SCS 11.9.8 Documentation

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1. Contents

SCS Help Contents

This help file is for SCS Version 11.9.8.
Change history can be viewed at Recent Changes.

IMPORTANT: ALWAYS, repeat ALWAYS complete at least one dry run (a 'dry tech') of the *entire show* at least a week before the first performance or first dress rehearsal of any show. This is to give you the opportunity to identify and fix any issues ahead of time.

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Production Live Running

- Setting Up For a Production
- Setting Up Your Video Projector For Videos and Still Images
- Playing Cues for a Show

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- Video Problems
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- ASIO Problems
- Outputs 3/4 and 5/6 Swapped
- Linked Audio Files Out Of Sync

Credits, Terms and Conditions, Registering

- Credits

- Terms and Conditions
- Registering SCS
- Recent Changes

2. Introduction

Overview

The **Show Cue System (SCS)** has been designed specifically for use in live theatre, and enables you to assemble all the sound and video/image cues you need in the order in which they are to be played.

Many common audio file formats are accepted, including WAV, MP3 and WMA; several video file formats, including AVI, WMV and MP4; and the image formats PNG, JPG, BMP and GIF (including animated GIF's).

SCS is intended for use alongside a sound mixing console, otherwise referred to as a sound desk or sound board. However, it is also feasible to run the sound interface outputs directly to powered amps.

Using SCS, sound cues do not have to be 'cued up' - they are instantly playable. This is a boon for tech rehearsals as well as for performances. Video/image cues can be played to a video projector or other device treated as a second screen.

Cue types

The following cue types are available:

	Audio cues	Play audio files, with facilities to set start and end points, loop points, level (volume) and pan, fade-in and fade-out times, and output device selection. *(Audio cues are available in all license levels, but some features are not available in SCS Lite.)*
or	**Video/Image cues**	Play video files, with facilities to set start and end points, and audio level and pan. Also used for displaying still image files. Video/Image cues are set up similar to a 'slideshow' so you can include multiple images and videos within a single cue. Cross-fades between images are possible. For existing cues the video camera icon is displayed if there is at least on video file in the cue. The camera icon is displayed if only still images are included in the cue. *(Available in SCS Standard and higher license levels.)*
	Playlist cues	Play a list of audio files either consecutively or randomly. Designed primarily for pre-show and intermission music, but can be used during for other cues where you need several audio files to be played consecutively. *(Available in SCS Standard and higher license levels.)*
	Level Change cues	Change the level (volume) and/or pan of an earlier cue over a nominated period of time. Typically used to fade down scene change music while still keeping the music playing at a lower level. Several level change cues can be set up to move a sound around an auditorium. *(Available in SCS Standard and higher license levels.)*
	SFR cues	With SFR cues you can **stop**, **fade out and stop** or **loop release** an earlier cue or multiple cues. Additionally, a *playlist cue* may be **hibernated** using an SFR cue, which means it will be faded out and paused so that later on that same playlist may be **resumed** (also by an SFR cue). Hibernation enables you to use a single playlist for pre-show and intermission music, with the playlist "hibernating" during the first Act. *(Available in all license levels, except for hibernation, which is not available in SCS Lite.)*
	Lighting cues	Can be used to control lighting or other equipment via DMX. *(Available in SCS Professional and higher license levels, but note that with SCS Professional you can only control DMX channels 1-32. There are no channel restrictions with higher license levels.)*
	Note cues	Set markers or reminders at selected points in your cue list. *(Available in SCS Standard and higher license levels.)*
	Memo cues	Display information about non-cue activity you want your operator reminded of. If you are an entertainer you can use Memo cues to display lyrics. Memos are fully formatted with font selection, bold, italics, indentation, bullet lists, etc. *(Available in SCS Professional and higher license levels.)*

	'Go To' cues	Jump to a nominated cue in the cue list, enabling you to set up loops of cues. *(Available in SCS Professional and higher license levels.)*
	'Set Position' cues	Jump to a new position within a currently-playing cue. *(Available in SCS Professional and higher license levels.)*
	Call Cue	Call a 'callable cue', and then resume from the next cue in the cue list. This is useful if you have a particular cue, possibly with multiple sub-cues, that has to be called several times in the show. It is similar to a Hot Key (Trigger) cue except that the called cue is activated by this 'Call Cue' rather than by a keyboard action. *(Available in SCS Professional and higher license levels.)*
	Enable/Disable Cues	This cue type allows you to dynamically enable or disable other cues. *(Available in SCS Professional and higher license levels.)*
	Control Send cues	Send MIDI, RS232 or Network (TCP/UDP) messages to other devices or programs such as your sound or lighting board. Various MIDI message formats are supported, including a subset of MSC (MIDI Show Control). See also MTC cues below. *(MIDI and RS232 available in SCS Professional and higher license levels; Network (TCP/UDP) available in SCS Professional Plus.)*
	MTC (MIDI Time Code) cues	Send MTC messages (full-frame and quarter-frame). Many lighting boards can have lighting cues controlled by MTC and you can use the MTC cue type to start and run MTC, thereby syncing your lighting cues to SCS audio cues. *(Available in SCS Professional and higher license levels.)*
	Live Input cues	Accept live input from mics, instruments, etc to include in the mix. As with Audio File cues, Live Input cues may have level and pan settings, be adjusted by Level Change cues, and be 'turned off' or faded out by SFR cues or by other Live Input cues. *(Available in SCS Professional and higher license levels, and requires SoundMan-Server.)*
	'Run External Program' cues	Enables you to start an external program such as PowerPoint (© Microsoft). *(Available in SCS Professional and higher license levels.)*

A cue may have multiple sub-cues. This means that by activating one 'cue' you can cause several separate events to occur, such as commence playing an audio file, stop playing an earlier audio file, send a MIDI control message to a lighting board, and so on. The sub-cues may either all start together, or you may set relative start times. So if you want to send a MIDI control message 20 seconds after the start of playing an audio file you can do this within a single cue. You can send several MIDI control messages if required, all with their own relative start times.

Audio Drivers

SCS uses third party software for the low-level playback of audio files. There are two software products available: you can use the **BASS audio library** which is included in your SCS setup file, or you can use **SoundMan-Server (SM-S)** which must be purchased separately from Richmond Sound Design or from Show Cue Systems. SM-S support in SCS is available in SCS Professional and higher licenses. It is also available in the demo version. By default, SCS uses the BASS audio library.

License Levels

There are several license levels available as listed below:

SCS Lite	Enables you to play WAV, MP3, WMA, AIFF, OGG and FLAC audio files, provided you just need to play complete files without SCS controlled fades. Supports 2 audio output channels (eg a stereo pair). SCS Lite only supports the BASS audio driver option but excluding ASIO support.
SCS Standard	Adds the ability to set start and end times, playlist cues, level change cues, video/image cues and note cues. Supports 4 audio output channels per production, with up to 2 devices per audio file cue or sub-cue. ASIO support is also included. SCS Standard only supports the BASS audio driver option.

SCS Professional	Contains all the features of **SCS Standard**, as well as MIDI/RS232 control of cues, control send cues and MTC cues. Supports 16 audio output channels per production, with up to 8 devices per audio file cue or sub-cue. SCS Professional supports BASS and SM-S audio driver options. Track selection in audio files is supported if you are using SM-S. Limited support for Lighting cues (ie SCS Professional supports DMX channels 1-32 only).
SCS Professional Plus	Contains all the features of **SCS Professional** but with support for up to 32 audio output channels overall and up to 16 devices per audio file cue or sub-cue. Also supports DMX and Network (TCP/UDP) control of cues, and Network support for control send cues. SCS Professional Plus supports BASS and SM-S audio driver options. Lighting cues in SCS Professional Plus support DMX channels 1-512.
SCS Platinum	Contains all the features of **SCS Professional Plus** but with support for as many audio output channels overall as your SM-S license permits. If you do not use SM-S then you are limited to 32 audio output channels (using BASS).

Please note that throughout this document, wherever a feature is stated to be dependent on a SCS Professional license then that feature is also available with SCS Professional Plus and higher license levels.

To use SCS with SoundMan-Server you will need a SoundMan-Server license and dongle (except for the demo mode of SM-S). The number of outputs supported will be the lesser of your SCS license level and your SM-S license level. So if you have an SM-S license that supports 64 outputs then you need an SCS Platinum license to use more than 32 of those outputs. The maximum number of outputs currently supported by SM-S and SCS Platinum is 512.

Your SM-S license also determines the number of playback channels available, which is generally twice the number of outputs. You can, however, purchase an SM-S license configured specifically to your needs. SCS will use as many playback channels as your SM-S license provides, regardless of your SCS license level. IE, your SCS license level will not limit the number of playback channels.

A table showing the features available with each license level is given under Feature Comparison.

The demo version of SCS has a session time limit of 60 minutes. After 60 minutes you will need to close and restart the program to continue. There is also a limit of 25 cues per cue file, and a **30-day trial period**. At the end of the 30-day trial period the session time limit is reduced to 5 minutes. To remove these restrictions, please register as explained under Registering SCS.

SCS is provided at low cost especially to assist amateur and not-for-profit theatre groups to put on quality productions. However, the features included and the stability of the product have also attracted many professional users.

SCS Prerequisites

Computer	SCS is available only for PC's running Microsoft Windows.
Operating System	Windows 7 or later. We recommend Windows 10 or Windows 11.
Processor	All current-day processors will satisfactorily handle SCS. We recommend using a computer with an Intel i7 or higher processor.
Sound Card / Interface	Any good or at least reasonable sound card should work satisfactorily with SCS. Please note that a cheap sound card or on-board sound processor may give satisfactory results when you listen to cues through your PC speakers, but may give less than satisfactory results when played through the sound system at your theatre. An external sound interface connected by USB or Firewire will generally provide better quality, and many such devices have balanced outputs. If you have a digital mixer (eg an Allen&Heath Qu or SQ series mixer, or a Behringer X32), then you can use a USB connection to send audio directly to the mixer, provided you have installed the manufacturer's USB driver. The Behringer X32 also requires an X-UF or X-USB expansion card. To access all the mixer's input channels you may have to select ASIO as the audio driver in SCS (see below).
Audio Driver	The SCS installation setup file includes the necessary components of the BASS audio library, supporting DirectSound, WASAPI and ASIO. SCS Professional and higher license level users may alternatively select SoundMan-Server (SM-S) as the Audio Driver. SM-S must be run on the same machine as SCS. SM-S uses ASIO.
Video Card	To play high 720p HD videos a 64Mb video card is required. 1080p videos require a at least a 128Mb video card.
Video/Image Display	For video/image cues to be displayed on a secondary monitor or video projector, that monitor or video projector *must* be configured as an extension of your desktop. Up to 4 secondary monitors/projectors are supported (up to 8 if you have SCS Professional Plus or higher), provided they can be configured in this way.
MIDI In	If you wish to control cues using MIDI input messages sent by a separate controller device, your PC or sound interface must have a MIDI input port.
MIDI Out	If you wish to use cues that send MIDI messages sent to an external device (or devices) then your PC or sound interface must have a MIDI output port. The MIDI output port can also be used for MIDI Thru to automatically stream MIDI input messages to the MIDI output port, whether or not those messages are used by SCS.
DMX Control	If you wish to control SCS cues via DMX from an external device (eg a lighting board) then you need an ENTTEC 'DMX USB PRO' or 'DMX USB PRO MK2'. Note that the cheaper ENTTEC 'OPEN DMX USB' is not suitable as this only supports DMX Send, not DMX Receive.
DMX Out	DMX Lighting cues are supported via ENTTEC 'DMX USB PRO MK2', 'DMX USB PRO' or 'OPEN DMX USB' device, or an FTDI 'USB-RS485 cable'. We recommend the DMX USB PRO or DMX USB PRO MK2.
Disk Space	SCS including supplied DLL's requires about 50Mb of disk storage, but sound files, especially WAV files, can be many megabytes in size. Note that WAV files are *the* recommended format for sound files. SoundMan-Server will only play WAV or AIFF files but SCS also supports other formats such as MP3 and WMA. To play MP3, etc files via SM-S, SCS encodes a WAV file from the original file, and stores that WAV file in an 'Encoded Files' folder.
Display Size	A screen display size of at least 1024 by 768 pixels is recommended.

How SCS Works

SCS reads a list of cues and sub-cues from a selected **Cue File** (saved with a .scs11 extension), and displays a list of the cues in the upper part of the main screen. Where a cue contains multiple sub-cues, only the first sub-cue is displayed in this list.

Facilities are available to create a new Cue File or to edit an existing Cue File.

Each cue is made up of one or more of the following sub-cue types:

	Audio File	An audio file, such as a WAV, MP3 or WMA file, with required level, pan, fade-in and fade-out times, looping start and end points, speaker assignments, etc.
 or 	**Video/Image**	Video files, such as AVI, WMV and MPEG can be played to a secondary screen if available. This secondary screen may be a video projector. A smaller 'monitor' window is also displayed over the main SCS window on the primary screen. This is useful if you cannot see the video projection screen from where you are running SCS. If SCS finds only one display connected (eg during cue design) then only the 'monitor' window is displayed. You can use up to 4 secondary screens, but an individual video/image cue can currently only be played to one of those screens. The audio track for a video file may be played through any selected DirectSound/WASAPI device. You can set the audio level as required, and for many productions you may wish to mute the audio completely. Still image files, such as PNG, JPG and BMP, can be displayed in a similar manner to videos. Video/Image cues are set up like a 'slideshow' so you can include multiple images and videos within a single cue. Cross-fades between images are possible, but cross-fades between videos is not yet implemented. *(Available in SCS Standard and higher license levels.)*
	Playlist	For pre-show and intermission music you may want to assemble a list of audio file tracks to play, and then when the show is about to start or resume you want to fade out and stop the music, regardless of how far thru the list you have played. The Playlist is designed for this. You can include as many audio files as you want and play them either sequentially or randomly. You can set up cross-fades if required, and nominate the duration of the overall fade-out time. *(Available in SCS Standard and higher license levels.)*
	Level Change	New level and/or pan required for a nominated audio file cue, designed to enable you to change these settings sometime after the audio file has started playing. For example this could be used at the start of scene when an actor comes on stage and the audio level of the scene change music is to be lowered but not faded out completely. *(Available in SCS Standard and higher license levels.)*
	Stop / Fade-Out / Loop Release	This enables you to set up a cue to stop or fade out an earlier cue. If you have specified looping start and end points for an audio file, you can also release the audio file from the loop using the Loop Release cue type. Releasing a loop causes the audio file to continue as normal but when it next gets to its 'end of loop' position it will continue to the end of the file (or to the cue's end point) instead of looping back. These cues are generally referred to as SFR cues (Stop/Fade/Release cues).
	Lighting	Can be used to control lighting or other equipment via DMX. *(Available in SCS Professional and higher license levels, but note that with SCS Professional you can only control DMX channels 1-32. There are no channel restrictions with higher license levels.)*
	Note	Notes are basically cues without sub-cues. They can be used to remind you of non-cue events, such as 'End of Act 1', 'House Lights', etc. *(Available in SCS Standard and higher license levels.)*

	'Go To' cues	Jump to a new position within a currently-playing cue. *(Available in SCS Professional and higher license levels.)*
	'Set Position' cues	Jump to a nominated cue in the cue list, enabling you to set up loops of cues. *(Available in SCS Professional and higher license levels.)*
	Call Cue	Call a 'callable cue', and then resume from the next cue in the cue list. This is useful if you have a particular cue, possibly with multiple sub-cues, that has to be called several times in the show. It is similar to a Hot Key (Trigger) cue except that the called cue is activated by this 'Call Cue' rather than by a keyboard action. *(Available in SCS Professional and higher license levels.)*
	Enable/Disable Cues	This cue type allows you to dynamically enable or disable other cues. *(Available in SCS Professional and higher license levels.)*
	Control Send	Control Send cues enable you to control other devices directly from SCS where a compatible interface is available. For example, you could send a Recall Snapshot MIDI message to a digital mixer, or a scene change MIDI message to a lighting board. You can also use a Control Send cue to play a MIDI file. This is intended for multiple MIDI commands such as for controlling lights during the playback of a song track. SCS will *not* play a MIDI file to an audio output or use sound fonts. *(Available in SCS Professional and higher license levels.)*
	MTC (MIDI Time Code)	Send MTC messages (full-frame and quarter-frame). Many lighting boards can have lighting cues controlled by MTC and you can use the MTC cue type to start and run MTC, thereby syncing your lighting cues to SCS audio cues. *(Available in SCS Professional and higher license levels.)*
	Live Input	Accept live input from mics, instruments, etc to include in the mix. As with Audio File cues, Live Input cues may have level and pan settings, be adjusted by Level Change cues, and be 'turned off' or faded out by SFR cues. *(Available in SCS Professional and higher license levels, and requires SoundMan-Server.)*
	'Run External Program' cues	Enables you to start an external program such as PowerPoint (© Microsoft). *(Available in SCS Professional and higher license levels.)*

A cue may contain just one of the above, or any combination of the above including multiple instances of any sub-cue type. Typically, a cue *will* be just an audio file cue, or just a stop cue, etc. But you can set up a cue containing, for example, an audio file, a stop for an earlier cue, a control send to change a lighting scene, and a control send to activate a pyrotechnics event.

Where a cue contains more than one of these sub-cue types, the **cue** is regarded as having **sub-cues**. Internally, SCS treats *every* cue as having one or more sub-cues (except Note cues), but to simplify the interface the sub-cues are normally only significant where there are two or more.

The attributes of each cue and sub-cue are known as **properties**.

Production-level properties can also be set. This is where you can define what speaker assignments you want for the show as well as other production-specific information.

When the cue file has been read, the audio files for the first few sound cues are immediately loaded. This is the way SCS always operates - it ensures the audio files for the next few sound cues are always loaded so there should be no delay in playing cues. This also assumes you have removed any silence from the beginning of the audio file itself. Information on doing this for wave files is discussed under Preparing Sound Files.

Cues are manually activated by clicking the button at the top of the screen labeled **Qn - Go!** where **Qn** is the label given to the sound cue (it doesn't have to start with **Q** - you can label your cues as you wish, eg **FX 1**, **S/C 1**, etc). Cues can also be activated automatically a specified time after the start or end of another nominated cue, or even at a specified time *before* the expected end of another cue. Some cues may also be set up as **hot key** cues, which means they are started by pressing a keyboard key. SCS also has the ability to activate cues from **MIDI, RS232, DMX** and **Network** (TCP or UDP) input messages (provided you have the appropriate license level).

Running the Demo

You can run the **SCS** demo as follows:

- Start the program scs11.exe (or scs11demo.exe), which under Windows can be done by clicking: **Start / SCS 11 / SCS 11**. It's recommended to have a shortcut to SCS 11 setup on your desktop - this option is available when you install SCS 11.
- **SCS 11 Demo V2** should be listed in the 'Load Production' window. Select this item and click 'Open this Cue File'. If 'SCS 11 Demo V2' is not shown then click 'Browse' and look for it in your Documents\SCS_Demo folder.

  To keep down the size of the SCS demo download, most of the audio files in the demo are MP3 files. However, for quality sound effects it is recommended that you use WAV files or some other lossless format.
- Make sure the speakers connected to your default sound device are turned on.
- The first sound cue can be played by clicking the button labeled **Q1 - Go!** at the top left of your screen. As an alternative to clicking the **Qx - Go!** button, you can press the space bar (briefly) or click the right mouse button with the mouse pointer positioned anywhere within the limits of the SCS program window.
- Details on how to play all the cues in the demo are given below:

  This demo cue file is set up to give examples of using SCS in a typical theatre environment. It will start before the show begins and run through some of the scenarios that are encountered.

  Q1: This starts the pre-show background music playlist. This is a playlist cue such as you might build for intermission or pre-show music. This demo only contains short extracts from four music files* - in practice you would use full length music files with as many files as you need to adequately cover the time required, plus plenty of spare music included to allow for late starts. Q61 - Q64 are setup as "Hotkeys" for the playlist/intermission music (see the panel on the lower right of your screen), the letter before the cue description is the hotkey you can use to activate these cues. However, for live productions it is unlikely that you would need to use hotkeys for your pre-show/intermission music and you should have cues specifically set up to start and fadeout the playlist at the appropriate points in your cue list.

  Q2: This is a memo cue that auto-starts with Q1. Memo cues in this demo provide helpful advice on what is going on. Memo cues can also be used for information to be displayed to the audience or to back-stage crew.

  Q3 - Q16: The 3 minute curtain call. The next series of cues will auto play up to the start of the show (Q19) to provide a 3 minute warning to the audience with introduction music playing in the background. If you have multiple sound outputs they could be fed to the bar or foyer area as well for example.

  The timings in this demo have been shortened but feel free to edit them as need be.

  Note: As mentioned above, you may manually stop or start the Intermission playlist by using the hot keys as detailed in the HKeys panel on the main screen.

  Q18: Start the next cue to fade the overture out or let it run until the end.

  Play the fanfare Q19 manually.

  After the fanfare has completed, run Q20 when required.

  Once the car is running trigger Q21 manually.

  Read the Note cue Q22 and follow the instruction.

  Once Q25 has started run Q26 manually.

  Q27: The next manual cue Q28 is a simple slide show for pictures bringing us to that end of Act 1 and the intermission. This cue runs a simple 'slide show' of 4 JPG image files, each set to run for 7 seconds with a 1.5 second cross-fade. If you have a second monitor configured as an extension of the Windows desktop then these images will be displayed on the second monitor. If you only have your primary monitor then the images will be displayed in a small window near the top of your main window.

  Q29: The background playlist has been re-started, the next cue (Q30) will fade out and stop the playlist ready for the start of Act 2

  You could put your own bells warning in next as happened at the start of Act 1 (Q3-Q16).

  Q30: Activate the next cue (Q30) to prepare for Act 2

  Q31 - Q37 is a simple rainforest audio cue sequence that can all be stopped by Q38. These sound cues are also linked. To run this part of the demo, you will manually start Q31 (Rain forest ambience), then manually start Q32 (Bird call) when you are ready to do so. Cues Q33 - Q37 start automatically at set times (explained shortly), and when you want to terminate this sequence of cues you will activate Q38 (Stop forest and birds).

Q38: (Stop forest and birds) is an SFR Cue set up to fade out and stop all earlier running cues. When you get to this point in the demo you should just have Q31 (Rain forest ambience) still playing. To terminate this cue click the button now labeled Q38 - Go!. A Fade Out Cue will stop the nominated cue immediately if it does not have a Fade-out time specified, but where they have a Fade-out time then the Stop Cue starts the Fade-out. Therefore, activating Q38 will cause Q31 (Rain forest ambience) to fade out and stop over 5 seconds.

Q40: This is a London street scene at night that will fade into daylight, this is 2 pictures with a cross fade set. Activating Q41 will activate a slow crossfade between Q40 and Q41 (the two .png picture files).

Q42: This sequence is made from a picture Q43 cross fading into a video Q45 for the sinking and then back to a picture of the sunken ship Q49 with appropriate sound effects (Q44, Q46 & Q47).

Q49.2: Playing a video with it's own soundtrack (Q51)*. In the background several audio cues (Q52-Q55) run at set 'auto-start' times until the end of the video. If you examine these cues in the Editor you will see that most of them are set to play just a short part of the relevant audio file.

- You can select any cue by clicking on that cue in the list in the upper part of the screen. This will reposition the script to that cue.
- You can dynamically change the level or pan of an individual cue simply by dragging the **Level** or **Pan** slider in the cue's display panel. (The original **level** and **pan** requirements for each cue are specified when the cues are set up.) To dynamically adjust the *overall* level and pan, it is recommended that you use the faders on the sound desk (mixing console) as adjustments can be achieved much more sensitively this way.
- The slider below the multimedia controls in each cue's display panel shows the **progress** of the cue. You can also use this to reposition a cue at any point, which is primarily intended for tech rehearsals, when you may wish to quickly go to a position near the end of a cue.
- Setting up and editing cues is described later in the Help, including details of Control Send cues and directing sound output to different sound devices. (Control Send cues and multiple sound devices are not included in the demo, but the functionality is available for you to try.)
- When you have finished playing the cues, close the program by clicking the close window control (X) in the top right corner of the window.

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* See Credits for copyright info regarding music and videos used in the demo.

Feature Comparison

The following license levels are available: **Lite**, **Standard**, **Professional**, **Professional Plus** and **Platinum**. A significant feature difference between **Professional Plus** and **Platinum** is the maximum number of audio output channels supported. To use the additional audio output channels available in **Platinum** you need SoundMan-Server (SM-S) installed and selected as the Audio Driver.

The following table shows a comparison of the functionality available with the SCS license levels, as well as the functionality of the **Demo** version:

Feature	Demo	Lite	Standard	Professional/ Pro Plus/ Platinum	Note
Sound File Support					
WAV, MP3, WMA, AIFF, OGG, FLAC, AAC, M4A	Y	Y	Y	Y	1
Multi-Channel Files	Y	Y	Y	Y	
ASIO support	Y		Y	Y	
SM-S support	Y			Y	
Video File Support					
AVI, WMV, ASF, MPEG, MPG, MP4, MOV, M4V, DIVX, MKV, FLV, F4V, 4FP, F4A, F4B, 3GP, 3G2, MTS, M2TS, VOB	Y		Y	Y	
Still Image File Support					
PNG, JPG, BMP, GIF (including animated GIFs)	Y		Y	Y	2
Cue Types					
Audio File Cues	Y	Y	Y	Y	
Stop/Fade-Out/Release (SFR) Cues	Y	Y	Y	Y	3
Level Change Cues	Y		Y	Y	
Playlist Cues	Y		Y	Y	
Video/Image Cues	Y		Y	Y	13
Lighting Cues	Y			Y	4
Notes	Y		Y	Y	
Memos	Y			Y	
'Go To' Cues	Y			Y	
'Call Cue' Cues	Y			Y	
'Set Position' Cues	Y			Y	
'Enable/Disable Cues' Cues	Y			Y	
Control Send Cues - MIDI/RS232	Y			Y	
Control Send Cues - Network (TCP/UDP)	Y			Plus/Plat	
Control Send Cues - HTTP Request	Y			Plus/Plat	
'Run External Program' Cues	Y			Y	
Live Input Cues				Y	5
MTC/LTC (MIDI/Linear Time Code) Cues	Y			Y (LTC: Plat only)	
Cue Play Control					

Set Level and Pan for each Cue	Y	Y	Y	Y	
Set Fade-In and Fade-Out Times	Y	Y	Y	Y	
Dynamically Adjust Level and Pan	Y		Y	Y	
Set Start-At and End-At Times	Y		Y	Y	
Allow Loops in Audio File Cues	Y		Y	Y	
Adjust Tempo and Pitch in Audio File Cues	Y			Y	
Device Outputs (eg speakers)					
Max. Audio Output Channels per Production	4	2	4	16/32/512	6
Max. SCS Audio Devices per Cue	2	1	2	8/16/16	7
Max. Secondary Screens for Video/Image Cues	4		4	4/8/8	
Max. Control Send Devices per Production	1			4/8/64	
Max. Fixture Types	8			16/16/32	
DMX Universes * Channels	1*(1-32)			1*(1-32) / 2*(1-512) / 2*(1-512)	4
Input Devices					
Max. Video Capture Devices	1			2/4/4	
Cue Activation Control					
Manual Start ('Go' button or right-click)	Y	Y	Y	Y	
Hotkeys	Y	Y	Y	Y	
Auto-Start (following an earlier cue)	Y		Y	Y	
Time-of-Day Start (time-based cues)	Y		Y	Y	
MIDI Control (eg MSC, but excluding MTC)	Y			Y	
MTC (MIDI Time Code)				Plus/Plat	
RS232 Control	Y			Y	
DMX Control	Y			Plus/Plat	8
Network Control (TCP/UDP)	Y			Plus/Plat	
Standby Cue Control	Y			Y	
Cue-Start Confirmation	Y			Plus/Plat	
Cue Limits					
Max. No. of Cues	25	40	80	unlimited	9
Max. No. of Cues that may use WAV file Cue Points or Markers	2	0	2	Pro: 2, Plus/Plat: unlimited	10
Other Features					
Print Cue List	Y	Y	Y	Y	
Customize Displayed Cue List	Y	Y	Y	Y	
Re-Number Cues	Y	Y	Y	Y	
Bulk Edit Cues	Y		Y	Y	

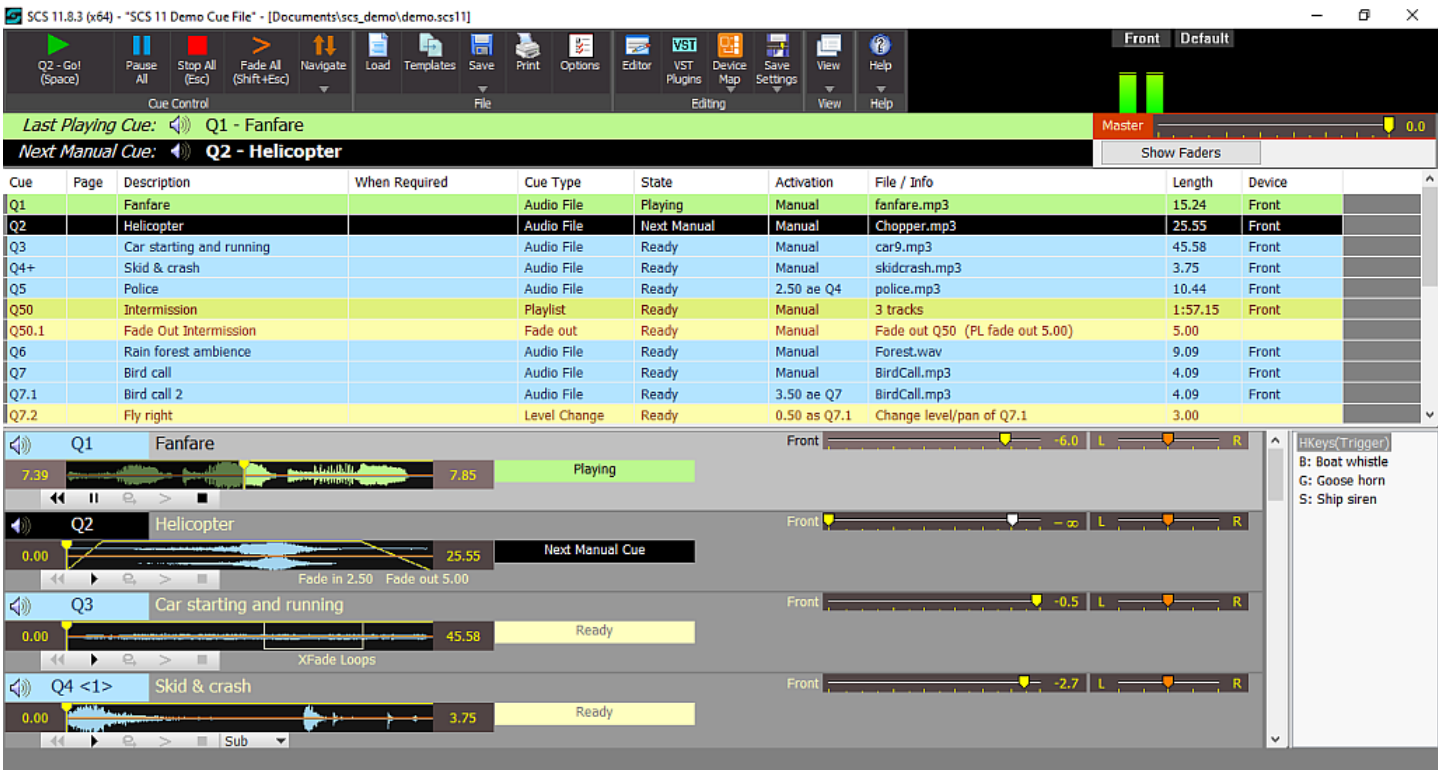
Select Colors	Y		Y	Y	
Lock Editing and Options	Y	Y	Y	Y	
Collect Production Files	Y	Y	Y	Y	
Import/Export Cues	Y	Y	Y	Y	
Favorite Cue Files	Y	Y	Y	Y	
Production Timer	Y		Y	Y	
Faders Window and External Control Surface support	Y			Y	
Import Devices from another SCS Cue File	Y			Y	
VST Plugin support for Audio File Cues	Y			Plus/Plat	11, 12
Primary/Backup Functional Mode	Y			Plus/Plat	
Move to Time (M2T)				Plus/Plat	

Notes

1. SCS may not be able to play WMA files with DRM protection (Digital Rights Management). You may get the message 'License Required'.
2. Some restrictions apply regarding animated GIF's. See the documentation on 'Still Images' for details.
3. 'Hibernate' options in SFR cues are not available with SCS Lite.
4. Lighting Cues send DMX, and for DMX you need an ENTTEC 'DMX USB PRO MK2', 'DMX USB PRO' or 'OPEN DMX USB' device, or an FTDI 'USB-RS485 cable'. The DMX USB PRO MK2 is the recommended device. SCS Professional supports DMX channel numbers 1-32, but SCS Professional Plus and higher support 2x512 DMX channel universes.
5. Live Inputs are only available for SM-S (SoundMan-Server) users. However, you can create and edit these cues in a non-SM-S environment by assigning the Dummy Live Input device as a physical device.
6. Audio Output Channels are physical outputs on sound cards / audio interfaces. For example, a 7.1 sound card has 8 output channels and with an SCS Standard license you will be able to use up to 4 of those channels. These could be set up as 4 mono outputs, or 2 stereo outputs, or 1 stereo output and 2 mono outputs, or 1 four-channel output.
7. SCS Audio Devices are logical devices that you define in your Production Properties. They may be given device names like 'Front' for the front speakers, 'USL' for an upstage-left speaker, etc.
8. For DMX Control you need an ENTTEC 'DMX USB PRO' or 'DMX USB PRO MK2'. Note that the cheaper Enttec 'Open DMX USB' is not suitable as this only supports DMX Send, not DMX Receive.
9. The Max. No. of Cues includes *all* cue types. For example, if you have 30 audio file cues and 20 SFR cues this counts as 50 cues, which means you will need either the Standard or a higher level license. Combined cues (eg a sound file cue and stop cue combined) count as a single cue.
10. In many audio file editors, such as GoldWave, you can set 'cue points' or 'markers' which are sample-accurate. In SCS you can use these 'cue points' or 'markers' for setting start, end and loop points in an audio file cue. You need an SCS Professional Plus or higher license to make full use of this feature. If you have an SCS Standard or Professional license then you can use the feature on up to 2 audio file cues. This enables you to try out the feature before upgrading to Professional Plus or Platinum.
11. Only VST Effects Plugins are supported, and only one Plugin per Audio File Cue.
12. Plugins from waves.com are not directly supported even when selecting the respective WaveShell-VST DLL. However, you may be able to split the plugins into separate VST DLL's using a product call shell2vst. Contact support@showcuesystems.com if you need more info.
13. Video Capture is supported in SCS Professional and higher licenses, and in the Demo version.

The Main Window

When you start open or create a cue file, the details will be displayed on the main window. Here is an example using the demo cue file. In this example, Q1 (Fanfare) is currently playing, and Q2 (Helicopter) is the next cue to be started:



The **Toolbar** at the top of the display provides buttons for Cue Control and various other functions. To the right is a **Meter Display**, showing the levels being output to the devices defined in this production.

Below the Toolbar is the **Last Playing Cue** and the **Next Manual Cue**. The **Last Playing Cue** shows the last cue that was started, but only for cues where the type of the first or only sub-cue is audio, video/image, playlist, lighting, live input or control send. The cue displayed here will remain displayed until (a) a different cue is started, provided it meets the display criteria for Last Playing Cue, or (b) the cue is completed. For a completed cue, the cue will continue to be displayed here for up to 10 seconds, which is particularly useful for cue types that end immediately, such as a lighting cue that instantly sets a lighting plot. The Last Playing Cue is cleared immediately on Stop Everything.

The **Next Manual Cue** shows the cue that will be activated the next time you click the 'Go' button (regardless of the cue type).

A **Master Fader** is displayed below the Meter Display. See Main Window Toolbar for details of the Toolbar, or Meter Display and Master Fader for details of the Meter Display and the Master Fader.

Clicking the **Show Faders** button displays the Faders Window (only available with SCS Professional and higher licenses).

Although the **Toolbar** contains a 'Go' button, in practice you will probably not use it! This is because there are other easier ways to activate the next cue. Common methods are a right-click of the mouse, or pressing the Space bar. SCS also provides external control facilities, such as by activating the 'Go' button by MIDI control. 'Stop All' (the panic button) can be activated by just pressing Esc.

The **Cue List** at the top of the display shows the cues from the cue file, and you can scroll through this list to see all the cues.

The **Cue Panels** below the Cue List show several cues or sub-cues, starting with any currently playing cues or sub-cues. You can scroll through the cues, but note that completed cues are not displayed in the Cue Panels, so you cannot scroll to a completed cue. See Cue Panels for details.

To the right of this is the **Hotkey List**, which shows a summary of the 'hotkeys', ie cues which can be activated simply by pressing a keyboard key. This panel is only displayed if you have at least one hotkey cue defined for the current production, and if the Display Option 'Show Hotkey List' is checked (which it is by default). You can adjust the width of the Hotkey List by dragging the **splitter bar** on the left of the list. However, note that this will cause audio graphs in the Cue Panels to be redrawn.

Between the **Cue List** in the upper part of the screen and the **Cue Panels** in the lower part of the screen is a **splitter bar** that you can drag up or down. As you drag the splitter bar up, additional Cue Panels will be displayed, and as you drag the splitter bar down, fewer Cue Panels will be displayed. The position of the splitter bar is remembered between

SCS sessions.

At the foot of the screen is a **Status Line**.

Adjusting the displayed columns in the Cue List

You can decide which columns you want to display in the Cue List by clicking the **Options** button and then selecting **Cue List Columns**.

Within the Cue List you can adjust individual column widths by dragging the column divider in the header, and you can reposition columns by dragging a column title. For example, to move the *Cue Type* column so that it is displayed immediately after the *Cue* column, click and drag the column title 'Cue Type' to the required position immediately after the 'Cue' column title.

Cue Panels

For details on the information displayed in the **Cue Panels** and how you can use the controls displayed, see Cue Panels.

Cue and Sub-Cue Descriptions

For details on the differences between Cue and Sub-Cue Descriptions, and where they are displayed on the Main Window, see Cue and Sub-Cue Descriptions.

Adjusting the Layout

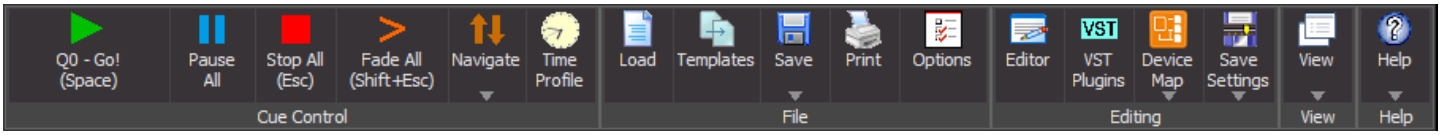
There are other options for controlling the visual appearance of the main window, such as deciding what features are displayed, and what font sizes to use. These can be changed by clicking the **Options** button and selecting **Display Options**.

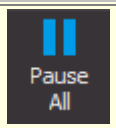
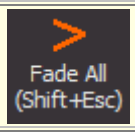
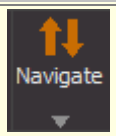
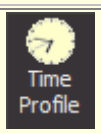
Video/Image Monitor Window

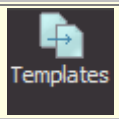
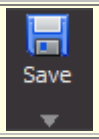
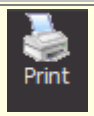
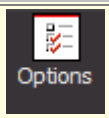
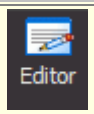
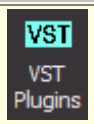
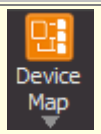
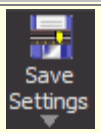
A 'monitor window' of a video/image cue may be displayed over the main SCS window on the primary screen. This is useful if you cannot see the secondary screen (eg a video projection screen) from where you are running SCS. This is also useful during cue design if you do not have a secondary screen available. For information about this, see **Video Monitor Size** in Display Options.

Main Window Toolbar

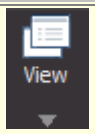
Some features not available with all license levels.



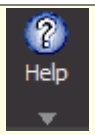
Cue Control		
	Go!	The **Go** button is used to start the next cue, although you will usually use the keyboard equivalent which by default is the **Space Bar**. Alternatively you can right-click the mouse to start the next cue. To disable or change keyboard activation see Shortcuts. The "next cue" is the "next manual-start cue" because auto-start cues do not need to started by the **Go** button. The label of the cue to be started is displayed in the button caption.
	**Pause All** **Resume All**	This can be regarded as an alternative to **Stop All** (described below). The difference is that whereas **Stop All** stops and resets running cues, **Pause All** will just *pause* all running cues and countdowns, and **Resume All** may then be used to resume those cues and countdowns. A single button is used, initially labeled **Pause All**. If the button is clicked the label is changed to **Resume All**. Note that in either mode the button can be keyboard-activated by **Ctrl/U**.
	Stop All	This is the panic button, although you will usually use the keyboard equivalent which by default is the **Esc** (Escape) key. **Stop All** causes all currently running cues to be stopped immediately (not faded out), and if any cue is currently counting down to a start that count down is stopped. The cue list is then repositioned at the start of the first cue that was stopped by **Stop All**. The usual situation where you would use this is where you accidentally start a cue before time. If you then hit **Esc** the cue will stop immediately and the cue list will be reset ready for you to play the cue at the right time! See also **Fade All** below.
	**Fade All**	**Fade All** provides a less abrupt stopping of audio but otherwise acts the same as **Stop All**. The default keyboard equivalent is **Shift** + **Esc**. The **Fade All** time is set in General Options and the default is 1 second.
	**Navigate**	**Navigate** can be used to navigate around the cue list. The button has a drop-down menu which contains **Go To Top** (go to the top of the cue list), **Go Back** (go back to the previous manual-start cue), **Go To Next** (go to the next manual-start cue), **Go To End** (go to the end of the cue list), and **Find**. Note that instead of using the **Navigate** button you can just click in the cue list on the cue you want to go to. The **Find** menu item will open the Find Cue window - alternative, just press **Ctrl/F**. If you have an SCS Professional Plus or higher license then there will also be a menu item **Select Hotkey Bank**. See Hotkey Banks for details. There will also be a menu item **Reset 'Step' Hotkeys**. See the information about Hotkey (Step) under Cue Properties.
	Standby	The **Standby** button is only displayed if at least one cue in your current cue file has a 'Set Standby' property. When that cue has completed it is reset to 'Ready' and the **Standby** button is enabled and the cue number is shown in the button caption. That cue may then be replayed by clicking on the **Standby** button, regardless of how much further thru the cue list you have progressed. See Standby Cues for details.
	**Select Time Profile**	The **Select Time Profile** button is only displayed if at least one cue in your current cue file is time-based, ie it is set up to be started at a nominated time of day. For time-based cues you may have different *Time Profiles*, such as 'Evening' and 'Matinee'. One of these *Time Profiles* will be set as the default *Time Profile*, ie the one initially selected when the cue file is opened. However, using the **Select Time Profile** button you can switch to a different *Time Profile*. See Time-Based Cues for details.

File		
	Load	The **Load** button opens the Load Production window which provides a number of ways in which you can open an existing production or create a new production.
	**Templates**	The **Templates** button opens the Templates window which enables you to create, use and maintain SCS templates.
	**Save**	The **Save** button shows a drop-down menu enabling you to **Save** current changes or **Save As** a new cue file. If a Template is currently being displayed for editing in the main window, then the **Save As** option is disabled.
	**Print**	The **Print** button opens the SCS Print dialog to enable you to print a hard copy of your cue list, or to prepare a list suitable for copying and pasting into Excel or some other program. See Printing the Cue List for details.
	**Options**	The **Options** button opens a window in which you define preferences and settings applicable to any production run or edited on this machine by this Windows user. See Options for details. Note that **Options and Editing** can be locked, which is useful when you have finalized your cue file and want to prevent operators making changes.
Editing		
	**Editor**	Click the **Editor** button to open the SCS Editor Window. This is for setting up or changing cue details, production details, importing or exporting cues, etc. You can switch back to the Main Window any time you wish - you do *not* have to close the **Editor** to do this. Note that **Options and Editing** can be locked, which is useful when you have finalized your cue file and want to prevent operators making changes.
	**VST Plugins**	The **VST Plugins** button opens a window in which you can select 3rd party VST Effects Plugins you have installed on your computer, and assign those plugins to audio output devices. See VST Plugins for details. VST Plugins can also be used in Audio File Cues.
	**Device Map**	The **Device Map** button enables you to easily change to a different device map. On selecting a different device map, the Editor will be opened with the new device map selected, and you will be asked to 'Apply Device Changes' or 'Undo Device Changes'.
	**Save Settings**	**Save Settings** is enabled if you manually change the level or pan of a cue, or if you adjust the Master Fader. A drop-down menu is displayed. The first two entries refer to the Master Fader, and are: • **Reset Master Fader Setting** • **Save Master Fader Setting** If you have manually change the level or pan of any cues, you will see a menu item for each one, eg: • **Save Level/Pan Q1** • **Save Level/Pan Q4** Clicking one of the above menu items immediately applies that change in the cue file. This list will handle saves to the level and pan settings for up to 20 cues - after that the oldest one gets rolled off the list. If there is at least one cue in the *Save Settings* list then you can save all the Level/Pan settings by clicking on: • **Save Level/Pan for all above Cues**. (This can also be actioned by a keyboard shortcut. The default shortcut is Shift+F10.) *Note that if a Level Change cue has affected an Audio or Video cue, then 'Save Settings' will not be available for manual changes to that Audio or Video cue.*

View

	**View**	The **View** button displays the following menu items: • **Operational Mode**, which displays the following items: o **Design Mode** o **Rehearsal Mode** o **Performance Mode** The current Operational Mode will be identified with a check mark. To change the Operational Mode, select the required new Operational Mode. For more information on Operational Modes, see Options and Settings. • **Meters**, which displays the following sub-menu: o **Meter Display**, which has a sub-menu of the types of display available. The default is 'VU (Levels)'. The other formats are not currently available, but you can turn off the display completely by selecting 'None'. o **VU Meter Bar Width** enables you to adjust the width of the meter bars in the VU display. Available widths are 'Narrow' (default), 'Medium' and 'Wide'. o **Peak Hold** enables you to see the peak levels reached by each output. If you select 'Auto' then the peak levels are displayed for up to 1 second. If you select 'Hold' then the peak levels are displayed indefinitely, only being increased when a higher peak is reached, or by being reset by the 'Reset Peak Hold' menu item (explained next). If you select 'Off' for Peak Hold, then peak level markers are not displayed. o **Reset Peak Hold** will reset the peak level markers. This menu item is only enabled if you select 'Hold' for Peak Hold. • **Current Information** is mainly to enable you to easily and quickly check the currently-selected Device Map, Audio Driver, Video Library, Operational Mode and some other information. The 'Aggregate Times' may be useful if you are running something like a dance show where every dance has an SCS cue and there are no lengthy gaps between cues (as there usually are in stage plays). Note that the 'Aggregate Times for Non-Completed Cues' is not necessarily the same as 'Time Remaining' as it does not take into account the progress of any such cues currently playing. • **Time of Day Clock** will display a sizable window showing the time of day - see Clock Timers. • **Countdown Timer** enables you to set and display a sizable window of a countdown timer - see Clock Timers. • **Clear Countdown Timer** will close and clear the Countdown Timer. • **Show DMX Display Window**: This opens the DMX Display Window which can be used to monitor DMX being sent by Lighting Cues.

Help

	**Help**	The **Help** button displays the following menu items: • **Help Contents** displays this file. • . • **Clear 'Don't tell me this again' indicators**: Sometimes a message may appear to warn you of some condition, and rather than have that message displayed each time you run SCS or run that cue file, you can select a 'Don't tell me this again' checkbox in the message. By selecting this 'clear...' menu item, any such settings are cleared, so the relevant message(s) would again be displayed if and when applicable. • **Tracing**: All non-demo versions of SCS trace events and debug info in a log file, although it is possible to turn off logging (tracing) using this **Tracing** menu item. Log files are intended for the use of SCS Support, so if you report a problem to us then we may ask you to email us the relevant log file. The name of the log file includes a timestamp indicating when the run started. The log file is compressed on closing, and any log files more than 7 days old are deleted. SCS also applies a size limitation to prevent log files becoming excessively large, especially if SCS is run 24/7. (SCS is run 24/7 in some museums and other venues where cues are triggered by signals received from motion sensors.) • **Check for Updates**: If you have an active Internet connection then you can select this menu item to check if the version of SCS you are using is the latest version. Note that this provides information only - it does not download a new version. See also 'Automatic Checks for Updates' under Options / General. • **Online Forums**: If you have an active Internet connection then you can select this menu item to access the SCS Forums. • **Registration** (not available in the demo version) opens the SCS Registration window. If you have upgraded your license (eg from Standard to Professional) this is where you will enter your new Authorization String. If you have the demo version of the program then to register the program you need to purchase an SCS license online at our Purchases web page, or through one of the Agents listed on that page. • **About** displays version and copyright info, as well as who this version of SCS is licensed to.

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Meter Display and Master Fader

Meter Display

The default meter display shows VU levels for all Audio Output devices, and all Video Audio devices, eg:

In this example there are two stereo Audio Output devices: Front and Rear; two mono Audio Output Devices: USR and USL; and one stereo Video Audio device: Default.

Audio Output devices will always be shown first and their labels (eg 'Front') will be underlined. The labels for the Video Audio device(s) will not be underlined.

The order of the devices is determined by the order in the **Production Properties**, so if you want to change the order of the Audio Output VU meters then change the order of the devices in Production Properties - Audio Output Devices.

VU meters for Video Audio devices are *not* shown by default. You can turn on these VU meters from Options - Video Driver. The reason for this default setting is that the constant audio peak monitoring necessary to display the VU meters can adversely affect audio playback quality of the video file. No such issues have ever been reported with audio file playback - only with video file playback.

Master Fader

This slider enables you to adjust the overall level of all audio outputs including the Video Audio outputs. The Master Fader setting is saved as a Production Property so can also be set in the Production Properties in the Editor. The yellow pointer shows the current Master Fader setting, and the white pointer shows the Master Fader setting currently saved for this Production (ie saved as a Production Property). When you load a cue file, the Master Fader is set to the value of the Production Property. If you manually adjust the Master Fader, the white pointer stays at the saved setting and if you **Reset Master Fader** the fader will be reset to the white pointer.

The Master Fader can be adjusted by user-defined keys, eg:

Master Fader Up:	Add key (+) on numeric pad
Master Fader Down:	Minus key (-) on numeric pad
Master Fader Reset:	Multiply key (*) on numeric pad
Master Fader Mute:	Shift and Minus key (-) on numeric pad

The keys you want to assign to these functions can be defined under Options - Shortcuts. If you do not have a numeric pad on your computer keyboard then the above defaults may not be suitable, so you can nominate other keys, such as the up and down arrows for master fader up and down.

Master Fader Mute toggles the Master Fader between silence and the current level. So the first time you press the *mute* key the output will be silenced, but the second time you press the *mute* key the fader will revert to the level it was at when you muted the output. The 'mute state' is canceled if you change the master fader in any way. So if you press the *mute* key, then drag the Master Fader slider even just a little, then the 'mute state' is canceled and the next time you press the *mute* key the output will again be muted, not reset.

The **Master Fader** can also be controlled by **MIDI** commands. See Cue Control Devices - MIDI for details.

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Changing the Levels of All Playing Cues

The feature described below is only available for *Audio File* cues, not for *Playlists* or *Video* cues.

When a cue is playing it is possible to manually change the level of the cue by dragging the appropriate level slider displayed in the cue panels. However, you may have a couple of cues playing simultaneously and/or using more than a single output and you want to adjust the overall level of these playing cues, especially during rehearsals. Using the Master Fader may not be desirable as that would affect non-playing cues as well.

There are two keyboard assignments that can be used to simultaneously adjust the levels of all outputs of all playing cues. The defaults for these keyboard assignments are:

Decrease Levels Of Playing Cues: Shift+F11

Increase Levels Of Playing Cues: Shift+F12

If you prefer to use different keyboard assignments then you can set different assignments under Options - Shortcuts. However, it is recommended that you do not use letters, numbers of symbols because **these same shortcuts are also available in the Editor for adjusting the levels of all devices in Audio File Cues and Level Change Cues**. When you're using the Editor, the field currently in focus (ie where the cursor is positioned) may be a text field such as a Description, and if you were to assign a letter, number or symbol to one of these shortcuts then you would not be able to use that letter, number or symbol in the Description (or other text field).

When you use one of these shortcuts, the actual dB change in the level is as set in Options - Shortcuts against **dB Increment for Increase/Decrease Shortcuts** and can be in the range 0.1dB up to 1dB. The default is 0.3dB.

Using these defaults, if you press Shift+F11 then the levels of all outputs of all playing cues will be decreased by 0.3dB. Hold the key down if you want a larger decrease. Similarly Shift+F12 can be pressed to increase the levels 0.3dB. Such changes are regarded as manual changes so the **Save Settings** drop-down menu will be updated. This means you can make the adjustment permanent via the **Save Settings** menu.

A few important points to note:

- Adjustments will only be made to cues currently with a status of *Playing* or *Paused*, so cues that are *Fading In* or *Fading Out* will not be adjusted.
- Increases or decreases outside the dB range (-75dB up to 0dB) will be capped, *but* SCS will remember the number of key presses to note the indicated dB increase or decrease. Changing from one direction to the other (eg changing from increasing to decreasing) will calculate back from the latest remembered dB increase or decrease. That may all seem complicated so an example should help explain the reasoning behind this. Suppose you set the dB Increment to 1dB, have 2 playing sounds that have respective levels of sound1: -7dB, sound2: -4dB, and you want to increase the levels. Using the Shift+F12 key to increase the levels, you will get:
    - Initial playing sounds: sound1: -7dB, sound2: -4dB
    - 1st key increase: sound1: -6dB, sound2: -3dB
    - 2nd key increase: sound1: -5dB, sound2: -2dB
    - 3rd key increase: sound1: -4dB, sound2: -1dB
    - 4th key increase: sound1: -3dB, sound2: 0dB
    - 5th key increase: sound1: -2dB, sound2: 0dB

    Then you decide the level is too high and want to take it down again. Using the "Shift+F11" key to decrease the levels, you will get:
    - 1st key decrease: sound1: -3dB, sound2: 0dB
    - 2nd key decrease: sound1: -4dB, sound2: -1dB
    - etc

    Note that the 1st key decrease did *not* decrease the level of sound2 (it stayed at 0dB) because SCS was reversing the sequence of the increases. So if you continue to decrease the levels this way then you get back to the original levels of sound1 and sound2, ie -7dB and -4dB respectively.
- SCS cancels the 'remembering' of the decreases (Shift+F11) and increases (Shift+F12) for an *Audio File* cue if a *Level Change* cue that affects the *Audio File* cue is activated, or if you make a separate manual adjustment to the cue's level by dragging the level slider.
- The history is cleared on saving the settings (eg by Shift+F10).

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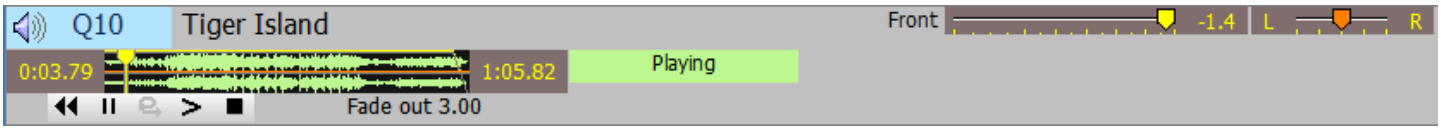
Cue Panels

The Cue Panels on the Main Window by default show details of the next few cues or sub-cues, starting with any currently playing cues. A scroll bar to the right enables you to scroll through to other cues, but note that completed cues are not displayed in the cue panels, so you cannot scroll to a completed cue. Also, hot key cues are only displayed in the cue panels when they are playing, so you cannot scroll to a hot key cue.

The information displayed in a cue panel depends on the sub-cue type.

Audio File Sub-Cues and Common Fields



Cue Number (Q10): This shows the label or number of the cue, sub-cue, or playlist track number. As previously mentioned you can use the cue panel's scroll bar to scroll through the cues. If you wish to jump to (or "go to") a cue then you can click on that cue in the cue list in the upper part of the Main Window. If the Cue Number is followed by // (eg Q1 //) then this indicates that gapless playback will be implemented for this cue. See Gapless Playback for more information.

Description (Tiger Island): **This is the description of the Sub-Cue, *not the description of the Cue*.** For cues with only one sub-cue the cue and sub-cue descriptions will be the same unless you have changed one or the other. The Description for an audio file sub-cue is initially derived from the 'Title' property in the file header if available, otherwise the Description is initially set to the name of the file without the extension.

If the cue's **Page** property is set then this will be displayed before the **Description**, eg 'p25 Tiger Island'.

Progress Slider: This slider shows the current position in the audio file, or the selected portion of the audio file. You can drag the pointer to any position either before or during playback.*

The audio graph will not be displayed if the file's duration is greater than the Editing Option Max. File Length for Audio Graph File Scan. This also applies to the audio graphs displayed for other cue types.

For Audio File Cues only (not Playlist Cues etc), superimposed over the **Progress Slider** may be displayed yellow lines showing the playback levels of the device(s), and orange lines showing the pan settings. The level curve is scaled so that the highest level of the curve touches the top of the progress slider. You can control which type of curves you want displayed (or none at all) by selecting options under Display Options.

Level and Pan Controls: These controls display the current or required level and pan for each device used by this sub-cue. The pan control is only displayed for 2-channel (stereo) output devices. You can manually adjust the level and/or pan by dragging the pointer.* When you make a manual adjustment to the level or pan, you will be able to save the new level or pan by selecting the appropriate menu item from the **Save Settings** button in the toolbar, *unless* a Level Change sub-cue has affected this sub-cue.

Transport Controls: The transport controls can be used to manually start, stop, pause, rewind, fade-out or loop-release the cue. Most of the buttons are common to multi-media players, but there are two SCS specific buttons:

Fade Out: If the cue or sub-cue has a Fade-Out time specified then clicking this button will commence the fade out.

Loop Release: If the cue or sub-cue contains a loop then clicking this button will cause the loop to be released, which means SCS will ignore the 'Loop End' point when it is next reached, and will keep playing up to the 'End At' point (or to the end of the file if no 'End At' has been specified).

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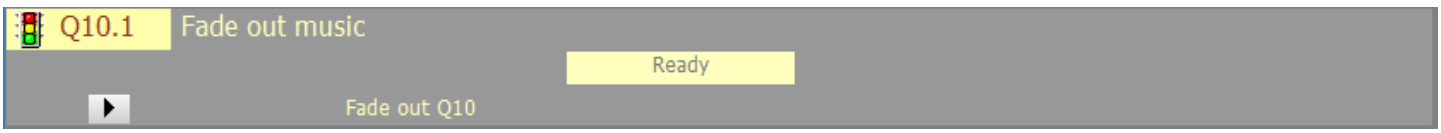
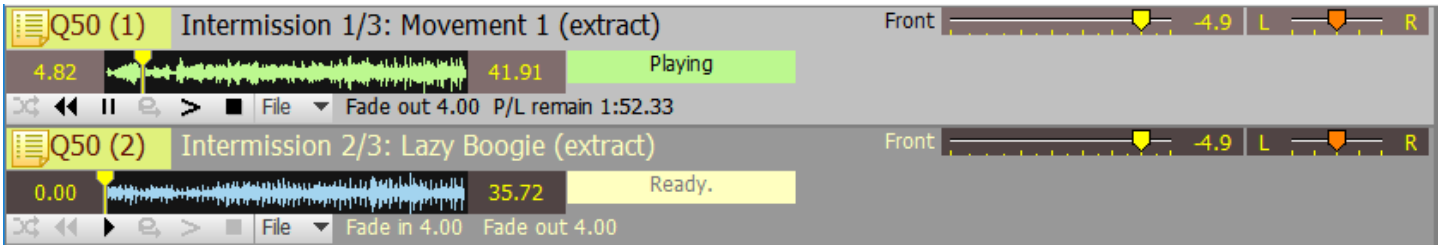
* If you want to make fine adjustments to a slider, left-click the slider and then use the left-arrow and right-arrow keys as required. On left-clicking the slider, the background color is changed to your Windows color scheme's "Selected Items" color. This indicates that the slider is "selected" and that using the left-arrow or right-arrow keys will affect this slider. When you click elsewhere the slider will no longer be "selected" and the background color will revert to the standard color for sliders.

SFR (Stop/Fade/Release) Sub-Cues



Transport control: The **Play** button is displayed for SFR sub-cues and some other non-media cue types to provide a button to activate the sub-cue. So if you click the Play button on an SFR sub-cue it will activate the SFR sub-cue.

Playlist Sub-Cues



With Playlist sub-cues, cue panels are displayed for up to two tracks. These will be for the track currently playing or ready for playing, and for the next track to be played.

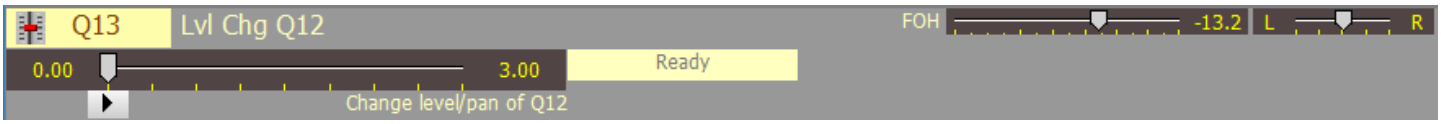
Transport Controls: The **Shuffle** button is enabled provided the "Random Play" property has been selected for this playlist. You can only use the button prior to starting the playlist as the effect is to shuffle the play order. The button is therefore (a) only enabled on the cue panel for the first track to be played, and (b) is disabled when the sub-cue is started.

Transport Control Selector: The drop-down list showing "File" alongside the transport controls primarily enables you to stop or fade-out the whole playlist. To do this, change the drop-down list to "Cue" or "Sub-Cue" and then click the required button (probably stop or fade-out). When this selector is set to "File", which is the default for playlist tracks, then the transport controls act only on the currently playing track. Stopping or fading-out a track causes the playlist to move on to the next track to be played, if any.

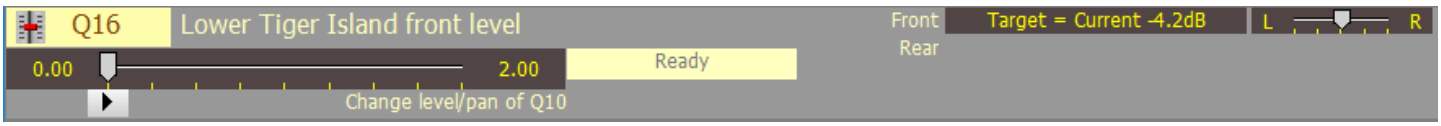
The **Transport Control Selector** is also displayed in the cue panel for any cue that has multiple sub-cues. The default setting for sub-cue types other than playlist is "Sub-Cue", but by selecting "Cue" you can, for example, stop all the sub-cues in the current cue just by clicking the Stop transport control button.

Level Change Sub-Cues

There are two types of Level Change: Absolute and Relative. An **Absolute Level Change** will displayed as shown below, where the level of Q12 is be changed to -13.2dB over 3 seconds.



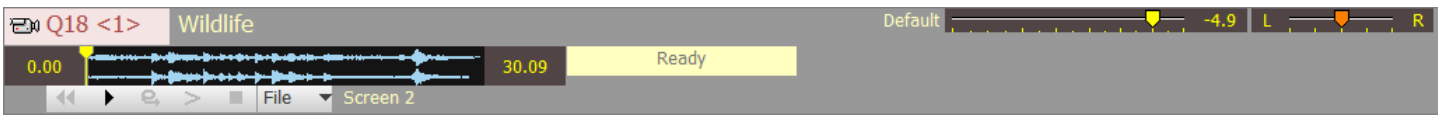
A **Relative Level Change** will be displayed as shown below, where the 'Front' level of Q10 is to be increased by 6dB over 2 seconds. In this example, no change is to be made to the 'Rear' level.



Transport control: If you click the Play button on an Level Change sub-cue it will activate the Level Change.

See also Level Envelopes.

Video/Image Sub-Cues



Video/Image sub-cues are like 'slide shows' with possibly many images and/or videos. Cue panels are displayed for up to two items. These will be for the item currently playing or ready for playing, and for the next item to be played. The level and pan sliders are only displayed for videos, not for still images.

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Cue and Sub-Cue Descriptions

This section explains the difference between **Cue Descriptions** and **Sub-Cue Descriptions**.

In SCS 11 every cue is made up of one or more sub-cues, and there is a 'Description' field for the cue and also an equivalent field for each sub-cue. Having these two Description fields (cue and sub-cue) enables you to 'describe' each cue and also each sub-cue, which is particularly useful for cues with multiple sub-cues.

The Description for an audio file sub-cue is initially derived from the 'Title' property in the file header if available, otherwise the Description is initially set to the name of the file without the extension. Note: you can force SCS to ignore the title and always use the file name by setting the Editing Option 'Ignore file title tags when setting default descriptions'.

On the Main Window SCS shows:

- **one line per cue in the cue list** in the upper part of screen.
- **every sub-cue in the display panels** in the lower part of the screen.

Consequently, the **cue description** is shown in the cue list, but the **sub-cue description** is shown in the display panel.

SCS keeps a note of which descriptions are set to their default values, and when editing will propagate the description of the first sub-cue up to the cue unless you have manually altered the cue description.

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Keyboard Shortcuts

Some features only available with **SCS-Standard** and/or higher license levels.

Various SCS commands are available using the keyboard. Most of these are configurable - see Options and Settings - Shortcuts for details. The table below explains just *some* the keyboard shortcuts, assuming the default keyboard assignments.

Tip: Key presses are sent by Windows to the program window that currently has focus (if any). So if you've accessed another program or system pop-up and then closed that program or pop-up, focus will *not necessarily* be reset to the SCS main window. If you don't realize that when you next press a key for SCS (eg the space bar to start a cue, or a hot key), then SCS does nothing because it didn't receive the keypress event from Windows.

To warn you about this, **SCS displays a warning in the status line of the main window if the main window loses focus.** SCS checks every 5 seconds (sometimes more often) to see if the main window has focus, and if not then a warning message is displayed in the status line. Just **left-click** on the warning message to re-establish focus on that window.

This is primarily to assist you during performances. Checking for focus every 5 seconds is canceled if you use the Editor or the Options screen. Checking for focus is reinstated the next time you start SCS.

Default Key	Function	Explanation
General commands		
Space	'Go' Button	Start the next cue
Esc	Stop All	'Panic button' - stops all cues immediately.
Shift + Esc	Fade All	Similar to Stop All but fades out cues rather then stopping them immediately. The default fade time is 1 second, but that can be changed in General Options.
Ctrl + U	Pause/Resume All	Pauses (or Resumes) all playing cues.
Master Fader		
Num Pad Add	Master Fader Up	Increase the overall level.
Num Pad Subtract	Master Fader Down	Decrease the overall level.
Num Pad Multiple	Master Fader Reset	Reset the Master Fader to the original level (shown by the white pointer).
Shift + Num Pad Subtract	Master Fader Mute	Mute/Unmute all outputs.
Change Levels Of Playing Cues		
Shift + F11	Decrease levels of playing cues.	
Shift + F12	Increase levels of playing cues.	
Ctrl + F11	Decrease level of last playing cue (no action if the last playing cue has completed)	
Ctrl + F12	Increase level of last playing cue (no action if the last playing cue has completed)	
Save Settings		
Shift + F10	Save Settings (all Cues)	Equivalent of the 'Save Settings' menu item 'Save Level/Pan for all above Cues'.
Cue List Navigation		
Up Arrow	Cue List Up One Row	Go up one row in the cue list. Note that this is not necessarily the same as the 'Go Back' navigation item, as 'Go Back' will go back to the previous manual-start cue.
Down Arrow	Cue List Down One Row	Go down one row in the cue list. Note that this is not necessarily the same as the 'Go To Next' navigation item, as 'Go To Next' will go to the next manual-start cue.
Page Up	Cue List Up One Page	Go up one page in the cue list.
Page Down	Cue List Down One Page	Go down one page in the cue list.
Home	Cue List Top	Go to the top of the cue list, ie to the first cue.

End	Cue List End	Go to the 'End' line of the cue list.
Ctrl + Left Arrow	Previous Image	These two shortcuts are designed to allow you to easily step backwards and forwards thru a slideshow, especially where you have image cues set to 'continuous play', where the whole display of the slideshow is manually controlled. If an image cue is being displayed when you use 'next image' or 'previous image', then SCS will reposition the cue list at the next or previous cue *and* play that cue. If an image cue is *not* being displayed when you use 'next image' or 'previous image', then SCS will reposition the cue list at the next or previous cue, but will *not* start that cue. Although these shortcuts are designed for Image Cues, they work on all cue types. Please note that currently these commands work at the cue-level, not the sub-cue level. So if you have multiple image sub-cues in a cue then using one of these functions will *not* go to the next or previous sub-cue but to the next or previous cue.
Ctrl + Right Arrow	Next Image	
Other commands		
Ctrl + Shift + A	Favorite File #1	Open file #1 in your Favorite Files list. Subsequent keys open subsequent Favorite Files, eg *Ctrl* + *Shift* + *B* will open Favorite File #2.
Ctrl + Shift + F1	Hotkey Bank 1	Select Hotkey Bank 1. Subsequent keys select subsequent Hotkey Banks, eg *Ctrl* + *Shift* + *F2* selects Hotkey Bank 2. Note that there is no shortcut key to de-select the current Hotkey Bank, ie no shortcut key to select Hotkey Bank 0. Also, note that *Ctrl* + *Shift* + *F10* will not work as this is used by Windows.
Ctrl + 9	Skip to previous cue marker	These two shortcuts can be used both in the Main Window and in the Editor to skip backwards and forwards through cue markers or cue points in Audio File Cues. For more information on these shortcuts, see the relevant 'tip' under Audio File Cue Points and Markers. Note that the 9 and 0 (zero) in these defaults keys apply to the keys in the main part of keyboard, not to those on the numeric pad.
Ctrl + 0	Skip to next cue marker	
Editor Transport Controls		
F4	Rewind	
F5	Play/Pause	
F6	Stop	
F7	Add an SCS Cue Marker	Not really a 'transport control', but pressing F7 while playing an Audio File Cue in the Editor will add an SCS Cue Marker at the current position. See SCS Cue Markers for more info.

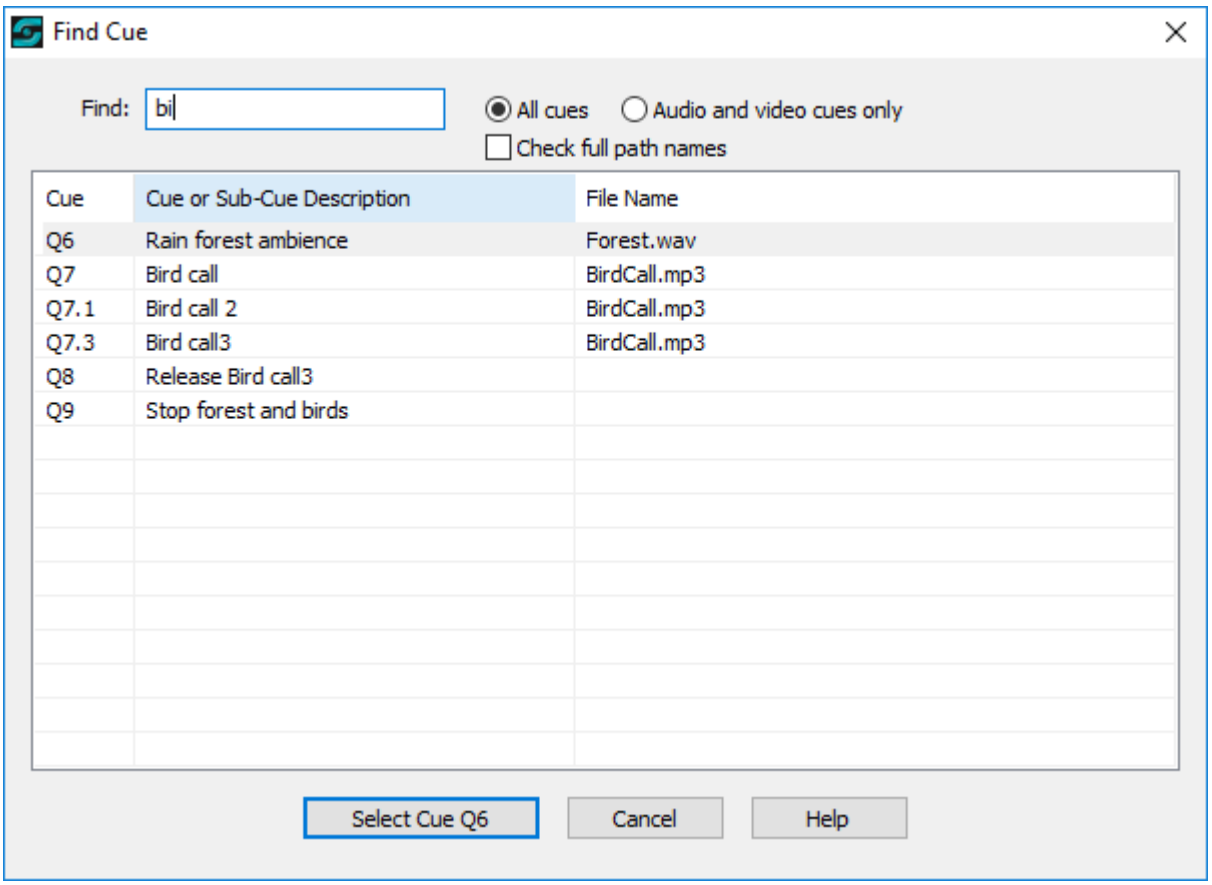
Back to The Main Window

Find Cue

Overview

This screen enables you to find a cue in your current cue list by searching for a nominated string. The **Find Cue** function can be accessed either from the main window or from the Editor. In the main window, 'Find' is an option under the 'Navigate' button, or you can simply press Ctrl/F, provided you haven't assigned Ctrl/F to a keyboard shortcut. In the Editor you can click the magnifying glass in the Editor Sidebar, or just press Ctrl/F.

Example:



In this example, based on the supplied demo cue file, the user has enter "bi" and SCS has found six cues that contain "bi". As each character is typed in (or removed), the list is refreshed. So if the user then entered "r" making the find field "bir", Q6 would be removed from the list immediately.

Controls and Fields

Find: Enter some characters you want to search for. SCS will search for this text in cue labels, page numbers, MIDI/DMX cue labels, cue and sub-cue descriptions, filenames, and in hot key labels. Case is ignored when searching.

All cues and **Audio and video cues only**: If **All cues** is selected (default) then all cue types are included in the search. If **Audio and video cues only** is selected then the search will include Audio File Cues, Playlist Cues and Video/Image Cues, but other cue types will be ignored.

Check full path names: By default this checkbox is clear, meaning that file path names are ignored when searching. However, by selecting this checkbox the full path names will be included in the search. This is useful if you want to locate cues for any files on a network drive, eg by searching for "k:" if the network drive you are looking for is drive K.

Select Cue: The caption of this button indicates which cue will be selected, and defaults to the first cue that matches the search criteria. In the above example, if you click on, say, Q7.1 in the search results then the caption of this button will change to **Select Cue Q7.1**. The action that occurs on clicking the **Select Cue** button depends on whether you came to the Find window from the main screen or from the Editor. If from the main screen then SCS will 'Go To' the selected cue, which is the same as clicking on that cue in the main cue list. If you came to the Find window from the Editor then clicking this button will select that cue in the Editor. Note that although the search results may show more than one entry for some cues, the **Select Cue** button always takes you to the cue, not to a sub-cue.

> **Tip:** Double-click the cue in the search results to quickly select that cue. For example, if the Find window was called from the main screen, then in the above example double-clicking Q7.3 would immediately go to Q7.3 in the main cue list.

Cancel: Click **Cancel** to close this window, without selecting a cue.

Help: Displays this Help.

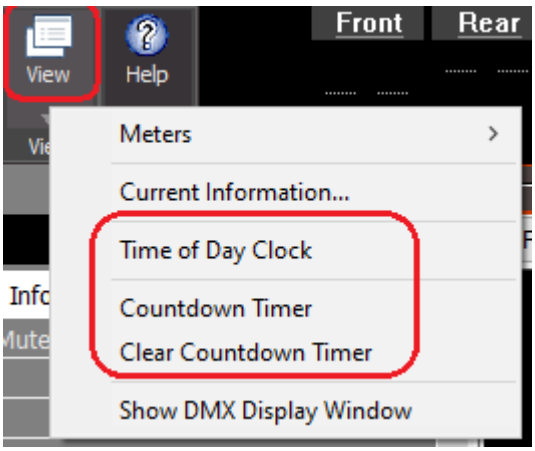
Clock Timers

Clock Timers are available with all license levels.

Overview

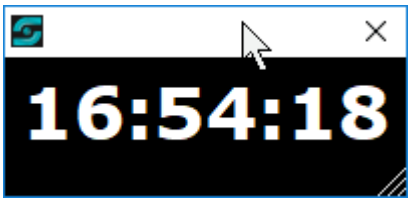
Clock Timers allow you to view the current time on a small sizeable window. You can also set an event start time and count down to this time. Separate timer windows are available for these two features. You can resize these windows using the resize handle in the lower right corner, and you can drag the windows to any position.

The "Time of Day Clock" and the "Countdown Timer" are both found under the "View" menu option on the main screen.



Time of Day Clock

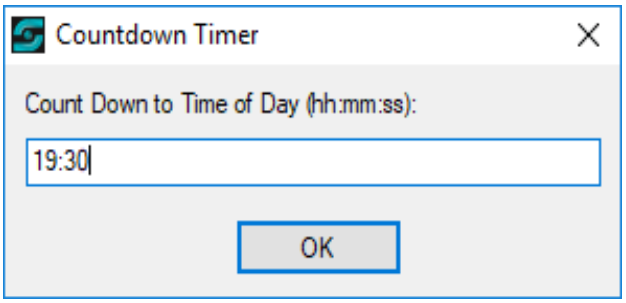
Here is an example of the "Time of Day Clock":



NOTE: This clock is displayed in 24 Hour mode only.

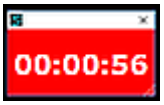
Countdown Timer

The "Countdown Timer" is for counting down to a nominated time-of-day, eg the start time of your show. For example, if your show is scheduled to start at 7:30pm then you can set the Countdown Timer as shown below:



When the "Countdown Timer" is set the display will show a small sizeable window with the time counting down to zero.

As the "Countdown Timer" approaches zero and falls below 60 seconds, the timer will then flash RED/BLACK to highlight the timer is coming to an end.



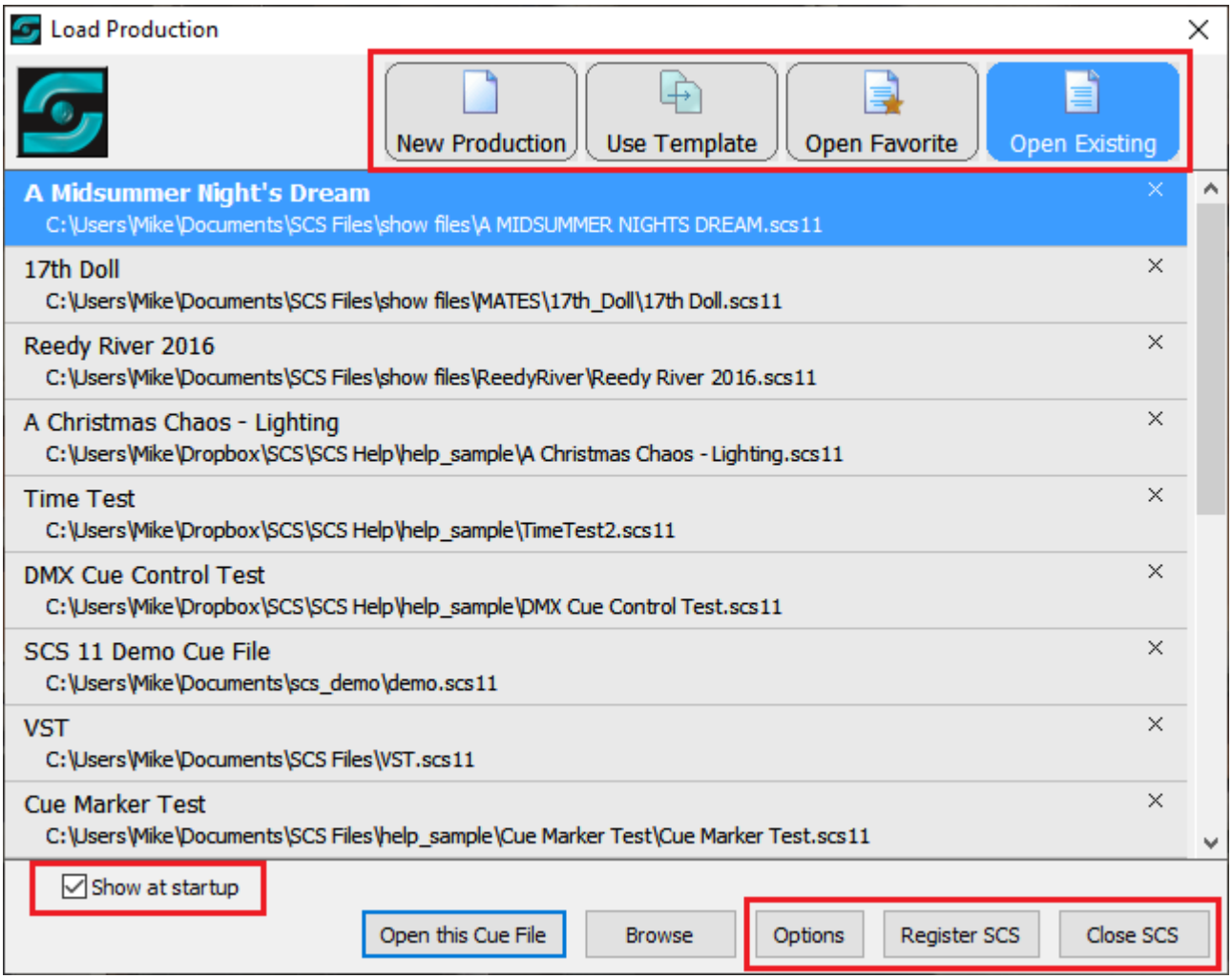
When the "Countdown Timer" reaches zero the window will turn GREEN and hold for a period of 5 seconds before vanishing.

00:00:00

The 'Load Production' Window

Overview

The 'Load Production' window provides a number of ways in which you can open an existing production or create a new production. The window is initially displayed with the **Open Existing** option selected.



Options

New Production: This option is designed for creating a new production from scratch. See New Production for details.

Use Template: This option enables you to create a new production based on a template. You can also use this to *manage* your Templates, such as by creating a new template based on the currently-open cue file. See Use Template for details.

Open Favorite: This option enables you to open a cue file you have listed in your 'Favorites'. You can also use this to *manage* your Favorites list, such as by adding the currently-open cue file to your Favorites. See Open Favorite for details.

Open Existing: This option enables you to open a recently-opened or any other SCS cue file. See Open Existing for details.

Common Controls

Show at startup: By default, this **Load Production** window is displayed on starting SCS. However, you may want to skip this step and have SCS automatically open the last-used cue file each time you start the program. This is useful when you are in live production or even during rehearsals for a production, where you always want SCS to open the last-used cue file. It is also relevant if you are using SCS in an environment where SCS is automatically started on booting up the computer, such as for controlling audio and videos in Museum exhibits. To prevent SCS displaying the **Load Production** window on startup, clear the **Show at startup** checkbox. You can always reinstate this option if required by selecting this checkbox after displaying the window from the *Load* toolbar button in the Main Window.

Options: This button enables you to access the Options screen before opening any cue file.

Register SCS: This will open the SCS Registration window. If you have upgraded your license (eg from Standard to Professional) this is where you will enter your new Authorization String. If you have the demo version of the program then to register the program you need to purchase an SCS license online at our Purchases web page, or through one

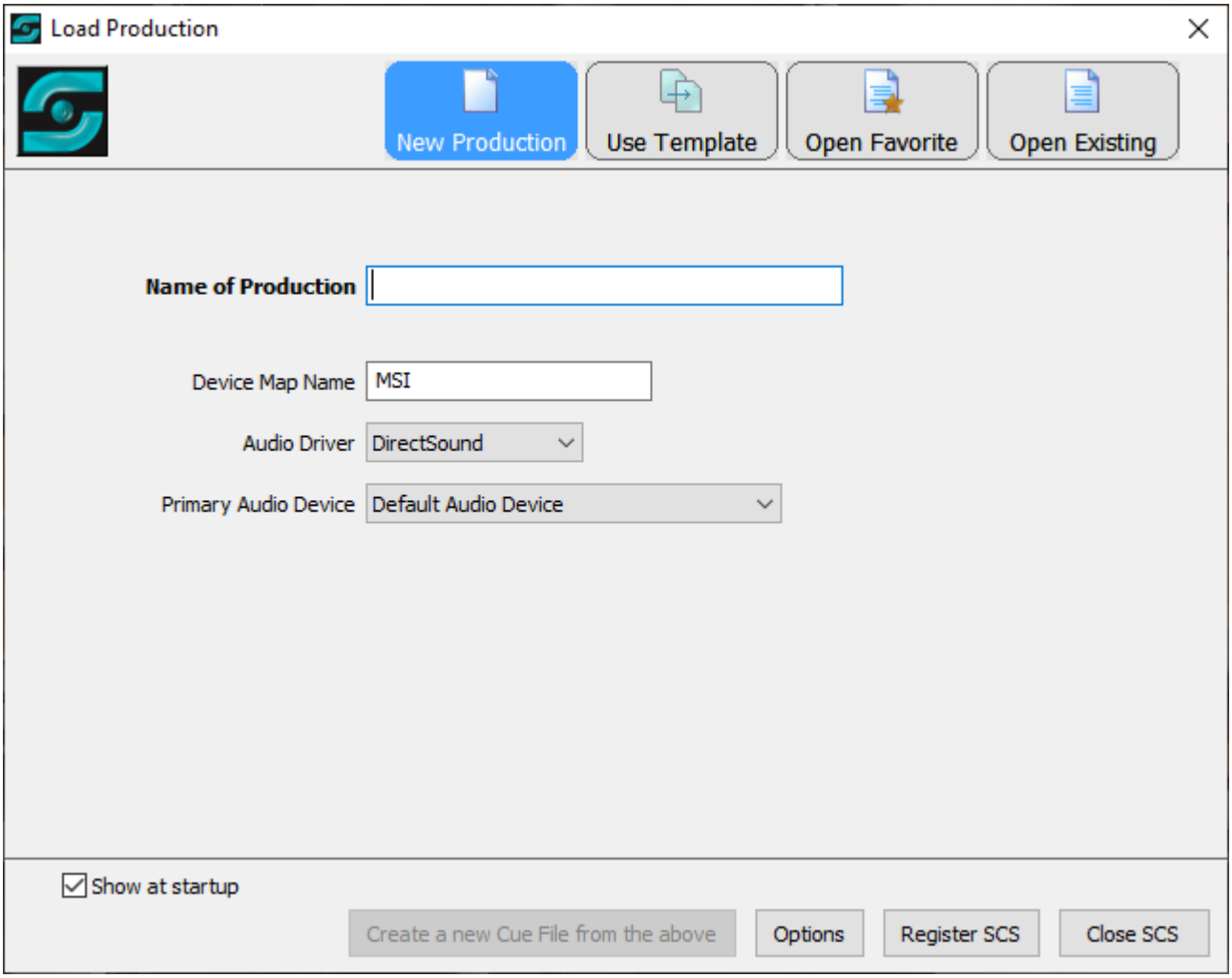
of the Agents listed on that page.

Close SCS (or **Cancel**): Click this button to close this window without taking any action. If this window is displayed on starting SCS then the text will be **Close SCS**, but if the window has been displayed after selecting the *Load* toolbar button in the Main Window then the text will be **Cancel**.

New Production

Overview

The **New Production** option of the *Load Production* window is designed for creating a production from scratch.



Controls and Fields

Name of Production: This populates the *Name of Production* property as displayed and maintained in Production Properties - General.

The next three fields may be left with their default values if required.

Device Map Name: A 'Device Map' will be created for the production and will contain computer-specific details, such as which physical devices are to be used for which audio outputs. You can have more than one 'device map' for a production, which is useful if you sometimes have an external audio interface connected and want to use that, but otherwise to just use the built-in audio interface. When a new production is created, just one device map is initially included, and the name of that device map is, by default, the computer name (since device maps are computer-specific). However, if you would rather use a different device map name (such as a name that indicates the equipment configuration) then you can set that here. SCS remembers the setting in this and the following two fields, so the next time you use the **New Production** option the window will be pre-populated with the last-used settings. See Device Maps for more info.

Audio Driver: This selects and populates the *Audio Driver* Device Map property as displayed and maintained in Production Properties - Audio Output Devices.

Primary Audio Device: The new production will be created with a single Audio Output Device named 'Front'. The **Primary Audio Device** combobox allows you to select the physical device to be mapped to 'Front'. If you select *Default Audio Device* then SCS will assign the Windows default sound device. This is the default setting and is useful if you want to use the Windows default device, even if that changes as you connect or disconnect external devices. (Note: *Default Sound Device* is not available if the **Audio Driver** is *ASIO*.)

Show at startup: See the description of this checkbox under Load Production Window.

Create a new Cue File from the above: This button will be enabled when you have entered the **Name of**

Production. Click the button to create a new cue file and associated device map using the information supplied in this window. The *Load Production* window will be closed, the *Main Window* will be displayed for this new production, and the *Editor* window will be opened. **Note**: The 'new cue file' is initially just an internal cue file image - it is not saved to disk or other medium until you save it from the Main Window or the Editor.

Close SCS (or **Cancel**): See the description of this button under Load Production Window.

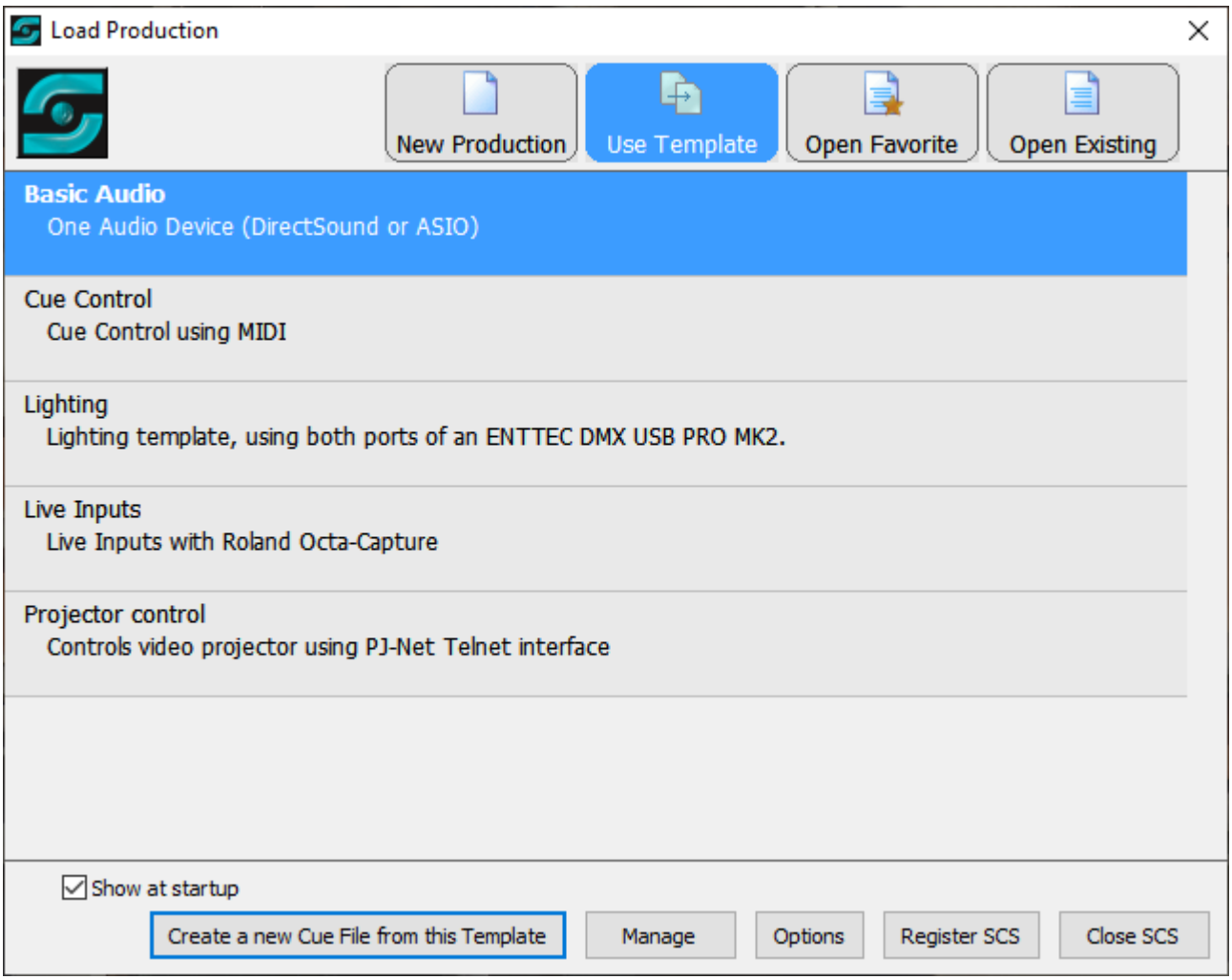
Tip: The **New Production** option provides an easy way to set up cue files for events such as drama or vocal festivals, when visiting groups or individuals may arrive with their cues or backing tracks on a USB drive. For example, a group named *Downtown Players* turns up with a dozen or so audio files on a USB stick - and hopefully a copy of their script. Just select **New Production**, enter *Downtown Players* against **Name of Production** and click **Create a new Cue File from the above**. Plug in the USB stick and allow Windows File Explorer to display the files on that drive. Now select and drag each required file from the drive to the SCS Editor (in the Editor Cue List). The files should preferably be selected and dragged in the order required for the production to save having to subsequently re-order the cues in SCS. See Drag and Drop for more info.

Note that if the above is carried out immediately before the group or individual performs, then it is not necessary to save the cue file - although you obviously would if there was to be another performance later. If you are going to save the production and want to remove the USB stick, then you should first of all Collect your production files to allow SCS to copy the files from the USB stick to the hard drive (or other permanent drive).

Use Template

Overview

Templates are designed to allow you to create cue files using cues and (especially) **devices** that you want to use for many productions. See Templates for more information. The **Use Template** option of the *Load Production* window is designed for creating a new production based on a template you have previously created. Templates you have created will be displayed with the **Template Name** and **Description**.



Controls

Show at startup: See the description of this checkbox under Load Production Window.

Create a new Cue File from this Template: Click this button to create a new cue file and associated device map based on the currently-selected (highlighted) template. The *Load Production* window will be closed and the Main Window will be displayed for this new production. **Note**: The 'new cue file' is initially just an internal cue file image - it is not saved to disk or other medium until you save it from the Main Window or the Editor.

Manage: This will open the Templates window to allow you to create and manage your templates.

Close SCS (or **Cancel**): See the description of this button under Load Production Window.

Templates

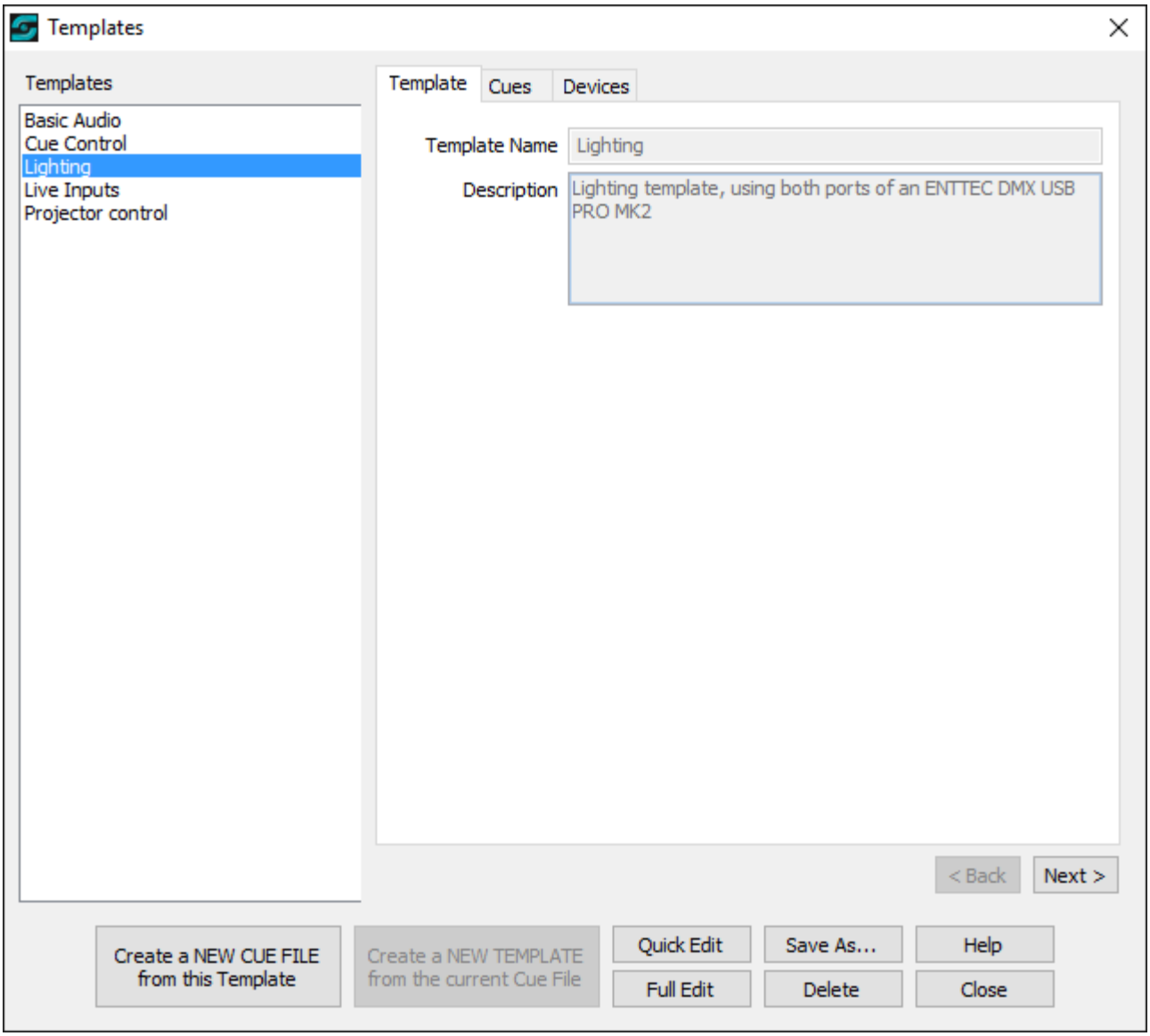
Overview

Templates are designed to allow you to create cue files using cues and (especially) **devices** that you want to use for many productions. For example, a template may be set up with audio devices Front, Rear, USL and USR, using ASIO as the audio driver, and nominated ASIO device channels for each of the devices Front, Rear, USL and USR. If this is a combination that you frequently use (or start from) then by creating a cue file and device map file base on this template will significantly simplify the initial build of new production files.

You can include **cues** in templates, such as hotkeys for fading out all playing cues, lighting blackouts, theatre logo images, etc, or other commonly-used cues.

When you create a cue file based on a template, the new cue file is initially just a snapshot of the template. The cue file DOES NOT retain any link with that template, so if the template is subsequently changed or deleted then that has no effect on any cue file developed from that template.

The **Templates** window will look something like this:



Controls and Fields

Templates: This list shows your Templates. Click on an entry in this list to see more details or to select the template for actioning one of the buttons at the foot of the window.

Panel Control (Template / Cues / Devices): The **Template** tab displays the **Template Name** and **Description**. These can be easily modified after clicking *Quick Edit*. The **Cues** tab displays a list of any cues included in the selected Template. Note that a template does not have to include cues - it's quite normal to have a template that just defines devices. The **Devices** tab contains two lists: the first list shows the included devices (eg 'Audio Output: Front') and the second list shows the included device maps.

Create a NEW CUE FILE from this Template: Click this button to create a new cue file and associated device map

based on the currently-selected (highlighted) template. The *Templates* window will be closed and the Main Window will be displayed for this new production. **Note**: The 'new cue file' is initially just an internal cue file image - it is not saved to disk or other medium until you save it from the Main Window or the Editor.

Create a NEW TEMPLATE FILE from the current Cue File: This is what you will use to create a new template. You will initially shown a dialog that asks you to enter a **Template Name** for the new Template. (See more info below about **Template Names**.) Having entered a valid new Template Name the Template is then built directly from the cue file, including all the cues, devices and device maps. The Template information is displayed in the *Quick Edit* mode so you can easily exclude any cues, devices or device maps that you do not wish to be included in the Template, as well as entering a **Description** for the Template.

Quick Edit: This button enables the Template fields, so you can change the **Template Name** or **Description**, and choose to exclude selected cues, devices or device maps. Use the checkboxes to mark items for inclusion or exclusion. Initially, all items are checked for inclusion. Note that in Quick Edit you cannot *add* cues, devices or device maps. For that you need to use **Full Edit**. When **Quick Edit** is activated, two new buttons will be displayed: **Save** and **Discard**. Click **Save** to save any changes you have made or to save a new template. Click **Discard** to discard any changes you have made or to discard a new template.

Full Edit: Use **Full Edit** if you need to do editing that cannot be done using **Quick Edit**. **Full Edit** will close any currently-open cue file (you'll get a warning with an option to cancel!) and the template will be opened and may be viewed and edited just like any cue file. You can add cues, devices, etc, and you can also play cues, etc, At the foot of the *Main Window* a message will be displayed advising that a template is being edited, and displaying a **Close Template** button. The message (but not the button) is also displayed in the *Editor*. Some Editor functions are not available while you are using Full Edit of a template.

Save As: This enables you to make a copy of the current template, with a different Template Name. You will be prompted for the **New Template Name**. You can then edit your new template as required..

Delete: Use this button to delete the currently-selected Template. Note that this will *not* affect any cue files that were initially created using this template as cue files do not retain any links to templates.

Help: Displays this Help page.

Close: Closes the Templates window. If there are unsaved changes then you will asked if you want to save the changes.

Template Names and Template Storage

Unlike SCS Cue Files, templates are stored as files with the Template Name as the basic part of the filename. For example, the template "Basic Audio" (see above screenshot) is stored in a file named "Basic Audio.scstm", and associated device maps are stored in a file named "Basic Audio.scstd". There may also be an associated database file, named "Basic Audio.scsdb".

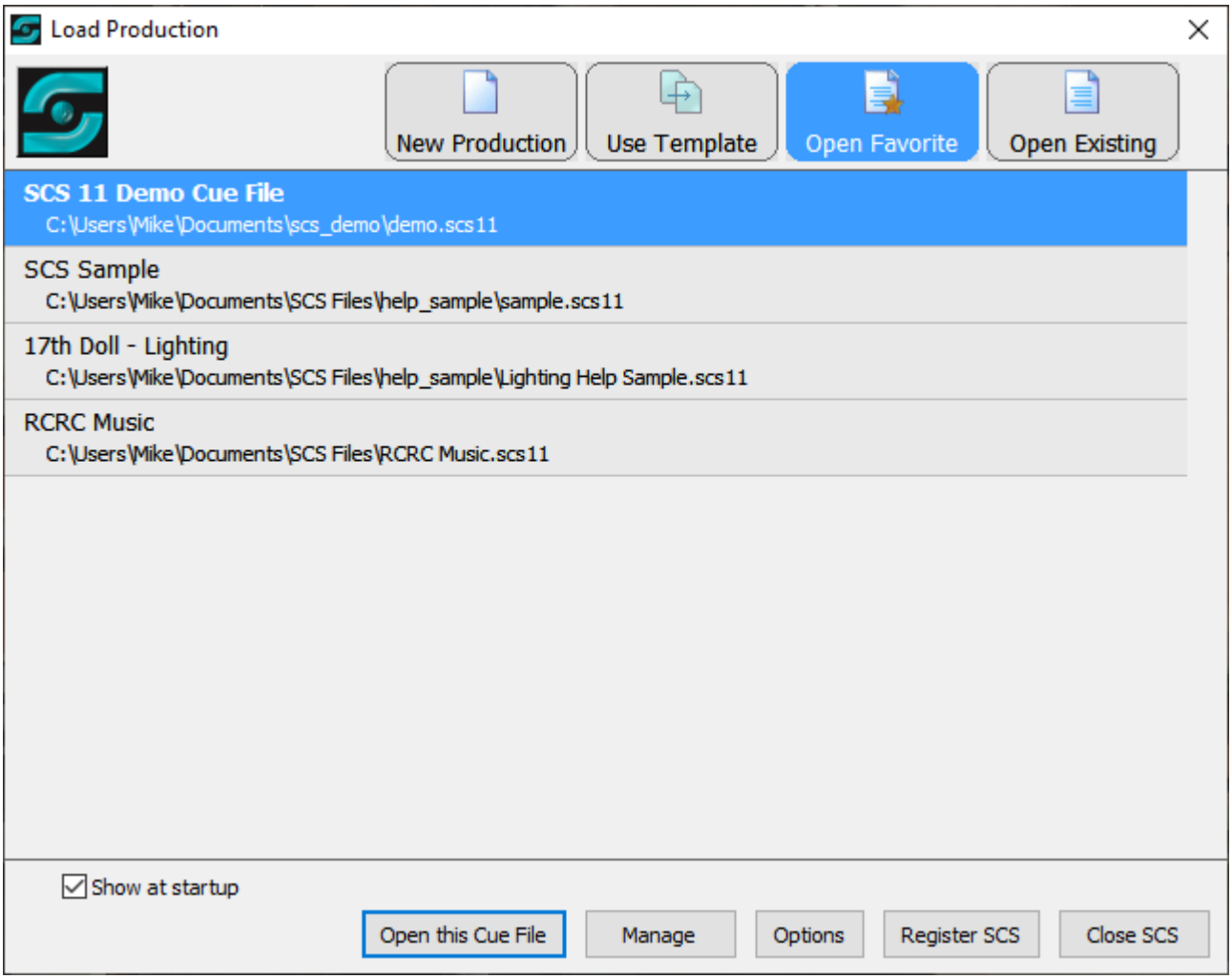
Template Names must therefore not contain any characters that are unacceptable in filenames (such as / and \). SCS checks Template Names using a standard 'validate filename' function. SCS also checks that you do not duplicate Template Names, ignoring case when checking for duplicates (since Windows ignores case in filenames).

Templates are stored in a Templates folder in the SCS Application Data folder - see Special Folders. It is quite OK to copy this folder or files within this folder to the corresponding folder on another computer. However, note that template device maps (the .scstd files) may refer to devices not available on the target computer.

Open Favorite

Overview

Using **Open Favorite** you can open an SCS cue file that you have saved in your 'Favorites' list. You can also use this option to *manage* your Favorites list, such as by adding the currently-open cue file to your Favorites. The **Production Name** and **File Name** for each of your 'favorite' files is displayed, in the order specified in your Favorites list.



Controls

Show at startup: See the description of this checkbox under Load Production Window.

Open this Cue File: To open one of the listed files, click on that cue file (production) in the list and click **Open this Cue File**.

Manage: This will open the Favorite Cue Files window to allow you to manage your list of favorite files, such as to add files to the list, remove files from the list, or re-order the list.

Close SCS (or **Cancel**): See the description of this button under Load Production Window.

Favorite SCS Cue Files

Overview

If you have some SCS cue files that you use frequently, then you can keep them in your 'Favorite Cue Files' list. The feature has been included primarily for musicians who use SCS for backing tracks and show automation, but Favorites may be used for any SCS cue files.

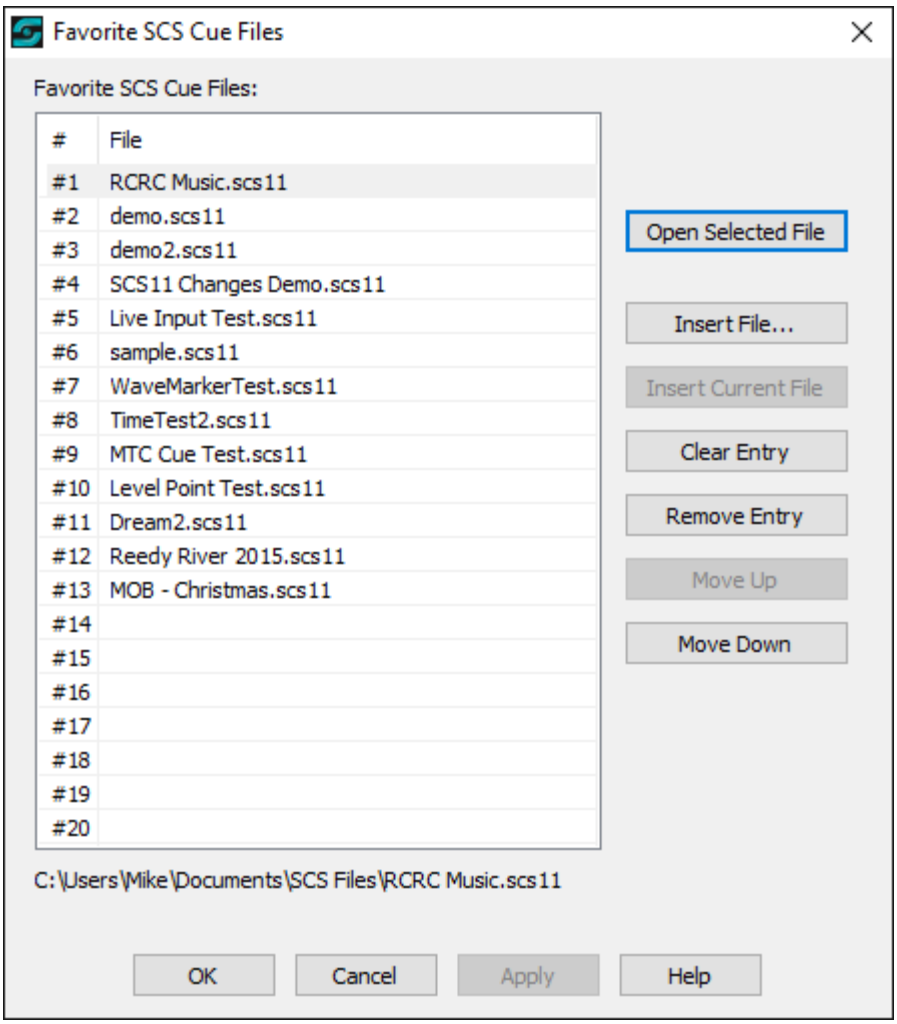
There are basically two uses of a 'Favorites' list:

- Your **Favorite Cue Files** may be 'show files' containing tracks for specific types and lengths of show. For example, you could have a show file for weddings, another show file for 1-hour gigs, another for 2-hour gigs, and so on. For this use of 'Favorites' you would open the required favorite cue file for the type of show or event you are performing at.
- Your **Favorite Cue Files** may be master cue lists containing cues you frequently want to import into other cue files. For example, if you are a musician or singer wanting to build a cue file for a particular show, then you could create an new cue file and import selected cues from a master cue list identified in your Favorites.

Favorite SCS Cue Files can be accessed from the **Open Favorite / Manage** option and button in the Load Production window, and from Import Cues from another SCS Cue File in the Editor. Up to 20 cue files may be recorded in your Favorites list.

A Favorite file may alternatively be opened directly from the main SCS window using a **keyboard command**. The keyboard command for opening 'Favorite File #1' is defined in Key Mapping, and the default is Ctrl/Shift/A. Subsequent keys open subsequent favorite files, eg Ctrl/Shift/B will open #2, Ctrl/Shift/C will open #3, and so on. You could use these keyboard assignments with the **pok** wireless remote control pedal board available from **X-Tempo** (www.xtempozone.com).

The **Favorite SCS Cue Files** window will look something like this:



'Favorite File' Actions

Favorite SCS Cue Files: This list shows your Favorite Files. Click on an entry in this list to see the full path name of the file, and/or to select the file for acting on with the buttons on the right.

Open Selected File: Opens the selected (highlighted) file. Any changes you have made to the Favorite Files list will be saved, and the Favorite Files window will be closed.

Insert File: Opens the Windows file bowser window to enable you to find an SCS Cue File that you want to add to your list of Favorites. The selected file will be inserted into the list *before* the highlighted entry, and the remainder of the list will be pushed down to accommodate the new entry. Note that this operation only adds a file to the Favorites list - it does not open the inserted cue file.

Insert Current File: Adds your currently open SCS Cue File to your list of Favorites. The file will be inserted into the list *before* the highlighted entry, and the remainder of the list will be pushed down to accommodate the new entry.

Clear Entry: This button removes the highlighted file from the list but just leaves the entry blank and does *not* compact the remainder of the list. This means that any following files in the list will retain their current Favorite File # (number) which may be important if you are using Shortcuts to open specific files.

Remove Entry: This button removes the highlighted file from the list and moves the remainder of the list up one row.

Saving your Favorites

Any changes you have made to **Favorite SCS Cue Files** will be saved when you click **Open Selected File**, **OK** or **Apply**. To cancel any changes, click the **Cancel** button.

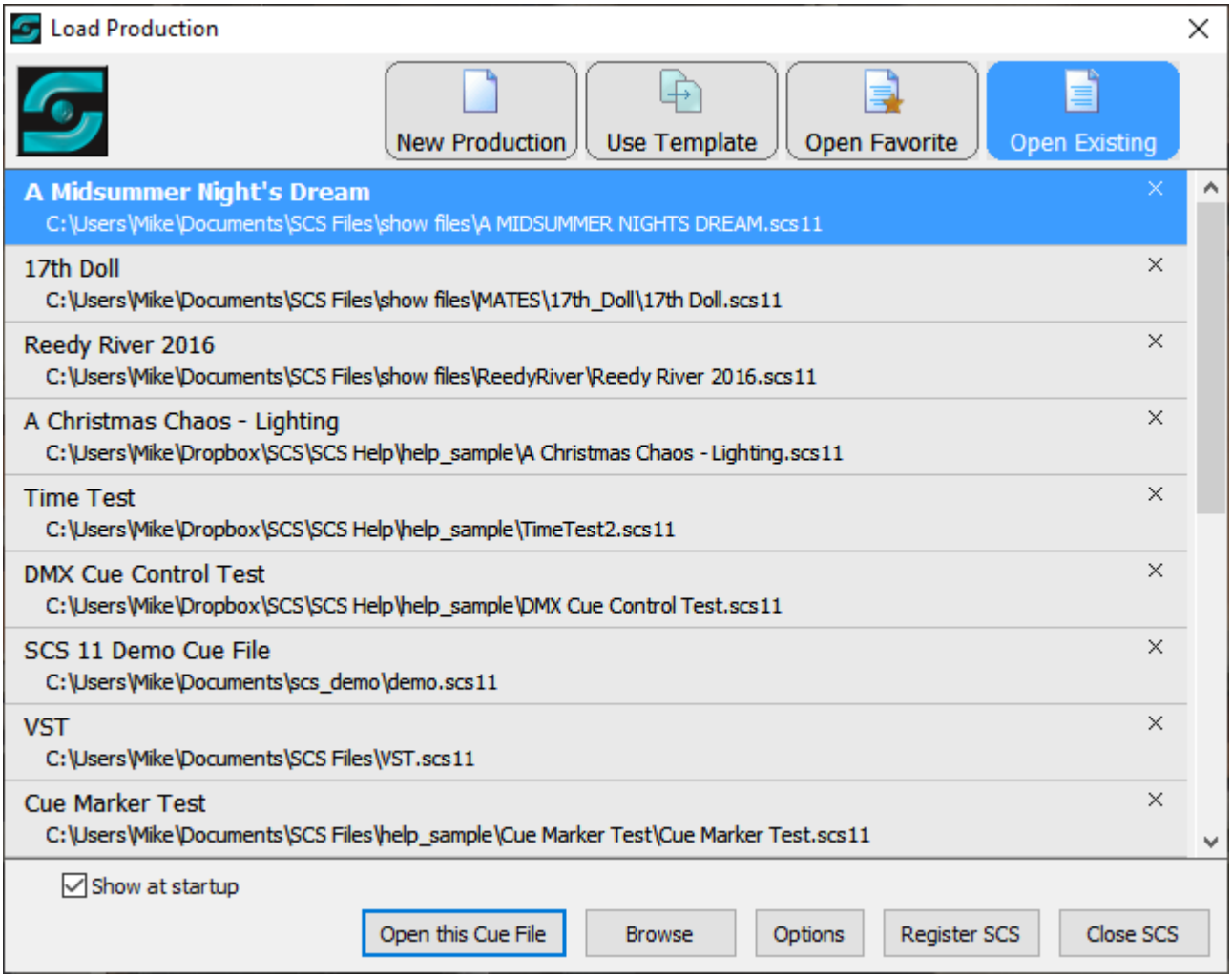
Your Favorite Files list is stored in a 'User Preferences' file so *is not* copied to other computers when you copy SCS Cue Files or Production Folders to other computers.

See also how **Favorite Files** can be opened from Keyboard Shortcuts or from Cue Control Devices - MIDI.

Open Existing

Overview

Using **Open Existing** you can open any available SCS cue file. The window shows recently-used cue files. The **Production Name** and **File Name** for each of these files is displayed.



Controls

Show at startup: See the description of this checkbox under Load Production Window.

Open this Cue File: To open one of the listed files, click on that cue file (production) in the list and click **Open this Cue File**.

Browse: To locate and open an existing cue file that is not displayed in the list, click the **Browse** button. This will open a standard Windows *Open File* dialog to allow you to search for and open any avilable SCS Cue File.

Close SCS (or **Cancel**): See the description of this button under Load Production Window.

VST Plugins

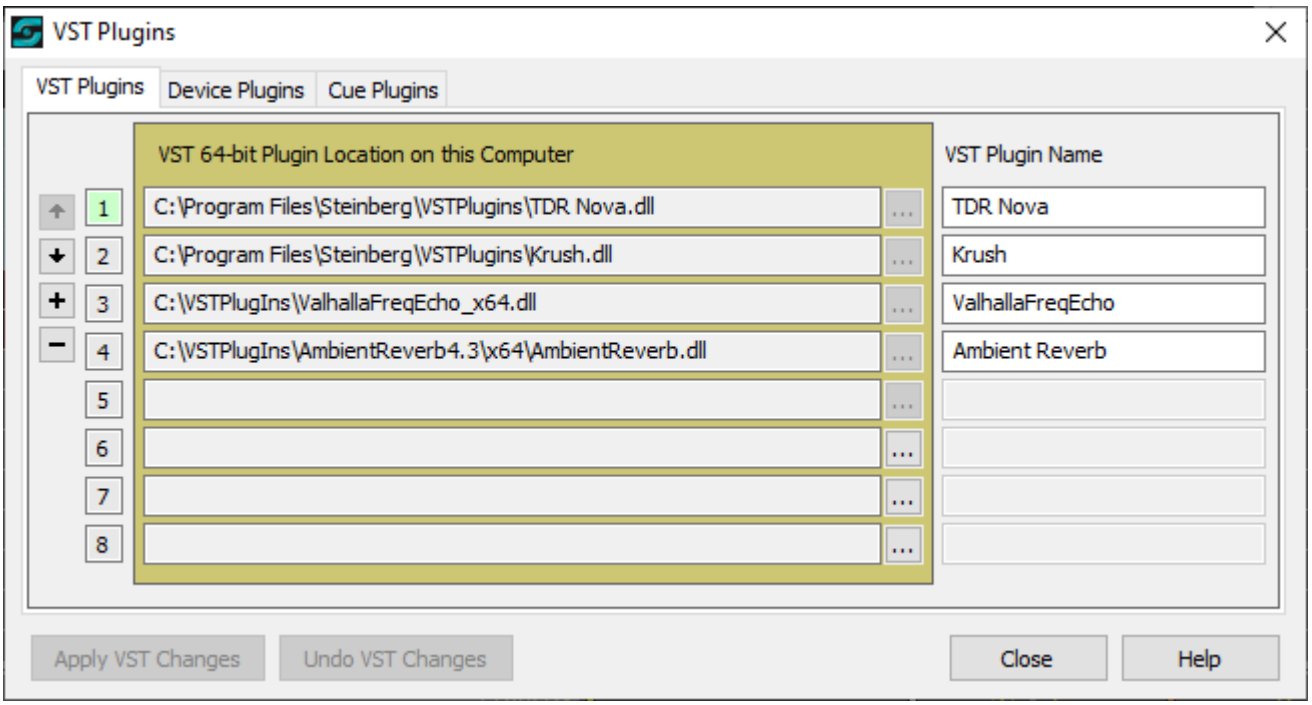
VST Plugins are only supported with **SCS Professional Plus** and higher licenses.

Overview

If you have an SCS Professional Plus or higher license level then you can apply 3rd-party **VST Effects Plugins** to Audio Output Devices and in your Audio File Cues - see Audio File VST Plugins. VST Plugins available on the web allow you to add EQ, reverb, delay or other effects.

To use VST Plugins in your production, you first need to list and locate the plugins you require. Click the **VST Plugins** button in the Main Window Toolbar. A window like this (initially empty of plugins) will be displayed:

VST Plugins Tab



Properties and Controls

Plugin Number (1, 2, etc): If this number is displayed with a colored background (eg see 1 in the above screenshot) this indicates this plugin is the 'current' plugin for the **Sidebar Controls** to the left. To make a different plugin the 'current' plugin, click on any field in the line for the required plugin, or on the Plugin Number itself. SCS supports up to eight plugins.

Sidebar Controls: Controls are available to enable you to easily change the order of the plugins as explained for devices under Audio Output Devices.

Computer-Specific Field

VST 64-bit Plugin Location on this Computer: This is a display-only field showing the full pathname of the VST Plugin DLL or VST2 file. If you are running the 32-bit version of SCS then this heading will display '32-bit'. To find a VST Plugin, use the ... (browse) button. See the note below regarding 32-bit and 64-bit versions. Use the **Browse** button (...) to search for and select a VST plugin file.

Unfortunately VST3 plugins are not supported as they are not supported by the BASS_VST add-on that SCS uses.

VST Plugin Name: This will populated when you select a plugin. Most plugins supply a name via an 'information' function call, but if the plugin doesn't supply a name then SCS uses the filename itself (without the extension). You can change this name if you wish.

Important Notes:

1. VST Plugins are supplied as DLL's (Dynamic Link Libraries) or as VST2 files, and will be either 32-bit or 64-bit. If you are running the 64-bit version of SCS then you *must* use 64-bit plugins, and if you are using the 32-bit version of SCS then you *must* use 32-bit plugins. SCS will attempt to check the validity of the plugin and throw an error message if the selected file appears to be incompatible.
2. Internally, SCS will keep separate computer-specific entries for the 32-bit and 64-bit VST Plugin Locations, but when SCS is run only the relevant (32-bit or 64-bit) VST location will be displayed and used.
3. Only VST EFFECTS plugins are supported by SCS.
4. Plugins from waves.com are not directly supported even when selecting the respective WaveShell-VST DLL. However, you may be able to split the plugins into separate VST DLL's using a product called shell2vst.

Device Plugins Tab

See VST Device Plugins.

Cue Plugins Tab

See VST Cue Plugins.

Common Controls

Apply VST Changes: This button (and the **Undo VST Changes** button) will be enabled when any changes have been made to the information displayed in this window, including any changes made when viewing a plugin's GUI (see next tab). Clicking this button will save those changes to the internal copy of the cue file (the .scs11 file), which may then be saved to the actual cue file later. On applying the VST changes, this button is then disabled until another change is made.

Undo VST Changes: Clicking this button will reinstate the VST Plugin info as it was prior to the enabling of these two buttons. That includes reinstating plugin GUI settings that were changed since the these two buttons were last enabled.

Close: Closes this window. If the **Apply VST Changes** button is enabled then you will be asked if you want to apply the changes.

Help: Displays this Help.

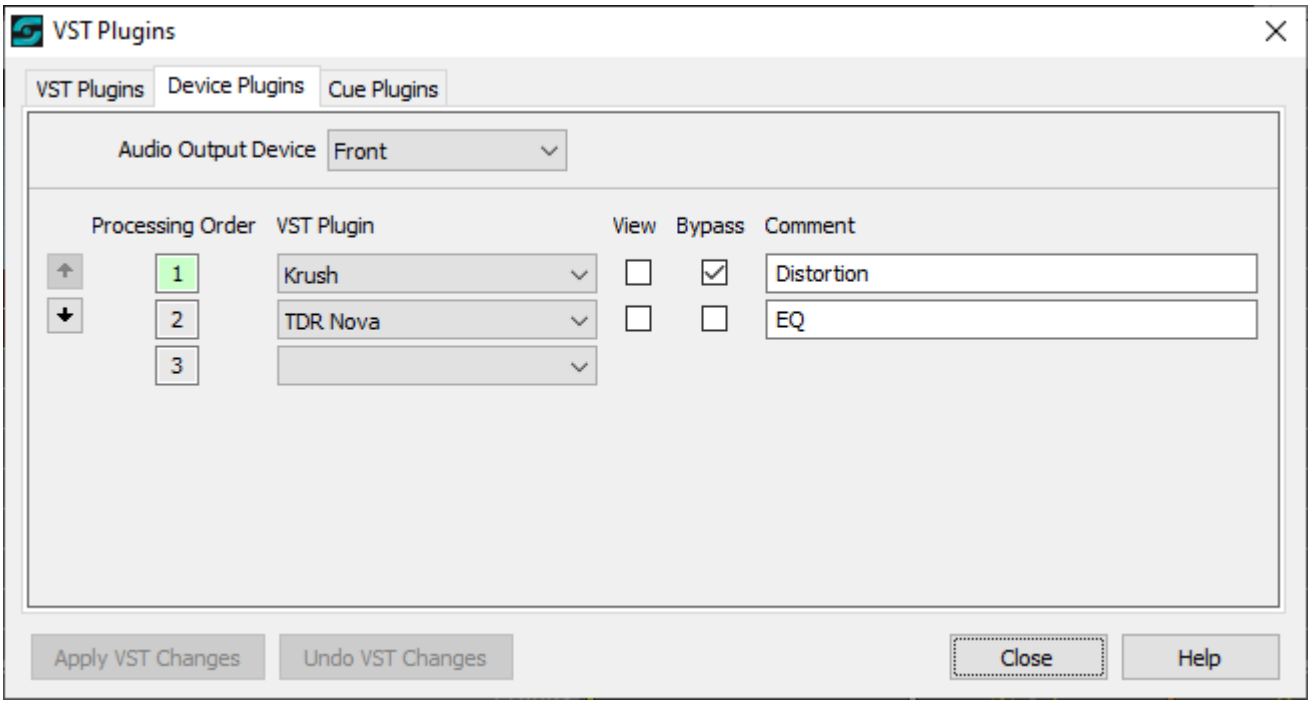
VST Device Plugins

VST Plugins are only supported with **SCS Professional Plus** and higher licenses.

Overview

To apply a 3rd-party **VST Effects Plugins** to one or more Audio Output Devices, enter the required plugin details under the **Device Plugins** tab of this window. You will first need to select the **Audio Output Device** as explained below.

Device Plugins Tab



Properties and Controls

Audio Output Device: Select the Audio Output Device that the plugins selected below the line are to be applied to. Different Audio Output Devices may have different plugins assigned, or may have no plugins assigned.

Processing Order: If more than one plugin is assigned to this Audio Output Device then the Processing Order determines the plugin order in which the audio is to be processed. In the above example, output from Audio File Cues or PLaylist Cues directed to the Front device will first of all be fed to the Krush plugin, and output from the Krush plugin will be fed to the TDR Nova plugin. Output from the TDR Nova plugin will be sent to the Audio Output Device 'Front'.

If this number is displayed with a colored background (eg see 1 in the above screenshot) this indicates this plugin is the 'current' plugin for the **Sidebar Controls** to the left. To make a different plugin the 'current' plugin, click on any field in the line for the required plugin, or on the Processing Order itself.

Sidebar Controls: Controls are available to enable you to easily change the Processing Order. To remove a plugin from the Processing Order, just select the blank entry from the relevant drop-down list under **VST Plugin**.

VST Plugin: Select the required VST Plugin from the drop-down list, or select blank to remove an existing entry.

View: Select this checkbox to view the GUI (graphical user interface) of this plugin. See below for an example and more information.

Bypass: If you have a VST plugin selected but want to listen to the audio *without* the plugin applied then select this checkbox. Alternately selecting and de-selecting the **Bypass** checkbox while the audio is playing can assist in hearing the effect of the plugin. The bypass (or cancelling the bypass) may take up to a second to take effect due to buffering. Note that the state of the **Bypass** checkbox is saved, which means you can 'permanently' bypass the plugin for this audio output device without losing the link to the plugin and any program and parameter settings you have applied (see below). If you clear the **Bypass** checkbox later (even in a later SCS session) then the selected plugin and parameter settings will be reinstated.

Note: When an Audio Output Device has one or more VST plugins assigned and not currently bypassed, then the name of that device will have & appended to it wherever it is displayed in the main window. For example, if device 'Front' has a VST plugin applied (as is shown in the above screenshot) then the device name will be shown as Front& in the VU Meter display, the main cue list, and the cue panels.

Using the Plugin Viewer

When you select the **View** checkbox, the plugin's GUI will be displayed (assuming it has one). Here's an example using the TDR Nova plugin:

Plugins have potentially many adjustable items, including the **program** and **parameters** for that program. In the above example, the user has selected program '4 Band Dyn' and has adjusted parameters by clicking and dragging various items in the display.

When the SCS cue file is saved (ie the .scs11 file), the selected program and parameter settings are saved with other data for that Audio Output Device. So different Audio Output Devices can have different VST Plugin settings, even if they use the same plugin and are played at the same time.

VST Plugins come with default settings for parameters. SCS only saves parameter settings in the cue file where the current setting is not the default setting.

If you want to undo any changes you have just made, use the Undo VST Changes button. However, not that this will also undo any other changes made since the window was opened or changes were last applied..

You can drag the Plugin Viewer window to a new location and SCS will remember that location. As different plugins will have different window sizes, the stored location of the window is the top left position of the window.

To close the Plugin Viewer window, either click the window's X button or clear the **View** checkbox. Closing the window does *not* lose any settings you have applied.

Back to VST Plugins | Next Tab (VST Cue Plugins) >

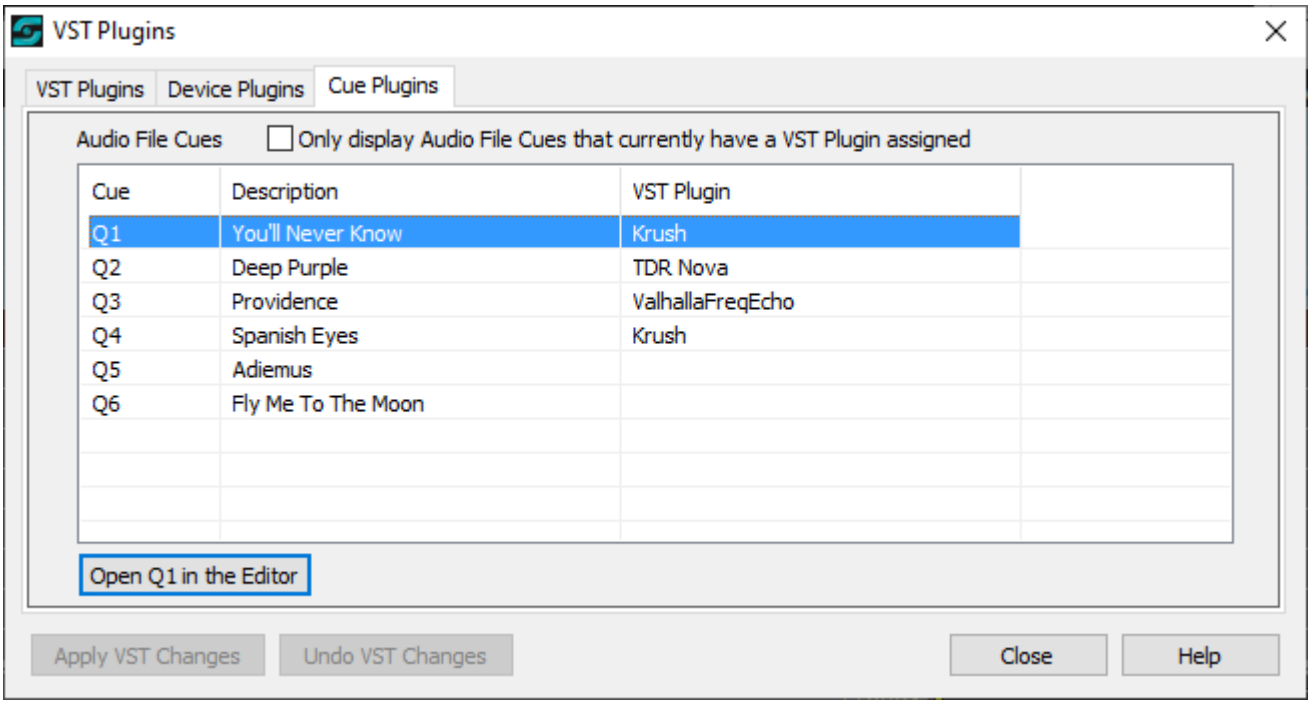
VST Cue Plugins

VST Plugins are only supported with **SCS Professional Plus** and higher licenses.

Overview

This is mainly a display-only tab as VST Plugins for Audio File Cues are set up and maintained when editing the Audio File Cue. See Audio File Cues - VST Plugins for details.

Cue Plugins Tab



Properties and Controls

Audio File Cues: This is a list of Audio File Cues in your cue file. If the following checkbox is clear (default) then *all* Audio File Cues are listed. If the above checkbox is selected then only Audio File Cues that currently have a VST Plugin assigned will be displayed. Note that this display does not take into consideration the enabled/disabled state of the cues, nor the 'bypass' state of the plugins.

Only display Audio File Cues that currently have a VST Plugin assigned: If you select this checkbox then the list will only include Audio File Cues that currently have a VST Plugin assigned.

Open <cue> in the Editor: As mentioned earlier, VST Plugins for Audio File Cues are set up and maintained in the Editor. By clicking this button, SCS will open the Editor at the cue currently selected in the list. You can also double-click on a cue in the list. For example, in the above example if the user double-clicked on Q3 then the Editor would be opened at Q3.

Note: As Cue Plugins are set up and maintained in the Editor, any changes made to this information in the Editor will *not* affect the enabling or disabling of the 'Apply VST Changes' and 'Undo VST Changes' buttons.

Back to VST Plugins | < Previous Tab (VST Device Plugins)

Faders Window

The *Faders Window* is only available with **SCS Professional** and higher license levels.

EQ settings are only available with Live Inputs, which requires the use of SoundMan-Server.

Overview

The Faders Window provides conventional fader controls for your input gains, output gains and the master output level. Adjusting gains is possible using your mouse on these controls, but live adjustments are much easier if you have an external 'Control Surface' such as a Behringer BCR2000 or BCF2000. In the External 'Control Surface' Setup topic of this Help you will see how you can link your Control Surface to SCS, although currently the only external devices supported are the Behringer BCR2000 and Behringer BCF2000.

However, you can also control the Output Gain, Master and DMX faders by MIDI Cue Control messages.

Note that all EQ settings and all fader levels are stored in the production's Device Map file, so are computer-specific.

Access the Faders Window by clicking the **Show Faders** button below the VU meters in the main window. When you click this button, a window like this will be displayed:

This example is based on a production that has eight live inputs, two audio output 'devices', and DMX lighting device. The first six live inputs are fed from radio mics on six actors, and the last two live inputs are a fed from hand-held radio mics.

You can drag the window to wherever you want, and SCS will remember the position between sessions.

Controls and Fields

EQ Controls

EQ is only available on live inputs, so the EQ panel is only displayed if you have at least one live input. EQ is available on every live input channel, but the EQ panel just shows the EQ settings for whichever channel has the **Select** button highlighted. In the above example, this is Delmay. **BCR2000/BCF2000 tip:** To Select a live input channel for EQ control, press the 'EQ Select Live Input' button on the BCR2000 or BCF2000 for that live input channel. (See External 'Control Surface' Setup for more information.)

You must **Select** a live input channel before you can adjust any of the following EQ controls. The EQ controls will show whatever EQ settings you last set for that live input channel.

Low Cut: To apply the low-cut filter, click the **ON** button next to 'Low Cut'. (Click the button again to de-select.) You

can then adjust the rolloff frequency by using your mouse to 'turn' the **Freq** knob, similar to an ordinary fader, ie click-and-move.

The low cut **Frequency** may be set between 20Hz and 400Hz. The default is 100Hz.

BCR2000/BCF2000 tip: *Turn Low Cut on or off by* pressing *the first push encoder, and adjust the frequency by* turning *the first push encoder.*

EQ Band 1: Two bands of parametric EQ are available, so details regarding **EQ Band 1** also apply to **EQ Band 2**. The only difference between the two bands is the default frequency. To apply EQ Band 1, click the **ON** button next to 'EQ Band 1'. (Click the button again to de-select.) You can now adjust the **Gain**, **Frequency** and **Q** of the EQ band.

The **Gain** range is -15dB to +15dB, default 0dB.

The **Frequency** range is 20Hz to 20000Hz. The default frequency for EQ Band 1 is150Hz and the default frequency for EQ Band 2 is 600Hz.

The **Q** value determines the bandwidth around the selected **Frequency** - the higher the **Q** value the narrower the bandwidth. The supported range from wide to narrow is Q 1.0 (about 1.4 octaves) to Q 20.0 (about 0.7 octaves). The red marker on the control shows if you are widening or narrowing the bandwidth. The default Q value is 4.0 (about 1/3 octave).

BCR2000/BCF2000 tip: *The 2nd-4th push encoders control the gain, frequency and Q for EQ Band 1, and the 5th-7th push encoders control the corresponding settings for EQ Band 2. Press any one of these push encoders to turn on or off the respective EQ Band group, and turn the encoders to adjust the values.*

Faders

Faders are displayed for live input channels (if any), for audio output 'devices', and for the master audio output control. If a DMX lighting device is specified, then the DMX Master fader is also displayed. Please note that the live input and audio output faders control the gain (input gain or output gain) of those channels - they do not show or control levels set within cues. For example, using the above screenshot, if you lower the level of the 'Front' output then that will lower the 'Front' level for all cues that send output to that device. Similarly, if you increase the level of 'Cyril' then that affects all cues for Cyril.

Assign/Assigned to BCF Faders: These two buttons below the fader groups are only displayed for the BCF2000 as the BCF2000 has only 8 vertical faders, so these buttons enable you to designate the assignment of the vertical faders. You can either click one of these buttons, or press the corresponding **Inputs** or **Outputs** button on the BCF2000 (see External 'Control Surface' Setup for more information).

Faders: Click and drag a fader to adjust the level. The maximum level for audio faders will be either 0dB or +12dB, according to the **Maximum Audio Level** set in Run Time Settings. If you hold down a Ctrl key and click a fader, the level will be set to 0dB. The **DMX Master** fader range is 0% to 100%. Adjusting the DMX Master fader only affects the DMX values sent to 'dimmable' channels - see Lighting Devices.

Note that keyboard shortcuts are available for increasing and decreasing the **Master** level and the **DMX Master** percentage. These keyboard shortcuts operate whether or not the Faders window is currently displayed.

BCR2000 tip: *Fader levels can be adjusted using the respective rotary encoders. Note that the DMX Master fader is mapped to the 8th rotary encoder in the top row.*

BCF2000 tip: *Live Input fader levels can be adjusted by assigning the faders to* ***Inputs*** *and then using the respective vertical faders. Outputs and Master fader levels can be adjusted by assigning the faders to* ***Outputs*** *and then using the respective vertical faders. As with the BCR2000, the DMX Master fader is mapped to the 8th rotary encoder in the top row.*

L (Live) indicator: This is a display-only indicator. If the **Live** indicator is highlighted yellow (as shown above for Cyril, Skye, Delmay and Declan), this means a Live Input Cue for this input is 'live'. So the above example is for a scene or part-scene in which these four characters are on stage and have speaking parts. All other inputs are not live, so any audio coming from those non-live mics will not be heard through SCS.

M (Mute) and **S (Solo) buttons**: These are traditional Mute and Solo buttons, intended for use during testing and tech runs etc. If a **Mute** button is pressed then it is highlighted in red and that input is muted. If a **Solo** button is pressed then it is highlighted in green. **Solo** causes only the soloed channel(s) to be heard through SCS. Note that multiple channels may be either muted or soloed.

Select: As mentioned earlier, **Select** is used to select the live input channel for EQ.

Other Buttons

Clear Solos: This button is enabled if at least one **Solo** button is selected. Since you may have several **Solo** buttons

selected, using **Clear Solos** is a convenient way to cancel all selected **Solos**.

Save Fader Levels: Since faders are designed to provide live control of input and output gains (particularly input gains), SCS does not assume you always want to save these settings. So if you adjust fader levels and later on close SCS, then SCS will *not* ask you if you want to save your changes. So if you do want to save the latest fader levels, click **Save Fader Levels**. (This button is only enabled if at least one fader level has been changed.)

Close: Closes this window.

Setup: This button opens the External 'Control Surface' Setup window. You must have a MIDI Cue Control Device set up for this button to be enabled, even if that device has no 'Cue Control Commands' assigned. Relevant 'Cue Control Commands' will, however, need to be assigned if you are *not* using an external controller suchas the BCR2000, but are using incoming MIDI messages to control the Output Gain, Master or DMX faders.

External 'Control Surface' Setup

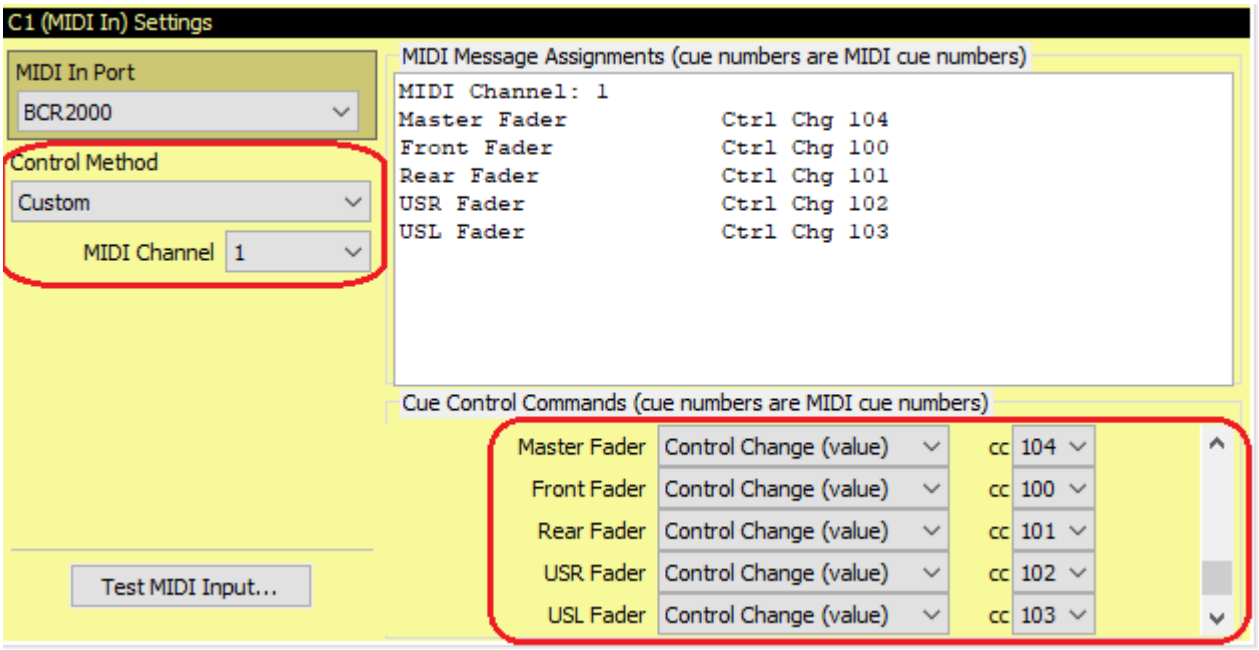
Overview

A 'Control Surface' is an external device that can be used to provide easier dynamic control of audio levels than is available when just using a mouse and keyboard, or even a touch screen. Some controllers have motorized faders, such as the Behringer BCF2000. The initial SCS support for control surfaces was developed for the Behringer BCR2000 which does not have motorized faders but does have 24 rotary encoders. The BCF2000 is similar to the BCR2000 except the BCF2000 has 8 motorized vertical faders instead of the 24 rotary encoders. Note that the Faders Window will show a vertical fader representation for level control, regardless of whether the physical control is a vertical fader or a rotary encoder.

Controls and Fields

Controller: Select from 'MIDI Cue Control Device' or the list of supported controllers. Currently the Behringer BCR2000 and BCF2000 are supported. If your controller is not included in the list then you may be able to use a MIDI Cue Control Device.

To use **MIDI Cue Control Device** as the Controller (and this is the default setting), set up a MIDI Cue Control Device and assign the required **MIDI Channel** and **Cue Control Commands**. Here is an example:



Note that the Cue Control Commands area has been scrolled down to view the Master Fader and later controls. You only need to enter details for the controls you wish to operate from the external device.

(NB Although a BCR2000 has been used in the above example, this was because an alternative external controller was not available. With a BCR2000 it is recommended you actually choose 'BCR2000' as the Controller, not 'MIDI Cue Control Device'.)

The following controls are only displayed for BCR2000 and BCF2000.

MIDI In Port and **MIDI Out Port**: SCS will communicate with your controller via MIDI, and 2-way communication is required so SCS can send settings to the controller as well as receive settings from the controller. Select the ports required - the input and output ports may well have the same name, as is the case for the Behringer BCR2000.

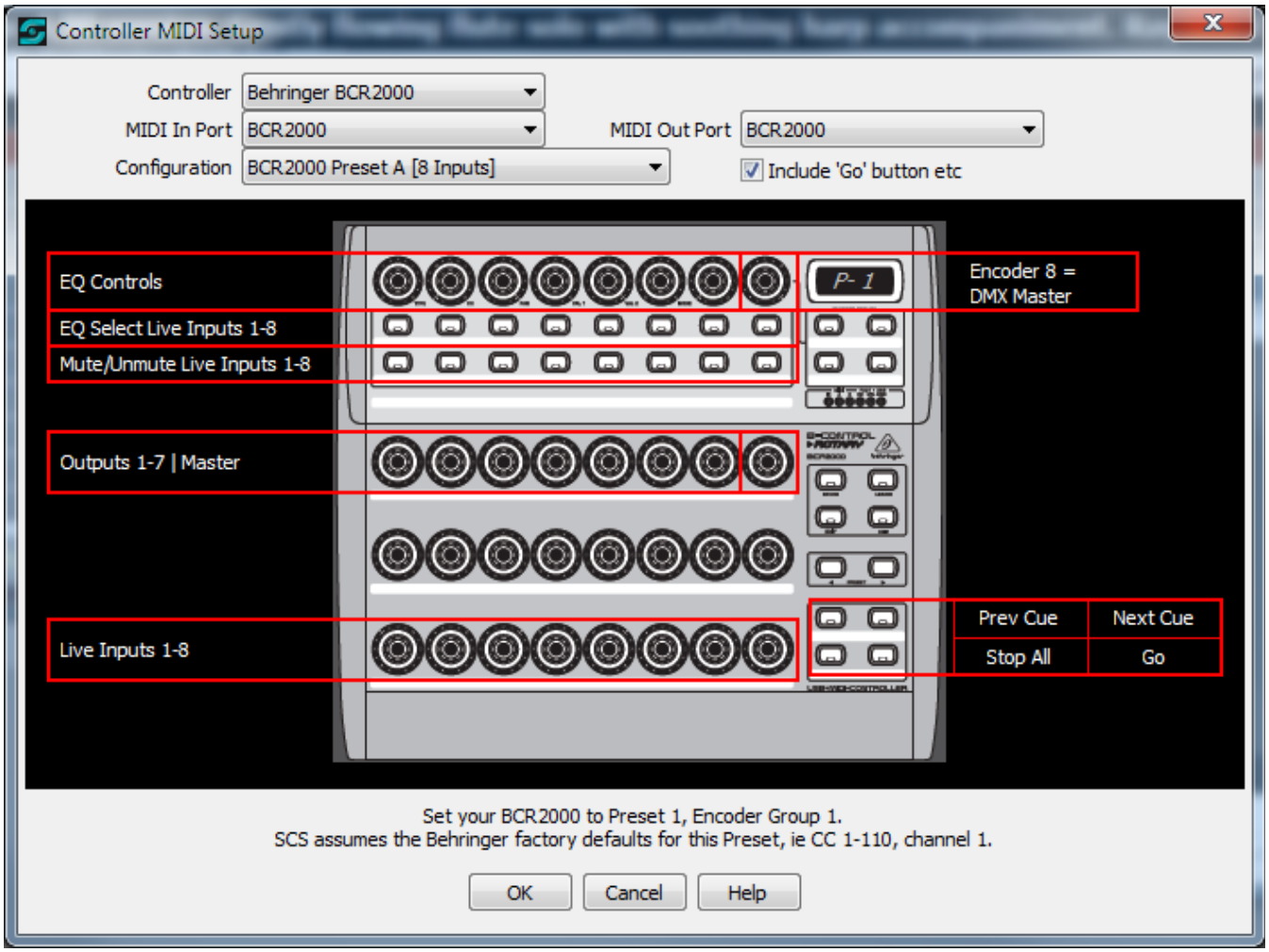
Configuration: This drop-down list contains configurations or 'presets' that SCS includes for the selected **Controller**.

Include 'Go' button etc: The BCR2000 and BCF2000 have four programmable buttons on the lower right of the unit. If you select this **Include 'Go' button etc** checkbox then for the BCR2000 presets these four buttons will be assigned to *Prev Cue, Next Cue, Stop All,* and *Go*. For the BCF2000 preset the first two of these buttons are always assigned to *Inputs* and *Outputs*, so selecting the **Include 'Go' button etc** checkbox just assigns the 3rd and 4th buttons to *Stop All,* and *Go*.

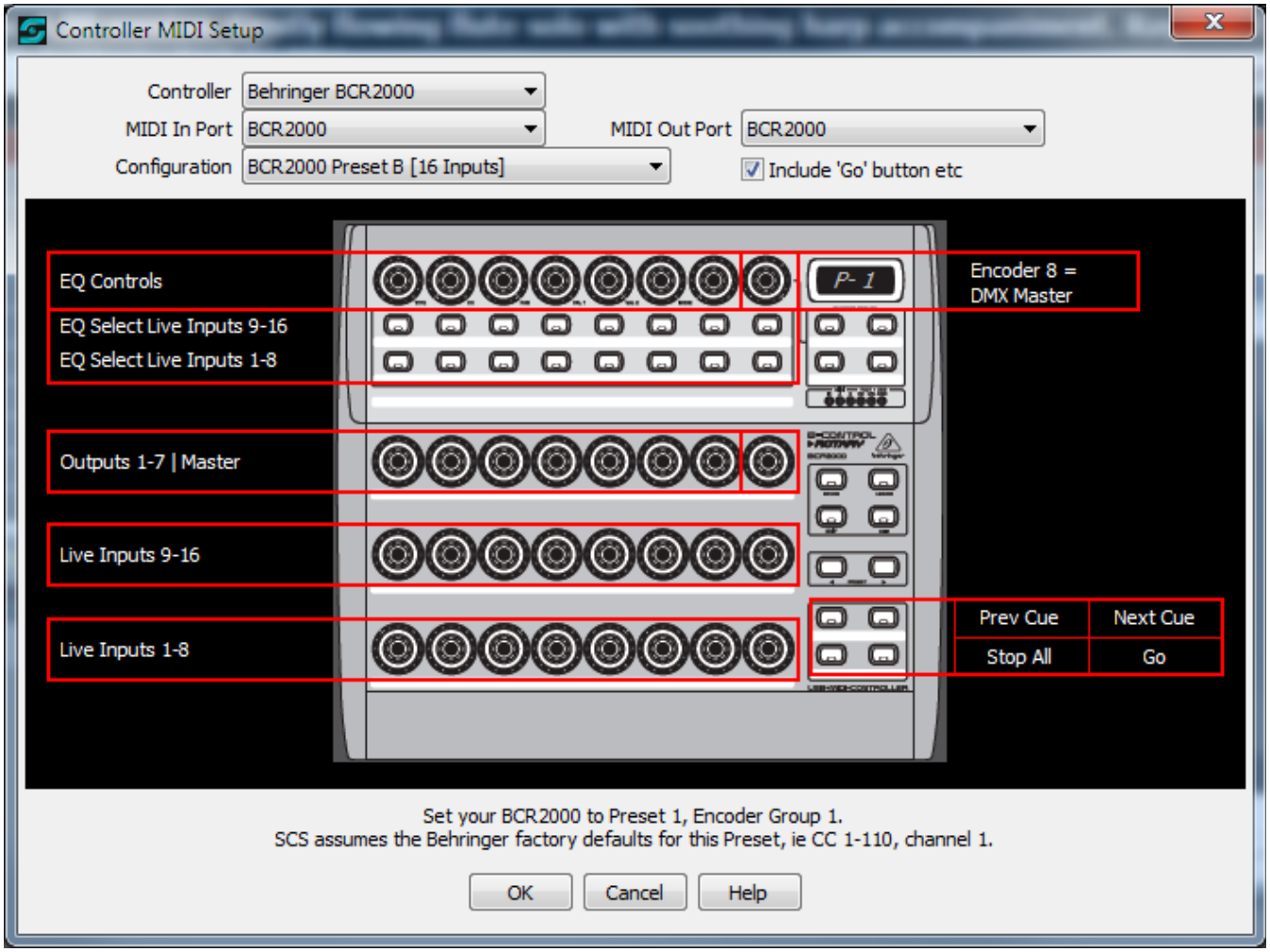
Note: By default the **Include 'Go' button etc** is clear because these buttons can be more trouble than they are worth due to their position on the unit. During rehearsals for a show using live inputs, I had these buttons assigned and twice I accidentally touched the bottom-right button whilst adjusting a live input level. That, of course, triggered the next cue. So I turned off the **Include 'Go' button etc** feature before the first production run, and used the computer keyboard for activating cues.
You probably won't have this problem if you always use your *left* hand to adjust the BCR2000 rotary encoders or BCF2000 faders.

The following Configurations are currently included:

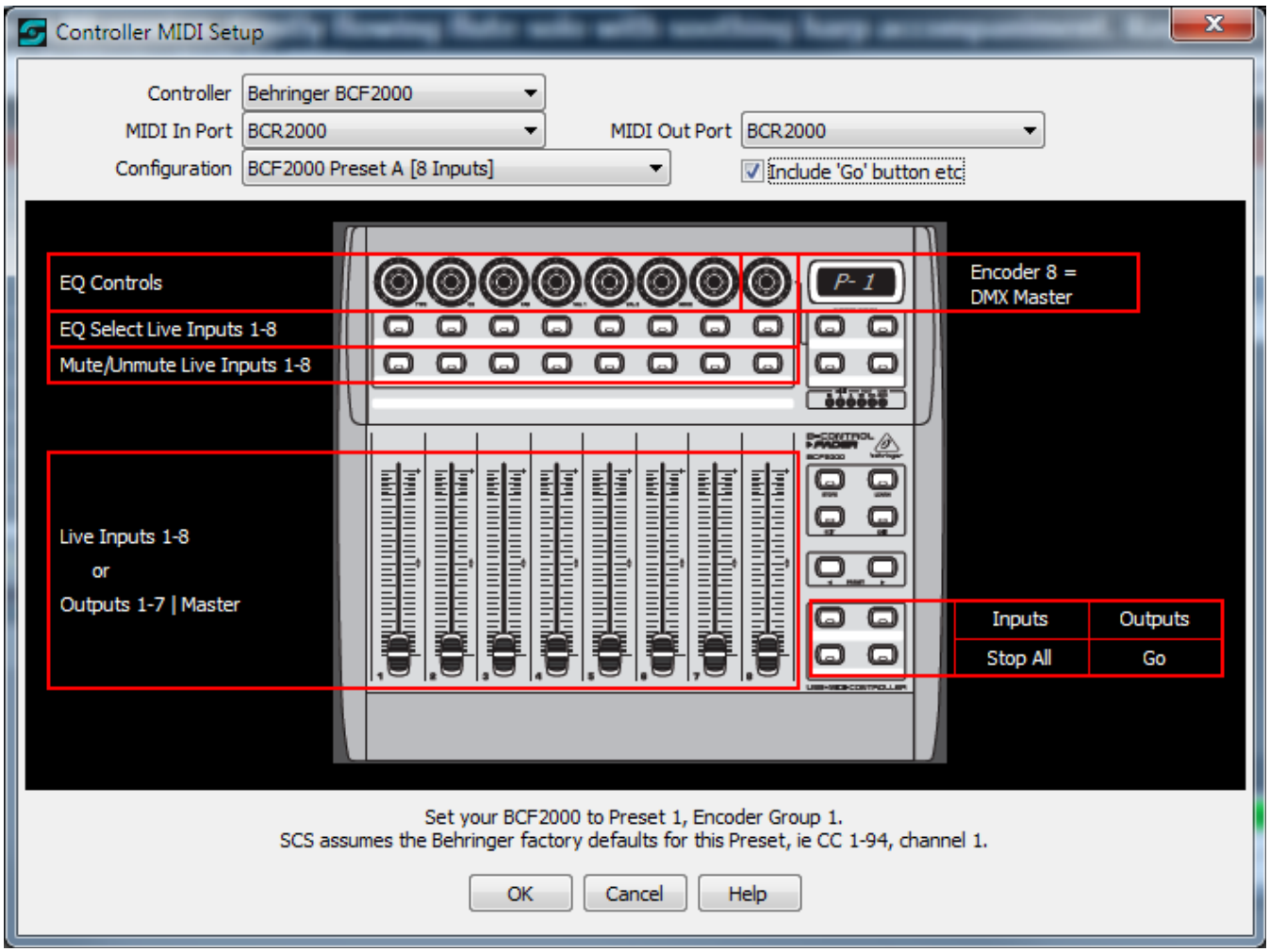
- **BCR2000 Preset A [8 Inputs]**



- **BCR2000 Preset B [16 Inputs]**



- **BCF2000 Preset A [8 Inputs]**



The various control assignments marked using red outlines are not changeable (apart from selecting or de-selecting the 'Include 'Go' button etc' checkbox), except that for the BCF2000 you can switch the vertical fader assignments between **Inputs** and **Outputs** by using the relevant push button to the right of the faders.

For the BCR2000 the **Master Level** is always the 8th rotary encoder in the 3rd row, regardless of how many outputs you have. For the BCF2000 with **Outputs** selected, the **Master Level** is always the 8th vertical fader, regardless of how many outputs you have.

With the 8-input configurations, the second row of push buttons are assigned as **Mute** buttons.

Important: The BCR2000 or BCF2000 *must* be set to Preset 1, encoder group 1. This is because SCS assumes and uses the MIDI Control Change numbers of the Behringer factory default of that setting.

Also, the Operating Mode must be set to USB mode 1 (or U-1), which it should be by default.

OK: Accept any changes made in this window, and close the window.

Cancel: Close this window, discarding any changes made.

Help: Displays this Help.

The Editor

The following sections are included under this topic:

- Starting and Using the Editor
- Editor Toolbar
- Editor Sidebar and Cue List
- Undoing, Redoing and Saving Your Changes
- **Production Properties**
  - General
  - Devices
    - Audio Output Devices
    - Video Audio Devices
    - Video Capture Devices
    - Live Inputs
    - Input Groups
    - Fixture Types
    - Lighting Devices - DMX
    - Control Send Devices - MIDI
    - Control Send Devices - RS232
    - Control Send Devices - Network
    - Control Send Devices - HTTP
    - Cue Control Devices - MIDI
    - Cue Control Devices - RS232
    - Cue Control Devices - Network
    - Cue Control Devices - DMX
  - Time Profiles
  - Run Time Settings
  - Import Devices from another SCS Cue File
- **Cue Properties**
  - Time-Based Cues
  - Callable Cues
  - Standby Cues
  - Re-Number Cues
  - Cue-Start Confirmation
  - Hotkey Banks
- **Cue Types**
  - Audio File Cues
  - Live Input Cues
  - Stop / Fade-Out / Release (SFR) Cues
  - Level Change Cues
  - Playlist Cues
  - Video/Image Cues
  - Lighting Cues
  - Control Send Cues
  - MTC Cues
  - Note Cues
  - Memo Cues
  - Go To Cues
  - Set Position Cues

    - 'Call Cue' Cues
    - Run External Program Cues
    - Enable/Disable Cues
- Collect Production Files
- Bulk Edit Cues
- Copy Properties from another Cue or Sub-Cue
- Copy, Move or Delete a Range of Cues
- Drag and Drop
- Import Cues from another SCS Cue File
- Import Cues from a CSV File
- Export Cues to a new SCS Cue File

Starting and Using the Editor

The Editor is used to set up or maintain details of all cues for a production. You can also nominate how you want to use sound devices for the production, eg what speaker placements you want to use.

Access to the Editor may be restricted by password control so that operators can be prevented from changing cue details. This is particularly useful if the person running the cues is not the person who setup the cues.

When you are in the Editor you can switch back to the Run window while keeping the Editor window active. Once you have started the Editor you will see two icons for SCS in your Windows task bar - one for the Run Window and the other for the Editor Window. One of the issues in handling the two windows is how to treat auto-start cues. If you are testing a cue in the Editor and there is another cue that auto-starts on the completion of the one you are testing, then in the Editor we do not want this auto-start to be actioned. The approach used is that if the Run screen has 'focus', ie it is the current window, then auto-start cues operate normally, but if the Editor window has focus then auto-starts are ignored.

To activate the Editor just click the **Editor** button in the run screen's toolbar. If the buttons is disabled (greyed out) then editing is locked. To unlock the Editor, click the **Options** button in the toolbar to open the **Options and Settings** window, click the button labeled **Unlock Editing and Options Changes** and then enter the required password.

In the Editor window you will see a **Toolbar** at the top of the screen, and a 'tree view' of your **Cue List** on the left below the Toolbar. Each item in the tree view is known as a **node**. Properties of the currently-selected node are displayed in the panel to the right of the tree view.

The icons in the tree view and the toolbar represent the following:

	The production. (This icon symbolizes a theatre ticket)
	Audio file cue or sub-cue
	Video/image cue or sub-cue
	Playlist cue or sub-cue
	Level-change cue or sub-cue
	Stop / fade-out / release (SFR) cue or sub-cue
	Note cue
	Memo cue
	'Go to' cue or sub-cue
	'Set position' cue or sub-cue
	Control send cue or sub-cue
	Live input cue or sub-cue (only available with SoundMan-Server)
	'Run external program' cue or sub-cue
	MTC (MIDI Time Code) cue or sub-cue
	A cue containing sub-cues (shown in either the open or closed state)

Between the Cue List and the Properties Panel there is a vertical draggable **splitter bar**. Dragging this splitter bar left or right resizes the window horizontally, as the property panels have a fixed width. This enables you to change the display width of the cue list on the left. The window size and position will be remembered between sessions.

In the Properties Panel, if you are viewing **Cue Properties** then there is a horizontal draggable splitter bar between the **Cue Properties** and the **Sub-Cue Properties**. The default position of this splitter bar is just below the *Activation* button, hiding the rarely used *Standby* control. You can see the *Standby* control by either scrolling down the **Cue Properties**, or by dragging down the horizontal splitter bar. SCS deliberately does not save the position of this horizontal splitter bar, so the next time you start SCS this splitter bar returns to the default position.

In the Editor you can:

- **Display or change production-level properties** by clicking on the production node. The panel on the right will show the properties for this production, such as the name or description, and the device and speaker assignments you want to use. You can also display Production Properties by clicking on the *Production Properties* button in the Editor's toolbar. See Editor Toolbar for more information.
- **Display or change any cue or sub-cue properties** by clicking on the cue or sub-cue node. The panel on the right will show the general cue properties in the upper part of the panel, and properties specific to the cue type or sub-cue type in the lower part of the panel.
- **Add a cue** by clicking the Cues button in the editor's toolbar, and then selecting the required Cue type from

the pop-up menu. Alternatively, if a button for adding the required cue type is displayed in the Favorites then just click that Favorites button. A new cue will be created *after* the currently selected node. Default values may be pre-loaded into some of the properties. You can also add a cue by using right-click on the cue list in the Editor. A context menu is displayed when you right-click.

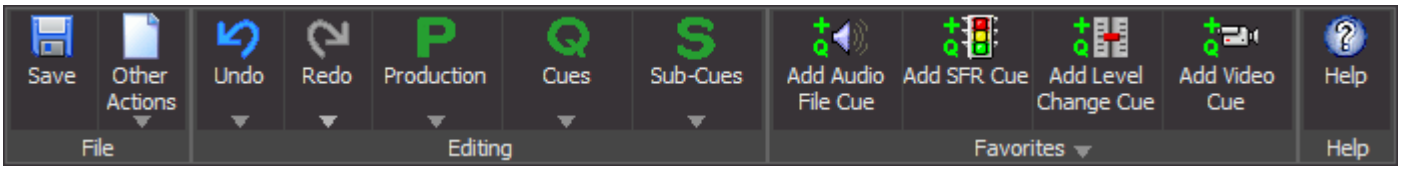
- **Add a sub-cue to an existing cue** by clicking the Sub-Cues button in the editor's toolbar, and then selecting the required Sub-Cue type from the pop-up menu. Alternatively, if a button for adding the required sub-cue type is displayed in the Favorites then just click that Favorites button. A new sub-cue will be created *after* the currently selected node. Default values may be pre-loaded into some of the properties. You can also add a sub-cue by using right-click on the cue list in the Editor. A context menu is displayed when you right-click.
- **Moving cues and sub-cues, and changing sub-cues to cues or vice versa.** Arrow buttons to the left of the cue list enable you to easily move cues or sub-cues, including moving a sub-cue into another cue. Using appropriate buttons you can also create a new cue from an existing sub-cue, or merge two cues, ie move all the sub-cues of a cue into the previous cue. See Moving Cues and Sub-Cues, and Changing Sub-Cues to Cues or Vice Versa for details.
- **Collect Production Files.** this provides an easy way for you to collect into a 'Production Folder' all the audio, video and image files used in your production. This simplifies transferring the production to another computer. See Collect Production Files for details.
- **Import or Export cues.** If you want to copy some cues from another SCS cue file then you can use the Import/Export Cues menu option displayed when you click the Cues button in the toolbar. You can also Export selected cues from the current cue file to create a new cue file (or overwrite an existing cue file) to provide a subset of the cues in the current file. The Import and Export facilities enable you to have libraries of cues that you may want to drop into various shows. You can also Import or Export by right-clicking on the cue list in the Editor. A context menu is displayed when you right-click. See Importing Cues and Exporting Cues for details.

Tip: The easiest way to add, delete, copy or paste cues or sub-cues is to right-click on the required cue or sub-cue in the cue list, and then select the required action from the menu displayed.

To Close the Editor, use the window's 'X' icon. You may also minimize the window or just switch back the Run Screen if you do not yet wish to close the Editor, but just want to go back to the Run Screen.

Editor Toolbar

Some features not available with all license levels.



File	
Save	Unlike the **Save** button in the Run Screen Toolbar, the **Save** button in the Editor Toolbar does not have a drop-down list - it is intended as a quick means of saving your work, so including a drop-down list would unnecessarily slow that task. However, the **Other Actions** button does include **Save As** as an option.
Other Actions	To save space in the toolbar, some lesser-used functions are included in a drop-down menu under Other Actions. The functions available are: • **Save As** - to save your cue file as a new cue file • **Print** - to print your cue file (see Printing the Cue List) • **Options** - to open the SCS Options and Settings window (see Editing Options)
Editing	
Undo / Redo	The **Undo** and **Redo** buttons will enable you to undo and redo field changes, etc. A pop-up menu is shown of the changes you may undo or redo, and several consecutive changes (starting at the most recent) may be undone or redone in one operation. Move the mouse pointer thru the list as required to select the changes to be undone or redone, and click on the menu item when you have the oldest required change selected. See Undoing, Redoing and Saving Your Changes for details.
Production	Click this button for production-related operations. A drop-down menu will be displayed with the following entries: • **Production Properties** - this is equivalent to clicking on the top node of the cue list tree. See Production Properties for details. • **Collect Production Files** - this provides an easy way for you to collect into a 'Production Folder' all the audio, video and image files used in your production. This simplifies transferring the production to another computer. See Collect Production Files for details. • **Import Devices from another SCS Cue File** - enables you to copy device maps and devices from or associated with another cue file. This is useful if you want to use the same or a similar device setup that you used for another production. See Import Devices from another SCS Cue File for details. • **Production Timer Actions** - allows you to nominate cues that will control starting, pausing and resuming the Production Timer. See Production Timer for details.

Cues	Click this button for cue-related operations, particularly for add new cues. A drop-down menu will be displayed with the following entries: • **Add <cue type>**, eg **Add 'Audio File' Cue** - there will be one menu entry for each available cue type. Select the required menu entry to create the cue *after* the currently selected node. Default values may be loaded into some of the properties. • **Renumber Cues** - opens a window that provides facilities for renumbering some or all of the cues in your cue file. See Cue Renumbering for details. • **Bulk Edit Cues** - opens a window that enables you to make bulk changes to a nominated field. For example, you can use **Bulk Edit** to lower the level (volume) of all or selected cues. See Bulk Edit Cues for details. • **Copy, Move or Delete a Range of Cues** - opens a window that makes it easier to copy, move or delete cues if several consecutive cues are involved. See Copy, Move or Delete a Range of Cues for details. • **Import Cues from another SCS Cue File** - enables you to copy into your current cue file selected cues from another SCS cue file. See Import Cues from another SCS Cue File for details. • **Import Cues from a CSV File** - enables you to copy into your current cue file selected cues from a CSV file (comma-separated values file). This function was designed for handling an exported ETC show file, which is in CSV format. See Import Cues from a CSV File for details. • **Export Cues to a new SCS Cue File** - allows you to select some or all of the cues in your current cue file and export them to create another SCS cue file. See Export Cues to a new SCS Cue File for details.
Sub-Cues	Click this button for sub-cue-related operations, particularly for add new sub-cues. Every cue in SCS has one or more sub-cues, and these sub-cues can be of different types (see How SCS Works for more info). A drop-down menu will be displayed with the following entries: • **Add <sub-cue type>**, eg **Add 'Audio File' Sub-Cue** - there will be one menu entry for each available sub-cue type. Select the required menu entry to create the sub-cue *after* the currently selected node, in the same cue. Default values may be loaded into some of the properties.
Favorites	
Favorites	Click the group title (displaying **Favorites** followed by a down-pointing arrow) to display a popup-menu from which you can select up to 6 *Add Cue* or *Add Sub-Cue* buttons to be displayed in the Favorites group. This is to provide you with single-click access to these functions. Initially, SCS includes *Add 'Audio File' Cue* and *Add 'SFR' Cue* in the Favorites, but you can add or remove Favorites to suit your most common requirements.
Help	
Help	

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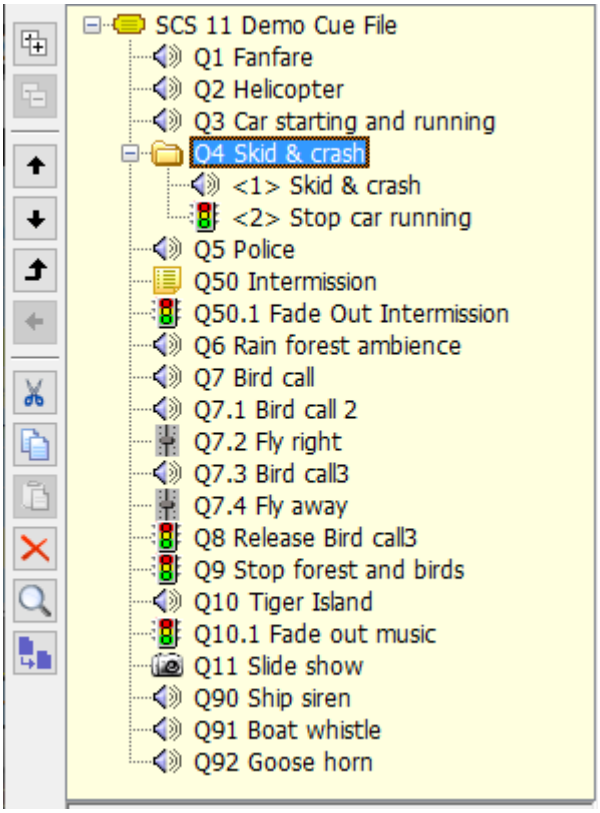
Editor Sidebar and Cue List

Controls are available in the Editor to help you copy and paste cues, delete cues, move cues around, create cues from sub-cues, and merge cues. Buttons are available in a 'sidebar' (vertical toolbar). The buttons enabled at any time depend on the currently-selected node in the Editor's cue list. For example, when you are positioned at the top of the cue list the 'Move up' button is disabled.



	Expand All	Expands all nodes except for the Production node.
	Collapse All	Collapses all nodes except for the Production node.
	Move up	If a cue is selected, move that cue up one position, eg move Q3 up one position so that it comes before Q2. If a sub-cue is selected, move that sub-cue up one position, eg move Q4's "Stop car running" up one position so that comes before "Skid & crash". If the sub-cue is the first sub-cue for this cue, then move the sub-cue into the previous cue as the last sub-cue.
	Move down	If a cue is selected, move that cue down one position, eg move Q3 down one position so that it comes after Q4. If a sub-cue is selected, move that sub-cue down one position, eg move Q4's "Skid & crash" sub-cue down one position so that comes after "Stop car running". If the sub-cue is the last sub-cue for this cue, then move the sub-cue into the next cue as the first sub-cue.
	Merge this cue into the previous cue	This button is only enabled if a cue is selected, not a sub-cue. The sub-cues of the selected cue will be moved into the previous cue, following the existing sub-cues of that cue. For example, with Q3 selected as shown above, clicking this button will move the "Car starting and running" audio file sub-cue into Q2, following the existing "Helicopter" sub-cue. After this operation, the original cue (Q3 in this example) is deleted.
	Move this sub-cue and any following sub-cues into a new cue	This button is only enabled if a sub-cue is selected. The selected sub-cue, plus any following sub-cues in the same cue, will be moved into a new cue created at this position in the cue list. For example, if Q4's "Stop car running" is selected, then this button will move this sub-cue into a new cue that will be positioned between Q4 and Q5.
	Cut	Copy the currently-selected cue or sub-cue to the SCS clipboard, and remove that cue or sub-cue from the list. (Alternatively, press **Ctrl/X**.)

	Copy	Copy the currently-selected cue or sub-cue to the SCS clipboard. (Alternatively, press **Ctrl/C**.)
	Paste	Paste the cue or sub-cue in the clipboard into the cue list, *after* the currently-selected node. A new cue number will be created. (Alternatively, press **Ctrl/V**.)
	Delete	Remove the currently-selected cue or sub-cue from the cue list.
	Find	Open the Find Cue window to search for a cue. (Alternatively, press **Ctrl/F**.)
	Copy Properties from another Cue or Sub-Cue	Opens the Copy Properties window to allow you to copy selected properties from another cue or sub-cue of the same type as the currently-selected cue or sub-cue. Not all cue types are supported - see Copy Properties for details.

Tip: To assist in cutting and pasting, etc, a tooltip will be displayed if you hover the mouse over one of these buttons. Also, when a cue or sub-cue is in the SCS clipboard then this information is displayed in the 'clipboard panel' below the Editor's cue list.

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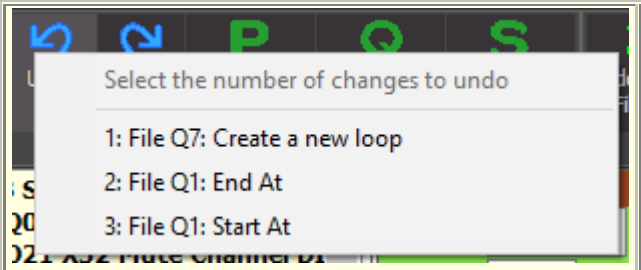
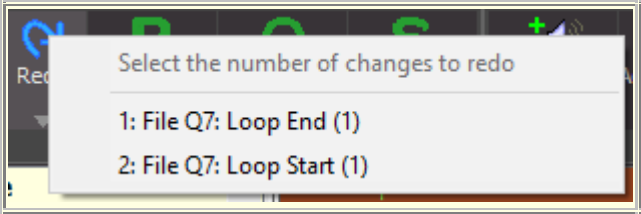
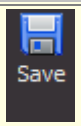
Undoing, Redoing and Saving Your Changes

	**Undo**	When you click the **Undo** button a drop-down menu c list. Since this is a menu, just click the menu item for just the last change (resetting the Loop indicator in Q resetting the End At point in Q1), and so on. **Consecutive changes to the same field are** -3.0dB to -4.5dB and then to -12dB and then U changes are consecutive. If you changed som that level to -4.5dB. As well as field changes, U deletions.
	**Redo**	When you undo some changes these changes are nc actions, then the **Redo** list would then show these sa the list. This is because redoing changes must be dor The **Redo** button is disabled as soon as you make a changes have been made since your last **Undo**.
	**Save**	You can save your changes at any time by clicking th new cue file is then saved (with a .scs11 extension). I **Save As** menu item available under the **Other Actior** **Undo** and **Redo** are not affected by saving your char new cue file is opened.

Recovery

If your computer crashes while you are editing a cue file, then when you next start SCS it will offer you the option to recover from your last edit. Regardless of when you last saved your changes, you should find that SCS will recover to a very recent point in your editing - probably up to the last change you made. You will not, however, be able to "undo" any changes prior to that recovery point.

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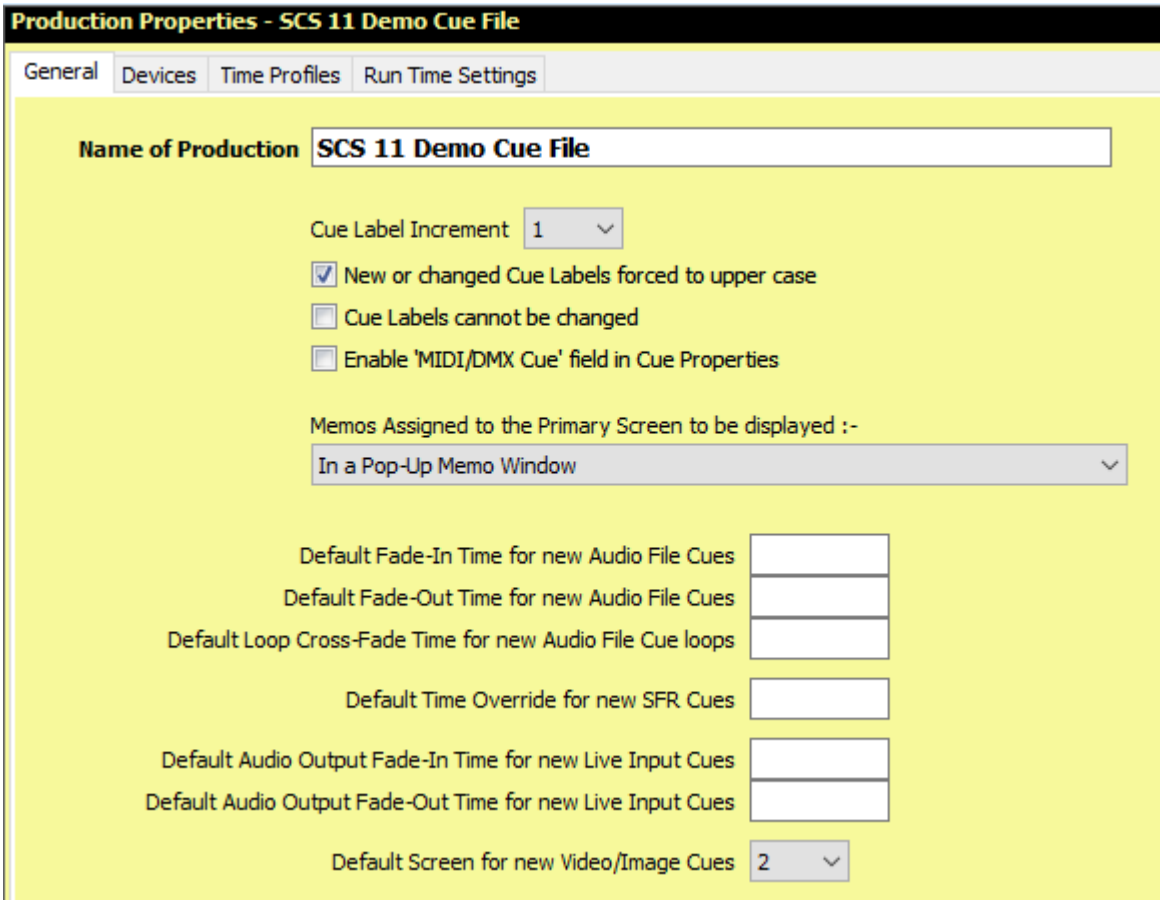
7.5. Production Properties

Production Properties - General

Some Production Properties are only available with **SCS Standard** and/or higher license levels.

Overview

Click on the top 'node' of the cue list tree to view and edit the **Production Properties.** You can also select **Production Properties** from the menu displayed on clicking the **Production** button in the Editor's toolbar. You will see a panel like this:



Properties and Controls

General

Name of Production: Enter the name of your production or show.

Cue Label Increment: When you create cues, SCS generates a default cue label (or cue number). The first cue you create will be labeled Q1, and if you leave that label unchanged then the second cue created will be Q2. However, you can change these defaults by increasing the **Cue Label Increment**. So if you set the Cue Label Increment to 5 before you create your first cue then the first cue you create will be labeled Q5, and if you leave that label unchanged then the second cue created will be Q10. Changing this property only affects cues created *after* you make the change. Note that your cue labels do not *have* to be 'Qn'. See the description for **Cue** under **Cue Properties** for details.

New or Changed Cue Labels forced to upper case: If you want your cue labels always in upper case, then mark this checkbox. This only affects new or changed cue labels - it will not alter existing cue labels.

Cue Labels cannot be changed: If your cues have all been written up in the script then you may want to lock in the cue labels (cue numbers). By marking this checkbox, the labels of existing cues cannot be changed.

Enable 'MIDI/DMX Cue' field in Cue Properties: If you are going to use MIDI or DMX control for your cues then you need to be able to identify the cues using a numeric id. See the description for **MIDI/DMX Cue** under **Cue Properties** for details. The **MIDI/DMX Cue** field under **Cue Properties** *will* be displayed if you have selected MIDI or DMX control in the **Cue Control Devices** tab of Production Properties, but this **Enable 'MIDI/DMX Cue' field in Cue Properties** checkbox enables you to force the **MIDI/DMX Cue** field to be displayed regardless of the **Cue Control Device** assignments.

Memos Assigned to the Primary Screen to be displayed: Any Memo Cues that have their **Target Display** set to *Window or Panel on primary screen* will be specifically displayed according to the setting of this Production Property. The choices available are:

- In a Pop-Up Memo Window
- In a Memo Panel to the right of the Cue List in the main window
- In a Memo Panel to the right of the Cue List AND Cue Panels in the main window

For more information, see Memo Cues.

The following properties affect certain cue types added or changed in the Editor

Default Fade-In Time for new Audio File Cues: You may enter here the default **Fade-In Time** to be used when adding an Audio File Cue - does not affect existing cues. Only set this property if all or most the Audio File cues you add are to be faded in, and faded in over the same length of time. You can, of course, subsequently change or remove the actual fade-in time on any cue.

Default Fade-Out Time for new Audio File Cues: You may enter here the default **Fade-Out Time** to be used when adding an Audio File Cue - does not affect existing cues. Only set this property if all or most the Audio File cues you add are to be faded out, and faded out over the same length of time. You can, of course, subsequently change or remove the actual fade-out time on any cue.

Default Loop Cross-Fade Time for new Audio File Cue loops: You may enter here the default **Loop Cross-Fade Time** used when adding a loop to an Audio File Cue - does not affect existing cues with loops.

Default Time Override for new SFR Cues: You may enter here the default **Time Override** used when adding an SFR Cue - does not affect existing cues.

Default Fade-In Time for new Live Input Cues: You may enter here the default **Fade-In Time** to be used when adding a Live Input Cue - does not affect existing cues. Only set this property if all or most the Live Input cues you add are to be faded in, and faded in over the same length of time. You can, of course, subsequently change or remove the actual fade-in time on any cue.

Default Fade-Out Time for new Live Input Cues: You may enter here the default **Fade-Out Time** to be used when adding a Live Input Cue - does not affect existing cues. Only set this property if all or most the Live Input cues you add are to be faded out, and faded out over the same length of time. You can, of course, subsequently change or remove the actual fade-out time on any cue.

Default Output Screen for new Video/Image Cues: SCS supports up to 4 secondary screens (numbered 2 to 5) for Video/Image Cues, provided the screens are configured as extensions of the Windows desktop. If you have just one secondary screen (such as a screen or video projector connected to your laptop's external monitor port) then that would be screen 2. However, if you have more 'screens', and your video projector is, say, 'screen 3', then you may want to make 'screen 3' the default screen for Video/Image Cues. This field enables you to set the required default screen. You can, of course, subsequently change the actual screen of any Video/Image Cue. See also the description of **Screen** under Video/Image Cues, particularly if you have a Matrox or similar device that supports multiple displays.

Next Tab (Devices) >

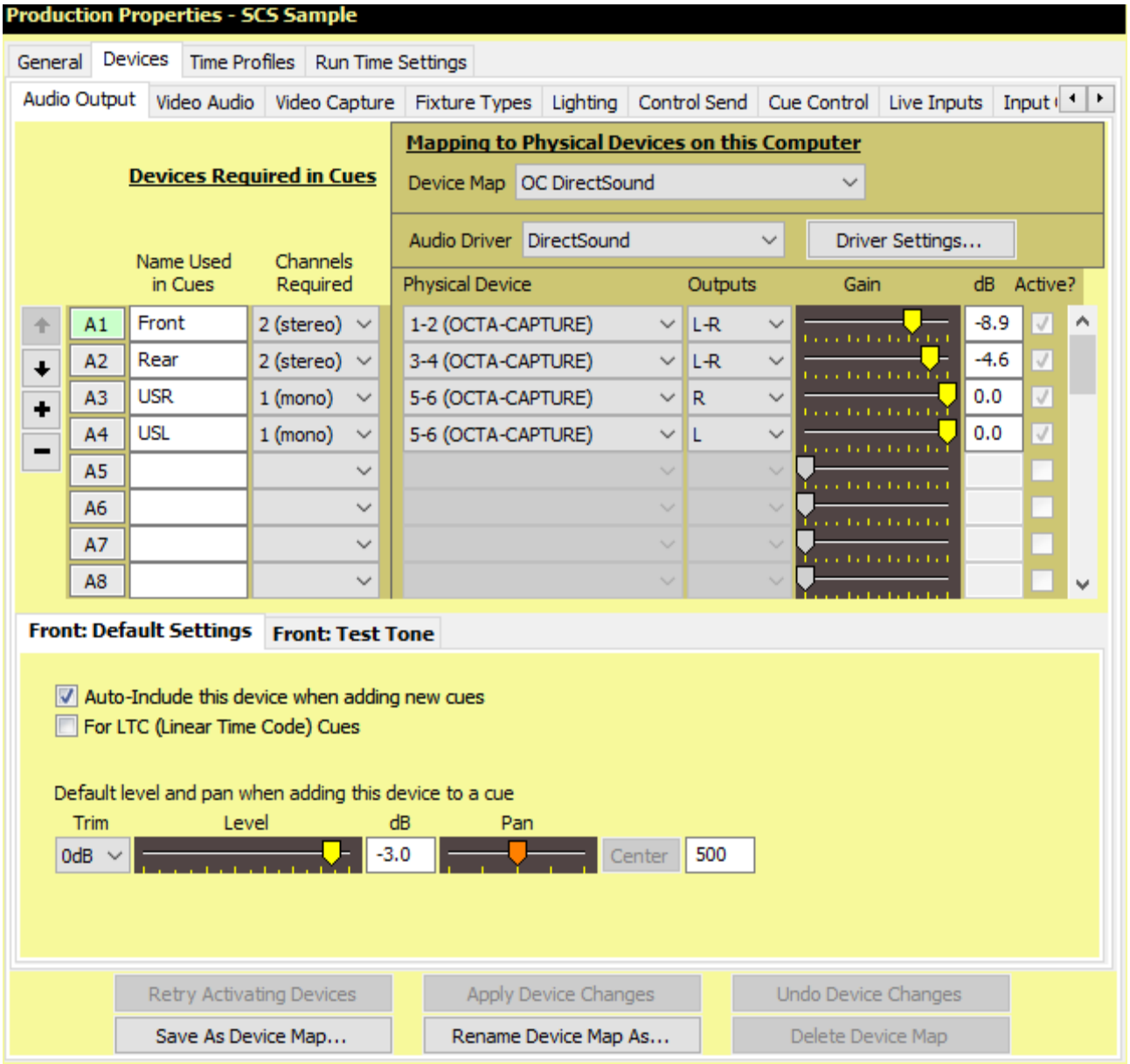
Production Properties - Audio Output Devices

Some features only available with **SCS Standard** and/or higher license levels.

Overview

The **Devices** tab has sub-tabs, although the sub-tabs you see will depend on your license level, and the number of individual devices available will also depend on your license level.

The first sub-tab is for you to define your **Audio Output Devices**.



Initially there will just be one **Audio Device** displayed, which will have 'Front' as the **Name Used in Cues**.

Important information regarding Device Maps, and setting or changing device details:

The **Devices** tab has been split into multiple sub-tabs: "Audio Output Devices", "Video Audio Devices", "Live Inputs", "Input Groups", "Control Send Devices", and "Cue Control Devices". In the top section you can setup your required device names and mappings to physical devices and speakers, but none of the changes you make in this section will have any effect on your cues until you click the **Apply Device Changes** button. This means that SCS will not try to keep cue device assignments in sync with the settings here on the fly - SCS will wait until you indicate that the changes are to be applied. You will, however, be able to use the **Test Tone** control to check an assignment before applying the changes, except for ASIO devices. Test tones for ASIO devices can only be processed when there are no unapplied device changes.

Changes you make in this section are NOT recorded in the 'Undo/Redo' list until you apply the changes. To discard any unapplied changes, use the **Undo Device Changes** button.

See also: Device Maps

Properties and Controls

Devices Required in Cues

When you plan your production, decide where you want sound to emanate from in the theatre or other venue. If you just want speakers above or either side of the stage then you can set up one SCS **Device** named 'Front'. If you also want some sound effects etc from rear speakers, where the choice of sounds will be different to the sounds sent to the front speakers, then set up a **Device** for 'Rear'. Set up as many **Devices** as you need for different sound outputs.

Also nominate the number of **Channels Required** for each **Device**, eg '1 (mono)', '2 (stereo)', etc.

Mapping to Physical Devices on this Computer

We have just discussed setting up the audio output **Devices** you want to use in your production. You may be setting up your cues on your computer at home and then want to transfer the whole production to your theatre computer. But your theatre computer may have different hardware to your home computer. This means that the mapping of **Devices** to **Physical Devices** may be different on the two computers. For example, on your home computer you may just have the built-in sound card whereas on the theatre computer you may have a professional multi-channel output device such as a Roland Octa-Capture.

To handle this scenario, SCS creates a **Device Map** for the production and computer, so a **Device Map** for this production will be kept on your home computer, and a separate **Device Map** for this production will be kept on the theatre computer. It is also possible to have multiple **Device Maps** on an individual computer, but only do this if you need to, such as if you have certain hardware that's not always available.

A **Device Map** is where computer-specific information is held. To help you see which items are regarded as computer-specific (on all the device tabs), these fields are shown with a distinctive background color like this:-

Physical Device

Device Maps and Device Tabs

On the "Audio Output Devices" tab you may set up one or more Device Maps. You could, for example, set up three Device Maps: one that uses DirectSound/WASAPI with the built-in speakers of your laptop; another that uses DirectSound/WASAPI with an external audio interface (such as a Roland Octa-Capture), and a third Device Map that uses ASIO and your external audio interface.

The Device Maps you specify here apply to **"Audio Output Devices", "Video Audio Devices"** and **"Live Inputs"**.

"Input Groups" are just used to define groups of Live Input channels, so have no direct computer-specific fields and so therefore have no fields that need to be stored in a Device Map.

"Control Send Devices" and **"Cue Control Devices"** *do* have computer-specific fields, but these are unrelated to the Audio Driver or Audio Outputs you select, so the computer-specific fields for "Control Send Devices" and "Cue Control Devices" are held in a separate single 'Device Map'. So regardless of how many Device Maps you have specified under "Audio Output Devices" and which of those device maps you select at any time, the physical device selections for "Control Send Devices" and "Cue Control Devices" will always be the same - for that Cue File on that computer.

See also: Device Maps

Device Number (A1, A2, etc): If this number is displayed with a colored background (eg see A1 in the above screenshot) this indicates this device is the 'current' device for the **Sidebar Controls** to the left, and for the **Default Settings** and **Test Tone** panels displayed below the device list. To make a different device the 'current' device, click on any field in the line for the required device, or on the Device Number itself.

Sidebar Controls: Controls are available to enable you to easily change the order of the devices. The order of the devices here (in the Production Properties) is the order the VU meters will be displayed on the Run Screen, which is why you may wish to change the order. The sidebar controls available are:

↑	Move up	Move the current device up one position.
↓	Move down	Move the current device down one position.
✚	Insert device	Open a new line *before* the current device so you can insert details of a new device. (You can also add a device just by entering the details in a blank line, such as in line A3 in the above screenshot.)

-	Remove device	Removes the current device. SCS will not let you do this if the device is being used by any cue.

Name Used in Cues: Enter the name you want to use for the device in your cues, such as 'Front', 'Rear', 'Stage Left', 'Radio', etc. You will use this name in the audio file cue and sub-cue definitions, so if you want the sound of a radio broadcast to appear to come from a radio you have on stage, then by suitably placing a concealed speaker in or near the radio then in the audio file cue definition you can select the 'Radio' audio device.

Channels Required: If you require mono output from this **Device** then select *1 (mono)* from the drop-down list. If stereo output is required, select *2 (stereo)*. Other multi-channel outputs are also available.

Computer-Specific / Device Map-Specific Fields

Device Map: The currently-selected **Device Map** for this production. The initial **Device Map** created for this production on this machine will be given the name of the machine but you can change the name by clicking the **Rename Device Map As...** button. In the above screenshot the Device Map had been renamed to reflect the device and driver used in this Device Map. If you have previously set up other Device Maps on this computer for this production, then you can change the selected Device Map from the **Device Map** drop-down list.

Audio Driver: The Audio Driver used by this Device Map. By 'Audio Driver' we mean the audio format and software, where the audio format is DirectSound, WASAPI or ASIO, and the software is the BASS audio library or SoundMan-Server (SM-S).

Driver Settings: Clicking this button will display **Options and Settings** window, with the appropriate **Audio Driver Settings** node selected.

Physical Device: The physical device assigned to this **Name Used in Cues**. The devices included in this drop-down list will be determined by the **Audio Driver** selected. If you select 'Default Audio Device' then this will map the **Name used in Cues** device to the current Windows default sound device. This handles situations where an external audio interface may or may not be connected, and where Windows may change the default sound device accordingly. 'Default Audio Device' uses whatever audio device is currently assigned by Windows as the default.

Outputs: This drop-down list is populated according to the outputs available on the selected **Physical Device** and the number of **Channels Required**, eg 2 (stereo) or 1 (mono). So for stereo devices the list will contain values like 1-2, 2-3, 3-4, etc, whereas for mono devices the list will contain single output numbers like 1, 2, 3, etc. Some multi-channel audio interfaces publish their WDM outputs as stereo pairs. For such **Physical Devices** SCS populates the **Outputs** list with 'L' and 'R', or 'L-R'. Select the required output(s) from this list.

Gain and **dB**: This is like a Master Gain Control for this physical output in *this* Device Map. Normally you should leave the gain at the default setting of maximum gain (0.0dB). Where this control becomes useful is if you have set all your Audio File Cue levels when you designed your cues, and then you transfer the production to your theatre or to another venue and one of your main outputs (eg your 'Rear' speaker output) is too loud. If you are running through a sound desk that is normally not a problem - you just lower the faders for the 'Rear' speakers. But if you are sending outputs directly from your audio interface device to powered speakers you may or may not be able to adjust the levels of those speakers. If you cannot adjust their levels (for technical or policy reasons) then in your SCS Device Map for this venue you can just drop the **Gain** as required.

Active?: This display-only checkbox will be checked if SCS has successfully initialized this device, or will be blank if the initialization failed. If you have devices that have not been initialized successfully, click **Retry Activating Devices** at the bottom of this tab.

See also: Device Maps

Auto-Include this device when adding new cues: If this checkbox is selected (which it is by default for the first device, ie device A1) then whenever you add a new Audio File or Playlist cue then this device will automatically be included. You can, if required, remove the device if it is not required for that cue. You should only 'auto-include' devices you want for the majority of your cues, to make setting up the cues simpler. Note that this property only affects future cues added - changing the setting has no effect on existing cues.

Default level and pan when adding this device to a cue: This gives the trim, level and pan to be used when adding this device to a cue. You can, of course, subsequently change the trim, level and pan in the cue itself.

For LTC (Linear Time Code) Cues: *(Only displayed if you have an **SCS Platinum** license.)* If this checkbox is selected and your current Audio Driver is SoundMan-Server then LTC Cues will use this Audio Device for sending Linear Time Code.

Test Sound: You can select the type of test sound (test tone) you want to hear. This may be either 'Sine Wave (440Hz)' or 'Pink Noise'.

Test Tone Level: You can adjust the level (volume) of test tones using this slider. If you want to make fine adjustments to the level, left-click the slider and then use the left-arrow and right-arrow keys as required.

Pan: If the selected device has two channels (under 'Channels Required') then the Pan control enables you to pan the test sound between the two channels.

Center: This button will center the pan control.

Short Test Tone: Click this button to send a short test tone to the corresponding Physical Device and selected Speakers/Outputs. A confirmation message is displayed, such as 'Test Tone sent to Front'.

Continuous Test Tone: Click this button to send a continuous test tone to the corresponding Physical Device and selected Speakers/Outputs. A confirmation message is displayed, such as 'Test Tone sent to Front'. The button caption is changed to **Cancel Test Tone**, so click this button again to stop the test tone.

Tip: Suppose the computer you are going to use at the theatre has a sound card/interface with all the channels you need, but the computer you are using to prepare the cues does not. (We'll refer to these as the 'theatre pc' and the 'home pc' as this is a typical scenario.) You can still set up all the audio devices you want to use even if you don't have separate physical devices or speakers for them all. On your home pc define all the **Names Used in Cues** that you need for your show. However, since you don't have enough **Physical Devices** you can double-up on their use. For example, in the above screen shot you could assign all device names to the same physical device. When you transfer your files to the theatre pc then you just have to go to the Production Properties and assign the **Physical Devices** as required - you do not have to change any of your audio file cues or sub-cues.

Device Map Buttons

The following buttons are part of the **Devices** tab, not specifically the **Audio Output Devices** sub-tab. They therefore affect *all device properties*, whether they be for Audio Output Devices, Video Audio Devices Live Input Devices, Control Send Devices, or Cue Control Devices.

Retry Activating Devices: If any of the devices has not yet been successfully initialized, and so displays the **Active** checkbox clear, this Retry button will be enabled. By clicking this button, SCS will retry the initialization of those devices.

Apply Device Changes: This button will be enabled if you have made any changes to the existing device names or mappings. Those changes are regarded as temporary until you click the **Apply Device Changes** button. When you click this button, SCS will apply your new settings to cues that use the devices. The new settings will also be recorded *en masse* in the Undo/Redo list. If you have changed any of the Physical Devices then SCS asks you if you want to save your changes as a new Device Map or apply the changes to the current Device Map. This is to prevent you unintentionally overwriting your current Device Map when setting up mappings for a different physical device.

Warning! When you apply your device changes, SCS will issue *Stop All* if any cues are found that use a device that has been changed, and will also close those cues. This is to enable the cue(s) affected to be reopened with the new device settings.

Undo Device Changes: Use this button if you do not want to apply the device changes, but wish to reinstate the settings of the Production Properties**.**

Save as Device Map: This enables you to save the current device map with a new name, without destroying the existing device map.

Rename Device Map As: This button lets you change the name of the currently-open device map. You will be asked for the new name for the device map.

Delete Device Map: Use this button to delete a device map you no longer require for this production on this machine. The button is disabled if only one device map exists for this production on this machine, to ensure at least one device map is retained.

Next Topic (Video Audio Devices) >

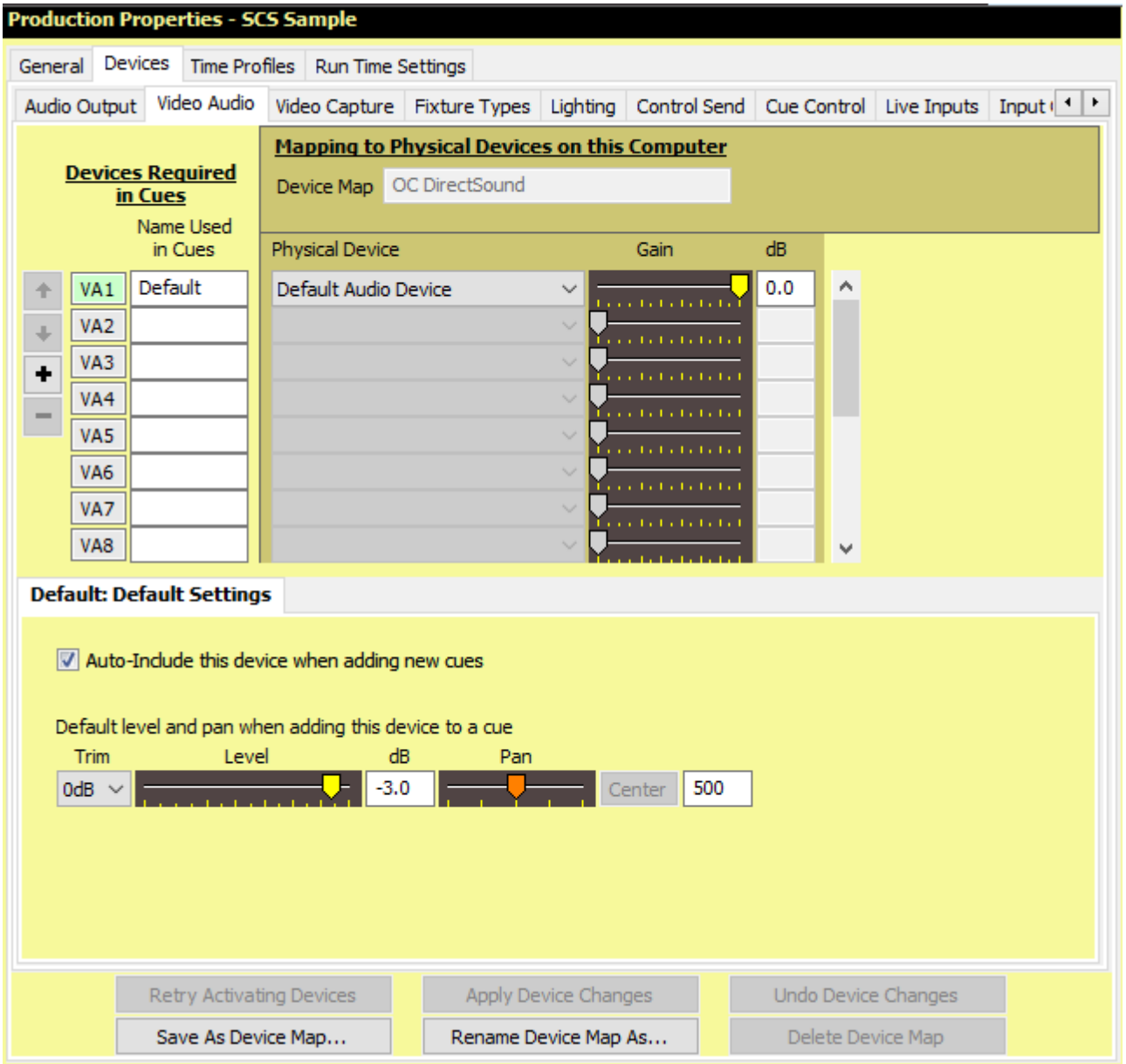
Production Properties - Video Audio Devices

Overview

'Video Audio' refers to the audio output of video files. You can select any available DirectSound output device for your video's audio. Although each video cue only lets you choose one audio device, you can use different audio devices for different cues, so in this tab of the Production Properties you can define your Video Audio Devices.

Note: As mentioned above, audio devices for video files must be DirectSound. The video playback library used by SCS does not support ASIO or SoundMan-Server output channels.

Here's an example of the Production Properties for Video Audio Devices:



Initially there will just be one **Video Audio Device** displayed, which will have 'Default' as the **Name Used in Cues** and will be mapped to 'Default Audio Device', which is the Windows default sound device.

Properties and Controls

Devices Required in Cues	Mapping to Physical Devices on this Computer
Here you need to identify each audio output 'device' you want to use in Video/Image cues. You give each device a **Name** that will be used in your Video/Image cues (although, of course, only relevant for video files).	All your Device mappings are held in a **Device Map**. This is the *same* **Device Map** used for **Audio Output Devices**, so the name of that **Device Map** is displayed but is not editable here. The **Physical Devices** chosen are for this **Device Map** on this computer.

Device Number (VA1, VA2, etc): If this number is displayed with a colored background (eg see VA1 in the above

screenshot) this indicates this device is the 'current' device for the **Sidebar Controls** to the left, and for the 'Default Settings' panel displayed below the device list. To make a different device the 'current' device, click on any field in the line for the required device, or on the Device Number itself.

Sidebar Controls: Controls are available to enable you to easily change the order of the devices as explained for Audio Output Devices.

Name Used in Cues: Enter the name you want to use for the audio output in your Video/Image cues.

Computer-Specific / Device Map-Specific Fields

Device Map: This is a display-only field showing the Device Map currently selected for this production in the Audio Output Devices tab.

Physical Device: The DirectSound device assigned to this **Name Used in Cues**. If you select 'Default Audio Device' then this will map the **Name used in Cues** device to the current Windows default sound device. This handles situations where an external audio interface may or may not be connected, and where Windows may change the default sound device accordingly. 'Default Audio Device' uses whatever audio device is currently assigned by Windows as the default.

Gain and **dB**: This is like a Master Gain Control for this physical output in *this* Device Map. Normally you should leave the gain at the default setting of maximum gain (0.0dB). See the corresponding property under Audio Output Devices for more info.

Default Settings

Auto-Include this device when adding new cues: If this checkbox is selected then whenever you add a new Video/Image Cue then this device will automatically be included. One and only one Video Audio Device may have auto-include selected as Video/Image cues only support a single audio device. Note that this property only affects future cues added - changing the setting has no effect on existing cues.

Default level and pan when adding this device to a cue: This gives the trim, level and pan to be used when adding this device to a cue. You can, of course, subsequently change the trim, level and pan in the cue itself.

Device Map Buttons

The buttons at the foot of the tab apply to all device types as explained for Audio Output Devices.

< Previous Topic (Audio Output Devices) | Next Topic (Video Capture Devices) >

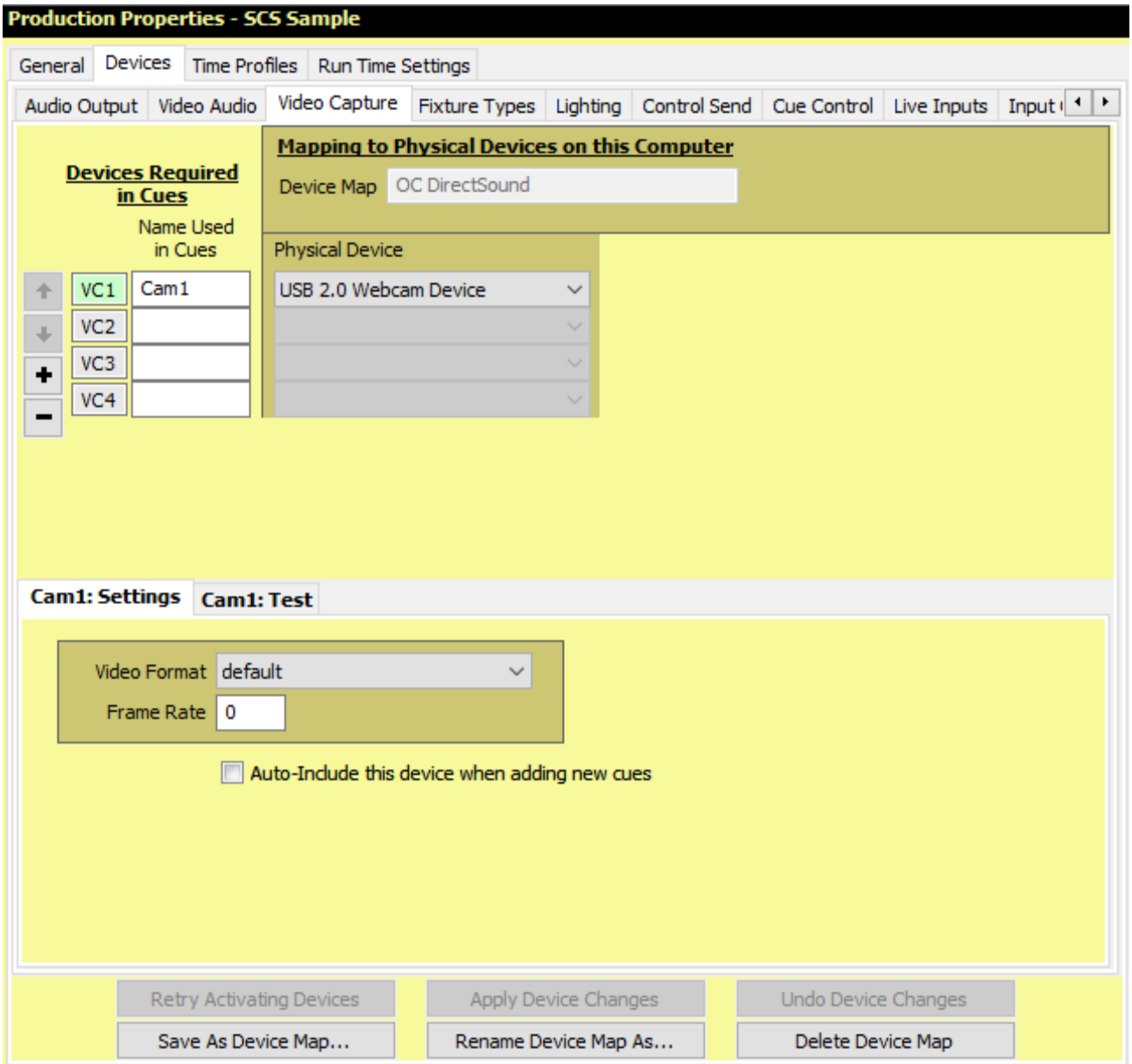
Production Properties - Video Capture Devices

Video Capture is only available with **SCS Professional** and higher license levels.

Overview

Video Capture Devices are devices that provide live video feeds, which normally would be video cameras. The term 'video capture' is used widely in the industry for devices that can 'capture a video signal' for transmission to a computer or other device.

Here's an example of the Production Properties for Video Capture Devices:



Properties and Controls

Devices Required in Cues	Mapping to Physical Devices on this Computer
Here you need to identify each video capture device you want to use in Video Capture cues. You give each device a **Name** that will be used in your Video Capture cues.	All your Device mappings are held in a **Device Map**. This is the *same* **Device Map** used for **Audio Output Devices**, so the name of that **Device Map** is displayed but is not editable here. The **Physical Devices** chosen are for this **Device Map** on this computer.

Device Number (VC1, VC2, etc): If this number is displayed with a colored background (eg see VC1 in the above screenshot) this indicates this device is the 'current' device for the **Sidebar Controls** to the left, and for the Settings' panel displayed below the device list. To make a different device the 'current' device, click on any field in the line for the required device, or on the Device Number itself.

Sidebar Controls: Controls are available to enable you to easily change the order of the devices as explained for

Audio Output Devices.

Name Used in Cues: Enter the name you want to use for the audio output in your Video/Image cues.

Computer-Specific / Device Map-Specific Fields

Device Map: This is a display-only field showing the Device Map currently selected for this production in the Audio Output Devices tab.

Physical Device: The video camera or other capture device.

Video Format: If the performance of your video capture needs to be improved, setting the Video Format may help. The drop-down list shows formats a sizes supported by the selected Physical Device, such as MJPG 960x540 (5 to 30 fps), MJPG 1280x720 (5 to 30 fps), YUY2 160x120 (5 to 30 fps), etc.

Frame Rate: This can also be set if required. 0 (zero) implies the default frame rate for the device will be used. Although items under Video Format contain details like "(5 to 30 fps)", SCS does not cross-check the Frame Rate against these entries. Currently SCS accepts Frame Rates in the range 5 to 60, in addition to 0 which impllies default.

Other Settings

Auto-Include this device when adding new cues: If this checkbox is selected then whenever you add a new Video Capture Cue then this device will automatically be included. Note that this property only affects future cues added - changing the setting has no effect on existing cues.

Device Map Buttons

The buttons at the foot of the tab apply to all device types as explained for Audio Output Devices.

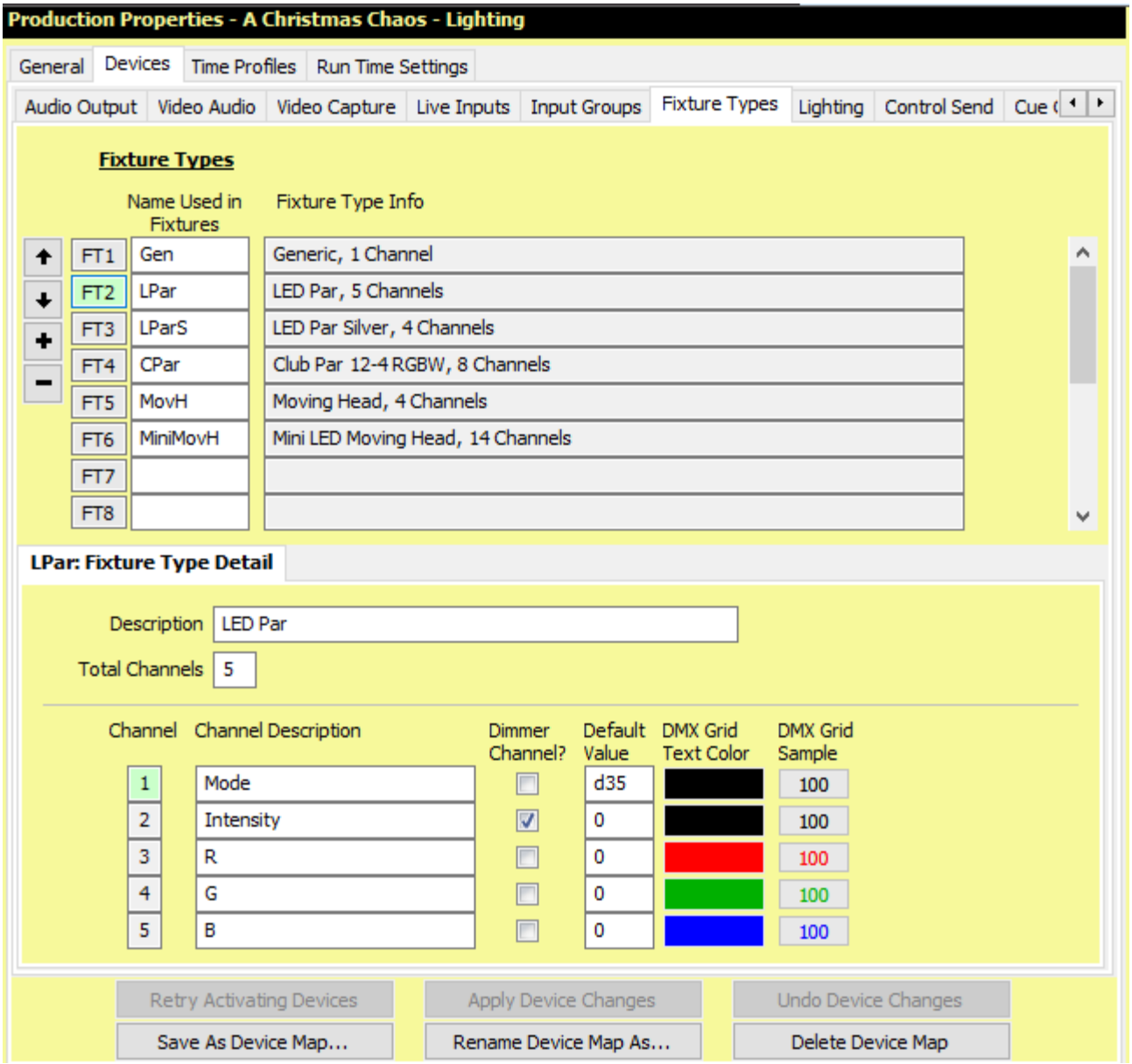
< Previous Topic (Video Audio Devices) | Next Topic (Live Inputs) >

Production Properties - Fixture Types

Fixture Types are only used for Lighting Devices are therefore only available with **SCS Professional** and higher license levels.

Overview

Before setting up your Lighting Devices you need to set up the **Fixture Types** you will be using. If you have single-channel lighting fixtures of various different makes and models, you can just set up a single Fixture Type to cover all these units. In the example below a 'Generic' Fixture Type has been created for such fixtures. For more complex fixture types you will probably want to set up separate Fixture Type entries for each different type of fixture, even if some different types have the same channel assignments.



Properties and Controls

Fixture Type Number (FT1, FT2, etc): If this number is displayed with a colored background this indicates this device is the 'current' fixture types for the **Sidebar Controls** to the left, and for the 'Settings' panel displayed below the fixture type list. To make a different fixture type the 'current' fixture type, click on any field in the line for the required fixture type, or on the Fixture Type Number itself.

Sidebar Controls: Controls are available to enable you to easily change the order of the fixture types.

Name Used in Fixtures: Enter the name you want to use for the fixture type in your Lighting device fixtures.

Fixture Type Detail

Description: Enter a description for this fixture type.

Total Channels: Enter the number of DMX channels supported by this Fixture Type. This will determine the extent of the list of channels displayed in the fields below.

Channel: The listed Channel numbers are determined by the **Total Channels** field. These numbers are display-only.

Channel Description: Enter a description for this channel, such as the color. For a single-channel fixture you could enter something like 'Dimmer' or 'Intensity'.

Dimmer Channel: Select this checkbox for any channel that is to be regarded as a 'dimmer channel' for the purpose of applying fade ins and fade outs, including blackouts.

- If the Fixture Type is for **single-channel lighting fixtures** then that channel will probably be a dimmable channel and should therefore have this checkbox selected.
- If the Fixture Type has an **intensity** or **dedicated dimmer channel** (the terminology may vary) then select that channel only as the Dimmer Channel in SCS. For example, if the Fixture Type has RGB channels and also an intensity channel, then do *not* select the Dimmer Channel checkbox for the RGB channels, but just for the intensity channel. If you select the checkbox for the RGB channels *and* the intensity channel then your fades may appear twice as fast as you require as the intensity channel would be fading a color channel that itself was fading.
- If the Fixture does *not* have an intensity channel then set the Dimmer Channel checkbox for the lighting channels, eg the RGB channels.
- If the Fixture Type has nothing dimmable (eg a DMX-controlled smoke machine) then leave all Dimmer Channel checkboxes clear for this Fixture Type.

Default Value: This is the DMX value to be initially set for this channel for this Fixture Type when adding a relevant Fixture to a Lighting Cue. The value may be entered as a percentage in the range 0-100, or as a DMX value in the range d0-d255. As an example, for the production that these screenshots are from, the 5-channel LED Par fixtures are required to have the mode set to the DMX value 35 for this production, so for the Fixture Type 'LPar' we have set the Default Value for channel 1 (the 'mode' channel) to d35. Note that this is only the default value applies when adding the fixture to a Lighting Cue. In Lighting Cues the values may be changed as required.

DMX Grid Text Color: This determines the text color of DMX values displayed for this channel in the DMX Display Window. Click on this control to display a pop-up menu that contains some standard colors (eg red, green, blue) and also a link to the 'color picker' control, which will enable you to select any color you wish.

DMX Grid Sample: This display-only control shows an example of how the DMX value will appear in the DMX Display Window. This is particularly useful for colors that do not contrast well with the background. As the background color is common to all cells in the grid, it cannot be changed here, but you can select a different background color in the DMX Display Window itself. The selected background color will be used in these **DMX Grid Sample** displays. Note that when colors are first assigned to Fixture Type Channels, SCS will automatically assign red, green, blue, white, yellow and cyan for descriptions like "R", "Red", etc. Other channels will be assigned the default color, which is black.

Device Map Buttons

The buttons at the foot of the tab apply to all device types as explained for Audio Output Devices.

< Previous Topic (Input Groups) | Next Topic (Lighting - DMX Devices and Fixtures) >

Production Properties - Lighting - DMX Devices and Fixtures

DMX Devices are only available with **SCS Professional** and higher license levels. *For full DMX support you will need an **SCS Professional Plus** or higher license.* With **SCS Professional** you are limited to using DMX Channels 1-32 only.

Note: SCS supports DMX Devices only via the following ENTTEC and FTDI devices (www.enttec.com and www.ftdichip.com):

- **ENTTEC DMX USB PRO MK2**
- **ENTTEC DMX USB PRO**
- **ENTTEC OPEN DMX USB**
- **FTDI USB-RS485 cable**

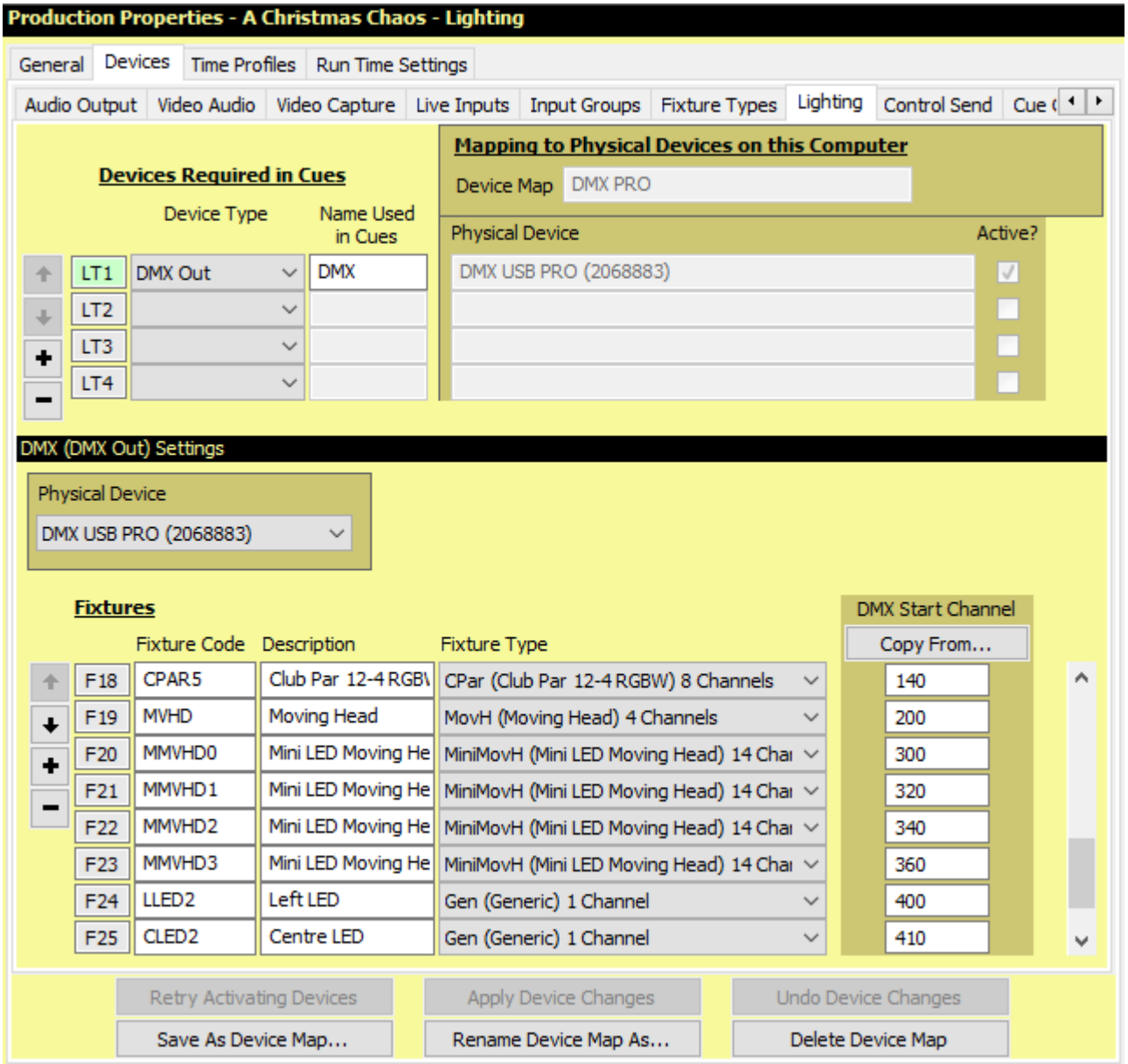
The **FTDI USB-RS485 cable** device is compatible with the **ENTTEC OPEN DMX USB**.

Installing the D2XX driver for any of the above devices should install ftd2xx.dll. If SCS cannot find ftd2xx.dll as a loadable library then DMX will not be enabled.

Please note: the **USB PRO** and **USB PRO MK2** are the preferred devices. DMX needs to be refreshed about 40 times a second, and the USB PRO and USB PRO MK2 handle that refreshing internally. The OPEN DMX USB and FTDI USB-RS485 do *not* handle DMX refreshing and so for these devices SCS needs to handle the refreshing. This is a processing overhead.

Overview

In SCS you may set up Lighting Cues to control any DMX device. Here's an example of the Production Properties for Lighting Devices:



Note: If you open a cue file that contains Lighting Devices that were added in SCS 11.7.1 or earlier then the screen display will be as shown here: Lighting Devices - Pre SCS 11.8.

Properties and Controls

Devices Required in Cues	Mapping to Physical Devices on this Computer
Here you need to identify each device you want to use in Lighting cues. You select the **Device Type** and give the Device a **Name** that will be used in your Lighting cues.	All your Device mappings are held in a **Device Map**. This is the *same* **Device Map** used for **Audio Output Devices**, so the name of that **Device Map** is displayed but is not editable here. The **Physical Devices** chosen are for this **Device Map** on this computer.

Device Number (LT1, LT2, etc): If this number is displayed with a colored background (eg see LT1 in the above screenshot) this indicates this device is the 'current' device for the **Sidebar Controls** to the left, and for the 'Settings' panel displayed below the device list. To make a different device the 'current' device, click on any field in the line for the required device, or on the Device Number itself.

Sidebar Controls: Controls are available to enable you to easily change the order of the devices as explained for Audio Output Devices.

Device Type: This drop-down list contains the Lighting device types supported by your license level. This Help page describes the properties etc for DMX Out' devices.

Name Used in Cues: Enter the name you want to use for the device in your Lighting cues. Note that SCS provides a default name based on the Device Type but you can change this if you wish.

Device Map Fields

Physical Device (below Mapping...): The physical device assigned to this **Name Used in Cues**. This Physical Device item is a display-only field based on the 'Settings' provided in the lower part of the screen.

Active?: This display-only checkbox will be checked if SCS has successfully initialized this device, or will be blank if the initialization failed. If you have devices that have not been initialized successfully, click *Retry Activating Devices* at the bottom of this tab.

Physical Device (below Settings): Select the required DMX Device from the drop-down list. The entries available in the list will depend on the installed devices and possibly whether or not they are connected and switched on. At the end of the drop-down list you will see 'Dummy DMX Port'. Selecting the Dummy entry enables you to set up Lighting cues for this DMX device even if you have no real DMX device available.

DMX Port: This field is only displayed for devices that have more than one DMX Output Port, which currently is just the ENTTEC DMX USB PRO MK2. Also, it is only displayed if you have an **SCS Professional Plus** or higher license. Select the required Port to be used for this Lighting Device in Lighting Cues.

DMX Refresh Rate: This field is only displayed for ENTTEC *OPEN DMX USB* or equivalent devices. If an *OPEN DMX USB* or equivalent device is used for Lighting Cues then SCS needs to constantly refresh DMX channel values sent to the device. This is not necessary with the *DMX USB PRO* or *DMX USB PRO MK2* as these devices handle DMX refreshing internally. The **DMX Refresh Rate** field indicates the frequency required for the refresh. The default is 40 fps (frames per second), but you can select a lower rate, down to 25 fps. ENTTEC support have provided the following advice: "40 fps is ideal, but I would leave an option between 25 to 40 fps - just in case some fixtures don't like 40 fps."

Note: If more than one DMX Port is available (see above) and you wish to use more than one DMX Port in your production then you need to set up a Lighting Device for each port. Each Lighting Cue (or Sub-Cue) can only send DMX to one Lighting Device, but you can have separate cues or sub-cues to send DMX to all required Lighting Devices.

Fixtures

In this section you can enter details of all the fixtures you are using. Before adding your fixtures, you must first of all have set up your Fixture Types.Fixtures are linked to a 'Lighting Device', so if (for example) you are using both ports of an ENTTEC DMX PRO USB MK2 then you must assign each fixture to the correct 'device'. There is no practical limit to the number of fixtures you can register - the displayed list will grow as you add more fixtures.

Fixture Code: Enter a code to uniquely identify this fixture. You will be using **Fixture Codes** when you build your Lighting Cues. **Fixture Codes** are forced to upper case by SCS. They must start with a letter and contain only letters and digits.

Description: Enter a description for this fixture.

Fixture Type: Select the relevant Fixture Type from the drop-down list. SCS uses properties of the Fixture Type to determine the relative DMX channels available for Lighting Cues.

Device Map Fields

DMX Start Channel: Enter here the DMX Start Channel for this fixture. As this is a Device Map field you can have different DMX Start Channels for different device maps, eg for different venues.

Note: You can enter *multiple DMX Start Channels* for an individual 'Fixture', although that is not recommended except for stage lighting. It may, however, be useful for audience lighting if the theatre has separate DMX channels for audience lighting in different parts of the theatre, such as for stalls, uppare and lower balconies, etc. If all performances will require the same selection of audience lighting DMX channels, then you can create a single 'fixture' for audience lighting, and assign all of the associated DMX channels to this fixture. To enter multiple DMX Start Channels, enter the channel numbers separated by commas (eg 1,7,8) or as a range (eg 1-3), or a combination of the two forms (eg 1,3-6,12-14). SCS checks that you have not duplicated DMX Start Channels, and also that if the associated fixture type is multi-channel (eg an RGBW LED fixture type) then a range (eg 1-3) is not acceptable.

Copy From: If you are setting up a Lighting Device for a new Device Map then you may want to copy the DMX Start Channels from a Lighting Device in another Device Map. For example, if you have one Device Map for home use (eg using the inbuilt sound card) and a different Device Map for theatre use (eg using a professional multi-channel audio interface), then if you are using the same DMX interface unit in both locations then you only want to have to set up the DMX Start Channels once. **Copy From** enables you to do this and to then copy those DMX Start Channels to the other Device Map.

Note that **Copy From** does *not* enable you to copy DMX Start Channels from another Production's cue file or device map file. If you want to do this then consider using Import Devices. Make sure you include relevant Device Maps in the import, because it's the Device Maps that contain the DMX Start Channels.

Note: Although **DMX Start Channel** is a device map field, SCS also stores this in the cue file (the .scs11 file) as a *default* DMX Start Channel. This is to simplify the process of transferring the cue file to another computer. Ideally, to do this you should collect your production files including an export of the device map file, and copy these to the other computer. However, if all you do is copy your cue file to the other computer then initially the created device map will have no DMX Start Channels assigned, so SCS then uses these *default* DMX Start Channels, which are recorded in the cue file.

Device Map Buttons

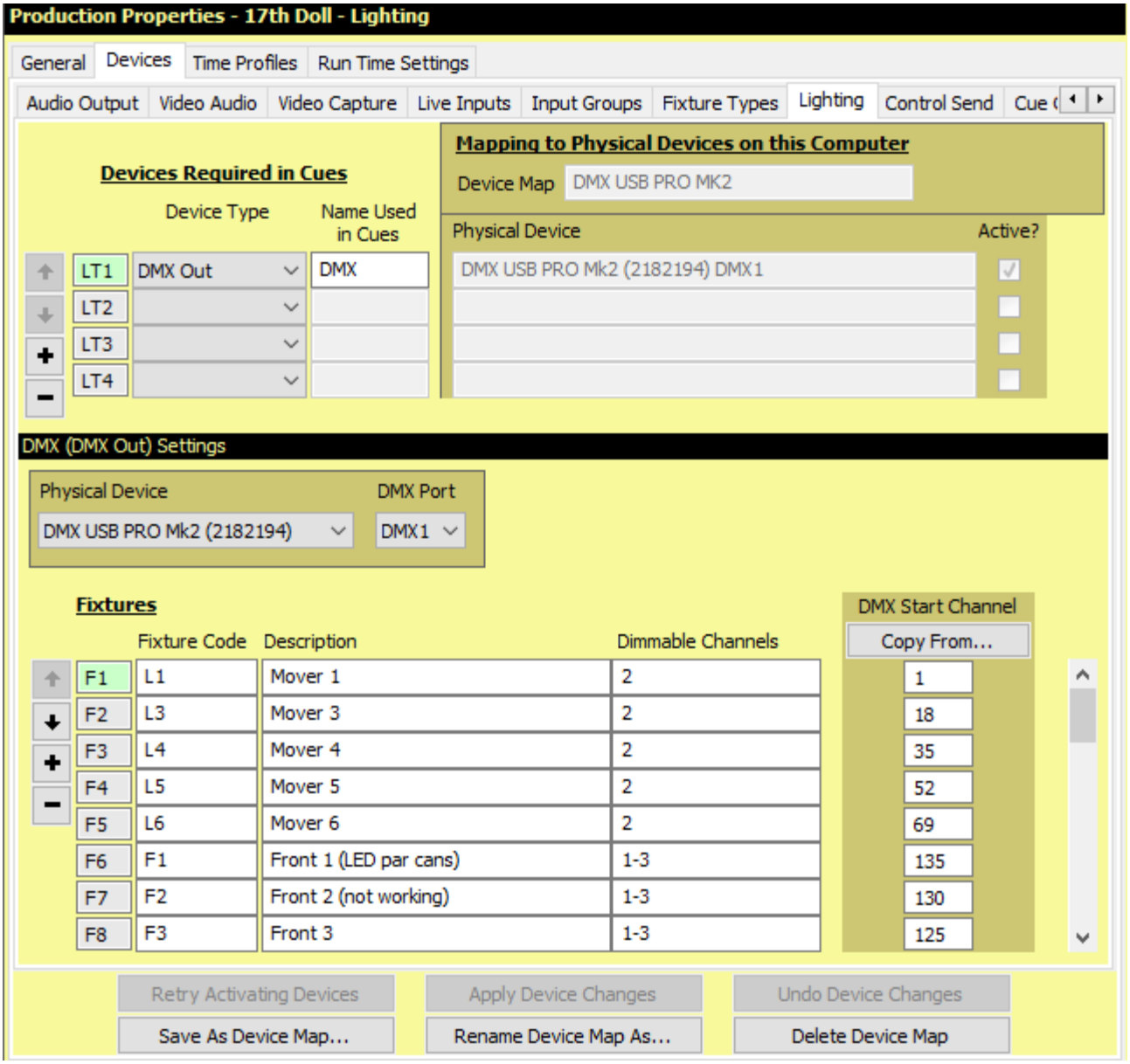
The buttons at the foot of the tab apply to all device types as explained for Audio Output Devices.

< Previous Topic (Fixture Types) | Next Topic (Control Send Devices - MIDI) >

Lighting Devices - Pre SCS 11.8

Overview

If you open a cue file that with Lighting Devices that were added in SCS 11.7.1 or earlier then the properties may include **Dimmable Channels** under Fixtures. This property is no longer required due to the properties now available with Fixture Types. (Fixture Types did not exist in SCS 11.7.1 and earlier versions.) If SCS finds any Fixtures for this Lighting Device contain Dimmable Channels, then the display will appear as shown below:



Dimmable Channels: If this fixture is to be faded up or down then SCS needs to know which relative channels are 'dimmable'. If a Lighting Cue is set to fade out other active fixtures then you do not want SCS to 'fade' channels assigned to pan and tilt, etc - just channels that directly affect the intensity of the fixture's light. The **Dimmable Channel** numbers may be entered individually, separated by commas (eg 1,7,8) or as a range (eg 1-3), or a

combination of the two forms (eg 1,3-6,12-14). In practice, you will probably only need to enter a single channel or a simple range. **Example**: In the venue for the above production, the 'mover' lights are MAC 350 Entours, each configured to use 17 DMX channels. Channel 2 is the intensity channel, so only channel 2 has been nominated as dimmable. However, the LED par cans are simple 3-channel RGB fixtures, so all 3 channels are nominated as dimmable.

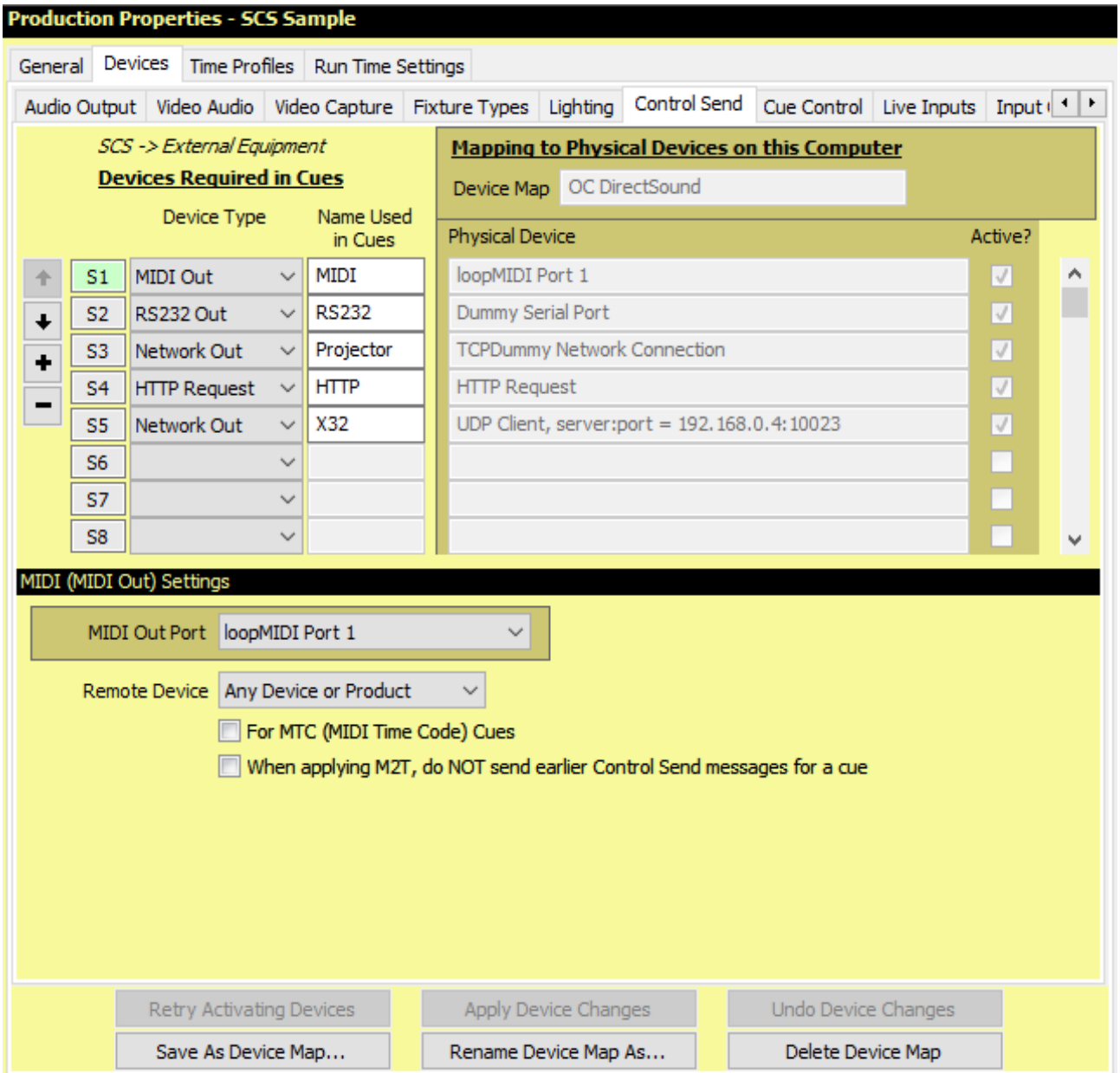
Note: For new productions, please use the new Fixture Types so you can then make full use of the new SCS features, which enhances yet simplifies the setting up and testing of Lighting Cues.

Production Properties - Control Send Devices - MIDI

MIDI Control Send Devices are only available with **SCS Professional** and higher license levels. Remote Devices other than 'Any Device or Product' are only available with **SCS Professional Plus** and higher license levels.

Overview

In SCS you may set up Control Send cues to send commands to external equipment such as sound mixers or lighting boards where Control Send cues can be used to select pre-programmed scenes, snapshots, etc. They can also be used to send control messages to other software, which may be running on a separate computer. See Control Send Cues for details. The layout of the lower part of the screen depends on the Device Type of the currently-selected device. The example below shows the layout for a **MIDI** device.



Properties and Controls

Devices Required in Cues	Mapping to Physical Devices on this Computer
Here you need to identify each device you want to use in Control Send cues. You select the **Device Type** and give the Device a **Name** that will be used in your Control Send cues.	All your Device mappings are held in a **Device Map**. This is the *same* **Device Map** used for **Audio Output Devices**, so the name of that **Device Map** is displayed but is not editable here. The **Physical Devices** chosen are for this **Device Map** on this computer. Where there are no suitable device type available then you can select a dummy. This enables you to set up, for example, MIDI Control Send cues on a computer that does not have MIDI available.

Device Number (S1, S2, etc): If this number is displayed with a colored background (eg see S1 in the above screenshot) this indicates this device is the 'current' device for the **Sidebar Controls** to the left, and for the 'Settings' panel displayed below the device list. To make a different device the 'current' device, click on any field in the line for the required device, or on the Device Number itself.

Sidebar Controls: Controls are available to enable you to easily change the order of the devices as explained for Audio Output Devices.

Device Type: This drop-down list contains the Control Send device types supported by your license level. This Help page describes the properties etc for '**MIDI Out**' devices. Note: If you need MIDI Thru (so that any MIDI received on a MIDI In port is automatically be passed to the MIDI Out port) then select **MIDI Thru** as the **Device Type**.

Name Used in Cues: Enter the name you want to use for the device in your Control Send cues. Note that SCS provides a default name based on the Device Type but you can change this if you wish.

Computer-Specific Fields

Physical Device: The physical device assigned to this **Name Used in Cues**. The Physical Device is a display-only field based on the 'Settings' provided in the lower part of the screen.

Active?: This display-only checkbox will be checked if SCS has successfully initialized this device, or will be blank if the initialization failed. If you have devices that have not been initialized successfully, click *Retry Activating Devices* at the bottom of this tab.

MIDI In Port: This is only displayed if youi have selected **MIDI Thru** as the **Device Type**. Select the required MIDI In Port from the drop-down list. The entries available in the list will depend on the installed devices and possibly whether or not they are connected and switched on. At the end of the list you will see 'Dummy MIDI In Port'. Selecting the Dummy entry enables you to set up MIDI Thru for this MIDI In device even if you have no real MIDI In Port available.

MIDI Out Port: Select the required MIDI Out Port from the drop-down list. The entries available in the list will depend on the installed devices and possibly whether or not they are connected and switched on. At the end of the list you will see 'Dummy MIDI Out Port'. Selecting the Dummy entry enables you to set up Control Send cues for this MIDI Out device even if you have no real MIDI Out Port available.

Other MIDI Out Settings

Remote Device: The default for this is 'Any Device or Product', but if you want to use this MIDI Control Send device to control a mixer supported by SCS then select that mixer from this drop-down list. Supported mixers (or potentially other devices) are determined by entries saved in an SCS-supplied configuration file. Updates to this file may be released as required, and normally will not require an update of SCS itself. See Control Send - MIDI Remote Device for information about Control Send Cues that use this feature.

MIDI Channel: (Not shown in the above screenshot.) This field is only shown if it is required by the selected Remote Device. For example, standard MIDI messages (eg Note On, Control Change) must include the MIDI channel number expected by that Remote Device.

For MTC (MIDI Time Code) Cues: If you want to use this MIDI device for sending MTC (MIDI Time Code) then select (tick) this checkbox. Only one MIDI Out device may be selected for MTC. A device marked 'For MTC' will be used when MTC Cues are played. The device may also be used for Control Send Cues if required, so it's possible to send MIDI Control messages within an MTC stream. Note: This facility is *not available* for **MIDI Thru** devices. This is because MTC is generated by a high-priority thread which does not handle MIDI In Ports.

When applying M2T, do NOT send earlier Control Send messages for a cue: If you use the Move to Time (M2T) facility then when you 'Apply' M2T any earlier MIDI Control Send messages for that cue will be processed. For example, if you have MIDI Control Messages in sub-cues set to start 0.0 seconds, 7.5 seconds, 18.0 seconds and 25.0 seconds after the start of the cue, and you specify 18.0 seconds as the 'move to time' then when you click the Apply button the messages at 0.0 and 7.5 seconds will be immediately sent. This is important as the messages may be required for unmuting or muting mics, etc. However, if the messages are for selecting scenes on a lighting board then you do *not* want to send those earlier messages. This 'do not send' checkbox is device-specific, so if for *this device* you will not want to send earlier control send messages then select this checkbox.

Device Map Buttons

The buttons at the foot of the tab apply to all device types as explained for Audio Output Devices.

See also: MIDI Time Code

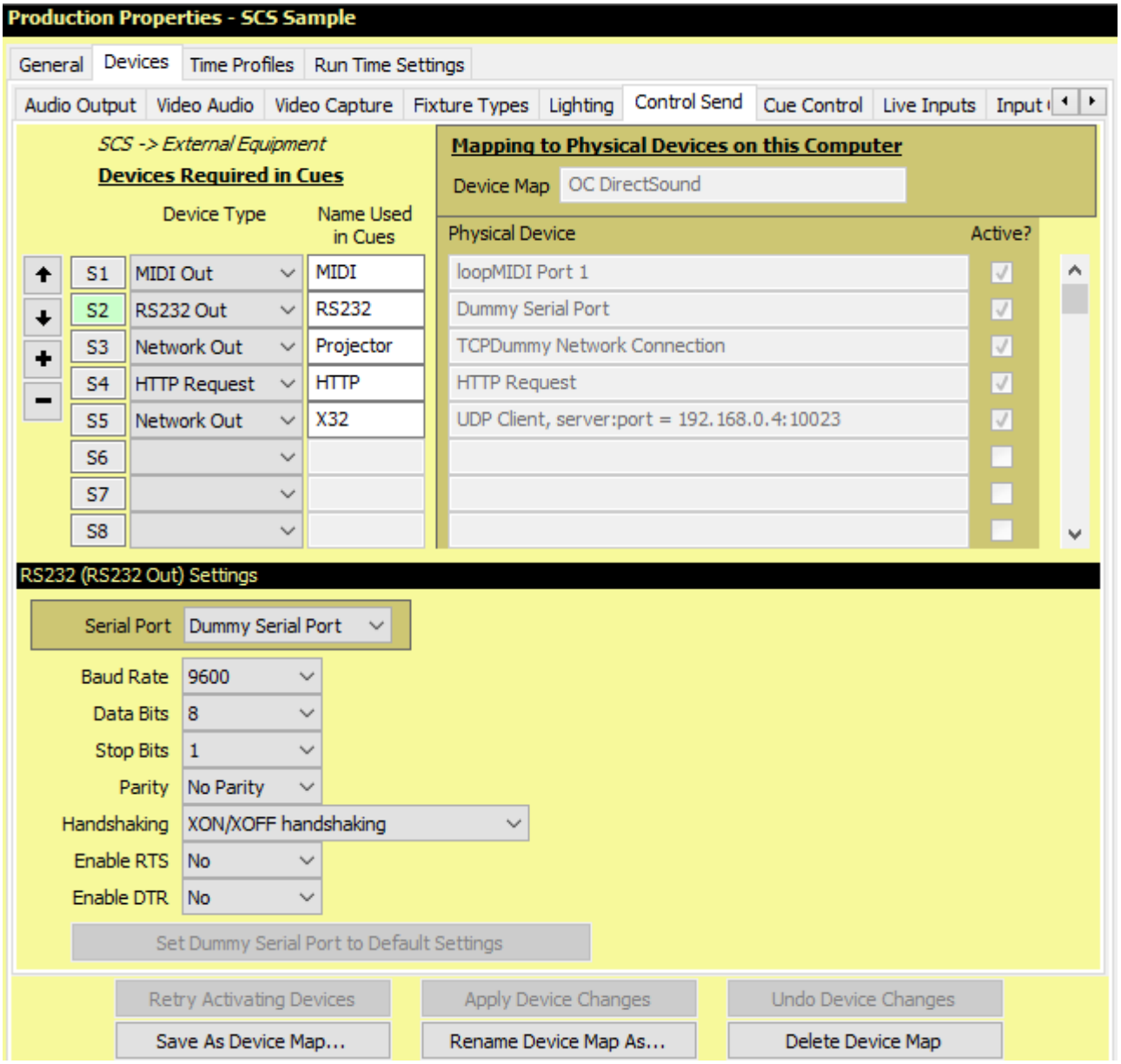
< Previous Topic (Lighting Devices - DMX) | Next Topic (Control Send Devices - RS232) >

Production Properties - Control Send Devices - RS232

RS232 Control Send Devices are only available with **SCS Professional** and higher license levels.

Overview

In SCS you may set up Control Send cues to send commands to external equipment such as sound mixers or lighting boards where Control Send cues can be used to select pre-programmed scenes, snapshots, etc. They can also be used to send control messages to other software, which may be running on a separate computer. See Control Send Cues for details. The layout of the lower part of the screen depends on the Device Type of the currently-selected device. The example below shows the layout for an **RS232** serial device.



Properties and Controls

Devices Required in Cues	Mapping to Physical Devices on this Computer
Here you need to identify each device you want to use in Control Send cues. You select the **Device Type** and give the Device a **Name** that will be used in your Control Send cues.	All your Device mappings are held in a **Device Map**. This is the *same* **Device Map** used for **Audio Output Devices**, so the name of that **Device Map** is displayed but is not editable here. The **Physical Devices** chosen are for this **Device Map** on this computer. Where there are no suitable device type available then you can select a dummy. This enables you to set up, for example, RS232 Control Send cues on a computer that does not have an RS232 port available.

Device Number (S1, S2, etc): If this number is displayed with a colored background (eg see S2 in the above screenshot) this indicates this device is the 'current' device for the **Sidebar Controls** to the left, and for the 'Settings' panel displayed below the device list. To make a different device the 'current' device, click on any field in the line for the required device, or on the Device Number itself.

Sidebar Controls: Controls are available to enable you to easily change the order of the devices as explained for Audio Output Devices.

Device Type: This drop-down list contains the Control Send device types supported by your license level. This Help page describes the properties etc for 'RS232 Out' devices.

Name Used in Cues: Enter the name you want to use for the device in your Control Send cues. Note that SCS provides a default name based on the Device Type but you can change this if you wish.

Computer-Specific Fields

Physical Device: The physical device assigned to this **Name Used in Cues**. The Physical Device is a display-only field based on the 'Settings' provided in the lower part of the screen.

Active?: This display-only checkbox will be checked if SCS has successfully initialized this device, or will be blank if the initialization failed. If you have devices that have not been initialized successfully, click *Retry Activating Devices* at the bottom of this tab.

Serial Port: Select the required Serial Port from the drop-down list. The entries available in the list will depend on the installed devices and possibly whether or not they are connected and switched on. SCS looks for serial ports in the range COM1 - COM32. At the end of the list you will see 'Dummy Serial Port'. Selecting the Dummy entry enables you to set up Control Send cues for this RS232 device even if you have no real serial port available.

Other RS232 Out Settings

Baud Rate: Select the required baud rate from the drop down list. This must match the corresponding setting on the device that is to receive the RS232 messages. The default is 9600.

Data Bits: Select the required number of data bits from the drop down list. This must match the corresponding setting on the device that is to receive the RS232 messages. The default is 8 data bits.

Stop Bits: Select the required number of stop bits from the drop down list. This must match the corresponding setting on the device that is to receive the RS232 messages. The default is 1 stop bit.

Parity: Select the required parity setting from the drop down list. This must match the corresponding setting on the device that is to receive the RS232 messages. The default is 'No Parity'.

Handshaking: Select the required handshaking protocol from the drop down list. This must match the corresponding setting on the device that is to receive the RS232 messages. The default is XON/XOFF. (For *AMX Netlinx Control Systems*, set this to 'No Handshaking'.)

Enable RTS: Select the required 'Request To Send' setting from the drop down list. This must match the corresponding setting on the device that is to receive the RS232 messages. The default is No (RTS not enabled).

Enable DTR: Select the required 'Data Terminal Ready' setting from the drop down list. This must match the corresponding setting on the device that is to receive the RS232 messages. The default is No (DTR not enabled).

Set <Serial Port> to Default Settings: Clicking this button will set all the above to their default values

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Device Map Buttons

The buttons at the foot of the tab apply to all device types as explained for Audio Output Devices.

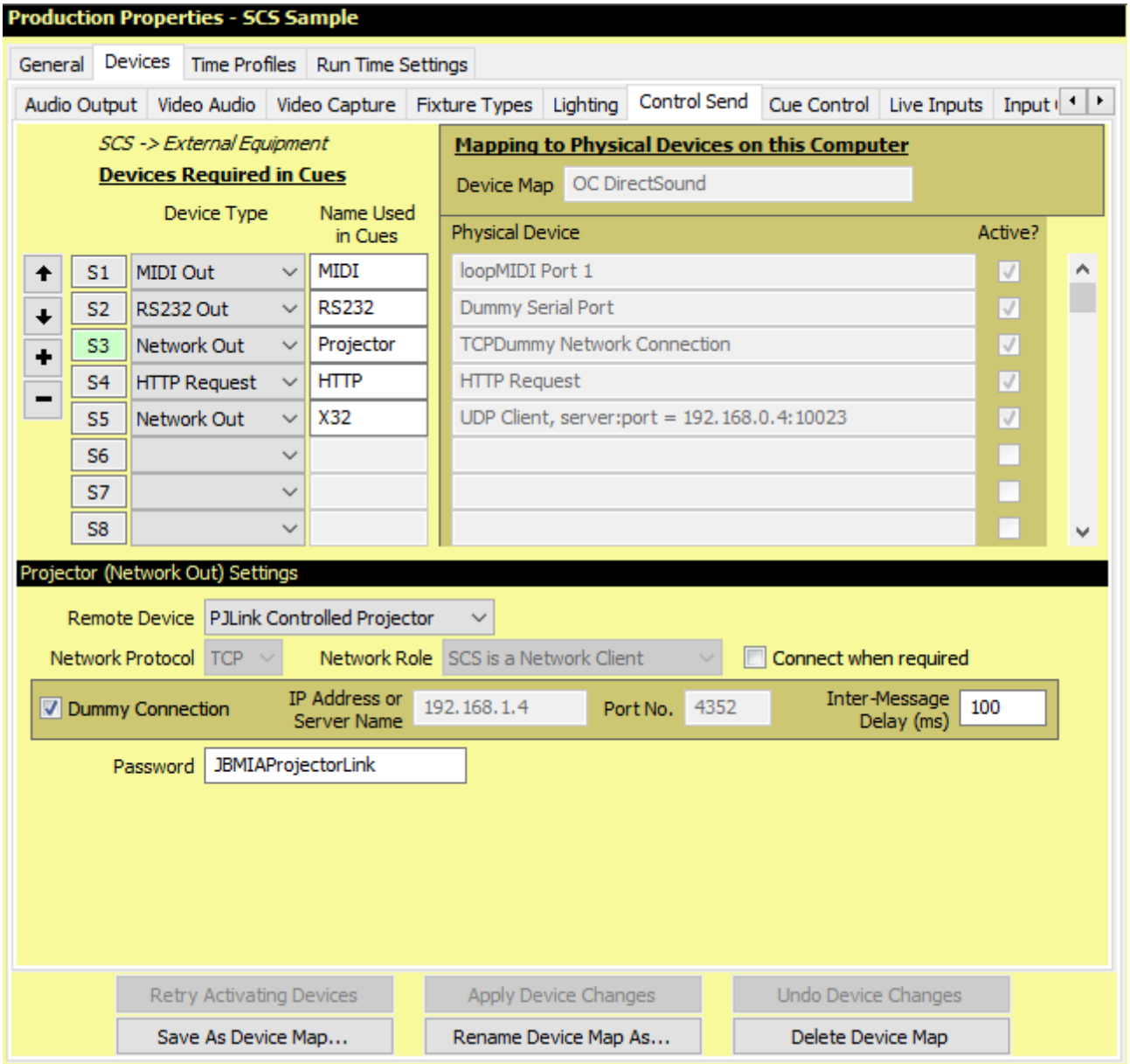
< Previous Topic (Control Send Devices - MIDI) | Next Topic (Control Send Devices - Network) >

Production Properties - Control Send Devices - Network

Network (TCP/UDP) Control Send Devices are only available with **SCS Professional Plus** and higher license levels.

Overview

In SCS you may set up Control Send cues to send commands to external equipment such as sound mixers or lighting boards where Control Send cues can be used to select pre-programmed scenes, snapshots, etc. They can also be used to send control messages to other equipment, or to software which may be running on a separate computer. See Control Send Cues for details. The layout of the lower part of the screen depends on the Device Type of the currently-selected device. The example below shows the layout for a **Network** connection.



Properties and Controls

Devices Required in Cues	Mapping to Physical Devices on this Computer
Here you need to identify each device you want to use in Control Send cues. You select the **Device Type** and give the Device a **Name** that will be used in your Control Send cues.	All your Device mappings are held in a **Device Map**. This is the *same* **Device Map** used for **Audio Output Devices**, so the name of that **Device Map** is displayed but is not editable here. The **Physical Devices** chosen are for this **Device Map** on this computer.

Device Number (S1, S2, etc): If this number is displayed with a colored background (eg see S3 in the above screenshot) this indicates this device is the 'current' device for the **Sidebar Controls** to the left, and for the 'Settings' panel displayed below the device list. To make a different device the 'current' device, click on any field in the line for the required device, or on the Device Number itself.

Sidebar Controls: Controls are available to enable you to easily change the order of the devices as explained for Audio Output Devices.

Device Type: This drop-down list contains the Control Send device types supported by your license level. This Help page describes the properties etc for 'Network Out' devices.

Name Used in Cues: Enter the name you want to use for the device in your Control Send cues. Note that SCS provides a default name based on the Device Type but you can change this if you wish.

Computer-Specific Fields

Physical Device: The physical device assigned to this **Name Used in Cues**. The Physical Device is a display-only field based on the 'Settings' provided in the lower part of the screen.

Active?: This display-only checkbox will be checked if SCS has successfully initialized this device, or will be blank if the initialization failed. If you have devices that have not been initialized successfully, click *Retry Activating Devices* at the bottom of this tab.

Other Network Out Settings

Remote Device: The purpose of this field is to simplify configuring SCS for commonly-used devices or products. The following devices and products are currently included in this list:

- Any Device or Product
- SCS on another computer
- PJLink Controlled Projector
- PJNet Controlled Projector
- Behringer X32 Digital Mixer
- Behringer X32 Compact Mixer
- TheatreMix
- Other OSC Device
- LightFactory
- vMix

Remote Devices

- *PJLink* and *PJNet* are treated similarly by SCS. The differences are that the default **Port No.** for *PJLink* is 4352, and for *PJNet* is 10000, and that the default Password for *PJLink* is JBMIAProjectorLink.
- If the Remote Device is *Behringer X32 Digital Mixer* or *Behringer X32 Compact Mixer* then when SCS successfully establishes a UDP connection with the X32 then SCS retrieves the current names of channels, DCA groups, cues, scenes, snippets, etc. These are then available for use in Control Send Cues.
- *TheatreMix* helps you mix sound for theatre shows without tedious console programming. See theatremix.com for details including a list of supported consoles.
- For more information on using *vMix*, see Control Send - vMix.

Network Protocol: This field will be preset and disabled for certain remote devices. If the field is enabled then select either *TCP* or *UDP* as required by the remote device or product.

Network Role: This field may be preset and disabled for certain remote devices. If the field is enabled then select the required Network Role or connection type as follows:

- *SCS is a Network Client*: Select this option if SCS is to be a Network Client. A Network Client means that SCS will try to establish a Network connection with a nominated host (as described below).
- *SCS is a Network Server*: Select this option if SCS is to be a Network Server. A Network Server means that SCS will listen on a nominated port (see below) for a connection request from a program running as a Network Client.
- *Dummy Network Connection*: Select this option if you wish to set up Control Send cues for a Network connection but you do not have a suitable Network connection available on this computer.

Connect when required: If the selected network device is not immediately available then if this checkbox is selected then SCS will attempt to make the connection when the device is required for a Network Control Send Cue.

Computer-Specific Fields

Server Name or IP Address and **Port No.:** These fields only appear if *SCS is a Network Client.* In the **Server Name or IP Address** field enter either the network name of the server, or the relevant IP address. In the **Port No.** field enter the port number that the server will be listening on. **Port No.** may be preset and disabled for certain remote devices. **Server Name or IP Address** is *never* preset or disabled.

Listen on Port No.: This field only appears if *SCS is a Network Server.* Enter the port number this instance of SCS to listen on. **Listen on Port No.** may be preset and disabled for certain remote devices.

Inter-Message Delay (ms): With some TCP network-connected devices it is necessary to apply a short delay between consecutive messages or the connected device may treat consecutive messages as a single message. An inter-message delay should *not* be required for a UDP connection as UDP preserves message boundaries. The default Inter-Message Delay is 100 milliseconds if the Network Protocol is TCP, or 0 milliseconds if the Network Protocol is UDP. You can change the inter-message delay time if required. vMix does not need message boundaries so the default Inter-Message Delay for this Remote Device is 0 milliseconds, even though the Network Protocol is TCP.

Password: This field is only shown for *PJLink* and *PJNet* remote devices. For *PJLink* devices, if the device (projector) is set for no authentication (security off) then the **Password** is not used and may be left blank. If authentication is set (security on) then the **Password** must exactly match the password set in the device's configuration. If the **Password** does not match then an ERRA message will be sent by the device when SCS responds to a "PJLINK 1" message. *PJNet* devices send "Hello" when SCS establishes a network connection, and SCS sends a password reply that contains what you have entered in **Password**.

Incoming messages that require processing (eg for Login prompts): These fields (not shown in the above screenshot) may be preset and disabled for certain remote devices, or even hidden completely if they are not relevant. For most Network servers you send Control Send messages to, these fields will NOT be required so you can leave the fields blank. The feature was added to SCS initially to handle opening and closing the shutter of a Sanyo projector (eg the XM150 or WM5500). These shutter operations can be controlled via an Ethernet connection, sending C0E to open the shutter and C0D to close the shutter. However, on sending one of these commands, the projector may reply asking for a password, by sending to the client (SCS in this case) the message "PASSWORD:" (without quotes). The client (SCS) then needs to reply with the correct password. The example shown in the screenshot above illustrates this scenario.

Incoming Message: Up to 4 incoming messages may be monitored. Enter expected incoming messages that require processing. When matching actual incoming messages with messages in these fields, SCS ignores case, leading and trailing spaces, and any carriage return or linefeed characters. All other characters must be entered to obtain a match.

Action Required: If you have entered an **Incoming Message**, then select the **Action Required** for this Incoming Message. If you select *'Send a reply'* then enter the required **Reply Message** in the next field. Note that a blank Reply Message is permitted. If in **Action Required** you select *'Device now ready to receive commands'* then receiving this Incoming Message indicates to SCS that the remote device is now ready to receive Control Send messages from SCS.

Reply Message: Enter the respective replies for the **Incoming Messages** where **Action Required** is set to *'Send a reply'*. A blank reply is permitted.

Add CR? If **Reply Messages** are to be terminated by CR (Hex 0D) then this checkbox should be selected, which *is* the default setting.

Add LF? If **Reply Messages** are to be terminated by LF (Hex 0A) then this checkbox should be selected, which *is not* the default setting.

Video Projectors: Several makes of video projectors support network control for features such as opening and closing the shutter, although in the documentation these commands may be defined as *Video Mute Off* and *Video Mute On*. Projectors we have investigated all use the same network commands and even the same network port, and the reason for this is that they all appear to use **PJLink** or **PJNet** software, although it's difficult to find any direct references to this software.

Powering ON the Video Projector: Note that SCS will not automatically power on the video projector, so for PJLink or PJNet devices we recommend you initially send the appropriate Control Send message to power on the projector. For PJLink this is **%1POWR 1** (note the single space after POWR), and for PJNet this is the command **C00**.

Powering OFF the Video Projector: Powering off a video projector usually requires you to confirm the action, and this applies also when using the network PJNet command **C02** - you need to send it twice. The easiest way to do this using a Network Control Send Cue is to specify the ASCII message C02 in two consecutive lines.

Device Map Buttons

The buttons at the foot of the tab apply to all device types as explained for Audio Output Devices.

Credit

Thanks to Mikk Mengel, Brian O'Connor, Jörg Deitz and Hannu Ahtikari for assistance with the video projector requirements.

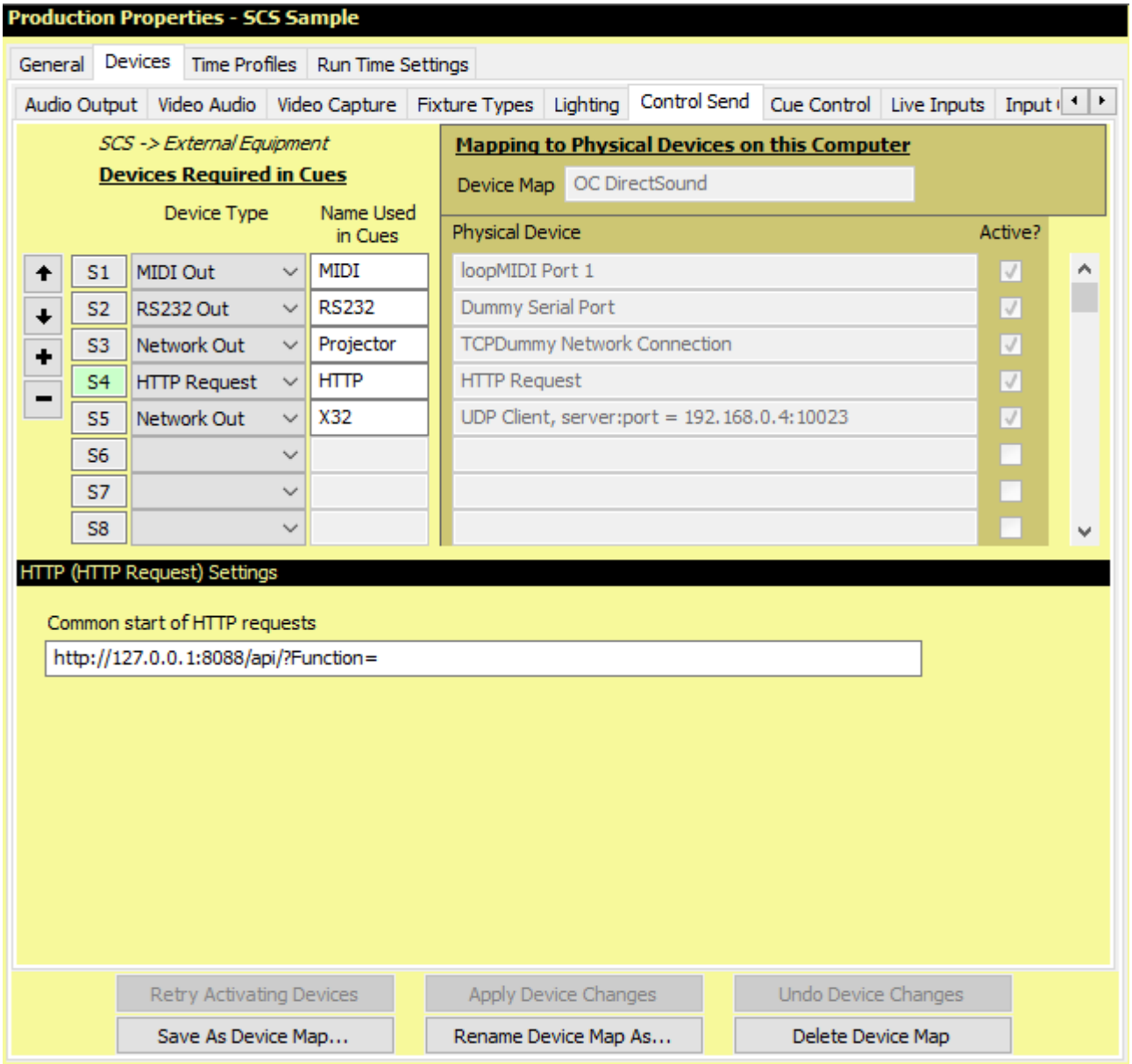
< Previous Topic (Control Send Devices - RS232) | Next Topic (Control Send Devices - HTTP) >

Production Properties - Control Send Devices - HTTP

HTTP Control Send Devices are only available with **SCS Professional Plus** and higher license levels.

Overview

In SCS you may set up Control Send cues to send commands to external equipment such as sound mixers or lighting boards where Control Send cues can be used to select pre-programmed scenes, snapshots, etc. They can also be used to send control messages to other software, which may be running on a separate computer. See Control Send Cues for details. The layout of the lower part of the screen depends on the Device Type of the currently-selected device. The example below shows the layout for an *HTTP Request* 'device'. This is not an actual 'device'. Any HTTP Request message that is sent from a Control Send cue is like entering that same message in the URL field of a web browser.



Properties and Controls

Devices Required in Cues	Mapping to Physical Devices on this Computer
Here you need to identify each device you want to use in Control Send cues. You select the **Device Type** and give the Device a **Name** that will be used in your Control Send cues.	All your Device mappings are held in a **Device Map**. This is the *same* **Device Map** used for **Audio Output Devices**, so the name of that **Device Map** is displayed but is not editable here. The **Physical Devices** chosen are for this **Device Map** on this computer.

Device Number (S1, S2, etc): If this number is displayed with a colored background (eg see S4 in the above screenshot) this indicates this device is the 'current' device for the **Sidebar Controls** to the left, and for the 'Settings'

panel displayed below the device list. To make a different device the 'current' device, click on any field in the line for the required device, or on the Device Number itself.

Sidebar Controls: Controls are available to enable you to easily change the order of the devices as explained for Audio Output Devices.

Device Type: This drop-down list contains the Control Send device types supported by your license level. This Help page describes the properties etc for 'HTTP Request' devices.

Name Used in Cues: Enter the name you want to use for the device in your Control Send cues. Note that SCS provides a default name based on the Device Type but you can change this if you wish.

Computer-Specific Fields

Physical Device: The physical device assigned to this **Name Used in Cues**. The Physical Device is a display-only field.

Active?: This display-only checkbox will be checked if SCS has successfully initialized this device, or will be blank if the initialization failed. If you have devices that have not been initialized successfully, click *Retry Activating Devices* at the bottom of this tab.

Other HTTP Request Settings

Common start of HTTP requests: This field is optional but is recommended if all your HTTP requests are to be sent to the same target. The above example show how you could set up this field for sending messages to vMix (video mixing software available from www.vmix.com). The vMix API defines the functions that may be called, such as *http://127.0.0.1:8088/api/?Function=QuickPlay*. By specifying this 'common start', the individual Control Send cue items just need the function itself, eg *QuickPlay*.

Device Map Buttons

The buttons at the foot of the tab apply to all device types as explained for Audio Output Devices.

< Previous Topic (Control Send Devices - Network) | Next Topic (Cue Control Devices - MIDI) >

Production Properties - Cue Control Devices - MIDI

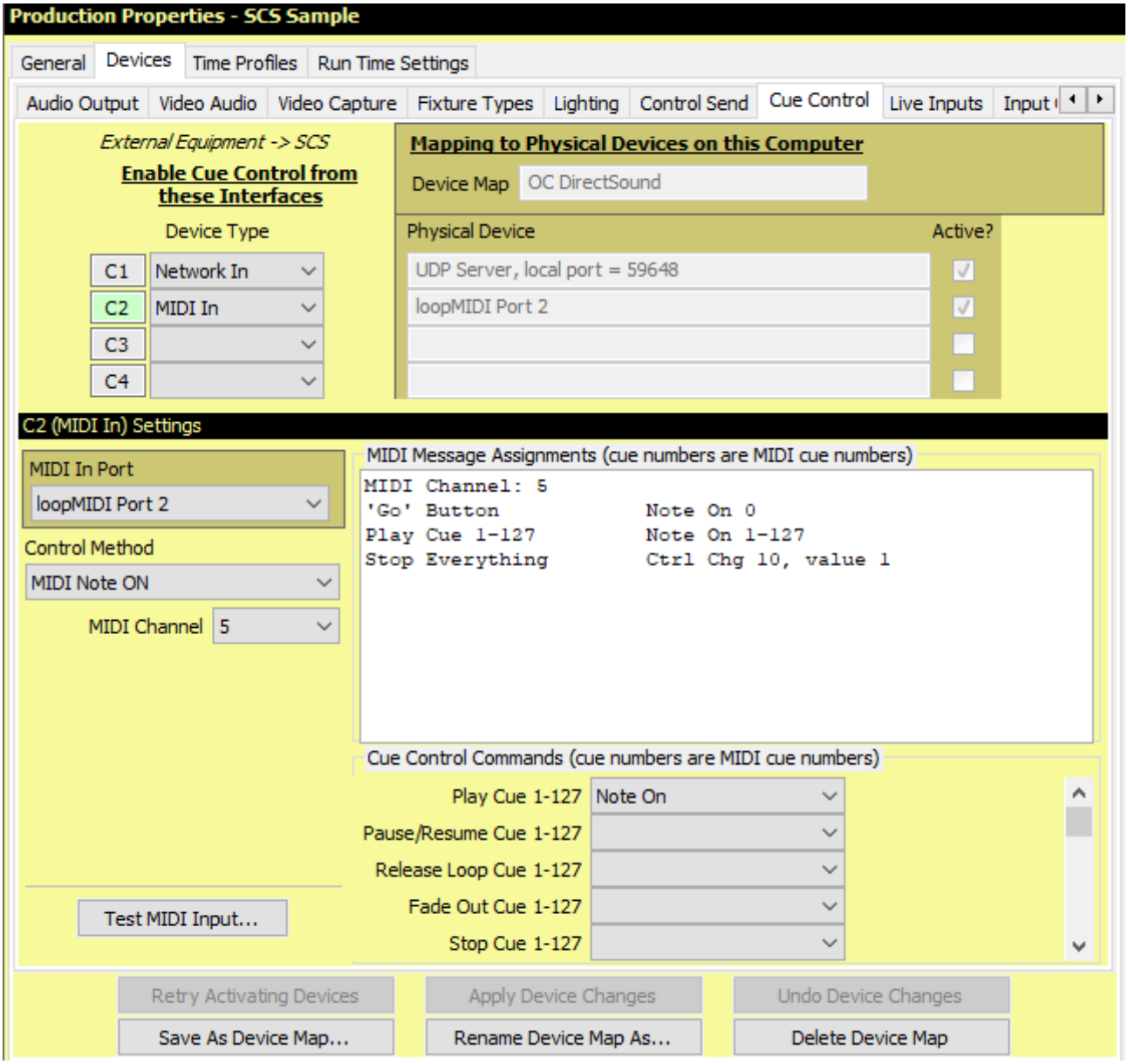
MIDI Cue Control is only available with **SCS Professional** and higher license levels.

Overview

If you want to control SCS cues by MIDI messages sent by an external device then enter the relevant detail as a **Cue Control Device**. The layout of the lower part of the screen depends on the Device Type of the currently-selected device, and for MIDI devices the layout is further dependent on the Control Method. The example below shows the layout for a **MIDI** device with a Control Method of 'MIDI Note On'.

Note: If you need **MIDI Thru** (so that any MIDI received on a MIDI In port is automatically be passed to a MIDI Out port) then set up a Control Send device with a Device Type of **MIDI Thru**, and select the required MIDI In and Out Ports. You can do this even if you do not need MIDI Control Send Cues in your production. See Control Send Devices - MIDI for more information.

If you have an Allen&Heath Qu-Series mixer and wish to use the Qu soft keys, see MIDI Control from an A&H Qu-Series Mixer.



Properties and Controls

Enable Cue Control from these Interfaces	Mapping to Physical Devices on this Computer
SCS allows you to nominate up to four devices from which SCS can be remotely controlled, such as from a lighting board. However, it would not be common to have remote control from more than one device so you will probably only have a 'C1' entry.	All your Device mappings are held in a **Device Map**. This is the *same* **Device Map** used for **Audio Output Devices**, so the name of that **Device Map** is displayed but is not editable here. The **Physical Devices** chosen are for this **Device Map** on this computer.

Device Number (C1, C2, etc): If this number is displayed with a colored background (eg see C1 in the above screenshot) this indicates this device is the 'current' device for the 'Settings' panel displayed below the device list. To make a different device the 'current' device, click on any field in the line for the required device, or on the Device Number itself.

Device Type: This drop-down list contains the Cue Control device types supported by your license level.

Computer-Specific Fields

Physical Device: The physical device assigned to this Cue Control Device. The Physical Device is a display-only field based on the 'Settings' provided in the lower part of the screen.

Active?: This display-only checkbox will be checked if SCS has successfully initialized this device, or will be blank if the initialization failed. If you have devices that have not been initialized successfully, click *Retry Activating Devices* at the bottom of this tab.

MIDI In Port: Select the required MIDI In Port from the drop-down list. The entries available in the list will depend on the installed devices and possibly whether or not they are connected and switched on.

Other MIDI In Settings

Control Method: This drop-down list contains some preset control methods available for cue control, as well as a 'custom' method where you can set up your own MIDI assignments. For methods other than MSC (MIDI Show Control) and MMC (MIDI Machine Control) you will see a scrollable panel display entitled **Cue Control Commands**. This panel is described later. The following **Control Methods** are available:

Control Method	Description
Note On	Use this method if you want to activate cues using 'Note On' messages. See MIDI Note On Messages for details.
Program Change (0-127)	Use this method if you want to activate cues using 'Program Change' messages *and* your sending device or software uses program numbers in the range 0-127. See MIDI Program Change Messages for details.
Program Change (1-128)	Use this method if you want to activate cues using 'Program Change' messages *and* your sending device or software uses program numbers in the range 1-128. See MIDI Program Change Messages for details.
MIDI Time Code (MTC)	Use this method of you want to activate cues by externally-generated MTC. See MIDI Time Code for more details.
MIDI Show Control (MSC)	SCS recognizes a subset of the MIDI Show Control (MSC) system exclusive messages. See MIDI Show Control Messages for details.
MIDI Machine Control (MMC)	SCS recognizes a subset of the MIDI Machine Control (MMC) system exclusive messages. See MIDI Machine Control Messages for details.
ETC AB	This Control Method follows the assignments published for the **AB Fader Pair** for *ETC Express* lighting consoles. This provides for control of SCS MIDI Cue Numbers up to 999 using *Program Change* and *Controller Change* messages. See MIDI ETC Messages for details.
ETC CD	This Control Method follows the assignments published for the **CD Fader Pair** for *ETC Express* lighting consoles. This also provides for control of SCS MIDI Cue Numbers up to 999 using *Controller Change* messages. See MIDI ETC Messages for details.
Palladium	Use this method if you are using *Palladium* to control SCS and you are *not* using the MSC format. See Palladium Messages for details.
Custom	If none of the above methods is suitable, you can use the **Custom** method provided you do not want to use SysEx messages, and that the SCS MIDI Cue Numbers you want to control are in the range 1-127.

Tip: MIDI control enables you to connect SCS to a device or software that can send MIDI messages to SCS to control cues. Any suitable device could be used as the controller, including lighting boards and sound boards that can transmit MIDI cue control messages. Software programs such as *Palladium* can also be used.

When you select a Control Method and select any necessary additional information, the display panel on the right (**MIDI Message Assignments**) will provide you with a summary of the message types that SCS will respond to, provided corresponding cues are included in your cue file.

MIDI Channel: For Control Methods *other than MSC and MMC,* you must nominate the MIDI Channel number that SCS will recognize. Any incoming messages that do not have this MIDI channel will be ignored by SCS. The purpose of a MIDI Channel is to allow messages to be sent to different devices on the same MIDI daisy chain, with each device being allocated a unique MIDI Channel. (NB MIDI Channel numbers are numbered 1-16, but in the MIDI messages these are held as 0-15, or 0H-FH.)

'Go' Button Macro #: If the Control Method is MSC then you may be expecting 'macro' messages to activate cues. More details of this are given under MIDI Show Control Messages. If you need a 'Go button' facility then you can dedicate one macro number to be used for this purpose, which, of course, means the number will not be available for a MIDI Cue #.

Cue Control Commands

If the Control Method is *other than MSC and MMC* then the **Cue Control Commands** panel will be displayed. Note that each of the messages listed in this panel has a MIDI channel component, so SCS will only respond to such messages if the MIDI channel matches the **MIDI Channel** nominated in these Options.

This panel is scrollable, so use the scroll bar on the right to see additional Cue Control commands. The first few commands are cue-related commands, eg 'Play Cue 1-127'. The numbers 1-127 refer to **MIDI Cue Numbers**, which you can assign to cues that need them (ie cues you want to control via MIDI). See Cue Properties for information on setting a cue's **MIDI Cue Number**. You would normally want to set a cue's MIDI Cue Number to match the Cue Label, eg for Q7 you would assign MIDI Cue Number 7. However, as the non-MSC formats only have 7 bits for a cue number, only MIDI cue numbers up to 127 can be recognized. (The ETC methods get around this restriction for 'Play Cue', allowing for MIDI cue numbers up to 999, but the limit of 127 still applies to the other command types, such as 'Stop Cue'.)

After the cue-related commands there are some global commands, such as **Stop Everything**.

If you set the **Master Fader** Control Command, you will probably use a Control Change with a nominated controller number (eg cc 7). The 7-bit value (vv) for that Control Change will determine the Master Fader setting, 127 being the maximum setting and 0 being the minimum setting. Other command types could be used if required, and the relevant value/velocity/etc field will determine the Master Fader setting.

Open Fav. File #1-#20: If you want to be able to open a different cue file (.scs11 file) by sending a MIDI command to SCS, then this is possible provided you set up your Favorite SCS Cue Files with cue files you may wish to switch to. Then set **Open Fav. File #1-#20** to the MIDI command you want to use. For example, suppose you set this command to 'Control Change, cc 7'. If you send 'Control Change 7, value 4' to SCS then SCS will open Favorite File #4. (If entry #4 is blank then the MIDI command is ignored.) If you set the command to 'Note On', 'Note Off' or 'Key Pressure', with a nominated key number, then the Favorite File number is determined from the 'velocity' (provided it is in the range 1 - 20).

Set Hotkey Bank 0-12: See Hotkey Banks for details.

When you select a **Control Method**, commands that are defined by that Control Method are displayed *disabled*. You can then *supplement* that Control Method by setting other commands as required (assuming your controlling device or software can transmit those requests).

> **Tip:** When you change the selected **Control Method**, all the **Cue Control Commands** are cleared and reset as required for the new Control Method, *unless* the new Control Method is **Custom**. So to set up a Custom method, start with the Control Method that is closest to what you need, then change the Control Method to **Custom**.

For each of the enabled commands you want to set, select the required MIDI message type from the drop down list. Depending on what message type you select, and whether or not the command is cue-related, you may be required to enter some additional information. Conventional 2-character abbreviations are used to identify the fields, eg **cc** for Controller Number for a Control Change message.

If **cc/vv** displays two drop-down lists (the first for the controller number and the second for the controller value), you may select * for the controller value, which means 'any value'.

MIDI Message Assignments

This panel provides information on how the selected MIDI message types are mapped to SCS cues.

Test MIDI Control

Having selected a MIDI In device and relevant details for the Control Method, you can now check that SCS is receiving and recognizing these messages by clicking the **Test MIDI Input** button. This will open a **MIDI Test** window, and selected incoming MIDI messages will be displayed in that window. Where the message is recognizable for cueing purposes, the mapping is displayed. For example, if you have selected MSC as the Cue Control Message Type and SCS detects a SysEx message that is correct for a 'GO' command, then the MIDI Test window will display the hexadecimal values of the SysEx message followed by "MSC Command = GO".

You can clear messages from the window by clicking the **Clear** button. Close the window by clicking the **Close** button.

Device Map Buttons

The buttons at the foot of the tab apply to all device types as explained for Audio Output Devices.

< Previous Topic (Control Send Devices - HTTP) | Next Topic (Cue Control Devices - RS232) >

MIDI Note On Messages

SCS supports the control of cues by MIDI Note On messages. These are mapped to SCS MIDI cue numbers as follows:

SCS	Note On
'Go' Button	Note On 0
Play Cue 1 - 127	Note On 1 - 127

MIDI Channel: Select the MIDI Channel (1-16) that SCS is to monitor for these cue control messages.

NB undefined bytes in the MIDI messages, such as the 'velocity' for *Note On* messages, may contain any value. However, ***Note On* messages with a velocity of 0 are converted internally to *Note Off* messages.**

The above MIDI Message Assignments are set by default when 'MIDI Note ON' is selected as the Control Method. Other Cue Control Commands may be set as required, eg 'Stop Everything' may be assigned a Control Change message.

Back to Cue Control Devices - MIDI

MIDI Program Change Messages

SCS supports the control of cues by MIDI Program Change messages. If your sending device or software uses program numbers in the range 0-127 then use Control Method **Prg Chg (0-127)**. If your sending device or software uses program numbers in the range 1-128 then use Control Method **Prg Chg (1-128)**.

Program Control messages are mapped to SCS MIDI cue numbers as follows:

SCS	Program Change (0-127)
'Go' Button	Program change 0
Play Cue 1 - 127	Program change 1 - 127

SCS	Program Change (1-128)
Play Cue 1 - 127	Program change 1 - 127
'Go' Button	Program change 128

MIDI Channel: Select the MIDI Channel (1-16) that SCS is to monitor for these cue control messages.

The above MIDI Message Assignments are set by default when 'MIDI Program Change (0-127)' or 'MIDI Program Changed (1-128)' is selected as the Control Method. Other Cue Control Commands may be set as required, eg 'Stop Everything' may be assigned a Control Change message.

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MIDI Show Control Messages

This section of the Help provides details on the SCS support for **MIDI Show Control (MSC)** messages. MSC message bytes are principally defined using their hexadecimal values, such as 7FH (7F hexadecimal = 127 decimal).

Device Id: For MSC messages you need to select the **Device Id** that identifies SCS in the MSC network. In an MSC environment each device is uniquely identified by assigning a Device Id, although you can have more than one device sharing the same Device Id. Select an **Device Id** in the range 00H to 7EH. For an individual device you should select a Device Id in the range 00H to 6FH, as Device Id's in the range 70H to 7EH are allocated to Group Id's. SCS accepts MSC messages that have a Device Id that matches the **MSC Device Id** and also MSC messages that have a Device Id of 7FH ("All Call").

MSC Command Format: This should normally be left at the default setting of 10H, which is the *Sound (General Category)* format. Sometimes, however, you may want to link SCS to a controller that sends MSC messages using a different format. For example, the ETC Express lighting desk sends MSC commands using format 01H - *Lighting (General Category)* as it is intended for controlling other lighting desks. If, in fact, you are using it to control SCS cues then you need to set this **Command Format** to 01H. If you can select a command format on the controller then you should select 10H for sound cues.

'Go' Button Macro #: This identifies the **Fire** command's macro number that activates the SCS 'Go' button. The default setting is macro 0, but the device you are using to send MSC commands may not be able to send 0 - some devices only send macro numbers 1 to 127. If you are using the MSC Fire command for activating SCS cues, select the required macro number to be used for the 'Go' button. Note that the number you choose should preferably *not* be a number you use as a MIDI cue number as this could cause confusion to operators.

SysEx message to run a cue

The format of a Show Control message is as follows, where fixed value bytes are shown in hexadecimal:

F0 7F <Device Id> 02 <Command Format> <Command> <Data> F7

For SCS the required message format is as shown below:

Byte type	Value (Hex)	Description
Start byte	**F0**	Start of SysEx message.
Start of message	**7F**	
Device ID	**?**	The 'Device ID' that represents SCS, or 7F for "all-call" if a system-wide broadcast.
SysEx message	**02**	Denotes a MIDI Show Control message.
Command format	**10**	SCS by default expects a command format of hex 10 - *Sound (General Category)*, but any other valid command format can be set. SCS also responds to 7F - *All-Types*.
Command	**?**	Commands currently recognized by SCS are: 01 - GO 02 - STOP 07 - FIRE See *MSC Commands* below for details.

Data: Cue number or Macro number	**?**	Cue number is used for GO and STOP commands. It may be omitted as explained under *MSC Commands* below, but if it is entered then the format of an MSC cue number is: <Q_number> 00 <Q_list> 00 <Q_path> SCS only uses the Q_number component. The 00 delimiters and other components are optional - SCS reads the Q_number up to the first 00 delimiter or up to the F7 SysEx stop byte, whichever comes first. Q_number, Q_list and Q_path are expressed as ASCII numbers 0-9 (encoded as 30H-39H) with the ASCII decimal point character (2EH) used to delineate subsections. SCS maps the Q_number to an SCS MIDI Cue #. For example, cue 235.6 would be represented by the hex data: 32 33 35 2E 36 Macro number is used for FIRE commands and is used as explained under *MSC Commands* below. The macro number is a 7-bit number (maximum value 127 decimal) occupying only one byte. For example, macro number 110 (mapping to MIDI Cue #110) would be represented by the hex data: 6E
Stop byte	**F7**	End of SysEx message.

MSC Commands

The MSC commands currently recognized by SCS are as follows:

GO	**If no cue number is supplied,** the **Go** button is activated, starting the next manually started cue in the cue list. Note that in SCS this could be any type of cue, ie a sound file cue, a stop cue, a level change cue, or a cue containing any combination of cue types. **If a cue number is supplied,** the SCS cue whose MIDI Cue Number matches the Q_number is activated. If no such cue is found the command is ignored.
STOP	**If no cue number is supplied,** all currently running cues are stopped. **If a cue number is supplied,** the SCS cue whose MIDI Cue Number matches the Q_number is stopped. If no such cue is found the command is ignored. The MSC **STOP** command stops cues immediately, ignoring fade out settings. If you require a cue to be faded out then as well as specifying a fade-out time for the cue you need to create a Stop Cue for that cue, and use the MSC **GO** command to activate the Stop Cue *instead* of using the MSC **STOP** command.
FIRE	SCS does not have a macro facility but MSC Fire Macro messages can be used to activate SCS cues as follows: **If the macro number matches the 'Go Macro',** the **Go** button is activated, starting the next manually started cue in the cue list. **If the macro number does not match the 'Go Macro',** the SCS cue whose MIDI Cue Number matches the macro number is activated. If no such cue is found the command is ignored.

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MIDI Machine Control Messages

This section of the Help provides details on the SCS support for **MIDI Machine Control (MMC)** messages. MMC message bytes are principally defined using their hexadecimal values, such as 7FH (7F hexadecimal = 127 decimal).

Device Id: For MMC messages you need to select the **Device Id** that identifies SCS. SCS accepts MMC messages that have a Device Id that matches the **Device Id**.

Apply 'Fade All' for 'Stop All': There is a fairly limited number of standard MMC commands, and there isn't a standard command for fading out cues. SCS processes the MMC 'Stop' command as 'Stop All', but if you prefer to have this MMC command processed as 'Fade All' then select this checkbox. Note that this will apply to *all* MMC 'Stop' commands received from this Cue Control device.

SysEx message to run a cue

The format of a Machine Control message is as follows, where fixed value bytes are shown in hexadecimal:

F0 7F <Device Id> 06 <Command> F7

For SCS the required message format is as shown below:

Byte type	Value (Hex)	Description
Start byte	**F0**	Start of SysEx message.
Start of message	**7F**	
Device Id	**?**	The 'Device ID' that represents SCS.
SysEx message	**06**	Denotes a MIDI Machine Control message.
Command	**?**	Commands currently recognized by SCS are: 01 - Stop 02 - Play 03 - Deferred Play 04 - Fast Forward 05 - Rewind 09 - Pause See *MMC Commands* below for details.
Stop byte	**F7**	End of SysEx message.

MMC Commands

The MMC commands currently recognized by SCS are as follows:

Stop	All currently running cues are stopped (implemented as per 'Stop All'), unless the Apply 'Fade All' for out and stopped (as per 'Fade All').
Play	Activates the 'Go' button if this button is enabled, otherwise the command is ignored.
Deferred Play	As 'Play'.
Fast Forward	Go to the next manual-start cue (implemented as per 'Go To Next' in the main window's Navigate mer
Rewind	Go to the previous manual-start cue (implemented as per 'Go Back' in the main window's Navigate m
Pause	Pause all running cues, or resume after a previously-issued 'Pause All'. (Implemented as per the 'Pau

Back to Cue Control Devices - MIDI

MIDI ETC Messages

SCS supports the control of cues using MIDI messages sent from an *ETC Express* lighting console using the **AB Fader Pair** or **CD Fader Pair**. Other devices or software that can send *Program Change* and/or *Controller Change* messages that match the information below can also use one of these ETC Control Methods. The formats are mapped to MIDI cue numbers as follows:

SCS	ETC AB
'Go' Button	Program change 0
Play Cue 1 - 127	Program change 1 - 127
Play Cue 128 - 255	Controller change 70, value 0 - 127
Play Cue 256 - 383	Controller change 71, value 0 - 127
Play Cue 384 - 511	Controller change 72, value 0 - 127
Play Cue 512 - 639	Controller change 73, value 0 - 127
Play Cue 640 - 767	Controller change 74, value 0 - 127
Play Cue 768 - 895	Controller change 75, value 0 - 127
Play Cue 896 - 999	Controller change 76, value 0 - 103

SCS	ETC CD
'Go' button	Controller change 77, value 0
Play Cue 1 - 127	Controller change 77, value 1 - 127
Play Cue 128 - 255	Controller change 78, value 0 - 127
Play Cue 256 - 383	Controller change 79, value 0 - 127
Play Cue 384 - 511	Controller change 80, value 0 - 127
Play Cue 512 - 639	Controller change 81, value 0 - 127
Play Cue 640 - 767	Controller change 82, value 0 - 127
Play Cue 768 - 895	Controller change 83, value 0 - 127
Play Cue 896 - 999	Controller change 84, value 0 - 103

MIDI Channel: Select the MIDI Channel (1-16) that SCS is to monitor for these cue control messages.

The above MIDI Message Assignments are set by default when 'ETC AB' or 'ETC CD' is selected as the Control Method. Other Cue Control Commands may be set as required, eg 'Stop Everything' may be assigned a Control Change message using a a controller number that does not clash with.those listed above.

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Palladium Messages

SCS supports the control of cues by MIDI messages sent by Palladium, which is a sound control system developed and marketed by *CH Sound Design* (www.chsounddesign.com). SCS can be used as a playback source for *Palladium*, and you can download *Palladium* playback files for SCS from the *Palladium* web site.

These MIDI messages are mapped to SCS MIDI cue numbers as follows:

SCS	Palladium
'Go' Button	Note On 0
Play Cue 1 - 127	Note On 1 - 127
Pause/Resume Cue 1 - 127	Note Off 1 - 127
Go To Cue 1 - 127	Program Change 1 - 127
Load Cue 1 - 127	Key Pressure 1 - 127
Unload Cue 1 - 127	Channel Pressure 1 - 127
Stop Everything	Control Change 123, value 0

MIDI Channel: Select the MIDI Channel (1-16) that SCS is to monitor for these cue control messages.

NB undefined bytes in the MIDI messages, such as the 'velocity' for Note On and Note Off messages, may contain any value.
However, ***Note On* messages with a velocity of 0 are converted internally to *Note Off* messages**.

The above MIDI Message Assignments are set by default when 'Palladium' is selected as the Control Method. Other Cue Control Commands may be set as required, eg 'Fade All' may be assigned a Control Change message with a controller number other than 123.

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MIDI Control from an A&H Qu-Series Mixer

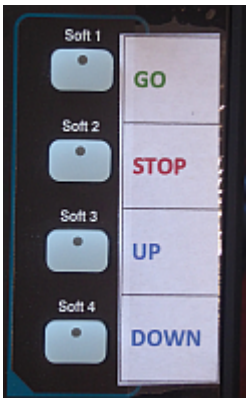
If you have an Allen&Heath Qu-Series mixer and you want to use the mixer's Soft Keys to start and stop cues in SCS, here's how you can set up the Qu mixer and an SCS Control device to do that:

You must have a USB connection from the mixer to your computer. *Always* use the same USB connection on your computer, as the A&H driver seems to differentiate between connections.

On the **Qu mixer**, press **Setup** and then select **Control** and **Softkeys**.

- For Soft 1, select Function 'MMC', 'MMC Play'. Then select Apply. **Soft 1** is going to be used to activate the SCS **GO** button.
- For Soft 2, select Function 'MMC', 'MMC Stop'. Then select Apply. **Soft 2** is going to be used to activate **Stop Everything**.
- For Soft 3, select Function 'MMC', 'MMC Rew'. Then select Apply. **Soft 3** is going to be used to navigate to the **Previous Cue**.
- For Soft 4, select Function 'MMC', 'MMC FFwd'. Then select Apply. **Soft 4** is going to be used to navigate to the **Next Cue**.

It would be advisable to place labels alongside these Soft keys on your mixer, eg:



In **SCS**, set up a **Cue Control MIDI In** device as follows:

- Set Control Method to 'MIDI Machine Control (MMC)'.
- Set Device Id to 127.
- Click **Apply Device Changes** and save your changes.

That's all. Now when you press Soft 1 on your mixer, the GO button will be activated. When you press Soft 2, 'Stop Everything' will be activated. Soft 3 will go up to the previous cue, and Soft 4 will go down to the next cue.

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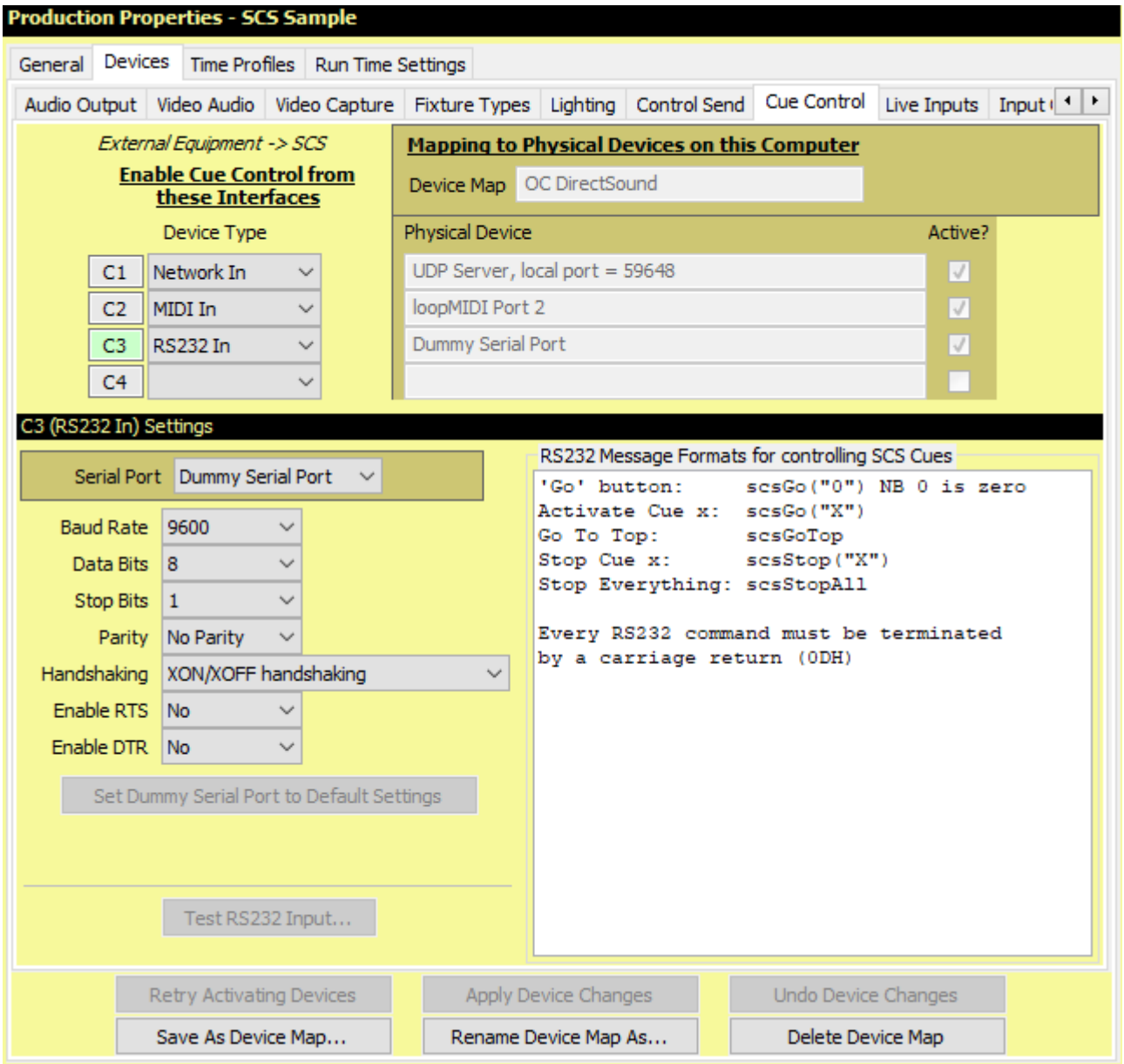
Production Properties - Cue Control Devices - RS232

RS232 Cue Control is only available with **SCS Professional** and higher license levels.

Overview

If you want to control SCS cues by RS232 messages sent by an external device then enter the relevant detail as a **Cue Control Device**. The layout of the lower part of the screen depends on the Device Type of the currently-selected device. The example below shows the layout for an **RS232** device.



Properties and Controls

Enable Cue Control from these Interfaces	Mapping to Physical Devices on this Computer
SCS allows you to nominate up to four devices from which SCS can be remotely controlled, such as from a lighting board. However, it would not be common to have remote control from more than one device so you will probably only have a 'C1' entry.	All your Device mappings are held in a **Device Map**. This is the *same* **Device Map** used for **Audio Output Devices**, so the name of that **Device Map** is displayed but is not editable here. The **Physical Devices** chosen are for this **Device Map** on this computer.

Device Number (C1, C2, etc): If this number is displayed with a colored background (eg see C1 in the above screenshot) this indicates this device is the 'current' device for the 'Settings' panel displayed below the device list. To make a different device the 'current' device, click on any field in the line for the required device, or on the Device Number itself.

Device Type: This drop-down list contains the Cue Control device types supported by your license level.

Computer-Specific Fields

Physical Device: The physical device assigned to this Cue Control Device. The Physical Device is a display-only field based on the 'Settings' provided in the lower part of the screen.

Active?: This display-only checkbox will be checked if SCS has successfully initialized this device, or will be blank if the initialization failed. If you have devices that have not been initialized successfully, click *Retry Activating Devices* at the bottom of this tab.

Serial Port: Select the required RS232 In Port from the drop-down list. The entries available in the list will depend on the installed devices and possibly whether or not they are connected and switched on. SCS looks for serial ports in the range COM1 - COM32.

Other RS232 In Settings.

Baud Rate: Select the required baud rate from the drop down list. This must match the corresponding setting on the device that is sending the RS232 messages. The default is 9600.

Data Bits: Select the required number of data bits from the drop down list. This must match the corresponding setting on the device that is to sending the RS232 messages. The default is 8 data bits.

Stop Bits: Select the required number of stop bits from the drop down list. This must match the corresponding setting on the device that is sending the RS232 messages. The default is 1 stop bit.

Parity: Select the required parity setting from the drop down list. This must match the corresponding setting on the device that is sending the RS232 messages. The default is 'None'.

Handshaking: Select the required handshaking protocol from the drop down list. This must match the corresponding setting on the device that is sending the RS232 messages. The default is XON/XOFF. (For *AMX Netlinx Control Systems*, set this to 'No Handshaking'.)

Enable RTS: Select the required 'Request To Send' setting from the drop down list. This must match the corresponding setting on the device that is sending the RS232 messages. The default is No (RTS not enabled).

Enable DTR: Select the required 'Data Terminal Ready' setting from the drop down list. This must match the corresponding setting on the device that is sending the RS232 messages. The default is No (DTR not enabled).

Set <Serial Port> to Default Settings: Clicking this button will set all the above to their default values.

RS232 Message Formats

This panel provides information on how the selected RS232 message types are mapped to SCS cues for an **RS232 In** port.

RS232 command formats currently supported are:

SCS	RS232	
Go Button	**scsGo("0")**	Note: 0 is zero.
Activate Cue x	**scsGo("x")**	Note: x is cue label, eg Q90.
Go To Top	**scsGoTop**	
Stop Cue x	**scsStop("x")**	Note: x is cue label, eg Q90.
Stop All	**scsStopAll**	

Every RS232 command must be terminated by a carriage return (**0DH**). The RS232 commands and cue labels included in the commands are not case-sensitive. For example, if you have a cue label Q90 then the RS232 command SCSGo("q90") will successfully fire that cue.

Test RS232 Control

Having set your required **RS232 In** Comm Port Settings, you can now check that SCS is receiving and recognizing these messages by clicking the **Test RS232 Input** button. This will open a **RS232 Test** window, and selected incoming RS232 messages will be displayed in that window. Where the message is recognizable for cueing purposes, the mapping is displayed.

You can clear messages from the window by clicking the **Clear** button. Close the window by clicking the **Close** button.

Device Map Buttons

The buttons at the foot of the tab apply to all device types as explained for Audio Output Devices.

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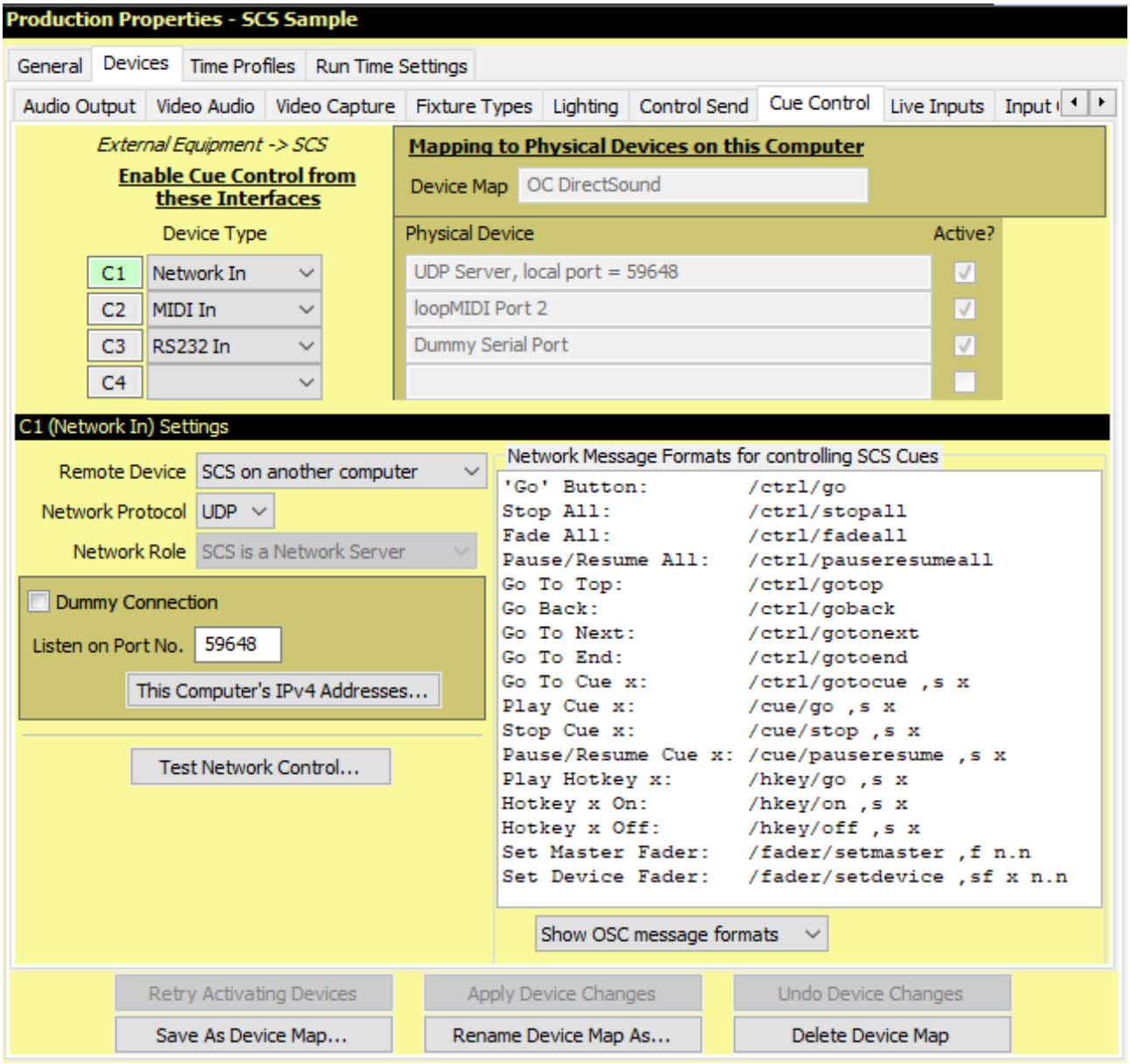
Production Properties - Cue Control Devices - Network

Network (TCP/UDP) Cue Control is only available with **SCS Professional Plus** and higher license levels.

Overview

If you want to control SCS cues by Network messages sent by another program (on the same or a different computer) then enter the relevant detail as a **Cue Control Device**. The layout of the lower part of the screen depends on the Device Type of the currently-selected device. The example below shows the layout for a **Network** device.



Properties and Controls

Enable Cue Control from these Interfaces	Mapping to Physical Devices on this Computer
SCS allows you to nominate up to four devices from which SCS can be remotely controlled, such as from a lighting board. However, it would not be common to have remote control from more than one device so you will probably only have a 'C1' entry.	All your Device mappings are held in a **Device Map**. This is the *same* **Device Map** used for **Audio Output Devices**, so the name of that **Device Map** is displayed but is not editable here. The **Physical Devices** chosen are for this **Device Map** on this computer.

Device Number (C1, C2, etc): If this number is displayed with a colored background (eg see C1 in the above screenshot) this indicates this device is the 'current' device for the 'Settings' panel displayed below the device list. To make a different device the 'current' device, click on any field in the line for the required device, or on the Device Number itself.

Device Type: This drop-down list contains the Cue Control device types supported by your license level.

Computer-Specific Fields

Physical Device: The physical device assigned to this Cue Control Device. The Physical Device is a display-only field based on the 'Settings' provided in the lower part of the screen.

Active?: This display-only checkbox will be checked if SCS has successfully initialized this device, or will be blank if the initialization failed. If you have devices that have not been initialized successfully, click *Retry Activating Devices* at the bottom of this tab.

Other Network In Settings.

Remote Device: The purpose of this field is to simplify configuring SCS for commonly-used devices or products. The following devices and products are currently included in this list:

- Any Device or Product
- SCS on another computer
- Behringer X32 Digital Mixer
- Behringer X32 Compact Mixer
- TheatreMix
- LightFactory

For more information on the *Behringer X32* remote devices, see Cue Control using a Behringer X32 Mixer.

TheatreMix helps you mix sound for theatre shows without tedious console programming. See theatremix.com for details including a list of supported consoles.

LightFactory is a software-based lighting control system. See www.lightfactory.net for details.

Network Protocol: This field will be preset and disabled for certain remote devices. If the field is enabled then select either *TCP* or *UDP* as required by the remote device or product.

Network Role: This field may be preset and disabled for certain remote devices. If the field is enabled then select the required Network Role or connection type as follows:

- *SCS is a Network Client*: Select this option if SCS is to be a Network Client. A Network Client means that SCS will try to establish a Network connection with a nominated host (as described below).
- *SCS is a Network Server*: Select this option if SCS is to be a Network Server. A Network Server means that SCS will listen on a nominated port (see below) for a connection request from a program running as a Network Client.
- *Dummy Network Connection*: Select this option if you wish to set up Control Send cues for a Network connection but you do not have a suitable Network connection available on this computer.

Computer-Specific Fields

Server Name or IP Address and **Port No.:** These fields only appear if *SCS is a Network Client.* In the **Server Name or IP Address** field enter either the network name of the server, or the relevant IP address. In the **Port No.** field enter the port number that the server will be listening on. **Port No.** may be preset and disabled for certain remote devices. **Server Name or IP Address** is *never* preset or disabled.

Listen on Port No.: This field only appears if *SCS is a Network Server.* Enter the port number this instance of SCS to listen on. **Listen on Port No.** may be preset and disabled for certain remote devices.

This Computer's IPv4 Addresses: This button only appears if *SCS is a Network Server.* The purpose of this button is to assist in setting up the network client that will be sending commands to SCS. The number of IPv4 Addresses listed will depend on what's connected to the computer. For example, you may have an IPv4 address for a wireless network connection, and a second IPv4 address for an Ethernet cable conection. The IPv4 address you set on the client depends on how that client communicates with the SCS computer, eg by wireless connection or by Ethernet cable connection.

Network Message Assignments

This panel provides information on how the selected Network message types are mapped to SCS actions. You can choose to **Show OSC Message Formats** or **Show ASCII Message Formats**.

SCS functions currently supported are as follows (blank entries indicate functions not supported with that message format):

SCS Function	OSC Message Format	ASCII Message Format	Notes
Go Button	/ctrl/go	scsGo("0")	0 (in ASCII format) is zero

Stop All	/ctrl/stopall	scsStopAll	
Pause or Resume All	/ctrl/pauseresumeall		
Go To Top	/ctrl/gotop	scsGoTop	
Go Back	/ctrl/goback	scsGoBack	
Go To Next	/ctrl/gotonext	scsGoToNext	
Go To End	/ctrl/gotoend		
Go To Cue	/ctrl/goto ,s x	scsGoTo("x")	x is the cue label, eg Q90
Play Cue x	/cue/go ,s x	scsGo("x")	x is the cue label
Stop Cue x	/cue/stop ,s x	scsStop("x")	x is the cue label
Pause or Resume Cue	/cue/pauseresume ,s x		x is the cue label
Activate Hotkey x	/hkey/go ,s x		x is the hotkey, eg A
Start Note Hotkey x	/hkey/on ,s x		x is the note hotkey (operates the sa hotkey x')
Stop Note Hotkey x	/hkey/off ,s x		x is the note hotkey
Set Master Fader	/fader/setmaster ,f n.n		n.n is the required dB, eg -12 or -8.5 outside the permitted range (eg -75d be capped.
Set Master Fader Relative	/fader/setmasterrel ,f n.n		As above but adjusts the master fad relative dB level, eg -3 will lower the fader level by 3dB; 1.5 will raise the fader level by 1.5dB. Resultant value permitted range (eg -75dB to 0dB) w
Set Device Fader	/fader/setdevice ,sf x n.n		Similar to Set Master Fader but appl specified Audio Output Device. x is t Front), and n.n is the required dB, e
Set Device Fader Relative	/fader/setdevicerel ,sf x n.n		As above but adjusts the device fade relative dB level, eg -3 will lower the level for hat device by 3dB; 1.5 will r fader level for that device by 1.5dB. values outside the permitted range (0dB) will be capped.

The **OSC Message Format** is not just text - OSC commands are strictly formatted with an address pattern (sometimes called an 'OSC Path') optionally followed by a tag string and then followed by values for those tags. Only use the OSC Message Format from devices or software that support OSC. Note that SCS can send OSC in Control Send Cues so you can use OSC to send commands from 'SCS on another computer'.

Note: Incoming OSC messages may optionally be preceded by /scs, eg /scs/ctrl/go. This is useful for external systems that prefer all outgoing OSC messages to start with an identifier unique to the target system.

Individual **ASCII Message Format** commands *may* be terminated with a carriage return (**0DH**) or 'pipe' character (|). If multiple ASCII commands are received together, each command *must* be terminated with a carriage return (**0DH**) or 'pipe' character(|).

The network commands and cue labels included in the commands are not case-sensitive. For example, if you have a cue label Q90 then the ASCII command SCSGo("q90") will successfully fire that cue.

Test Network Control

Having set your required **Network Connection** type and selected **Network Cue Control**, you can now check that SCS is receiving and recognizing these messages by clicking the **Test Network Control** button. This will open a **Network Test** window, and selected incoming network messages will be displayed in that window. Where the message is recognizable for cueing purposes, the mapping is displayed.

You can clear messages from the window by clicking the **Clear** button. Close the window by clicking the **Close** button.

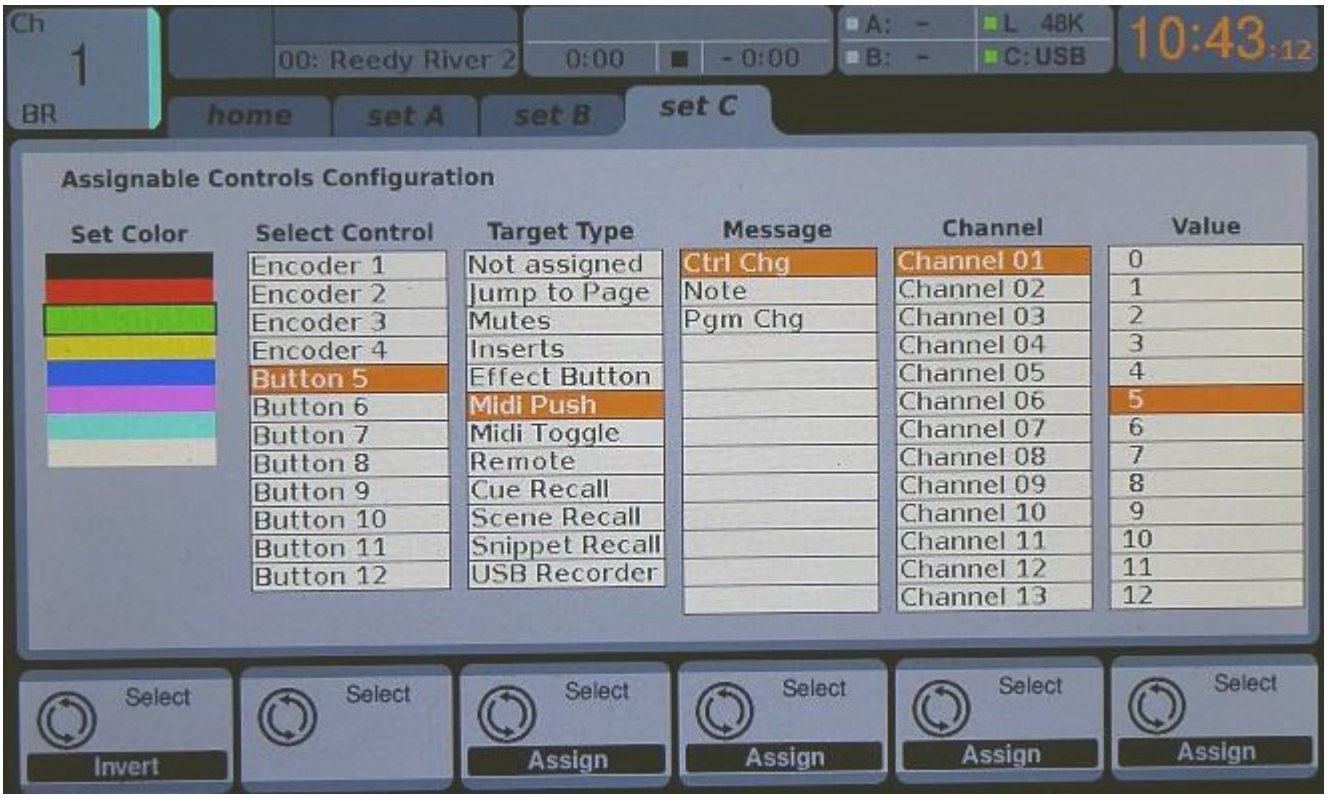
Device Map Buttons

The buttons at the foot of the tab apply to all device types as explained for Audio Output Devices.

Cue Control using a Behringer X32

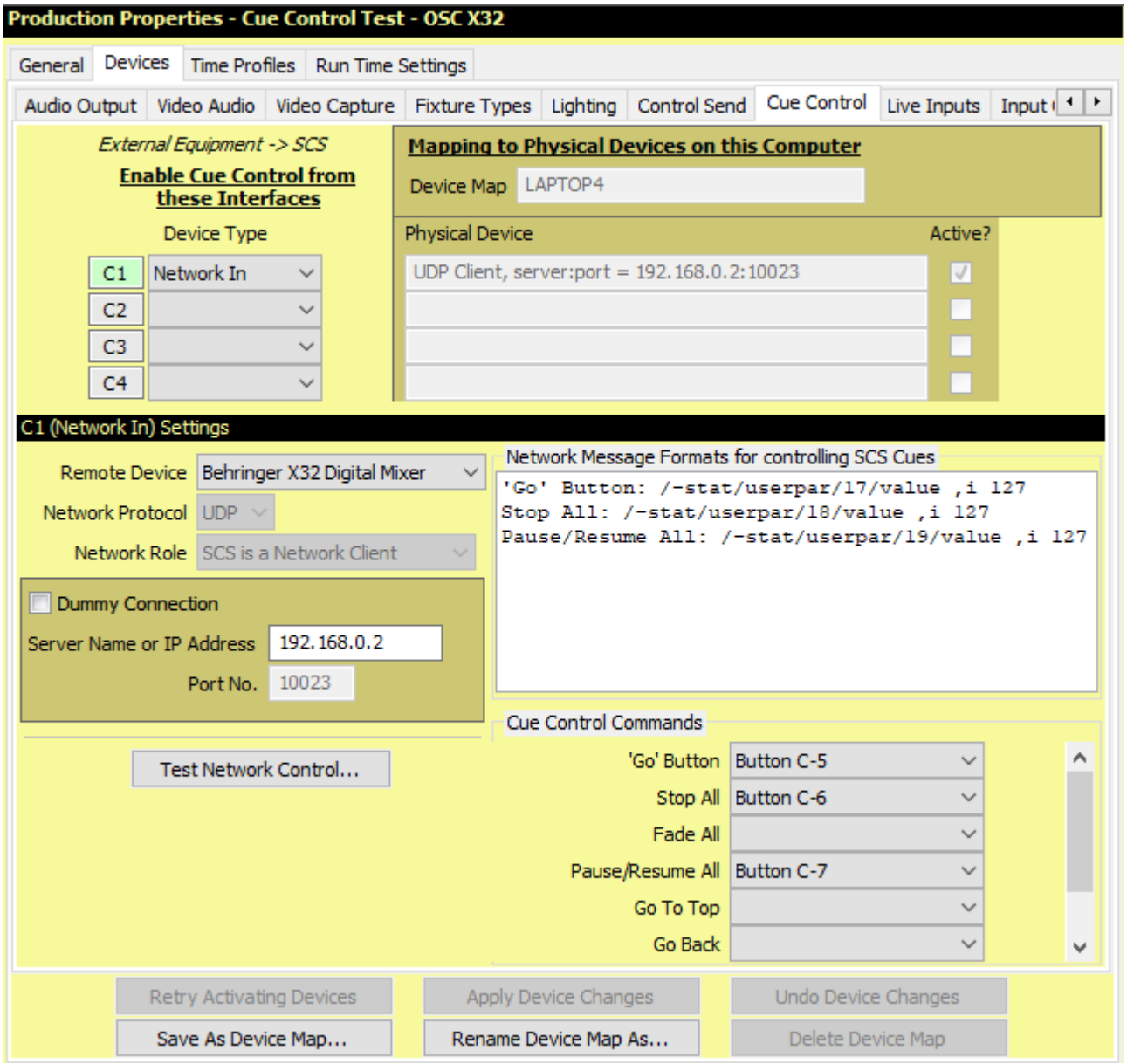
Network (TCP/UDP) Cue Control is only available with **SCS Professional Plus** and higher license levels.

You can control SCS cues from a Behringer X32 Digital Mixer or X32 Compact Mixer using the X32's user assignable buttons. For example, you can set up these controls as shown here:



The above shows the configuration for 'Set C, Button 5'.

In SCS you can setup a **Cue Control Device** in **Production Properties** as shown here:



The **IP address** should be the same as that used for the X32 in the Control Send Devices (if used).

Under **Cue Control Commands**, select the buttons you want to use for any of the commands you want to control from the X32. You do not need to assign buttons to all the commands, so if you only want *'Go' Button* and *Stop Everything* then you only need to select buttons for those two commands.

For the **X32 Digital Mixer**, buttons available are A-5 to A-12, B-5 to B-12, and C-5 to C-12, corresponding to physical buttons 5 to 12 in sets A, B and C. For the **X32 Compact Mixer**, buttons available are A-1 to A-8, B-1 to B-8, and C-1 to C-8, corresponding to physical buttons 1 to 8 in sets A, B and C.

The **Network Message Formats...** panel is a display-only list of the OSC commands corresponding to each selected command.

On the X32 we recommend you use buttons in set C as sets A and B are pre-populated, whereas set C buttons are initially unassigned (at least in X32 firmware version 2.14).

Some points and recommendations about assigning these buttons on the X32 (see first screenshot above):

- The **Target Type** of each button you want to assign should be set to *Midi Push*, even though we are not using a Midi connection for this purpose.
- Leave **Message** and **Channel** at the default first setting, as shown in the X32 screenshot.
- If you have two or more buttons assigned then it is vital that each button sends a unique MIDI message, so we recommend you set **Value** to the button number. (The OSC command doesn't contain any of the information gathered from the MIDI assignments, but if you have several buttons with exactly the same assignments then pressing any one of those buttons may cause the X32 to transmit OSC commands for all buttons with that assignment, although Behringer did fix that issue at firmware version 2.14.)
- Using the above X32 settings, the OSC command sent on pressing button C-5 is "/-stat/userpar/17/value ,i 127". When the button is released the X32 sends "/-stat/userpar/17/value ,i 0". SCS only considers the

non-zero value, ie the press of the button, not the release of the button. The number 17 indicates button C-5. The complete range is 1-12: A5-A12; 13-16: B5-B12; 17-24: C5-C12. (These numbers apply to the X32 Digital Mixer, not the X32 Compact Mixer.)

- Note that X32 button assignments are scene-specific, so if you are using multiple scenes then you will need to store these assignments with each scene, or preferably set them up at the start of preparing a production.

Back to Cue Control Devices - Network

Production Properties - Cue Control Devices - DMX

DMX Cue Control is only available with **SCS Professional Plus** and higher licenses.

Overview

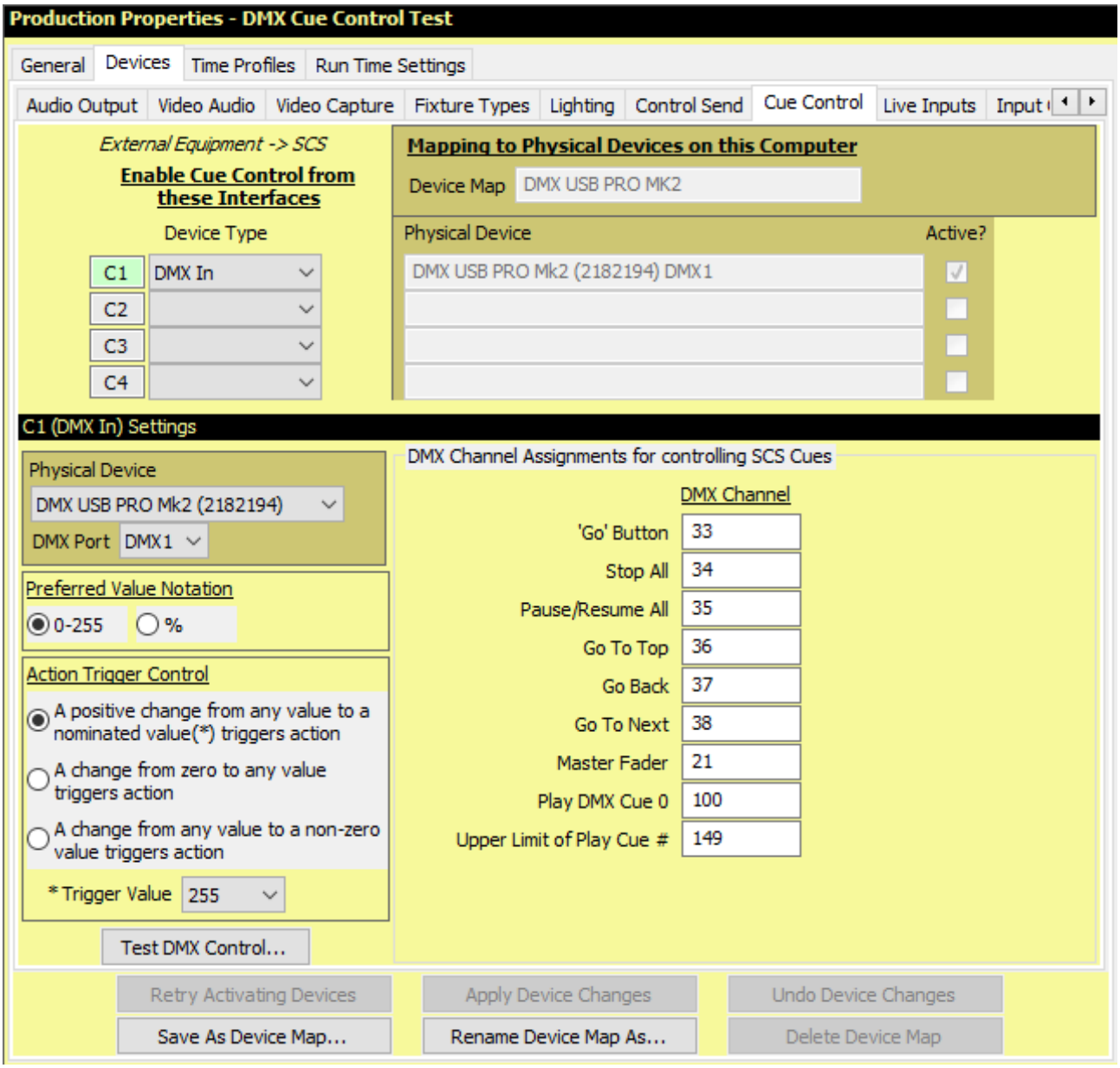
Note: SCS supports DMX Control only via the following ENTTEC devices (www.enttec.com):

- **ENTTEC DMX USB PRO MK2**
- **ENTTEC DMX USB PRO**

Note that the cheaper **ENTTEC OPEN DMX USB** is not supported for Cue Control as this is a send-only device.

Installing the D2XX driver for either of the above devices should install ftd2xx.dll. If SCS cannot find ftd2xx.dll as a loadable library then DMX control will not be enabled.

If you want to control SCS cues by DMX messages received from an external device, then enter the relevant detail as a **Cue Control Device**. The layout of the lower part of the screen depends on the Device Type of the currently-selected device. The example below shows the layout for a **DMX In** device.



Properties and Controls

Enable Cue Control from these Interfaces	Mapping to Physical Devices on this Computer
SCS allows you to nominate up to four devices from which SCS can be remotely controlled, such as from a lighting board. However, it would not be common to have remote control from more than one device so you will probably only have a 'C1' entry.	All your Device mappings are held in a **Device Map**. This is the *same* **Device Map** used for **Audio Output Devices**, so the name of that **Device Map** is displayed but is not editable here. The **Physical Devices** chosen are for this **Device Map** on this computer.

Device Number (C1, C2, etc): If this number is displayed with a colored background (eg see C1 in the above screenshot) this indicates this device is the 'current' device for the 'Settings' panel displayed below the device list. To make a different device the 'current' device, click on any field in the line for the required device, or on the Device Number itself.

Device Type: This drop-down list contains the Cue Control device types supported by your license level.

Computer-Specific Fields

Physical Device: The physical device assigned to this Cue Control Device. The Physical Device is a display-only field based on the 'Settings' provided in the lower part of the screen.

Active?: This display-only checkbox will be checked if SCS has successfully initialized this device, or will be blank if the initialization failed. If you have devices that have not been initialized successfully, click *Retry Activating Devices* at the bottom of this tab.

DMX Port: Select the DMX Receive device (or port) that corresponds to the physical device or port connected by DMX cable to the relevant Show Control device (eg lighting board).

Other DMX In Settings

Preferred Value Notation: If your Show Control device (eg lighting board) has fader levels marked as a percentage then you may wish to select '%' as the **Preferred Value Notation**. The default setting is '0-255' which is the actual value range of DMX channel values. Note that the **Preferred Value Notation** only affects how values are displayed. Internally, SCS uses 0-255 values.

Action Trigger Control: This determines the *value change* required to trigger an action, such as the 'Go' Button action. The options are:

- A positive change from any value to a nominated value triggers the action, where the 'nominated value' is specified in the **Trigger Value** field. The default value is 255 (the maximum value), which means that if the value changes from any value in the range 0-254 to value 255, then action is triggered. If you choose a value less than 255 then note that the action will only be triggered on a positive change. For example, if you choose the value 200 then the action will trigger if the DMX channel value changes from 199 to 200, but will *not* trigger if the DMX channel value changes from 201 to 200 as that is a negative change. Also, the action will *not* trigger if the DMX channel value changes from 199 directly to 201 as the 'nominated value' of 200 is not received. The default value of 255 is therefore the most useful unless you have some particular reason for using a lower value.
- A change from zero to any value triggers the action. So a change of value from 0 to any value in the range 1-255 will trigger the action, but a change from any value in the range 1-255 to any other value (including 0) will *not* trigger the action.
- A change from any value to a non-zero value triggers the action. This was how SCS checked for trigger control in versions prior to SCS 11.2.6 and is retained for backward-compatibility. However, this can cause unwanted repeats of actions, especially if DMX control is sent from a fader. It is recommended you use one of the other action trigger control options, depending on your specific needs and equipment setup.

Note that **Action Trigger Control** does not apply to **Master Fader** as this uses the value to determine the level.

DMX Channel Assignments for controlling SCS Cues

In this panel you nominate which SCS commands may be controlled by DMX messages.

DMX Channel: Against each listed SCS command, enter the DMX Channel (1-512) assigned to control that command, or leave the field blank if the command is NOT to be controlled by DMX.

These are the commands currently supported, and how they are DMX controlled:

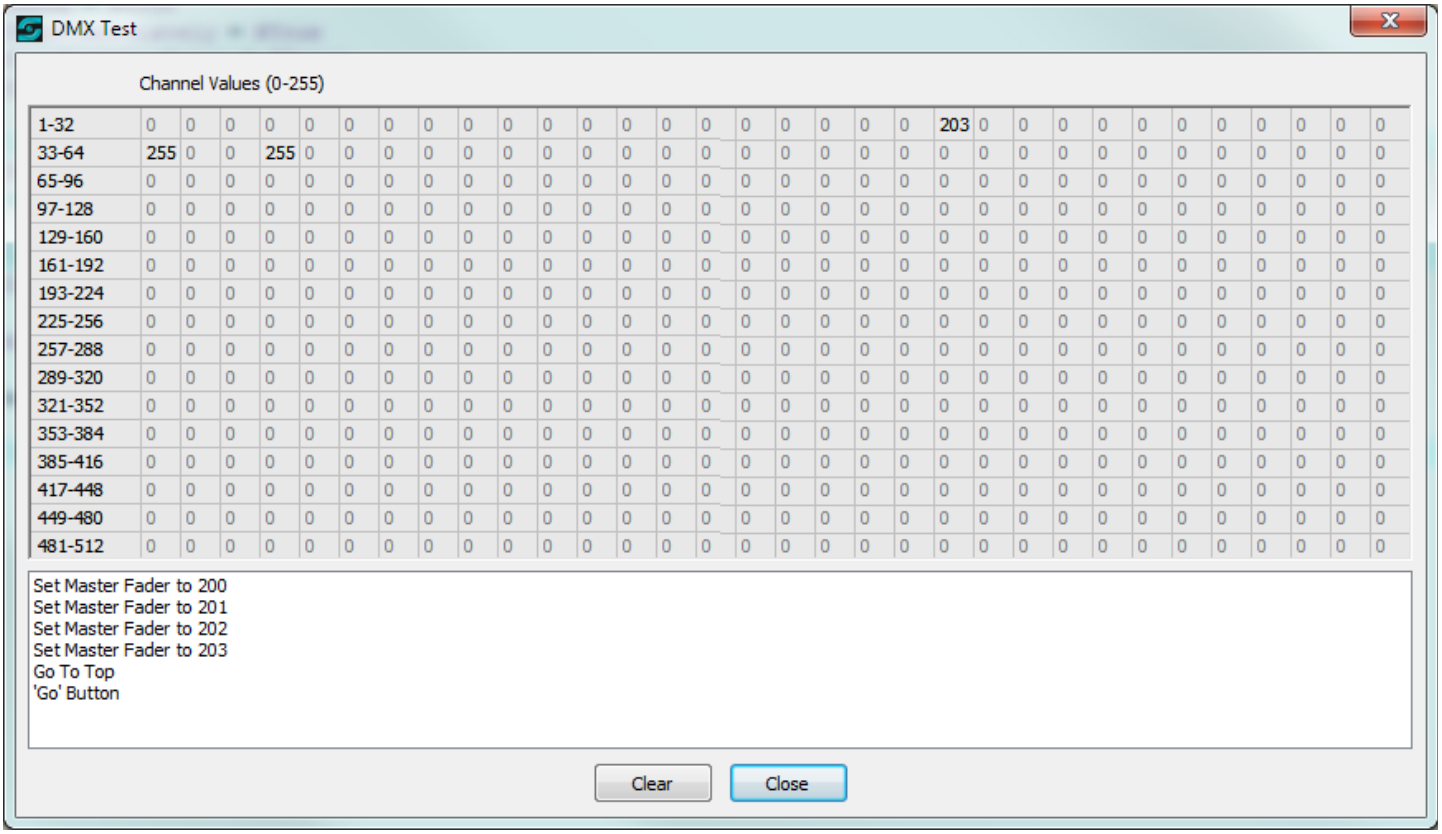
SCS	DMX

'Go' Button Stop Everything Pause/Resume All Go To Top Go Back Go To Next	SCS will look for a change in the DMX channel's value that satisfies the selected **Action Trigger Control** option. Note that SCS uses the actual values in the range 0-255, not the percentage equivalents. For example, the value 1 is, of course, not 0, but in terms of percentages the value 1 would be displayed as 0%, as the actual percentage is approx 0.39%. For example, you may have assigned a button on your lighting board to the channel you have nominated for the 'Go Button', such as channel 33. When the button is in it's normal unpressed state, the value for the channel would be 0, and when the button is pressed the value will probably be set to 255. So pressing the button you have assigned to channel 33 in this example, would fire the 'Go Button'. Releasing that button has no effect on SCS as the new value is 0. So each time you press this button on the lighting board, the SCS 'Go Button' is actioned. We recommend you use trigger buttons for these commands, not toggle buttons or faders. However, faders *could* be used for scenarios such as the default Action Trigger Control whereby the action would be triggered when the fader hits the maximum position.
Master Fader	SCS will set the Master Fader to the DMX channel's value if the value has changed. (A fader should be used for this control, not a button.) The new value may be any value in the range 0-255 (ie the whole range). The value will be scaled to match the SCS fader, so 255 will represent maximum fader level; 0 will represent minimum fader level; and 127 will represent the level at the midpoint of the fader.
Play DMX Cue 0 Upper Limit of Play DMX Cue #	Enter values in both of these fields if you want a range of DMX channels to be assigned to activating specific cues. For this range of DMX channels, SCS will look for a change in the DMX channel's value, and will activate the DMX Cue # if the value change satisfies the selected **Action Trigger Control** option. In the above screenshot the range is 100 to 149, so (with the example Action Trigger Control) if the value of DMX channel 105 changes from a value less than 255, to 255, then SCS will activate DMX Cue #5 (if it exists). DMX Cue numbers are set in the Cue Properties (see **MIDI/DMX Cue**).

Test DMX Control

Having selected a DMX In device and relevant details, you can now check that SCS is receiving and recognizing these messages by clicking the **Test DMX Control** button. This will open a **DMX Test** window, and selected incoming DMX messages will be displayed in that window. Where the message is recognizable for control purposes, the SCS command is displayed.

The Test DMX window looks like this:



In the above example, the only channels with a non-zero values are 21, 33 and 36. Channel 21 has been assigned to the Master Fader. During the course of this test, the fader on the controlling device was set to 200 and then moved to 203. The values in channels 33 and 36 both hit 255 so triggered the assigned actions.

You can clear messages from the window by clicking the **Clear** button. This does *not* clear the DMX channel matrix. Close the window by clicking the **Close** button.

Device Map Buttons

The buttons at the foot of the tab apply to all device types as explained for Audio Output Devices.

< Previous Topic (Cue Control Devices - Network) | Next Topic Time Profiles) >

Production Properties - Live Inputs

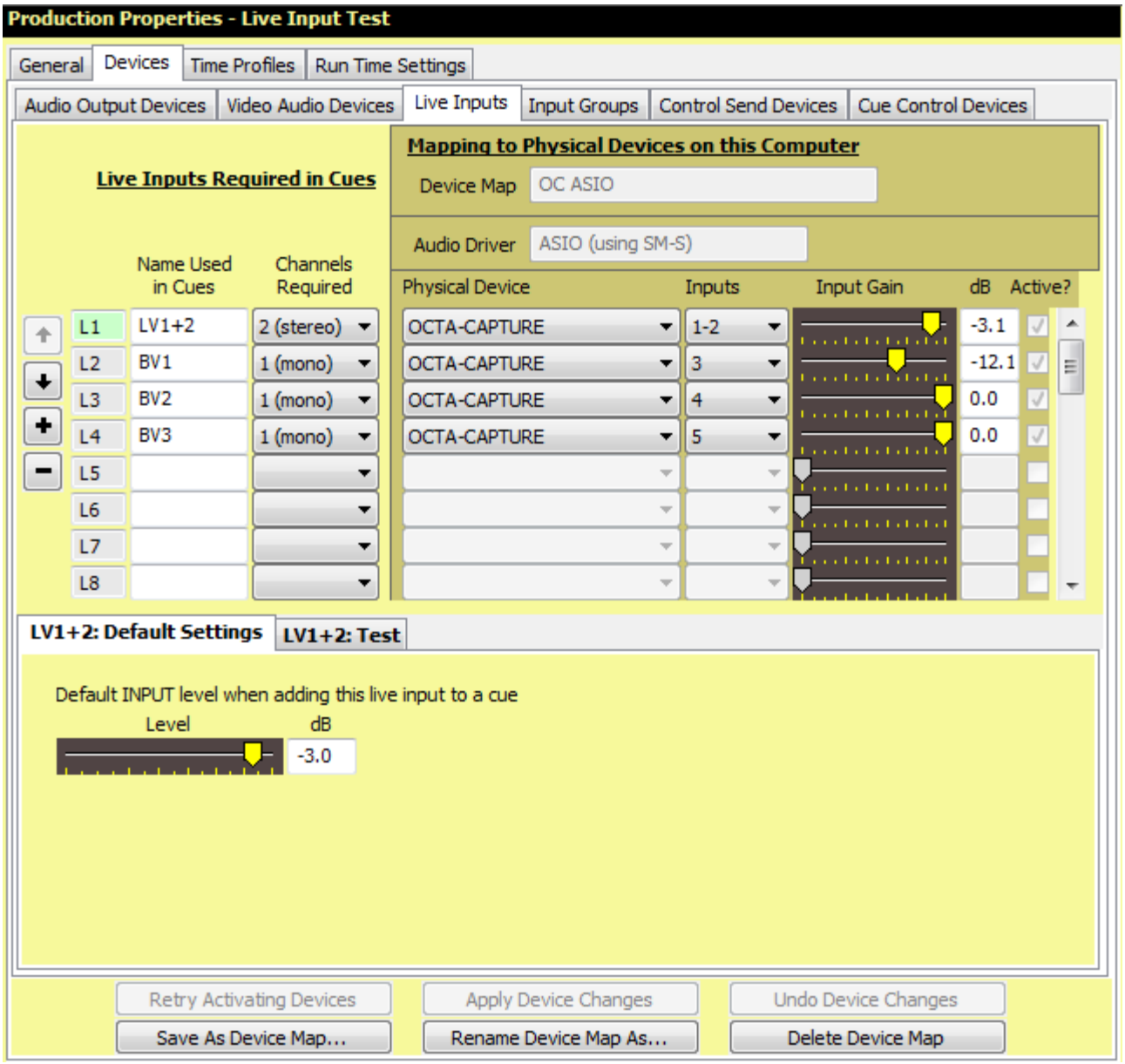
Live Input is only available with **SCS Professional** and higher licenses, *and* if you have SoundMan-Server installed. However, see also the section below on creating and testing Live Input Cues on a computer that does not have SoundMan-Server installed or loaded.

Overview

Live Inputs allow you to take inputs from mic's, instruments, etc, and process them using Live Input cues, Level Change cues and SFR cues. You can therefore use SCS to turn on and turn off mic's etc, as well as have cues that control the levels and pan settings of these inputs.

Please note that with mic's and instruments you frequently need personal control over levels to cope with variations in performers' levels. SCS Live Input cues are best suited to inputs that need no or rare dynamic adjustments.

Here's an example of the Production Properties for some Live Inputs:



Properties and Controls

Live Inputs Required in Cues	Mapping to Physical Devices on this Computer
Here you need to identify each input you want to use in Live Input cues. You give each input a **Name** that will be used in your Live Input cues.	All your Device mappings are held in a **Device Map**. This is the *same* **Device Map** used for **Audio Output Devices**, so the name of that **Device Map** is displayed but is not editable here. The **Physical Devices** chosen are for this **Device Map** on this computer.

Device Number (L1, L2, etc): If this number is displayed with a colored background (eg see L1 in the above screenshot) this indicates this device is the 'current' device for the **Sidebar Controls** to the left, and for the 'Settings' panel displayed below the device list. To make a different device the 'current' device, click on any field in the line for the required device, or on the Device Number itself.

Sidebar Controls: Controls are available to enable you to easily change the order of the devices as explained for Audio Output Devices.

Name Used in Cues: Enter the name you want to use for the input in your Live Input cues.

Channels Required: Live Inputs in SCS may be mono or stereo. Select as required.

Computer-Specific / Device Map-Specific Fields

Device Map: This is a display-only field showing the Device Map currently selected for this production in the Audio Output Devices tab.

Audio Driver: This is a display-only field showing the Audio Driver currently selected for this production in the Audio Output Devices tab.

Physical Device: The ASIO device assigned to this **Name Used in Cues**.

Inputs: This drop-down list contains the available ASIO input channels on the selected ASIO device. Select the required input channels for this Live Input.

Input Gain and **dB**: This is like a trim control for this physical input in *this* Device Map. It is therefore a Master Input Gain control for the input channel.

Active?: This display-only checkbox will be checked if SCS has successfully initialized this device, or will be blank if the initialization failed. If you have devices that have not been initialized successfully, click *Retry Activating Devices* at the bottom of this tab.

Default Settings

Default INPUT level when adding this live input to a cue: This gives the level to be used when adding this Live Input to a cue. You can, of course, subsequently change the level in the cue itself.

Important: There is a difference between **Input Gain** and **Input level**. This is best explained by likening the controls to those of a sound mixer, such as those of the *Mackie 3204-VLZ3* shown opposite.

The SCS **Input Gain** control is a Master Input Gain control that sets the maximum actual input level.

The SCS **Input Level** controls on individual cues, with a default set according to **Default INPUT Level** control, allow individual cues to use different input levels within the range specified by the **Input Gain** control.

The **Input Gain** and **Input Level** controls are additive, so if you have an Input Gain of -3.1dB and an Input Level of -3.0dB then that input will be attenuated -6.1dB.

Test

The **Test** panel allows you to run a test of the selected Live Input. This enables you to confirm the input is working and to adjust the **Input Gain** as required. *Please note that the test level is controlled by the **Input Gain** and the chosen output device's **Output Gain**, but it is not affected by the **Default Input Level**.*

Output Device for Test: Select an SCS audio output device from the drop-down list. Your Live Input test will be directed to that audio output device.

Test Live Input: Click this button to start the test. Any input received should now be heard on your selected output device, and signal should also be shown on the horizontal VU indicator to the right of the button. When clicked, the button caption then changes to **Cancel Test**, so click **Cancel Test** to terminate the test.

Creating and Editing Live Input Cues on a Computer that does not have SoundMan-Server installed or loaded

If you wish to create and edit Live Input Cues on a computer that does not have SM-S installed or loaded, then you can do this by:

- Setting the Audio Driver under Audio Output Devices to a driver other than SoundMan-Server, such as DirectSound.
- For each Live Input device you have specified (eg LV1+2, BV1, etc in the above screenshot) select 'Dummy Live Input' as the Physical Device.
- Now click 'Save As Device Map...' and create a new device map with a meaningful name, such as 'Dummy Live Inputs'.
- We recommend you now close and restart SCS.
- You can now create and edit Live Input Cues even though SoundMan-Server is not installed on the computer. You obviously will not be able to properly test these cues.

Device Map Buttons

The buttons at the foot of the tab apply to all device types as explained for Audio Output Devices.

See Also:

- Input Groups
- Live Input Cues

< Previous Topic (Video Capture Devices) | Next Topic (Input Groups) >

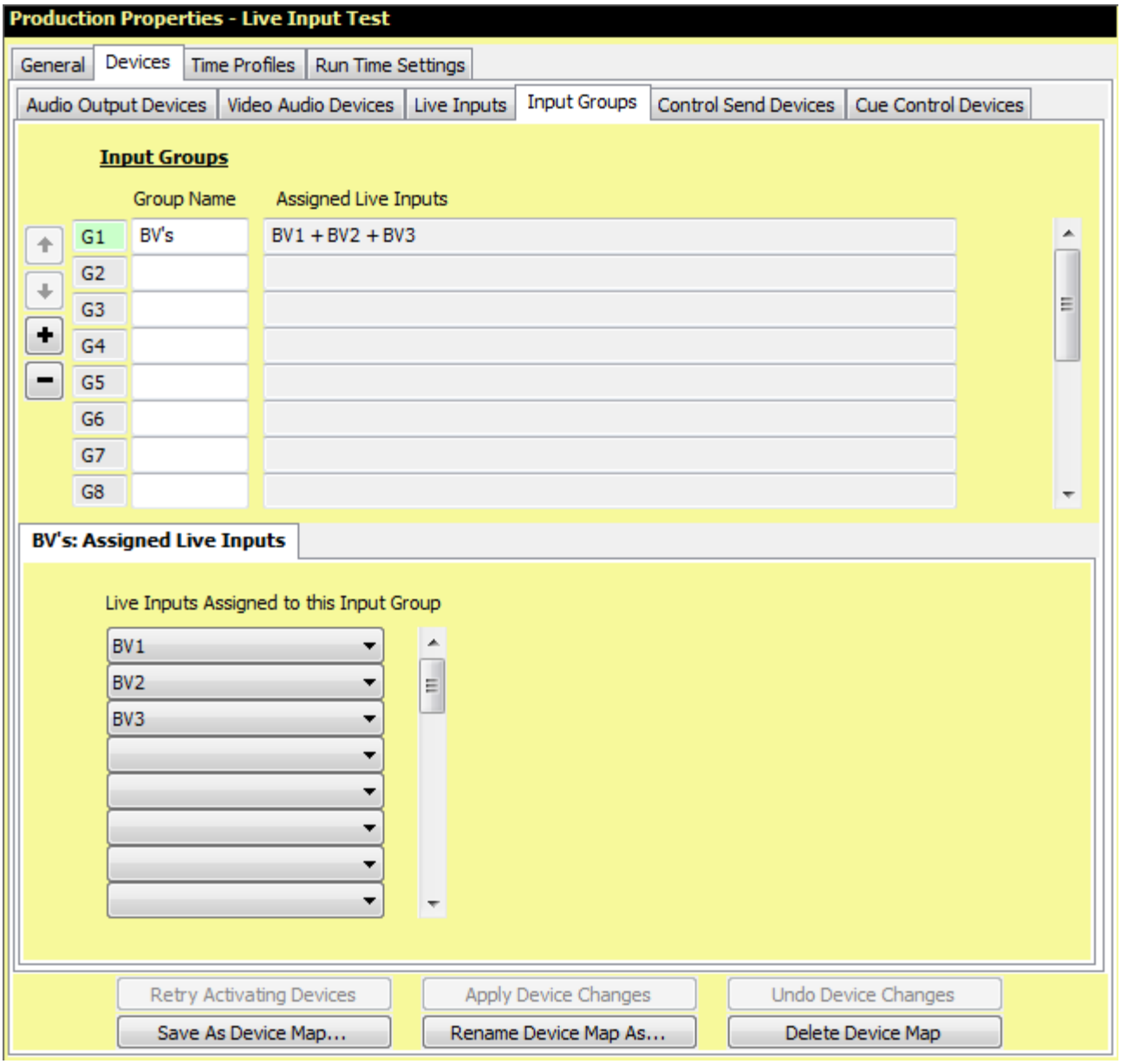
Production Properties - Live Input Groups

Live Input Groups are used with Live Inputs and are therefore only available with **SCS Professional** and higher licenses, *and* if you have **SoundMan-Server** installed. However, see also the section under Production Properties - Live Inputs on creating and testing Live Input Cues on a computer that does not have SoundMan-Server installed or loaded.

Overview

Live Input Groups provide you with a way to group Live Inputs so you can quickly add multiple Live Inputs to Live Input cues, assuming you want to use the same selection of Live Inputs in several cues. The use of Input Groups is optional - you can use Live Inputs without setting up any Input Groups if they serve no purpose for your production.

Here's an example of the Production Properties for a single Input Group:



Properties and Controls

Group Number (G1, G2, etc): If this number is displayed with a colored background (eg see G1 in the above screenshot) this indicates this device is the 'current' group for the **Sidebar Controls** to the left, and for the 'Assigned Live Inputs' panel displayed below the group list. To make a different group the 'current' group, click on any field in the line for the required group, or on the Group Number itself.

Sidebar Controls: Controls are available to enable you to easily change the order of the groups as explained for Audio Output Devices.

Group Name: Enter the name you want to use for the Input Group when adding the group of live inputs to Live Input cues.

Assigned Live Inputs: This is a display-only field which is populated with the list of assigned Live Inputs.

Live Inputs Assigned to this Input Group: Select the required Live Inputs to be included in this group, from the drop-down lists. Note that any Live Input can be included in more than one group, or with none.

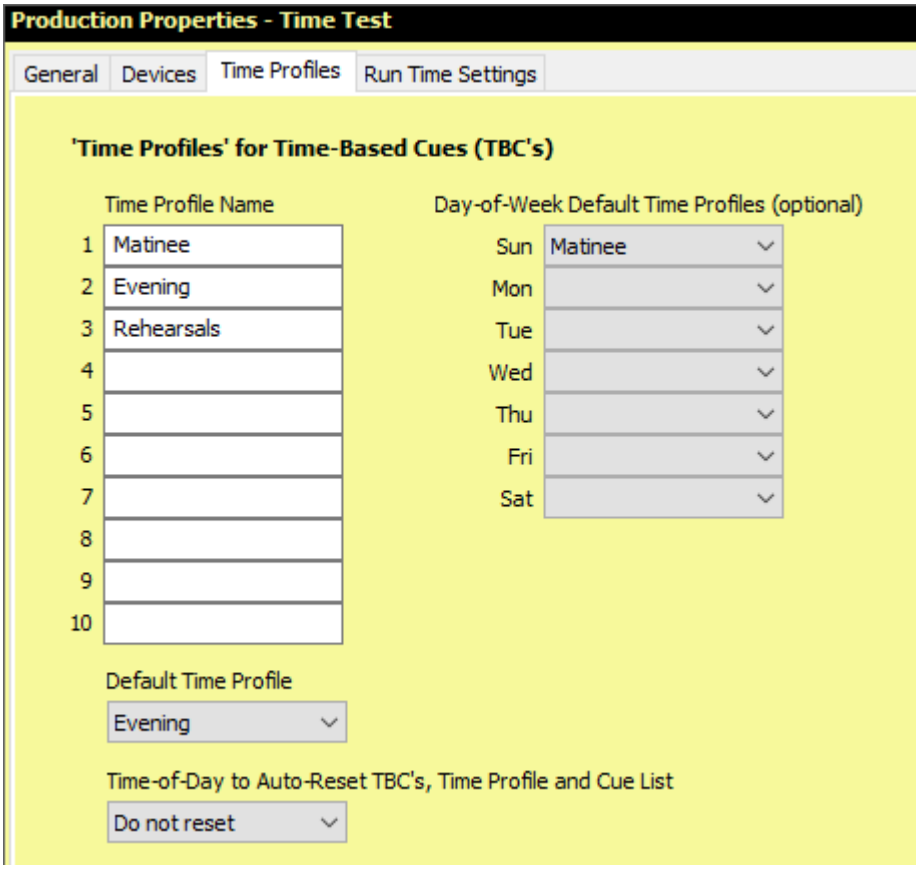
Device Map Buttons

The buttons at the foot of the tab apply to all device types as explained for Audio Output Devices.

< Previous Topic (Live Inputs) | Next Topic (Fixture Types) >

Time Profiles

The **Time Profiles** tab looks like this:



Properties and Controls

'Time Profiles' for Time-Based Cues (TBC's)

If you have any time-based cues in this production, you need to specify here one or more 'Time Profiles' that enable you to specify different times of day for different occasions. For example, you can have a Time Profile named 'Evening' for times relevant for an evening performance; another Time Profile named 'Matinee' for times relevant for an afternoon performance; and a Time Profile named 'Rehearsals' where you want the time-based cues to be ignored.

Time Profile Name: Enter the names of up to ten Time Profiles. Leave this section blank if you are not using time-based cues.

Default Time Profile and **Day-of-Week Default Time Profiles**: When you open your cue file for a production (eg when you start SCS), the initial Time Profile used will be derived from these fields. In the above example, if the cue file is opened on a Sunday then SCS will initially use the 'Matinee' Time Profile, but if the cue file is opened on any other day then the 'Evening' Time Profile is initially used.

Any time-based cue that has a blank start time for the selected Time Profile will be ignored. Note that you can change the Time Profile on the Run screen by clicking the **Time Profile** button on the toolbar.

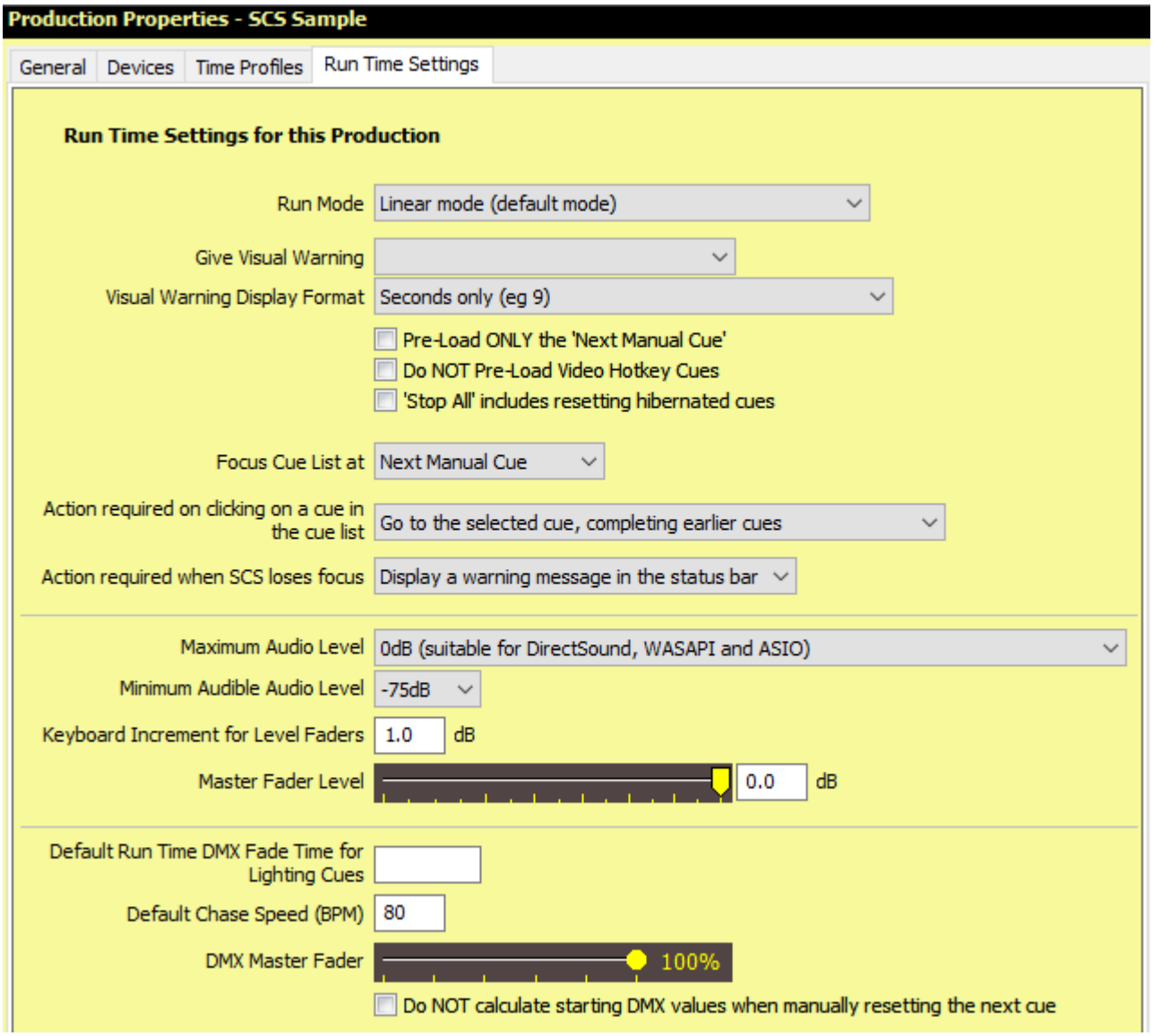
Time-of-Day to Auto-Reset TBC's and Cue List: If you are running SCS unattended over several days using Time-Based Cues (TBC's), then you can automatically reset the Time-Based Cues and the Cue List each day. This is implemented using this Production Property. The drop-down list provides for half-hourly times between midnight and 9:00am, but note that you should set this to a time *earlier* than your first TBC is scheduled to start. It is expected that you would normally set this time to Midnight (if you want to use the feature) unless you have a production that runs past that time. This Auto-Reset feature also re-randomizes the play orders of 'random' playlists.

See Time-Based Cues for more details.

< Previous Topic Devices) | Next Topic (Run Time Settings) >

Production Properties - Run Time Settings

The **Run Time Settings** tab looks like this:



Properties and Controls

Run Time Settings for this Production

Run Mode: SCS is primarily designed to be run in **Linear Mode**, which means that you expect to start from the top of the cue list and progress thru the cue list until the last cue. Exceptions to this linear processing are handled by Hot Key cues, which may be fired at any time and as often as you wish. **Linear** and **Non-Linear Run Modes** are explained below.

Linear and Non-Linear Run Modes

If you have a separate master cue control program such as *Palladium* or the *AMX Netlinx Control System* then you may be using SCS as your playback source. You may therefore just want a list of cues that are loaded and played on demand, and not necessarily in the order you have listed them in SCS. This applies particularly to audio files you want to play several times for different cues in the 'master' cue list. Provided your master cue control program communicates with SCS using MIDI, RS232 or Network control, you can implement this mode of operation by selecting a **Non-Linear Run Mode**.

The basic functional differences between **Linear** and **Non-Linear** modes are as follows:

Linear Mode:	Play cues from top of cue list to last cue, plus hot key cues.
Non-Linear Mode:	Play any cue at any time.

The processing differences between **Linear** and **Non-Linear** modes are shown in the following table. Please note that the information described applies principally to Audio File cues that are *not* hot key cues.

Action or Event	Linear Mode (default mode)	Non-Linear Mode (open cues on demand)	Non-Linear Mode (pre-open all cues)
Open a cue file	First few cues are pre-opened.	NO cues are pre-opened.	ALL cues are pre-opened.
A cue completes	The cue is unloaded and marked as 'Completed'. SCS then pre-opens the next few cues (except where they are already loaded).	The cue is unloaded and marked as 'Not Loaded'. No other cues are affected.	The cue is re-loaded and marked as 'Ready'. No other cues are affected.
Play a cue 'out of order', ie not the next cue in the cue list (eg Q38)	Q38 and the next few cues are pre-opened and marked as 'Ready', and Q38 is started. Any cues prior to Q38 that are not currently playing are unloaded if necessary and marked as 'Completed'.	Q38 and any dependent* cues are opened if necessary, and Q38 is started. No other cues are affected.	Q38 is started. No other cues are affected.
Go to another cue in the cue list (eg Q45)	The cue list is positioned at Q45. This cue and the next few cues are pre-opened and marked as 'Ready'. Any cues prior to Q45 that are not currently playing are unloaded if necessary and marked as 'Completed'.	The cue list is positioned at Q45. This cue and any dependent* cues are opened if necessary, but no other cues are affected.	The cue list is positioned at Q45 but no other action is required as all cues are pre-opened.

* **Dependent Cues** are cues that have some relationship with the nominated cue. For example, if Q39 is set to auto-start 3 seconds after the end of Q38 then Q39 is a *Dependent Cue* to Q38, so will be opened whenever Q38 is opened.

For SFR cues, **All earlier cues** is displayed and processed as **All playing cues** if the Run Mode is Non-Linear. So if you have selected a Non-Linear Run Mode then in the Editor you will find that the drop down cue list for SFR cues contains "All playing cues" instead of "All earlier cues". In the cue file (the .scs11 file) these modes are the same - they are both saved as "all", but when an SFR cue with "all" is activated then the Run Mode is checked to determine if the required action is to be applied only to all earlier cues (Linear Run Mode) or to all playing cues (Non-Linear Run Mode).

Setting up Linear and Non-Linear Cues in the same Production

If you have a show in which you want both linear cues (activated by keyboard or mouse) *and* non-linear cues (activated by MIDI or other external interface) then select a **Run Mode** of "Linear AND Non-Linear (open non-linear on demand)" or "Linear AND Non-Linear (pre-open all non-linear cues)". With these two run modes, SCS scans all your cues and marks any cue with a **MIDI/DMX Cue Number** as 'non-linear'. Non-Linear cues are treated similarly to hot key cues, so when they are activated by MIDI no other cues are affected, and the cue list position of the *Next Manual Cue* is unchanged. You can have both linear and non-linear cues in the same production, ie in the same SCS cue file.

Visual Warning

Give Visual Warning: This property is designed primarily for users who use SCS for backing tracks, etc, in live band performances. If you select a non-blank value from the drop-down list then whenever a cue is nearing it's end you will get a visual warning of the time remaining. Various time periods are available. To determine the cue duration (so SCS knows when it is nearing the end), SCS considers the play lengths of audio file sub-cues, video/image sub-cues, and playlists. MIDI files are excluded. Note that for Audio File Cues that contain one or more loops, a 'count down' time cannot be displayed until all loops have been released.

Since this 'Visual Warning' feature was introduced, it has been expanded to include settings for monitoring the cue position instead of just monitoring the time remaining. The settings now available are:

- Count down last *n* seconds (with separate entries between 5 seconds and 60 seconds)
- Count down whole cue
- Cue position
- Cue position plus optional time offset *
- File position *

* 'Cue position plus optional time offset' and 'File position' are only available with Audio File Cues. For other cue types

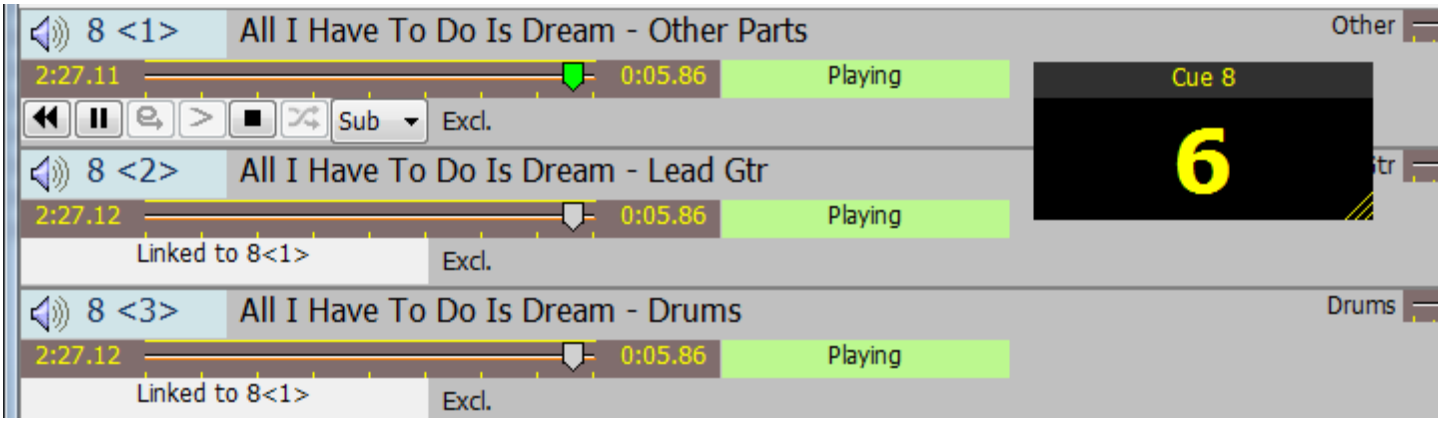
(eg video cues) these options will revert to 'Cue position'.

Visual Warning Display Format: This field enables you to set the format of the display of the visual warning to one of the following:

Seconds only (eg 9)
Time format - including hundredths (eg 8.75 or 2.03.45)
hh:mm:ss (eg eg 0:09 or 1:23:45)

The default is 'Seconds only (eg 9)'.

Example:



In live running you would probably not show the Sub-Cues for backing track cues like this.

Tip: On the visual display warning window there is a title bar at the top of the box showing the relevant cue number. You can click on this bar and drag the window to another position, even to a different screen. You can also resize the window by clicking and dragging the resize handle in the bottom right. Resizing the window will cause the time's font size to be resized (but not the font of the title bar), which means you can display a very large Visual Warning time if required. SCS remembers the size and position of the window across sessions.

Note that in Cue Properties you can turn on or off the visual warning ('warn before end') for each cue. The default is 'on', which means that if you set the **Give Visual Warning** time here then by default this will apply to *all* cues. You can also use **Bulk Edit** to turn on or off the 'near end warning' for multiple cues. This only applies to 'Count down...' settings as it is a 'warn before end' property.

Pre-Load ONLY the 'Next Manual Cue': This may be useful in a music production if you have many sub-cues for a music cue, and you are not needing to pre-load the following cue until the current cue has completed. By ticking this checkbox SCS will only pre-load the files for the 'Next Manual Cue', and then only pre-load them when any currently-playing cue has completed. This helps reduce the runtime memory requirement of SCS.

Do NOT Pre-Load Video Hotkey Cues: SCS normally pre-loads all audio and video hotkey cues so that they are available for 'instant' playback. However, pre-loading video cues can take significant resources, and if you have a lot of video cues then the video playback library (eg TVG) may fail to pre-load some cues. This can have an impact on other video cues that are *not* hotkey cues, because if the video playback library cannot open any more video cues then that may affect any video cue that's not currently open but needs to be opened for playback. So if SCS cannot open some video cues because you have too many video hotkey cues, then try setting this runtime property. Note that you may need to close and restart SCS for this to take any significant effect, especially if SCS has already failed to open some video cues. Although there may now be a slight delay in starting a video hotkey cue, tests have shown that this delay is quite small, especially when using TVG.

'Stop All' includes resetting hibernated cues: The 'hibernation' of cues was originally designed to allow you to set up a playlist for pre-show music, fade-out and 'hibernate' it during the first Act, and then resume that hibernated playlist for intermission music. If, during the first Act, it is necessary to 'Stop All' then this would not affect the currently hibernated playlist, meaning that at Intermission your playlist may be resumed.

However, if you are hibernating cues for other reasons then you may require any currently hibernated cues to be reset to 'Ready' on 'Stop All'. This may apply particularly during rehearsals when you are more likely to using 'Stop All'. This checkbox (**'Stop All' includes resetting hibernated cues**) enables you to select this action.

Focus Cue List at: If the visible portion of the cue list in the main window is not high enough to display all your cues then a vertical scrollbar will be displayed which will enable you to scroll to view any part of the cue list. However, during normal production running you do not want to have to do this so SCS auto-scrolls the display as you progress through your cues. By default, SCS 'focuses' the scrolling around the **Next Manual Cue**, which means your next manual cue will be around the middle of the visible area (unless the cue is near the beginning or end of the list).

In some productions you may be more interested in having SCS focus the scrolling around the **Cue Currently**

Playing, especially if you have many auto-start cues and the next manual cue is often a long way down the list. This can be implemented by selecting **Cue Currently Playing** from the drop-down list. If there is more than one cue currently playing then SCS will attempt to keep all the playing cues visible, but gives priority to the cue that was most recently started.

Action on clicking on a cue in the cue list: If you click on a cue in the cue list in the main SCS window, then by default SCS will 'go to' that cue, which means that the cue you click on becomes the 'next manual cue' and all preceding cues will be marked as 'completed' unless they are currently active. Actions available are:

- *Go to the selected cue, completing earlier cues.* Default action as described above.
- *Set 'Go' button to the selected cue, but do not 'go to' the cue.* The 'Go' button is set to the selected cue but basically nothing else happens. If you then click 'Go' (or equivalent) then SCS will 'go to' the cue and start playing it. This action is useful if you have SCS playing fairly much unattended, but need the facility to allow users to jump to a new cue, but also want to avoid the cue list stopping if the action was accidental, and the user didn't follow-up the click with a 'Go' action. Note that if you use a touch-screen then touching the cue list is equivalent to clicking on the cue list, so the possibility of accidental clicks or touches can be quite high in a busy environment.
- *Ignore the click.* As the action implies, this will cause SCS to totally ignore any click or touch of the main cue list. This could be useful in a situation where SCS is run unattended and should always run through the whole cue list - which may well have a 'GoTo' cue at the end to loop back to the start.

Action required when SCS loses focus: If you have another app running at the same time as SCS and you click on a window of that app, then SCS loses focus. This means that if you, say, press the space-bar to activate the next cue, then that space-bar press is sent to whatever app and window currently has focus. So SCS will, by default, display a warning message in the status bar if the SCS main window does not have focus. However, if you are controlling SCS exclusively from some external device then the warning is irrelevant and can be annoying. So this property allows you to dictate how 'lost focus' is to be handled. The options are:

- *Display a warning message in the status bar.* This is the default action as described above.
- *Ignore 'lost focus' states.* If SCS loses focus, no warning will be displayed. We recommend you only select this option if you are confident that it will never be necessary to activate SCS manually using the keyboard or a mouse click.

Run Time Audio Settings

Maximum Audio Level: The maximum level (volume) supported by DirectSound is 0dB so that is the default maximum level used in SCS. However, if you are primarily using ASIO drivers then you can set the **Maximum Audio Level** to +12dB if you wish. This will enable you to amplify sounds, but be careful with this as you may introduce distortion. If you select +12dB when you are using DirectSound then the results of using a level greater than 0dB are undefined. Possible results are that the level will be capped at 0dB, or you may actually get amplification, or you may get distortion. So this setting is designed primarily for ASIO.

Minimum Audible Audio Level: The audio level below which SCS will cut out the audio playback signal. The default setting for new cue files is -160dB, but you can alternatively select -120dB. We recommend you select either -120dB or -160dB. Prior to SCS 11.8.3.2 the minimum was -75dB, and if you have a cue file that was last saved prior to 11.8.3.2 and have audio fade outs specified, then the fade out behavior may be different with the change to -120dB or -160dB. So for cue files last saved prior to 11.8.3.2, this minimum is set to -75dB to retain the fade out behavior where applicable. You may, however, change this.

Keyboard Increment for Level Faders: When you click on a level fader the fader then has focus, which is indicated by the background color being changed to a light blue. When a level fader has focus you can use the keyboard arrow keys to make minor adjustments to the level. This field determines what those minor adjustments will be, and by default this is 1dB. Note that you can hold down an arrow key on a fader to make larger changes.

Master Fader Level: This Production Property is where the default (or initial) **Master Fader** setting for this production is stored. You can adjust this default or initial **Master Fader** setting by dragging the slider.

Run Time DMX Settings

Default Run Time DMX Fade Time for Lighting Cues: You may enter here a default **Fade Time** to be used when running a Lighting Cue. This will be used for DMX items that *do not* have a fade time specified, provided the Lighting Cue has *Use production default* selected for 'Default fade time for the above items'. See Lighting Cues for more info.

Default Chase Speed (BPM): If you have any Lighting Cues that use the chase option then the **Default Chase Speed** in beats per minute (BPM) is initially applied, and will be the chase speed initially set for any new Lighting Cue with chase. The default value for **Default Chase Speed (BPM)** is 80.

DMX Master Fader: This Production Property is where the default (or initial) **DMX Master Fader** setting for this production is stored. You can adjust this default or initial **DMX Master Fader** setting by dragging the slider.

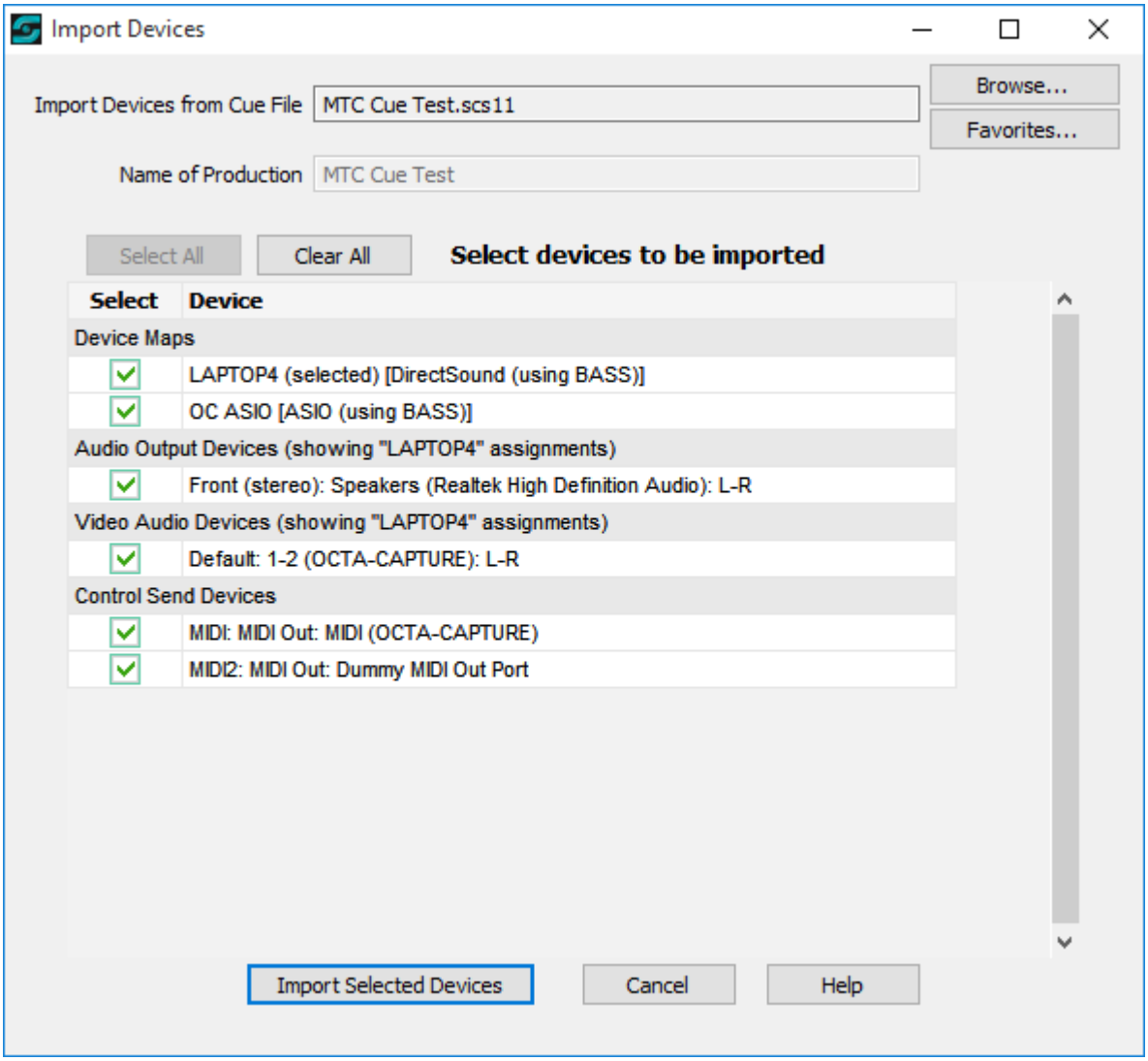
Do NOT calculate starting DMX values when manually resetting the next cue: If you manually select the next cue, eg by clicking on a cue in the main window's cue list, SCS attempts to calculate the DMX values that would be active immediately prior to your playing that next cue. This is basically performed by scanning all prior Lighting Cues and also Call Cues that call Lighting Cues. This is ideal for rehearsals if the director wants to rehearse a part of a scene - possibly several times. If you do not want this calculation to occur, possibly because you are heavily reliant on the use of hotkeys for the current production, then you can disable the feature by selecting this checkbox. See also the **Run Time Note** under Lighting Cues.

< Previous Topic (Time Profiles)

Import Devices from another SCS Cue File

Import Devices from another SCS Cue File is only available with **SCS Professional** and higher license levels.

This feature enables you to copy into your current cue file selected devices and device maps from or associated with another SCS cue file. This is useful if you want to use the same or a similar device setup that you used for another production When the **Import Devices** window is opened, click either the **Browse** button or the **Favorites** button to find the SCS cue file containing the devices you want to import. When you have selected a cue file a window like this will be displayed:



Import Devices from Cue File: This is the name of the cue file you just selected. You can select a different file by clicking the **Browse** or **Favorites** button and selecting a different file.

Name of Production: This display-only field shows the 'Name of Production' from the Production Properties of the import devices cue file.

Select devices to be imported: A list of the device maps and devices in or associated with the import cue file is displayed as shown above. Device maps are shown first, followed by devices grouped by their purpose. By default, all device maps and devices are selected for importing. For the device maps and/or devices you do *not* want to import, clear the **Select** checkbox. You can also use the buttons above the list to **Select All** or to **Clear All**.

Import Selected Devices: When you click this button the selected device maps and/or devices will be imported. A message box will be displayed confirming the items imported or updated. When you acknowledge that message, the Import Devices window will be closed.

On returning to the Editor it is recommended that you click **Apply Device Changes** and then **Save** your changes.

Cancel: This button may be used to close the **Import Devices** window without performing an import.

Help: This button displays this help.

Notes on how this function is implemented (using examples):

- **Importing Device Maps:** If the import file has a device map named *MyPC* and the currently-open cue file also has a device map named *MyPC* then any device-map-specific fields that are common to both maps will have the current settings overridden by the import settings (assuming *MyPC* is selected for import). For example, if device 'Front' is currently assigned to 'Speakers' but in the import file it is assigned to 'Octa-Capture 1-2' then the import will cause 'Octa-Capture 1-2' to become the assigned output.
- If the import file has a device map named *MyPC* but the currently-open cue file does not have a device map of that name, then *MyPC* will be imported as a new device map (assuming it is selected for import) but the current device maps will not be affected at all by the mappings in *MyPC*.
- **Importing Devices:** If the import file has an audio output device named *Back* and the currently-open cue file also has an audio output device named *Back*, and if both such devices have the same number of channels (eg 2-channels) then any other properties for that device will be imported, such as the 'default level and pan when adding the device to a new cue'. (This is assuming the *Back* device has been selected for import.)
- If the import file has an audio output device named *Back* but the currently-open cue file does not have an audio output device of that name, then a new audio output device will be created for *Back* (assuming *Back* was selected for import).

This is where things can get a bit confusing. When a new device is imported, the relevant device map settings will also be imported for all selected device maps, if any. However, if the currently-selected device map does not have a corresponding import then this new device ends up with no physical device assigned (in the currently-selected device map). Your initial reaction to that may be that SCS did not import the physical device assignments, but it's just that the physical device assignments are in a **newly-imported** device map. By changing the selected device map (see the **Device Map** drop-down list shown under Audio Output Devices) you will find the imported device map and correct mappings available. But then if your currently-open cue file has some audio output devices that did not exist in the import cue file, then here you get the reverse situation, with these original devices without a physical device assignment in the newly-imported device map(s).

The above discussion on audio output devices also applies to all other devices, including control send and cue control devices.

Tip: After processing the import you may need to change the currently-selected Device Map if the name(s) of the imported Device Maps are different to the currently-selected Device Map.

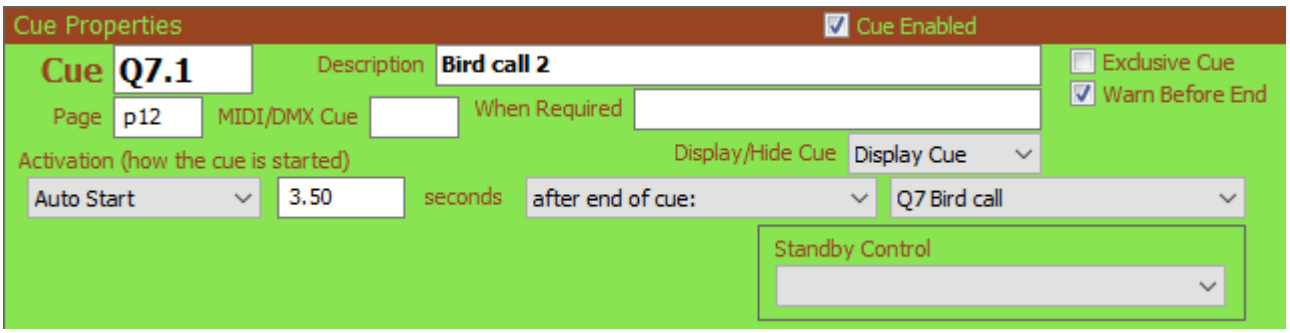
See also: Device Maps

Cue Properties

Some features only available with **SCS-Standard** and/or higher license levels.

Overview

Click on a cue 'node' of the cue list tree to view and edit the **Cue Properties.** The upper panel to the right of the cue list tree will contain properties that are common to all cue types. For example:



Normally the lower part of this panel (Standby Control etc) is hidden as it is rarely used, but you can scroll down to see these extra properties, or drag the 'splitter bar' below the panel to permanently see more properties (as has been done for the above screen shot). SCS remembers the splitter bar position across sessions.

Properties and Controls

Some properties and controls displayed in this panel will vary depending on other properties or options. Also, some properties may only be available if you have an **SCS Standard** and/or higher license.

General

Cue: Enter your required identification for the cue, eg Q3 for 'Cue 3', FX 5 for 'Effect 5', or just the number of the cue, eg 27. You can also append decimals or alpha characters to the number, eg Q3.1, FX5A, etc. This field is also referred to as **Cue Number** and **Cue Label**.

When you add a cue SCS creates a default **Cue Label** which you can change if required. For example, if the previous cue label is Q3 then SCS will set the new cue label to Q4 unless that label is already in use. If the previous cue label is alphabetic-only, eg M, then SCS will set the new cue number to the next available alphabetic label.

If you want to re-number several cues you can use the Re-Number Cues option available under the **Cues** button in the toolbar.

Description: This is a free-format field into which you should enter a description of the cue. The details you enter in the Description will appear in the cue list in the upper part of the main screen. Note: You can leave this field blank and have it auto-populated from the Description of the first sub-cue.

Page: This optional free-format field is intended for entering the script page number, preferably prefixed by 'p' (eg p12 as shown above) to distinguish this from other fields when displayed. (Note: prior to the addition of the *Page* field, the recommendation was to include the page number in the Description, but the disadvantage of that recommendation is that other cues that pick up the description, eg SFR or Level Change cues, would include the page number of the origin cue as it was part that cue's Description. Having *Page* as a separate property keeps the Description 'clean' and more suitable for picking up for the default Description of SFR and Level Change cues.) Note that *Page* can be set or changed in Bulk Edit Cues, which is useful for adding page numbers to a cue file that doesn't currently have page numbers.

MIDI/DMX Cue: *This field is only displayed if you have selected the Production Property **Enable 'MIDI/DMX Cue' field in Cue Properties**, or if you have selected a MIDI or DMX Cue Control device in Production Properties.*
For MIDI control, enter the MIDI Cue Number that will trigger this cue from an incoming MIDI message. For DMX control, enter the DMX Cue Number that will map to a DMX channel in the range set in Cue Control Devices - DMX.

If you want this cue excluded from MIDI/DMX triggering, leave the **MIDI/DMX Cue** field blank. If you are using MIDI control then remember that for MIDI Control Message Types of **Note On** and **Program/Controller Change** then the MIDI Cue Numbers must be whole numbers in the range 1-127. This also applies to the **MSC Fire Macro**. For other **MSC** messages the MIDI Cue Numbers may have dot numbers, such as 1.2.3. The MSC format obviously supports far more cues than the other formats.

When Required: This is an optional free-format field into which you may enter details of when the cue should be started. Examples are: "3 seconds after blackout"; "When Leonard exits OP"; "Kipps: Thank you, Mr Bunce!"

Various Control Properties

Cue Enabled: This field indicates if the cue is currently enabled, ie the cue is to be included in the main window. All new cues are enabled by default. Clear the checkbox to disable a cue. A disabled cue will not appear in the main window and will be ignored during production runs. Unlike deleting a cue, disabling a cue leaves the cue available in

the Editor and so can be re-enabled later if required.

Exclusive Cue: Making a cue 'exclusive' makes sure your operator does not accidentally start another audio or video/image cue while this one is still playing. It is really just that - a way of reducing unintentional cue starts. If an exclusive cue is running then the 'Go' button is disabled if the cue displayed on the 'Go' button is or contains an audio or video/image cue. When the exclusive cue completes, the 'Go' button is then enabled if applicable.

Tip: If you want the option to override the Exclusive Cue property, ie if you want the option to be able to activate the 'Go' button even if an exclusive cue is playing, then the **Ctrl** (Control) key may be used for this purpose provided you have set the option ***'Ctrl' overrides exclusive cue for 'Go' methods***. This option is on the *Shortcuts* node of *Options and Settings*. See Options and Settings - Shortcuts for details.

Hotkey cues may be started while an exclusive cue is playing, but in keeping with the goal of the 'exclusive cue' property being a way to reduce unintentional cue starts, if a Hotkey cue itself is marked as 'exclusive' then this means that the Hotkey cue may not be re-started while it is playing. So if the operator accidentally presses the hotkey twice instead of once then the second press will be ignored if the cue has the 'exclusive cue' property set.

Warn Before End: This checkbox is only displayed if in your Production Properties you have nominated a **Give Visual Warning...** time. This checkbox enables you to turn on or off the visual warning for this cue. The default setting is 'on'. For more information, see Production Properties - Run Time Settings.

Display/Hide Cue: This drop-down list enables to hide cues either just from the Cue Panels in the main window, or to hide the cue completely in the main window (ie Cue Panels and the Cue List). Hiding cues in the Cue Panels (using the **Hide Cue Panel** selection) can be particularly useful for hotkey or non-linear cues that are fired repeatedly, as hiding the cues avoids the need to re-draw the cue panels when the cue starts and ends. Hiding cues completely (using the **Hide Cue** selection) is useful for auto-start cues that you do not want displayed on the main window, since displaying them could be confusing. The default selection in this drop-down list is **Display Cue**, which causes the cue to be displayed in both the cue list and the cue panels. Note that hiding a cue *does not* disable the cue. If you want to disable the cue, select the **Cue Enabled** checkbox as described above.

Activation (How the Cue is Started)

Activation Method (first field in this section): Normally a cue will be started by you clicking the **Go!** button or right-clicking the mouse. This is a manual start of the cue and is indicated by selecting **Manual (Go button)** as the activation method. However, other **Activation Methods** are also available.

Activation Method	Description
Manual (Go button)	The cue will be started by you clicking the **Go!** button or right-clicking the mouse. You may also assign a keyboard key (such as the space-bar) to the 'Go' function. See Key Mapping for details.
Auto Start	The cue is to be automatically started a given time relative to the start or end of another cue, or to be started automatically a given time after the cue file has been loaded. You will need to enter the following fields: **Auto Start Time** (before the word 'seconds'): The time in seconds, eg 3.5, relative to the start or end of another cue that this cue is to be started. **Activation Point** (the next field): Select **after start of cue**, **after end of cue**, **before end of cue** or **after cue file loaded** from the drop-down list. The **before end of cue** option will start the current cue the specified time prior to the *expected* end of the controlling cue. The **after cue file loaded** option is used to start your cues automatically when the cue file has been loaded. **Controlling Cue** (for cue-related Activation Points): Select from the drop-down list the cue that is to control the activation of the current cue. Note that you can select *Previous cue* which is useful if you may be moving cues around. **Hide this Auto-Start Cue in the Main Window**: Select this checkbox if you *don't* want to see this auto-start cue displayed in the main window. If you select this checkbox for *all* your auto-start cues (which you can do using Bulk Edit) then in the Main Window you will only see your Manual Start cues (and any Time-Based cues). **Example**: If for *Q4* you select *Auto Start 4 seconds after start of Q3* then Q4 will automatically start 4 seconds after Q3 is started. Note that the duration of Q3 has no bearing on when Q4 is started. Sometimes you will want a cue to be activated immediately another cue stops or is stopped. In this case enter something like this: *Auto Start 0 seconds after end of Q3*.

A cue may alternatively be started by pressing a nominated key on the keyboard. This is known as a **Hotkey**. Hotkeys are useful for cues you want to start many times during the show, especially if the timing is fairly random. Four hotkey modes are available: **trigger**, **toggle, note** and **step**.	
Hotkey (Trigger)	With a **trigger** hotkey, when you press (and release) the nominated key the cue will start playing, and it will continue playing until the end of the cue, or until the cue is ended by another cue. If you press the key again while the cue is still playing, the cue will restart from the beginning. For *all* Hotkey modes you will need to enter the following fields: **Hotkey**: Select an available hotkey from the drop-down list. Although the number keys 0-9 are available in the list, be aware that the keys on the numeric pad may not activate a hotkey if numeric lock is off. It is safer to stick to the alphabetic keys (A-Z) and the function keys (F1-F12). The caps lock key does not affect hotkey recognition. The 'Page Up' (PgUp) and 'Page Down' (PgDn) keys are also available as they are the only keys supported by some wireless presenter clickers. However, if you use PgUp or PgDn then this will override the corresponding action on the main cue list. **Hotkey bank**: Multiple **hotkey banks** are available with **SCS Professional Plus** and higher licenses only. See Hotkey Banks for details. **Hotkey label**: Enter a label to be displayed in the Hotkey panel on the main screen. You should keep this label fairly short so you can read it easily.
Hotkey (Toggle)	With a **toggle** hotkey, the nominated key 'toggles' the play state of the cue. Press (and release) the key to start the cue, and press the key a second time to stop or fade out the cue. So when you press nominated key, if the cue is not currently playing then the cue will be started, but if the cue *is* currently playing then it will be stopped (or faded out if the cue has a fade out time). For Lighting Cues, if the cue is not currently playing then the lighting cue will activate the designated DMX channels, etc, but if the cue *is* currently playing then the designated DMX channels will be set to 0.
Hotkey (Note)	With a **note** hotkey, the key is treated like playing a note on a synth. Press *and hold* the nominated key to start the cue. The cue will continue playing while you *hold down* the key. When you *release* the key, the cue will be stopped (or faded out). For Lighting Cues, when you press and hold the nominated key then the lighting cue will activate the designated DMX channels, etc. When you release the key designated DMX channels will be set to 0. This could be useful for audience blinders, lightning effects, flashes from explosions, etc.
Hotkey (Step)	A **step** hotkey is similar to a **trigger** hotkey except that it is intended for scenarios where you need a different cue to be played for each activation of the hotkey. This enables you to have multiple cues assigned to the same hotkey, and SCS will 'step' through those cues one at a time for each press of the hotkey. In the hotkey panel in the main window, step hotkeys will be listed with their respective 'step number', eg X#1, X#2, etc for hotkey X. Step numbers are dynamically assigned at runtime based on the physical order of these particular step hotkey cues. The step numbers are *not* stored in the cue file. If the step hotkey (eg 'X') is pressed more times than there are steps then excess activations are ignored. They will, of course, be reset next time you open the cue file, but you can also manually reset them at any time using the **Reset 'Step' Hotkeys** menu item under **Navigate** in the main window. This reset feature is useful for rehearsals where you may wish to repeat the steps.
Time-Based	The cue will be automatically started at a nominated time of day. See Time-Based Cues for details.
Callable Cue	The **Callable Cue** Activation Method is similar to the **Hotkey (Trigger)** activation method except that the cue is started by another cue, not by the keyboard. These 'callable cues' are designed for situations where you may have the same sequence of events to be triggered several times in the show, where all those events can be set up as sub-cues of a single cue. The cue type that is used to activate a callable cue is the 'Call Cue' Cue. See also Callable Cues.
On Cue Marker	If you have an Audio File Cue that has Cue Markers or Cue Points then you can use these to trigger other cues. When you select **On Cue Marker** as the Activation Method then a drop-down list of available Cue Markers and Cue Points will be displayed. Just select the required entry from this list. When the cue for that marker or point is played and that selected marker or point is reached, this cue will be activated.

MIDI Time Code	For **MIDI Time Code** activation you will need to enter the required Time Code that will activate the cue. Note that if a cue with Activation Method 'MIDI Time Code' has multiple sub-cues then you can set individual sub-cues to start at a 'Relative MTC'. See the description of Relative MTC at Audio File Cues. (This description applies to all cue types.)
Cues may also be started using a two-step process, where a cue is intended to be started by a remote operator (such as an orchestra conductor) but only when the cue has first been set to a 'waiting for confirmation' state by the principal SCS operator or by an auto-start cue. See Cue-Start Confirmation for details.	
Manual+Conf	The cue state is set to 'waiting for confirmation' manually, ie by any of the methods available for **Manual (Go Button)**.
Auto+Conf	The cue state is set to 'waiting for confirmation' as for an **Auto Start** cue.
External (Trigger)	This is basically the same as **Hotkey (Trigger)** except that the cue is expected to be activated by a Cue Control command, such as an incoming MIDI message. More significantly, External (Trigger) is similar to Manual (Go button) with this important exception: With Manual (Go button), if you try to re-activate the cue while it is currently playing (eg when using non-linear run mode), SCS ignores the re-activation request. With External (Trigger) and also with Hotkey activation methods, if you re-activate the cue while it is currently playing then the re-activation request is accepted and the cue is restarted.
External (Toggle)	Basically the same as **Hotkey (Toggle)** except that the cue is expected to be activated by a Cue Control command, such as an incoming MIDI message. Please note that SCS remembers the toggle state, so when you first send the 'Note On' for the particular cue the cue will start playing, and the next time you send the 'Note On', SCS will stop the cue. However, if the cue has already stopped then SCS still treats this as a 'Stop' request even though it does nothing. The reason for not resetting the state automatically after the cue naturally ends is to avoid the situation where the operator sends the 'stop' toggle request at around the same time as the cue naturally ends. If the operator's 'stop' request arrived after the natural end and if SCS had reset the state, then SCS would restart the cue, which is not what was required. So by having a consistent approach, always requiring both 'start' and 'stop' requests, we avoid embarrassing situations of a cue being started accidentally.
External (Note)	Basically the same as **Hotkey (Note)** except that the cue is expected to be activated by a MIDI Cue Control 'Note On' command. When the 'Note On' MIDI message for the cue is received, the cue will be started. When the corresponding 'Note Off' MIDI message is received, the cue will be stopped (or faded out if a fade-out time is specified).
External Fader	This activation method is currently designed solely for Lighting Cues. This activation method enables the associated Lighting Cue to be faded up and down manually under the control of a fader on a MIDI controller such as a nanoKONTROL, Behringer BCF2000 or BCR2000. See Lighting Control by External Fader for more information.

It is recommended that **hotkeys** and **callable cues** be defined after the last scheduled cue. Also, you cannot use a scheduled cue as a hotkey cue. If you want to use a sound file for a scheduled cue and also for a hotkey then enter two cues - one scheduled cue and one hotkey cue.

Tip: Hotkeys are a useful way of supplementing an atmos cue with random extra sounds. For example, if you require a 'forest atmos' cue to run for a few minutes, you could have a suitable forest ambience audio file as a scheduled cue, set to loop continuously until you stop the cue. You could also set up a couple of animal or bird sounds on separate hotkeys, and play these randomly during the 'forest atmos' cue. Just make sure the levels of the hotkey cues are set appropriately for the cue they are going to supplement; use the pan control so that you don't have all the animals and birds in the center (assuming you're running a stereo mix); and finally make sure that the animals and birds selected are native to the geography of the setting! And don't go overboard with hotkeys - normally the audience should not consciously notice the detail of an atmos cue.

Standby

Standby Control: This feature is primarily designed to provide a **Repeat Last Cue** capability. See Standby Cues for details.

Time-Based Cues

Time-Based Cues are only available with **SCS Standard** and higher license levels.

In SCS you can specify a time of day for a cue to start. For example, if your show starts at 7:30pm you could have pre-show music you want played from 7:00pm. You can set up this cue to start automatically at 7:00pm so you do not have to be in the sound booth at the time.

That's OK if you just have evening performances, but if you also have matinées then you may want to play this same playlist played from 2:00pm. Also, there will be rehearsals when you don't want to play the pre-show music at all, or if you do then you want to activate the cue manually.

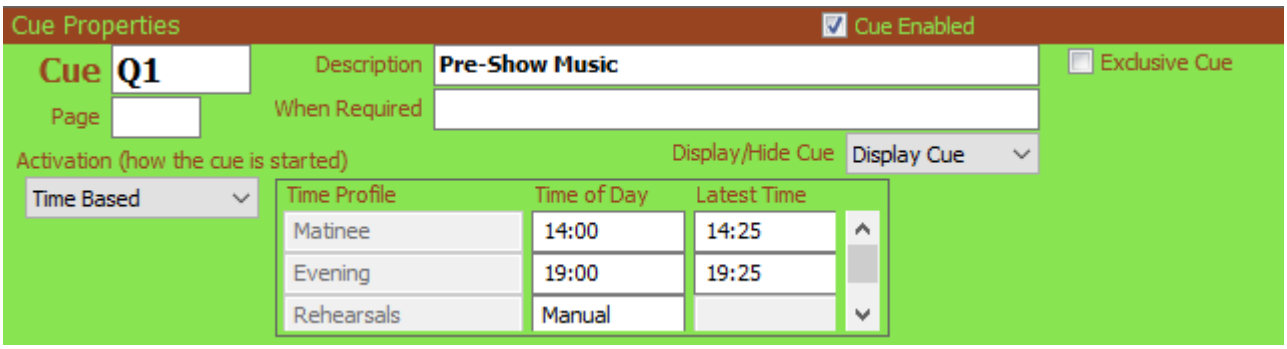
For **Time-Based Cues (TBC's)** you can set up a number of **Time Profiles** in your **Production Properties** - see Production Properties - Time Profiles. For example, you could set up these Time Profiles:

- Matinee
- Evening
- Rehearsals

For each cue you want auto-activated by time of day, set the cue's **Activation (How the Cue is Started)** to **Time Based**, and then for each **Time Profile** enter the **Time of Day** at which the cue is to start. You may use either 24-hour time or AM/PM time, eg 14:00 or 2:00PM. Times may be specified down to seconds, but remember that start times are based on your PC clock setting, so if your PC clock is wrong so will your cue start times!

For rehearsals you may want the cue to be activated manually, eg by using the 'Go' button. To have the cue activated manually for a Time Profile, enter **m** or **Manual** in the time field.

For example:



To prevent a time-based cue playing at all for a particular time profile, leave the **Time of Day** blank against that **Time Profile**.

The **Latest Time** is an optional field which was added in SCS 11.8.1. Using the above example where the Matinee pre-show music is set to start at 14:00 (2pm), if you didn't start SCS until, say, 14:05 then in versions prior to SCS 11.8.1 this cue would automatically be deemed to have completed because more than one minute had passed since the time specified in **Time of Day**. This is still the case if **Latest Time** is left blank, but setting **Latest Time** as shown above to 14:25 means this cue *will* auto-start if SCS is started up until 14:25.

When you load your cue file for a production (eg when you start SCS), the Time Profile initially used will be determined from the **Default Time Profile** and the relevant **Day-of-Week Default Time Profile** (if set). These fields are in the Production Properties. Any time-based cue that has a blank start time for this profile will be ignored (although you will still be able to see the cue in the Editor). Also, any time-based cue for the selected profile that has a start time (**Time of Day**, or **Latest Time** if set) more than one minute ago will be regarded as 'complete', so if you restart the program during the show then you will not get your pre-show music re-played!

You can change the selected Time Profile on the Run screen by clicking the **Time Profile** button on the Toolbar.

Example:	
Cue PRE	Pre-show music (playlist; master level -6dB)
Cue ANN	Pre-show announcement (TBC with 3 sub-cues) • Sub-1: Level change of PRE, fade to -INF over 2.5 seconds • Sub-2: Audio file of announcement, relative start 2.5 seconds (duration of audio file: 12 seconds) • Sub-3: Level change of PRE: fade up to -6dB over 2.5 seconds; relative start 14.5 seconds

When running your cues, the status of a 'ready' time-based cue will change to 'count down' one minute before the cue is due to play.

Back to Cue Properties

Callable Cues

Callable Cues are only available with **SCS Professional** and higher license levels.

A **Callable Cue** is similar to a **Hotkey (Trigger)** cue except that the cue is started by other cues rather than by a keyboard action. **Callable Cues** are designed for situations where you may have the same sequence of events to be triggered several times in the show, where all those events can be set up as sub-cues of a single cue. The cue type that is used to activate a callable cue is the 'Call Cue' Cue.

Here's an example of a **Callable Cue** as set up the Editor:

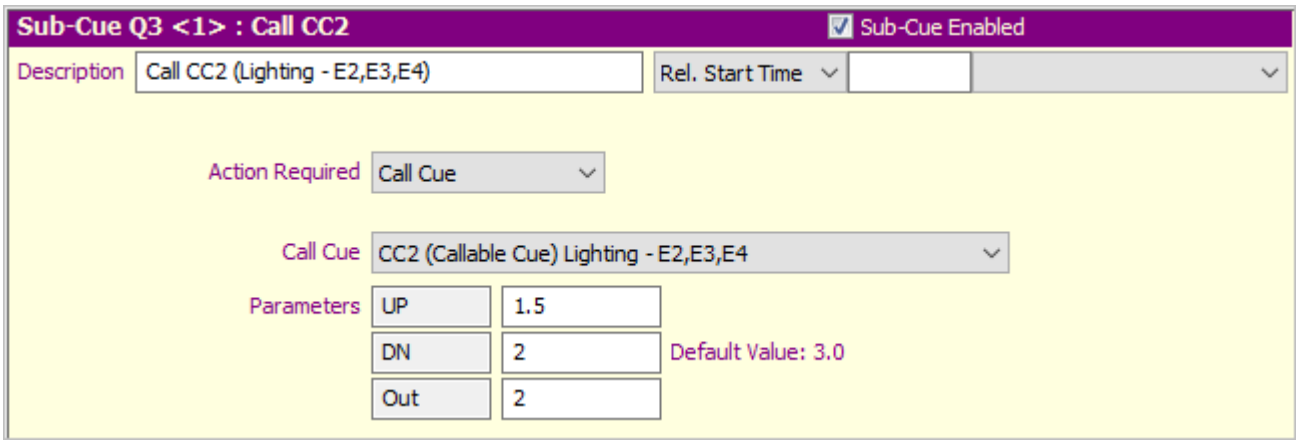
Note that the Cue's **Activation Method** is set to *Callable Cue* because this cue will be activated by another cue which will be of type **'Call Cue'**.

Parameters: A Callable Cue may optionally have parameters which enable selected sub-cue properties to be set based on values supplied for those properties in a cue that calls this Callable Cue.

- Up to 4 parameters may be supplied.
- The format is parameter1=default, parameter2=default, etc, but default values (as shown by '=default') are optional.
- Each parameter (also referred to as a parameter id) must start with a letter in the range A-Z or a-z. Remaining characters in a parameter id must be in the range A-Z, a-z, 0-9, or _ (underscore).
- There are no restrictions on the characters used for parameter defaults, except that , (comma) cannot be used within a default as it indicates the end of a parameter=default component.
- Any leading and trailing spaces are ignored.

In the above screenshot CC2 has 3 parameters (UP, DN and OTH), and DN has been assigned a default value of 3.0.

The screenshot also shows a Lighting sub-cue with each of the fade times set from a parameter rather than having an actual time. When CC2 is called from a Call Cue like this:



then the UP in the Lighting Cue (CC2<1>) will be replaced at run-time by 1.5, DN and OTH will both be replaced by 2. If DN had been left blank in Q3<1> then in CC2<1> DN would have been replaced by 3.0 as that is the default value specified in CC2.

Because a **Callable Cue** may be called many times, when an activation of the cue does complete, the cue is reset to 'Ready', just like a Hotkey cue.

We recommend you place all Callable Cues at the end of your cue list.

IMPORTANT: Support for Parameters in Callable Cues and subordinate sub-cues was introduced in SCS 11.9 and there is currently a very limited number of sub-cue properties that accept parameter substitution. This list is expected to be expanded in later releases as the demand arises. Currently only the following properties support parameter substitution:

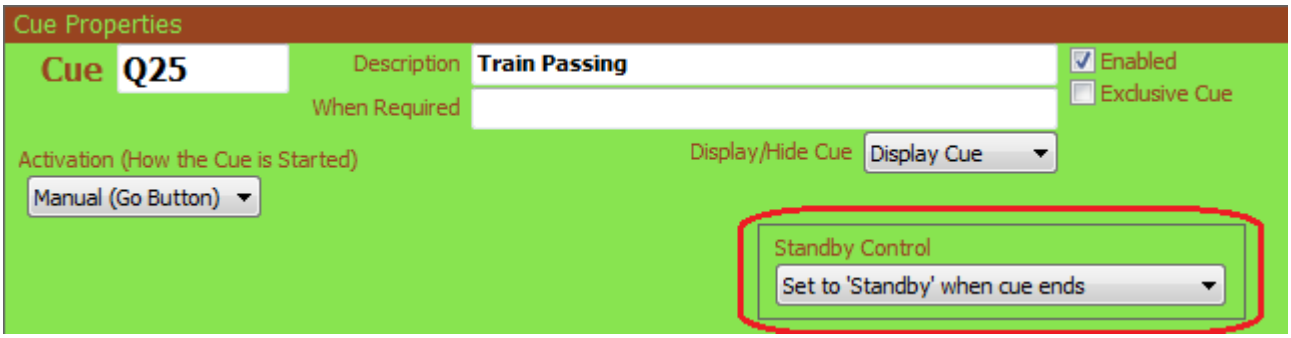
- **Lighting Cues**: Parameter substitution is supported for the time values against 'Use this fade up time', 'Use this fade down time', and 'Use this fade out time'.
- **MIDI Control Send Cues**: Parameter substitution is supported for certain fields, eg Velocity. Where parameter substitution is available, the corresponding drop-down list will include the parameter id's at the top of the list.

[Back to Cue Properties]

Standby Cues

Standby Cues are only available with **SCS Professional** and higher license levels.

The purpose of the **Standby** feature is primarily to allow you to **repeat the last cue**. However, this is not a universal *repeat last cue* facility - you need to nominate which cues will require this feature when you prepare your cue file. The **Standby** requirement is set in the **Edit Cue** window, eg:



If you select **Set to 'Standby' when cue ends** then when the sound cue has finished playing the sound file will be left open and the **State** will be set to **Standby** instead of to **Complete**. Also, a **Standby Go!** button will be displayed in the Main Window Toolbar.

If you click the **Standby Go!** button (or alternatively press Alt+S) then the cue on standby will play. When it has finished playing it will once again go on standby so you can repeat this cue as often as required. You will notice that the **Standby Go!** button displays the cue label of the cue on standby.

The cue on standby will stay on standby as you progress thru your cue list until one of two events occur (or three if you include closing the program). Only one cue can be on standby at any time, so if another cue is played that has **Set to 'Standby' when cue ends** selected then when that cue has finished playing it will take over as the **Standby** cue and the previous standby cue will be closed and its state set to **Complete**.

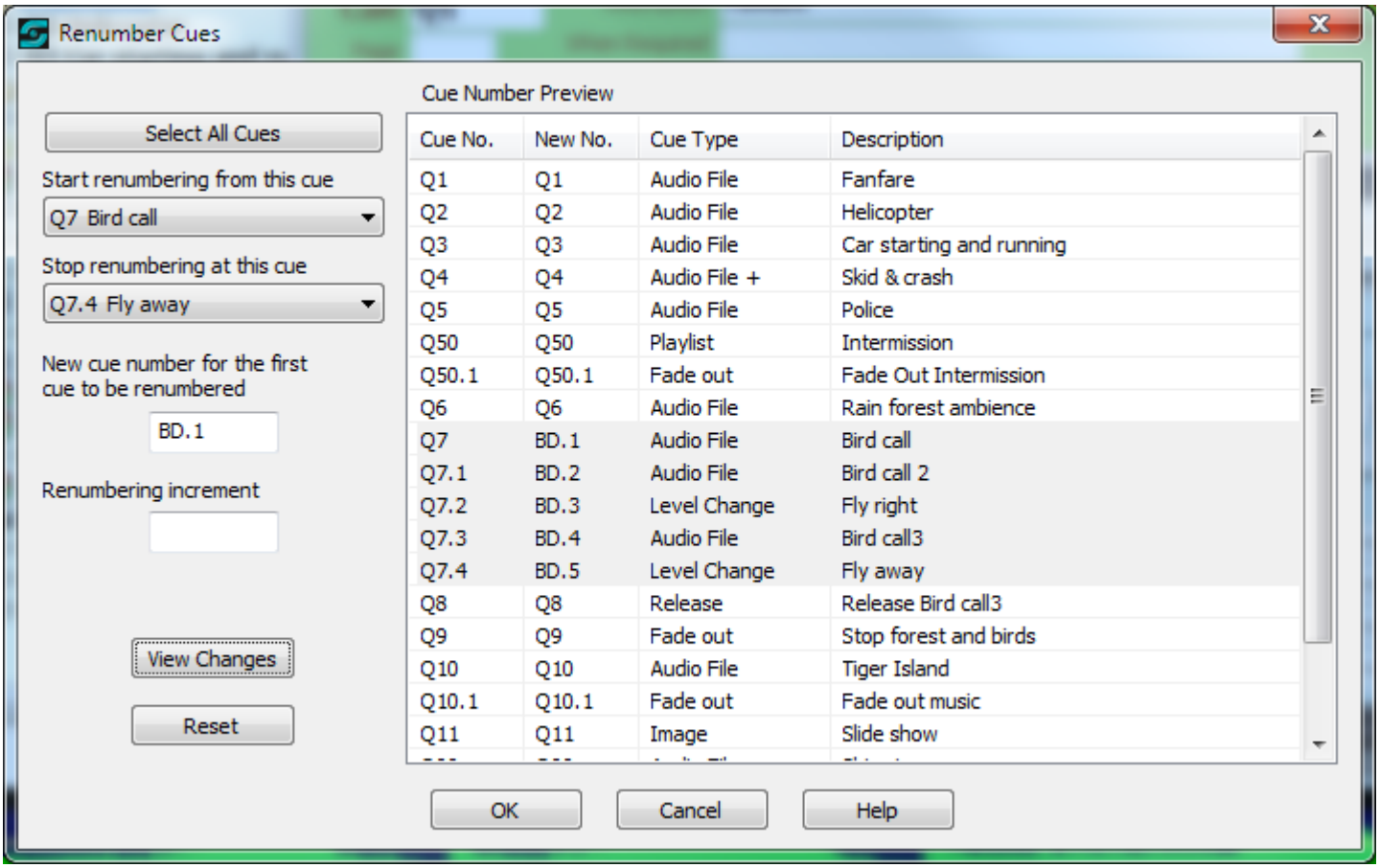
The reason the Standby remains active as you progress thru your cue list is that you may be running several cues simultaneously, with ambient music or sounds quietly playing in the background while stronger cues of shorter duration are played as required. The cue you want to repeat may therefore not always be the last cue you started and also may not always be the last cue completed. By specifically nominating which cue(s) are to go on standby you can confidently activate your standby cue knowing exactly which cue will play.

The second **Standby** option is **Cancel 'Standby' cue when this cue starts**. When the cue is started, this option will close the **Standby** cue, set its state to **Complete**, and remove the **Standby Go!** button from the screen. The purpose of this option is to prevent you accidentally playing the **Standby** cue later in the script. As the 'cancel' action is performed when the cue on which this option is set starts, you can place this option on the cue immediately following the **Standby** cue itself.

Back to Cue Properties

Renumber Cues

The **Renumber Cues** window can be accessed from the Editor by clicking on **Cues / Renumber Cues** or by a keyboard shortcut if available (default Ctrl+R). This menu item is disabled if the Production Property 'Cue Labels cannot be changed' is checked.



When the window is opened your entire cue list is displayed under **Cue Number Preview**. The **Cue Type** column displays the type of the first or only sub-cue. If a cue has two or more sub-cues, then '+' is displayed after the cue type.

In the above example we have chosen to renumber cues Q7 to Q7.4, starting the new numbering at BD.1.

The fields available in this window are as follows:

Select All Cues: Click this button to set the following two fields to the first and last cues respectively. Note that all cues are selected by default when the window is opened, so the main purpose of this button is to simplify all-cue selection later (if required) if you have changed the default selection.

Start renumbering from this cue: Select from the drop-down list the first cue you want to include in this renumbering operation. By default, the first cue is selected.

Stop renumbering at this cue: Select from the drop-down list the last cue you want to include in this renumbering operation. By default, the last cue is selected.

> **Tip:** The easiest way to select the range of cues to be renumbered is to 'multi-select' the cues in **Cue Number Preview**. For example, the selection in the screenshot above resulted from a left-click on Q7 followed by a shift-left-click on Q7.4.

New cue number for the first cue to be renumbered: Enter the required new cue number (cue label) for the first cue in the range of cues to be renumbered. Note that alphabetic-only labels are permitted as explained under **Cue** in Cue Properties.

Re-numbering increment: You may optionally enter a number here (integer only) that will be used as the increment value when calculating cue numbers. For example, if you enter 5 in this field and you had entered Q100 in the previous field then your new cue numbers will be Q100, Q105, Q110, etc. If you leave the field blank, an increment of 1 is assumed.

View Changes: Click this button to update the **Cue Number Preview** list with the new cue numbers. Please note that if you want to renumber cues then you *must* view changes before you click the **OK** button, as the **OK** button will

implement what is in the **Cue Number Preview** list.

> **Tip:** You can renumber different ranges of cues as required and view the changes before you click the **OK** button.

Reset: Click this button to undo all your changes, resetting all the **New No's** back to the **Cue No's**.

OK: Click this button to accept the **New No's** shown in the **Cue Number Preview** list, and to update your cue list with those new numbers.

Cancel: Click this button to discard any changes to cue numbers..

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Cue-Start Confirmation

Cue-Start Confirmation is only available with **SCS Professional Plus** and higher licenses.

This feature is designed for the following scenario:

> "For this show - as for many others - there are certain playback cues that have to be triggered by the Conductor, such as click tracks. He wants to be able to use the top-most key on his synth keyboard (not played as part of the score) to trigger each cue (rather than a key per cue - as it's all too hard to keep track of which one he wants)."

The conductor is effectively a **second** or **remote operator** of SCS, but the conductor must only be able to start specific cues. If you just implement MIDI control to map the top-most 'Note On' command to 'Go Next' then the conductor could start *any* 'next cue', so SCS provides a way in which the conductor's control of starting the next cue can be enabled only when required. This enabling is controlled manually by the principal SCS operator, or by an auto-start cue. You can liken this enabling to **opening a gate** to allow thru the confirmation command from the conductor. The **gate** will be **closed** automatically after the confirmation command has been received.

SCS Professional Plus users will have two additional entries in the **Activation Method** drop-down list: **Manual+Confirm**, and **Auto+Confirm**. **Manual+Confirm** means that the cue must first be manually activated by any method acceptable to a **Manual (Go Button)** activation, such as a mouse right-click, pressing the spacebar, or by a MIDI command. On receiving this activation, the cue state is changed from **Ready** to **Waiting for Confirm**. The cue will only start playing when a confirmation message is received, which may be either via MIDI (such as a specific Note On message sent from the conductor's synth) or by the operator's keyboard.

Under Production Properties - Cue Control Devices - MIDI select a suitable **Control Method**, eg *MIDI Note On* and then scroll down the **Cue Control Command** list to locate **Go Confirm**. It is here that you specify what MIDI message is to trigger the 'confirmation'. For a Note On message you need to enter the Note No. so only that Note No. will trigger the confirmation.

Also, go to Options and Settings - Shortcuts. An entry here allows you to nominate a computer keyboard key (shortcut) that will enable the SCS operator to supply the confirmation should that be necessary. For example, you could use the / key. It's advisable to use a key that cannot be used for a Hotkey.

In the Editor you may now enter a cue **Activation Method** of **Manual+Confirm** to cause the cue to require manual activation plus confirmation. When the production is running, if a 'confirmation' message is received when no cue is awaiting confirmation, a warning message will be displayed for 7 seconds on the status line. This is primarily so the principal SCS operator knows that the remote operator (eg conductor) has sent the confirmation message when it was not expected. That confirmation message will be discarded - it is not queued.

Note that if you are also using MIDI control for your main cue control then the MIDI 'Go Confirm' message must use the same MIDI channel as your other MIDI control commands, because there is only one drop-down field for the MIDI Channel.

Auto+Confirm provides the same confirmation functionality as **Manual+Confirm**, except that changing the cue state from **Ready** to **Waiting for Confirm** is activated like any other Auto-Start cue (eg 0.00 seconds after the end of another cue) instead of being manually activated.

A few notes:

- The SCS operator or auto-start condition should activate the cue to 'open the gate' (ie change state from 'Ready' to 'Waiting for Confirm') as soon as it is safe for the conductor to start the cue. Opening the gate too near to the actual expected start time could cause frustration if the conductor sometimes gets in ahead of time while the gate is still closed. So leave a reasonable margin.
- If necessary, the SCS operator can issue the confirmation from the computer keyboard provided a key has been assigned to this command as explained above. This allows for situations where, for example, the conductor is not present for a particular performance and a click track is to be started by the SCS operator.
- Sometimes you may have SCS cues that are present for backup purposes only, where the conductor will only issue the confirmation if it is necessary. To provide for this, whenever SCS starts a cue *other than a hotkey cue* the program will scan the cue list for any cue other than the current cue that is waiting for confirmation and will 'Complete' that cue. So if the conductor does not issue the confirmation command for a 'Waiting for Confirm' cue, and neither does the SCS operator, then that 'Waiting for Confirm' cue will effectively be canceled when another non-hotkey cue is started.

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Hotkey Banks

Hotkey Banks are only available with **SCS Professional Plus** and higher licenses.

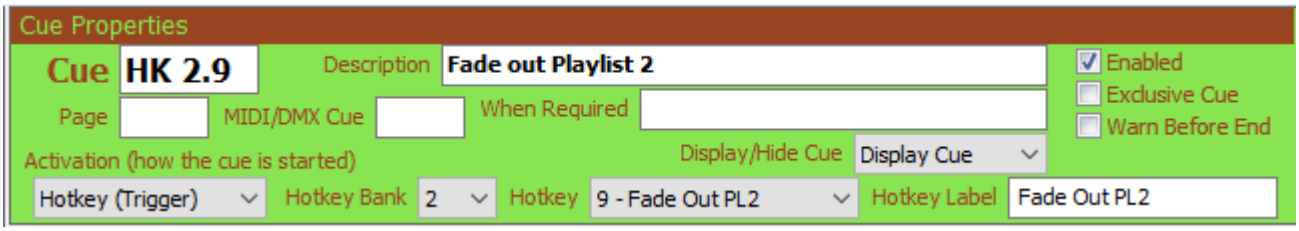
For most productions you will probably only need a single 'bank' of hotkeys, and for some productions you will not need any hotkeys at all. So for licenses up to and including **SCS Professional** just one hotkey bank is supported. This bank is labeled * (star).

SCS Professional Plus, however, supports hotkey bank * plus up to 6 other hotkey banks (labeled 1-6), and **SCS Platinum** supports hotkey bank * plus up to 12 other hotkey banks (labeled 1-12).

The purpose of multiple hotkey banks is to enable you to re-use hotkeys for different parts of the show. For example, hotkey A in bank 1 could activate a gunshot cue, but in bank 2 it could activate a lighting cue. Obviously you would need a good reason to need to re-use hotkeys or you (or your operator) could get very confused.

Hotkey bank * (star) is for hotkeys that are **common** to all banks. When a hotkey bank in the range 1-12 is selected then the hotkeys available will be those in the selected bank *plus* those in bank *. For example, if you have a lighting blackout hotkey that you want always available then you should include that in bank *. SCS ensures uniqueness of hotkeys between banks * and all other banks. For example, if you use hotkey A in bank 1 then you cannot use hotkey A in bank *, and vice versa. Bank * is also referred to as bank 0 (zero).

Here is an example showing the assignment of hotkey 9 in bank 2:



When a hotkey bank in the range 1-12 is selected, the Hotkey Panel in the main window will have the selected hotkey bank displayed at the top of the list, eg Bank 2, and the list will then show hotkeys in the selected bank plus the hotkeys in bank *. (No distinction or separation is made in the panel to indicate if a hotkey belongs to the selected bank or to bank *.)

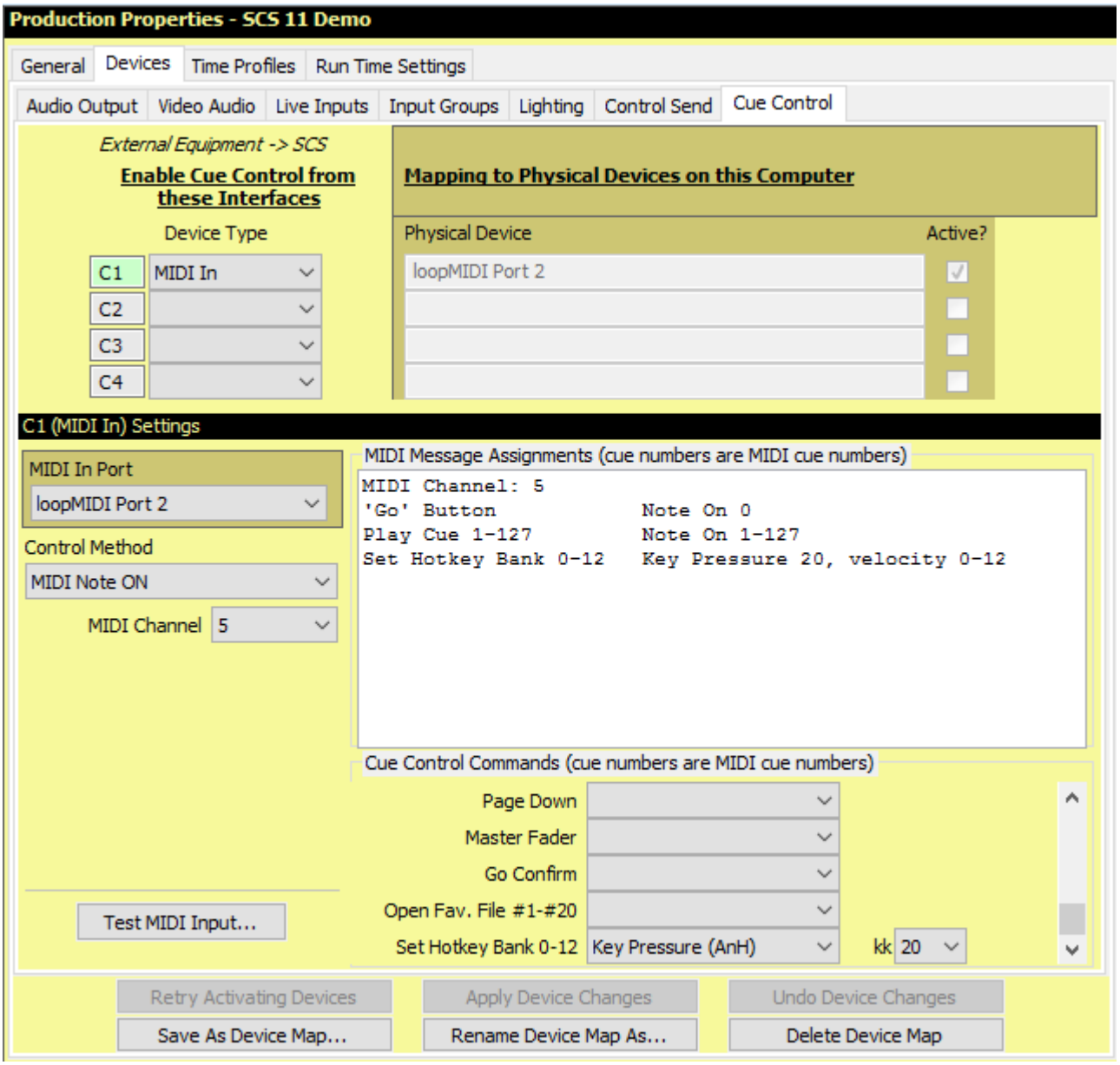
Selecting a Hotkey Bank

Selecting a hotkey bank is achieved using a 'Select Hotkey Bank' menu item under the **Navigate** button in the Main Window Toolbar. To cancel the selection of the current hotkey bank (ie without selecting another hotkey bank), select 'Hotkey Bank * (Common)'.

Selecting a hotkey bank can also be achieved using a Keyboard Shortcut. The default keyboard shortcuts for selecting hotkey banks are **Ctrl/Shift/F1** (for bank 1) up to **Ctrl/Shift/F12** (for bank 12). Note that there is no keyboard shortcut to de-select a hotkey bank, ie no keyboard shortcut to select bank *. Also, **Ctrl/Shift/F10** should not be used as this is a Windows shortcut so SCS never receives this command.

You can also create a cue to select a hotkey bank. This can be done using the Call Cue cue type.

You can also select a hotkey bank via MIDI if you have a **MIDI Cue Control Device** assigned. *In MIDI messages, bank * (star) is identified as bank 0 (zero)*. Any available hotkey bank can be selected, including bank 0 (to de-select any other selected bank). Here's an example of setting up a Cue Control device to accept Hotkey Bank changes via MIDI:



In this example, an incoming MIDI **Key Pressure** message on channel 5 for key 20 with velocity 0 will select hotkey bank 0 (ie bank *). Velocity 1 will select hotkey bank 1, and so on.

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Audio File Cues

Some features only available with SCS-Standard and/or higher license levels.

Adding a new Audio File Cue or Sub-Cue

To add a new Audio File *Cue*, click the **Cues** button in the Editor's toolbar and select **Add 'Audio File' Cue**, or if you have **Add Audio File Cue** in the **Favorites** then just click that button. To add a new Audio File *Sub-Cue*, click the **Sub-Cues** button in the toolbar and select **Add 'Audio File' Sub-Cue**, or if you have **Add Audio File Sub-Cue** in the **Favorites** then just click that button.

On selecting the option, an Audio File Selector window will be opened to enable you to select the required Audio File.

Tip: In the Audio File Selector window you can select *multiple* files, and SCS will create a separate Audio File Cue for *each file* you select. The order of the cues will be the order of the selected files in the list.

Tip: If you do not yet have the audio file you want to use for the cue then you can create a **Place Holder** for the Audio File cue. To do this, simply select **Cancel** in the Audio File Selector, and you will be asked if you want to create a Place Holder, so just click **Yes**. This will create an Audio File Cue which can be 'played' just like any other audio file cue, but will, of course, immediately complete as there is no file selected and the duration of the cue is 0.000 seconds.
When you are ready to assign an audio file to this Place Holder cue, simply click the Browse (...) button to select the required file.
(If you Cancel the Audio File Selector and then click **No** when asked if you want to create a Place Holder, then the Add Audio File Cue operation is also canceled.)

Viewing or Changing an Audio File Cue or Sub-Cue

To view or change an Audio File Cue or Sub-Cue, just click on the relevant node in the Editor's Cue List.

When you have added or selected an *Audio File* cue or sub-cue, a cue and sub-cue panel like this will be displayed:

Resizing the window

- The audio graph is displayed the full width of the Editor window. If you change the width of the Editor window then the audio graph will also be resized.
- If you change the height of the Editor window, or the position of the splitter bar between the *Cue Properties* and the *Sub-Cue Properties*, then the number of Audio Device entries visible will be adjusted.

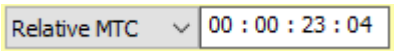
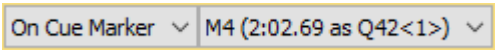
Properties and Controls

General

Sub-Cue Description: When you open an audio file SCS will examine the file and display the title as the 'Description' of this sub-cue. If the title cannot be found then SCS will display a description derived from the file name. You can change the Sub-Cue Description field if required. Note: you can force SCS to ignore the title and always use the file name by setting the Editing Option 'Ignore file title tags when setting default descriptions'.

Rel. Start Time (Relative Start Time): This field is available for every type of sub-cue. It is designed for cues that contain multiple sub-cues, and enables you to delay the starting of a sub-cue. For example, suppose your first sub-cue for this cue is an Audio File sub-cue that starts immediately the cue starts, and you want a number of Control Send sub-cues to start at set times during the playback of that audio file. You can do that by setting the Relative Start Time on the Control Send sub-cues. Enter a relative time in seconds, eg 24.75, or minutes and seconds, eg 1:30.00, or leave the field blank if you do not want to delay the start. The drop-down list alongside this field enables you to select other relative start points, such as 'after end of previous sub-cue'. If you leave the drop-down field blank, SCS assumes 'after start of this cue'.

If available, the **Rel. Start Time** combobox may also include **Relative MTC** and **On Cue Marker**.

> **Relative MTC** is only available if the cue itself has an Activation Method of 'MIDI Time Code', and the Relative MTC you enter will be added to the cue's MIDI Time Code. For example:
>
> 
>
>
> If the cue's Activation Method is MIDI Time Code 12:30:00:00 then this sub-cue will start when the MIDI Time Code is 12:30:23:04. This enables you to set up a cue with multiple sub-cues each controlled by a relative MTC, so if you need to change the cue's MIDI Time Code then you do not need to change the time codes of that cue's sub-cues.
>
> **On Cue Marker** is only available if this cue has an earlier Audio File sub-cue that has Cue Markers defined (or Cue Points). For example:
>
> 
>
>
> This example is for a sub-cue of Q42, and the first sub-cue of Q42 is an audio file sub-cue with cue markers, including the cue marker M4 positioned at 2:02.69. This sub-cue will start when cue marker M4 is reached during playback of the audio file in Q42<1> (the first sub-cue of Q42).
>
> Tip: This On Cue Marker example was taken from a cue file that activates different lighting sub-cues at different cue markers in Rockin' Around the Christmas Tree. The cue includes several chase lighting sub-cues timed to exactly match the beat of the music (which was 70bpm), as well as a couple of non-chase lighting sub-cues.

Audio File

Audio File: This will contain the path name of the sound file to be played. The **...** (browse) button can be used to locate a file if you wish to change the currently-selected file. Supported file formats are WAV, MP3, WMA, AAC, M4A, OGG, AIFF, FLAC and APE. Note that some compression formats lose audio quality. See Audio File Selector for information on how to preview audio files before including them in your cue file.

If you try to open a file that has DRM (Digital Rights Management) protection then SCS may not be able to open it - you may get the error message: 'The file is protected (license required)'.

If the field starts with $(Cue) this indicates the audio file is in the same folder as the cue file (the .scs11 file). This is the ideal place to keep your audio files as it helps when transferring your production to another computer - see Collect Production Files. Even if you do not intend to transfer your production to another computer, it is still beneficial to collect your files into a 'Production Folder' to safeguard your audio files from subsequent editing, etc. It can be frustrating if you want to revisit a production you ran a year ago if some of the files are no longer there!

See also Drag and Drop for details on how a file can be dragged from an external application.

Other Actions: Clicking this button displays a pop-up menu with the following actions available:

- **Reset the Start, End, Loop and Fade times to their initial values**: Resets the time and loop fields to their currently saved values, which normally would be the values initially displayed for this cue.
- **Clear the Start, End, Loop and Fade times**: Clears the time and loop fields.
- **Trim complete silence from start**: Sets the 'Start At' time by trimming silence from the start of the file.
- **Trim all below -75dB/-60dB/-45dB-30dB from start**: Sets the 'Start At' time by trimming audio below the selected dB level from the start of the file.
- **Trim complete silence from end**: Sets the 'End At' time by trimming silence from the end of the file.
- **Trim all below -75dB/-60dB/-45dB-30dB from end**: Sets the 'End At' time by trimming audio below the selected dB level from the end of the file.

- **Change Playback Rate, Tempo or Pitch**:
- **Rename the Audio File**: If you wish to rename the audio file you have selected for this Audio File cue, then select this action to open the Rename File window.

Note that the 'trim' items just set the 'Start At' or 'End At' times and you can try different menu choices to achieve the best result. SCS does not remember any *menu choice* you used to set the 'Start At' or 'End At' time, but does remember the 'Start At' and 'End At' times.

Time Fields

Start At: If you do not want to start the cue from the beginning of the file, enter the time at which the cue is to start, or drag the ◣ handle (below the graph) to the required position on the graph. Leave **Start At** blank to start at the beginning of the file. If you have a Professional Plus or higher license and the file has 'cue points' or 'markers', then the adjacent chevron button (») will be enabled. Click that button to view the Audio File Cue Points and Markers window, where you may select a cue point from the list displayed. If a cue point or marker has been selected then the **Start At** field will be disabled as the Start At position is effectively locked into the selected cue point or marker. The 'start' handle on the graph will also be disabled. See also **Other Actions** below. You can also set **Start At** by right-clicking on the graph approximately where you want to start at, and selecting *Set 'Start At' postion* from the pop-up menu.

End At: If you want SCS to stop the cue before the end of the file then enter the time at which you want the cue to stop, or drag the ◢ handle (below the graph) to the required position on the graph. This is the absolute time within the file, *not* the required time after 'Start At'. Leave **End At** blank to let the cue run until the end of the file (or until you stop it). If you have a Professional Plus or higher license and the file has 'cue points' or 'markers', then the adjacent chevron button (») will be enabled. Click that button to view the Audio File Cue Points and Markers window, where you may select a cue point from the list displayed. If a cue point or marker has been selected then the **End At** field will be disabled as the End At position is effectively locked into the selected cue point or marker. The 'end' handle on the graph will also be disabled. See also **Other Actions** below. You can also set **End At** by right-clicking on the graph approximately where you want to end at, and selecting *Set 'End At' position* from the pop-up menu.

Play Length: This display-only field shows how much of the audio file will be played, based on the earlier of 'Start At' and 'Loop Start', up to the later of 'Loop End' and 'End At'. The range of the progress slider is set to this Play Length.

Fade In time: Use this field if you want SCS to fade in the audio file, or create a fade-in level point using the Level Envelope facilities. Leave the field blank if fade in is not required. For new Audio File cues the Fade In Time is initially set to the default value nominated in Production Properties - General. For example, to fade in the cue over 3 seconds enter 3 under 'Fade In time'. When you start the cue the level will build from no sound to the level specified by the **Level** fader(s) over the time specified (3 seconds in this example). SCS supports a few built-in fade curves. The default fade curve (or fade type) is 'Standard', which follows a linear track of the level faders. Other options include logarithmic and linear fades. A 'linear' fade is not the same as a 'standard' fade as the level faders are not linear across the entire range. To select a fade type other than 'Standard' click the adjacent chevron button (»). A pop-up window will allow you to select the required fade type from a drop-down list. You can also enter the required fade in time in that same window, although this is just a replica of the **Fade In Time** field.

Fade Out time: Use this field if you want SCS to fade out the cue, or create a fade-out level point using the Level Envelope facilities. Leave the field blank if fade out is not required. For new Audio File cues the Fade Out Time is initially set to the default value nominated in Production Properties - General. For example, to fade out the cue over 4 seconds enter 4 under 'Fade out time'. When you fade out the cue the level will fade to no sound over the time specified (4 seconds in this example). Fade out is also activated automatically at the specified number of seconds before the end of the cue, if you do not fade out the cue manually or with an SFR Cue. SCS supports a few built-in fade curves. The default fade curve (or fade type) is 'Standard', which follows a linear track of the level faders. Other options include logarithmic and linear fades. A 'linear' fade is not the same as a 'standard' fade as the level faders are not linear across the entire range. To select a fade type other than 'Standard' click the adjacent chevron button (»). A pop-up window will allow you to select the required fade type from a drop-down list. You can also enter the required fade out time in that same window, although this is just a replica of the **Fade Out Time** field.

Current Position in File: This field displays the current time position within the file. It is an editable field so if you want to set the current position to some specific value then you can do that by keying in the required position. You can also set the current position by a single-left-click on the graph.

Time Offset for Cue Position Display (not shown in the above screenshot, but when displayed will be immediately below 'Current Position in File'): This field is only displayed if the Production Properties - Run Time Setting 'Give Visual Warning' is set to 'Cue position plus optional time offset'. This setting is not likely to be used often but can be useful where SCS is used for ballet music. The music for a particular item may be using an audio file that has been cut from a longer file, but the director may wish to see the position based on the original full-length music track. This can be achieved using this property. For example, if the audio file for the cue was cut from a longer file starting at position 3:25.060 then this time can be entered into this Time Offset field. When the cue is started, the Cue Position display will start from that setting, ie 3:25.060 in this example. Also, the caption of the display will contain 'Cue position +

3:25.060'.

Loop Fields

You can optionally set up loops within an Audio File cue. SCS supports up to 8 loops per cue, but loops may not overlap. Note that loops are *not available* if you have added Standard Level Points (see Level Envelope).

To **Add a Loop**, click the **Loops +** button. The **Detail for Loop #** field will be incremented and the other loop fields will be primed for the new loop. If this is the first loop then the **Loop Start** and **Loop End** points are initially set to start and end of the cue. If this is not the first loop then the initial **Loop Start** and **Loop End** points of the new loop will be set to follow the currently-displayed loop. You can, of course, change these settings.

Detail for Loop #: Click the **<** or **>** buttons to step through the available loops. The **Loop Start** and other fields will show details for that loop.

Loop Start: Enter the position within the file at which the loop is to start, or drag the ◤ handle (*above* the graph) to the required position on the graph. Leave **Loop Start** blank to loop from the beginning of the file. If you have a Professional Plus or higher license and the file has 'cue points' or 'markers', then the adjacent chevron button (») will be enabled. Click that button to view the Audio File Cue Points and Markers window, where you may select a cue point from the list displayed. If a cue point or marker has been selected then the **Loop Start** field will be disabled as the Loop Start position is effectively locked into the selected cue point or marker. The 'loop start' handle on the graph will also be disabled. You can also set **Loop Start** by right-clicking on the graph approximately where you want to start the loop, and selecting *Set 'Loop Start' position* from the pop-up menu.

Loop End: Enter the position within the file at which the loop is to end, or drag the ◥ handle (*above* the graph) to the required position on the graph. Leave **Loop End** blank to loop up to the end of the file. If you have a Professional Plus or higher license and the file has 'cue points' or 'markers', then the adjacent chevron button (») will be enabled. Click that button to view the Audio File Cue Points and Markers window, where you may select a cue point from the list displayed. If a cue point or marker has been selected then the **Loop End** field will be disabled as the Loop End position is effectively locked into the selected cue point or marker. The 'loop end' handle on the graph will also be disabled. You can also set **Loop End** by right-clicking on the graph approximately where you want to end the loop, and selecting *Set 'Loop End' position* from the pop-up menu.

Loop XFade: In this field you can enter a loop cross-fade time. This will cross-fade audio from the end of the loop to the start of the loop, which should eliminate any click and therefore make it easier to setup your loops. This will, of necessity, reduce the length of your loop by the duration of the cross-fade. For example, if you have a loop that lasts 30 seconds and you specify a cross-fade time of 1 second, then at 29 seconds into the loop the sound will cross-fade with the start of the loop.

Play this loop [ ] times: This property enables you to nominate a fixed number of iterations of the loop. For example, if you set this field to 4 then the loop will be heard 4 times. You can still stop the cue or release the loop early if you wish to - this field is effectively the maximum or default number of iterations of the loop. Leave the field blank to loop until stopped or released manually or by another cue.

The following property (Loops Linked) is not *included in the **Loops** panel as it applies to all loops, ie not separately for each loop. It is displayed in the panel to the left of the **Loops** panel.*

Loops Linked: Audio File Cues with linked sub-cues may include loops. The loops (if required) must be specified in the *first* of the Audio File sub-cues, and the loops may then also be automatically applied to the linked sub-cues. This **Loop Linked** checkbox is provided to indicate that any linked sub-cues are to have the loop applied to those sub-cues as well. Do NOT enter the loop details into the linked sub-cues or SCS will break the 'link'. Note that the **Loops Linked** property only loops correctly if the BASS mixer is used (or you use ASIO instead of DirectSound/WASAPI). SCS automatically switches (if necessary) to using the BASS mixer if when loading a cue file it finds one or more cues using the **Loops Linked** property.

Adjusting Start At, End At, Loop Start, Loop End, Loop XFade, Fade In and Fade Out time fields using arrow keys: If you want to fine tune these fields, click on the required field to highlight it and then use Ctrl/Left-Arrow to reduce the time field by 0.01 second (1/100 second), or Ctrl/Right-Arrow to increase the time field by 0.01 second (1/100 second). When using these keyboard shortcuts, SCS drops the thousandths of a second.

Audio Graph Controls

The audio graph shows levels for the currently-selected device. You can show the graph for a different device simply by clicking on the relevant device number (eg '2') or by clicking on any control for that device (eg the 'Level' control). Horizontal light blue lines show the 'Level' for that device, which is -3.0dB in the above example.

If the audio file contains a very large number of samples (eg several 100 million) then SCS may bypass drawing the audio graph due to the excessive amount of memory required to load the samples data.

The audio graph will also not be displayed if the file's duration is greater than the Editing Option Max. File Length for Audio Graph File Scan.

Zoom: Move this slider to the right to zoom in on the graph, or to the left to zoom out. One of the vertical markers on the graph will show small yellow markers at the top and bottom of the line. (This may not be the case after resetting or clearing the time and loop fields.) The line with the yellow markers shows which line was last set, and when you zoom the graph the zoom will be based around that line. For example, if you drag the Loop Start handle to approximately where you want it, you can then zoom in to set the position more accurately, and the zooming in will keep that loop start position in view.

View Playable: The 'playable' area is normally the section of the audio file between the 'start at' and 'end at' position, so in the screen shot above the playable area is the section of the file between 7.316 and 2:22.131. By clicking this button the graph is redisplayed showing just that section.

View All: If you have zoomed in and you want to redisplay the whole file then you can click the **View All** button.

Position: This scrollbar gives an indication of how much of the file is displayed in the graph and how far through the file the graph represents. You can move the 'thumb' of the scrollbar to scroll the graph forwards or backwards. The scrollbar is disabled when the entire file is displayed. You can also move the displayed part of the graph by dragging the graph left or right. To do this just click and hold anywhere on the graph (except on a level point marker) and then drag left or right. Warning: if you click but do not drag then SCS treats this as a 'reposition' request and changes the current position.

Auto Scroll: If checked and you have zoomed in on the audio graph, then when you play the audio file the graph will auto scroll to ensure the current position is always in view.

Graph ... Levels: This control allows you to adjust how you see the audio graph displayed. Note that this only affects the display of the graph - it does not affect the actual audio playback levels. The options are:

- **Graph File Levels**: The whole graph is based on the levels recorded in the audio file. This is the default setting.
- **Graph File Levels Normalized**: As *Graph File Levels* except that SCS will scan the graph for the highest peak and display the graph scaled so that this highest peak reaches the top of the graph. This can make it easier to see where you may want to set level points.
- **Graph Adjusted Levels**: The graph shows levels adjusted by the device level, fade-in and fade-out, and level point adjustments.
- **Graph Adjusted Levels Normalized**: As *Graph Adjusted Levels* except that SCS will scan the graph for the highest peak and display the graph scaled so that this highest peak reaches the light blue 'device level' line.

Notes:

- To display the graph SCS scans and decodes the audio file, which can take several seconds for a large file. However, once the graph has been built SCS saves the graph information in a database in the same folder as your cue file (the .scs11 file) so the next time you view this audio file cue the graph will be displayed 'instantly'.
- There are two major phases in assembling the data for the graph. The first phase is reading and decoding data from the audio file and populating an internal 'samples' array. While this phase is in progress a yellow progress bar will be displayed. The second phase is pulling data from the 'samples' array to populate an array that matches the graph's display width and zoom factor. While this phase is in progress a green progress bar will be displayed.

Useful Keyboard and Mouse Commands:

There are some useful keyboard and mouse commands available ***when the Audio Graph has focus***, as explained below:

- To set focus to the Audio Graph, either click on one of the level points (identified by L or P), or click anywhere in the graph to set the current position. If you don't want to change the current position, then click on a level point. **Warning!** Be careful to keep the mouse pointer still when you click on a level point, or you may unintentionally drag the level point to a new position, even if by only a few milliseconds.
- You can now use the left and right arrows on your keyboard to navigate through the level points.
- If you have multiple audio devices assigned to this cue then you can use the up and down arrows on your keyboard to navigate through the audio devices.
- You can use the mouse wheel to adjust the zoom. If you want 'fine tuning' of the zoom, hold down a shift key while using the mouse wheel.

As mentioned as the start of this note, the above keyboard and mouse commands are only available while the audio graph has focus. So if you move focus away from the audio graph (eg by clicking in the *Fade In Time* field) then these keyboard and mouse commands will not function.

Keyboard shortcuts are also available to **Skip Back** or **Skip Forward 2 Seconds** for each press of the keyboard shortcut. The default assignments are Shift+F8 (skip back) and Shift+F9 (skip forward). These shortcuts are *not* dependent on the audio graph having focus.

Audio Devices

In this section you will define which audio devices are to used to playback this audio file. It may be that you are just using a single mono or stereo output, in which case you will only need a single entry in this section. However, you can nominate additional audio devices up to the limit supported by your SCS license.

Audio device: The audio devices available are as specified under Production Properties - Audio Output Devices. The use of different audio devices enables you to direct an audio file cue to a particular sound card or output(s) of a multi-channel card. For example, you can have one channel pair feeding the front speakers, and another channel pair feeding rear speakers, etc.

Tracks: (SM-S audio driver only) This enables you to select the track or tracks to be played to this device. The main purpose of this is to allow you to define mono devices in **Production Properties** but be able to play stereo or other multi-track files spread correctly across multiple devices. For example, to play a stereo file in stereo over two mono devices. The values that may be in the drop-down list are dependent on the number of tracks in the audio file *and* the number of channels requested for the selected Audio Device (as defined in **Production Properties**). Here are typical values:

- Dflt: The default assignment of tracks to output channels. For a stereo device, a stereo file will play track 1 to the first channel and track 2 to the second channel. A mono file will be played to both the first and second channels. For a mono device a stereo file will be downmixed to that single channel.
- 1: Play track 1 only to this device. If the device has more than one output channel then track 1 will be played to all the outputs of the device, at the same level.
- 2: Play track 2 only to this device. If the device has more than one output channel then track 2 will be played to all the outputs of the device, at the same level.
- 3 etc: as above but for track 3 etc.
- All: Play all tracks to all outputs of this device. For example, a stereo file played to a stereo device will have tracks 1 and 2 downmixed to mono and sent to each output of the device.

Trim: You should only need to use this control if you have files to be played at a low level and you are having difficulty setting the level using the **Level** control. With the **Trim** control you can apply an overall reduction in the level of up to 50dB.

Level: The level fader sets the level (volume) at which SCS will play the cue, after the fade in time if specified. The setting of the fader is also displayed and is enterable as a dB value. The maximum dB setting (loudest) setting is 0dB or +12dB, depending on the 'Maximum Audio Level' set in Production Properties - Run Time Settings. 0dB represents the level of the audio file as recorded, ie without any attenuation. If you set the level to -75 or lower then SCS treats this as -infinity, ie silent. You may also enter this as -INF.

Pan: The pan controller sets the stereo position of the sound. The setting of the controller is also displayed and is enterable as a number, where 0 is left, 500 is center, and 999 is right. The **Center** button is enabled if the current value is not 500 (center). Clicking this button sets pan to 500 (center).

Tip: If you want to make fine adjustments to the level or pan, left-click the slider and then use the left-arrow and right-arrow keys as required. When you left-click the slider the background color of the slider will change to your Windows color scheme's *selected item* color (probably blue). This indicates that the slider *has focus* so keyboard actions like left-arrow and right-arrow are processed by that slider.

Level Envelope

For information on creating and maintaining a 'level envelope' within an audio file cue, see Level Envelope.

Linked Files

Linked cues or sub-cues are started, paused, and stopped simultaneously, and SCS also keeps the cue positions in sync if you manually reposition the cues.

- The audio/video file cues or sub-cues are set to start simultaneously,
- The length of the cues or sub-cues are EXACTLY the same, and
- The 'Start At' times of the cues or sub-cues are EXACTLY the same.

The same file may be used in all instances, or you may use different files provided they have the same length.

See Linked Files for details.

VST Plugin

For information on using a VST Effects Plugin with an audio file cue, see VST Plugin.

Gapless Playback

For information on gapless playback when auto-starting an audio file cue immediately after the end of another audio file cue, see Gapless Playback.

Normalization

If you want to 'normalize' the audio levels of a number of Audio File Cues you can do this using Bulk Edit.

Testing your Audio File Cue

You can test your Audio File Cue or Sub-Cue using the controls available in the 'Test' panel. Just press the play button to start the test. You can also use the other transport controls as required. Note that keyboard shortcuts are available for Rewind, Play/Pause and Stop. The default shortcuts are F4 (Rewind), F5 (Play/Pause) and F6 (Stop).

The slider alongside the transport controls shows the progress of the cue. You can also use this to reposition the cue at any point.

If you want to make fine adjustments to the position, left-click the slider and then use the left-arrow and right-arrow keys as required.

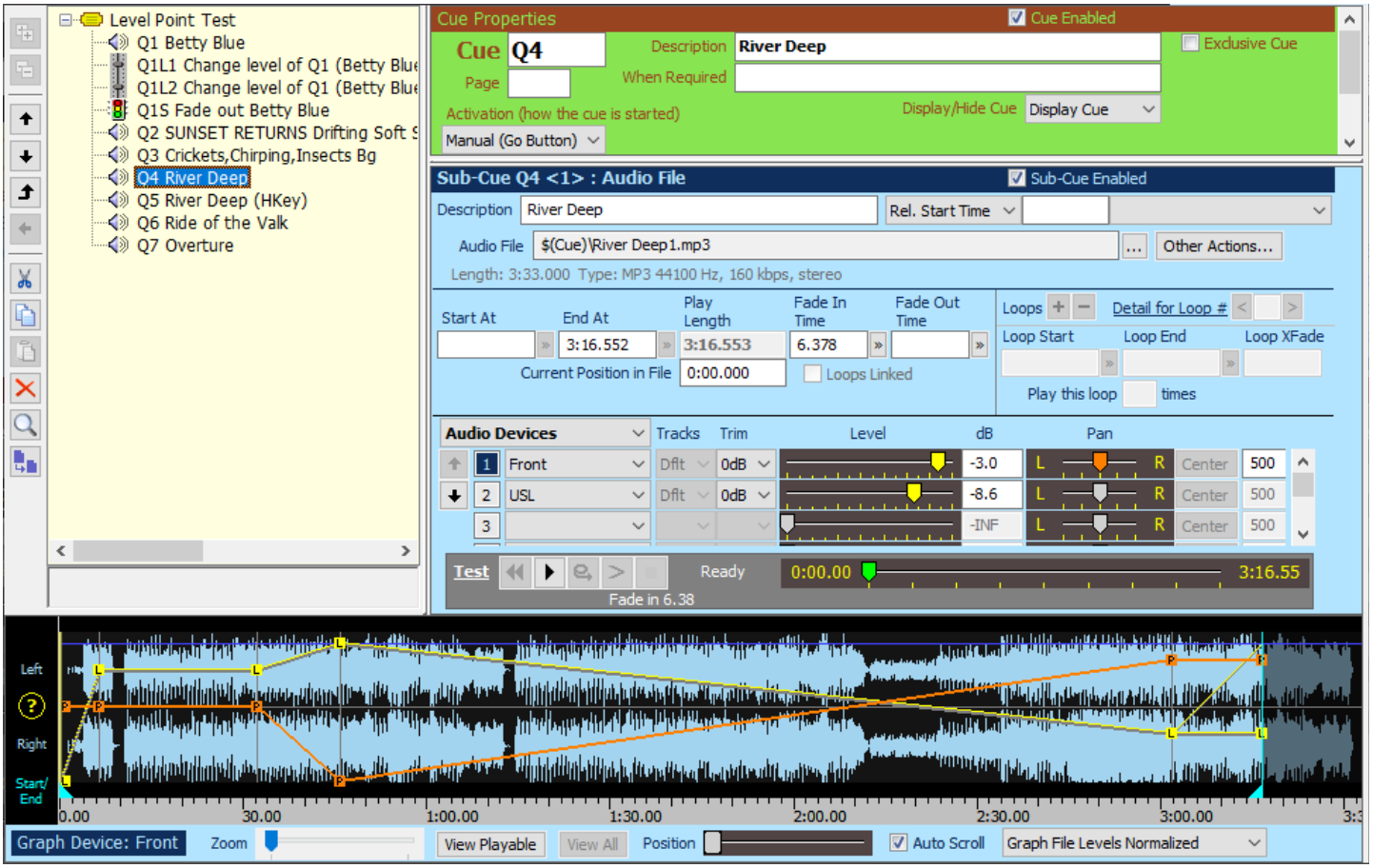
Level Envelope

Overview

A Level Envelope (sometimes referred to as a Volume Envelope) consists of a set of **Level Points**, with each Level Point nominating the required device levels for the cue at a specific time. If you nominate fade-in and/or fade-out time, then SCS sets up level points for the fade-in and/or fade-out. Level points created between fade-in and fade-out are referred to as 'standard' level points.

'Standard' level points are available with SCS Professional and higher license levels.

Here's an example of a cue containing level points:



The audio graph currently shows levels for the 'Front' audio device. You can show the graph for a different device simply by clicking on the relevant device number (eg '2') or by clicking on any control for that device (eg the 'Level' control).

The **Horizontal light blue line** show the 'Level' for that device, which is -3.0dB in the above example.

A **Level Point** comprises a **relative dB level** and (if the output is stereo) a **pan** setting. For example, a **relative dB level** entered as +0.0dB would play (in the above example) at -3.0dB. So if you adjust the overall level for the device (in this cue) then playback level all level points will automatically be adjusted. (The level points will retain their entered relative dB levels.)

Level point markers on the audio graph show the Level (L) and Pan (P) settings.

The first level point is at the start of the cue, and because this cue has a fade-in time specified, the starting level is -INF and cannot be changed. (If you do not have a fade-in time specified than you *can* change the starting level.) The pan setting is 'center' but you can change that if required.

The next level point is a 'fade-in' level point at 6.378 seconds. This has a relative level of -6.3dB, and the pan setting is 'center'. (Although you cannot specifically see those values in the above screenshot, you would be able to see and adjust them by selecting *Level Point: Fade In* from the **Audio Devices** drop-down list.)

The third level point is a 'standard' level point at 32.365 seconds. This level point has been set to the same relative level as the preceding level point, ie to -6.3dB, pan center. So the playback level for this device stays constant between the end of the fade-in and this level point.

The fourth level point is a 'standard' level point at 45.830 seconds and the relative level is set to +0.0dB, and pan is set towards the right. So between the second and third level points the playback level will increase to -3.0dB, and pan will move to the nominated position towards the right.

The fifth level point is another 'standard' level point, at 3:01.824 with a relative level of +0.0dB and a pan setting towards the left. So between the third and fourth level points the playback level will stay constant at -3.0dB, and pan

will move to the nominated position towards the left.

The final level point is the 'end' level point, with the same setting as the preceding level point. So the level and pan remain unchanged during this final period of just under 15 seconds.

Important information regarding Level Envelopes:

As mentioned earlier, 'Standard' level points are only available if you have an SCS Professional or higher license.

Due to various logical complexities, a cue containing a loop cannot include 'standard' level points.

Level point times are unique within the cue - you cannot have two level points with exactly the same time. For example, if you drag the third level point (in the above graph) to the left, the drag position will stop 1 millisecond to the right of the second level point.

The playback level will be capped if necessary, so if you set a relative level of +20dB when the audio device level is -3.0dB then the actual playback level will be capped at +0.0dB (or at +12dB if you have selected that higher 'maximum audio level' in Run Time Settings).

The 'minimum audible audio level' used by SCS is as set in Run Time Settings. Any actual or derived dB level at or below this minimum is treated as -INF (minus infinity) and is passed to the underlying software as the internal value 0, which is silence.

A Level Change Cue affecting an Audio File Cue with a Level Envelope will cancel processing of the Level Envelope, ie the Level Change Cue effectively takes over from the Level Envelope.

Level Point Maintenance

Adding a Level Point

To add a level point to an audio graph, **right-click on the graph at the approximate position that you require the level point**. A popup menu (or 'context menu') will appear. In the context menu, select the type of level point you want to add, which may be 'fade-in', 'standard' or 'fade-out'. Menu items disabled imply that the operation is not available. For example, 'add fade-in level point' will be disabled if you already have a fade-in time set (and therefore a fade-in level point).

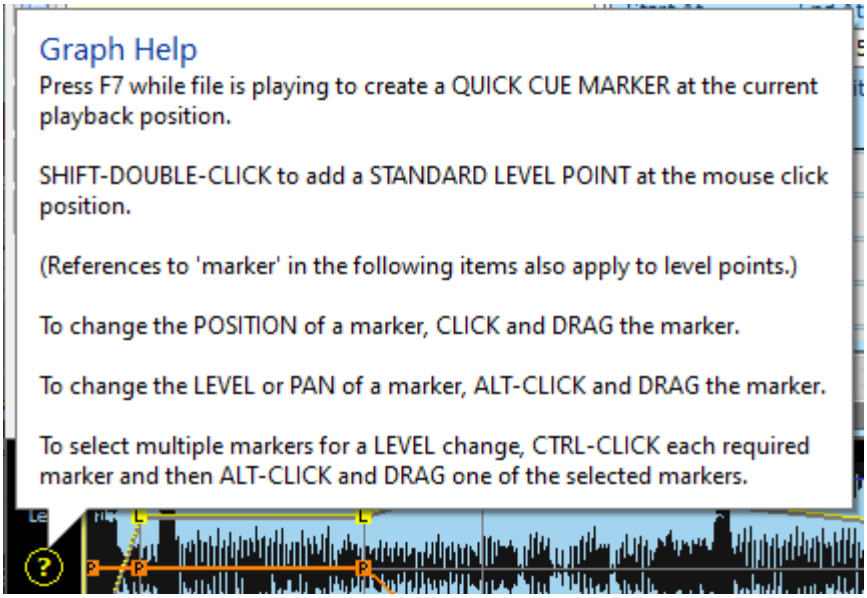
If you decide you do not want to add a level point, simply click elsewhere and the pop-up menu will close.

If you select a menu item to add a level point then the pop-up menu will close and your selected level point will be added and will be visible on the audio graph. If this is the earliest on only level point then the relative level will initially be set to +0.0dB, but you will be able to change that as explained later. If there is an earlier level point already existing then the relative level and pan of your new level point will initially be set the same as the preceding level point, but you will be able to change that as explained later.

Alternatively, to add a Standard Level Point, just **shift-double-click in the graph** where you want that standard level point. You can adjust the position, level and pan as described below.

Moving or Changing an SCS Cue Marker Level Point

If you hover the mouse pointer over the question mark to the left of the graph, you will see this pop-up:



Changing the Position of a Level Point

To change the position of an existing level point, **click and drag the marker** to the required position. Note that you can zoom in on your graph if you want to see the wave form more precisely. The limits of dragging are determined by

adjacent level points and/or by the start and end positions.

Alternatively, you can set a new position for the level point by right-clicking the level point marker, and then selecting 'set position of this level point' from the pop-up menu. You will then be provided with a simple dialog window in which you can enter the new time for the level point. Note that this time is the time within the file, regardless of the 'start at' time of the cue.

You can undo an accidental movement of a level point by using the Editor's **Undo** button.

Changing the Relative Level or Pan of a Single Level Point

To change the relative level or pan of a single level point, **alt-click and drag the marker**. For a level point marker (L) this will adjust the level, and for a pan marker (P) this will adjust the pan setting.

If you have level and pan markers displayed very close together then it can sometimes be difficult to know that you will alt-click on the required marker. For example, you may want to change the level but end up changing the pan. To help alleviate this ambiguity, right-click anywhere on the graph and in the context menu you will see several menu options regarding showing level and pan curves. So if you want to adjust the pan setting you could turn off displaying the level curves and markers.

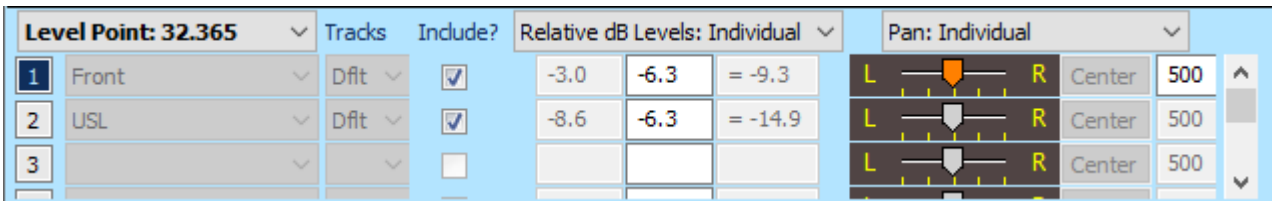
Alternatively, you can change the relative level and/or the pan setting by adjusting the relative level and/or pan sliders as described below under 'Viewing Level Point Information'.

Changing the Relative Level of Multiple Level Points

To change the relative level of multiple level points, first of all **ctrl-click** on each level point marker (L) to be included in the adjustment. Then release the ctrl key and **alt-click and drag** one of the selected level point markers, The relative levels of the selected level points will each be adjusted by the same dB. If necessary, adjustments will be capped. Note that changing the pan settings of multiple level points is not supported - each pan marker has to be separately adjusted. Similarly, you cannot change the position of multiple level points - the position of each level point has to be separate;y adjusted.

Viewing Level Point Information

When you first view the properties for an audio file cue you will see the level and pan settings for each selected Audio Device, as shown in the above screenshot. You will see that Audio Devices is the first entry in a drop-down list (a 'combobox'). If you click on that drop-down list you can select one of the Level Points shown. When you select a Level Point then the level and pan controls will be changed to show the details for the selected level point. For example:



Level Point Properties and Controls

Audio Device and **Tracks**: These are display-only when a Level Point is displayed. To add or change the Audio Device and/or Tracks (if available) you need to select **Audio Devices** instead of a **Level Point**.

Include?: Clearing an instance of this checkbox enables you to exclude a device from the action of this level point. This is similar to the **Include this Device** checkbox available in Level Change Cues. You can only exclude devices on Standard Level Points, not on Fade-In or Fade-Out Level Points. See also **Include All Devices for Level Points** in Editing Options.

Relative dB Levels drop-down list: This list contains three entries: *Individual*, *Synced* and *Linked*. Your setting here applies to ALL level points in this cue.

- The default is ***Individual***, which means that the relative level for each device can be set and changed independently.
- If you choose ***Synced*** and you have more than one device entry, then the relative levels of all devices will remain in sync as you adjust the relative level against a device. Note that the Audio Device levels themselves may be different (as shown in the earlier screen shot, where 'Front' has a level of -3.0dB and USL has a level of -8.6dB). So syncing the relative levels does just that - it keeps the *relative dB level* the same across all devices.
- If you choose ***Linked*** and you have more than one device entry, then any adjustment to the relative level of a device will apply the same adjustment to the other devices included in that level point. For example, if Relative dB Levels in the above example had been set to Linked and you changed the 'Front' relative level to -12.3dB (a difference of -6.0dB) then the relative level of the 'USL' device would be change to -28.2dB.

Relative dB Levels: Three fields are shown: (1) the audio device level, (2) the relative level, and (3) the resultant playback level. Only the relative level is enterable. Note that the playback level will be capped if necessary, and if so will be displayed within square brackets, eg =[+0.0].

Pan drop-down list: This list contains three entries: *Use Audio Device Pan, Individual* and *Synced*. Your setting applies to ALL level points in this cue.

- The default is ***Use Audio Device Pan***, which means the pan setting for the Level Point will be the same as that specified for the 'Audio Device'.
- ***Individual*** and ***Synced*** operate similarly to the corresponding **Relative dB Level drop-down list** settings. There is no *Linked* setting for Pan as it doesn't make much sense.

Pan: The **Pan** slider, **Center** button and Pan Value field are as for any other pan control in SCS. Pan is only available when the selected device is a 2-channel (stereo) device.

Setting a Level Point's Level and/or Pan the same as the previous or next Level Point

If you have changed a level point's level and/or pan and now wish to apply the same settings to the previous or next level point, then right-click on the level point to be changed. You will see menu items for **Set Level and Pan same as Previous Level Point**, and **Set Level and Pan same as Next Level Point**. Selecting the required menu entry will apply this change and the graph will be refreshed accordingly. There are also menu items for just setting the level or just setting the pan.

*Please note that these menu items affect **all** devices - not just the currently-selected device.* Also, this operation will copy the 'Include?' settings from the associated (previous or next) level point.

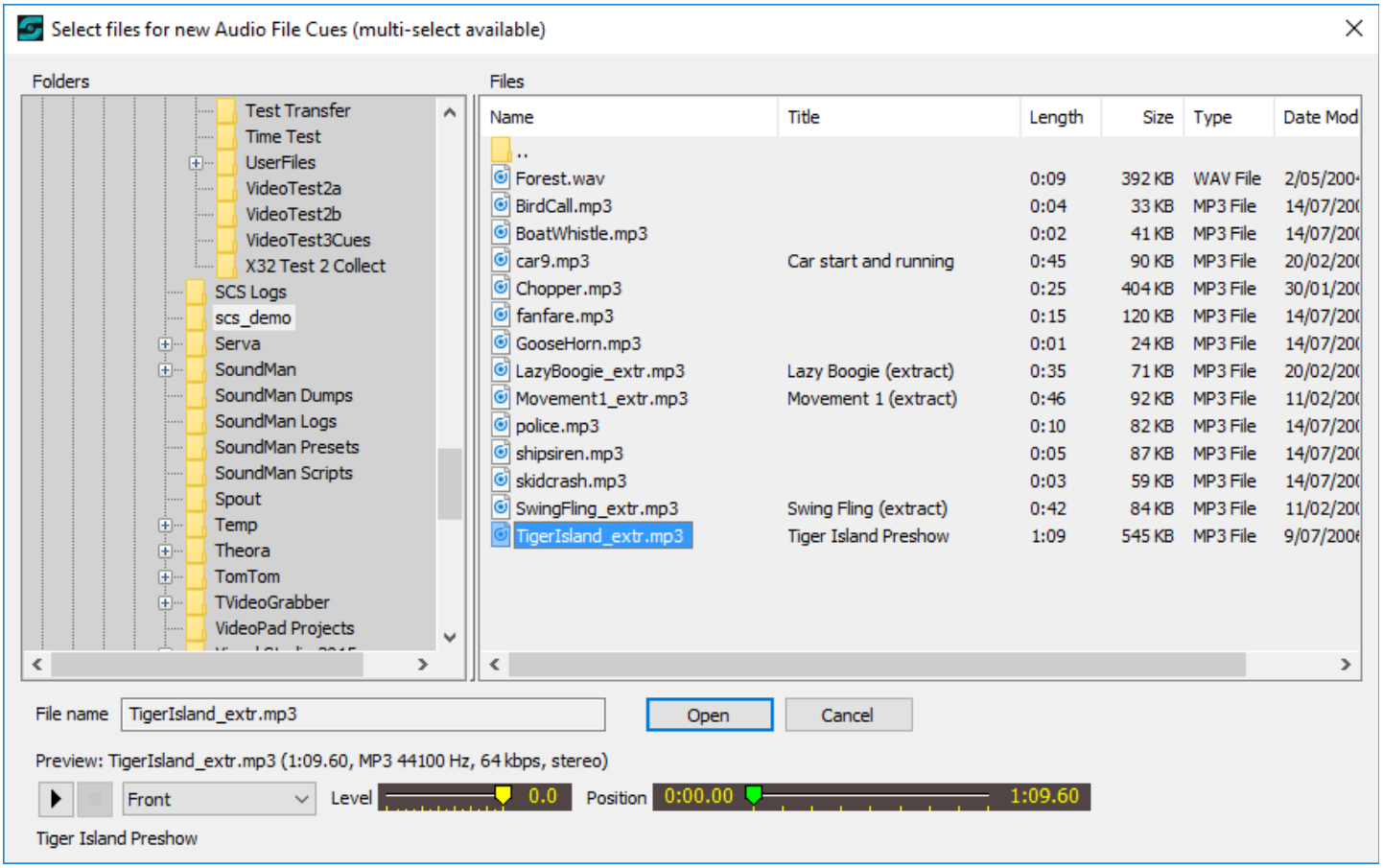
Removing a Level Point

To remove a level point, right-click on the level point marker and select **Remove Level Point** from the pop-up menu.

Back to Audio File Cues

Audio File Selector

When you add a new Audio File or Playlist cue, or click on the browse button (shown as ...) to select a new audio file, the file selection window includes a facility to listen to a file without having to select it into your production. The file selection window will look something like this:



If "(multi-select available)" appears in the window title then you can select multiple audio files in the normal Windows manner of holding down Ctrl (Control) or Shift as you select the files. Multi-select is available when adding new **Audio File Cues**, in which case SCS creates a **Audio File Cue** for each selected file, and when selecting file(s) for a **Playlist Cue**. SCS adds the cues/files in the order displayed in the list. If you have selected multiple files, the last selected file displayed is the one available for preview.

Controls available enable you to **play** the audio file; **stop** playback; select the **preview device** to be used; set the **level** (volume) of the preview, and set the start or current **position** in the file for previewing. Playback will stop when you click the **stop** button or when you click on another file in the list.

The **level** and **position** can be adjusted while the file is playing, but the **device** can only be selected when the file is not playing.

The columns displayed in this list (eg 'Name', 'Title', etc) are currently fixed. However, you can reorder the columns by dragging the column titles to a new position, and you can change the width of a column by dragging the separator at the end of the column title. These changes will be remembered across SCS sessions.

[Back to Audio File Cues]

Linked Files

SCS will link together audio files and/or video files from different cues or sub-cues where:

- The audio/video file cues or sub-cues are set to start simultaneously,
- The length of the cues or sub-cues are EXACTLY the same, and
- The 'Start At' times of the cues or sub-cues are EXACTLY the same.

The same file may be used in all instances, or you may use different files provided they have the same length.

Linked cues or sub-cues are started, paused, and stopped simultaneously, and SCS also keeps the cue positions in sync if you manually reposition the cues.

Here is an example of a Linked Sub-Cue scenario:

Playing a music or vocal track thru one device and a click track thru a second device.

In this scenario we probably have a music or vocal track to be played thru Front and a click track to played thru musos' IEM's (in-ear monitors). The click track would be a separate sound file created when the music track was created, and would be exactly the same length in terms of the number of samples and therefore duration. This arrangement can be setup as follows:

1. Setup an **Audio File Cue** to play the music/vocal track thru Front. We will refer to this cue as the **primary** sub-cue.
2. Add an **Audio File Sub-Cue** to play the click track thru musos' IEM's. We will refer to this sub-cue as the **secondary** sub-cue.

As the two sub-cues have the same duration (assuming you haven't provided different **Start at** or **End at** times) SCS will link the secondary sub-cue to the primary sub-cue.

You can also link audio files in different cues by setting the secondary cue(s) to auto-start 0.00 seconds after the start of the primary cue, but is it much easier just to use sub-cues of a single cue.

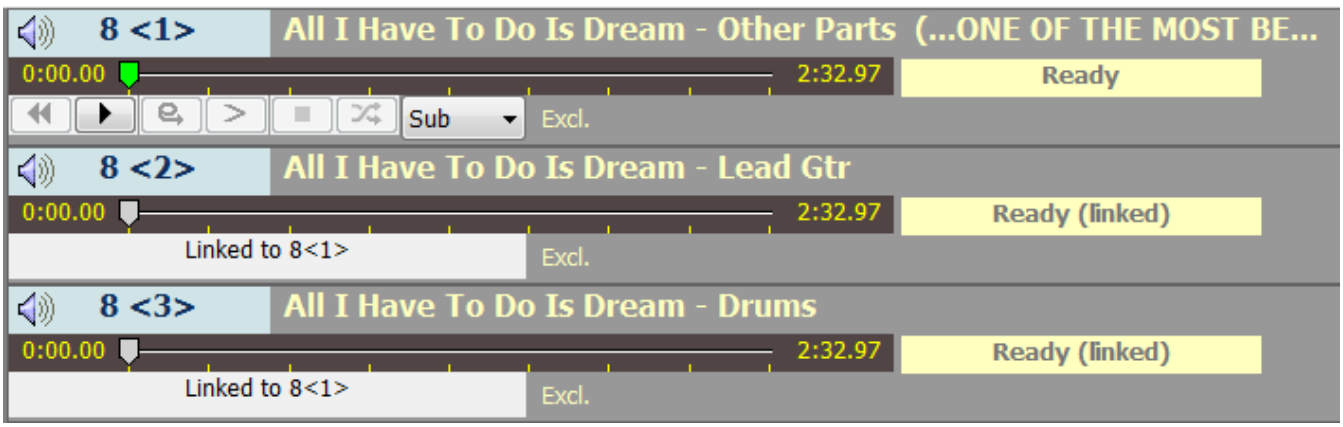
How to link audio files when they are not exactly the same length.

The reason SCS does not link audio files where the cues or sub-cues are of different lengths is the issue of how to treat the transport controls and positioning controls after one of the files has ended. For example, if the first file is 9 minutes long and the second file is 5 minutes long, then after 5 minutes playing the second file will be closed. So if you then drag the progress slider back to the 3 minute position, what is to happen to that second file? SCS *could* re-open the file and position it 3 minutes through the file but currently it does not do that.

However, you may have files you want to 'link' but they are not exactly the same length but they are very close to it. This may happen particularly with music tracks where one of the tracks has been slightly edited after the original mastering. For example, your main track may be 4 minutes 25.15 seconds long and your second (edited) track may be 4 minutes 23.50 seconds long. SCS will not link these because they are not the same length, ***but*** you can force the cues or sub-cues to be the same length by **setting a common 'End At' time**. In cases like this there will almost certainly be some silence at the end of the tracks, so by nominating an 'End At' position of 4 minutes 23.50 seconds or less for *both* tracks makes SCS regard them as being the same length, and so will link them if they are set to start together.

How Linked Cues and Sub-Cues Appear on the Main Screen

Where you have linked cues or sub-cues, each cue or sub-cue will displayed as for any other audio file cue or sub-cue. However, the transport controls are only displayed for the primary cue or sub-cue. For example:



The above shows three sub-cues of cue 8, ie 8<1> is the first or **primary** sub-cue, 8<2> is the second sub-cue and

8<3> is the third sub-cue. (There were others as well, but they have been omitted from this example.) The **primary** sub-cue shows the transport controls, but in place of those buttons 8<1> and 8<2> (**secondary** sub-cues) show **Linked to 8<1>**. Any transport control you click for a **primary** sub-cue is effectively reproduced in the corresponding **secondary** sub-cues. This also applies to any changes you make to the **progress** slider of the **primary** sub-cue - the same changes are made to the linked sub-cues. You will notice that the **progress** slider of the **secondary** sub-cue is disabled, ie you cannot manually move the slider.

What this all comes down to is that SCS tries to treat linked cues as a single cue.

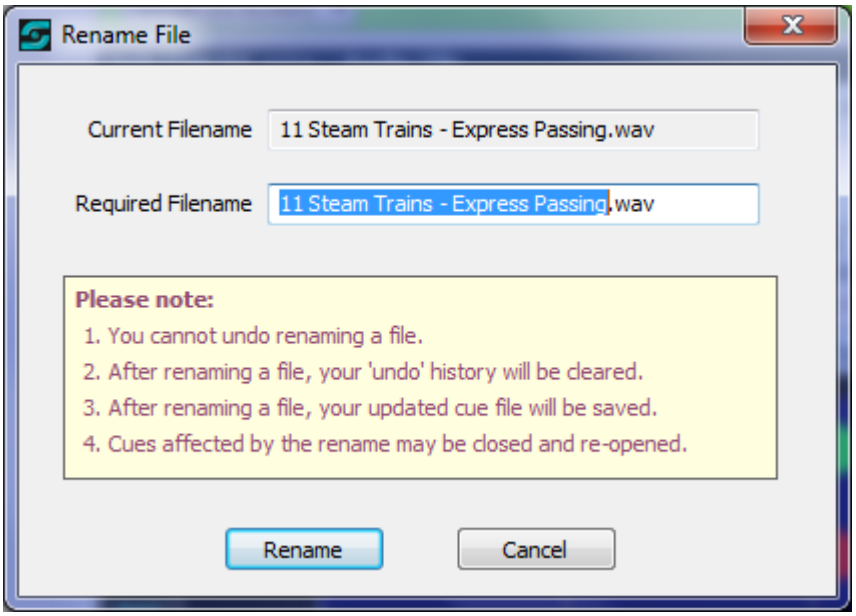
Note regrading video files.

If one or more video files are included in a set of linked files, please note that the video file syncing will not be as accurate as audio file syncing. In particular, if you have an audio file sub-cue that supplies the audio for a video file, then SCS cannot guarantee 'lip sync' accuracy. This is because video files are played using a different library to audio files. Audio files are, by default, played using the BASS audio library, which includes a built-in facility to link files. The BASS audio library does not support video file playback. Video files are, by default, played using the TVG (TVideoGrabber) library. TVG does *not* support 'linking' so even if two video files are 'linked' in SCS, this just means that SCS will send separate commands to TVG for each video file, to start, stop, reposition, etc the files.

Back to Audio File Cues

Rename File

When you are editing an Audio File cue or a Playlist cue you have the option to rename the currently selected audio file. This can be particularly useful for files ripped from CD if the ripper program could not obtain track titles from the Internet. You typically end up with file names like 'Track 01.mp3'. Using the SCS Rename File feature you can rename the audio file even if you have used that same file elsewhere in the current cue file (.scs11 file). The rename file window will look like this, with the name of your currently-selected file displayed:



To rename the file, enter the **Required Filename** in the field provided, and click the **Rename** button.

To cancel the operation without renaming the file, click the **Cancel** button.

See also the information under **Please note** in the screen shot above.

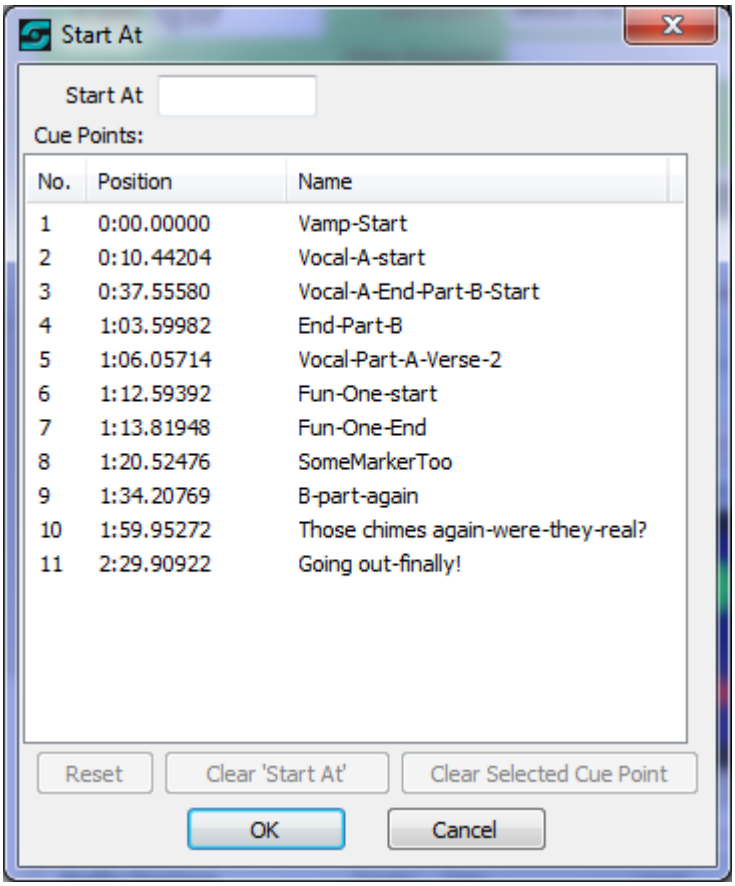
[Back to Audio File Cues]

Audio File Cue Points and Markers

Audio File Cue Points and Markers are are supported with **SCS Standard** and higher license levels.

See also SCS Cue Markers. Note that SCS Cue Markers are not the same as 'Audio File Cue Points and Markers', as 'Audio File Cue Points' are embedded in an audio file, and 'Audio File Markers' are held in a separate file with an extension of .mrk. SCS Cue Markers, however, are just positions saved within the cue file (the .scs11 file).

When you click a chevron button (») for **Start At**, **Loop Start, Loop End** or **End At**, then a window like the one shown below will be displayed. This lists cue points or markers found for the current audio file.



Cue Points and Markers

If you have prepared the audio file using Wavelab then you can record markers for that file and Wavelab will save those **markers** to a MRK file. For example, if your audio file is named "When I'm SixtyFour.wav" then any markers you create will be saved (by Wavelab) in "When I'm SixtyFour.mrk". Whenever SCS opens an audio file it also looks for a MRK file in the same folder as the audio file. If no such file is found then SCS may look for **cue points** within the audio file itself.

Cue points provide basically the same functionality as markers, but they are embedded in the audio file itself. Not all audio file formats support cue points which is why MRK files were designed. (Other audio editors have similar concepts but currently SCS 11 only supports Wavelab MRK files.) SCS will look for cue points in the audio file if no MRK file is found, and if the audio file is a 16-bit uncompressed WAV file.

In SCS, **Cue Points** and **Markers** are generally just referred to as **Cue Points**.

Cue Points (and hence Markers) are only used by SCS if they are named. This is because SCS stores in the cue file (the .scs11 file) the name of the cue point you have selected. So in the above example if you select "Vocal-A-Start" as the Start At position then SCS stores "Vocal-A-Start" in the cue file. This means you can change the position of the Cue Point in your Audio Editor program (eg Wavelab) and next time SCS opens the file it will sync the Start At position to the new position of that Cue Point. SCS also stores the sample position recorded for that Cue Point, which it will use if you have removed or renamed the Cue Point.

Cue Points are sample-accurate, so using Cue Points (or Markers) for **Start At**, etc gives you sample-accurate positioning. Corresponding times are displayed to 5 decimal places of seconds.

Tip: Two keyboard shortcuts are available to "**Skip to previous Cue Marker**" and "**Skip to next Cue Marker**". The default keys are **Ctrl+9** and **Ctrl+0** (zero) respectively. The 9 and 0 (zero) are the adjacent keys on the main part of the keyboard, *not* the keys on the numeric pad. These shortcuts can be used in the Main Window and in the Editor, although if you change these shortcuts then note that these shortcuts are set separately for the Main Window and for the Editor, so they can be different.

Although these shortcuts refer to Cue Markers, they also work with Cue Points.

Where you can use these keyboard shortcuts:

- In the Editor: When you edit an Audio File Cue with a file that contains at least one cue marker or cue point, then you can use the shortcuts to skip backwards or forwards through the cue markers/points. The cue can be playing at the time, or you can use the shortcuts before you start playing the cue.
- In the Main Window: Using these shortcuts can only apply to one audio file, so SCS will look for the first playing or to-be-played Audio File Cue that contains at least one cue marker or cue point. These shortcuts can be used to skip backwards or forwards through the cue markers/points of that cue. A message will be displayed in the status line, eg "Skipped to Cue Marker Q22: Vocal-Part-A-Verse-2 (1:06.06 as Q22)".

"**Prev Cue Marker**" and "**Next Cue Marker**" are also available via a MIDI Cue Control device. *However,* the assigned MIDI commands are not processed by the Editor and will always be applied (if applicable) in the Main Window.

Properties and Controls

Start At: This field will be named the same as the field you came from in the Audio File Sub-Cue Properties. The field will be populated with the current field value. If you decide not to select a Cue Point (eg because a suitable Cue Point is not available) then you can enter a Start At time here, but note that manually-entered times are recorded to 1/1000 second (3 decimal places) so are not as precise as sample-accurate cue points.

Cue Points: This table shows the cue points (or markers) found for this file, listing only those with a 'name'. Any cue point or marker you want to use in SCS must have a name that is unique within the file. This usually means you need to change the default name assigned by the software that set up the cue points. If SCS finds there are duplicated cue point names then a warning message will be displayed. The warning only occurs on displaying this Cue Points and Markers window, and is only displayed once per affected file, per session.

To select a **Cue Point** simply click the required cue point and then click the **OK** button. The 'time' of that cue point will be displayed in the source field in the Audio File Sub-Cue Properties (eg in the **Start At** field), and internally SCS will record the cue point name and sample position.

Reset: This button just resets the **Start At** (or other) field at the top of the window to the value it had on entering the window.

Clear 'Start At': This button will clear the Start At (or other) field. If you then click OK then the Start At field in the Audio File Sub-Cue Properties will be cleared.

Clear Selected Cue Point: This is best explained by an example. If you have previously selected 'Vocal-A-Start' as the required cue point for **Start At** then **Start At** is effectively locked in to that cue point. The time of that cue point (as shown in the above screen shot) is 0:10.44204. By clicking **Clear Selected Cue Point** you can release **Start At** from being locked into 'Vocal-A-Start', but unlike 'Clear...' this leaves the **Start At** time alone, except that it is now displayed to 3 decimal places instead of 5 as it is no longer treated as sample-accurate. This means you can now make minor (or major!) adjustments to the **Start At** time to suit your needs in SCS, without having to move the cue point. So this action dis-associates or unlinks the **Start At** field from the cue point.

OK: Accepts the currently-selected setting and closes the window.

Cancel: Discards the setting and closes the window without applying any change.

Back to Audio File Cues

SCS Cue Markers

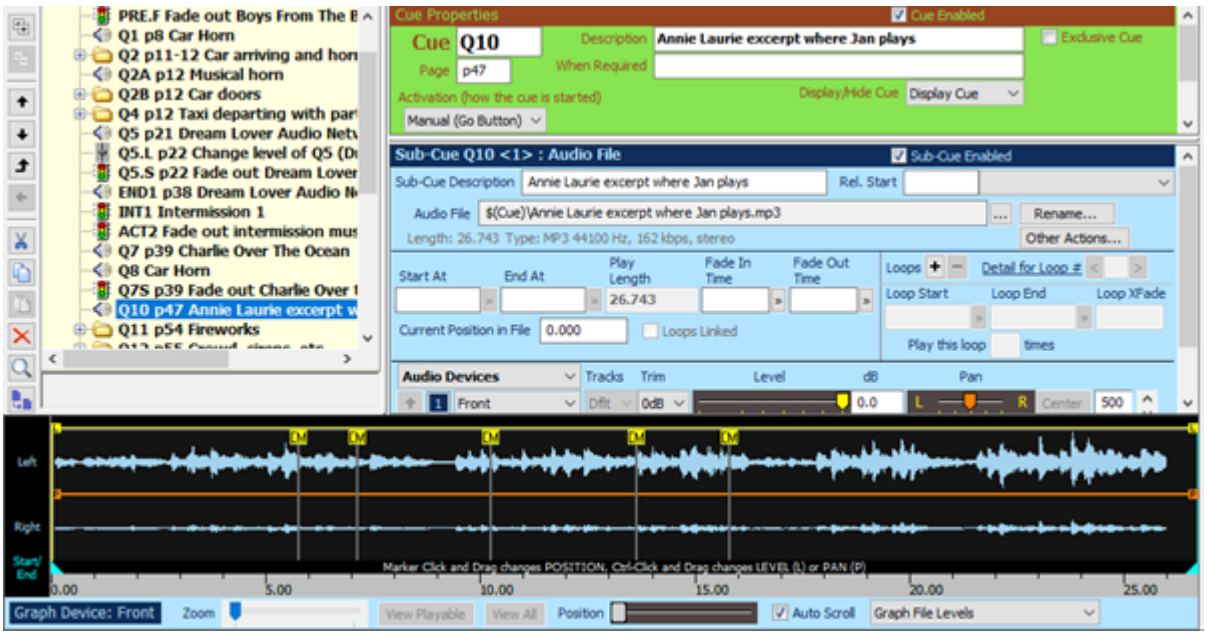
SCS Cue Markers are supported with **SCS Standard** and higher license levels.

See also Audio File Cue Points and Markers. Note that SCS Cue Markers are not the same as 'Audio File Cue Points and Markers', as 'Audio File Cue Points' are embedded in an audio file, and 'Audio File Markers' are held in a separate file with an extension of .mrk. SCS Cue Markers, however, are just positions saved within the cue file (the .scs11 file).

Overview

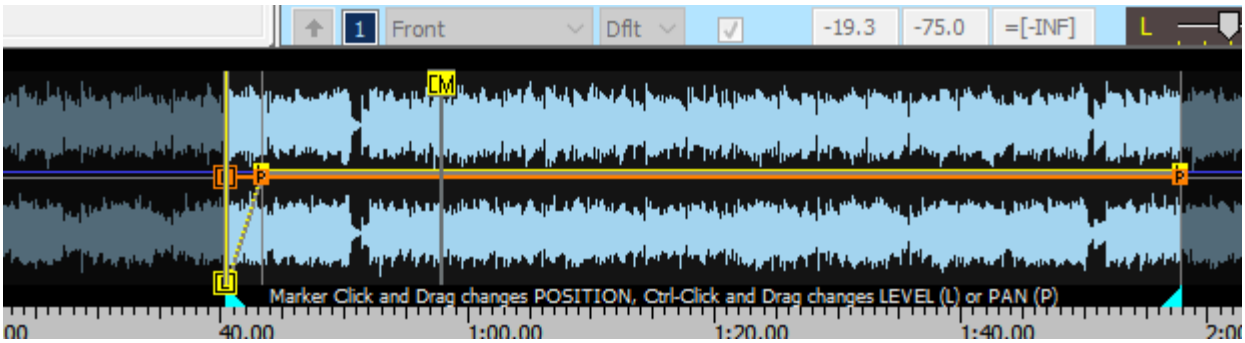
SCS Cue Markers allow you to set markers on an 'Audio Cue', and a Cue Marker can be used for auto-starting one or more other cues.

Here is an example of a cue containing SCS Cue Markers.

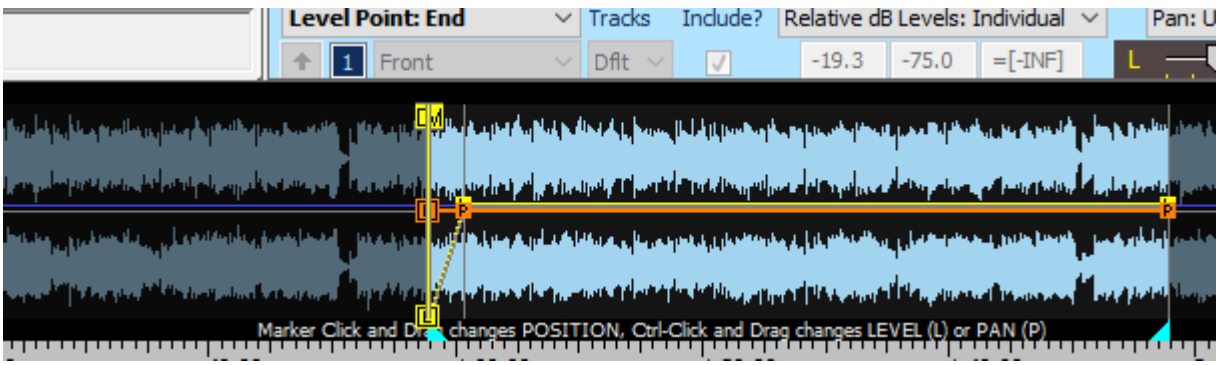


The audio graph currently shows five SCS Cue Markers.

SCS Cue Markers, similar to Level Points, cannot exist outside the 'Start' and 'End' Points set on an audio cue, also the 'Start' and 'End' Points cannot be moved past an SCS Cue Marker.



Below shows the 'Start' Point moved along the audio cue until it meets the cue marker position.



SCS Cue Marker Maintenance

Adding a Cue Marker

1. Adding a Cue Marker Using the 'Add Quick Cue Marker' Menu Option

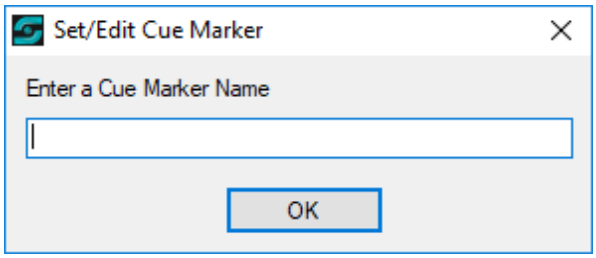
To add a Cue Marker right click at the time on the graph of the audio cue where you would like the marker to be set. A pop-up menu will appear. Select 'Add Quick Cue Marker'. A Cue Marker will be created (if permitted at that point). The name assigned will be M1, or M2 if M1 is already in use, and so on.

2. Adding a Cue Marker Using the 'Set/Edit Cue Marker' Menu Option

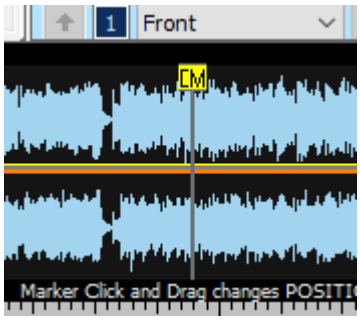
If you do not want SCS to assign the default Cue Marker Name (M1, etc) then you can add a Cue Marker by right clicking at the time on the graph of the audio cue where you would like the marker to be set, and then selecting 'Set/Edit Cue Marker' from the pop-up menu.

An input box is displayed to enter in a name for the marker. The name must be unique within the cue. If the name entered is not unique the input box will continue to request another name.

You may cancel the addition of the Cue Marker by hitting the 'X' button on the input box.



Once a name is entered, press the 'OK' button and an SCS Cue Marker will appear on the audio cue at the position you clicked the graph.

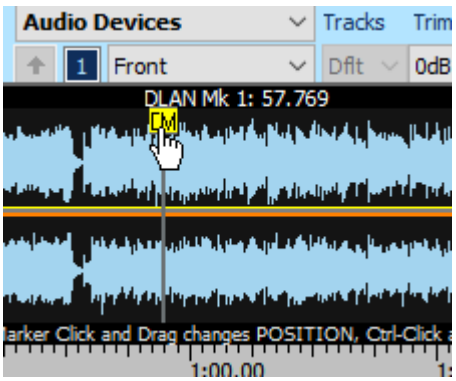


3. Adding a Cue Marker Using Key F7

You can alternatively add a cue marker to an audio file cue by pressing F7 at the required time while the cue is playing in the Editor. Like the 'Quick Cue Marker' method, the name assigned will be M1, or M2 if M1 is already in use, and so on. You can add several cue markers using F7 if required. The function is disabled if you have already reached the maximum number of cue markers for the cue.

Highlight Cue Marker Information

An individual SCS Cue Marker name and position can be seen on the graph by positioning your mouse pointer on the 'CM' graphic at the top of the marker line.



Changing the Name of a Cue Marker

To change the name of a Cue Marker, highlight the Cue Marker as explained above, and right-click the mouse. Select 'Set/Edit Cue Marker' from the pop-up menu. The input box shown above (Adding a Cue Marker) will be displayed, with the current name. If the Cue Marker Name field in this input box is blank then the mouse wasn't correctly aligned over the cue marker. Just press the X button to close the input box and try again.

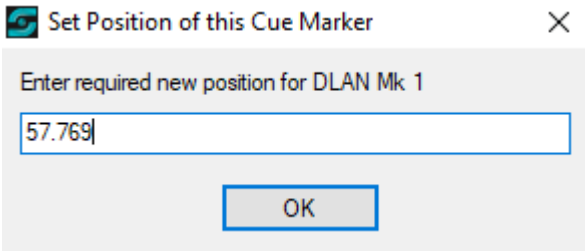
Changing the Position of a Cue Marker

Once a Cue Marker exists on the audio cue then the position can be altered by two methods

1. Set Position of this Cue Marker Using a Menu Option

By right clicking on the SCS Cue Marker header the menu options appear that allow the marker position to be changed by entering a specific position. Select **Set Position of the Cue Marker** from the pop-up menu.

Enter a specific position into the input box and click the 'OK'. The SCS Cue Marker will instantly be moved to the entered position.

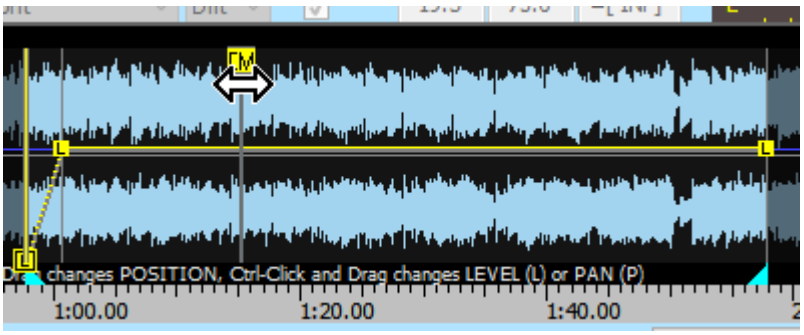


When entering a new position for an existing cue marker it must remain inside the boundaries of the 'Start' and 'End' Points otherwise a validation error is shown.

2. Slide the SCS Cue Marker by Clicking and Dragging the Marker

Left click on the marker header to show the Cue Marker information and hold the mouse button down (mouse pointer will change to left/right arrow) and slide the marker Left or Right.

The Marker may only remain inside the boundaries of the 'Start' and 'End' Points



Remove an SCS Cue Marker

An SCS Cue Marker can be removed by right clicking on the marker header and selecting the **Remove Cue Marker** menu option

The SCS Cue Marker will be removed upon selecting this option unless the marker is being actively used to 'AutoStart' another cue. A message to warn the user of this is shown and the marker will not be removed.

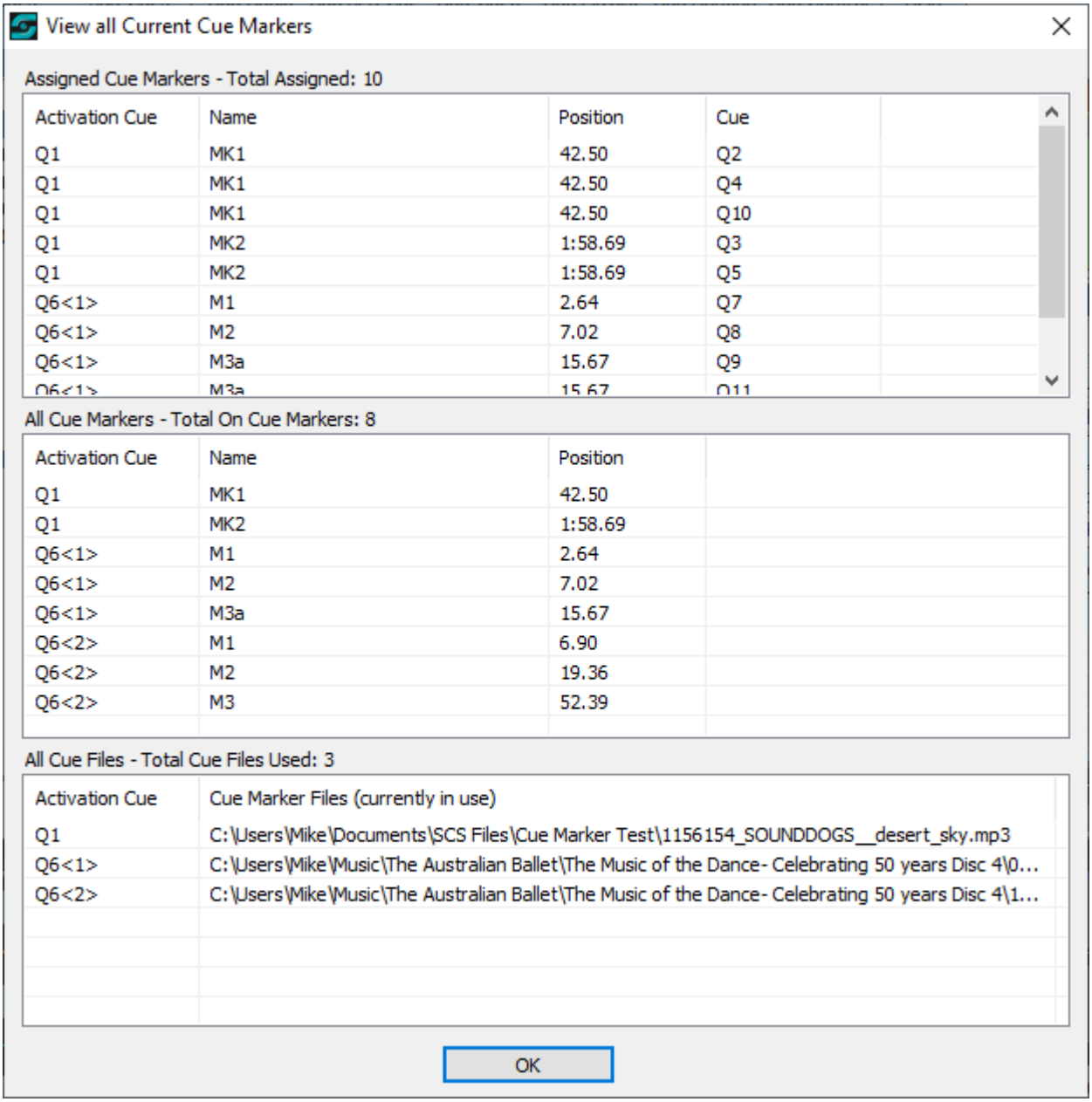
View all Current SCS Cue Markers

Selecting this menu option will display a window showing the following -

1. Active SCS Cue Markers used for 'AutoStart' another cue already assigned
2. All SCS Cue Markers that exist on all audio cues
3. All Cue Files that contain SCS Cue Markers

Other information includes the marker <Cue>, <Activation Cue>, <Name> and <Position>. This is a view only window and cannot be edited.

Additionally, depending upon the your license, the remaining number of markers that can be added and the remaining number of audio files that can have SCS Cue Markers added to them is shown.



Tip: Two keyboard shortcuts are available to "**Skip to previous Cue Marker**" and "**Skip to next Cue Marker**". "**Prev Cue Marker**" and "**Next Cue Marker**" are also available via a MIDI Cue Control device. See Audio File Cue Points and Markers for more information.

Note that if an Audio File Cue has cue markers or cue points, then subsequent sub-cues *in that same cue* may be triggered 'On Cue Marker'. See the description of On Cue Marker at Audio File Cues. (This description applies to all cue types.)

Back to Audio File Cues

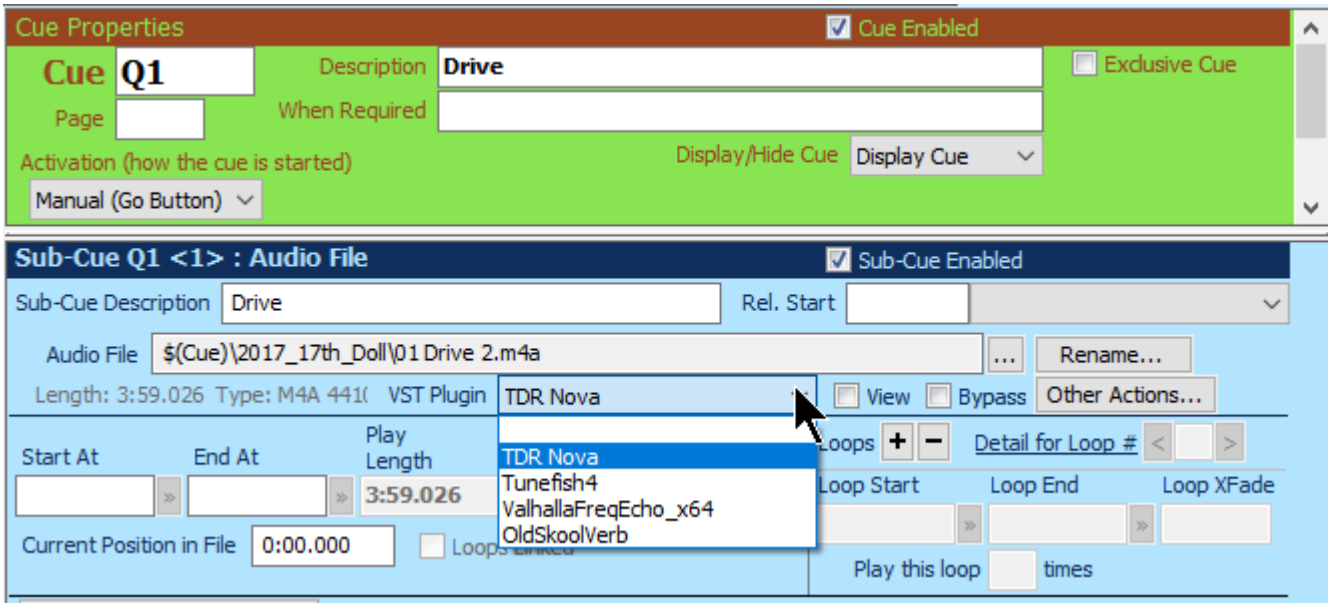
Audio File VST Plugins

VST Plugins are only available with **SCS Professional Plus** and higher license levels.

Overview

If at least one VST Plugin has been specified under VST Plugins then the Audio File cue display will include a field in which you can optionally select a VST Plugin to be used with this Audio File Cue. To access the VST Plugins window, click the **VST Plugins** button in the Main Window Toolbar.

Here's an example:



Additional Properties and Controls

VST Plugin: Select the required VST Plugin from the drop-down list, or select (or leave) blank if no VST Plugin is required for this Audio File Cue.

View: Select this checkbox to view the GUI (graphical user interface) of this plugin. See below for an example and more information. The plugin's GUI will only be displayed in the editor - it is not displayed from the main screen.

Bypass: If you have a VST plugin selected but want to listen to the audio *without* the plugin applied then select this checkbox. Alternately selecting and de-selecting the **Bypass** checkbox while the audio is playing in the editor can assist in hearing the effect of the plugin. The bypass (or cancelling the bypass) may take up to a second to take effect due to buffering. Note that the state of the **Bypass** checkbox is saved, which means you can 'permanently' bypass the plugin for this cue without losing the link to the plugin and any program and parameter settings you have applied (see below). If you clear the **Bypass** checkbox later (even in a later SCS session) then the selected plugin and parameter settings will be reinstated.

Using the Plugin Viewer

When you select the **View** checkbox, the plugin's GUI will be displayed (assuming it has one). Here's an example using the TDR Nova plugin:

Plugins have potentially many adjustable items, including the **program** and **parameters** for that program. In the above example, the user has selected program '4 Band Dyn' and has adjusted parameters by clicking and dragging various items in the display.

When the SCS cue file is saved (ie the .scs11 file), the selected program and parameter settings are saved with other data for that Audio File Cue. So different Audio File Cues can have different VST Plugin settings, even if they use the same plugin and are played at the same time.

VST Plugins come with default settings for parameters. SCS only saves parameter settings in the cue file where the current setting is not the default setting.

If you want to undo any changes you have just made, use the SCS Undo facility.

You can drag the Plugin Viewer window to a new location and SCS will remember that location. As different plugins will have different window sizes, the stored location of the window is the top left position of the window.

To close the Plugin Viewer window, either click the window's X button or clear the **View** checkbox. Closing the window does *not* lose any settings you have applied.

Back to Audio File Cues

Change Playback Rate, Tempo or Pitch

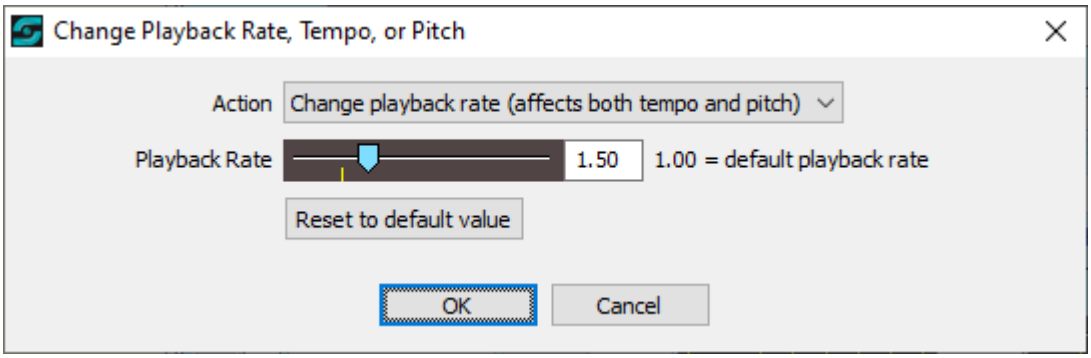
Changing the Playback Rate, Tempo or Pitch is supported with **SCS Professional** and higher license levels.

This 'Other Action' for Audio File Cues enables you to change *one* (only one) of the following for the audio file in that cue:

- **Playback Rate**: This affects both the tempo and the pitch. For example, setting the Playback Rate to 2.0 will play the audio file double-speed, and the pitch at double the frequency (ie up one octave). Setting the Playback Rate to 0.25 will play the audio file at quarter-speed, and the pitch at a quarter of the frequency, ie down two octaves. The range accepted by SCS is 0.05 to 5.0, and the default is 1.0 (1.0 = no change to Playback Rate).
- **Tempo**: This affects tempo only and does not affect the pitch. The range accepted by SCS is 0.05 to 5.0, and the default is 1.0 (1.0 = no change to Tempo).
- **Pitch**: This affects pitch only and does not affect tempo. Unlike the above changes that affect tempo, the values for Pitch are expressed in semitones (or part thereof) and may be in the range -60 to +60. The default is 0, meaning no change to Pitch.

Please note that if you use SoundMan-Server as the Audio Driver then only Playback Rate (which affects both tempo and pitch) may be changed. SCS does not prevent you selecting Tempo or Pitch but will display a warning message. At run time, any change to Tempo or Pitch will be ignored when using SoundMan-Server.

Here's an example of the pop-up screen:



Properties and Controls

Action: The required Action. The available actions are as described above, plus 'No change to playback rate, tempo or pitch', which you would select if you want to remove a previously-set action.

Playback Rate, **Tempo** or **Pitch**: This slider and the associated text box are where you set the required new Playback Rate, Tempo or Pitch. See above for accepted values. The single 'tick line' on the slider shows the default position.

Reset to default value: This resets the Playback Rate, Tempo or Pitch to the appropriate default value.

OK: This will close the window and update the Audio File sub-cue currently being edited.

Cancel: This will close the window, discarding any settings and leaving the Audio File sub-cue unchanged.

Note: The Properties explained above enable you set a non-default Playback Rate, Tempo or Pitch on opening the audio file for that sub-cue, so the effect applies immediately on playing the sub-cue. However, if you wish to change the Playback Rate, Tempo or Pitch sometime after the start of playback then you can do that using the relevant Action of a Level Change Cue. See Change Playback Rate, Tempo or Pitch via Level Change Cue. This also supports 'Duration of Change', so you can, for example, slow down or speed up playback over several seconds.

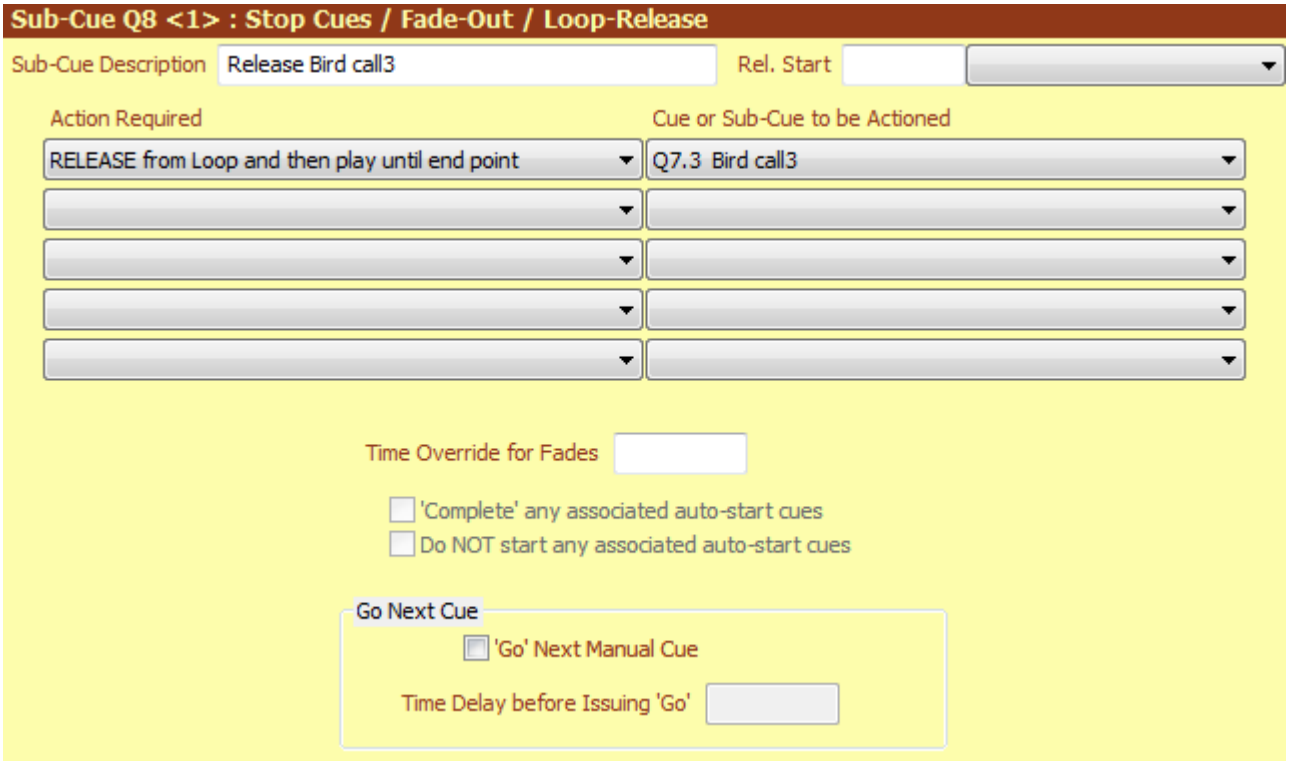
Back to Audio File Cues

Stop / Fade-Out / Release (SFR) Cues

Some features only available with **SCS-Standard** and/or higher license levels.

Overview

For an SFR cue or sub-cue, a sub-cue panel like this will be displayed:



Note that SFR cues cannot be used to fade lighting cues. SFR cues are designed for audio and video cues.

Properties and Controls

General

Sub-Cue Description: Enter a description for this sub-cue. You can leave this field blank and let SCS create a default Description for you from the first line under **Cue to be Actioned** and **Action Required**.

Relative Start: These fields are available for every type of sub-cue. For details see *Relative Start* under Audio File Cues. Then click the **Back** button in the Help Viewer to return to this page.

Action Required and Cue or Sub-Cue to be Actioned

Action Required: The following actions are available:

Common actions	
STOP Immediately - do not fade out	Causes the selected cues to be stopped, closed and marked as 'completed'.
FADE OUT and then STOP	Causes the selected cues to be faded-out *provided* those cues have a fade-out time specified, or a **Time Override for Fades** has been entered. At the end of the fade-out, the cue will will be stopped, closed and marked as 'completed'.

RELEASE from Loop and then continue playback	This applies to cues that contain one or more loops. Note that cues with *two or more loops* will have an entry under **Cue or Sub-Cue to be Actioned** for each loop, for example: Q4 (Loop #2) When I'm Sixty-Four Q4 (Loop #1) When I'm Sixty-Four The loops are listed in reverse order as the cues themselves are listed in revesre order. If the selected cue only has one loop then the Loop Release will cause the selected cue to have the current loop released, ie when the cue next reaches the 'loop end' point the cue will keep playing up to the 'end at' point, or until the end of the file if no 'end at' point has been specified. If you select *Previous Cue* of one of the other generic items (eg *All Playing Cues*) then Loop Release will be applied to the current loop in the target cue(s).
STOP Playlist at end of current track	For playlist cues only, this will stop the cue when the current track ends.
PAUSE	Pause the selected cues. (NB: if this SFR cue is a 'toggle' hotkey cue and the **Action Required** is PAUSE, then the cue will toggle between PAUSE and RESUME.)
RESUME	Resume the selected paused cues.
The following 'Hibernate' features are only available with SCS Standard and higher licenses.	
PAUSE immediately and HIBERNATE	Immediately pauses the selected cues and 'hibernates' them. See below for information on 'Hibernating Cues'.
FADE OUT and then HIBERNATE	Causes the selected cues to be faded-out *provided* those cues have a fade-out time specified, or a **Time Override for Fades** has been entered. At the end of the fade-out, the cue will will be paused and marked as 'hibernating'.
RESUME hibernating cue (with fade in if applicable)	Resumes hibernating cues, fading in the cues if they have a fade-in time, or a **Time Override for Fades** has been entered.
RESUME hibernating cue at start of next track	Resumes hibernating playlist cues at the start of the next track. This is useful if you have a single playlist cue for pre-show and intermission, and you *fade out and hibernate* the cue at the end of pre-show and want to resume at the beginning of a track for intermission.
Other actions	
STOP ALL (= ESC)	Cue equivalent of the **Stop All** button on the Main Window Toolbar. This action is provided primarily to provide a way of activating **Stop All** by MIDI if you are using MIDI Note On or a similar cue control method. The recommended Cue Activation Method for this 'Stop All' cue is 'External (Trigger)'. Note that some other cue control methods such as DMX support Stop All directly so do not need an SFR cue for this purpose.
FADE ALL (= Shift/ESC)	Cue equivalent of the **Stop All** button with **Shift** down. If a value is entered in **Time Override for Fades** then this will be used, otherwise the fade time is as set in **'Fade All' Time** in General Options.

PAUSE/RESUME ALL (= Alt+U)	Cue equivalent of the **Pause All / Resume All** button on the Main Window Toolbar. This action is provided primarily to provide a way of activating **Pause All / Resume All** by MIDI if you are using MIDI Note On or a similar cue control method. The recommended Cue Activation Method for this 'Stop All' cue is 'External (Trigger)'. Note that some other cue control methods such as DMX support Pause All / Resume All directly so do not need an SFR cue for this purpose.
STOP and COMPLETE playing MTC/LTC cues	Any currently-playing MTC/LTC Cue (or sub-cue) will be stopped and completed.

Cue or Sub-Cue to be Actioned: The drop-down list here will display a list of all Audio File, Playlist, Video/Image, Live Input and Control Send cues and sub-cues. Note especially that Lighting cues are not included, so you cannot fade out lighting using an SFR cue. Sub-cues are only shown where there is more than one sub-cue for the cue. Additionally, the first few lines of this list contain special entries for "earlier cues", "playing cues" and "previous cue".

- **All earlier cues (any type)** - This option will cause the SFR cue to act on all cues *earlier* in the cue list than the SFR cue itself. If you select a Fade Out or Stop action for this SFR cue, then all earlier cues will be marked as completed (after they have been faded out if required, and stopped). So even if an earlier cue has not yet been started it will still be 'completed'.
- **All earlier audio cues** - as above but the SFR cue acts only on Audio File Cues and Playlist Cues (or sub-cues)
- **All earlier video/image cues** - as above but the SFR cue acts only on Video/Image Cues (or sub-cues).
- **All earlier live input cues** - as above but the SFR cue acts only on Live Input Cues (or sub-cues). (This is useful if you want to kill all your mic's but leave and audio file playing.)
- **All playing cues (any type)** - This option will cause the SFR cue to act on all playing cues only, regardless of whether they are earlier or later in the cue list. This option is particularly useful if you want to set up the SFR cue as a **hotkey** cue (although see ***<Cues...>*** below). Only playing cues are affected, so cues not yet started will remain 'Ready' (or 'Not Loaded', etc). For a Fade Out or Stop action, playing cues will be marked as completed (after they have been faded out if required, and stopped).
- **All playing audio cues** - as above but the SFR cue acts only on Audio File Cues and Playlist Cues (or sub-cues)
- **All playing video/image cues** - as above but the SFR cue acts only on Video/Image Cues (or sub-cues).
- **All playing live input cues** - as above but the SFR cue acts only on Live Input Cues (or sub-cues). (This is useful if you want to kill all your mic's but leave and audio file playing.)
- **Previous cue** - This option will cause the SFR cue to act on the previous enabled cue that contains an Audio file, Video/Image file, or a Playlist. This is useful for providing an SFR cue that fades or stops the previous cue where the actual previous cue may vary, such as due to a cue being disabled or because you are importing the SFR cue from another cue file. Note that this option acts on the previous cue in the displayed cue list, which may not be the same as the most recently started cue.
- ***<Cues or Sub-Cues...>*** - The remainder of the list will show cues and sub-cues. Selecting a cue or sub-cue will cause the SFR cue to operate on that cue or sub-cue only. You would normally select a cue that's earlier in the cue list than this SFR cue, but there are some occasions when you would want the SFR cue to affect a later cue which is why the full cue list is included in the drop-down list. An example of using an SFR cue on a later cue is if the later cue is a hotkey cue, or if you have set the 'Run Mode' Production Property to non-linear.
- **All earlier cues EXCEPT cues listed above** - This option acts on all earlier cues except any cues listed earlier in this same SFR cue. This is particularly useful if you have several cues playing including a playlist and you want to hibernate and fadeout the playlist but fadeout and stop the other cues. To do this, include a 'fade out and hibernate' for your playlist as the first entry in the SFR cue, and a 'fade out and stop' for 'all earlier cues EXCEPT cues listed above' as the second entry in the SFR cue. Note that both of these entries *must* be in the same SFR cue.
- **All playing cues EXCEPT cues listed above** - This is similar to 'all earlier cues except cues listed above' except that it acts on playing cues only.

This field must be blank for the actions 'STOP ALL' and 'PAUSE/RESUME ALL'.

Tip: Stopping 'Go To' cues: 'Go To' cues are usually used in loops of cues that contain auto-start times, so the loop just keeps going without manual intervention. To escape from the loop you can use an SFR cue to fade out and stop (or just stop) audio files etc within the loop, and you should also include a 'STOP' of the 'Go To' cue.

Time Override for Fades: This field enables you set or override the fade-in or fade-out time for cues or sub-cues affected by this SFR cue. Leave the field blank if no override is required, or if it is not applicable. For example, you can set up an Audio File cue without a fade-out time but implement a fade-out when this SFR cue is actioned by (a) selecting action 'FADE OUT and then STOP', and (b) Setting the required fade-out time in this *Time Override for Fades* field. This field must be blank for the actions 'STOP ALL' and 'PAUSE/RESUME ALL'.

Tip: Time Override for Fades is particularly useful for playlist cues that you want to hibernate or resume from hibernation. The playlist cue itself has fields for fade-in time and fade-out time, and these will be used when you start and terminate the playlist. They will also be used when you hibernate the playlist or resume the playlist from hibernation. However, if you do not want to fade-in your playlist cue at the start but *do* want to fade-in the cue when it is resuming from hibernation, then you can leave the playlist 'fade-in' time blank (implying no fade-in) but set the required fade-in time in the SFR cue that resumes the playlist from hibernation. Same applies to fade-out.

Note: *The next two properties are mutually-exclusive as they define action to be taken for associated auto-start cues. If you try to select both checkboxes then SCS will only accept the last one checked and will clear the other.*

'Complete' any associated auto-start cues: This feature is only available for 'STOP Immediately' and 'FADEOUT and then STOP' actions. This is useful if you set up an SFR hotkey cue to fade out and/or stop all playing cues but do not want auto-start cues to start that may otherwise be started as a result of cues being stopped.

Do NOT start any associated auto-start cues: This feature is only available for 'STOP Immediately' and 'FADEOUT and then STOP' actions. This is useful if you have a pseudo playlist of cues where each cue is set to auto-start after or before the end of the previous cue, but you want the ability to prevent that auto-start happening if you click elsewhere in the cue list.

'Go' Next Manual Cue and **Time Delay before Issuing 'Go'**: If you have an SFR cue to stop or fade out playing cues, etc, this enables you to also activate the next manual cue (as in hitting the 'Go' button'). A time delay before 'Go Next' may be supplied, eg enter 2.5 for a 2.5 second delay. Leave the Time Delay field blank to immediately action the 'Go' button.

Hibernating Cues

A number of users have requested the ability to use the same playlist cue several times, such as for pre-show music and then to carry on where it left off for intermission music. To facilitate this you can put a playlist into hibernation instead of just completing it. When a playlist is hibernated it is faded out (if the playlist has a fade-out time specified) and then paused. The status of the cue is set to 'hibernating', and while it is hibernating it will not be displayed in the cue panels in the lower part of the main window.

To hibernate a playlist you need to use the SFR action "Fade Out and Hibernate", nominating the Playlist cue to be hibernated.

To 'wake up' a hibernated cue there are two actions available in SFR cues: "Resume hibernated cue" and "Resume hibernated cue at start of next track". When a hibernated cue is resumed, it will again be displayed in the cue panels in the lower part of the main window. The first of these SFR actions (Resume hibernated cue) will continue the playlist from where it was paused, fading in the audio if it was faded out for hibernation. The second of these SFR actions (Resume hibernated cue at start of next track) will skip the remainder of the track that was playing at the time of hibernation, and start playing the next track in the play order.

Tip: Although hibernation is designed for **playlists**, it is also possible to hibernate and resume an **audio file cue** or a **video cue**. With video cues, the paused video image will remain displayed during hibernation. However, if you are not really wanting to 'hibernate' the cue then it is better just to use PAUSE and RESUME.

Level Change Cues

Level Change Cues (LCQ's) are only available with **SCS Standard** and higher license levels.

Overview

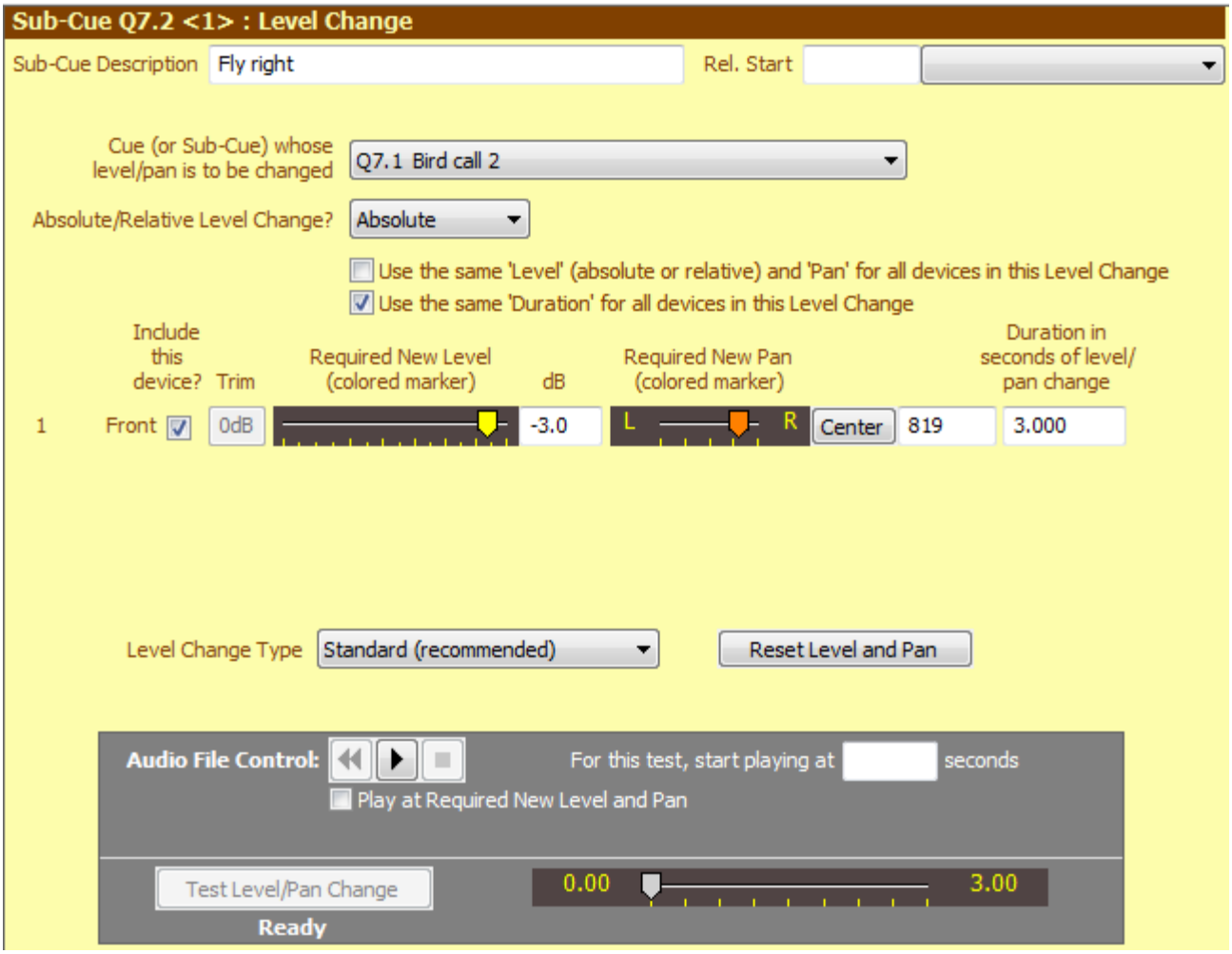
Often you will have a sound cue that starts at a fairly high level (volume) and then is to drop to a lower level below dialog. This can be done by riding the fader on the sound desk, but sometimes you may want to apply this fade from the computer. One example of this is where you have two sound cues running simultaneously, and you want to fade only one of them. You can achieve this by use of a **Level Change Cue**. With the Level Change Cue you nominate the cue or sub-cue whose level you want to change, the required new level and/or pan settings for each devices, and the time over which the change is to occur. The new level may be lower or higher than the current level.

Level Change Cues also enable you to change the Playback Rate, Tempo or Pitch if the nominated cue or sub-cue is an Audio File Cue. See Change Playback Rate, Tempo or Pitch via Level Change Cue for details.

SCS also allows you to have more than one Level Change Cue for any nominated cue or sub-cue. So after dropping the level of a cue during dialog you could have another Level Change Cue to increase the level again, and maybe to pan the sound to one side.

Note: See also Level Envelope for details on how to setup a level envelope within an Audio File cue.

For a *Level Change* cue or sub-cue, a sub-cue panel like this will be displayed:



Properties and Controls

General

Sub-Cue Description: Enter a description for this sub-cue. You can leave this field blank and let SCS create a default Sub-Cue Description for you based on the selected cue.

Relative Start: These fields are available for every type of sub-cue. For details see *Relative Start* under Audio File Cues. Then click the **Back** button in the Help Viewer to return to this page.

Cue (or Sub-Cue) whose level/pan is to be changed: Select from the drop-down list the cue or sub-cue whose level and/or pan is to be changed. This is also referred to as the 'Target' cue or sub-cue. The target may be an audio file, playlist or video cue or sub-cue.

Changing the Target Cue or Sub-Cue

If you change the target cue or sub-cue then SCS will retain the current device settings where possible and feasible. So if the previous target cue in this LCQ used devices 'Front' and 'Rear' and the new target cue uses device 'Front', 'USL' and 'USR' then on applying this change SCS will retain whatever LCQ device settings you had for 'Front'. The device settings for 'USL' and 'USR' would be set as they would if this was a completely new LCQ, ie as it would if the target cue field was previously blank.

SCS will not retain device settings if the new target cue or sub-cue is of a different type, eg if it was previously for an Audio File Cue but is now for a Playlist Cue.

Absolute/Relative Level Change: This field indicates if the required level(s) entered for this cue are absolute (eg change the level to -12dB) or relative (eg lower the current level by 6dB). The default setting for this drop-down list is the last setting used or found this SCS session, or **Absolute** if this is the first Level Change added or found. The remainder of this help page relates to absolute level changes. For information about **Relative** level changes, see Relative Level Changes.

Level and Pan Changes

The level and/or pan settings for each device used by the selected audio file sub-cue can be changed independently. You can, for example, change a level in one device and leave the level of another device unchanged.

Use the same 'Level' and 'Pan' for all devices in the Level Change: This is only relevant if the target cue has more then one device. If you select this checkbox then you just need to set the **Required New Level** and/or **Required New Pan** for the first included device and the same setting will apply to all included devices.

Use the same 'Duration' for all devices in the Level Change: This is only relevant if the target cue has more then one device. If you select this checkbox then you just need to set the **Duration** for the first included device and the same setting will apply to all included devices. This checkbox *is* selected by default.

Include this device?: This checkbox enables you to process a Level Change on selected devices only. To exclude a device from this Level Change, clear the corresponding checkbox. You can create some interesting effects this way as SCS enables you to have several Level Changes operating concurrently (on different devices). This is because by excluding a device from a Level Change, if that cue output is currently the subject of another Level Change that has not yet completed, then that existing Level Change will continue while the new Level Change starts adjusting the level or pan of another device.

Required New Level: With this fader or dB field you can select the new level you want for this cue. The white marker shows the 'expected' level, and the setting of that is derived from the level of the target or from the required new level of the most recent level change cue or sub-cue for the target. See also the *Note Regarding Playlists* (below).

If you want to make fine adjustments to the level, left-click the slider and then use the left-arrow and right-arrow keys as required. Alternatively, to simultaneously adjust the **Required New Level** for all selected devices then you can use the keyboard Shortcuts for *Decrease (or Increase) Levels of Playing Cues*. By default these shortcuts are Shift+F11 and Shift+F12.

Required New Pan: With this fader or the number field you can select the new pan you want for this cue. The white marker shows the 'expected' pan, and the setting of that is derived from the pan of the target or from the required new pan of the most recent level change sub-cue for the target. The **Center** button is enabled if the Required New Pan is not center. Clicking this button sets Required New Pan to center.

If you want to make fine adjustments to the pan, left-click the slider and then use the left-arrow and right-arrow keys as required.

Duration in seconds of level/pan change: Specify the time over which the level/pan change is to occur. For example, to change the level/pan over 4.5 seconds, enter 4.5 in this field. The default duration is 0.000 seconds, which will cause an instantaneous change.

Level Change Type: Select the type of level change you require. The default is 'Standard', which follows a linear track of the level faders. Other options include logarithmic and linear changes. A 'linear' change is not the same as a 'standard' change as the level faders are not linear across the entire range. This does not affect how pan is controlled - a change in a pan setting is always linear.

Reset Level and Pan: This button sets the Required New Level and Required New Pan settings to the 'expected' settings.

Note Regarding Playlists

If a **Level Change** is applied to a Playlist, the *Required New Level* specifies the whole-of-playlist required levels (per device). Note that these will be adjusted by the **Relative Level (%)** of each track in the playlist. The default **Relative Level (%)** is 80%. This percentage is applied to the internal conversion of the level from dB to a linear scale.

Testing your Level Change Cue

You can test your Level Change Cue using the controls available in the 'Test' panel. Note that keyboard shortcuts are available for the transport controls Rewind, Play/Pause and Stop. The default shortcuts are F4 (Rewind), F5 (Play/Pause) and F6 (Stop).

If you want to check the *Required New Level* and *Pan* then the easiest way to do this is to select the checkbox **Play at Required New Level and Pan**, and then click the 'play' button. While the audio file is playing you can adjust the **Required New Level** and/or **Required New Pan** as described earlier.

If you want to test the effect of the Level Change Cue then first of all make sure the 'Play at Required New Level and Pan' checkbox is *clear.* Then start playing the cue or sub-cue whose level/pan you want to change by clicking the play button. When this reaches the point at which you want the level/pan change to occur, click the 'Test Level/Pan Change' button. When the change has completed (which will be after the maximum time you specified under 'Duration in seconds of level/pan change'), the audio file keeps playing for 5 seconds (or until it runs out if less than 5 seconds remain). This is so that you can listen to the final result before the test terminates, which is particularly important if you specified 0.000 as the duration.

If want your level/pan change to occur, say, 30 seconds into a cue, then you can start the sound cue somewhere near that point. For example, to start the test of the sound cue after 27 seconds, enter 27 against 'For this test, start playing at'.

(The test may not be reliable if the previous state of the cue or sub-cue to be changed had devices excluded in a previous Level Change.)

If your target is a Playlist with random selection, then the track currently first in the play order will be used in the test.

Relative Level Changes

Overview

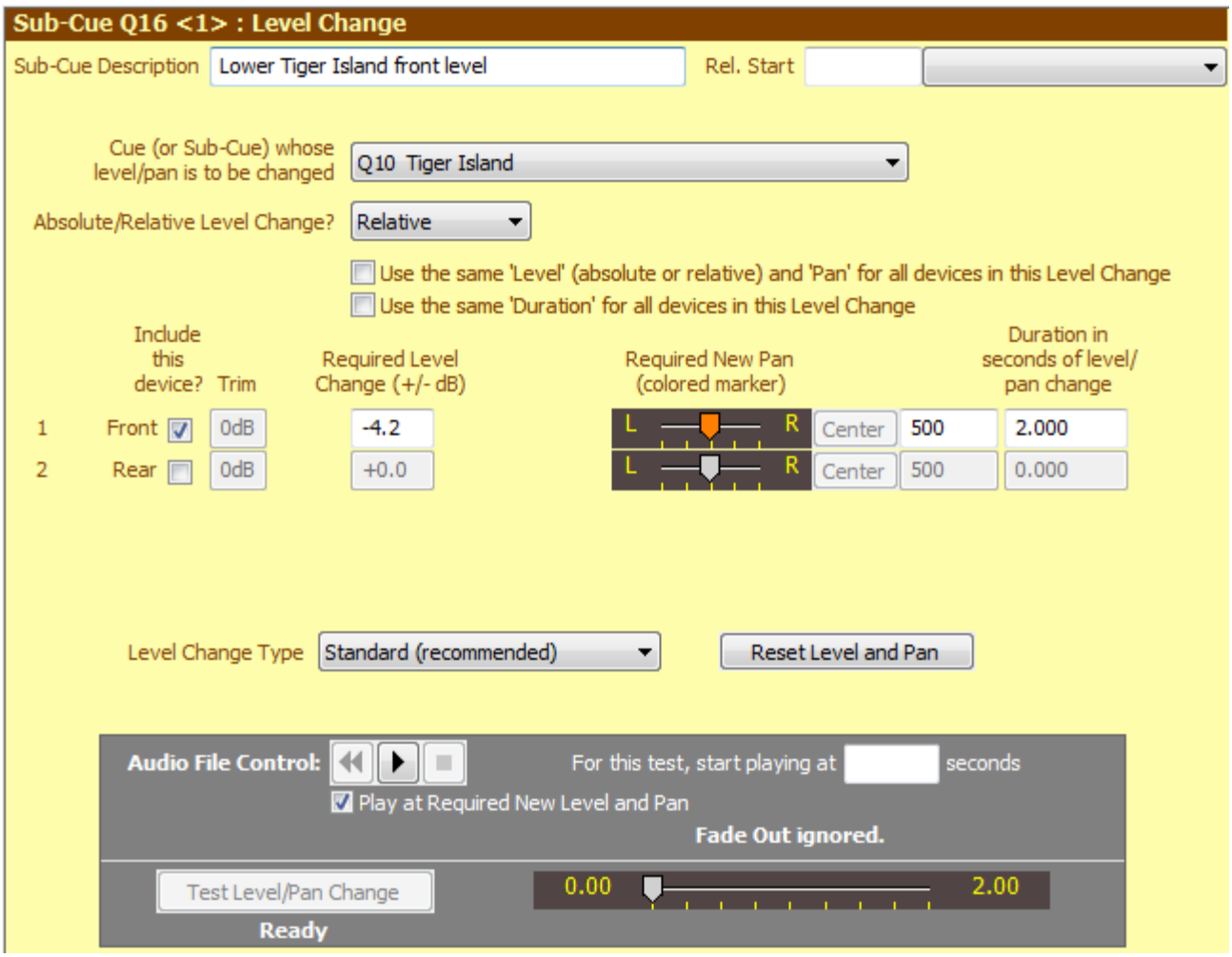
Under Level Change Cues we have explained how to set up Level Change Cues where the new level is given as an absolute value. For example, if the *Required Level* is set to -24dB then -24dB will be the new level of the target cue regardless of the current level of that cue. Sometimes it is useful to be able to nominate a **Relative Level Change**, where the *Required Level* defines the positive or negative dB change required. For example, if you specify a **Relative Level Change** with a *Required Level* of +4.5dB then when the Level Change cue is activated then the target cue's level will be increased by 4.5dB, regardless of what the current level is. (Relative Level changes will be limited if necessary. The operating level range in SCS is -75dB up to 0dB.)

Relative Level Changes have the following benefits over **Absolute Level Changes**:

- If the audio cue you are using is too loud or too soft and you adjust the level of the original audio file cue, then any associated *Relative Level Change* cues will effectively have the same adjustment made.
- By assigning a **Hotkey** to a *Relative Level Change* cue you can use that hotkey repeatedly to apply the relative level change, ie to repeatedly increase or decrease the level of the target cue. By using two hotkey cues like this you can have one hotkey to increase the level and another hotkey to decrease the level. (Note that this just affects the target cue, not the overall level. To adjust the overall level you can use the *Master Fader*.)
- If you only want to adjust the **Pan** setting and leave the **Level** unchanged, then by nominating a *Relative Level Change* of +0.0dB your cue (or sub-cue) will be independent of the current level of the target cue. So you effectively have a **Pan Change Cue** which doesn't affect the target cue's level.

The second dot point above (assigning a hotkey to the cue) could be useful if you need to be able to temporarily lower the level of a specific cue during intermittent dialog, whilst keeping other cues playing at their current level (and also without having to adjust the overall output level).

To set up a **Relative Level Change** cue, add a **Level Change Cue** (or Sub-Cue) and select **Relative** in the drop-down list against **Absolute/Relative Level Change**. The Sub-Cue Properties panel will be slightly adjusted for a Relative Level Change, for example:



Properties and Controls

Properties are as described under Level Change Cues except for the following differences:

Absolute/Relative Level Change: Select **Relative** for a *Relative Level Change*.

Required New Level: For *Relative Level Changes* the fader is not displayed - only a text box in which you must enter the required dB level change. This *must* be entered with a leading + or - to indicate if the level is to be increased (+) or decreased (-). See also the *Note Regarding Playlists* (below).

Reset Level and Pan: This button sets the Required New Level and Required New Pan settings to the 'expected' settings. As the Required New Level is a relative level, resetting will cause this to be set to +0.0 (ie neither increase nor decrease the level).

Note Regarding Playlists

If a **Relative Level Change** is applied to a Playlist, the *Required New Level* specifies the increase or decrease required to the whole-of-playlist levels (per device). Note that these will be adjusted by the **Relative Level (%)** of each track in the playlist. The default **Relative Level (%)** is 80%. This percentage is applied to the internal conversion of the level from dB to a linear scale.

Back to Level Change Cues

Change Playback Rate, Tempo or Pitch via Level Change Cue

Changing the Playback Rate, Tempo or Pitch is supported with **SCS Professional** and higher license levels.

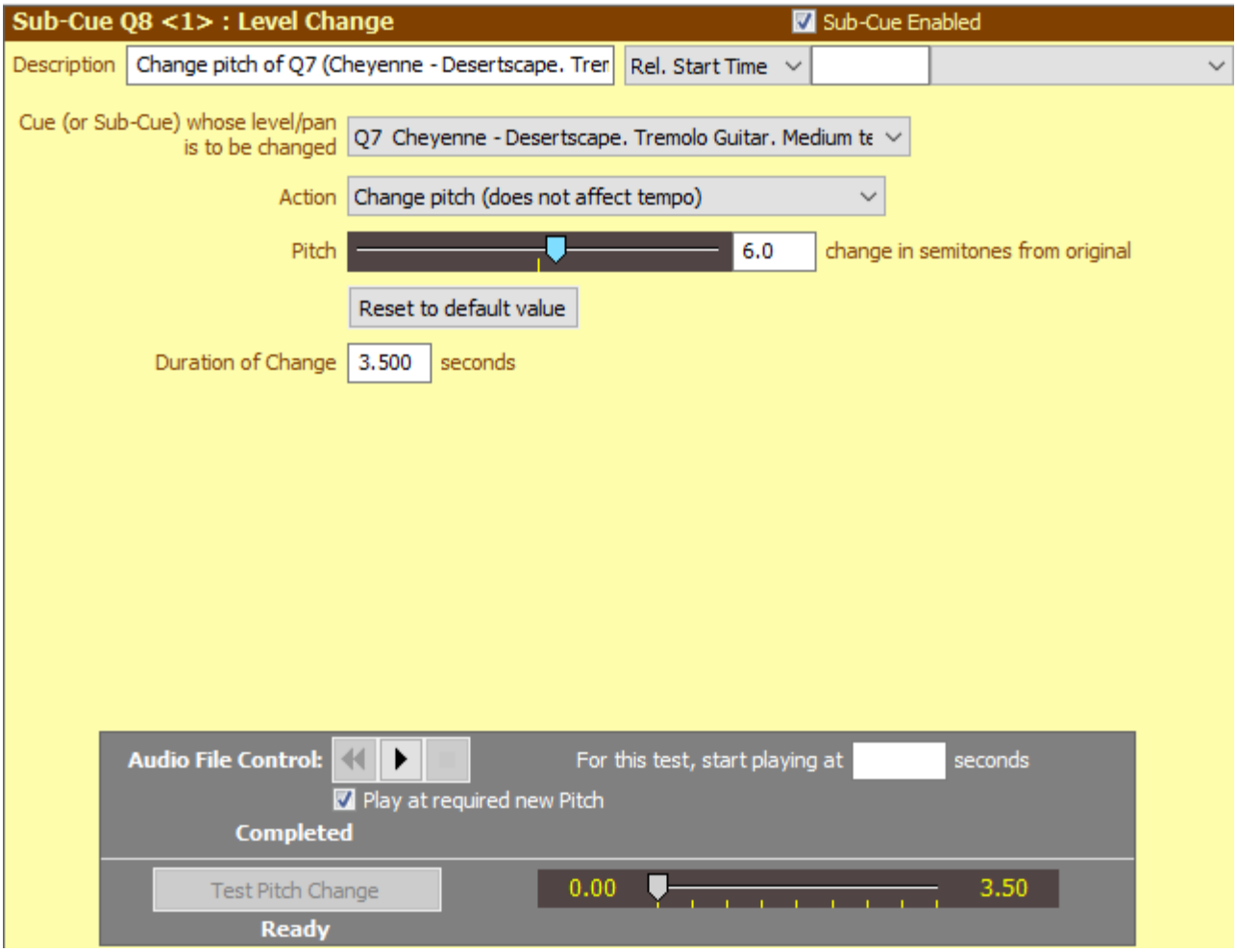
Overview

If the selected **Cue (or Sub-Cue)** is an Audio File Cue and you have an SCS Professional of higher license then the Action Property will include the following additional entries:

- **Change Playback Rate**: This affects both the tempo and the pitch. For example, setting the Playback Rate to 2.0 will play the audio file double-speed, and the pitch at double the frequency (ie up one octave). Setting the Playback Rate to 0.25 will play the audio file at quarter-speed, and the pitch at a quarter of the frequency, ie down two octaves. The range accepted by SCS is 0.05 to 5.0, and the default is 1.0 (1.0 = no change to Playback Rate).
- **Change Tempo**: This affects tempo only and does not affect the pitch. The range accepted by SCS is 0.05 to 5.0, and the default is 1.0 (1.0 = no change to Tempo).
- **Change Pitch**: This affects pitch only and does not affect tempo. Unlike the above changes that affect tempo, the values for Pitch are expressed in semitones (or part thereof) and may be in the range -60 to +60. The default is 0, meaning no change to Pitch.

Please note that if you use SoundMan-Server as the Audio Driver then only Playback Rate (which affects both tempo and pitch) may be changed. SCS does not prevent you selecting Tempo or Pitch but will display a warning message. At run time, any change to Tempo or Pitch will be ignored when using SoundMan-Server.

Here's an example:



Properties and Controls

Properties are as described under Level Change Cues except for the following differences:

Action: The required Action. The available actions are as described above.

Playback Rate, **Tempo** or **Pitch**: This slider and the associated text box are where you set the required new Playback Rate, Tempo or Pitch. See above for accepted values. The single 'tick line' on the slider shows the default position.

Reset to default value: This resets the Playback Rate, Tempo or Pitch to the appropriate default value.

Duration of Change: Specify the time in seconds over which the action is to occur. For example, to change the pitch over 3.5 seconds, enter 3.5 in this field. The default duration is 0.0 seconds, which will cause an instantaneous change.

Note: The Properties explained above enable you set up a 'Level Change' cue to change the Playback Rate, Tempo or Pitch sometime after the start of playback of the selected Audio File sub-cue. However, if you wish to set a non-default Playback Rate, Tempo or Pitch on opening the file so that the required action takes immediate effect, then that can be done via the **Other Actions...** button under Audio File Cue. See Change Playback Rate, Tempo or Pitch for **Audio File Cues**.

Back to Level Change Cues

Playlist Cues

Playlist Cues are available with **SCS Standard** and higher license levels.

Overview

Playlists are designed for pre-show and intermission music, but there is no reason why you cannot use them for any cue or sub-cue that requires this functionality. A typical playlist for pre-show or intermission music will contain several audio files, with more than enough music to cover the pre-show or intermission time. With a playlist you can play the tracks (ie files) in the playlist for as long as you need to, and then when the show is about to start or re-commence after intermission, you activate an SFR cue to fade out the playlist wherever it is up to.

Adding a new Playlist Cue or Sub-Cue

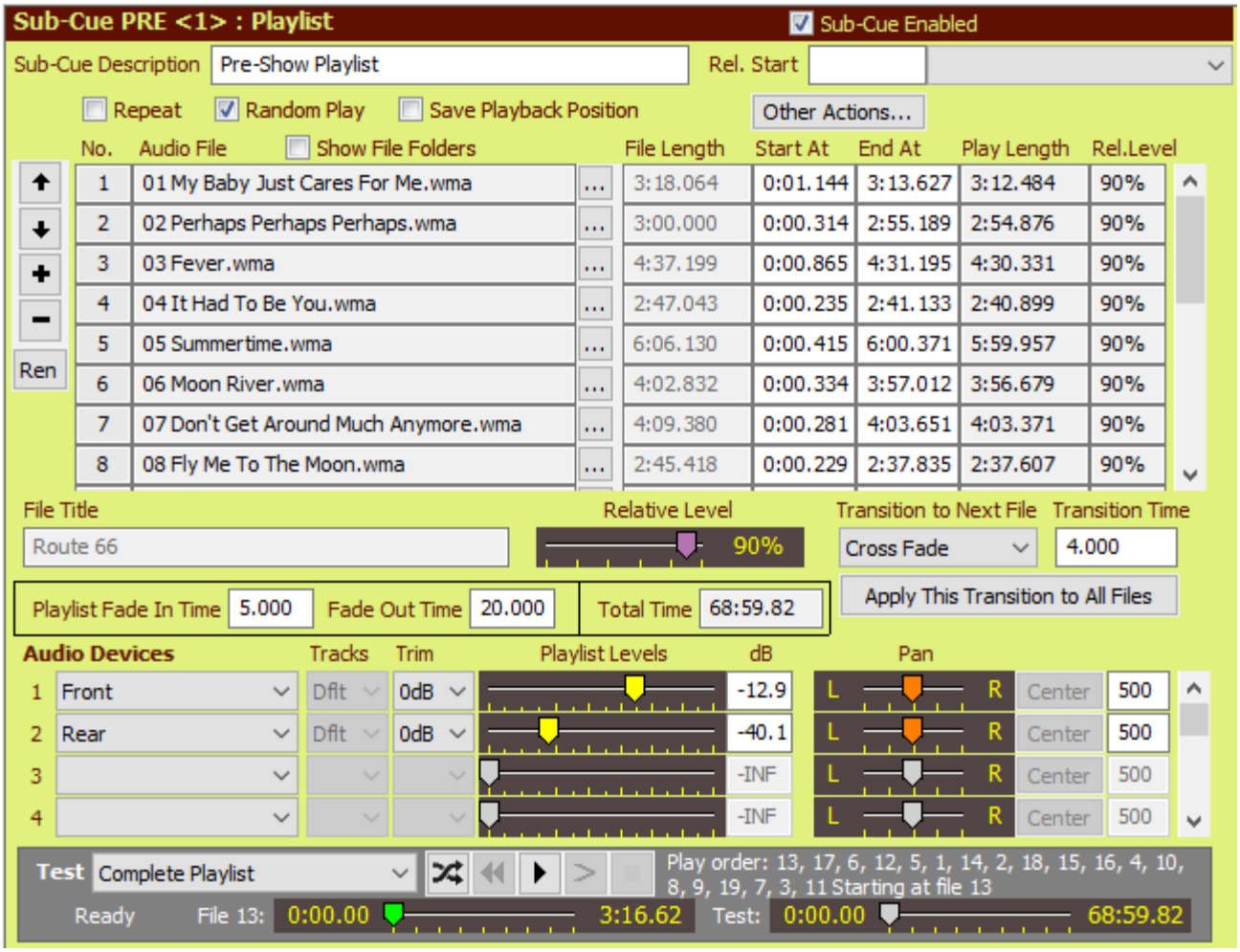
On selecting the toolbar button or option to add a new Playlist Cue or Sub-Cue, an Audio File Selector window will be opened to enable you to select the files for the Playlist. If you Cancel from the Audio File Selector then the Add Playlist operation is also canceled.

> **Tip:** If you do not yet have the audio files you want to use for the cue then you can create a **Place Holder** for the Playlist cue. To do this, simply select **Cancel** in the File Selector, and you will be asked if you want to create a Place Holder, so just click **Yes**. This will create an Playlist Cue which can be 'played' just like any other playlist cue, but will, of course, immediately complete as there is no file selected and the duration of the cue is 0.000 seconds. When you are ready to assign audio files to this Place Holder cue, simply click the first Browse (...) button to select the required file(s).
> (If you Cancel the File Selector and then click **No** when asked if you want to create a Place Holder, then the Add Playlist Cue operation is also canceled.)

Viewing or Changing a Playlist Cue or Sub-Cue

To view or change a Playlist Cue or Sub-Cue, just click on the relevant node in the Editor's Cue List.

When you have added or selected an Playlist cue or sub-cue, a sub-cue panel like this will be displayed:



Properties and Controls

General

Sub-Cue Description: Enter a description for this sub-cue. You can leave this field blank and let SCS create a

default Sub-Cue Description for you.

Relative Start: These fields are available for every type of sub-cue. For details see *Relative Start* under Audio File Cues. Then click the **Back** button in the Help Viewer to return to this page.

Repeat: Tick this checkbox if you want the playlist to loop back to the start when it reaches the end.

Random Play: Tick this checkbox if you want random play of your playlist. The random order of play is set when the cue file is loaded, or whenever you re-tick this checkbox, or whenever the **shuffle** button in the transport controls is clicked. However, see also *Save Playback Position* below.

Save Playback Position: This checkbox is included primarily to support lengthy playlists which are played frequently (eg daily) and where you want to minimize the likelihood of individual tracks being repeated too soon. Here are the effects of selecting this checkbox:

Save Playback Position: For a Playlist that has this property set:

- When SCS is closed (or the cue file is closed) then the number of the final track that was played is stored for this cue in the Production database.
- When this cue file is next opened on this computer then SCS will retrieve that track number and prime the playlist cue to start from the following track number (ie to start at the beginning of the next track).
- If *Random Play* is selected then the current play order is also saved in the database, and is retrieved and used when the cue file is next opened.
- If *Repeat* and *Random Play* are both selected then when the end of the current play order is reached then SCS re-randomizes the play order, but in the new play order SCS ensures there is a minimum gap of 50% of the track count between successive selections of each track. For example, if the last track in the current order is track 17 and there are 50 tracks in the playlist, then in the re-randomize SCS will not re-select track 17 until at least position 25. (Note that this re-randomize at the end of the play order only occurs when *Save Playback Position* is selected, in addition to *Repeat* and *Random Play*.)

A limitation of the re-randomize of the play order is that it is not possible to apply a transition such as a cross-fade from the last track of the current play order to the first track of the new play order. This is because SCS allows the Playlist to end after the last track is played, and then re-randomizes the play order, resets the cue to point to the first track in the new play order, and then resumes playback. This should all happen 'instantly', but it prevents the use of cross-fades etc at the end of the play order.

Other Actions: Clicking this button will display a menu list of actions you can apply to either individual tracks or to the entire playlist. Normally you would only use these actions *after* you have selected all the files you required in your playlist as the menu actions examine the files are then apply changes where necessary to fields like the start, end and relative levels. The menu choices are not remembered, so adding another file to the playlist cue will just be added with the default settings (eg blank start and end times). These following actions are available:

- **Trim complete silence from the Start and End of the SELECTED file**: Sets the 'Start At' and 'End At' times by trimming silence from the start and end of the currently-selected file.
- **Trim all below -75dB/-60dB/-45dB-30dB from the Start and End of the SELECTED file**: Sets the 'Start At' and 'End At' times by trimming audio below the selected dB level from the start and end of the currently-selected file.
- **Reset the Start and End times of the SELECTED file to their initial values**: Resets the 'Start At' and 'End At' times to their saved values, for the currently-selected file.
- **Clear the Start and End times of the SELECTED file**: Clears the 'Start At' and 'End At' times for the currently-selected file.
- The next few actions are the same as the above, but for **ALL files** currently in the playlist.
- **Adjust Relative Levels to apply Peak Normalization across ALL files (Max 100%)**: The purpose of this is to assist in providing a playlist of uniform volume regardless of the levels of your files. If you have files sourced from different CD's etc then they could well have differing levels. Selecting this menu item will cause SCS to compare the maximum peaks of all files currently in the playlist. The file(s) with the lowest maximum will have their **Relative Level** set to 100%. Other files (that have higher maximum peaks) will be assigned lower **Relative Levels**, so that when played back the maximum peak of every file will be heard at the same level. Please note the following: (a) Peak Normalization adjusts Relative Levels based on the highest sample value - it does not take into consideration the apparent loudness of the audio file; (b) SCS does *not* consider the 'Start At' and 'End At' times when scanning for a file's maximum peak - the entire file is always scanned.
- **Adjust Relative Levels to apply Peak Normalization across ALL files (Max 90%)**: As above except that the upper limit is set to 90% instead of 100%, which enables you to manually increase individual relative levels above the upper level, eg to increase a file's relative level from 85% to 95%. You would not be able to apply such an increase if the upper limit was set to 100%.
- **Adjust Relative Levels to apply Peak Normalization across ALL files (Max 80%)**: As above except that the upper limit is set to 80%.

- **Remove ALL files from this Playlist**: This is useful if you are building a new show's cue file from an existing cue file and want to change the pre-show music Playlist.

Note that scanning a file normally occurs only once as the scan results are stored in a database table. As mentioned before, SCS does not remember any menu choice you make - these actions are just apply changes where applicable to other fields. You can subsequently change the values in any of those fields if required.

Audio Tracks

This table contains the audio files to be included in the playlist. They are referred to as 'tracks', so a playlist with 8 audio files contains 8 tracks.

Audio File: This will contain the path name of an audio file to be played. The **...** (browse) button can be used to locate a required file. In the Audio File selector window you can choose multiple files, and these will be inserted in the playlist at this point. See also Drag and Drop for details on how files can be dragged from an external application.

To **change the order of the tracks** you can use the up and down arrows to the left of the list.

To **remove a track**, click the 'minus' button to the left of the list

To **insert a track** before the currently-selected track, click the 'plus' button to the left of the list.

To **rename** the currently-selected, click the '**Ren**' button to the left of the list. This will open the Rename File window.

File Length: This display-only field shows the duration of the audio file.

Start At: If you do not want to start the track from the beginning of the file, enter the time at which the track is to start. This can be to 3 decimal places of seconds. For example, enter 12.5 to start the track 12.5 seconds from the start of the file. Leave blank to start at the beginning of the file. (See also **Other Actions** above.)

End At: If you want SCS to stop the track before the end of the file then enter the time at which you want the track to stop. This is the absolute time within the file, *not* the required time after 'Start At'. Leave 'End At' blank to let the track run until the end of the file (or until you stop it). For example, to get SCS to stop playing the track at the 15.45 seconds time with the file enter 15.45 in the 'End At' field. (See also **Other Actions** above.)

Play Length: This display-only field shows how much of the audio file will be played, based on the 'Start At' and 'End At' where set. The range of the progress slider for this track is set to the Play Length.

File Title: When you open an audio file SCS will examine the file and display the title if found, Otherwise SCS will display a title derived from the file name.

Relative Level (%): As different audio files can be recorded at different levels, this fader gives you a chance to adjust the level of an individual track, making it louder or softer than the others. The default setting for this fader is 80%, so by default you have headroom available for increasing the level of a track. (See also **Other Actions** above regarding Peak Normalization.)

Transition to Next File: This defines how the playlist is to go from this track to the next track in the playlist. Options are

- **None**: No 'transition' is required, and that when this track has completed the next track will start, with no cross-fade, etc.
- **Cross Fade**: This track will fade out and the next track will simultaneously fade in. The duration of the cross-fade is specified in the **Transition Time** field.
- **Mix**: This is like a cross-fade in that the next track will commence before this track has ended, but the tracks will not be faded out or in. This is suitable for music tracks that have their own fade-out. The duration of the mix is specified in the **Transition Time** field.
- **Wait**: This provides for a pause between tracks. A CD player will normally provide a 2-second or more pause between tracks, and this 'Wait' transition type enables you to emulate this in a playlist. The duration of the wait is specified in the **Transition Time** field.

Apply This Transition to All Files: The information you have just entered sets the transition between this track and the next track. If you have significantly different start and end characteristics in the various tracks you have selected for your playlist, you may want to individually set the transitions for each track. However, if you want to use the same transition for all tracks then having set a transition type and time, click this button. The button is disabled if all the transition types and times are already the same. It is recommended that you *do* use the same transition type and time for all tracks, *especially* if you use random play.

Playlist Fade In Time: Enter the time in seconds (eg 3.5) that you want the playlist to fade in with. Leave blank if no fade in of the playlist is required. This fade in time is also used when resuming a hibernated playlist *unless* the SFR cue that activates the resume has a 'fade time override' set.

Fade Out Time: Enter the time in seconds (eg 3.5) that you want the playlist to fade out over when an SFR cue is activated to fade out this playlist cue. The cue will be marked as 'completed' when the Playlist Fade-Out has ended,

and any unplayed files in the Playlist will be discarded, *unless* the SFR cue specifies **hibernate**, in which case the playlist cue will be marked as 'hibernated' and any unplayed files in the Playlist will still be available when the Playlist is resumed.

Total Time: This display-only field shows the total time of the playlist, allowing for cross-fade time etc to avoid double-counting.

Audio Devices

In this section you define which audio devices are to used by this playlist. It may be that you are just using a single mono or stereo output, in which case you will only need a single entry in this section. However, you can nominate additional devices up to the limit imposed by your SCS License level.

Audio device: The audio devices available are as specified in the Production Properties - Audio Output Devices.

Tracks: (SM-S audio driver only) This enables you to select the track or tracks to be played to this device. For details see the description of the **Tracks** field in Audio File Cues.

Trim: You should only need to use this control if your playlist is to be played at a low level and you are having difficulty setting the level using the **Playlist Levels** control. With the **Trim** control you can apply an overall reduction in the level of up to 50dB.

Playlist Levels: The level fader sets the level (volume) at which SCS will play the cue. The setting of the fader is also displayed and is enterable as a dB value. The maximum dB setting (loudest) setting is 0dB or +12dB, depending on the 'Maximum Audio Level' set in Production Properties - Run Time Settings. 0dB represents the level of the audio file as recorded, ie without any attenuation. If you set the level to -75 or lower then SCS treats this as -infinity, ie silent. You may also enter this as -INF.

Pan: The pan controller sets the stereo position of the sound. The setting of the controller is also displayed and is enterable as a number, where 0 is left, 500 is center, and 999 is right. The **Center** button is enabled if the current value is not 500 (center). Clicking this button sets pan to 500 (center).

Gapless Playback

For information on gapless playback between consecutive tracks of your playlist, see Gapless Playback.

Testing your Playlist Cue

You can test your Playlist Cue using the controls available in the 'Test' panel. As a playlist can typically run for 20 minutes or more, SCS provides a way for you to check the transitions without having to listen to the entire 20 minutes or so. In the drop-down box next to 'Test' you can choose how much of the playlist you want to test. You can select **Complete Playlist**, **First and last 10 seconds of each track**, **First and last 5 seconds of each track**, or the **Highlighted file only**. If you select **Complete Playlist** or one of the **First and last ... seconds...** tests, then the test will start at the currently selected file. This is shown by the wording following *Play order*.

Use the multimedia controls to play or stop the test. The 'File' slider in the Test panel shows the progress through the file currently being played, and the 'Test' slider shows the progress thru the test as a whole. You cannot currently drag these sliders yourself.

Note that keyboard shortcuts are available for **Rewind**, **Play/Pause** and **Stop**. The default shortcuts are F4 (Rewind), F5 (Play/Pause) and F6 (Stop).

Keyboard shortcuts are also available to **Skip Back** or **Skip Forward 2 Seconds** for each press of the keyboard shortcut. The default assignments are Shift+F8 (skip back) and Shift+F9 (skip forward).

Video/Image Cues

Video/Image Cues are available with **SCS Standard** and higher license levels. Video Capture is only available with **SCS Professional** and higher license levels.

Overview

Video/Image Cues are like 'slide shows' or 'story boards' - you can include several image and/or video files to be played sequentially. Although Video/Image Cues can handle multiple video/image files, you may alternatively just include a single file in a cue. Video/Image Cues also support live video feeds through a selected Video Capture Device.

Adding a new Video/Image Cue or Sub-Cue

On selecting the toolbar button or option to add a new Video/Image Cue or Sub-Cue, the action is as follows:

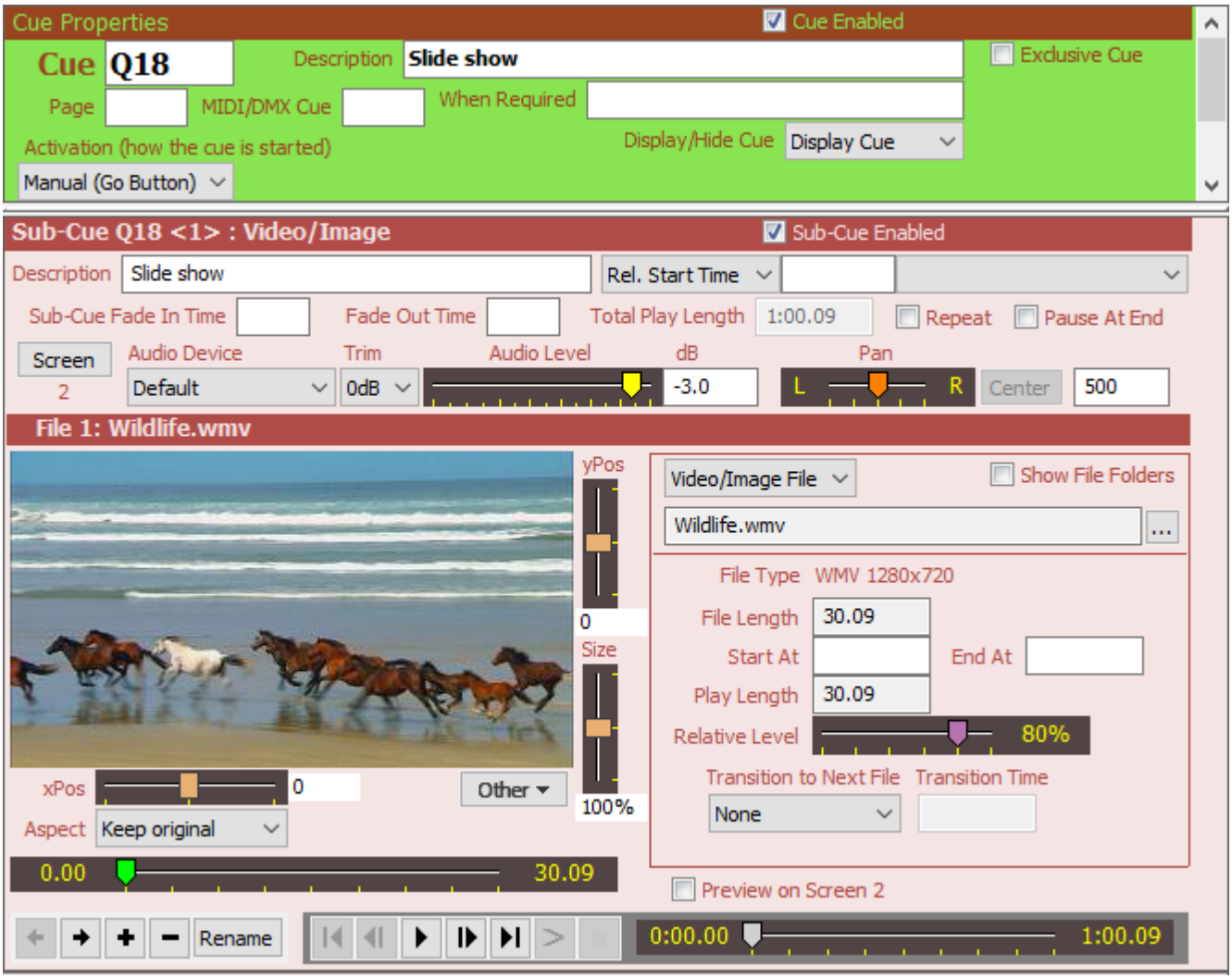
- If *no* Video Capture device has been specified in Production Properties then a File Selector window will be opened to enable you to select the files for the cue. Note that you can select multiple files in the File Selector window. If you select multiple files then you will be asked if you want to create a separate video/image cue for each selected file, or a single video/image cue containing all the selected files. The order of the selected files will probably be the order in which the files are displayed in the file selector, but unfortunately we cannot guarantee the order. If you wish, you can re-order the files (or cues) after you have created the cue(s).
- If a Video Capture device *has* been specified in Production Properties then SCS doesn't initially know if you want to select a file or a video capture device (eg a video camera). So the screen is displayed without a file having been selected. By default the first combo box in the detail panel will show **Video/Image File**, and to select a file you just need to click on the Browse (...) button to select the required file. To select a video capture device, click on the combo box and select **Video Capture**, and then select the required Video Capture Device.

Tip: If you do not yet have the video or image file you want to use for the cue then you can create a **Place Holder** for the Video/Image cue. To do this, simply select **Cancel** in the File Selector, and you will be asked if you want to create a Place Holder, so just click **Yes**. This will create an Video/Image Cue which can be 'played' just like any other video/image cue, but will, of course, immediately complete as there is no file selected and the duration of the cue is 0.000 seconds.
When you are ready to assign a video or image file to this Place Holder cue, simply click the Browse (...) button to select the required file.
(If you Cancel the File Selector and then click **No** when asked if you want to create a Place Holder, then the Add Video/Image Cue operation is also canceled.)

Viewing or Changing a Video/Image Cue or Sub-Cue

To view or change a Video/Image Cue or Sub-Cue, just click on the relevant node in the Editor's Cue List.

When you have added or selected a *Video/Image* cue or sub-cue, a sub-cue panel like this will be displayed:



The above example shows how the panel appears when a **video file** is currently selected. The properties displayed to the right of the main image are slightly different for image files or for video capture devices.

There are four parts to the panel:

- o General and audio
- o Currently-selected file or video capture device
- o Timeline adjustment controls and test controls
- o Timeline

Properties and Controls

General

Sub-Cue Description: Enter a description for this sub-cue. You can leave this field blank and let SCS create a default Sub-Cue Description for you.

Relative Start: These fields are available for every type of sub-cue. For details see *Relative Start* under Audio File Cues. Then click the **Back** button in the Help Viewer to return to this page.

Sub-Cue Fade In Time: Enter the time in seconds (eg 3.5) that you want the video/image cue to fade in with. Leave blank if no fade in of the cue is required. This fade in time is also used when resuming a hibernated video/image *unless* the SFR cue that activates the resume has a 'fade time override' set.

Fade Out Time: Enter the time in seconds (eg 3.5) that you want the video/image cue to fade out over when an SFR cue is activated to fade out this cue. The cue will be marked as 'completed' when the Fade-Out has ended, and any unplayed files in the cue will be discarded, *unless* the SFR cue specifies **hibernate**, in which case the playlist cue will be marked as 'hibernated' and any unplayed files in the cue will still be available when the cue is resumed.

Total Play Length: This display-only field shows the total time of the video/image cue, allowing for cross-fade time etc to avoid double-counting.

Repeat: Select this checkbox if you want the sub-cue to loop back to the start when it reaches the end. The sub-cue will keep on repeating until it is stopped, such as by an SFR Cue or by another Video/Image Cue that uses the same **Screen**.

Pause At End: Select this checkbox to pause the last item (which must be a video file for this property to be effected) when that video file ends. This will *pause* the final video on the last frame. To *stop* (and 'complete') the sub-cue you

will need to use an SFR Cue. Note that currently it is not possible to *fade out* a video file while it is in the paused state. BTW, **Repeat** and **Pause At End** are mutually exclusive.

Screen: Click this button to show a pop-up dialog in which you can select the screen or screens on which this video/image cue is to be shown. For **SCS Standard** and **SCS Professional** licenses, SCS supports up to 4 secondary screens (numbered 2 to 5) provided they are configured as extensions of the Windows desktop. For **SCS Professional Plus** and higher licenses, SCS supports up to 8 secondary screens (numbered 2 to 9). When you set up your cues, select the screen or screens you ultimately want the video/image cue to be played to, even if one or more of those screens are not available on the computer you are using for designing your cues. If a required screen is not available then SCS will use the last available screen, and will adjust the size of the displayed videos and images to share that physical screen with the nominated screens. If no secondary screens are available then SCS will display the videos and images in panels across the top of the cue list in the main window. (See also **Max. Screen No.** in Display Options.)

Tip: If you have a stretched display spanning multiple devices, such as a Matrox *DualHead2Go*, see Options and Settings / Video Driver Settings for information on how to split the stretched display into independent displays.

Important notes about using multiple screens per cue:

- If you select more than one screen (eg you select screens 2, 3 and 4) then SCS always treats the lowest numbered selected screen (2 in this example) as the primary or 'master' screen for this cue, and the other selected screens (3 and 4 in this example) as slaves of the master.
- Any image or video displayed on the master is reproduced on each of the slaves.
- If you are displaying monitor screen panels on the main SCS window then only one monitor is shown for such a cue. However, the caption of that monitor window will identify the corresponding main display screens, eg '2,3,4'.
- This feature is primarily designed for environments in which you have multiple screens that are to show the same video/image cues. SCS may not handle all the weird permutations of multiple cues trying to simultaneously use different mixes of selected screens.

Audio

This section is only relevant for video files.

Audio Device: The audio devices available are as specified under Production Properties - Video Audio Devices. Although each Video/Image cue can only have one Audio Device selected, this property does allow you to send the audio output of different Video/Image cues to different devices. If you want to mute the audio, or if the video file(s) for this sub-cue have no audio, then select 'Mute Audio' as the device. This should be more efficient as the video playback library then will not play the audio track.

Trim: You should only need to use this control if you have files to be played at a low level and you are having difficulty setting the level using the **Level** control. With the **Trim** control you can apply an overall reduction in the level of up to 50dB.

Level: The level fader sets the level (volume) at which SCS will play the cue, after the fade in time if specified. The setting of the fader is also displayed and is enterable as a dB value. The maximum dB setting (loudest) setting is 0dB, which represents the level of the audio file as recorded, ie without any attenuation. If you set the level to -75 or lower then SCS treats this as -infinity, ie silent. You may also enter this as -INF.

Pan: The pan controller sets the stereo position of the sound. The setting of the controller is also displayed and is enterable as a number, where 0 is left, 500 is center, and 999 is right. The **Center** button is enabled if the current value is not 500 (center). Clicking this button sets pan to 500 (center).

Tip: If you want to make fine adjustments to the level or pan, left-click the slider and then use the left-arrow and right-arrow keys as required. When you left-click the slider the background color of the slider will change to your Windows color scheme's *selected item* color (probably blue). This indicates that the slider *has focus* so keyboard actions like left-arrow and right-arrow are processed by that slider.

Tip: For theatre or music productions you will often want just the video image - not the audio. To mute the audio select Audio Device 'Mute Audio' as explained above.

Video/Image File: Video File

This section describes the properties available for handling video files. For details of properties available for handling image files, see Still Images. For details of properties available for handling video capture, see Video Capture.

Video/Image File: This field is common to both videos and still images, and if the type of file selected here determines how the remainder of this section is displayed, ie for video or for still image. The field contains the name of the image file to be displayed. The **...** (browse) button can be used to locate the required file. Most file formats are supported, including AVI, WMV, MPEG, MPG and MP4. Please contact us if you have a format that will not play. Note

that the choice of Video Renderer may affect what can be played. (For still image formats, see Still Images.)

File Type: Summarized information about this file, including the width and height.

File Length: The duration of the video file. (NB: times on video/image cues are only shown to 2 decimal places. Video frame rates are typically up to 30 frames per second, so millisecond timing is not particularly relevant.)

Start At and **End At**: If you do not want to start the cue from the beginning of the file, use the **Start At** field to the time at which the cue is to start. If you want SCS to stop the cue before the end of the file then set the **End At** field to the time at which you want the cue to stop. The 'End At' field is the absolute time within the file, *not* the required time after 'Start At'. Leave 'End At' blank to let the cue run until the end of the file (or until you stop it). For example, to get SCS to stop playing the cue at the 15.45 seconds time with the file enter 15.45 in the 'End At' field.

Play length: This field shows how much of the video file will be played, based on the 'Start At' and 'End At' times. The range of the progress slider below the preview image is set to this Play Length.

Relative Level (%): As with Playlist cues, this fader gives you a chance to adjust the audio level of an individual video file, making it louder or softer than the others. The default setting for this fader is 80%, so by default you have headroom available for increasing the level of a file.

xPos, yPos, Size, Aspect and **Other**: These controls enable you to adjust how the video image is displayed. See the description of these controls under *Still Images* for more information, including information on how to adjust the X/Y position and size using the mouse or keyboard. See also Using SCS Sliders for tips on resetting the sliders to their default values.

Transition to Next File: This defines how the cue is to transition from this file to the next file in the cue. Options are

- **None**: No 'transition' is required, and that when this file has completed the next file will start, with no cross-fade, etc.
- **Cross Fade**: This file will fade out and the next file will simultaneously fade in. The duration of the cross-fade is specified in the **Transition Time** field.

IMPORTANT NOTE: The Transition properties are used between items *within the current Video/Image Sub-Cue only*. They are NOT used to control the transition from the current cue or sub-cue to the next cue or sub-cue.
If you want to cross-fade the last image in this cue or sub-cue to the first image in the next cue or sub-cue then you need to use the **Sub-Cue Fade In Time** of that next cue or sub-cue. Here are a couple of examples:

Example 1: Q1 displays an image, and after 30 seconds you want a 2-second cross-fade to the image in Q2.

- Set up Q1 with a display duration of 32 seconds.
- Set up Q2 to auto-start 2 seconds before the end of Q1, and set Q2's fade in time to 2 seconds.

Example 2: Q3 displays an image to be displayed continuously until Q4 (another image cue) is manually started. Q3 is then to cross-fade to Q4 over 5 seconds.

- Set up Q3 with the 'continuous' checkbox selected.
- Set up Q4 (manual start) with a sub-cue fade in time of 5 seconds.

Timeline

The timeline is shown the full width of the Editor window. If you change the width of the Editor window then the timeline will also be resized.

A thumbnail of each video and image file is shown in the timeline, plus a 'spare' for adding video/image files to the end of the timeline. The filename, excluding the file extension, is shown below the thumbnail, and also the Play Length (for videos) or Display Time (for images and video capture devices). Here is an example:

Clicking on a thumbnail in the timeline marks that as the currently-selected file, so the image and properties for that file are then displayed in the 'currently-selected file' area. A border is displayed around the thumbnail. You can also multi-select files by holding down Ctrl or Shift while you click the thumbnails, or press Ctrl+A to select all files. If you do select more than one file then no preview image will be displayed, and only fields common to all selected files will be displayed to the right of the preview panel. Where fields are displayed, any values in those fields will only be displayed if they are the same for all of the selected files.

If you click the 'spare' thumbnail at the end of the timeline, the file browser window is opened to enable you to select one of more video/image files to be added to the end of the timeline.

See also Drag and Drop for details on how files can be dragged from an external application.

Timeline Adjustment Controls

To change the order of the files in the timeline, use the left-arrow and right-arrow buttons below the timeline to move the selected file or files. (It is not yet possible to change the order of the files by drag-and-drop - that feature will be added later.) The 'plus' button allows you to insert one or more files immediately before the selected file, provided only one file is currently selected. The 'minus' button allows you to remove the selected file(s) from the cue (multiple files may be selected for this operation). The 'Rename' button allows you to rename the selected file, provided only one file is currently selected.

Testing your Video Cue

You can test your Video Cue or Sub-Cue using the controls available in the 'Test' panel. Press the 'play' button to start the test. Other buttons enable you to go to the first, previous, next or last file. A tooltip is displayed when you hover the mouse over a button. Note that keyboard shortcuts are available for Play/Pause and Stop. The default shortcuts are F5 (Play/Pause) and F6 (Stop).

Preview on Output Screen: If you select this checkbox then your video/image cue will display on the nominated screen. SCS remembers the setting of this checkbox during the current session, but deliberately does not save the setting across sessions. This is to avoid the possibility that you set this in your last editing session, then go into live production, and for some reason need to open the Editor during the live production. By not saving the setting across sessions this avoids the possibility of accidentally having your editor's video/image cue displayed on the main output screen when you have an audience present.

Keyboard shortcuts are also available to **Skip Back** or **Skip Forward 2 Seconds** for each press of the keyboard shortcut. The default assignments are Shift+F8 (skip back) and Shift+F9 (skip forward).

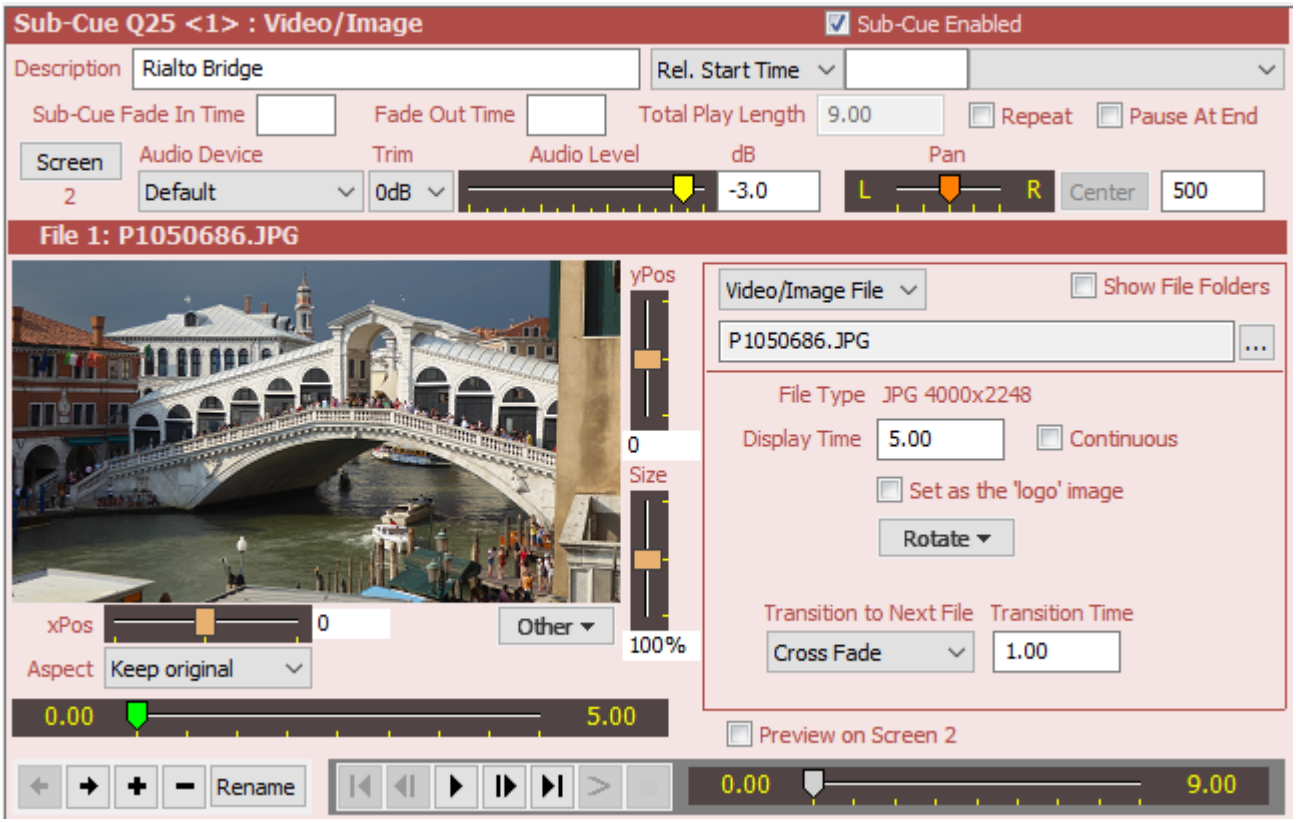
Video/Image Cues - Still Images

Overview

Still images can be included in Video/Image Cues. Although Video/Image Cues can handle multiple video/image files, you may alternatively just include a single file in a cue.

You can also select an image to be displayed as a 'logo' whenever no other video/image cues are being played to the selected screen. For example, instead of the default black screen you could display a company logo or an image in keeping with the production.

When you add or select an image file in a Video/Image cue or sub-cue, a sub-cue panel like this will be displayed:



Properties and Controls

Properties are as described under Video/Image Cues except for the following:

Images

This section describes the properties available for handling image files. For details of properties available for handling video files, see Video/Image Cues.

Video/Image File: This field is common to both videos and still images, and if the type of file selected here determines how the remainder of this section is displayed, ie for video or for still image. The field contains the name of the image file to be displayed. The **...** (browse) button can be used to locate the required file. Still image formats accepted are PNG, JPG, BMP and GIF. NB although the term 'still image' is used extensively, SCS also supports animated GIF's, which are obviously not 'still'.

File Type: Summarized information about this file, including the width and height.

Display Time and **Continuous**: Enter the length of time you want this image to be displayed in **Display Time**, or select **Continuous** if the image is to play continuously. The **Continuous** option is only available for the last file in the cue, and **Continuous** and **Repeat** are mutually exclusive - if you want to **Repeat** the cue then you must set a **Display Time** for every Image file, including the last Image file. The 'default' Display Time for a new image file is the Display Time of the previous image added or selected. Note that if you have many images in a cue and you want to change the Display Time of some or all of them then just multi-select the thumbnails of the relevant images and then enter the required new Display Time and press the Tab key.

Set as the 'logo' image: This is the property you should select if you want this image to be used as a 'logo' instead of the default black screen displayed when the selected screen is inactive, ie when no other video/image cues are playing to that screen. This could be a logo, but it may be *any* image supported by SCS. A few important points about 'logo' images:

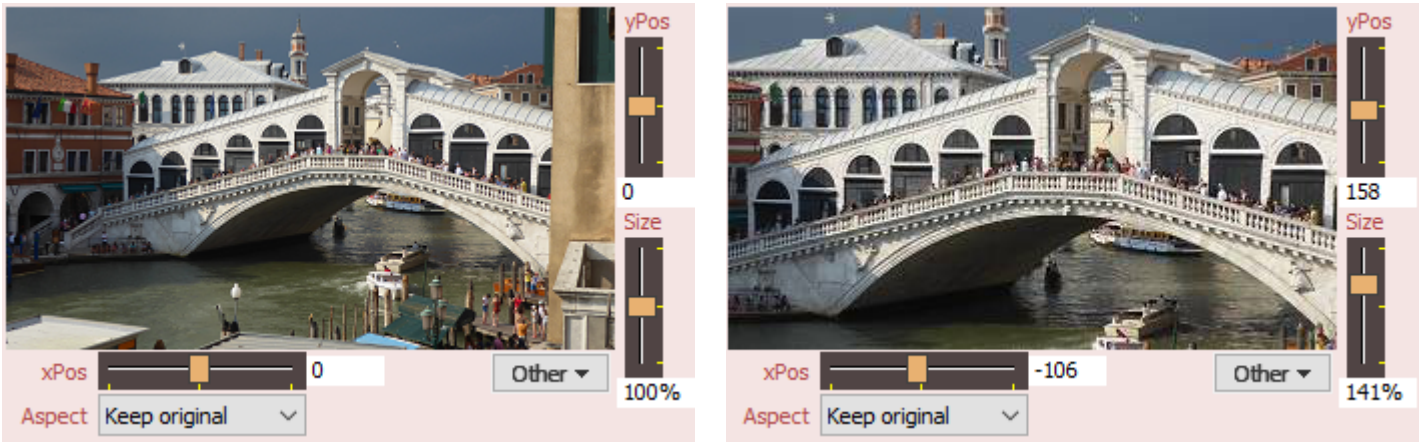
- If you select this checkbox then the **Display Time** and **Continuous** properties are cleared as they are not

applicable.

- A logo image, if used, must be the *only* item in a video/image cue or sub-cue.
- When a logo image sub-cue is played, the image is saved and, if applicable, displayed. The sub-cue is then marked as 'completed'.
- Typically you would have a logo image cue at the top of your cue list.
- The **Sub-Cue Fade In Time** can be set to fade in the logo image whenever it is to be displayed. This avoids having the image displayed suddenly. The **Fade Out Time**, however, is not used.

Rotate: This button provides options to rotate or flip the image. You can both rotate and flip if required. The selected option will be displayed to the right of this button, unless the image is in the normal default state. The selected option will be stored as a sub-cue property so will be preserved between SCS sessions.

xPos, yPos, Size and **Aspect**: These four controls enable you to adjust how the image is displayed. For example:



The first screenshot shows the full image as it would be displayed using the default settings. The second screenshot shows how the image would be displayed with adjustments made to the size and position (using sliders **Size**, **xPos** and **yPos**).

Each of these sliders has an associated text field (eg the text field for yPos in the second image shows 158). You can enter any required value into these fields for more precise settings. The **xPos** and **yPos** settings are display offsets (positive or negative) up to the source width or source height.The **Size** field is a percentage in the range 0% to 200%. A setting of 0% is no display at all, and 200% is double-size.

See Using SCS Sliders for tips on resetting the sliders to their default values.

The **Aspect** control (not changed in the above example) specifies the aspect ratio for the displayed image, ie how the image is displayed on the target screen. If you want the aspect ratio unchanged then leave this control at *Keep original*. Other options are: *Full screen, 16:9, 4:3, 1.85:1, 2.35:1,* and *Custom*. If you select *Custom* then a slider will be displayed giving you variable control of the aspect ratio.

Moving the Video/Image using the Mouse or Keyboard

You can also adjust the video/image position (X and Y position) by clicking and dragging the image in the preview panel. Alternatively, while the mouse cursor is over the image in the preview panel you can use the arrow keys on your keyboard to move the image. If you hold down a shift key when using the arrow keys, then increments are small (about 1 pixel of the selected 'Screen').

Resizing the Video/Image using the Mouse Wheel or Keyboard

While the mouse cursor is over the image in the preview panel you can zoom in or zoom out (ie change the size) by using the mouse wheel. Alternatively, while the mouse cursor is over the image in the preview panel you can use the + and - keys on your keyboard to resize the image. If you hold down a shift key when using the + or - keys, then increments are small (about 1 pixel of the selected 'Screen').

Other: The first option under this control is *Use default position, size and aspect*. This item will be enabled if any of **Size**, **xPos** and **yPos** are not at their default settings. The item enables you to easily reset the controls to their defaults. Other items under the **Other** control are *Copy position, size and aspect into clipboard*, and *Paste position, size and aspect from clipboard*. These items are useful if you have made adjustments to position, size and/or aspect for an image and want to use those same settings for other images, either in the same cue or in other cues. When you have copied position, size and aspect to the clipboard, then *Paste...* option is then changed to identify the source, eg *Paste position, size and aspect from clipboard (copied from Q12<.3> (DSC_2862.JPG))*.

Transition to Next File: For an explanation of the transition properties, see the description of this property under Video/Image Cues.

Note: SCS buffers up to two still images at a time, which typically will be the currently displayed image plus the next image to be displayed. When an image file is closed, SCS will look for the next image file to be loaded. However, SCS will defer that operation if an image fade is in progress. This is because loading an image file can affect the performance of the fade, especially if the image file being opened is large. If you are displaying images continuously using cross-fades then make sure the **Display Time** is at least 0.5 second greater than the cross-fade **Transition Time** to give sufficient time for SCS to load the next image. This will not be an issue for normal slide show use where each image has a period of time in which it is visible on its own. It would only be an issue if you want to continuously fade between images.

Animated Image Limitations

- The following properties cannot be set for an animated image (eg for an animated GIF): xPos, yPos, Size, Aspect, Rotate, Logo.
- Although fading of animated images is supported, we do not recommend using fades for an animated image that is displayed to more than one screen. The processing time required to resize and blend each frame for multiple screens can exceed the frame delay times of the animated image.

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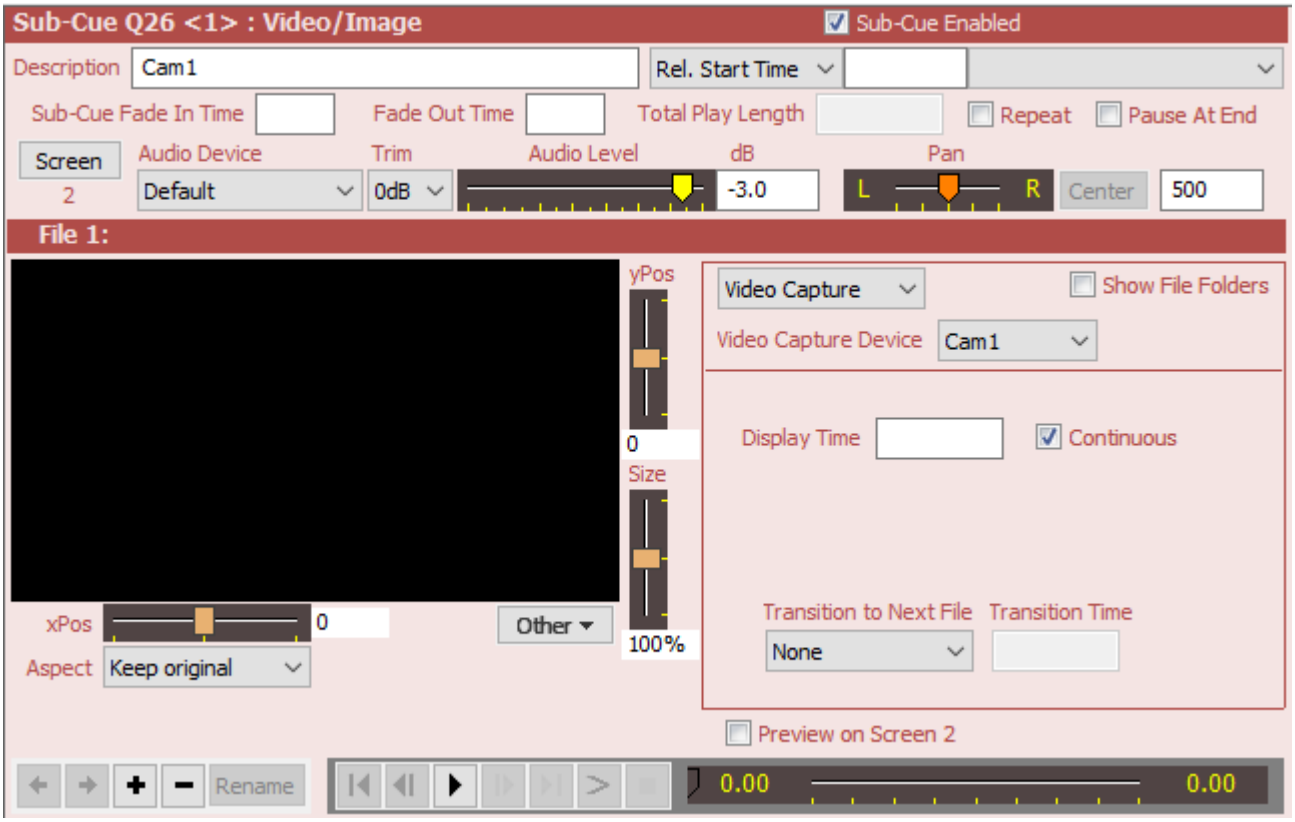
Video/Image Cues - Video Capture

Video Capture is only available with **SCS Professional** and higher license levels.

Overview

Video capture (eg the live feed from a camera) can be included in Video/Image Cues. Although Video/Image Cues can handle multiple video/image files, you may alternatively just include a single file or video capture in a cue.

When you select Video Capture using the selector combo box, a sub-cue panel like this will be displayed. Although the image is initially shown black, when you test the cue using the Play button the image from the selected device (eg video camera) will be displayed.



Properties and Controls

Properties are as described under Video/Image Cues except for the following:

Video Capture

Video Capture Device: The video capture devices (eg for live camera feeds) available are as specified under Production Properties - Video Capture Devices. Although eac

Display Time and **Continuous**: Enter the length of time you want the feed from the video capture device to be displayed in **Display Time**, or select **Continuous** if the feed to be displayed continuously. The **Continuous** option is only available for the last file or feed in the cue, and **Continuous** and **Repeat** are mutually exclusive - if you want to **Repeat** the cue then you must set a **Display Time** for every file and feed, including the last file or feed. The 'default' Display Time for a new feed is the Display Time of the previous video capture added or selected. Note that if you have many files and/or feeds in a cue and you want to change the Display Time of some or all of them then just multi-select the thumbnails of the relevant items and then enter the required new Display Time and press the Tab key.

xPos, yPos, Size, Aspect and **Other**: These controls enable you to adjust how the video capture image is displayed. See the description of these controls under *Still Images* for more information, including information on how to adjust the X/Y position and size using the mouse or keyboard. See also Using SCS Sliders for tips on resetting the sliders to their default values.

Transition to Next File: For an explanation of the transition properties, see the description of this property under Video/Image Cues.

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Lighting Cues

Lighting Cues are only available with **SCS Professional** and higher license levels. DMX is used for primarily for lighting control.

With **SCS Professional** you are limited to DMX Channels 1-32 only, and only a single universe. To use DMX Channel numbers greater than 32 you need an **SCS Professional Plus** or higher license.

Prerequisites

Before you can create a **Lighting Cue**, you must:

1. Set up required **Fixture Types** under Fixture Types in Production Properties.
2. Set up a **Lighting Device and Fixtures** under Lighting - DMX Devices and Fixtures in Production Properties.

Note: SCS supports DMX Devices only via the following ENTTEC and FTDI devices (www.enttec.com and www.ftdichip.com):

- **ENTTEC DMX USB PRO MK2**
- **ENTTEC DMX USB PRO**
- **ENTTEC OPEN DMX USB**
- **FTDI USB-RS485 cable**

The **FTDI USB-RS485 cable** device is compatible with the **ENTTEC OPEN DMX USB**.

Installing the D2XX driver for any of the above devices should install ftd2xx.dll. If SCS cannot find ftd2xx.dll as a loadable library then DMX will not be enabled.

Please note: the **USB PRO** and **USB PRO MK2** are the preferred devices.

DMX needs to be refreshed about 40 times a second, and the USB PRO and USB PRO MK2 handle that refreshing internally. The OPEN DMX USB and FTDI USB-RS485 do *not* handle DMX refreshing and so for these devices SCS needs to handle the refreshing. This is a processing overhead.

Overview

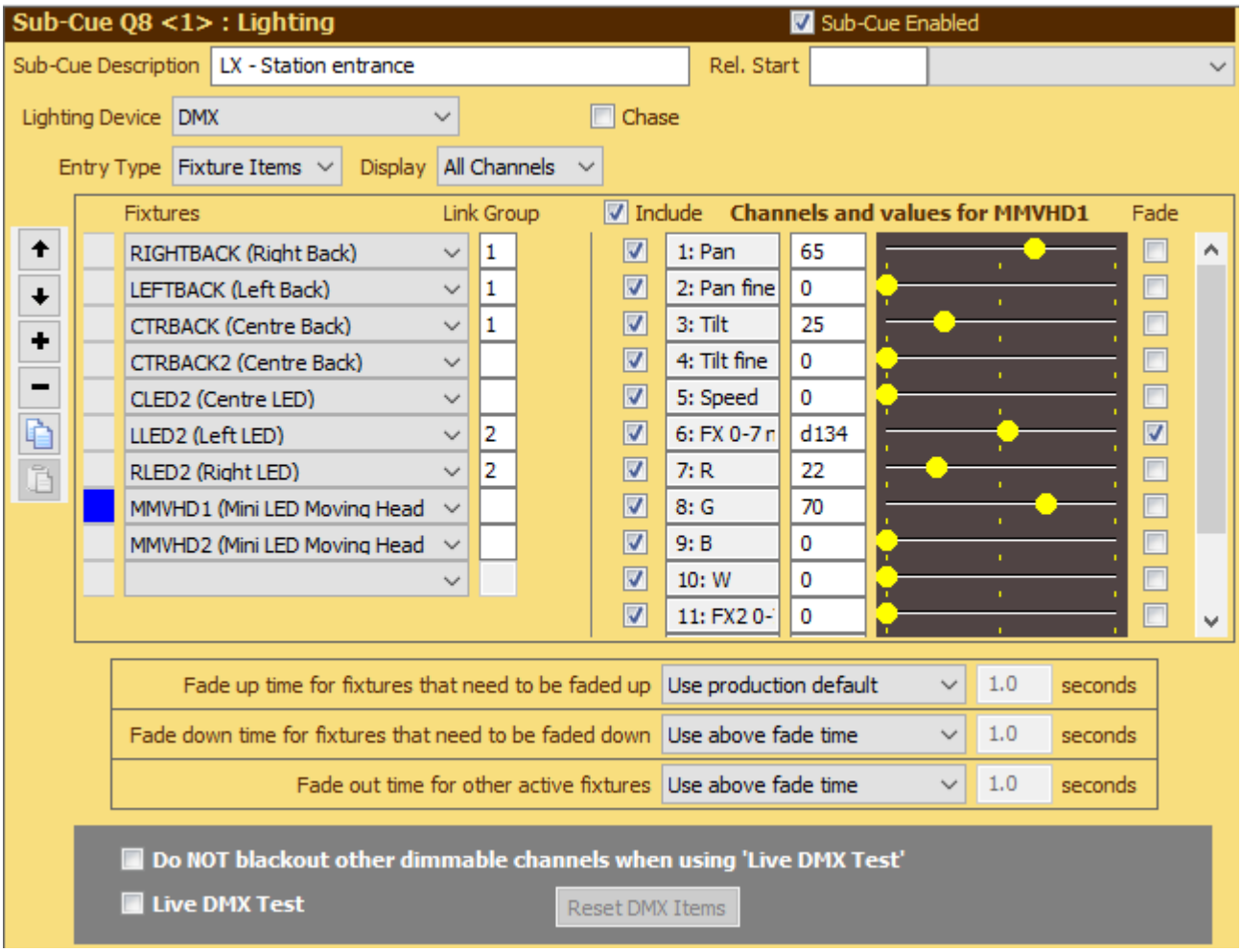
Lighting Cues use DMX to control lighting fixtures or dimmers but can, of course, be used to control any other equipment that accepts DMX. SCS generally implements the "**tracking**" method, whereby once a channel is at a value, it remains at that value until another cue sets the channel to a new value. However, this can be overridden by selecting a different option under **Fade out time for other active channels**. This will effectively enforce the "**preset**" method, whereby the cue represents a snapshot of how *all* DMX values are to be set.

SCS implements "**LTP (Latest Takes Precedence)**". This means that if you set a channel to a value and then set the same channel to a new value, then the new value takes precedence.

Tips for creating a Lighting Cue similar to another Lighting Cue:

1. If you want to create a Lighting Cue (or Sub-Cue) that's identical to or similar to an existing Lighting Cue then you can just use Copy and Paste to create the new cue.
2. However, if you have *already* created the new Lighting Cue and wish to change it to be identical to or similar to another Lighting Cue, then you can use Copy Properties from another Cue or Sub-Cue.
3. Finally, if you have a lighting plot that you wish to use several times in the show then consider creating a Lighting Cue with an Activation Method of Callable Cue, and then use a 'Call Cue' Cue each time you want to activate that lighting plot. See Callable Cue for details. We recommend Callable Cues be placed at the end of your cue list.

Here's an example of a Lighting Cue:



Properties and Controls

General

Sub-Cue Description: Enter a description for this sub-cue.

Relative Start: These fields are available for every type of sub-cue. For details see *Relative Start* under Audio File Cues. Then click the **Back** button in the Help Viewer to return to this page.

Lighting

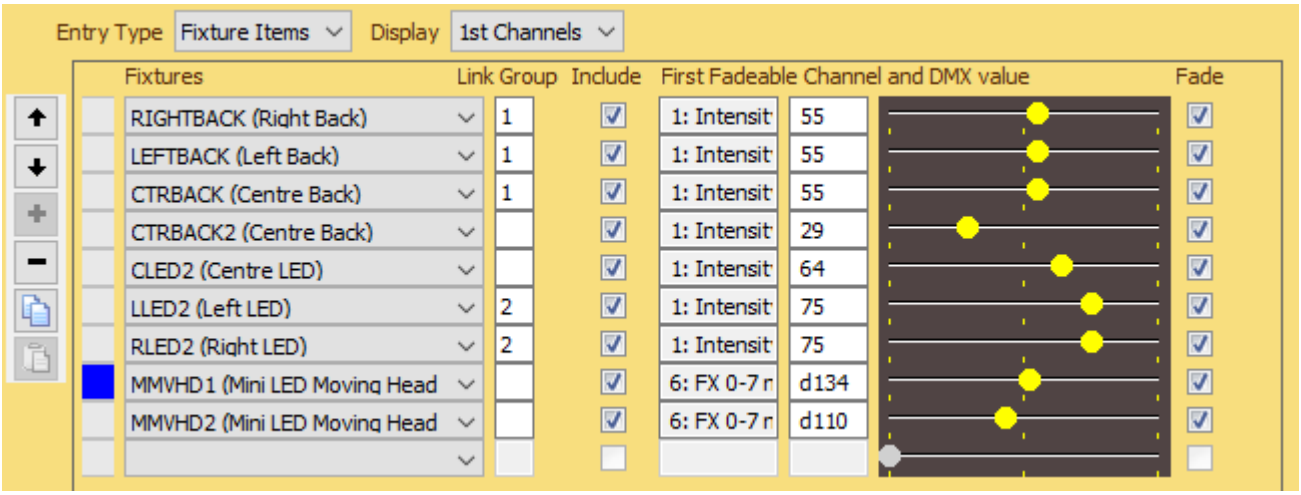
Lighting Device: Select a Lighting Device from the drop-down list. See Production Properties - Lighting - DMX Devices and Fixtures for more info.

Chase: Leave this checkbox clear if the Lighting Cue is not a chase. If you do want this cue to implement a chase then select the **Chase** checkbox. Some additional fields will be displayed. For the revised screenshot and further information see Chase Lighting Cues.

Entry Type: For a Lighting Cue where you want to set specific values for selected Fixtures, select **Fixture Items**. For a blackout, select **Blackout**. You can alternatively select **DMX Items** which enables you to use the pre-SCS 11.8 method of entering DMX values, eg "PAR1,PAR2:1@20,2-3@25, PAR3:1@100". See Lighting Cues - Pre SCS 11.8 for more info on **DMX Items**. Another Entry Type is **DMX Capture**, which enables you to build a Lighting Cue using DMX values captured either as a snapshot (single instance) or as a sequence. See DMX Capture Lighting Cues for details.

If you have Lighting Cues set up using an older version of SCS, then these will only *be displayed with an Entry Type of* ***DMX Items****.*

Display: This control is only displayed for **Fixture Items**. The default setting is **All Channels** and will display all channels for the currently-selected fixture. So in the above screenshot, all the channels for fixture MMVHD1 are displayed and can be adjusted. If you change the **Display** setting to **1st Channels** then the next part of the screen will change to show just the first fadeable channel for each fixture. ***This is particularly useful if you have many single-channel fixtures.*** Here's an example of how this may appear:



In the theatre used for building this cue, the first seven of the fixtures used in this cue (down to RLED2) were all single-channel fixtures. The last two fixtures shown above were moving head fixtures where channel 6 was an effects channel, were DMX values in the range 8-134 set the intensity. As can be seen in the earlier screenshot on this page, channel 6 is the first (and only) channel marked as fadeable, for this fixture.

Note that the **Display** setting just determines how the fixture properties are displayed on this screen - it is not a 'property' so does not get saved in the cue file and does not affect the DMX values sent by the cue.

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*The following properties and controls are display for Entry Type **Fixture Items**. They are not required for **Blackout**.*

Fixtures

Fixtures: Select the Fixture(s) you require for this Lighting Cue. The **Fixtures** controls are populated from the fixtures you have set up under Production Properties - Lighting - DMX Devices and Fixtures.

Link Group: This is optional, and if set then causes all the fixtures in the same **Link Group** to have the same channel values set. If used, it must be numeric in the range 1-9. For example, in the screenshot above the first three fixtures are in link group 1. If the you move the slider for channel 1 (Intensity) for any of these fixtures then that same new value change will also be applied to the other fixtures in that **Link Group**. All **Fixtures** associated with a specific **Link Group** must all have the same **Fixture Type**. This is to ensure that the relative channel numbers of all Fixtures in the Link Group have the same purpose.

Side-Bar Buttons: The buttons to the left of **Fixtures** can be used to move individual Fixtures up or down, or to add or remove a Fixture from the cue. Clicking the **Copy** button will copy all the **Fixtures, DMX values, etc** for this sub-cue to a clipboard. Clicking the **Paste** button will replace any **Fixtures, DMX values, etc** with those currently saved in the clipboard. The **Copy** and **Paste** facility is not available for **Chase** cues, so those buttons will be disabled if Chase has been selected. Note that SCS will display a meaningful tooltip if the mouse hovers over any of the side-bar buttons.

Channels and Values - Display Setting 'All Channels'

*The items listed here are for the **Fixture** currently selected on the left. You can select a Fixture by clicking on the selector button, where ■ indicates the currently-selected Fixture (MMVHD1 in the above example).*

Channel Numbers and Descriptions; When you select a Fixture on the left, the details for that Fixture are displayed on the right, with one entry for each channel as determined by the Fixture Type of that Fixture. The channel number and description are shown for each channel. Note that if you cannot see the entire description then just hover the mouse pointer over the field to see a 'tooltip' that contains the channel number and the full description.

Include: The **Include** checkbox to the left of the Channel Number and Description should be set if the specified DMX value for this channel is to be included when the cue is played. Clear the checkbox if setting the DMX value for this channel is not required in this cue. If the checkbox is clear then the DMX Value and Slider for this channel will be disabled. The **Include** checkbox at the top of the list (to the left of the word 'Include') enables you to bulk change the Include settings for all channels in the currently-selected fixture.

DMX Value: You may enter the DMX value you require using the text field or you may use the slider. The value in the text field may be a percentage entered just as a number between 0 and 100, or a DMX value entered as dmx followed by a number in the range 0-255, eg dmx230. dmx may be abbreviated to d, eg d230. When using the slider, if the value displayed in the text field starts with d or dmx then the slider will recognize the value as a 0-255 DMX value. If the value displayed is just an integer then the slider will recognize the value as a 0-100 percentage. The slider is useful when used in conjunction with **Live DMX Test** as it enables you to easily view changes. Note that when the slider has focus then you can make small changes using the left- and right-arrow keys.

Fade: In the lower part of the screen are the fields **Fade time up time for fixtures that need to be faded up** and

Fade down time for fixtures that need to be faded down. If times are selected in those fields then they will be applied against each channel that has the **Fade** checkbox selected. By default, when adding a Fixture to the cue this checkbox will be selected for each channel identified in the associated Fixture Type as a Dimmer Channel, and will be clear for non-dimmer channels. However, the Fade checkbox is included here so you can override this setting on a channel-by-channel basis. For example, you may want to 'fade' the pan and tilt channels to move the head from it's existing position to a new position. Pan and tilt are not dimmable channels. Although 'fade' is not actually the correct term for this activity, the term has been selected to refer to any DMX value change over time.

Channels and Values - Display Setting '1st Channels'

*The items listed here show the first included fadeable channel for each **Fixture**.*

Channel Numbers and Descriptions; The relative channel number and description of each fixture's first included fadeable channel will be displayed here. If there is no included fadeable channel for a fixture then the first channel for that fixture will be shown. Note that if you cannot see the entire description then just hover the mouse pointer over the field to see a 'tooltip' that contains the channel number and the full description.

Include: As above, except that the **Include** checkbox at the top of the list is not present, as that is a 'fixture-level' include control.

DMX Value: As above.

Fade: As above.

Fade up time for fixtures that need to be faded up: This drop-down list determines the fade up time to be applied to included **Channels** that have the **Fade** checkbox selected, where the new DMX value is greater than the DMX value current at run time. The choices are:

- *None:* No fade will be applied by default, eg if channel 2 is included and has been assigned a value of 59 then when the cue is played SCS will instantly set channel 2 to 59%.
- *Use production default:* This will use the **Default Run Time DMX Fade Time for Lighting Cues** set in Production Properties - Run Time Settings.
- *Use this fade up time:* This will enable the associated Fade Time field, allowing you to enter the required fade up time in seconds and decimals of a second (eg 1.5).

Fade down time for fixtures that need to be faded down: This drop-down list determines the fade down time to be applied to included **Channels** that have the **Fade** checkbox selected, where the new DMX value is lower than the DMX value current at run time. The choices are:

- *None:* No fade will be applied by default, eg if channel 2 is included and has been assigned a value of 59 then when the cue is played SCS will instantly set channel 2 to 59%.
- *Use above fade time:* This will use the time selected against **Fade up time for fixtures that need to be faded up** (see above) even if that is *None* or 0.
- *Use this fade down time:* This will enable the associated Fade Time field, allowing you to enter the required fade down time in seconds and decimals of a second (eg 1.5).

Fade out time for other active fixtures: If you want any *other* active *and dimmable* fixture channels to be faded out (or immediately blacked out) when this cue is run, then select the required option from this list:

- *Do not fade out others:* As the description implies, any other active DMX channels (ie DMX channels currently with values greater than 0) will be left at their current values. This is in keeping with the 'tracking' method of lighting consoles.
- *Use above fade time:* Any other active dimmable channels will be faded out over the time selected against **Fade down time for fixtures that need to be faded down** (see above) even if that is *None* or 0.
- *Use this fade out time:* This will enable the associated Fade Time field, allowing you to enter the required fade out time in seconds and decimals of a second (eg 1.5).

Note 1: Separate fade up and fade down times are provided primarily to allow for better cross-fades. Cross-fades can be improved by entering a longer time for the fade down.

Note 2: Fades on other active channels is designed for genuine lighting fades - not for movements etc. So fades on other active fixtures only affects channels identified in the associated Fixture Types as dimmable channels. Fades on other active fixtures does *not* refer to the 'Fade' checkbox described under 'Channels and Values' above.

Note 3: Times for *Use this fade up/down/out time* may be entered as parameter id's if the parent cue has an activation method of Callable Cue and where Parameters have been entered. This enables you to have basically the same Lighting Cue but with different fade times based on parameters entered in a 'Call Cue' Cue. See also Callable Cue.

Do NOT blackout other dimmable channels when using 'Live DMX Test': When you use **Live DMX Test** (described next) SCS will blackout all other active dimmable channels *unless* you first of all select this 'Do NOT blackout...' checkbox.

Live DMX Test: If you select this checkbox then the DMX Values are sent to the DMX interface. This enables you to check, for example, a real lighting effect while you drag DMX Value sliders until you get the effect and intensity you

desire. The purpose of **Live DMX Test** is to enable you to view the *end result* of the Lighting Cue. SCS will blackout all other active channels *unless* you first of all select the 'Do NOT blackout...' checkbox described above.

Reset Items: If you make any changes to the DMX Items, including the use of the DMX Values slider, then you can use the **Reset DMX Items** button to reinstate the original items and values. Note that this will not reset the *Fade time* setting or the *Fade out time for other active channels* setting.

Hotkey/External 'note' and 'toggle' cues

Using 'note' or 'toggle' hotkeys or external activation can be useful. With hotkey **'note'** activation, when the hotkey is pressed and held down SCS plays the lighting cue as normal, but when the hotkey is released SCS resets the designated DMX channels to their values prior to the hotkey being pressed. This can be useful for audience blinders, lightning effects, flashes from explosions, etc. With **'toggle'** activation, if the current toggle state = 1 (as shown in the hotkey list in the main window) then SCS saves the current DMX channel values for channels used by this cue, and then plays the lighting cue as normal. If the current toggle state = 0 the SCS resets the DMX channel values from the previously-saved values. These actions also apply to the corresponding external activation methods.

Run Time Note: If you manually select the next cue in the main window, eg by clicking on a cue in the cue list, SCS attempts to calculate the DMX values that would be active immediately prior to your playing that next cue. Whenever a cue (any cue) is started, SCS records in a temporary database a snapshot of all current DMX channel values, as well as the cue number. Only the latest snapshot for each cue is retained. When calculating DMX starting values, SCS initially looks for an entry in the database to retrieve the DMX values set prior to that cue last being started. If no snapshot is found for that cue, SCS scans all prior Lighting Cues and also Call Cues that call Lighting Cues, and calculates the DMX values from that scan.

This is ideal for rehearsals if the director wants to rehearse a part of a scene - possibly several times. If you do not want this calculation to occur, possibly because you are heavily reliant on the use of hotkeys for the current production, then you can disable the feature by selecting the Production Properties Run Time Setting 'Do NOT calculate starting DMX values when manually resetting the next cue'.

Note that any DMX snapshots in the temporary database are cleared on opening or creating a cue file, so are only relevant for the current session.

Lighting Control by External Fader

A Lighting Cue can alternatively be controlled using an external fader, such as a fader on a nanoKONTROL or a Behringer BCF2000 or BCR2000. See Lighting Control by External Fader for details.

DMX Master Fader

Note that SCS provides a **DMX Master Fader** to enable you to globally adjust the intensity of lighting. See Meter Display and Master Faders for details.

Credit

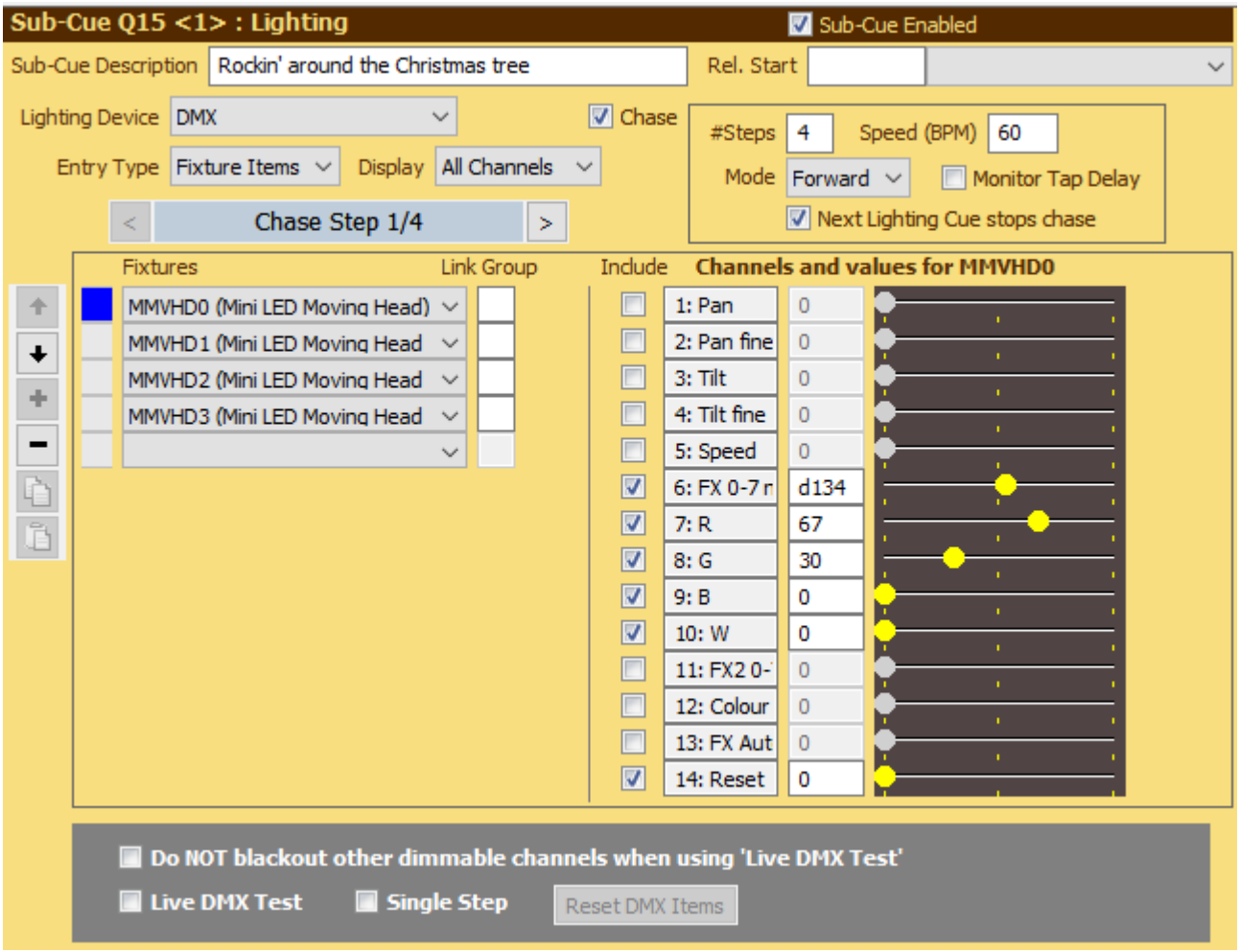
Special thanks to Bruce Gray, Dieter Edinger, Davide Bellucci and Lluís Vilarrasa for advice on the design of SCS Lighting Cues, and to Michel Winogradoff and Didier Petit for advice on external fader control.

Chase Lighting Cues

Overview

Under Lighting Cues we explained how to set up a normal (non-chase) Lighting Cue. The following provides details specifically for Chase Lighting Cues.

If the **Chase** checkbox is selected then some changes are made to the screen layout as shown in the following example:



If you are not familiar with SCS Lighting Cues and/or have not read the help page on Lighting Cues, please read that now.

Chase-specific fields are as follows:

#Steps: This defines the number of steps in the chase and must be between 2 and 8 for SCS Professional users, or between 2 and 24 for SCS Professional Plus and Platinum users. The default is 4.

Speed (BPM): The required speed of the chase in beats per minute, which must be between 1 and 480. This defines the duration between successive steps, so 100 BPM translates to 600ms between steps. The default is set to the **Default Chase Speed (BPM)** as set in Production Properties / Run Time Settings. See also **Monitor Tap Delay** (below). Hint: You can also set the **Speed (BPM)** field using the Tap Delay keyboard shortcut (default Ctrl+.) even if you have *not* selected Monitor Tap Delay, and even if focus is not currently on Speed (BPM).

Mode: This defines how the chase moves. The options available are Forward (default), Reverse, Bounce and Random.

Monitor Tap Delay: If this checkbox is set then when the cue is running SCS will set the speed according to the current tap delay time as set by the use of a keyboard shortcut (default Ctrl+.) or by a nominated MIDI or Network message. Taking the keyboard shortcut as an example, the tap delay time is set by averaging the delay time over 3 or 4 consecutive presses of the shortcut key, where the time since the last key press is less than 1.5 seconds.

Note: The chase speed and flashing indicator shown in the VU meter area of the main screen may display the chase speed in one of three colors, eg:

Grey, eg 80: The chase speed is currently the production default but may be adjusted using the tap feature.

Orange, eg 104: The chase speed has been set by using the tap feature, and may be adjusted using the tap feature.

Yellow, eg 100: The chase speed has been set by a Lighting Cue which does not have 'Monitor Tap Delay' set.

The **Speed (BPM)** in a Lighting Cue is used if (a) **Monitor Tap Delay** has not been set, or (b) **Monitor Tap Delay** *has* been set but the operator has not yet manually set a tap delay time this SCS session. If the operator subsequently manually sets the tap delay time then SCS immediately applies the tap delay time to this cue if **Monitor Tap Delay** is set.

Next Lighting Cue stops chase: If this checkbox is selected the the chase will be stopped when another lighting cue is started. Note: A DBO lighting cue will always stop a chase.

Chase Step: In the above screenshot you will see this displayed as 'Chase Step 1/4', ie step 1 of 4. This indicates that the DMX Items and DMX Value fields are for Chase Step 1. To view or edit the DMX Items and DMX Values for Step 2, click the **> button** to the right of the **Chase Step** field. You can obviously then click the **< button** to go backwards through the DMX Items and DMX Values for earlier steps.

Fixtures

The **Fixtures** and **Link Group** are as specified under Lighting Cues. For a chase Lighting Cue, these fields can only be set in Step 1 of the chase - they are common to all chase steps.

Channels and DMX Values

The **Include** and **DMX Values** can be set differently for each chase step.

Other

Do NOT blackout other active channels when using 'Live DMX Test': See Lighting Cues.

Live DMX Test: Select this checkbox to immediately view the effect of the chase.

Single Step: This is similar to **Live DMX Test** except that only the DMX for the currently-selected step will be sent. To view the next step, click the **> button**.

Notes

- You can have as many chase cues as you wish in a production but SCS will only process one chase at a time. When you start a chase cue SCS checks if a chase is currently running, and if so then SCS will stop the cue (or sub-cue) that started that chase. Stopping a chase cue sets to 0 all the *dimmable* channels that were specified in the chase.
- A chase cue can also be stopped by an SFR cue.
- Another lighting cue will also stop a chase cue if the chase cue itself has the **Next Lighting Cue stops chase** property selected, or if the new lighting cue contains a DBO command.
- No fades between chase steps are supported.

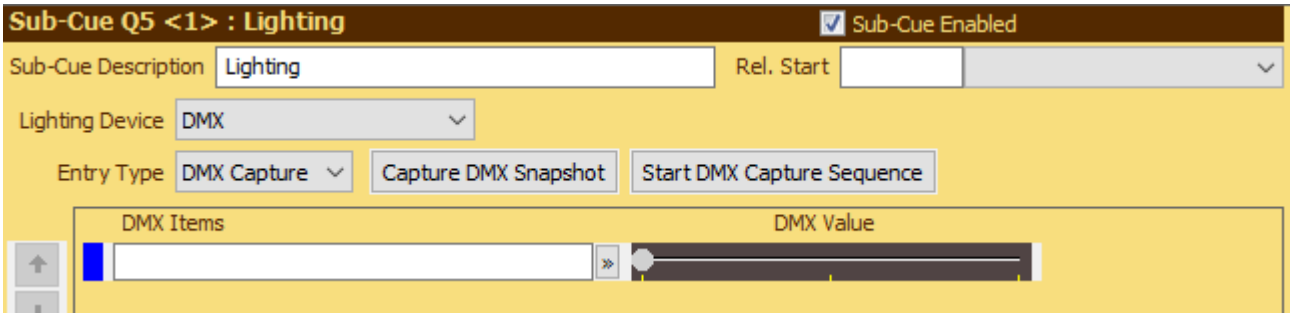
DMX Capture Lighting Cues

DMX Capture Lighting Cues are only available with **SCS Professional Plus** and higher license levels.

Overview

This feature enables you to create a Lighting Cue using DMX data captured from the selected Lighting Device. This enables you to reproduce in SCS a lighting cue originally created using a lighting board or other software.

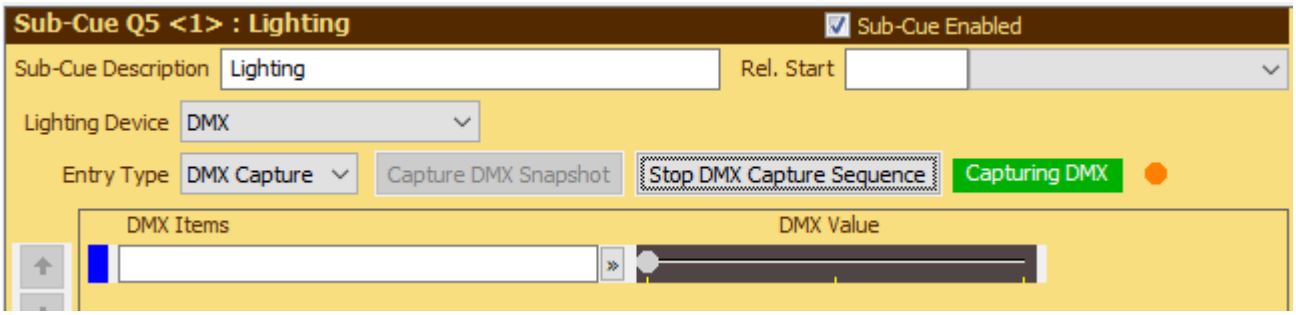
To create a DMX Capture Lighting Cue, select 'DMX Capture' as the **Entry Type**. This will display a screen starting with this:



Clicking the button **Capture DMX Snapshot** will create a Lighting Cue based on the current DMX values of all 512 channels of the DMX universe associated with the selected Lighting Device.

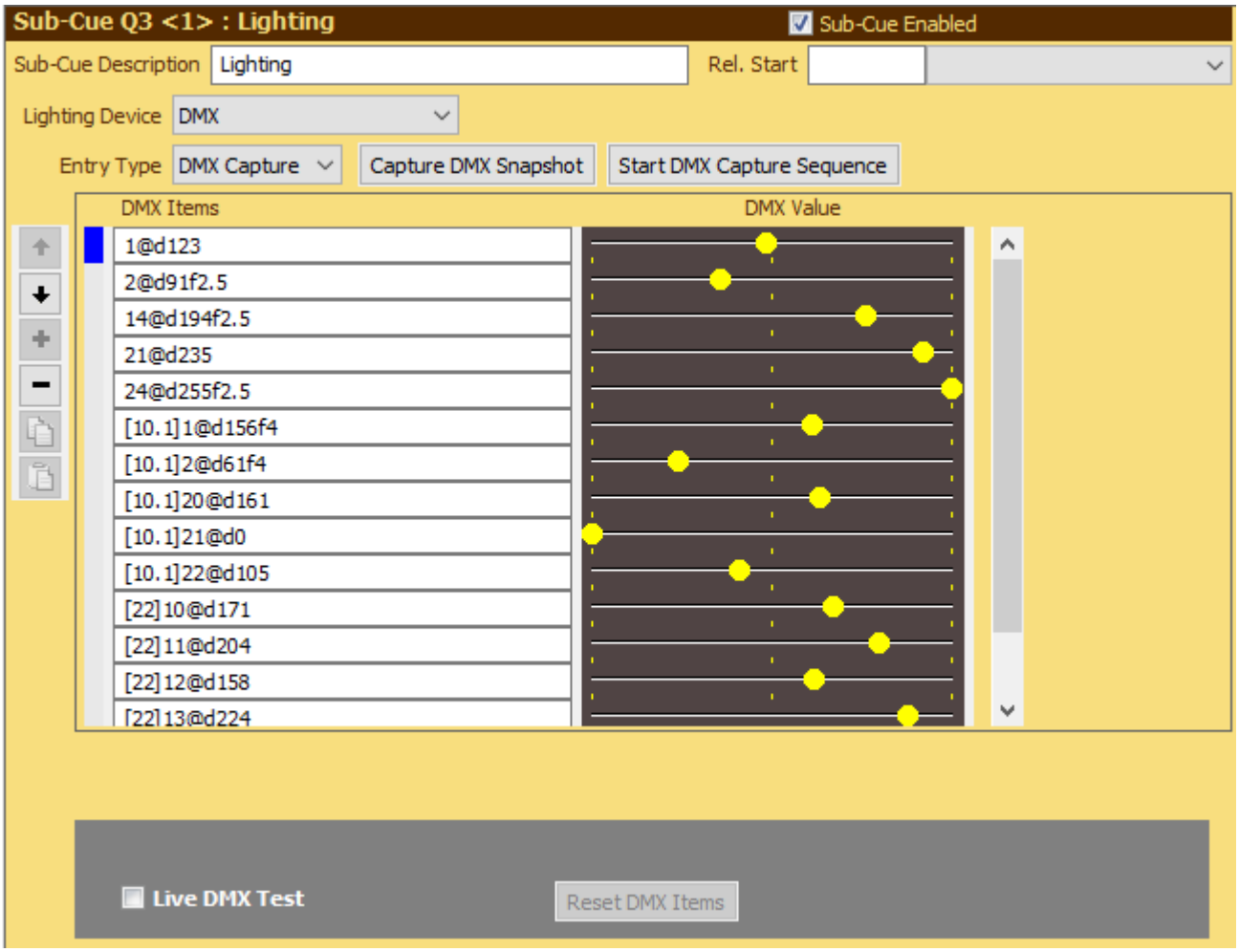
Alternatively, clicking the button **Start DMX Capture Sequence** will initially record (internally) the current DMX values of all 512 channels of the DMX universe associated with the selected Lighting Device, and then continue recording (internally) any channel value changes that occur until you click **Stop DMX Capture Sequence** (which is the same button renamed). The Lighting Cue will then be built from the recorded data.

When **DMX Capture Sequence** is active, the display will look like this:



The text **Capturing DMX** will be display constantly until you click **Stop DMX Capture Sequence**. The orange indicator to the right flashes briefly whenever a DMX value change message from this Lighting Device is received. The indicator will remain displayed during something like a fade where DMX value change messages are received many times per second.

When you click **Stop DMX Capture Sequence**, the Lighting Cue DMX items will be created and the display will look something like this:



Displayed **DMX Items** that start with a number in square brackets, eg [10.1], are for DMX value changes that occur after the start of the capture sequence, where the number in square brackets is the time in seconds since the capture sequence was started. ***This is now referred to as the 'delay time'.***

A similar display will occur after clicking **Capture DMX Snapshot**, but without any delay times as all channel values are based on a single snapshot in time.

Entries in **DMX Items** are based on the format originally developed for Lighting Cues - Pre SCS 11.8 but with the delay time feature added. Items that do not have a delay time are applied immediately the Lighting Cue is subsequently played (allowing also for fades if specified). When building the LTP (Latest Takes Precedence) list of values to be sent to all 512 channels, SCS initially sets all channels to 0. This does *not* necessarily mean that 0 will be sent to all channels initially, because an entry like "1@d123" will cause that initial value 0 to be replaced by the value 123 *before* it is sent to the device. But channels like 3-13, 15-20, etc will be set to 0 as there are no specific values set for those channels at the start.

Examples are as follows:

- The item "1@d123" means that channel 1 is to be set to the DMX value 123. The "d" means that "123" is a DMX value. If the "d" were omitted, the number would have to be a percentage in the range 0-100.
- The item "2@d91f2.5" means that channel 2 is to be faded (from 0) to the DMX value 91 over 2.5 seconds.
- The item "[10.1]2@d156f4" means that after a delay time of 10.1 seconds, channel 2 is to be faded from it's current value to the DMX value 156 over 4 seconds.
- The item "[10.1]21@d0" means that after a delay time of 10.1 seconds, channel 21 is to be immediately set to 0.

Important information regarding the *DMX Capture Sequence* process:

- We cannot guarantee that recorded delay times precisely match the actual delay times of the original DMX value changes. There are two main reasons for this. Firstly, the timing is dependent on when the relevant API is called by SCS and also detects the change. Secondly, each 'Change of State' packet received from the API contains the changed values for up to 40 *consecutive* DMX channel numbers, starting from a channel number identified in that message. So there could be multiple 'Change of State' packets received for a single lighting change. These 'Change of State' packet will be received a few milliseconds apart.
- SCS tries to be smart when building the **DMX Items** entries. SCS rounds each recorded delay time to the nearest 0.1 second so if there are multiple 'Change of State' packets for a single actual change, then SCS is likely to provide them all with the same 'adjusted' delay time. If you have some entries with slightly different delay times that you consider should be the same, you may edit the delay times in these entries.
- Also, if SCS considers a sequence of value changes for a DMX channel to represent a fade, then it will create a single entry such as "2@91f2.5" instead of recording an entry for every individual 'Change of State' packet for that channel.
- With **DMX Capture**, SCS does *not* try to match DMX channel numbers with fixture channels, and so does not try to identify which channels are 'fader' channels. Consequently, when a DMX Capture Lighting Cue is played, SCS does not apply the DMX Master fader setting to any channels.
- It's important to remember that when a **DMX Capture Lighting Cue** is *played*, DMX values will be applied to *all 512 channels* in the DMX universe of that Lighting Device.

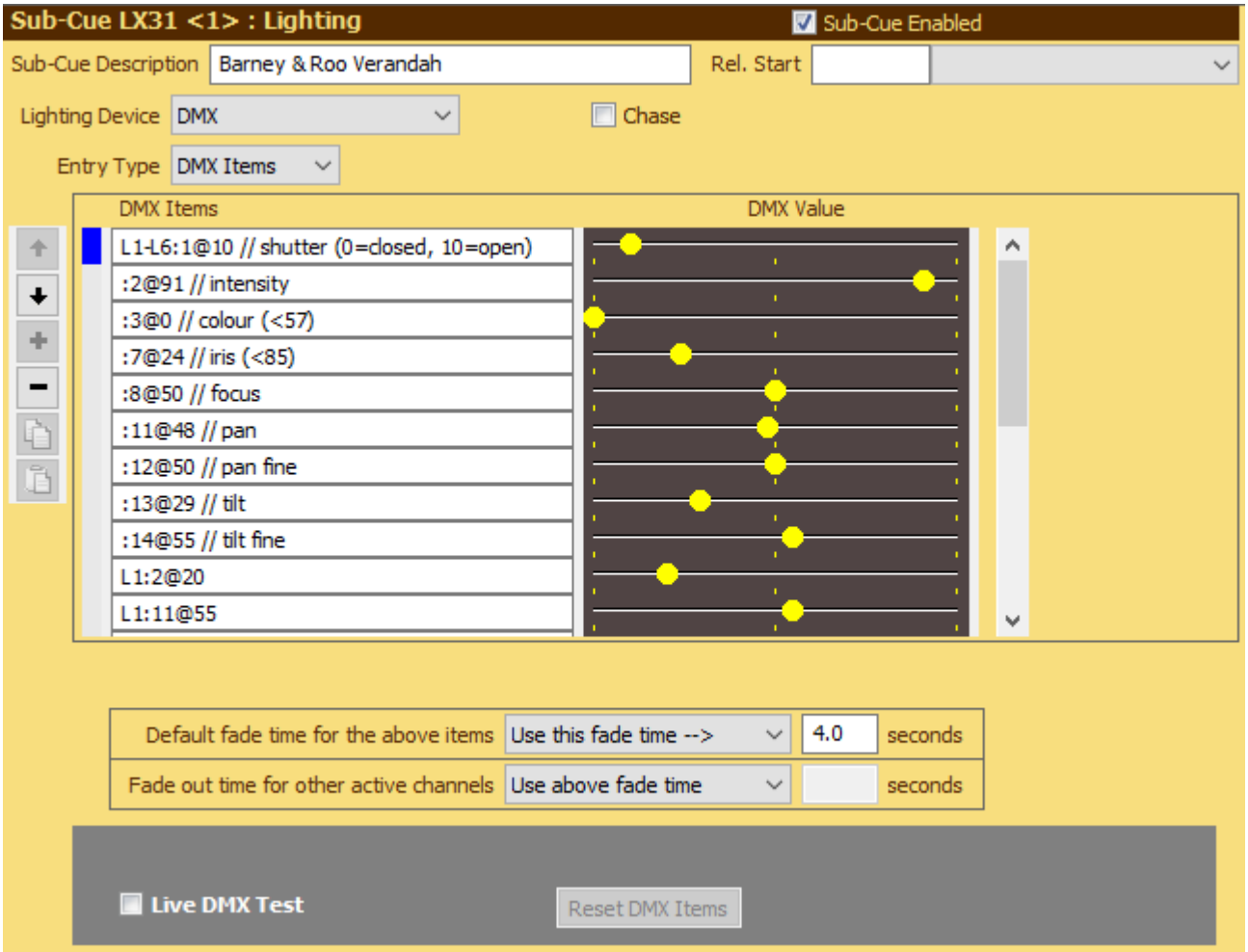
You can edit the **DMX Items** if you wish. See Lighting Cues - Pre SCS 11.8 for more information, as this format and the editing process is very similar.

You can also re-capture either a snapshot or a sequence. If you click on either of these capture buttons when there are currently DMX Items displayed, you will be warned that this will action replace the existing items and you will be asked if you wish to continue.

Lighting Cues - Pre SCS 11.8

Overview

Lighting Cues prepared using SCS 11.7.1 or earlier will be assigned an **Entry Type** of **DMX Items**, and the screen will look like this:



Properties and Controls

*The information below covers **DMX Items**, **DMX Value** and **Side Bar Buttons**. For other properties and controls, see Lighting Cues.*

DMX Items: You can enter each **DMX Item** in the form **{fixture list}:{channel list}@{value}[fade{time}]** *or* **DBO[![fade{time}]]**

Format **{fixture list}:{channel list}@{value}[fade{time}]**, example: *L1-L6:1@10*

- The **fixture list** is a single fixture code (eg L1), a series of fixture codes separated by commas (eg L1,L3,M7), a range of fixture codes separated by a dash (eg L1-L6), or any combination (eg L1-L4,L8). If you enter a range of fixture codes then SCS treats numbers correctly, so something like L8-L12 will correctly select L8, L9, L10, L11 and L12. Any non-existent fixture codes in that range will be ignored.
- A **colon (:)** is required following the **fixture list**.
- The **channel list** is a single number, a series of numbers separated by commas (eg 1,3,5), a range of channels denoted by first and last number separated by a dash (eg 1-17), or any combination (eg 1,4-8,12). These channel numbers are fixture channel numbers. For the above example the fixtures L1-L6 were MAC 350 Entour moving head fixtures, configured to use 17 DMX channels, so the channel list for these fixtures must use channels in the range 1-17. Warning: SCS does not currently check that the channel numbers are in range for the specified device(s).
- An @ sign is required following the **channel list**.
- The **value** may be a percentage entered just as a number between 0 and 100, or a DMX value entered as **dmx** followed by a number in the range 0-255, eg **dmx230**. **dmx** may be abbreviated to **d**, eg **d230**.
- If a **fade** is required it should be entered as **fade** followed by the required time in seconds and (optionally) decimals of a second, eg **fade2.5**. **fade** may be abbreviated to **f**, eg **f2.5**. Note: fade was originally implemented for fading the intensity of a light, but **fade** or **f** may be used on any type of channel. For example,

if the fixture's channel function is 'focus' then the **fade** setting may be used to change the focus to a new focus value over a designated time.

- If you wish to add a comment, enter ***//*** followed by your comment.

Note: For backwards-compatibility SCS supports DMX Items that do not have a fixture code. For such items the channel numbers are absolute channel numbers (within the DMX universe of the Lighting Device). For example, 495-500@60f2 will fade DMX channels 495-500 to 60% over 2 seconds. *However,* any dimming of intensity that's controlled by other cues or by the DMX Master Fader will *only* operate on dimmable channels identified in Lighting Device Fixtures. So intensity dimming like this is *not* backwards-compatible. If you have Lighting Cues that do not use fixtures then please change them to use fixtures to gain the full functionality of this cue type.

Format **DBO[![fade{time}]]**, example DBO!f2

- **DBO** implements Dead Blackout, or Fade to Blackout if a fade time is given.
- If **snap to Dead Blackout** is required then enter **DBO** and ensure the 'default fade time' is 0, or (safer) enter **DBO!f0**.
- If **fade to Blackout** is required then enter **DBO** followed by **exclamation mark (!)** followed by **fade** followed by the required time in seconds and (optionally) decimals of a second, eg **DBO!fade2.5**. **fade** may be abbreviated to **f**, eg **DBO!f2.5**.
- As with other DMX Items, if you wish to add a comment, enter ***//*** followed by your comment.

Notes regarding DBO

- DBO (Dead Blackout) will set to 0 (or fade to 0) the *dimmable* channels identified in all Lighting Device Fixtures. Other channels are left unchanged.
- Because DBO is designed for implementing a Dead Blackout, this command ignores the **Lighting Device** selected for this Lighting Cue. So if you have two Lighting Devices (eg for ports 1 and 2 of an Enttec DMX USB PRO MK2) then a single DBO will act on both ports.
- For a scene change or similar you may want a DBO followed by some blue lighting on stage. Since SCS implements LTP (latest takes precedence) you can enter DBO in the first item line and then whatever DMX settings you need for the blue light in subsequent item lines of the cue. The Lighting Device is obviously relevant for the additional item lines.
- Playing a Lighting Sub-Cue that contains DBO will stop any chase Lighting Cue currently running.

Note: The highest DMX Channel number you can use may be limited by your SCS license level - the maximum is 16 for **SCS Professional**, but 512 for **SCS Professional Plus** and higher.

DMX Value: This slider provides a way of adjusting the **value** specified within the corresponding **DMX Item**. The slider is useful when used in conjunction with **Live DMX Test** as it enables you to easily view changes. Note that when the slider has focus then you can make small changes using the left- and right-arrow keys.

Side-Bar Buttons: The buttons to the left of **DMX Items** can be used to move individual items up or down, or to add or remove an item. The **Copy** and **Paste** buttons are different in that they operate on the complete displayed set of **DMX Items** (including the **DMX Values**). Clicking the **Copy** button will copy all the currently-displayed **DMX Items** to a clipboard. Clicking the **Paste** button will replace any existing (displayed) **DMX Items** with those currently saved in the clipboard. Note that SCS will display a meaningful tooltip if the mouse hovers over any of the side-bar buttons.

Control Send Cues

Control Send Cues are only available with **SCS Professional** and higher license levels.

Network (TCP/UDP) and HTTP Control Send Cues are only available with **SCS Professional Plus**.

Overview

The purpose of a Control Send cue is to enable SCS to send one or more control messages to external devices, such as audio mixers or lighting boards where Control Send cues can be used to select pre-programmed scenes, snapshots, etc. They can also be used to send control messages to other software, which may be running on the same or a separate computer.

Control Send Cues can send **MIDI, RS232, Network (TCP or UDP)** and **HTTP** messages.

MIDI Send

Before you set up any Control Send cues that send **MIDI** messages you need to nominate a **MIDI Out** device in Production Properties - Control Send Devices - MIDI.

RS232 Send

Before you set up any Control Send cues that send **RS232** messages you need to nominate an **RS232 Out** device in Production Properties - Control Send Devices - RS232.

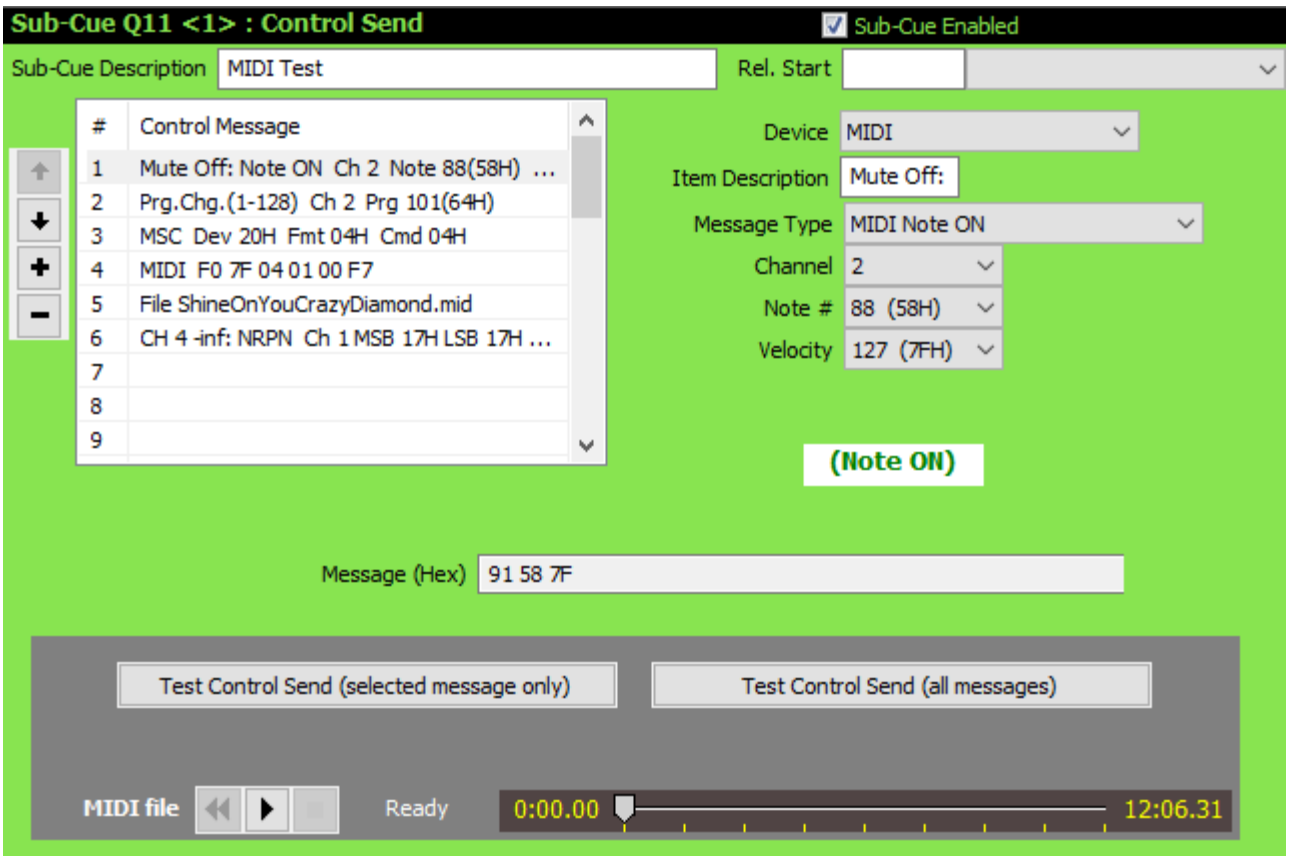
Network Send

Before you set up any Control Send cues that send **Network** messages you need to nominate a **Network Out** device in Production Properties - Control Send Devices - Network.

HTTP Send

Before you set up any Control Send cues that send **HHTP** messages you need to nominate a **HTTP Request** device in Production Properties - Control Send Devices - HTTP.

For a Control Send cue or sub-cue, the lower panel to the right of the cue list tree will contain properties specifically for control send sub-cues. For example:



Properties and Controls

General

Sub-Cue Description: Enter a description for this sub-cue. You can leave this field blank and let SCS create a default Description for you.

Relative Start: These fields are available for every type of sub-cue. For details see *Relative Start* under Audio File Cues. Then click the **Back** button in the Help Viewer to return to this page.

Control Messages

Up to 16 Control Messages my be sent by one Control Send sub-cue, as displayed in the list on the left. The details on the right are for the currently-selected Control Message, so in the screenshot above the details on the right are for Control Message #1.

Toolbar Controls: Controls are available to enable you to easily change the order of the messages. The messages are sent in the order displayed in this list, so if you need to change that order then use the appropriate toolbar control(s). The toolbar controls available are:

↑	Move up	Move the current message up one position.
↓	Move down	Move the current message down one position.
+	Insert message	Open a new line *before* the current message so you can insert details of a new message. (You can also add a message just by entering the details in a blank line, such as in line 5 in the above screenshot.)
−	Remove message	Removes the current message.

Device: Select the required Control Send device from the drop-down list. This list is built from the Control Send devices you have nominated in Production Properties - Control Send Devices.

Item Description: This is an optional field that you may use to *briefly* describe what this Control Send Item is used for. This item description is limited to 10 characters because it is displayed at the start of the Control Send item in the grid, so if too long would take up valuable space.

The remainder of screen is adjusted according to the type of that device.

MIDI

See Control Send - MIDI for details of MIDI fields.

RS232

See Control Send - RS232 for details of RS232 fields.

Network

See Control Send - Network for details of Network fields.

HTTP

See Control Send - HTTP for details of HTTP fields.

Message (Hex): This display-only field shows in hexadecimal the actual MIDI, RS232 or Network message that will be sent for the currently selected message. (Not displayed for HTTP messages.)

Testing your Control Send Cue

You can test your Control Send Cue using either of the **Test Control Send** buttons in the 'Test' panel. The first button tests the currently select message only, and the second button tests the whole sub-cue. Just click the required button and the message(s) will be sent if the required device(s) are available. A confirmation message is displayed in the grey panel for a few seconds.

Control Send - MIDI

MIDI Control Send Cues are only available with **SCS Professional** and higher license levels.

The table below explains the fields available for MIDI messages in Control Send cues.

Note: Values for some of these fields (eg Velocity) are entered from a drop-down list. If the parent cue has an activation method of Callable Cue and Parameters have been entered, then these Parameter Id's will be included at the top of the drop-down list, and at run-time the value supplied by the 'Call Cue' Cue will be used. This enables you to have basically the same MIDI Control Send Cue but with different values based on parameters entered in a 'Call Cue' Cue. See also Callable Cue. But note that the values supplied via a Call Cue parameter may not be validated, and if out-of-range may be ignored.

Message Type: The Message Types supported by SCS are **MIDI Program Change (0-127), MIDI Program Change (1-128), MIDI Control Change, MIDI Note On, MIDI Note Off, MIDI Show Control (MSC), MIDI Free Format, MIDI NRPN** and **MIDI File.**

The two **MIDI Program Change** Message Types are to allow for the different standards used by different manufacturers. Some devices will expect Program numbers in the range 0-127, whereas other devices expect Program numbers in the range 1-128. If you are using the Program Change Message Type then you *must* select the number range that is used by the device you are sending the messages to, as the mapping of the program numbers to Hex values in the MIDI message are different. This can be seen in the drop-down list for the Program #.

The remaining fields displayed are determined from the selected Message Type.

MIDI Program Change (0-127)

Channel: Select the required MIDI Channel number from the drop-down list. The list shows logical channel numbers in the range 1-16, which translate to 0-15 physically in the MIDI message.

Program #: Select the required Program (or 'Patch') number from the drop-down list. Program numbers are shown in decimal and hexadecimal, in the range 0 (00H) to 127 (7FH).

MIDI Program Change (1-128)

Channel: Select the required MIDI Channel number from the drop-down list. The list shows logical channel numbers in the range 1-16, which translate to 0-15 physically in the MIDI message.

Program #: Select the required Program (or 'Patch') number from the drop-down list. Program numbers are in the range 1 to 128. The hexadecimal equivalents actually sent in the MIDI message will be in the range 00H (for Program #1) to 7FH (for Program #128).

MIDI Control Change

Channel: As MIDI Program Change

Control #: Select the required Control number from the drop-down list. Control numbers are shown in decimal and hexadecimal, in the range 0 (00H) to 127 (7FH).

Value: Select the required Control value from the drop-down list. Control values are shown in decimal and hexadecimal, in the range 0 (00H) to 127 (7FH).

MIDI Note On

Channel: As MIDI Program Change

Note #: Select the required Note number from the drop-down list.

Velocity: If your target device requires a velocity setting in the Note On message you can select the required velocity setting here, in the range 0 (00H) to 127 (7FH). If your target device does not require a velocity setting you must still select a Velocity as the MIDI Note On message structure requires it. I recommend you do *not* select a velocity of 0 (00H) as some MIDI devices interpret Note On with velocity 0 as Note Off. When adding a new **Note On** message SCS defaults the Velocity to 127 (7FH).

MIDI Note Off

Channel: As MIDI Program Change.

Note #: Select the required Note number from the drop-down list.

Velocity: If your target device requires a velocity setting in the Note On message you can select the required velocity setting here, in the range 0 (00H) to 127 (7FH). If your target device does not require a velocity setting you must still select a Velocity as the MIDI Note Off message structure requires it. When adding a new **Note Off** message SCS defaults the Velocity to 0 (00H).

MIDI Show Control (MSC)

See Control Send - MIDI Show Control (MSC) for details of MSC fields.

MIDI NRPN

See Control Send - MIDI NRPN for details of MIDI NRPN fields.

MIDI Remote Device

See Control Send - MIDI Remote Device for details of MIDI Remote Device fields.

MIDI Free Format

This provides a free format way of entering a MIDI message. This can be used to send MMC (MIDI Machine Control) messages, other SysEx messages, or any other message not covered by the previously listed MIDI message types.

Entry Mode: (Display only). Indicates that the MIDI message (next field) must be entered as a string of Hex characters.

MIDI Message: Enter the message required. SCS only accepts hex characters (0-9 and A-F) and spaces. Spaces are ignored when building the message so can be included for legibility.

Set MIDI Message by MIDI Capture: Instead of keying in the hex characters for a MIDI Message, you can capture or record the MIDI Message by using your external equipment to send the required MIDI message. To use this facility, the following field and button are provided:

MIDI Capture Port: Select the required MIDI Capture Port. You only need to do this once as SCS will then remember the MIDI Capture Port you have selected.

Capture Next MIDI Message: When you are ready to capture a MIDI message, click this button. SCS opens the MIDI Capture Port and waits for the first (or next) MIDI message. The message is then copied to the MIDI Message field and the port is closed.

To capture another MIDI Message for another position in the cue, go to the next position in the list and repeat the process. You can also replace an existing message the same way.

When you click the **Capture Next MIDI Message** button, the caption of the button changes to **Cancel MIDI Capture**, and reverts to **Capture Next MIDI Message** when a MIDI message has been received. If you want to abandon the process before a MIDI message is received, just click **Cancel MIDI Capture**. MIDI capture is also canceled if you click on another Control Send item.

The facility handles both short MIDI messages (eg Note On) and long MIDI messages (eg SysEx), but the message will always be saved in your cue list as a 'MIDI Free Format' message.

MIDI File

If you have many MIDI messages to send over a period of time, such as for controlling lighting during a music track, then it is often better to prepare a separate MIDI file and play that file in sync with your audio track. If you have prepared such a MIDI file then you may include that file in you Control Send cue by selecting the MIDI file here. Please note that this is designed for sending control messages to external equipment - SCS will not play the MIDI file as an audio file. Also, no more than one MIDI File may be included in a single Control Send sub-cue.

MIDI File: Select the required MIDI file by using the Browse (...) button.

File Length: This display-only field shows the length of the file in minutes and seconds. Please note this may not be exactly correct.

Start At: If you wish to start playback part way through the file, then enter the required **Start At** time. Use this with care as it may result in required MIDI events being skipped. Leave blank to start at the beginning of the file.

End At: If you wish to end playback before the physical end of the file, then enter the required **End At** time. Leave blank to play to the end of the file.

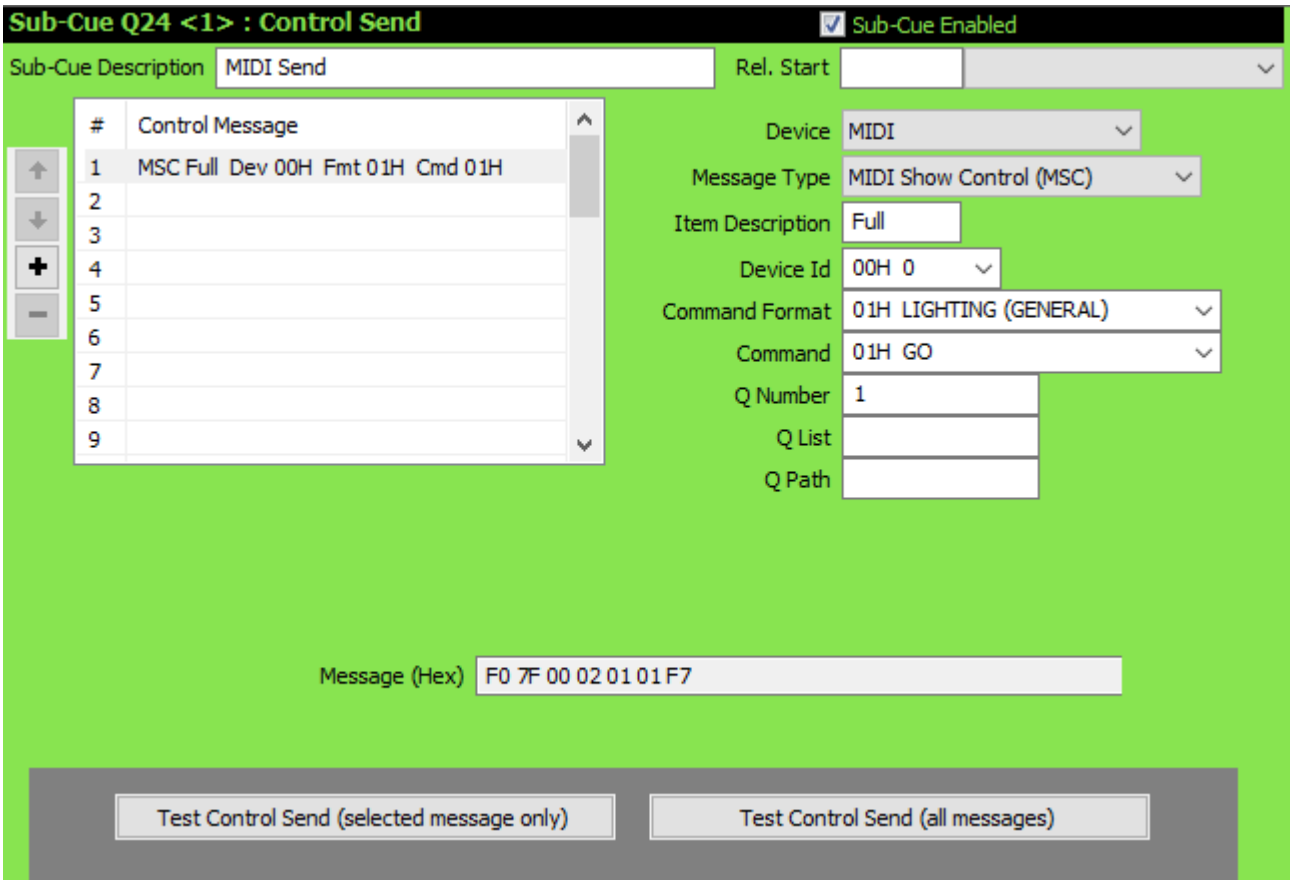
Play Length: This display-only field shows the play length of the file in minutes and seconds, ie taking into consideration the **Start At** and **End At** times.

Warning! Due to a limitation in the Windows MCI (Media Control Interface) it is not possible to send MIDI messages and MIDI files through the same port simultaneously. If you play a MIDI file to a port that's currently configured for MIDI messages then SCS will close that port so the MIDI file can be played.

Back to Control Send Cues

Control Send - MIDI Show Control (MSC)

Here is an example of a Control Send cue set up send a single MSC command:



The table below explains the fields available for MIDI Show Control (MSC) Control Send cues. Most numbers in drop-down lists are shown with the hexadecimal value first as this is most commonly used.

Device Id: Select the required destination Device Id from the drop-down list (range 00H to 7FH).

Command Format: Select the Command Format from the drop-down list (range 00H to 7FH). Standard descriptions of a number of Command Formats are displayed in the list.

Command: Select the Command from the drop-down list (range 00H to 1EH). Standard descriptions of Commands are displayed in the list.

The Data fields displayed are determined from the selected Command.

Commands 01H (Go), 02H (Stop), 03H (Resume), 05H (Load), 0BH (Go Off) and 10H (Go/Jam Clock)

Q Number: Optional; required if Q List is sent. Enter the required Cue Number, which may contain digits and decimal points, eg 235.6 *Note: If the previous Q Number entered was an integer (no decimal point) then on displaying the fields for a* new command, SCS will populate the **Q Number** field with a value one greater than the previous Q Number.

Q List: Optional; required if Q Path is sent. Enter the required Cue List, formatted as for Q Number.

Q Path: Optional. Enter the required Cue Path, formatted as for Q Number.

Command 06H (Set)

Control Number: Enter the required Control Number. Legal values are in the range 0 to 16383 but your device may have other limits.

Control Value: Enter the required Control Value. Legal values are in the range 0 to 16383 but your device may have other limits.

Command 07H (Fire)

Macro Number: Select the required Macro Number from the drop down list, in the range 0 (00H) to 127 (7FH)

Commands 08H (All Off), 09H (Restore) and 0AH (Reset)

These commands do not require data fields.

Commands 1BH (Open Cue List), 1CH (Close Cue List)

Q List: Enter the required Cue List, formatted as for Q Number (see Command 01H etc above).

Commands 1DH (Open Cue Path), 1EH (Close Cue Path)

Q Path: Optional. Enter the required Cue Path, formatted as for Q Number (see Command 01H etc above).

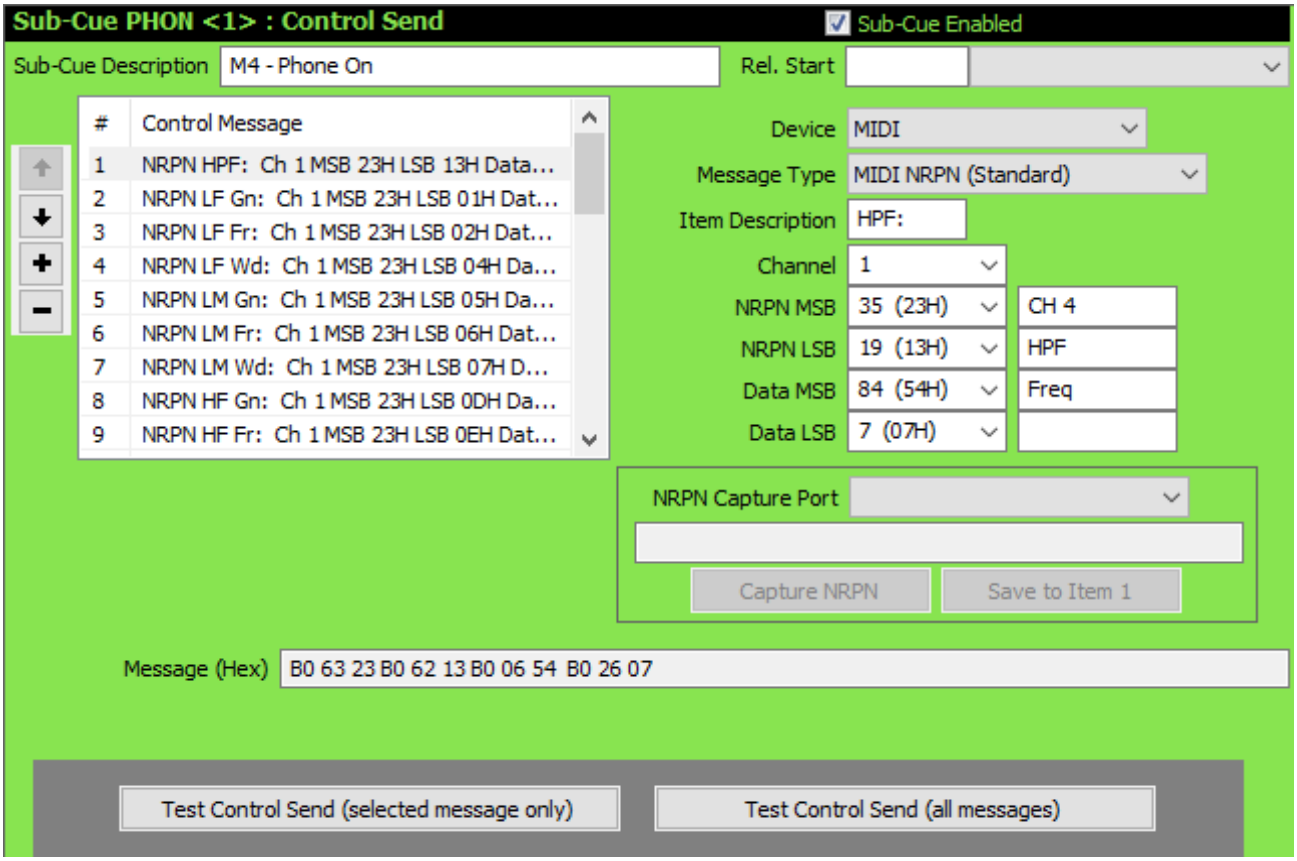
Other Commands

Data fields for other commands are not yet implemented in SCS. If you have a particular requirement for a Command Data format not yet implemented, contact SCS Support.

Back to Control Send - MIDI

Control Send - MIDI NRPN

MIDI Control Send cues may be set up to send NRPN (Non-Registered Parameter Number) messages. Here is an example of a Control Send cue set up to send NRPN messages to an Allen&Heath Qu-Series mixer, to set the CH4 EQ to simulate the effect of speech on an incoming phone call, which is primarily to limit the frequency range to 400Hz-4kHz:



The table below explains the fields available for MIDI NRPN Control Send cues.

Message Type: Select 'MIDI NRPN (Standard)' from the drop-down list, *unless* the device you are connecting to is a Yamaha, such as a Yamaha CL/QL series mixing console. For Yamaha devices, select 'MIDI NRPN (Yamaha)'

Channel: Select the MIDI channel required by the receiving device.

NRPN MSB: Select the required 'NRPN MSB' (Most Significant Byte) from the drop-down list (range 0-127, or 00H to 7FH). In the following text field you may optionally enter a description for this NRPN byte.

NRPN LSB: Select the required 'NRPN LSB' (Least Significant Byte) from the drop-down list (range 0-127, or 00H to 7FH).

Note: For Message Type 'MIDI NRPN (Yamaha)', NRPN LSB will appear before *NRPN MSB to comply with the Yamaha NRPN format.*

Data MSB: Select the required 'Data MSB' (Most Significant Byte) from the drop-down list (range 0-127, or 00H to 7FH).

Data LSB: Select the required 'Data LSB' (Least Significant Byte) from the drop-down list (range 0-127, or 00H to 7FH). The **Data LSB** field is optional in the NRPN format, so this field may be left blank.

NRPN Capture Port: Select the required MIDI NRPN Capture Port. You only need to do this once as SCS will then remember the NRPN Capture Port you have selected.

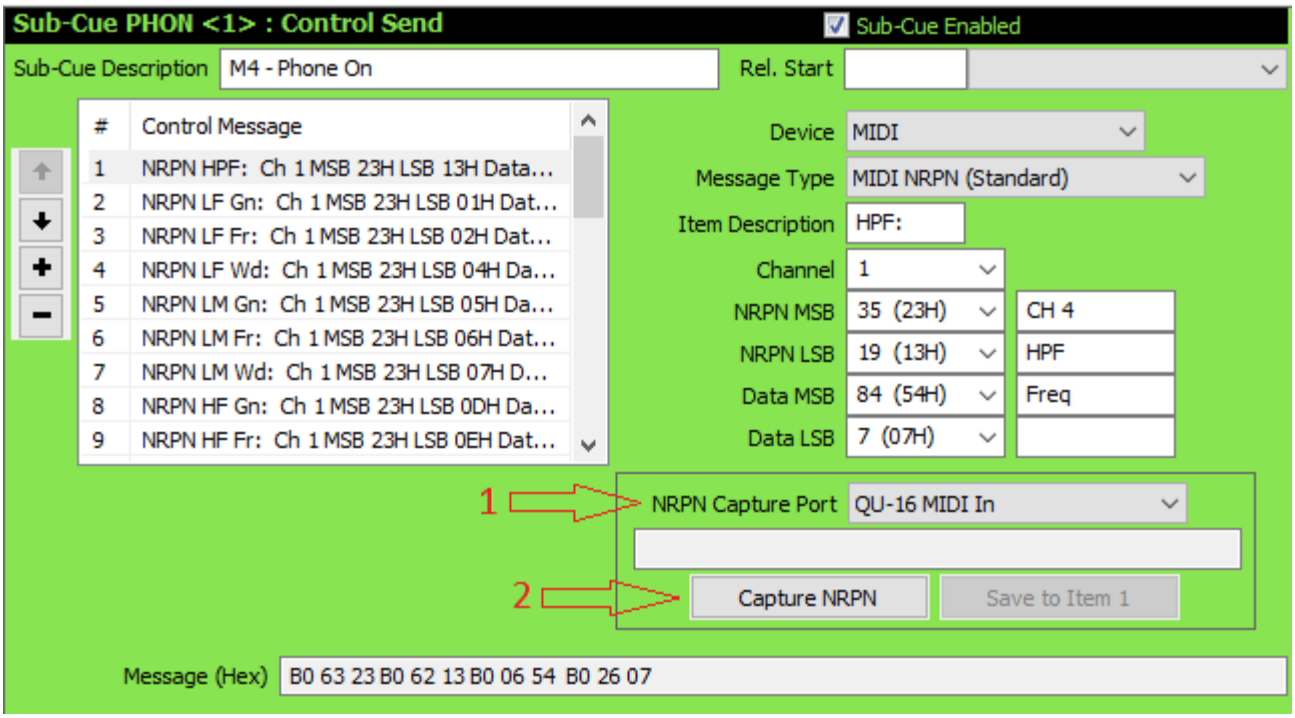
Capture NRPN: After selecting the NRPN Capture Port, this button will be enabled and you can use this to capture any incoming NRPN messages. The field above this button will show the latest such message captured. The caption of this button will change to '**Cancel NRPN Capture**' which you should select if you do not want to proceed with saving this NRPN.

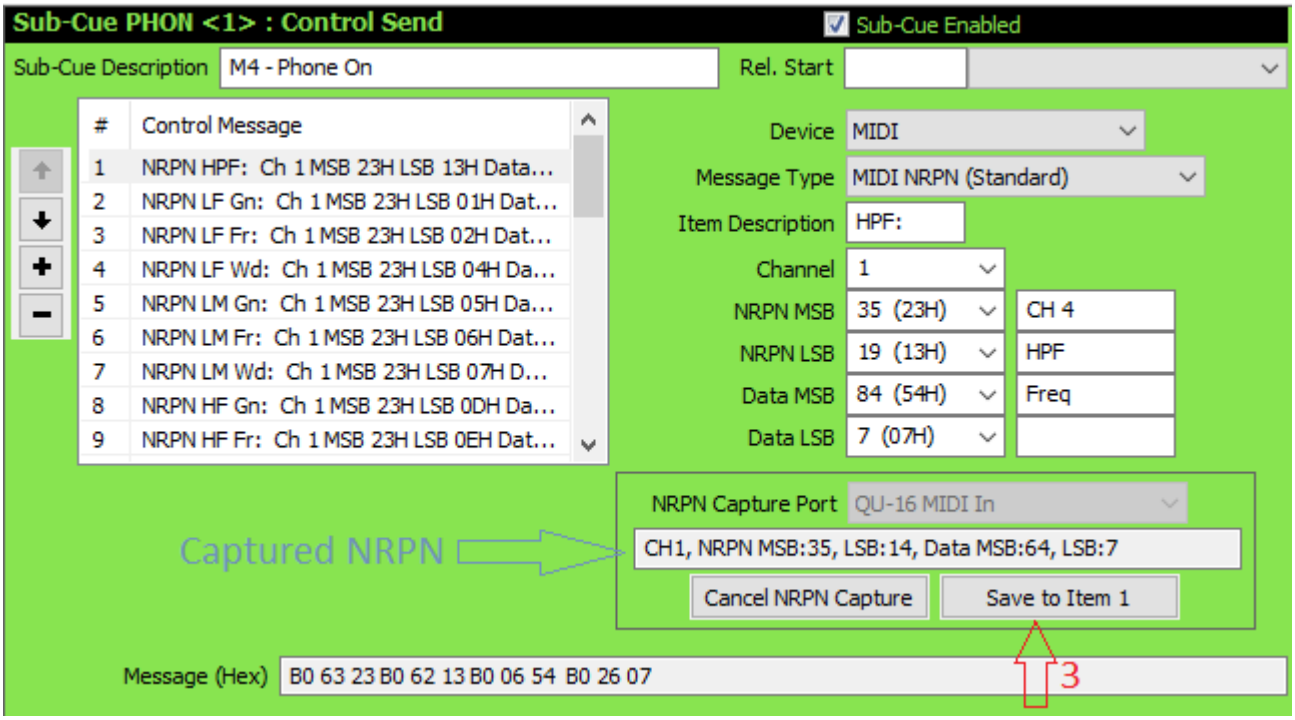
Save to Item ...: After capturing NRPN, you can use this button to transfer the latest (displayed) NRPN message to the currently-selected Control Send item.

Note: If you have selected Message Type 'MIDI NRPN (Standard)' but the captured NRPN has the NRPN LSB part before the NRPN MSB part then on clicking 'Save to Item' SCS will change the Message Type to 'MIDI NRPN (Yamaha)'. And vice versa.

Message (Hex): This display-only field shows the actual MIDI message built from the selected NRPN and Data values.

Here is an example of using the NRPN Capture feature:





On clicking **'Save to Item 1**', the captured NRPN will be saved in the currently-selected item, which in this example means that the Data MSB field will change from 84 to 64.

The NRPN Capture feature is useful with devices such as an Allen&Heath Qu-Series mixer where you can enable **'Capture NRPN**' and then adjust, say, an EQ rotary control until you get the desired result, and then click **'Save to Item ...**' to save the final setting of that rotary control. You can also use this with faders. Similarly with Yamaha digital mixing consoles and other digital devices.

If you have an Allen&Heath Qu-Series mixer then you can download the document 'Qu Mixer MIDI Protocol' from the Allen&Heath website.

[Back to Control Send - MIDI]

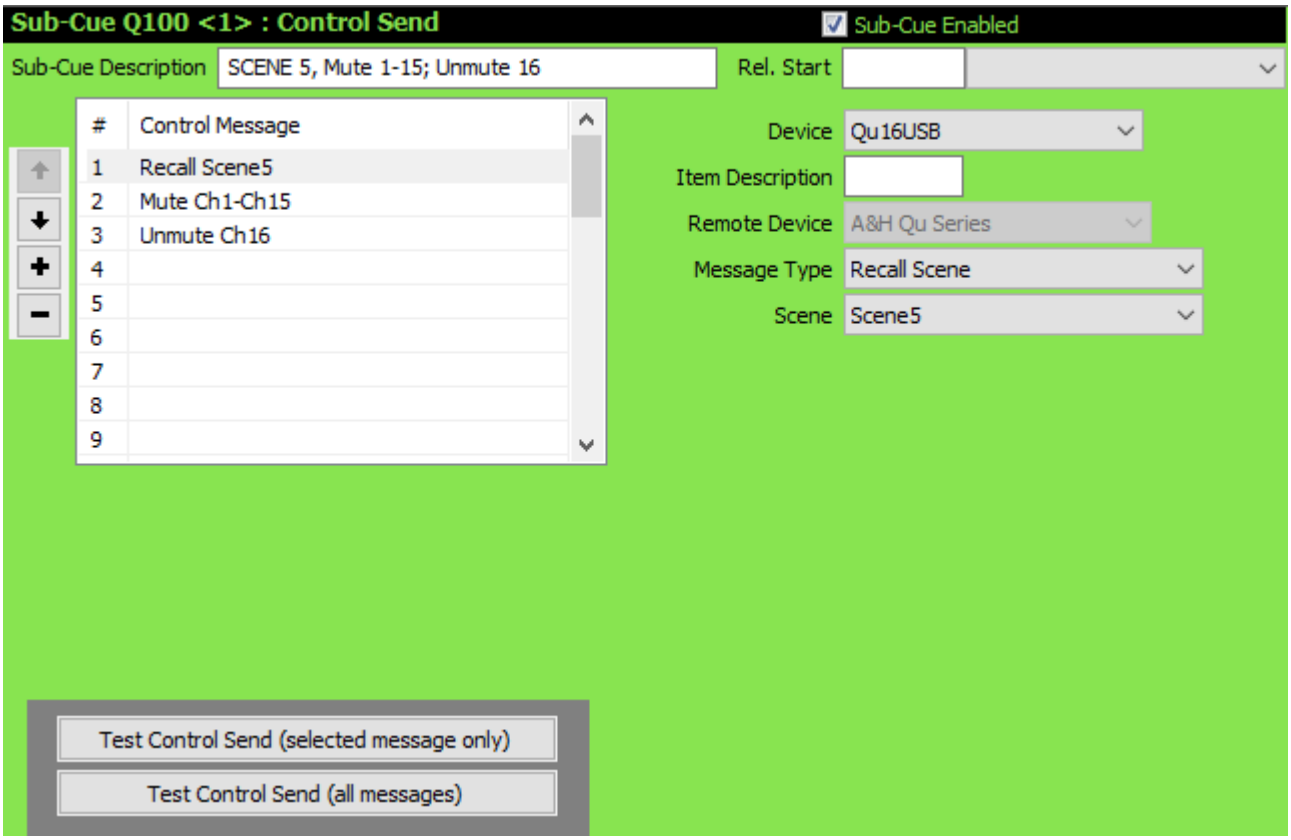
Control Send - MIDI Remote Device

Remote Device Message types such as 'Recall Scene', 'Mute/Unmute Channels', etc are only available with **SCS Professional** and higher license levels.

Supported remote devices (eg digital mixers) are determined by entries held in an SCS-supplied configuration file. Updates to this file may be released as required, and normally will not require an update of SCS itself. The purpose of this feature is to simplify applying commonly-used mixer settings, such as muting or unmuting channels, or recalling scenes. The configuration file contains data that SCS uses to determine the actual MIDI messages required for that remote device.

To use this feature you must first of all set up a MIDI Control Send Device with the **Remote Device** set to the required type of device, eg 'A&H Qu Series'.

Here is an example of a Control Send cue set up for controlling an Allen&Heath Qu-16 mixer:



Remote Device: A display-only field showing the Remote Device defined in Production Properties for this MIDI **Control Send Device**.

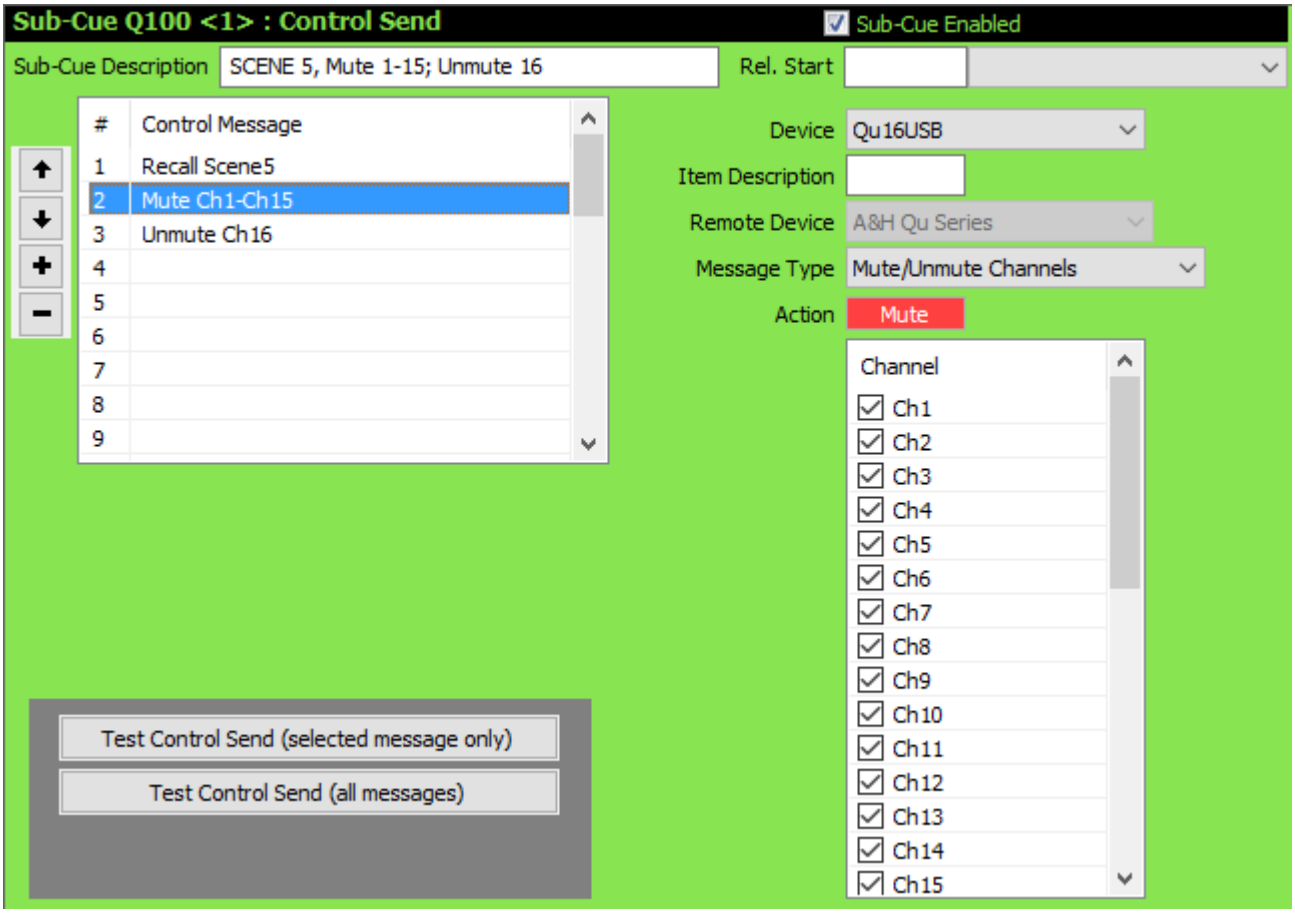
Message Type: Select the Message Type from the drop-down list. The first few Message Types in this list are obtained from the SCS-supplied configuration file. This is followed the Message Types listed under Control Send - MIDI, eg 'MIDI Program Change (0-127)'. So if you need a function that's not supported by one of the special Message Types supplied for this remote device then you can enter your own MIDI message.

The remainder of the screen is determined by the selected Message Type, using data held in the SCS-supplied configuration file. If only one item may be chosen from a list (eg to recall a scene) then the list of available items will be displayed in a drop-down list, as shown in the screenshot above.

Note: Some Message Types referred to in this Help topic may not be available for your Remote Device.

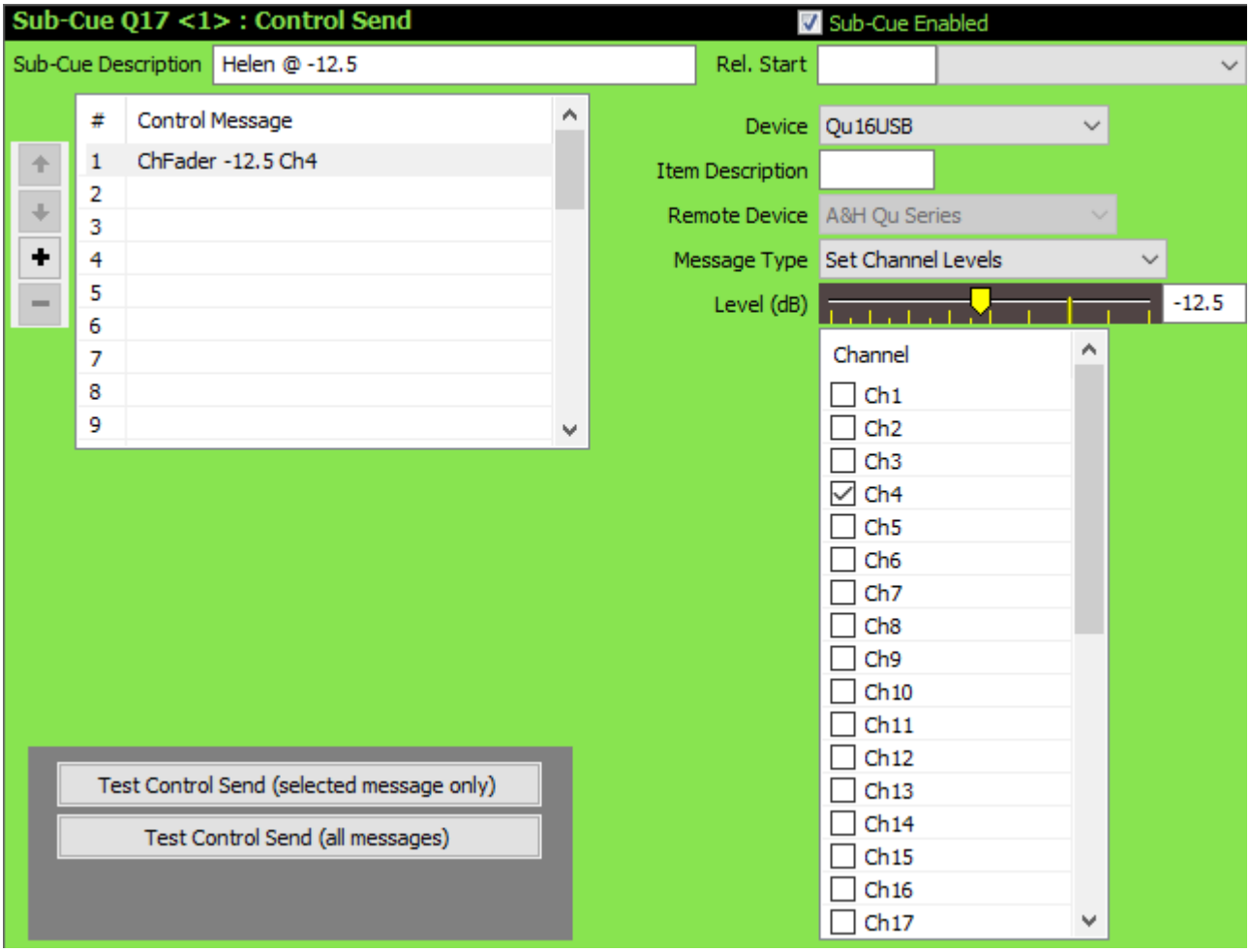
If multiple items may be selected, such as muting or unmuting multiple channels, then a grid like that shown below will be displayed, where you can select one or more of the items using the checkboxes. For **'Mute/Unmute**' message types, a separate **Action** button will be displayed with which you select either **Mute** or **Unmute**. 'Mute' is displayed with a red background; 'Unmute' is displayed with the regular grey background.

If you need to mute some channels and unmute other channels then you will need to use separate Control Messages as shown in messages 2 and 3 below.



For Fader Level message types, such as 'Set Channel Levels', a Level slider will be displayed as shown below. The range of the slider is determined from data in the SCS-supplied configuration file. For example, for the Qu-16 the maximum level is +10dB. The vertical marker that is slightly higher than the others is for 0dB.

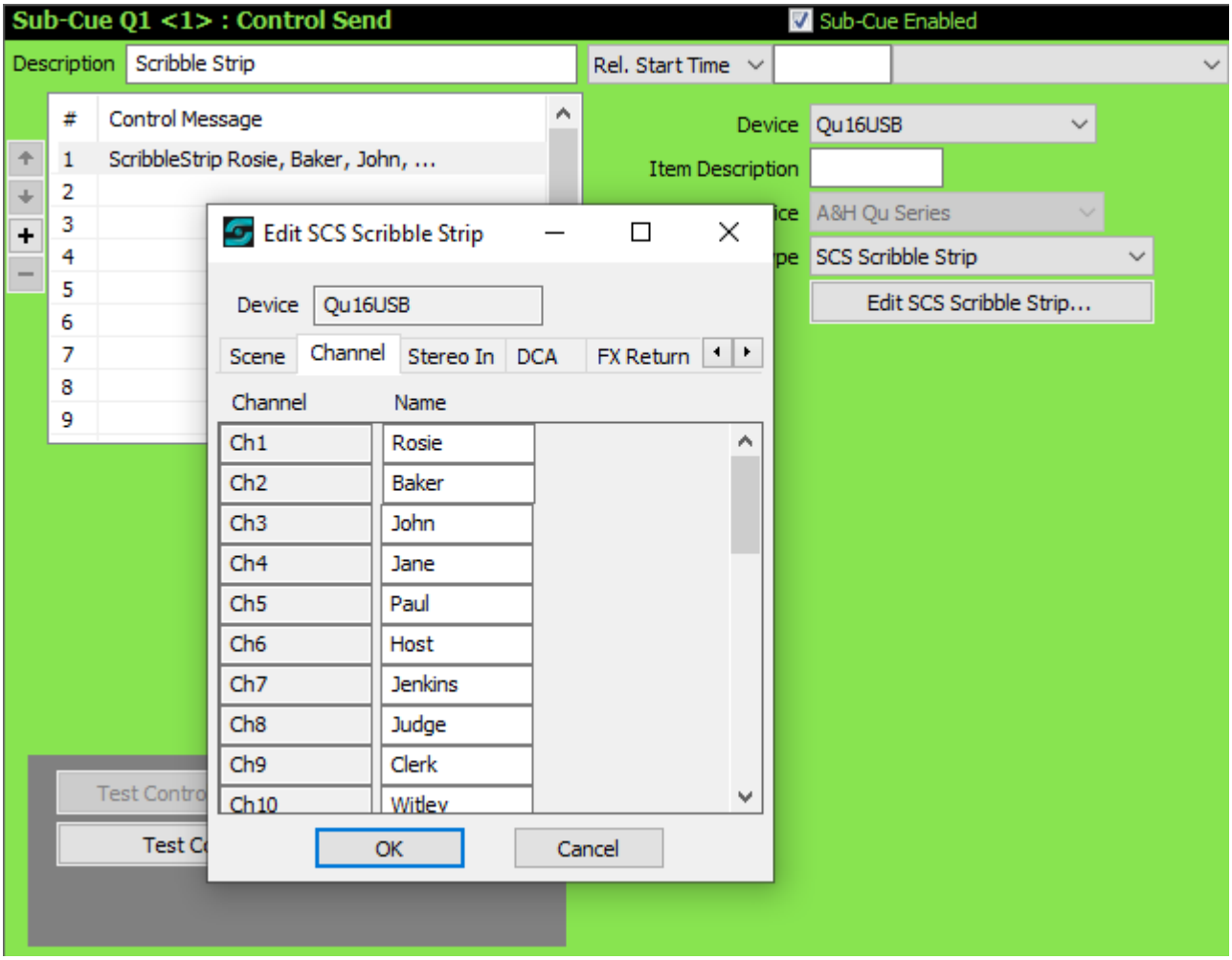
A grid will also be displayed if appropriate. For Channel Levels, select the channels to have this Level setting applied. If you need to apply different levels to different channels then you will need to use separate Control Messages.



SCS Scribble Strips

Setting up a scribble strip enables you to name your channels, etc, as is possible in most digital mixers. SCS does not load from or send SCS scribble strip info to the mixer, but that's only because the required MIDI message formats are not published or do not work according to the supplied specifications. But setting up SCS Scribble Strips can significantly assist in setting up and following your cues in SCS.

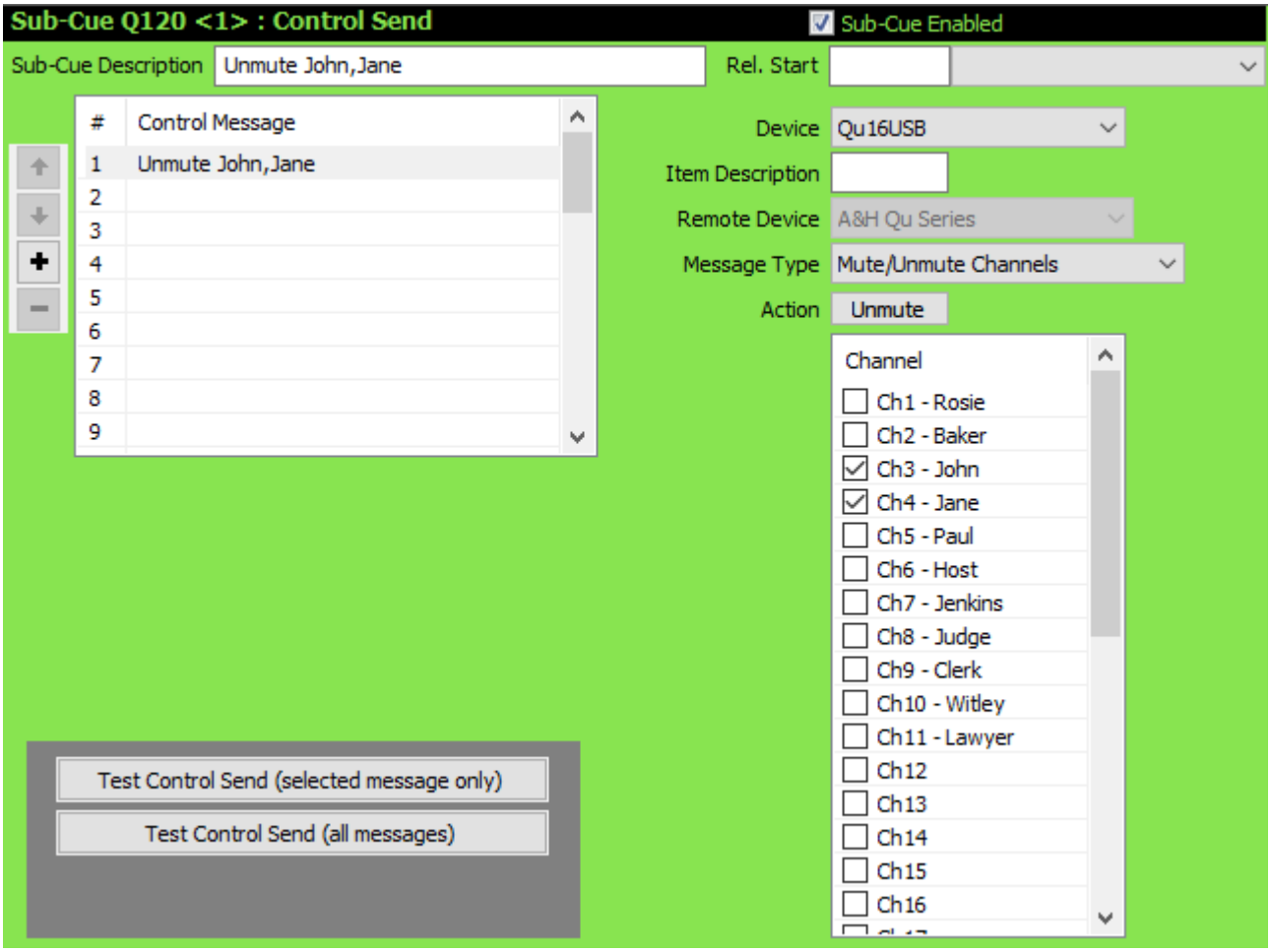
To create an SCS Scribble Strip you need to create a Control Send cue with a **Message Type** of **SCS Scribble Strip**. An example is shown below:



The pop-up window is displayed when you create a new SCS Scribble Strip, or when you click the 'Edit SCS Scribble Strip...' button of an existing SCS Scribble Strip message.

The tabs 'Scene', 'Channel', 'Stereo In', etc are obtained from the device information held in the configuration file, so not all tabs will be available for all devices. You may enter the Name you require for each channel, etc, or you may leave the Name blank. When you have entered or changed the Names, click **OK**. Note that the window is resizable. SCS remembers the size and position of the window across sessions.

Setting up or editing a subsequent Control Send cue will display the names from a prior SCS Scribble Strip, as shown in the following example, where the names John and Jane have been used in the description of the control message:



Important: When selecting an SCS Scribble Strip for use in a cue such as the above example with Q120, SCS searches for the latest SCS Scribble Strip in a Control Send cue *prior to the current cue* in the cue file. If you only need one SCS Scribble Strip for the whole production, then you could set this up as the first cue in your cue list, and as the cue does not have to be manually processed you could set the cue's Activation Method to 'auto start 0.00 seconds after cue file loaded'.

Also, the 'SCS Scribble Strip' message type is not available if there are no SCS Scribble Strip items for the selected Remote Device in the configuration file.

Setting up your remote device (eg mixer)

- You may need to adjust some settings on your mixer to ensure it responds to MIDI messages sent from SCS.
- For a Behringer X32 mixer you will need an X-UF or X-USB expansion card installed in the X32. Connect your USB cable to the USB socket on the expansion board, *not* to the remote control USB socket.

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Control Send - RS232

RS232 Control Send Cues are only available with **SCS Professional** and higher license levels.

The table below explains the fields available for RS232 messages in Control Send cues.

Entry Mode: When you setup an RS232 message you may enter the message as an **ASCII** string, as **Hex** values, or as **ASCII+CTL**, which is ASCII plus control characters enclosed in angle brackets. The **ASCII** mode is most suitable for RS232 messages that are humanly readable such as "Off(5)", and the **Hex** mode if values to be sent are not based on regular text. The **ASCII+CTL** is useful if you have messages that are humanly readable but also need common control characters, such STX. To enter one of the control characters, enclose the code in angle brackets. For example, <STX> will transmit 02H. The complete list of recognized control characters is given below.

Add CR (0DH) to end of Message? This checkbox is primarily intended for the ASCII Entry Mode but also applies to the Hex Entry Mode. If the checkbox is checked (which is the default setting) then a "Carriage Return" (0DH) will be added to the end of the message.

Add LF (0AH) to end of Message? This checkbox is primarily intended for the ASCII Entry Mode but also applies to the Hex Entry Mode. If the checkbox is checked (which is the default setting) then a "Line Feed" (0AH) will be added to the end of the message.

RS232 Message: Enter the message required. If you have selected the Hex Entry Mode then SCS only accepts hex characters (0-9 and A-F) and spaces. Spaces are ignored in Hex mode when building the message so can be included for legibility.

ASCII+CTL Codes

Code	Hex
<NUL>	00
<SOH>	01
<STX>	02
<ETX>	03
<EOT>	04
<ENQ>	05
<ACK>	06
<BEL>	07
<BS>	08
<TAB>	09
<LF>	0A
<VT>	0B
<FF>	0C
<CR>	0D
<SO>	0E
<SI>	0F
<DLE>	10
<DC1>	11
<DC2>	12
<DC3>	13
<DC4>	14
<NAK>	15
<SYN>	16
<ETB>	17
<CAN>	18
<EM>	19
<SUB>	1A
<ESC>	1B
<FS>	1C
<GS>	1D
<RS>	1E
<US>	1F
<DEL>	7F

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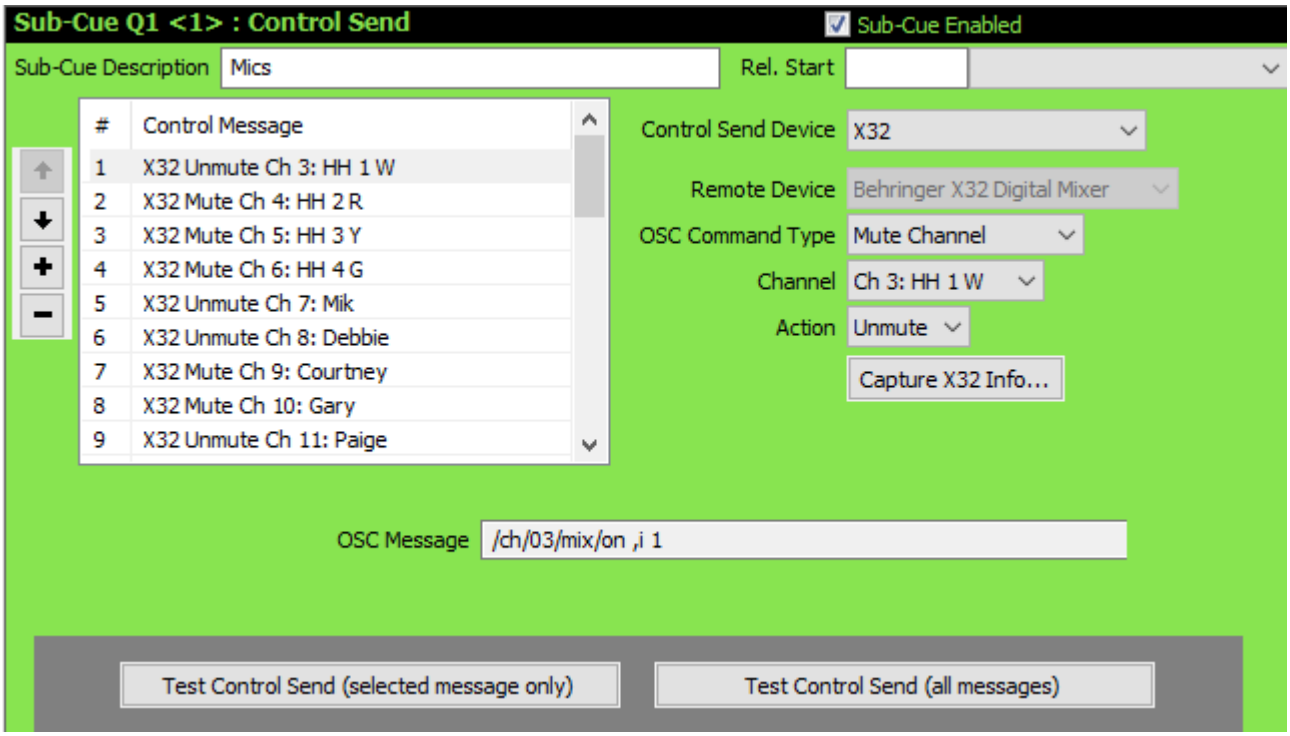
Control Send - Network

Network (TCP/UDP) Control Send Cues are only available with **SCS Professional Plus** and higher license levels.

The fields displayed for a Network Control Send Cue are governed by the **Remote Device** of the selected **Control Send Device**. Here is an example where the **Remote Device** is a *Behringer X32 Digital Mixer*:



The table below explains the fields available for Network messages in Control Send cues.

Remote Device: A display-only field showing the Remote Device defined in Production Properties for this Network **Control Send Device**. Fields that follow are dependent on the **Remote Device**.

For **Remote Device** *Behringer X32 Digital Mixer*:

- **OSC Command Type**: Select one of the supported OSC Command Types. The list currently includes Go Cue, Go Scene, Go Snippet, Mute Channel, Mute Aux Input, Mute FX Return, Mute Mix Bus, Mute Matrix Output and Mute 'Mute Group'. This list may be extended later.
- **Cue / Scene / Snippet / Channel / Aux Input / FX Return / Mix Bus / Matrix Output / Mute Group / Free Format**: *One* of the fields will be displayed, based on the selected **OSC Command Type**. For example, the screenshot above shows **Channel** as the **OSC Command Type** is *Mute Channel*. The field itself will be a drop-down list if SCS was able to retrieve a list from the X32. Otherwise the field will be displayed as a text field. This enables you to enter, say, channel numbers that you plan to use even if you do not currently have the X32 connected. For details regarding **Free Format** see OSC Free Format.
- **Action**: This field is displayed for **OSC Command Types** Mute Channel, Mute Aux Input, Mute FX Return, Mute Mix Bus, Mute Matrix Output and Mute 'Mute Group'. For the **Action** select *Mute* or *Unmute*.
- **Capture X32 Info**: This is particularly useful if you are setting up or editing cues during a rehearsal where you are selectively muting or unmuting actors' mics. As the rehearsal progresses you will mute or unmute mic channels as necessary on the X32, If you want to create an SCS Control Send Cue to replicate this action then you can use the **Capture X32 Info** button to build a Control Send cue with the current mute states of all channels. So when this cue is played in a live performance, the cue will reproduce what was captured in that rehearsal - at least for the channel mute states, not the channel levels. See Capture X32 Info for details.

For **Remote Device** *OSC Other*:

- The fields displayed are the same as for *Behringer X32 Digital Mixer* except that fields for **Cues**, **Scenes**, etc are always displayed as text fields as SCS does not interrogate the device for the respective lists, so cannot display them in a drop-down list. **Free Format** is also available with *OSC Other*. For details regarding **Free Format** see the Help page OSC Free Format.

For **Remote Device** *vMix*:

- See Control Send - vMix.

All other **Remote Devices**:

- **Entry Mode:** When you setup an Network message you may enter the message as an **ASCII** or **UTF8** string, as **Hex** values, or as **ASCII+CTL**, which is ASCII plus control characters enclosed in angle brackets. The **ASCII** and **UTF8** modes are most suitable for messages that are humanly readable such as "Off(5)", and the **Hex** mode if values to be sent are not based on regular text. The **ASCII+CTL** is useful if you have messages that are humanly readable but also need common control characters, such STX. To enter one of the control characters, enclose the code in angle brackets. For example, <STX> will transmit 02H. The complete list of recognized control characters is given below.

  The difference between **ASCII** and **UTF8** is how the message will be encoded when it is sent. Most devices or software that you will send such messages to will accept **ASCII** encoding, but some products, such as CasparCG Server, require **UTF8** encoding.
- **Add CR (0DH) to end of Message?** This checkbox is primarily intended for the ASCII Entry Mode but also applies to the Hex Entry Mode. If the checkbox is checked then a "Carriage Return" (0DH) will be added to the end of the message. The default setting for **Add CR** is 'checked'.
- **Add LF (0AH) to end of Message?** This checkbox is primarily intended for the ASCII Entry Mode but also applies to the Hex Entry Mode. If the checkbox is checked then a "Line Feed" (0AH) will be added to the end of the message. The default setting for **Add LF** is *'unchecked'* (clear).
- **Network Message:** Enter the message required. If you have selected the Hex Entry Mode then SCS only accepts hex characters (0-9 and A-F) and spaces. Spaces are ignored in Hex mode when building the message so can be included for legibility.

TCP Control of Video Projectors

For controlling Video Projectors (eg for powering on/off or for opening/closing the shutter) see the note about **Video Projectors** in Control Send Devices - Network. This specifically relates to projectors that use the **PJ-Net** protocol, such as Sanyo, Sony, Eiki and Christie projectors. For these projectors, the **Entry Mode** in your Control Send Cue should be set to **ASCII**, and **Add CR** must be checked.

Powering off a video projector usually requires you to confirm the action, and this applies also when using the TCP PJ-Net command **C02** - you need to send it twice. The easiest way to do this is to specify the ASCII message C02 in two consecutive lines of the same Control Send Cue.

Note: SCS may apply a short delay between sending consecutive control messages as some external equipment fails to separate the network messages if they are sent without any such inter-message delay. The length of this delay is set in Production Properties - see Control Send Devices - Network. Delays are not be necessary for UDP connections as the UDP protocol recognizes message boundaries, so the default delay time for UDP is 0ms. TCP unfortunately does not recognize message boundaries. However, vMix messages use CR as a message boundary, so no delay time is required for vMix even though it uses TCP. The default delay time for other TCP devices is 100ms.

ASCII+CTL Codes

Code	Hex
<NUL>	00
<SOH>	01
<STX>	02
<ETX>	03
<EOT>	04
<ENQ>	05
<ACK>	06
<BEL>	07
<BS>	08
<TAB>	09
<LF>	0A
<VT>	0B
<FF>	0C
<CR>	0D
<SO>	0E
<SI>	0F
<DLE>	10
<DC1>	11
<DC2>	12
<DC3>	13
<DC4>	14
<NAK>	15
<SYN>	16
<ETB>	17
<CAN>	18
<EM>	19
<SUB>	1A
<ESC>	1B
<FS>	1C
<GS>	1D
<RS>	1E
<US>	1F
<DEL>	7F

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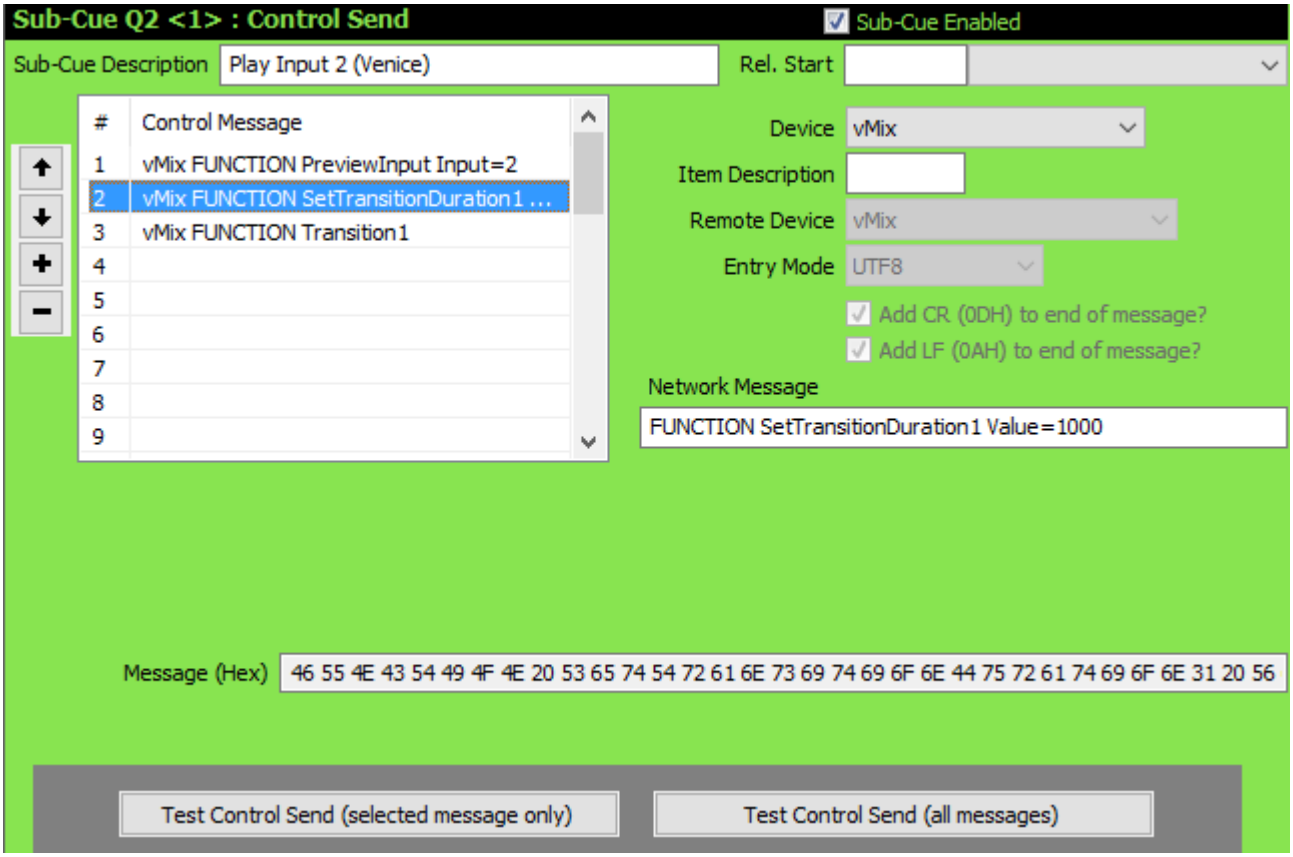
Control Send - Network - vMix

To control vMix (vmix.com) we recommend using a network connection. When you set up the required Control Send device (see Production Properties - Control Send Devices - Network), select **vMix** as the **Remote Device** as this will simplify setting up Control Send Cues for vMix.

Here is an example of a Control Send Cue that sends three messages to vMix:



This example is taken from a scenario where the user had pre-loaded into vMix every video required for the production, in specific input slots, as well as a black color input in the first input slot.

When the above cue is played, SCS would send these three commands consecutively to vMix:

1. "FUNCTION PreviewInput Input=2" which will load input 2 (a video file) into the vMix Preview Window.
2. "FUNCTION SetTransitionDuration1 Value=1000" which will set the duration of 'transition 1' to 1 second.
3. "FUNCTION Transition1" which will transition the content of the Preview Window to the Output Window.

The effect of this cue is that the video file in Input 2 will start playing in the vMix Output Window (eg via a video projector), fading in the video over 1 second.

For details of all available vMix commands see these topics in the vMix User Guide: TCP API and Shortcut Function Reference. Regarding the vMix User Guide, we recommend you do *not* download the User Guide as a PDF file as you may find the downloaded version has truncated line lengths in the Shortcut Function Reference table, removing the very important *Parameters* column. It is therefore safer to view the table online.

Important Note:

SCS will *not* validate the content of the Network Message. However, a couple of tips:

- The vMix TCP API requires command types to be in upper-case, eg FUNCTION, not Function. (That only applies to the command type, not to the remainder of the command.)
- A command that requires more than one parameter must have the parameters separated by ampersand (&), eg "FUNCTION SetVolume Value=75&Input=2"

Controlling vMix from SCS

If you want to control vMix from SCS but are not sure how to get started, then here is a suggested setup, based on the cue file used for the above screenshot:

- First of all, start vMix so you have an empty vMix control panel.
- Add an Input as a color, selecting black as the color. This Input can be used at any time to black out the Output Window.
- For every video/image file you want to use in this production, add an Input using the required video/image file. These should preferably be added in the order in which you wish to play those files.
- Select 'Fullscreen' if required.
- Make any other changes you require that are to be global for this production.
- Important: Now Save a Preset. You may wish to name the file for this preset the same or similar to your cue file name. The preset you have now saved will contain a snapshot of the vMix settings, including details of all the Inputs you have added.

Assuming you have already set up a Control Send Network Device for the vMix connection, now set up cues in SCS as follows:

- Add a Control Send Cue to open the vMix Preset, eg with a Network Message like this
  FUNCTION OpenPreset Value=C:\Users\Mike\Documents\Show Files\Reedy River\Reedy River.vmix
- For each video/image you want to play, add a Control Send Cue similar to that shown in the above screenshot. There are, of course, other ways to play your video/images depending on your requirements, such as by using the shortcuts CutDirect or QuickPlay.
- We also suggest you set up a hotkey cue in SCS for 'Stop All' (eg assigning keyboard key S), which will enable you to initiate a blackout in vMix as well as stopping everything in SCS. To do this, add a Control Send Hotkey Cue containing one control message, such as:
  FUNCTION QuickPlay Input=1
  Note that Input 1 is the black colour Input you added. The default QuickPlay transition time in vMix is 500ms, so if you want an immediate blackout you could use CutDirect Input=1.
  Now add an SFR *sub-cue* to this cue with an Action Required of 'STOP ALL (=ESC)'.
- Other SCS cues can be added wherever required.

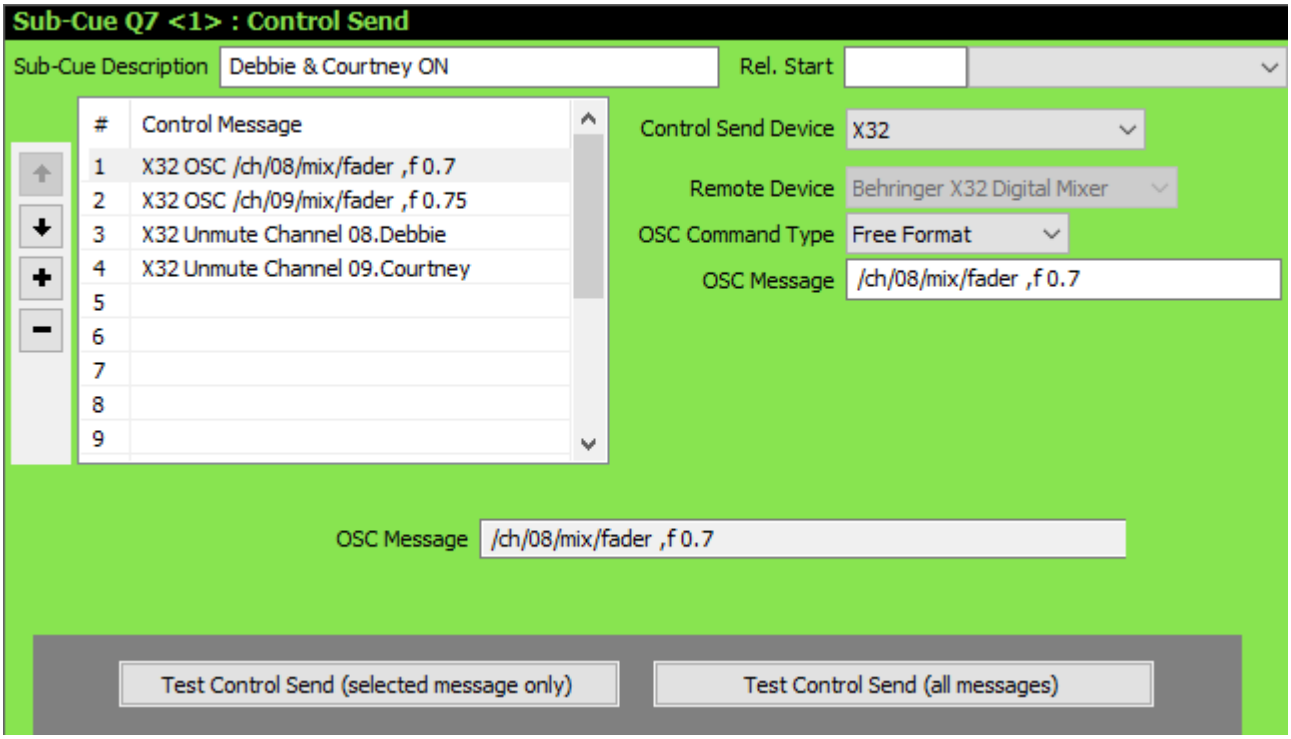
With the above all set up and saved, whenever you want to run this show:

- Start vMix.
- Start SCS and open this cue file.
- Play your first cue to send the OpenPreset command to vMix. vMix will now open that preset, but note that this can take some time to complete, even though the SCS cue itself completes 'instantly'. So wait until vMix has successfully completed this task before continuing in SCS.
- You can now play your cues in SCS. The vMix Control Send Cues will cause the designated video/image to be played.
- If you need to 'Stop All', then use the assigned hotkey (eg keyboard key S) instead of ESC, so that any video/image currently being played or displayed by vMix will be blacked out.

Control Send - Network - OSC Free Format

If you need to send an OSC command that is not supported by the regular **OSC Command Types** available in SCS then you can select *Free Format* and enter any valid OSC command, formatted as described below.

Here is an example of a Control Send Cue that sends four OSC commands to a *Behringer X32 Digital Mixer*, to set fader levels on channels 8 and 9 and then to unmute those channels. Unmuting the channels is done by using the **Mute** command type with **Unmute** as the Action, but to set the fader levels it is necessary to use the **Free Format** command type.



For a **Free Format** OSC message, you *must* enter an **OSC Message** constructed as follows:

An OSC message has the following general format:

<address pattern> <type tag string> <arguments>

The **address pattern** is a string that starts with a '/', followed by a message routing or destination. For example: **/ch/08/mix/fader**

The **type tag string** specifies the data type(s) for the argument(s) to follow. OSC **type tags** begin with a comma (',') followed by one or more of the characters 'i', 'f', 's', or 'b' that correspond to the data types int32, float32, OSC-string, or OSC-blob. SCS does not support 'b' as this is meaningless in the context of a user-enterable OSC Message. The selected item in the above screen shot shows the type tag string as **,f** meaning that this OSC message has one **argument** which is a float32 value.

It is expected that normally you will only need one **tag** and corresponding **argument**. If you have more than one **tag** and **argument** then the arguments must be separated by single space characters. (Note also that the first **argument** must be separated from the **type tag string** by a single space character.)

- **int32 arguments** must be entered as integers, optionally signed, eg 440, -5.
- **float32 arguments** may include a decimal point and be optionally signed, eg 0.75, -1.234.
- **string arguments** must be enclosed in double quotes if they contain spaces, eg "hello world", but need not be enclosed in double quotes if they do *not* contain spaces, eg Q5.

Other examples of OSC Messages:

- `/oscillator/4/frequency ,f 440.0`
- `/foo ,iisff 1000 -1 hello 1.234 5.678`

Important Notes:

- SCS will validate the format of the **OSC Message** but will *not* determine if the **OSC Message** is meaningful or compatible with the target device. Any message that the target device doesn't accept will most likely be ignored by the device. No 'accepted' or 'rejected' response is included in the OSC specification, so SCS cannot determine if the message was accepted by the device.To check if an **OSC Message** is acceptable to your device, use the **Test Control Send (selected message only)** button.
- If you send a message that solicits a response from the device, SCS will do nothing with the response.
- OSC messages are not sent simply as text strings - the messages are assembled in a very specific format for transmission, including converting the int32 and float32 arguments to 32-bit values (either integer or floating point), and ensuring all parts of the message are 4-byte-aligned,

If you have a *Behringer X32 Digital Mixer* then for details of available OSC messages we recommend the publication *Unofficial X32/M32 OSC Remote Protocol* by Patrick-Gilles Maillot, available from

https://sites.google.com/site/patrickmaillot/x32.

Control Send - Network - Capture X32 Info

This window is displayed after clicking the **Capture X32 Info** button in the editor panel for a Control Send - Network Cue.

Purpose

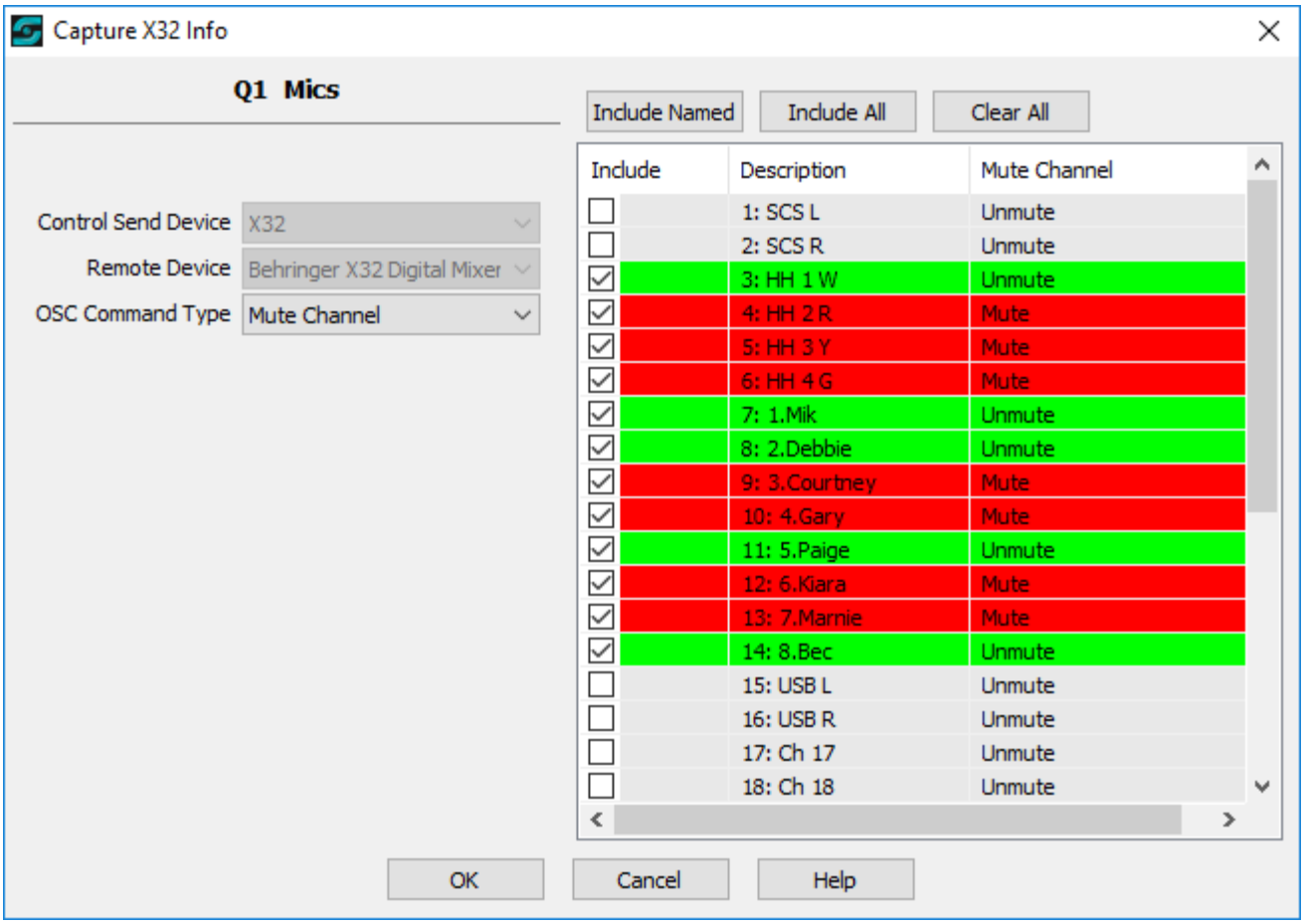
To understand how to use **Capture X32 Info** it is important to understand why the feature was built. If you are running a production where you have actors' mics that you frequently need to mute or unmute (on the X32) then during an early rehearsal you can use **Capture X32 Info** to create Control Send Cues that record the current mute states of, preferably, *all* the actors' mic channels. You should create such a cue for every occasion on which you need to mute or unmute at least one mic.

You will then have Control Send Cues you can use to set all the necessary channel mute states, for each cue point in the production where these changes are required.

We recommend you include *all* mic channels in every relevant Control Send cue, not just the channels that change. During rehearsals in particular, this means that the director can jump to any place in the script and by playing your cue at or prior to that point you will correctly mute or unmute all mic channels as required.

Although we mention 'mics' in the above, this obviously also applies to other channel usages, such as instrument channels. Also, although we mention 'channels', you can alternatively capture the mute states of DCA groups, Aux Inputs, etc, as described further down this page against 'OSC Command Type'. However, it is not possible to capture more than one OSC Command Type in a single Control Send sub-cue.

Here's an example of capturing the Mute states of the channels on a currently-connected *X32 Digital Mixer*, although initially all the **Include** checkboxes will be clear.



Please Note:

This feature of SCS is designed to capture a snapshot of the *current* Mute states of channels, DCA groups, Aux Inputs, etc, as determined by the selected **OSC Command Type**. This screen does not provide a facility to *change* any setting on the X32, although that can, of course, by done by changing the **Action** in the Control Send Cue itself, when that cue is played.

Properties and Controls

Cue: This is a display-only field showing the (Sub-)Cue Number and Description of the sub-cue currently being edited.

Control Send Device: A display-only field showing the Control Send Device selected in the item selected in the sub-cue currently being edited.

Remote Device: A display-only field showing the Remote Device displayed for the item selected in the sub-cue currently being edited.

OSC Command Type: This field is initially set to the OSC Command Type of the item selected in the sub-cue currently being edited, but you can change this if required. The list currently includes Mute Channel, Mute Aux Input, Mute FX Return, Mute Mix Bus, Mute Matrix Output and Mute 'Mute Group'.

Include List: This is the scrollable list shown on the right which is populated with the selected items, eg Channels, plus the current state of the relevant Mute control on the X32. The **Include** checkbox is used to identify the items to be included in the current Control Send sub-cue. Items that are included will be highlighted in green for unmute, or red for mute.

Include Named: This will set the **Include** checkboxes for all items (eg channels) that have names assigned. Using the channels shown in the above screenshot as an example, **Include Named** would *not* include channels 17 and 18, but would include channels 1-16.

Include All: This will set all **Include** checkboxes.

Clear All: This will clear all **Include** checkboxes.

OK: This will close the Capture window and update the Control Send sub-cue currently being edited, *replacing any existing items in that Control Send sub-cue*. This only occurs if at least one **Include** checkbox is selected. If *no* **Include** checkboxes are selected then then no action takes place, and the button acts the same as **Cancel**.

Cancel: This will close the Capture window, discarding any Include settings and leaving the Control Send sub-cue unchanged.

Help: Show this Help.

Control Send - HTTP Request

HTTP Control Send Cues are only available with **SCS Professional Plus** and higher license levels.

The table below explains the fields available for HTTP Request messages in Control Send cues.

HTTP Message: Enter the message required. **Full HTTP Message** (display-only): This will show the full message that will be sent, comprising the text entered in ***Common start of HTTP requests*** in Production Properties - Control Send Devices - HTTP followed by the text you have entered against ***HTTP message***.

Back to Control Send Cues

MTC (MIDI Time Code) Cues and LTC (Linear Time Code) Cues

MTC (MIDI Time Code) Cues are only available with **SCS Professional** and higher license levels.

LTC (Linear Time Code) Cues are only available with **SCS Platinum**, and when using SoundMan-Server. SoundMan-Server is required because LTC is sent using a SoundMan-Server timecode generator.

Overview

An MTC cue enables you to send MTC (MIDI Time Code) via a selected MIDI Output port.

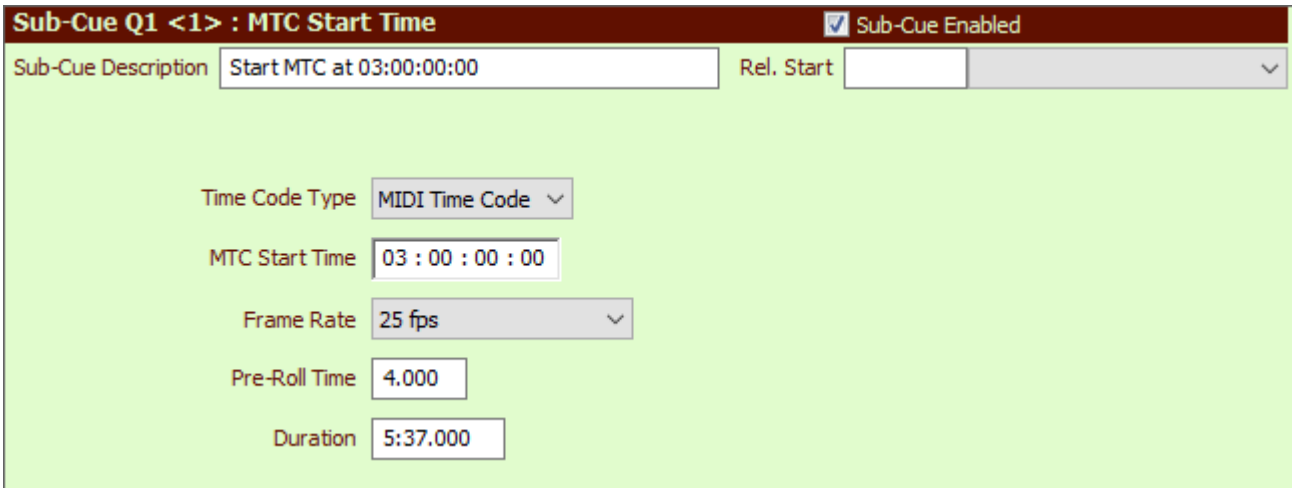
An LTC cue enables you to send LTC (Linear Time Code) via a selected Audio Output Device, provided SoundMan-Server has been selected as the Audio Driver.

Note:

Before you set up any MTC cues you need to nominate a **MIDI Out** device in Production Properties - Control Send Devices - MIDI and set the '**For MTC'** property of that device.

Before you set up any LTC cues you need to nominate an **Audio Output** device in Production Properties - Audio Output Devices and set the '**For LTC'** property of that device. The **Audio Driver** for LTC must be *ASIO (using SM-S)*.

For an MTC or LTC cue or sub-cue, a sub-cue panel like this will be displayed:



Properties and Controls

General

Sub-Cue Description: Enter a description for this sub-cue. You can leave this field blank and let SCS create a default Description for you.

Relative Start: These fields are available for every type of sub-cue. For details see *Relative Start* under Audio File Cues. Then click the **Back** button in the Help Viewer to return to this page.

Time Code

Time Code Type (only displayed for SCS Platinum users): Select 'MIDI Time Code' for an MTC Cue, or 'Linear Time Code' for an LTC Cue. If the control is not displayed then 'MIDI Time Code' applies.

In the following, read 'LTC' for 'MTC' if 'Linear Time Code' has been selected.

MTC Start Time: Note that the "MTC Start Time" is actually 4 fields and you can tab between them as required. The default time is 00:00:00:00, so if you just need to set the 'hours' component then the first of these fields is the only one you need to change.

Frame Rate: Select the required frame rate from the drop-down list. The Frame Rate you select is remembered by SCS and is used as the default Frame Rate for subsequent new MTC cues. For example, if you change this to 30fps for your first MTC cue, then when you create your next MTC cue SCS will default this field to 30fps.

Pre-Roll Time: For MTC, the Pre-Roll Time is the delay after sending a Full-Frame message before sending Quarter-Frame messages. For LTC, the Pre-Roll Time is deducted from the LTC Start Time for the first timecode sent. So if the above example was for LTC then the first timecode sent would be 02:59:56:00. Leave the field blank if no pre-roll time required. SCS remembers your last setting and uses it as the default Pre-Roll Time for new MTC cues.

Duration: Specifies how long the MTC cue is to run. You can leave this blank if you are going to stop the cue using an SFR cue. Also, if you set up a cue like this:

Qn sub-cue 1: Audio File
Qn sub-cue 2: MTC

then the MTC sub-cue will be 'linked' to the Audio File sub-cue which means they will start together and end together. For this scenario you can leave the MTC **Duration** blank as SCS will stop the MTC sub-cue when the Audio File sub-cue ends. Also, if you drag the progress slider on the Audio File sub-cue, then the MTC will be adjusted accordingly. An MTC sub-cue may also be linked to a Video sub-cue.

If you do enter a Duration then in the cue panels on the main window a progress bar will be displayed for the MTC cue. You can drag the pointer on that progress bar to change the current MTC position.

Note: **Pre-Roll Time** must be set if your target equipment (eg lighting board) requires time to sync to the **MTC Start Time** sent by a 'Full Frame' message. If your equipment documentation doesn't specify the required delay then you may need to experiment to see how quickly the equipment syncs to the **MTC Start Time**.

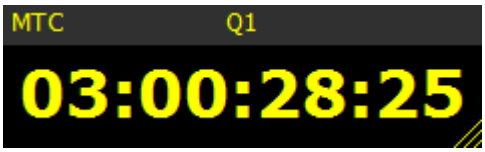
Tip: If you need to use **Pre-Roll Time** with a lighting board and you want a lighting cue to fire immediately the cue's associated audio starts then you have two options. One option is to insert a corresponding pre-roll silent period at the start of the audio file so that the audio and the MTC 'Quarter Frame' messages start simultaneously (after the **Pre-Roll Time** has elapsed).

However, having a silent period at the start of the audio file is not satisfactory if you want the cue to start 'instantly'. What you can probably do (check your equipment documentation) is fire your first lighting cue using a MIDI Control Send message and let the lighting board handle subsequent lighting cues (*after* the **Pre-Roll Time**). With this technique you will not need any silent pre-roll time at the beginning of your audio file. You will, of course, still need to set the **Pre-Roll Time** in the MTC sub-cue.

The **Sub-Cue Description** defaults to "Start MTC at <MTC start time>", but you change this description if you wish.

If you want a cue to stop MTC then create an SFR cue to "Stop immediately" the MTC cue.

From the main screen you can now run your cues. When MTC is running, the current MTC time is displayed in the top right of the VU meter area, or in a separate window if requested against **MTC Display** in the Display Options. If displayed in a separate window it will appear like this:



You can move the window anywhere you wish, even onto another screen, by clicking and dragging the title bar. You can also resize the window by clicking and dragging the resize handle in the bottom right. Resizing the window will cause the time code font size to be resized (but not the font of the title bar), which means you can display a very large MTC display if required. SCS remembers the size and position of the window across sessions. *Note that when an MTC Cue is completed, SCS hides the MTC window after 3 seconds unless another MTC Cue is started.*

The MTC displayed in SCS may not be exactly the same as the MTC displayed on the slave for various reasons, but should be a good enough guide for general use. If the MTC cue itself is displayed in the cue panels, then the MTC time is also displayed in the status field.

Note: If you start a new MTC cue while one is already playing, that previous MTC cue will be marked as 'Complete'.

See also: MIDI Time Code

Note Cues

Note Cues are only available with **SCS Standard** and higher license levels.

Overview

A Note Cue is a cue without any sub-cues. Use the cue Description field for your note. When a Note is displayed in the cue display panels the description is highlighted. The Note is cleared from the list by 'playing' the cue.

See also Memo Cues.

NB A 'Note' cue is *not* the same as a 'Hotkey (Note)' or 'External (Note)' cue.

Memo Cues

Memo Cues are only available with **SCS Professional** and higher license levels.

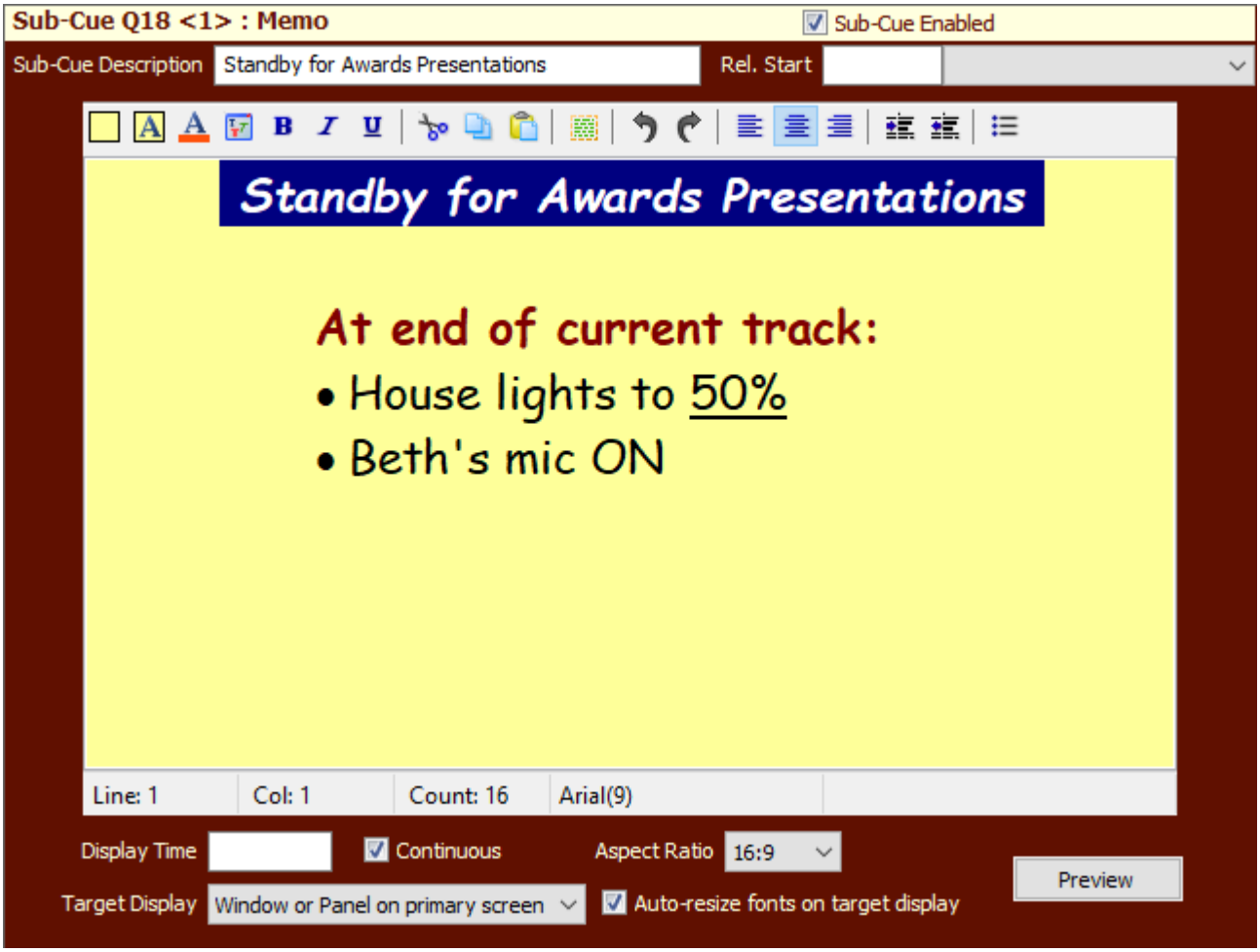
Overview

Memo cues are like extended 'Note' cues, but operate as normal cues / sub-cues in that the memo is displayed when you activate the cue and is closed when the cue is stopped. They are useful for displaying information about non-cue activity you want your operator reminded of. If you are an entertainer you can use Memo cues to display **lyrics** etc.

They can also be used for audience announcements, such as for pre-show advice about cell phones / mobile phones.

Many text formatting options are available, as well as color settings.

For a *Memo* cue or sub-cue, a sub-cue panel like this will be displayed:



An example such as the above could be used at or near the end of the cue list for an event, and this Memo cue could be set to start, say, 10 seconds before the end of the previous cue, where the previous cue plays a music track for accompanying a dance item, etc. This would cause this Memo to pop-up 10 seconds before the end of the music track.

Properties and Controls

General

Sub-Cue Description: Enter a description for this sub-cue. You can leave this field blank and let SCS create a default Description for you.

Relative Start: These fields are available for every type of sub-cue. For details see *Relative Start* under Audio File Cues. Then click the **Back** button in the Help Viewer to return to this page.

Memo

Memo: In the main control, enter the text you want for your memo. If you have not entered a Sub-Cue Description then SCS will populate this from up to the first 40 characters of the first entered line in the memo control - as shown in the example above.

Formatting options are available via the toolbar:

These toolbar buttons are (from left to right):

- Memo Background Color
- Text Background Color
- Text Color
- Select Font Style and Size
- Bold
- Italic
- Underline
- Cut
- Copy
- Paste
- Select All
- Undo
- Redo
- Align Left
- Align Center
- Align Right
- Increase Indent
- Decrease Indent
- Bullet List

Display Time and **Continuous**: Enter the length of time you want the memo to be displayed in **Display Time**, or select **Continuous** if the memo is to displayed continuously until the cue is stopped or closed. The 'default' Display Time / Continuous setting for a new memo is that of the last memo entered or processed.

Aspect Ratio: This is mainly for use with memos to be displayed on a secondary screen, to assist in ensuring the memo layout is suitable, and is used internally to resize fonts if you have selected the **auto-resize fonts** property.

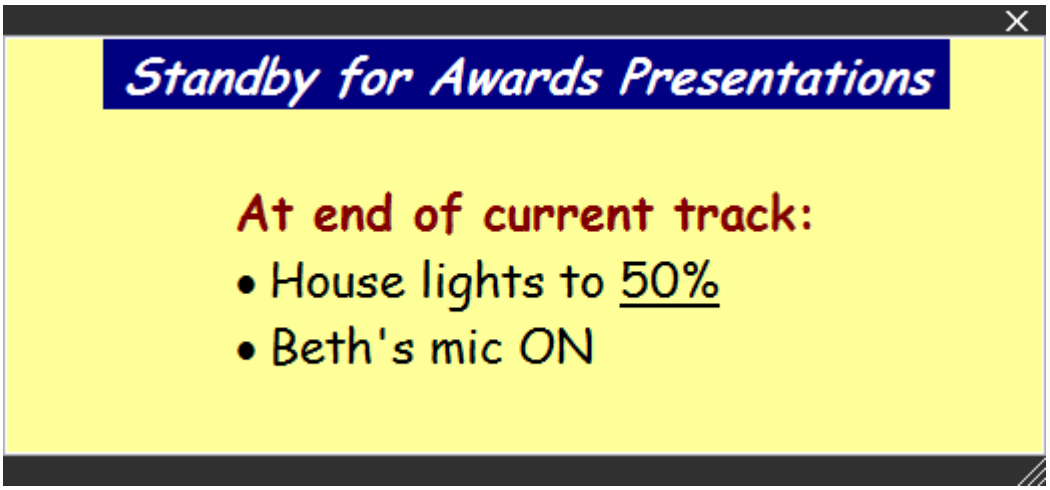
Target Display: Select the location where you want this memo cue to be displayed. You can select *Window or Panel on primary screen*, or *Full-screen display on screen <n>*.

For *Window or Panel on primary screen*, the target is determined by the Production Property (General): **Memos Assigned to the Primary Screen to be displayed**: The choices available in that Production Property are:

- In a Pop-Up Memo Window
- In a Memo Panel to the right of the Cue List in the main window
- In a Memo Panel to the right of the Cue List AND Cue Panels in the main window

Auto-resize fonts on target display: This is mainly intended for memos to be displayed on a secondary screen. If set then when the memo is displayed SCS will resize the fonts using a factor derived primarily by dividing the target height by the height of this memo design control. *Although this checkbox also applies to memo's displayed in a pop-up window on the primary screen, you may find it better to **clear** the checkbox for this target display.*

Preview: This allows you to see how the Memo will be displayed at run time, and to adjust the size if required to suit what is displayed if the target display is a pop-up window on the primary screen. Here's an example of the pop-up window preview:



This shows *exactly* how the Memo will appear at run time (except for the position on the screen). To adjust the size of the display, click and drag the /// marker in the bottom right of the window. To close the window, click the X marker in the top right. You can also move the window by clicking and dragging the top bar (anywhere to the left of the X). When you do close the window, SCS remembers the width and height of the memo display, so every memo cue has

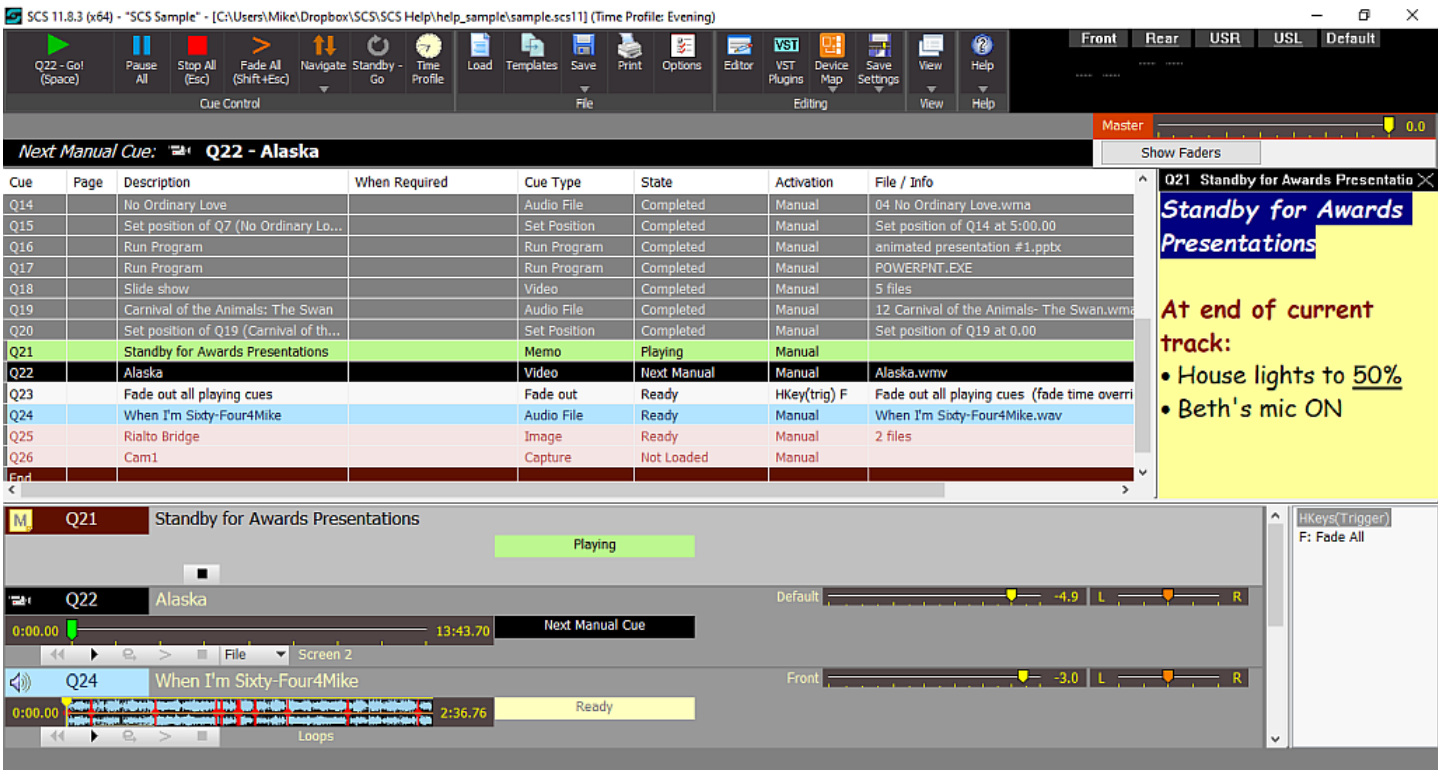
it's own display width and height saved.

If the target display is a secondary window then the preview will show the memo full-screen on that selected screen. To cancel the preview, click **Cancel Preview** (the same button).

Run Time

If the Memo is displayed in a **pop-up window** then you can move that anywhere you wish - even to another screen. The pop-window is also resizable.

If the Memo is displayed in a **panel to the right of the cue list** then here's an example of how that may appear:



Note that you may need to adjust the formatting of the Memo to suit the target display. For the above example of displaying the Memo in a panel, the Memo was edited to align all items to the left.

There is a vertical 'splitter bar' between the Cue List and the Memo Panel, and you can drag that splitter bar left or right to adjust the width of the Memo Panel. SCS remembers the splitter bar setting and applies that to all Memo Cues displayed on the Primary Screen.

If the Memo is displayed in a **panel to the right of the cue list and cue panels** then the display will be similar to the above example except that the Cue Panels (including the Hotkey panel if present) are reduced in width so that the Memo Panel can occupy the space down to just above the status bar.

If you close the Memo by clicking the X in the top right of the Memo Window or Panel then this will stop (terminate) the Memo cue.

If you run a Memo cue when another Memo cue is being displayed to the same Target Display then that currently displayed Memo cue will be terminated.

Here's a real-life example of using a Memo Cue for a Pre-Show Checklist. This was provided by David Lambert, who created this cue for the benefit of board operators who only occasionally ran the show.

PRESHOW CHECKLIST
(This window will close automatically after curtain speech - Hotkeys A or C)

AMPS
- Both amps turned on
- Top amp volume knobs pointing up at 12 o'clock position **(VERY IMPORTANT!!!)**

MIXER
- Faders 1 - 4, 6, 8 set to Unity
- Fader 5 set to Infinity and muted (Not Used)
- Fader 11/12 set to Unity *(as indicated by 'U' on the fader)*
- Fader 11/12 Mute Button disengaged
- Fader 11/12 1-2 switch disengaged / 3-4 switch engaged
- Sub 1 fader set to Unity (Left)
- Sub 2 fader set to Unity (Right)
- Sub 3 fader set to Unity (Left)
- Sub 4 fader set to Unity (Right)
- Main Mix set to Unity

AUDIOBOX USB
- Mixer knob set to full
- Main set to full
- All other knobs all the way down (not used)

HOTKEYS:
- A - Prerecorded curtain speech (Use if a live speech is not required.)
- B - Live curtain speech (Use if box office manager wants to give the speech [rare])
- C - End of live speech (Music plays out as box office manager exits stage)
- F1 - Resets preshow/intermission music if you need to restart for any reason. (Usually only needed during rehearsals.)

This Memo Cue was set to auto-start, and the relevant Production Property was set to display memos 'in a pop-up memo window'.

Go To Cues

Go To Cues are only available with **SCS Professional** and higher license levels.

Overview

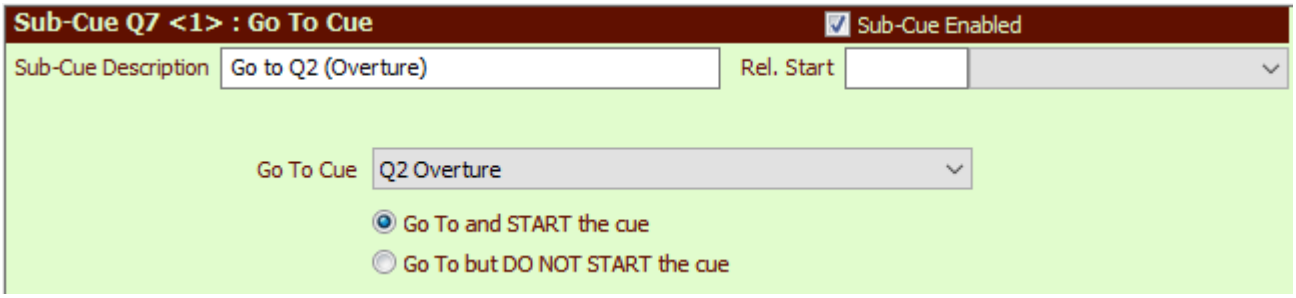
A Go To cue will jump to a new position in the cue list. This enables you to create a loop of multiple cues.

Using a Go To cue is best explained with a simple example. Suppose you have the following cues:

- **Q1** - Preshow music as a playlist
- **Q2** - Audio file cue
- **Q3** - Control send cue
- **Q4** - Audio file cue
- **Q5** - SFR cue
- **Q6** - Audio file cue

When **Q6** has completed you want to loop back to **Q2**. To do this, set up **Q7** as a **GoTo** cue referencing **Q2**. When Q7 is run, SCS will jump back to Q2 in the cue list and will immediately start Q2, *unless* the 'do not start' option is selected (see below).

For a *Go To* cue or sub-cue, a sub-cue panel like this will be displayed:



Properties and Controls

General

Sub-Cue Description: Enter a description for this sub-cue. You can leave this field blank and let SCS create a default Description for you.

Relative Start: These fields are available for every type of sub-cue. For details see *Relative Start* under Audio File Cues. Then click the **Back** button in the Help Viewer to return to this page.

Go To Cue

Go To Cue: Select a cue from the drop-down list.

Go To and START the cue: This is the default action of a 'Go To' cue. On repositioning the cue list at the selected cue (Q2 in the above example), that cue will be immediately started.

Go To but DO NOT START the cue: If this option is selected then the cue list will be repositioned at the selected cue (Q2 in the above example) but that cue will *not* be automatically started.

Tip: Stopping 'Go To' cues: 'Go To' cues are usually used in loops of cues that contain auto-start times, so the loop just keeps going without manual intervention. To escape from the loop you can use an **SFR Cue** to fade out and stop (or just stop) audio files etc within the loop, and you should also include a 'STOP' of the 'Go To' cue.

Here's an example taken from a cue file supplied by an SCS customer:

Cue	Description	Cue Type	State	Activation	File / Info	Length	Device
306	High Pitched wind	Audio File	Next Manual	Manual	HIGH_PITCHED_WIND_BB.wma	2:58.96	FOH+
310	High Pitched wind	Audio File	Ready	Linked	HIGH_PITCHED_WIND_BB.wma	2:58.96	FOH+
311+	Change level/pan of 310 (High Pitched wind)	Level Change	Ready	4.00 as 310	Change level/pan of 310 (High Pitched wind)	2.00	
312+	Change level/pan of 310 (High Pitched wind)	Level Change	Ready	0.00 ae 311	Change level/pan of 310 (High Pitched wind)	2.00	
313	Go to 311 (Change level/pan of 310 (High Pitched wind))	Go To Cue	Ready	0.00 ae 312	Go to 311		
314	Fade out High Pitched wind	Stop&Fade	Ready	Manual	Fade out 306 310 313 (fade time override 5.00)	5.00	

The purpose of this loop is to produce the effect of a howling wind moving around the auditorium, and this is achieved using the Level Change cues operating on the Audio File cues. Cue 313 loops back to the first of these level change cues, which keeps the audio continually moving around the auditorium. (The Level Change cues both actually contain two sub-cues, with one sub-cue changing the level of cue 306 and the other changing the level of cue 310.)

When the 'howling wind' is to be faded out and stopped, the operator will activate SFR cue 314. This SFR cue

contains 'fade out and stop' entries for cues 306 and 310 (the two audio file cues) and a 'stop' entry for cue 313 (the 'go to' cue). This causes cue 313 to be marked as 'completed' which prevents it being auto-started after the end of cue 312.

Credit: Thanks to John Hutchinson for this example.

Set Position Cues

Set Position Cues are only available with **SCS Professional** and higher license levels.

Overview

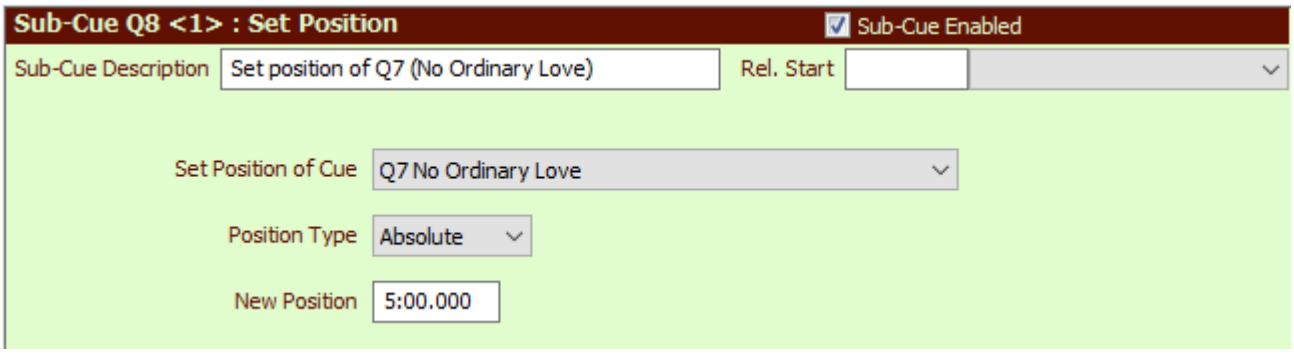
A Set Position cue enables you to will jump to a new position within a currently-playing cue. For example, if **Q7** is a long audio or video cue and is currently playing, and you want a cue (**Q8**) that will cause **Q7** to jump to the position 5:00 (5 minutes exactly), then set up **Q8** as a **Set Position** cue referencing Q7 and with a **New Position** of 5:00.000. When Q8 is run, Q7 will jump to the 5:00.000 minute position, just as if you had dragged the progress slider to that position. (On videos there could be a small freeze in the image as the video control searches for the new position and populates the playback buffer. This is particularly noticeable on high definition videos.)

Notes:

As mentioned above, a **Set Position** cue enables you to will jump to a new position within a currently-playing cue (referred to here as the 'target cue'). If the target cue has several sub-cues, the 'set position' will occur on *all* audio file and video/image sub-cues in that target cue. With video/image sub-cues, the 'set position' will be applied to the first video/image file only.

As can be deduced from the above, **set position** cues are primarily geared towards target cues that have just a single audio file or video/image sub-cue, or cues that have multiple audio file sub-cues that start together.

For a *Set Position* cue or sub-cue, a sub-cue panel like this will be displayed:



Properties and Controls

General

Sub-Cue Description: Enter a description for this sub-cue. You can leave this field blank and let SCS create a default Description for you.

Relative Start: These fields are available for every type of sub-cue. For details see *Relative Start* under Audio File Cues. Then click the **Back** button in the Help Viewer to return to this page.

Set Position

Set Position of Cue: Select a cue from the drop-down list. *Only Audio File cues, and Video/Image cues with only one video/image, are available for* **Set Position of Cue**. Alternatively, you can select 'All playing audio cues' or 'All playing video cues'.

Position Type: Select *Absolute, Relative, Before End,* or *Cue* Marker. If the **New Position** is to be relative to the current position of the target cue then select *Relative*.

New Position: This field will be displayed if **Position Type** is *Absolute, Relative* or *Before End*. Enter the required new position in the standard time format, <minutes>:<seconds>.<thousandths>. You can omit entering non-significant characters. For example, if you enter just 45 then SCS will interpret that as 45 seconds. A fully-formatted time will be redisplayed. If this is to be a *Relative* position then **New Position** must start with a + or -. For *Before End* the position will be the time before the end of the target cue. For example, setting a Before End position of 15 will jump the target cue to 15 seconds before the 'end at' position.

To simulate a record skipping back you could set up a hotkey cue containing a Set Position Cue with a Relative New Position of, say, -2.000. When the target cue is playing you can activate this hotkey cue whenever required and the target cue will skip back 2 seconds.

Cue Marker: This field will be displayed if **Position Type** is *Cue Marker*. If the target cue has one or more cue markers or cue points then this drop-down list will be populated with the names and positions of those cue markers. Select the required cue marker. See SCS Cue Markers for more information. A Cue Marker cannot be selected for either of the 'All playing...' cue selections.

'Call Cue' Cues

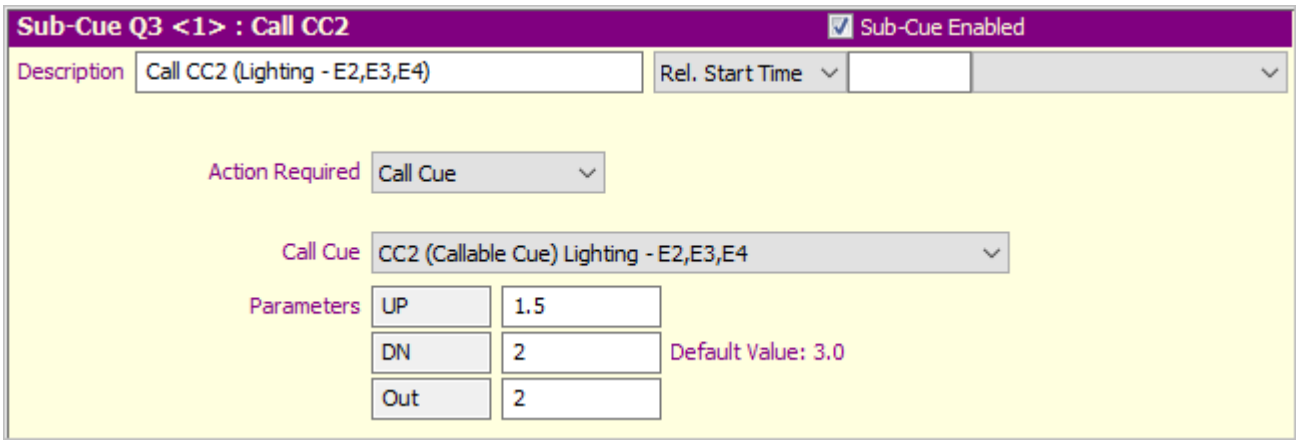
'Call Cue' Cues are only available with **SCS Professional** and higher license levels.

Overview

There are two actions available in a Call Cue cue type:

- The primary purpose of this cue type is to call another cue, typically a cue you may wish to use several times at different points in your cue list, such as setting a lighting plot.
- A secondary purpose is to allow you to select a hotkey bank, rather than having to do this by a keyboard shortcut.

A sub-cue panel like this will be displayed:



Properties and Controls

General

Sub-Cue Description: Enter a description for this sub-cue. You can leave this field blank and let SCS create a default Description for you.

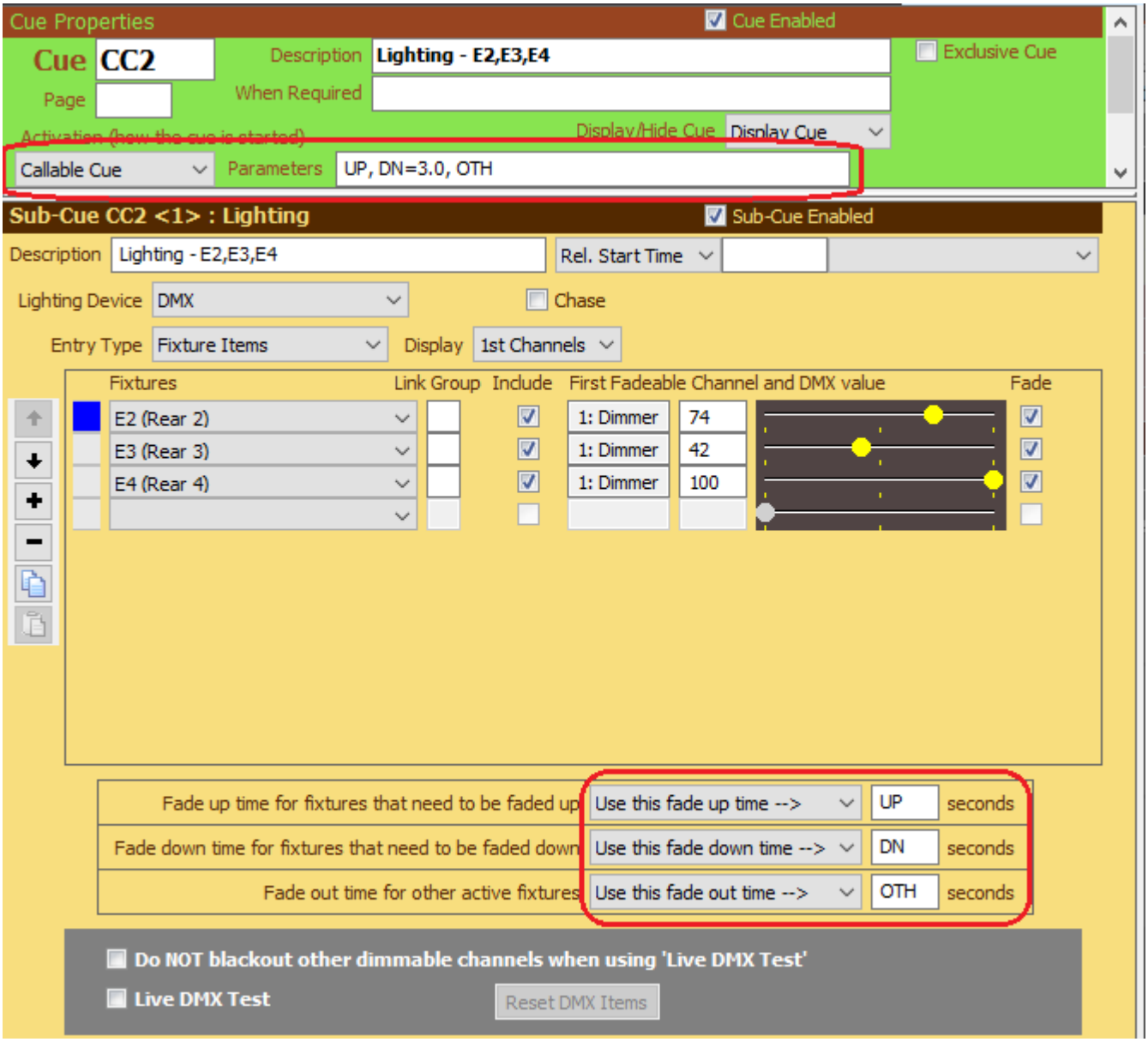
Relative Start: These fields are available for every type of sub-cue. For details see *Relative Start* under Audio File Cues. Then click the **Back** button in the Help Viewer to return to this page.

Call Cue / Select Hotkey Bank

Action Required: This is the type of action you require, which may be either *Call Cue* or *Select Hotkey Bank*. The action you choose determines which field is displayed next.

Call Cue: This field is displayed if the **Action Required** is *Call Cue*. Select a cue from the drop-down list. The list contains only cues that have an **Activation Method** of *Callable Cue, Hotkey (Trigger)*, or *External (Trigger)*. A 'callable cue' - see Callable Cue - is similar to a Hotkey (Trigger) Cue except that the cue is activated only by *this* cue type ('Call Cue') rather than by a keyboard action. Regarding cues with hotkey and external activation methods, note that only 'trigger' modes are supported by Call Cue, not 'note' or 'toggle' modes.

Parameters: Parameters will only be displayed if the selected Call Cue (CC2 in the above example) is a Callable Cue and has parameters. A Callable Cue may have up to 4 parameters, and these will be displayed here. In this example, CC2 has 3 parameters, name UP, DN and OTH. The DN parameter in CC2 has been given a default value of 3.0. To help understand how these parameters are used, here is CC2 with the parameter definition and usage highlighted:



See Callable Cue for more information.

In the **'Call Cue' Cue** (Q3<1> in the above example), the **Parameters** are auto-populated from the Callable Cue's (CC2's) **Parameters** property.

Enter the value required for each parameter. If a 'Default Value' is displayed then you may leave the value field blank, which means the default value will be used. Note that the default value set io the Callable Cue may be changed later.

Warning! SCS does not check the validity of the values you enter for these parameters! In the above example, the parameter UP is used in CC2 for the 'Fade up time...', but if the value entered against UP is not valid for a time field then SCS will not report that. In practice, it will probably mean that the parameter value will be ignored.

Select Hotkey Bank: This field is displayed if the **Action Required** is *Select Hotkey Bank*. Select the required hotkey bank from the drop-down list. Note that SCS does *not* check if you have any cues that use the selected hotkey bank.

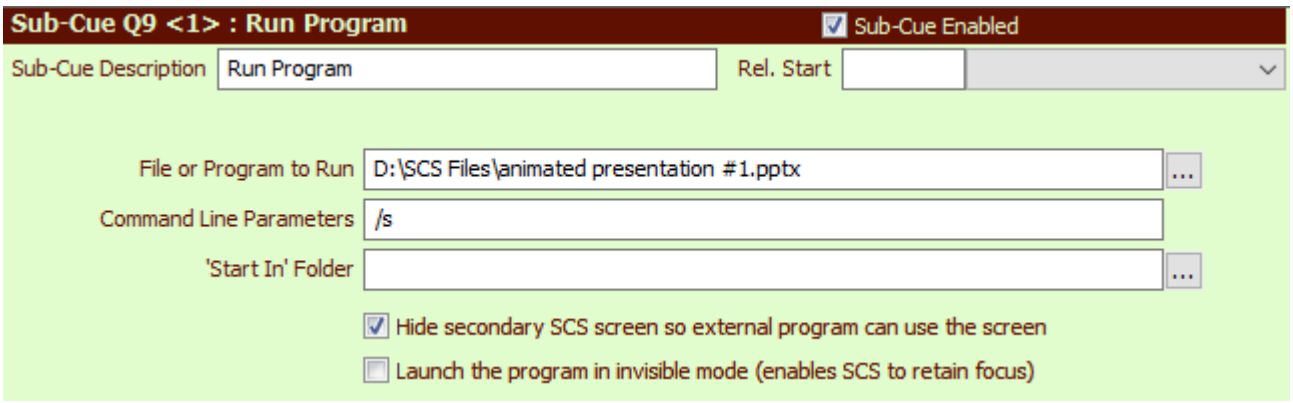
Run External Program Cues

Run External Program Cues are only available with **SCS Professional** and higher license levels.

Overview

This cue type enables you to run an external program such as Microsoft's *PowerPoint Viewer* directly from your SCS Cue List. The external program runs asynchronously, ie SCS does not wait for the program to end but will allow you to continue running other cues.

For a *Run External Program* cue or sub-cue, a sub-cue panel like this will be displayed:



Properties and Controls

General

Sub-Cue Description: Enter a description for this sub-cue. You can leave this field blank and let SCS create a default Sub-Cue Description for you based on the selected cue.

Relative Start: These fields are available for every type of sub-cue. For details see *Relative Start* under Audio File Cues. Then click the **Back** button in the Help Viewer to return to this page.

Run Program

File or Program to Run: Use the Browse button (...) to select either a file or a program to be run. For example, if you choose a PowerPoint file then the file will be played by PowerPoint or the PowerPoint Viewer - depending on the default application associated with the file type of the selected file. (Default programs are assigned in Windows, not in SCS.)

Command Line Parameters: If required you may enter any parameters accepted by the external program. If you include a filename in **Command Line Parameters** then you must enclose the filename in double quotes (").

'Start In' Folder: If the external program requires this, you can select the 'Start in' folder. Normally that would be the folder containing the file to be run. Use the Browse button (...) if you want to select a folder.

> **Tip:** If any of the above three *Run Program* fields contains $(cue) then SCS will replace this at run time with the full path name of the folder containing the current cue file (.scs11 file). It is recommended that you keep all the files for a production in this folder and that you make use of the $(cue) substitution facility where applicable.

Hide secondary SCS screen...: If you have video/image cues in your SCS cue list and SCS finds a second monitor (or video projector) present when the program is started, then SCS opens a black window on that second monitor for displaying the video/image cues. If you *also* want to run something like PowerPoint Viewer to that screen then select **Hide secondary SCS screen...**. This will hide the video/image window so that the PowerPoint presentation can be seen. The video/image window will remain hidden until the next video/image cue is run.

Launch the program in invisible mode...: When SCS executes this cue to run another program, Windows will probably transfer focus to that program. SCS will take focus back as soon as it can, but any keyboard actions (eg ESC to Stop All) that you use may be sent to the 'run program' rather than to SCS if the timing is close. If you do not need to see the screen of the 'run program' then we recommend you set this checkbox. By running the program in invisible mode, the 'run program' will not (or should not) take focus, which means that keyboard actions such as ESC can be safely assumed to be received by SCS.

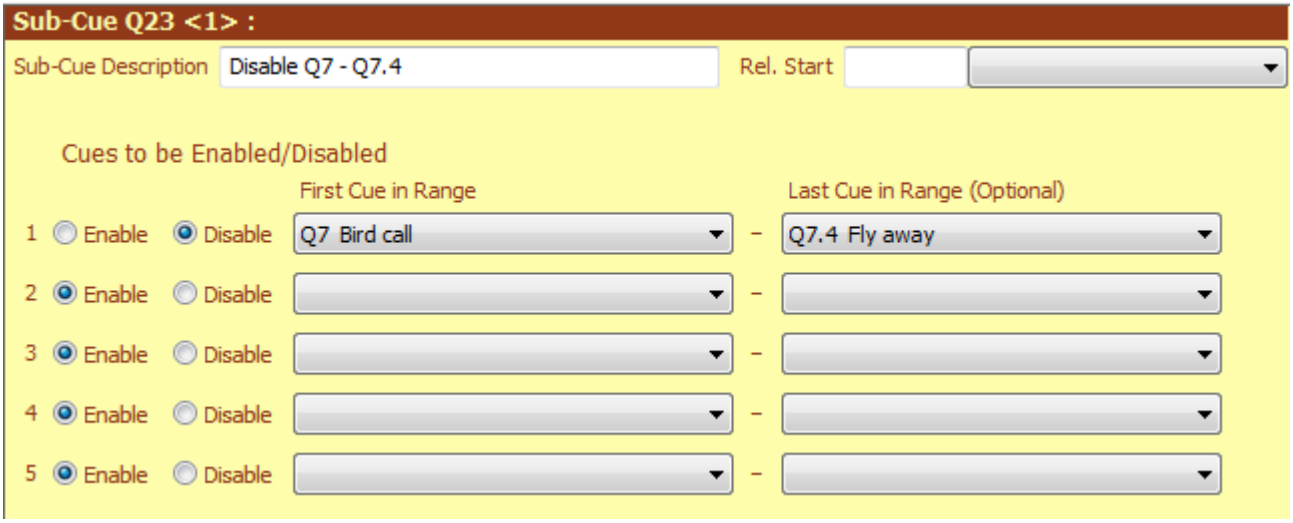
Enable/Disable Cues

Enable/Disable Cues are only available with **SCS Professional** and higher license levels.

Overview

This cue type allows you to dynamically enable or disable other cues.

For an *Enable/Disable Cues* cue or sub-cue, a sub-cue panel like this will be displayed:



Properties and Controls

General

Sub-Cue Description: Enter a description for this sub-cue. You can leave this field blank and let SCS create a default Description for you.

Relative Start: These fields are available for every type of sub-cue. For details see *Relative Start* under Audio File Cues. Then click the **Back** button in the Help Viewer to return to this page.

Cues to be Enabled/Disabled

Enable / Disable: Select the required option button for the cue or cue range you will enter on this line.

First Cue in Range: Select the cue you want to enable/disable (or the first cue in a range of cues you want to enable/disable).

Last Cue in Range: Leave blank if this line is to apply to a single cue, or if this line applies to a range of cues then select the last cue in the range.

> **Note:** Up to 5 individual cues and/or ranges of cues may be enabled / disabled. The only validation applied is that for each line the **Last Cue in Range** (if entered) cannot be earlier than the **First Cue in Range**. It is permissible for cue ranges of different lines to overlap. SCS applies the enable/disable actions in the order given, ie line 1 to line 5. So you could, for example, disable Q20 - Q29 in line 1, and then enable Q25 in line 2.

The enabling and disabling of cues does not affect the **Enabled** checkbox in the Editor. If an enabled cue is disabled by an instance of this cue type, the cue will still appear as enabled in the editor. However, in the main window the disabled cues will disappear from the list, and if those disabled cues are hotkey cues then they will no longer respond to those hotkeys. If the cue(s) are subsequently enabled, they will again be displayed, and if they are hotkey cues then they will respond to hotkeys.

Live Input Cues

Live Input is only available with **SCS Professional** and higher licenses, *and* if you have **SoundMan-Server** installed. However, see also the section under Production Properties - Live Inputs on creating and testing Live Input Cues on a computer that does not have SoundMan-Server installed or loaded.

Overview

Live Input cues enable you to take audio from mic's, instruments or other live sources and control levels and panning through SCS. At run time you can also control gain and EQ via the Faders Window.

Adding a new Live Input Cue or Sub-Cue

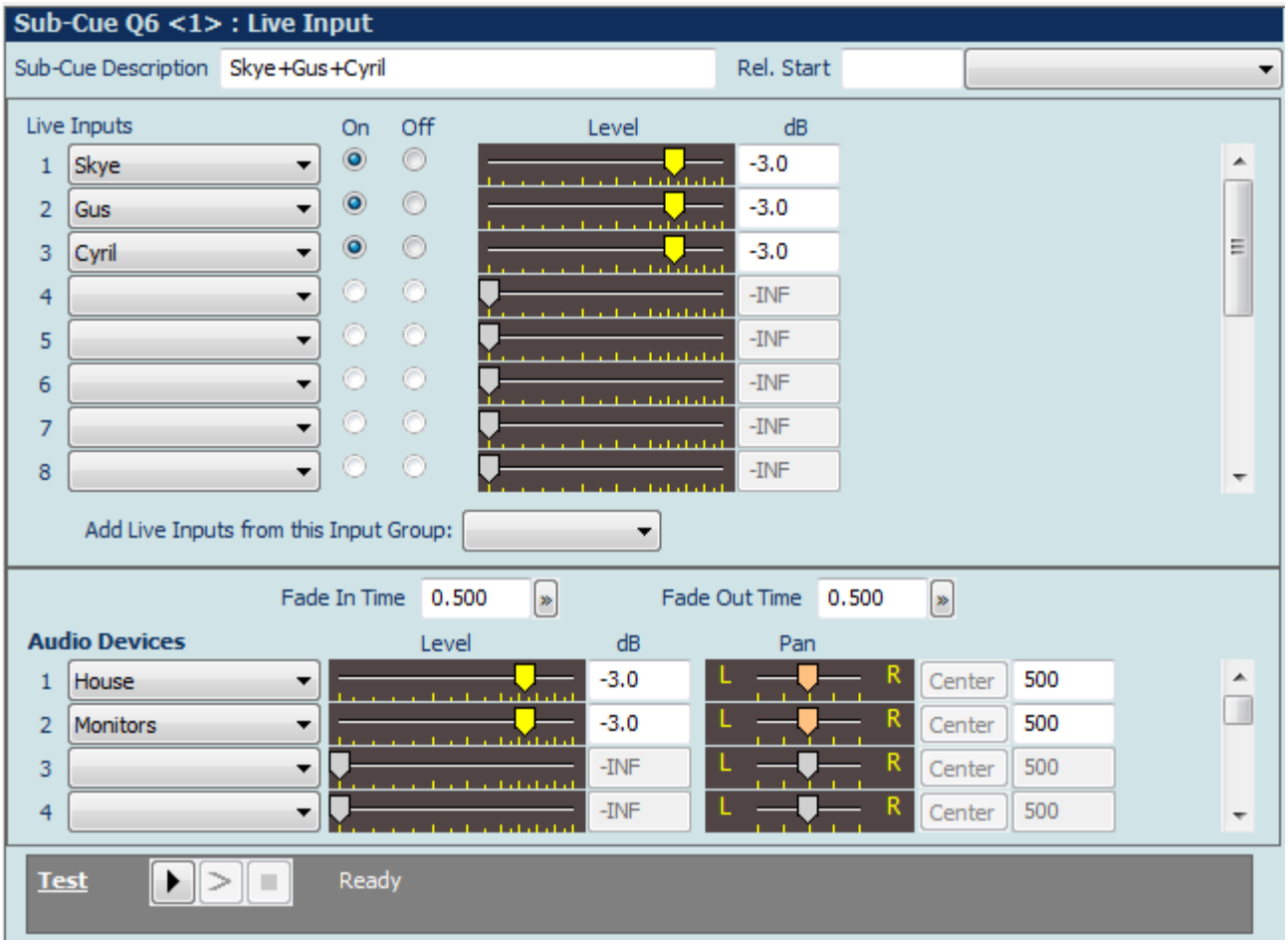
Before adding Live Input cues you must have your Live Inputs specified in Production Properties - Live Inputs.

To add a new Live Input *Cue*, click the **Cues** button in the Editor's toolbar and select **Add 'Live Input' Cue**, or if you have **Add Live Input Cue** in the **Favorites** then just click that button. To add a new Live Input *Sub-Cue*, click the **Sub-Cues** button in the toolbar and select **Add 'Live Input' Sub-Cue**, or if you have **Add Live Input Sub-Cue** in the **Favorites** then just click that button.

Viewing or Changing an Live Input Cue or Sub-Cue

To view or change an Live Input Cue or Sub-Cue, just click on the relevant node in the Editor's Cue List.

When you have added or selected an *Live Input* cue or sub-cue, a sub-cue panel like this will be displayed:



Properties and Controls

General

Sub-Cue Description: When you select your Live Inputs, SCS will auto-populate the 'Sub-Cue Description' field as illustrated above. You can change the Sub-Cue Description field if required.

Relative Start: These fields are available for every type of sub-cue. For details see *Relative Start* under Audio File Cues. Then click the **Back** button in the Help Viewer to return to this page.

Live Inputs

In this section you select one or more live inputs to be controlled by this cue. Note that you can also add live inputs from an Input Group.

Live Input: Select a Live Input from the drop-down list. Live Inputs are set up under Production Properties - Live Inputs.

On/Off: When you select a **Live Input** then by default SCS assumes you are 'turning on' that input, so sets the **On** button. So in the above example, mic's for Skye, Gus and Cyril are all turned on (in SCS) and have levels set as shown. Now suppose a short while later, Skye leaves the stage. To 'turn off' (mute) Skye's' mic in SCS, set up another **Live Input** cue with just Skye selected, but select the **Off** button. When this second cue is activated, Skye's mic will be muted, but Gus and Cyril's mics will remain 'on'.

Level: This level fader sets the *input* level for this live input, and is similar in concept to a channel level fader on a sound desk. The level can also be set using the **dB** field. (The **Level** and **dB** are disabled if **Off** is selected.)

Add Live Inputs from this Input Group: This drop-down list enables you to add all the Live Inputs assigned to an Input Group. This provides a quick way to add multiple Live Inputs. This control is only used during editing - the specified Input Group is *not* saved with the cue, so if you subsequently add or remove Live Inputs from the selected Input Group then this has no effect on cues previously set up using that Input Group. As the control is just used to assist in selecting the required Live Inputs, the control is cleared immediately after adding the selected Live Inputs, so it is possible to then select another group. Any Live Input in an Input Group that is already assigned to this cue will not be added a second time. (Note that if you select the wrong Input Group then the Undo button is a quick way to remove Live Inputs you've just added!)

Time Fields

Fade In time: Use this field if you want SCS to fade in the live input cue. Leave blank if fade in is not required. For new Live Input cues the Fade In Time is initially set to the default value nominated in Production Properties - General. For example, to fade in the cue over 2.75 seconds enter 2.75 against 'Fade In time'. When you start the cue the level will build from no sound to the level specified by the **Level** fader(s) over the time specified (2.75 seconds in this example). SCS supports a few built-in fade curves. The default fade curve (or fade type) is 'Standard', which follows a linear track of the level faders. Other options include logarithmic and linear fades. A 'linear' fade is not the same as a 'standard' fade as the level faders are not linear across the entire range. To select a fade type other than 'Standard' click the adjacent chevron button (»). A pop-up window will allow you to select the required fade type from a drop-down list. You can also enter the required fade in time in that same window, although this is just a replica of the **Fade In Time** field.

Fade Out time: Use this field if you want SCS to fade out the cue. Leave blank if fade out is not required. For new Live Input cues the Fade Out Time is initially set to the default value nominated in the Production Properties - General. For example, to fade out the cue over 4 seconds enter 4 against 'Fade Out time'. When you fade out the cue the level will fade to no sound over the time specified (4 seconds in this example). SCS supports a few built-in fade curves. The default fade curve (or fade type) is 'Standard', which follows a linear track of the level faders. Other options include logarithmic and linear fades. A 'linear' fade is not the same as a 'standard' fade as the level faders are not linear across the entire range. To select a fade type other than 'Standard' click the adjacent chevron button (»). A pop-up window will allow you to select the required fade type from a drop-down list. You can also enter the required fade out time in that same window, although this is just a replica of the **Fade Out Time** field.

Audio Devices

In this section you will define which audio devices these live inputs are to be linked to for this cue. It may be that you are just using a single mono or stereo output, in which case you will only need a single entry in this section. However, you can nominate additional audio devices up to the limit supported by your SCS license. *Note that the Audio Device selection is not used if the cue is only being used to 'turn off' Live Inputs.*

Audio device: The audio devices available are as specified in the Production Properties.

Level: This level fader sets the *output* level (volume) at which SCS will play the cue, after the fade in time if specified. The setting of the fader is also displayed and is enterable as a dB value. The maximum dB setting (loudest) setting is 0dB or +12dB, depending on the 'Maximum Audio Level' set in Production Properties - Run Time Settings. If you set the level to -75 or lower then SCS treats this as -infinity, ie silent. You may also enter this as -INF.

Pan: The pan controller sets the stereo position of the sound. The setting of the controller is also displayed and is enterable as a number, where 0 is left, 500 is center, and 999 is right. The **Center** button is enabled if the current value is not 500 (center). Clicking this button sets pan to 500 (center).

Note regarding Stereo Live Inputs: If you 'play' a stereo live input to a stereo audio output device then 'left' will play to 'left' and 'right' will play to 'right'. This also applies playing a stereo live input to multiple stereo output devices - 'left' play play to each output's 'left', and 'right' will play to each outputs 'right'.

However, for mono outputs or for audio outputs with 3 or more channels, the stereo live input channels are mixed down to mono and sent to all selected outputs.

Tip: If you want to make fine adjustments to the level or pan, left-click the slider and then use the left-arrow and right-arrow keys as required. When you left-click the slider the background color of the slider will change to your Windows color scheme's *selected item* color (probably blue). This indicates that the slider *has focus* so keyboard actions like left-arrow and right-arrow are processed by that slider.

Testing your Live Input Cue

You can test your Live Input Cue or Sub-Cue using the controls available in the 'Test' panel. Just press the play button to start the test. You can also use the other fade out button to fade out the live input (if you have specified a fade out time), and the stop button to terminate the test.

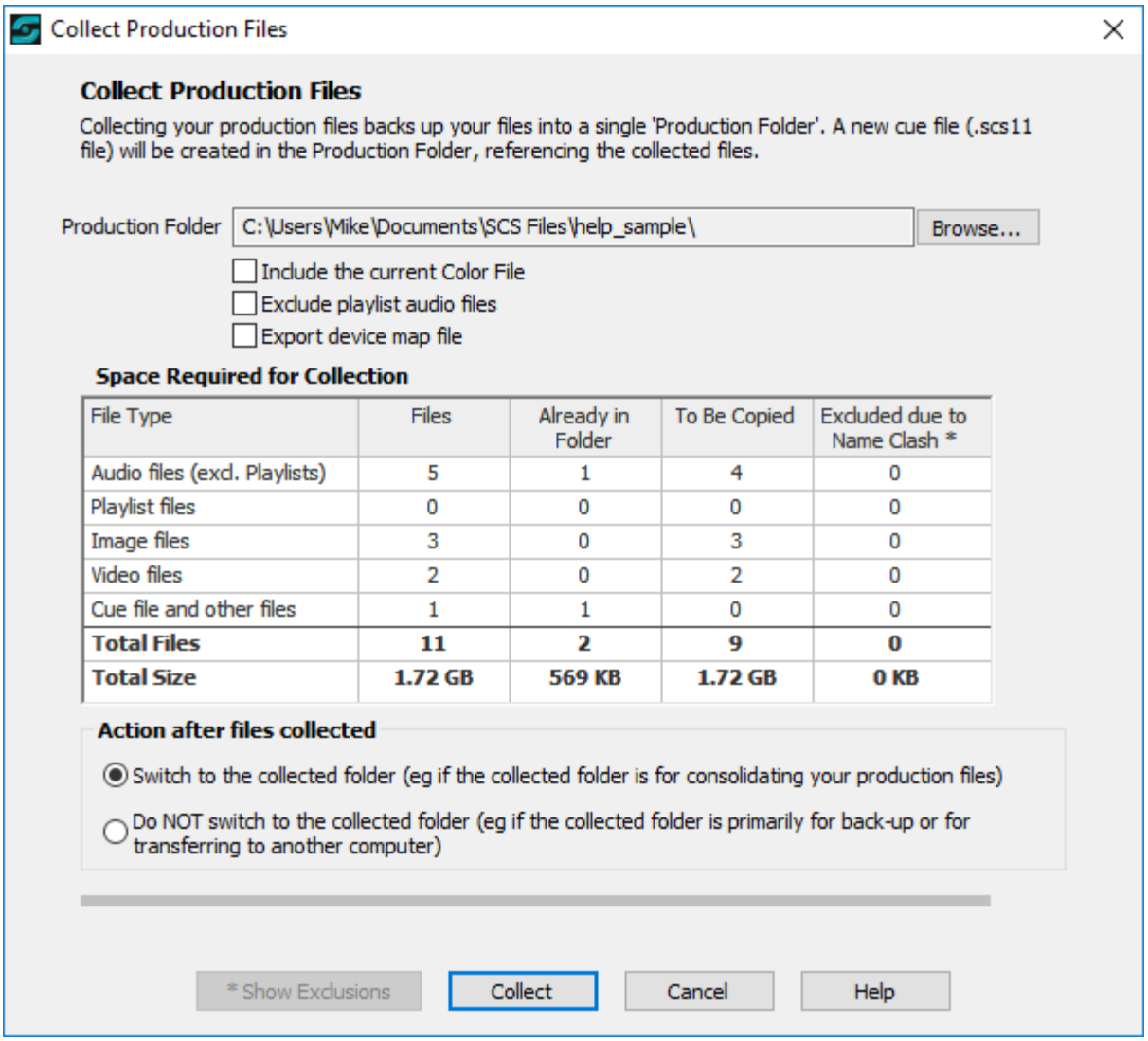
See also: Faders Window

Collect Production Files

This provides an easy way for you to collect into a '**Production Folder'** all the audio, video and image files used in your production. This simplifies copying or transferring your production to another computer, such as from your home computer to your theatre computer. It is also useful for protecting your files from changes made to those files unrelated to your production.

A **Production Folder** is a folder on your computer that you can create for all the files for a production. For example, if your theatre company is producing *The Wizard of Oz* then you might want to name your production folder *wizard*. In this folder you will keep your SCS cue file (eg *wizard.scs11*) plus copies of all the audio, video and image files you use in the production. You may also save the color file (scs_colors.scsc) to the production folder if you wish, and also export the device map file to the production folder. More information on that is given later in this Help topic. If you prepare your cues on your home computer and then want to transfer them to your theatre computer then all you need do is copy the production folder *wizard*. This could be copied via a USB memory drive (if it has enough capacity for all your audio, video and image files), or across a network, or by burning a CD or DVD of the production folder and copying from that.

This SCS function simplifies the process of collecting into a new or selected Production Folder all the files referred to in your cue file (the .scs11 file).



Production Folder: Click on the **Browse** button to *either* create a new folder wherever you want to, or to select an existing folder. If you are using **Collect Production Files** to create a back-up or to transfer the production to another computer, then you could select an external or network drive.

Include the current Color File: If this checkbox is selected then the currently loaded color file will be included in the collection. More information is given later in this Help topic.

Exclude playlist audio files: If you have pre-show or intermission playlists using possibly a large number of audio files from your Music library (or elsewhere) then you may *not* want all these files copied into your Production folder. By selecting this checkbox, SCS will exclude all playlist audio files from the collection.

Export device map file: Device maps are intended to be computer-specific as they hold the mapping of your 'logical'

devices (such as 'Front') to physical devices available on this computer. As device maps are computer-specific they are held in a file that is separated from your normal production files, namely under the Windows user AppData\Roaming folder. However, this is not convenient for production backups or if you want to transfer your production to another computer that has the same or a similar hardware configuration. That's where **Export device map file** is useful. If you select this checkbox then the collection will include an 'exported' version of the Device Map File for this production. Please see Device Maps for information on how the export file is used on transferring the production to another computer.

Space Required for Collection: This table summarizes the number and total size of files required for the collection.

> **Excluded due to Name Clash**: This column within **Space Required for Collection** will only contain non-zero values if there are duplicated base names and extensions for different files. For example, if you have a cue that use the image file "C:\Users\Mike\Documents\image1.jpg" and another cue that uses the image file "C:\Users\Mike\Pictures\image1.jpg" then this represents a name clash because both files are named image1.jpg but one file is under \Documents but the other file is under \Pictures. As they are obviously different files, SCS cannot 'collect' them both into the Production Folder as image1.jpg. In cases like this, only the first of the files will be collected into the Production Folder when the **Collect** button is clicked..

Action after file collected: If you are collecting your files for the purpose of having them all in the one folder (which is what we recommend for productions) then the first of these options will **Switch to the collected folder** after the files have been collected. If you are collecting your files for backup or transfer to another computer then select **Do Not switch to the collected folder**.

Show Exclusions: This button is only enabled if there is at least one file counted in the column **Excluded due to Name Clash**. Clicking this buttons displays the names of such files.

Collect: When you click the **Collect** button, any audio, video and image files referenced by the currently-open cue file that are not currently in the Production Folder will be copied to the Production Folder (except for playlist files if **Exclude playlist audio files** has been selected, and any files identified as having a name clash). The cue file itself will be copied (if necessary) to the Production Folder, and will be updated for the new location of audio files, etc.

Cancel: This button may be used to close the window without performing the collection. If you have already started the collection and want to abort the process, then clicking **Cancel** will abort the collection process before the next file is selected for copying.

Help: This button displays this help.

Note 1: When collecting files, SCS checks before copying a file into the Production Folder that if a file of the same name already exists in the folder, then the file is of the same length and modification date-time. If the length or modification date-time is different then cues using that new file will still point to the original file (outside the Production Folder).

Note 2: If you choose **Export device map file** then the current Device Map File will *always* be exported, even if the file already exists. This is because any current version of the exported file may be out-of-date.

Saving your color schemes: If you are preparing a production on one machine and then transferring the files to another machine (eg to a computer at the theatre) then you may also want to copy your color schemes. One way to do this is just to copy the **scs_colors.scc** file from "Documents" (or "My Documents") to the corresponding location on the theatre computer. However, if there are other people doing the same thing for other productions using SCS, this could cause some friction if you go and wipe out their favorite color schemes! So what you can do is keep a version of **scs_colors.scc** in your Production Folder, and you can set up your own color schemes here and they will not affect any other SCS user on the theatre computer, and changes they make will not affect *your* color schemes. To include **scs_colors.scc** in your Production Folder, just select the checkbox labeled **Include the current Color File** before you click the **Collect** button.

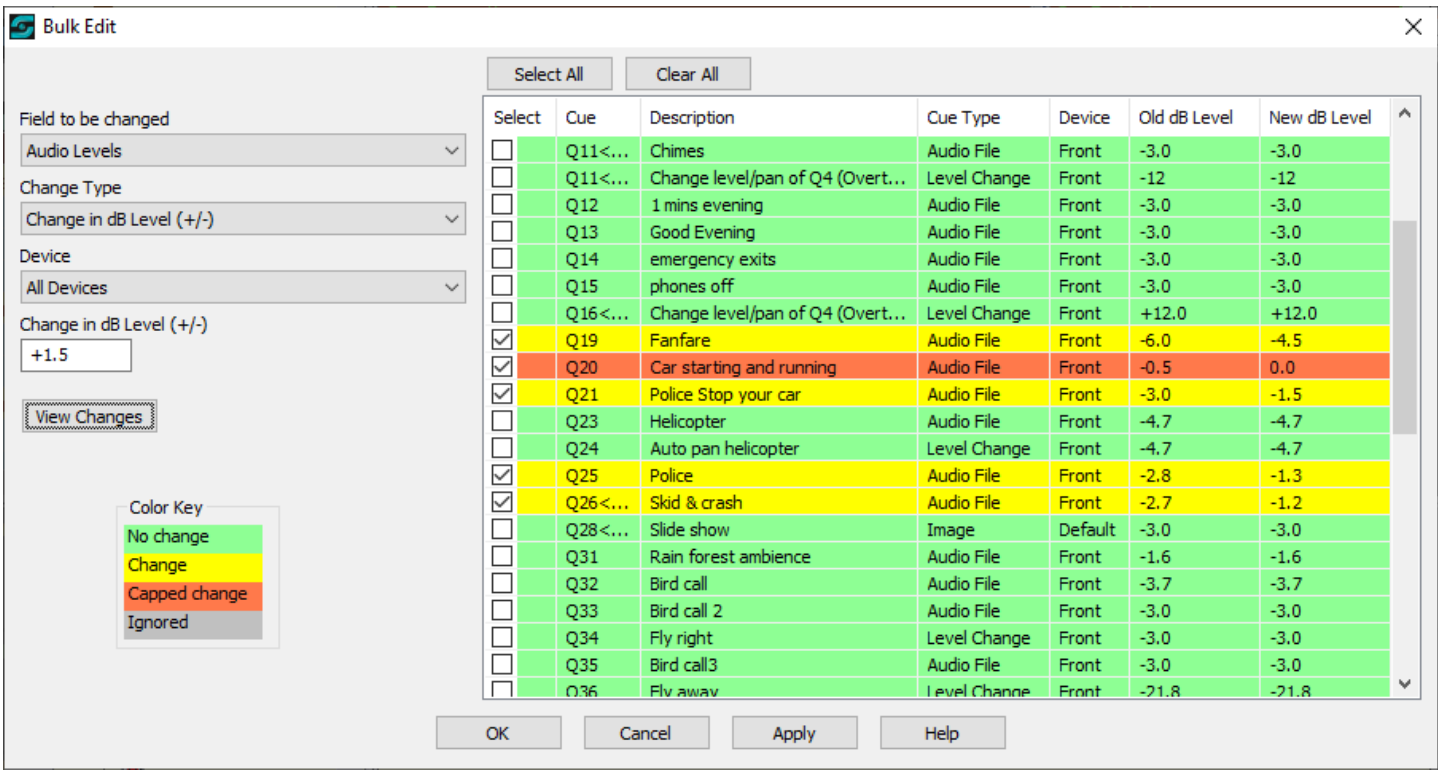
See Color Scheme Designer for more information.

See also: Portability (transferring your files to another computer)

Bulk Edit Cues

Bulk Edit is only available with **SCS Standard** and higher license levels.

This facility allows you to bulk change the value of a field on all or selected cues.



Field to be changed: Select the field you want to change. When you have done this, a list of cues or sub-cues will be displayed in the main table in this window.

Change Type: This drop-down list is only displayed if the **Field to be changed** is set to *Audio Levels*. The choices are "Change in dB Level (+/-)", "New dB Level", and "Apply Peak Normalization". They are described in detail later in this Help topic. Selecting a **Change Type** will refresh the list of cues and sub-cues displayed.

Device: This drop-down list is only displayed if the **Field to be changed** is set to *Audio Levels*. The list is populated with audio devices applicable to the selected Change Type.The purpose of this drop-down list is to enable you to be more selective in the information displayed in the main table. Selecting a **Device** will refresh the list of cues and sub-cues displayed. If, for example, you have a device named 'Rear' and you select 'Rear' as the **Audio Device** then only cues that use 'Rear' will be displayed.

The next field will be one of the following, depending on the type of change requested:

Change in dB Level (+/-): This is displayed for ***Audio Level*** field changes with a Change Type of ***Change in dB Level***. Enter the required dB change starting with + or -. For example, enter +3 to increase levels 3dB, or -4.5 to decrease levels 4.5dB. You *must* enter + or - at the start of the field. The adjustment will be made to the levels of the selected cues. Note that listed cues include Audio File cues, Video cues, Level Change cues and Playlist cues. If an Audio Level change would cause the new dB level to by out of range for an SCS dB setting, then the new level will be capped. The dB range used in SCS is -75dB (displayed as -INF) up to 0dB, or up to +12dB if that has been selected as the Maximum Audio Level in Run Time Settings.

New dB Level: This is displayed for ***Audio Level*** field changes with a Change Type of ***New dB Level***. Enter the required new dB level for the selected cues.

Maximum dB Level: This is displayed for ***Audio Level*** field changes with a Change Type of ***Apply Peak Normalization***. See the description below regarding peak normalization.

New value for this field / **Exclusive Cue**: This combination is displayed if you select *Exclusive Cue* as the **Field to be changed**. Tick the checkbox if you want to **set** the *Exclusive Cue* property on the selected cues. Leave the checkbox clear to **clear** the property on selected cues.

New value for this field / **Hide Auto-Start Cue**: This combination is displayed if you select *Hide Auto-Start Cue* as the **Field to be changed**. Tick the checkbox if you want to **set** the *Hide this Auto-Start Cue in the Main Window* property on the selected cues. Leave the checkbox clear to **clear** the property on selected cues.

New value for this field for *Fade In Type*, *Fade Out Type* and *Level Change Type*: Choose from the drop-down list to modify the fade or level change type for the selected cues.

View Changes: This button is only displayed if the above field is a text field, as the button is not required for changes to other field types. This is because changes made by changing the state of a checkbox or selecting an entry in a drop-down list can be immediately used to populate the 'New' value in the main table. Clicking the **View Changes** button is a convenient way to indicate that you have completed entering your change, although SCS will actually regard the entry as completed if you click (or tab) *anywhere* out of the text field.

The **Device** column shown in the above screenshot is only included if the **Field to be changed** is set to ***Audio Level***. For all other field selections, this column is replaced by **Activation**, eg *Manual*, *1.00 ae Prev*, etc.

Total play length of enabled Audio File cues: This display-only field is displayed if you select *Cue Enabled* as the **Field to be changed**. If you are using SCS for backing tracks for a band then this can help you in deciding which tracks (cues) to include for a show. As you enable/disable cues, this field will be adjusted to show the total playing length of enabled Audio File cues. Since the field is specifically designed for this purpose, the calculation of the total play length is somewhat simplified but should be accurate enough for it's intended purpose. The calculation *only* considers cues containing Audio File cues, and ignores Video/Image cues, Playlists, etc. Only manual-start and auto-start cues are considered. Hot key cues and time-based cues are ignored. For each cue that *is* considered, SCS examines the Audio File cues and calculates the maximum (cue length + sub-cue relative start time). That is considered to be the length of this cue, and SCS totals these values for all enabled cues to determine the **Total play length of enabled Audio File cues**.

Changes will affect only those cues or cues that have the **Select** checkbox ticked. The **Select All** and **Clear All** buttons enable you tick or clear the checkboxes on *all* displayed cues or cues.

Tip: Changes to your cues are not made until you click the **Apply** button or the **OK** button. This means you can see the effect of our changes before applying them, and change your selection or new values as much as you like until you are ready to apply the changes (or to **Cancel** and discard the changes).

Color Key: In the main table in this window colors are used to clearly show you what will be changed when you click the **Apply** button or the **OK** button. The colors used are as follows:

No change	The item will not be changed, or is not selected.
Change	The item will be changed.
Capped change	The item will be changed but the amount of the change will be capped to prevent the new value being out of range.
Ignored	A requested change to this item cannot be processed. This should only occur for Normalization requests where no file statistics have been collected by SCS. The most likely reason for this is that the duration of the audio file is greater than the maximum length for a file scan as specified in the Editing Options.

Peak Normalization

The **Change Type** of **"Apply Peak Normalization"** acts on multiple Audio File Cues in a similar way to the Peak Normalization feature of a Playlist Cue, although the normalization is applied differently. The purpose of peak normalization is to assist in providing Audio File Cues of uniform volume regardless of the recorded levels of the files. It is primarily useful for music tracks - it is not expected to be used with sound effects files. You should therefore be careful regarding the cues you selected for peak normalization to be applied.

Processing this **Change Type** will cause SCS to compare the maximum peaks of the files in all the *selected* Audio File Cues. The file(s) with the lowest maximum will have their **dB Level** set to the value eneterd against **Maximum dB Level**. Other files (that have higher maximum peaks) will be assigned lower **dB Levels**, so that when played back the maximum peak of every selected file will be heard at the same level. Please note the following: (a) Peak Normalization adjusts dB Levels based on the highest sample value - it does not take into consideration the apparent loudness of the audio file; (b) SCS does *not* consider the 'Start At' and 'End At' times when scanning for a file's maximum peak - the entire file is always scanned.

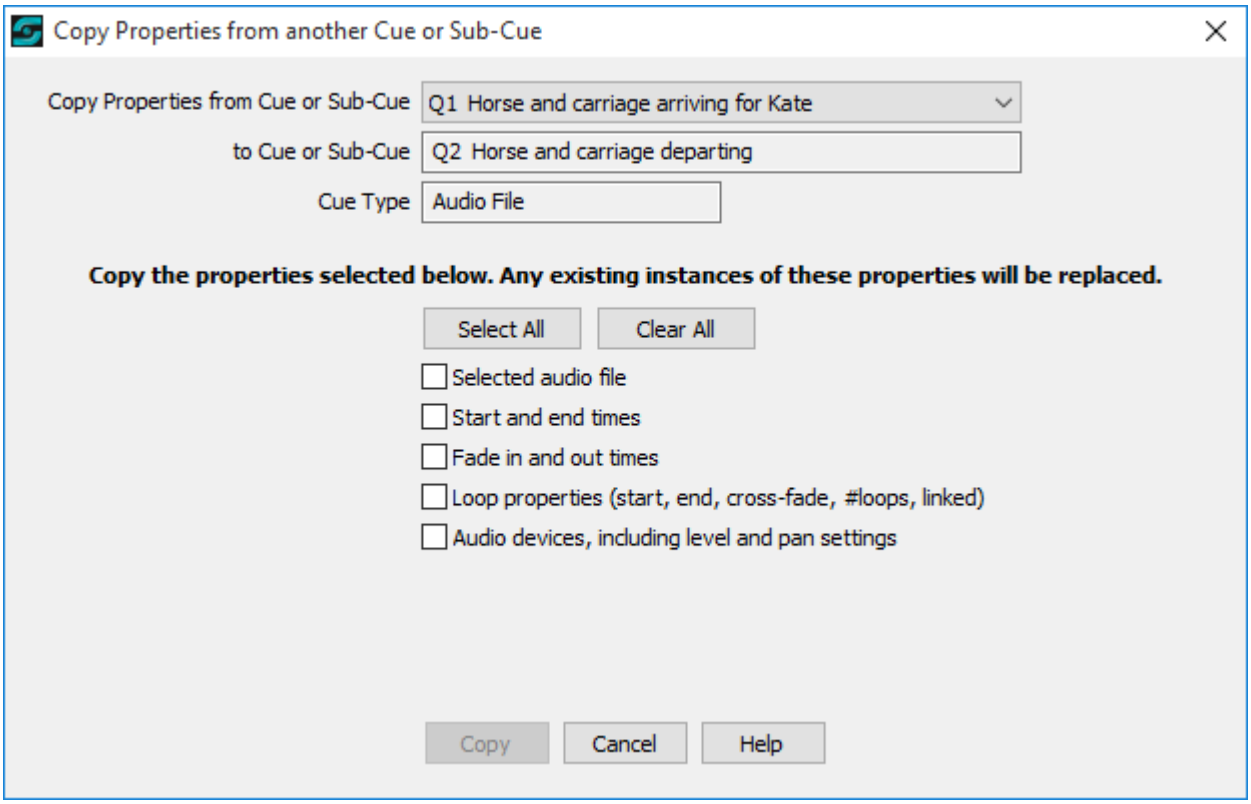
Copy Properties from another Cue or Sub-Cue

Overview

This screen enables you to copy properties from another cue or sub-cue to the cue or sub-cue currently open for editing. To simplify the explanation here, the term 'cue' will generally be used but this should be taken as meaning 'cue or sub-cue'.

You will only be able to copy from cues of the same type. The properties that may be copied (and therefore the checkboxes displayed on the screen) will depend on the cue type of the cue being edited. Currently only **Audio File Cues** and **Lighting Cues** are supported.

Here's an example of the **Copy Properties** screen for an **Audio File Cue**:



Since this screen can only be accessed from the Editor, when the screen is displayed the cue or sub-cue currently being edited is shown as a display-only field against '**to Cue or Sub-Cue**', and the '**Cue Type**' is also shown as a display-only field.

Controls and Fields

Copy Properties from Cue or Sub-Cue: This dop-down list will be populated with any other cues of the same **Cue Type**. Select the cue you wish to copy properties from.

to Cue or Sub-Cue: As mentioned above, this is a display-only field populated with the cue currently being edited and is therefore will be the recipient for the copied properties..

Cue Type: As mentioned above, this is a display-only field populated with the cue type of the cue currently being edited. The **Cue Type** determines the list of available properties that may be copied, and therefore the checkboxes that are displayed. These are currently as follows:

Cue Type: Audio File

- Selected audio file *
- Start and end times
- Fade in and out times
- Loop properties (start, end, cross-fade, #loops, linked)
- Audio devices, including level and pan settings

Cue Type: Lighting

- Lighting device, entry type, fixtures, DMX channel values, etc
- Fade time settings

Copy: Copies the selected properties where relevant and valid, and then closes the window. SCS carries out some validation and may reject or ignore some requests. For example, if you choose to just copy 'start and end times' to the current audio file cue and the 'end time' is beyond the length of the audio file in the current cue, then SCS will display

a warning and not copy these properties. **Note that any existing instances of the selected properties will be replaced.**

* If you include *Selected audio file* then SCS will also copy the *Sub-Cue Description*, which may also then change the *Cue Description*.

Cancel: Closes the window without copying any properties.

Help: Displays this Help.

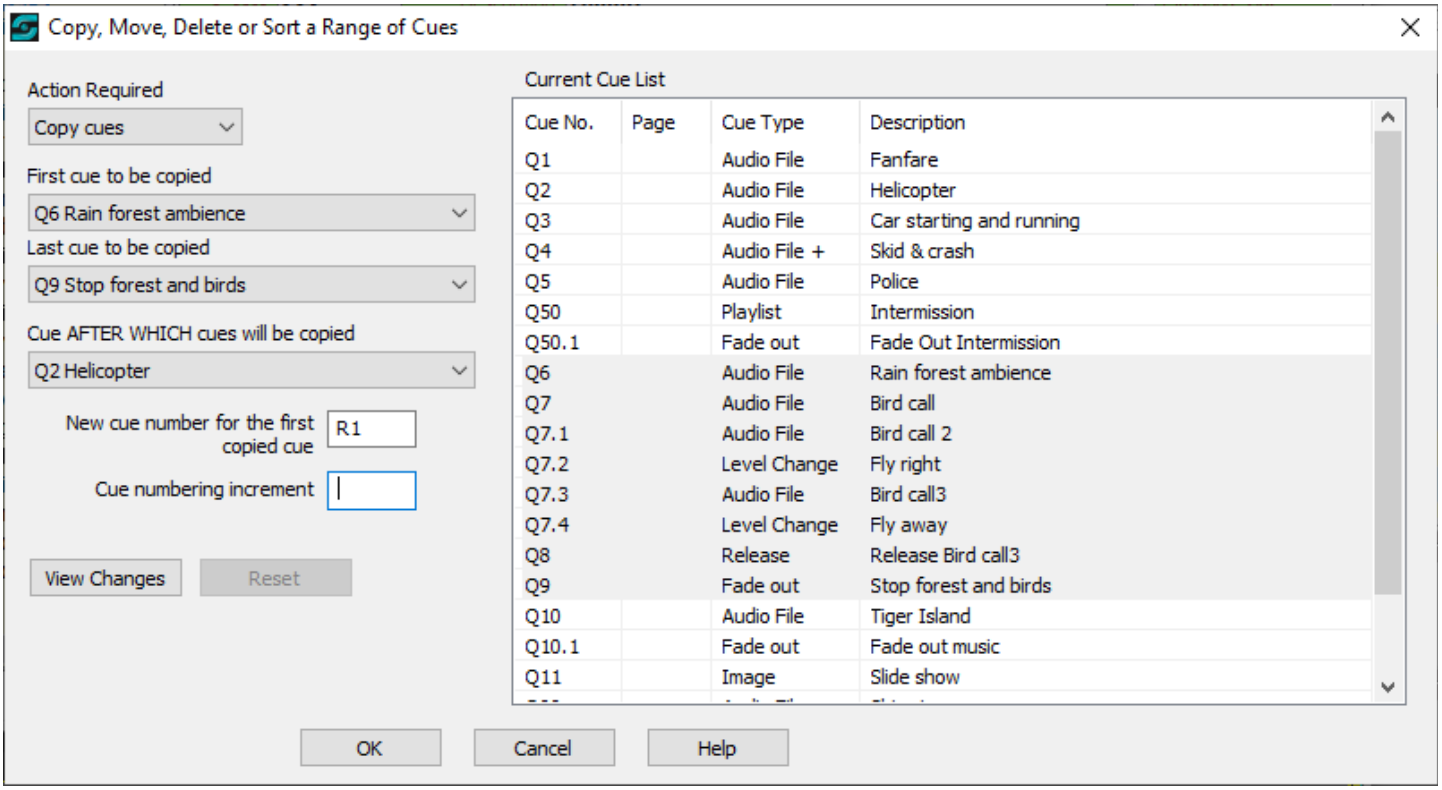
Copy, Move, Delete or Sort a Range of Cues

Overview

This screen enables you to copy, move, delete or sort a contiguous range of cues instead of having to copy them etc one-by-one. For example, in the cue list shown below you could move Q1 - Q5 to after Q9, or you could delete Q50 - Q50.1. This particular screenshot illustrates copying Q6 - Q9 to after Q2.

To use this screen, select the **Action Required** and the **First** and **Last** cues in the range. Then select or enter other fields as required. Now click **View Changes**. The **Current Cue List** will change to **Changed Cue List** and will show how the cue list would look after the requested change has been applied. If you are not happy with that, eg because you selected the wrong target location, just click **Reset**, make adjustments as required, and then again click **View Changes**. If you want to save these changes, click **OK**. If you want to close the window and discard the changes, click **Cancel**. Note that you cannot save changes you have not viewed. You will get a warning message if you click **OK** but have not viewed the changes.

You can only work on one contiguous range of cues with each call to 'Copy, Move, Delete or Sort a Range of Cues'.



Controls and Fields

Action Required: Select *Copy cues, Move cues, Delete cues* or *Sort cues* from the drop-down list. After selecting **Action Required** the remaining controls or fields will be displayed or hidden depending on the action. The **Current Cue List** will also be populated.

First cue to be copied/moved/deleted/sorted: Select the first cue in the range to be copied, moved, deleted or sorted. Note the caption on this other controls is adjusted according to the **Action Required**.

Last cue to be copied/moved/deleted/sorted: Select the last cue in the range to be copied, moved, deleted or sorted.

> **Tip:** The easiest way to select the range of cues to be copied/moved/deleted/sorted is to 'multi-select' the cues in **Current Cue List**. For example, the selection in the screenshot above resulted from a left-click on Q6 followed by a shift-left-click on Q9.

Cue AFTER WHICH cues will be copied/moved: This control is only displayed when copying or moving cues. Select the cue after which the nominated range of cues is to be copied or moved. To copy or move cues to the top of list select *Top of Show*.

New cue number for the first copied cue: This field is only displayed when copying cues. Since the cues are to be copied the copies must be assigned new cue numbers. Enter the number for the first of the copied cues, and SCS will auto-generate cue numbers for the other copied cues (see also next field).

Cue numbering increment: This field is only displayed when copying cues. You can leave this field blank if the increment is to be 1. For an increment greater than 1, enter the required increment. For example if the new cues are

to number A10, A15, A20, etc then enter A10 against **New cue number...** and 5 against **Cue numbering increment**.

New value for this field / **Exclusive Cue**: This combination is displayed if you select *Exclusive Cue* as the **Field to be changed**. Tick the checkbox if you want to **set** the *Exclusive Cue* property on the selected cues. Leave the checkbox clear to **clear** the property on selected cues.

New value for this field / **Hide Auto-Start Cue**: This combination is displayed if you select *Hide Auto-Start Cue* as the **Field to be changed**. Tick the checkbox if you want to **set** the *Hide this Auto-Start Cue in the Main Window* property on the selected cues. Leave the checkbox clear to **clear** the property on selected cues.

New value for this field for *Fade In Type*, *Fade Out Type* and *Level Change Type*: Choose from the drop-down list to modify the fade or level change type for the selected cues.

Change in dB Level (+/-): This field is displayed for *Audio Level* field changes, instead of the 'New value' field. Enter the required dB change starting with + or -. For example, enter +3 to increase levels 3dB, or -4.5 to decrease levels 4.5dB. You *must* enter + or - at the start of the field. The adjustment will be made to the levels of the selected cues. Note that listed cues include Audio File cues, Video cues, Level Change cues and Playlist cues. If an Audio Level change would cause the **New dB Level** to by out of range for an SCS dB setting, then the new level will be capped. The dB range used in SCS is -75dB (displayed as -INF or the infinity symbol) up to 0dB.

View Changes: Click this button to see the effect these changes will have. The changes will be displayed in the cue list on the right, but note that the changes have not yet been applied to your actual cue list - they will not be applied until you click **OK**. On clicking **OK** the **Action Required** and other controls and fields are disabled, ie locked. To unlock then you need to click **Reset**.

Sorting: When using the 'Sort cues' action, please check carefully that the sorted result is what you expect. SCS will attempt to sort the selected range of cues by **page number** and **cue number**, but sorting can be compromised if there are extra characters in a cue number or even a page number. SCS does attempt to handle these situations by building an internal sort key that splits each page number and cue number into numeric, alphabetic, and 'other character' parts.. For example cue numbers like Q1A, Q10.5, Q2 will be sorted to Q1A, Q2, Q10.5 (provided they all have the same page number), but cue numbers like Q1, 2, 4, 22, PRE, POST, 1234, Q2 will be sorted to 2, 4, 22, 1234, POST, PRE, Q1, Q2, which may or may not be what you want! However, since the page number takes priority then that may help, especially if cues like PRE (pre-show) and POST (post-show) have sensible page numbers, which should ensure PRE gets sorted before POST.

Sorting uses the Unicode Latin-1 Supplement (single byte) character set, so handles English alphabet characters (A-Z) as well as European characters such as Ü (umlaut). The sort may not correctly handle other character sets, such as Japanese. All sorting ignores case,

Reset: This button is enabled when you have clicked **View Changes**. Clicking **Reset** resets the screen to the way it was displayed prior to clicking **View Changes**, enabling you to modify your selection etc.

OK: Click **OK** to apply your changes to your main cue list and to close this window.

Cancel: Click **Cancel** to close this window, discarding any changes.

Help: displays this Help.

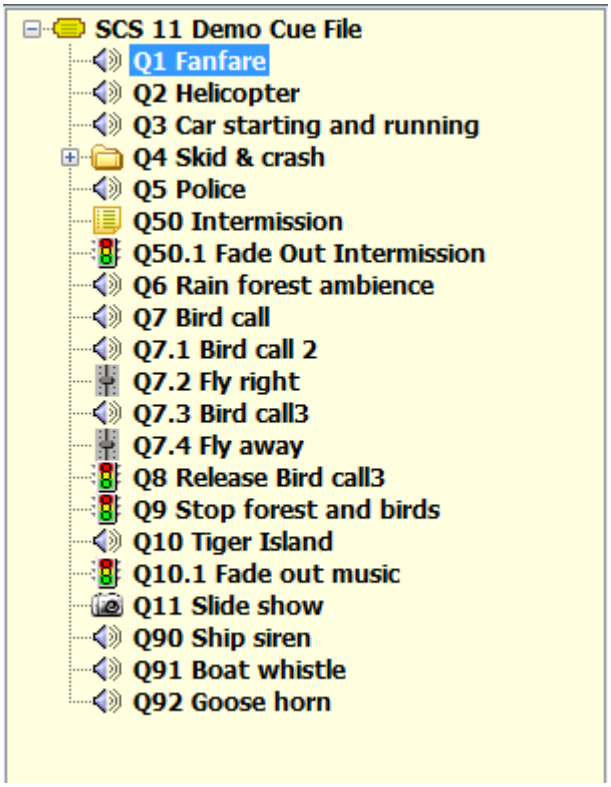
Warning: Note that when copying cues, any references to other cues will remain unchanged. For example, suppose using the SCS Demo cue file (displayed in the screenshot above) you copy Q3 - Q5 to after Q9, numbering the new cues CA, CB and CC. Cue CC was copied from Q5 which has 'auto-start 2.5 seconds after the end of Q4'. In cue CC the activation will *still* say 'auto-start 2.5 seconds after the end of Q4'. You will probably then want to change that reference from Q4 to CB (or, preferably in this case, to 'Previous Cue'). There's a similar scenario with the SFR sub-cue in Q4 stopping Q3.

Drag and Drop

You can 'drag and drop' files from an external program into the SCS Editor. There are various places that accept dropped files, as described below. Please note that SCS has no control over the order in which the files are dropped - they will be dropped in the order in which they are supplied by the underlying Windows API.

You can also drag and drop the currently selected cue to another position in the cue list. You cannot drag and drop a *sub-cue* - only a complete *cue* (with all of it's sub-cues).

The Editor Cue List



When you drag files into the Editor Cue List (above), as you move the mouse over the cue list the cue or item under the mouse pointer will be highlighted. For example, in the above screen shot, "Q1 Fanfare" is highlighted. When you release the mouse button, SCS will create a cue or cues AFTER the currently highlighted cue or item. So in the above screen shot the cue or cues would be created after Q1 and before Q2.

SCS accepts audio, video and image files. For audio files, if you drag and drop just one audio file into the cue list then SCS will create an Audio File Cue for that file. If you drag and drop multiple audio files then SCS will display a message asking you if you want to create multiple Audio File Cues or a single Playlist Cue.

For video/image files, if you drag and drop just one video/image file into the cue list then SCS will create a Video/Image Cue for that file. If you drag and drop multiple video/image files then SCS will display a message asking you if you want to create multiple Video/Image Cues, or a single Video/Image Cue containing all the video/image files.

Audio File Cues

When editing an Audio File Cue you can drag a single audio file into the "Audio File" field to replace the currently-selected audio file. If you drag multiple audio files then SCS accepts only the first file.

Playlist Cues

When editing a Playlist Cue you can drag audio files into the "Audio File" list to add files to the Playlist. A solid horizontal black line will indicate where the new files will be added.

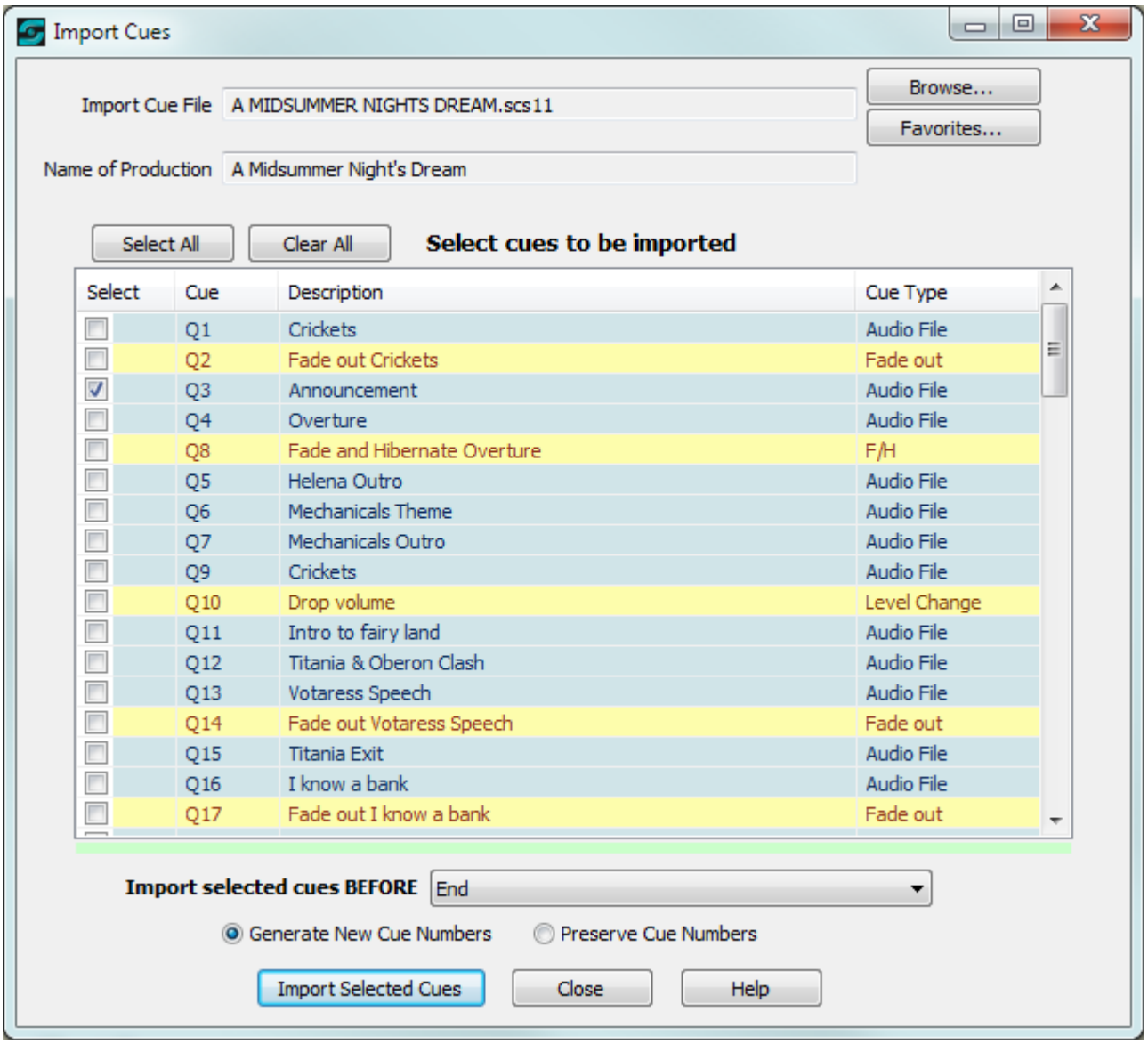
Video/Image Cues

When editing a Video/Image Cue you can drag video and image files into the "Timeline". A solid vertical black line will indicate where the new files will be added.

Back to Starting and Using the Editor

Import Cues from another SCS Cue File

This feature enables you to copy into your current cue file selected cues from another SCS cue file (ie from another .scs11 file). When the **Import Cues** window is opened, click either the **Browse** button or the **Favorites** button to find the SCS cue file containing the cues you want to import. When you have selected a cue file a window like this will be displayed:



Import Cue File: This is the name of the cue file you just selected. You can select a different file by clicking the **Browse** or **Favorites** button and selecting a different file.

Name of Production: This display-only field shows the 'Name of Production' from the Production Properties of the import cue file.

Select cues to be imported: A list of the cues in the import cue file is displayed in a similar manner to the cues on the Run Screen, ie the same color scheme is used and if a cue has two or more sub-cues then a + is displayed after the cue number. It is not possible to view the sub-cues. For the cue or cues you want to import, tick the **Select** checkbox. You can also use the buttons above the list to **Select All** or to **Clear All**.

Tip: If you want to see more cues without having to scroll down so frequently, you can resize this window. SCS remembers across sessions the last used size and position of the window.

Import select cues BEFORE: This indicates where within your current cue file the imported cues are to be copied. This defaults to the cue currently selected in the Editor. You can change the cue displayed here and select any other cue, or select **End** if you want to import the cues at the end of your current cue list.

Generate New Cue Numbers or **Preserve Cue Numbers**: The cue numbers in your import file may have no relation at all to the cue numbers in your current file, and some of the cue numbers may be the same (eg you could have a Q1 in both files). By selecting **Generate New Cue Numbers** (which is the default setting) then when your cues are

imported they will be assigned new numbers using the usual method of generating cue numbers. On the other hand, you may have set up libraries of cues for different items and have used a cue numbering convention unique for each item. For example, if you have cues for the song *Memory* then you may have your cues numbered MEM1, MEM2, etc. With this convention in place you may want to select **Preserve Cue Numbers** when you import the cues so that on being imported they retain their MEM1, MEM2, etc. numbers.

Import Selected Cues: This button is not enabled until you select one or more cues to be imported. When you click this button the selected cues will be imported, but there are a few things you should be aware of:

- Cue numbers will auto-generated if you have selected the **Generate New Cue Numbers** option.
- If you import a cue (eg Q2) that is set to auto-start based on the start or end time of another cue (eg Q1) and you have *not* selected that other cue (Q1) then the imported cue (Q2) will be converted to manual start. However, you will get notification that this will happen and you may cancel the import if you wish. You could then, if appropriate, select both cues (Q1 and Q2) and then import the the cues.
- If you import a hotkey cue (eg HK60 activated by key Z) and that hotkey (Z) is already being used then the imported cue (HK60) will be converted to manual start. However, you will get notification that this will happen and you may cancel the import if you wish.
- Each SCS cue file has a list of available devices held in the Production Properties. The names used may therefore vary between productions, typically because the devices are logically named (eg 'radio' for an on-stage radio). This means that when you import cues from another file it is possible that one or more of the cues refers to a device that has not been defined in your current production's properties. SCS will try to create device names in your Production Properties for device names not currently included. Any existing device names that are not used by your cues will be removed. This approach greatly simplifies the building of show files from master lists. You may have a master list that has, say, half-a-dozen devices named, none of which is 'Front'. To build a new show from that master list you could create a *New* cue file and then import the required cues from the master list. Since creating the new cue file automatically gave you an 'Front' device name, the import will throw this away and set up the devices from your master list.

On completing the import a message is displayed confirming the number of cues imported. On acknowledging this message the **Import Cues** window is closed.

On returning to the Editor it is recommended that you **Save** your changes (the imported cues) or that you collect your files into a **Production Folder**. Collecting your files into a Production Folder will copy the audio files of the imported cues into your current Production Folder.

Close: This button may be used to close the **Import Cues** window without performing an import.

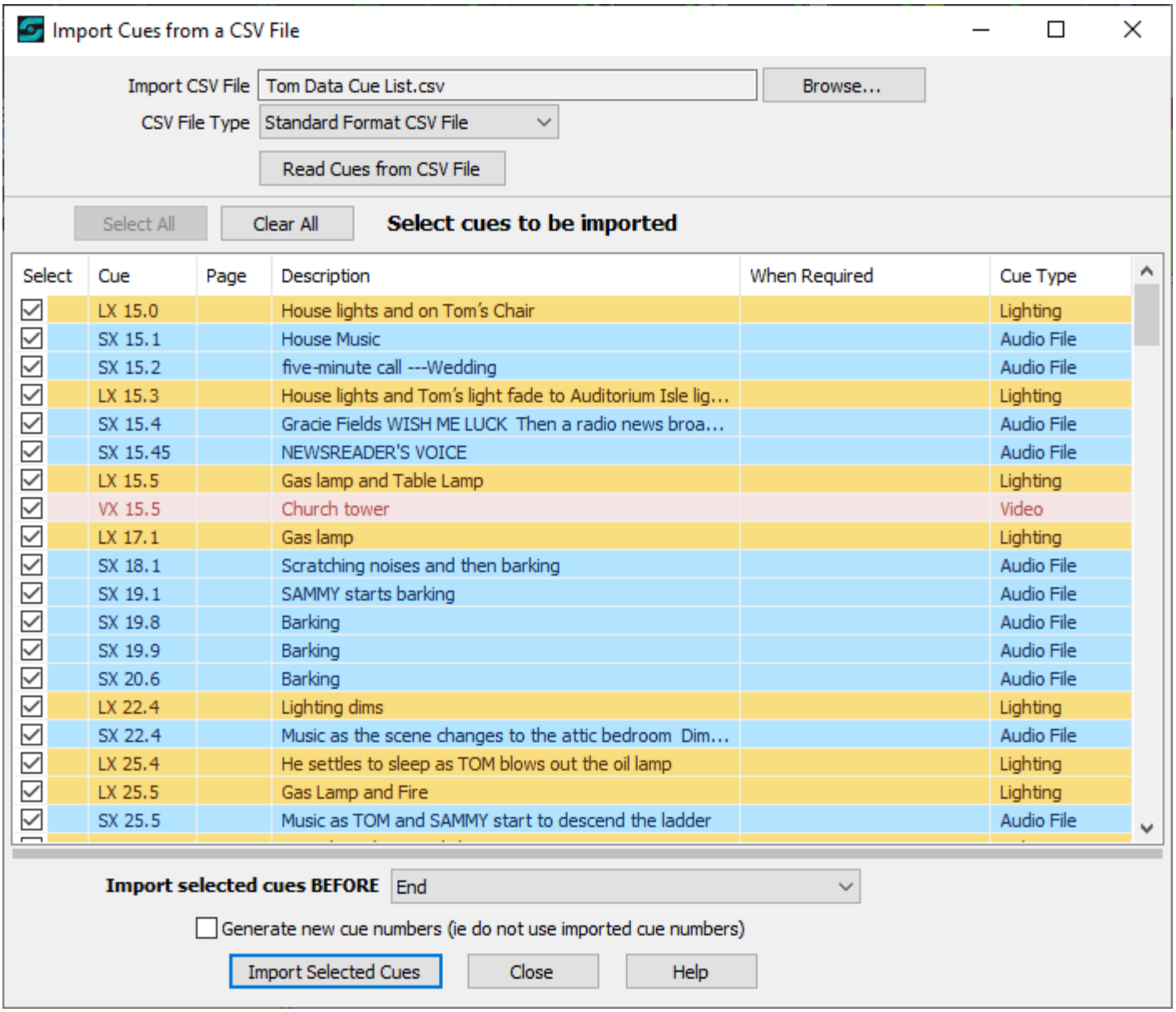
Help: This button displays this help.

Import Cues from an CSV File (Standard Format)

This feature enables you to copy into your current cue file selected cues from a CSV (comma-separated values) file. Two file types are supported: a 'standard' format, and an ETC Export format. The information below describes the 'standard' format. This could be useful if you have cues marked in a script such as a Word document, and you are able to extract those cue details into a separate text file.

For details on importing cues from an ETC export file, see Import Cues from a CSV File (ETC Exported Show File Format).

Here is an example of using the standard format:



Import CSV File: Click the **Browse** button to select the CSV file you want to import. Although only the filename and extension are displayed, the 'tool tip' (displayed when the mouse pointer is over the field)' will show the full path and filename.

CSV File Type: Select the file type of the file you are importing, which for this Help topic should be 'Standard Format CSV File'. The specification of a 'Standard Format CSV File' is documented later in this Help topic.

Read Cues from CSV File: Click this button to populate (or re-populate) the list of cue shown in this window.

Select cues to be imported: A list of the cues generated from the import cue file is displayed in a similar manner to the cues on the Run Screen, ie the same color scheme is used and if a cue has two or more sub-cues then a + is displayed after the cue number. It is not possible to view the sub-cues. For the cue or cues you want to import, tick the **Select** checkbox. You can also use the buttons above the list to **Select All** or to **Clear All**.

Tip: If you want to see more cues without having to scroll down so frequently, you can resize this window. SCS remembers across sessions the last used size and position of the window.

Import select cues BEFORE: This indicates where within your current cue file the imported cues are to be copied. This defaults to the cue currently selected in the Editor. You can change the cue displayed here and select any other cue, or select **End** if you want to import the cues at the end of your current cue list.

Generate New Cue Numbers: The cue numbers in your import file may have no relation at all to the cue numbers in your current file, and some of the cue numbers may be the same. By selecting **Generate New Cue Numbers** then when your cues are imported they will be assigned new numbers using the usual method of generating cue numbers.

Import Selected Cues: This button is not enabled until you select one or more cues to be imported. When you click this button the selected cues will be imported. On completing the import a message is displayed confirming the number of cues imported. On acknowledging this message the window is closed.

On returning to the Editor it is recommended that you **Save** your changes (the imported cues).

Close: This button may be used to close the window without performing an import.

Help: This button displays this help.

Standard CSV File Format

The first line of the CSV text file must list column headings. The following headings are recognized:

CUE, TYPE, DESCRIPTION, PAGE, WHEN REQUIRED, SUB-DESCRIPTION, FILE NAME

The order is not important, and neither is case (eg TYPE and Type are both acceptable). Leading and trailing spaces are ignored.

Subsequent lines are expected to contain cue details in the same order.

Cue: This is obviously the field that will be used to populate the Cue field of a cue. If you enter two or more lines with the same Cue number then this Import function will create multiple sub-cues for that cue.

Type: This is the single-character code that SCS uses to define a Sub-Cue Type. Only the following types are currently supported by this Import function:

F: Audio File Cue

A: Video/Image Cue

K: Lighting Cue

Lines containing any other values in the Type column, including blank, will be ignored.

Description: This will populate cue's Description field.

Page (optional): This will populate the cue's Page field.

When Required (optional): This will populate the cue's When Required field.

Sub-Description (optional): This will populate the sub-cue's Description field. If this field is omitted or left blank then SCS will use the Description field to populate the sub-cue's Description.

File Name (optional): For Audio File or Video/Image cues (types F or A) this will populate the sub-cue's corresponding filename field. SCS will NOT check the validity of this field at this time. If the File Name field is omitted or left blank then SCS will create a Place Holder for that sub-cue.

Please note that none of these fields may contain a comma as part of the field as commas are used to separate the fields.

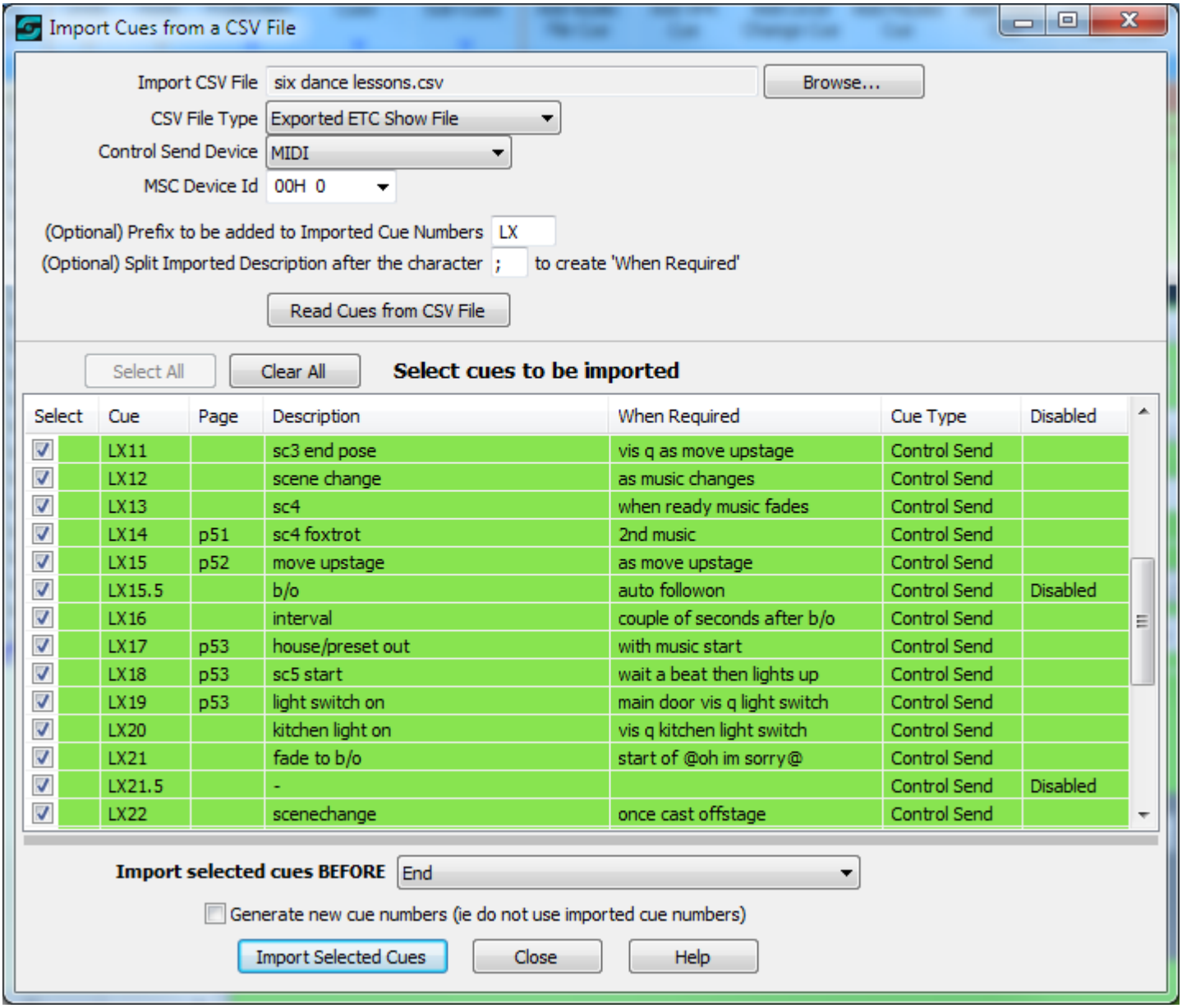
Here are a few lines from the file that created the example in the above screenshot:

```
CUE,TYPE,DESCRIPTION,PAGE,WHEN REQUIRED,SUB-DESCRIPTION,FILE NAME
ACT ONE,,,,,,
LX 15.0 ,K,House lights and on Tom’s Chair,,,,
SX 15.1 ,F,House Music,,,,
SX 15.2 ,F,five-minute call ---Wedding,,,,
LX 15.3 ,K, House lights and Tom’s light fade to Auditorium Isle lighting  Evening  ,,,,
SX 15.4 ,F, Gracie Fields WISH ME LUCK  Then a radio news broadcast  ,,,,
SX 15.45 ,F, NEWSREADER'S VOICE  ,,,,
LX 15.5 ,K, Gas lamp and Table Lamp ,,,,
VX 15.5 ,A, Church tower ,,,,
```

Note that the line 'ACT ONE' will be ignored as the Type field is blank. Leading and trailing spaces in all fields are ignored.

Import Cues from a CSV File (ETC Exported Show File Format)

This feature enables you to copy into your current cue file selected cues from a CSV file that was created as an exported ETC show file.



The cues shown in the above screenshot (cues LX11 - LX22) were derived from these lines in the file 'six dance lessons.csv':

```
1,Cue,1,11,,sc3 end pose;vis q as move upstage,3,0,6,0,3,0,3,0,3,0,6,,,,,,,,,,,
1,Cue,1,12,,scene change;as music changes,10,0,7,0,10,0,10,0,10,0,10,,,,,,,,,,,
1,Cue,1,13,,sc4;when ready music fades,8,0,15,0,8,0,8,0,8,0,17,,,,,,,,,,,
1,Cue,1,14,,p51 sc4 foxtrot;2nd music,6,0,20,0,6,0,6,0,6,0,20,,,,,,,,,,,
1,Cue,1,15,,p52 move upstage;as move upstage,4,0,4,0,4,0,4,0,4,0,4,,,,,,F3,,,,,,
1,Cue,1,15.5,,b/o;auto followon,4,0,4,0,4,0,4,0,4,0,6,,,,,,,,,,,
1,Cue,1,16,,interval;couple of seconds after b/o,8,0,8,0,8,0,8,0,8,0,8,,,,,,,,,,,
1,Cue,1,17,,p53 house/preset out;with music start,,,,,,,,,,14,,,,,,,,,,,
1,Cue,1,17,1,,10,2,10,2,10,2,10,2,10,2,14,,,,,,,,,,,
1,Cue,1,17,2,,8,0,8,0,8,0,8,0,8,0,8,,,,,,,,,,,
1,Cue,1,18,,p53 sc5 start;wait a beat then lights up,3,0,3,0,3,0,3,0,3,0,3,,,,,,,,,,,
1,Cue,1,19,,p53 light switch on;main door vis q light
switch,0,0,0,0,0,0,0,0,0,0,0,,,,,,,,,,,
1,Cue,1,20,,kitchen light on;vis q kitchen light switch,0,0,0,0,0,0,0,0,0,0,2,,,,,,,,,,,
1,Cue,1,21,,fade to b/o;start of @oh im sorry@,3,0,10,0,3,0,3,0,3,0,10,,,,,,F8,,,,,,
1,Cue,1,21.5,,,5,0,5,0,5,0,5,0,5,0,7,,,,,,,,,,,
1,Cue,1,22,,scenechange;once cast offstage,2,0,3,0,5,0,5,0,5,0,2,,,,,,,,,,,
```

Import CSV File: Click the **Browse** button to select the CSV file you want to import. Although only the filename and extension are displayed, the 'tool tip' (displayed when the mouse pointer is over the field)' will show the full path and filename.

CSV File Type: Select the file type of the file you are importing, which for this Help topic should be 'Exported ETC Show File'.

Control Send Device: This must be the MIDI output device defined under Production Properties that will be used for sending MIDI Control Send messages to your ETC lighting board. If you have not yet set up this device under Production Properties, then close this window and set up the device.

MSC Device Id: For exported ETC Show Files, SCS will generate MSC (MIDI Show Control) messages in Control Send cues. Select the MSC Device Id that the ETC lighting board software will recognize.

Prefix to be added to Imported Cue Numbers: This optional field can be used to add a common prefix to the cue numbers. For example, the cue numbers from the CSV file shown in the above screenshot were just numeric (1, 1.5, 2, etc), but the prefix LX has been set as shown. This means that when the cues are imported into an SCS cue file then the lighting cues can be readily distinguished from other cues, assuming you use a suitable prefix.

Split Imported Description after the character [ ] to create 'When Required': This field enables you to enter 'Description' and 'When Required' in the description or label of the source cue, such as in the ETC 'Label' field. By specifying the separator character here then SCS will split the imported field at this character. Only one character may be entered, but note that SCS will trim off any leading or trailing spaces when saving the component parts. If the separator character is not found in the imported field then the entire field will be saved as 'Description'.

Page: To set the Page field, one of the components of the ETC Label must start with 'p' or 'P' and be followed by one or more digits without intervening spaces or other non-numeric characters. IE, SCS looks for a 'word' that looks like a page number, such P5 or P12. See lighting cue 14 in the above example, where p51 is included at the start of the label field and is extracted by SCS into the 'Page' field.

Disabled: An imported cue will be disabled if the lighting cue is deemed to be auto-started on the lighting board. This condition is detected if the *preceding* cue has a non-blank value in the 'Follow' field (column W). See lighting cue 15 in the above example, which has F3 in column W, thus rendering the following cue (15.5) disabled.

Read Cues from CSV File: Click this button to populate (or re-populate) the list of cue shown in this window. If you change any of the fields above (eg if you change the Prefix) then click **Read Cues from CSV File** again to re-populate the list.

Select cues to be imported: A list of the cues generated from the import cue file is displayed in a similar manner to the cues on the Run Screen, ie the same color scheme is used and if a cue has two or more sub-cues then a + is displayed after the cue number. It is not possible to view the sub-cues. For the cue or cues you want to import, tick the **Select** checkbox. You can also use the buttons above the list to **Select All** or to **Clear All**.

> **Tip:** If you want to see more cues without having to scroll down so frequently, you can resize this window. SCS remembers across sessions the last used size and position of the window.

Import select cues BEFORE: This indicates where within your current cue file the imported cues are to be copied. This defaults to the cue currently selected in the Editor. You can change the cue displayed here and select any other cue, or select **End** if you want to import the cues at the end of your current cue list.

Generate New Cue Numbers: The cue numbers in your import file may have no relation at all to the cue numbers in your current file, and some of the cue numbers may be the same. By selecting **Generate New Cue Numbers** then when your cues are imported they will be assigned new numbers using the usual method of generating cue numbers, except that if you have specified a **Prefix** then generating the new cue numbers will be based on cues that have that Prefix.

> **Tip:** If you are importing lighting cues then it is recommended that you specify a **Prefix to be added to imported Cue Numbers** (such as LX), and leave **Generate New Cue Numbers** *blank*. If your CSV file cue labels already have a prefix then you will not need to specify a Prefix in this window unless you decide to generate new cue numbers.

Import Selected Cues: This button is not enabled until you select one or more cues to be imported. When you click this button the selected cues will be imported. On completing the import a message is displayed confirming the number of cues imported. On acknowledging this message the window is closed.

On returning to the Editor it is recommended that you **Save** your changes (the imported cues).

Close: This button may be used to close the window without performing an import.

Help: This button displays this help.

Configuring ETC Labels for each lighting cue

The lighting designer will be responsible for configuring the ETC label attribute of each lighting cue. This enables the page number, cue description and when required information to be captured and transferred to the Show Cue System (SCS) Production. This information is then displayed in separate columns on the SCS Main Window.

ETC Label Format

Configure the Label attribute of each cue or cue part using the following format:

<Page number> <Cue Description> ; <When required>

Page Number: The cue page number in the form of either **Pnn** or **pnn** followed by a space

Cue Description: A short description of the cue, for example, *Act 1, Scene 3*

The cue description is followed by a semicolon ";" This separates the Description and When Required fields.

When Required: A brief note on when the cue is required, for example, *as George enters SR*.

Examples

p12 Act 1, scene 3; On cue from SM

P24 Stage up; as he enters and switches lights on

p34 Blackout; …so that's goodbye then…

Example of applying a label to a cue on the ETC console

[Cue]<n>[Label]p12 Act 1, scene 3; On cue from SM [Enter]

Exporting ETC Show Cues to SCS

1. Insert a USB drive into one of the USB ports on the ETC lighting console.
2. Press the **[Displays]** key.

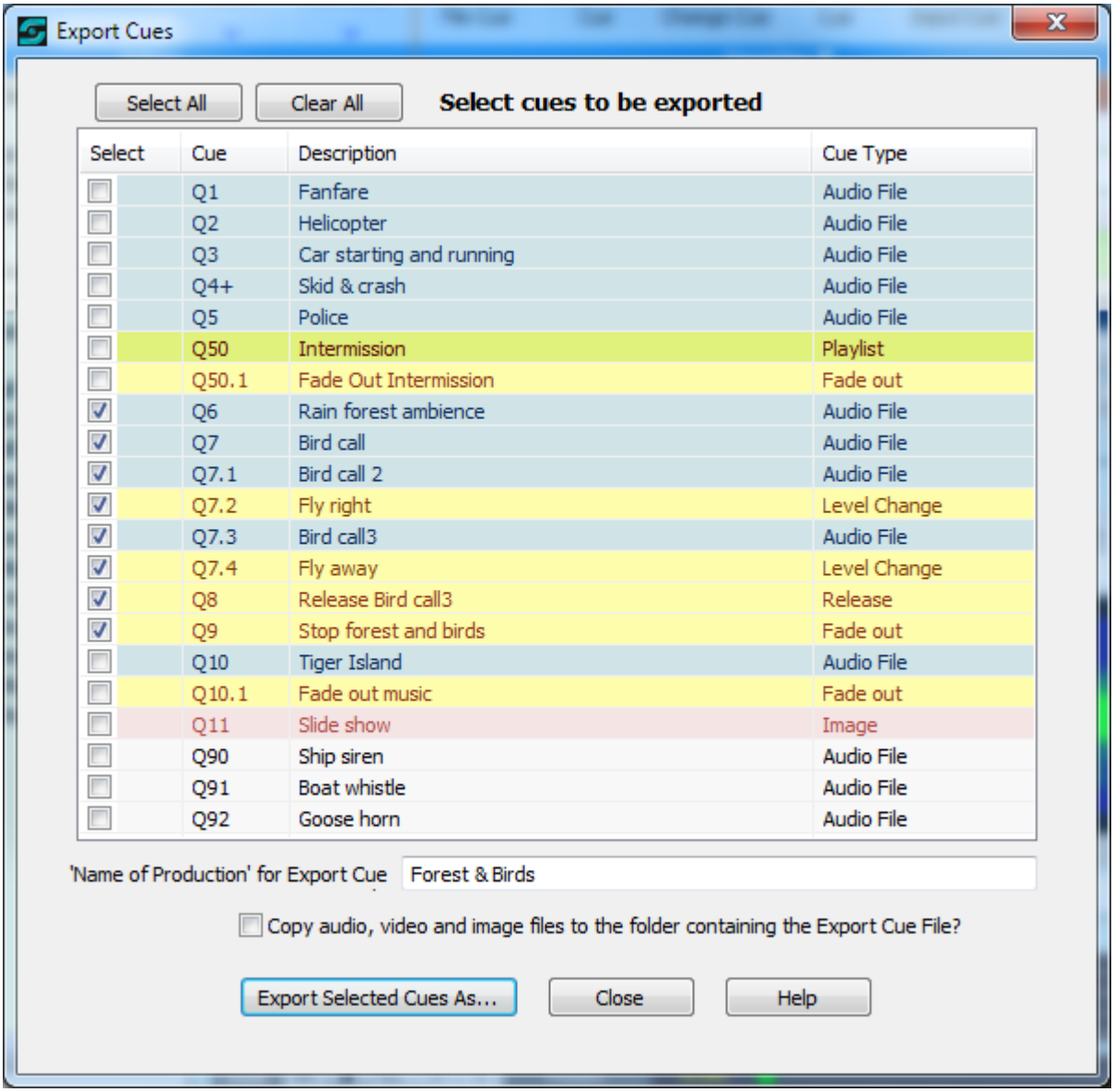
3. Navigate within the browser to **Export… , CSV,** <USB Drive> and then press **[Select]**.

4. Click **OK**.
5. In **Enter New Show Name**: <Current Show Name>, press **[Enter]**.
6. The CSV file will be located in the root of USB drive.

Credit: This function has been developed with the assistance of Roger Forsey, who suggested adding this feature to SCS, and supplied a Windows Script File (wsf) for creating an SCS cue file from an ETC export file. The example in the main screenshot above is taken from the ETC export file 'six dance lessons.csv' supplied by Roger, as were the sections *Configuring ETC Labels for each lighting cue* and *Exporting ETC Show Cues to SCS*.

Export Cues to a new SCS Cue File

This facility allows you to select some or all of the cues in your current cue file and export them to create another SCS cue file.



Select cues to be exported: A list of all your cues is displayed in a similar manner to the cues on the Run Screen, ie the same color scheme is used and if a cue has two or more sub-cues then a + is displayed after the cue number. It is not possible to view the sub-cues. For the cue or cues you want to export, tick the **Select** checkbox. You can also use the buttons above the list to **Select All** or to **Clear All**.

'Name of Production' for Export Cue File: When you export the cues you will be creating a new SCS cue file so this will have its own set of Production Properties. This will be a copy of the Production Properties of our current cue file, but the **Name of Production** may be set as required for your export cue file. The default value is the name from your current Production Properties. Changing the name for the export cue file will *not* affect your current Production Properties - it is only used for the export cue file.

Copy audio, video and image files to the folder containing the Export Cue File?: When you save your selected cues in the export cue file you will be selecting or possibly creating a folder in which the export cue file will be saved. The option is provided here for you to copy into that same folder all the audio, video and image files referenced by the cues you are exporting - effectively enabling you to create a Production Folder for that export. This checkbox is ticked by default, so clear the checkbox if you do *not* want the audio, video and image files copied.

If this check box is ticked when you click the *Export Selected Cues As* button, then the audio and video/image cues in the export cue file will point to this 'production' folder. If the checkbox is cleared then the audio and video/image cues in the export cue file will still point back to the original locations of those files.

Export Selected Cues As: This button is not enabled until you select one or more cues to be exported. Like the **Save As** feature, the **Export Selected Cues As** function displays the standard dialog for creating a new file or for overwriting an existing file. If you select an existing file you will get a warning message advising you that the file

already exists, and asking you if you want to replace it. Note that replacing the file will destroy any previous content of that file - the export function does not have the ability to append to an existing file. Note also that as with any Windows *Save As* dialog you will be able to create a new folder in which to save the file. As well as saving the new cue file, the audio files referenced by the exported cues will also be copied to the same folder *if* the above checkbox is ticked. Note that you can select the format of the save cue file, ie as an SCS 11 cue file (.scs11) or as an SCS 10.8/10.9 cue file (.scsq)

On completing the export, the **Export Cues** window is closed.

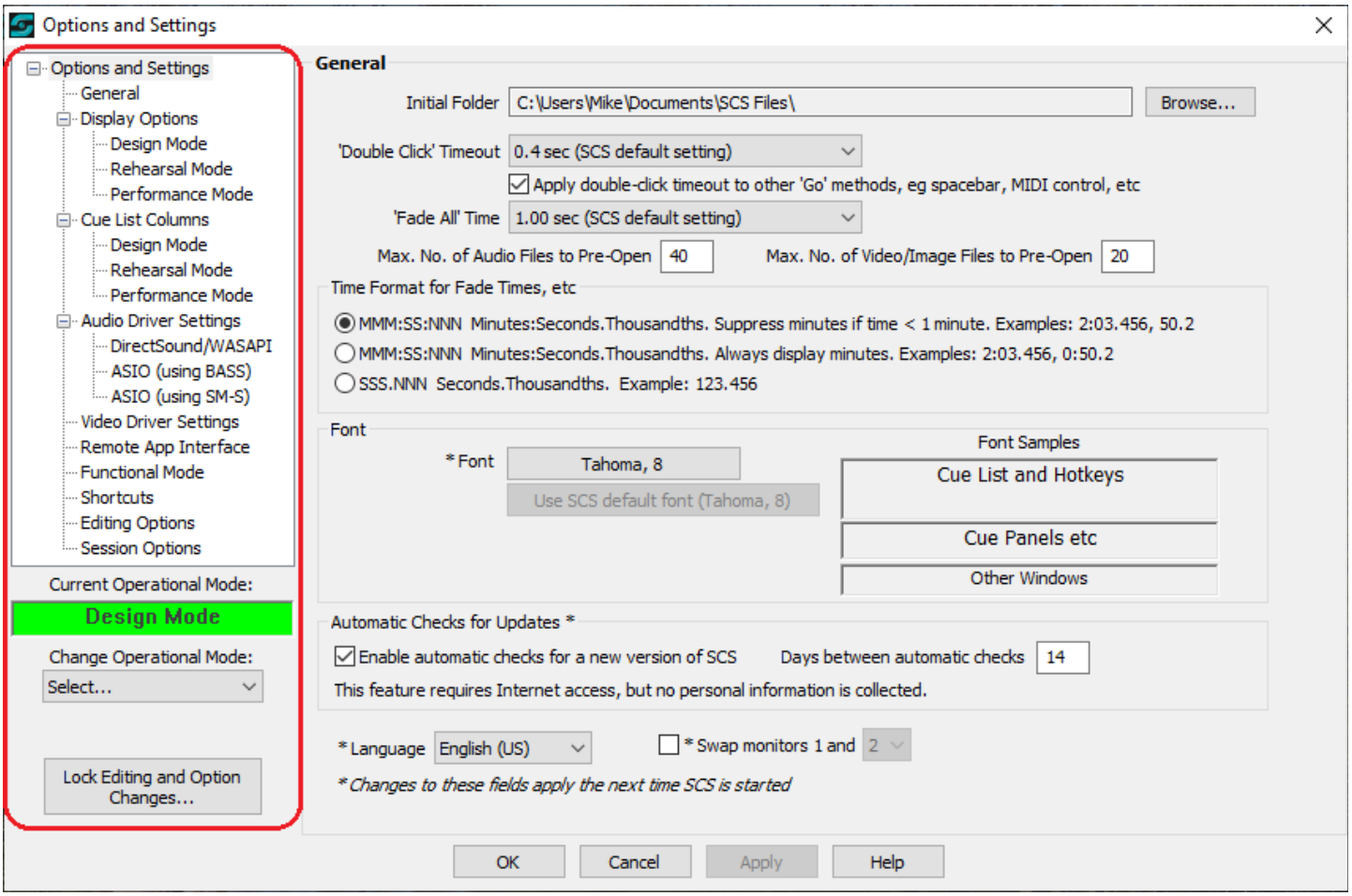
Close: This button may used to close the **Export Cues** window without performing an export.

Help: This button displays this help.

Options and Settings

The **Options and Settings** window (accessed via the **Options** button in the toolbar) enables you to specify settings that are to be used whenever you run SCS on this computer by this User Account. These are settings that are *not* specific to any one production, but which *are* applicable or potentially applicable to all cue files used on this computer. The settings are saved in a file in the User's Application Data folder so are *not* transferred to another computer if you copy a cue file or a production folder.

The **Options and Settings** window appears like this (but without the red outline):



Options and Settings: This 'tree view' lists the groups of options available. Some of these options may not be displayed if your SCS license doesn't permit the use of the relevant facilities. To access the particular options, just click on the required node.

Operational Mode

There are three Operational Modes available: **Design Mode**, **Rehearsal Mode** and **Performance Mode**. Different Display Options and Cue List Column selections are available for each Operational Mode.

- **Design Mode**: When you are designing your cues and running rehearsals you probably want all the available controls displayed on the main window of SCS. By default, Design Mode provides this.
- **Rehearsal Mode**: During rehearsals you may need access to cue editing capabilities, so by default Rehearsal Mode has many of the Display Options of Design Mode. However, one important addition is that if you click on a cue in the main window (to change to another cue) then in Rehearsal Mode (and Performance Mode) SCS will display a message box asking you to confirm this action. This confirmation request has been added because it is very easy to accidentally 'click' on a cue using a laptop's trackpad*. The confirmation request message box includes an option to not ask again this session.
- **Performance Mode**: When your design work has been completed and you are running performances, you may want to hide some of the controls. By default, Performance Mode Display Options provides this. The confirmation request on clicking on a cue in the main window is also enabled.

In all Operational Modes you can set the Display Options and Cue List Columns as desired for that Operational Mode.

* We recommend you disable a laptop's trackpad for rehearsals and performances. Use a mouse instead, and place the mouse control somewhere accessible but not where you will accidentally move it. The mouse pointer on the screen should preferably be positioned in a 'safe' spot, such as over a cue panel - not over the cue list. You should find a function key on your keyboard that enables you to disable/enable the trackpad.

Current Operational Mode: This displays the currently-selected Operational Mode.

Change Operational Mode: Use this drop-down list to change the Operational Mode. As with all **Options and Settings**, the selected **Operational Mode** will be saved when you click **Apply** or **OK** and so will be 'remembered' across SCS sessions.

Lock Editing and Option Changes: This button opens a dialog window that enables you to lock the **Editor** and **Options and Settings**. The facility is password-controlled, using a 'Sound Designer Password'. If you have not yet specified a 'Sound Designer Password', or if you have forgotten the password, then you can click on a link to open a window to enter a new password. That window requires you to enter your SCS Authorization String to confirm the authenticity of the request.
When the lock is in place, your cue properties etc are locked and cannot be changed, giving you assurance that no-one can meddle with your cues, which is particularly important if you are not the person who will be running the cues during live performances. The lock also prevents anyone changing any of your options, including the **Operational Mode**. When the lock is in place, the only 'option' enabled is this button, which now has the caption: **Unlock Editing and Option Changes**. Unlocking is also, of course, password-controlled.

Option Groups

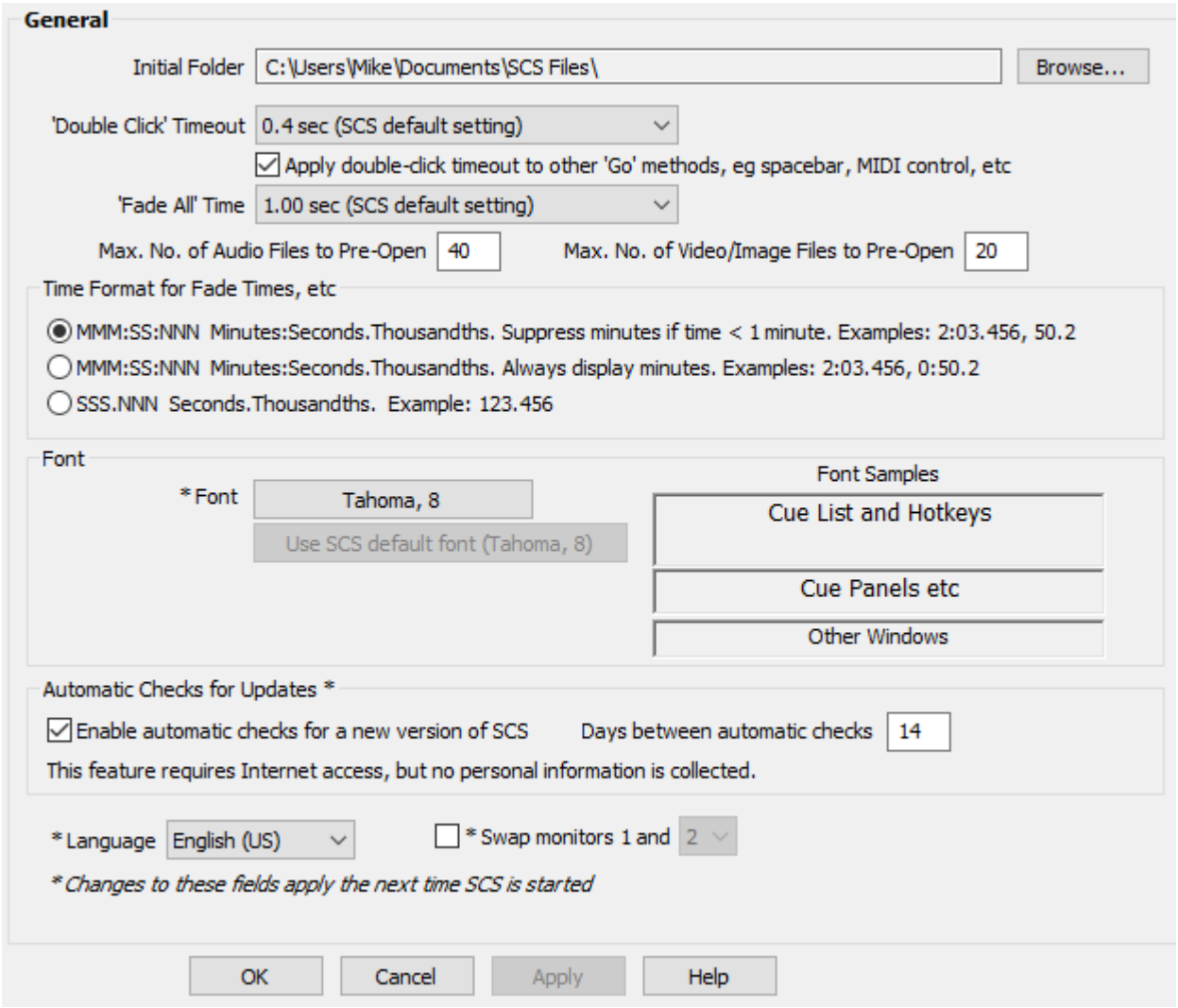
For details of individual option groups, see:

- General
- Display Options
- Cue List Columns
- Audio Driver Settings - DirectSound/WASAPI
- Audio Driver Settings - ASIO (BASS)
- Audio Driver Settings - ASIO (SM-S)
- Video Driver Settings
- Remote App Interface
- Functional Mode (Primary/Backup)
- Shortcuts
- Editing Options
- Session Options

Saving your Options and Settings

To save any changes you have made to **Options and Settings**, click the **OK** button. To cancel any changes, click the **Cancel** button.

Options and Settings - General



Initial Folder: Here you can nominate a folder (directory), or select one using the **Browse...** button, that will be the initial folder opened when browsing for sound files and cue files. For example, you could have a folder on the D: drive called scs_files, and in that folder create a folder for each show plus a folder to be a repository for all the sound effects wave files you download off the web or record off sound effects CD's etc. Then by setting this **Initial Folder** to D:\scs_files you will find setting up and editing cue files much easier. The default **Initial Folder** is the full path name to "Documents" or "My Documents".

Double-Click Timeout: Many computer users are so conditioned to double-clicking the mouse that sometimes they double-click when they mean to single-click. If SCS didn't specifically watch out for this, you could end up firing two cues instead of one, because the first click would fire the intended cue and the second click would fire the next cue assigned to the 'Go' button. To prevent this happening accidentally, SCS ignores a click that occurs within a set time of the previous click. The default timeout value is 0.4 second (400 milliseconds). However, you may adjust that timeout using this **'Double-Click' Timeout** field. Typically you would reduce this timeout if you have consecutive cues that you *do* need to fire rapidly. However, be careful not to reduce this too much. You may well find that just reducing the timeout to 0.3 second is all you need to do.

If you change this timeout then one other setting you will probably need to change is the Windows setting for the Double-Click speed of the mouse. Under Windows XP you can set this from Start / Settings / Control Panel / Mouse. I guess this is similar under other Windows versions. I have found that if I double-clicked within the Windows Mouse double-click time then SCS didn't get notified of the second click. So I had to make the Windows Mouse double-click time shorter - then it worked OK. One problem with this is that if you make the Mouse double-click time so short that double-clicks are not recognized as 'double-clicks' then you can no longer double-click to start a program from the desktop! You can, as always, start a program by a single click on the icon followed by pressing Enter.

Apply double-click timeout to other 'Go' methods, eg spacebar, MIDI control, etc: By default, the **Double-Click Timeout** is also applied to other methods of activating the 'Go' button, such as by the space bar on the keyboard, MIDI control, etc. If you need to fire consecutive cues rapidly using the keyboard, MIDI control, etc, then *clear* this checkbox.

'Fade All' Time: The 'Stop All' button (optionally activated by pressing ESC) is designed as a panic button to stop any playing cue immediately. However, you may want a less abrupt stopping of audio. You can achieve this using the

'Fade All' button (optionally activated by holding down a Shift key when you press ESC. The fade time is specified in this option. The default 'fade all' time is 1 second.

Max. No. of Audio Files to Pre-Open: SCS pre-opens audio files so they are immediately ready for playback. By default the number of audio files pre-opened (excluding hotkey files) is 40, but you can specify a higher or lower number in this field. The number must be between 2 and 99. By specifying a low number you may save memory and improve performance on some computers.

Max. No. of Video/Image Files to Pre-Open: SCS pre-opens video and image files so they are immediately ready for playback. By default the number of video/image files pre-opened is 20, but you can specify a higher or lower number in this field. The number must be between 2 and 99. By specifying a low number you may save memory and improve performance on some computers, but specifying a higher number is preferred if you have videos to be run back-to-back. For example, if all your videos are pre-opened at the start of the run, then this saves processing time *during* the run.

Tip: Whenever a cue or sub-cue completes, SCS looks through the cue list for audio and video files that can be pre-opened. However, to minimize interference with currently playing cues, SCS will generally not pre-open an audio file while another audio file is playing, and will not pre-open a video file while another video file is playing. This is particularly important for video files, as buffering a video file can noticeably interrupt the playback of another video that is playing. So if you need to run several videos back-to-back then ideally you need to set **Max. No. of Video/Image Files to Pre-Open** to at least the number of videos to be played back-to-back, up to the limit available. If SCS has not pre-opened a video file when it is required for playback, there will be a slight pause while buffering is started.

Time Format for Cue Lengths, etc: Here you can indicate how you want cue lengths and other times displayed. Basically it is a choice of displaying minutes if the cue length is a minute or more; *always* displaying minutes; or display in seconds only.

Font: If you want to change the font or font size used in SCS then you can choose a different font and font size here. Being able to change the font is useful if the default font is not displayed well with your screen size and Windows settings. The **Font** button shows the currently-selected font and size. Click this button to open a standard 'font requester' and select the font and size you wish to use. Examples of how this font will appear are then displayed under **Font Samples**. Please note that the 'Cue List and Hotkeys' font sizes may be set under Display Options. If the Display Options setting has this field set to 'Default' then the font size selected here against **Font** will be used. However, font sizes on the main window may be scaled, usually upwards, according to the screen size. That is why the **Font Samples** may show different results for the three samples. *Changes to this field take effect the next time you start SCS.*

Use SCS default font: Click this button if you want the **Font** to revert to the SCS default.

Automatic Checks for Updates

By default, SCS will check every 14 days if an update is available, but this check will, of course, only be performed of there is Internet access. No information, personal or otherwise, is collected. If an update *is* available then a message will be displayed in the Load Production window. This automatic check does not, however, check if you are currently eligible to download this version or if you need to purchase an update plan. That will only be determined when you login to the SCS website. Manual checking for updates can always be performed using Help / Check for Updates in the main window.

The automatic check for updates is only performed if the current Operational Mode is Design Mode. It is NOT performed for Performance Mode or Rehearsal Mode.

Enable automatic checks for a new version of SCS: Clear this checkbox to turn off the automatic checking. Turning this off is recommended for production use if you do not set the Operational Mode to Performance Mode or Rehearsal Mode.

Days between automatic checks: If automatic checking is enabled, then this field determines how often the automatic checking will occur.

Changes to these fields take effect the next time you start SCS.

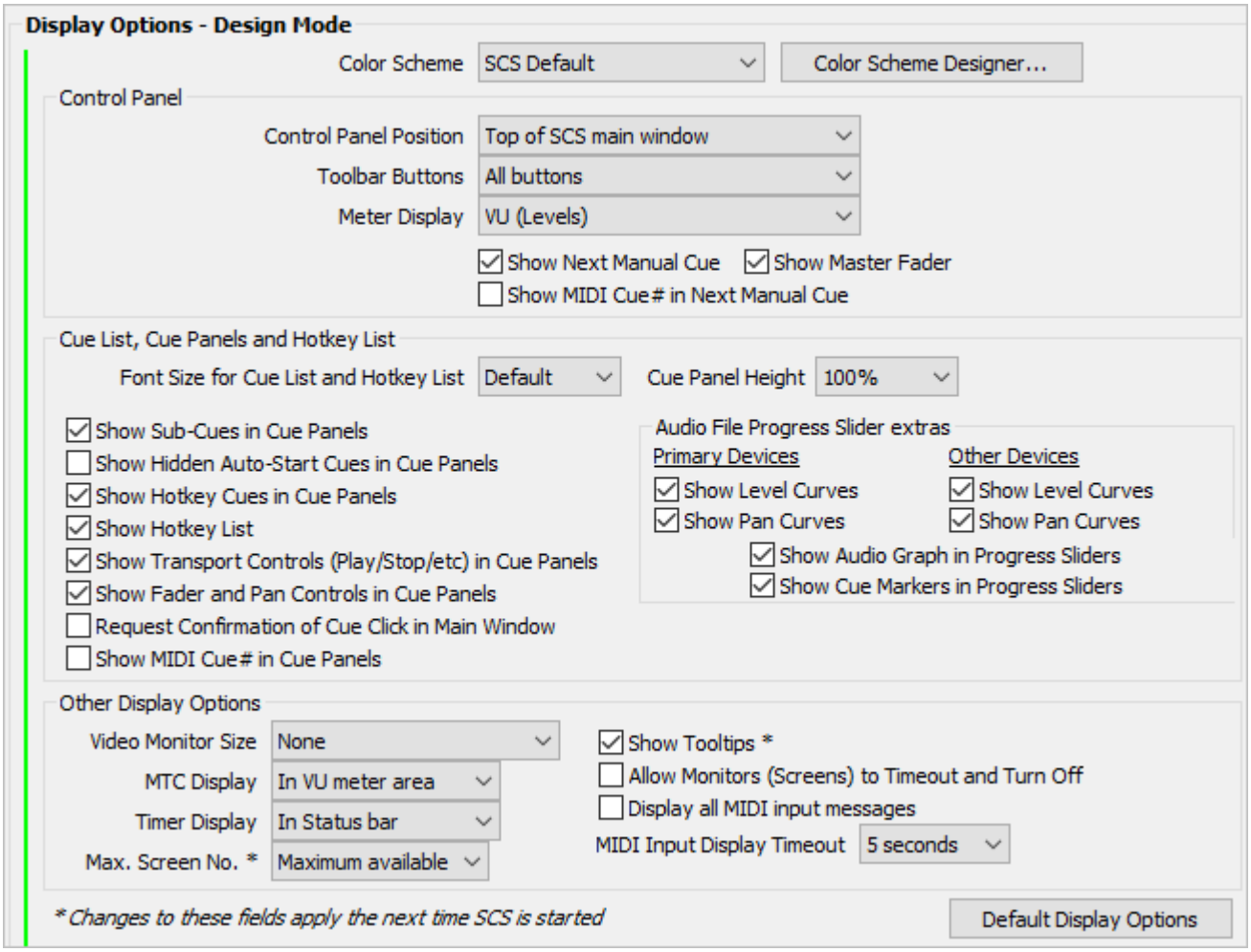
Language: Select the language you want for SCS labels and messages. Currently English(US), English(GB), French, Italian, Spanish, Catalan, German, Polish, Japanese and Chinese are implemented. If you are interested in supplying translations for another language, please email support@showcuesystems.com. *Changes to this field take effect the next time you start SCS.*

Swap Monitors 1 and 2: A few users have found that when they connect an external monitor or video projector to their computer that Windows sets this external device as 'Screen 1', not 'Screen 2'. If you encounter this issue and cannot change a Windows setting to permanently correct it then select **Swap Monitors 1 and 2** and SCS will

internally swap outputs to these two screens. If the other monitor is not monitor 2 then you can select another monitor number from the drop-down list. This list is populated with the monitor numbers of currently-connected monitors. In Windows Display Settings they must be defined as extensions of the desktop. *Changing this option takes effect the next time you start SCS.*

Back to Options and Settings

Options and Settings - Display Options



The layout of this frame is the same for **Design Mode**, **Rehearsal Mode** and **Performance Mode**. The relevant mode is displayed in the frame title, and Design Mode shows a green line down the left hand side, Rehearsal Mode an orange line, and Performance Mode a blue line. The purpose of the modes is to enable you to use different color schemes and display options for each mode.

Color Scheme: Select a color scheme from the drop-down list, or click **Color Scheme Designer** to create or modify your own color scheme. See Color Scheme Designer for details.

Control Panel Position: The 'control panel' is the panel containing the toolbar, meter display, 'Next Manual Cue', and Master Fader. By default this panel is displayed at the top of the main window. Other options are to display the panel at the bottom of the main window, or hide it altogether.

Toolbar buttons: This gives you the option to display all the toolbar buttons (on the main window), or to display a 'performance' set (play/stop/etc), or to hide the toolbar altogether. For Design Mode the default is 'All buttons'; for Performance Mode the default is 'Performance buttons only'.

Meter Display: Select 'VU (Levels)' is to display VU meters, or 'None' to suppress the display. The default is 'VU (Levels)'. (Note that the meter display will be hidden anyway if the Control Panel is hidden).

Show Next Manual Cue: Indicates whether or not the 'Next Manual Cue' panel is to be displayed. (This will be hidden anyway if the Control Panel is hidden.)

Show Master Fader: Indicates whether or not the 'Master' fader is to be displayed. You may want to hide this in Performance mode if you do not want your operator to adjust the overall output level. (This will be hidden anyway if the Control Panel is hidden.)

Show MIDI Cue # in Next Manual Cue: If you use MIDI Cue Numbers (see Cue Properties) then this option enables you to include the MIDI Cue Number (where present) with the Description in 'Next Manual Cue'.

Font Size for Cue List and Hotkey List: Here you can select a different font size for these items on the main window. You may find it beneficial to have a larger font size in Performance Mode.

Cue Panel Height: This allows you to increase or decrease the height of the cue panels on the main window. You may find it beneficial to set an increased height for Performance Mode.

Show Sub-Cues in Cue Panels: If this checkbox is clear then SCS will display just one cue panel per cue regardless of the number of sub-cues (except for Playlists which will display two cue panels if there are at least two files in the Playlist). The cue panel displayed will be for the primary sub-cue. By default this option is selected for Design Mode and Rehearsal Mode, but clear for Performance Mode.

Show Hidden Auto-Start Cues in Cue Panels: In Cue Properties you can specify an auto-start cue to be hidden in the main window. By using Bulk Edit you can apply this, if required, to all auto-start cues, which means that the main window will only show manual-start cues. Although this may be what you ultimately want, if you are having some difficulty with some of your auto-starts, this option allows you to force the 'hidden' auto-start cues to be shown. By default the checkbox is clear.

Show Hotkey Cues in Cue Panels: When a hotkey cue plays it normally appears in the cue panels while it is playing. If you want to suppress this action, just clear this checkbox.

Show Hotkey List: Clear this checkbox if you want to hide the Hotkey list that is shown on the lower right of the main window. Note that this panel is hidden anyway if you have no hotkey cues in your production.

Show Transport Controls in Cue Panels: You normally do not need to use the transport controls (play/stop/etc) in the cue panels as your cues should be activated by the 'Go' button or equivalent. To reduce the likelihood of unintentionally clicking one of these buttons, and also to simplify the screen, you can clear this checkbox to hide the transport controls. In Design Mode the default is to display the controls, and in Performance Mode the default is to hide them.

Show Fader and Pan Controls in Cue Panels: This is another option that you may wish to clear in Performance Mode to further reduce the likelihood of the operator messing with your cues.

Request Confirmation of Cue Click in Main Window: When a laptop's trackpad is active it's very easy to move the mouse pointer and accidentally 'click' on a cue in the cue list. This, of course, will reposition the cue list at the clicked-on cue. During a production performance (and even during rehearsals) that can disrupt the show, especially if the 'Next Manual Cue' is then activated. Selecting 'Request Confirmation of Cue Click in Main Window' should eliminate this problem, because if you 'click' on a cue in the main window SCS will display a message box asking you to confirm the action. You can respond with 'Yes', 'Yes, but don't ask me again this session', or 'No'. By default, 'Request Confirmation of Cue Click in Main Window' is selected in Rehearsal and Performance modes, but not selected in Design mode.

Show MIDI Cue # in Cue Panels: If you use MIDI Cue Numbers (see Cue Properties) then this option enables you to include the MIDI Cue Number (where present) with the Description in cue panels.

Audio File Progress Slider extras: These checkboxes allow you to control which level and pan curves are shown in Audio File progress sliders in the cue panels. The 'primary device' is the first device for a cue. **Show Audio Graph in Progress Sliders** controls whether or not audio graphs are displayed in Cue Panel progress sliders for Audio File Cues and for Playlist Cues. **Show Cue Markers in Progress Sliders** controls whether or not SCS cue markers are displayed in Cue Panel progress sliders.

Video Monitor Size: This determines the size of the operator's monitor windows for Video/Image Cues. The sizes are set by selecting the height - the width is automatically adjusted. You can select **Small**, **Standard** or **Large**, or you can hide the monitor windows altogether by selecting **None**. The default setting is **None** for *Design Mode* and **Standard** for *Performance Mode*.

MTC Display: If you have MTC Cues then SCS displays the current MIDI Time Code. By default, this is displayed in the VU Meters area of the main window, but this **MTC Display** option allows you to specify that the MIDI Time Code is to be displayed in a separate window. The MTC in this window will be displayed in a larger font and the window can be moved and resized as required. SCS remembers the window size and position across sessions. *Note that when an MTC Cue is completed, SCS hides the MTC window after 3 seconds unless another MTC Cue is started.* See MTC Cues for more information.

Timer Display: If you are using the Production Timer then SCS displays the current value of the Production Timer. By default, this is displayed in the status bar at the bottom of the main window, but this **Timer Display** option allows you to specify that the Production Timer is to be displayed in a separate window. The time in this window will be displayed in a larger font and the window can be moved and resized as required. SCS remembers the window size and position across sessions. See Production Timer for more information.

Max. Screen No.: Video/Image cues are normally played to secondary screens or video projectors. When you are designing your cues you *may* want to use your secondary screen for other purposes. This option allows you to limit how many screens SCS will use. Note that changing this setting takes effect the next time you start SCS.

Show Tooltips: Tooltips are the hints sometimes displayed when the mouse hovers over a field. SCS uses tooltips extensively in the Editor and also elsewhere. If you do not want to see tooltips then clear this checkbox. In Design Mode the default is to show tooltips, and in Performance Mode the default is to hide them. Note that changing this setting takes effect the next time you start SCS. This is because tooltips are created when a screen is first loaded, so

tooltips cannot be hidden retrospectively within an SCS session.

Note: Some SCS fields use the Windows tooltip feature to display the full value of the field. For example, when a filename is displayed in a text field the field may not be long enough to see the full filename, but by also displaying the filename as a tooltip it is usually possible to see (in the tooltip) the full filename. The display of these tooltips is also controlled by the **Show Tooltips** option.

Allow Monitors (Screens) to Timeout and Turn Off: This is useful if SCS is being used unattended for lengthy periods, such as all-day or 24/7. You should NOT select this option for normal theatre performances where you need the screen to stay on for the entire performance. Please note that turning off the screens is controlled by Windows, not by SCS. By default, SCS calls a Windows function to *disable* the timeout and turn-off, but by setting this checkbox you can allow Windows to implement the timeout and turn-off based on your Windows display settings.

Display all MIDI input messages: MIDI input messages that are not needed are normally filtered out immediately, but if you want to see these messages in the status line (or test window) then select this option.

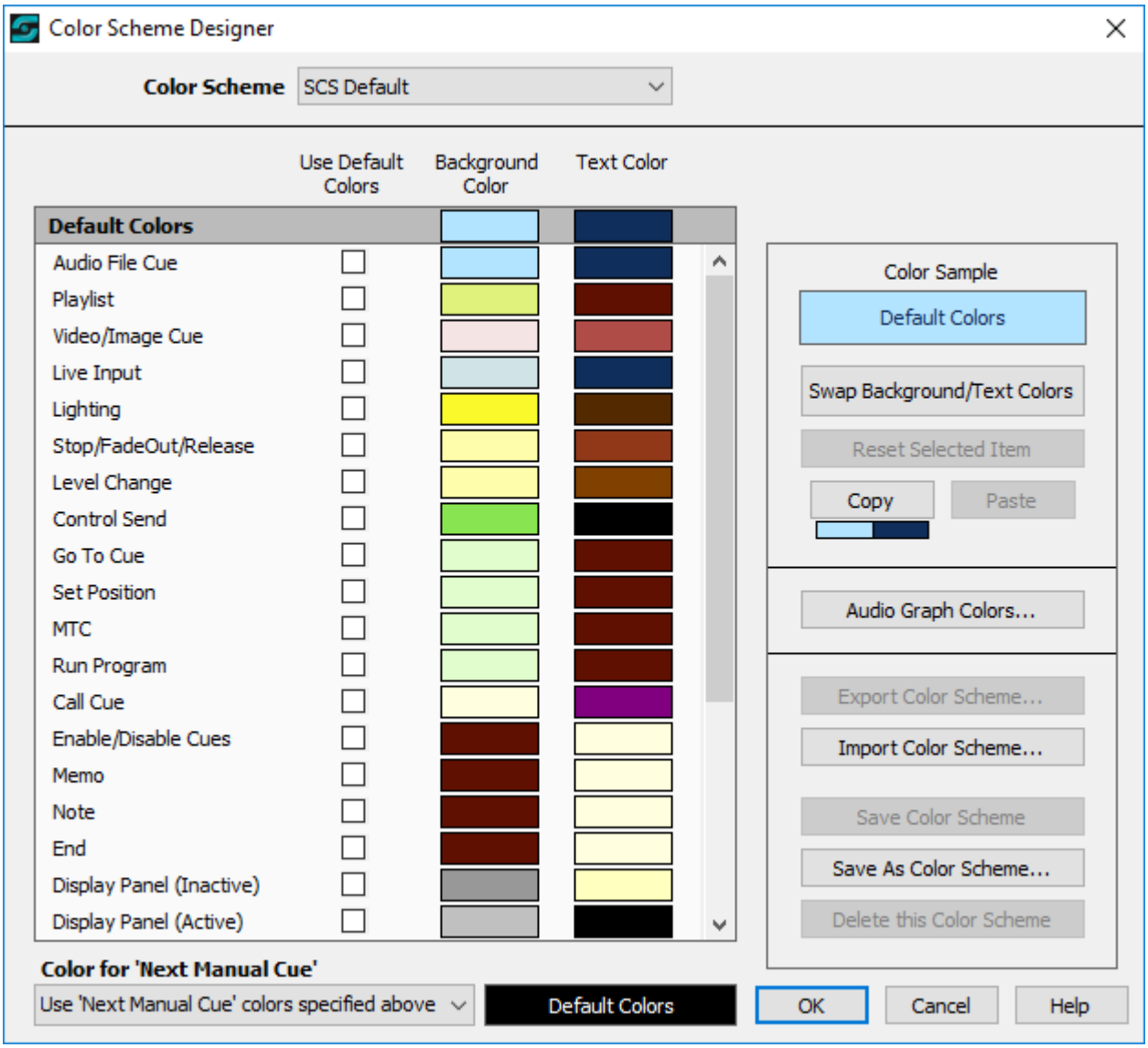
Default Display Options: Click this button to set all the Display Options for this Operational Mode to their default values.

Tip: On the main window you can drag the splitter bar located between the cue list and the cue panels. SCS records the splitter bar position and saves it for the current Operational Mode. This means you can have different settings for Design Mode and Performance Mode.

Back to Options and Settings

Color Scheme Designer

In SCS you can select one of a number of preset Color Schemes for your cues, etc, or you can design your own Color Scheme. You can also have different Color Schemes for 'Design' Operational Mode and 'Performance' Operational Mode. The **Color Scheme Designer** is accessed via Options and Settings - Display Options and looks like this:



Color Scheme: Select a predefined or user-defined color scheme from this drop down list. The main panel of colors will show you the colors for the selected Color Scheme. If you want to create your own color scheme, start by selecting a Color Scheme that most closely matched what you want. Built-in color schemes included in SCS are:

- *SCS Default.* The aboive screenshot shows a part of the color scheme.
- *SCS Light.* This is the same as *SCS Default* but has **Color for 'Next Manual Cue'** set to *Lighten colors of OTHER cues.*
- *SCS Dark.* This is the same as *SCS Default* but has **Color for 'Next Manual Cue'** set to *Darken colors of OTHER cues.*
- *SCS WinDef.* If you're not keen on colors, try this color scheme, which is based on the idea of using 'Windows default' black on gray, with just a few exceptions.

Panel of Colors (untitled): This panel lists all the cue types and other items that may have preset or user-defined colors. The list is scrollable except for the **Default Colors** line which is always displayed as the first item. To view the **Color Sample** for an item, click on that item's description. For example, click on **Control Send** to view the **Color Sample** for the Control Send cue type.

Use Default Colors: The Default Colors item simplifies using the same color pair (background and text colors) for several items. Just select the required 'default' background and text colors, and then select the **Use Default Colors** checkbox against any item that is to inherit these default colors. If you then change the default background and/or text color, this change will be applied to all items with **Use Default Colors** selected.

Background Color: This shows the currently-selected background color for the item. Click on a **Background Color** item to display the standard 'Color Picker' dialog, and choose your color from that dialog. If you change the color then

an asterisk (*) will be displayed after the item description.

Text Color: This shows the currently-selected text color for the item. Click on a **Text Color** item to display the standard 'Color Picker' dialog, and choose your color from that dialog. If you change the color then an asterisk (*) will be displayed after the item description.

Color for 'Next Manual Cue': This determines the color for the Next Manual Cue, or (depending on the selection) the colors of *other* cues. The options available are:

- *Use 'Next Manual Cue' colors specified above*. This will set the background and text colors of the next manual cue to the corresponding colors selected in the **Panel of Colors**.
- *Use cue colors*. No distinction will be made to highlight the next manual cue - the colors will be the same as other cues of that cue type.
- *Swap cue background and text colors.* The selected colors for that cue type will be swapped if the cue is the next manual cue.
- *Lighten colors of OTHER cues.* The next manual cue will use the specified colors for that cue type, but all other cues will have their background colors lightened. The text colors will be either black or white, depending on the luminosity of the background color.
- *Darken colors of OTHER cues.* The next manual cue will use the specified colors for that cue type, but all other cues will have their background colors darkened. The text colors will be either black or white, depending on the luminosity of the background color.

A sample of the appearance of the Next Manual Cue is displayed alongside this item. The sample shown is for the currently-selected item, eg 'Audio File Cue'. This sample is hidden for non-cue items, except for 'Default Colors' as that item can be applied to cue types.

Color Sample: This display-only item shows you how the selected item appears, using the currently-selected Background and Text Colors.

Swap Background/Text Colors: This button enables you to swap the background and text colors for the currently-selected item.

Reset Selected Item: If you have changed the background or text color of the currently-selected item then this button enables you to reset the colors back to the last-saved colors.

Copy: Copies the selected item's color settings to an internal clipboard so you can subsequently **Paste** these color setting to another item. A small graphic is shown below these buttons showing the relevant background and text colors.

Paste: See **Copy**. Note that **Paste** is only enabled if **Copy** has been used.

Audio Graph Colors: To review or change the colors used in audio graphs, click this button. This will open the Audio Graph Colors dialog. If audio graph colors have been changed then an asterisk (*) will be display after the button caption.

Export Color Scheme: User-defined color schemes are held in the file "scs_colors.scsc". So any such user-defined color scheme is therefore available for all SCS productions run on that computer. However, sometimes you may want to copy a user-defined color scheme to another computer or to share it with other SCS users. To do this, click **Export Color Scheme** to create a file that contains *only* the currently-selected color scheme. The default filename for the save will be "scs_colors <scheme name>.scscs". For example, if the currently-selected color scheme is named Mike then the default filename for the save will be "scs_colors Mike.scscs". The default folder for the save will be the folder containing your current cue file. (Note: the Export Color Scheme button is disabled if the currently-selected color scheme is a predefined scheme, such as "SCS Default". This is because predefined schemes are already available on any SCS installation.)

Import Color Scheme: If you have a color scheme file that was created by SCS using the **Export Color Scheme** function (probably a file created on another computer) then you can import the color scheme in that file to you current SCS installation. Just click **Import Color Scheme** and choose the file, which must have a .scscs extension. Note that you cannot import a color scheme with the same name as an existing color scheme.

Save Color Scheme: This button saves your changes back to the selected Color Scheme if this is a user-defined color scheme. If the selected Color Scheme is a predefined Color Scheme then this button opens the ***'Save As Color Scheme'*** dialog. This means that the predefined Color Schemes themselves will always remain as published.

Save As Color Scheme: This button saves the colors to a new Color Scheme, which you will name in a pop-up input box. The name you enter here will be the name that subsequently appears in the **Color Scheme** drop-down list.

Delete this Color Scheme: Click this button to remove, permanently, a user-defined Color Scheme you no longer require.

OK: Click OK to accept the currently-selected Color Scheme. If there are unsaved changes then they will be saved.

Cancel: Click Cancel to discard any unsaved changes.

Help: Display this Help.

Note: User-defined Color Schemes are held in the file scs_colors.scsc, which by default is saved in your application data folder. This means the schemes are machine and user specific. You can, however, choose to save your Color Scheme in your 'Production Folder'. If you do this then when you copy your Production Folder to another computer than your Color Scheme(s) will also be transferred. See Collect Production Files for more information.

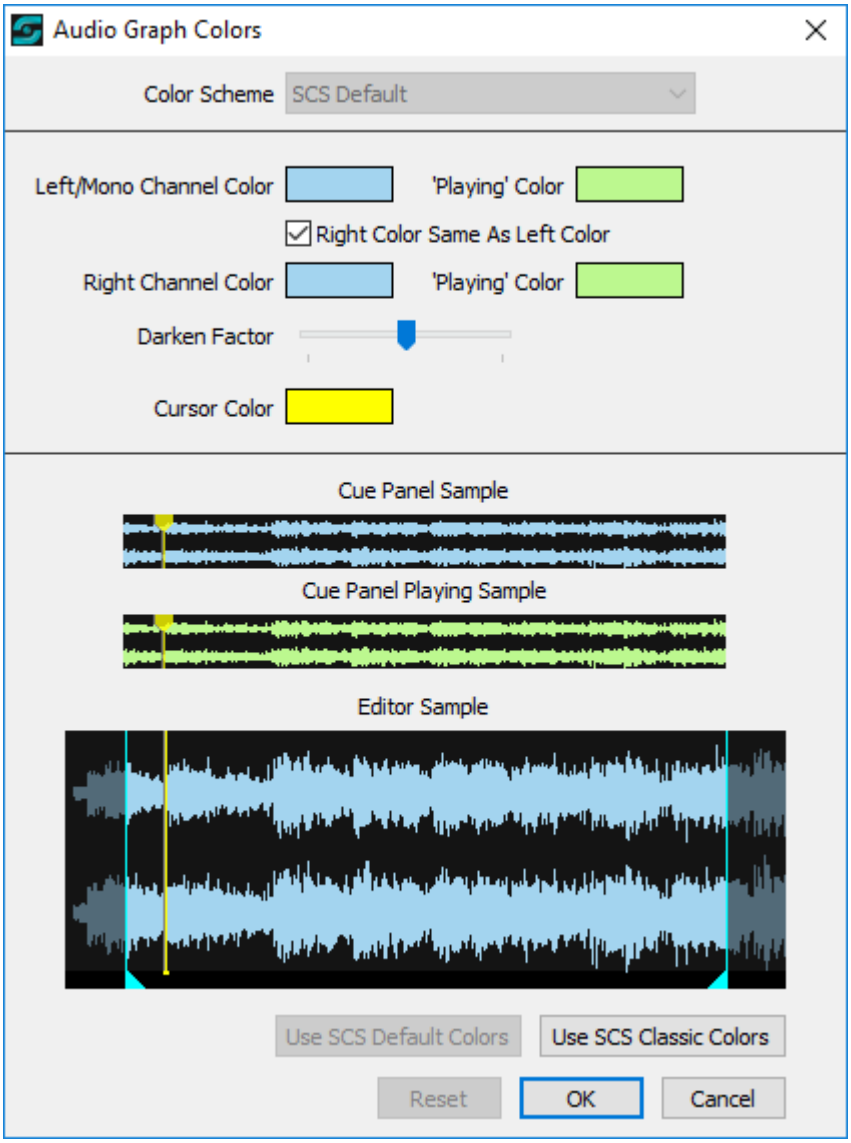
SCS handles color scheme files basically as follows:

- When SCS is started, it looks for ***scs_colors.scsc*** in the SCS 'application data' folder. If this file is found, then this color file is loaded into memory. If the file is not found, SCS then looks for the SCS 10 Color Scheme file ***scs_colors.scc*** in "Documents" or "My Documents". If this file is found, then this color file is loaded into memory. If neither of these files are found then just the built-in (predefined) color schemes will be available.
- Whenever SCS opens a cue file (eg a .scs11 file) it looks in the cue file's folder for ***scs_colors.scsc*** or ***scs_colors.scc***. If the file is found then this color file is loaded into memory, replacing in memory any previously loaded color schemes.
- **Important!**: If neither ***scs_colors.scsc*** nor ***scs_colors.scc*** are found in the cue file's folder, the currently loaded color file remains loaded. If you then collect your files into a new or existing Production Folder you have the opportunity to save this color file along with any audio file changes, etc. This provides an easy mechanism for you to 'transfer' you color schemes to another of your Productions, or to use them in a new Production. But see also the Export and Import features mentioned earlier in the Help topic.

Back to Display Options

Audio Graph Colors

Audio graphs are shown in the Editor when editing Audio File Cues, and also in Cue Panels for Audio File Cues and Playlist Cues. The colors used in these audio graphs are dependent on the selected Color Scheme. The Audio Graph Colors dialog is accessed from the Color Scheme Designer by clicking on the **Audio Graph Colors** button. The Audio Graph Colors dialog looks like this:



Color Scheme: This is a display-only field showing the **Color Scheme** currently selected in Color Scheme Designer (which is the parent window of this dialog).

Left/Mono Channel Color: This shows the color to be used in audio graphs for the left or mono channel. Click on the **Left/Mono Channel Color** graphic to display the standard 'Color Picker' dialog, and choose your color from that dialog. Note that audio graphs in the Editor show the audio for the complete file, which may therefore include parts of the file that are excluded from playback in this cue. The **Left/Mono Channel Color** is the color used for the playable (or included) part of the file. The excluded part of the file is shown darker, as determined by the **Darken Factor** control.

'Playing' Color: The first of these graphics shows the color to be used in audio graphs for the left or mono channel when the cue is playing. Click on the graphic to display the standard 'Color Picker' dialog, and choose your color from that dialog.

Right Color Same As Left Color: If you want the left and right colors to be the same, then select this checkbox.

Right Channel Color: This shows the color to be used in audio graphs for the right channel. If **Right Color Same As Left Color** is clear then you can click on the **Right Channel Color** graphic to display the standard 'Color Picker' dialog, and choose your color from that dialog. Note that audio graphs in the Editor show the audio for the complete file, which may therefore include parts of the file that are excluded from playback in this cue. The **Right Channel Color** is the color used for the playable (or included) part of the file. The excluded part of the file is shown darker, as determined by the **Darken Factor** control.

'Playing' Color: The second of these graphics shows the color to be used in audio graphs for the right channel when the cue is playing. Click on the graphic to display the standard 'Color Picker' dialog, and choose your color from that dialog.

Darken Factor: This control governs how much darker the 'excluded' parts of the audio graph will be. This only applies to audio graphs in the Editor because audio graphs in Cue Panels only show included audio.

Cursor Color: This shows the color to be used in audio graphs for the position cursor. Click on the **Cursor Color** graphic to display the standard 'Color Picker' dialog, and choose your color from that dialog.

Cue Panel Sample: This display-only graphic shows how an audio graph may appear in Cue Panel audio graphs when using the selected colors.

Cue Panel Playing Sample: This display-only graphic shows how an audio graph for a *playing* cue may appear in Cue Panel audio graphs when using the selected colors.

Editor Sample: This display-only graphic shows how an audio graph may appear in Audio File Cues in the Editor when using the selected colors.

Use SCS Default Colors: Click this button to change the selected colors to the SCS default. The button is disabled if the SCS default colors are already selected.

Use SCS Classic Colors: Click this button to change the selected colors to the audio graph colors that were used pre-11.6.0. The button is disabled if the 'classic' colors are already selected.

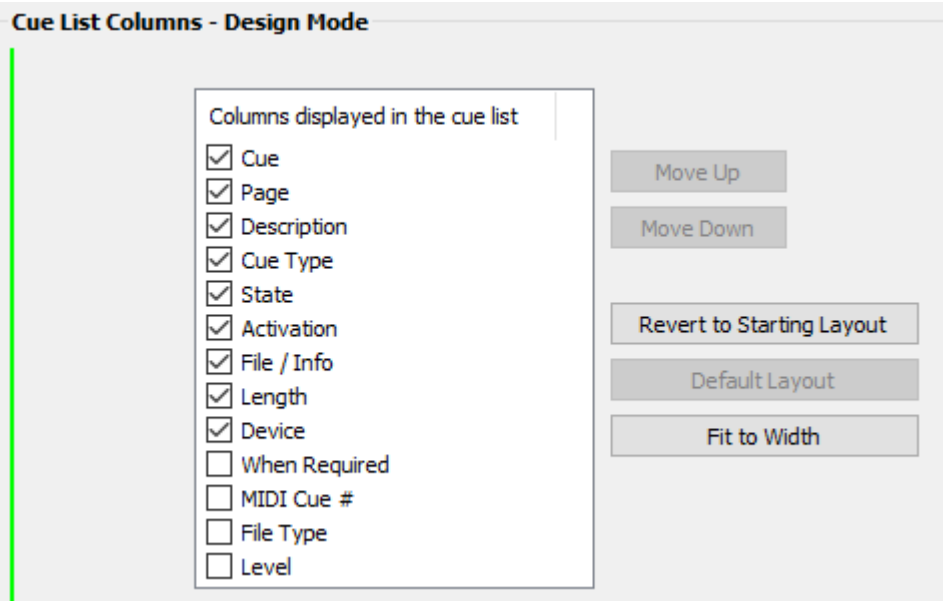
Reset: Click this button to reset the colors to those selected on entry to this dialog.

OK: Click OK to accept the currently-selected colors.

Cancel: Click Cancel to discard any changes.

Back to Color Scheme Designer

Options and Settings - Cue List Columns



The layout of this frame is the same for **Design Mode**, **Rehearsal Mode** and **Performance Mode**. The relevant mode is displayed in the frame title. This enables you to display a different selection and arrangement of columns for Design Mode, Rehearsal Mode and for Performance Mode.

Columns displayed in the cue list: Select the columns you want displayed in the cue list of the main window.

Move Up / Move Down: Use these buttons to change the order of the columns to be displayed. (You can also change the order by dragging the column headings on the main window.)

Revert to Starting Layout: If you have changed the selection or order of columns then you can click this button to revert to the layout as at the start of this SCS session.

Default Layout: Click this button to set the 'columns displayed' to the SCS default.

Fit to Width: Adjusts the width of the last column so the cue list fills the overall display width of the cue list in the main window.

Tip: As mentioned above, on the main window you can change the order of the columns by dragging the column headers. You can also change the width of individual columns by either dragging the column header separators, or by double-clicking a column header separator. SCS records the column positions and widths and saves them for the Current Operational Mode.

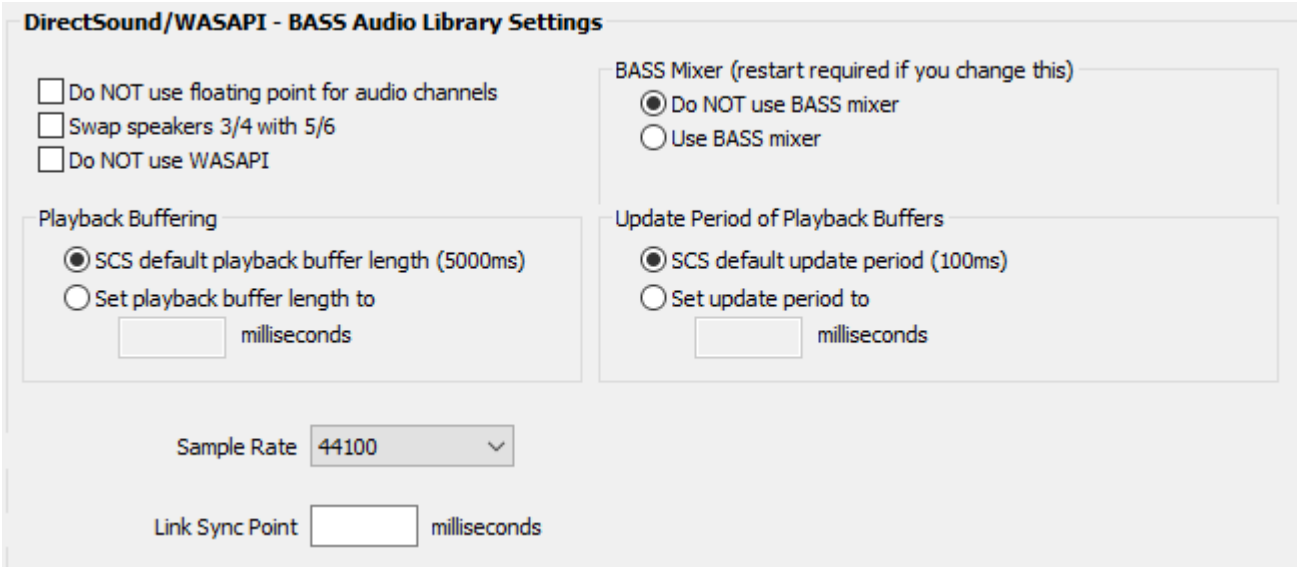
Back to Options and Settings

Options and Settings - Audio Driver - DirectSound/WASAPI

In SCS audio files are played via either BASS audio library (www.un4seen.com) or SoundMan-Server (www.richmondsounddesign.com). SoundMan-Server (SM-S) is only available if you have SCS Professional or higher, and note that SM-S must be purchased separately.

If WASAPI (Windows Audio Session API) is available on your computer, which it should be as from Windows Vista, then you can select WASAPI instead of DirectSound as the Audio Driver in Production Properties. Note that some audio devices fail if using WASAPI.

If using the BASS audio library you may use either DirectSound/WASAPI or ASIO. The options described below are the **BASS DirectSound/WASAPI** options and settings. Note that these settings apply to both DirectSound and WASAPI (although with WASAPI SCS always uses the BASS mixer).



BASS Audio Library Settings

Do NOT use floating point for audio channels: This may seem a bit of a mystery but you should only need to tick this checkbox if you find that speaker selection is not working. Typically this seems to occur on Sound Blaster and Audigy cards. The symptoms are varied - sometimes sound in front channels but nowhere else; sometimes very low levels. If you have any of these problems then tick this checkbox. If you don't have any such problems then leave this checkbox clear.*

Swap speakers 3/4 with 5/6: If you find your outputs 3/4 and 5/6 are the wrong way round then select this option. If you change this option you may need to close and restart SCS for this to take effect. Please note that this option is only used for 6- and 8-channel sound cards as these are the only configurations that have the problem.

Do NOT use WASAPI: Some audio drivers seem to take a long time (several seconds) to initialize WASAPI, which results in SCS taking perhaps up to a minute to start. If you have any such issues then it will be worth trying setting this checkbox. After applying this change, click OK and then close and restart SCS. However, note that if your audio interface supports more than two outputs (ie more than a single stereo send) then with some audio interfaces the DirectSound driver may only support two outputs and to use more than two you would need to use WASAPI or ASIO. (NB In extreme circumstances, SCS may freeze during initialization when try to interrogate the device's WASAPI driver. Because of this possibility, this option has also been made available on the 'special start' screen - see Problem Starting SCS for more info.)

BASS Mixer

The BASS Mixer is a BASS 'add-on' feature that provides some functionality not available when just using the core BASS product. The use of the BASS Mixer has been made optional with DirectSound as, unfortunately, there can be side effects.

The major drawback in using the BASS mixer is that it is necessary to use a much smaller playback buffer. If not using the BASS Mixer the default playback buffer size is 5000ms (5 seconds) to ensure that cues played smoothly even if the computer has been idle for a while. However, when using the BASS mixer, level and pan changes are applied pre-mixer as the BASS mixer may need to mix several channels, each with specific level and pan settings. This mixing is performed in the playback buffer, so using a playback buffer size of 5000ms can delay level and pan changes being heard by up to 5 seconds. To counter this issue, the default playback buffer size *when using the BASS Mixer* is just 300ms (0.3 second), which is a more acceptable 'delay'.

Unfortunately some users have reported glitches in audio playback when using the BASS mixer, and this is due to

using the short playback buffer. What happens is what is referred to as 'buffer underrun', where feeding data into the playback buffer has not been fast enough and the audio playback temporarily runs out of data to play. If you have issues with audio glitches then first of all try increasing the 'playback buffer length' and also the 'update period'. If this doesn't help then select the option to NOT use the BASS Mixer. This is virtually guaranteed to fix any audio glitches assuming there aren't external factors affecting playback.

Do NOT use BASS mixer: This is the default setting and you should choose this option unless you need the extra functionality provided by the internal mixer (see below), *or* if you experience glitches during audio playback when using the internal mixer. The *default* sizes for pre-buffering and playback buffering are set to 5000ms (5 seconds), and the *default* update period is set to 100ms. It is strongly recommended that you use the default settings for pre-buffering, playback buffering and update period.

The following feature is NOT available when you choose not to use the BASS mixer:

- Panning of a mono file when using speaker outputs that have more than two channels *and* you are using Windows XP. (This is not a limitation if you are using Windows Vista or later.)

Use BASS mixer: This provides the extra functionality listed above. The *default* sizes for pre-buffering and playback buffering are set to 300ms (0.3 second), and the *default* update period is set to 80ms.

Note that the **Loop Linked** property in Audio File Cues only loops correctly if the BASS mixer is used or you use ASIO instead of DirectSound/WASAPI. SCS automatically switches (if necessary) to using the BASS mixer if when loading a cue file it finds one or more cues using the **Loop Linked** property.

Changing the BASS Mixer option takes effect the next time you start SCS.

Playback Buffering

A Playback Buffer is used for each audio cue as it is being played and is used to buffer the data read from disk. The default playback buffer length is 5000 milliseconds (5 seconds) if you are not using the internal mixer, or to 300ms if you are. The maximum value accepted by the BASS audio library is 5000ms. If you are using the BASS mixer and increase the setting (above 300ms), this decreases the chance of the sound possibly breaking up, but increases the latency. For example, if you increase the playback buffer length to 3000ms (3 seconds) then it may take up to 3 seconds for a level change to be heard *if you ARE using the BASS mixer*.*

SCS default playback buffer length: This option sets the playback buffer length to 5000ms if you are not using the BASS mixer, or to 300ms if you are.

Set playback buffer length to ... milliseconds: This option enables you to specify your own value for the playback buffer length. The minimum length is the Update Period + 1ms and the maximum length is 5000ms.

Update Period of Playback Buffers

The Update Period is the amount of time between updates of the playback buffers. Each update cycle has a certain amount of overhead (besides the actual decoding), so lower update periods (ie more frequent updates) mean the overhead becomes a higher proportion of the processing. At the other end of the scale, you don't want an update period that's too high to keep the playback buffers fairly full (or cause CPU usage spikes). In general, it is recommended that you do not go below 10ms or above a third of the playback buffer length (the maximum accepted by BASS is 100ms).

SCS default update period: This option sets the update period to 100ms if you are not using the BASS mixer, or to 80ms if you are.

Set update period to ... milliseconds: This option enables you to specify your own value for the update period. This must be between 5 and 100ms.

Other

Sample Rate: The sample rate is only used by some sound card drivers - in fact, AFAIK only **RME** drivers use the field. With other WDM drivers the sample rate is automatically set depending on the format of the channels that are played and what the device supports. The sample rate is determined by the user's choice in the device's control panel. **RME** cards may require the sample rate to be set to 48000, but other common sample rates are also included in the drop-down list.

Link Sync Point: The syncing of linked cues and files can sometimes be a bit loose. It has been observed that on repositioning the primary cue, then syncing becomes much tighter. In the **Link Sync Point** field you can set the number of milliseconds after which SCS will *automatically* resync linked files. If you leave the field blank (or set it to 0), the resync will not occur. A suggested value for resyncing is 20 (milliseconds).

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* Changes to these Audio Driver options may not be effected on currently open audio files. You may need to re-open your cue file, or close and restart SCS, for your changes to take effect.

Credit

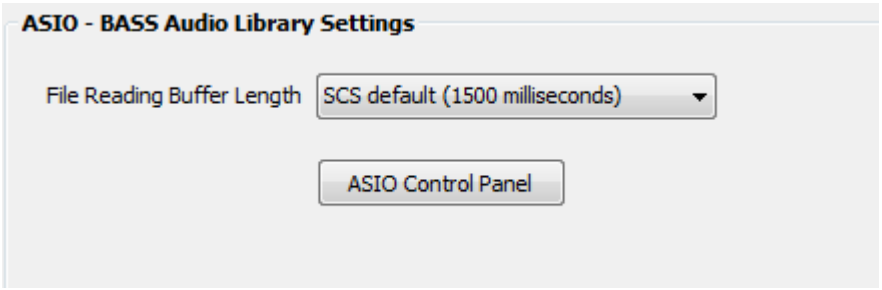
BASS Audio Library, copyright © un4seen developments (www.un4seen.com).

Back to Options and Settings

Options and Settings - Audio Driver - ASIO (Using BASS)

In SCS audio files are played via either BASS audio library (www.un4seen.com) or SoundMan-Server (www.richmondsounddesign.com). SoundMan-Server (SM-S) is only available if you have SCS Professional or higher, and note that SM-S must be purchased separately.

If using the BASS audio library you may use either DirectSound/WASAPI or ASIO. The options described below are the **BASS ASIO** options and settings.



BASS Audio Library Settings

File Reading Buffer Length: Audio file data needs to be read in advance of the ASIO playback process, and in this option you can set the size of the buffer required for reading the file. Normally there should be no need to change the default setting. But in the unlikely event that you do get audio glitches then try selecting a higher **File Reading Buffer Length**. A high buffer length may, however, cause a brief buzz on repositioning a cue, eg when clicking on the progress slider. However, so far this has only been noticed on files located on a wireless network drive (not recommended!) Initial testing has shown that the minimum **File Reading Buffer Length** setting of 500ms provides excellent results, but the default has been set to 1500ms to provide a better tolerance against possible conflicting disk activity by Windows background processes. SCS generally uses a higher buffer length for audio files located on an network drive, but for production performances we advise you to have all your files on a local drive. The recommended procedure that can assist with this is to collect your files into a Production Folder as explained under Collect Production Files.

ASIO Control Panel: Click this button to open the ASIO Control Panel for your ASIO driver. Note that the ASIO control panel is not a part of SCS. This button is disabled if SCS has not yet initialized the BASS ASIO library.

Changes to Audio Driver ASIO settings may not be effected on currently open audio files. You may need to re-open your cue file, or close and restart SCS, for your changes to take effect.

Troubleshooting

See ASIO Problems if you still have problems with glitches in playback.

Credit

BASS Audio Library, copyright © un4seen developments (www.un4seen.com).

Back to Options and Settings

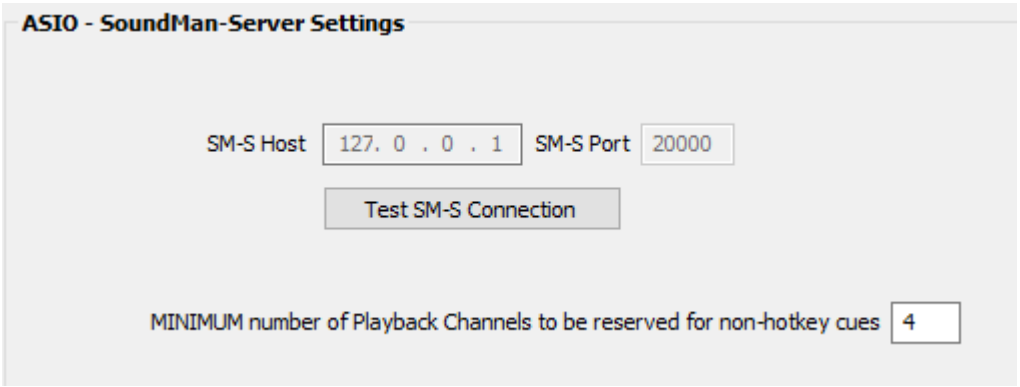
Options and Settings - Audio Driver - ASIO (Using SM-S)

The SM-S (SoundMan-Server) interface is only available with **SCS Professional** and higher licenses.

If you have not yet read the topic SoundMan-Server, please read that now.

In SCS audio files are played via either BASS audio library (www.un4seen.com) or SoundMan-Server (www.richmondsounddesign.com). SoundMan-Server (SM-S) is only available if you have SCS Professional or higher, and note that SM-S must be purchased separately but can be purchased as an 'optional extra' through our web site.

The options described below are the **SM-S** options and settings.



SoundMan-Server Settings

SM-S Host and **SM-S Port**: SCS communicates with SM-S via a TCP link, but SM-S must be run on the same machine as SCS. So these fields are display-only. The **SM-S Host** field will contain 127.0.0.1 because that is the TCP/IP address for 'local host' (ie 'this machine'). The **SM-S Port** field will contain 20000, as that is the port number SM-S listens to.

Test SM-S Connection: Click this button to check that SCS can connect to SM-S using the above settings. A message will be displayed to the right of this button advising you of the success or otherwise of this connection attempt. If the connection fails, check that SoundMan-Server has been started. If not, then start SM-S and when it has completed initialization, click the **Test** button again.

MINIMUM number of Playback Channels to be reserved for non-hotkey cues: Your SM-S license and dongle defines the maximum number of SM-S playback channels that may be used. If this number is fairly low and if you have many hotkey cues, then you may find your hotkey cues are taking up too many playback channels. This can mean that there are insufficient playback channels available for non-hotkey cues, which basically means you can't run your production! This field defines the minimum number of playback channels you want to reserve for non-hotkey cues, and the default is 4. Note that SM-S needs a playback channel for each track of a multi-channel audio file, so a stereo file requires 2 playback channels. Also, if you have a looping cue with a cross-faded loop then that will double the number of playback channels required for the cue as the file needs to be opened twice.

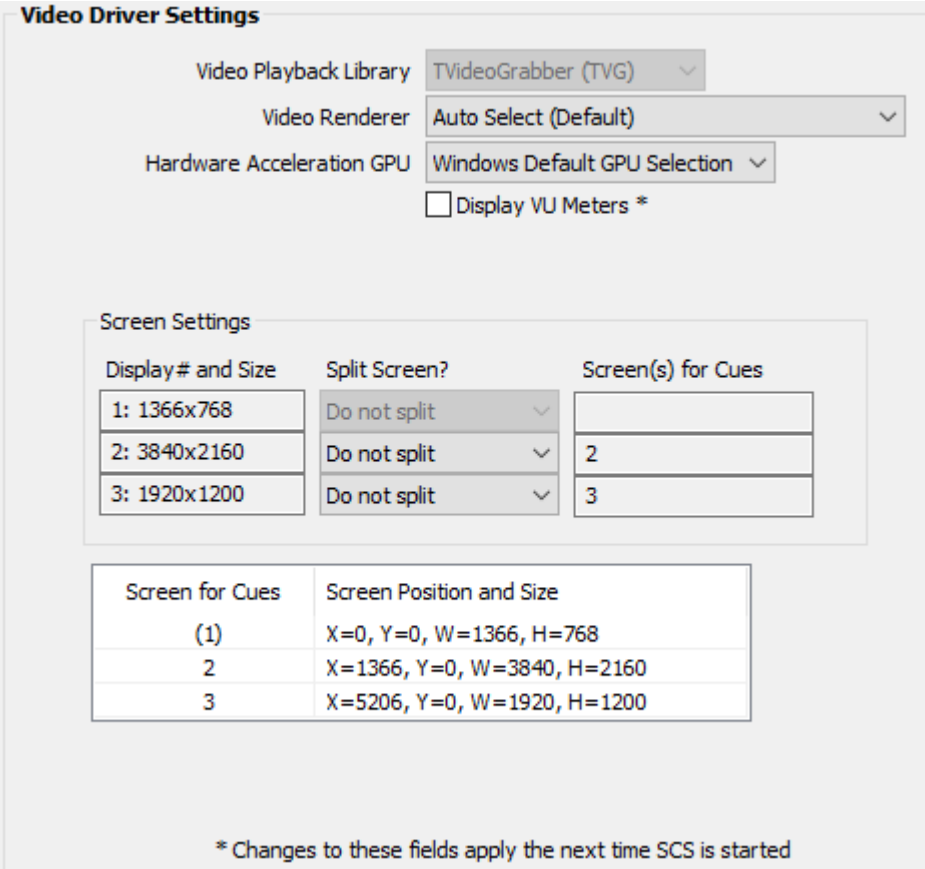
Important Note: If you have an SM-S license and dongle, then *please use the dongle!* Running SM-S without the dongle restricts you to demo mode which at the time of writing supports only 2 inputs, 2 outputs and 4 playbacks.

Credit

SoundMan-Server copyright © Richmond Sound Design Ltd (www.richmondsounddesign.com).

Back to Options and Settings

Options and Settings - Video Driver Settings



Video Playback Library: The only video playback library available is 'TVideoGrabber (TVG)'.

Video Renderer: Hopefully you will not need to change the default settings. However, if you find that your video image does not display, especially if it doesn't display on your secondary screen, then try changing the renderer "VMR7". Other Video Renderers are also available to try if you still have problems.

Hardware Acceleration GPU: Hardware acceleration using a GPU (Graphics Processing Unit) helps provide smooth playback of video files. You can leave this at **Windows Default GPU Selection** although you could try selecting a GPU from this list if you consider the video playback performance could be improved. The drop-down list shows the GPU's specifically supported by TVG. Unfortunately the list is not filtered according to the types of GPU installed. If you have a NVIDIA graphics card then you can select **NVIDIA CUDA**. If you are not sure what GPU (if any) you have, open Windows Task Manager and click the Performance tab. The GPU's will be listed there. When you are playing a video file from SCS, you can view the GPU usage in Task Manager - preferably under the Processes tab. If you click on the GPU column header to display this column in descending order, you will see the GPU usage when playing video files, and in particular you will be able to see if the selected GPU is being used. You may find that some video file types will not use the selected GPU, but they may still be processed by the GPU auto-selected by Desktop Window Manager.

Display VU Meters: You can select this checkbox to include VU meters for your video devices in the main window's VU Meters display. This checkbox is clear by default, meaning VU meters for video devices will *not* be displayed. The reason for this default setting is that the constant audio peak monitoring necessary to display the VU meters can adversely affect the audio playback quality of video files. No such issues have ever been reported with audio files - only with video files.

Split Screen Settings

If you have a multi-display interface unit that allows you to connect two or more displays to a single VGA or similar port on your computer, then you may find that the only way the driver will allow you to configure the displays is as a single stretched display. This is the case with Matrox GXM's (Graphics eXpansion Modules) such as the DualHead2Go, unless you also have a Matrox graphics card that supports 'independent mode'.

If you can only configure the connected displays as a stretched display then using settings in this panel you can configure SCS to treat them as independent displays for the purposes of Video/Image Cues.

Display # and Size: Under this heading will be listed the physical displays known to Windows. The **Display #** is the number shown by Windows if you click 'Identify' in the Windows' 'Screen Resolution' dialog or similar. The size is the width and height of the display as detected by Windows.

Split Screen?: This allows you to split a stretched display into independent displays. Options available are 'Do not

split', or to split into either 2 or 3 independent displays. Please note that SCS cannot determine if really you do have a stretched display spanning multiple devices, so there is limited scope for being smart in determining meaningful values to populate this drop-down list. The values displayed in the drop-down list in each row are determined by the Display Size shown in the preceding field. SCS will include the following entries:

- **Do not split**: This entry is always available.
- **2 x [width x height]**: This entry will be displayed, with the calculated width and height, provided the stretched display width is *exactly* divisible by 2 and if the calculated width is at least 800 pixels.
- **3 x [width x height]**: This entry will be displayed, with the calculated width and height, provided the stretched display width is *exactly* divisible by 3 and if the calculated width is at least 800 pixels.

Select the required value for **Split Screen**.

Screen(s) for Cues: This display-only field shows the 'Screen' number that you will need to use in a Video/Image Cue to display the video/image on this independent display. So in the above example, a Video/Image Cue that specifies Screen 2 will be shown in the left half of the stretched 3840x1200 display, and a Video/Image Cue that specifies Screen 3 will be shown in the right half of the stretched 3840x1200 display. Note that screen numbers start at 2 as Video/Image Cues use screen numbers that start at 2. This also applies to Memo Cues where the **Target Display** is set to a secondary screen.

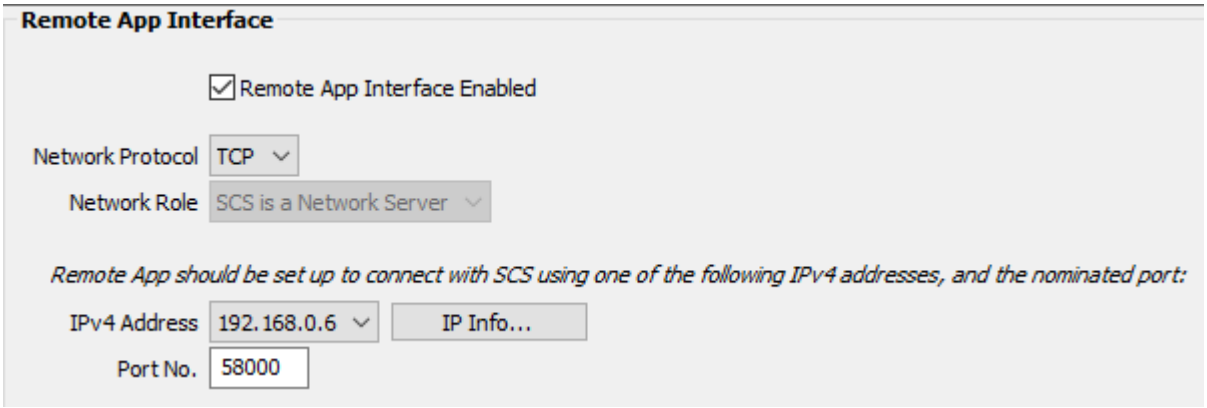
The panel below Split Screen Settings shows the physical position and size of each screen. This may be helpful information if images etc are not being displayed where you thought they should be displayed. The panel is not shown if there is only a primary screen.

Notes on how SCS saves 'Split Screen Settings'.

As with all Options and Settings, SCS saves your Split Screen Settings in a preferences file so the settings are remembered between sessions. If you've been testing your cues with a stretched secondary display and then the next time you start SCS you only have a single secondary display connected, note that SCS will *not* lose the split screen settings previously saved for the stretched display. So you will *not* have to reset these settings when going back to the stretched display configuration.

Back to Options and Settings

Options and Settings - Remote App Interface



Here at Show Cue Systems we have not provided a remote app but some SCS users have developed their own remote apps which are or will be available to other SCS users. Details of these apps will be available on the SCS web site. The purpose of the Remote App Interface option and setting is to provide a simple way for you to configure SCS and your remote app to communicate.

SCSremote

SCSremote is an application to remotely control SCS from an Android smart-phone or tablet. SCSremote can control basic SCS functions such as playing cues, navigating between cues, adjusting master level, and displaying? cue times and progress. It is available to download from Google Play.

SCSremote has been developed by Simone Guisti and any queries on this should be directed to simone@rockopera.it.

Remote App Interface Enabled: This checkbox allows you to easily turn on or off access from a remote app. For example, during rehearsals you may want to use your remote app to run cues whilst sitting in the middle of the auditorium, but during live performances you only want to control SCS from the sound booth, where your SCS computer is located. By disabling the RAI (Remote App Interface) for live performances, you can avoid any potential issues if someone gets hold of your smart phone or device that has the SCS remote app installed.

Network Protocol: For SCSremote this *must* be set to TCP (which is the default stting). However, some future remote app may support UDP, so this control enables you to select either TCP or UDP.

Network Role: This is a display-only field that shows that SCS is a Network Server for the Remote App. The Remote App itself should therefore be a Network Client.

IPv4 Address: Your Remote App must be configured to communicate with SCS using an IP Address and Port number that your computer and SCS recognize. The **IPv4 Address** drop-down list shows the IP addresses currently available on this computer. For a Remote App you will probably need set the App to communicate with SCS via the IP Address of your wireless router. If you are not sure which IP Address is the right one, click the **IP Info** button for more information.

*Note: The **IPv4 Address** list is for information only - SCS itself listens on* all available *IP addresses for a Remote App connection request.*

Port No.: This is the Port Number that SCS will accept messages from. The default is 58000. Your Remote App must be set to communicate with SCS using the Port Number specified here.

The remote app may require two connections. The primary connection will use the above **Port No.** and the secondary connection will use a port number one greater, eg 58001. The primary connection is for commands sent be the app to SCS and for the corresponding replies sent by SCS back to the app. The secondary connection is used for SCS-initiated messages to the app. The app should *not* send any messages to SCS via the secondary connection. If the app does not request the secondary connection then SCS bypasses sending SCS-initiated messages to the app.

Back to Options and Settings

Options and Settings - Functional Mode (Primary/Backup)

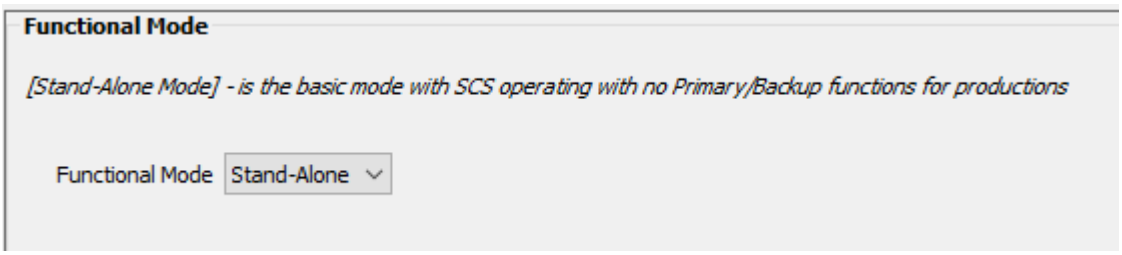
Functional Modes 'Primary' and 'Backup' are only available with **SCS Professional Plus** and higher licenses. This item is not displayed with lower license levels.

It is sometimes desirable to have a backup copy of your cues running on a separate computer, so that if your primary computer fails then you can switch to the backup computer with minimal interruption to your show. You can do this by using custom-built hardware, or you can use the **Functional Mode** settings in SCS, provided you have an SCS Professional Plus or higher license.

There are three **Functional Modes** available:

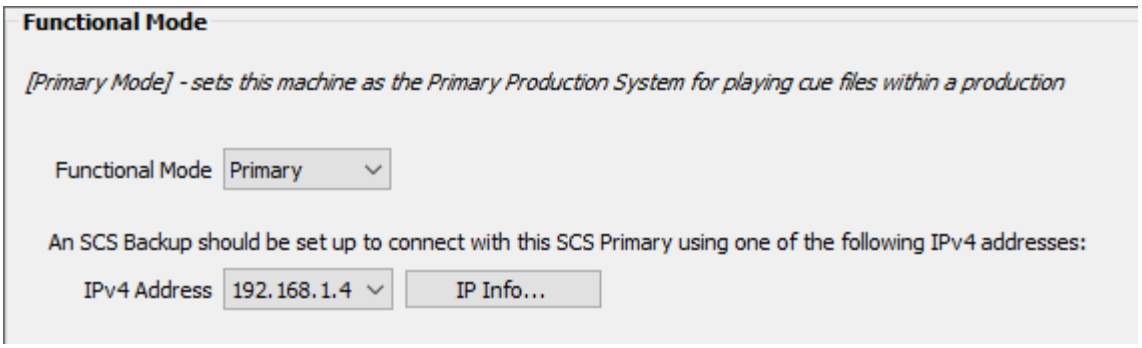
- **Stand-Alone**. This is the default mode, and you would use this mode if you are running a single instance of SCS. License levels below SCS Professional Plus *only* run Stand-Alone mode.
- **Primary**. Using Primary mode, SCS will be operated as normal, eg using the keyboard and mouse on the Primary computer, but it will also send selected commands to any Backup computers that have connected to the Primary computer.
- **Backup**. If SCS is set to Backup mode, then it will try to establish a network connection with the Primary computer. If that connection is successful, then the Primary computer will send selected commands to the Backup computer, and the Backup instance of SCS will act on those commands to keep the Backup in sync with the Primary. After starting SCS on the Backup computer and setting the Backup mode, the operator *should not* manually control SCS on this computer, unless necessary.

Here is the display for **Stand-Alone**:



No other settings are required.

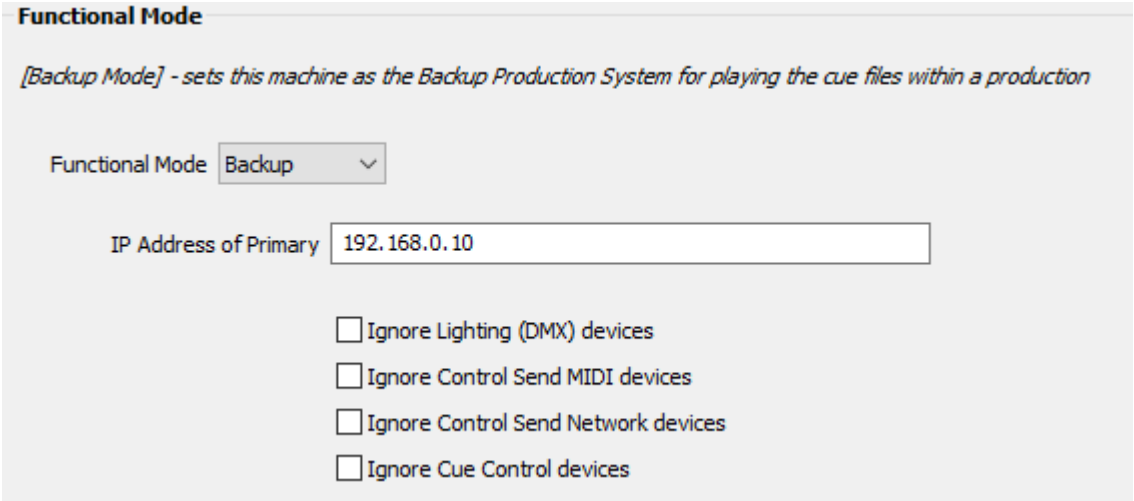
Here is the display for **Primary**:



IPv4 Address: The Backup computer must be configured to communicate with this SCS Primary using an IP Address that your computer and SCS recognize. The **IPv4 Address** drop-down list shows the IP addresses currently available on this computer.

*Note: The **IPv4 Address** list is for information only, to assist in configuring your Backup computer. An SCS Primary listens on* all available *IP addresses.*

Here is the display for **Backup**:



IP Address of Primary: Enter the IP address or server name of the computer that is the Primary.

Ignore Lighting (DMX) devices: Only select this option if necessary, which would be the case if any DMX sent by the Backup would be sent to the same DMX network as the Primary.

Ignore Control Send MIDI devices: Only select this option if necessary, which would be the case if any MIDI sent by the Backup would be sent to the same MIDI devices as the Primary.

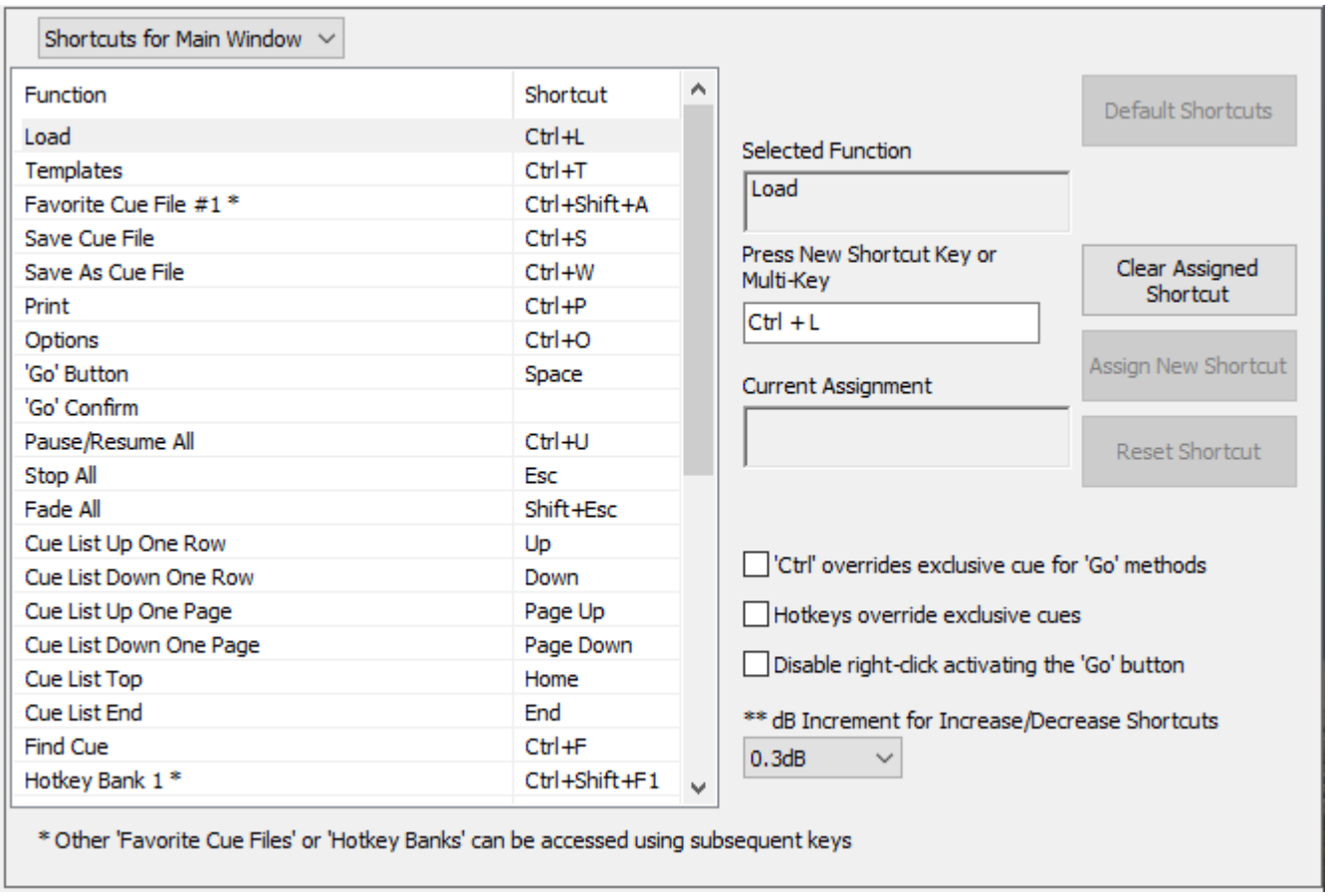
Ignore Control Send Network devices: Only select this option if necessary, which would be the case if any control send network messages sent by the Backup would be sent to the same network as the Primary.

Ignore Cue Control devices: Select this option if the Backup will be receiving the same connections as the Primary. As the Primary will be sending commands to the Backup, the Backup should ignore any incoming messages that control cues.

For more information, see Setting up a Backup Computer.

Back to Options and Settings

Options and Settings - Shortcuts



This feature enables you to set your own key mapping for various SCS functions. These are referred to as 'shortcuts'. Shortcuts are available separately for the **Main Window** and for the **Editor**. The combo box at the top of the panel is used to select **Shortcuts for Main Window** or **Shortcuts for Editor**. Although some shortcuts are common to both the Main Window and the Editor, the shortcuts are held separately so theoretically could be different. Many of the shortcuts follow normal Windows conventions or standards (eg Ctrl+C for Copy).

Having selected the required shortcut list (Main Window or Editor), you can view or change shortcuts as required. For example, to change the *Master Fader Up* key, click on *Master Fader Up* in the list. Then click on the **Press New Shortcut Key or Multi-Key** field and press the key you want to use for increasing the Master Fader.

The reference to **Multi-Key** means that you can use **Shift** or **Ctrl** keys (or both) with the key, such as Ctrl + U.

If the key you select is already assigned to some other SCS function in that shortcut list, then that assignment will be displayed in the **Current Assignment** field. You can, however, reassign that shortcut to the function you have selected. The new key assignment will not take effect unless you click the **Assign New Shortcut** button. If this shortcut is currently assigned to another function then a warning message is displayed asking you if you wish to reassign this shortcut to the new function.

The **Default Shortcuts** button reinstates the SCS defaults for the selected list (Main Window or Editor), and the **Clear Assigned Shortcut** button enables you to remove keyboard activation of a selected function. The **Reset Shortcut** is an easy way to undo a change made but not yet assigned.

'Ctrl' overrides exclusive cue for 'Go' methods: When an exclusive cue is playing, the 'Go' button is disabled if the next manual cue is an audio file or video/image cue. This is to prevent the accidental starting of the next cue. However, you may have situations in which you wish to override this behavior and force SCS to accept 'Go' for such a cue, even if an exclusive cue is currently playing. If this checkbox is selected (ticked) then if you hold down a control key (usually labeled 'Ctrl') while an exclusive cue is playing, then the 'Go' button will be enabled if there is a 'Next Manual Cue' ready. So actions like Ctrl/GoButton, Ctrl/Space, Ctrl/RightClick will start the next manual cue, even if an exclusive cue is currently playing.

Hotkeys override exclusive cues: As mentioned above, the Exclusive Cue property is useful to prevent the accidental starting of the next cue. However, pressing a hotkey is not likely to be 'accidental', so if you need the facility to play hotkeys when an exclusive cue is playing then select this checkbox.

Disable right-click activating the 'Go' button: If you have assigned a key mapping for the **'Go' Button** then you *may* wish to disable the use of the right mouse-click for activating cues. To do this, select the checkbox labeled

Disable right-click activating the 'Go' button. Another reason why you might want to disable the right-click is if you are using external cue control, such as MIDI or RS232.

dB Increment for Increase/Decrease Shortcuts: This defines the dB change that occurs when you use the shortcuts *Increase/Decrease Levels of Playing Cues* in the Main Window list, and *Increase/Decrease Levels of All Devices for this Sub-Cue* in the Editor list.

Notes:

Increase/Decrease Levels of Playing Cues: For Playlist cues, these shortcuts adjust the *relative level* of the current track, so the adjustment is capped at relative level 100%.

Increase/Decrease Level of Last Playing Cue: These shortcuts adjust the level of the cue Audio File, Video File or Playlist cue that was started. If that cue is no longer playing then the command is ignored, regardless of any prior audio cues that are still playing.

Rewind, **Play/Pause** and **Stop**: These Editor shortcuts can be used with Audio File Cues, Playlist Cues, Video/Image Cues, and Level Change Cues.

The Editor shortcuts **Cut Cue**, **Copy Cue** and **Paste Cue** have been assigned defaults Ctrl+1,Ctrl+2 and Ctrl+3. We recommend you do NOT assign Ctrl+X, Ctrl+C and Ctrl+V to these or any other functions as Ctrl+X, Ctrl+C and Ctrl+V can be used to cut, copy and paste individual field values, such as fade times.

Skip Back 2 Seconds and **Skip Forward 2 Seconds** are Editor shortcuts that can be used with Audio File Cues, Video Cues, and Playlist Cues.

Using a Wireless Presenter / Clicker with SCS

Wireless presenters / clickers typically send keyboard commands such as 'up' and 'down'. Setting SCS shortcuts for one of these units is easy. With 'Shortcuts for Main Window' selected, just select a **Function** such as 'Go' Button and then press the button on the clicker that you wish to use to activate that function. The keyboard command received by SCS will be displayed in the **New Shortcut Key** field, so now all you need to do is click **Assign New Shortcut**. As mentioned earlier, if that new shortcut is currently assigned to another function, then SCS gives you the option to reassign this shortcut to the new function.

Repeat the above for each clicker button.

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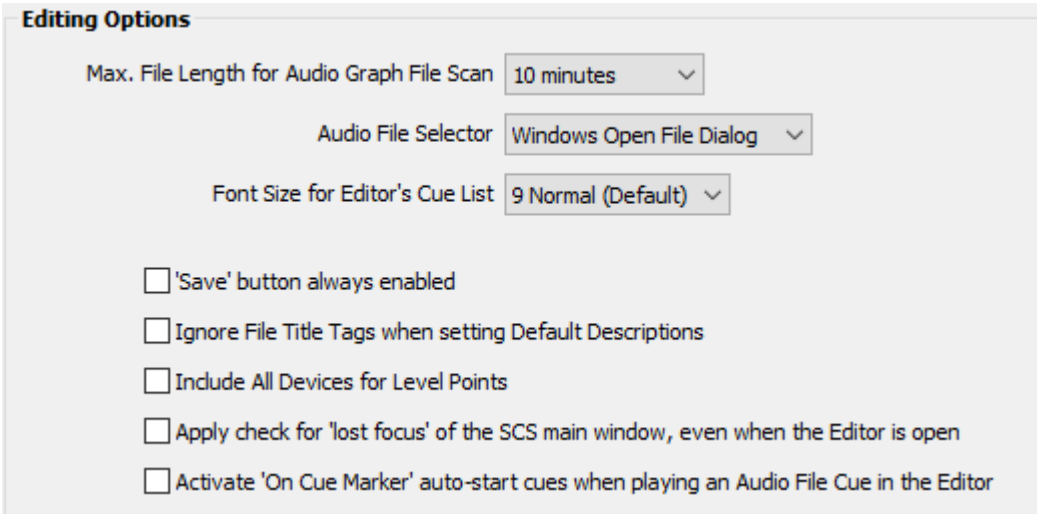
Options and Settings - Editing Options



Max. File Length for Audio Graph File Scan: When an Audio File cue or sub-cue is displayed in the Editor, SCS normally builds an Audio File Graph so you easily see the overall wave form. However, if you have long files (eg 30 minutes duration or more) then building the audio file graph can demand substantial resources, both in time and in memory. If the large file is just required for some background music or ambiance then it is likely that you do not really need to see the audio graph, so it would be beneficial to skip the generation of the audio graph, this saving time and memory. This Editing Option enables you to set the maximum length for building the graph. The default is 10 minutes, meaning any audio file with a length of more than 10 minutes will not have an audio graph generated.

Note: this value also controls the building of audio graph displays for cue panels in the main window.

Audio File Selector: This determines the style of Open File Dialog displayed for selecting an audio file for an Audio File Cue or a Playlist Cue. The *SCS Open Audio File Dialog* provides the ability to preview (listen to) an audio file without having to select it into the cue, but the *Windows Open File Dialog* is faster and also includes the 'quick access' list, so is the default audio file selector. But if you do want to be able to preview the audio files before selecting them into your production then change this to *SCS Open Audio File Dialog*.

Font Size for Editor's Cue List: This enables to enlarge the font size of the Editor's Cue List - see Editor Sidebar and Cue List.

'Save' button always enabled: It appears that occasionally the 'Save' button is not enabled even though you have made a change in the Editor. The cause of this is still under investigation, but as a work-around you can use this option to enable the 'Save' button and leave it permanently enabled. This means you can save your cue file at any time. If SCS *has* detected a change since the last save, an asterisk (*) will be displayed at the end of the Window title in the Main and Editor windows.

Ignore File Title Tags when setting Default Descriptions: When you add an Audio File sub-cue then SCS examines the selected audio file to see if it has a 'Title' tag. Tags are commonly used in MP3 files. If a Title tag exists then by default SCS will use this as the sub-cue description, which is also propagated to the cue description. If no Title tag is found then SCS uses the file name (excluding the path and the extension) as the sub-cue description. This Editing Option enables you to force SCS to *always* use the file name and to ignore the Title tag when setting the default description. Note that changing this option only affects new sub-cues or sub-cues where you change the selected file - existing sub-cues will not be altered.

Include All Devices for Level Points: When adding a Standard Level Point in an Audio File sub-cue, then if this option is selected then all devices currently assigned to that Audio File sub-cue will be marked as included for that new Level Point. This option does not change the 'Include' settings of existing Level Points - it is only used when adding a new Level Point.

Apply check for 'lost focus' of the SCS main window, even when the Editor is open: SCS regularly checks that the main window has focus, because any keyboard actions (eg pressing the space bar or Esc) are sent to whatever program and window currently has focus. This check is normally suppressed if the SCS Editor window has focus, which is what you would want when designing your cues and building your show. It is not expected (and not recommended) that you have the Editor open during live productions or dress rehearsals, but some users will have the Editor open in these situations due to limited time available in the design stage. By setting this checkbox, you can force SCS to give you that warning when appropriate.

Activate 'On Cue Marker' auto-start cues when playing an Audio File Cue in the Editor: This relates to Audio File Cues where cue markers or cue points exist - see SCS Cue Markers - and where other cues are set to be activated 'On Cue Marker' for a cue marker or cue point in that cue. When testing this Audio File Cue in the Editor then the audio file is normally played in isolation, so any related 'on cue marker' cues are not activated. However, you

may wish to have these related 'on cue marker' cues activated so you can confirm or adjust the position of a cue marker. This Editing Option allows you to turn on this feature.

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Options and Settings - Session Options

Session options are for the current SCS session only - they are not saved between sessions. Also, the options are reset if you open another cue file.

The purpose of these session options is to enable you to temporarily ignore certain **Control Send** device types and/or certain **Cue Control** device types. For example, you may have set up your cues to send MIDI commands to a lighting desk, but during a rehearsal you want to run the lighting manually. You could, of course, just unplug the MIDI cable, but that may not always be acceptable. So by going to these Session Options you can just choose to Disable MIDI Send.

In the above screenshot you can see that **DMXSend** is Enabled, and **MIDI Control** is Enabled. All the other devices are "Not required for this production". SCS sets or resets the Session Options whenever a cue file is opened or created. Any **Control Send** or **Cue Control** device types found in the current cue file's Production Properties will be set to Enabled. Any device types *not* found in the current cue file's Production Properties will be marked "Not required for this production", and as the devices do not exist then you cannot change the Enabled status.

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SoundMan-Server (SM-S)

The SoundMan-Server (SM-S) interface is only available with **SCS Professional** and higher licenses.

SoundMan-Server is a "virtual sound system audio engine" from Richmond Sound Design Ltd (www.richmondsounddesign.com). Throughout this document SoundMan-Server is referred to as SM-S. The interface between SCS and SM-S has been developed with the full cooperation of Richmond Sound Design, with special thanks to Charlie Richmond and Loren Wilton. Testing of the interface has been carried out by ourselves and Carl Underwood, who also provided many implementation suggestions. Carl has been an SM-S user for some years, and approached Show Cue Systems with the recommendation that we provide this interface to SM-S.

This section of the Help file explains how to set up SCS to interface to SM-S. You need an SCS Professional or higher license. The SCS Platinum license level is the highest level and will support as many outputs as your SM-S dongle permits, which may be up to 512.

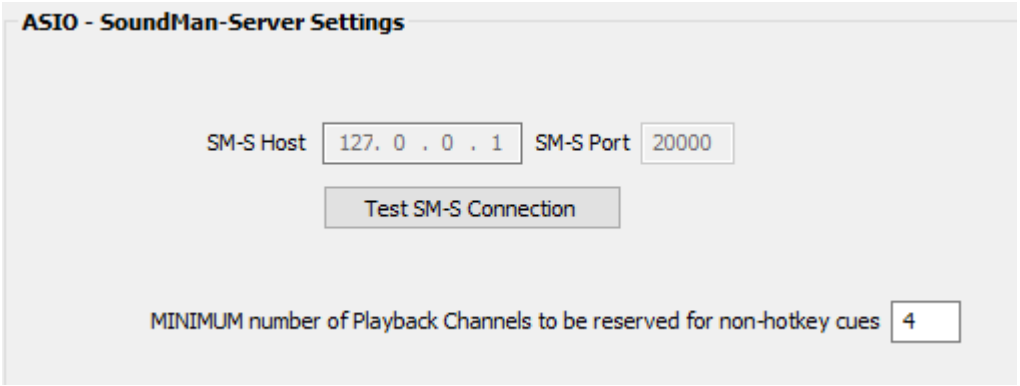
Getting Started With SoundMan-Server

SM-S must be run on the same machine as SCS. SM-S is designed to potentially run on a different machine to the host program (such as SCS), but since SCS passes full path names of audio files to SM-S it would mean that these full path names must be identical for SM-S and SCS. The easiest solution is to have both products running on the same machine, so SCS imposes that restriction.

The steps to follow are:

1. **Start SM-S**, remembering to insert the dongle (unless you're using the demo version of SM-S).
2. **Start SCS**.
3. In SCS, go to *Options* and click on *"ASIO (using SM-S)"*.

A panel like this will be displayed:



1. Click the **Test SM-S Connection** button to confirm that SCS can connect with SM-S.
2. If the connection test is successful, click the **OK** button to close *Options*.
3. Now go to the Editor, open the Production Properties, select the *Devices* tab, and select **Audio Driver** *"ASIO (using SM-S)"*. Now select Physical Devices and outputs as required - although you should select the same Physical Device for all SCS Audio Outputs devices unless your SM-S license and dongle permits you to use multiple physical devices.

SM-S Interface Implementation

The above should get you started but there are some options you can change if required. See Options and Settings - Audio Driver - ASIO (SM-S).

Note: SM-S will only play WAV and AIFF files - SM-S does not play file types like MP3 or WMA. SCS, however, does support all of these file types, so to enable an MP3 file (for example) to be 'played' by SM-S, SCS encodes a WAV file from the MP3 file and presents the WAV file to SM-S. This happens behind the scenes so does not require any action on your behalf, and the cue details displayed on your screen will still show the MP3 file. Encoded WAV files are held in an **Encoded Files Folder** which is created by SCS immediately below the **SM-S Audio Files Root Folder**. See Encoded Files Folder for more information.

Encoded Files Folder

SM-S will only play WAV or AIFF files but you may have other file types you want to use, such as MP3 and WMA. SCS attempts to seamlessly support several file types not supported natively by SM-S. It does this by encoding a WAV file equivalent of a requested MP3/etc file, and storing that encoded WAV file in the **Encoded Files Folder**. So if you want to use *Lilacs.wma* then SCS will create *Lilacs.wav* and store *Lilacs.wav* in the **Encoded Files Folder**. SCS then sends a command to SM-S to open *Lilacs.wav*.

The encoding process is very fast so should not be noticeable except for large files. Encoding only has to be done once per file unless you make a change to the original file.

The **Encoded Files Folder** is named **"EncFiles"** and will be created if necessary under the SCS Application Data Folder (see Special Folders).

In addition to the encoded files themselves, SCS keeps an index of the files. This file is named **"scs_encfilesindex.scse"** and is stored in the **Encoded Files Folder**. SCS keeps the following information for each file it encodes:

- Full path name of the original file
- Size of the original file, and date last modified
- Name of the encoded file

Using this information, when a cue requests something like *Lilacs.wma*, SCS scans the index to see if this file has already been encoded. If it finds an entry for this file, and the size and date last modified also match, then SCS will use the already-encoded file. If not, then a new encoded file will be created and the index updated.

If you use an audio file editor such as GoldWave to edit an MP3 (etc) file that's already been encoded, then the next time SCS is asked to use that MP3 file then it will find the *date last modified* has changed, and probably the *size* as well. So SCS will re-encode the file. Currently, this will not replace the existing encoded file but SCS creates a new file and a new index entry. By the way, if you do want to edit an MP3 (etc) file, then it would be more efficient for SCS if you save the edited file as a WAV file, and change your cue(s) to use this new WAV file.

10. Miscellaneous

Starting SCS

Overview

We recommend setting up a **shortcut** on your Windows desktop for starting SCS.

Command Line Parameters

If you start SCS from the command line, batch file, or even a desktop shortcut, then you may add the name of the cue file as a parameter (or 'argument'), eg:

```
"C:\Program Files\SCS 11\scs11.exe" "C:\Users\Mike\Documents\SCS Files\Show_Monday.scs11"
```

When scs11.exe is started using the above command line, then the Show_Monday.scs11 cue file will be opened.

Note that where file names or file paths contain spaces then the complete file name must be enclosed in quotes.

Windows Task Scheduler

If SCS is to be run unattended then another possibility is to get the Windows Task Scheduler to start SCS at a set time each day, and possibly with a different cue file each day. Refer to the Microsoft Help on Task Scheduler.

That's OK for starting SCS, but you would also need to be able to kill any current instance of SCS. You can do this with Task Scheduler as well (provided you schedule this prior to the task that starts scs11.exe). Set up a task to run "**taskkill /im scs11.exe**". Unfortunately this is not a clean shutdown - it would be nicer to let SCS close down properly, but taskkill should do the job OK.

Problem Starting SCS?

Occasionally you may find you cannot get SCS started due to some issue with your machine or due to something that happened in your last run of SCS. If you cannot successfully start SCS, then follow the instructions given in the Troubleshooting section Problem Starting SCS.

Time Fields

Times in SCS are generally held in milliseconds. There are a couple of exceptions to this: 'time of day' fields and 'cue points'. 'Time of day' fields are held internally as seconds since midnight. 'Cue points' are held to 5 decimal places of seconds.

For time fields such as 'start at', 'end at', 'fade-in time', and so on, you can drag a marker on a graph (if available) to set the time, or you can enter the time manually in the provided text box. When entering a time manually, the following examples illustrate ways in which you can enter a time:

Time Entered	Meaning
25	25 seconds
1.41	1.410 seconds
.8	0.8 seconds (800 milliseconds)
2:1.7 *or* 2.1.7	2 minutes, 1.7 seconds
12:34.567 *or* 12.34.567	12 minutes, 34.567 seconds
100	100 seconds (1 minute, 40 seconds) - will be redisplayed as 1:40.000

Note that "." may be entered instead of ":" as a separator between minutes and seconds to enable times to be entered using just the numeric pad.

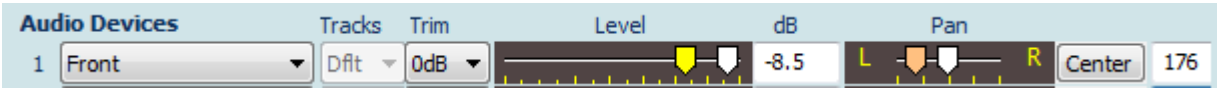
Regardless of the format you use when entering a time, SCS reformats the time to a standard format and may redisplay the reformatted time.

Using SCS Sliders

Many of the sliders in SCS have facilities to make special adjustments.

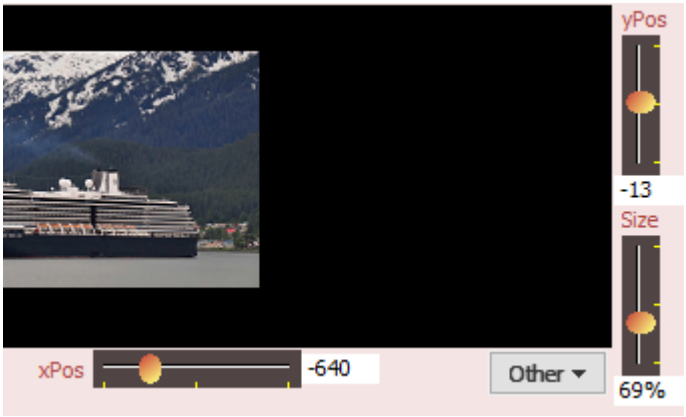
Resetting Sliders to Saved or Default Positions

Consider the **Level** and **Pan** sliders shown here:



Both of these sliders show a white pointer which represents the currently saved level or pan setting. Taking the **Level** as an example, sometimes you will experiment with the audio level and then decide you want to revert to the saved level. There are two ways you can revert to the saved level (three if you include 'Undo'). The easiest way is to *click anywhere inside the white pointer.* This will cause the level slider to snap back to the saved position. A second way is to *hold a Ctrl key down* while you click anywhere within the slider.

Now consider the **Size** and **Position** sliders shown here:



These sliders do not show a white marker, but if you want to reset an individual slider (eg the xPos slider) to it's default position then you can *Ctrl/Click* anywhere in the slider and the slider will snap back to the center position (which is the default position for all the sliders shown in this example).

Making fine adjustments

If you want to make fine adjustments to any slider, left-click the slider and then use the left-arrow and right-arrow keys as required. When you left-click the slider the background color of the slider will change to your Windows color scheme's "selected item" color (probably blue as shown above). This indicates that the slider has focus so keyboard actions like left-arrow and right-arrow are processed by that slider.

Using the mouse wheel

You can also adjust any SCS slider with the mouse wheel, provided the slider currently has focus.

Sound File Recommendations for SCS

It is recommended that you use 16-bit (or higher) PCM Wave files (mono, stereo or multi-channel as required) for sound effects or music tracks for use during the show. This is because no compression of the audio has been performed which means (a) good playback quality, and (b) no decompression on the fly is required while the file is being played, meaning less processor power required and used.

Other file types are fine for pre-show and intermission music. This is not to say you shouldn't use MP3 files, etc for sound or music cues, but personally I always use uncompressed WAV files to ensure the best result. FLAC files should also provide good quality as the format is 'lossless'.

Preparing Sound Files

To record and/or edit sound files, use a sound file editor such as *GoldWave*. A few tips:

Collect your files into a Production Folder for your show. In that folder you can store the Cue File (the .scs11 file) and all the sound files required for the show. You can do this easily in SCS in the Editor - see Collect Production Files.
Using sound editing software, **delete silence or unwanted sound at the beginning and end of each sound file**. By viewing the wave form and zooming in to the start, you should find it easy to delete everything right up to the instant the required sound starts.
Check the entire wave form for clipping. If you have recorded a sound file yourself and the wave form tries to exceed the level limits, you will typically see the wave form butted up against the upper and lower limits, and this implies that your recording has been clipped. Re-record your sound file at a lower recording level to ensure a clean unclipped recording. If you obtained a sound file from some other source you should still check for clipping. Many sound effects files available on the Internet contain clipping. Discard such files and find better ones.
If your software provides the facility, you may find it beneficial to **maximize the level** (*GoldWave* provides this facility under Effects / Volume / Maximize). Maximizing the level will not *cause* clipping, but if the sound file was recorded at a very low level you will not get a good quality sound, even with maximizing. Generally speaking, maximizing the level of the sound file provides you with the most flexibility as you do not have to pump up the level on the sound desk just to make a low-level sound file sufficiently loud.
You can **set and leave the faders on the sound desk at a constant setting** (eg 'unity' or '0') and set the required cue levels using the cue's 'Level' setting. However, keep a hand on the faders to provide a correct, live balance between actors' dialog and sound cues.
Where you have a cue that **auto-starts** then the level of the cue should be determined and set in relation to the cue currently playing.
When you are preparing sound cues, remember that what may sound wonderful thru your PC speakers may be less than satisfactory when heard thru the sound system at your theatre. (Sometimes the opposite is the case. A thunder sound effect can rumble around the theatre yet sound almost crackly on typical PC speakers.) **Try out the sounds at the theatre as soon as possible**, and also look at getting some good speakers to connect to your home PC if that is where you are preparing your cues.

File Formats for Gapless Playback

If you rip your files from a CD then ***we strongly recommend you select the WAV format*** for saving your files. WMA encoding appears to add some padding to the end of the file, which prevents gapless playback. MP3 files may also have padding at the end, and possibly also at the start.

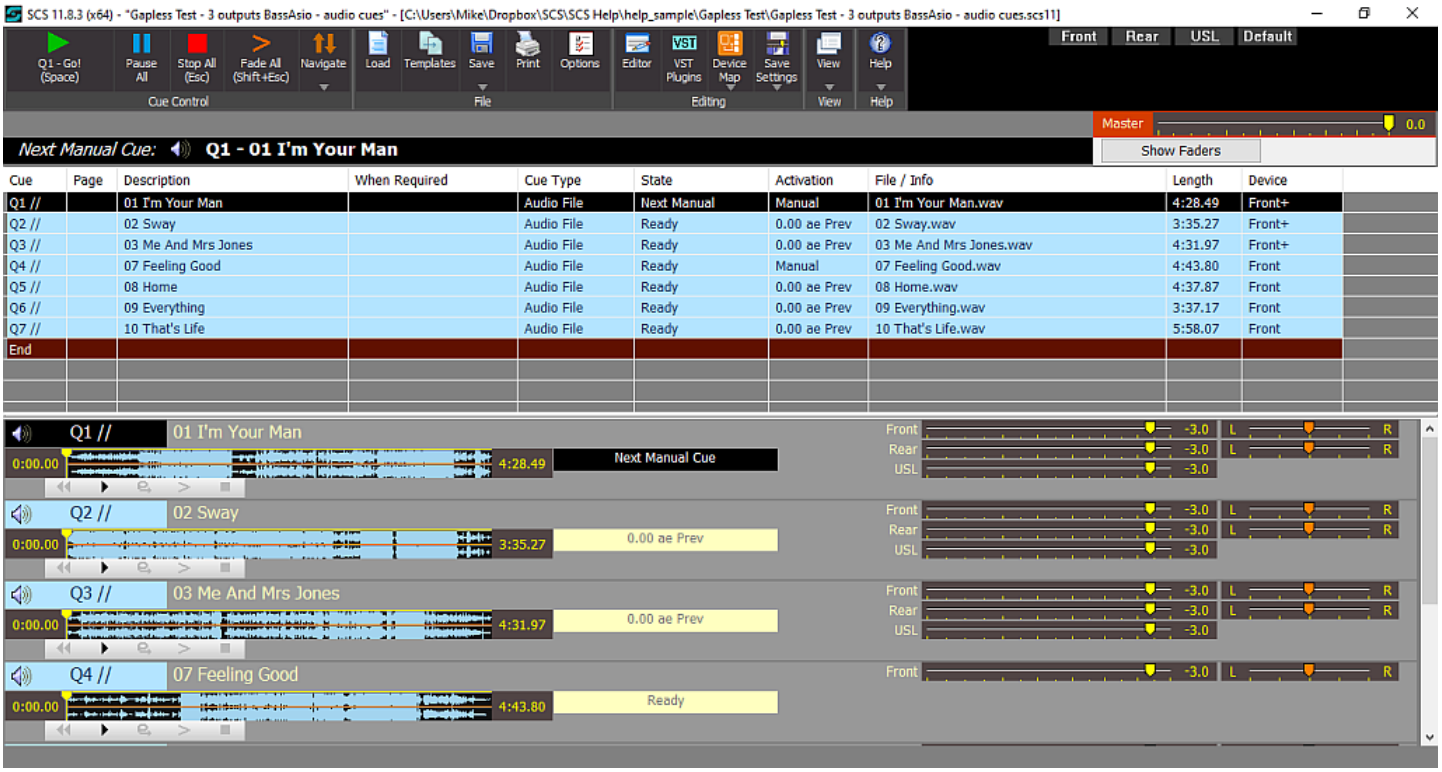
For more information see Gapless Playback.

Gapless Playback

The *Gapless Playback* functionality is only available with **SCS Standard** and higher license levels.

Some CD's are recorded with gapless boundaries between tracks - particularly classical music CD's and live recordings containing audience noise. If you rip audio files from such a CD and want to play cues of consecutive tracks without gaps between the cues then the following information files will help you achieve this.

SCS supports gapless playback for Audio File Cues and for Playlist Cues. SCS internally creates 'gapless streams' for cues or playlists deemed eligible for gapless playback. Any cue that meets the gapless criteria will be displayed with // after the cue label, which enables you to confirm that cues you want played gapless will be processed by a gapless stream. Here's an example:



In this example we have three cues, Q1-Q3, playing 3 consecutive tracks ripped from the CD *Michael Bublé Meets Madison Square Garden* (check copyright conditions before using commercial recordings). The // after each cue label indicates that the cue uses a gapless stream. If the // is *not displayed*, then the cues will still play as specified, eg Q2 will start immediately after the end of Q1, but the transition between Q1 and Q2 may not be gapless.

To use the gapless playback feature:

- Your SCS License must be **SCS Standard** or higher, and
- The SCS Audio Driver must be *DirectSound/WASAPI (using BASS)* or *ASIO (using BASS)*. See Production Properties - Audio Output Devices for more info. If your Audio Driver is *Direct Sound (using BASS)* then in your Direct Sound Options and Settings you must have ***Use BASS mixer*** selected.

For **Audio File Cues** to be deemed eligible for gapless playback, the following additional conditions must be met:

- **Simple explanation:** The Audio File cues must be set up so that each audio file is played in full without fades or loops, played to the same device(s), and set to play sequentially without gaps between the cues (eg Q2 and Q3 in the above example are set to auto-start 0.00 seconds after the end of the 'previous cue').
- **Detailed explanation:**
  - For the second and subsequent cues in the required gapless sequence (eg Q2 and Q3 in the above example) the cue must be set to auto start 0.00 seconds after the end of an earlier Audio File cue (or an earlier cue that contains one Audio File sub-cue but which may contain other sub-cue types), and the 'Relative Start' fields of the sub-cue must be blank, which is the default setting.
  - The 'Start At', 'End At', 'Fade In' and 'Fade Out' times for the Audio File cues must all be blank, ie each track is expected to be played in full without any fades.
  - The 'Loop' checkbox must be clear.
  - The 'Audio Devices' must be identical. For example, in the above screenshot you can see that all three cues use Front, Rear and USL. If USL had been omitted from Q3 then Q3 would have been left out of the gapless sequence. This condition is necessary because it is the 'gapless stream' that is split across the

designated output devices, so all cues feeding into a gapless stream must have the same designated output devices. (NB SCS does not check that the output levels and pan settings are identical, but in practice you would want them the same or you would hear the level/pan change.)

For **Playlist Cues** to be deemed eligible for gapless playback, the following additional conditions must be met:

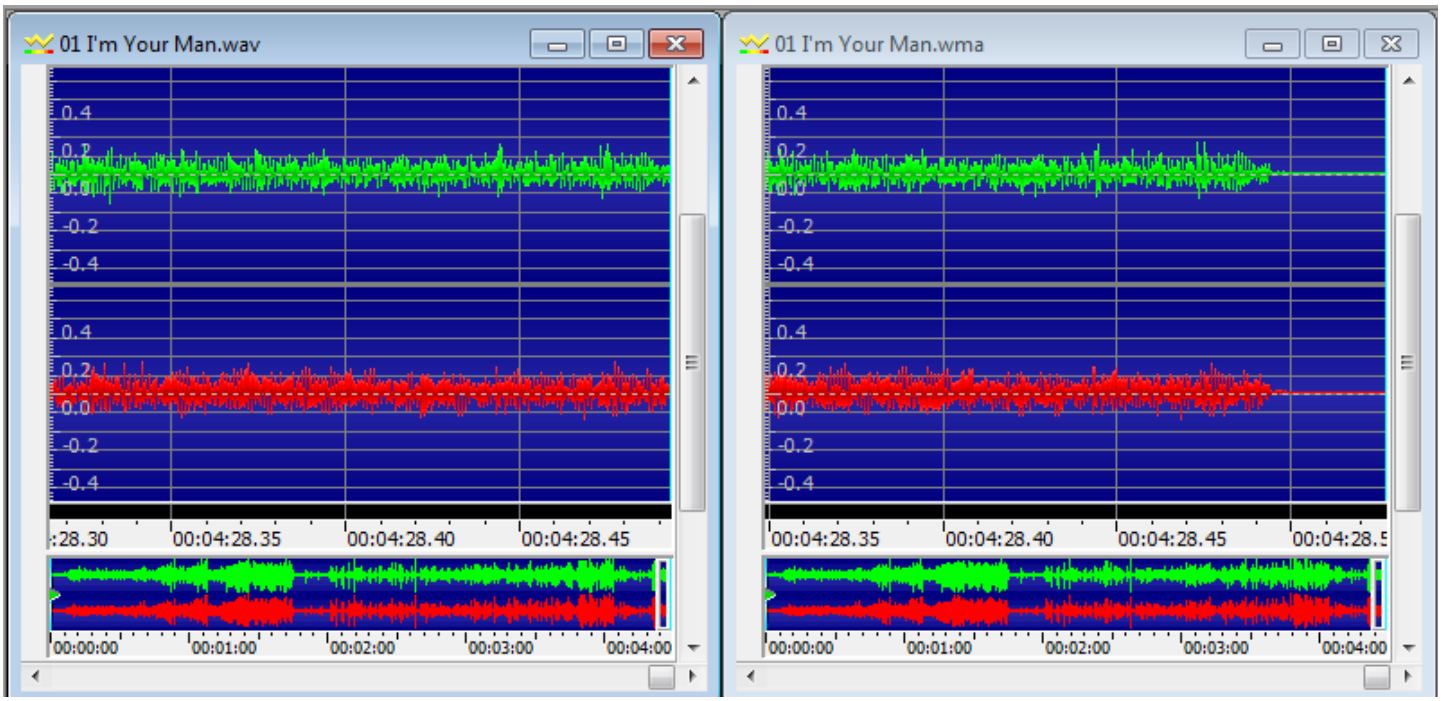
- The 'Start At' and 'End At' times must all be blank, and the 'Transition to Next File' must be 'None' for all files in the Playlist, ie each track is expected to be played in full without any cross-fades etc between tracks.
- 'Random Play' must be blank.

Note: With Audio File Cues such as in the above example, the gapless playback settings will not stop you from navigating to a cue by clicking on the cue in the cue list. So for rehearsals you can, for example, click on Q2 and play that cue (followed by Q3 etc), while still retaining the gapless playback of the whole sequence for production runs.

File Formats for Gapless Playback

If you rip your files from a CD then ***we strongly recommend you select the WAV format*** for saving your files. WMA encoding appears to add some padding to the end of the file, which prevents gapless playback. MP3 files may also have padding at the end, and possibly also at the start.

Here's a GoldWave screenshot showing the difference between a WAV file and a WMA file:

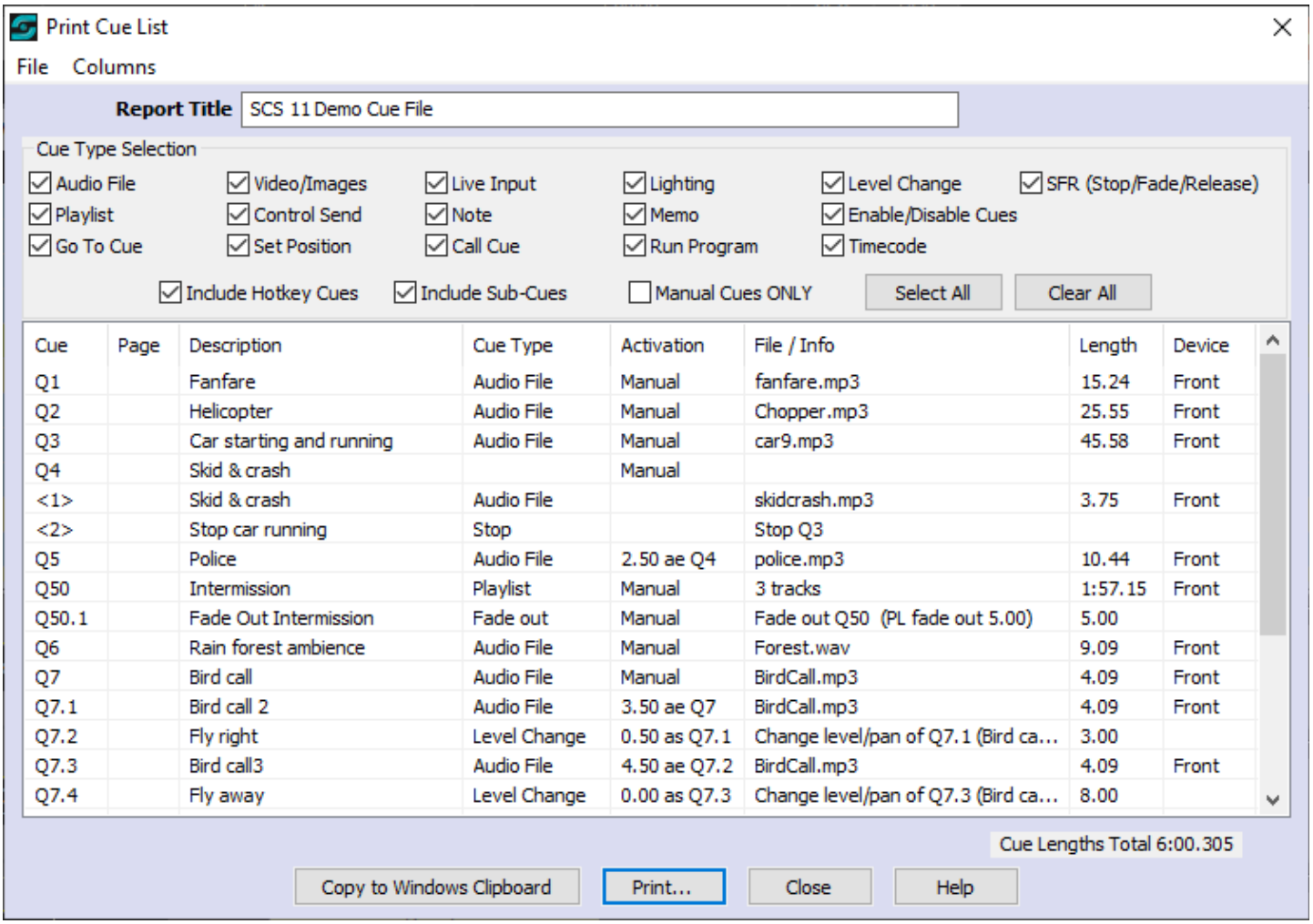


This left window shows the end of "01 I'm Your Man.wav", containing audio right up to the very end. The right window shows the end of "01 I'm Your Man.wma". The WMA file is about 33 milliseconds longer than the WAV file, and those final 33 milliseconds are silent. Both files were ripped from the CD using Windows Media Player. So if we had selected the WMA files for this example we would NOT hear gapless playback because of the 33 milliseconds of silence in the file itself.

So please use the WAV format when ripping files from CD's.

Printing the Cue List

You can produce a hard copy list of cues via the **Print** button in the toolbar. This opens a window which displays cue and sub-cue information. You can also copy the information to the Windows clipboard for pasting into Excel or other programs. The **Print Cue List** window looks like this:



Cue	Page	Description	Cue Type	Activation	File / Info	Length	Device
Q1		Fanfare	Audio File	Manual	fanfare.mp3	15.24	Front
Q2		Helicopter	Audio File	Manual	Chopper.mp3	25.55	Front
Q3		Car starting and running	Audio File	Manual	car9.mp3	45.58	Front
Q4		Skid & crash		Manual			
<1>		Skid & crash	Audio File		skidcrash.mp3	3.75	Front
<2>		Stop car running	Stop		Stop Q3		
Q5		Police	Audio File	2.50 ae Q4	police.mp3	10.44	Front
Q50		Intermission	Playlist	Manual	3 tracks	1:57.15	Front
Q50.1		Fade Out Intermission	Fade out	Manual	Fade out Q50 (PL fade out 5.00)	5.00	
Q6		Rain forest ambience	Audio File	Manual	Forest.wav	9.09	Front
Q7		Bird call	Audio File	Manual	BirdCall.mp3	4.09	Front
Q7.1		Bird call 2	Audio File	3.50 ae Q7	BirdCall.mp3	4.09	Front
Q7.2		Fly right	Level Change	0.50 as Q7.1	Change level/pan of Q7.1 (Bird ca...	3.00	
Q7.3		Bird call3	Audio File	4.50 ae Q7.2	BirdCall.mp3	4.09	Front
Q7.4		Fly away	Level Change	0.00 as Q7.3	Change level/pan of Q7.3 (Bird ca...	8.00	

Report Title: This will be printed at the top of the Cue List. It is initialized to the name of your production. You can change the title as required - this only affects what is printed on the Cue List.

Cue Type Selection: The checkboxes in this panel determine which cue types are to be included in the printed Cue List. The 'Manual Cues Only' feature can be useful if the printed cue list is to help you run the cues for the show.

Cue List: Cues of the types selected are displayed in the main grid on this window. You can manipulate this display as explained below. Any changes you make will be remembered for the next time you use this screen.

Cue Lengths Total: This display-only field is the calculate total lengths of all selected cues. It does not take into account auto-start times, etc. Also note that this field is not included when printing or copying to the Windows clipboard.

Adjusting the displayed columns in the Cue List

You can decide which columns you want to display in the Cue List by clicking the menu item **Columns** and then checking or unchecking fields as required.

Within the Cue List you can adjust individual column widths by dragging the column divider in the header, and you can reposition columns by dragging a column title. For example, to move the Cue Type column so that it is displayed immediately after the Cue column, click and drag the column title 'Cue Type' to the required position immediately after the 'Cue' column title.

Control Buttons

Copy to Windows Clipboard: Click this button to copy the displayed contents to the Windows clipboard. The information is copied in a format that is suitable for pasting into Excel or some similar program.

Print: The **Print** button will open the standard Windows Print Dialog for printing the Cue List as currently displayed. Note that you should be able to select the orientation (portrait or landscape). If you have long cue descriptions you

may find landscape orientation to be beneficial.

Close: The **Close** button is used to close the Print Cue List window.

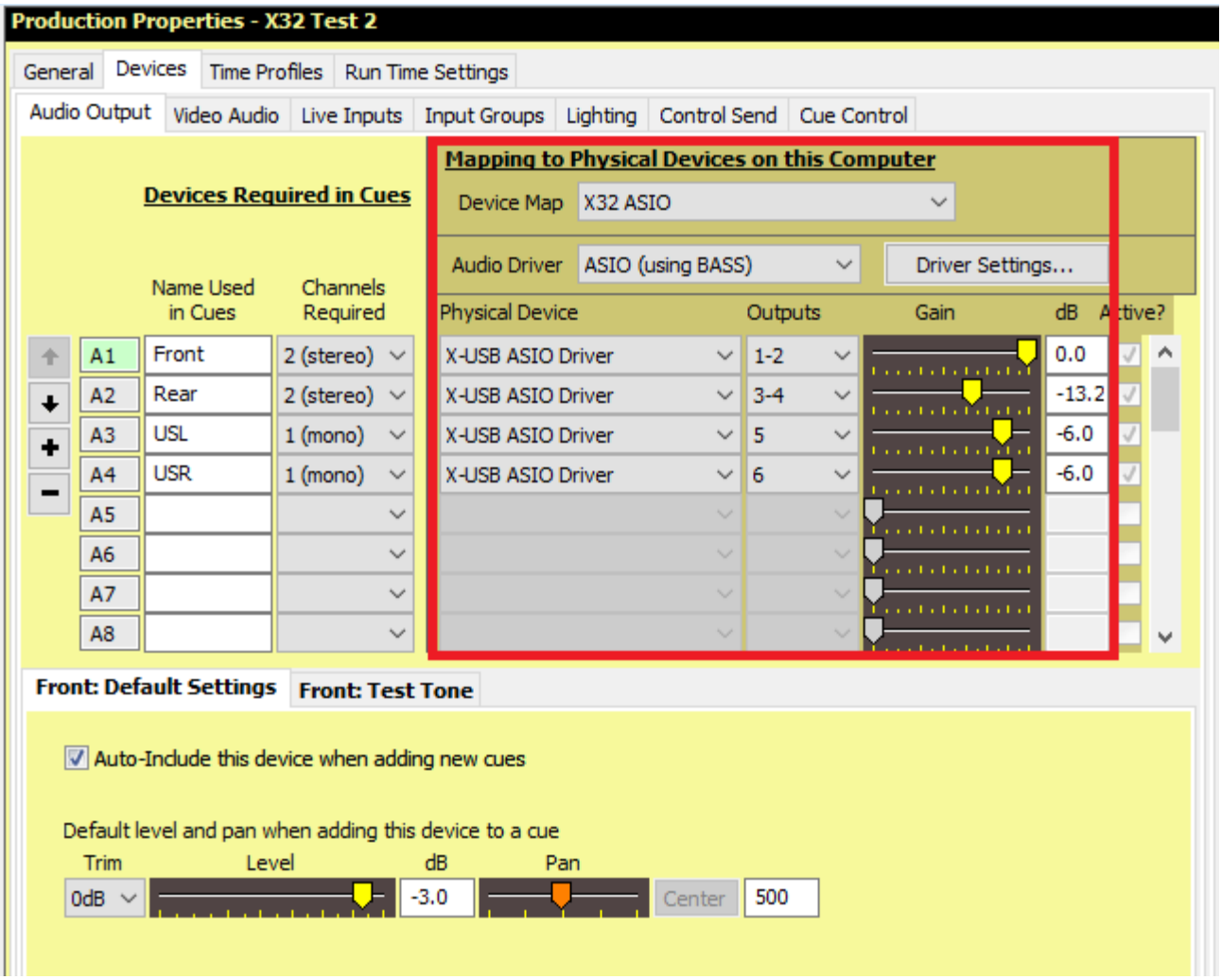
Help: The **Help** button displays this help.

Device Maps

Device Maps are intended to be computer-specific as they hold the mapping of your 'logical' devices (such as 'Front') to physical devices available on this computer. As device maps are computer-specific they are held in a file that is separated from your normal production files, namely under the Windows user AppData\Roaming folder.

Tip: **Device Maps** are also useful if you use a single computer in different environments, such as at home when you are designing cues and then at the theatre for rehearsals and productions. In your home or design environment you may have more limited equipment available than you do in the theatre, such as just an onboard sound card instead of a professional multi-channel audio interface. So you could have a 'design' Device Map that maps your SCS outputs to the sound card outputs, which may require you to double-up on some device assignments. Then you can have a 'theatre' Device Map that has all the device mappings you need for your production.

Device Maps contain settings with a darker background in Production Properties / Devices, For example:



In the above screenshot the properties within the dark background are computer-specific, and the properties within the **red box** are are saved in the **Device Map File** for this cue file (with the exception of any 'Driver Settings' you have selected). Note that the 'Active' checkbox is a run-time display-only item so is not stored anywhere.

All other production properties such as 'Name Used in Cues', 'Channel Required', 'Default level and pan when adding this device to a cue', etc are saved in the **Cue File** (ie the .scs11 file).

So what happens if you want to copy your production to another computer?

SCS has a Collect Production Files facility designed to assist with this task. This enables you to collect into a single folder all the files used in your production so you can then copy the folder to another computer. This will not include your **Device Map File** but you can *export* the Device Map File to the Production Folder (ie the 'collection' folder).

If you copy your Production Folder to another computer and then start SCS and open that cue file then SCS checks for a **Device Map File** in the Device Maps folder on this computer. If SCS cannot find a Device Map File in the Device Maps folder then SCS then looks for a **Device Map Export file** in the same folder as the Cue File. If this is found then SCS displays a message asking you if you want to use this file. If you OK this request then SCS copies the export file as a **Device Map File** to the Device Maps folder and then continues by opening this **Device Map File**.

If SCS cannot find a Device Map File or a Device Map Export file (or if you indicate you do not want SCS to use the

export file) then SCS creates a default Device Map File for this Cue File.

Warning!

Using a Device Map File that was exported from another computer is useful if you have the same devices on the target computer, but if the devices are different (or if the drivers have published different names to the devices) then you will still have to review and change your device selections.

Tip: If you need the same or similar devices as in another production, you can use Import Devices from another SCS Cue File. This also includes the Device Maps. After processing the import you may need to change the currently-selected Device Map if the name(s) of the imported Device Maps are different to the currently-selected Device Map.

Background Info (you can ignore this unless it's of interest)

A number of users have asked where Device Maps are held and why they are not an integral part of the cue file (the .scs11 file). Hopefully the following example will help explain the purpose of Device Maps.

Device maps are machine-specific as they are designed to hold machine-specific device names, etc. If your Windows user name is Mike then your device maps will be in the folder "C:\Users\Mike\AppData\Roaming\ShowCueSystem\DevMaps\".

If your cue file is "Reedy River.scs11" then the device map file (in the above folder) will be "Reedy River_15AEF27E.scsd", where "15AEF27E" matches the SCS-generated "ProdId" in the cue file. The reason for including "ProdId" is to allow for different cue files with the same name but different purpose, such as "test.scs11".

Although device maps are machine-specific, there are occasions on which it's quite OK to use the same device map settings on another machine. That's why Collect Production Files includes the checkbox 'Export device map file'. For the above cue file, the exported device map file would be named "Reedy River_15AEF27E.scsdx" (note the .scsdx extension), and would be written to the selected 'Production Folder'.

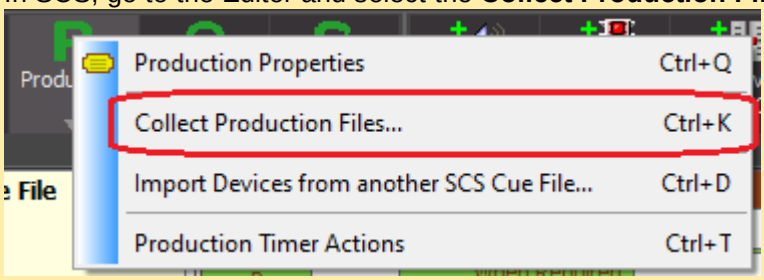
If you copy this Production Folder to a different computer, start SCS and open the cue file "Reedy River.scs11", SCS will look in that computer's SCS device map folder for "Reedy River_15AEF27E.scsd" (assuming "15AEF27E" is the ProdId). If SCS cannot find that file it looks for "Reedy River_15AEF27E.scsdx" (note the extension .scsdx) in the folder containing the cue file "Reedy River.scs11". If this also cannot be found then SCS creates a new device map file in the relevant device map folder.

See also: Collect Production Files, Portability, Special Folders

Portability (transferring your files to another computer)

Many SCS users prepare files and cues on their PC at home or in a studio and then transfer the files to a different PC at the theatre. The physical path name of files on your home PC may be different to those on the theatre PC, but SCS enables you to easily transfer your files as follows:

The simplest way to transfer your files is to follow these steps:

1. **Collect your files into a Production Folder on your home or studio computer.**
   In SCS, go to the Editor and select the **Collect Production Files** menu item under the **Production** button:
   

   This opens the Collect Production Files window which enables you to create a **Production Folder** and collect into that folder all the audio, video and image files used in the currently-open cue file. The cue file itself (the .scs11 file) will also be copied and will be updated so that each audio file cues etc will now refer to the copy of the file in the Production Folder. For example, if your production is *The Wizard of Oz* then you might want to name your Production Folder *wizard*. Choose an external drive (eg a USB drive or an SSD) or a network drive for the Production Folder, but also select '**Do NOT switch to the collected folder**'.
2. **Remove the external drive (if applicable).**
   If using an external drive you should use the 'Safely Remove Hardware' facility, which is normally activated from an icon in the System Tray (bottom right of your screen).
3. **On your theatre PC copy the Production Folder from your external or network drive to the hard disk.**
   It doesn't matter where you copy the **Production Folder** to.
4. **If you have not already done so, install SCS on your theatre PC.**
   This should be installed from the latest download available in the Members' Area of the SCS web site.
5. **Start SCS on your theatre PC and open the cue file (the .scs11 file) from the Production Folder you have just copied onto this PC.**
   SCS will find all the audio, video and image files successfully as they are all in the **Production Folder** (eg *wizard*).

See also: Device Maps

Special Folders

SCS Application Data Folder

Windows provides a folder in which applications can store data for the Windows user, so there is a separate 'application data' folder for each Windows user. SCS creates a folder named **ShowCueSystem** in the application data folder. The location of this folder depends on the version of Windows you are using.

For example, my Windows user name is Mike and under Windows the SCS Application Data folder is "**C:\Users\Mike\AppData\Roaming\ShowCueSystem**".

Note that the application data folder is by default a hidden folder, but you can turn on the option to view hidden items. In Windows 10 this option is under the 'View' menu item of File Explorer.

Device Maps Folder

This folder is named **DevMaps** and will be created in the **SCS Application Data Folder** mentioned above. It should *not* be moved from that location. The folder will store Device Maps for each production cue file for this machine. For example, if you have a cue file named "wizard.scs11" then SCS will save the Device Map(s) for that cue file in a file named "wizard_<ProdId>.scsd", which will be stored in **DevMaps**, where <ProdId> is a unique 'Production Id'.

If you copy your production to another computer, such as from your design computer to your theatre computer, then the device map file should *not* be copied - a new device map file will be created on the theatre computer when you first open that cue file with SCS. The device map file on the theatre computer will map SCS devices to physical devices available on that computer. However, if

The reason for the existence of the **DevMaps** folder is to keep device map files *away* from the corresponding cue files, so they do *not* get saved to Production Folders and get included when productions are copied to another computer.

For more details of device maps, see Production Properties - Audio Output Devices.

SM-S Encoded Files Folder

This folder is named **EncFiles** but it is only created if the **Audio Driver** is SM-S. SM-S will only play WAV or AIFF files but you may have other file types you want to use, such as MP3 and WMA. SCS attempts to seamlessly support several file types not supported natively by SM-S. It does this by encoding a WAV file equivalent of a requested MP3/etc file, and storing that encoded WAV file in **EncFiles**.

The folder will be created in the **SCS Application Data Folder** mentioned above. It should *not* be moved from that location.

For more details, see Encoded Files Folder.

Initial Folder

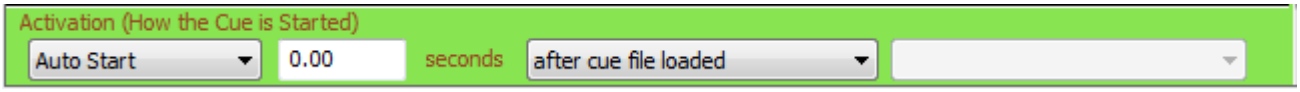
When you click a **Browse** button to find an audio file, the Windows 'Open File' dialog will start from the folder you last used with the 'Open File' dialog in the current SCS session. For the first time you 'Browse', the dialog will use the **Initial Folder** specified in General Options. The default setting for this option is "Documents" or "My Documents".

Production Folder

A **Production Folder** is a folder in which you *may* store all the files for a production. The use of a Production Folder is optional but it is very useful if you want to transfer your production to another computer, such as from your design computer to your theatre computer. For details on how to create and use a Production Folder, see Portability (transferring your files to another computer).

Auto-Starting a Cue File

If you are using SCS in an environment where the cues are to be started as soon as the cue file has been loaded, then you can do this by setting the first cue to **Auto Start 0.00 seconds after cue file loaded**, ie like this:



You can, of course, select a time greater than 0.00 seconds. This could be useful for the scenario described below.

Auto-Starting when Windows starts

Windows allows you to nominate some programs to be started automatically when Windows is started. The easiest way to do this is to add the program to the Windows Startup folder. For example, in Windows 7 Click the Windows "Start" button and select "All Programs." Right-click the "Startup" folder in the menu and select "Open All Users." If you want to auto-start SCS when Windows is started, *copy* into the Startup folder a shortcut to scs11.exe, such as by copying the shortcut that's on your desktop.

By combining these two features, you can have your cues automatically start when Windows is started, which is useful for some environments such as museum exhibitions. Remember that by default SCS opens the last-used cue file when it is started.

If you are using SCS with SM-S then you can add SM-S to the Startup menu as well. You will need to have your SM-S dongle inserted when you start the machine. It doesn't matter in which order SM-S and SCS are started if they are both included in the Startup folder. If SCS is setup to use SM-S and SCS cannot connect to SM-S, then SCS keeps trying for up to 20 seconds, which should be enough time for SM-S to successfully start.

Since your Windows environment may be starting several programs and services at startup, you may find it beneficial to delay the start of the first cue to prevent audio break-up. This can be done simply be setting a higher value in the time field before **after cue file is loaded**. You could, for example, set this to 60 seconds.

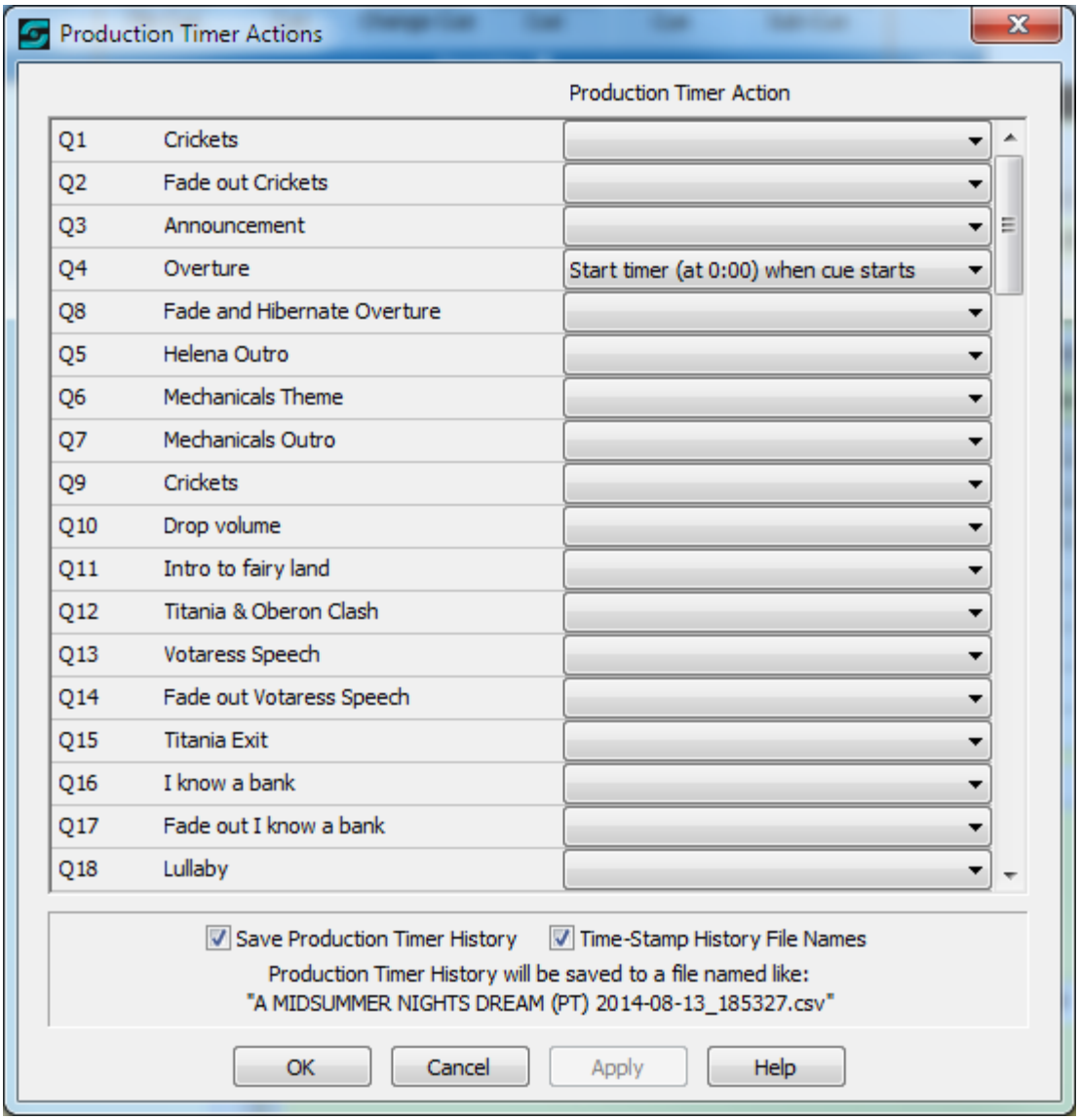
Production Timer

The Production Timer is available with **SCS Standard** and higher license levels.

The **Production Timer** is an optional feature that lets you time your Production, each Act, or any other sequence of cues. Currently this feature is designed to be set up whilst preparing your cues in the Editor. Later on we may provide a facility to display the elapsed time between and including nominated cues. The Production Timer, when set, is displayed on the bottom right of the SCS Main Window in the window's status bar, or in a separate window if requested against **Timer Display** in the Display Options (see the bottom of this page for more details). For example 25:14 displayed indicates 25 minutes 14 seconds have elapsed since the timer was last started, excluding any time during which the timer was paused.

To set up the **Production Timer**, go to the Editor and click the **Production** toolbar button in the Editor and select **Production Timer**.

A window similar to this will be displayed:



This shows a scrollable list of your enabled cues and a drop-down list for the Production Timer Action where you indicate what action, if any, is to be applied to the Production Timer when the cue starts or ends.

Production Timer Action: This drop-down list contains the following options:

<blank>	No action.
Start timer (at 0:00) when cue starts	Start or reset the timer at 0:00 when this cue starts. Typically used for th displayed in the main window's status bar.
Start timer (at 0:00) when cue ends	Start or reset the timer at 0:00 when this cue ends. Could be used to sta window's status bar.

Pause timer when cue starts	Pause the timer when this cue starts. Could be used on your intermissio value will be displayed within square brackets, eg [1:05:37].
Pause timer when cue ends	Pause the timer when this cue ends.
Resume timer when cue starts	Resume the timer when this cue starts. Could be used on the first cue a
Resume timer when cue ends	Resume the timer when this cue ends. Could be used on your cue that f after intermission.

To determine the running time of your show, make sure you include a 'Pause timer' action on your last cue or your post-show cue if you have one.

To separately time each Act, at the start of each Act include a 'Start Timer' action as this will restart the timer from 0:00.

If there is no actual cue for any time at which you need to start, pause or resume the timer, you can always add a Note Cue for just that purpose.

In your cue list, the following abbreviations are displayed against cues where applicable:

(TS)	Start timer (at 0:00) when cue starts
(TSe)	Start timer (at 0:00) when cue ends
(TP)	Pause timer when cue starts
(TPe)	Pause timer when cue ends
(TR)	Resume timer when cue starts
(TRe)	Resume timer when cue ends

Save Production Timer History: If this checkbox is selected then the Production Timer history for the current session will be saved when SCS is closed down or when the cue file (the .scs11 file) is closed. The Production Timer history will be saved in a csv (comma-separated values) file suitable for viewing in a spreadsheet program such as Excel. More details are given below.

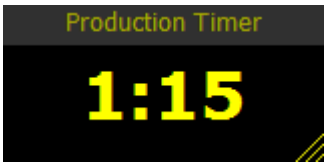
Time-Stamp History File Names: If this checkbox is *clear* (and **Save Production Timer History** is checked) then the Production Timer history will be saved to a file named the same as the .scs11 file but with " (PT).csv" instead of ".scs11". For example, if your cue file is "MyProd.scs11" then the Production Timer history will be saved to "MyProd (PT).csv". Each time you run the production, the history file will be overwritten, which is useful if you do not want to amass a large number of history files. However, if **Time-Stamp History File Names** is *checked* then a date and time will be appended to the history file name as shown in the screen shot above. The actual date and time will be when the first **Production Timer Action** occurred for that run.

Production Timer History File Format

As mentioned above, the Production Timer history will be saved in a file suitable for viewing in a spreadsheet program such as Excel. The columns will be:

Date	Date this production timer event occurred (format yyyy-mm-dd)
Time	Time this production timer event occurred (format hh:mm:ss)
Timer Event	The production timer event that occurred, ie started, paused or resumed.
Timer Value	Timer value when this event occurred
Cue	Cue that triggered this event
Cue Description	Description of the cue that triggered this event
Cue's Production Timer Action	The 'Production Timer Action' of the cue that triggered this event, primarily to indicate here if the event occurred when the cue started or when the cue ended

The Production Timer is displayed in the status bar at the bottom of the main window, or in a separate window if requested against **Timer Display** in the Display Options. If displayed in a separate window it will appear like this:



You can move the window anywhere you wish, even onto another screen, by clicking and dragging the title bar. You can also resize the window by clicking and dragging the resize handle in the bottom right. Resizing the window will cause the time's font size to be resized (but not the font of the title bar), which means you can display a very large Production Timer display if required. SCS remembers the size and position of the window across sessions.

Tip: Michel Winogradoff has provided a useful "**Stop Watch**" that uses the SCS Production Timer. This Stop Watch uses 3 hotkey cues to start, pause and resume the timer. See the SCS Forum topic Stopwatch using F1,F2,F3 Hotkeys for details.

MIDI Time Code (MTC)

MIDI Time Code (MTC) is only supported under **SCS Professional** or higher, and cue control by MTC is only supported under **SCS Professional Plus** or higher.

SCS may be optionally set up to **generate and send MTC** or to **receive MTC from an external source**. Cues may be activated by MTC, either internal or external MTC.

To Generate and Send MTC

*Available under **SCS Professional** or higher.*

If you want SCS to generate and send MTC then:

- In Production Properties set up a Control Send Device with a **Device Type** of 'MIDI Out' and select the checkbox **'For MTC'**. Select the required **MIDI Out Port**.
- For each instance at which you wish to start sending MTC, set up an MTC Cue. In an MTC Cue you nominate the required **MTC Start Time**, **Frame Rate**, **Pre-Roll Time** (optional) and **Duration** (optional).
- MTC generation will stop when the Duration is reached (if specified), or when an SFR Cue stops this MTC Cue. When either of these events occurs, the MTC Cue is marked as completed.
- If an MTC Cue is activated while another MTC cue is playing then the new MTC Cue takes over and the previous MTC Cue is terminated and marked as completed.

See the links in the above text for more details.

To Trigger Cues by MTC generated by an External Source

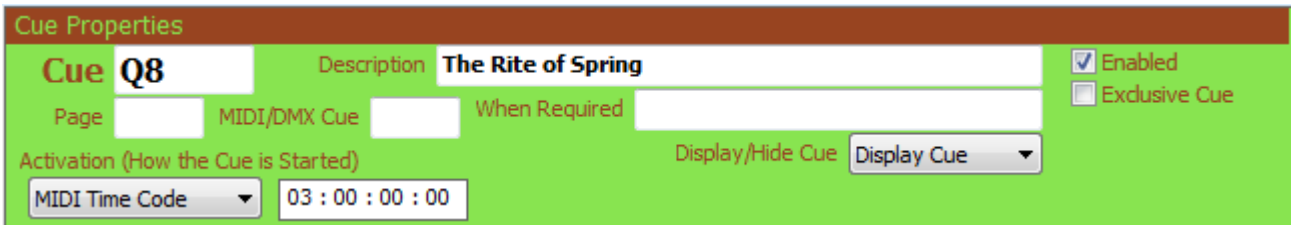
*Available under **SCS Professional Plus** or higher.*

If you want to trigger SCS Cues from MTC generated by an external source then:

- In Production Properties set up a Cue Control Device with a **Device Type** of 'MIDI In' and select **Control Method** 'MIDI Time Code'. Select the required **MIDI In Port**.
- For each cue you want activated by MTC, set the Activation Method to 'MIDI Time Code' and enter the required Time Code that will activate the cue. See below for more info.

For each cue you want auto-activated by MTC, set the cue's **Activation (How the Cue is Started)** to **MIDI Time Code**.

For example:



Note that the MTC Time is actually 4 fields and you can tab between them as required. The default time is 00:00:00:00, so if you just need to set the 'hours' component then the first of these fields is the only one you need to change

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To Trigger Cues by MTC generated Internally by SCS

*Available under **SCS Professional Plus** or higher.*

If you want SCS to generate MTC then you can also use this generated MTC to trigger cues in SCS your production. So SCS-generated MTC can be sent to other devices and also be used to trigger other SCS cues. This is basically a combination of the two above methods, specifically:

- In Production Properties set up a Control Send Device with a **Device Type** of 'MIDI Out' and select the checkbox **'For MTC'**. Select the required **MIDI Out Port**.
- Important: If you only need MTC for triggering SCS cues and do not need the MTC to be sent externally, then select a **MIDI Out Port** of 'Dummy MIDI Out Port'.
- For each instance at which you wish to start sending MTC, set up an MTC Cue. In an MTC Cue you nominate the required **MTC Start Time**, **Frame Rate**, **Pre-Roll Time** (optional) and **Duration** (optional).
- Important: Cue Activation by MTC ignores Pre-Roll Time, ie as soon as the specified Time Code occurs then the cue is triggered.

Notes on Cues Triggered by MTC

These notes apply regardless of whether the MTC is received from an external source or generated internally by MTC

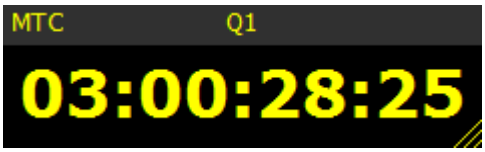
Cues.

When continuous MTC is being received or generate, only time codes of alternate frames are received or generated, eg 00:00:00:00, 00:00:00:02, 00:00:00:04 etc. This is because the time code is a 32-bit value which is sent using 8 short MIDI messages, or 8 'time code pieces'. Each piece contains 4 bits of the 32-bit value, and a piece is sent every quarter-frame. So it takes the time of two frames to send all 8 pieces.

There is nothing to prevent you from specifying, say, an MTC start time for a cue using a time code that falls between two received or generated time codes. For example, you may receive time codes 03:00:00:00, 03:00:00:02, etc, but have specified a cue start time of 03:00:00:01. To handle this possibility, SCS triggers a cue if the specified time code is *greater than the previous time code* received or generated and *less than or equal to the current time code*. So if you had specified a cue start time code of 03:00:00:01 and that time code was not received or processed, then the cue would be trigger at the next higher time code, ie 03:00:00:02 in this example.

Time Code Display

When MTC is being generated or received, the current MTC time code is displayed in the top right of the VU meter area, or in a separate window if requested against **MTC Display** in the Display Options. If displayed in a separate window it will appear like this:



You can move the window anywhere you wish, even onto another screen, by clicking and dragging the title bar. You can also resize the window by clicking and dragging the resize handle in the bottom right. Resizing the window will cause the time code font size to be resized (but not the font of the title bar), which means you can display a very large MTC display if required. SCS remembers the size and position of the window across sessions. *Note that when an MTC stops, SCS hides the MTC window after 3 seconds unless MTC is restarted.*

If MTC is being received from an external source then the title bar shows 'External MTC'.

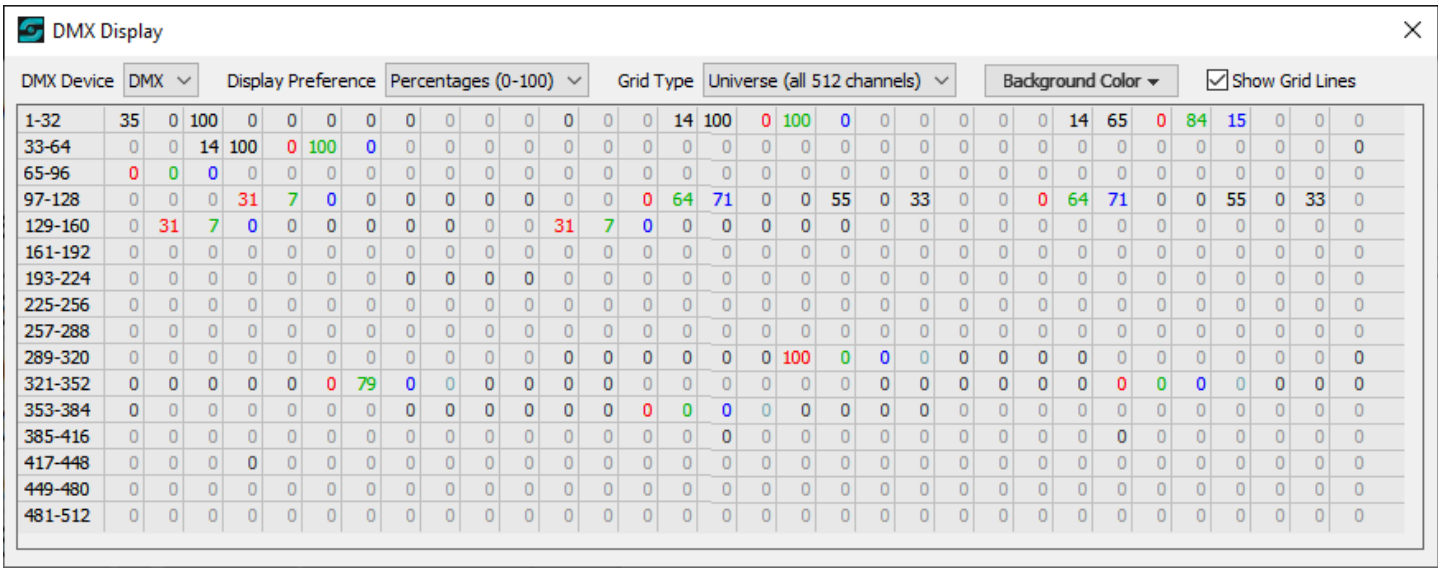
DMX Display Window

The *DMX Display Window* is only available if at least one DMX Lighting Device has been specified.

Overview

The DMX Display Window can be used to monitor DMX values being sent to connected (or potentially connected) equipment.

Access the DMX Display Window from the SCS Main window by clicking the **View** button and selecting **Show DMX Display Window** from the pop-up menu. When you select this menu item, a window like this will be displayed:



1-32	35	0	100	0	0	0	0	0	0	0	0	0	0	14	100	0	100	0	0	0	0	0	0	14	65	0	84	15	0	0	0
33-64	0	0	14	100	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
65-96	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
97-128	0	0	0	31	7	0	0	0	0	0	0	0	0	0	64	71	0	0	55	0	33	0	0	0	64	71	0	0	55	0	33	0
129-160	0	31	7	0	0	0	0	0	0	0	0	31	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
161-192	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
193-224	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
225-256	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
257-288	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
289-320	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
321-352	0	0	0	0	0	0	79	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
353-384	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
385-416	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
417-448	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
449-480	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
481-512	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

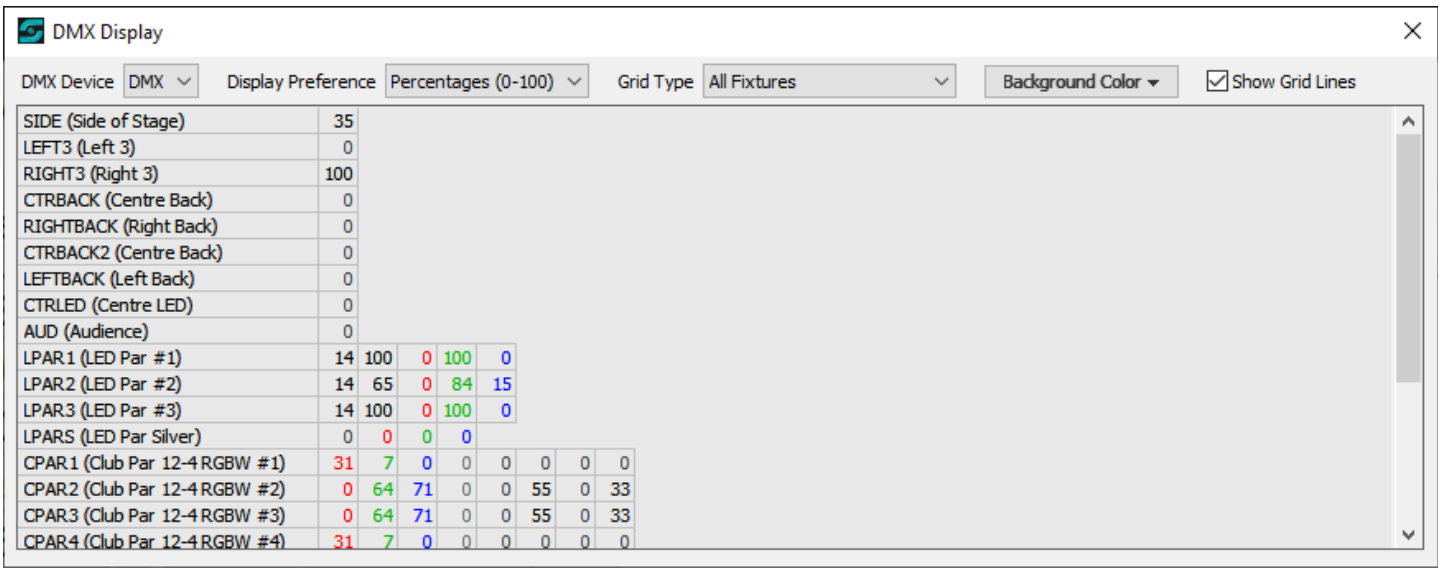
You can drag the window to wherever you want, and SCS will remember the position between sessions. You can close the window either by clicking the Close Window button (X) or by de-selecting the Main window's menu item 'Show DMX Display Window'.

Controls and Fields

DMX Device: Select a Lighting Device from one of those you have set up in Production Properties - Lighting Devices - DMX. The windows will display the DMX values sent to channels on the physical device associated with that Lighting Device.

Display Preference: Channel values can be displayed either as percentages (default) or as actual DMX values (0-255).

Grid Type: The default selection is *Universe (all 512 channels)* as shown above. Alternatively, you can select *All Fixtures*, which will show a grid like this:



SIDE (Side of Stage)	35							
LEFT3 (Left 3)	0							
RIGHT3 (Right 3)	100							
CTRBACK (Centre Back)	0							
RIGHTBACK (Right Back)	0							
CTRBACK2 (Centre Back)	0							
LEFTBACK (Left Back)	0							
CTRLED (Centre LED)	0							
AUD (Audience)	0							
LPAR1 (LED Par #1)	14	100	0	100	0			
LPAR2 (LED Par #2)	14	65	0	84	15			
LPAR3 (LED Par #3)	14	100	0	100	0			
LPARS (LED Par Silver)	0	0	0	0				
CPAR1 (Club Par 12-4 RGBW #1)	31	7	0	0	0	0	0	0
CPAR2 (Club Par 12-4 RGBW #2)	0	64	71	0	0	55	0	33
CPAR3 (Club Par 12-4 RGBW #3)	0	64	71	0	0	55	0	33
CPAR4 (Club Par 12-4 RGBW #4)	31	7	0	0	0	0	0	0

The order of the fixtures is the order in which they are listed in Production Properties - Lighting Devices.

Background Color: Click on this control if you wish to change the background color of the grid, which may help more clearly see some text colors.

Show Grid Lines: If you clear this checkbox then the grid lines will not be displayed.

SCS remembers your preferences between sessions.

Lighting Control by External Fader

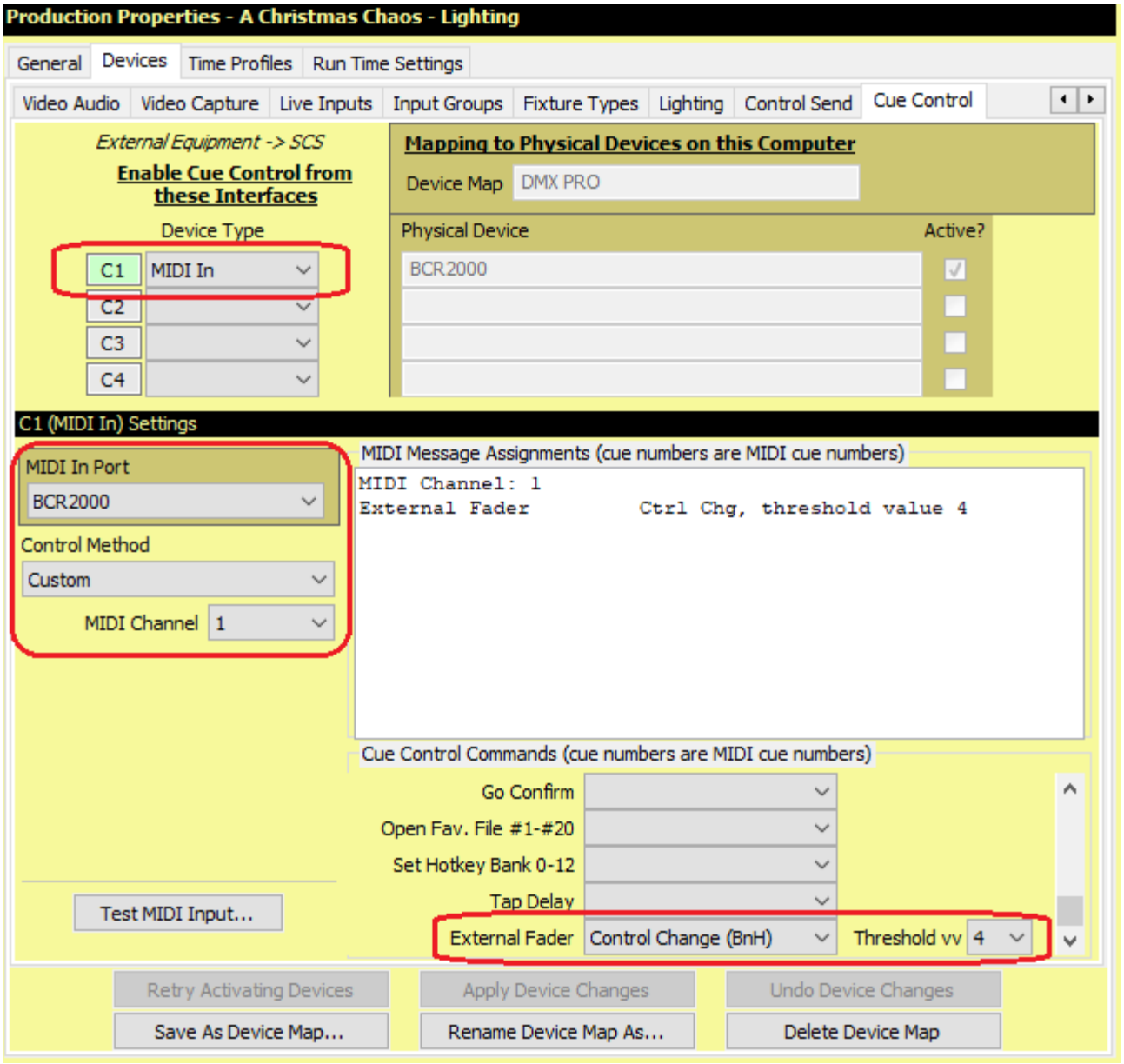
This feature is only supported under **SCS Professional** and higher license levels.

Overview

Setting a cue's Activation Method to External Fader enables you to manually control the fade of that cue's Lighting sub-cue(s). For example, if you have a nanoKONTROL or a Behringer BCF2000 or BCR2000 MIDI Controller then you can use the faders to control individual Lighting cues in SCS. To use this feature you will need a MIDI controller that will send MIDI Control Change messages on moving a fader.

Implementation

In **Production Properties** in SCS, set up a Cue Control device similar to that shown below:



The **MIDI Channel** must match that used by your controller in MIDI Control Change messages sent on moving a fader.

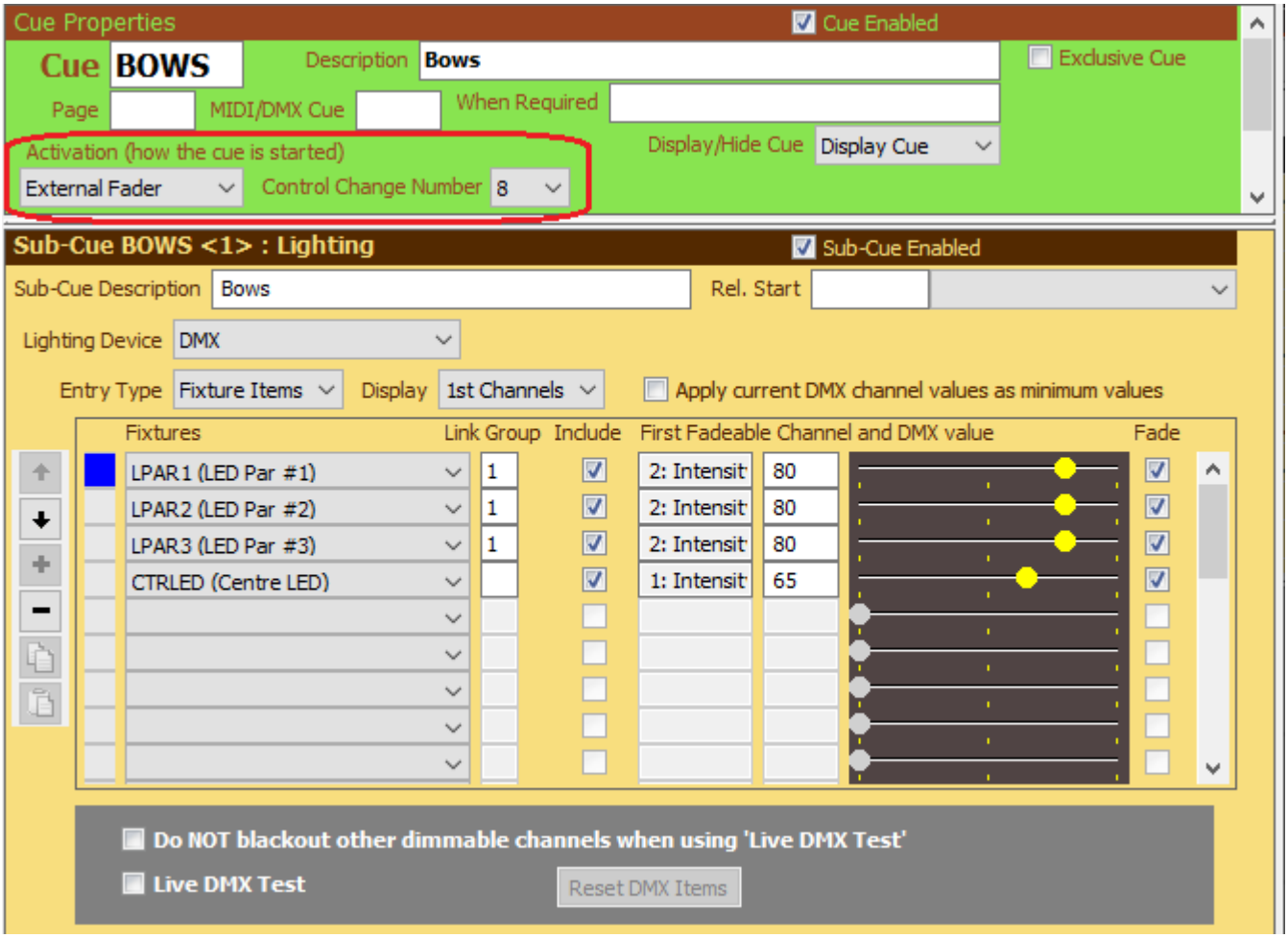
Set **External Fader** to Control Change.

Note that no Control Change number (cc) is entered here. That will be entered in the Cue Properties for cues with 'External Fader' as the Activation Method. Each such cue should have a unique Control Change number, so it can be controlled by the corresponding fader on your MIDI controller.

We recommend you set the **Threshold vv** (threshold value) to a value greater than 0. When an external fader is moved, this will trigger and control the relevant cue (if set). The 'threshold value' is to help avoid accidental starting of a cue if a fader is bumped or very slightly moved. In this above screenshot the threshold has been set to 4. What this means is that if the fader is bumped and sends a MIDI Control Change value of, say, 1, then SCS will ignore this message. SCS would only take action if the MIDI control change value is 4 or greater. You can set the threshold value to any value from 0 to 9. If you set this to 0 then any increase of the fader, including value 1, will activate the

cue. SCS will calculate the required percentage based on the range from the threshold value up to 127.

A Lighting Cue to be controlled by an external fader should be set up similar to this example:



The **Activation Method** must be set to 'External Fader', and the **Control Change Number** must be set to match that sent by your MIDI controller on moving the fader you want to use for this cue.

If a fixture's dimmer channel set to, say, 80%, then the fader's 0%-100% range will be applied against 0%-80% for that DMX channel. If the dimmer channel of another fixture in that same cue is set to 100% then the fader's 0%-100% will be applied against the full 0%-100% range of that fixture.

Note that the 'fade up', 'fade down' and 'fade out others' times in an 'external fader' lighting cue are hidden and therefore ignored, as the action of the external fader is effectively replacing these fade times.

Important: SCS assumes the cue's relevant fader will initially be at the minimum position. When the fader level reaches the 'Threshold Value' ('Threshold vv') then the cue state will change to *Playing* and DMX values will be calculated and applied. The cue state will remain at *Playing* until the fader level returns to minimum (MIDI value 0). When this occurs, the cue state will return to *Ready*.

Apply current DMX channel values as minimum values: If you leave this checkbox clear then when this cue is activated (by moving the fader at least as far as the threshold position) then each nominated fixture will be faded up from 0. So if, for example, LPAR2 in the above screenshot is currently displaying at 50% then on activating the cue that fixture will immediately change to 0% and then increase as the fader is raised. This is OK if you always expect to use this feature shortly after a blackout. However, if you select this checkbox then as you raise the fader then the level of LPAR2 will stay at 50% until the fader itself sends Control Change values greater than 64 (ie 50%). Similarly, on lowering the fader from, say, maximum, then LPAR2's level will drop accordingly *until* it reaches 50% and will then stay at 50%.

Credit: Thanks to Michel Winogradoff and Didier Petit for advice on and assistance with the design and testing of this feature.

Setting up a Backup Computer

The *Functional Mode* feature, which enables you to sync an SCS Backup computer with an SCS Primary computer, is only available under **SCS Professional Plus** or higher.

Overview

It is sometimes desirable to have a backup copy of your cues running on a separate computer, so that if your primary computer fails then you can switch to the backup computer with minimal interruption to your show. You can do this by using a some custom-built hardware, or you can use the **Functional Mode** settings in SCS, provided you have an SCS Professional Plus or higher license.

There are three Functional Modes available:

- **Stand-Alone**. This is the default mode, and you would use this mode if you are running a single instance of SCS. License levels below SCS Professional Plus *only* run Stand-Alone mode.
- **Primary**. Using Primary mode, SCS will be operated as normal, eg using the keyboard and mouse on the Primary computer, but it will also send selected commands to any Backup computers that have connected to the Primary computer.
- **Backup**. If SCS is set to Backup mode, then it will try to establish a network connection with the Primary computer. If that connection is successful, then the Primary computer will send selected commands to the Backup computer, and the Backup instance of SCS will act on those commands to keep the Backup in sync with the Primary. After starting SCS on the Backup computer and setting the Backup mode, the operator *should not* manually control SCS on this computer, unless necessary.

How to set up SCS on your Primary and Backup Computers

The cue file and associated audio files, etc must be identical on the Primary computer and the Backup computer, although file pathnames may differ. For example, on your Primary computer you may have your production files in a folder on drive C: whereas on your Backup computer the files may be in a folder of a different name and on a different drive. The recommended procedure is to collect your files into a production folder on your Primary computer, and then to copy the folder to the desired location on your backup computer. See Collect Production Files for details. Note that by keeping all your audio files, etc in or under the Production Folder then in your cue file (the .scs11 file) SCS will record the locations starting with $(Cue)\, eg $(Cue)\DoorBell.wav which means the file DoorBell.wav is located in the same folder as the cue file (the .scs11 file). Files in folders under $(Cue) are handled the same way.

The link between an SCS Primary computer and an SCS Backup computer is by a UDP network connection. This can be a wired connection using an Ethernet cable, or a wireless connection. Note that SCS only sends short messages from the Primary to the Backup, so network performance is not critical - although reliability, of course, is vital. SCS does *not* send any file content from the Primary to the Backup.

The Primary will support multiple Backup connections, which is feasible when using wireless connections.

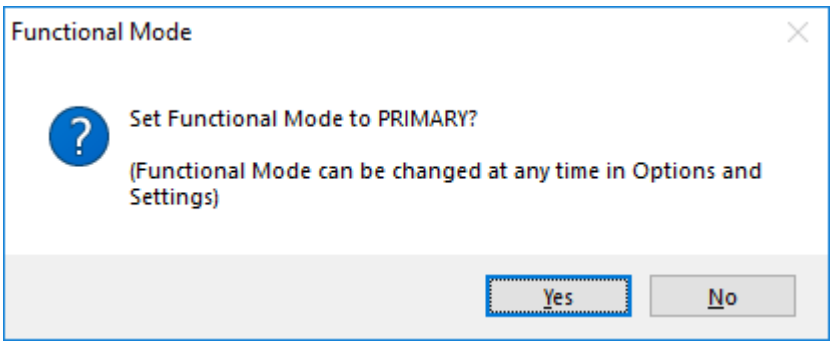
Note: The Primary and Backup computers should be running the same version of SCS. A warning message will be displayed by the Backup if when successfully connecting to the Primary the 'connection accepted' message from the Primary indicates the Primary is running a different SCS version to the Backup. This is not a 'fatal' error so does not abort the process, but running different versions on the Primary and Backup could have unexpected results.

Setting the Functional Mode

This done under **Options and Settings / Functional Mode**. See Functional Mode (Primary/Backup).

Functional Mode on Starting SCS

When you start SCS, if the Functional Mode last used by this instance of SCS was **Primary** or **Backup** then you will receive a message like this:



In this example, the Functional Mode last used was **Primary**.

If you click **Yes** then the displayed Functional Mode will be applied to this run. If you click No then the Functional Mode will be changed to **Stand-Alone**. This is particularly relevant if you've been using Backup mode on the computer and you have finished your production, and now wish to easily revert to **Stand-Alone** mode.

Communication between the Primary and the Backup

The 'Functional Mode' feature that supports **Primary** and **Backup** instances of SCS on different computers is designed solely to enable you to have a backup of your primary SCS instance while running live productions. The feature does *not* support cue editing, manually adjusting output levels, and various other functions that are deemed to be inappropriate for normal production use. However, if there is some SCS function that we've omitted but which you consider should be included, then let us know.

Here is a somewhat simplified version of the overall communication dialog:

Event	Primary Computer
User starts SCS on Primary	Network server started
	User opens cue file for this production
User starts SCS on Backup	
	Connection request received Primary sends 'connection accepted' response to the Backup computer Primary sends filename of the cue file to the Backup computer Primary sends the play order of any random playlists cues to the Backup computer
User clicks GO on Primary	The GO button is actioned, and a '/ctrl/go' command is sent to the Backup
User clicks STOP ALL on Primary	The STOP ALL button is actioned, and a '/ctrl/stopall' command is sent to the Backup

Other user initiated events handled in a similar manner to Go and Stop All are:

- Pause All, Resume All, Navigate (Go To Top, Go Back, Go To Next, Go To End)
- Clicking on a cue in the cue list
- Clicking a transport control button in a cue display panel (Shuffle, Rewind, Play, Pause, Release, Fade Out, Stop)

Note that other events such as clicking on the Editor button or the Options button do *not* generate messages for the Backup. So if you start editing cues on the Primary while your Backup is connected and running, then the two instances of SCS are going to be out-of-sync.

If you manually click on anything in the Backup then this will *not* send anything to the Primary, so this also may cause the two instances of SCS to be out-of-sync.

What happens if the Primary Computer crashes?

If the Primary Computer crashes and you need to switch to a Backup, then there may be some re-plugging you need to do but as far as the SCS Backup is concerned you can just take over manual control of this Backup and continue playing cues as before, *unless...* you have set any of the checkboxes that cause DMX, MIDI or Network devices to be ignored. Also, any time-based cues will not auto-start as time-based cues in the Backup rely on being started in response to a message from the Primary. To be safe, go to Options and Settings / Functional Mode and change the Functional Mode to either Stand-Alone or Primary.

Note that a **Primary** instance of SCS will run without the need for any **Backup** instances to be running. If you start a **Backup** instance and it cannot connect to the **Primary** then the attempt to connect will time out after 4 seconds and you will then be given the option to try again (after start the **Primary**) or to switch to **Stand-Alone** mode.

Move to Time (M2T)

The *Move to Time* feature is only available with **SCS Professional Plus** and higher license levels.

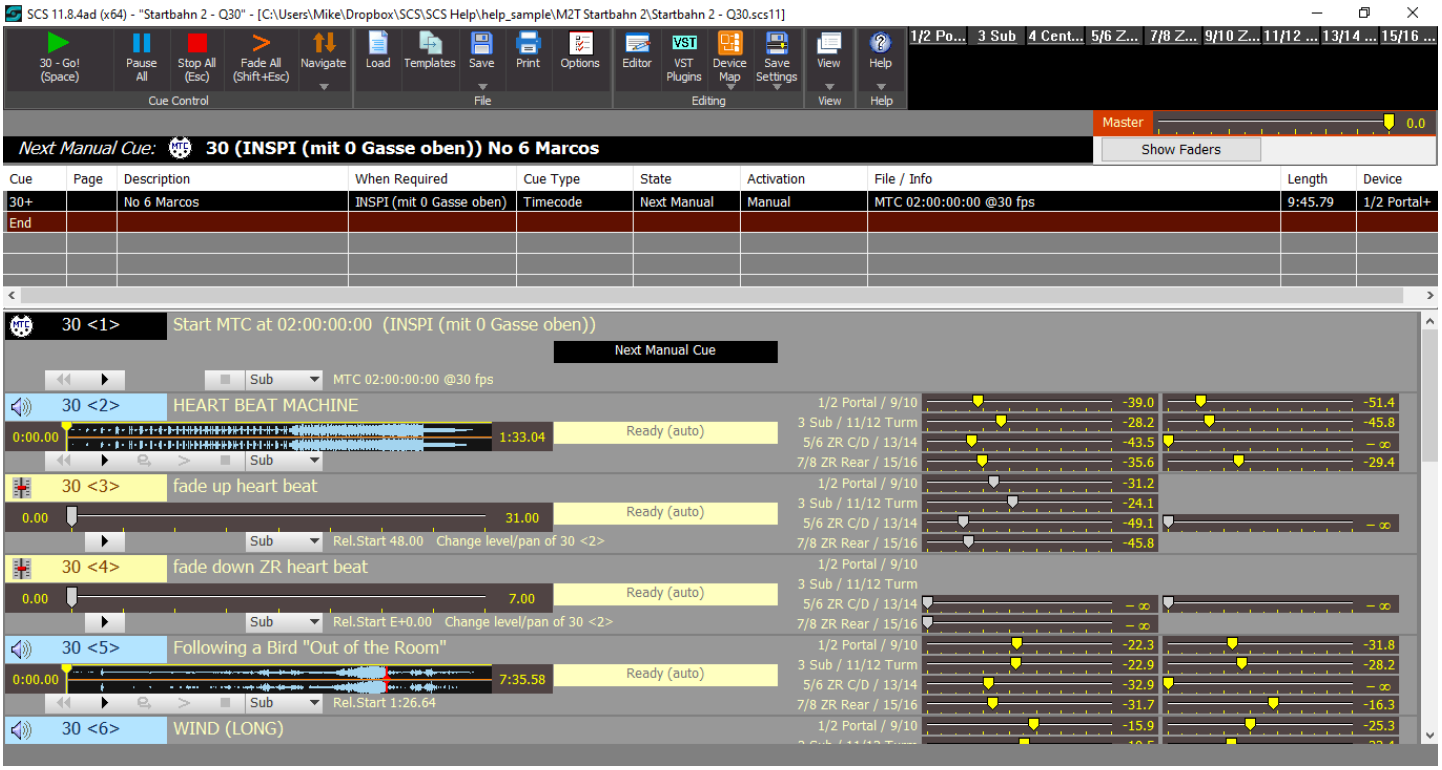
'Move to Time' may be useful during rehearsals if the director or music director wants to run a cue from part way through the cue, where that cue contains sub-cues and/or associated auto-start cues. The 'Move to Time' feature enables you to nominate a start point, and SCS will move the cue position to that time, and set any sub-cues and associated auto-start cues to match that time.

Consider the following example which contains just a single cue (cue 30) taken from a full cue file supplied by Christian Peters, but modified slightly to suit this Help topic. Here's a 'print' image for that cue:

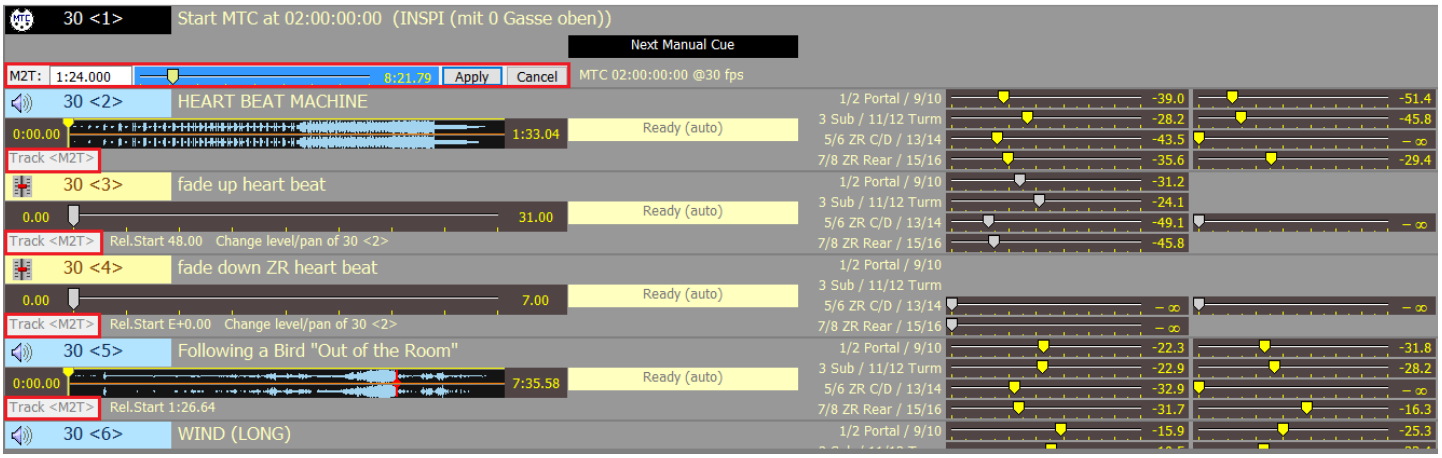
Cue	Description	Cue Type	Activation	File / Info	Length	Device
30	No 6 Marcos		Manual			
<1>	Start MTC at 02:00:00:00	Timecode		MTC 02:00:00:00 @30 fps		
<2>	HEART BEAT MACHINE	Audio File		HEART BEAT MACHINE.m4a	1:33.04	1/2 Portal+
<3>	fade up heart beat	Level Change	rel 48.00	Change level/pan of 30 <2>	31.00	
<4>	fade down ZR heart beat	Level Change	rel E+0.00	Change level/pan of 30 <2>	7.00	
<5>	Following a Bird "Out of t...	Audio File	rel 1:26.64	Ezio Bosso Following a bird [The 12th roo...	7:35.58	1/2 Portal+
<6>	WIND (LONG)	Audio File	rel 7:15.00	WIND (LONG).m4a	2:30.79	1/2 Portal+
<7>	LS 251	Control Send	rel 15.00	Note ON Ch 14 Note 60(3CH) Vel 127(7FH)		to BEL
<8>	LS 251.5	Control Send	rel 1:00.00	Note ON Ch 14 Note 61(3DH) Vel 127(7FH)		to BEL
<9>	LS 252	Control Send	rel 1:57.00	Note ON Ch 14 Note 62(3EH) Vel 127(7FH)		to BEL
<10>	LS 253	Control Send	rel 5:30.00	Note ON Ch 14 Note 63(3FH) Vel 127(7FH)		to BEL
<11>	LS 254	Control Send	rel 6:42.00	Note ON Ch 14 Note 64(40H) Vel 127(7FH)		to BEL
<12>	LS 255	Control Send	rel 7:10.00	Note ON Ch 14 Note 65(41H) Vel 127(7FH)		to BEL
<13>	LS 256	Control Send	rel 7:25.00	Note ON Ch 14 Note 66(42H) Vel 127(7FH)		to BEL

Cue 30 actually contains 16 sub-cues, although only the first 13 are shown in the above screenshot. When the cue is started under normal circumstances, MIDI Timecode is started (sub-cue <1>) and playback of an audio file is also started (<2>). 15 seconds later, the first control send sub-cue (<7>) is played. 48 seconds after the start of the cue, a level change sub-cue (<3>) gradually increases the level of the audio file over a period of 38 seconds. And so on.

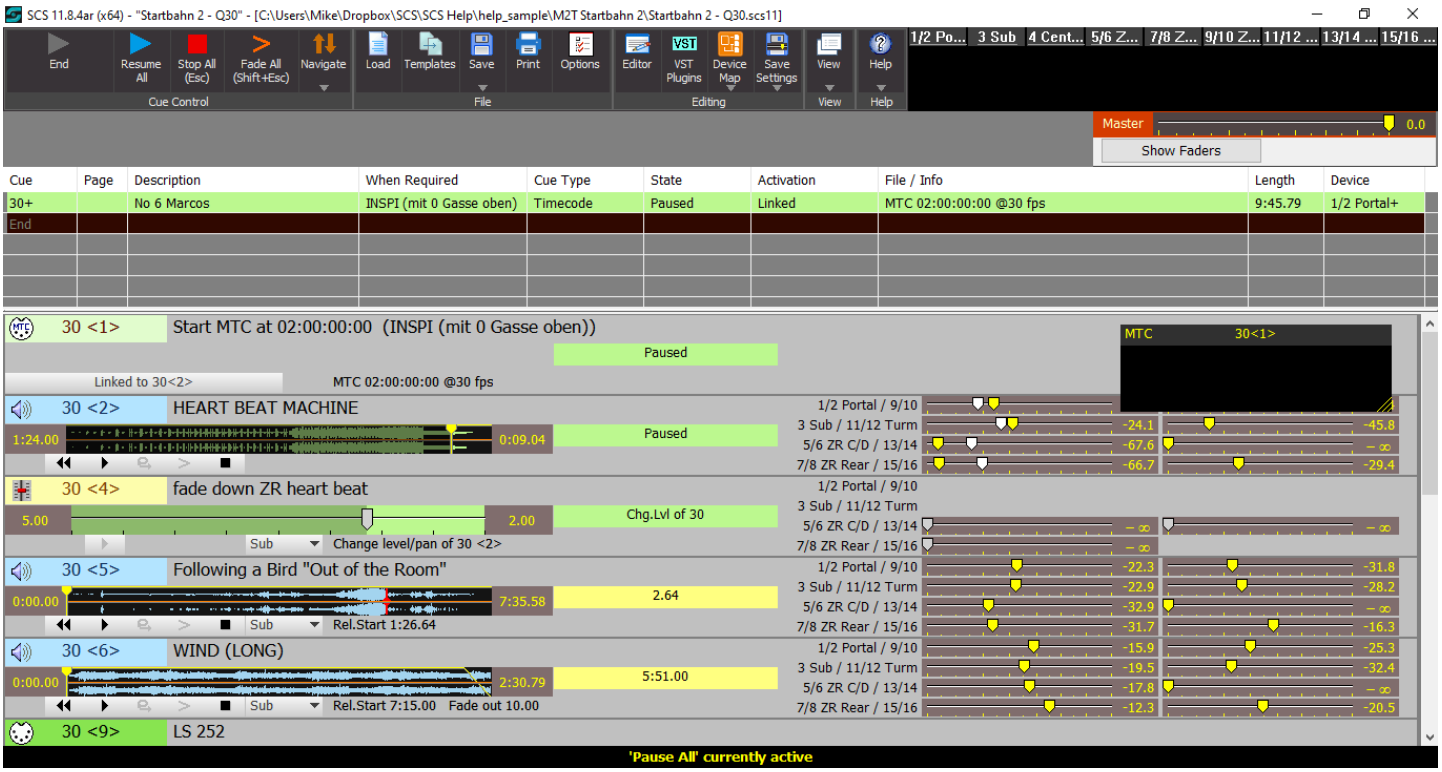
Here's a screenshot of how the cue initially shows in the main window:



This cue (30) accompanies dancers. Suppose that during a rehearsal the director or choreographer wants the dancers to start from a position that is, say, 1 minute 24 seconds through the cue. To 'move' the cue to that position, press **Ctrl+M** and then enter 1:24 in the 'M2T' (Move to Time) field. This part of the screen will then look like this (note that items highlighted in red, which now replace the transport controls):



If you do not wish to proceed, click the **Cancel** button, or just press **Ctrl+M** again. If you do want to proceed, click the **Apply** button. SCS will now action the 'Move to Time' and the screen will appear as shown here:



So what has happened?

- MTC sub-cue <1> has been moved to the 1:24 position. No MTC has yet been sent, which is why the MTC display is blank, but when you activate 'Resume All' MTC will start from 02:01:24:00. This is calculated from the sub-cue's MTC start time (02:00:00:00) plus the 'Move to Time' value (1:24).
- Audio file sub-cue <2> has been positioned at 1:24.00.
- Level change sub-cue <3> is not shown as it has been completed. However, the effect of that level change has been applied to the relevant device levels in audio file sub-cue <2>.
- Level change sub-cue <4> is shown as 5 seconds through. This is calculated based on the scheduled start time of this sub-cue, which was 0.00 seconds after the end of sub-cue <3>, and that sub-cue was set to start 48 seconds after the start of the cue, and had a duration of 31 seconds. 48+31+5 = 84, which equals 1:24. The effect of level change sub-cue <4> at the 5-second position has been applied to the relevant device levels in audio file sub-cue <2>.
- Audio file sub-cue <5> is due to start 1:26.64 after the start of the cue, so the count-down time is now 2.64 seconds.
- Audio file sub-cue <6> is due to start 7:15.00 after the start of the cue, so the count-down is now 5:51.00.
- Control send sub-cues <7> and <8> are not shown as they are now marked as completed as they were set to start earlier than 1:24.00. However, they have also been processed *unless* this control send device has the 'do not send earlier messages' property set. Processing earlier messages is important for situations where the skipped control sends may be muting or unmuting mics. See 'When applying M2T, do NOT send earlier Control Send messages for a cue' under Control Send Devices - MIDI for more information. Please note that

currently this property is only available for MIDI Out devices.

- Control send sub-cue <9> and also the remaining sub-cues will have their count-down time reduced by 1:24.00.

Important

The 'Move to Time' has now been applied, but SCS has now left the production in the **Pause All** state, so to activate the cue from this point, click **Resume All**. To cancel the whole operation, click **Stop All**.

Although the above example (cue 30) uses only sub-cues of that cue, SCS will also handle dependent cues. For example, if you have an audio file cue that has one of more other cues set to auto-start relative to that audio file cue, then the entire group of cues (and sub-cues) can be handled by a 'Move to Time' request for that audio file cue.

Pre-Requisites and Conditions

- "Move to Time' is only available with SCS Professional Plus and higher licenses.
- The 'Move to Time' keyboard shortcut (Ctrl+M by default) is not accepted if any cue is currently playing. A warning message will be displayed.
- 'Move to Time' is applied to the cue shown as the 'Next Manual Cue'.
- SCS currently restricts 'Move to Time' to cues and dependent cues of the following types:
    - Audio file
    - Level change
    - SFR
    - Control send
    - MTC

  The presence of any other cue types in the group will prevent that cue from being available for 'Move to Time' processing, and a warning message will be displayed if you press Ctrl+M for that cue.

Credit

Special thanks to Christian Peters for advising on this feature, and assisting with the design and testing.

11. Production Live Running

Setting Up For a Production

IMPORTANT: ALWAYS, repeat ALWAYS complete at least one dry run (a 'dry tech') of the *entire show* at least a week before the first performance or first dress rehearsal of any show. This is to give you the opportunity to identify and fix any issues ahead of time.

If you have a mixer that accepts audio via a USB connection, then please use that! You may have to install a supplied USB driver, but supplying audio via USB to your mixer avoids any issues regarding hum, noise, etc.

If you cannot send audio to your mixer via USB then your computer should be placed close to the sound board, keeping connecting cables as short as possible. This is very important if your sound card/interface has unbalanced outputs, which is the case with sound cards usually supplied with new computers. To get a sound card with balanced outputs you normally have to purchase a separate interface, and your computer dealer probably won't know what you're talking about! You could try some of the larger music stores, or search the Internet for a supplier near you. Setup is very simple. Just connect the required line-outs from your sound card(s) to the line-ins on your sound board.

If you are also using MIDI control to activate SCS cues from your sound or lighting board then once again it is likely that MIDI can be sent via a USB connection. If your board does not support that then you will need a MIDI cable to connect your PC to the relevant board.

Make sure that where you place your keyboard is not prone to having a script or some other item accidentally dropped on the keyboard. If you do not expect to use the keyboard, eg if you have no hotkey cues, then get the keyboard safely out of the way. If something is dropped on the keyboard during a performance then you are likely to have cues starting and/or stopping unexpectedly! That hasn't happened to me during a performance but it did happen - once - in rehearsals.

Make sure you have a suitable light for following the script.

Setting Up Your Video Projector For Videos and Still Images

To display videos and still images on a video projector, **the video projector must be configured in Windows as an extension of the Windows desktop**, eg as Screen 2. To set up the video projector (or another monitor) as an extension of the Windows desktop, right-click on the Windows desktop and select 'Display Settings'. You should then see a graphic depicting the current display configuration. If the graphic shows a single box containing 1|2 then select 'Extend these displays'.

SCS 11 supports up to 8 additional screens, and any such screen you use must be configured as an extension of the Windows desktop.

When SCS opens a cue file, if there is at least one video/image cue and the required secondary screen (eg video projector) is detected, then a maximized black borderless window is opened on the secondary screen, and any videos and images are displayed in that window. So the secondary screen remains black when not playing cues.

Playing Cues for a Show

Pre-Season / Pre-Show

Set up the computer and associated equipment as described in the previous section. In tech week (or before) you will need to determine the level required for each cue. Generally speaking, try to set your cue levels such that the sound desk faders can be run at 'unity' or '0'.

Determine a cue's level from the Edit window for the cue. The sound desk fader should be set to the optimum position as mentioned earlier, and then use the cue's 'Level' fader and 'Pan' control to set the required cue level and pan.

Bear in mind that a number of factors will affect the level of the sound reproduced. You need to ensure that the only variable will be the level of the fader. Other controls that can affect the level include:

- Gain control on mixer channel
- Equalization
- Group faders
- Master faders
- Stage Monitor levels

The size and placement of the audience will also have an impact on the sound level, unless you have a really super theatre with seats that absorb sound to about the same level as a person.

The above list is not exhaustive. The important thing to do is to run thru a few cues before every performance to make sure they sound right. Check all speakers.

On your PC, do the following:

- **Disable Windows sounds** (eg the sound played when Windows is started). To this, we recommend setting the Windows Sound Scheme to 'No sounds'. If you have Windows 11 than also clear the checkbox 'Play Windows Startup sound'.
- Pause the task scheduler. (If you don't know how to do this, select the Windows Help and enter: *task scheduler*.)
- SCS should preferably be the only program loaded and/or run during the show.
- Disable any programs that may kick into life during the show.

During the Show

You may need to dim your monitor, or alternatively try switching the SCS color scheme to 'SCS Dark'.

When you are running the cues, if you intend to use the right mouse button to start and stop cues then position the mouse pointer somewhere where you can see it easily.

SCS treats a mouse double-click as a single click. If it did not and you accidentally double clicked to start a cue that is followed by a stop cue, then the cue would stop straight away, and all you and the audience would hear would be a short burst of sound. To avoid this problem, a click is ignored if it occurs within 0.4 second of the previous click. If you want to reduce or increase this 'double-click timeout' then you can do that under General Options.

Status Line

If you use MIDI control to activate cues, then the Status Line at the foot of the screen initially displays the MIDI control method, and then displays information about MIDI control messages received.

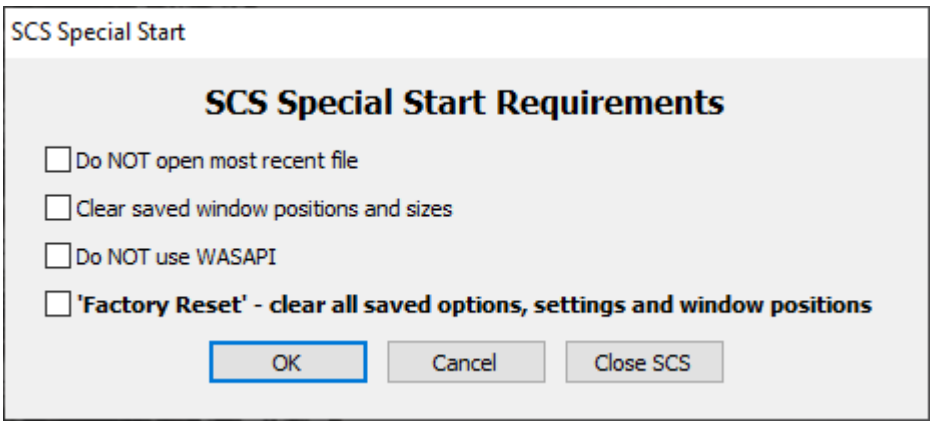
12. Troubleshooting

Problem Starting SCS

Special Start Requirements

Occasionally you may find you cannot get SCS started due to some issue with your machine or due to something that happened in your last run of SCS. One such scenario is if you drag the SCS main window to the secondary screen and then subsequently find the main window is hidden behind a black screen and you cannot get to it.

If you encounter an issue preventing you from successfully starting SCS then the next time you start scs11.exe **HOLD DOWN A SHIFT KEY** while starting the program. SCS will then display:



Do NOT open most recent file: SCS normally opens the most recent cue file when it starts, so if you are running several performances of a production then each time you start SCS your production's cue file will be opened automatically - unless you had opened a different cue file since the previous performance of your production. On rare occasions, opening the most recent cue file can be an issue, particularly if sound or MIDI interfaces you used for that production are no longer available. By selecting this checkbox you can prevent SCS trying to open that cue file - instead it will just start without opening any cue file.

Clear saved window positions and sizes: Whenever an SCS functional window is closed, SCS records the position and size of the window so that the next time the window is opened (which may be in a later session) the window is opened at the same position and size. This applies to almost all SCS windows, such as the main window, the editor, options, video monitor windows, export and import windows, etc. If you want to start afresh with the default window positions then select this checkbox. The issue of the main window being hidden behind the black screen of the secondary window can usually be cleared by selecting **Clear saved window positions and sizes**.

Do NOT use WASAPI: Some audio drivers seem to take a long time (several seconds) to initialize WASAPI, which results in SCS taking perhaps up to a minute to start. In extreme circumstances SCS may even freeze during initialization when trying to interrogate the device's WASAPI audio driver. If SCS does freeze during initialization, close SCS using Windows Task Manager. Now open SCS using this 'special start' feature, set this checkbox and click **OK**. (This setting is also available under Options - Audio Driver - DirectSound/WASAPI, but if SCS freezes during initialization then you wouldn't get the opportunity to get to the Options screen.)

'Factory Reset' - clear all saved options, settings and window positions: This resets everything except your 'Favorites', and (of course) doesn't affect any cue files or device maps. This is useful if you have taken over a project from someone else and want to start with a 'clean slate'. SCS saves in a 'preferences file' all your Options and Settings, window positions, splitter-bar positions, and a few other settings. If you select this checkbox and click **OK** then a message will be displayed asking you if you are sure you want to reset all options, etc. **Factory Reset** will delete the preferences file, and create a new clean file.

OK: SCS will then act on the checkbox(es) selected and then start SCS.

Cancel: Any checkboxes selected will be ignored and SCS will start normally.

Close SCS: Any checkboxes selected will be ignored and SCS will be immediately closed.

Video Problems

Video cues are only available with SCS Standard and higher license levels.

It has been said: "The great thing about standards is that there are so many to choose from". The field of video file formats is littered with "standards", some proprietary and some public domain. Research the MPEG format and you will find it contains many "parts" and this results in variations of the MPEG format. Handling the different formats is implemented via video codecs, but there are multiple codecs available for the same formats. The end result of this dog's breakfast is that it is difficult to include in SCS a video playback facility that can successfully handle all formats.

After a lot of research an experimentation, we have found the **TVideoGrabber (TVG)** playback library to be the most suitable for use with SCS.

Note: Before going further in trying to resolve video issues, make sure you have the latest **LAVFilters** installed and that you are using **TVideoGrabber (TVG)** as the video playback library in SCS. This combination has been found to work very well with all video file formats we've tried. If you have done this and still have video playback problems, then read on, or contact support@showcuesystems.com.

Here are some problems that have been reported by users, and suggestions on how to overcome them.

SCS fails to pre-load a video cue

This can occur if the video playback library runs out of resources to pre-load all the video files it is trying to load. This is most likely to occur if you are using video hotkey cues because SCS tries to pre-load files for all hotkey cues so they are ready for 'instant' playback. If this is the case in your production then set the property **Do NOT Pre-Load Video Hotkey Cues**. You can set this property in Production Properties - Run Time Settings. After saving your changes, close and restart SCS. Although there may now be a slight delay in starting a video hotkey cue, tests have shown that this delay is quite small.

Loss or reinstatement of a secondary screen

If you lose connection to the secondary screen (eg due to a faulty HDMI cable) then SCS will attempt to recover from this situation. It's not a 100% guaranteed solution, but SCS will (a) detect if a screen has been disconnected or connected, and (b) attempt to reposition and resize the video/image targets. The following warning message will be displayed in the status line of the main window: "The number of connected screens has changed. SCS will try to recover but we recommend you close and restart SCS."

You will be able to access the 'close window' X marker, etc, as well as the SCS toolbar and/or menu items.

The checks on screens being disconnected or connected are not made if your production does not use any secondary screens (eg if there are no video/image cues).

Video doesn't show on second screen

Microsoft has provided a number of Video Renderers over the life of Windows versions. If you find that your videos do not play on the second screen, then try changing the **Video Renderer**. You change this setting in Options and Settings - Video Driver Settings.

I have a Matrox DualHead2Go/TripleHead2Go and I can only configure this as a stretched display

Matrox tech support have advised us that their GXM units can only configure the connected displays as a single stretched display unless you have a Matrox graphics card that supports independent mode. To get around this limitation you can go to Options and Settings - Video Driver Settings in SCS and configure the stretched display as independent displays for the 'Screen' in Video/Image Cues.

Fixing Stuttering or Skipping Audio

The troubleshooting information below is only relevant when using the BASS audio library as your Audio Driver.

If you are encountering stuttering or skipping audio, this is probably due to "buffer underrun", which means the program is not filling the playback buffer fast enough from disk. You should find this will be fixed if you choose not to use the BASS mixer. The default playback buffer size when using the internal mixer is 300ms (it has to be short), but when not using the internal mixer the default playback buffer size is 5000ms. Set the required options as follows:

- Click the *Options* toolbar button
- Select *Audio Driver Settings / DirectSound/WASAPI*
- Select *Do NOT use BASS mixer*
- Make sure the buffering and update options are set to *SCS default...*

Then click **OK** to save the changes, and close and restart SCS.

ASIO

If you are using ASIO outputs and your sound card does not have a non-ASIO driver (ie does not have a DirectSound/WASAPI driver) then see ASIO Problems.

ASIO Problems

ASIO is only available with SCS Standard and higher license levels.

The troubleshooting information below is only relevant when using the BASS audio library as your Audio Driver.

Note: ASIO problems should be a thing of the past! As from SCS 11.1.3 a new version of the BASS audio library was included which has an 'asynchronous file reading and buffering' feature. This new feature, and the associated SCS coding, appears to have completely eliminated glitches in ASIO playback. If, however, you do have problems with ASIO playback then please consider the following *in order*.

Increase the ASIO Buffer Size

The ASIO buffer size is set in your ASIO driver's control panel - it is not set by SCS, although SCS does use the buffer size internally. Some ASIO drivers have a very small default buffer size. For example, the *Dante Virtual Soundcard* ASIO driver has an default buffer size of 128 samples. If your sample rate is 48000 samples per second then this provides only about 2.7ms for SCS to populate the ASIO buffer from internal buffers. In the *Dante Virtual Soundcard Control Panel* you can select other buffer sizes. Select the maximum setting, which is 2048 samples (based on information in the version 3.0.x User Manual). For other ASIO devices, just try increasing the current ASIO buffer size if you are having playback problems, but not necessarily to the maximum setting as some ASIO drivers have very high maximums which could seriously impact on latency.

Increase the File Reading Buffer Length

Try increasing the File Reading Buffer Length - see Options and Settings - Audio - ASIO (Using BASS).

Do NOT use a network drive for your audio files

SCS uses a higher File Reading Buffer Length for audio files located on network drives, but even with this higher length you may still get glitches in playback if your audio files are on a network drive. If you still experience glitches then transfer your audio files to a local drive. The preferred way to do this is to collect your files into a **Production Folder** as explained under Collect Production Files.

Keep your Audio Files on a Solid State Drive (SSD)

If you encounter playback problems with ASIO (eg glitches) then keeping your audio files on a solid state drive (SSD) may help. With an SSD or an SD card (which is basically an SSD) there are no issues with spin down, and minimal latency.

Important Note about ASIO

If you are using ASIO outputs on your production computer (eg your theatre's PC), make sure you run through your cues on that machine *before* your first rehearsal, so you can sort out any buffering issues. The settings you may have had on your design computer (if it's not the same computer) may be different to those required on the production computer.

Outputs 3/4 and 5/6 Swapped

There is always a potential for outputs 3/4 and 5/6 to be the wrong way round on a 6- or 8-channel sound card. This is not a bug but an inconsistency in output routing standards. For example, on a 7.1 sound card the outputs may all be correct, but on another 8-channel card that's not described as '7.1 surround sound' but as '8 channel multiple output' or similar, then outputs 3/4 and 5/6 may be the wrong way round.

If you find your outputs 3/4 and 5/6 are the wrong way round then there is an option you can set in Options and Settings - Audio Driver - DirectSound/WASAPI. This is labeled **Swap speakers 3/4 with 5/6**. If you change this option you may need to close and restart SCS for this to take effect. Please note that this option is only used for 6- and 8-channel sound cards as these are the only configurations that have the problem. Also, it is not used with ASIO outputs or with the SM-S audio driver.

Linked Audio Files Out Of Sync

The troubleshooting information below is only relevant when using the DirectSound/WASAPI as your Audio Driver.

If you have linked audio files that are not playing in sync then:

- Follow the recommendations set out under Linked Audio Files.
- If that doesn't help, set the **Link Sync Point** Audio Driver Option to, say, 20 milliseconds. See Options and Settings - Audio Driver - DirectSound/WASAPI for more information.

13. Credits, Terms and Conditions, Registering

Credits

Show Cue System (SCS) (originally known as *Sound Cue System*) was designed and written by **Mike Daniell** of:

Show Cue Systems Pty Ltd
PO Box 5037, Victoria Point,
Queensland 4165, Australia.

Australian Business Number: ABN 40 219 268 559

Latest information on SCS can be obtained from www.showcuesystems.com.

Design and programming assistance also provided by **Dee Ireland**.

SCS would not have been written and developed without the cooperation of the directors of the former **Harvest Rain Theatre Company** in Brisbane, Queensland, Australia. My thanks to **David** and **Robbie Parkin**, and also to the many actors and crew who have been a great encouragement to me.

My thanks go to the many users who have contributed ideas for new features and to those who have assisted in 'release candidate' testing.

The code for importing cues from an exported ETC show file is based on ideas and code supplied by **Roger Forsey** and is used with his permission. (ETC: Electronic Theatre Controls - www.etcconnect.com.)

Several users contributed ideas for the Level Envelope design, but special thanks go to **Christian Peters** for his suggestions and for his comprehensive testing of this feature.

The Network control of various projectors requires SCS to handle a login dialog. Thanks go to **Mikk Mengel, Brian O'Connor** and **Jörg Deitz**, all of whom provided useful information and assisted in testing the new code.

The "Stop Watch" idea based on the SCS Production Timer was supplied by **Michel Windogradoff**.

The design and testing of DMX Lighting Cues has been significantly helped by **Bruce Gray**, **Lluís Vilarrasa** and **Michel Windogradoff**.

The X32 MIDI message formats included in the 'control send remote device' file were built and tested with the assistance of **Dave Korman**.

Demo File Credits

The original demo cue file was prepared by **Mike Daniell**, and the 'v2' version includes additions by **Dee Ireland**.

In the demo the 'Intermission' music items *Lazy Boogie*, *Movement 1, Swing Fling* were composed and performed by **Larry Gosmeyer** and are used with his permission.

The *Tiger Island* music in the demo is an extract from the Tiger Island Preshow music that can be heard at Dreamworld's Tiger Island, Gold Coast, Queensland, Australia. The music was composed, arranged and produced and is copyright © 2004 by **Wesley Taylor** (www.grecords.com.au) in association with **Mark Eady** of Ozworks Entertainment Pty Ltd, and is used with Wes Taylor's permission.

The opening overture music is by kind permission of **Boxtree Productions Ltd**, boxtreeproductions.co.uk

The opening voice overs are by kind permission of **Mr B Fairchild**.

The videos at the end are also by kind permission of **Boxtree Productions Ltd** from their touring family friendly show *King Arthur*.

Spanish and Catalan translations by **Lluís Vilarrasa**.

French translation by **Michel Winogradoff**.

Italian translation by **Davide Bellucci**.

German translation by **Uwe Hinkel**.

Japanese translation by **Masashi Doi**.

Polish translation by **Krystian Kobus**.

Chinese translation by **广州龙音视界科技服务有限责任公司**.

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Tempo and pitch adjustments are processed using BASS_FX when the selected audio driver is DirectSound, WASAPI or ASIO (using BASS). BASS_FX is copyright © Arthur Aminov.

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TVideoGrabber (TVG) is copyright Datastead (www.datastead.com)

DMX control uses code supplied by Future Technology Devices International Ltd (www.ftdichip.com) and ENTTEC (www.enttec.com).

SCS 11 uses code based on the expat XML parser, which is licensed under the MIT license which can be viewed here.

SCS uses the MediaInfo library.

Selected SCS installation files contain LAVFilters written by Hendrik Leppkes and included with his permission.

ASIO is a trademark of Steinberg Media Technologies GmbH.

VST PlugIn Interface Technology by Steinberg Media Technologies GmbH, implemented in SCS using software supplied by Bjoern Petersen Software Design'n'Development (www.silverjuke.net) and BaseHead LLC (www.baseheadinc.com).

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Wave file editing software referred to in this documentation is **GoldWave**, (copyright © Chris S. Craig). Information on GoldWave can be obtained from goldwave.com.

For information on the **Matrox** GXM's (Graphics eXpansion Modules) referred to in this documentation, see Matrox Grahics eXpansion Modules.

And finally, thank you to all registered users, because without your registrations it would not be possible to continue developing SCS.

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SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Terms and Conditions

IMPORTANT: ALWAYS, repeat ALWAYS complete at least one dry run (a 'dry tech') of the *entire show* at least a week before the first performance or first dress rehearsal of any show. This is to give you the opportunity to identify and fix any issues ahead of time.

Single User Licenses

The 'single-user' license allows for the use of SCS by one person or position, not necessarily on a single PC. It is understood that many SCS users will set up cues on their PC at home and then transfer the files to a separate PC at the theatre. That is an acceptable interpretation of the 'single-user' condition. It is also acceptable under the 'single-user' license to run SCS on one back-up PC as well as on the production PC.

Loading SCS on to computers not owned by you

If you are using a computer not owned by you to to run SCS and are loading a copy of SCS owned by you to run a show for another group, you must uninstall the program after use. If it is left on their computer others in that organization may assume it is theirs, continue to use it and attempt to change the details of the owner to their own.

Multi-User Licenses

The following multi-user licenses are available: 2-user, 3-user, 4-user and corporate. A multi-user license is required if you are running more than one production concurrently. For example, if you have SCS installed on 4 computers (apart from backup) then you will need at least a 4-user license. A corporate license supports the installation of SCS on any number computers owned or leased by the registered user (which may be a corporation). Multi-user licenses are available for Standard licenses upwards.

Student Licenses

For educational institutions that have purchased an SCS license, student licenses are available at no additional cost. Student licenses are time-limited (normally to the end of the academic year) and are intended to be free for students to install on their own computers, provided they are bona fide students of courses that teach SCS. Please email support@showcuesystems.com with your requirements to arrange student licenses.

Update Plans

The license fee entitles you to free updates for 12 months from the date of purchase. After 12 months you may purchase an Update Plan which will entitle you to download updates for another 12 months. A 12-month update plan costs 20% of the current cost of the license you have (eg if you have a single-user SCS Professional license then the cost of a 12-month update plan will be 20% of the cost of an single-user SCS Professional license at the time you purchase the update plan). There is no obligation to purchase an update plan - you may continue using the version of SCS you have for as long as you like.

License Levels

The following license levels are available: Lite, Standard, Professional, Professional Plus and Platinum. See Feature Comparison for a comparison of the functionality available with these levels, as well as the functionality of the Demo.

Disclaimer

Plain English

The Show Cue System (SCS) has been used successfully in many productions, but the system is supplied 'as is' with no guarantee that it meets your needs. The author takes no responsibility for the consequences, financial or otherwise, should the software fail to perform or fail to perform satisfactorily.

Legalese

No warranty. To the maximum extent permitted by applicable law, the author disclaims all warranties, either express or implied, including, but not limited to, implied warranties of merchantability and fitness for a particular purpose, with regard to the software product, and any accompanying hardware.

No liability for consequential damages. To the maximum extent permitted by applicable law, in no event shall the author be liable for any special, incidental, indirect, or consequential damages whatsoever (including, without limitation, damages for loss of business profits, business interruption, loss of business information, or any other pecuniary loss) arising out of the use of or inability to use the software product, even if the author has been advised of the possibility of such damages.

Registering SCS

Terms and Conditions

Please read our Terms and Conditions (also available on the web site) for information about single-user licenses, multi-user licenses, student licenses, update plans, license levels, and a disclaimer regarding the use of SCS.

Payment and Registration

You can pay for and register your copy of SCS online at https://www.showcuesystems.com/cms/purchase. This provides a secure method of payment using *PayPal*. If you are a registered user and wish to upgrade your license, you can also do this via the web site. Details of upgrading your license are available at https://www.showcuesystems.com/mem_upgrades.php

If you prefer not to make payments over the Internet, contact support@showcuesystems.com indicating the currency you wish to use, and we will advise you on alternative methods of payment.

When your order and payment have been received you will be emailed further details.

SCS Agents

You may also purchase SCS from one of the registered agents listed on our Purchase web page.:

Thank you for using SCS.

Recent Changes to SCS

Some features may only be available in **SCS Standard** and/or higher license levels.

Version 11.9.8 (January 2023)

New or changed features

- The Bulk Edit screen now shows the Activation method (eg Manual, 1.00 ae Prev, etc) for all field types to be changed, except for 'Audio Levels' which continues to show Device in that column.
- The SoundMan-Server option to force audio processing onto a single processor has been removed.

Bugs fixed

- Bulk Edit was not properly handling clearing (setting to 0) Fade In and Fade Out Times.
- If an MTC sub-cue is linked to an Audio File cue or sub-cue, then on 'Stop All' the Audio File would continue playing, albeit silently. On activating something like starting the Editor, the Audio File playback would then be heard. The Stop All processing should not have resumed playback.
- The SoundMan-Server processing in SCS did not handle multiple ASIO interfaces correctly, especially regarding determining the sample rate to be passed to SoundMan-Server.

Version 11.9.7 (December 2022)

New or changed features

- The keyboard double-click timeout now also applies to network cue control 'Go' commands.
- The SCS Scribble Strip feature available for selected Control Send Remote Devices (such as Behringer SQ series mixers) now supports naming scenes.
- Support for *X32 Theatre Control* was added in SCS 11.8.5. This product has been re-launched as *TheatreMix*, so the corresponding descriptions have been changed in SCS. *TheatreMix* supports more console brands and models. No changes are required to your cue files.
- If you create a cue file on, say, your home computer, and then load this cue file the *first time* onto your theatre computer, then previously you would receive a message from SCS that no device map file could be found for that cue file and that a new device map file would be created. If no device map file for that cue file can be found on that computer, SCS now first of all looks for a compatible device map file and uses that to create the new device map file. 'Compatible' means that device types and names in the cue file must all exist in the device map. This also extends to fixture codes in lighting devices. SCS sorts the device map information to assist in locating the 'best match' device map. This enhancement means that your new cue file will inherit the same device map assignments, such as audio driver, audio device physical device assignments, lighting fixture DMX channels, control send ports, etc.

Bugs fixed

- Toggle HotKeys were not working for SFR cues.
- When a Note HotKey was released, it did not stop a counting down sub-cue of that HotKey Cue.
- An SFR to 'stop all earlier cues' didn't complete a sub-cue of an earlier running cue if that sub-cue had not yet started.
- Manually changing the pan setting of an audio file cue in the main window would set the level to -INF.
- HotKey Banks were not handled correctly, due to a bug in the 'Step' HotKey processing, which was added in 11.9.1.
- Double-presses of HotKeys is again supported. This had been disabled in SCS 11.9.5 in the code that prevented accidental double-presses of the space bar.
- MTC Full Frame messages may have had an incorrect SysEx channel generated.
- The Cue Panel's Audio File displayed current position would not change if the Audio File Cue (or Sub-Cue) was linked to an MTC Cue (or Sub-Cue). The audio file and MTC both played correctly and in sync - it was just the displayed current position of the audio file that didn't move.
- In 32-bit versions of SCS, a 'division by zero' error could occur on loading some large images. This was due to the underlying library failing to obtain the dimensions of the image, which only occurs under some conditions, such as there being several large images to load. SCS now catches the condition that caused the error and reports that the file cannot be opened. This problem doesn't seem to occur in 64-bit versions.

Version 11.9.6 (November 2022)

New or changed features

- When creating or editing an Audio File Cue or a Playlist Cue, the 'Other Actions' button now includes options to trim all below -75dB or -60dB from the start/end of the file, in addition to the previously supported trim all below -45dB or -30dB levels.
- MIDI Control Send Cues that use a Behringer X32 'Remote Device' can now also set Channel and DCA colors (sending scribble strip names is not yet supported).
- Network Control Send devices in Production Properties may now be marked as 'Connect when required'. This will cause the device to be connected when it is first required by a Network Control Send Cue, if the device is not immediately available.

Bugs fixed

- Fixed the incorrect MIDI values sent for 'Go Scene', 'Go Snippet' and 'Go Cue xxx' in MIDI Control Send Cues that use a Behringer X32 'Remote Device'.
- A memory error could occur on copying cues.
- A memory error could occur if a video/image cue was started in the main window, then stopped in the editor, and then the browse button in the editor used to select another video/image cue.
- Under some conditions, an Audio File Cue with current level of -INF would play at the 'Minimum Audible Audio Level' set in Production Properties / Run Time Settings, eg at -75dB.
- The Production Property 'Default Screen for new Video/Image Cues' was not being applied, so the overall default screen (2) was always applied.
- For Image Cues, the Rotate settings 'Flip Horizontal' and 'Flip Vertical' were not working due to a related change made in an earlier version of SCS. (They may have been working under some conditions.)
- The fix in 11.9.5 to prevent an accidental double-press of the space bar activating the next two cues had the side-effect of also imposing the 750ms delay on other keyboard commands, such as up-arrow and down-arrow for moving through the cue list. The 750ms delay is no longer applied to cue list navigation keyboard commands.
- The video/image display monitor on the main screen may stay black if the first video/image to be displayed has a fade-in time.

Version 11.9.5 (August 2022)

New or changed features

- MIDI Control Send device support for 'Behringer X32 Digital Mixer' as a 'Remote Device' now includes GoCue, and the number ranges for GoScene and GoSnippet have been corrected (0-99 instead of 1-100). Additional fader levels are also supported, including AuxIn, FXRtn, and others.

Bugs fixed

- The Audio Driver Option 'Use BASS Mixer' must be selected to display the Faders window if the audio driver is DirectSound or WASAPI. SCS was not applying this check for WASAPI, resulting in possibly incorrect channel levels if the BASS Mixer was not being used.
- An accidental double-press of the space bar for activating the next cue could result in the next two cues being activated. SCS now checks for at least 750ms between key presses for activating the next cue.

Version 11.9.4 (August 2022)

New or changed features

- MIDI Control Send devices now support 'Behringer X32 Digital Mixer' as a 'Remote Device'. Note that you will need an X-UF or X-USB expansion card installed in the X32 to use this feature.
- For SCS Platinum users, the maximum number of Control Send devices supported in Production Properties has been increased from 16 to 64.

Bugs fixed

- When opening the recovery file, the message 'The cue file has been changed by another application' may be displayed.
- Memo Cues loaded from a template file would lose their formatting.
- When editing an MSC Control Send Cue, the 'Command Format' could not be changed.
- If an Audio File Cue is linked to another Audio File Cue and the second of those cues is disabled, the link was not broken and playing the first cue would also play the disabled cue. SCS now checks cue and sub-cue 'Enabled' states when linking audio files.
- Earlier SCS 11.9 releases did not allow an SFR cue to select a 'Go To' Cue as a cue to be stopped.

Version 11.9.3 (July 2022)

New or changed features

- None

Bugs fixed

- A memory error could occur on entering an OSC command in a Control Send cue and then clicking on another sub-cue in the editor.
- When checking for existing devices in a device map, if a required device description was not found but a 'similar' description was found, then SCS may have used that. This was due to a now-obsolete work-around for changes to device descriptions that occurred with some device drivers and/or Windows several years ago. That SCS work-around has been removed so an exact description match is now required when SCS searches for existing devices.
- When entering or changing a Cue number, if the entered number has already been used then an 'already exists' message will be displayed. However, under some conditions this message would repeatedly display after clicking OK. This applied particularly when entering or editing a video/image cue.
- You could not change the Activation Method of a callable cue if another used callable cue existed.
- If you selected 'Large' as the 'Video Monitor Size' in Options and had no secondary screens attached, then any image cues set to cross-fade would only partially fill the video monitor panel.

Version 11.9.2 (June 2022)

New or changed features

- In 'Print Cue List' you may now choose 'Manual Cues Only'. This can be useful if the printed cue list is to help you run the cues for the show. (This feature was scheduled for 11.9.1 but was inadvertently omitted from that release.)
- The 'Set Position' cue type now supports the position type 'Before End' (for time before the 'end at' position of the target cue), and also supports 'all playing audio cues' and 'all playing video/image cues'.

Bugs fixed

- When changing the Operational Mode from a menu item under the main window's 'View' toolbar button, any resultant change in the columns displayed in the main window's cue list were not applied for cues completed at the time of this change.
- DMX interfaces (eg ENTTEC DMX USB PRO) with a high serial number were not recognized in earlier releases of SCS 11.9.
- Earlier SCS 11.9 releases did not accept MIDI Cue Control of hotkey cues.
- Earlier SCS 11.9 releases failed to process the cue Activation Method 'External Fader'.

Version 11.9.1 (May 2022)

New or changed features

- In Production Properties / Video Capture devices you may now select the video format, eg 'MJPG 1280x720 (5 to 30 fps)', and Frame Rate. Setting these may improve video capture performance.
- In Options / General, the maximum values for 'Max. No. of Audio Files to Pre-Open' and 'Max. No. of Video/Image Files to Pre-Open' have both been increased to 99. The default values remain unchanged, at 40 and 20 respectively.
- In the Editor's display of Audio File Cues, there are now '+' and '-' buttons under Audio Devices to enable you to easily insert or remove audio devices from the cue.
- A new type of Hotkey has been added: 'Step'. This enables you to have multiple cues assigned to the same hotkey, and SCS will 'step' through those cues one at a time for each press of the hotkey.
- The 'Page Up' (PgUp) and 'Page Down' (PgDn) keys may now be used for Hotkeys as they are the only keys supported by some wireless presenter clickers. However, if you use PgUp or PgDn for a Hotkey then this will override the corresponding action on the main cue list.
- The number of cue entries supported in a single Enable/Disable Cue has been increased from 5 to 10.
- Animated images (eg animated GIF's) may now be faded in, faded out, and cross-faded.
- The Operational Mode (Design, Rehearsal or Performance) can now be changed from the main window using a new menu item under the 'View' toolbar button.
- Chinese is now available as a language choice in Options / General.
- ~~In 'Print Cue List' you may now choose 'Manual Cues Only'. This can be useful if the printed cue list is to help you run the cues for the show.~~ (Now included in 11.9.2.)
- When using Cue Markers, 'Prev Cue Marker' and 'Next Cue Marker' are now available via a MIDI Cue Control device.
- The 'Test Tone' feature in Production Properties / Audio Output Devices now supports pink noise as well as sine wave. The feature also now enables you to pan the test if the device is assigned two channels.

Bugs fixed

- Fixed a bug in 11.9.0 that affected the creating and editing of MIDI Show Control (MSC) Control Send Cues.
- When editing an Audio File Cue, the Trim control was not processed correctly.
- When editing an Audio File Cue that uses a WAV file that contains embedded cue points, it was not possible to move the end marker back before the first embedded cue point.
- In the VST Plugins window, trying to insert a new plugin could cause a memory error.
- Rotating a still image could fail, resulting in a black image.
- Importing Lighting Devices from another cue file could cause a memory error.
- A Playlist Cue set to repeat would not repeat if the run mode is non-linear.
- Cues set to auto-start relative to a previous cue may run more than once if the run mode is non-linear.
- If a MIDI Time Code (MTC) sub-cue is linked to an Audio File sub-cue, then under some conditions the MTC sub-cue may not start when the linked Audio File sub-cue starts.
- An Audio File sub-cue or a Playlist sub-cue with a sub-cue start time of 'on cue marker' would start as soon as the cue itself was started.
- Fixed a bug in 11.9.0 that caused MIDI Control Send messages for Message Type 'Program Change (1-128)' to be processed incorrectly.
- A Recall Scene Control Send message to be sent to an Allen&Heath SQ series 'MIDI Remote Device' would always recall scene 1.
- Fixed some display size issues with Video/Image Cues.
- Fixed a bug in 11.9.0 that failed to ignore keyboard auto-repeats for commands like 'Go' and hotkeys.
- When two or more sub-cues of a cue display images simultaneously to separate screens and fade-in times are specified, then the fade in times of the second and any subsequent image sub-cues may be ignored and the image be displayed immediately.
- A Video sub-cue linked to an Audio File sub-cue may not play the video, even though the progress slider tracks apparent progress.
- Fixed a bug in 11.9.0 related to Audio File cues with cross-faded loops and also with a set number of times for the loop to execute. The loop counter would be incremented twice per loop.
- The Editing Option 'Max. File Length for Audio Graph File Scan' was not fully implemented.

Version 11.9.0 (February 2022)

New or changed features

- You can now set a non-default **Playback Rate**, **Tempo** or **Pitch** for an Audio File sub-cue. Playback Rate affects both Tempo and Pitch, whereas setting Tempo will affect Tempo only and leave the Pitch unchanged, and setting Pitch will affect Pitch only and leave Tempo unchanged.
- The Action of a Level Change sub-cue now allows you to select **Playback Rate**, **Tempo** or **Pitch** if the target sub-cue is an Audio File sub-cue. This enables you to change the Playback Rate, Tempo or Pitch sometime after the start of playback of that Audio File sub-cue. A Duration property is also available so you can, for example, slow down or speed up playback over several seconds.
- **Callable Cues** may now have parameters which are passed when a **'Call Cue'** cue type calls that callable cue. Currently only Lighting Cues and MIDI Control Send Cues accept parameters, and these only for selected fields. However, other cue types will be enhanced later to support parameters.
- If a cue has an Activation Method of MIDI Time Code then you can now have sub-cues of that cue set to start by **'Relative Time Code'**.
- If an Audio File cue has Cue Markers or Cue Points then subsequent sub-cues within that same cue may now be set to start **'On Cue Marker'**, specifying a cue marker (or cue point) within that audio file sub-cue.
- **Animated GIF's** are now supported in Video/Image Cues. Some restrictions apply.
- When using the Primary/Backup feature, the Backup did not report an error if the connection to the Primary failed. This could occur, for example, if the Backup's 'IP Address of Primary' was incorrect. SCS now reports if the connection fails, and one of the options provided is to change (ie correct) the IP Address that the Backup is trying to connect to.
- When using the Primary/Backup feature, SCS now displays a warning message in the Backup if the Primary is running a different version of SCS.
- When using the Primary/Backup feature, there is now an option for the Backup to ignore incoming network Cue Control messages (except for those sent by the Primary).
- Lighting fixtures may now be assigned multiple DMX Start Channels. This is primarily designed for audience lighting in venues with separate DMX channels for audience lighting in different areas of the theatre, such as stalls, upper and lower balconies, etc. If all performances will require the same selection of audience lighting DMX channels, then you can create a single 'fixture' for audience lighting, and assign all of the associated DMX channels to this fixture.
- The editor panel for editing Lighting cues now has a fixture-level 'Include' checkbox, enabling you to quickly include or exclude all channels for the selected fixture. This is useful if you just want to include a few channels of a multi-channel fixture - just exclude all channels and then include then few you need.
- DMX channels are no longer blacked out (set to zero) on closing SCS.
- If you have Lighting Cues and you manually select the next cue in the main window, eg by clicking on a cue in the cue list, SCS attempts to calculate the DMX values that would be active immediately prior to your playing that next cue. This is ideal for rehearsals if the director wants to rehearse a part of a scene - possibly several times. For more information, see 'Run Time Note' under the Lighting Cues topic.
- MIDI Control Send support for various external ('remote') devices such as Allen&Heath Qu and SQ mixers (added in 11.8.5) has been enhanced to include extra controls, including setting channel FX and DCA levels.
- A new Operational Mode has been added: **Rehearsal Mode**. You can have different Display Options and Cue List Columns for Design Mode, Rehearsal Mode and Performance Mode.
- A Display Option has been added to 'Request Confirmation of Cue Click in Main Window'. If set then when you click on a cue in the main window's cue list, SCS will ask you to confirm the action, with an option to not ask again in the current session. This has been added to reduce the likelihood of accidentally 'clicking' on a cue during a live production, an issue that can easily occur if the laptop's trackpad has not been disabled. This option is set by default for Rehearsal Mode and Performance Mode, but not for Design Mode.
- In Performance Mode the default Display Option for Toolbar Buttons has been changed from 'Hide toolbar' to 'Performance buttons only'. 'Performance buttons' are Go, Pause, Stop, Fade, Load, Options, View and Help.
- As previously advised, Live Input Cues require SoundMan-Server. However, it is now possible to assign a Dummy Live Input physical device to Live Input logical devices, which can then be used with any SCS audio driver, such as DirectSound. This will enable you to create and edit Live Input Cues on a computer that does not have SoundMan-Server installed or loaded, although you obviously will not be able to fully test these cues when using dummy devices.
- The font used for the Editor's Cue List can now be selected in Options / Editing Options. The default is font size 9 normal. Previously the font size was 9 bold and could not be changed.
- There are now Display Options to show a Cue's MIDI Cue Number in 'Next Manual Cue' and the Cue Panels.
- 'Print Cue List' now shows the calculated total length of all cues selected for printing.

Version 11.8.5 (August 2021)

New or changed features

- Added MIDI Control Send support for various external ('remote') devices such as Allen&Heath Qu and SQ mixers, Yamaha LS mixers, and others. See Control Send - MIDI Remote Device for details.
- Added *X32 Theatre Control* to the list of Remote Devices supported under Production Properties / Devices / Cue Control - Network In, and / Control Send - Network Out.
- The message box that was displayed when SCS loses focus has been dropped. SCS will now just display a warning message in the status line of the main window, although even that may be suppressed (as before) by a Production Property Run Time setting.
- In Production Properties / Fixture Types, the 'Fixture Type Detail' and 'Fixture Type Channels' panel tabs have been combined to make it easier to see all the details at once, and to reduce the likelihood of omitting significant channel details.
- Lighting Cues now support different 'fade up' and 'fade down' times, Previously there was just a 'fade time' that was used for both 'fade up' and 'fade down'. Cross-fades can be improved by entering a longer time for the fade down.
- A new Cue Activation Method of 'External Fader' has been added, initially for Lighting Cues. This enables the Lighting Cue to be activated, de-activated, faded up and down manually under the control of an external fader such as a nanoKONTROL MIDI controller, or a Behringer BCF2000 or BCR2000. See Lighting Control by External Fader for details.
- Improved the performance of image cues in cue files that do not contain any video fades.

Bugs fixed

- In Production Properties - Fixture Types, leaving the Description blank for a Fixture Type when the Name had been entered would correctly throw the error 'Description must be entered', but SCS would then loop throwing this error so you could not then enter a Description to correct the problem.
- Under Production Properties - Audio Output Devices, setting the 'For LTC (Linear Time Code) Cues' checkbox was not processed correctly. (NB this checkbox is only displayed for SCS Platinum users, and also requires SoundMan-Server to be installed.)
- Reducing the size of the main window to hide the VU meters could throw an error message if the Audio Driver is SoundMan-Server.
- Certain multi-monitor configurations were not handled correctly by SCS and could cause a 'division by zero' error.
- A sub-cue relative start that references the previous sub-cue (eg 2.00 after end of previous sub-cue) would fail to start if the previous sub-cue was disabled. The test now checks for the previous *enabled* sub-cue.
- 'Stop All (Esc)' could incorrectly set the 'next manual cue' if an earlier callable cue exists.
- There was a bug in the processing of blackouts in Lighting Cues, which could prevent some dimmable channels from being blacked out.
- Some video/image cues would fail to display as the target display control had not been made visible.
- 'Fade All' did not fade the audio of a playing video.
- When adding a Live Input 'device', the 'Test Live Input' button had no effect until the cue file was saved and reloaded.
- The 'Fade All' enhancement added in 11.8.3 had not been applied to SoundMan-Server audio output devices.
- Fixed a bug in editing old-style Lighting Cues, ie where the Entry Type is 'DMX Items'.
- Using the 'Display DMX Values' window could cause SCS to freeze if SCS needs to resize any part of the screen when displaying DMX values.
- Renumbering cues could leave some sub-cue descriptions with leading Z's in an embedded sub-cue label, if they referred to another sub-cue within the same cue. For example, this could occur with a Level Change sub-cue that applies to an Audio File sub-cue within the same cue.
- A thread conflict issue sometimes affected the display of still images with fade in times specified.
- Audio file cues with very short fade-in times may not have fully faded in.
- In Lighting Cues, some DMX channels could fail to be set due to a bug in blackout processing.

Version 11.8.4.1 (March 2021)

New or changed features

- A 'Move to Time (M2T)' property has been added to MIDI Control Send Devices in Production Properties to indicate that when applying M2T then control send messages set to fire *before* the nominated M2T should not be sent.

Bugs fixed

- A few bugs in M2T processing have been fixed.
- An Audio File Cue that has been faded out and hibernated may not have faded in correctly when the hibernated cue was resumed.
- A Lighting Cue could sometimes incorrectly blackout other DMX channels.

Version 11.8.4 (March 2021)

New or changed features

- A 'Move to Time' feature is now available, which is designed for use during rehearsals (not during live performances). This feature allows you to start a cue part-way through, and SCS will synchronize any sub-cues and associated auto-start cues so that the cue may be correctly started from that point. See 'Move to Time' in the Help for more information. ('Move to Time' is only available under SCS Professional Plus and higher licenses.)
- When a 'Go To' cue is played, the cue list will be repositioned at the target cue and by default that cue will then be started. There is now an option in the 'Go To' cue properties to indicate that the target cue must NOT be started.
- Up to *ten* Time Profiles may be set up in Production Properties. The limit was previously four Time Profiles.
- Network Cue Control now supports an OSC command to set the fader level of a specified Audio Output device.
- Some timing improvements to MTC Cue processing.

Bugs fixed

- The checkbox "Do not blackout other *active* channels when using 'Live DMX Test'" has been changed to "Do not blackout other *dimmable* channels when using 'Live DMX Test'". Previously, if this checkbox was left clear (which is the default) then the channel values for any non-dimmable channels would be set to zero.
- Fixed a bug in 11.8.3.4 that could incorrectly calculate the fade in time for an Audio File cue set to start part-way through the file.
- If a Playlist Cue has 'Wait' transitions, then when the first of these transitions occurred the cue would disappear from the main window's cue panels, even though the cue continued to play successfully.
- If a Playlist Cue has 'Wait' transitions and a Level Change Cue for that Playlist Cue is activated during a 'Wait' time, then the Playlist Cue could be set to the wrong level and/or the Level Change duration may have been ignored.
- Clearing the Display Options checkbox 'Show Master Fader' had no lasting effect.
- Some bug fixes in MTC Cue processing.

Version 11.8.3.4 (January 2021)

New or changed features

- The main window's control panel main now be placed at the bottom of the screen if required. The control panel position can be changed under Display Options.

Bugs fixed

- In Video Driver Settings, selecting a Video Renderer other than the default was ignored, so the default video renderer was always applied.
- Lighting Cues set up as toggle or note hotkey cues would clear all DMX channels on toggle off or note off, instead of just reinstating the pre-hotkey DMX values for the DMX channels specified in that cue.
- When a chase Lighting Cue is running, starting another Lighting Cue may stop the chase even if the chase cue's property 'Next Lighting Cue stops chase' is not set.
- In Lighting Cues, the 'Fade time for the above fixtures' would be applied against any DMX channel marked as a Dimmer Channel in Production Properties - Fixture Types, even if the channel's 'Fade' checkbox in the Lighting Cue was cleared. 'Fade time for the above fixtures' is now only applied against channels that have the 'Fade' checkbox set.
- If an Audio File Cue requires a stereo file to be down-mixed to a mono output device, *and* if DirectSound is the selected Audio Driver, *and* if the Audio Driver Setting 'BASS Mixer' is set to 'Do NOT use BASS Mixer', then the program could crash in a 64-bit environment.
- Fixed a bug that could prevent X32 user-defined button actions being processed for SCS Cue Control, if a Control Send X32 network device was also nominated.
- Repositioning an MTC/LTC Cue could incorrectly adjust the MTC/LTC values.

Version 11.8.3.3 (December 2020)

New or changed features

- An MTC cue or sub-cue linked to an Audio File cue or sub-cue is now accurately synced.
- Control Send cues now support the Yamaha MIDI NRPN format, which differs from the standard MIDI NRPN format. In the Yamaha format the NRPN LSB component appears before the NRPN MSB component.
- MIDI Cue Control devices with Control Method 'MIDI Machine Control (MMC)' may now optionally have the MMC 'Stop' command implemented in SCS as 'Fade All' instead of 'Stop All'.

Bugs fixed

- Clicking on the DMX Value field in a Fixture Lighting Cue would cause a memory error.
- When playing a still image cue with a specified display time, activating 'Pause All' by MIDI would correctly pause the cue but would not pause the elapsed time. For example, for a still image cue paused by MMC at 33 seconds and restarted 15 seconds later, playback resumed at 48 seconds and not at 33 seconds. This bug did not affect audio file cues or video file cues.
- A change in 11.8.3.2 could fail to 'complete' certain cues if they were started by hotkey, external control, or from a 'call cue'.
- Fixed a bug that could incorrectly raise the message 'Fixture Types not available when using a cue file containing Lighting Cues created using SCS 11.7.1 or earlier'.
- Network Control Send cues using the 'Hex' Entry Mode failed to send null (Hex 00) bytes.
- A memory could occur on playing a Video/Image 'place-holder' cue.
- An error introduced in an earlier version of SCS 11.8 resulted in DMX sent via an ENTTEC OPEN DMX USB device being one channel out. This did *not* affect DMX sent via an ENTTEC USB PRO or USB PRO MK2.

Version 11.8.3.2 (October 2020)

New or changed features

- Reinstated the 'Aspect' property in Video/Image Cues.
- Previously, the minimum audio level before audio is cut out was -75dB. You can now select -75dB, -120dB or -160dB in the new Production Properties / Run Time Setting *Minimum Audible Audio Level*. For new cue files this defaults to -160dB, but as changing this setting could affect fade-out times of existing Audio File Cues the -75dB minimum is retained for cue files last saved prior to this version. The *Minimum Audible Audio Level* is now saved in the cue file.
- New Editor Keyboard Shortcuts are available when editing audio file cues, video cues and playlist cues, to *Skip Back 2 Seconds* or *Skip Forward 2 Seconds* for each press of the keyboard shortcut. The default assignments are Shift+F8 (skip back) and Shift+F9 (skip forward).
- The Keyboard Shortcuts for *Skip to Previous Cue Marker* and *Skip to Next Cue Marker* are now available for audio file cues that do not have cue markers. *Skip to Previous Cue Marker* will skip to the start of the cue if there is no cue marker (or no previous cue marker), and *Skip to Next Cue Marker* will skip to the end of the cue if there is no cue marker (or no next cue marker).
- A new 'Stop MTC' action is available in SFR Cues, which can be used to stop and complete currently-playing MTC cues. Also applies to LTC cues if applicable.
- In the *DMX Display Window* you can now change the display from 'Universe (all 512 channels)' to 'All Fixtures'. The 'All Fixtures' selection will show the DMX channel values for each Fixture.
- When setting up Fixture Types in Production Properties, you can now select a 'DMX Grid Text Color' that will be used in the *DMX Display Window*.
- The feature added in 11.8.3 to include VU meters for video file audio is now an optional setting, and by default this is *disabled*. This is because a few users reported poor audio quality of video cues, which was found to be due to the constant audio peak monitoring. If you do not have any such issues, then you can turn this feature on under Options / Video Driver.
- Lighting Cues may now be built from captured DMX. This enables you to reproduce in SCS a lighting cue originally created using a lighting board or other software.
- Added 'vMix' as a *Remote Device* for Control Send Network Devices. This simplifies setting up the device type properties and Control Send Cues for controlling vMix from SCS.
- The 'Visual Warning' available to provide a highly-visible count down to the end of a cue now also supports 'Cue position', 'Cue position plus option time offset', and 'File position'. (The latter two are only available for Audio File Cues.)

Bugs fixed

- Fixed a few bugs in video file and video capture playback.
- When using Lighting Cues in a cue file, and then opening another cue file with Lighting Cues, this second cue file could fail to send DMX.
- If a sub-cue is disabled then this could under rare circumstances affect the selection of the next manual cue.
- Fixed a bug introduced in 11.8.3 that caused PJLink authentication to fail.
- The Keyboard Shortcuts for *Skip to Previous Cue Marker* and *Skip to Next Cue Marker* did not work if the selected cue had not yet been started.
- Some MIDI function calls could fail in 64-bit mode.
- Fixed a bug in earlier versions of 11.8 that caused Video/Image Cues with 'Repeat' selected to incorrectly handle repeats, typically causing the cue to stop shortly into the second pass.
- Some dialog boxes may have been off-screen when using non-default display positions in Windows.

Version 11.8.3 / 11.8.3.1 (June 2020)

New or changed features

- The minimum Windows version supported is now Windows 7.
- The latest version of the TVideoGrabber (TVG) video playback library is included.
- The video playback libraries xVideo and DirectShow have been removed.
- The SCS setup file that includes LAV Filters includes the latest version of LAV Filters (included with permission). Also, LAV Filters is now installed 'silently', ie without displaying option dialogs.
- Changes have been made to screen handling for video/image cues. As a result of this, the following Video Driver Options have been removed as they are no longer required: 'Use 2D Drawing Library for Still Images' (they are now displayed using the video playback library), and 'Apply DPI Context Awareness to fix Incorrect Video Image Sizes'.
- A Video Driver Option has been added for 'Hardware Acceleration GPU'.
- In Video/Image Cues, the 'Aspect' field has been removed. The 'original' aspect ratio is now always used.
- The VU Meter display in the main window now includes VU meters for video audio devices.
- A 'Fade All' (Shift+Esc) button has been added to the main window toolbar.
- Control Send Cues using a Network device may now select UTF8 as an Entry Mode. Entering the message is the same as for ASCII, but when the message is sent SCS will encode the message as UTF8, which is the encoding required by some devices or products, such as CasparCG Server.
- There is now an option under Options/Shortcuts to allow hotkeys to be played even when an exclusive cue is playing.
- The 'Run External Program' cue type now has an option to run the program in invisible mode, which enables SCS to retain focus. This is useful if you not need to see any window displayed by the run program.

Bugs fixed

- For Network Cue Control devices, the 'Test Network Control' window would ignore some messages, particularly if they were deemed to be irrelevant. All incoming messages should now be displayed in this test window.
- Navigating the cue list using up and down arrows would not navigate past an 'on cue marker' cue.
- Fixed some issues in the processing of 'ignore device this run', an option available if a particular device (eg a Control Send device) is not available.
- An SFR cue set to 'fade out and stop' a Memo cue had no effect on the Memo cue. SCS will now immediately close the Memo cue. Note that Memo cues cannot be faded in or out as the control used by SCS for displaying Memos does not support fades.
- After activating 'Stop All' and repositioning the cue list, a previously-loaded video cue that contains a fade-in time may fail to fade-in, resulting in a black screen.
- Some ASIO devices may have failed to initialize, reporting that the device was possibly not started or not connected. This has been reported with the *Dante Via* ASIO interface. A change has been made to the initialization code in SCS to fix that problem.
- Cues with an Activation Method of 'External (Toggle)' would always start from the beginning when an incoming 'Play Cue' command was received, instead of toggling between start and fade-out/stop.
- 'Stop All' would not stop 'Run External Program' sub-cues that were counting down to start.
- 'Stop All' of a hotkey cue with sub-cues with relative start times set those sub-cues to 'completed' instead of 'ready', meaning that next time the hotkey cue was started, the associated sub-cues would not play.
- Using down-arrow or similar to go down one row in the cue list past a cue with an activation method of 'before end of previous cue' would immediately activate that cue.

Version 11.8.2.2 (March 2020)

New or changed features

- 'Find Cue' (Ctrl+F) now includes 'When Required' in the search.
- Disabled Audio File Cues and Sub-Cues may now be played in the Editor.
- Lighting Cues now also support an entry type of 'DMX Items', which supports the pre-SCS 11.8 method of entering DMX values, eg "PAR1,PAR2:1@20,2-3@25, PAR3:1@100".
- Fixture Types now support up to 48 DMX channels *per Fixture Type* (previously 32).
- When editing a Playlist Cue there is now a menu item under 'Other Actions' to 'Remove ALL files from this Playlist'. This is useful if you are building a new show's cue file from an existing cue file and want to change the pre-show music PlayList.
- MIDI Control Send Cues may now be set up to send MIDI NRPN messages. If you are currently using MIDI Free Format messages to send NRPN then on reading your cue file SCS will ask you if you wish to have these converted to NRPN messages.
- Control Send Cues may now have a short 'Item Description' entered against each item.

Bugs fixed

- When editing an Audio File Cue, the '+' button for adding a loop was disabled if the cue had cue markers or cue points.
- Fixed an error that prevented multiple video sub-cues of a cue handled correctly.
- The SCS GUI could sometimes freeze under rare but specific circumstances.
- A new version of the BASS audio library is included which fixes a bug that also could cause SCS to freeze.
- If a device required by a production is not available on opening the cue file, and two or more Device Maps exist, sometimes the wrong 'unavailable device' message would be displayed.
- When using 'Test MIDI Input' for a MIDI Cue Control device (in Production Properties), MIDI message types that were not otherwise required by SCS would be discarded and therefore not displayed in the MIDI Test window.
- An error message referring to a failure to open a server connection with port 58000 could occur even if the 'Remote App Interface Enabled' option had not been set.

Version 11.8.2.1 (January 2020)

New or changed features

- Revised the 'Lost Focus' warning message, and added an option to the corresponding Production Properties Run Time Settings to *not* display the pop-up dialog.
- Cue Control by external MTC (MIDI Time Code) now accepts MTC without full frame messages. Previously, an MTC full frame message had to be received before SCS would check MTC time codes against cue start MTC times.
- Keyboard shortcuts have been added for '**skip to previous cue marker**' and '**skip to next cue marker**'. The default shortcut keys are Ctrl+9 and Ctrl+0 respectively. (See 'Audio File Cue Points and Markers' in the Help for more information.)
- The ability to link audio files (so they start, stop or be repositioned in sync) has been extended to include video files. However, note that video file linking is not as precise as audio file linking due to the different playback library used.

Bugs fixed

- If the main toolbar buttons are not visible (which is the default for Production mode) then MIDI 'GO' commands and some other actions would be ignored.
- Setting or changing a cue's MIDI/DMX Cue Number did not take immediate effect.
- If an external MTC (MIDI Time Code) was reset or changed, then cues set to start on receiving a nominated MTC may not have started, particularly if the changed MTC was earlier than the last MTC received.
- If an Audio File cue contains two or more Audio File sub-cues of the same play length then SCS would attempt to 'link' the sub-cues. However, that should only have occurred if the sub-cues also had the same 'start at' position.
- Under some conditions, the 'Next Manual Cue' would not advance to the next cue. This mainly occurred with cues containing linked sub-cues.
- If a Hotkey (Toggle) cue is ON and the user presses a key that is not a Hotkey (eg presses '1' when no hotkey cue is assigned to the '1' key) then SCS would lose the ON state of the Hotkey (Toggle) cue.
- When using Collect Production Files, if there is insufficient free space on the target drive for the collection then SCS will now display an error message and not process the collection request.
- 'Stop All' (Esc) may not have reset the cue list to the first cue stopped.
- When editing a Lighting Cue, the checkbox 'Do not blackout other active channels when using 'Live DMX Test'' was not always applied.

Version 11.8.2 (December 2019)

New or changed features

- **Cue markers** may now be set on audio file cues that contain loops.
- Audio graphs now show any '**cue points**' as well as SCS cue markers. (See 'Audio File Cue Points and Markers' in the Help for more information.)
- In 11.7.1 and 11.8.1 you could trigger a cue 'on cue marker' by setting Activation to 'Autostart' and then selecting 'on cue marker' and selecting the required cue marker. In 11.8.2 this has been changed. '**On Cue Marker**' is now included in the Activation drop-down list. On selecting 'On Cue Marker' the combobox of available Cue Markers is then displayed. This list now includes cue points, where those cue points lie between the start and end points of the associated Audio File cue. ***Please note that this feature is NOT backward-compatible.*** SCS 11.8.2 will correctly handle an 'on cue marker' auto-start cue saved using SCS 11.7.1 or 11.8.1, but once the cue file is saved by SCS 11.8.2 this change to the 'on cue marker' property will not be recognized by 11.7.1 or 11.8.1.
- There is now no license-based limit on the number of cues that may have cue markers or cue points. Any license level above SCS Lite may use as many cue markers and cue points as required.
- '**View Cue Markers Usage**' has been added to the menu items displayed when right-clicking on an audio graph in the editor.
- When playing a cue in the Editor, any associated 'on cue marker' cues are normally not started. A new Editing Option has been included to "Activate 'On Cue Marker' auto-start cues when playing an Audio File Cue in the Editor".
- An 'Are you sure you want to close SCS' message is now displayed when you try to close the program.
- In **Control Send cues** using the MSC message type, fields Q Number, Q List and Q Path now accept ',' characters as LightFactory apparently doesn't accept '.' characters, even though the official MSC spec lists only 'ASCII numbers 0-9 (encoded as 30H-39H) with the ASCII decimal point character (2EH)'.
- The VU meter display has been improved, primarily to handle longer device names before truncating.
- Screens used for importing cues from another cue file, and for copy/moving/deleting cues, now include the cue page numbers where supplied.
- **VST Plugins** can now be assigned to audio output devices, and a new 'VST Plugins' button is displayed in the toolbar of the main window.
- ASIO processing has been improved following the inclusion of the latest version of the BASS ASIO library.
- Network Control Send Cue messages sent to a PJ Link-enabled projector now have CR(0DH) automatically appended to the messages if they are not already terminated by CR.
- With **Lighting Cues**, you can now display just the first fadeable channel of each selected fixture when editing the cue. This is useful if several of your fixtures are single-channel fixtures, as it enables you to see all those DMX levels together.
- With **Lighting Cues**, SCS no longer tries to determine and set the pre-cue lighting state. That was not really workable, especially with the use of callable cues.
- When editing **Lighting Cues**, a new checkbox has been included for Live DMX Testing which enables you to choose not to blackout other active channels for the test. This can assist with making on-the-fly changes to a Lighting Cue during a rehearsal or performance.
- In **Set Position cues** you can now set the position to that of a cue marker in the target cue.
- Progress sliders in the Main Window's Cue Panels now dim the 'past' part of the progress.
- The default Audio File Selector (used when browsing for files for Audio File Cues or Playlist Cues) has been changed to the standard Windows Open File Dialog. If you want to use the SCS dialog which includes the preview feature then you can change this in Editing Options.
- The SCS Primary/Backup connection is now UDP instead of TCP, as UDP supports message boundaries which prevents some messages being concatenated.
- The SCS Primary/Backup feature now supports Time-Based Cues, and Playlist Cues that are set to random play.
- You can now sort cues using a new feature in 'Copy, Move or Delete a Range of Cues', which has been enhanced to 'Copy, Move, Delete or Sort a Range of Cues'.
- **Call Cue cues** can now call Hotkey (Trigger) and External (Trigger) cues as well as Callable cues.

Bugs fixed

- Fixed a bug in the handling of SCS Cue Markers that could cause a cue set to start 'on cue marker' to be activated twice.
- The 'load production' window will now be identified in the Windows task bar (when the window is displayed).

Version 11.8.1 (May 2019)

New or changed features

- **Time-Based Cues (TBC's)** may now have a 'latest time' set, which is useful for TBC's such as pre-show music if you start SCS *after* the 'time of day' you specified for the cue.
- When creating or editing a **Control Send Cue** that sends commands to a Behringer X32 Digital or Compact Mixer there is now a '**Capture X32 Info**' button available that enables you to set up the Control Send cue as a snapshot of current Mute settings, eg the Mute settings for selected channels.
- The maximum number of messages that may be included in a single Control Send Cue has been increased from 16 to 32.
- In Production Properties - Control Send Devices - Network, the default inter-message delay was previously 100ms. If the Network Protocol is UDP the default inter-message delay is now 0ms (no delay) as UDP preserves message boundaries whereas TCP does not.
- **Memo Cues** directed to the primary screen may now, via a new Production Property, be displayed in one of three ways: (1) in a pop-up window as in previous versions; (2) in a panel to the right of the cue list; (3) in a panel to the right of both the cue list and the cue panels. The new Production Property will apply to all Memo Cues that are directed to the primary screen. The Memo Panels in options (2) and (3) are resizable, as is the pop-up window of option (1).
- When saving a cue file, SCS now detects if the file has been changed by another application since it was opened or last updated by SCS. If the file has been changed, you may choose to overwrite the changed cue file, save as a new cue file, or cancel the operation.
- With some audio interfaces, such as the Presonus Audiobox, initialization can take several seconds per channel when determining WASAPI availability. There is now a new Audio Driver Option in SCS: 'Do NOT use WASAPI' with the tooltip hint 'If you do not need to use WASAPI (eg to access all available speakers) then setting this option can significantly reduce device initialization time'.
- The warning message 'SCS main window currently does not have focus' now flashes once a second.
- The test for 'SCS main window currently does not have focus' is not, by default, active when the Editor is open, but there is now an Editing Option to enable you to override this. This may be useful if you may have the Editor open during rehearsals or live runs.
- When 'Pause All' is active, a warning message will be flashed in the status bar. This is because 'Pause All' not only pauses playing cues, but also pauses any active auto-start countdown timers. This could have unexpected consequences if 'Pause All' is not canceled. 'Pause All' will be canceled by 'Resume All' or 'Stop All'.
- Saved window positions, sizes and splitter bar settings are now saved separately for different display configurations, eg separately for having one screen or two screens connected. This test also takes into consideration display scaling and sizes.
- When editing an Audio File Cue, clicking and dragging a marker on the graph (eg the fade-in marker) no longer auto-changes the selected combobox item that controls what is displayed in the 'Audio Devices' etc panel.

Bugs fixed

- A cue set to auto-start after load may not start if the loading processing takes too long.
- When determining if audio file cues can be played gapless, if an audio file cue contained a looping cue then in gapless mode that could freeze. Audio file cues with loops are now excluded from the gapless test.
- In Production Properties / Devices, when viewing or editing the Control Send or Cue Control devices, and then opening a different cue file and viewing those same device tabs, then the device selection from the first cue file will not have been cleared. For example, if the first cue file used a DMX Cue Control device but the second cue file used a MIDI Cue Control device, then when viewing this second file the DMX Cue Control device settings will not have been cleared.
- When stopping an audio file cue in the editor, resetting the cue position to the start was not handled correctly if the BASS mixer was selected in the Audio Driver Options.
- If the next cue in the main window's cue list is an auto-start cue and the user uses the down-arrow to navigate to this cue then that cue should have had it's 'activation method required' changed to manual start. This is the behavior that already occurs if the user clicks on that next cue.
- If a video/image cue has a fade-in time and after the cue has completed, if the user then uses the up-arrow to navigate back to the cue and then plays it again, the fade-in may not occur.
- When using multiple screens, sometimes the screen numbers detected by the underlying software are not consistent across SCS sessions. This can be due to the order in which external screens (or projectors) are connected. A fix is now included which always orders the screens according to their position (left-to-right, top-to-bottom), apart from the primary screen which is always 'screen 1' regardless of it's relative position.

Version 11.8.0 (January 2019)

New or changed features

- For **SCS Professional Plus** and higher license levels, **VST Effects Plugins** are now supported for **Audio File Cues**. This enables you to add EQ, reverb or any of the other multitude of features available in 3rd-party VST Effects Plugins. Note that currently this feature is available in Audio File Cues on BASS audio streams, which are created when using the BASS audio driver. In a later version we plan to provide other points at which VST Plugins may be called, such as for each audio output device.
- **Lighting Devices** and **Lighting Cues** now support **Fixture Types**. Fixture Types in SCS are entered and saved in Production Properties. For each Fixture Type you specify the number of channels and a description for each channel - which could be a single letter (eg R, G, B or W) or a brief description (eg Pan or Tilt). The design of the Lighting Cue screen in the Editor has been improved to include the list of Fixtures required for the Lighting Cue, and then for each Fixture you can set the required values for each channel, where the channel description is displayed. For example, you can easily adjust the color, intensity, direction etc using the sliders against the named channels. Note: Cue files created with SCS 11.7.1 or earlier that have Lighting Devices and Lighting Cues cannot use the new Fixture Types as this new feature affects many parts of the new design. So the Lighting Devices and Lighting Cues in these cue files will continue to be processed as before. The Help file contains additional info for 'Pre SCS 11.8' cue files.
- **Video/Image Cues** now support Video Capture Devices, such as live feeds from video cameras. The devices are defined in Production Properties.
- In **Options / Video Driver Settings** you can now make minor **Screen Adjustments** to the size, X position and Y position of the target screen areas of your secondary screens.
- **Linear Time Code (LTC) Cues** are now available for **SCS Platinum** users (only), provided SoundMan-Server is also installed. SoundMan-Server is required because LTC is sent using a SoundMan-Server timecode generator. The MIDI Time Code (MTC) Cue type has been enhanced to accept LTC where available. (MTC is still available for SCS Professional users and just requires an appropriate MIDI interface.)
- A **Time of Day Clock** can be displayed, and a C**ountdown Timer** can be set and displayed. These are available from the View menu on the main window.
- In **Audio File Cues** you can now adjust the relative levels of **multiple level points** in the graph. A 'Graph Help' pop-up is displayed if you hover the mouse pointer over the new question mark on the left of the graph. In keeping with convention, selecting multiple level points for this adjustment is achieved by using Ctrl-Click on each required level point. This means that Ctrl-Click is no longer available for adjusting the level or pan of a single level point, so that feature is now handled by Alt-Click. The Graph Help pop-up explains this.
- The 'uninstall' process has been enhanced to better clean up after uninstalling.
- Some performance improvements, particularly with regard to auto-starting cues.

Bugs fixed

- The 'near end warning' was not handling a cue being manually started part-way through.
- If an Audio File cue has more than 4 devices then due to a timing conflict in the GUI updating procedures a warning message could be displayed regarding the incorrect setting of a level slider.
- Setting an SCS Cue Marker would not always take effect before closing the Editor.
- Inserting a cue would not resync the internal list of SCS Cue Markers, which could result in an 'on cue marker' activation being ignored.
- Fixed the format of Control Send network OSC messages that contain no type tags to include an empty type tag string.
- Ignores incoming OSC messages that are not recognized by SCS, which can occur particularly when an X32 digital mixer is connected and SCS also has the mixer assigned as a Cue Control device. Previously, various actions on the X32, such as moving a fader, could cause an 'Unknown Command' error to be displayed on the SCS status line.
- Clicking on an auto-start cue in the main window could cause that cue to start immediately instead of being temporarily changed to manual-start.
- When using 'Collect Production Files', if the same file was used in more than one cue then only the first cue that used the file would be updated to show the new (collected) location of the file.
- If a cue has more than one sub-cue where the first sub-cue is an Audio File sub-cue and a later sub-cue has a non-zero relative start time, and the user clicks on the Audio File's progress slider to reposition the sub-cue, then the count down time for the later sub-cue would not be correctly calculated if the Audio File sub-cue had a non-zero 'start at' time. This could cause the later sub-cue to 'complete' immediately.
- The enabling and disabling of transport control buttons in the cue panels was sometimes incorrect for sub-cues other than the first sub-cue of a cue.

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