

# SpotOn

The Audio Playout Software



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# Introduction

SpotOn is a utility that can playout WAV, MP2, MP3, AIF and WMA format audio files from either touchscreen, keyboard, mouse or external trigger.

The main screen is shown below with the default setting of 64 buttons and 5 pages giving a total 320 buttons, initially all the buttons will be coloured dark green indicating an unassigned button.

Once loaded the button will change colour from green to blue and display the track name and duration, the colour and text can be changed later to something more appropriate.



Some of the main features of SpotOn:-

- Simple playout from mouse click or keyboard hot keys
- Audio output can be directed to any of the installed sound cards
- Customisable screen layout ranging from 1 to 160 buttons per page
- Button text and colour fully editable
- Audio gain, pan and speed adjustable
- Midi note input and output triggers available
- GPI input triggering
- Audio start and end points can be edited
- Buttons can be set to loop audio track
- Juke box style of playout with spacebar playing next track
- Fade In and Out options available

- Any number of tracks can be played simultaneously
- Uses WAV file Playlist data
- Comprehensive master/slave linking of buttons
- 5.1 surround sound capable
- ...

## [Installation](#)

# Installation 1

The SpotOn package is supplied in a single file:-

SetUp.exe      (Windows installer)

To install - insert the SpotOn CD into drive and the install process should begin automatically, if not navigate to the root directory of the CD drive and run the file SetUp.exe

When installation is complete SpotOn will appear as a shortcut Icon on the Windows Desktop.



Use the Control Panel 'Add/Remove Programs' utility to remove or update the SpotOn package.



SpotOn requires an external security key (dongle) before it will run, see [activation](#) section for details.

The minimum requirements for running the application are:-

Operating System	Windows XP Professional recommended, Vista and
Installed RAM	1024MB
Software	Microsoft DirectX version 9
Sound Card/s	Fully Microsoft DirectSound compatible with WDM drivers

File types used by SpotOn

*.dta	Session data - binary
*.pkg	Package - binary
*.txt	Track List and logs - tab delimited text
*.csv	Track List - comma delimited text
*.blk	Button Block - binary
*.tcl	Timecode Trigger List- binary
*.ctp	Button colour template - binary
*.stf	Play Stack file - binary

SpotOn data folders under ..\Documents and Settings\All Users\Application Data\Serialtech\SpotOn\

BackUp	BackUp session files
Debug	Debug files
Event Logs	Daily logs of significant events for fault diagnosis (EventLog_ddmmyy.txt)
Local	Copies of audio files loaded from remote or removable drives
Playout Logs (text)	Daily logs of tracks played in plain text (PlayLog_ddmmyy.txt)
Playout Logs (XML)	Daily logs of tracks played in XML format (PlayLog_ddmmyy.xml)
Recent	Links to recently used audio files
Temp	Temporary files

SpotOn system files under ..\Documents and Settings\All Users\Application Data\Serialtech\SpotOn\

~temp.dta	Session saved/loaded when SpotOn exits/runs
BackUp\~backup_X.dta	BackUp sessions
BackUp\~statuslog_X.txt	Status log files
Recent\*.lnk	Recent file list

The above are default folder locations for the files, some folders can be changed via [Admin|File Folders](#) menu option.

SpotOn system folders under ..\Program Files\Serialtech\SpotOn\

Archive	Previous version of SpotOn
Web	Web server files
Images	Sample button image files
TestFiles	Test files - sine wave tones, silence and sample frequency tests

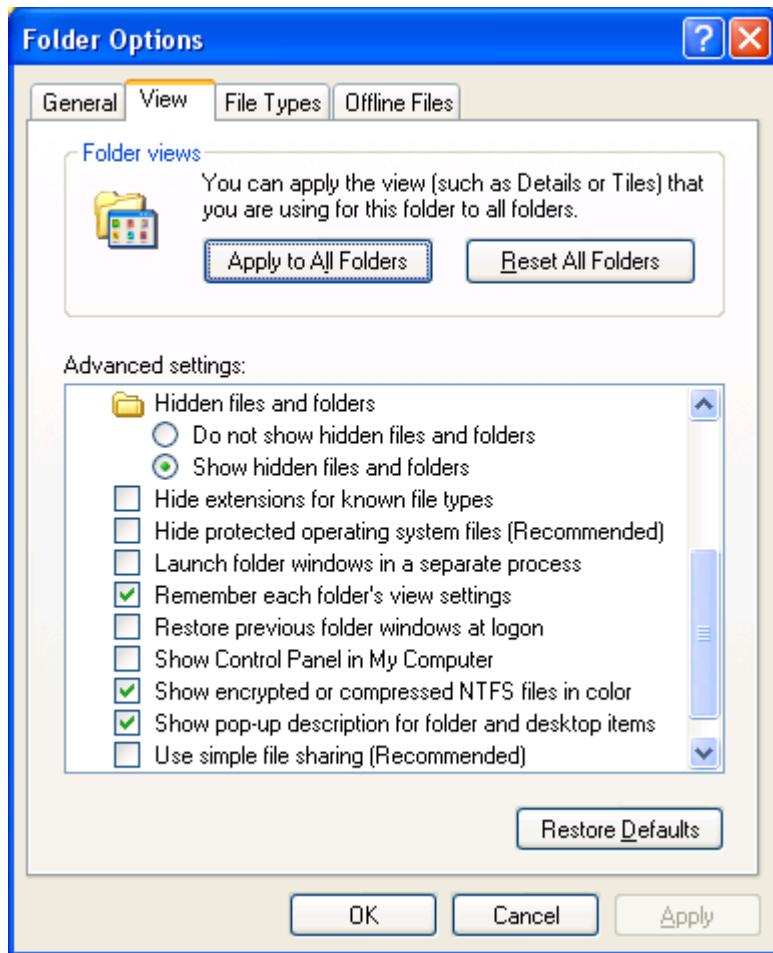
## Folder Access Rights

In some installations the Windows user account is based on a 'Restricted User' profile and this will not allow sufficient access rights to the Application Data folder. SpotOn will make an attempt at testing the access rights and show an error box if it detects a problem.

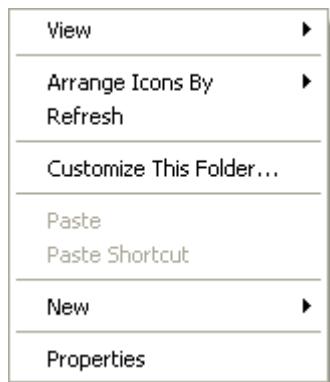


To set the access rights for the SpotOn Application Data folders:-

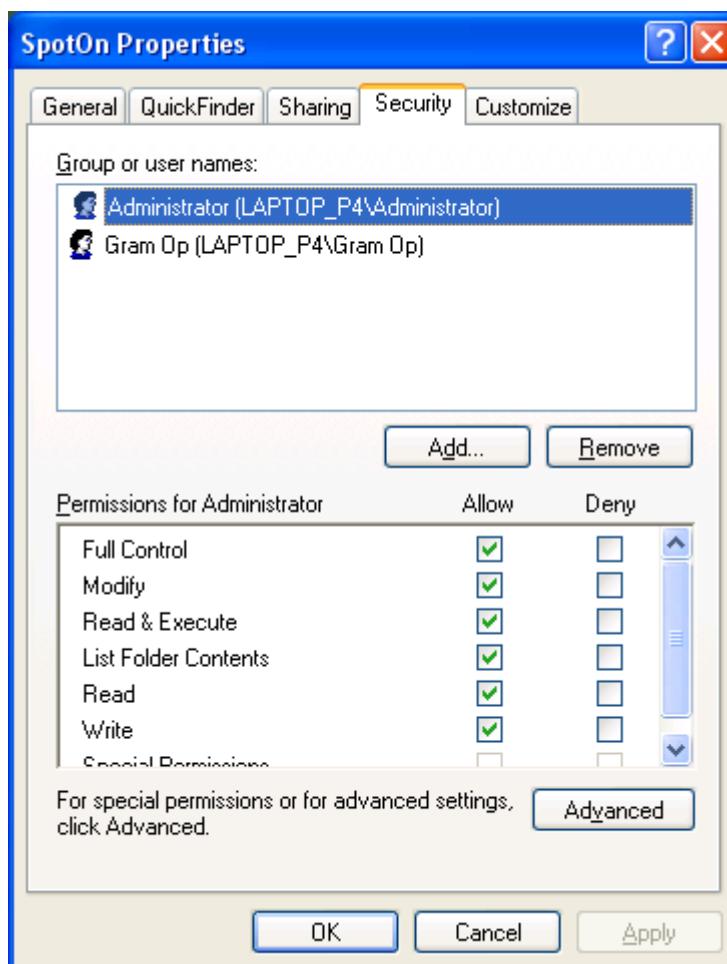
- 1, log on as Administrator
- 2, in Windows Explorer navigate to ..\Documents and Settings\All Users\Application Data\Serialtech\SpotOn
- 3, if the Application Data folder is hidden use the Windows Explorer menu item 'Tools|Folder Options|View|Hidden Files and Folders'
- 4, in Windows Explorer uncheck menu item 'Use simple file sharing...' usually found at the bottom of the menu bar



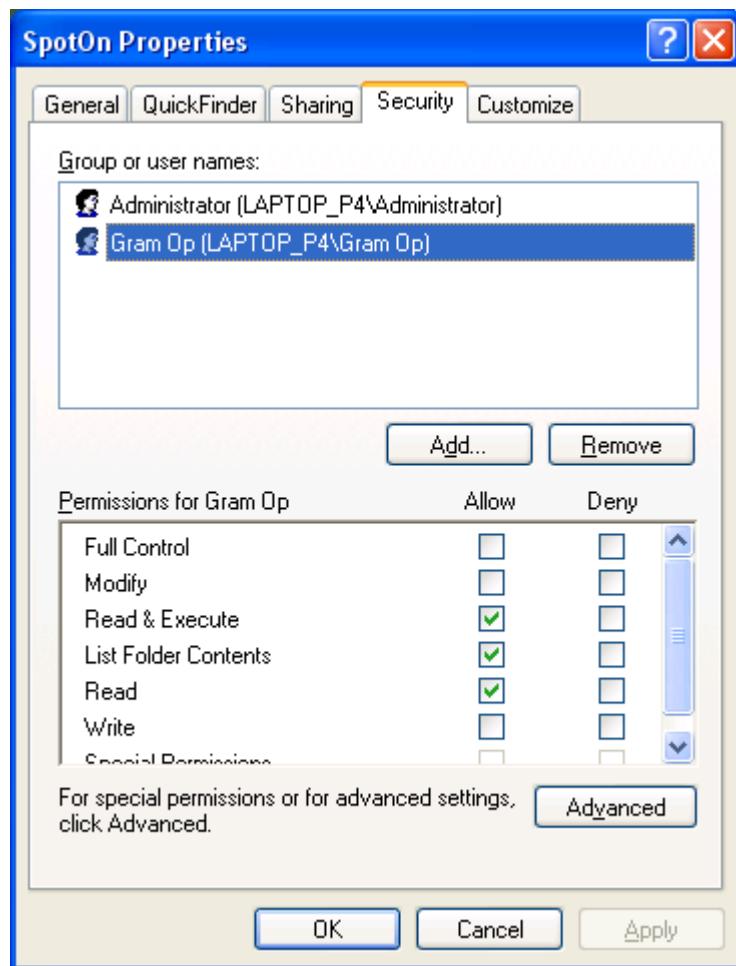
- 5, apply the changes
- 6, right-click in the right hand file pane of the folder display and select properties



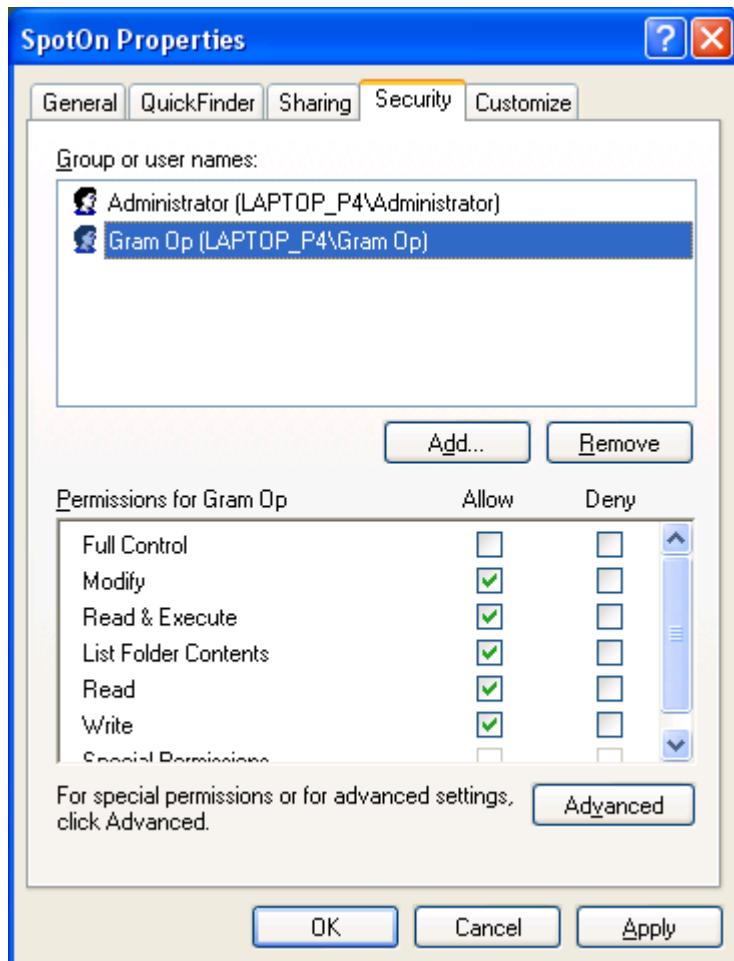
7, select the Security tab and the Administrator user, the permissions should be 'Full Control as shown



- 8, select the user that will be operating SpotOn, if the user account has been derived from a 'Restricted' profile then the access rights will be as below, which does not grant Write permissions



9, if necessary change the access rights by checking the 'Modify' checkbox to grant read/write access



10, click on Apply to save changes

[Installation 2](#)

# Installation 2

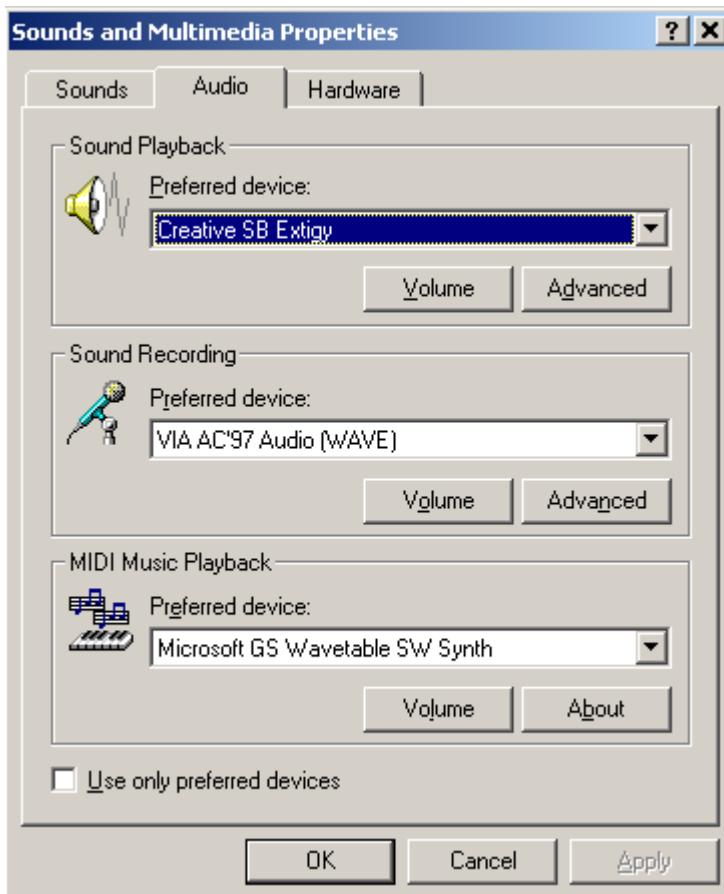
## Sound Playback Preferred Device

When SpotOn is used on a single PC by several operators each with their own log-on, it is essential that the Sound Playback Preferred Device is the same for each user.

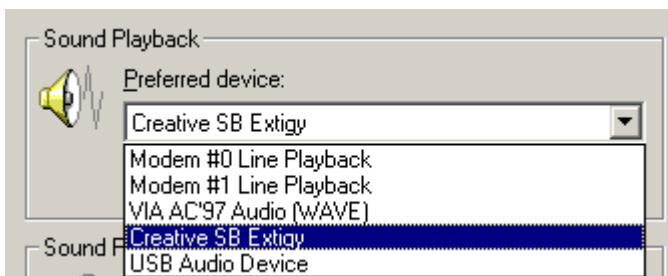
The Sound Playback Preferred Device is defined via the Windows Control Panel under the Sounds and Multimedia section.



Select the Audio tab



and then choose the required audio output device from the dropdown list

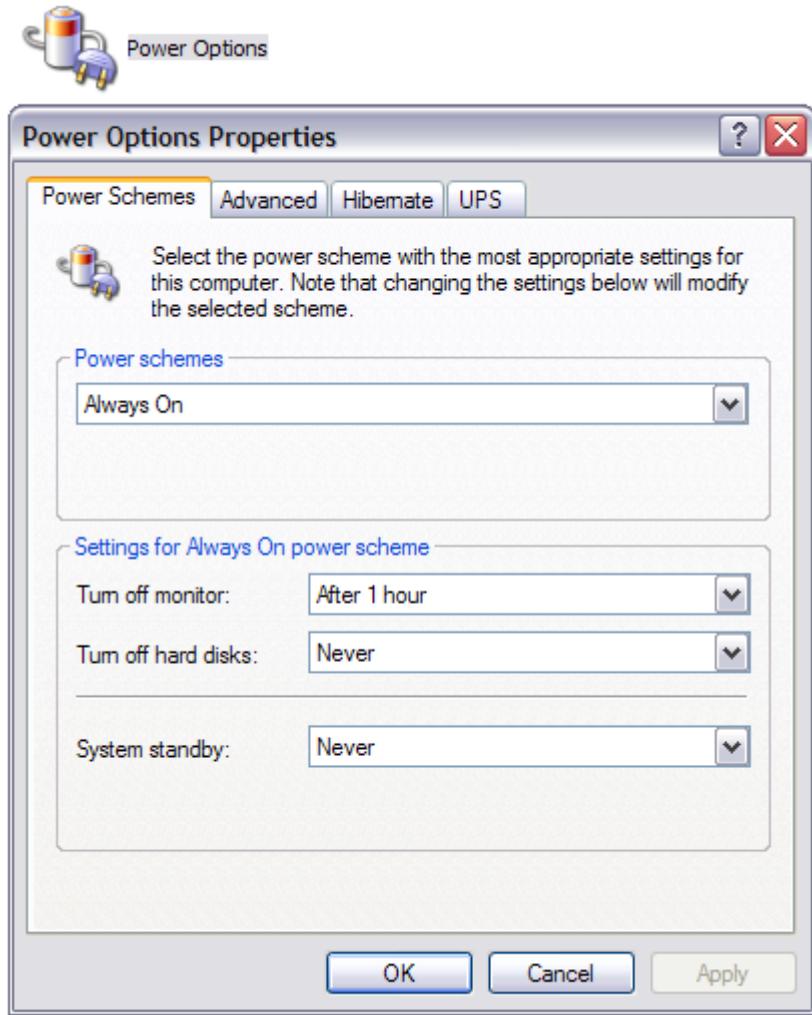


## Power Management

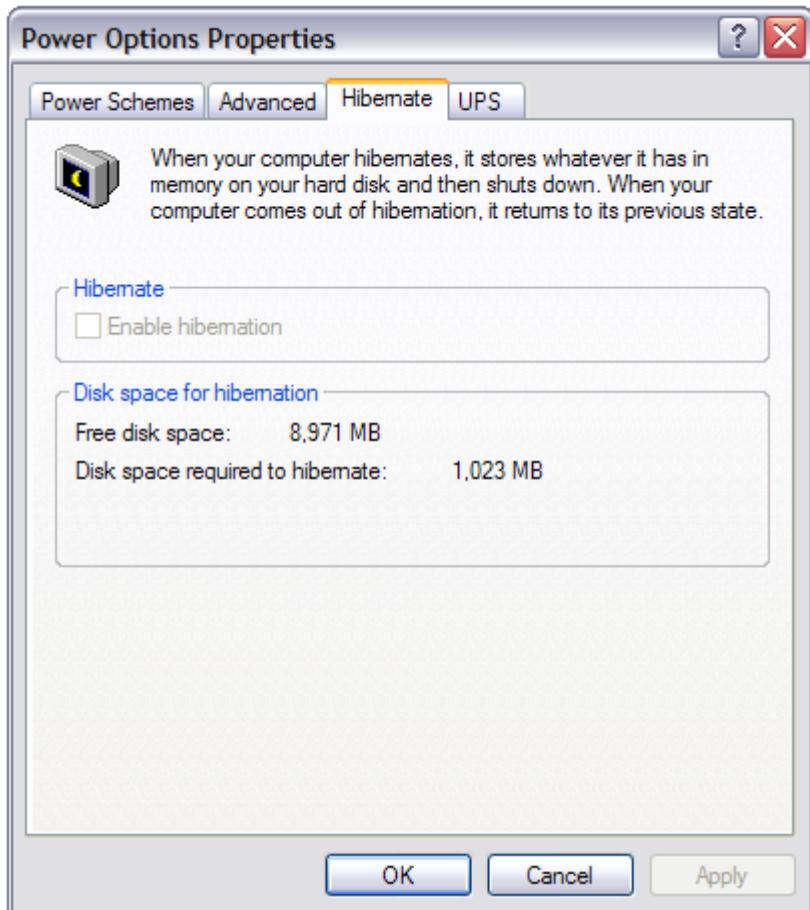
Windows XP computers have a sophisticated power management system that can get in the way of the SpotOn application, therefore it is recommended that the following settings be made.

In the Windows Control panel, select the Power Options icon and then the first tab named Power Schemes.

Choose the 'Always On' scheme, which should have the settings shown below with the Monitor powering down after an hour of inactivity and the hard disk continuously running and standby mode disabled



Also a very important setting to check can be found on the Hibernate tab, when running SpotOn the computer must not be allowed to enter its Hibernate mode, so the 'Enable Hibernation' option must be unchecked.



## CPU Usage

SpotOn does not require a large amount of CPU time, but it does require continued and regular amounts of CPU time in order to update the sound card buffers.

There are some programs that take more than their fair share of CPU time and these might cause problems when running with SpotOn, the effect would be gaps in the audio output.

However looking on the bright side, under tests SpotOn can play out tracks without problems whilst a virus scanner is checking the hard disk and using 97% of the CPU time cooperatively.

## Hard Disk Drives

As the audio information is read from continuously from disk, the speed or rather the seek time of the hard disk drive is important, therefore SCSI, fast IDE or SATA drives are recommended, large disk caches also boost performance. The audio data should preferably be stored on a non-system disk so separating the operating system from the data storage area. Regular defragmentation of the data storage disks will improve performance.

## **Microsoft DirectX**

The Microsoft Windows operating system has a subsection named DirectX, the utilities contained in this are concerned with MultiMedia functions.

DirectX is split into various sections such as DirectShow (graphics), DirectInput (game controllers) and DirectSound (audio), SpotOn makes extensive use of the DirectSound functions.

Within DirectSound are drivers to handle the interface to the hardware of the 'sound card', the most common type of interfaces are 'WAVE' and 'WDM' (Windows Device Model).

'WAVE' is based on old technology and could be regarded as a legacy interface, the more modern 'WDM' interface is the one that allows Microsoft DirectX/DirectSound full access to the sound card.

SpotOn relies on the 'WDM' interface to operate correctly.

So any sound card chosen to be used with SpotOn should show in the manufacturers data sheet references to full DirectX/DirectSound 'WDM' driver compatibility, if in doubt please contact the sound card manufacturer.

## **Sound Cards**

It is important that the sound card/s chosen should be fully compatible with the Microsoft DirectX/DirectSound API, consult the sound card manufacturers data for confirmation.

There is a wide choice of sound cards suitable for use with SpotOn as it make no great demands on the sound card performance.

Some sound cards which are aimed at the professional market may be unsuitable as they incorporate proprietary drivers that are not compatible with the Microsoft DirectX/DirectSound functions that SpotOn uses, these cards are often advertised with their own "virtual sound desk" software.

Another point to check when selecting a sound card is that it will allow several applications to use the sound card simultaneously, such as SpotOn being used for playout and a separate editing application preparing the audio files.

## **Audio Sample Frequency**

SpotOn uses an audio sampling frequency of 44.1kHz or 48kHz and consequently attempts to set up the sound card to run at this same frequency, however current versions of the Windows DirectX code take control of this away from the application. In some instances if another program changes the sound card sample frequency after SpotOn has been started, then this can make tracks played out via SpotOn appear at the wrong speed. See [Sound Card SetUp](#) for details of how the card sample frequency is set.

A much smaller frequency error is present in all sound cards, that is they are not clocked at precisely 44.1kHz or 48kHz the consequence of this is that over several minutes the timing of the audio track with slip relative to real time.

## Windows Volume Level Settings

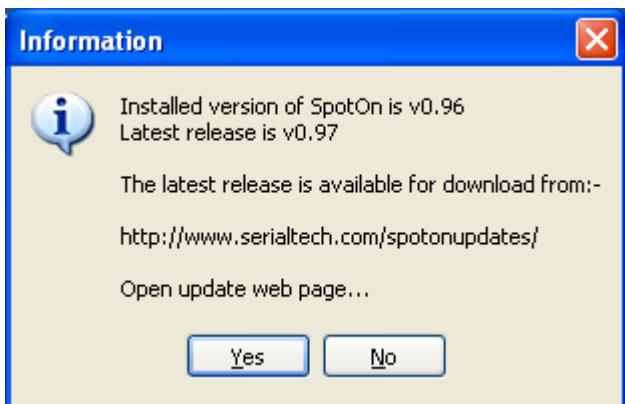
At startup SpotOn will check the volume level settings of the audio outputs, if any of the settings (Master or Wave) are not 0dB then they will be reported in the dialog box shown below.



The levels can be reset to 0dB via the [Volume Controls](#) option in the Engineering menu, in the Admin menu is the option not to display the [Volume Level check](#) results.

## Update Check

If [Web Hyperlinks](#) are enabled SpotOn will attempt to check each week for new updates, if a new version is ready for download then a message dialog similar to the one shown below will appear.



## Windows Vista and Windows 7

The latest version of Microsoft's operating system 'Windows 7' was released in 2009, SpotOn is compatible with Vista and Windows 7 but users should check that updated drivers for the sound card/s are available



# Activation

## Parallel/USB Port Security Key



SpotOn requires an external security key (dongle) before it will run, a key is supplied when the product is purchased.

The key plugs directly into the parallel printer port or a USB port on the PC, no user action is required to enable the key.

The parallel port key is designed to work with standard or bi-directional parallel ports and the latest 'intelligent' printers.

The program can be run on any PC which has the key fitted.

When using a USB key, note that Windows treats the same device in different USB ports (including hubs) as a different piece of hardware. This means that if the key has been set up on one port it should always be used in that port, otherwise Windows will report 'New Hardware Found' and start the hardware installation wizard.

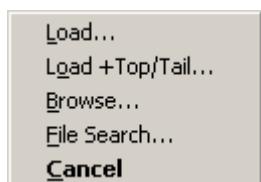
When using a USB dongle the USB port power settings should be checked to ensure that the power is 'Always On' see [USB Power Management](#) for details.

The USB security keys along with many other devices are sensitive to discharges of static electricity. The USB ports on a PC can be used with memory sticks and external disc drives, the action of plugging in these devices can cause static discharges into the PC wiring. To avoid affecting the USB dongle with these discharges it is recommended that the USB security key is connected to a USB port that is isolated from other ports used for memory sticks.

# Getting Started 1

To load a track into an unassigned/blank button, right-click the button and select **Load** from the popup menu.

If the program options have been changed from their default settings, you may find that the popup menu is accessed by holding down the Shift key whilst right-clicking the button, see [Options|Mouse Function](#).



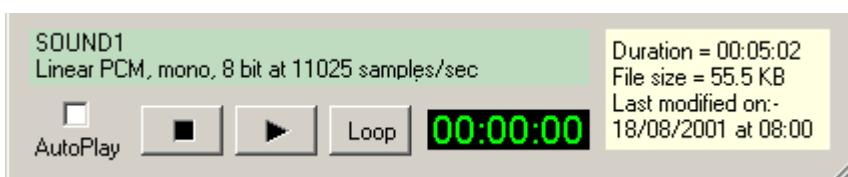
A standard file access dialog will appear listing common audio file types.



Navigate to the required file and click on Open, the file will then load into the button ready for use.



The track can be previewed before loading by using the controls at the bottom of the selection dialog, the track will be played out on the output assigned to be the [preview output](#).



The filename or embedded description will be shown along with the track format and file details, the track can be played or looped.

The preview option is only available for linearly coded PCM WAV files, and files containing compressed data in MP3 or similar formats cannot be previewed at present.



If the track preview section is not visible it can be enabled via the [Admin|Use WAV Preview](#) option

## AutoPlay

To speed up selection of the correct track the AutoPlay facility can be enabled



If AutoPlay is enabled then as soon as a valid WAV coded track is selected in the file list it will begin playing on the [preview output](#).

Once loaded the track can be played out by left-clicking on the button at which point the track number '1a' will change from black on green to yellow on red text. The time remaining (mm:ss) at the lower right of the button will count down as the playout progresses, at 00:03 the colour of this text will change to black on light blue.

Note - in the button legend '1a' - '1' refers to the button number and 'a' to the output device

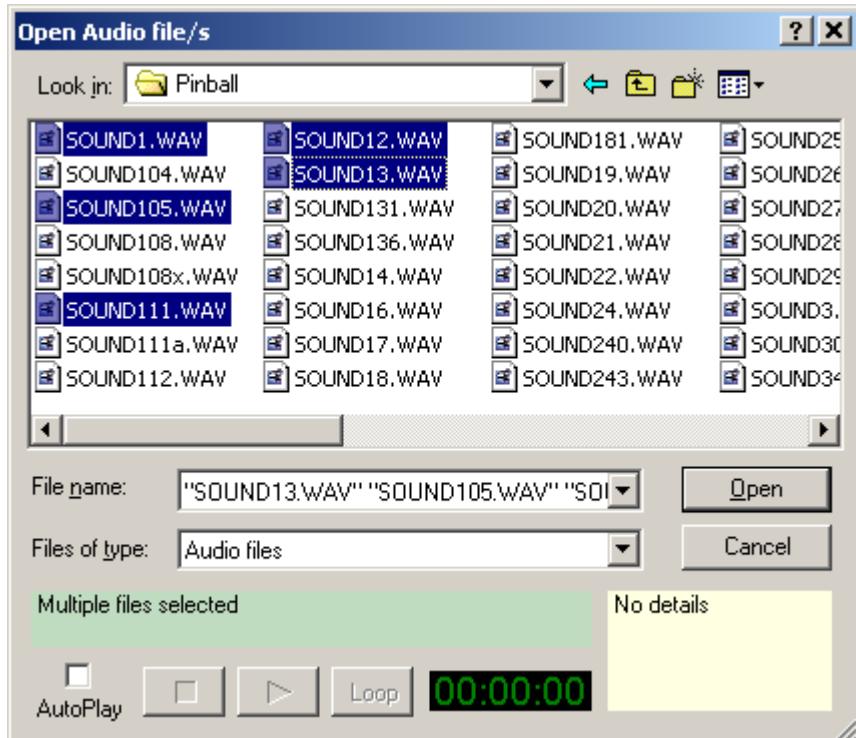
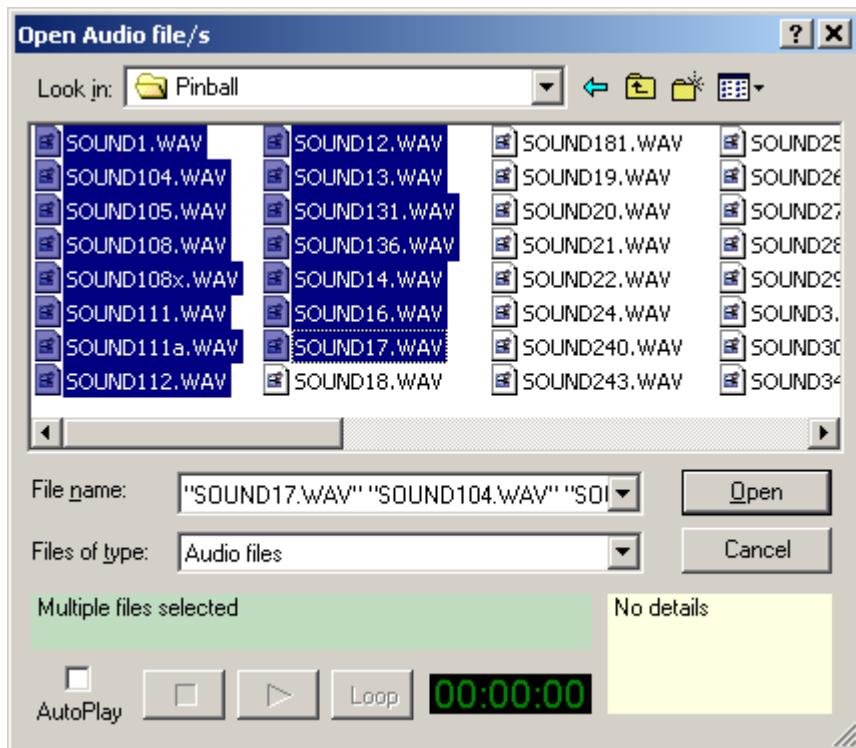


Repeated pressing of the left mouse button will alternately start and stop playout, when playout commences the track will always start from the beginning of the track. See [Options|MouseFunctions](#) for an alternative mode of operation.

[Getting Started 2](#)

## Getting Started 2

More than one track can be loaded into SpotOn by using the standard Windows multiple selection combinations of Shift+left-click for a block of tracks and Control+left-click for a non-contiguous list of tracks.

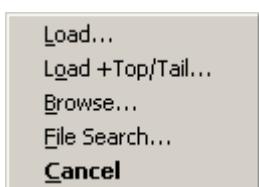


If the load action was started by right-clicking on button 1, the above Control click selection will result in the tracks being loaded into buttons as shown below.

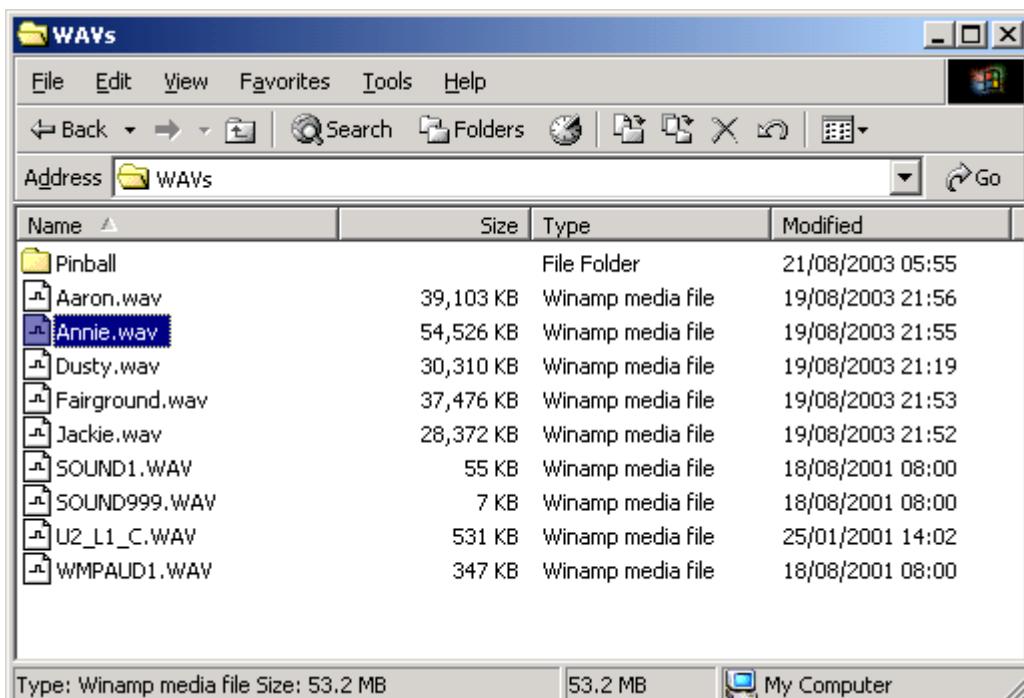


Note that due to the sorting of files by Windows the exact order of the files in SpotOn may not be the same as that seen in the file selection dialog box - SpotOn will sort them into alphabetical order.

As an alternative it is possible to drag and drop tracks onto buttons, to use this facility navigate to the required tracks using the **browse** option



This will display a Windows Explorer navigation window.



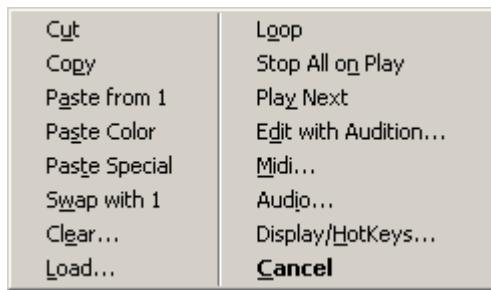
From this selected file/s can be dragged from the Explorer window onto the SpotOn button/s, again multiple selections will load into consecutive buttons overwriting any previously loaded tracks.

As an alternative to selecting the Browse option, single or multiple files can be drag and dropped from any Windows Explorer window that may be open.

[Getting Started 3](#)

## Getting Started 3

Once a button has been loaded the button right-click menu will contain many more options.



The items in the left hand column deal with the button as a whole, the items on the right cover the parameters of the track loaded into the button.

The **Cut**-to clipboard, **Copy**-to clipboard and **Paste**-from clipboard options allow tracks to be moved between buttons, Paste Colour will take the colour of the "Copied" button and paste it to a destination button enabling say, a set of buttons with similar sounds to have the same colour. **Paste Special** allows selected parameters to be copied to multiple buttons.

**Swap** will exchange the button that was "Copied" to the clipboard with the currently selected button.

**Clear** will remove all references to a track from a single button

**Load** displays file selection dialog for loading of a new track to this button.

Paste and Swap menus show the source button number that provided the data copied to the clipboard.

The first three items in the right hand column are options that can be checked or unchecked.

**Loop** when checked will cause the track play command to start playing the track in a continuous loop, the track will loop between In and Out points if they are present

**Stop All on Play** if this option is checked, when the track begins to play all other tracks being played will fade out using their individual fade times, this is indicated by a small solid square halfway up the right hand edge of the button.

Alternatively tracks can be set to stop immediately without fades by muting the audio on this button (see [Audio SetUp](#)), in this case the solid square box icon is replaced by a square outline

A further option is to stop all tracks on the current page only, here the button icon appears as a solid or outline diamond., this is enabled via the [Midi selection](#) see later

**Play Next** checking this option will cause the track contained in the next numbered button to play when this track reaches the end, this is indicated by a small right facing arrow halfway up the right hand edge of the button. If the next numbered button is unassigned then no other track will be played



When the track on button 1 reaches the end or the start of its fade out, Button 2 will begin to play

When button 2 plays any other tracks that may be playing will be stopped using their fade out times

When button 3 is played it will also stop any other tracks that are currently playing and will then play button 4 when the track on button 3 reaches the start of the fade out.

Button 4 is set to loop continuously

Button 5 will stop all tracks on current page

**Edit** *EditorName* opens up the user defined WAV file editor, this editor is selected via [SetUp|Editor](#) menu. If an editor is assigned the name of the editor will be shown in the menu.

**Midi** see [Midi Assignment](#)

**Audio** see [Audio Setup](#)

**Display** see [Display Options](#)

[Getting Started 4](#)

# Getting Started 4

The Status bar at the bottom of the main window shows hints and the state of several options.



Working from the left:-

## Data Rate



The current data rate of the audio streams being read from disk in bytes/second, note SpotOn has a predefined limit of 20MBytes/sec at which point the status text will change to yellow text on red background. Once the limit has been exceeded no more tracks can be started until the data rate falls below the limit.



As a guide, a CD quality track has a data rate of 176kBytes/sec so the 20MBytes/sec limit should be more than adequate being equivalent to over 100 tracks.



When SpotOn is set to work with multi-channel audio tracks, that is where the number of channels contained in a track is more than two, this status panel has a default green background. The multi-channel mode is enabled using [command line switches](#).

If the [Play Stack](#) is currently playing out a track then a new status bar panel will appear immediately to the right of the data rate panel, this Play stack panel will flash Yellow/Red, left-clicking on the panel will open up the Play Stack window.



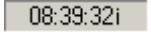
SpotOn can playout buttons on a Preview output without affecting the main outputs, the Preview output is assigned with [Global|Preview Output Assignment](#).



If Midi timecode is detected and Midi In is enabled then the timecode value will be shown with the addition of an 'm' suffix.



Similarly if [SMPTE timecode](#) is being used then it will be displayed but with the addition of an 'x' suffix indicating external timecode.



If the timecode is being derived from a button track then the suffix will be 'i' (internal)



If [Timecode Chase](#) mode is active then the timecode value will be shown in magenta text

## Hints

55.8 MB o/p A3, Fade Out, Log Fade, Play Next

Hint for the button under the mouse pointer, detailing file size, allocated output and any other modifiers. In this example 'A3' shows the allocated output port is A and suffix 3 indicates that it was the third button to be allocated to port A - this becomes important when utilizing sound card hardware mixers to produce smooth fades.

This panel will have a yellow background when [Prep mode](#) is active.

SpotOn running in Preparation Mode

## Midi In

**Midi In Off** The brown background to the text indicates no Midi In devices have been assigned, see menu [SetUp|Midi Devices](#) and would normally mean no Midi input triggers can be accepted. However, if [Midi Loopback](#) is enabled (see below) then clicking this panel will enable/disable the Midi In functions without the need for any real Midi devices, (used when the Midi out messages are internally looped back to the Midi In port).

**midi in on** **midi in off** If Midi loopback is on then the Midi Out panel text will be in lowercase

**Midi In Off** A Midi In device has been assigned but Midi In messages are not enabled clicking this panel will disable/enable Midi In.

**Midi In On** A Midi In device has been assigned and Midi In messages are enabled, clicking this panel will disable/enable Midi In.

**Midi In On** If multiple buttons are assigned the same Midi In note and are to be played out in overlapped mode the text will be underlined as will the Midi In note descriptions displayed on the buttons (see [SetUp|Midi Devices](#) for further details).

**Midi In On** If the option to use [Midi In over UDP](#) is enabled then the text will be in italics

**Midi In On**

**Midi In On** The panel text will flash red when incoming Midi In message is detected.

## Midi Out

**Midi Out Off** A Midi Out device has not been assigned, see menu [SetUp|MidiDevices](#)

**midiout off** A Midi Out device has not been assigned, but Midi loopback is selected

**Midi Out Off** A Midi Out device has been assigned but Midi Out messages are not enabled, clicking this panel will disable/enable Midi Out.

**Midi Out On** A Midi Out device has been assigned and Midi Out messages are enabled, clicking this panel will disable/enable Midi Out.

**Midi Out On** The panel text will flash red when Midi Out message is sent.

**midiout on** A Midi Out device has not been assigned, but Midi loopback is selected and is enabled

**Midi Out On** Midi Out over network is enabled when text is underlined, example shows Midi over Network enabled but no real Midi device selected

**Midi Out On** When [Network Master](#) enabled the text is shown in blue, example shows Network master enabled with a Midi device selected and Network Midi Master active

## GPI In

**GPI In Off** A GPI In device has not been assigned, see menu [SetUp|GPI Triggers](#)

**GPI In Off** A GPI In device has been assigned but GPI In events are not enabled

**GPI In On** A GPI In device is assigned and GPI In events are enabled, clicking this panel will disable/enable GPI In

**GPI In On** The panel text will flash red when a GPI In event is detected.

## PBus

When PBus control is enabled the text in the GPI In panel is shown underlined

**GPI In On** A GPI In device has not been assigned and PBus Control is enabled

**GPI In On** The panel text will flash cyan when a PBus trigger event is detected.

**GPI In On** GPI In device has been assigned and PBus Control is enabled

Shift right-clicking on the GPI In panel will toggle the PBus control enabled/disabled

## Links

**Links Off** Groups and Master/Slave links are disabled

**Links On** Groups and Master/Slave links are enabled, clicking this panel will disable/enable button linking

## HotKeys

**HotKeys Off** HotKeys are disabled

**HotKeys On** HotKeys are enabled, clicking this panel will disable/enable HotKeys, if Overlapped mode is selected and there are duplicate Hotkeys assigned the text will be underlined

## **Play Mode**

**Play/Menu**

Mouse button functions are - Left Button alternatively plays and stops track, Right button brings up menu

**Play/Stop**

Mouse button functions are - Left Button plays and right button stops track, shift+right button brings up menu

Mouse mode can be changed by left clicking on the panel or via menu [Options|Mouse Functions](#)

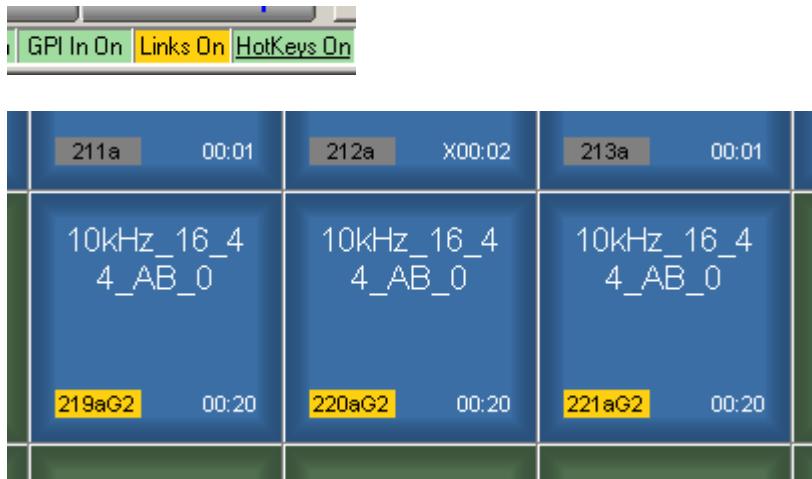
When using a touchscreen to control SpotOn sometimes it may be necessary to debounce the "presses" (left-clicks) made by the user so that the track is not restarted unintentionally. Under the

[options menu](#) the debounce time can be set and when in use it is indicated by the lower right status panel text being shown in white on blue as below.

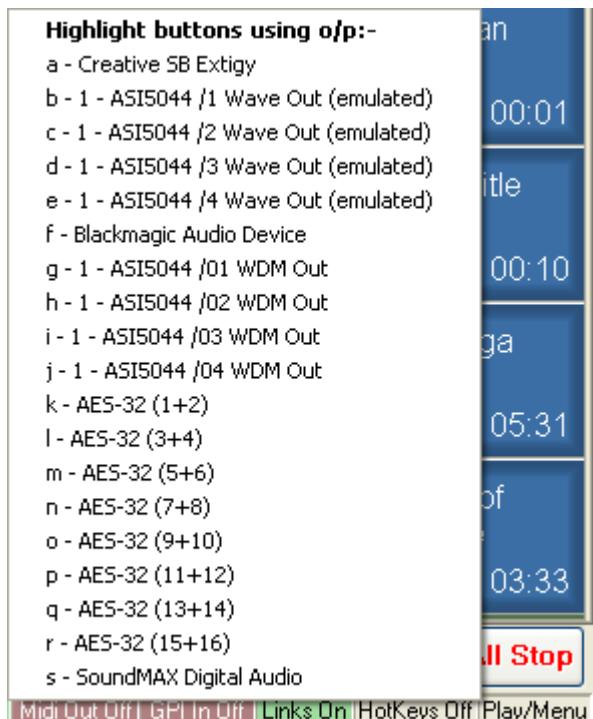
Play/Stop

The five button attributes MidiIn, MidiOut, GPIs, Links and Hotkeys above can be displayed as highlighted button numbers by right clicking the appropriate status bar panel.

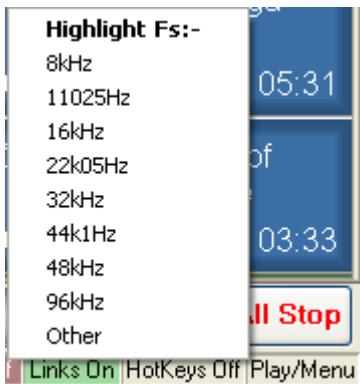
The panel will change colour to orange and the numbers on the buttons that have those attributes are also set to orange, the remaining button numbers are set to dark grey



Similarly the output assignments can be shown on screen by right-clicking the mouse mode panel on the right hand side of the status bar. This will offer a popup menu listing all the available audio outputs, selecting one of them will highlight the buttons on the screen as described above.



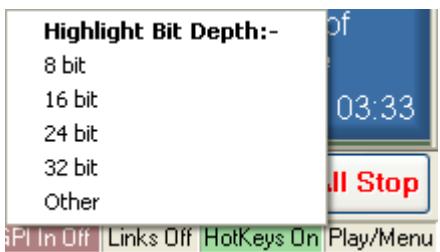
The button highlight can be used to show buttons with a specific sample rate, this mode is selected by shift right-clicking the mouse mode panel.



The button highlight can be used to show buttons with a specific number of channels, this mode is selected by control right-clicking the mouse mode.



Finally the button highlight can be used to show buttons with a specific bit depth, this mode is selected by shift+control right-clicking the mouse mode.

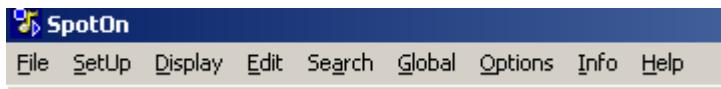


In all the highlighting modes the action will automatically cancel after 5 seconds or can be cancelled manually by right-clicking the panel a second time.

Example of a typical screen layout



# Main Menus



[File](#)

[SetUp](#)

[Display](#)

[Edit](#)

[Search](#)

[Global](#)

[Options](#)

[Info](#)

[Engineering](#)

[Admin](#)

[Help](#)

# File Menu



<a href="#"><u>New Session</u></a>	Clear all pages to start a new session
<a href="#"><u>Load Session</u></a>	Load data file containing complete setup information
Load Recent Sessions	Displays a list of recently accessed Sessions
<a href="#"><u>Restore from BackUp</u></a>	Restore session from timed backup file
Save Session	Save data to last loaded/saved disc file
<a href="#"><u>Save Session As</u></a>	Save data to a specific file
<a href="#"><u>Load Package</u></a>	Load file containing setup information and audio files
Load Recent Packages	Displays a list of recently accessed Packages
<a href="#"><u>Save Package As</u></a>	Save file containing setup information and audio files
<a href="#"><u>Merge Block of Buttons</u></a>	Load block of consecutive buttons
<a href="#"><u>Save Block of Buttons</u></a>	Save a block of consecutive buttons
<a href="#"><u>Save Track List</u></a>	Save track data in a spreadsheet compatible format
<a href="#"><u>File Search</u></a>	Opens an external file search utility
<a href="#"><u>Export</u></a>	Export copies of tracks to single folder
<a href="#"><u>Exit</u></a>	Close down SpotOn and save debug status files

## New Session

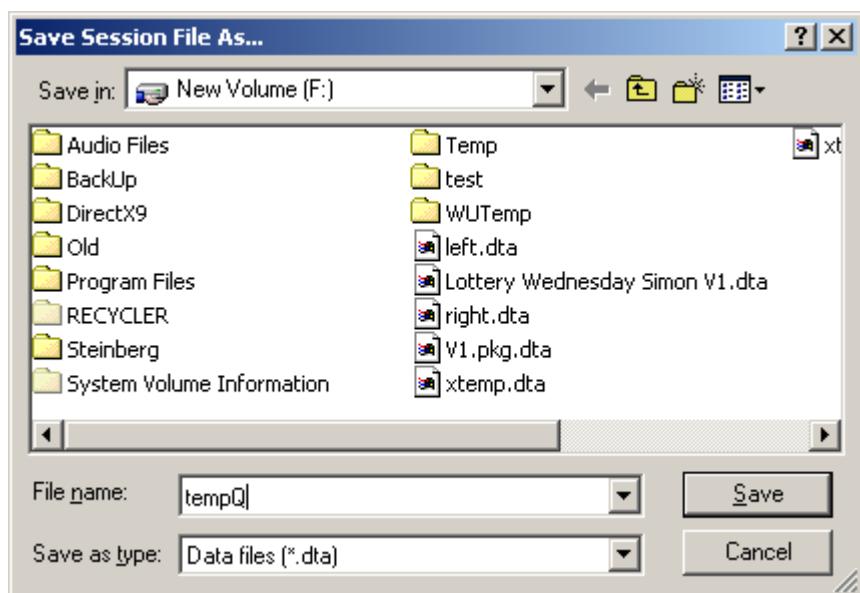
In addition to clearing all the buttons this option will load the file ~newsession.dta if it is present in the Application Data folder, this file can be saved just as any other session file so allowing loading of a customised new session.

Application Data folder = ..\Documents and Settings\All Users\Application Data\Serialtech\SpotOn\

## Load Session

Load a new session into SpotOn see [Load Session](#) page for an explanation

## Save Session As



This saves the current session to disc, for SpotOn to locate the files the extension must be '.dta' this is added automatically. In the example above the file would be saved as 'tempQ.dta'.

If an invalid file extension is entered as part of the filename then it will be rejected.



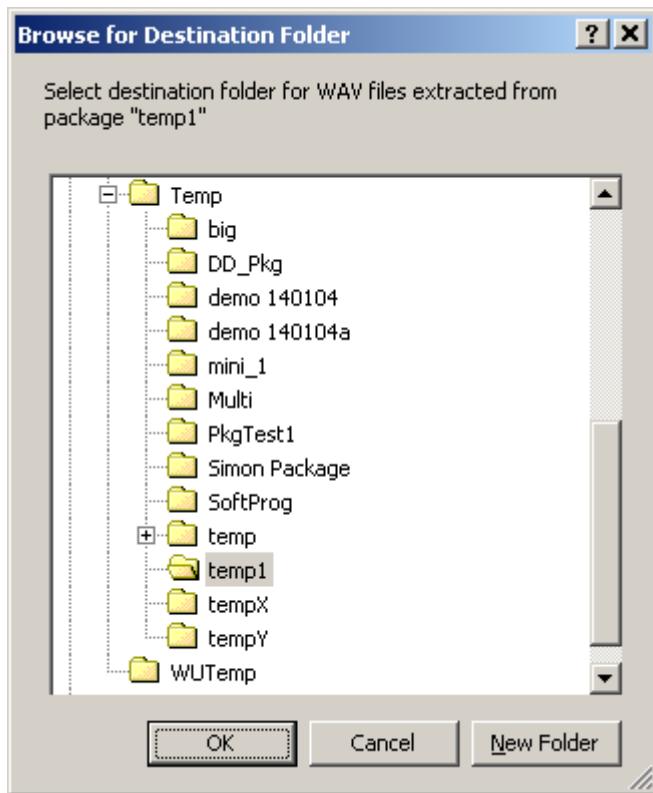
## Restore from BackUp

To restore a session from the automatic backup files, select a file based on the time and date that is most likely to contain the data required

11:27 today	16:54 yesterday
11:03 today	18:23 Sun 11 Apr
11:00 today	14:39 Sun 11 Apr
18:00 yesterday	14:34 Sun 11 Apr
17:20 yesterday	14:29 Sun 11 Apr
17:09 yesterday	14:24 Sun 11 Apr
17:04 yesterday	14:19 Sun 11 Apr
16:59 yesterday	14:14 Sun 11 Apr

## Load Package

A Package file (\*.pkg) can be loaded to recreate a complete setup including replacing the audio WAV files, as this may take up a large amount of disc space the location of the extracted audio files can be changed during loading from the default of SpotOn\Package Media\ to a more appropriate location, the default location is set via [Admin\File Folders](#)



If SpotOn detects that the package being loaded was built with a version of the program that is more recent than the current version, then the warning dialog box below will appear.



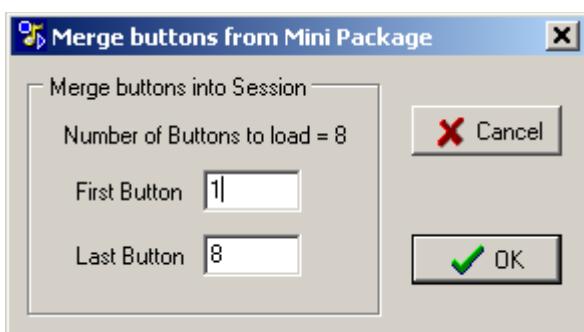
Clicking Yes will open the [Package Converter](#) utility, the Package Converter utility used must be the latest version and that can be found on the Serialtech web site - [PackageConvert.zip](#).

If the loaded package file contains less than the maximum number of buttons (<320) - a Mini package - then the option will be offered to merge the buttons into a specific place within the existing buttons.



If Yes is selected all buttons in SpotOn will be cleared and then loaded from the Mini package starting at button 1.

If No is selected a further option is offered defining where the mini package will be merged into the existing set of buttons

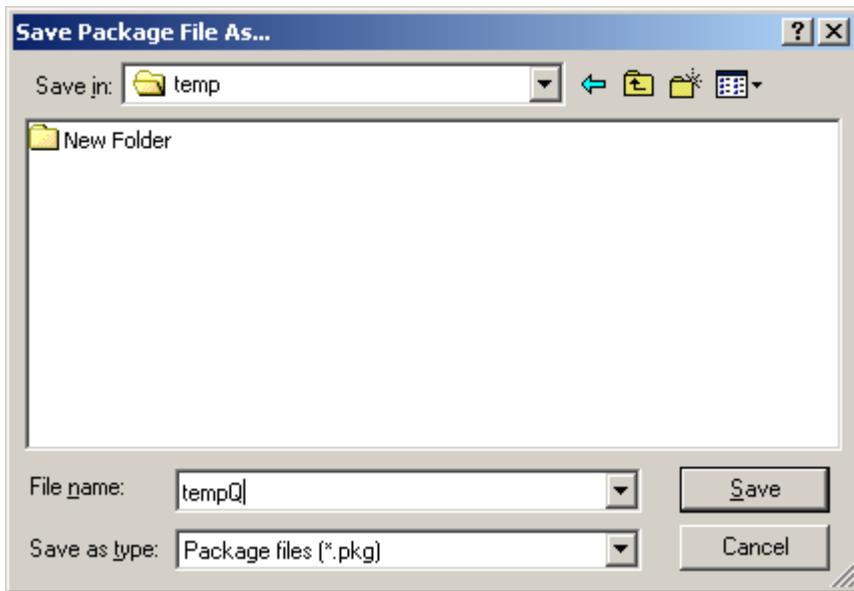


Default positioning starting at button 1, can be changed as below to start on any button.



Depending on the length of the original filenames and the length of the name of the new folder, it is possible that the length of the overall path name may exceed the limit set by Windows. If this is the case then the filenames will be truncated but remain unique.

### Save Package As

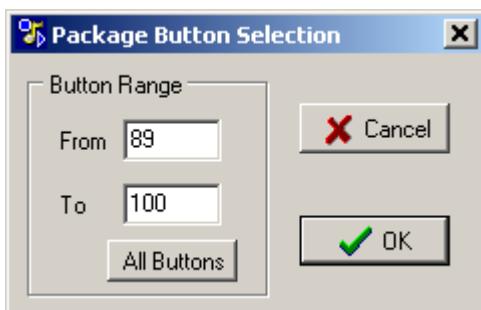


This option will save all the individual button settings along with the audio WAV files, consequently the resulting package file (\*.pkg) can be very large, with CD quality audio the file will take up approximately 10MB for each minute of audio saved.

This package file can then be reloaded into the same computer or another computer running SpotOn to recreate the original setup.

There is a utility program provided with SpotOn called [UnPackageWAVs](#) that can extract the audio WAV files from the package file, this may be useful when working offline without access to SpotOn to review the audio material. The utility can also export audio tracks with the trim and gain settings applied by SpotOn.

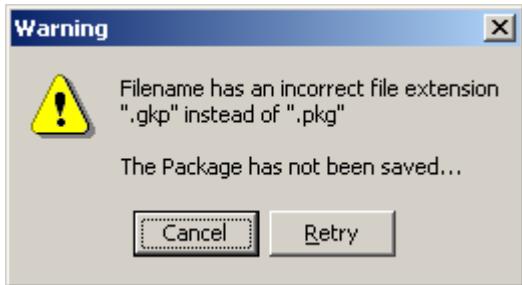
A Package can contain any number of consecutive buttons between 1 and the maximum of 320



If the package does not contain all buttons then it is termed a Mini Package and can be merged into an existing set of buttons.

This saves the current package to disc, for SpotOn to locate the files the extension must be '.pkg' this is added automatically. In the example above the file would be saved as 'tempQ.pkg'.

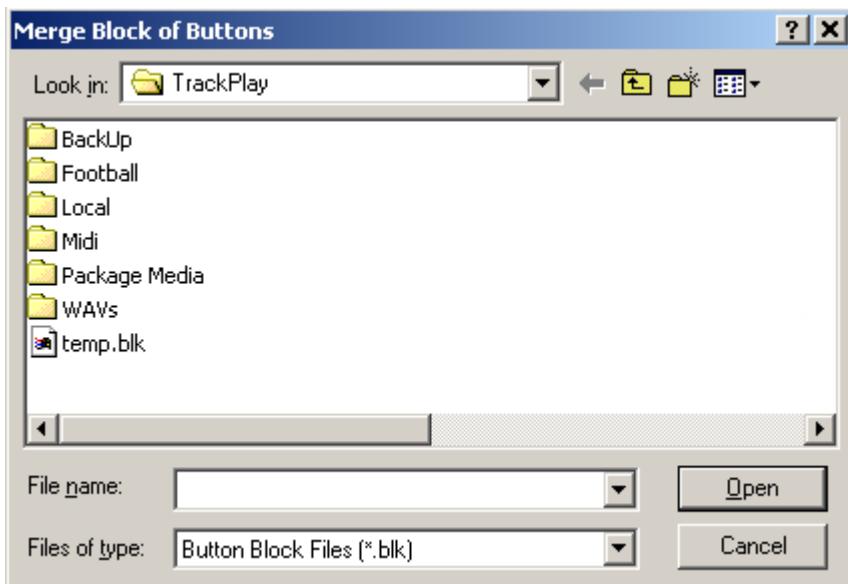
If an invalid file extension is entered as part of the filename then it will be rejected.



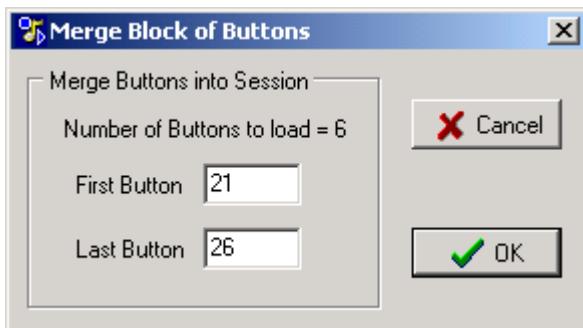
If a [CD/DVD burner utility](#) has been assigned then after the package has been saved there is then the option to burn it to CD or DVD.



## Merge Block of Buttons



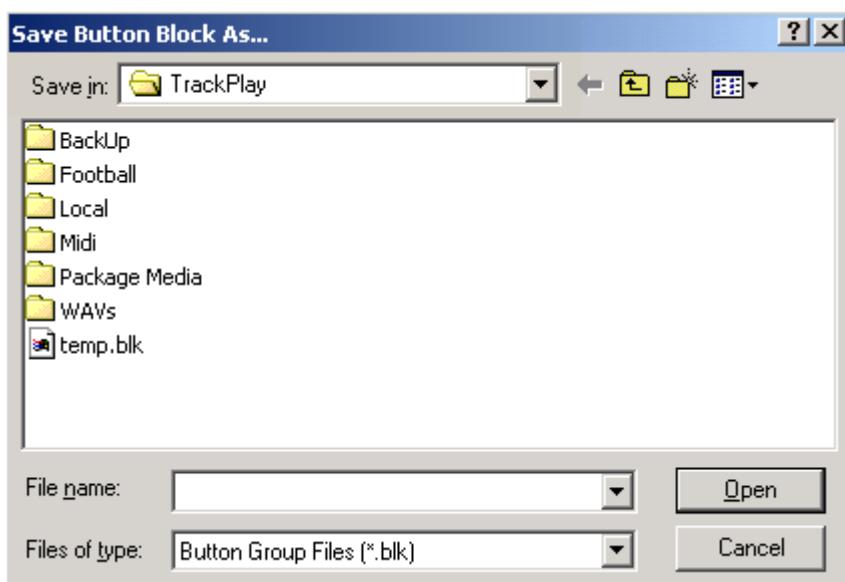
Having selected the file to retrieve the block of buttons, the first button of the sequence has to be defined, the number of buttons to be loaded is fixed in the file



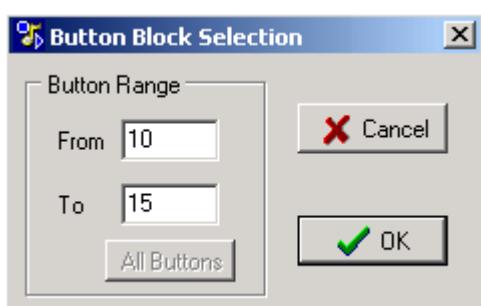
## Save Block of Buttons

A continuous numerical run of buttons can be saved to a file, this can be used for a set of tracks that are commonly used and can be imported into new setups

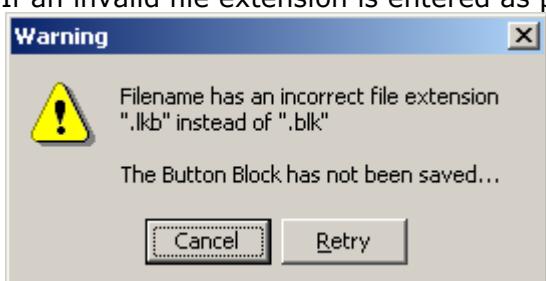
Select a file to store the block of buttons



Then select the continuous range of buttons to save



If an invalid file extension is entered as part of the filename then it will be rejected.



## Save Track List

A Track List contains the settings of the assigned buttons the data is saved as both a text file (\*.txt) and a comma separated variable (\*.csv) file

A typical section of a Track List file (\*.csv) imported into MS Excel

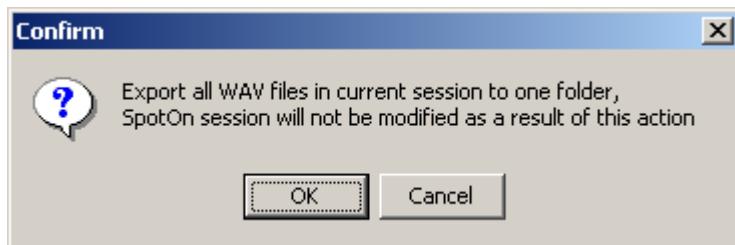
	A	B	C	D	E	F	G	H	I	J	K	L
1	#	TrackName	Length	Output	Gain	Left	Right	Speed	Trim In	In Point	Trim Out	Out Poi
2	2	SOUND1	00:00:05:02	a	0dB	0dB	0dB	0%	No	00:00:00:00	No	00:00:05
3	3	SOUND1	00:00:05:02	a	0dB	0dB	0dB	0%	No	00:00:00:00	No	00:00:05
4	4	SOUND1	00:00:05:02	a	0dB	0dB	0dB	0%	No	00:00:00:00	No	00:00:05
5	13	ding	00:00:00:69	e	0dB	0dB	0dB	0%	No	00:00:00:00	No	00:00:00
6	28	AudioTrack 09 (range)	00:00:08:01	e	0dB	0dB	0dB	0%	No	00:00:00:00	No	00:00:08
7	30	AudioTrack 14 (range)	00:00:11:51	e	0dB	0dB	0dB	0%	No	00:00:00:00	No	00:00:11
8	38	AudioTrack 14 (range)	00:00:11:51	e	0dB	0dB	0dB	0%	No	00:00:00:00	No	00:00:11
9	66	SOUND1	00:00:05:02	a	0dB	0dB	0dB	0%	No	00:00:00:00	No	00:00:05
10	67	SOUND1	00:00:05:02	a	0dB	0dB	0dB	0%	No	00:00:00:00	No	00:00:05
11	69	SOUND1	00:00:05:02	a	0dB	0dB	0dB	0%	No	00:00:00:00	No	00:00:05
12	70	SOUND1	00:00:05:02	a	0dB	0dB	0dB	0%	No	00:00:00:00	No	00:00:05
13	77	ding	00:00:00:69	a	0dB	0dB	0dB	0%	No	00:00:00:00	No	00:00:00
14	92	AudioTrack 09 (range)	00:00:08:01	e	0dB	0dB	0dB	0%	No	00:00:00:00	No	00:00:08
15	94	AudioTrack 14 (range)	00:00:11:51	e	0dB	0dB	0dB	0%	No	00:00:00:00	No	00:00:11
16	102	AudioTrack 14 (range)	00:00:11:51	e	0dB	0dB	0dB	0%	No	00:00:00:00	No	00:00:11

## File Search

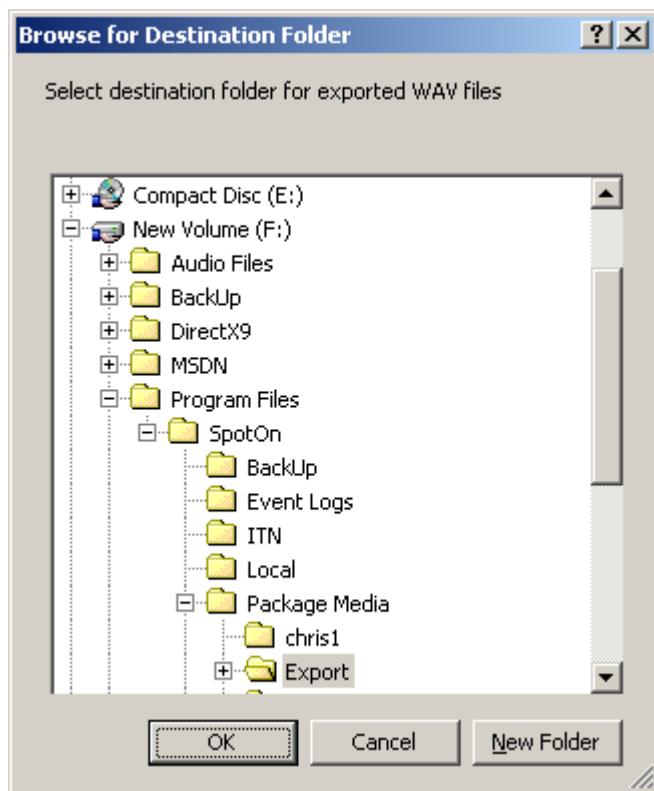
The menu item will run an external file search utility this utility may be customised to the type of files required, the utility is selected via [SetUp|Search](#) and the default program is [SpotOnSearch](#)

## Export

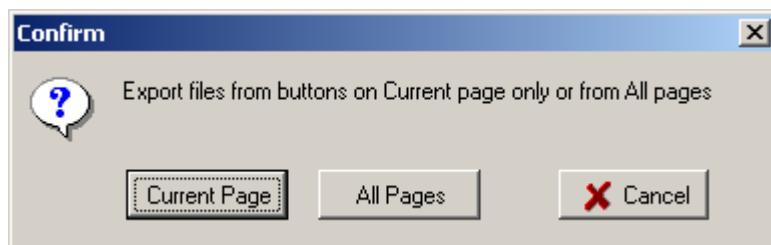
For convenience SpotOn provides an export facility to copy all the currently used audio files to a single folder, this does not change the files or locations used by the application.



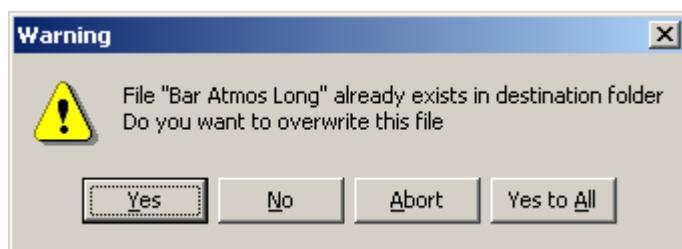
The destination folder is then selected



Next an option to export the files only from the buttons on the current page or from buttons on all pages is presented



If a filename is found in the destination folder that is the same as any of the files being exported a warning dialog will be shown



## Exit

This option will close down SpotOn and save a debug status file ~StatusLog.txt to the application data folder, found at:-

Windows 7 - C:\Program Data\Serialtech\SpotOn

Windows XP - C:\Documents and Settings\All Users\Application Data\Serialtech\SpotOn

Windows 2K - C:\Documents and Settings\All Users.WINNT\Application Data\Serialtech\SpotOn

This file is only overwritten when SpotOn is closed via the File|Exit route, exiting the program with the more usual Windows close button leaves the file intact.

This mode will be useful in debugging problems, if a problem should occur close down SpotOn and then save the ~StatusLog.txt file to another folder, the zip the file and EMail it to your supplier along with a detailed description of what problems occurred.

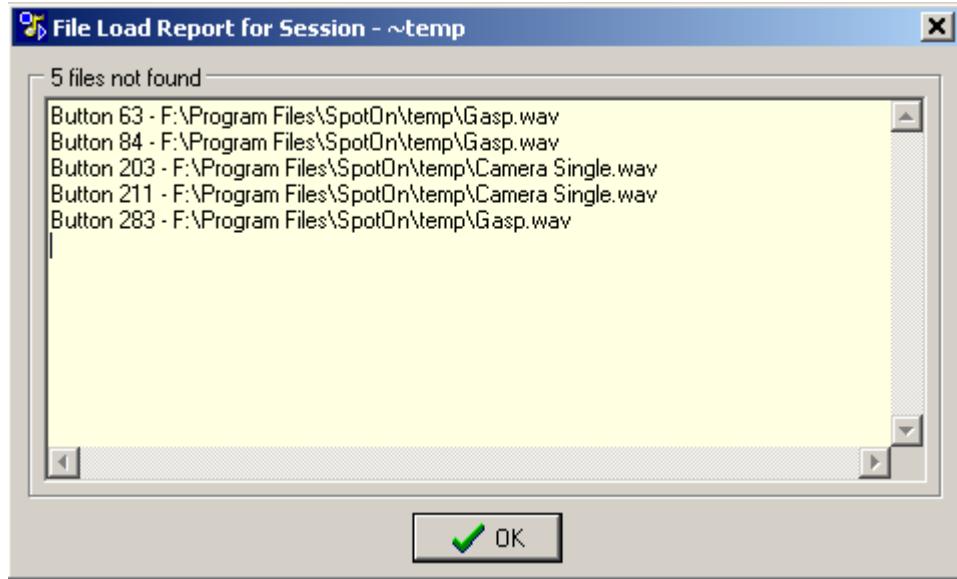
More comprehensive debug logs can be saved via the [Global|Utilities menu](#)

# Load Session

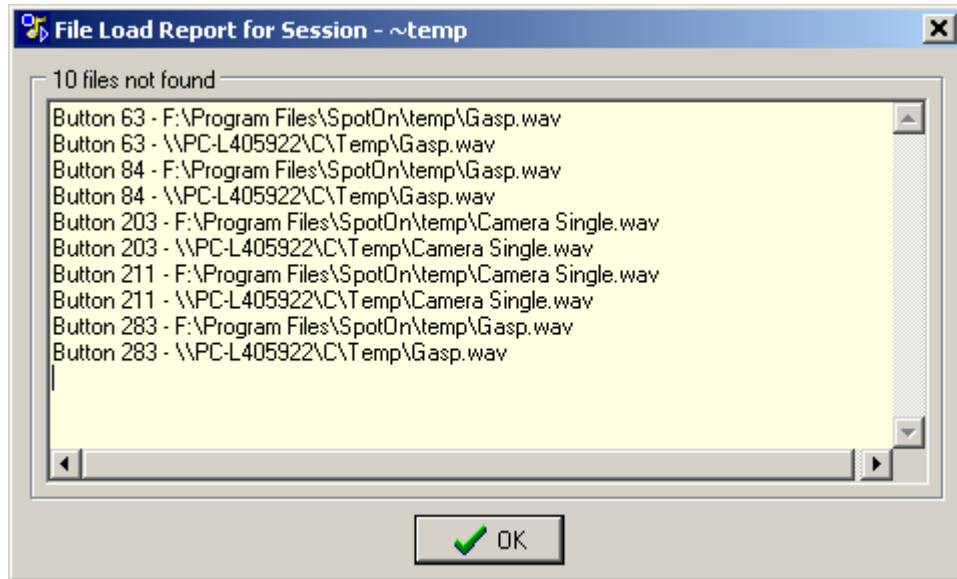
## Load Session

This option will load the selected session file which will contain the button assignments and any parameters that have been set such as Master/Slave links, Hotkeys etc., to achieve this the audio tracks are assumed to be in the same location (disk drive/folder) as they were when the session was saved.

However it is possible that the audio tracks have been moved or possibly deleted, in this case SpotOn will report any missing files as shown below along with their last known location.

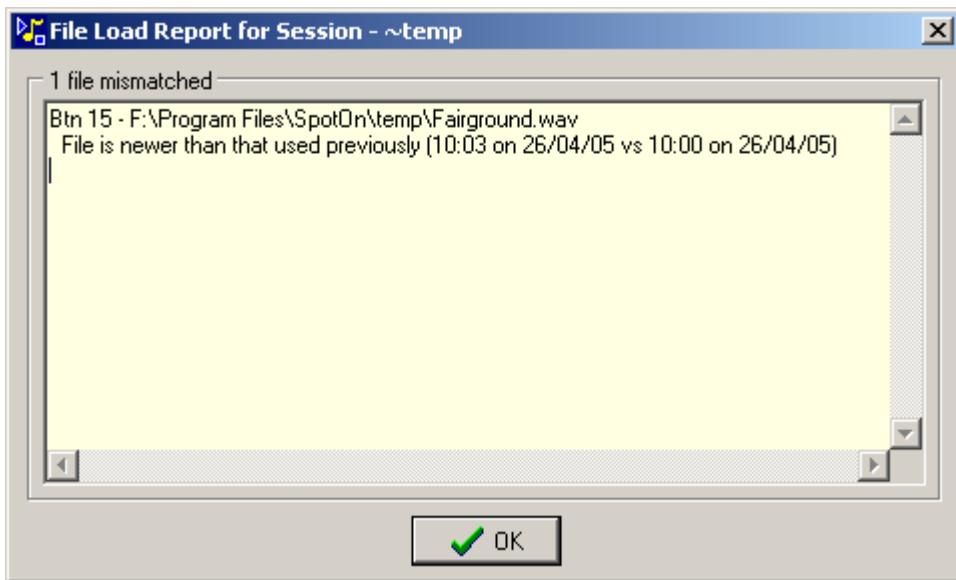


If the [Try Remote Files](#) option is checked, then the program will also attempt to search for the missing files in the location from which they were originally loaded eg CD or remote disk drive and then report as below.



Here there are two entries for each button, the first for the local copy of the file and the second for its original location, these reports are saved to the log file which can be viewed via [Info|Logs](#)

SpotOn will also detect audio files with a timestamp that is not the same as that when the session file was saved, usually indicating the file has been recently edited.



In this case if the playlist information has changed and it is possible the new playlist entries will be merged with the originals, also any fade out points that are now beyond the end of the file will be reset to default values.

This loading report is copied to the Event logs found under [Info|Logs|Events](#) so that any parameters changed can be reentered.

Activity Logs - Events		
File		
<a href="#">Playout</a> <a href="#">Events</a>		
Item	Time	Action
1	10:03:54	Session - ~temp - File timestamp mismatched:-
2	10:03:54	Btn 15 F:\Program Files\SpotOn\temp\Fairground.wav, File is newer than that used previously (10:03 on 26/04/05 vs 10:00 on 26/04/05)
3	10:04:03	Session file ""temp" loaded in 0.61s

As a result of the possibility that some audio tracks may not be found or timestamps have been changed unintentionally by copying files, it is recommended that the session and audio data are saved together in a [Package](#).

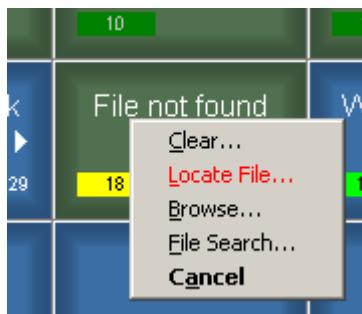
## File Not Found

If files cannot be found, the buttons concerned are shown with the text 'File not found' instead of the Trackname



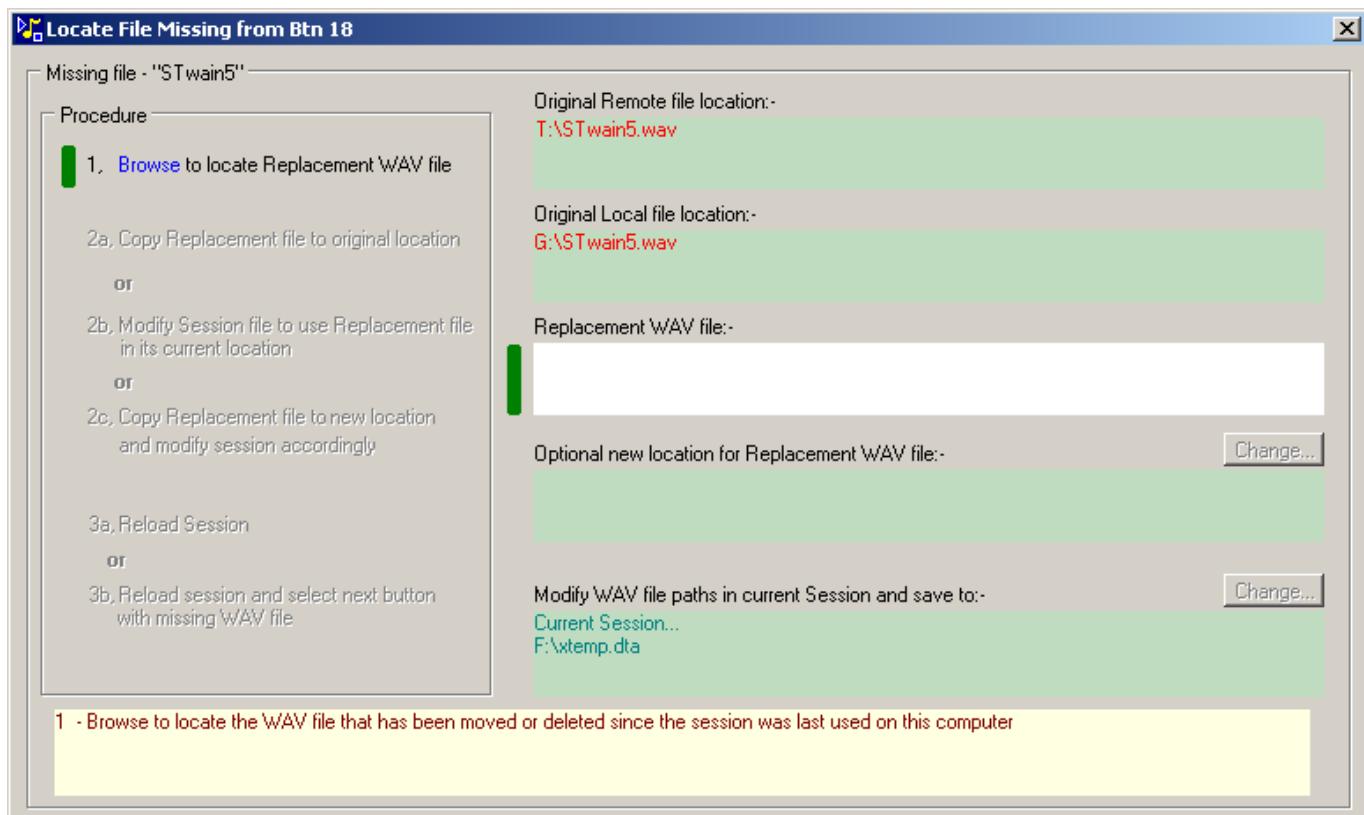
**Note:** It is important that a copy of the original session file is made using Windows Explorer before any attempts are made to recover missing files, this is to ensure the original session data is not inadvertently modified.

The right-click menu on this button contains an extra entry 'Locate File'



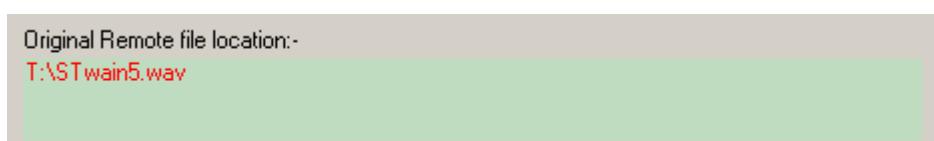
Choose Locate File to find the missing file and copy it to the original location where SpotOn was expecting to find the file or to copy it to a new location and modify the session file accordingly.

The Locate File dialog is shown below, on the left hand side is the procedure for locating/copying the file and on the right hand side the file locations.



#### Folder locations:-

Working down from the top right - the Original Remote File location points to the original source of the track, this could be a CD or server which maybe no longer accessible, in which case it will be shown in red text.



The Original File location is where SpotOn expected to find the file, again this will be shown in red text if the location cannot be accessed

Original Local file location:-

G:\STTwain5.wav

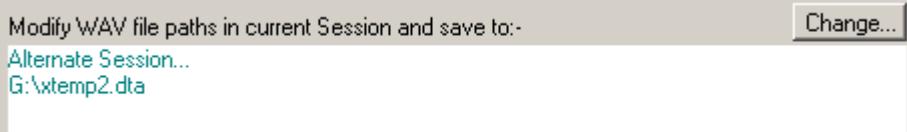
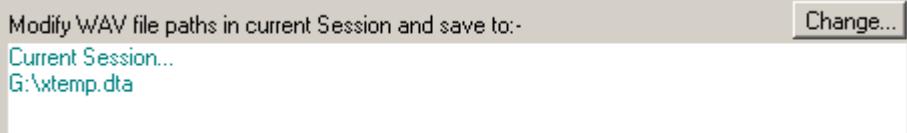
The Replacement WAV location is where SpotOn will now look for the audio file

Replacement WAV file:-

Once a replacement file has been located it can be copied to a new location, SpotOn will change the references to the audio file to point to the new location, the 'Change' button opens a folder selection dialog allowing the new location to be specified.

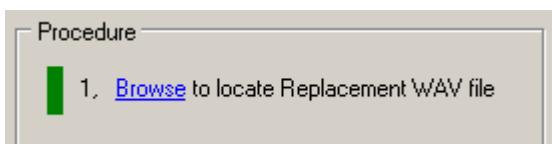


Lastly the session file that contains the changed filenames can be either the default current session or another new session file, the 'Change' button allows a new session file name to be entered

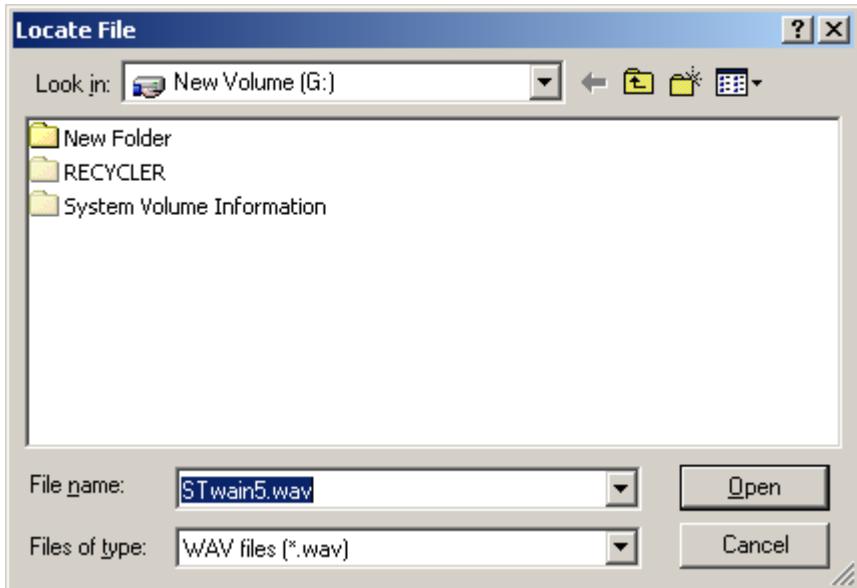


### Procedure:-

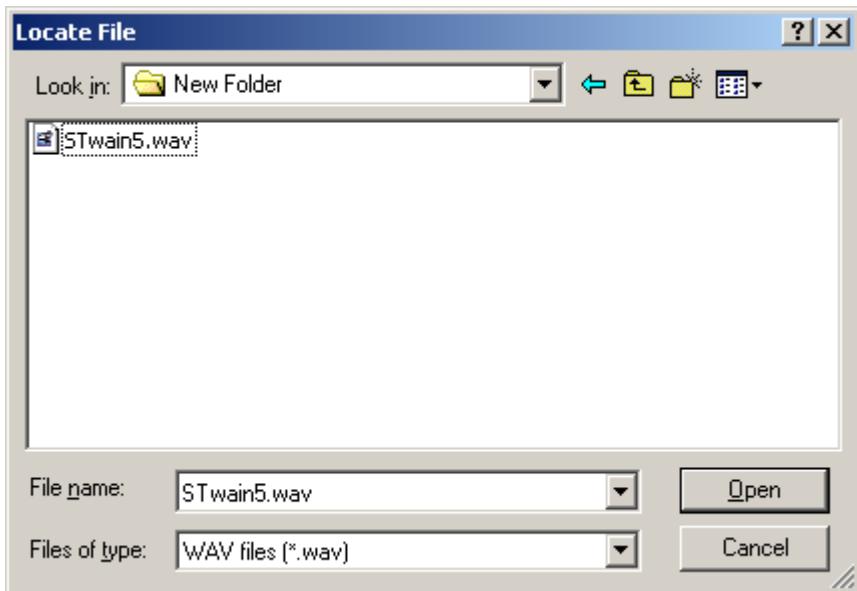
On the left of the dialog are listed the three steps to find the missing file, the steps are selected via hyperlinks indicated by blue text which is underlined when active, the vertical green bar shows the current step in the procedure.



The first step is to locate the missing file, clicking on Browse will display a file dialog window

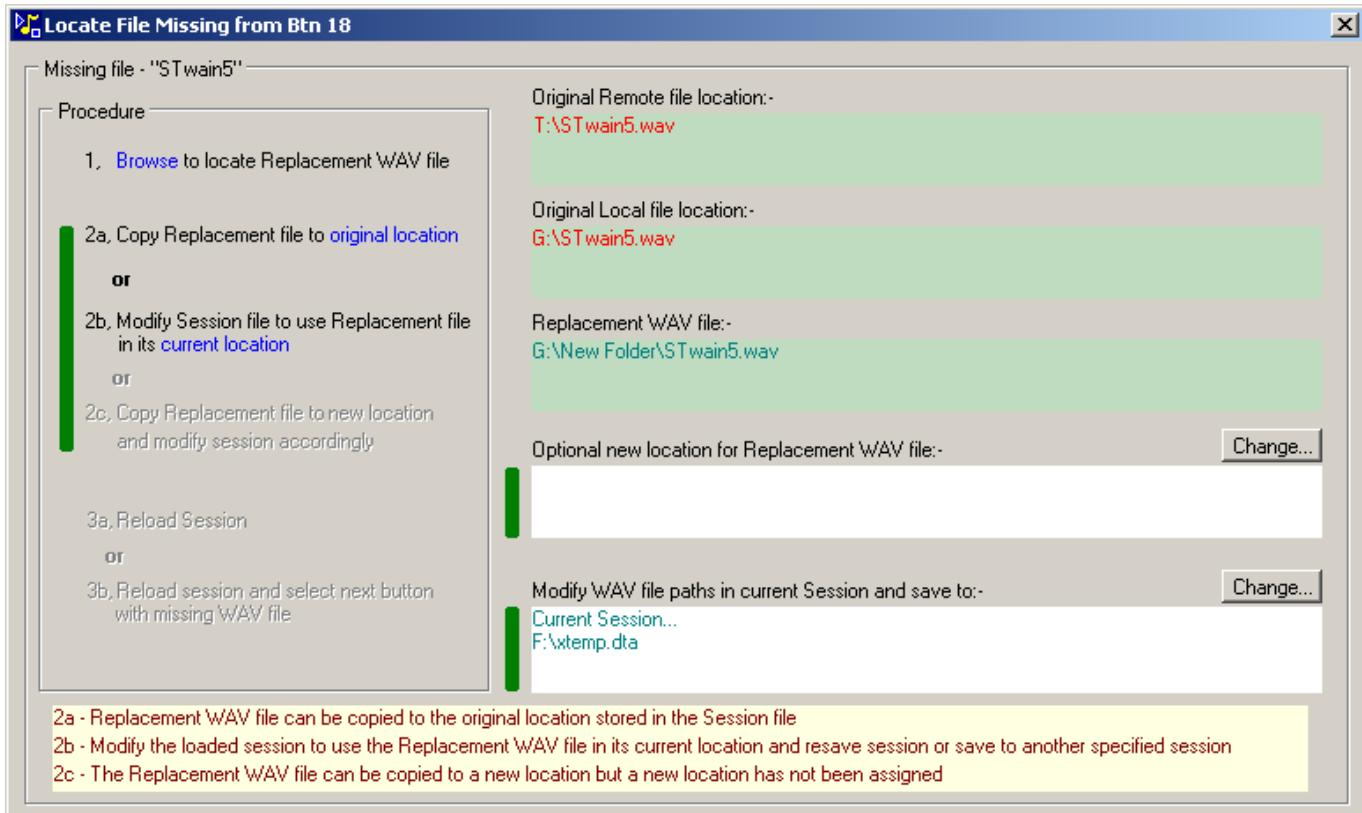


Here the file named 'STwain5.wav' no longer exists but in this case it is known to have been moved into the New Folder.



Once a replacement file has been assigned it is shown on the right of the dialog as a Replacement WAV file and the bar highlight on the far left moves to step 2

The hint panel at the bottom of the window give brief notes on the options available

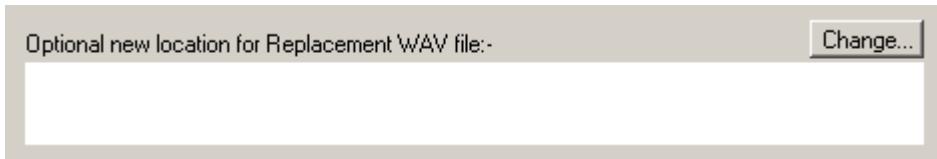


Some of the three options in step 2 may be disabled.

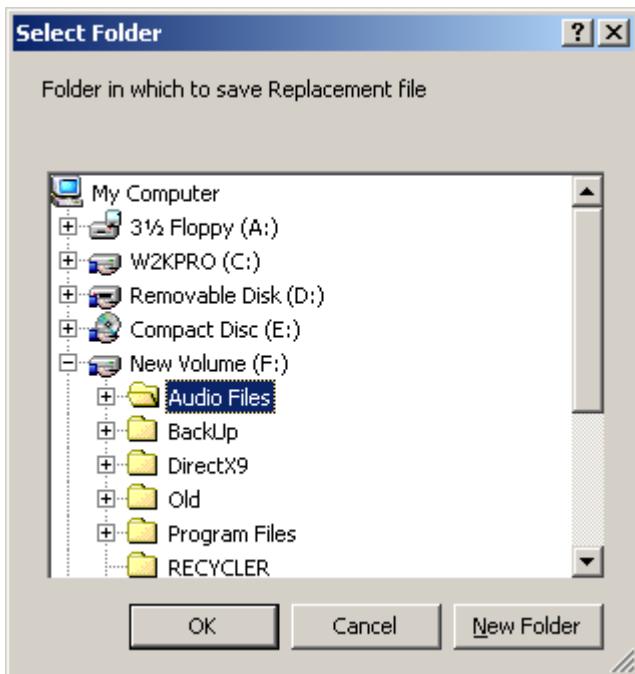
2a will be disabled if the original location does not exist on the computer, this may happen if a session has been copied from another computer or the computer disc drive configuration has been changed.

2b will always be enabled

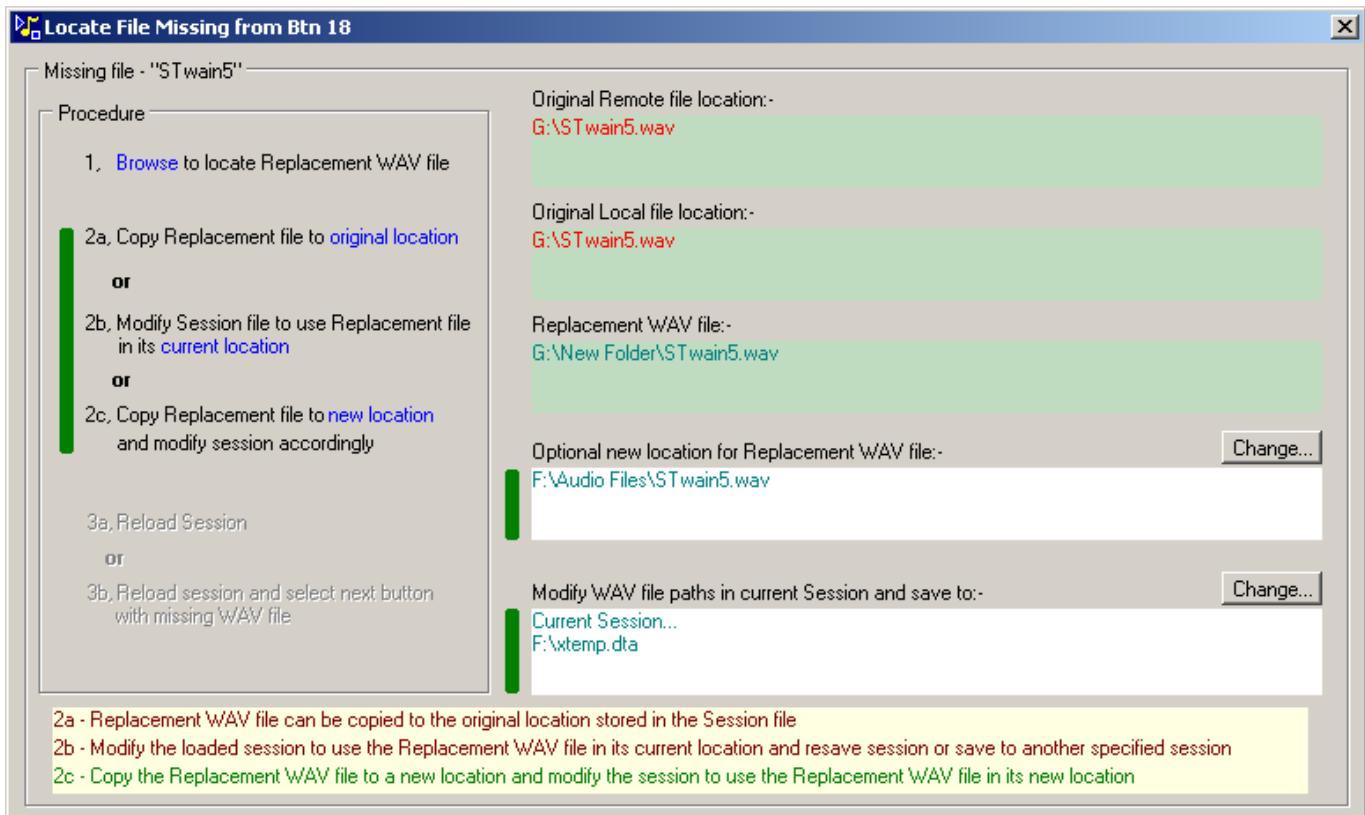
2c is initially disabled until a new location is specified via the section below



Click on the Change button to define a new location for the replacement WAV file

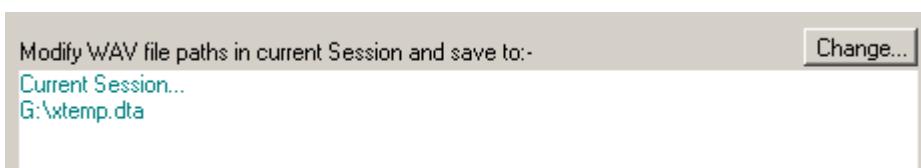


The alternative location is now specified and item 2c is enabled

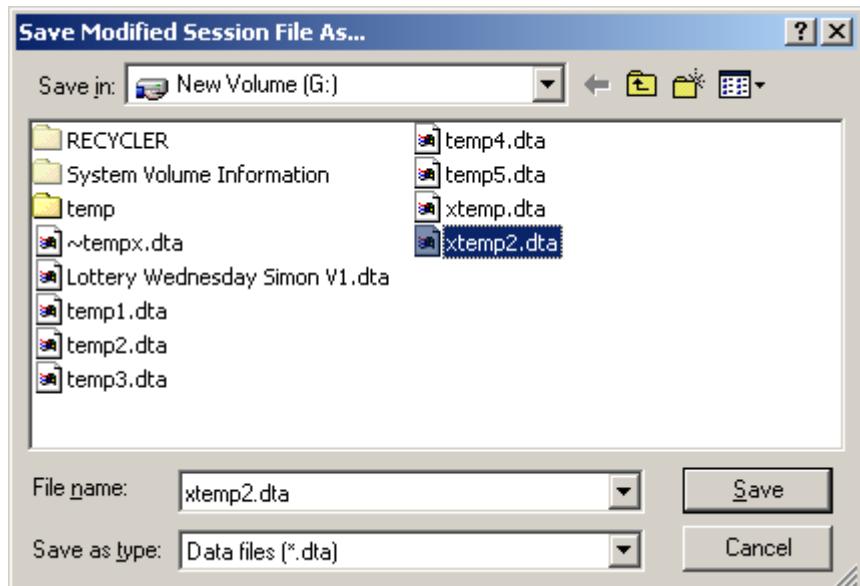


When the available options change the hint panel text is highlighted to indicate that it has been updated.

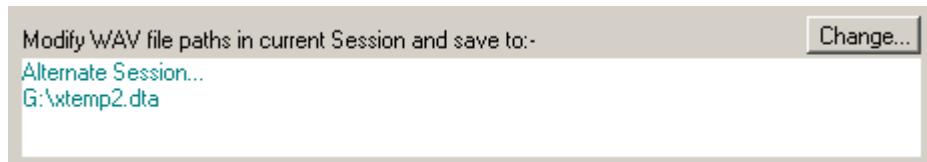
If the session data is to be modified the default is to modify the currently loaded session, alternatively another session name can be assigned by using the Change button



This displays a dialog box where the new session filename can be entered

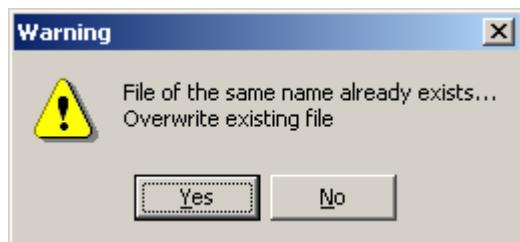


This is then reflected in the main dialog window



Clicking on any one of the options 2a, 2b or 2c will then move to step 3.

If when copying a file, a file of the same name is found in the destination folder a warning dialog will be shown

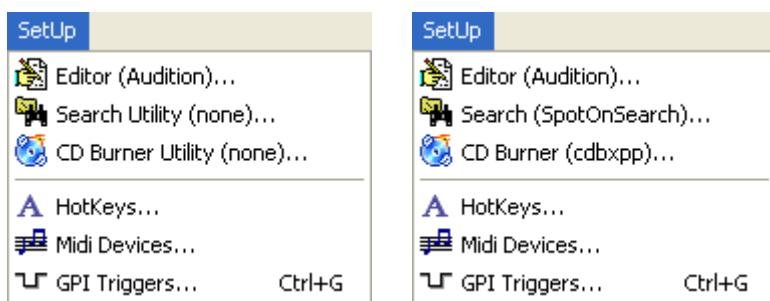


Finally on step 3 the two options are to reload the current session or to reload and select the next button with a missing WAV file.

Choosing 'select next button' will cause SpotOn to scan the remaining buttons for missing files and if the missing audio file is found in the same folder as the previous missing file then the session will be automatically modified with the new location.



# SetUp Menu

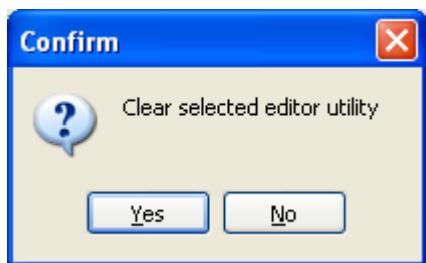


## Editor

Opens a file selector dialog to select an external WAV file editor, the editor application can then be called via the Edit option in the [Button Menu](#), the current editor name is shown in the menu item, a user selected editor is saved within the session file.

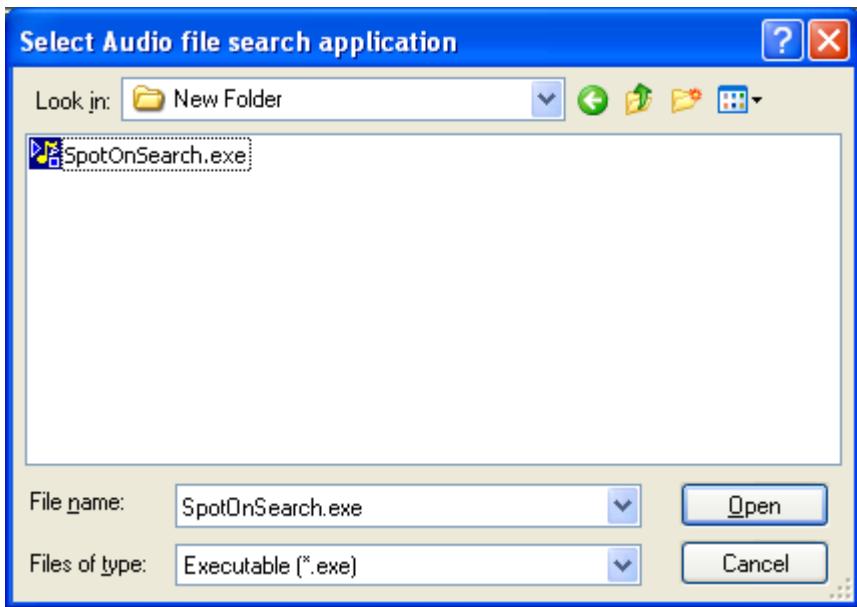


Selecting Cancel from the Editor select dialog will offer the option to clear the existing selection.

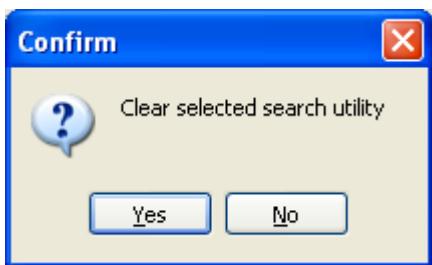


## Search

Opens a file selector dialog to select an external file search utility, the utility can then be called via the Search option in the [File Menu](#), the name of the current search utility is shown in the menu item. A utility [SpotOnSearch](#) is packaged with the SpotOn for this purpose.

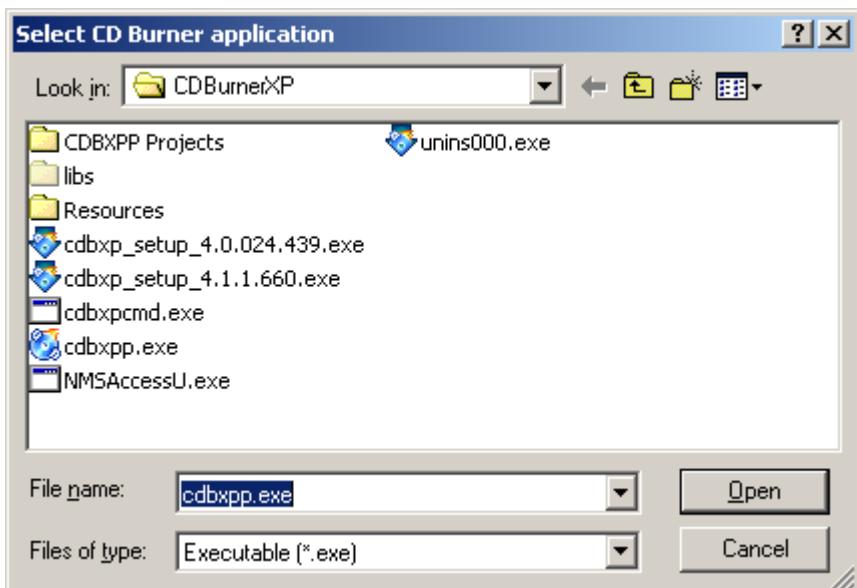


Selecting Cancel from the Search select dialog will offer the option to clear the existing selection.



## CD Burner

Opens a file selector dialog to select an external CD Burner utility. SpotOn is configured to use a third party CD burner utility "CDBurnerXP", the latest version of which can be found at <http://www.cdburnerxp.se>. The utility can then be called via Ctrl+B or the CD Burner option in the [Global|Utilities](#) menu, the name of the current utility is shown in the SetUp menu item shown above.



Selecting Cancel from the CD Burner select dialog will offer the option to clear the existing selection.



## HotKeys



The action of pressing HotKeys can be handled in different ways.

The top selection in the setup dialog box Global/Paged defines the scope of the HotKeys, defining whether the HotKey press is restricted to act only on the currently selected page or applied to all pages globally.

The Ganged/Overlapped setting defines how buttons assigned to the same HotKey should act when the HotKey is pressed.

In Ganged mode all the buttons with the same HotKey will act together, alternatively in Overlapped mode the buttons with the same Hotkey will play in numerical sequence, starting with the first button not currently playing or with the least amount of time remaining if all buttons with the same HotKey are already playing.

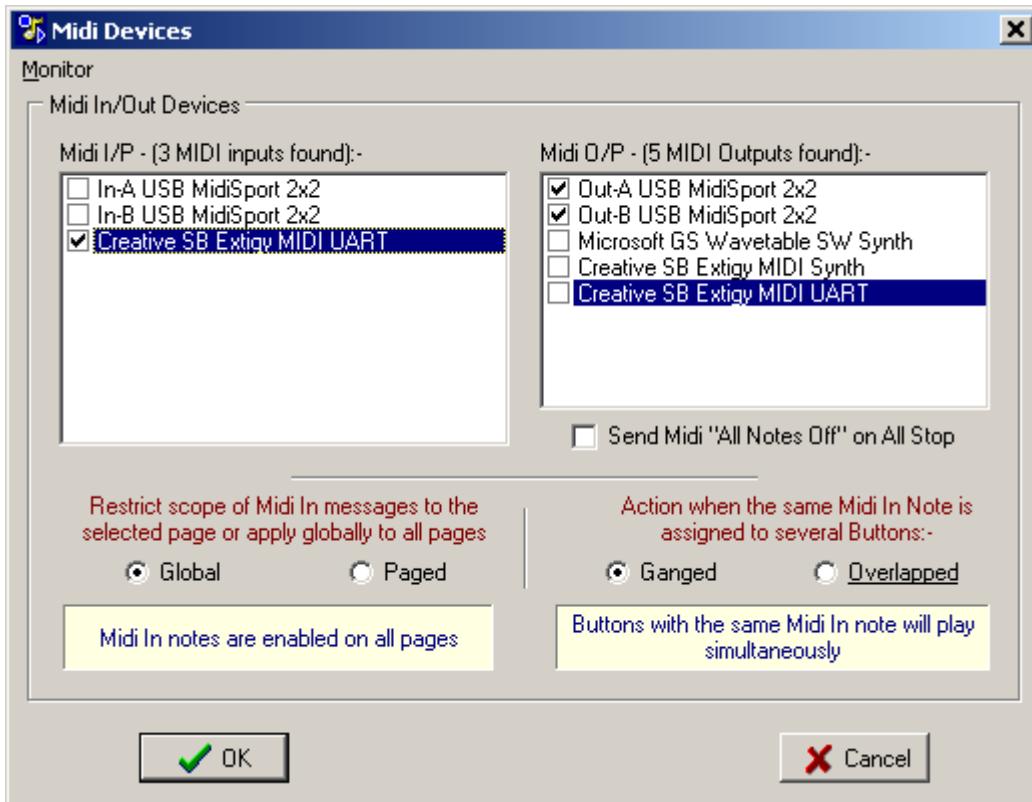
Hotkey overlapped play action can also be triggered by a mouse left-click on a button, [see Advanced Operation](#) for further explanation

If the HotKeys are currently disabled then the message below will be shown.

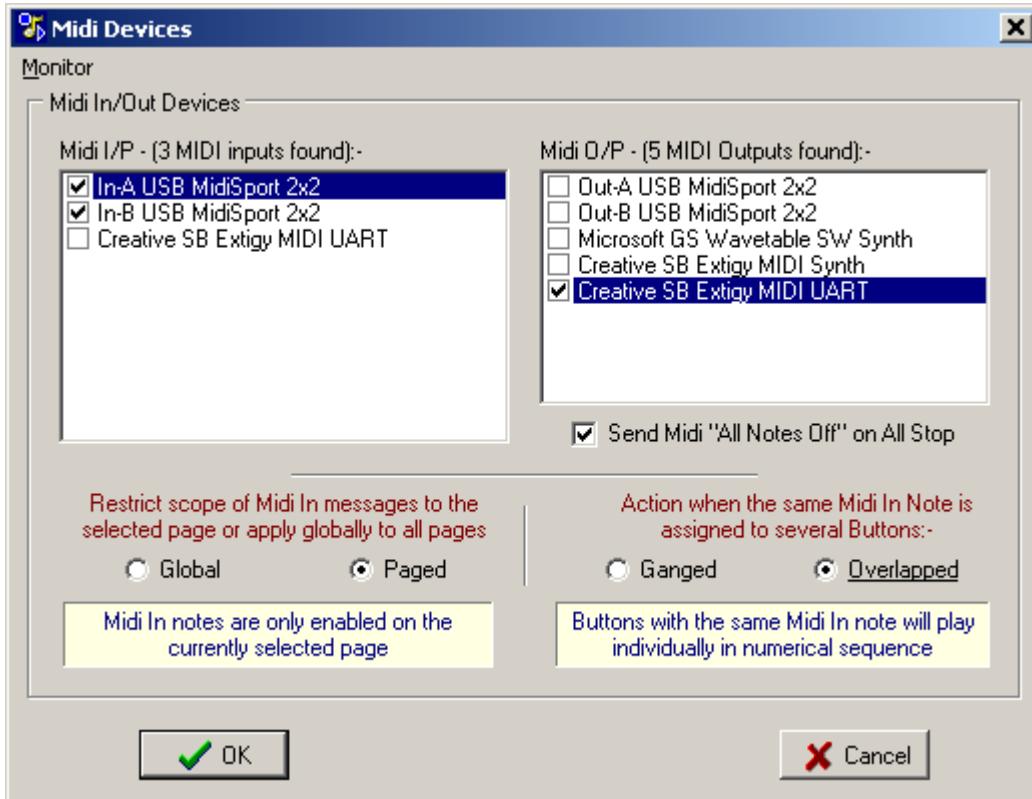


## Midi Devices

The Midi In and Out ports are set using the dialog box below, these are set globally and are not saved in the individual session data files.



One or more Midi In devices can be selected along with multiple Midi out devices.



If either the Midi In or Midi Out options are disabled then a message will be shown at the bottom of the dialog box



There is also an option to send the Midi message "All Notes Off" to all Midi Out channels when Escape or All Stop buttons are pressed



The action of the Midi In notes can be restricted to act only on the currently selected page by selecting Paged option as shown below. Midi In notes can be set to act across all pages by selecting the Global option.



When more than one button is assigned the same Midi note the buttons can be played in one of two ways, Ganged or Overlapped (duplicate hotkey assignments operate in a similar way).

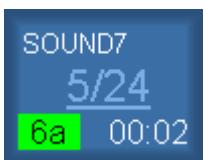


In Ganged mode all buttons with the same Midi In note will play when that Midi In message is received.

Alternatively in Overlapped mode each button with the same Midi In note will play individually on each successive Midi In message. The order in which the buttons are played is numeric starting with the first button not already playing.

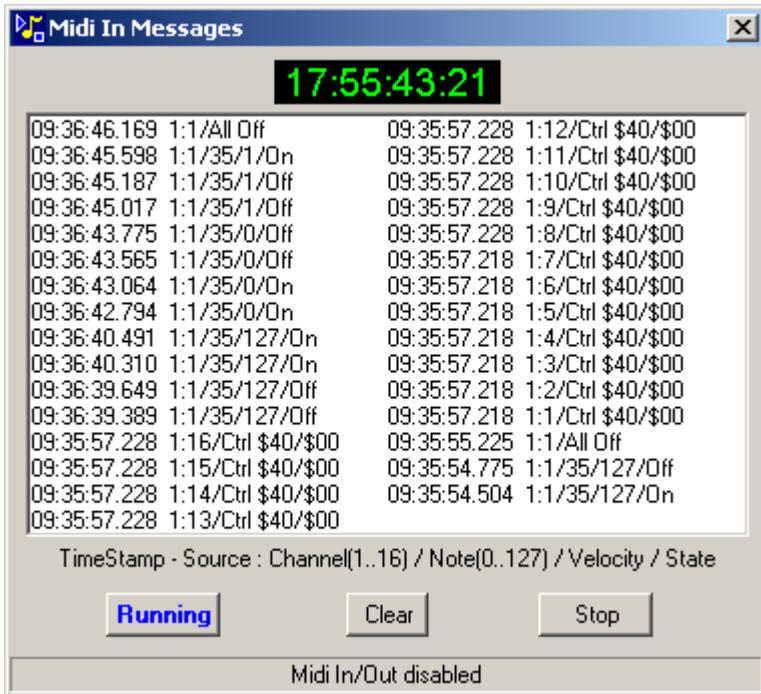
The Overlapped mode is suited to effects that need to be repeated but have a long reverberation time, just stopping and restarting the audio would be incorrect, so in Overlapped mode the previous effect is left running whilst a new copy of the effect is played out.

The Midi Note text displayed on the buttons will be underlined if it forms part of an overlapped sequence.



See [Advanced Operation](#) for further explanation

Selecting the Monitor menu item from the Midi devices window displays a listing the timestamped incoming midi messages. If Midi timecode is detected it will be shown at the top of the window in green text, if no Midi timecode is present the text will be in red. Midi timecode is also displayed in the [Data Rate panel](#) on the main window status bar.



The most recent Midi messages are shown at the top of the list, the Run and Stop buttons control the logging of the messages, clear will delete all entries in the list.

## GPI Triggers

External GPIS can be used via the computer game port to trigger playing of buttons see [GPI Assignments](#) this menu item can access via the Ctrl+G keyboard shortcut

# GPI Assignments

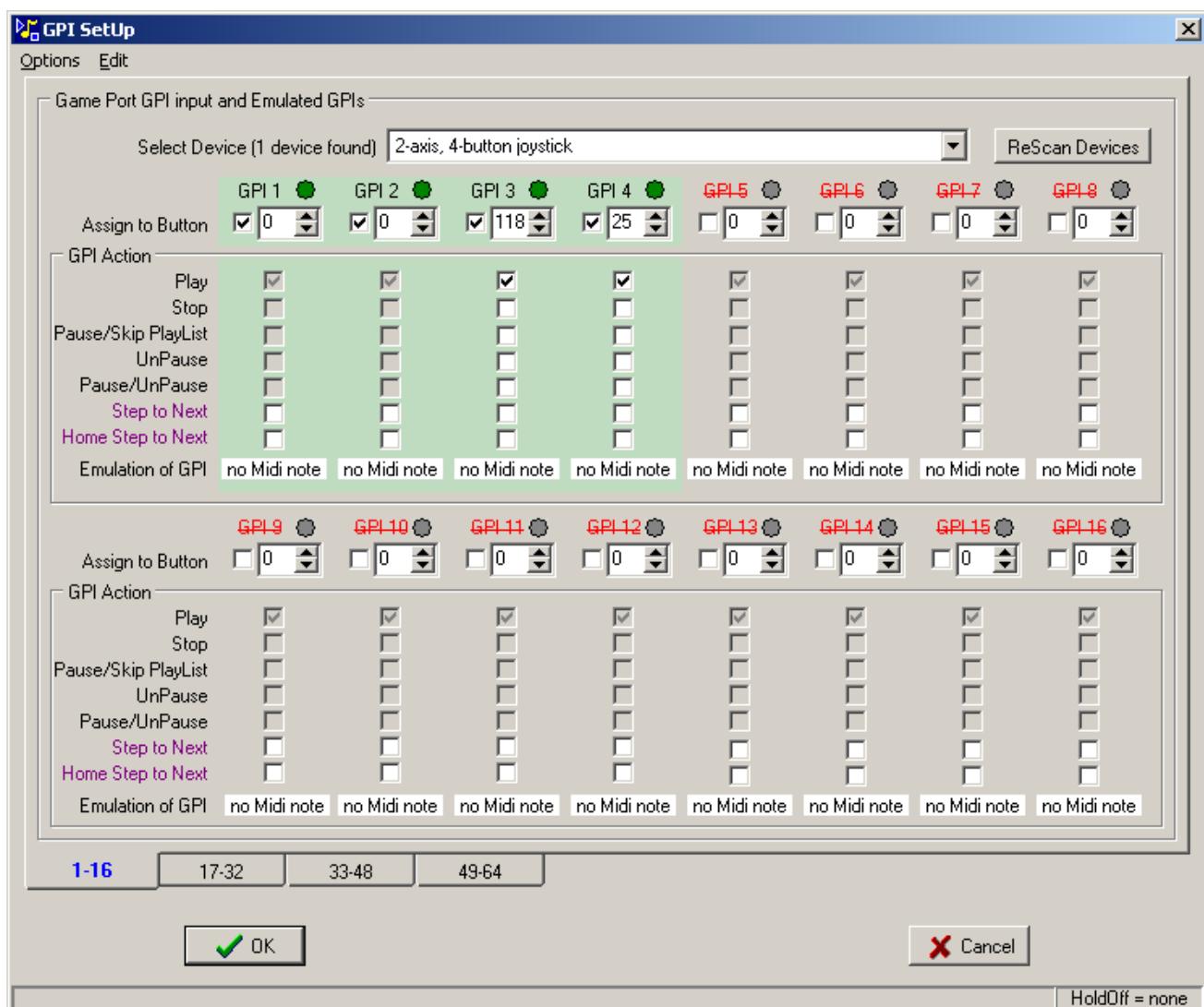
SpotOn accepts inputs from up to 64 GPIOs (General Purpose Interfaces), the first four of these are most simply implemented via the PC Game Port using the joystick button [connections](#). A USB joystick can also be used, however some internal wiring modifications to the joystick will be required to extract the switch contacts.

Any joysticks detected as being connected to the computer when SpotOn was run will be shown in the drop down list.

A PC Game Port card can be used to provide GPI inputs 1..4, with GPIOs 5..64 typically triggered by Hotkey, Midi or time based emulation of GPIOs - see later.

## Joystick Selection

In the image below only one joystick was found and it has 4 buttons that can be used, these are assigned to GPIO 1..4, "LEDs" for the remaining GPIOs are shown in grey.

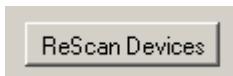


The area with a green background indicates that only GPIO 1..4 can be 'real' GPIOs from a game port card, the other GPIOs will be emulated in some way.

If more than one joystick device was detected then they will appear in the drop down list



If the configuration of the GPI devices has changed the list can be refreshed by clicking on the ReScan Devices button which will clear the selection and fill the list with the devices currently connected.



If a GPI device (joystick) is disconnected whilst in use then the display will show something like this

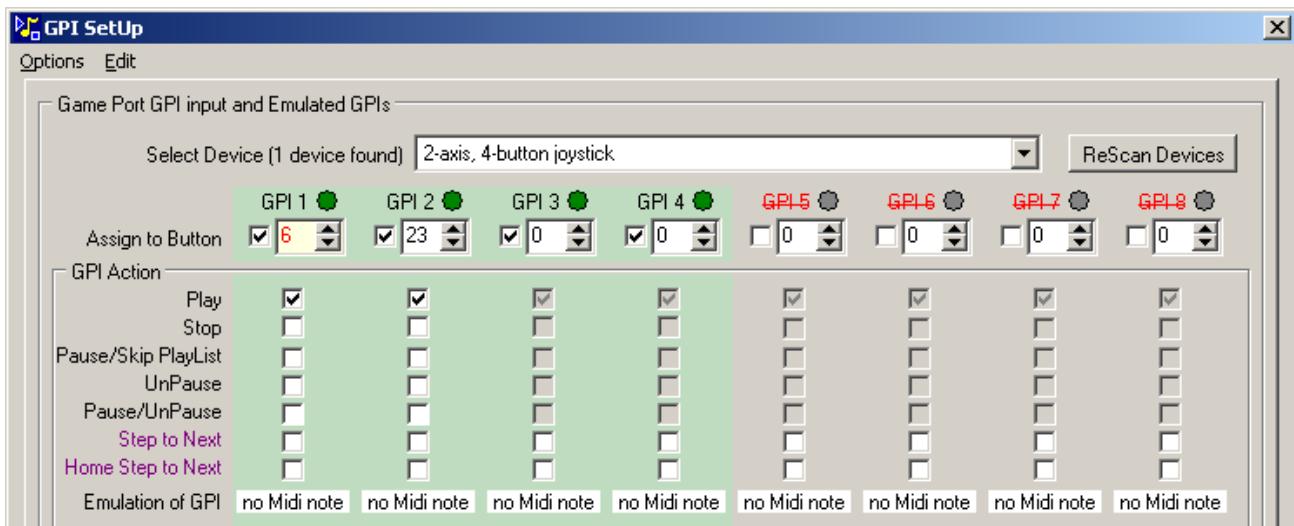


If GPIs are enabled the status bar of the main window will also indicate a disconnected device by flashing the GPI panel black/white



Disconnecting the GPI lead from the computer whilst SpotOn has it selected is not recommended, the GPI device should be deselected before it is unplugged, see [GPI wiring suggestions](#).

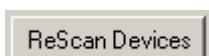
The next image shows the result when a 4 button joystick is detected, the red text in the GPI 1 box indicates that value (button number) has been changed since the dialog box was opened and hence is not a true mimic of the actual GPI assignment



The checkboxes immediately to the left of the GPI button number allow the GPI to be enabled/disabled, in the disabled mode the display is as shown below.



The devices connected to the game port are only checked when SpotOn starts up, if there are any changes to the attached devices then the ReScan Devices button must be clicked or SpotOn restarted before they are registered.



The choice of joystick device is applied globally and is not saved in the individual session data files.

If the GPI In triggers are disabled via the GPI In On/Off menu option then the message below will be shown.



## Button to GPI Assignment

The up/down nudge buttons associated with the GPI channels assign the button that will be controlled when the GPI becomes active, a button value of zero disables that GPI channel from controlling a specific button.

Under the nudge buttons are seven rows of checkboxes - Play, Stop, Pause, UnPause, Pause/UnPause, Step to Next and Home Step to Next.

Row 1 is the default action of Playing a track when the GPI becomes active.

Row 2 can be set to Stop a track when the GPI becomes active.

Row 3 can be set to temporarily Pause a track when the GPI becomes active, the Pause action is not available when the button has an active PlayList so this item will trigger a [Skip PlayList item](#) operation

Row 4 similarly will release the Pause and continue playing the track from the point it was paused.

Row 5 allows a single GPI to alternately Pause and UnPause a track

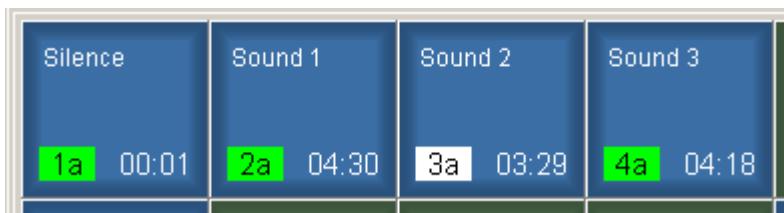
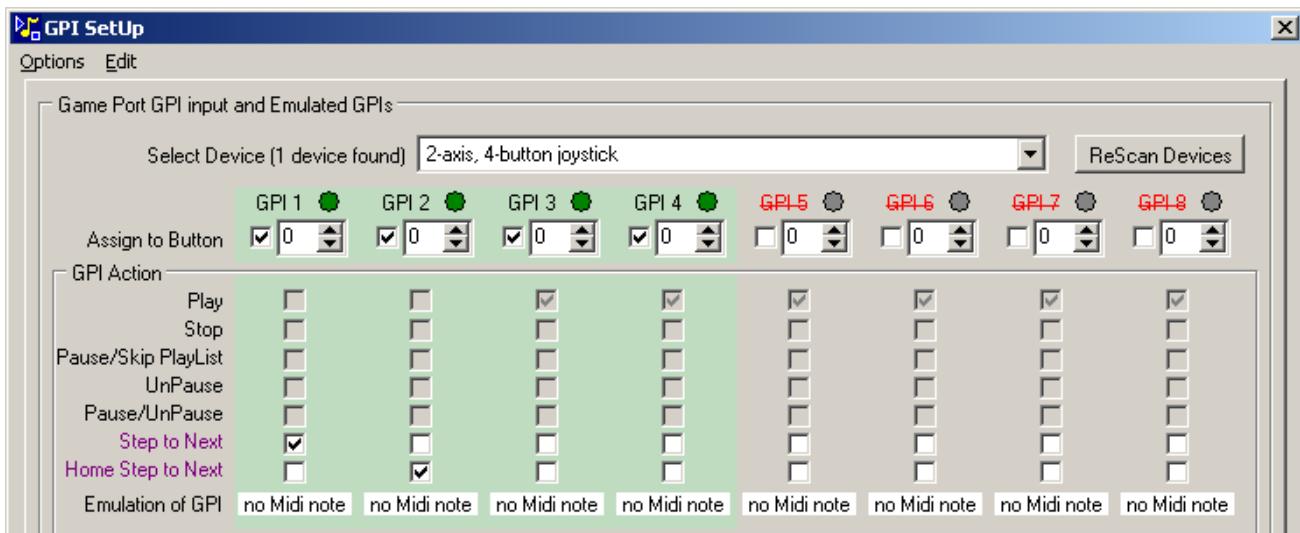
Row 6 enables the Step to Next Track function see [Options|Step To Next Track](#), if selected the GPI will issue a Play command to successive buttons each time it becomes active, (an option to skip over muted buttons is available under Options menu).

Row 7 of checkboxes provides the facility to reset the Step to Next operation by forcing the next button to be played to be the top left button on the current page, equivalent to pressing the Home key on the keyboard.

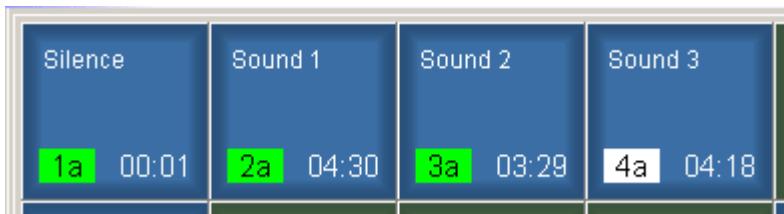
Note that when both Step to Next and Home Step to Next are checked SpotOn will first Home the selection to the top left button and then play that track and step to the next button.

In the example below GPI 1 will play successive buttons and GPI 2 will reset the next button to be the top left button.

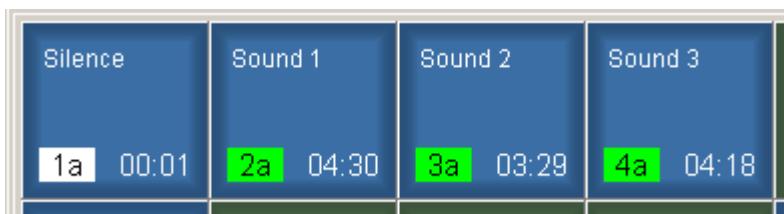
Selecting any Step to Next checkbox will automatically set the GPI button value to zero.



In this case if GPI 1 is asserted "Sound 2" will play and then SpotOn will step to button 4 ready to play "Sound 3"



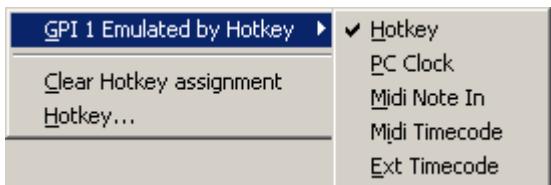
If GPI 2 is now asserted the Step to Next sequence will be reset to select button 1 which could well be a silent button that stopped all others, allowing the sequence to be reset at any time.



## Emulation of GPI

Emulation of GPI    no Midi note

Using the emulation selection boxes, a match to Hotkey, PC clock time, incoming Midi note, Midi timecode or a source of SMPTE timecode can be used instead of an external GPI to trigger the GPI action, right-click the selection box for options

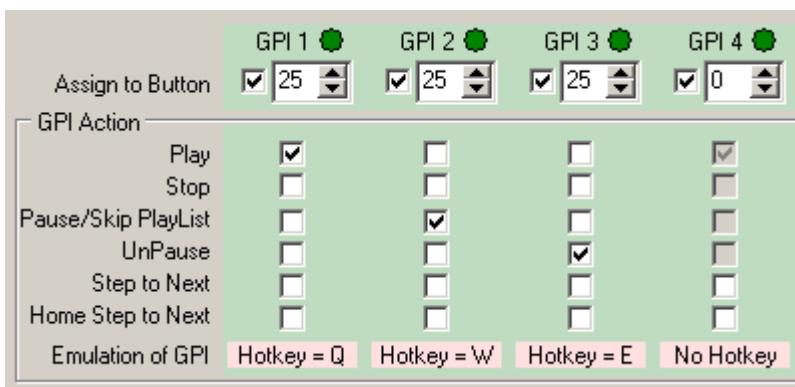


## Emulation of GPI by Hotkey

Assign the Hotkey to the GPI by pressing the appropriate keyboard key



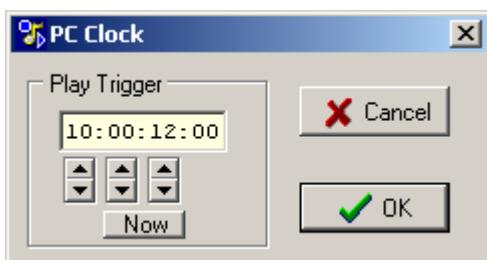
The image below shows Hotkeys Q, W, E assigned to GPIs 1..3



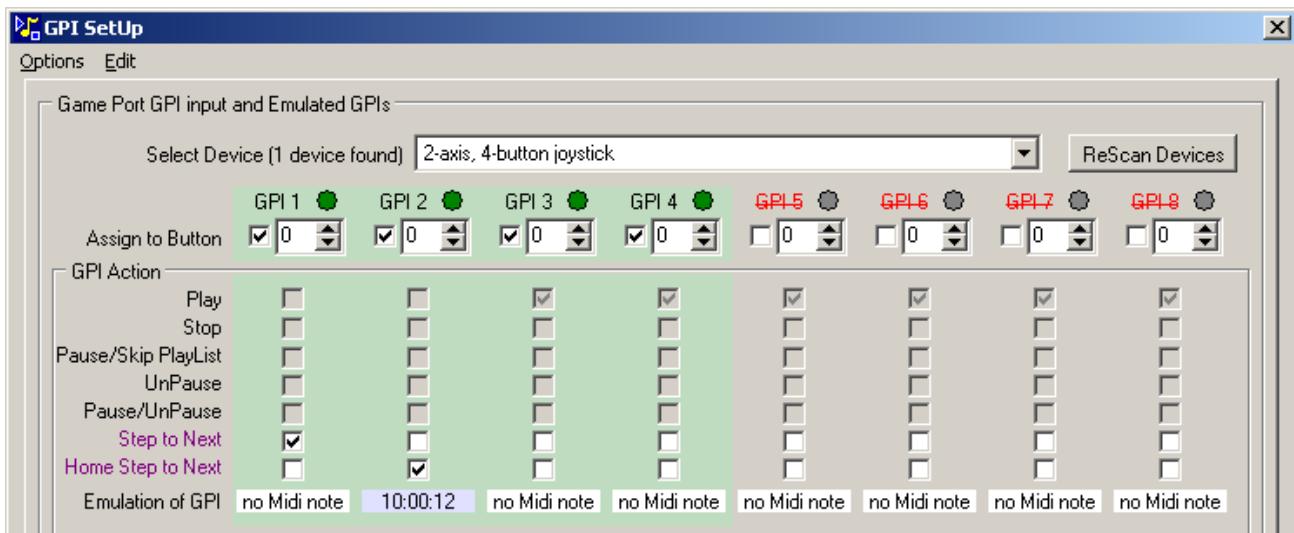
The same Hotkey can be assigned to button and to a GPI emulation

## Emulation of GPI by PC Clock

The PC internal clock can also be used to trigger GPI actions

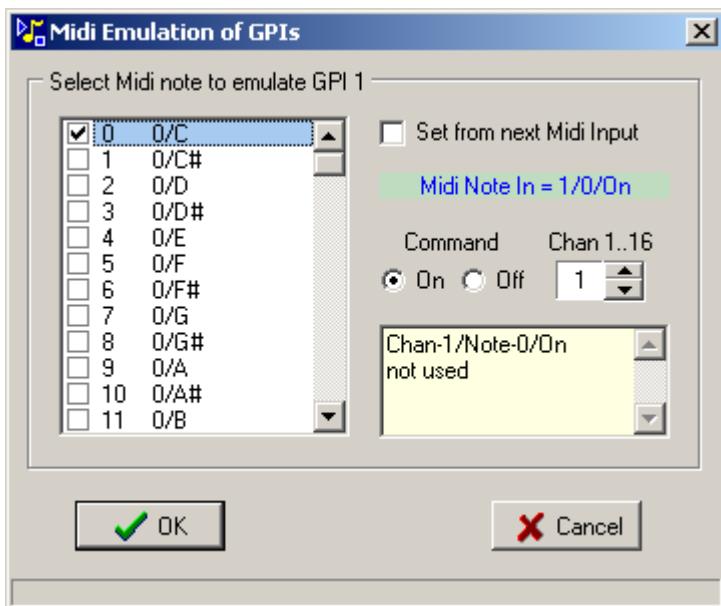


the precision of the time setting is restricted to 1 second for the PC clock source, the "Now" button is enabled in this mode to allow quick entry of the current time of day.



## Emulation of GPI by Midi Note

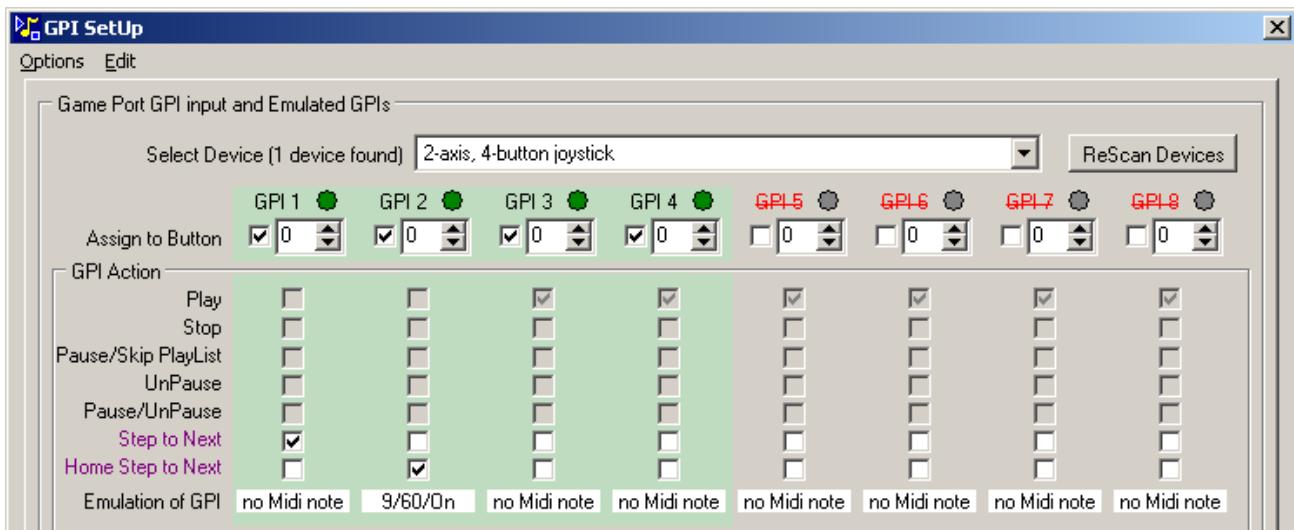
Select Midi Note In to display a Midi Note dialog box.



The Midi note can be automatically assigned by checking the box shown below, this will set the Midi note from the next Midi note to be received by SpotOn.

Set from next Midi Input

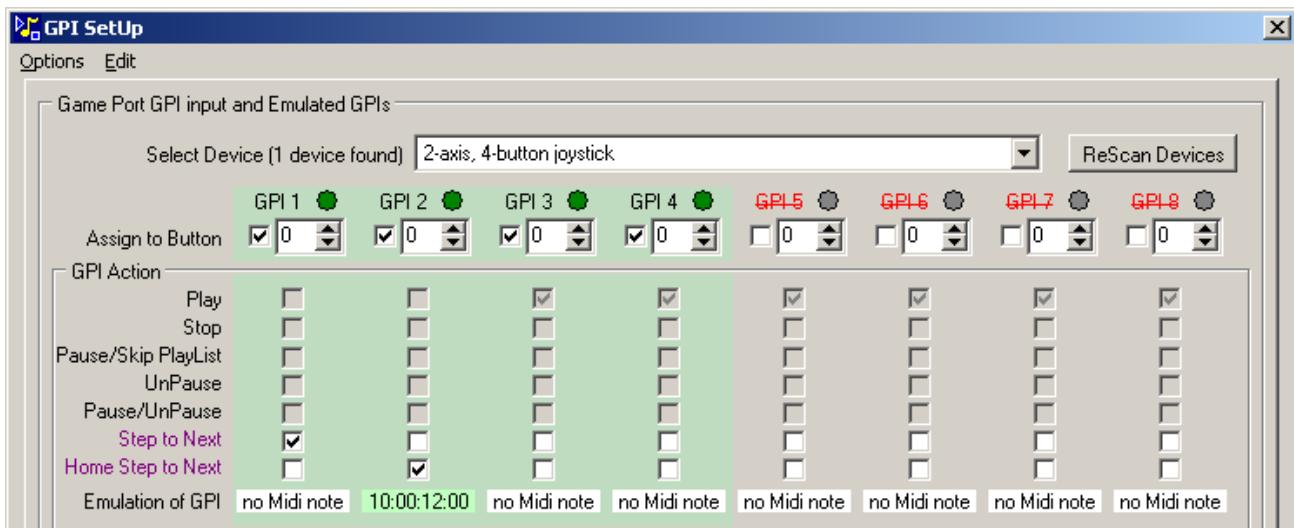
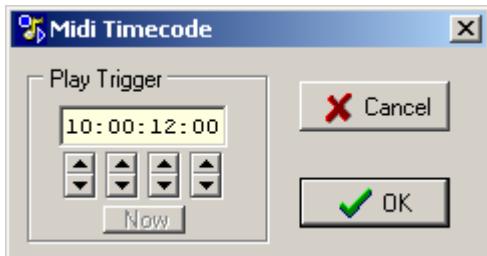
Here the Note On message for note 60 on channel 9 has been selected to emulate GPI 2



Now the selected Midi note will cause the GPI 2 action to be performed.

### Emulation of GPI by Midi Timecode

The fourth option is to trigger from a Midi timecode stream

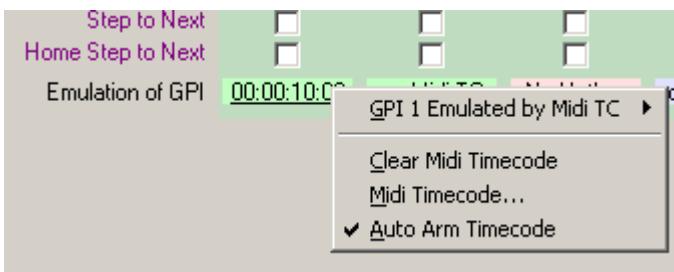


When any GPI with a time related trigger mode (PC Clock, Midi timecode or SMPTE timecode) is enabled and GPIs are enabled globally then the GPI In status panel background will flash to red whilst SpotOn is armed waiting for the time trigger.



Immediately after the time related GPI is triggered the associated GPI will be disabled to avoid subsequent false triggering.

As an alternative triggering mode the GPI can be rearmed when the detected timecode is earlier than that set as the trigger point, this is selected via the right-click pop menu item Auto Arm Timecode



To indicate the GPI is in the Auto Arm mode the Midi timecode value is shown underlined.

The Auto Arming function can be disabled for all GPIOs via the Options|Auto Arm Ext/Midi Timecode GPIOs main menu option.

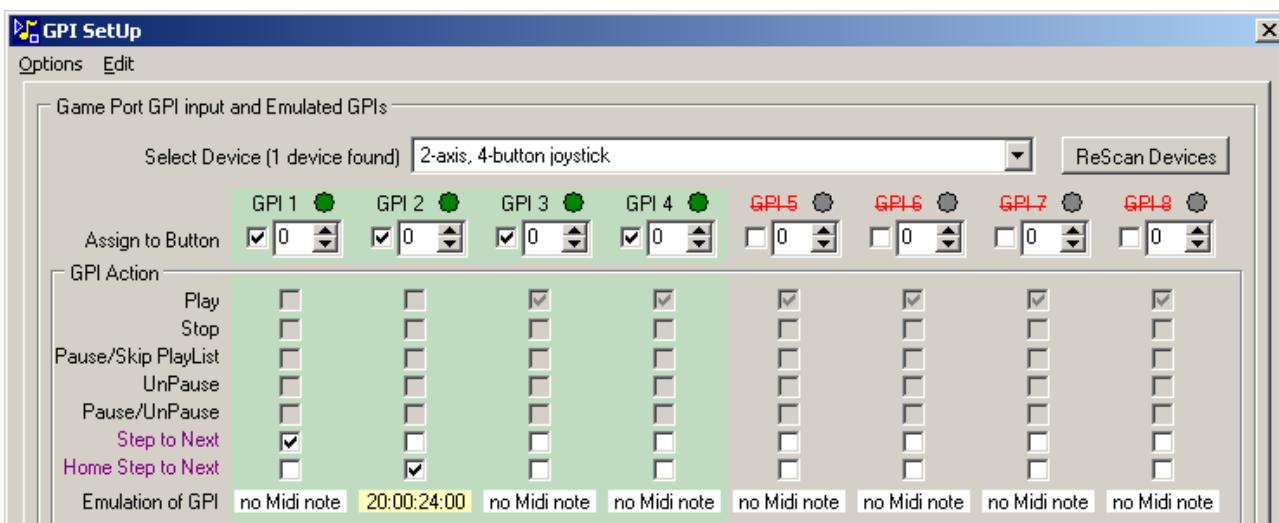
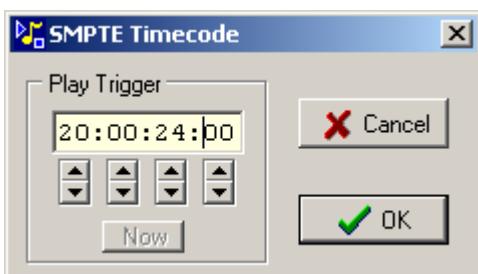
When the Auto Arming is disabled the associated popup menu item will be greyed out



## Emulation of GPI by External SMPTE Timecode

SMPTE LTC timecode can be read by SpotOn and used to trigger a GPI in a similar way to Midi Timecode described above.

There is a Global enable for SMPTE timecode triggering in [Options|Use SMPTE Timecode](#) and a setup dialog accessed via [Engineering|External Timecode](#)

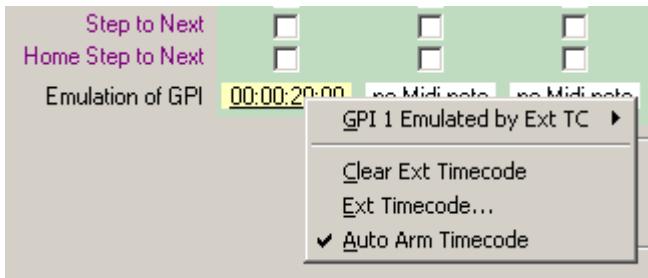


When any GPI with a time related trigger mode (PC Clock, Midi timecode or SMPTE timecode) is enabled and GPIs are enabled globally then the GPI In status panel background will flash to red whilst SpotOn is armed waiting for the time trigger.



Immediately after the time related GPI is triggered the associated GPI will be disabled to avoid subsequent false triggering.

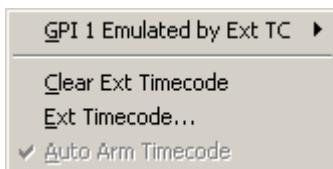
As an alternative triggering mode the GPI can be rearmed when the detected timecode is earlier than that set as the trigger point, this is selected via the right-click pop menu item Auto Arm Timecode



To indicate the GPI is in the Auto Arm mode the Midi timecode value is shown underlined.

The Auto Arming function can be disabled for all GPIs via the Options|Auto Arm Ext/Midi Timecode GPIs main menu option.

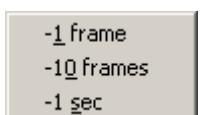
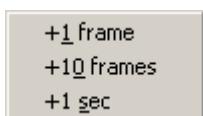
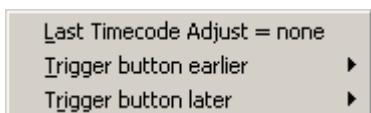
When the Auto Arming is disabled the associated popup menu item will be greyed out



SMPTE timecode nudge:-

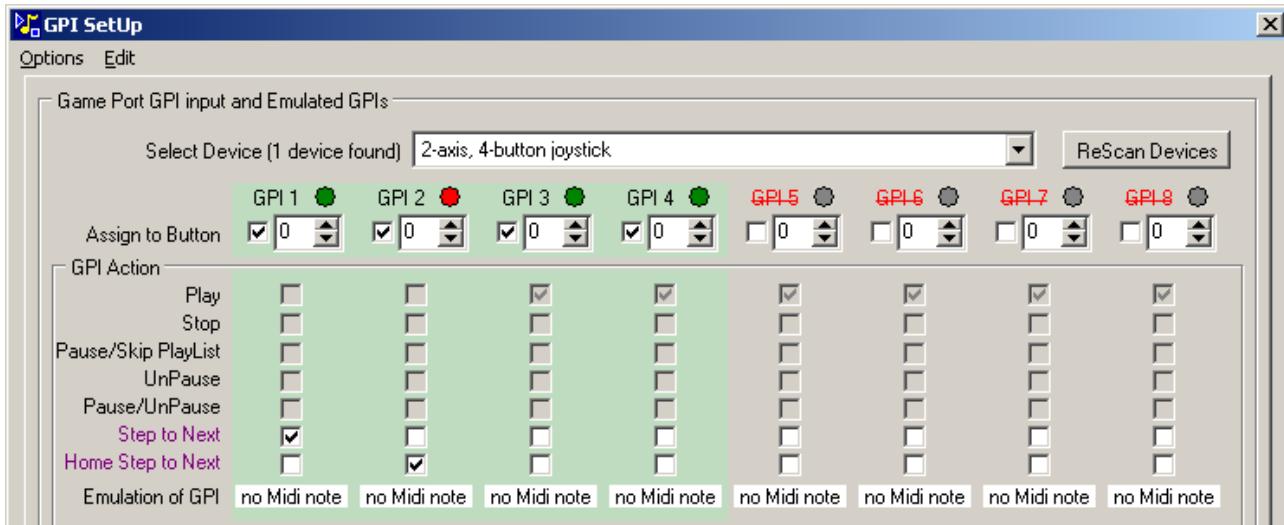
A hotkey shortcut is available to nudge the SMPTE timecode settings by shift+right clicking on the GPI In panel on the status bar.

The popup menu shows the last adjustment made along with options to nudge the trigger point earlier or later



## GPI Indication

When a GPI channel is active then the LED will change to show red

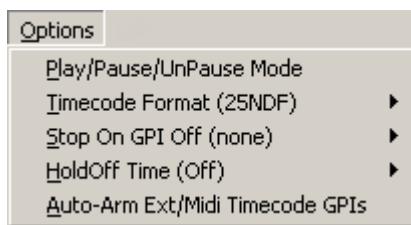


The GPIs can be globally enabled/disabled via the main menu [Options|Use GPI In](#) item and also by clicking the main window status bar panel



The text in the main window status panel briefly flashes red when an incoming GPI is detected

## Menus-Options



## Play/Pause/UnPause

Checking the Play/Pause/UnPause option will change the default Pause/UnPause action to be Play/Pause/UnPause and the screen legends will follow accordingly.



When Pause/UnPause is selected as a GPI action, successive GPI pulses will alternately Pause and UnPause a playing track, however if the track is neither Playing or Paused then the GPI is ignored.

With Play/Pause/UnPause checked in addition to the action described above the track will begin Playing if a GPI pulse is detected when the track is stopped i.e. not Paused and not Playing.

So the sequence of events could be GPI pulse 1 = Play, GPI pulse 2 = Pause, GPI pulse 3 = UnPause.

## Timecode Format



The timecode received by SpotOn either via Midi or external SMPTE inputs and used to trigger GPIs can be one of a variety of frame rates:-

24NDF	24Hz non-drop frame
25NDF	25Hz non-drop frame
30NDF	30Hz non-drop frame
29.97DF	29.97Hz drop frame

Selecting the appropriate format changes the timecode display and editing dialog boxes.

## Stop on GPI Off

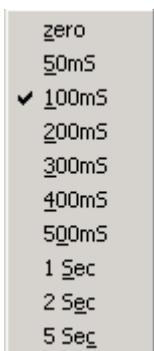
Normally the assertion/closure/forcing low of the GPI input is the only transition recognised and will Play the assigned button, if the menu option StoponGPIOff is selected then the off transition of the GPI is also detected and will Stop playout of the assigned button. GPI 1..4 can be individually set to react to the GPI off state.



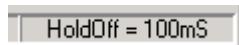
## HoldOff

As it is likely that the source of the GPI signal will be a manually operated switch, there is the chance that the switch contacts will bounce so sending unwanted signals. To avoid this there is a selectable HoldOff period under menu Options|HoldOff Time

The range of HoldOff is 0..5 seconds



The currently selected HoldOff period is shown in the right hand panel of the status bar and applies to all GPI channels



### AutoArm

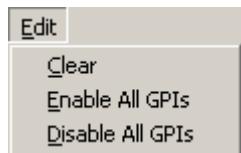
Auto-Arm Midi timecode GPIs - this is a master enable for all the GPIs emulated by Midi timecode, a warning will be shown in the lower part of the window when this option is active.



When this option is checked, any GPI set to trigger from a Midi timecode and individually AutoArmed, will be re-armed when the timecode value detected is earlier than the trigger timecode.

This mode allows multiple passes without the need to arm/enable the GPIs on each pass.

### **Menus>Edit**



The Edit menu contains three items:-

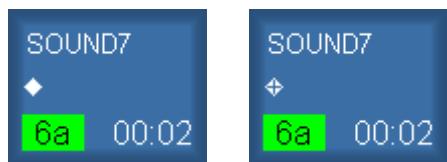
- a, clear all the GPI button assignments
- b, set all GPIs enabled
- c, set all GPIs disabled

On exiting the GPI Setup dialog a message box will appear warning of any Hotkeys that are assigned directly to Buttons and also selected as GPI emulation triggers.



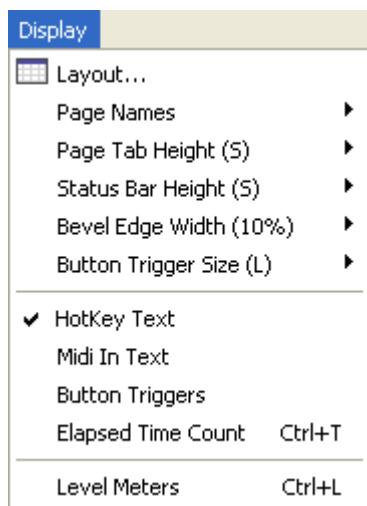
## Display

If the main menu [Display|Show GPI In Icons](#) option is checked then buttons assigned a GPI will have a diamond shape on the centre left of the button image.



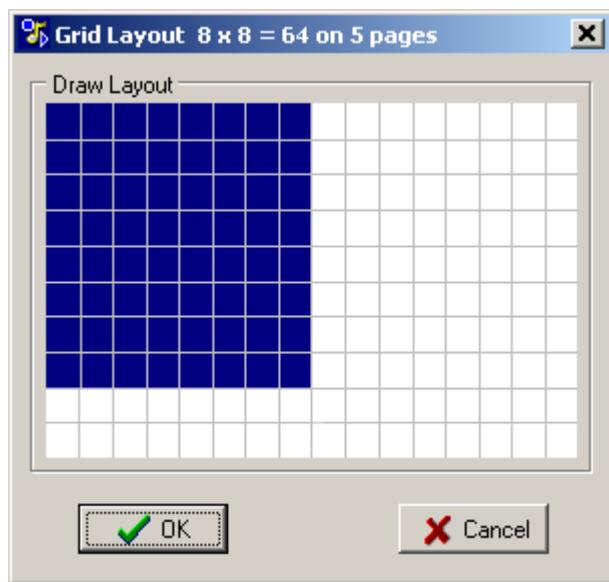
This diamond shape will have an internal + sign if more than one GPI is controlling a specific button

# Display Menu

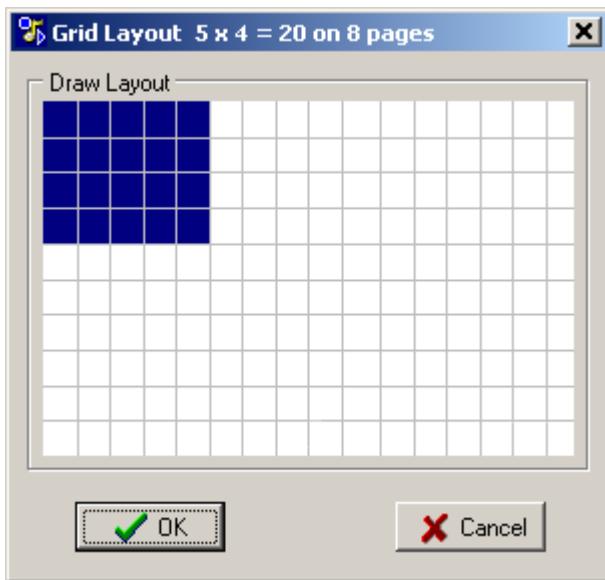


## Layout

SpotOn can display the buttons in a number of different configurations ranging from 8 pages with 1 button per page to 160 buttons per page across 2 pages.

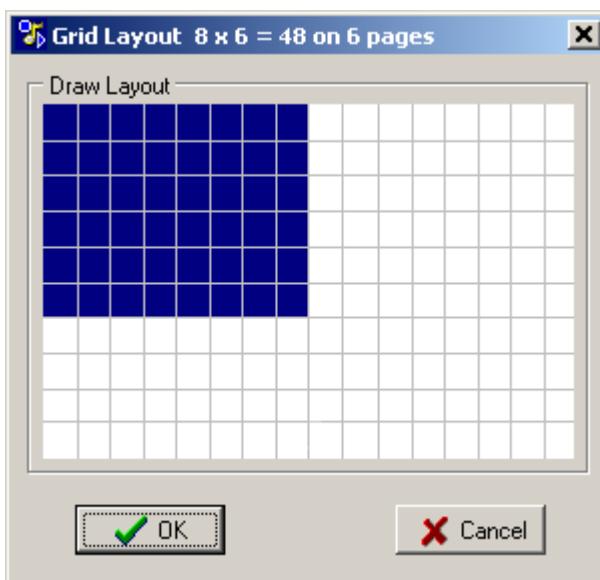


Use mouse to drag the layout to the desired configuration

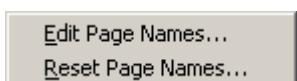


SpotOn has access to maximum of 8 pages of buttons, the number of pages actually available depends on how many buttons per page are displayed.

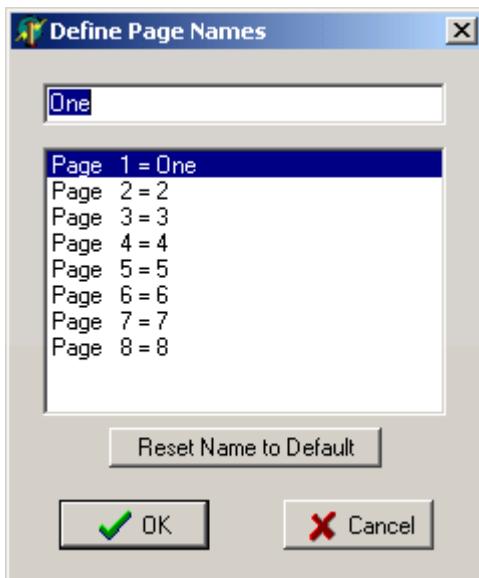
In the case below there were 48 buttons per page over 6 pages giving 288 buttons, pages 7 and 8 are therefore unavailable, buttons in the range 289 to 320 are hidden as they do not form a complete page.



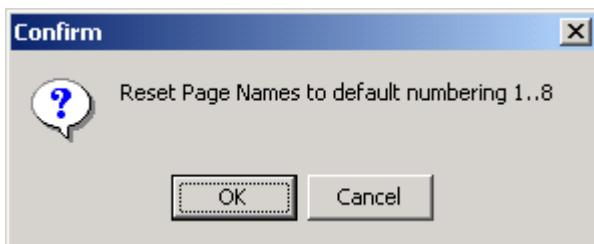
## Page Names



By default the page names are numbers 1..8 these can be changed to something more meaningful, as the size of the page tabs are restricted only short names are suitable



All the page names can be returned to the defaults of 1..8 using the Reset option, a confirmation dialog is shown before the names are changed



Another method of accessing the page name editor is to right-click the tabs



## Page Tab Height



The height of the page tabs at the bottom of the screen can be set to any of three levels

Small:-



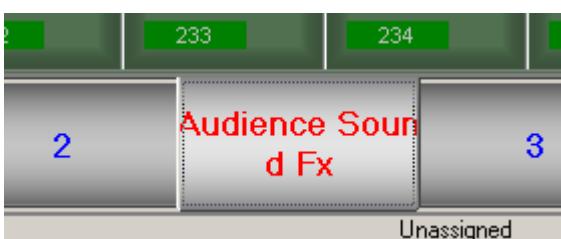
Medium:-



Large:-



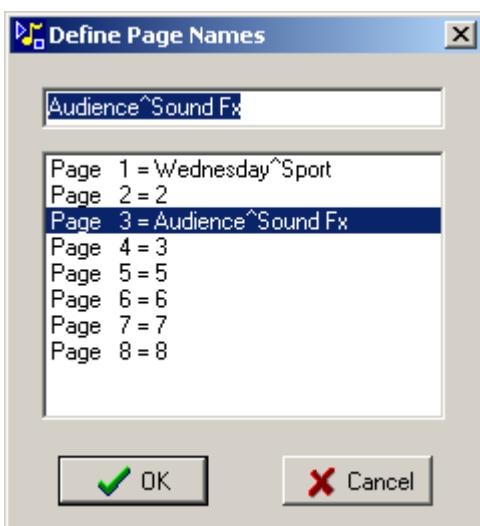
The larger sizes are more suited to operation via a touchscreen, on the Medium and Large settings the tab text will be word wrapped onto two lines



Depending on the width of the tab and the text the word wrapping may or may not be acceptable, however there is a feature that can force text onto the second line.

This is achieved by inserting a caret character '^' into the text at the point where the line break should appear.

(On most UK language keyboards the caret character is usually found as Shift+6)



The resultant text is then correctly split over two lines

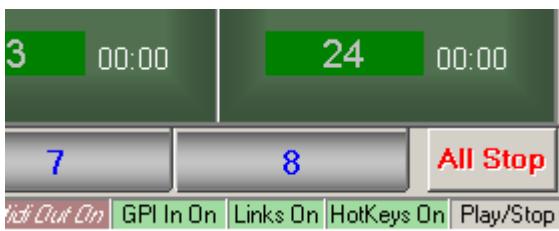


## Status Bar Height



The height of the status bar at the bottom of the screen can be set to any of three levels

Small:-



Medium:-



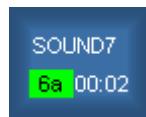
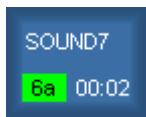
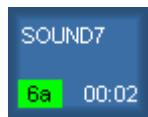
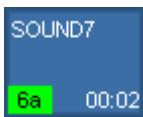
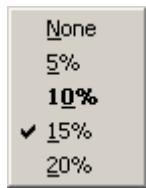
Large:-



The larger sizes are more suited to operation via a touchscreen.

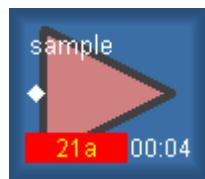
## Bevel Edge Width

The width of the shaded edge of the buttons can be adjusted with this option



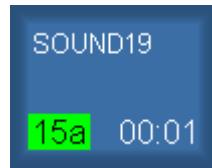
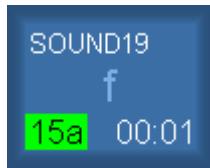
## Button Trigger Size

The size of the graphic appearing on the button can be set to one of three sizes Small, Medium or Large.



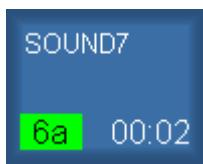
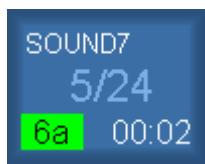
## Hotkey Text

If a button has a Hotkey assigned it will normally be shown in dimmed text in the centre of the button, to aid visibility of the track name the hotkey indication can be disabled with this option.



## Midi In Text

As an alternative to the hotkey text display the buttons can show the Midi In Channel/Note assignment.



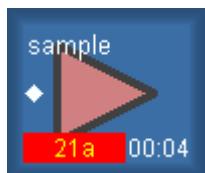
The button text display can be either HotKey, Midi In or none

## Button Triggers

SpotOn buttons can be triggered in a variety of ways, essentially these can be split into two groups:-

Local	button click, PlayNext, Master/Slave...
Remote	GPI, Timecode, Midi...

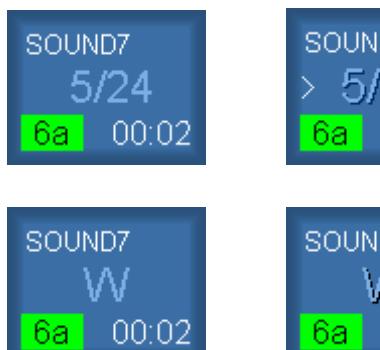
To aid the operator identifying if particular button was triggered by some type of remote control, a Button Trigger graphic can be displayed on the button.



This graphic is shown when the button is triggered by Midi, GPI, UDP, TCP, PBus or Timecode

## Edged Midi/HotKey Text

In order to improve visibility of the button Midi and HotKey text this option will add a drop shadow effect to the text



## Elapsed Time Count

By default the display at the lower right of the button shows the time remaining - counting down to zero.

As an alternative the display can be changed to show the Elapsed time - counting up from zero

This option applies globally and has a keyboard shortcut of Ctrl+T

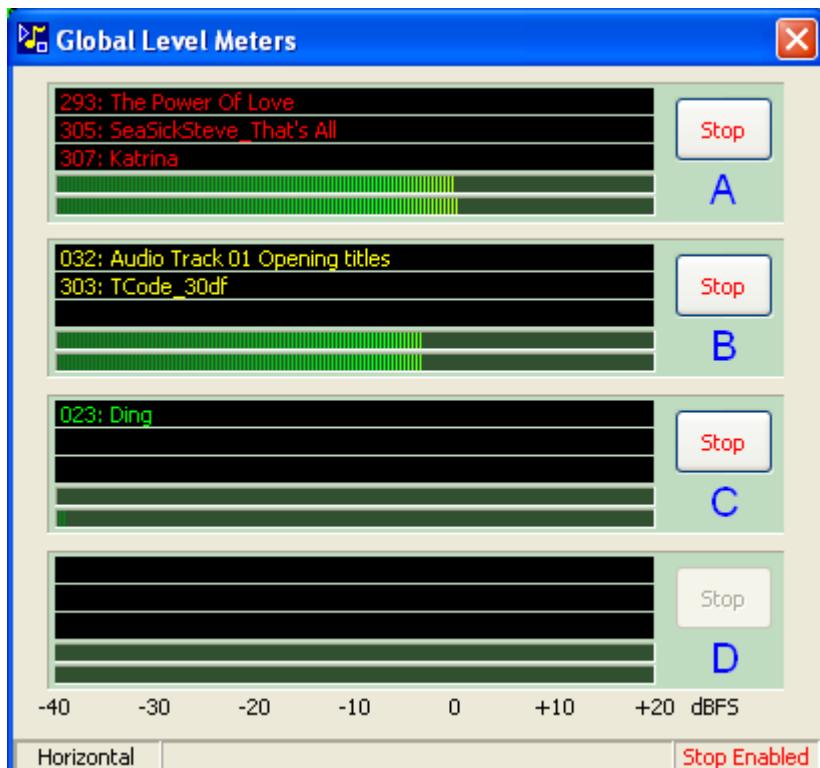


## Level Meters

A window showing the signal level on the first 4 outputs can be displayed with this menu item or via the Ctrl+L keyboard shortcut.

The buttons playing on specific outputs are listed in numerical order up to a maximum of 3, the text is coloured according to the number of buttons contributing to the output.

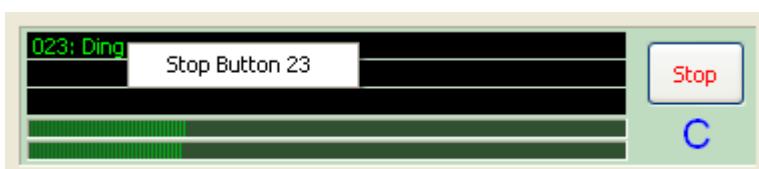
Green	One button playing
Yellow	Two buttons playing
Red	Three or more buttons playing



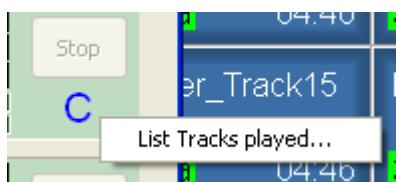
The Stop buttons on the right of the window allow all buttons on those specific outputs to be stopped, the Stop buttons are enabled by clicking the bottom right status bar panel

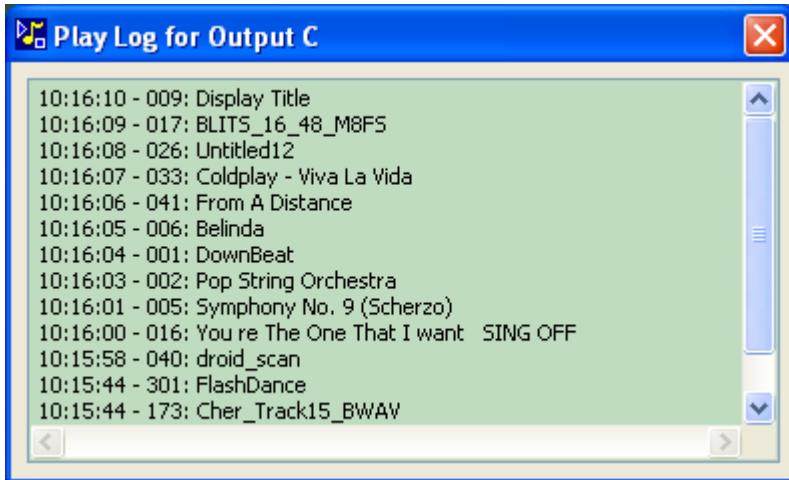
Stop Enabled     Stop Disabled

Individual buttons can be stopped by right-clicking on the appropriate entry

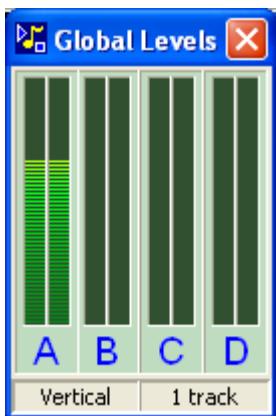


Right-clicking on the output letter "C" offers a timestamped listing of the last 100 tracks played on that output





An alternative vertical Level Meter display is available by left clicking the lower left status bar panel on the Level Meter window.



This simple display mode does not list the track names, but the number of tracks contributing to an output can be found by moving the mouse pointer over the output bargraphs.

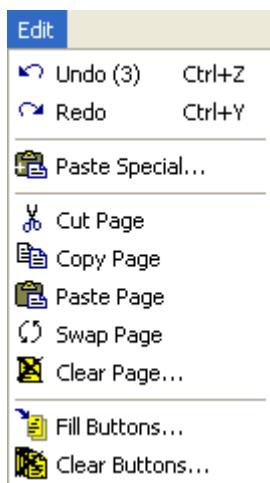
The right-click option to show the list of recent tracks played on a specific output is still available in this mode.

## Timecode Display

A floating window showing currently selected timecode reference



# Edit Menu



Undo	Undo last change
Redo	Redo last Undo
<u>Paste Special</u>	Selectively paste button parameters
Cut Page	Copy current page to clipboard and then clear current page
Copy Page	Copy current page to clipboard
Paste Page	Paste clipboard contents onto current page
Swap Page	Exchange page contents of current page with those last copied to clipboard
Clear Page	Clear contents of current page
<u>Fill Buttons</u>	Load a sequence of buttons with the same audio file
<u>Clear Buttons</u>	Clear all buttons

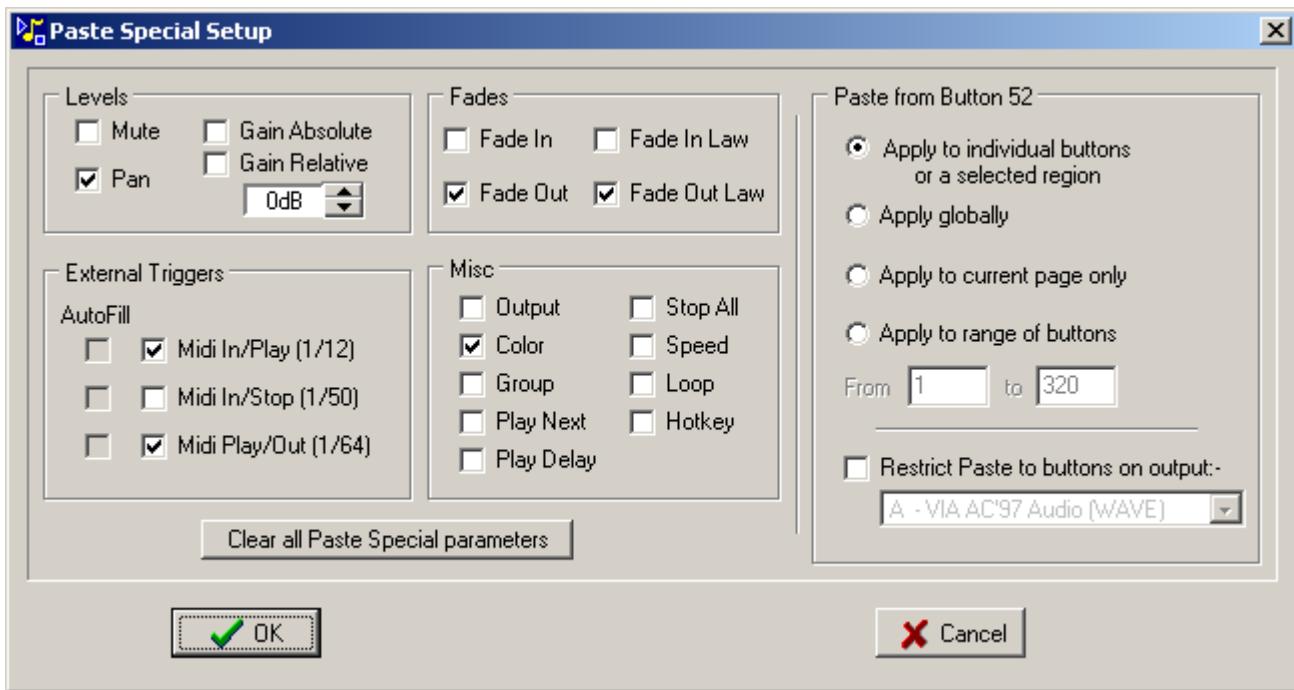
## Paste Special

The Paste Special option available at both button and page level can be used to copy/paste certain parameters from one button to one or more other buttons.

First the source button is selected that has the parameters to be pasted and the button is copied to the clipboard using the button popup menu Copy item



The main menu Edit|Paste Special dialog allows the selection of the parameters to be pasted, below Pan, Midi Out, Fade Out and Colour have been chosen, the Fade law checkbox is automatically checked when a fade time is selected.



On the right hand side of the dialog is the section where the range of target buttons are defined, the default is single individual buttons.

The parameters can now be pasted onto existing buttons using the button popup menu Paste Special option



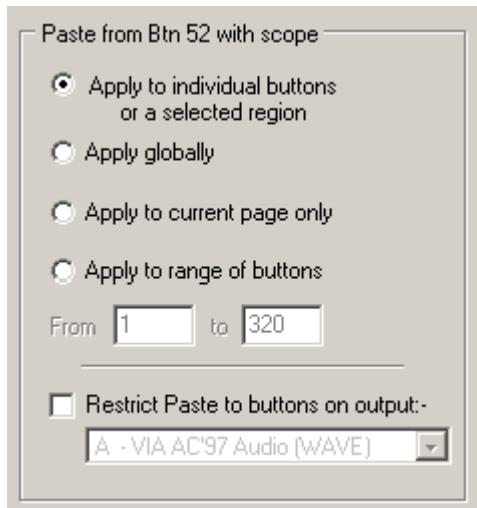
The status bar hint will indicate which parameters will be pasted, in this case Pan, Fade Out duration, Midi In to play and Color have been selected.



If a gain adjustment is required to be applied to several buttons and their relative gain settings must be maintained, then the Gain Relative option should be used, in the example below the gain of each button on which Paste Special is used will be increased by 3dB.

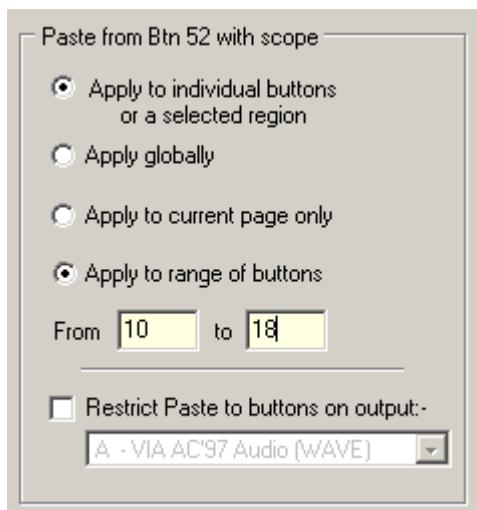


If more than one consecutive button is to be modified then other Paste Scope options can be used



- 1, One individual button at a time
- 2, All buttons across all pages
- 3, All buttons on current page only
- 4, A defined range of buttons
  
- 5, Further restrict above selection to only act on buttons assigned to a specific output

If a range of buttons 10..18 is required then the entry will look as below



When the Paste Special dialog is exited a further confirmation dialog will be shown with a summary of the changes about to be applied



Midi In/Play, Midi In/Stop and Midi Play/Out paste options have 'AutoFill' modifiers, when checked these will fill the selected range of buttons with a Midi note based on that of the copied button.



The Auto Fill modifier is only enabled when Paste Midi In/Play, Midi In/Stop or Midi Play/Out are checked and the Paste Scope is set to be a range of buttons



Pasting a range of buttons with Auto Fill checked will set the Midi notes of the pasted buttons to:-

Midi Note of copied Btn+1, Midi note of copied Btn+2, Midi note of copied Btn+3....

In the example above this would be in Channel/Note format:-

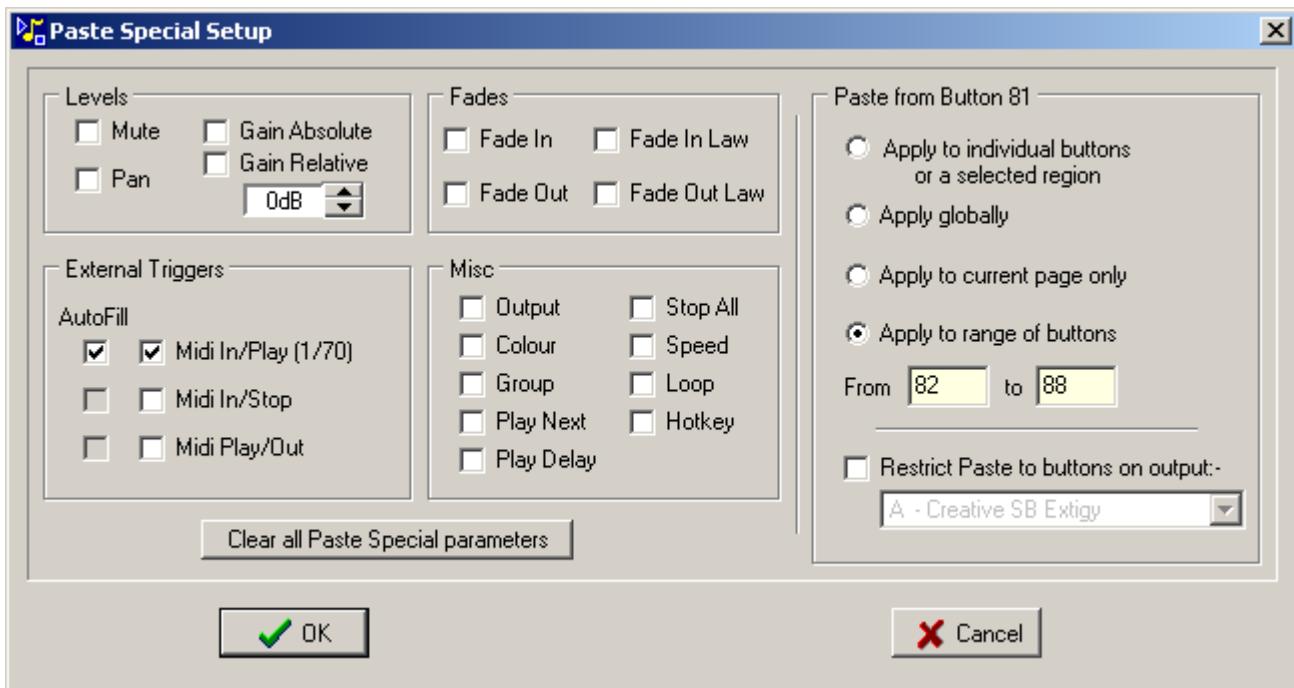
First button pasted >1/13, second button pasted >1/14, third button pasted >1/15...

The pasted Midi Channel number is always the same as the copied button.

As an example, button 81 has Midi In/Play allocated to note 1/70

SOUND22 1/70	SOUND24	SOUND25	SOUND26	SOUND27
81a 00:01	82a 00:01	83a 00:02	84a 00:01	85a 00:02

If the Midi notes on buttons 82..88 are to be assigned notes 1/71..1/77, then the procedure is to copy button 81 to the clipboard, and to use Paste Special SetUp to Auto Fill the buttons 82..88 as shown below

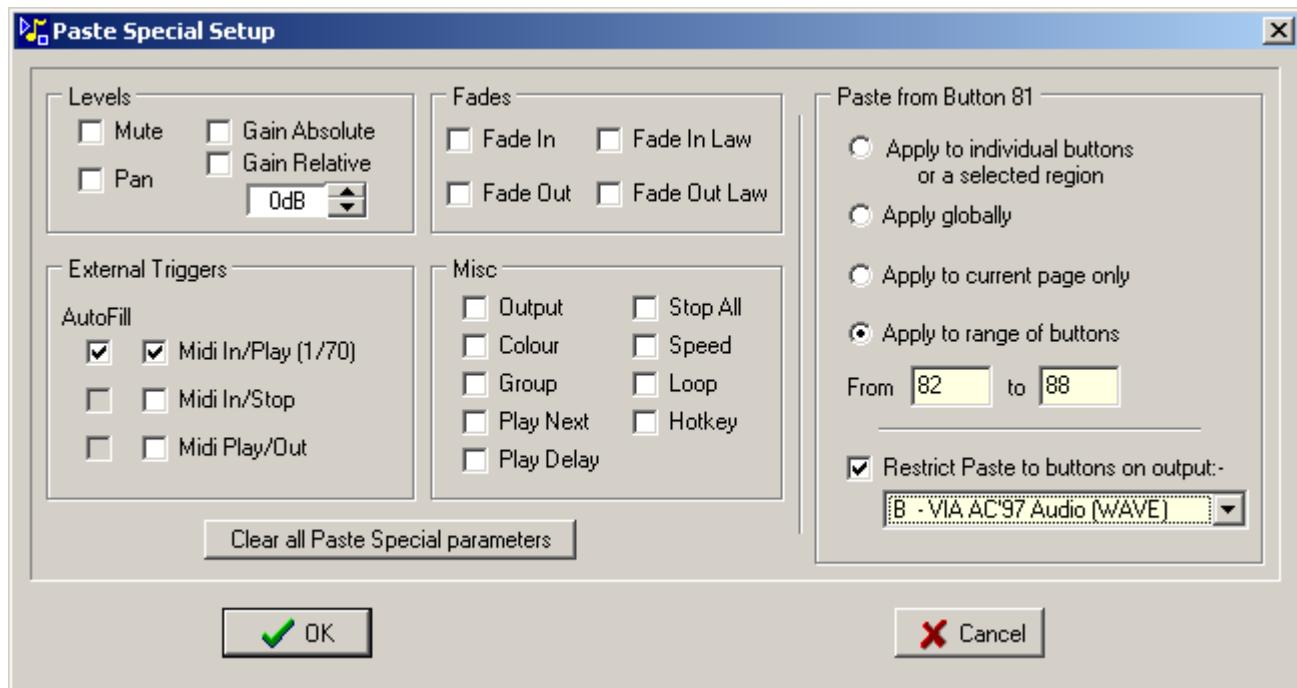


A prompt dialog appears confirming the changes



The result then becomes:-

SOUND22 1/70 81a 00:01	SOUND24 1/71 82a 00:01	SOUND25 1/72 83a 00:02	SOUND26 1/73 84a 00:01	SOUND27 1/74 85a 00:02
------------------------------	------------------------------	------------------------------	------------------------------	------------------------------

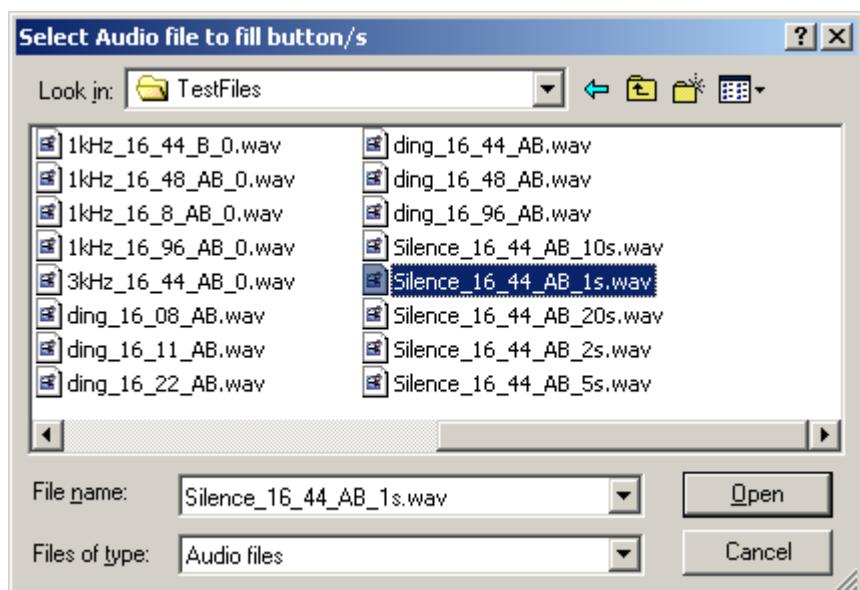


If the option to restrict the Paste Special action to buttons only on a specific output the prompt box will appear as below.

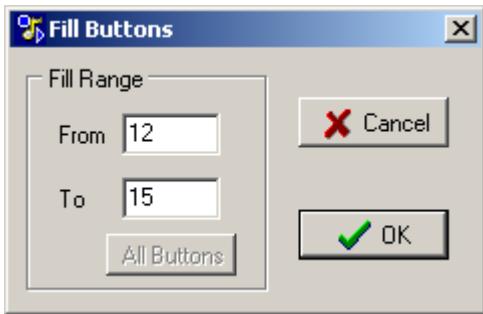


## Fill Buttons

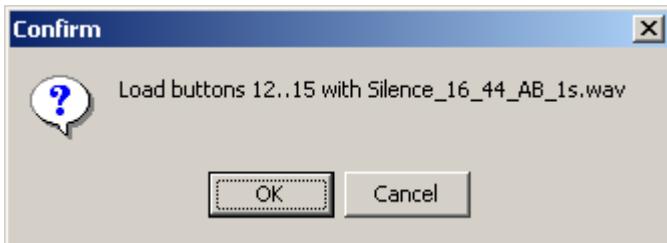
This option provides a quick method of loading the same audio file into a range consecutive buttons, this may be required when setting up SpotOn so that all spare buttons are loaded with for example 1 second of silence.



The first dialog box to be presented allows selection of the audio file followed by a further dialog defining of the range of buttons to be loaded

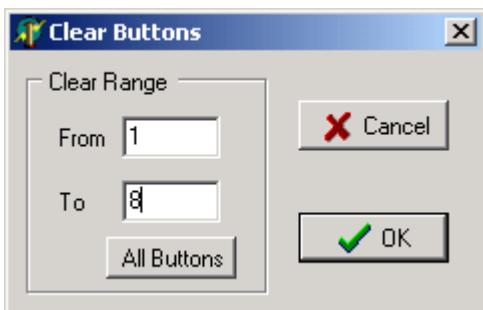


Finally a confirmation dialog box before the buttons are loaded.

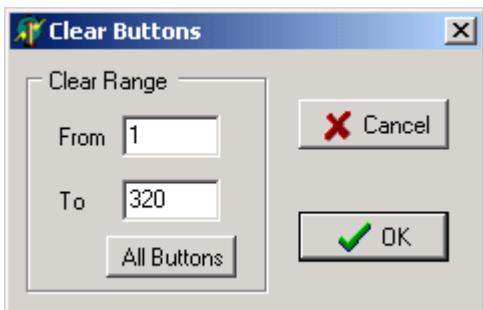


## Clear Buttons

To clear tracks from one or more buttons enter the first and last button numbers then click OK



Click on "All buttons" to enter the full button range



A confirmation dialog is shown before the buttons are cleared.



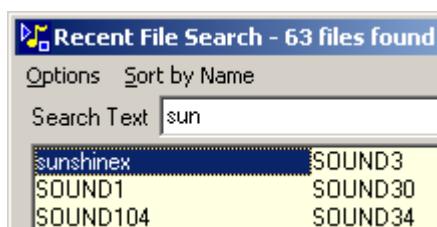
## Search Menu

The Search menu will display a popup window similar to that shown below containing the 1000 most recent files loaded into SpotOn.

The names listed are the disk filenames or display names if they were altered when loaded into SpotOn. They can be searched by typing directly into the Search Text edit panel, here 'sun' has been entered and the file 'sunshine' has been moved to the top of the list.



Once the required file has been located it can be selected and then dragged and dropped on to the appropriate main window button. Drag and Alt+Drop will automatically Top/tail track before it is loaded onto the button



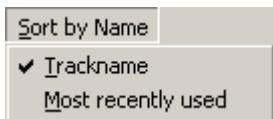
The actual location of the audio file is show in the search window status bar.



## Sorting Search List

By default the list of tracknames will be sorted in ascending alphanumeric order.

The 'Sort by' menu allows the list to be sorted in alphanumeric order or with the most recently loaded tracknames at the beginning of the list.



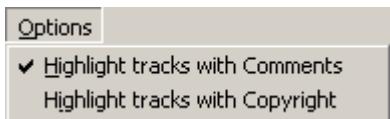
## Remote Files

Tracks sourced from remote file locations are included in the list only if the [Try Remote Files](#) option is selected, in that case any remote files will be shown in red text.

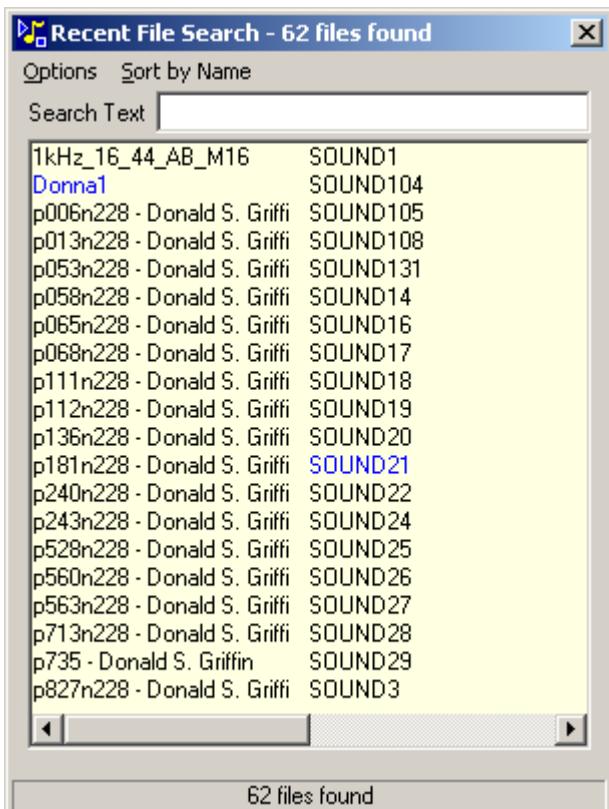


## WAV files containing Copyright or Comment fields

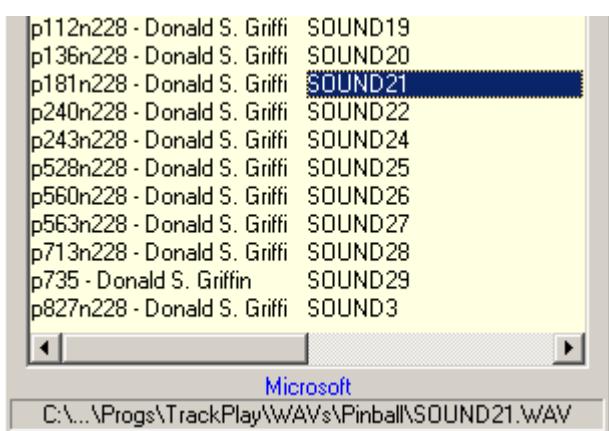
WAV files can contain embedded text fields detailing copyright, artist, creation date etc., the Options menu allows files having entries in either the Copyright or Comments fields to be highlighted in the search list.



Checking the Highlight Comments option displays the file name in blue if it has an associated comment field.



Selecting the file will show the comments in the upper status bar

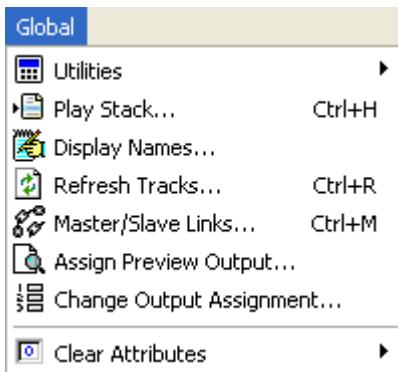


### Preview Track

The tracks can be previewed individually by double-clicking files in the results list. So for example the entries for 'Sound21' and 'Sound22' can be compared by double-clicking the names, right-clicking will stop the track as will closing the Search window.

The previewed audio will be played on the output that was selected as being the 'Preview Output' via Global|[Preview Output Assignment](#).

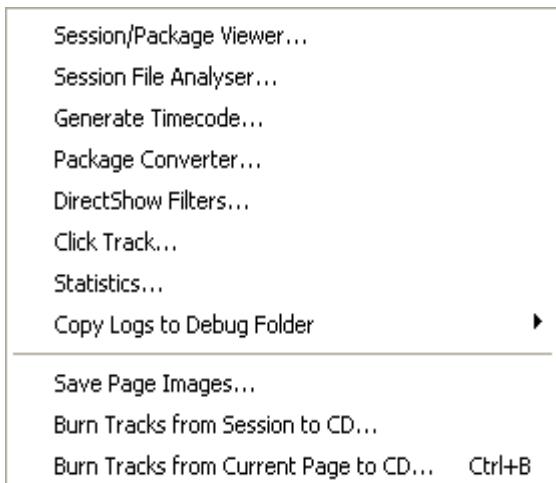
# Global Menu



## [Utilities](#)

- [Utilities](#) Assorted utilities giving information about current session
- [Play Stack \(Ctrl+H\)](#) Simple track player utility
- [Display Names](#) Edit display names and change track/button allocation
- [Refresh Tracks](#) Update tracks that have been modified since being loaded
- [Master/Slave Links](#) Setup links between Master buttons and Slave buttons
- [Assign Preview Output](#) Sets output to be used when previewing tracks
- [Change Output](#) Change audio output device for some or all buttons
- [Clear Attributes](#) Clear selected attributes

## Utilities



## [Session/Package Viewer](#)

Extract Tracks from CD

## [Session File Analyser](#)

## [Generate Timecode](#)

## [Package Converter](#)

## [DirectShow Filters](#)

## [Click Track](#)

## [Statistics](#)

## [Copy Logs to Debug Folder](#)

View contents of SpotOn Session and Package data files

Extract tracks from CD and save to disc as WAV files

Analyse usage of audio files in sessions

Generate a timecode WAV file

Convert Packages to be compatible with previous versions

Setup parameters for third party audio decoders

Generates a click/count in track

View audio file size and source folders

Save a set of SpotOn files for debugging

## [Save Page Images](#)

## [Burn Tracks from Session to CD](#)

## [Burn Tracks from Current Page to CD](#)

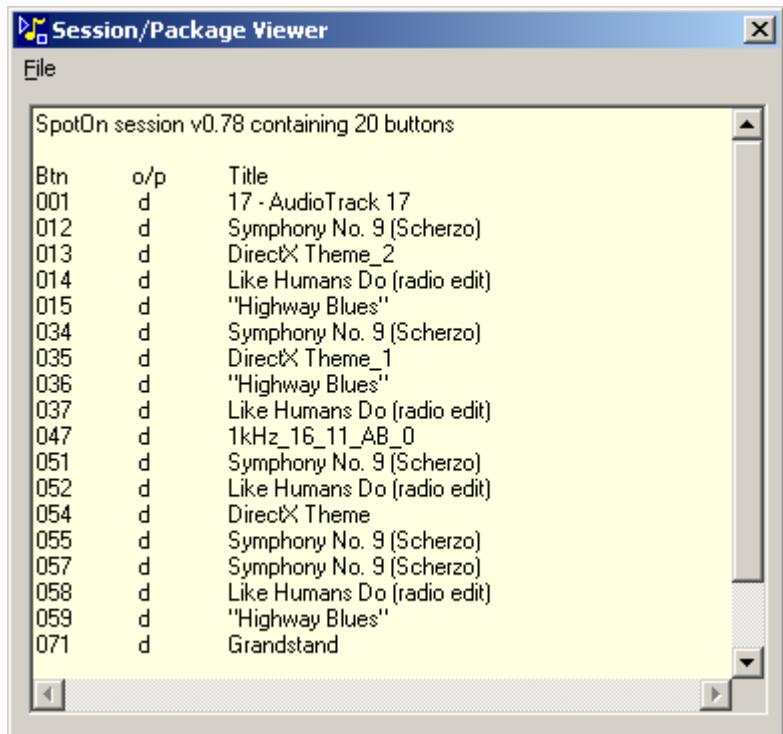
Save images of the active pages to disc

Burn tracks from the whole session to CD using

Burn a selection of tracks to CD using CDBurnerXP

## **Utilities-Session/Package Viewer**

Session/Package viewer allows the contents of either a SpotOn session or package to be examined, it will list the button number output device and track title. The information can be selected and pasted to the clipboard for use outside of SpotOn



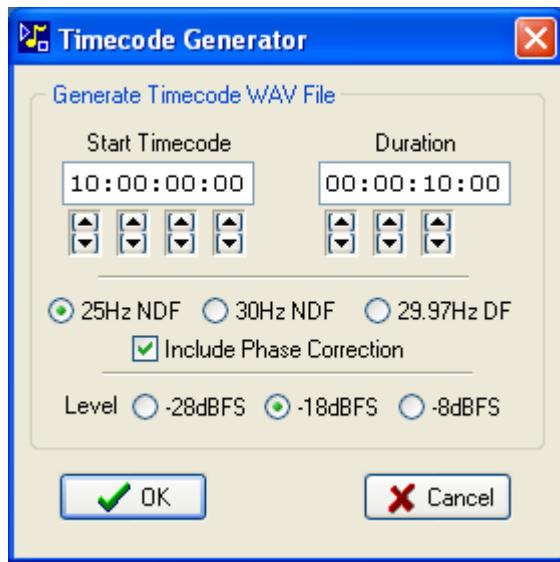
## **Utilities - Session File Analyser**

Session File Analyser is an application that runs external to SpotOn and is described on the [Session Analyser](#) page.

## **Utilities - Generate Timecode**

Occasionally it may be necessary to link the audio on a button with SMPTE timecode, this utility can create a WAV version of SMPTE timecode which when loaded onto a button can be played alongside the main audio with a Master/Slave link.

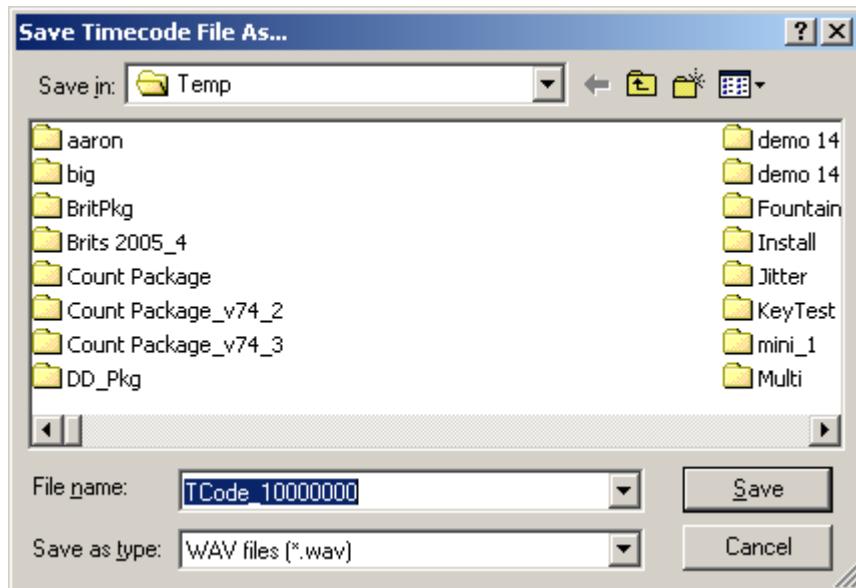
The first dialog box allows entry of the start timecode and the duration of the timecode track, in the example below timecode in the range 10:00:00:0 to 10:10:00:00 will be generated.



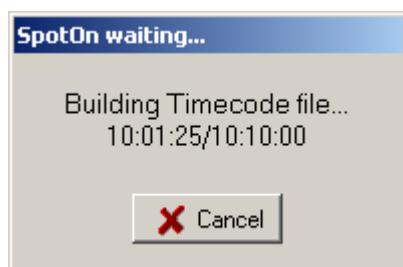
Options are available to set the timecode frame rate and signal level, -28dBFS equates to -10dBm.

The Include Phase Correction option allows a flag to be set in the timecode waveform to ensure the absolute phase of the sync word is maintained, most decoders can accommodate either setting.

Next the filename and location of the resultant timecode file is set.



Finally a Wait window is displayed showing the timecode generation process, the cancel button will abort the operation.



## Utilities - Package Converter

[Package Converter](#) is an external standalone application that will convert SpotOn Packages from one version to another, this is used to convert packages built with more recent versions of SpotOn to run on older installations.

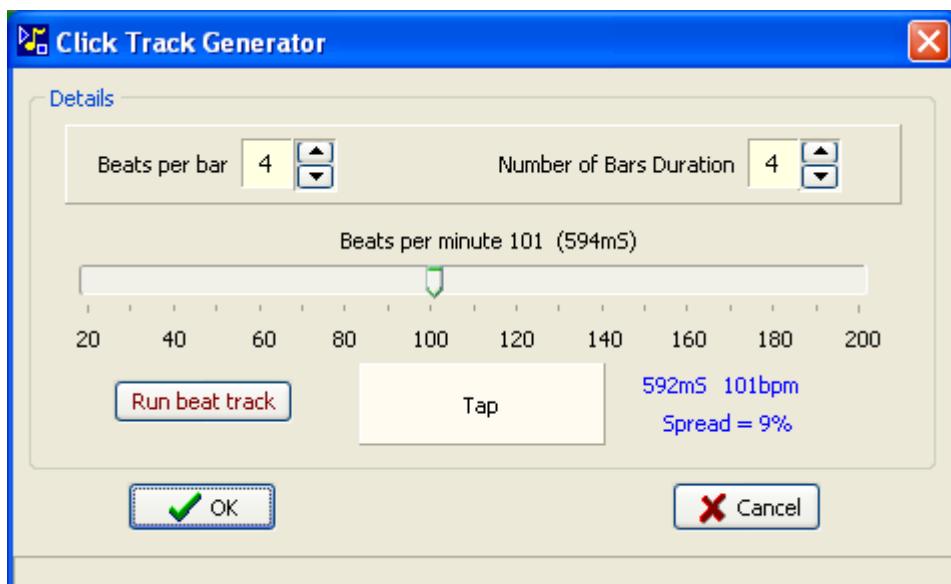
## Utilities - DirectShow Filters

Compressed audio files have to be decoded into uncompressed PCM WAV format before SpotOn can play the file, some of the DirectShow filters that perform the decompression have parameters that affect their output, the default settings are shown on the [Decoders](#) page

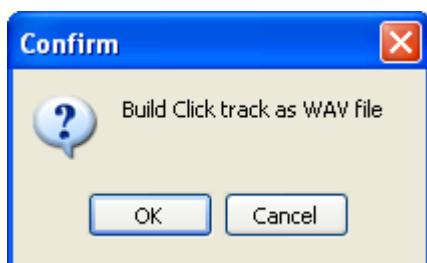
## Utilities - Click Track

A click track can be used as a timing reference or count in for musicians, SpotOn can generate a wide range of click track formats.

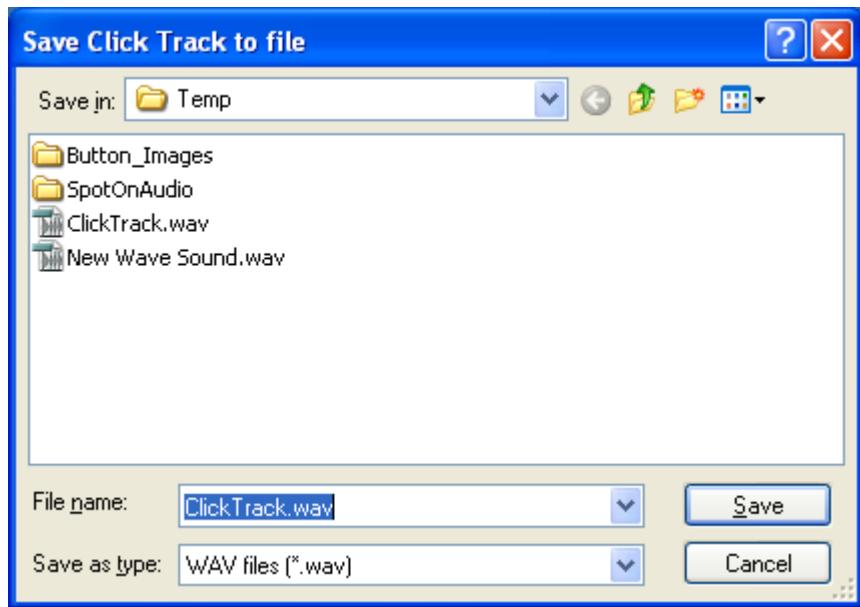
The parameters are set in the dialog shown below, the taps and beats can be previewed via the [Preview output](#)



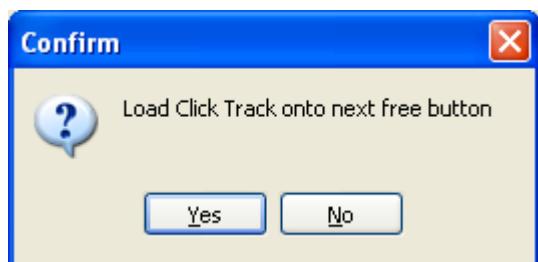
Clicking on OK will start building the file.



The file will be saved as a single channel 16 bit 48kHz wav file.

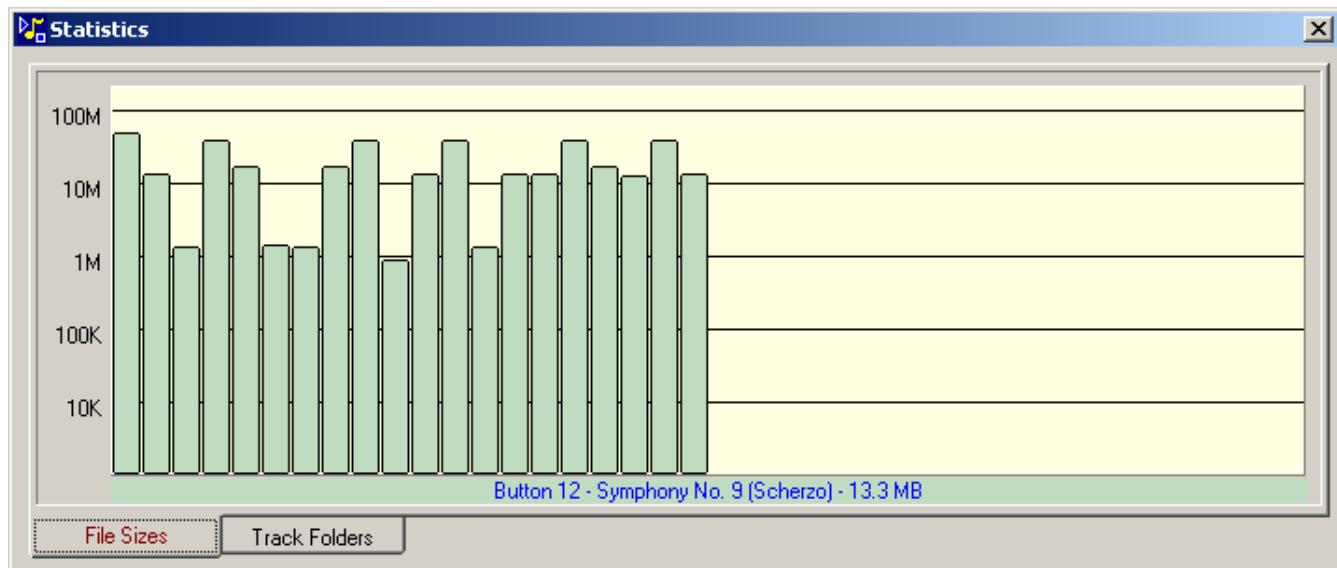


If the track is to be used immediately it can be loaded onto the next free button on SpotOn

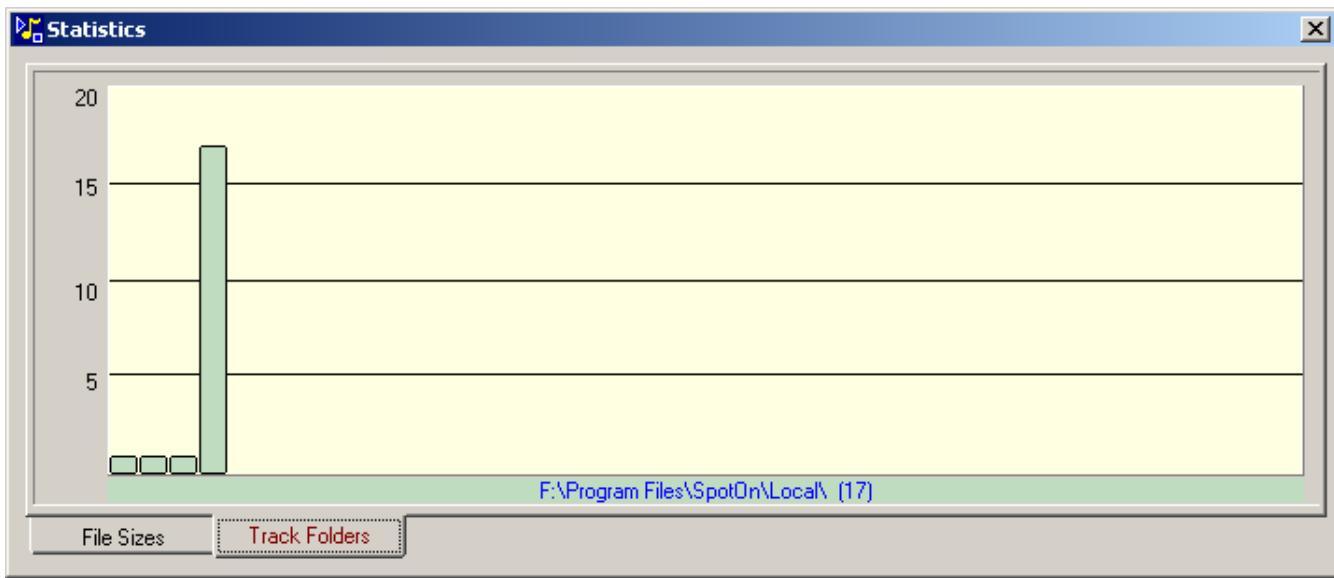


## Utilities - Statistics

Statistics show results of analysing the current session data, and is presented in two graphs

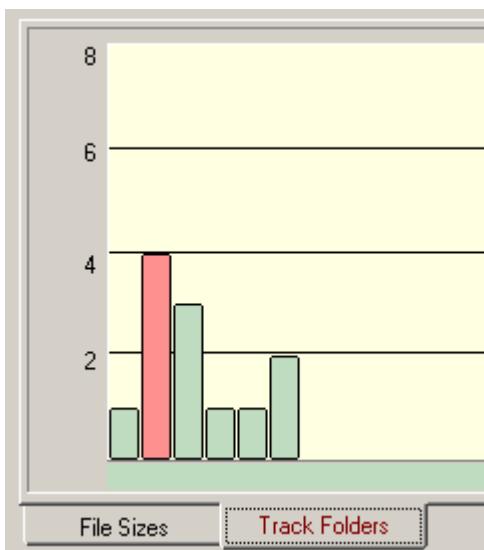


File Sizes displays a plot of file size for each button loaded, so that very large files can be identified.

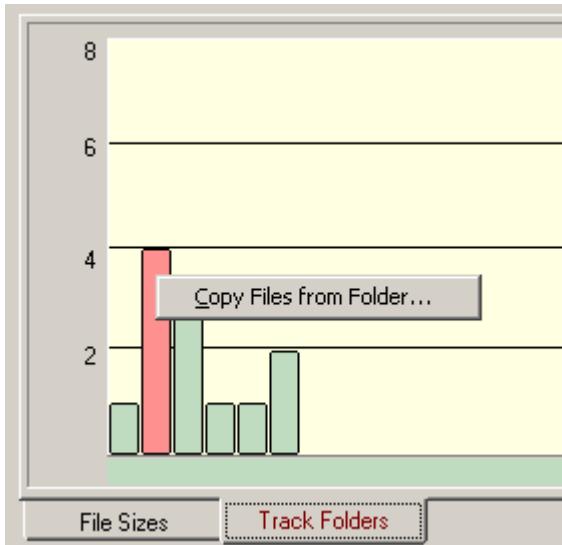


Track Folders displays the 'fragmentation' of the session, meaning how many different folders are used to store the audio files. In the above example the 20 files are spread across 4 folders, with 3 folders each containing one file and another holding the remaining 17.

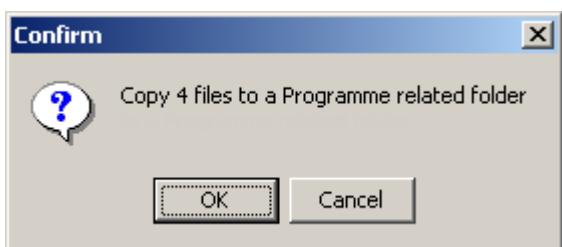
When files are loaded from a networked or removable disc they are copied to the local disc into a 'Local Files' folder, as defined in the [File Folders](#) menu. This folder is highlighted in red in the Track Folders display to indicate that some files are held in the general 'Local Files' folder and not in a more relevant folder associated with a show/programme.



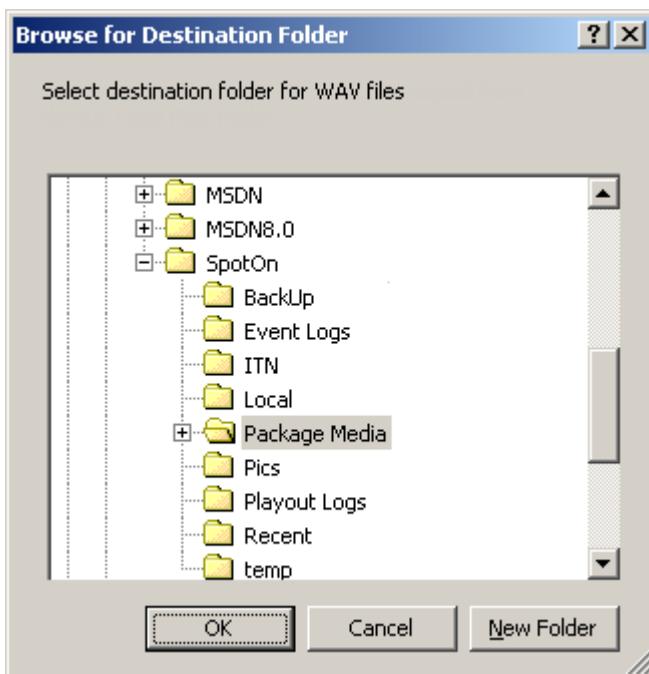
Right-clicking on any will show a popup menu



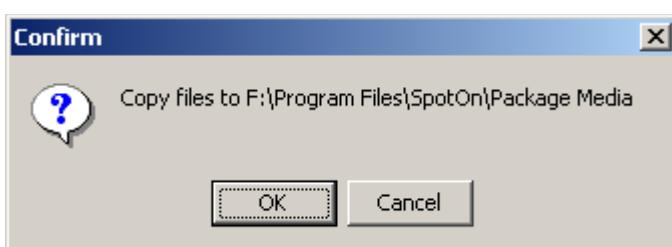
Clicking on the Copy Files menu item displays a dialog box confirming the files are to be copied



Next the new destination folder is selected



Finally a further confirmation before the files are copied.



If a file of the same name already exists in the new folder then it will not be overwritten

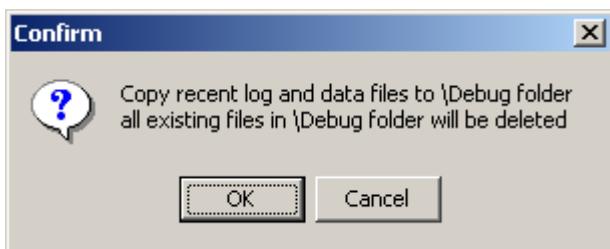


## Utilities - Copy Logs to Debug Folder

A sub menu on this item allows the date range of log files to be specified, Playout, Event and Error logs are all included.



Selecting one of the above options will display a confirmation dialog warning that the contents of the \Debug folder will be deleted, this folder is only used by SpotOn for debug log files and no other files should be present.

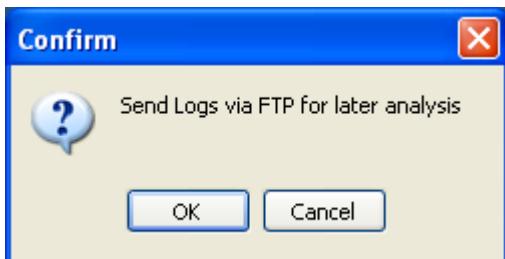


After the files have been copied a Debug.cab file is created and whilst this is being built a command line window will appear showing the compression progress

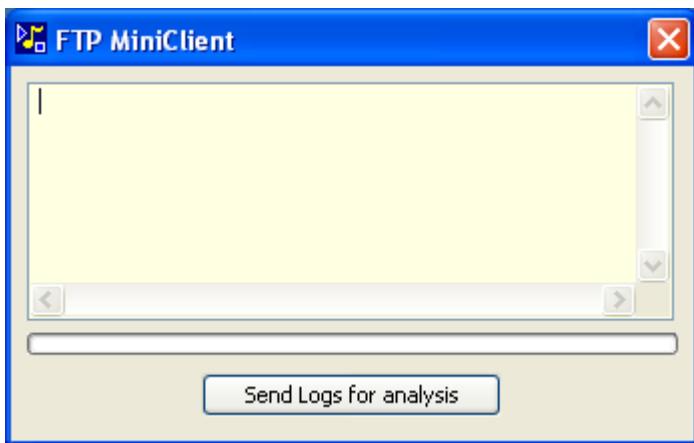
A screenshot of a command-line window titled "cmd". The window displays a long list of log files being added to a archive, starting with "EventLog\_030308.txt" and ending with "EventLog\_100408.txt". The text is as follows:

```
-- adding c:\temp\Serialtech\SpotOn\Debug\Logs\EventLog_030308.txt
-- adding c:\temp\Serialtech\SpotOn\Debug\Logs\EventLog_030408.txt
-- adding c:\temp\Serialtech\SpotOn\Debug\Logs\EventLog_040208.txt
-- adding c:\temp\Serialtech\SpotOn\Debug\Logs\EventLog_040308.txt
-- adding c:\temp\Serialtech\SpotOn\Debug\Logs\EventLog_050208.txt
-- adding c:\temp\Serialtech\SpotOn\Debug\Logs\EventLog_050308.txt
-- adding c:\temp\Serialtech\SpotOn\Debug\Logs\EventLog_050408.txt
-- adding c:\temp\Serialtech\SpotOn\Debug\Logs\EventLog_060208.txt
-- adding c:\temp\Serialtech\SpotOn\Debug\Logs\EventLog_060308.txt
-- adding c:\temp\Serialtech\SpotOn\Debug\Logs\EventLog_060408.txt
-- adding c:\temp\Serialtech\SpotOn\Debug\Logs\EventLog_070208.txt
-- adding c:\temp\Serialtech\SpotOn\Debug\Logs\EventLog_070308.txt
-- adding c:\temp\Serialtech\SpotOn\Debug\Logs\EventLog_070408.txt
-- adding c:\temp\Serialtech\SpotOn\Debug\Logs\EventLog_080108.txt
-- adding c:\temp\Serialtech\SpotOn\Debug\Logs\EventLog_080208.txt
-- adding c:\temp\Serialtech\SpotOn\Debug\Logs\EventLog_080408.txt
-- adding c:\temp\Serialtech\SpotOn\Debug\Logs\EventLog_090108.txt
-- adding c:\temp\Serialtech\SpotOn\Debug\Logs\EventLog_090208.txt
-- adding c:\temp\Serialtech\SpotOn\Debug\Logs\EventLog_090308.txt
-- adding c:\temp\Serialtech\SpotOn\Debug\Logs\EventLog_090408.txt
-- adding c:\temp\Serialtech\SpotOn\Debug\Logs\EventLog_100108.txt
-- adding c:\temp\Serialtech\SpotOn\Debug\Logs\EventLog_100208.txt
-- adding c:\temp\Serialtech\SpotOn\Debug\Logs\EventLog_100308.txt
-- adding c:\temp\Serialtech\SpotOn\Debug\Logs\EventLog_100408.txt
```

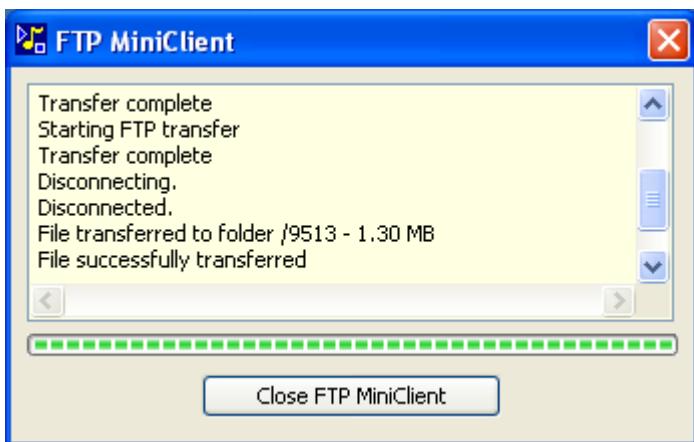
Next an option to transfer the debug files to a FTP server is offered, this uploads the files directly to a server so they can be analysed



Selecting OK will open a FTP MiniClient window



Clicking on Send Logs for analysis will start the file transfer



When completed close the window to continue

On completion of the copy/compression/FTP process there is a final option to display the contents of the \Debug folder

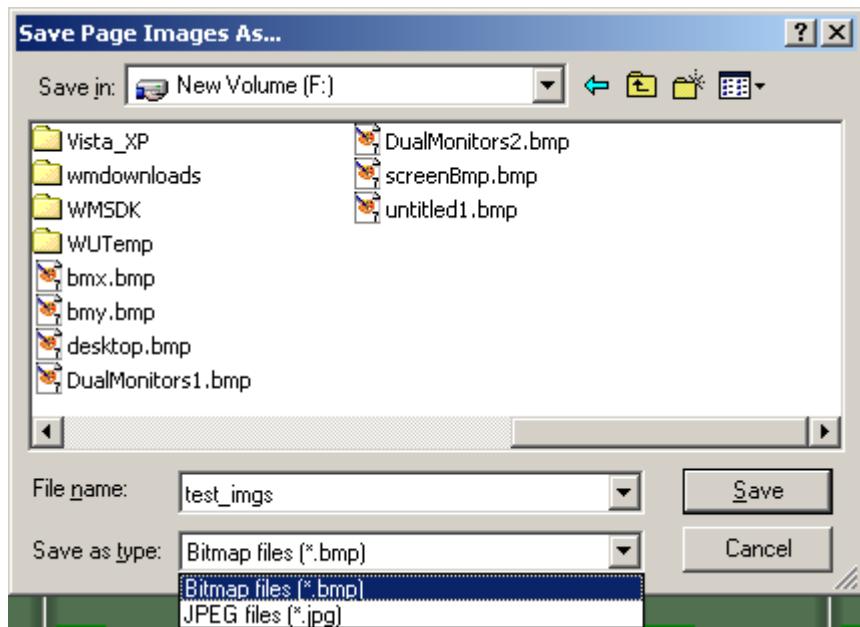


The "Debug\_Logs.cab" file can then be sent for analysis if required.

## Utilities - Save Page Images

To assist in passing information between SpotOn operators this menu option allows the SpotOn pages to be saved to file as either Windows bitmap or JPEG images.

The dialog box below allows the location of the image files to be set.



As the images are saved SpotOn will cycle through all available pages and then return to the originally displayed page.



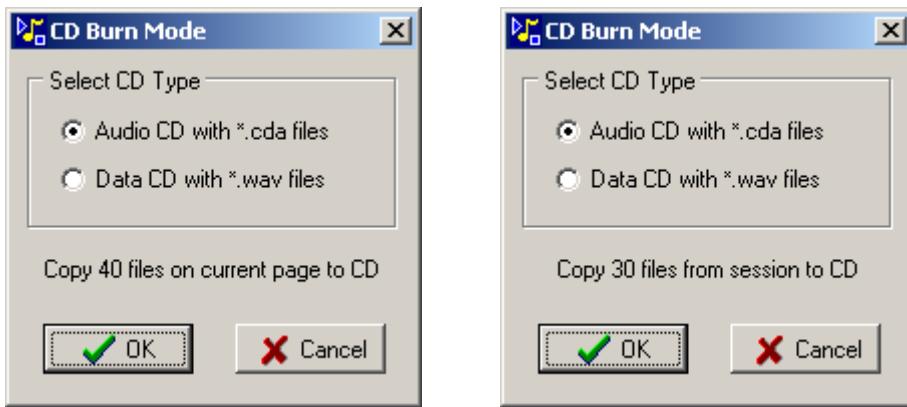
### Utilities - Burn Tracks to CD (Ctrl+B)

SpotOn is configured to use a third party CD burner utility "CDBurnerXP", the latest version of CDBurnerXP can be found at <http://www.cdburnerxp.se>

In order for SpotOn to access the utility the location of CDBurnerXP has to be assigned in the [SetUp menu](#).

By default all the tracks on the current page or session are selected for burning, alternatively a [source region](#) can be used with non-contiguous selections on a single page.

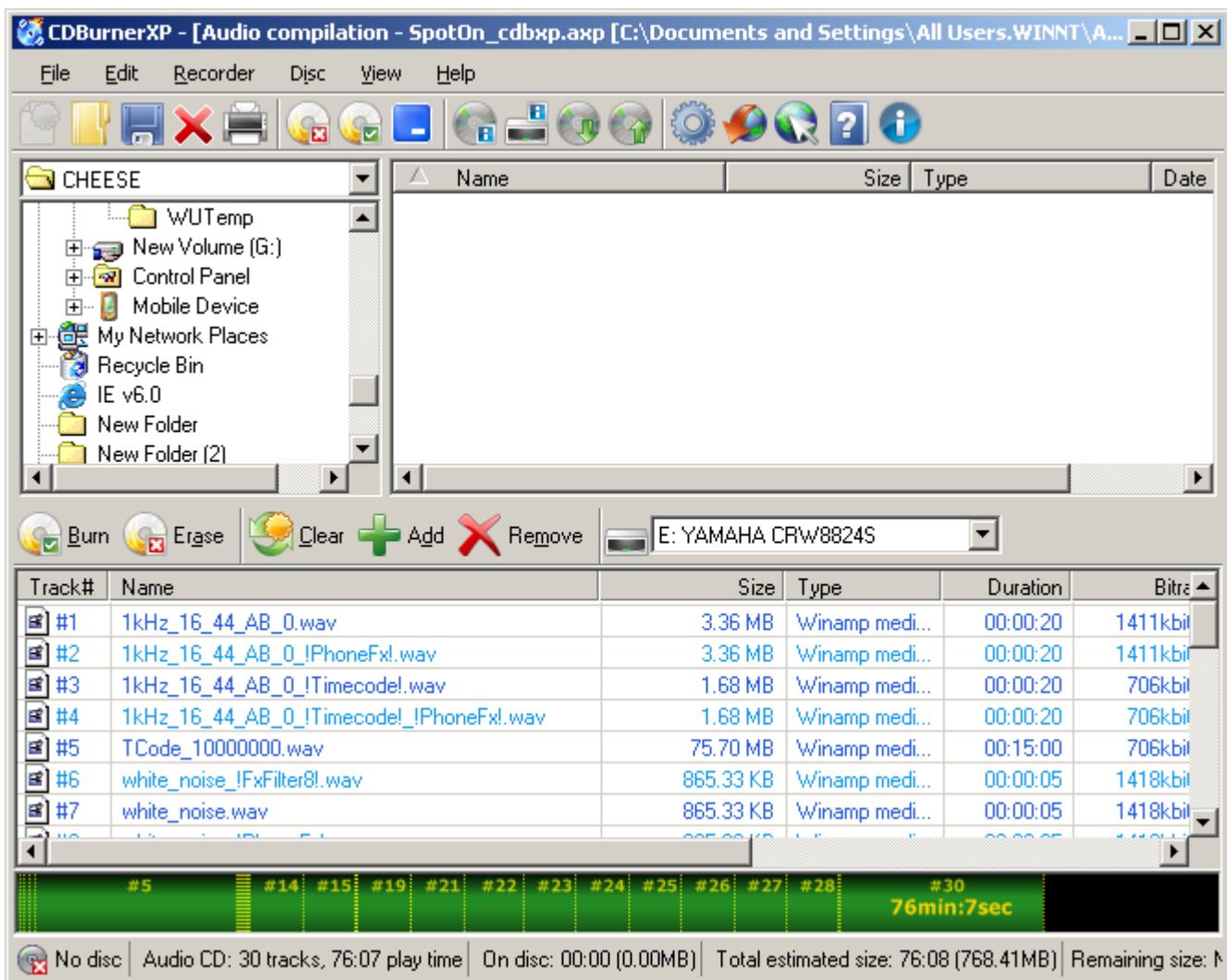
Next the type of file to burn onto the CD is selected to be either an Audio CD compatible with CD players or a Data CD containing the original \*.wav files for use with a computer.



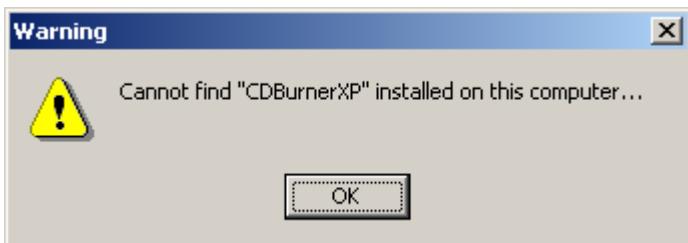
Note the files burned to CD are the original files without any modifications applied by SpotOn, i.e. gain, pan and trims adjustments are not copied across. However, in the case of MultiChannel files being saved to \*.cda tracks then the file will be mixed down to stereo.

The adjustments made by SpotOn to a track can be [rendered](#) to a copy of the track from the Trim window.

Clicking OK will open up the CDBurnerXP utility where the tracks to be burned can be edited or previewed



If no utility has been assigned or the file cannot be found the following message will be displayed.

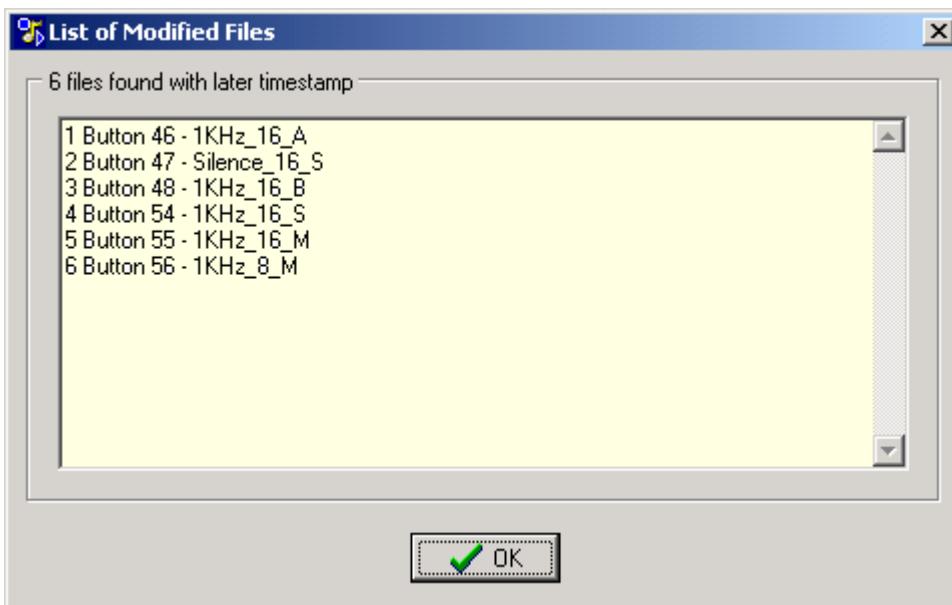


## Refresh Tracks (Ctrl+R)

If any tracks have been edited with an external WAV file edit application and then resaved, SpotOn will not know about the change until restarted or the button tracks are refreshed.

SpotOn could well be confused if audio files currently in use are modified externally, due to the information extracted from the audio file when originally loaded into SpotOn now being incorrect.

To avoid this situation clicking Refresh Tracks (Ctrl+R) will scan the disk files and compare the timestamps with those of the tracks currently loaded, files with more recent timestamps will be listed as shown below.



Following this dialog box is another to confirm that the updated tracks are to be loaded.



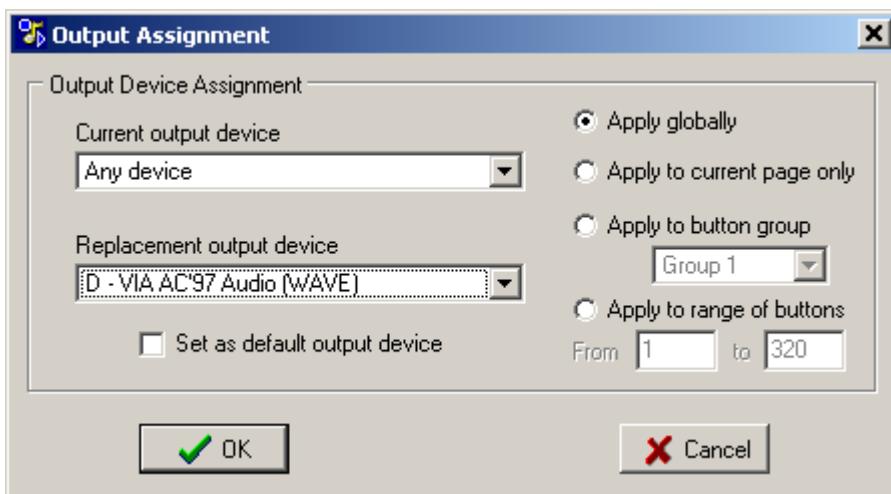
Playlist item selection and fade out times may be reset by this process, so the parameters of the buttons using these files listed must be checked and rehearsed before use.

When using the [Advanced Editing](#) option the tracks must be refreshed on completion of any editing operation

## Change Output Assignment

This option can globally change all buttons to use a specific audio output or only change those buttons already using a certain port.

The upper drop down box selects to audio output to be changed, and the lower box the output port that will be used instead.

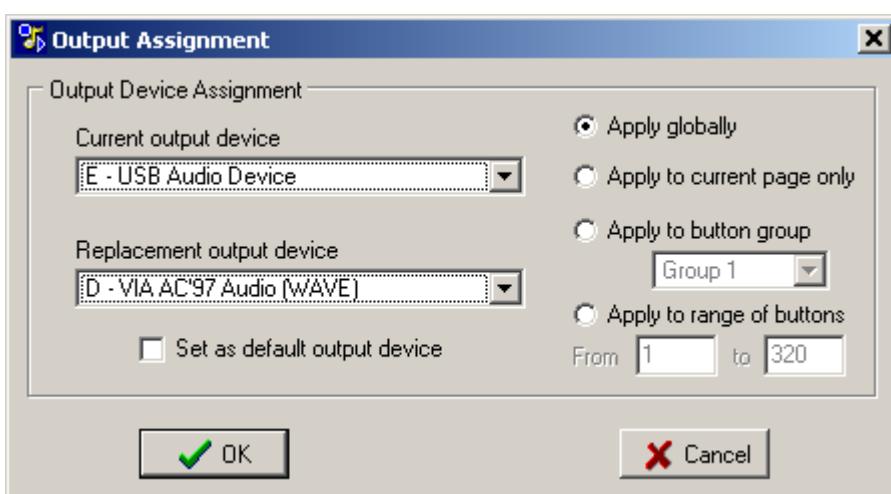


In the example above "Any device" is selected in the upper box and output "D" in the lower box, this will change all button to use output D. On the right hand side of the window the scope of the changes to output assignment can be set to either global, the current page, buttons on a specific group or a range of sequential buttons.

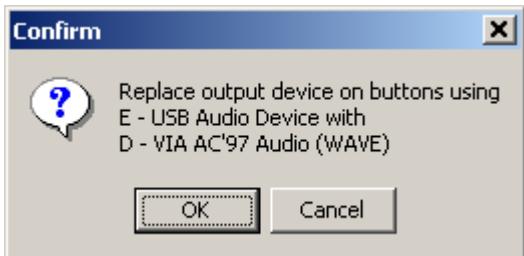
Clicking OK will show the confirmation dialog box.



The second example below defines output device "E" in the upper box, in this case only those buttons that are currently using output E will be changed to output D.

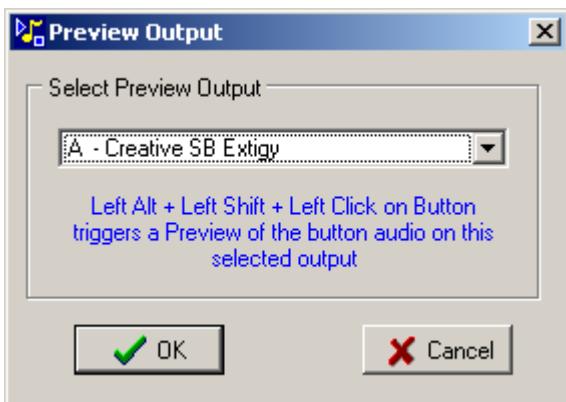


Checking the Set as Default option will cause any subsequently loaded track to be assigned to the output selected in the lower box.



## Preview Output Assignment

When tracks are played they use their assigned output, however tracks can be previewed via an alternative output, this dialog box sets the Preview output.



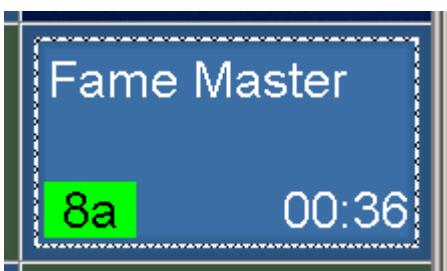
To enter the Preview mode from the main window press and hold left Shift and left Alt keyboard buttons, at this stage the DataRate panel will change colour to yellow and show "Pvw Mode".

Pvw Mode

Left-clicking on a button will now play that button on the Preview o/p only. The button preview can be stopped by holding down the left Shift and left Alt keyboard buttons and left or right clicking the button (depending on the mouse options selected).

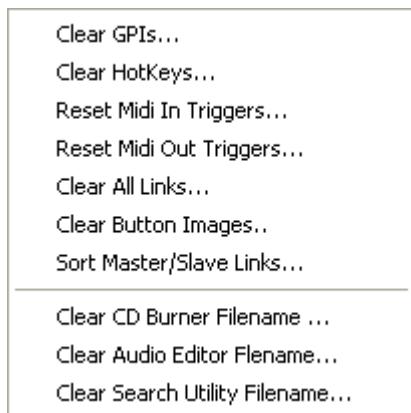
The Preview playout is completely independent of the usual playout mode, so buttons can be played out of the normal outputs whilst being previewed, only one button can be previewed at any one time.

The button being previewed is shown with a crosshatch rectangle



The time display will not count down during preview.

## Clear Attributes



Clear GPIs  
Clear Hotkeys  
[Reset Midi In Triggers](#)  
[Reset Midi Out Triggers](#)  
Clear All Links  
Clear Button Images  
Sort Master/Slave Links  
Clear CD Burner filename  
Clear Audio editor filename  
Clear Search Utility filename

Clear all GPI/button assignments  
Clear all HotKeys assigned to buttons  
Remove all Midi In triggers assigned to buttons  
Remove all Midi Out triggers assigned to buttons  
Clear all Master/Slave links  
Deletes images images from all buttons  
Sort Master/Slave links into "master button" order  
Disable CD burner utility  
Disable audio editor utility  
Disable file search utility

## Reset All Midi In Triggers

Remove all the Midi In Note settings from all buttons



## Reset All Midi Out Triggers

Remove all the Midi Out Note settings from all buttons

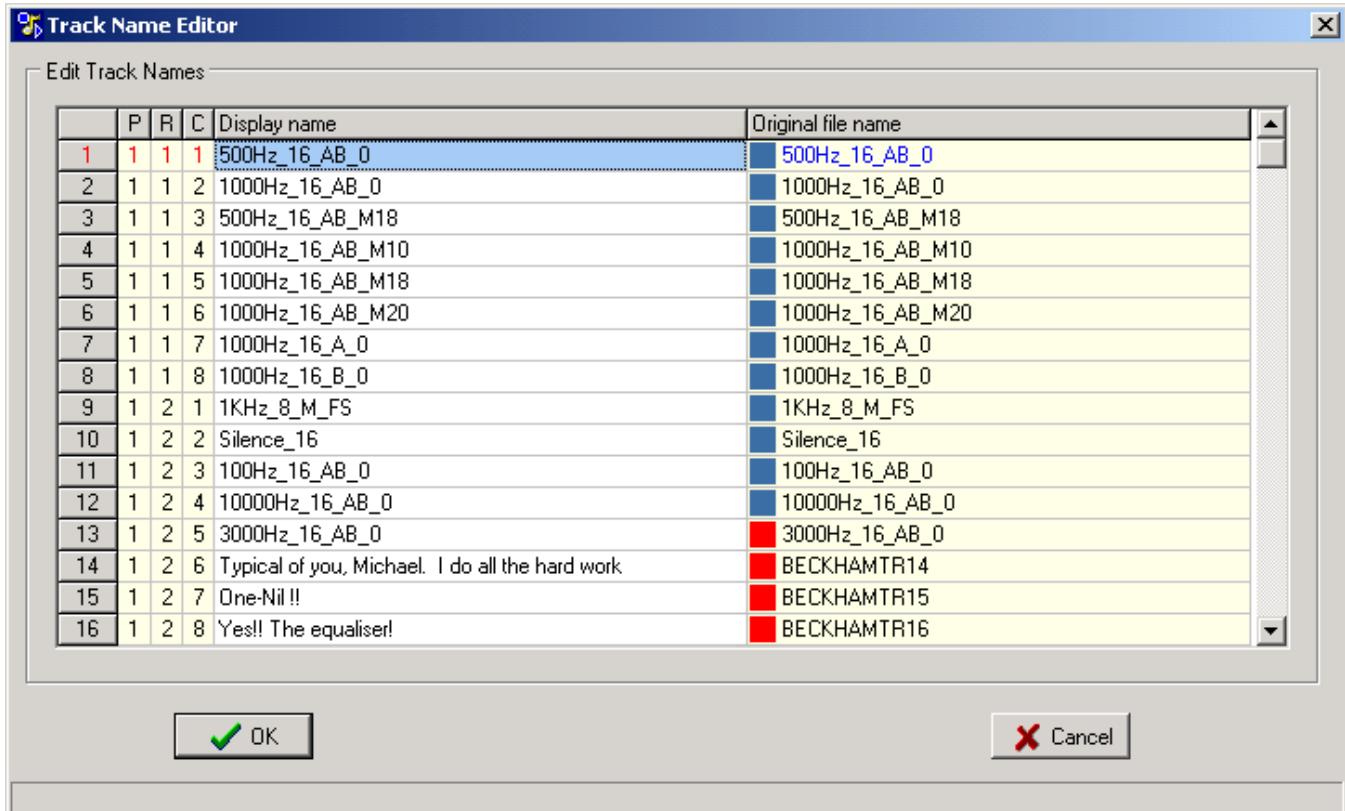


# Display Names

Single button display names can be edited using the button menu [Display](#) option, if a large number need to be changed then the window below is more appropriate.

The left hand column show the button number, columns P, R, C show the page, row and column respectively.

The final two columns contain the display name and the original file name



The display name can be edited by first selecting the cell and then double clicking to invoke the text editor

P	R	C	Display name
1	1	1	500Hz_16_AB_0
1	1	2	1000Hz_16_AB_0
1	1	3	500Hz_16_AB_M18
1	1	4	1000Hz_16_AB_M10

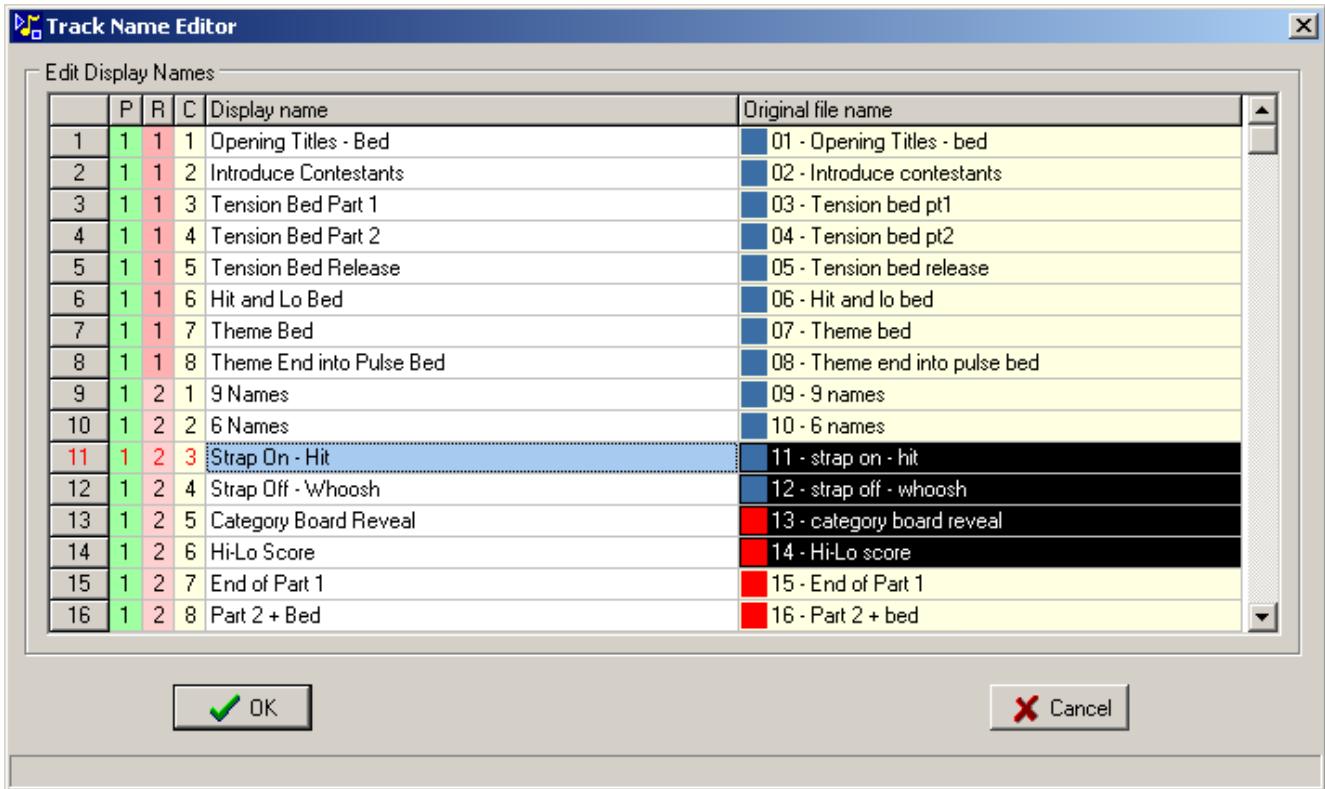
Another use of this window is the ability to reorder the tracks on the buttons

The entries in the right hand column can be dragged and dropped into new positions either singly or in blocks, button entries cannot be copied or cleared from this window.

To move a single track, simply click and hold down the left mouse button on the track in the filename column and drag the mouse within the column to the new location, the track will be inserted above the drop point.

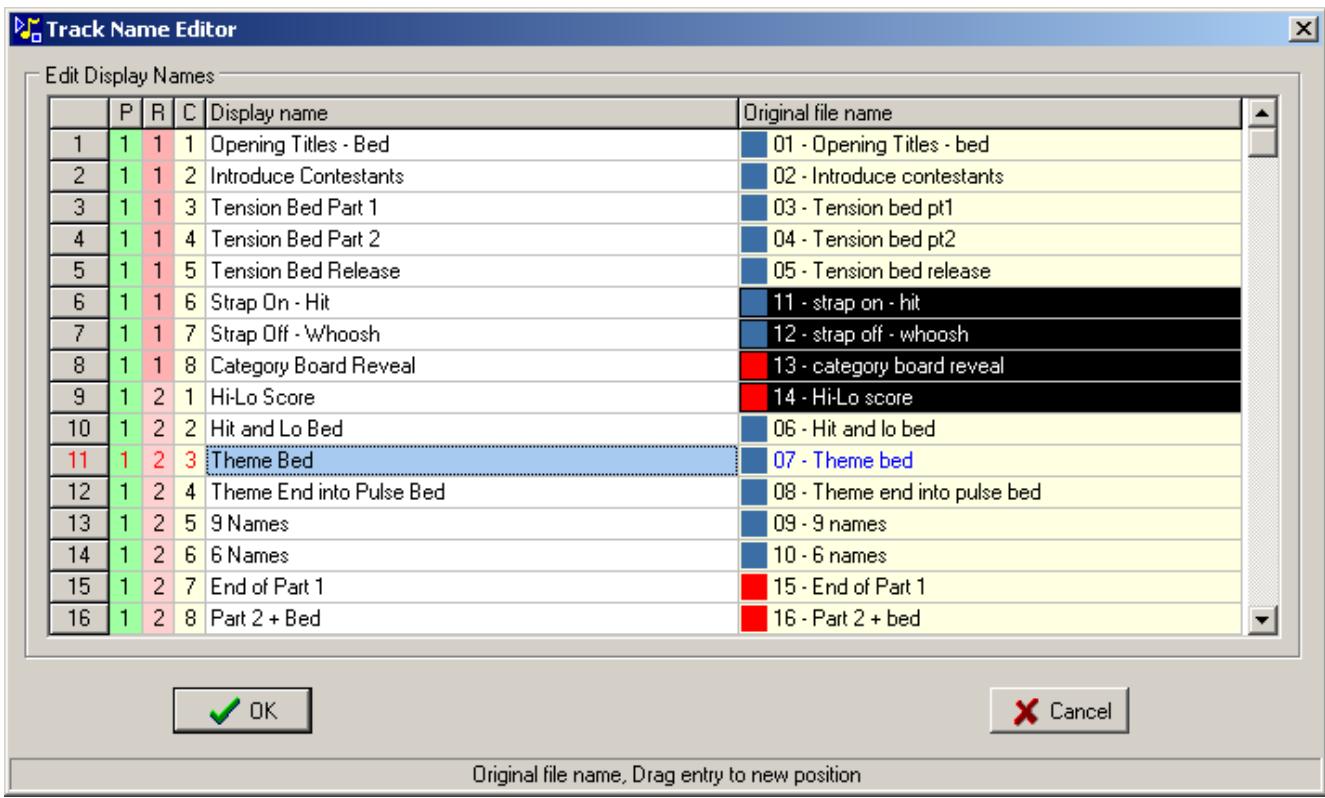
To move multiple track the Windows shift+click selection method is used.

If in the example below the tracks 11..14 are to be cut and pasted between tracks 5 and 6, first select the tracks to be moved by clicking on track 11 in the filename column then shift+clicking on track 14 in the same column. The selected tracks will be shown in white on black text.



Now click and hold down the left mouse button anywhere in the selected area, then drag the mouse to the entry for track 6 in the same column.

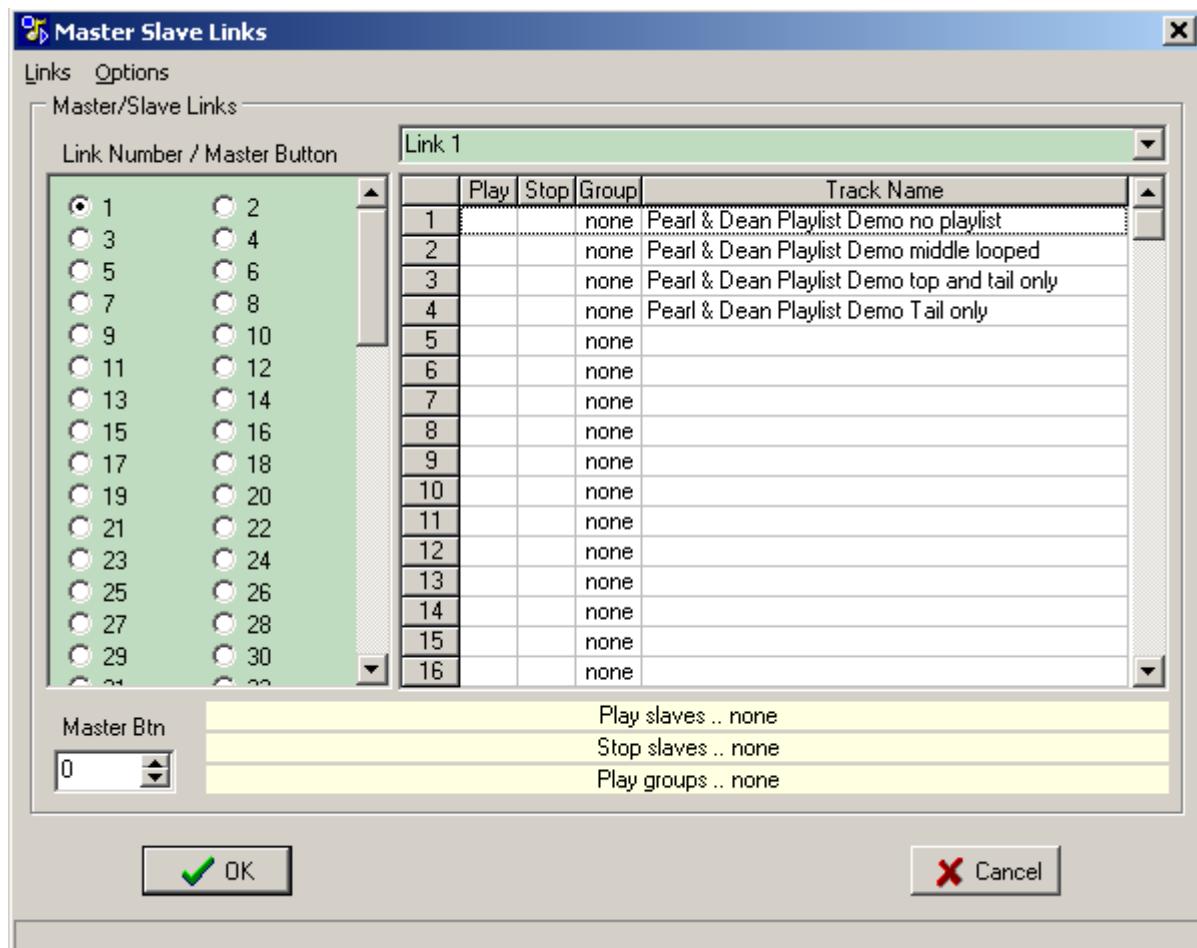
Release the left mouse button and the selected tracks will be inserted above track 6 as shown below



# Master/Slave Links

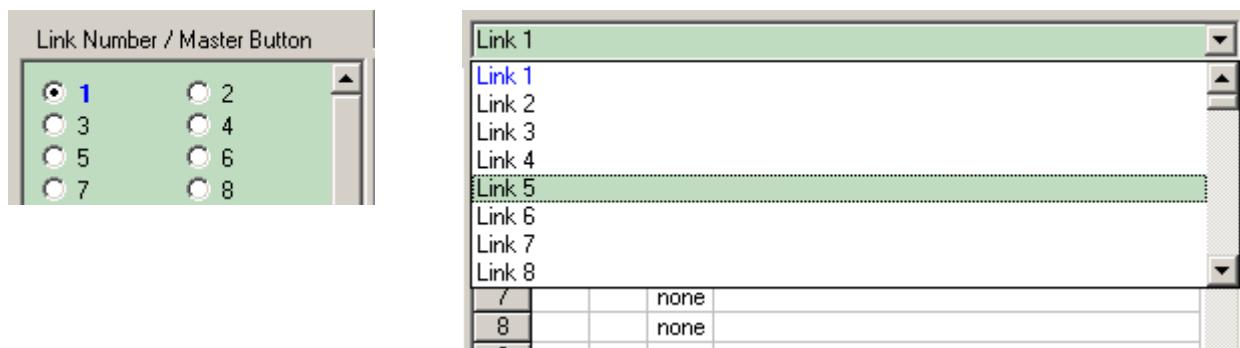
Buttons can be linked together so that one button (Master) can Play or Stop any number of other buttons (Slaves), alternatively buttons may be grouped so that playing any button in the group will stop all others in that group.

Special features such as Voice Over, Pause/UnPause and AutoPan can also be controlled via Master/Slave operation.

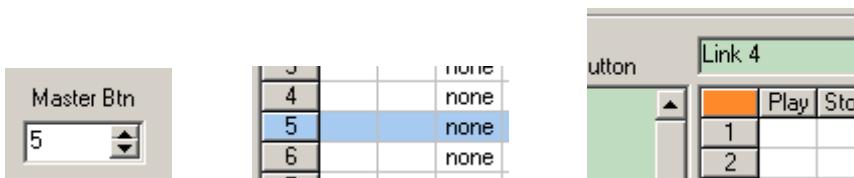


## Links

There are 100 Links that can be used, clicking on the left hand panel will select the appropriate link for editing, or alternatively selecting the link from the drop down list, the currently selected link is highlighted in blue text

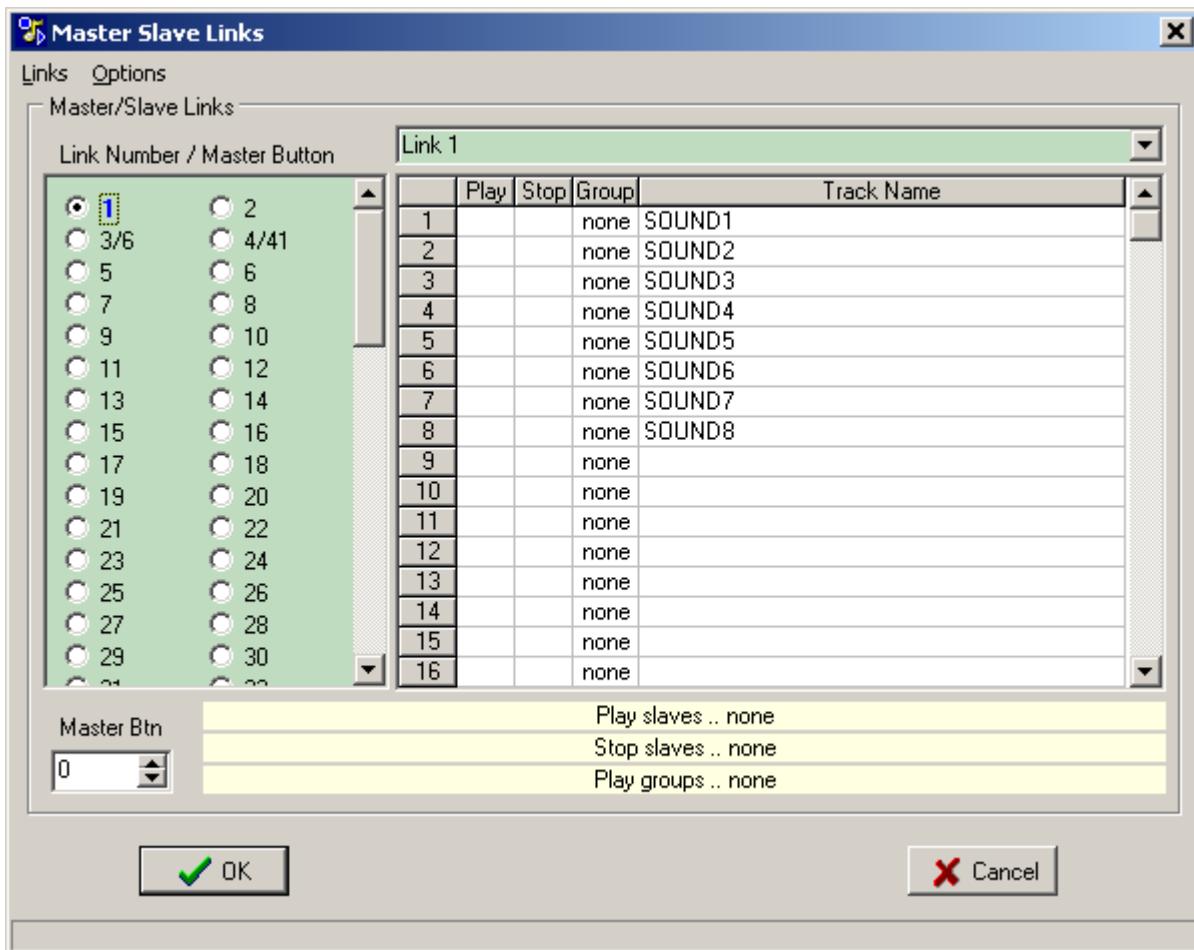


The Master button for a link can be typed in to the spin edit box or allocated by clicking the button number on the left hand side of the list, the selected Master button is highlighted in blue



A link can be deleted by entering 0 as the Master Button or clicking the top left cell in the display grid - shown in orange above.

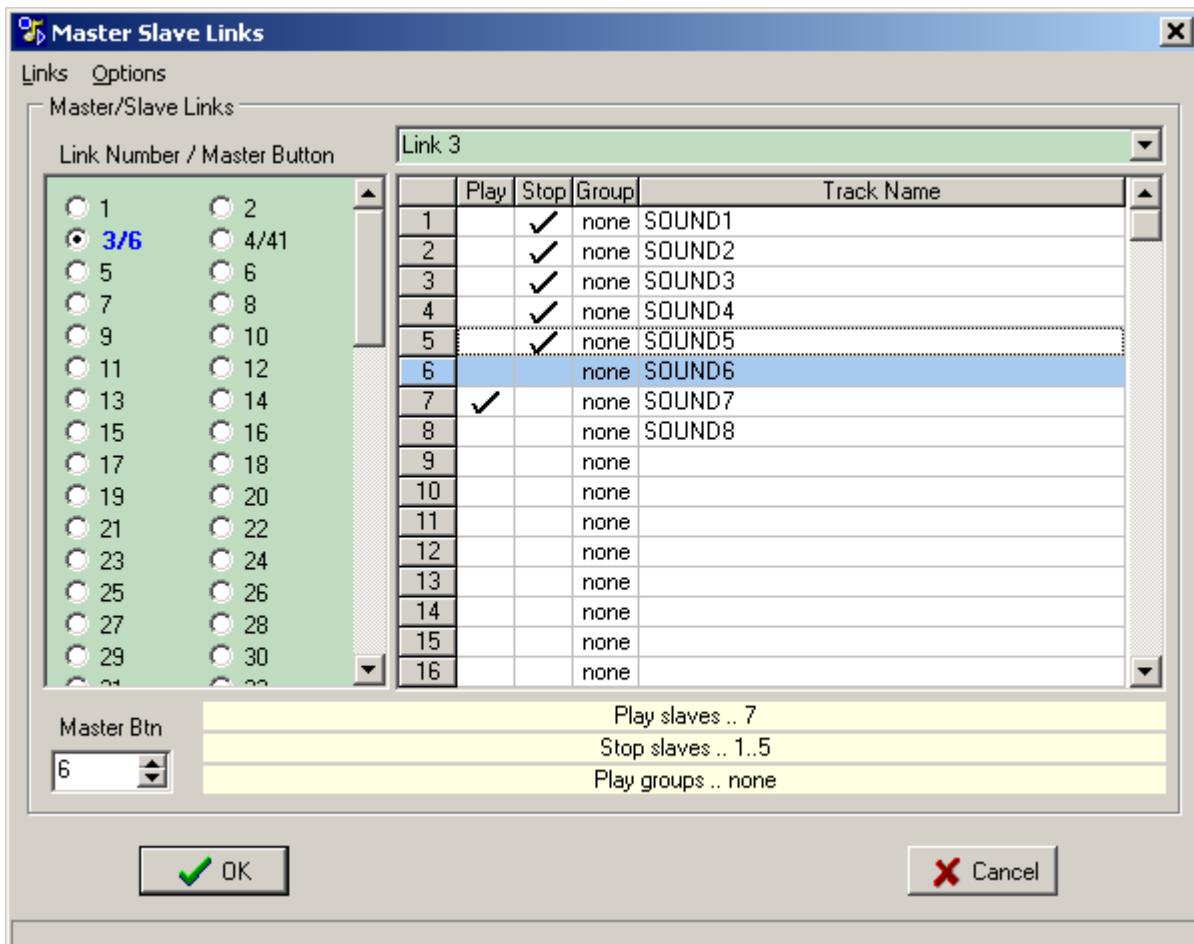
Play Slaves (those that will Play when the Master button is played) and Stop Slaves (those that will Stop when the Master is played) are allocated by clicking the appropriate cell in the list



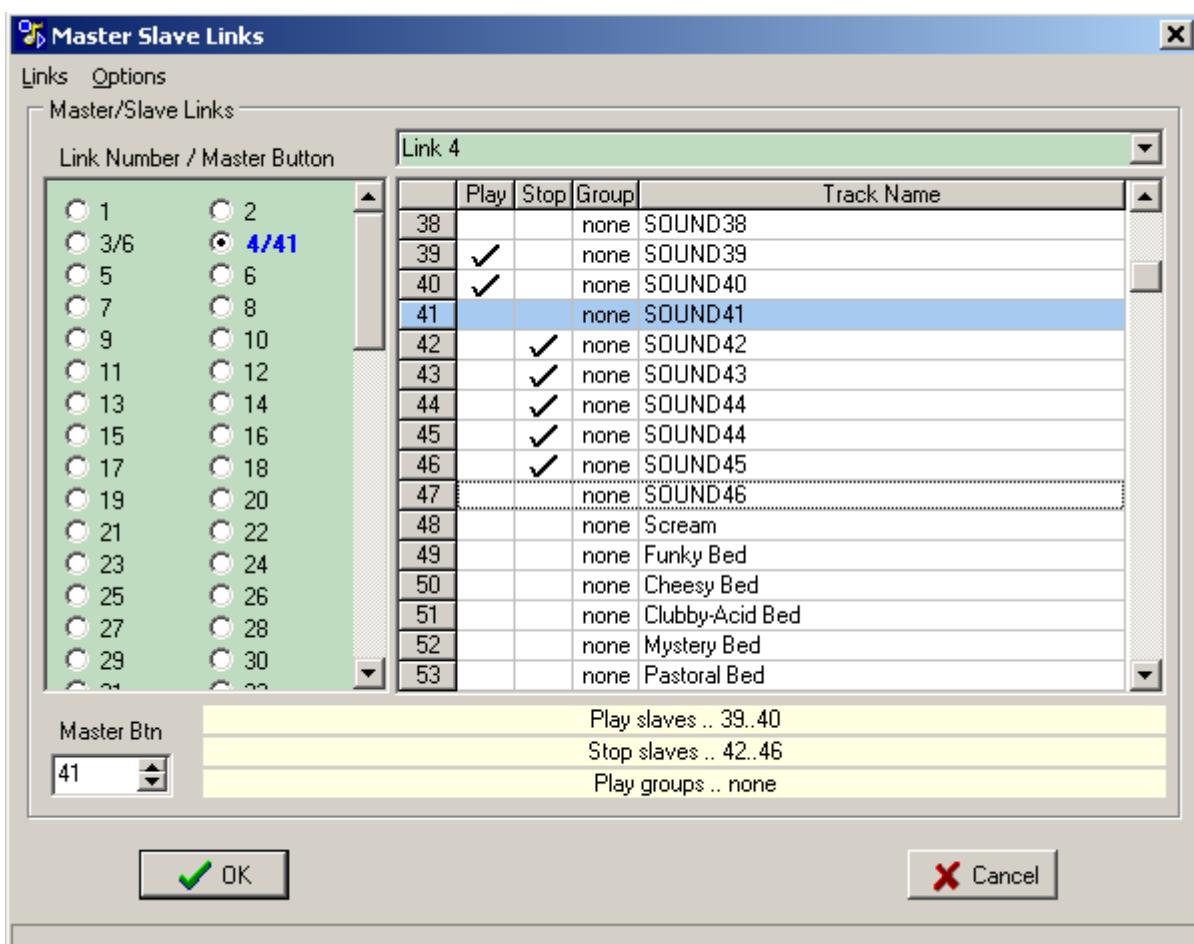
In the image above Link 1 is selected and is highlighted blue in the left hand panel, it has no master or slave buttons allocated.

Links 3 and 4 do have allocations and the master button is shown to the right of the link number i.e. 3/6 and 4/41

Selecting Link 3 shows the button allocations, buttons 1,2,3,4,5 will stop and button 7 will play when the master button 6 is played.

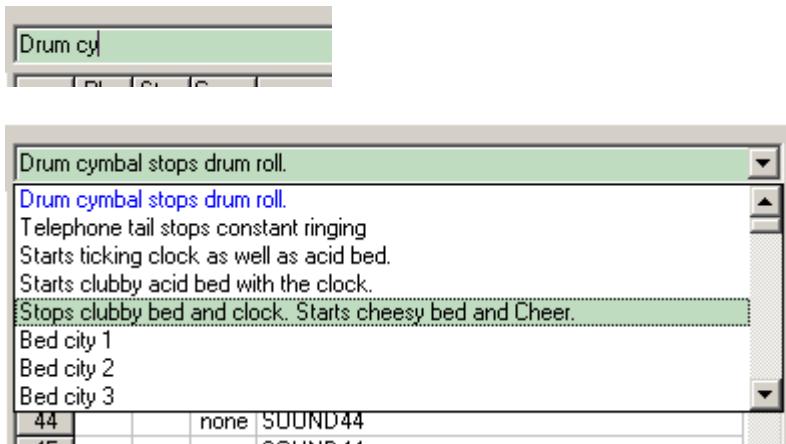


Similarly for link 4 buttons 39,40 will play and buttons 42,43,44,45,46 will stop when the master button 41 is played



A summary of the allocated buttons is shown at the bottom of the button allocation list

The individual links can be named by typing into the drop down list selection



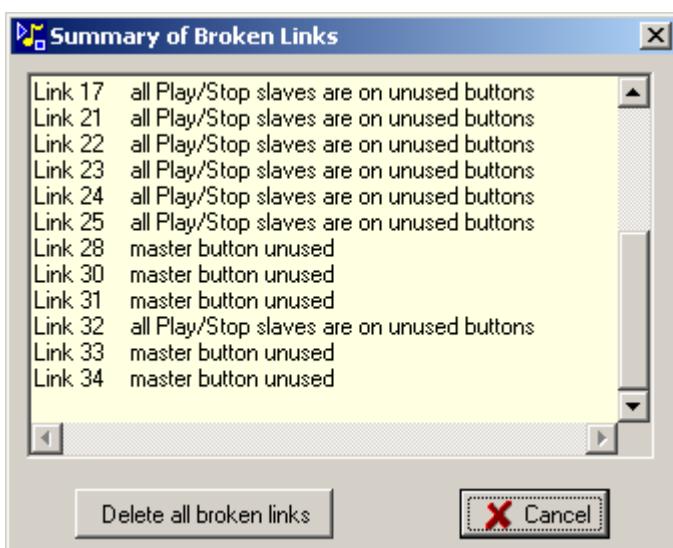
The links can be sorted into Master Button order using the Global|Sort Master/Slave Links option

If the Master/Slave links are currently disabled the message below appears at the bottom of the dialog box



The Links menu allows for the link names to be reset to their default of Link 1.. Link 99, and all Groups and Links to be cleared.

In addition the Links can be analysed and broken links displayed, a broken link is defined as one where the Master button is unused or all the Play and Stop slaves are pointing to unused buttons.



An option to delete all broken links is available

An additional menu is available by right-clicking the Play or Stop columns.

	Play	Stop	Group	Track Name
1			none	Dinner 16 MR AR
2				Clear All Groups
3				Clear All Play Slaves
4				Clear All Stop Slaves
5				Clear All Play and Stop Slaves
6				None
7			none	
8				

## Play Groups

As an alternative to using Links for collections of exclusive buttons Groups may be more appropriate.

There are 25 separate button groups and only one button assigned to a particular group can be playing at any one time, so playing a button will stop all other buttons in the group.

By default the buttons will not be assigned to any group and will show as "none" in the Group column

	Play	Stop	Group	Track Name
1			none	Pearl & Dean Playlist Demo no playlist
2			none	Pearl & Dean Playlist Demo middle looped
3			none	Pearl & Dean Playlist Demo top and tail only
4			none	Pearl & Dean Playlist Demo Tail only
5			none	
6			none	

Left clicking on the appropriate group cell will increment the group number and then roll back to none.

Right clicking the group cells displays a popup menu

✓ none	Group 10	Group 20
Group 1	Group 11	Group 21
Group 2	Group 12	Group 22
Group 3	Group 13	Group 23
Group 4	Group 14	Group 24+
Group 5	Group 15	Group 25!
Group 6	Group 16	Group A*
Group 7	Group 17	Group B*
Group 8	Group 18	Group C*
Group 9	Group 19	<b>Cancel</b>

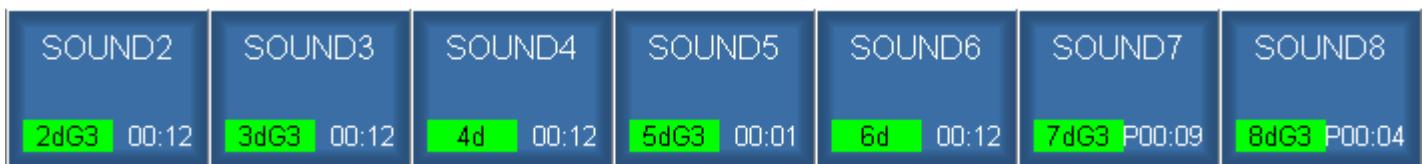
Selecting an item will set the group value for that button, the screen shot below shows 5 buttons assigned to group 3.

The Play selection on button 7 is coloured red as it belongs to a Master/Slave link and is now invalid - Groups and Play Links cannot act on the same button and will be automatically deleted on exiting from the Links dialog.

	Play	Stop	Group	Track Name
1			none	SOUND1
2			3	SOUND2
3			3	SOUND3
4			none	SOUND4
5			3	SOUND5
6			none	SOUND6
7	X		3	SOUND7
8	✓		3	SOUND8
9			none	
10			none	
11			none	
12			....	

The summary text in the lower part of the window shows the number of buttons assigned to each group.

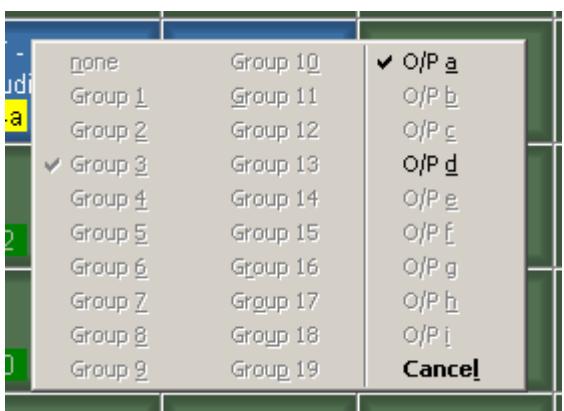
Play groups .. G3:5



As an alternative to setting up the Play Groups in this dialog box the groups can be assigned from the main screen by shift+ctrl right-clicking on a button



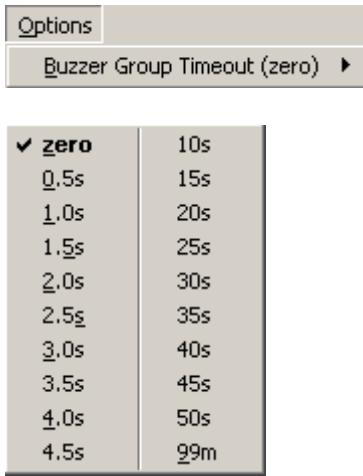
If the Groups and Master/Slave links are disabled then the group selections will be greyed out



## Buzzer Groups

In the above description of Play Groups there were 25 exclusive groups numbered 1..25, and 4 buzzer groups with legends A..D

Buttons assigned to Buzzer Groups act slightly differently to Play Groups, in that if any button that belongs to a buzzer group is played all other members of that buzzer group are prevented from being played for the duration of a timeout period.



The intended use of this is in "Bell and Buzzer" rounds in quiz shows where only the first person in a team to press the 'bell' or 'buzzer' actually triggers the sound effect, other presses are locked out.

This Buzzer Group mode of operation is only available when the Play command is received from an external source ie GPI or Midi, HotKey and mouse click operation is not affected by the presence of Buzzer Groups.

The Buzzer Group timeout can be set between zero and 99 minutes, with the longer timeouts it will often be necessary to reset the timeout period, say for the start of the next quiz round. The timeouts can be reset either by toggling the GPIs off/on or by use of the special play group 25.

Play group 25 is shown in the group selection windows as 25! meaning that it acts differently from groups 1..24.

When any button in group 25 is played directly (not with a Play Next) it will play and also clear the Buzzer Group timeouts. In practice this could be a button loaded with silence and operated by an external GPI triggered by someone supervising the quiz game.

## Play Stack

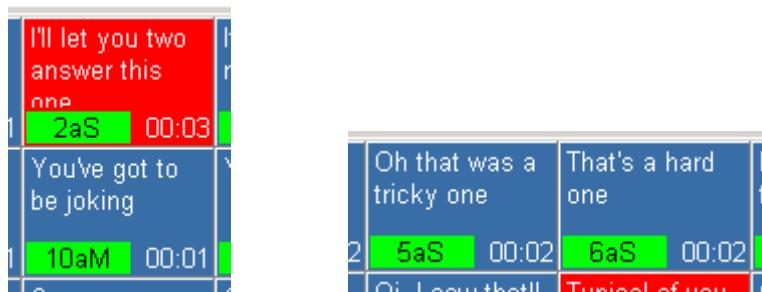
Play group 24 has a secondary function in that it will fade out any tracks playing in the [Play Stack](#) window.

## Display

The Groups and Master/Slave Links can be enabled via the [Options](#) menu or by clicking the status panel below



The button displays change to indicate any links, here button 10 has an M suffix to the button number indicating it is a Master and buttons 2, 5 and 6 have an S (Slave) suffix.



The status bar gives more information showing which Link the Master or Slave buttons are acting on.



## Voice Over

Voice Over mode is a special case of Master/Slave links where the gain of the Play Slave/s is reduced under control of the Master track - Stop slaves have no meaning in this mode and will be deleted.

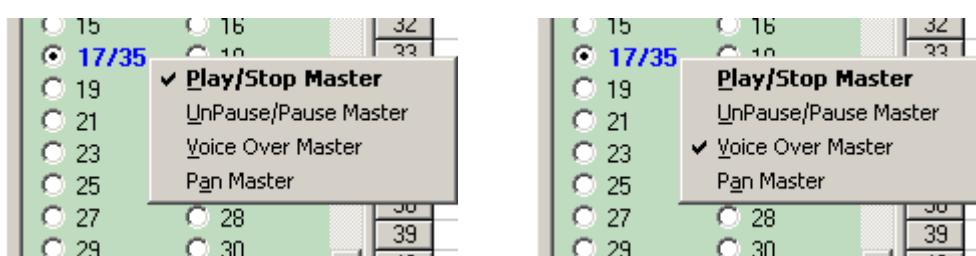
The Slave track/s would be already playing and when the master 'voice over' track is played the gain of the slave/s will be reduced using the fade time and law of the master track - this means the Fade In and Fade Out of the master track must be non-zero.

To convert a Master/Slave link to be a VoiceOver link:-

First select an existing link - in this case #17 that has a master button 35 and one play slave button 34

<input type="radio"/> 15	<input type="radio"/> 16	<input checked="" type="radio"/> 17/35	<input type="radio"/> 18	32	none
<input type="radio"/> 19	<input type="radio"/> 20		<input type="radio"/> 21	33	none
<input type="radio"/> 21	<input type="radio"/> 22		<input type="radio"/> 23	34	<input checked="" type="checkbox"/> none darkside
			<input type="radio"/> 25	35	none Pop_String_Orchestra_KOS145_1_21

Right-click the link number - the link must be assigned a Master button for the popup options to be displayed



Check the Voice Over master option, at which point the link number will be underlined and the 'tick' in the play column will change to a fade down/up image.

<input type="radio"/> 15	<input type="radio"/> 16	<input checked="" type="radio"/> 17/35	<input type="radio"/> 18	32	none
<input type="radio"/> 19	<input type="radio"/> 20		<input type="radio"/> 21	33	none
<input type="radio"/> 21	<input type="radio"/> 22		<input type="radio"/> 23	34	
			<input type="radio"/> 25	35	none Pop_String_Orchestra_KOS145_1_21

This means that track 34 will be faded down for the duration of the master track 35

The amount of gain reduction is set on each individual slave via the [Audio](#) button menu

When the Master/Slave setup window is closed a check is made of the buttons acting as Voice Over masters, if any have zero Fade In or Fade Out times a warning prompt box will appear indicating which buttons have to be modified.



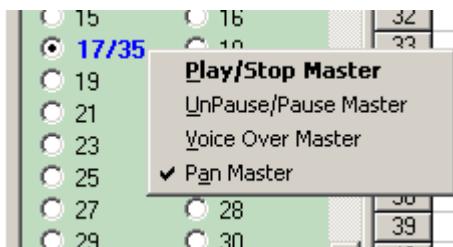
## AutoPan

The AutoPan feature allows one or more slave buttons to have their Pan setting modified under the control of a Master button.

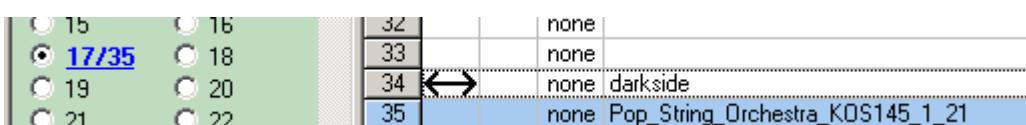
In a similar way to the Voice Over mode described above the pan transition is triggered by the Fade In and Fade Out of the Master track.

For AutoPan the starting point is the normal Pan value defined in the Audio Setup dialog, the end value is an alternative value defined in the [Audio SetUp](#) dialog by right-clicking the pan bar.

The AutoPan mode is selected by right-clicking the appropriate Link number and checking Pan Master

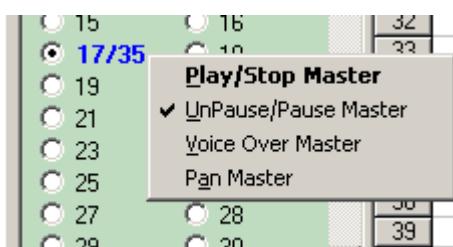


The selected play slave entries will have a double headed arrow displayed indicating that button is now an AutoPan slave.



## UnPause/Pause

The UnPause/Pause mode is selected by right-clicking the appropriate Link number and checking UnPause/Pause Master

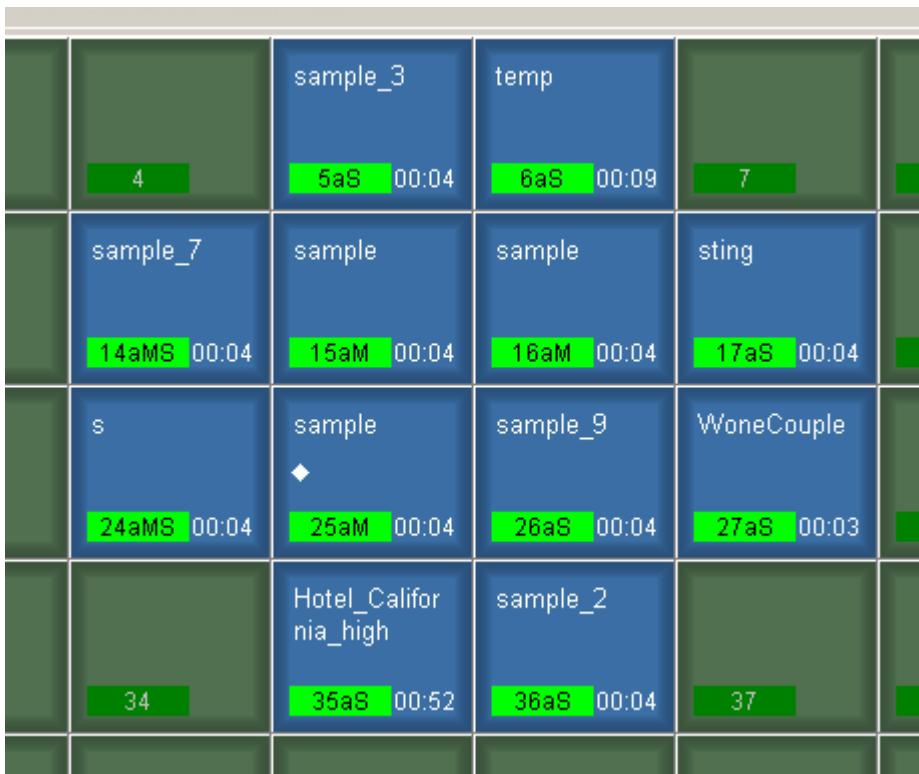


The selected stop slave entries will have a double line displayed indicating that button is now an Pause slave and similarly the selected Play slaves will have a double line with diagonal cross indicating the button is an UnPause slave

<input type="radio"/> 15	<input type="radio"/> 16	32	none
<input checked="" type="radio"/> 17/35	<input type="radio"/> 18	33	none
<input type="radio"/> 19	<input type="radio"/> 20	34	none darkside
<input type="radio"/> 21	<input type="radio"/> 22	35	none Pop_String_Ochestra_KOS145_1_21

## Link Diagrams

With a complex set of Master/Slave links it is often difficult to establish which buttons are linked, an example is shown below. The Master Slave setup dialog window can provide the information but not in a readily useful format.



A keyboard shortcut Ctrl+Shift+left mouse press can be used to show the master/slave links graphically, using the key combination on button 15 shows button 14 is a play slave (line is green).

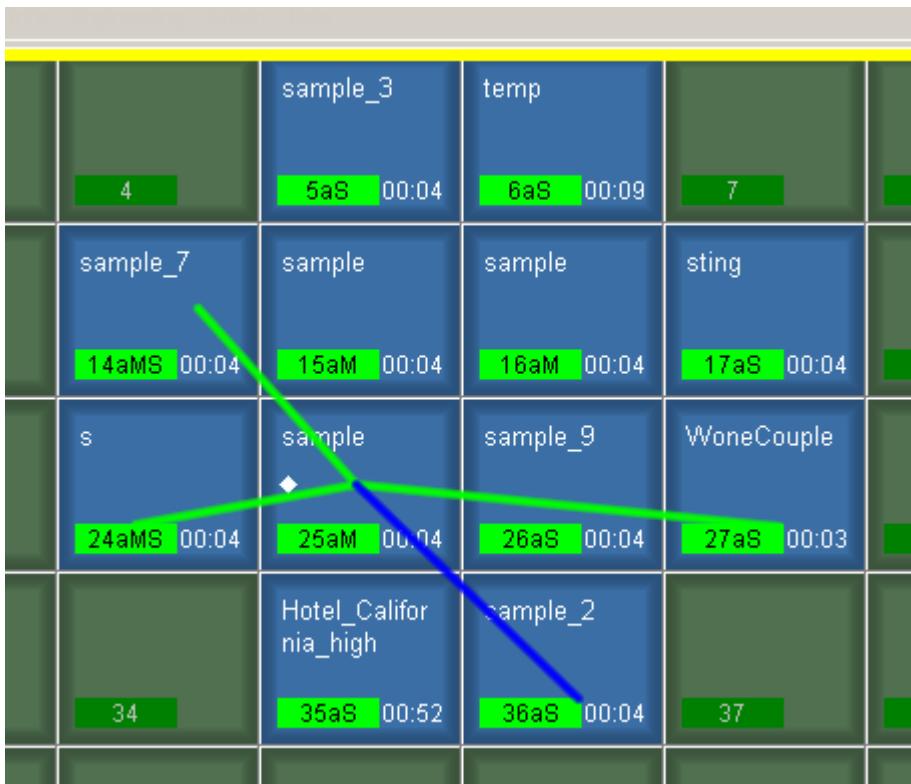
	sample_3	temp		
4	5aS 00:04	6aS 00:09	7	
sample_7	sample	sample	sting	
14aMS 00:04	15aM 00:04	16aM 00:04	17aS 00:04	
s	sample ◆	sample_9	WoneCouple	
24aMS 00:04	25aM 00:04	26aS 00:04	27aS 00:03	
	Hotel_California_high	sample_2		
34	35aS 00:52	36aS 00:04	37	

Testing the reverse link by clicking on button 14 shows a white line indicating it is a play slave from buttons 15 and 25, also button 14 is a play master to a button off the screen on another page (near horizontal green line).

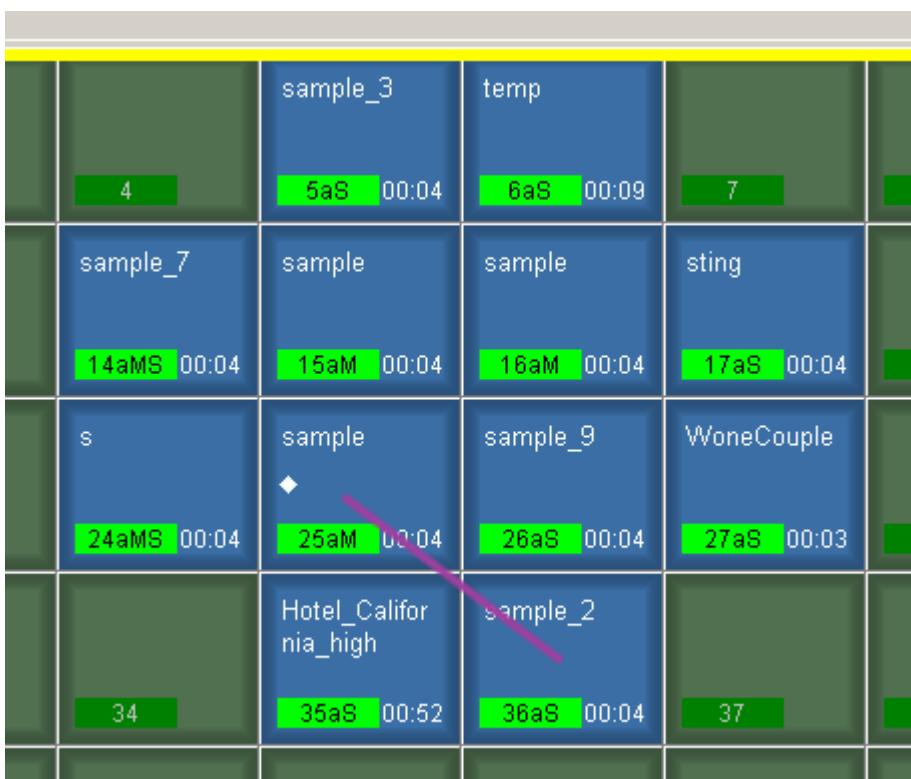
Note the yellow border at the top of the page, this is drawn around the SpotOn screen to indicate the image is temporarily frozen whilst the graphics are displayed.



Clicking on button 25 confirms some of the previous links and in addition displays button 36 as a Stop slave to button 25 (line is blue).



A reverse interrogation of button 36 shows it is a stop slave to master button 25 (line is magenta)



If instead of just using Shift+Ctrl+Left mouse press to display the existing links Shift+Ctrl+left mouse drag can create new links.

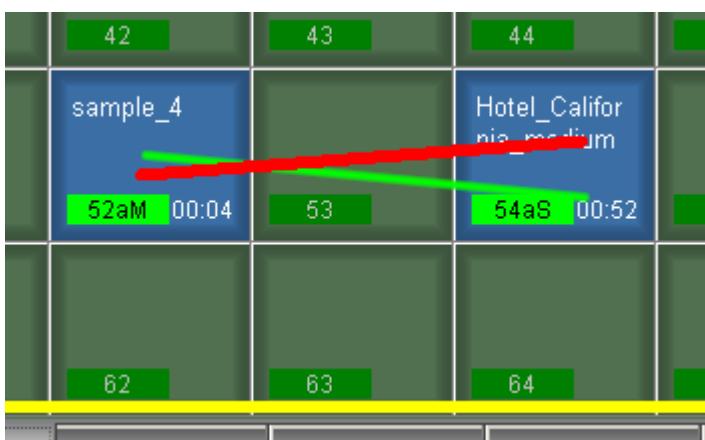
Below the Shift+Ctrl+Left mouse button has been dragged from button 52 to 54 drawing a thick red line, releasing the left mouse button as in 'drag and drop' will show a confirmation dialog.



The next unused Master/Slave link will be selected for this new link - in this example link 13



Play and Stop links can also be deleted using the same drag/drop method, for example if the mouse is Shift+Ctrl drag and dropped between buttons 52 and 54 as below



then a prompt dialog will ask if the link is to be deleted.



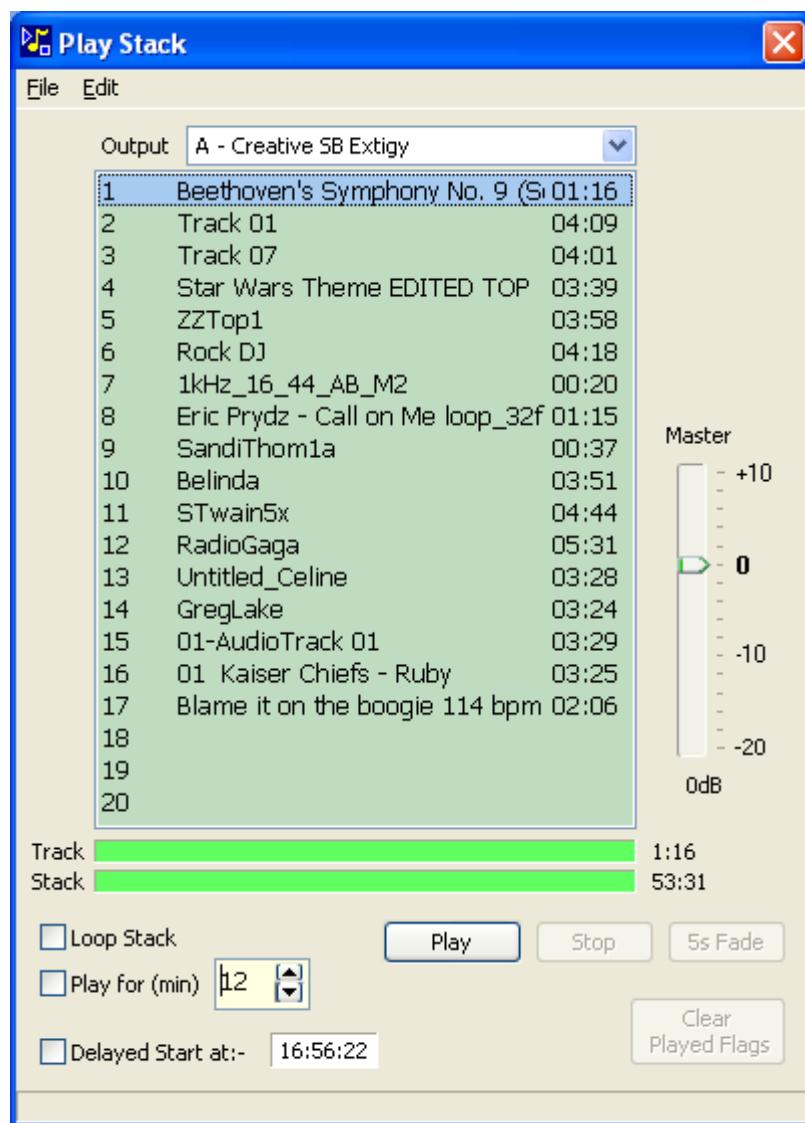
# Play Stack

A Play Stack is built into SpotOn and runs independently of the main SpotOn operation, the intended use is for playing out audience 'warm up' or interval music.

The stack can be set to play a set of tracks and fade out after a predetermined time or loop until stopped manually.

A fade out of the Play Stack can be triggered from the main SpotOn window by playing any button in [Group 24](#).

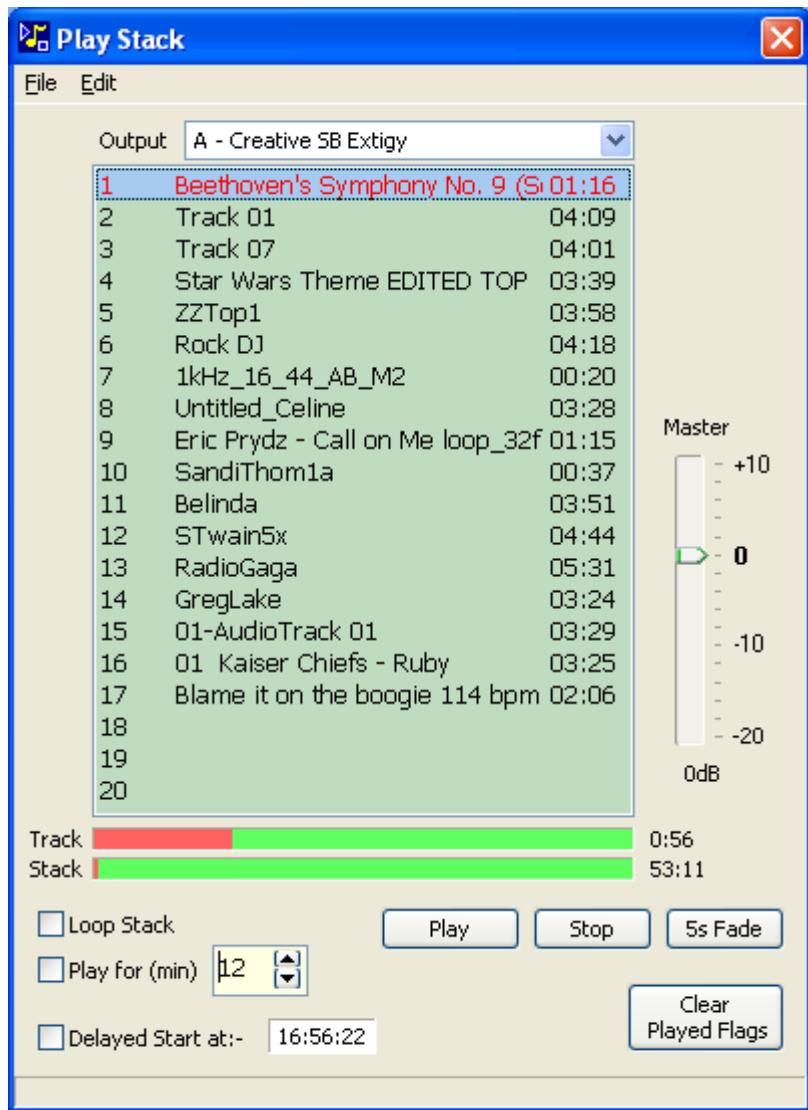
Tracks can be loaded by Ctrl+Left click drag (copy button mode) from the SpotOn buttons or by right-clicking an entry in the Play Stack and selecting Load/Insert.



The image above shows 17 tracks loaded and track 1 highlighted, the track names are taken from the audio filenames and truncated to fit the screen, there is no option to change the displayed track name.

Clicking on Play will start playing the stack in sequence from the highlighted button, the two bargraphs below the track list show the time remaining for the track on the upper bargraph and the time remaining in the whole stack on the lower bargraph.

The track entry will be shown in red text when it is playing.



When the 'Loop Stack' checkbox is checked as shown below, the lower bargraph is disabled as the duration of a looped stack is infinite.



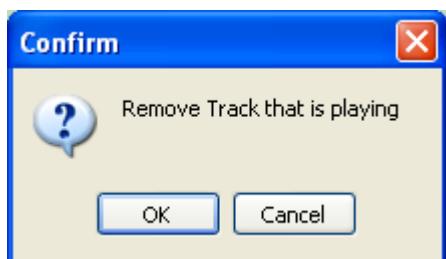
Tracks can be drag and dropped within the stack to change the playout order, in the example below, track 13 is being dragged and when dropped will be inserted above the track shown with yellow text and become track 8. Tracks currently numbered 8..12 will be moved down the stack one position and be renumbered.

1	Beethoven's Symphony No. 9 (S)	01:16
2	Track 01	04:09
3	Track 07	04:01
4	Star Wars Theme EDITED TOP	03:39
5	ZZTop1	03:58
6	Rock DJ	04:18
7	1kHz_16_44_AB_M2	00:20
8	Eric Prydz - Call on Me loop_32f	01:15
9	SandiThom1a	00:37
10	Belinda	03:51
11	STwain5x	04:44
12	RadioGaga	05:31
13	Untitled_Celine	03:28
14	GregLake	03:24
15	01-AudioTrack 01	03:29

Stack after drag/drop of track 13

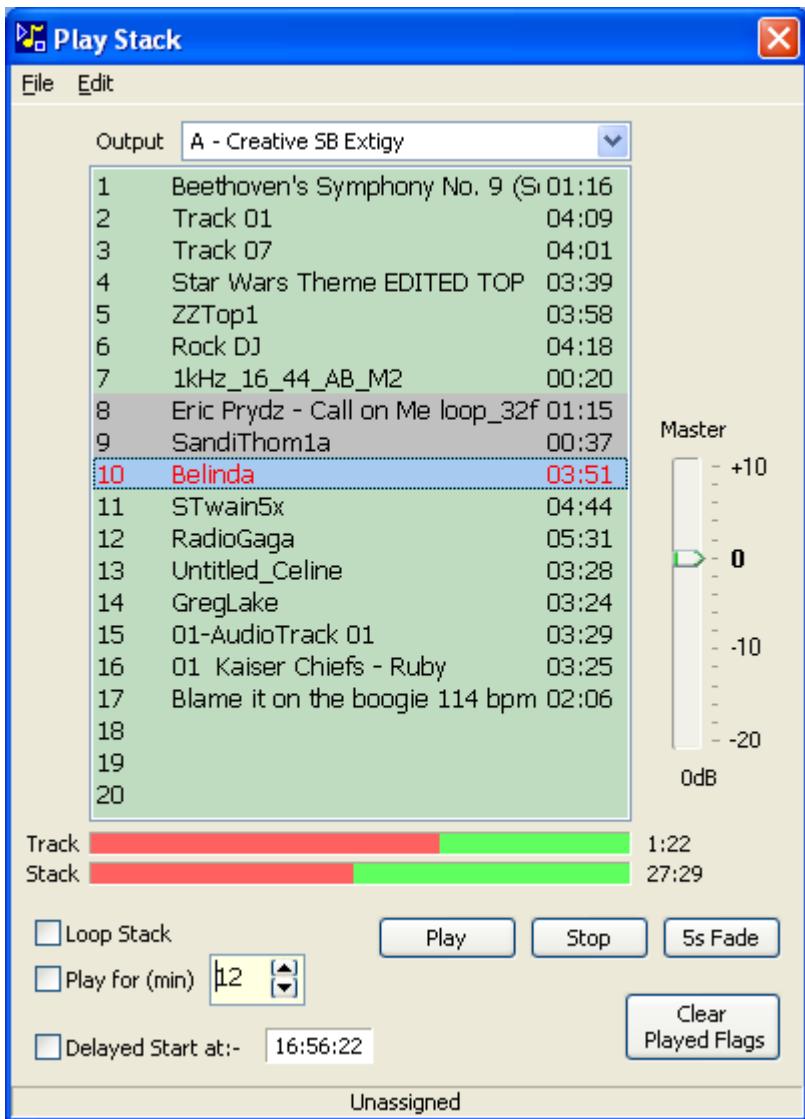
1	Beethoven's Symphony No. 9 (S)	01:16
2	Track 01	04:09
3	Track 07	04:01
4	Star Wars Theme EDITED TOP	03:39
5	ZZTop1	03:58
6	Rock DJ	04:18
7	1kHz_16_44_AB_M2	00:20
8	Untitled_Celine	03:28
9	Eric Prydz - Call on Me loop_32f	01:15
10	SandiThom1a	00:37
11	Belinda	03:51
12	STwain5x	04:44
13	RadioGaga	05:31
14	GregLake	03:24
15	01-AudioTrack 01	03:29

Tracks in the stack can be freely rearranged whilst the stack is playing, the only restriction is not to remove the track currently playing.



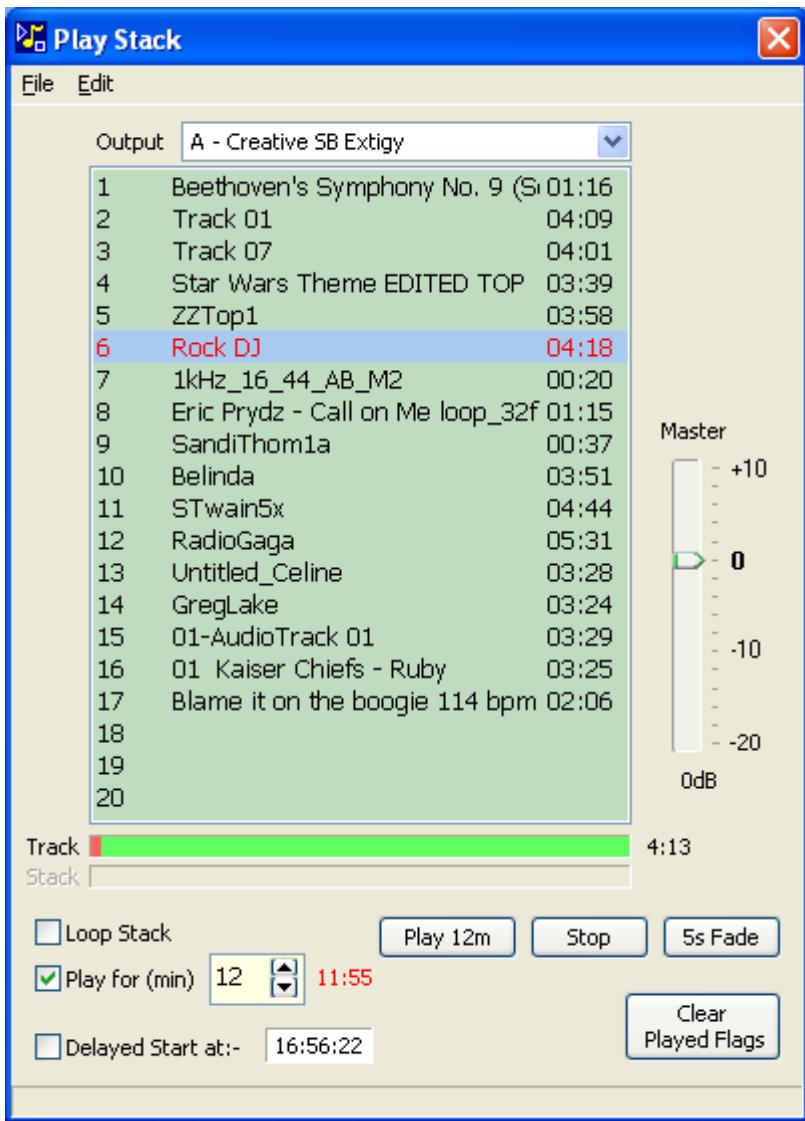
An internal flag is set as tracks are played out and the text background of the played track changes to grey, this is only an indication of the track already played and has no effect on the operation of the Play Stack.

The flags can be cleared by clicking on the 'Clear Played Flags' button



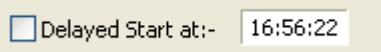
The Play Stack can be set to play for a defined length of time in the range 1..90 minutes, at the end of the time the track will fade out and stop.

This mode is set by checking the 'Play for (min)' checkbox and entering a value in the duration by typing directly or using the up/down buttons.



When the Play button is pressed a time remaining count down is shown in red text to the right of the duration.

The Stack Play button can be triggered from the PC clock.



Right-clicking on the time panel displays an editor dialog

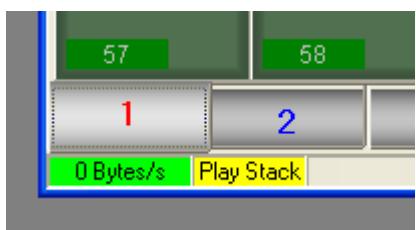
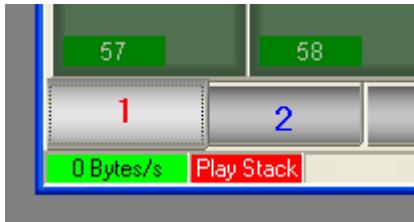


When active the start time text will be shown in red, at the point the start time is reached the stack will begin to play and the text will be shown as invalid and the checkbox cleared.



When the Play Stack window is closed it will remain active and has just been hidden, it can be reopened via the SpotOn Global|Play Stack menu.

If the Play Stack is playing a track and is then closed the track will continue to play and the SpotOn status bar will show a red/yellow flashing panel with the text 'Play Stack'



Clicking on the flashing status bar panel will reopen the Play Stack window

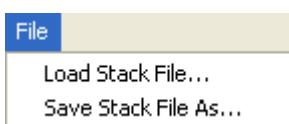
Playing a button in the main SpotOn window that is assigned to Group 24 will trigger a fade out of any Play Stack track currently playing.

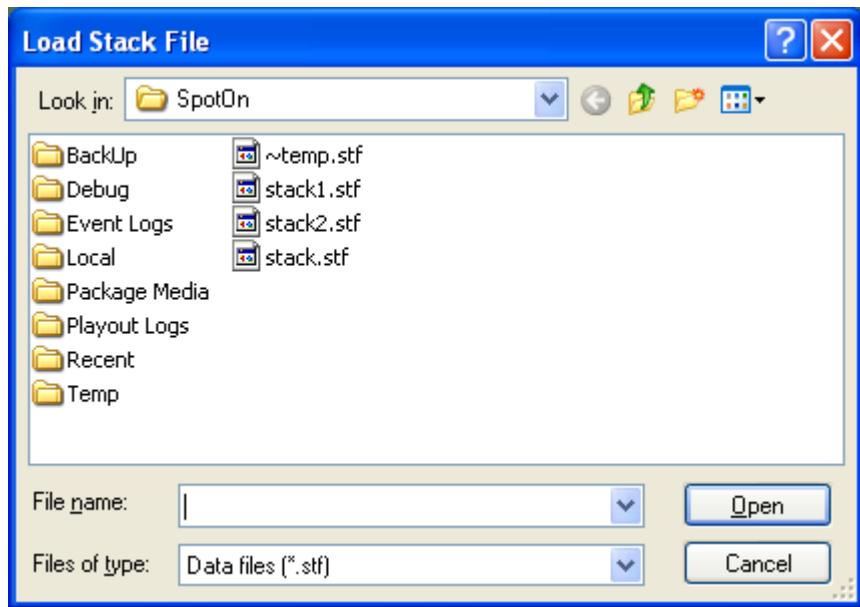
<u>done</u>	Group 10	Group 20
Group 1	Group 11	Group 21
Group 2	Group 12	Group 22
Group 3	Group 13	Group 23
Group 4	Group 14	✓ Group 24+
Group 5	Group 15	Group 25!
Group 6	Group 16	Group A*
Group 7	Group 17	Group B*
Group 8	Group 18	Group C*
Group 9	Group 19	<b>Cancel</b>

## Menus

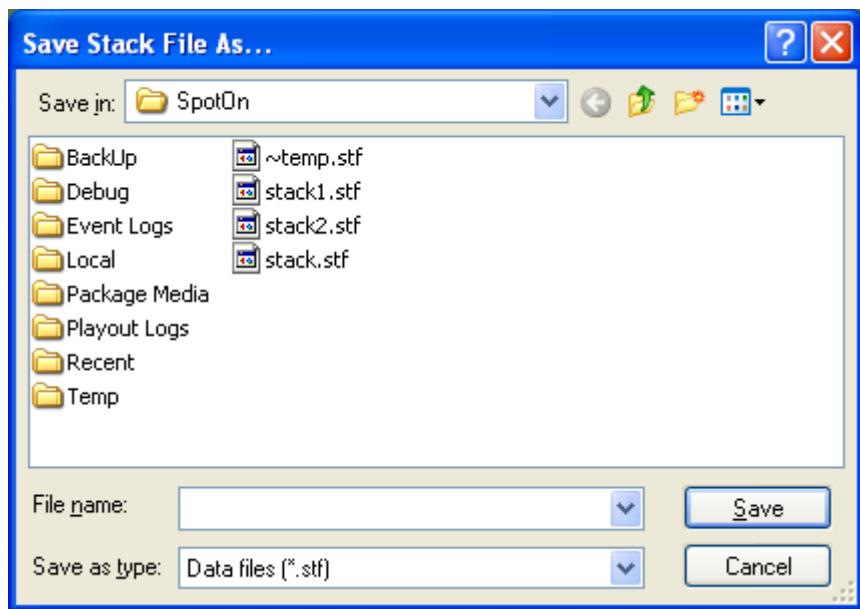
The File menu allows basic loading and saving of the Play Stack tracks and configuration, only the track filenames are saved and the Play Stack relies on the audio files staying in the same location on the local disc drives.

### Menus - File



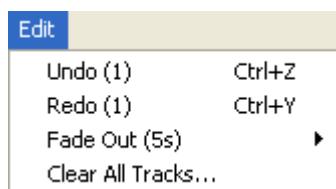


The Play Stack files are saved with the .stf file extension which may be associated with other programs, the only effect of this is that the icons shown along side the files will be different.

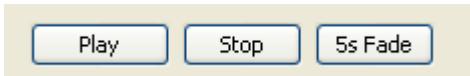
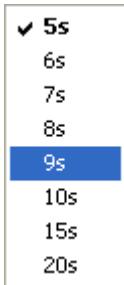


## Menus - Edit

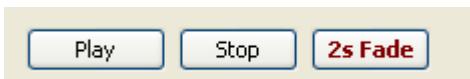
The Edit menu gives 32 levels of Undo/Redo and two options that act on all tracks



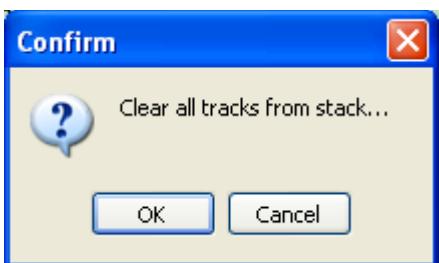
Fade Out will set the fade out time to any of the values shown below, this fade time is used at the end of a 'Play for' time or whenever the 'xs Fade' button is clicked and applies to all tracks.



If the fade out is in progress the Fade Out button text will change colour to red and count down to the end of the fade time.



The 'Clear All Tracks' option will remove all tracks from the stack.



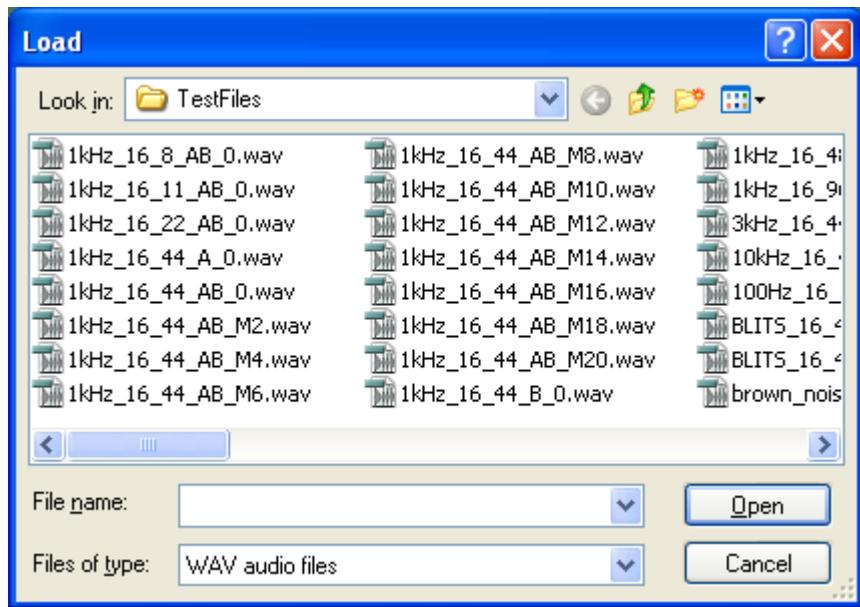
## Menus- Track

The right-click menu on the tracks allows changes to be made to the individual entry.

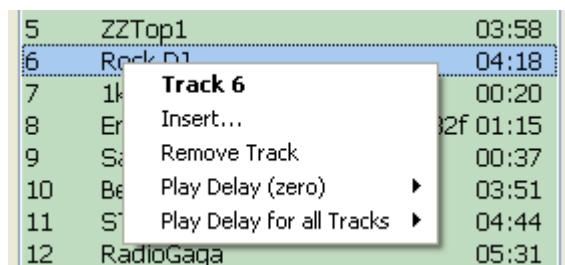
Right-clicking on a blank track offers the load option.



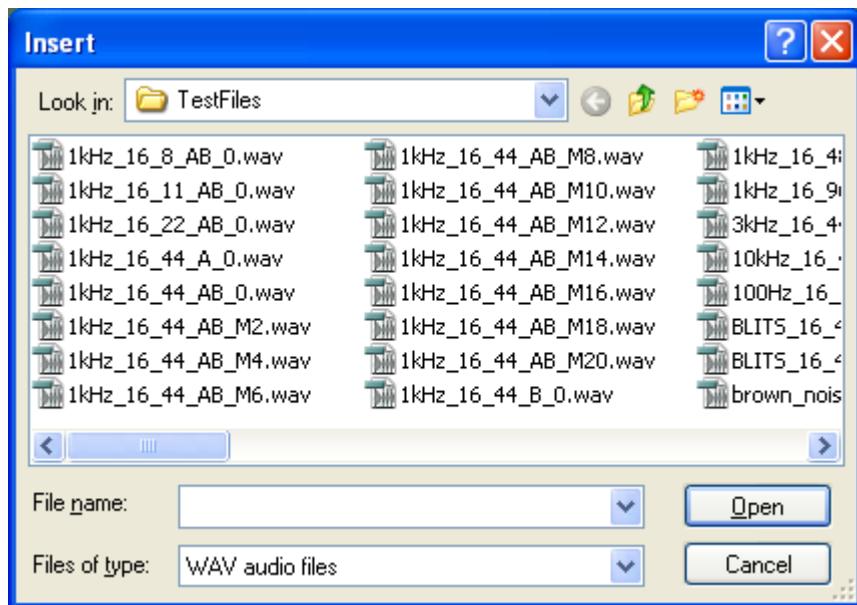
Play Stack uses the same default folder locations as SpotOn, however only \*.WAV files can be loaded.



Right-clicking on an existing track will offer more options.



Insert will load a new track immediately above the highlighted track.



Remove Track deletes the track from the list and moves the remaining tracks to fill the gap.

Play Delay sets a pause before the track starts to play, this can be set on an individual track or globally using Play Delay for all Tracks

✓ zero

1s  
2s  
3s  
4s  
5s  
6s  
7s  
8s  
9s

If track 6 was set to have a Play delay of 7sec the entry in the list would show 'd7'

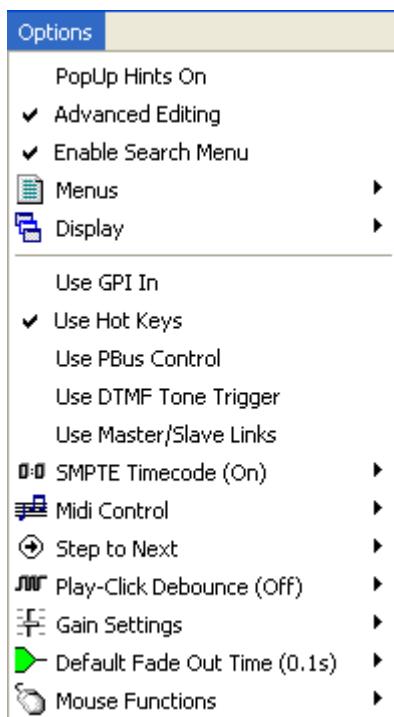
4	Star Wars Theme EDITED TOP	03:39
5	ZZTop1	03:58
6	d7 Rock DJ	04:18
7	1kHz_16_44_AB_M2	00:20
8	Untitled_Celine	03:28
9	Eric Prydz - Call on Me loop_32f	01:15

The Delay counts down when the track is played.

4	Star Wars Theme EDITED TOP	03:39
5	ZZTop1	03:58
6	d4 Rock DJ	04:18
7	1kHz_16_44_AB_M2	00:20
8	Untitled_Celine	03:28
9	Eric Prydz - Call on Me loop_32f	01:15

4	Star Wars Theme EDITED TOP	03:39
5	ZZTop1	03:58
6	d7 Rock DJ	04:18
7	1kHz_16_44_AB_M2	00:20
8	Untitled_Celine	03:28
9	Eric Prydz - Call on Me loop_32f	01:15

# Options Menu



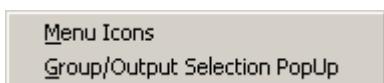
PopUp Hints On	toggle popup hint on/off
<a href="#">Advanced Editing</a>	allow editing of loaded WAV files
Enable Search Menu	enables Search menu item on main menu bar
<a href="#">Menus</a>	set main and popup menu options
<a href="#">Display</a>	general display options
Use GPI In	enable <a href="#">GPIs</a> from game port
<a href="#">Use Hot Keys</a>	show button hot keys
<a href="#">Use PBus Control</a>	enable remote control of SpotOn via a PBus serial link
Use DTMF Tone Trigger	enable triggering from <a href="#">external DTMF tones</a>
Use Master/Slave Links	enable <a href="#">master/slave links</a>
SMPTE Timecode	enable int/ext <a href="#">SMPTE LTC timecode</a> to trigger buttons directly and via
<a href="#">Midi Control</a>	Midi enabling options
<a href="#">Step to Next</a>	enable juke box mode
Play-Click Debounce	use hold off time between touchscreen presses
<a href="#">Gain Settings</a>	set overall gain offset and fade in/out depth
Default Fade Out Time	set fade on all subsequently loaded tracks
<a href="#">Mouse Functions</a>	change function of mouse buttons

## Advanced Editing

When this item is checked it allows the user to edit the audio data file being used by SpotOn, a warning message box is shown prior to any editing operation reminding the user that this mode is active.



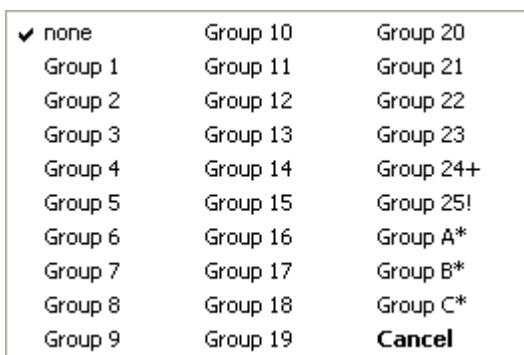
## Menus



Menu Icons will toggle menu graphical icons on/off



The Group/Output selection option changes the format of the button popup menu when a button is shift+ctrl right-clicked, with the option unchecked the full range of Group assignment is available.



With the item checked only Groups 1..19 are available for selection but in addition the output device can now be assigned to any of the first nine output devices.



## Display

Start Maximized	on start up display is maximised to full screen, only when loading Blank
✓ Start with Blank Session	SpotOn starts without loading previous session
Start with "New" Session	SpotOn loads a default template session
AutoShow Session Notes	show notes window on opening sessions
Bring to Front with Scroll Lock	bring main window into focus whenever Scroll Lock is pressed
Individual Button Fonts	allows Trackname font to be set separately for each button
Use Friendly Output Names	use names defined in <a href="#">Output Device Assign</a>
<a href="#"><u>Button Images</u></a>	allows bitmap images to be shown on buttons
Disable Button Text	removes all text from all buttons allowing button images to be seen in
<a href="#"><u>Highlight Buttons Playing</u></a>	draws flashing corners on the buttons that are playing
AutoLoad Button Images	automatically loads button images associated with audio files
<a href="#"><u>Show Tracks Already Played</u></a>	indicate tracks that have been played in this session
Reset Tracks Played	clear Tracks Played indications (Ctrl+U)

### Display - Start with Blank Session

Instead of loading a temporary file on start up to restore the state of the program to be the same as when it was last shut down, this option when checked loads a blank session file.

## Display - Bring to Front with Scroll Lock

Hotkeys will only trigger SpotOn buttons when SpotOn is the active application, for instance if Adobe Audition is being used and the SpotOn hotkey "F1" is pressed the key press will be handled by Audition and not SpotOn.

In order to ensure that SpotOn is the active application before using hotkeys the Scroll Lock key can be used to make SpotOn active.

It is recommended that a double press of Scroll Lock is used so that the Scroll Lock state is left unchanged, very few applications make use of the Scroll Lock state but some unusual behaviour may be noticed when navigating spreadsheets if Scroll Lock is on.

## Display - Individual Button Fonts

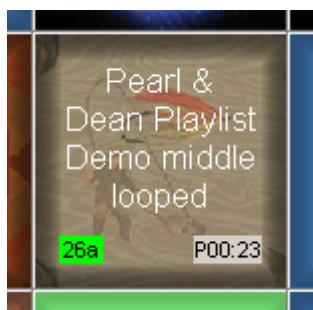
With the Individual Button Fonts option checked the font used to display the Trackname on each button can [changed independently](#).

## Display - Button Images

Normally a button consists of a flat or shaded edge plain colour background with text and symbols drawn ontop



Images can also be used as the button background



The images are enabled by this menu option and the specific image is allocated to the button via the button right-click [Display properties](#) dialog.

## Highlight Buttons Playing

00:09	3a	00:12	Donald 4a
	GLITS 0dBFS 1kHz at 48kHz 11a	00:04	12
	Cher_Track15		Cher_

In addition to the flashing button number the corners of the button can flash in sync with the button number.

## Show Tracks Already Played

With this option checked the colours of the buttons played will be set to black, so indicating those tracks already used. The button colours can be restored by using the Reset Tracks Played option or the Ctrl+U keyboard shortcut.

Segment of screen before any track is played

Thunderball bed Q	TBall release	tball press	tball 1	tball 2	tball 3	t
1aS 03:56	2b >00:07	3bS 00:18	4bM 00:04	5bM 00:04	6bM 00:05	7b
Lotto bed L	Lotto release	Lotto button	Lotto ball 1	Lotto ball 2	Lotto ball 3	L
13aMS 05:03	14b 00:10	15bS >00:21	16bM >00:03	17bM >00:04	18bM >00:04	19b

Same segment after playing buttons 2,4,15,18,25 and 28

Thunderball bed Q	TBall release	tball press	tball 1	tball 2	tball 3	t
1aS 03:56	2b >00:07	3bS 00:18	4bM 00:04	5bM 00:04	6bM 00:05	7b
Lotto bed L	Lotto release	Lotto button	Lotto ball 1	Lotto ball 2	Lotto ball 3	L
13aMS 05:03	14b 00:10	15bS >00:21	16bM >00:03	17bM >00:04	18bM >00:04	19b

## Hot Keys

Each button can be assigned a hot key so that individual tracks can be played out directly from the keyboard, this option enables the assigned HotKeys.

The HotKeys as assigned to buttons via the [Button right-click menu](#)

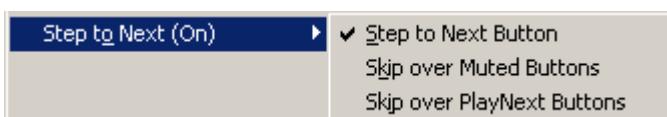


## SMPTE Timecode



The options are to enable/disable triggering from all SMPTE timecode sources and to use the [Timecode Trigger List](#).

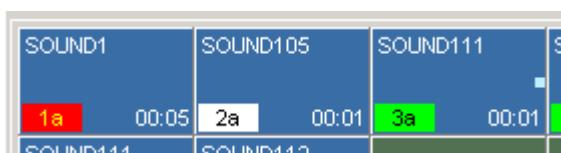
## Step To Next Track



This allows consecutive tracks to be played out by pressing the spacebar or GPI/Midi signals, when this option is selected the track number of the active button will be shown with a white background or the button will have white diagonal corners. The active button can be changed by navigating around the page with the cursor keys, left, right, up and down arrow keys along with Home and End



Pressing the spacebar will play the currently active track and make the next button active ready for playout.



This newly active button can be played at any time by pressing the spacebar, see [GPI Assignments](#) for triggering function externally.

if Skip over Muted Buttons is checked then buttons that are muted (have the muted box checked in audio setup dialog box) will be ignored when playing out using the spacebar and the next non-muted button will be selected as the next to play.

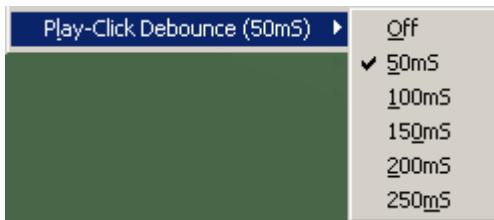
Similarly Skip over PlayNext buttons will ignore buttons in a PlayNext sequence as these buttons will be played automatically when the first button in the sequence is played.

The next button to play can be highlighted via the [Options|Display|Highlight](#) Step to Next option.

Home and End keys will position the highlighted key to the top left or bottom right buttons respectively.

When a button is assigned the virtual HotKey '=' it can be used as an alternative Home position, pressing Alt+Home will scan backwards through the buttons and move the Step to Next highlight to the previous button assigned '=' as a HotKey.

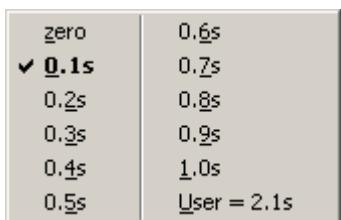
## Play-Click Debounce



When using a mouse left-click or touchscreen press to play a track, SpotOn will respond to every action. This can present a problem when using a touchscreen in that the "button" may not be pressed cleanly with the possible consequence of a double press being detected.

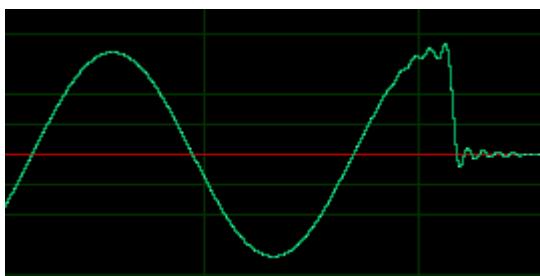
The debounce options in this menu prevent the button being pressed in the XXmS after the initial press so masking out any secondary/unintentional presses.

## Default Fade Out Time

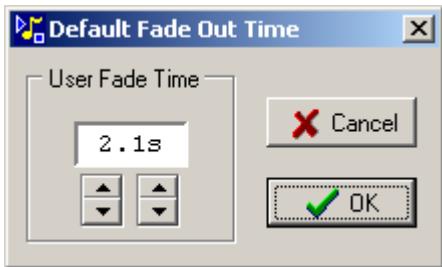


To minimize the abrupt audio transition when tracks are stopped before the end a default fade time can be used, this setting applied to all subsequently loaded tracks.

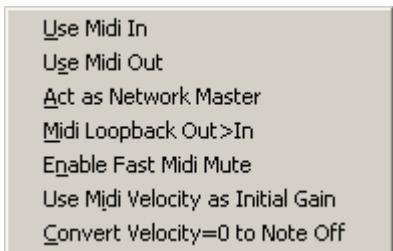
A setting of zero will produce audible clicks if the signal level is significant at the time the track is stopped, a worst case is shown below with full level tone stopped mid cycle.



A range of value 0.1s to 1.0s are available along with a user defined value that is saved with the session data.



## Midi



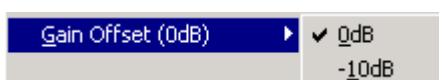
Use Midi In  
Use Midi Out  
Act as Network Master  
Midi Loopback Out>In  
Enable Fast Midi Mute  
Use Midi Velocity as Initial Gain  
Convert Velocity=0 to Note Off

respond to incoming Midi messages  
generate Midi outgoing messages  
send Midi out via Network link to a slave SpotOn computer  
internally loop outgoing messages back to the input, without  
specialist option for handling very fast Midi In messages  
use the Velocity data in Midi messages to set the initial gain  
test midi message for zero velocity and translate into a Note

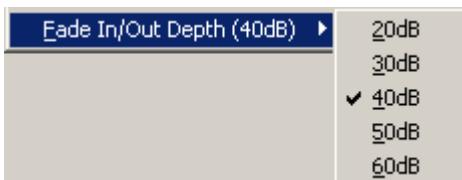
## Gain Settings



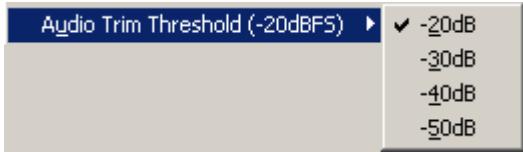
The overall gain offset of the audio played out by SpotOn can be set to 0dB or -10dB, when -10dB is selected the level of individual tracks can be increased by up to 10dB.



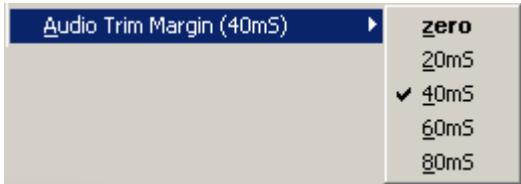
The depths of the Fade In and Out applied to tracks is globally set by this option



When using the AutoTrim feature the threshold for detecting audio can be set globally over the range -20dBFS..-50dBFS

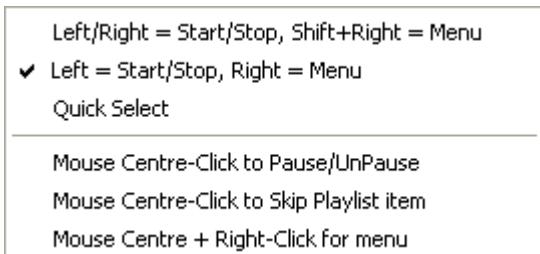


A modifier can be applied to the AutoTrim feature where the calculated In and Out points are expanded by a short time to include any leading or trailing transients.



## Mouse Functions

The functions of the left, right and centre mouse buttons can be changed with this option



Play/Stop:-

The default setting is alternate clicks of left mouse button to start and stop the track with the right mouse button used to bring up the popup menus.

If required this action can be changed to have the left and right mouse buttons start and stop the track respectively with Shift + right-click accessing the popup menus.

With the Quick Select option checked the mouse left/right button action can be changed by clicking on the [lower right hand panel](#) in the main window status bar.

Pause/Skip/Menu:-

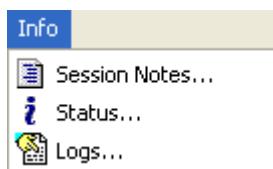
When using pointing devices with a centre button this can be assigned to a Pause/UnPause function, this only operates on tracks that do not contain a PlayList.

If the track does contain a PlayList the centre click can be set to cause the current PlayList section to move onto the next section on completion of the next loop, see [Advanced Operation](#)

As an alternative to using the keyboard Shift key the centre mouse button can be used to display the button menu.

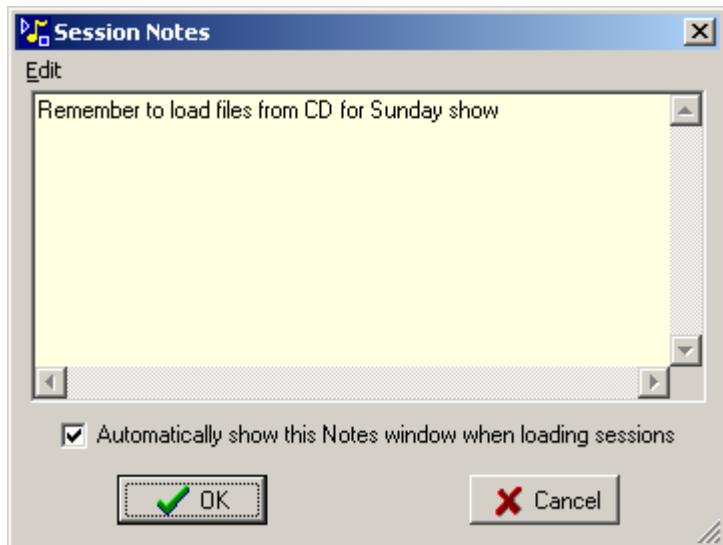
Note that in some installations using a Keyboard, Video and Mouse (KVM) switch the mouse centre+right key combination is a shortcut to change the KVM selection.

## Info Menu



### Session Notes

Provides a free text entry note pad which is saved with the session file



If the item in Options|Display|Auto Show Session Notes is checked then this window will be shown each time a session is loaded and the notes field is not blank.

The checkbox on this window can be unchecked to stop the window automatically showing for the remainder of the SpotOn session.

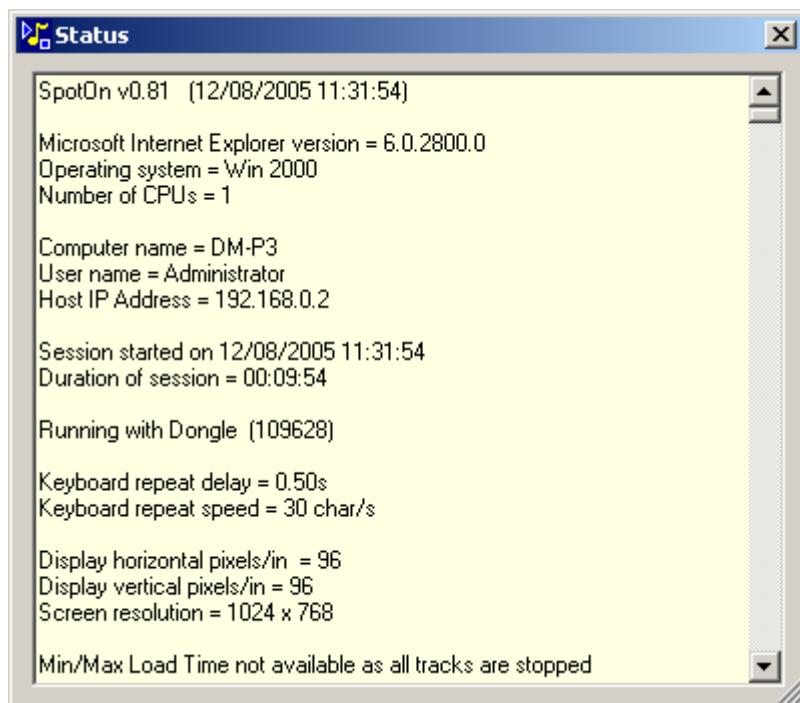
If the item in Options|Display|Auto Show Session Notes is unchecked, the notes window will not be automatically shown.

The notes field can be cleared using the menu item below.

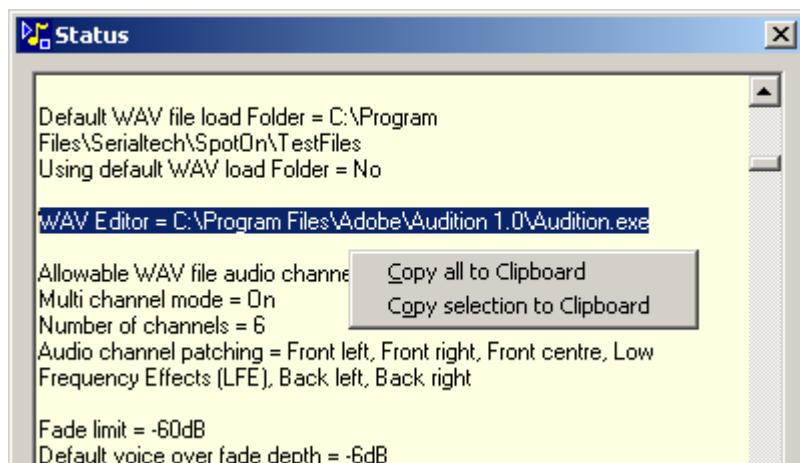
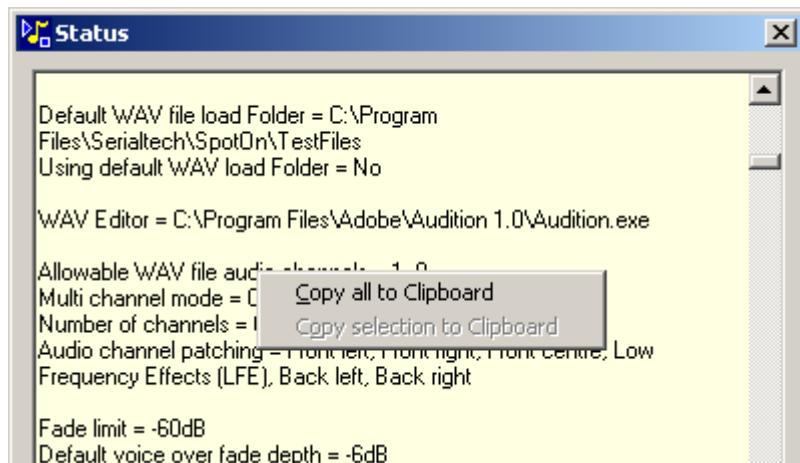


## Status

A selection of status information is listed in this panel only the first few items shown below will be of general use.



If it is necessary to copy some of the status information, right-clicking on the display will offer the option to copy to the Windows clipboard either all the text or just the selected text.



## Logs

A range of user activities are logged and can be viewed via this menu item, the activities are split into two pages - Playout and Events.

The Playout page shown below lists all the buttons that are played out against a timestamp along with other information describing the track and is intended for use with royalty payment logging.

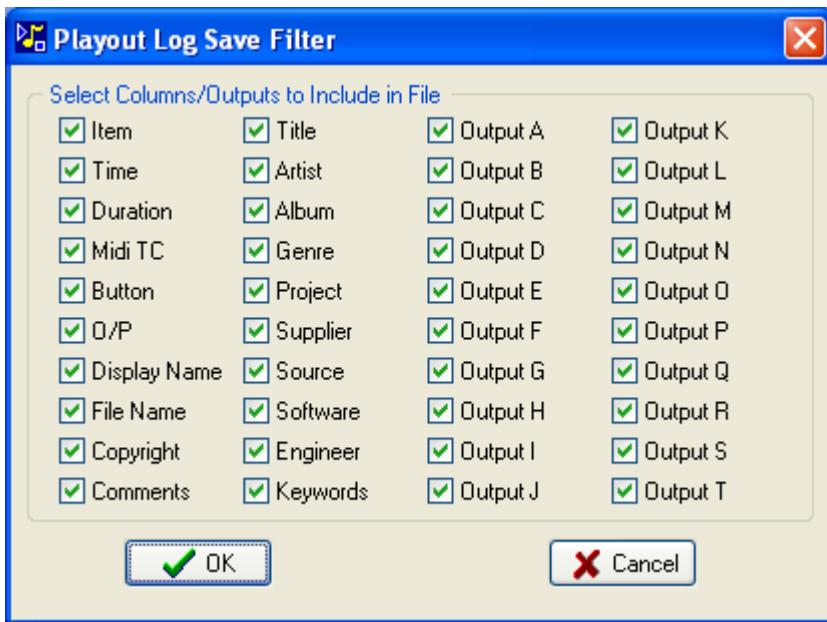
Activity Logs - Playout							
File		Playout		Events			
Item	Time	Duration	Midi TC	Button	O/P	Track Name	File Name
1	12:35:53	00:00:00	none	8n	a	Traffic	DowntownTraffic.wav
2	12:35:53	00:00:02	none	13c	a	Text Vidiprinter	Text Vidiprinter.wav
3	12:35:53	00:00:03	none	18c	g	Sting 1	Sting 1.wav
4	12:35:53	00:00:04	none	22c	a	GuitarBed	GuitarBed.wav
5	12:35:54	00:00:04	none	16c	e	Track 46	46-AudioTrack 46.wav
6	12:35:54	00:00:55	14:35:55	11c	a	Grandstand	Grandstand_KPM_433_1_44khz.wav
7	12:35:54	00:00:55	14:35:55	6c	e	CIN 2003 Short	CIN 2003 Short.wav
8	12:35:54	00:00:54	14:35:55	2c	a	Da Bungalow	AudioTrack 06.wav
9	12:35:54	00:00:54	14:35:56	3c	a	Da Bungalow & Sting	AudioTrack 07.wav
10	12:35:55	00:00:53	14:35:57	9n	e	Drum Roll 2	Drum Roll 2.wav
11	12:35:55	00:00:53	14:35:57	9n	e	Drum Roll 2	Drum Roll 2.wav
12	12:35:55	00:00:52	14:40:04	18n	g	Sting 1	Sting 1.wav
13	12:35:55	00:00:05	14:40:04	23c	g	Sting 3	Sting 3.wav
14	12:35:55	00:00:05	14:40:05	23n	e	Sting 3	Sting 3.wav

Activity Logs - Playout							
File		Playout		Events			
Item	Time	Duration	Midi TC	Button	O/P	Track Name	File Name
18	12:35:56	00:00:00	none	12h	a	Helicopter	Helicopter2.wav
19	12:35:56	00:00:02	none	13h	a	Text Vidiprinter	Text Vidiprinter.wav
20	12:35:56	00:00:03	none	13h	a	Text Vidiprinter	Text Vidiprinter.wav
21	12:35:56	00:00:04	none	18h	a	Sting 1	Sting 1.wav
22	12:35:57	00:00:04	none	19h	e	Sting 2	Sting 2.wav
23	12:35:57	00:00:55	14:35:55	19h	e	Sting 2	Sting 2.wav
24	12:35:57	00:00:55	14:35:55	14h	e	Text Whoosh	Text Whoosh.wav
25	12:35:57	00:00:54	14:35:55	9h	e	Drum Roll 2	Drum Roll 2.wav
26	12:35:57	00:00:54	14:35:56	9h	e	Drum Roll 2	Drum Roll 2.wav
27	12:35:57	00:00:53	14:35:57	9h	e	Drum Roll 2	Drum Roll 2.wav
28	12:35:58	00:00:53	14:35:57	3n	e	Da Bungalow & Sting	AudioTrack 07.wav
29	12:37:10	00:00:52	14:40:04	14h	g	Text Whoosh	Text Whoosh.wav
30	12:37:11	00:00:05	14:40:04	13n	a	Text Vidiprinter	Text Vidiprinter.wav
31	12:37:11	00:00:05	14:40:05	13n	a	Text Vidiprinter	Text Vidiprinter.wav

For the purposes of external analysis, a section of the list can be highlighted using Shift+click and Ctrl+click methods and saved to disc by right clicking in the grid.

Item	Time	Duration	Midi TC	Button	O/P	Track Name	File Name
18	12:35:56	00:00:00	none				
19	12:35:56	00:00:02	none				
20	12:35:56	00:00:03	none				
21	12:35:56	00:00:04	none				
22	Save Selection Options...						
23	Save Selection...						
24	12:35:57	00:00:55	14:35:55				

Save Selection Options opens up a further dialog box



The Playout Log columns to be included in the file can be selected and also restricted to specific outputs, this option is only available when saving a highlighted selection of the current Playout Log which includes 2 or more lines.

The lower case suffices appended to the button numbers indicate the method by which the button was played, these can be any one of the following:-

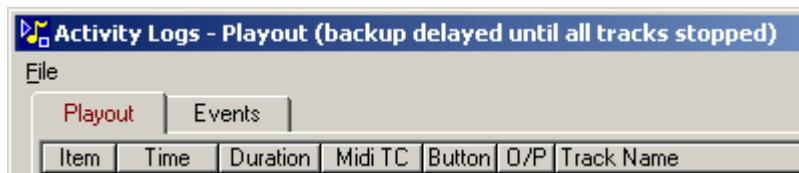
- a Audio dialog Play
- b Position bar
- c Mouse Click
- d Play Delay
- e Fine Trim
- f DTMF Midi
- g GPI
- h Hotkey
- i TCP message
- j TCP Midi message
- k Timecode list
- n PlayNext
- o Midi loop back
- p PBus message
- q Wired Midi (ExtMidiLo..ExtMidiHi)
- r Midi test
- s Slave
- t Trim window Play
- u UDP message
- v Midi over UDP message
- x Start time archived to log
- y AutoPlay
- # WAV Preview dialog
- @ Click track
- [ Timecode stack
- ] unPause
- ( Preview
- ) Centre click
- ~ Effect setup dialog
- ^ Output Assign

The trigger codes can be listed via the Info|Trigger Codes menu



The duration column shows the length of time a track was playing before it was stopped, the column will show a value of ???:???:?? whilst a track is playing.

With long track or tracks that loop the duration cannot be entered for some considerable time after they were started, the consequence of this is that the duration may not be correctly entered into the archived Playout Logs. To avoid this there is an option in the [Engineering menu](#) forcing the archive to only be updated when all tracks are stopped, if this option is selected then the title bar will change as shown below.



The Playout logs are saved to disc in the [default folder](#) with one log for each day SpotOn was used. The number of logs stored in the default folder is limited to 28, the oldest existing logs are deleted to maintain the maximum number of logs at 28.

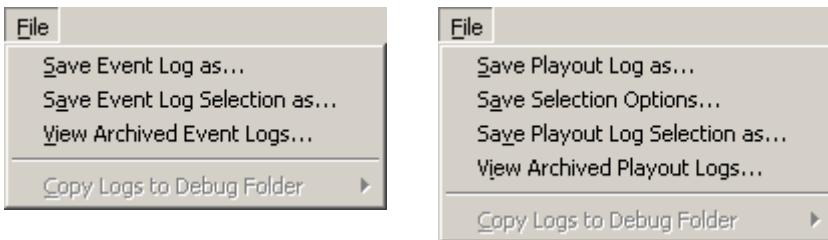
However, Playout Logs can be stored in a user defined folder assigned via [File Folders](#), the number of files stored in the user defined folder is unlimited.

The second page shows other activities such as GPI in, Midi In/Out, files loaded/saved and system errors.

Item	Time	Action
1	12:34:34	All Stop
2	12:35:42	Package loaded - F:\Program Files\SpotOn\ITN\Simon Package.pkg
3	12:36:36	GPI In On
4	12:36:36	GPI-1 On at 12:36:36:632
5	12:36:36	GPI-1 On at 12:36:36:832
6	12:36:37	GPI-1 Off at 12:36:37:112
7	12:36:37	GPI-1 On at 12:36:37:192
8	12:36:37	GPI-1 Off at 12:36:37:453
9	12:36:37	GPI-1 On at 12:36:37:513
10	12:36:37	GPI-1 Off at 12:36:37:713
11	12:36:54	Midi In On
12	12:37:00	Midi In L:0/9/On at 12:37:00:456
13	12:37:04	Midi In L:3/13/On at 12:37:04:301
14	12:37:11	Midi Out 0:0/12/On at 12:37:11:221

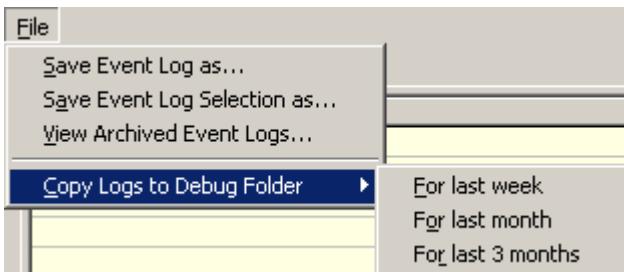
The Event logs are saved to disc in the [default folder](#) with one log for each day SpotOn was used. The number of logs stored in the default folder is limited to 28, the oldest existing logs are deleted to maintain the maximum number of logs at 28.

The main menu has option to save to disk either the entire log or just the highlighted section and also access archived logs - this is more applicable to the Playout logs where tracks played a few days ago can be located.

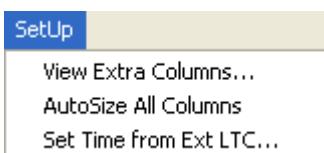


Both of the logs are automatically saved to disk when SpotOn closes.

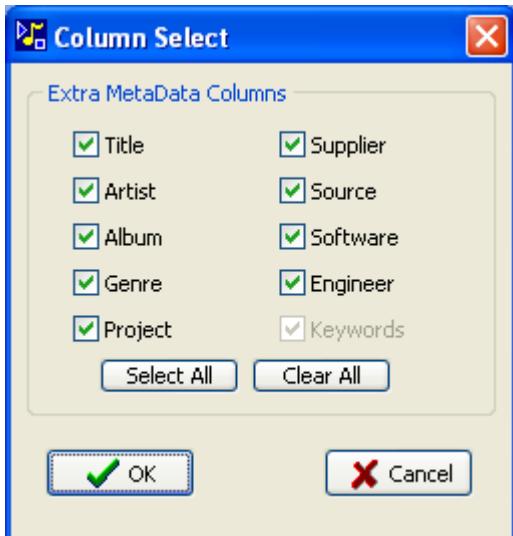
The last item in the menu is 'Copy Logs to Debug Folder' this option is only enabled when in Engineering mode and is used to copy a selection of recent logs to a folder for debugging purposes, see [Debug Logs](#)



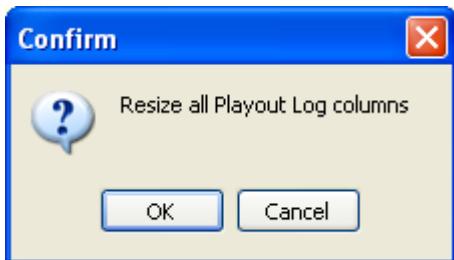
The SetUp menu Column options are only enabled whilst viewing the Playout log



in SpotOn v0.96 and above the playout log can display additional metadata, the columns shown can be selected via the View Extra Columns option



The width of the individual Playout log columns can be autosized by double clicking on the column header, alternatively all columns being shown can be autosized with the Autosize All Columns option



The timestamp applied to both the Playout and Event log entries is based on the PC clock, this can be set to the correct time by using the Windows Internet Time Server option or from an [external LTC signal](#)

## Local Files

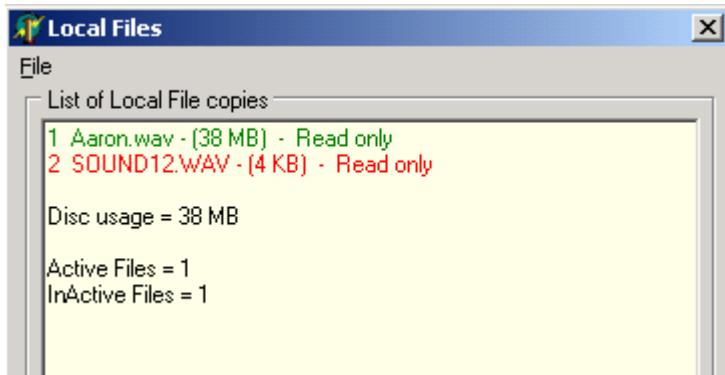
### This menu item has been disabled

Each time SpotOn loads a button with an audio file located on a non fixed drive it copies the file to a local directory.

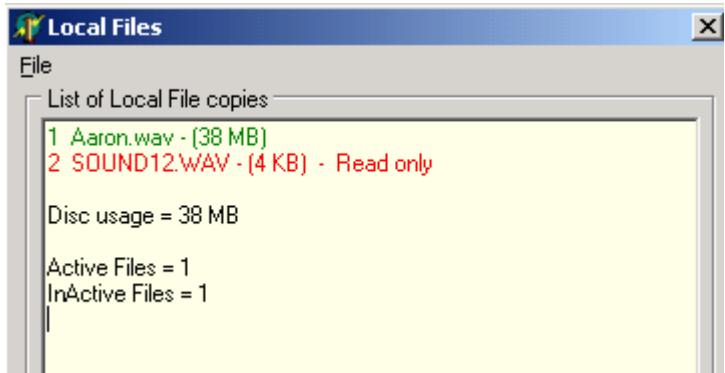
After sometime there may be files stored in this local directory that are redundant and can therefore be deleted, the file names coloured red are in use in the current session of SpotOn.

The items coloured green are not in use in the current session - but maybe used by others and be referenced in their data files.

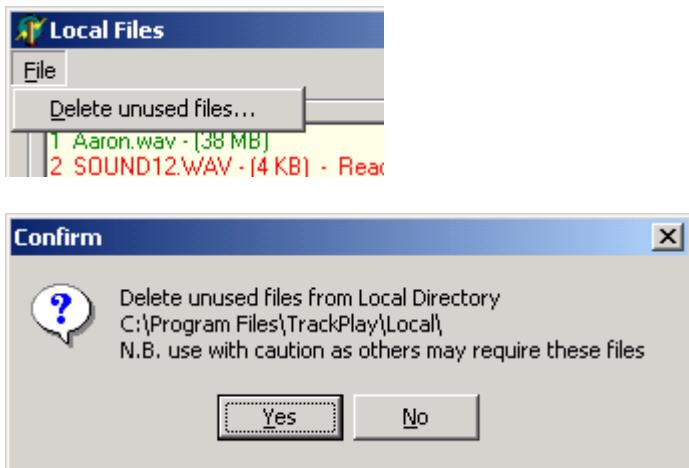
The file Aaron.wav below is shown as not used but write protected and therefore cannot be deleted.



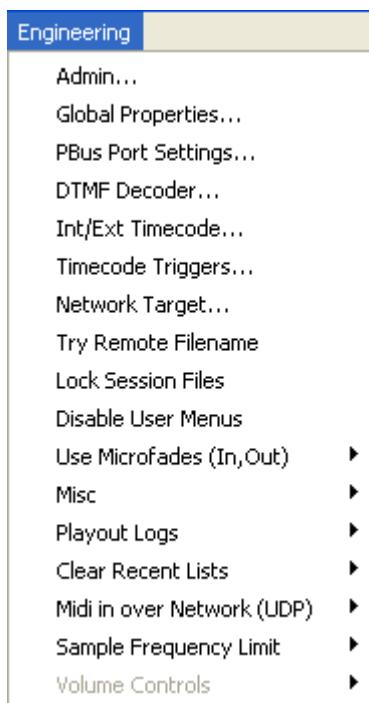
If the file was not write protected it would appear as below



Using the File menu the unused files can be deleted from the Local directory



# Engineering Menu



The Engineering Menu contains options to be set by an advanced user

[Admin](#)  
[Global Properties](#)  
[PBus Port Settings](#)  
[DTMF Decoder](#)  
[Int/Ext Timecode](#)  
[Timecode Triggers](#)  
[Network Target](#)  
[Try Remote Filename](#)  
[Lock Session Files](#)  
[Disable User Menus](#)  
[Use Micro Fades](#)  
[Misc](#)  
[Playout Logs](#)  
[Clear Recent Lists](#)  
[Midi In over Network](#)  
[Sample Frequency Limit](#)  
[Volume Controls](#)

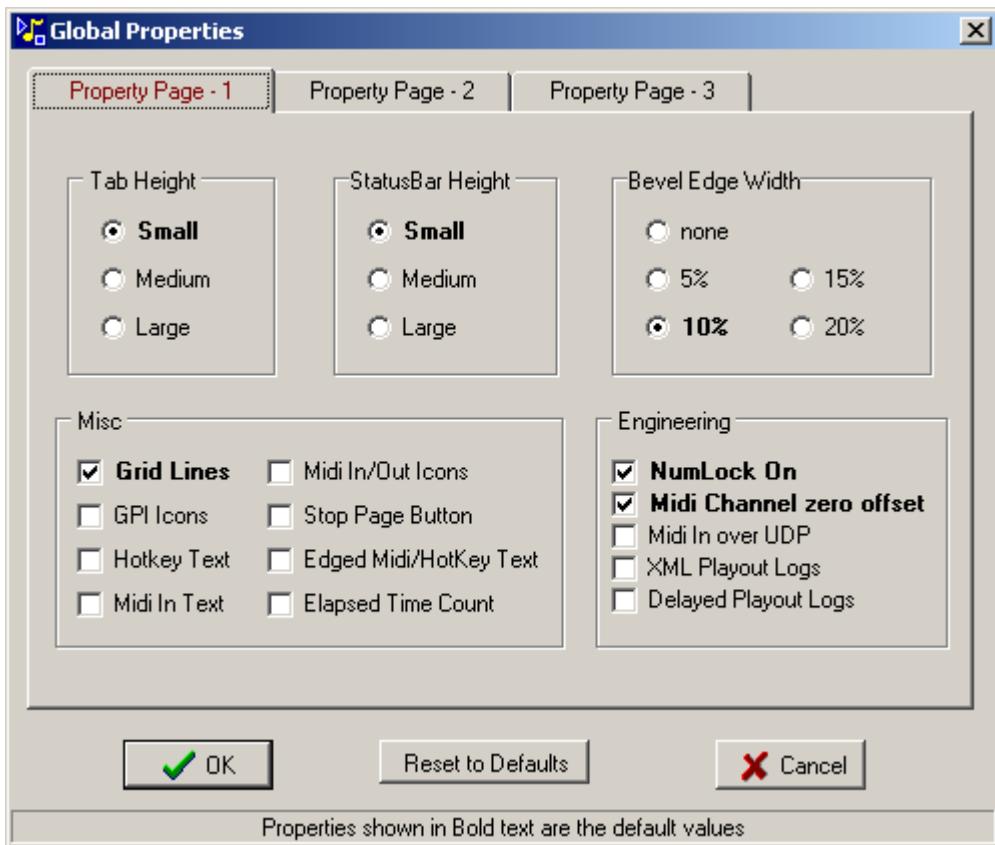
Administrator menu options  
Set range of property values  
Settings for receiving PBus commands  
Settings for receiving external DTMF tones  
Input settings for SMPTE or Button timecode  
Trigger buttons from a list of SMPTE timecodes  
Assigns target computer address  
search remote locations for audio file  
Set loaded track files to be read-only  
Disable menu items for simple playout operation  
Render precision fades for Fade Out and short Fade In durations  
Assorted Settings  
Options for generating/copying playout logs  
Clear history lists in File menu  
Enables Midi messages received via a Network connection  
Set highest sample frequency that SpotOn will allow in WAV files  
Adjust levels of Windows volume controls for each output - option disabled

## Admin

Provides password protected access to the [Administrator](#) menu options

## Global Properties

The Global Properties option allows a large number of the menu options to be viewed and set within one dialog window.

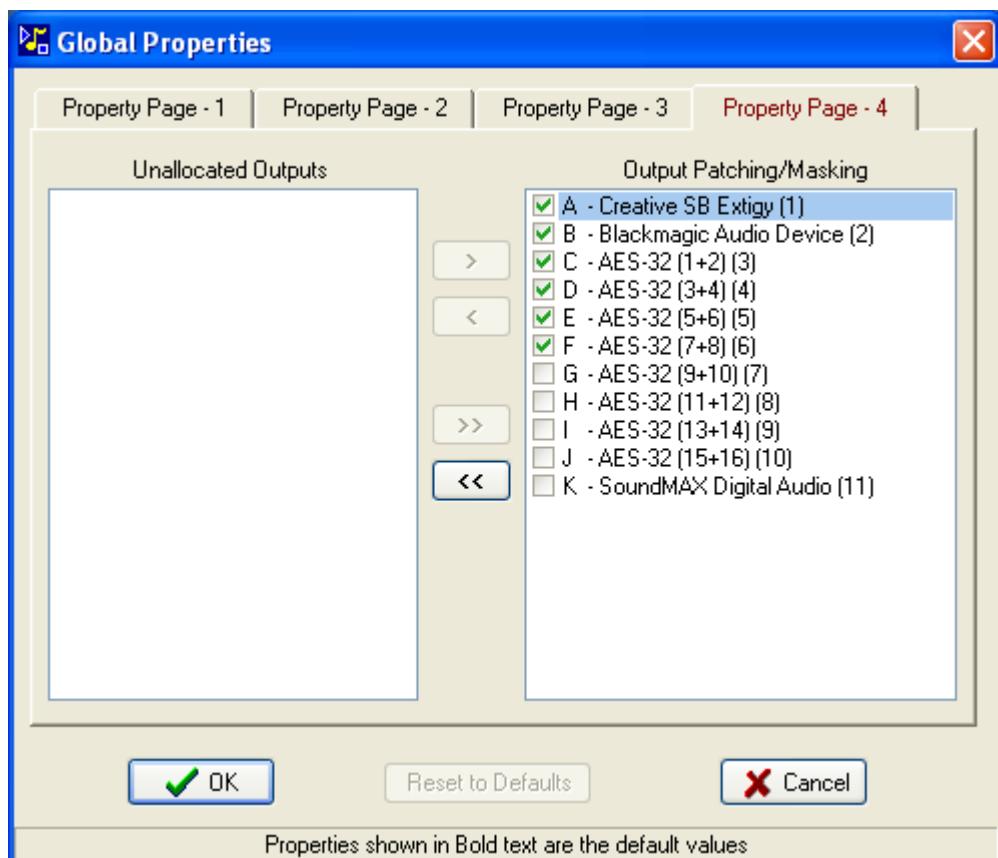


The default values are shown in bold text

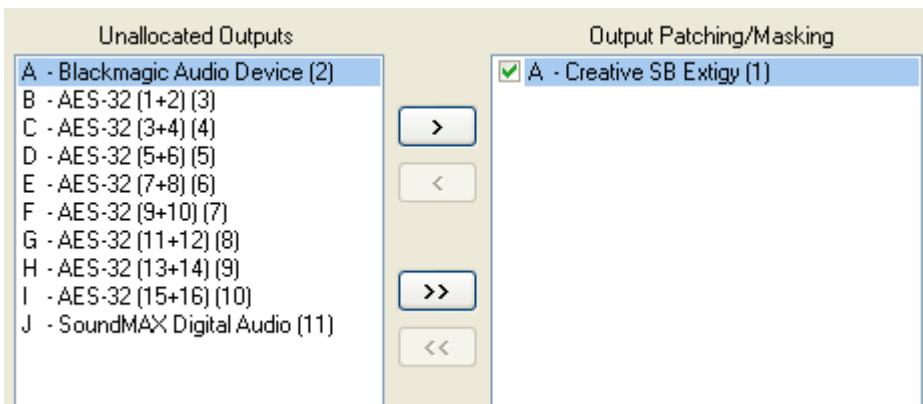
The 'Reset to Defaults' button will set all properties on all pages to the default values.

The 4th property page is only accessible when Admin mode is enabled, this page is a slightly more sophisticated version of the [Output Assignment](#) dialog.

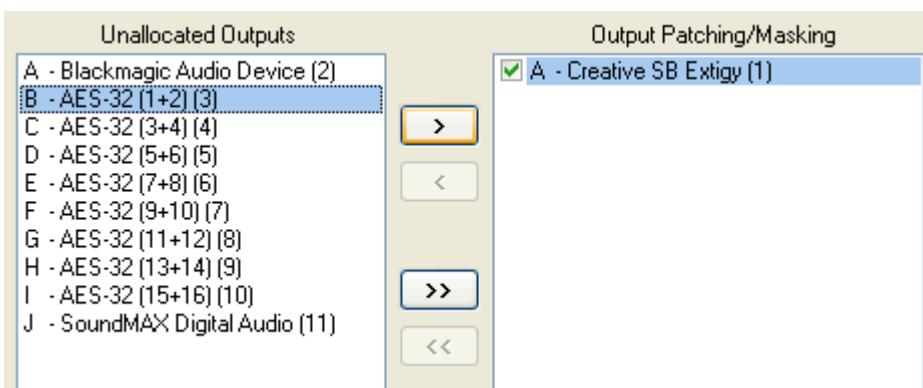
Initially the current output device configuration is shown in the right hand panel



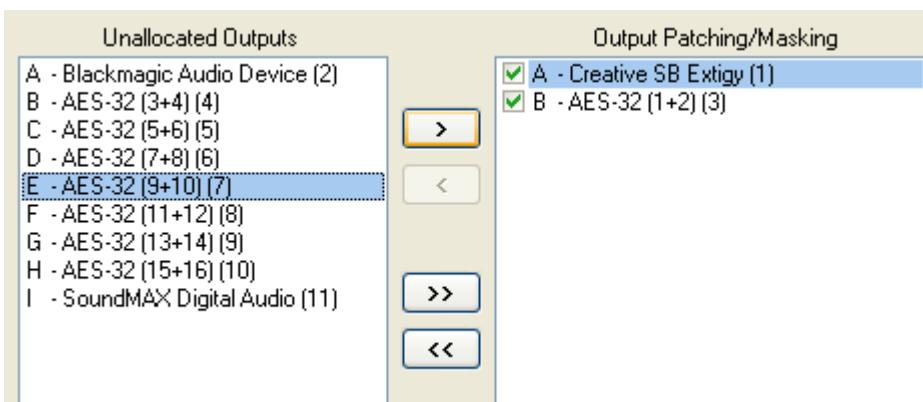
Clicking the << button will move all except the default output device into the left panel.



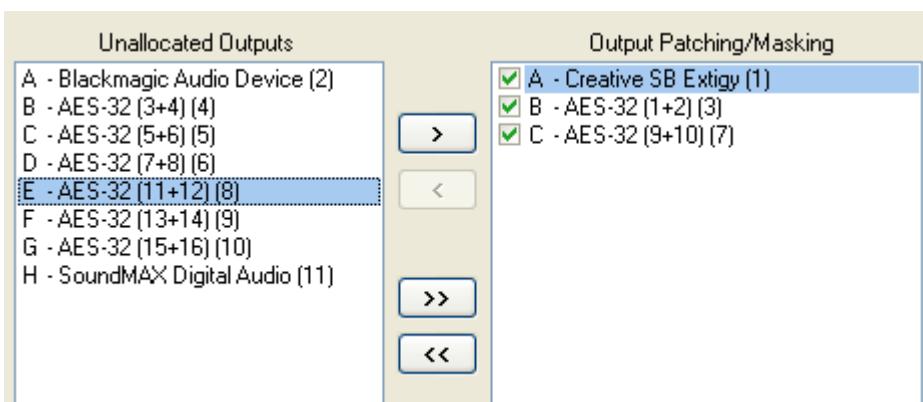
Now the output order can be built up by highlighting a entry in the left panel and clicking > to move the output in to the right hand panel.



The moved entry will be automatically 'unmasked' (checkbox ticked)

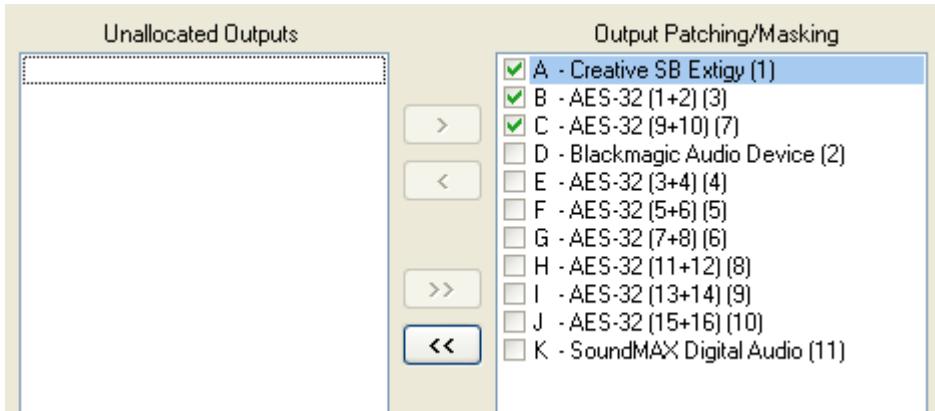


Continue moving entries until all the required outputs are in the right hand panel



Finally move all the remaining entries across to the right hand panel by clicking >>

These items will be entered as masked.



The order of the items in the right hand panel can be changed by left drag/dropping.

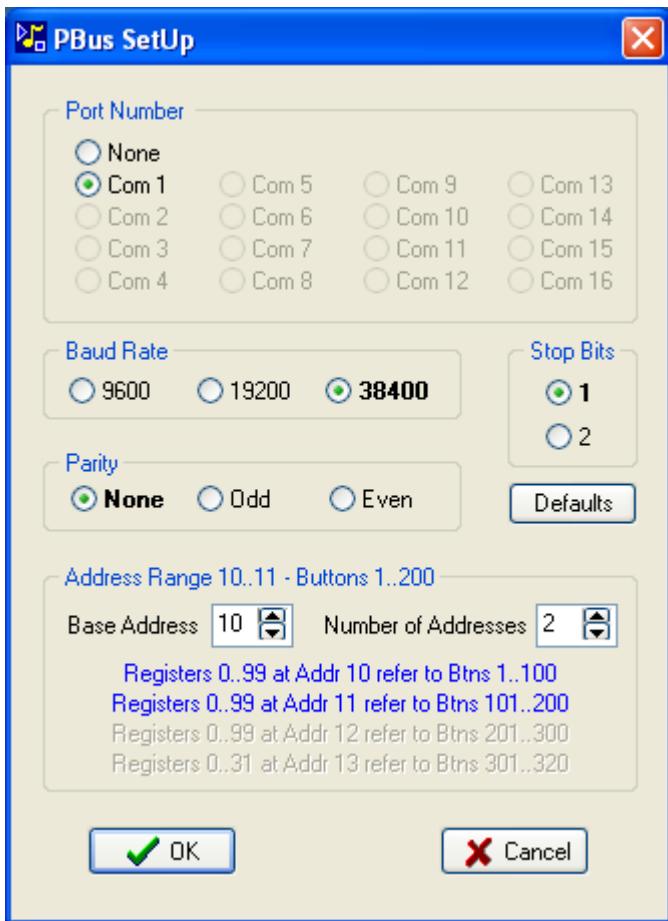
### **Try Remote Filename**

When loading a session file it is possible that some audio material referred to has been deleted from the local drive, in this case if the track assigned to a particular button cannot be found the button remains blank and a warning dialog will display the tracks not found.

However, if the Try Remote Filename option is checked then the original file location will also be tested to see if the file is still in that location, if it is it will be copied to the local drive. The disadvantage of this is that if network drives are being used and are offline, the timeout can be quite long making the program unresponsive.

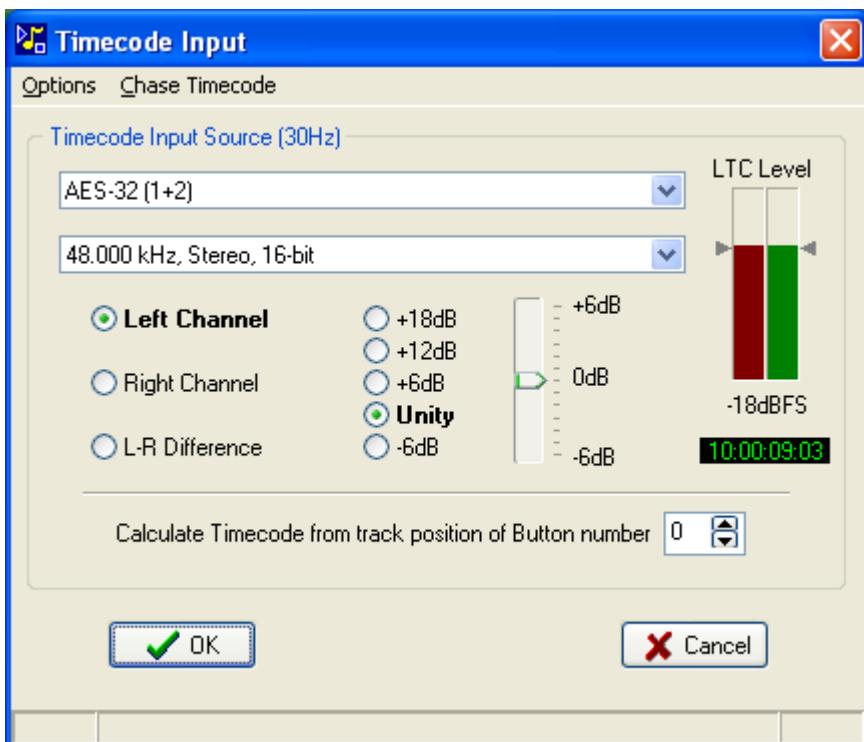
### **PBus Settings**

SetUp for PBus control see [PBus Control](#)

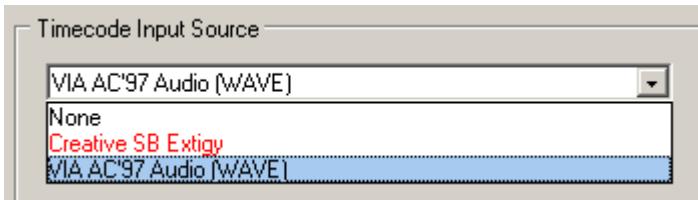


## Int/Ext Timecode

SpotOn can decode external SMPTE longitudinal timecode from a selected audio input or take the elapsed time timecode of a nominated button and use it to trigger [GPIs](#) or cause [AutoPlay](#) buttons to chase the timecode.



The analogue audio timecode (LTC) should be connected to an audio input channel and the channel selected from the upper drop-down menu.



The lower drop-down menu selects the sample rate and bit depth for the timecode signal - this is fixed at 44.1kHz and 16 bit.



The bargraphs on the right hand side of the window show the signal levels for left and right channels, immediately below is the calculated average signal level and the decoded timecode value.

The timecode can be decoded from the Left or Right channels or the difference between the two channels, the last option is a facility to use a balanced feed of LTC with an unbalanced stereo input as might be found on a Laptop computer.

Coarse and fine gain adjustment are available to compensate for low level inputs, if possible the level should be set to match the markers (-18dBFS) on the level bars .

The default options are shown in bold text.

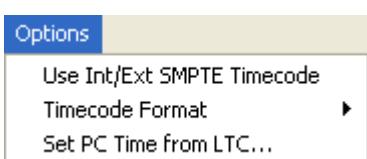
To use the alternative of deriving the timecode from a button select a non zero value in the button number box



The action of selecting a non-zero button number will set the audio input to None, similarly setting the audio input selection to anything other than None will set the button number to zero.

The timecode is calculated from the current absolute position within the track and does not take into account any In Point that may be set.

If the button number is set to 321 (which exceeds the highest button number available) the timecode will be based on the PC internal clock.



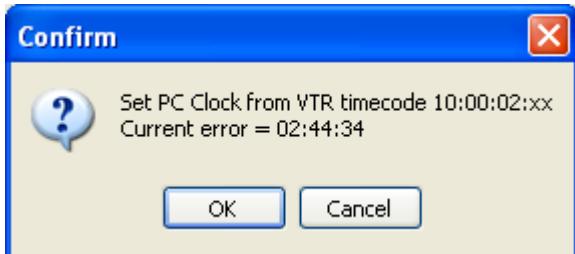
The Use Int/Ext SMPTE Timecode item duplicates the item in the [Options menu](#) and can disable/enable all the timecode facilities, if disabled a message will be shown in the lower part of the dialog.



Timecode format to be changed from the default of 25Hz non-drop frame.

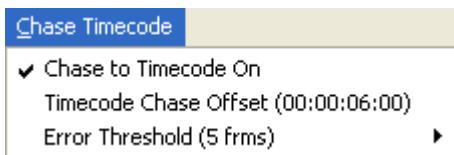


Additionally the external LTC signal can be used to set the PC clock, a prompt dialog box is shown with the current error



Access rights of the current user may restrict the ability to change the PC clock settings.

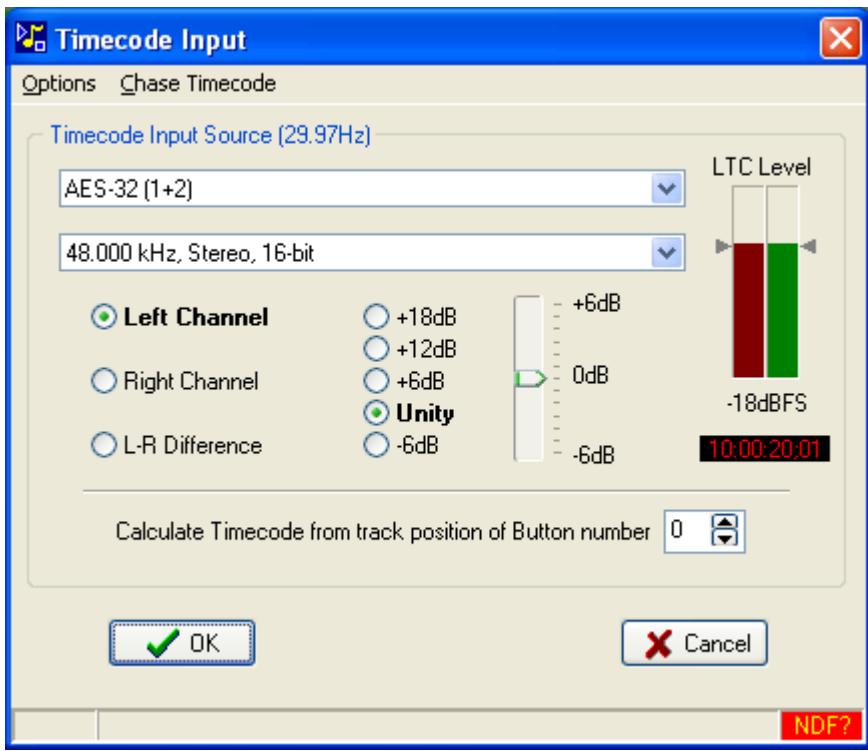
The timecode chase function allows [AutoPlay](#) buttons to chase external timecode, this function is enabled by checking 'Chase to Timecode On', alternatively this option can be set via a command line switch [/ChaseTCode](#).



The buttons selected to chase timecode should preferably be BWAV files containing an embedded start timecode in the metadata. The start time on Non BWAV buttons or BWAV buttons with no embedded start time will default to a 00:00:00:00.

It is important that the global [Timecode Format](#) set above matches the external timecode being used, differences in frame rate are not flagged but if there is a discrepancy between drop frame and non-drop frame timecode is will be indicated in the right hand side of the status bar.

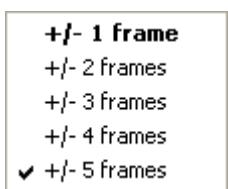
In the example below the global Timecode Format is set to 30Hz drop frame (29.97Hz), however the external timecode has been detected as non-drop frame.



The dialog below enables an offset to be entered so that the button timecode is always a predetermined amount ahead of the external timecode.



The Error Threshold setting defines how much error there has to be between the external timecode and the button timecode before the button is resynchronised.



## Timecode Triggers

The [Timecode Trigger List](#) offers a method of triggering buttons from incoming timecode as an alternative to emulated GPIs

## DTMF Tone Trigger

SpotOn can decode [DTMF](#) tone sequences and trigger buttons via associated Midi notes 16/100..115

## Network Target



If a Target follow Master setup is required where two SpotOn computers have identical packages loaded and one computer is to track the other then 'This PC as Network Master' should be checked on the Master computer and 'This PC as Network Slave' checked on the Target computer.

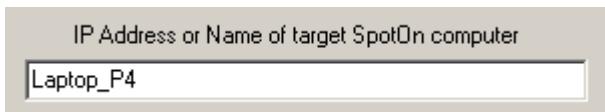


When loading packages onto other computers, the computer name and dongle number are automatically checked against those embedded in the package file to ensure the Networked messages are not looped back to the same computer.

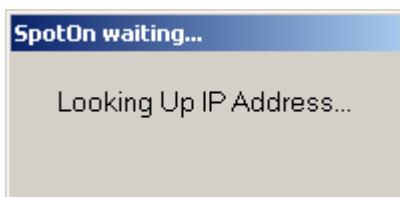
On the status bar of the Master computer the MidiOut panel should have underlined text indicating it is a Network Master

Midi Out On

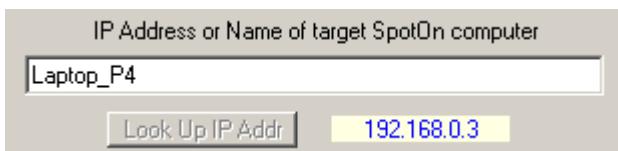
On the Master computer enter the computer name or IP address for the Target computer.



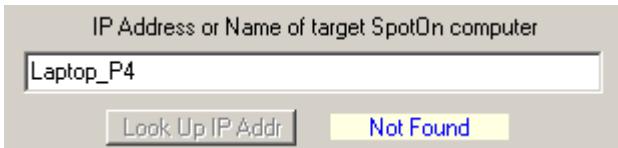
If only the computer name of the target computer is known, the current IP address of that computer can be found by clicking on LookUp IP Addr.



if the look up is successful then the IP address will be displayed proving that the computer is or was recently connected to the network



if the look up fails then Not Found is shown indicating that no computer of that name is currently on the network



SpotOn will accept either the Target computer name or its IP address, entering the computer name is preferred on networks operating DHCP where the computer IP addresses are not fixed.

Other than loading the packages the following should be set automatically on exiting the dialog

On the Master computer "[Use Midi Out](#)" in the Options menu must be enabled.

On the target computer "[Use Midi In over Network|Midi In over UDP](#)" in the Engineering menu and "[Use Midi In](#)" in the Options menu must be enabled.

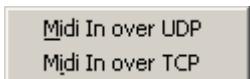
#### Master Computer

Network Master - checked  
Enter name of Target Computer  
Use Midi Out - enabled  
Load package

#### Target Computer

Network Master - unchecked  
Use Midi In over Network (UDP) - checked  
Use Midi In - enabled  
Load same package as Master

## **Midi In over Network**



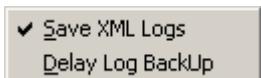
SpotOn can accept conventional Midi messages supplied via the sound card or game port, it can also respond to Midi messages passed to the computer running SpotOn via a network connection and is enabled by checking the UDP and/or TCP options.

The Midi In On mimic on the main window status bar will be in italics if either option is checked.



See [UDP/TCP Commands](#) for further information and details of non-Midi commands that can be sent over UDP

## **Playout Logs**

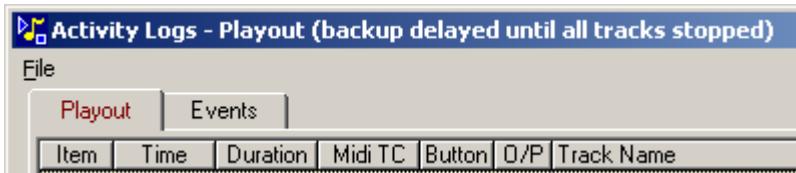


#### [Save XML Logs](#)

Delay Log BackUp

Generate XML formatted playout logs as well as plain text logs  
Delays backup of Playout logs until all tracks are stopped, this

When Delayed Log BackUp is selected the Playout log display window title bar indicates the selection.



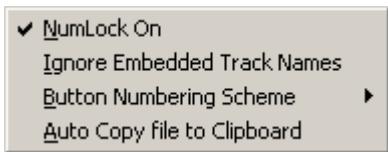
## Lock Session Files

To avoid accidental deletion or modification of files loaded into a session they can be set to be Read-Only for the duration of the session by using this option which is saved within the session and package files.

## Disable User Menus

If the SpotOn is to be used purely for playout and no loading or editing facilities are required then this option will disable all the main menus and the right click options.

## Misc



NumLock On

Set NumLock on at start up

Ignore Embedded Track Names

Ignore embedded track names when loading audio files

Button Numbering Scheme

Arrange the numbering of tracks

Auto Copy file to Clipboard

When checked the [button popup menu](#) Copy action will also copy

## Misc - NumLock On

When checked set the keyboard NumLock state to be On at start up

## Misc - Ignore Embedded Track Names

Audio files can have a 'Display name' embedded in the file along with the audio data, by default SpotOn uses this name if it is present as the Trackname when loading the file.

When this option is checked SpotOn will ignore the embedded 'Display Title' and make up a Trackname from the filename of the audio track when the file is initially loaded

## Misc - Button Numbering Scheme

### Normal

- Paged in Rows
- Paged in Columns
- Paged in Rows/Columns
- Paged in Columns/Rows
- Paged in 2 Blocks per page
- Normal with Column/Row order

In some instances the default numbering of the buttons on the pages may not be suitable so a range of alternative schemes is available:-

Normal (numbers increase on subsequent pages)	1	2	3	4	5	6
	7	8	9	10	11	12
	13	14	15	16	17	18
	19	20	21	22	23	24
Paged in Rows (numbers the same on all pages)	1	2	3	4	5	6
	1	2	3	4	5	6
	1	2	3	4	5	6
	1	2	3	4	5	6
Paged in Columns (numbers the same on all pages)	1	1	1	1	1	1
	2	2	2	2	2	2
	3	3	3	3	3	3
	4	4	4	4	4	4
Paged in Rows/Columns (numbers the same on all pages)	1	2	3	4	5	6
	7	8	9	10	11	12
	13	14	15	16	17	18
	19	20	21	22	23	24
Paged in Columns/Rows (numbers the same on all pages)	1	5	9	13	17	21
	2	6	10	14	18	22
	3	7	11	15	19	23
	4	8	12	16	20	24
Paged in 2 Blocks per page (numbers the same on all pages)	1	5	9	1	5	9
	2	6	10	2	6	10
	3	7	11	3	7	11
	4	8	12	4	8	12
Normal but with Column/Row order (numbers increase on subsequent pages)	1	5	9	13	17	21
	2	6	10	14	18	22
	3	7	11	15	19	23
	4	8	12	16	20	24

## **Clear Recent Lists**

Search...  
Sessions...  
Packages...  
Button Image Association...

Recent history lists available from the File menu and the File Search history can be cleared with this option along with the button image associations, note Undo does not operate with these actions.

## **Sample Frequency Limit**

44.1kHz  
**✓ 48.0kHz**  
96.0kHz

The sample frequency of WAV files can be any value - typically 8,000.. 96,000 samples/second, at the higher sample frequencies and especially with 32 bit samples the data rate can become very high and the application will slow down as more CPU time is absorbed during playout.

The default value is 48kHz which should be sufficient for most purposes.

## **Volume Controls - menu item disabled**

Each audio output device on a PC has its own set of mixer controls these can be accessed with this menu option

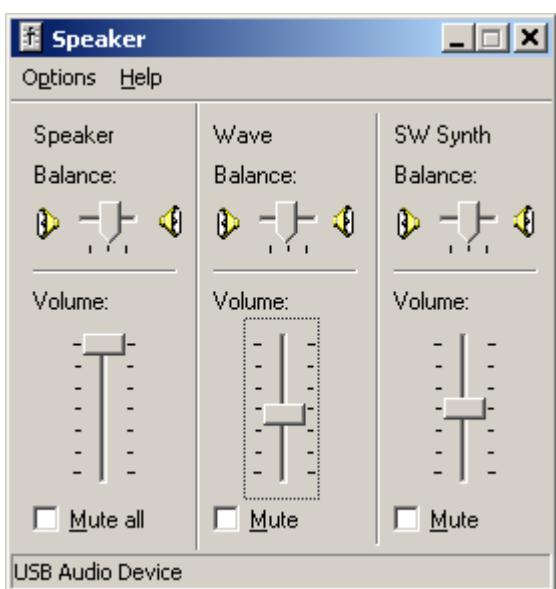
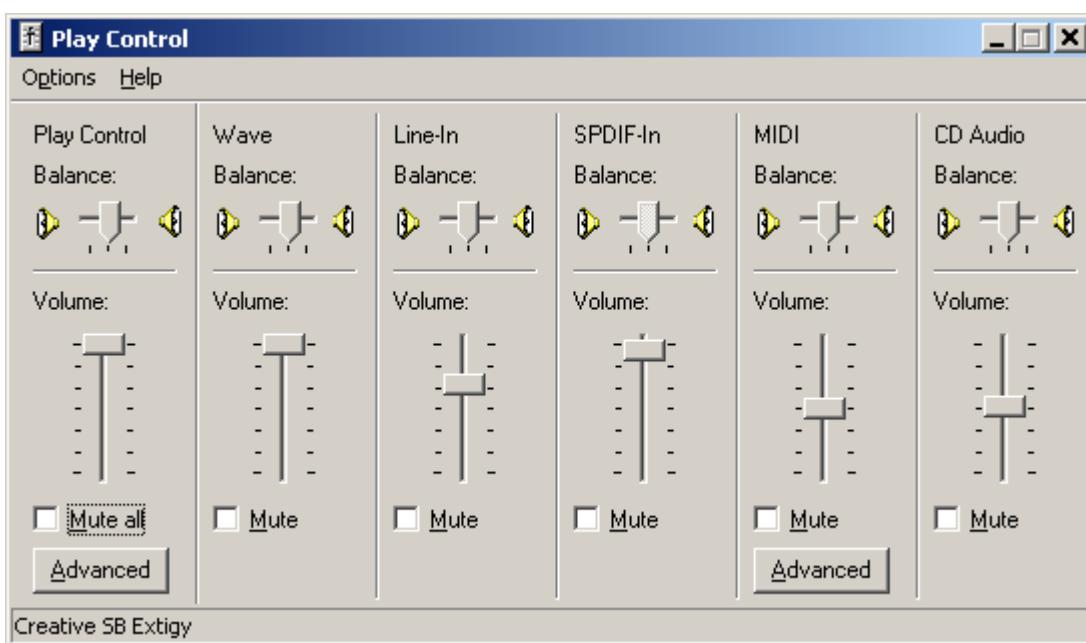
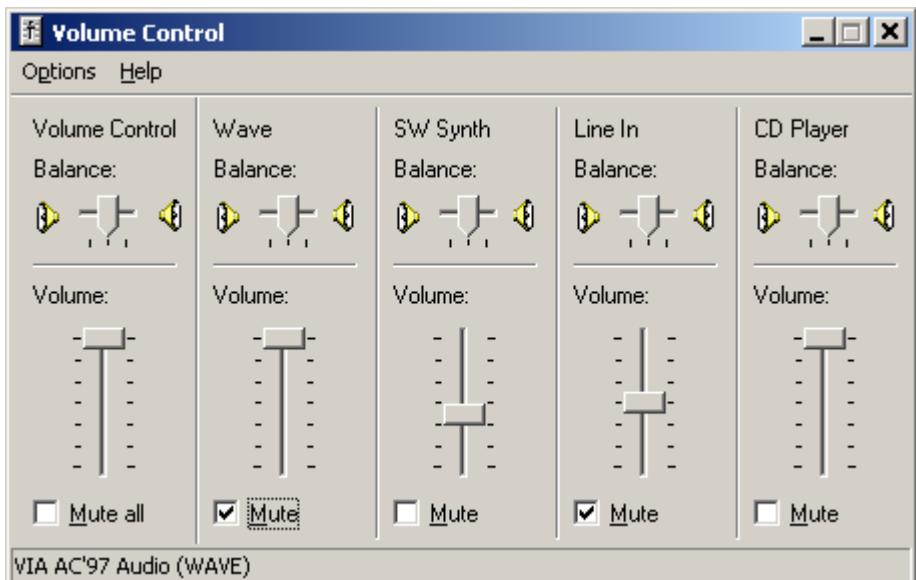
1 VIA AC'97 Audio (WAVE) [0,Mute dB]  
2 Creative SB Extigy [0,0 dB]  
3 USB Audio Device [0,-7 dB]

Note the level settings displayed to the right of the sound device name, these are of the form:-

[ Master level, Wave output level ]

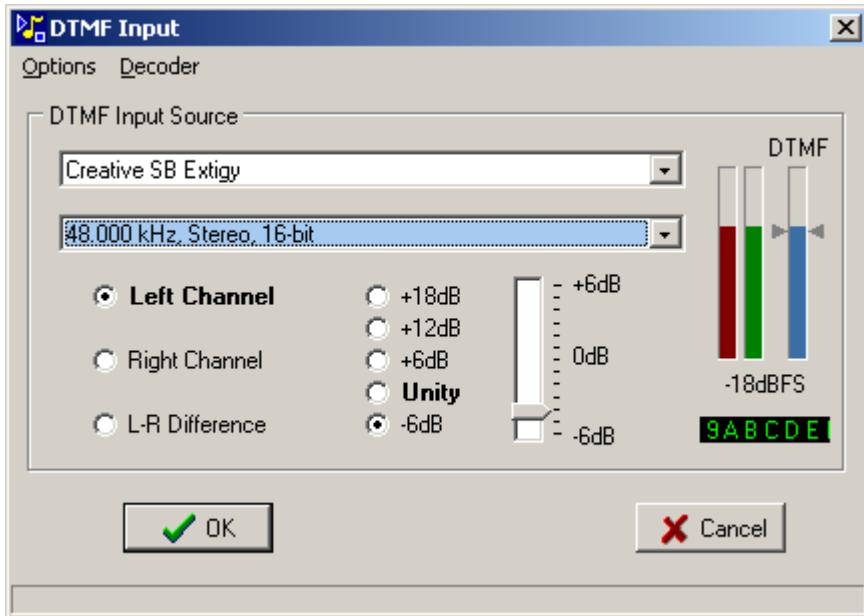
Levels are shown in dB (0dB is the maximum level), if a level is muted the word "Mute" is shown instead of the level value.

Typical control panels are shown below - note that not all sound card drivers support all options.

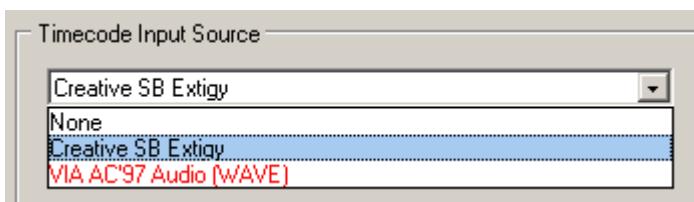


# DTMF Decoder

SpotOn can decode external DTMF tones (0..F) from a selected audio input and use them to trigger buttons via Midi notes 100..115 on channel 16.



The analogue DTMF source should be connected to an audio input channel and the channel selected from the upper drop-down menu. If the source entry is displayed in red text then it is already in use as an input for the [SMPTE timecode](#) reader and is not available.



The lower drop-down menu selects the sample rate and bit depth for the timecode signal - this is fixed at 48kHz and 16 bit.



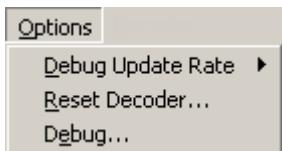
The bargraphs on the right hand side of the window show the signal levels for left, right and filtered channels, immediately below is the decoded data scrolling right to left.

Coarse and fine gain adjustment are available to compensate for low level inputs, if possible the level should be set so that the right hand bargraph matches the markers (-18dBFS).

The DTMF can be decoded from the Left channel, Right channel or the difference between the two channels, the last option is a facility to use a balanced feed of DTMF with an unbalanced stereo input as might be found on a Laptop computer.

The default options are shown in bold text.

The DTMF tones decoded are translated to Midi Note On messages in the range 100..115 on channel 16 for DTMF tones 0..F respectively where E=\* and F=#.



Debug Update rate sets the refresh period of the debug display



Reset Decoder sets all the decoder parameters to their default values after clicking on OK in the confirmation dialog



The Debug option displays a live timestamped list of the incoming DTMF data along with analysis of the signal quality

# DTMFDebug

	0	1	2	3	4	5	6	7	Error	Twist	Tone3	Rat
	697Hz	770Hz	852Hz	941Hz	1209Hz	1336Hz	1477Hz	1633Hz		dB	dB	%
0000mS >	92,	176,	2304,	123,	1040,	25,	46,	25	tone3	-6.9	-15.4	8
0025mS >	28,	39,	4,	7,	7,	25,	3,	5	bntot	2.9	-1.0	5
0050mS >	42,	12,	15,	18,	4,	30,	7,	8	bntot	-2.9	-4.6	5
0075mS >	32,	26,	47,	383,	12,	311,	10,	6	tone3	-1.8	-16.4	8
0100mS >	49,	144,	101,	2138,	37,	2326,	26,	6 = 0		0.7	-23.5	9
0125mS >	42,	223,	95,	1454,	46,	2169,	26,	9	tone3	3.5	-16.3	8
0150mS >	46,	178,	16,	36,	9,	134,	7,	4	bntot	-2.5	-9.3	7
0175mS >	32,	117,	18,	7,	6,	14,	9,	2	bntot	11.2	-5.3	7
0200mS >	47,	39,	9,	4,	14,	40,	12,	4	bntot	-1.3	-0.4	5
0225mS >	696,	100,	17,	19,	434,	78,	15,	13	tone3	-4.1	-12.8	8
0250mS >	2634,	123,	17,	16,	1708,	70,	14,	13 = 1		-3.8	-22.9	9
0275mS >	1246,	104,	11,	8,	1181,	43,	11,	9 = 1 ****		-0.5	-21.1	9
0300mS >	18,	38,	10,	2,	59,	15,	5,	4	bntot	3.8	-6.6	6
0325mS >	13,	63,	16,	6,	2,	9,	4,	1	bntot	-11.9	-1.7	6
0350mS >	35,	53,	8,	2,	4,	15,	7,	3	bntot	3.7	-7.6	6
0375mS >	1301,	50,	20,	10,	6,	18,	934,	13 = 3		-2.9	-25.4	9
0400mS >	2493,	91,	53,	18,	10,	41,	2766,	33 = 3 ****		0.9	-28.8	9
0425mS >	802,	55,	32,	11,	6,	39,	1334,	20 = 3		4.4	-23.2	9
0450mS >	26,	57,	25,	2,	3,	32,	58,	3	bntot	0.0	-5.0	5
0475mS >	19,	51,	54,	2,	2,	20,	11,	4	bntot	0.5	-8.2	6
0500mS >	33,	88,	21,	4,	33,	13,	8,	4	bntot	8.6	0.0	5
0525mS >	43,	1911,	21,	10,	998,	17,	5,	12 = 4		-5.6	-27.2	9
0550mS >	71,	2899,	10,	6,	1749,	30,	11,	10 = 4 ****		-4.4	-27.9	9
0575mS >	44,	286,	29,	9,	447,	22,	4,	4	tone3	3.9	-16.3	8
0600mS >	30,	5,	27,	4,	17,	4,	1,	1	bntot	-1.1	-4.0	6
0625mS >	12,	5,	57,	4,	3,	4,	2,	2	bntot	13.7	-7.8	7
0650mS >	41,	195,	77,	9,	99,	9,	13,	5	bntot	-5.9	-2.2	6
0675mS >	106,	2725,	58,	30,	1235,	59,	24,	21 = 4		-6.9	-21.4	9
0700mS >	156,	2237,	329,	42,	1787,	45,	14,	6	tone3	-2.0	-14.7	8
0725mS >	162,	133,	68,	13,	224,	11,	10,	3	tone3	2.8	-1.7	6
0750mS >	156,	23,	32,	6,	11,	2,	3,	1	bntot	-13.8	-2.7	8
0775mS >	169,	58,	64,	14,	7,	7,	6,	4	bntot	-8.5	-0.8	7
0800mS >	149,	372,	1165,	73,	16,	340,	11,	6	hilo	9.9	-0.8	7
0825mS >	232,	43,	2573,	70,	24,	1934,	29,	11	2ndt2	-2.5	-18.4	9
0850mS >	87,	45,	1384,	69,	35,	1858,	41,	36 = 8		2.6	-24.0	9
0875mS >	54,	32,	191,	22,	27,	90,	50,	118	tone3	-4.2	-2.3	5
0900mS >	19,	33,	67,	48,	8,	12,	31,	167	bntot	7.9	-2.9	6
0925mS >	50,	29,	102,	68,	47,	6,	27,	89	bntot	-1.2	-2.3	4
0950mS >	138,	37,	450,	62,	297,	22,	61,	13	tone3	-3.6	-6.7	6
0975mS >	65,	59,	3611,	175,	1619,	80,	36,	32	2ndt1	-7.0	-19.3	9

Portion of DFT bins sum in DTMF Tone 1 = 25%

Minimum DFT bins sum = 500

Maximum value of 2nd harmonic of Tones 1+2 = -30dB\*

Hold

DTMF tone twist limit = -12/+9dB\*

Maximum value of adjacent bin wrt Tone 2 = -18dB\*

Signal pre-filter = Wideband +/-0.50dB\*

The labels at the bottom of the screen show the decoder parameters, those with a '\*' suffix have right-click popup menus enabling the parameters can be changed live.

The Hold button at the bottom centre freezes the display for analysis, the Spacebar is the shortcut key for this button.

The Debug window is split into columns

Timestamp	25mS block decoding											
Tone Levels	Levels of the individual DTMF tones received											
Decoded Value	Decoded character 0..9, A..F											
Error	****	No Error										
	bntot	Total of all the frequency components not above threshold - insufficient signal										
	tone1	Ratio of the level of tone 1 to the sum of all frequency components not above										
	revtw	Higher tone level is greater than lower tone level and exceeds limit - channel has										
	nortw	Higher tone level is less than lower tone level and exceeds limit - channel has an										
	tone3	Next largest tone after the two main tones is not suppressed sufficiently -										
	hilo	Two tones detected are either both Lo tones or both Hi tones - there should be										
	2ndt1	Second harmonic of main tone 1 is larger than expected, so may not be a DTMF										
	2ndt2	Second harmonic of main tone 2 is larger than expected, so may not be a DTMF										
Twist	Measure of the relative values of the two main tones, shown as Normal Twist (nortw)											
Tone3	Level of Tone 3 when compared with Tone 2 exceeds the preset limit											
Ratio	Ratio of levels of Tone 1+Tone 2 to overall total is insufficient											

	0	1	2	3	4	5	6	7	Error	Twist	Tone3	Ratio
	697Hz	770Hz	852Hz	941Hz	1209Hz	1336Hz	1477Hz	1633Hz		dB	dB	%
0875mS >	54,	32,	191,	22,	27,	90,	50,	118	tone3	-4.2	-2.3	53
0900mS >	19,	33,	67,	48,	8,	12,	31,	167	bntot	7.9	-2.9	61
0925mS >	50,	29,	102,	68,	47,	6,	27,	89	bntot	-1.2	-2.3	46
0950mS >	138,	37,	450,	62,	297,	22,	61,	13	tone3	-3.6	-6.7	69
0975mS >	65,	59,	3611,	175,	1619,	80,	36,	32	2ndt1	-7.0	-19.3	92

At timestamp 875mS the two tones detected correspond to DTMF frequencies 2 (tone 1 - highest level) and 7 (tone 2 - second highest level) and are shown in blue text.

The error is 'tone3' because the next largest signal shown in green text at DTMF frequency 5 (tone 3) is too close in level to DTMF frequency 7 (tone 2), the difference is -2.3dB, the relative level of tone 3 is shown in magenta coloured text as it exceeds the tone 3 limit of -18dB.

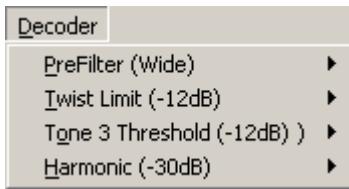
At timestamp 975mS the two tones detected correspond to DTMF frequencies 2 (tone 1) and 4 (tone 2), tone 2 is shown as normal in blue text but tone 1 is shown in magenta text which corresponds to the error '2ndt1' indicating the second harmonic of tone 1 exceeds the threshold.

The example below shows a high quality DTMF signal being decoded.

At timestamps 0, 25, & 50mS there is insufficient signal at the DTMF frequencies so the error is 'bntot', the next 3 entries correctly detect a '9', after two valid decodes the character is accepted as being good '\*\*\*\*'. A similar sequence of events follows when decoding the next character 'A'.

	0	1	2	3	4	5	6	7	Error	Twist	Tone3	Ratio
	697Hz	770Hz	852Hz	941Hz	1209Hz	1336Hz	1477Hz	1633Hz		dB	dB	%
0000mS >	15,	5,	6,	3,	7,	4,	31,	9	bntot	6.7	-3.9	58
0025mS >	17,	4,	2,	6,	4,	7,	10,	5	bntot	-4.1	-3.1	48
0050mS >	4,	6,	160,	14,	11,	5,	101,	4	bntot	-4.0	-17.2	85
0075mS >	3,	12,	332,	13,	5,	11,	329,	9 = 9		-0.1	-27.9	93
0100mS >	10,	9,	374,	9,	4,	10,	313,	7 = 9 ****		-1.5	-29.8	93
0125mS >	13,	7,	333,	17,	8,	6,	277,	8 = 9		-1.6	-24.4	91
0150mS >	12,	23,	38,	7,	4,	2,	54,	5	bntot	3.0	-4.3	63
0175mS >	50,	22,	13,	9,	6,	9,	14,	30	bntot	-4.5	-2.6	52
0200mS >	287,	13,	11,	11,	9,	4,	22,	166 = A		-4.8	-17.6	87
0225mS >	300,	11,	13,	18,	6,	3,	20,	260 = A ****		-1.3	-22.4	89
0250mS >	231,	18,	6,	9,	13,	2,	7,	297 = A		2.2	-22.2	90
0275mS >	107,	13,	13,	7,	4,	3,	13,	207	bntot	5.7	-18.1	86

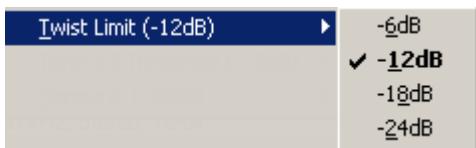
The Decoder menu sets the individual parameters of the decoder



The narrowband PreFilter selects only the DTMF tone spectrum range whereas the wideband filter includes the second harmonics of the DTMF tones



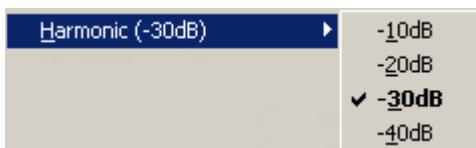
Twist is a measure of the relative amplitudes of the two most significant tones (tone 1 and tone 2)



Tone 3 threshold sets the limit for the next largest frequency component after the two most significant tones



With the Wideband prefilter selected a further check on the validity of the DTMF tones can be made by testing the level of the second harmonic of the primary tones.



In the SpotOn\TestFiles folder are a selection of DTMF wav files:-

DTMF? 48 A M18.wav

Single pulse of DTMF '0'.. DTMF 'F' at 48kHz 16 bit mono at -18dBFS

DTMF 48 TestToneSeq.wav

Sequence of DTMF characters at 48kHz 16 bit mono at -18dBFS

DTMF 48 TestTones.wav

Sequence of DTMF tones 0..7 and then all tones simultaneously at 48kHz 16 bit mono at -34dBFS

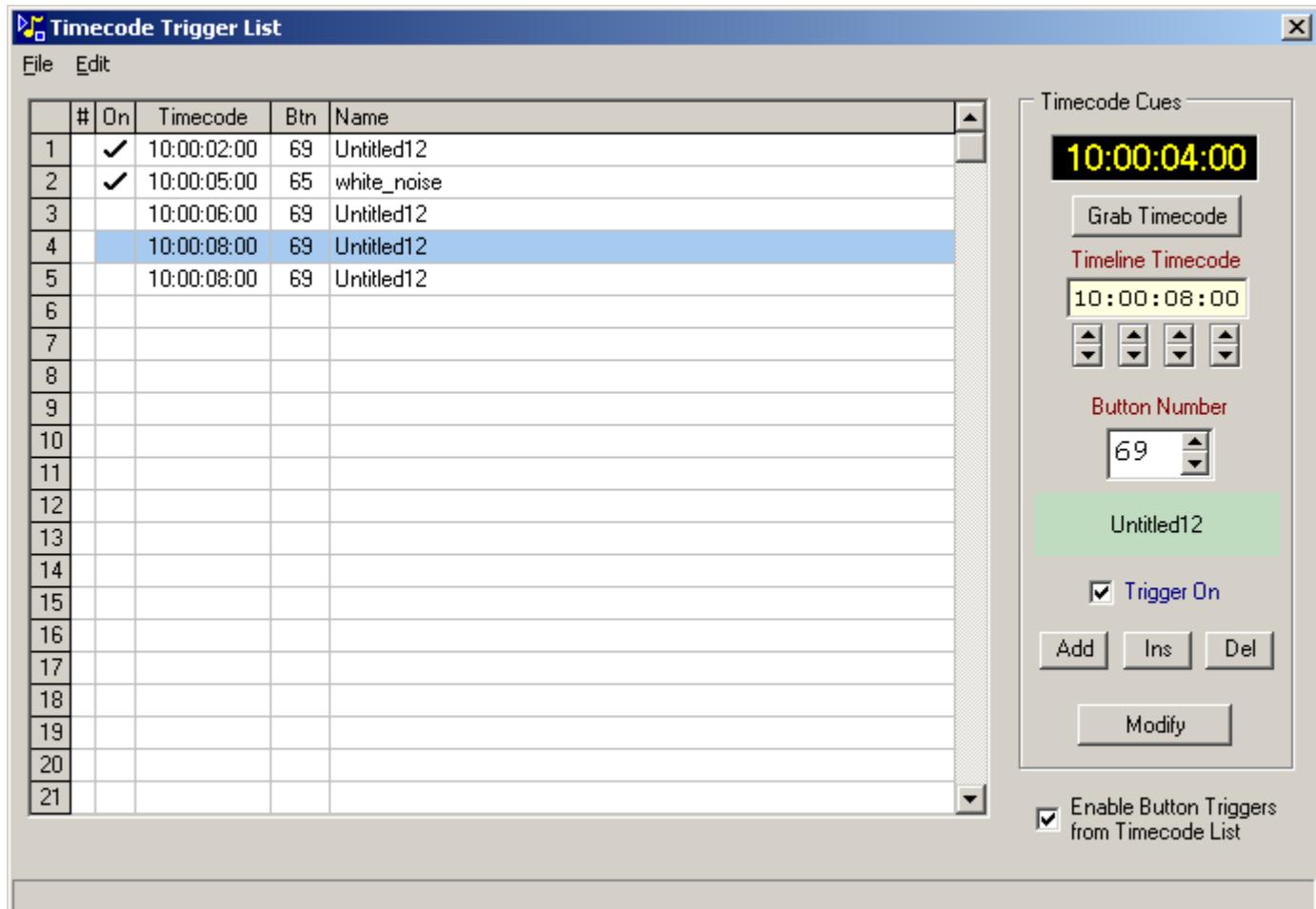
The DTMF decoder is enabled via the [options menu](#) selection Use DTMF Tone Trigger

# Timecode Trigger List

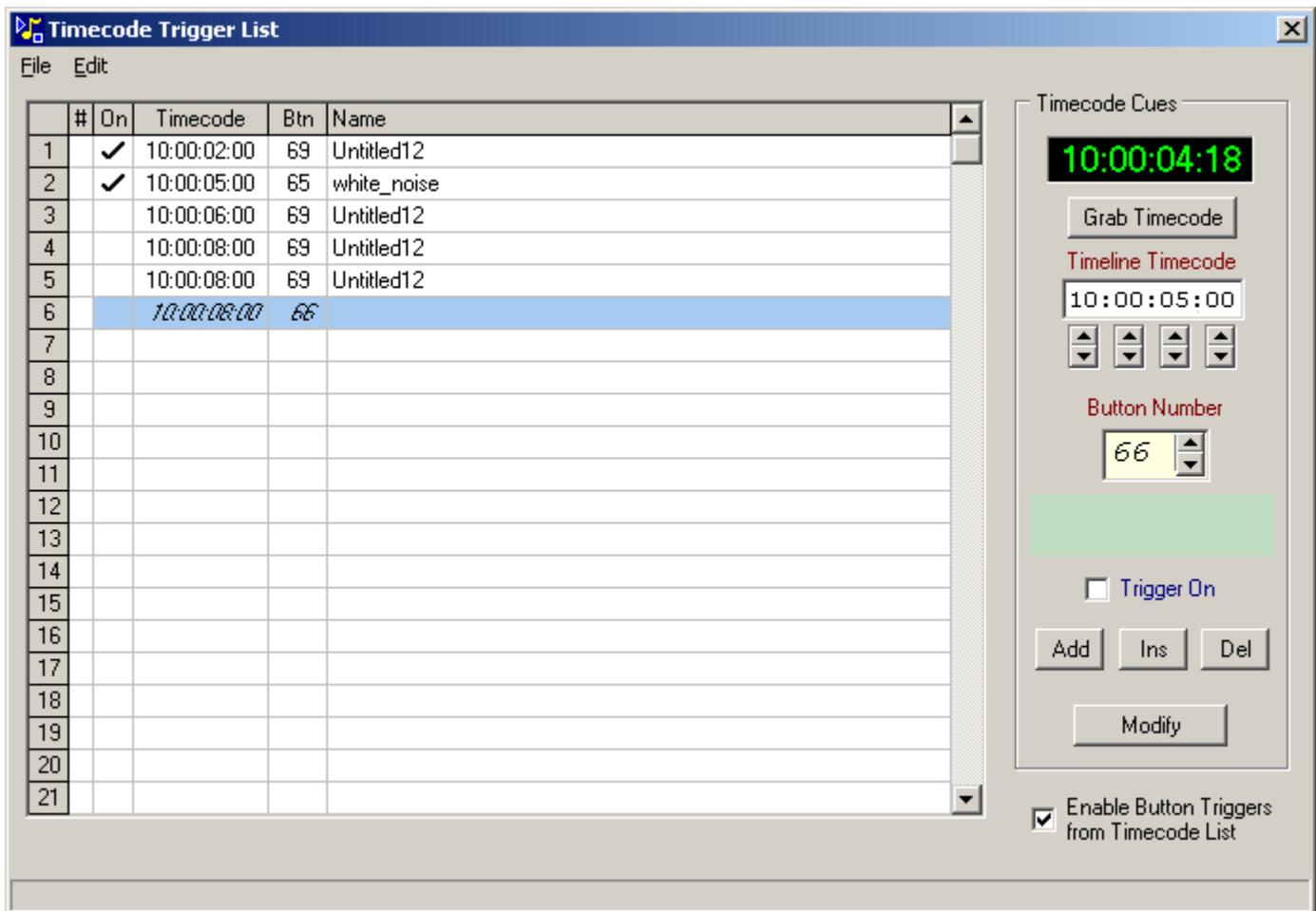
The Timecode Triggers dialog offers a list of timecode trigger points allocated to buttons, the list is formed of 6 columns.

The first column is the entry number followed in the next column (#) showing the state of the trigger, the third column (On) shows if the entry is enabled, clicking in the cells in the 'On' column will toggle the enabled state, this state is mimicked on the right hand edit panel as 'Trigger On'. The next three columns show cue point timecode, button number and button name respectively.

Clicking on the column headers will sort the list.



Button numbers can be entered by typing directly into the right hand Button Number section or by using the up/down nudge buttons. If the button selected is blank the number and the entry in the list will be shown in italic text as shown below in entry 6.



The timecode display in the upper right corner shows the [SMPTE timecode](#) being decoded from either an external source or directly from a button, the text will be yellow if no timecode is available.

The Mark Cue button will load the current timecode and add a new entry to the list, this can be used to make a first pass at setting the timecode cues.

The Add button will add a new entry to the end of the list, Del button will delete the selected entry and the Modify button will update the selected entry with the data in the right hand edit section.

The Insert button will insert a new entry above the selected line moving all higher numbered entries one line, if the list is full the last entry will be lost.

the State column show the current state of the cue - armed (green), playing (red) and elapsed (yellow).

#	On	Timecode	Btn	Name
1	<input checked="" type="checkbox"/>	10:00:02:00	69	Untitled12
2	<input checked="" type="checkbox"/>	10:00:05:00	65	white_noise
3		10:00:06:00	69	Untitled12
4		10:00:08:00	69	Untitled12
5		10:00:08:00	69	Untitled12
6		10:00:08:00	66	
7				

Cues 1 and 2 are armed.

	#	On	Timecode	Btn	Name
1		✓	10:00:02:00	69	Untitled12
2		✓	10:00:05:00	65	white_noise
3			10:00:06:00	69	Untitled12
4			10:00:08:00	69	Untitled12
5			10:00:08:00	69	Untitled12
6			10:00:08:00	66	
7					

Cue 1 is playing and cue 2 armed.

	#	On	Timecode	Btn	Name
1		✓	10:00:02:00	69	Untitled12
2		✓	10:00:05:00	65	white_noise
3			10:00:06:00	69	Untitled12
4			10:00:08:00	69	Untitled12
5			10:00:08:00	69	Untitled12
6			10:00:08:00	66	
7					

Cue 1 has elapsed and cue 2 armed.

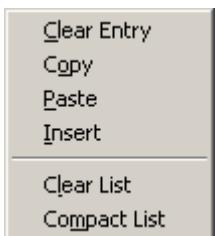
Items in the list can be selected by single clicks or using the standard Shift+click for a block of items.

	#	On	Timecode	Btn	Name
1			09:57:06:00	1	Sting 4 N
2			09:59:30:00	10	Round 2
3			09:59:30:00	7	Bed 5 main N95%
4			09:59:58:00	11	Round 3
5			09:59:58:00	18	vote bed
6			10:00:20:00	22	Sudden Death
7			10:00:36:22	34	HeadtoHead N

or Ctrl+click for a non-contiguous block of items.

	#	On	Timecode	Btn	Name
1			09:57:06:00	1	Sting 4 N
2			09:59:30:00	10	Round 2
3			09:59:30:00	7	Bed 5 main N95%
4			09:59:58:00	11	Round 3
5			09:59:58:00	18	vote bed
6			10:00:20:00	22	Sudden Death
7			10:00:36:22	34	HeadtoHead N
8			10:00:36:22	20	Sting 4 N

There is a right-click popup menu on the list

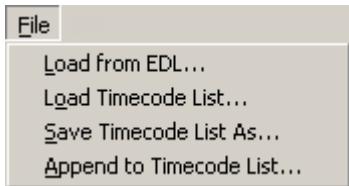


Clear Entry allows the selected entries to be deleted, Copy will temporarily copy the selected entries to the clipboard.

Paste will paste the entries from the clipboard over the list starting at the currently selected row, Insert will move the selected entry and all higher numbered entries toward the end of the list and insert the entries from the clipboard into the blank lines created.

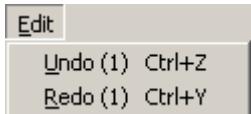
Compact List removes any blank lines and sorts the list into timecode order and finally Clear List will delete all entries.

There are two main menu sections File and Edit.



- |                         |   |
|-------------------------|---|
| Load from EDL           | Load timecodes from a section of an EDL file *.edl or *.txt |
| Load Timecode List      | Load timecodes from disc file *.tcl                         |
| Save Timecode List As   | Save timecode list to disc file *.tcl                       |
| Append to Timecode List | Load timecodes from disc and append to end of current list  |

Under the Edit menu are options to Undo or Redo changes



Timecode Triggers are enabled via the [Options menu](#), this option is copied by the Enable Button Triggers checkbox in the lower right of the window.

Loading timecodes from an EDL (Edit Decision List) - an EDL contains four columns of timecode along with transition instructions, a typical EDL is shown below

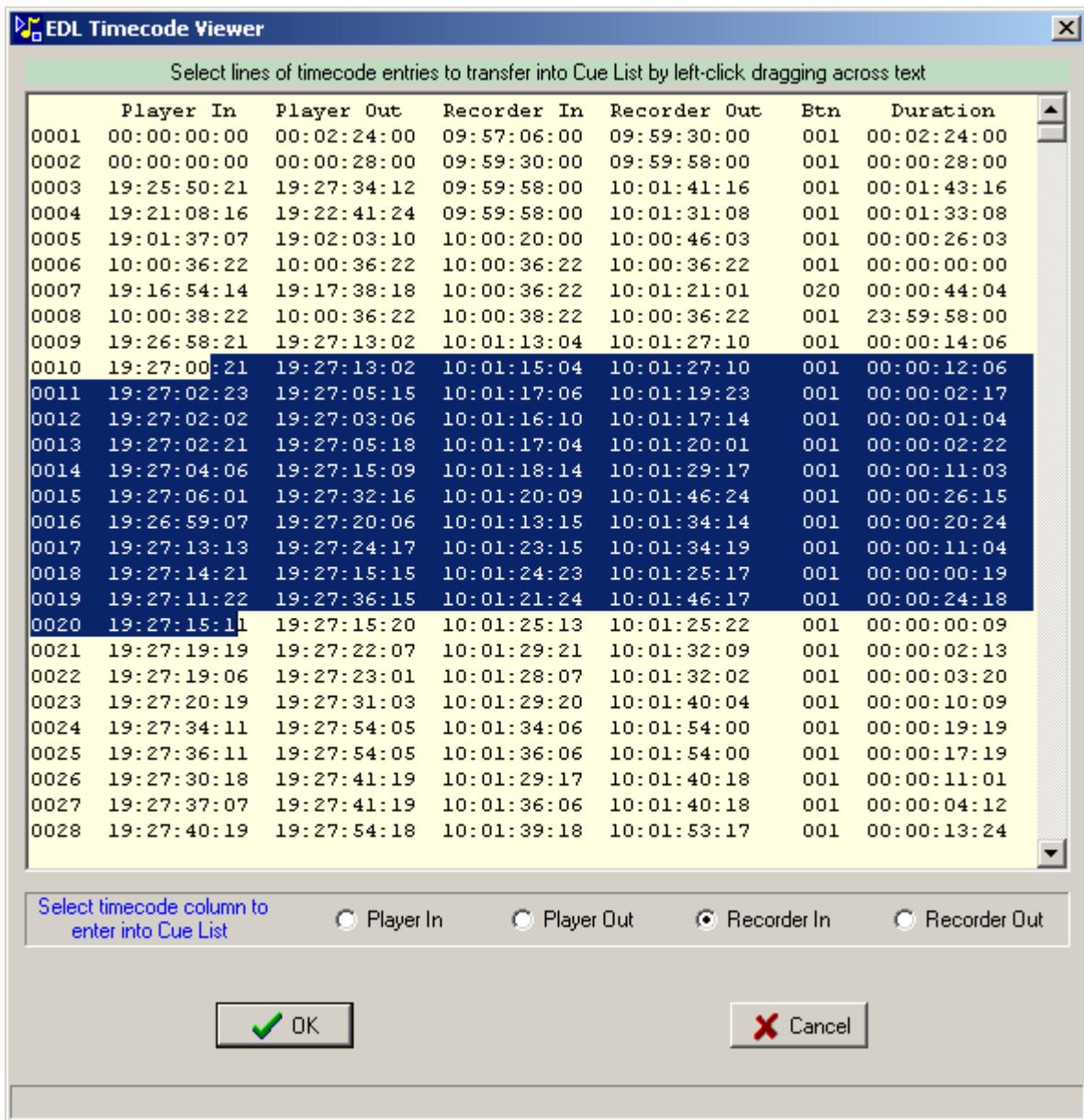
The screenshot shows the EDLView application window. The menu bar includes File, SetUp, Options, Search, and Help. The toolbar contains icons for New, Open, Save, Print, and Help. The status bar displays the timecode 00:00:00:00. The main window displays the following EDL content:

```
MULTITRACK EDL
TITLE:
FCM: NON-DROP FRAME
001 014 C 00:00:00:00 00:02:24:00 09:57:06:00 09:59:30:00
002 014 C 00:00:00:00 00:00:28:00 09:59:30:00 09:59:58:00
003 001 C 19:25:50:21 19:27:34:12 09:59:58:00 10:01:41:16
COMMENT: Spool 1505 renumbered to 7
004 007 C 19:21:08:16 19:22:41:24 09:59:58:00 10:01:31:08
COMMENT: Spool 3402 renumbered to 8
005 008 A1/2 C 19:01:37:07 19:02:03:10 10:00:20:00 10:00:46:03
SPLIT: AUDIO DELAY= 00:00:02:00
006 990 V C 10:00:36:22 10:00:36:22 10:00:36:22 10:00:36:22
006 1505 V D 020 19:16:54:14 19:17:38:18 10:00:36:22 10:01:21:01
006 990 AA C 10:00:38:22 10:00:36:22 10:00:38:22 10:00:36:22
SPLIT: VIDEO DELAY= 00:00:02:00
007 005 AA C 19:26:58:21 19:27:13:02 10:01:13:04 10:01:27:10
007 005 V C 19:27:00:21 19:27:13:02 10:01:15:04 10:01:27:10
COMMENT: Spool 9650 renumbered to 9
008 009 C 19:27:02:23 19:27:05:15 10:01:17:06 10:01:19:23
```

Below the text area, a message states "1269 lines found containing 1150 edits in file ~temp.edl". At the bottom right is a small icon.

Using the Load from EDL option the timecodes can be extracted and displayed as a simple list, the section of timecodes to be added to the Timecode Trigger list are selected by left-click dragging across the text. Any partial lines selected will be included in the example below lines 10 to 20 inclusive will be transferred.

Only one timecode column can be used and that is selected from the options immediately below the listing, Recorder In is the default



There is no option for button numbers to appear in the standard EDL so the Dissolve time is used to indicate the 3 digit button number, below the button number 020 will be associated with Player In timecode 19:16:54:14

```
006 990 V C 10:00:36:22 10:00:36:22 10:00:36:22 10:00:36:22
006 1505 V D 020 19:16:54:14 19:17:38:18 10:00:36:22 10:01:21:01
006 990 AA C 10:00:38:22 10:00:36:22 10:00:38:22 10:00:36:22
```

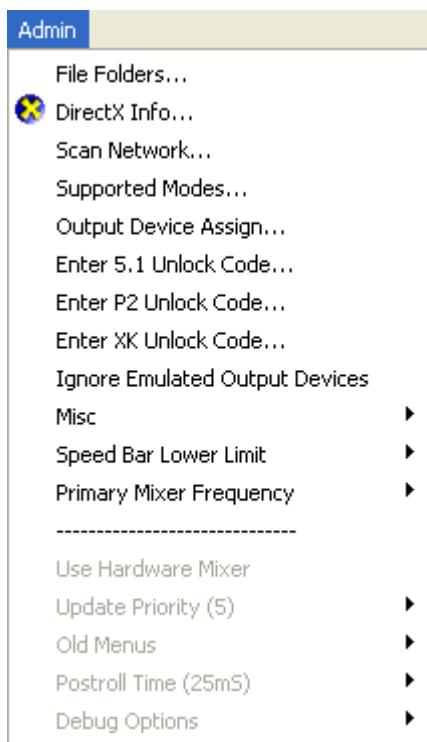
This can be seen in line 6 of the EDL Timecode Viewer above.

This interpretation of button numbers could be used if facilities to generate a dummy EDL is available, alternatively SpotOn can load simple text files based on the format:-

```
D 023 12:34:56:01
D 132 01:23:45:10
```

This could be produced directly in a text editor or extracted from a spreadsheet as a tab delimited file.

# Admin Menu



## [File Folders](#)

[DirectX Info](#)

[Scan Network](#)

[Supported Modes](#)

[Output Device Assign](#)

[Enter 5.1 Unlock Code](#)

[Enter P2 Unlock Code](#)

[Enter XK Unlock Code](#)

[Ignore Emulated Output Devices](#)

[Misc](#)

[Speed Bar Lower Limit](#)

[Primary Mixer Frequency](#)

Sets folder locations for application data

Opens Microsoft DirectX diagnostic tool

Scan network for other SpotOn systems

Analyse modes supported by audio output devices

Configures audio output patching

Enable SpotOn for 5.1 surround sound operation

Enter unlock code to enable SpotOn\_P2

Enter unlock code to enable SpotOn\_Xk

Prevent SpotOn from opening Emulated Output Devices

Miscellaneous settings

Define the lower limit of the speed change slider bar

Sets the Windows sound mixer sampling frequency

## **File Folders**

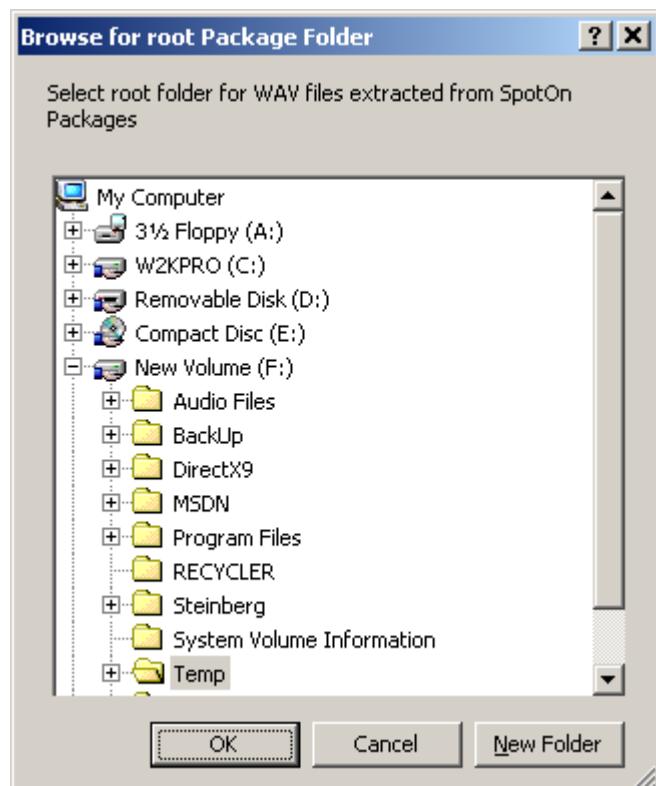
File Folders option displays a selection dialog box to define the locations of the folders used for:-

- a, temporary storage when tracks are copied prior to being edited by an external WAV file editor
- b, storage for tracks loaded from a network connection or a CD
- c, root folder in which new folders are created for files extracted from packages
- d, folder for playout logs containing a timestamped listing tracks played
- e, location of session backup files which can be used to recover from a computer failure
- f, default location for User session files
- g, default folder for loading audio files

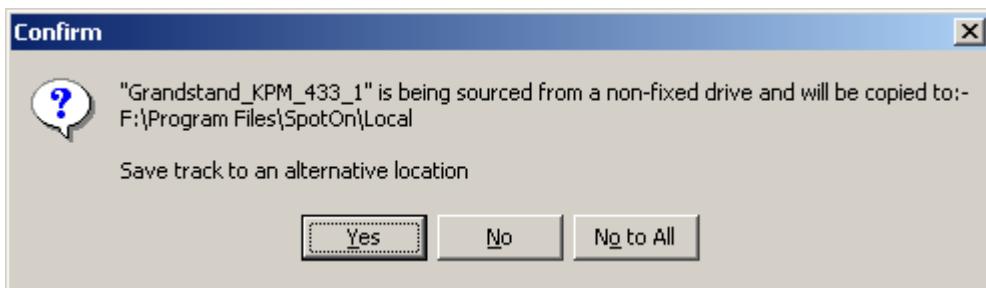
These settings are also displayed in the [Info|Status](#) listing



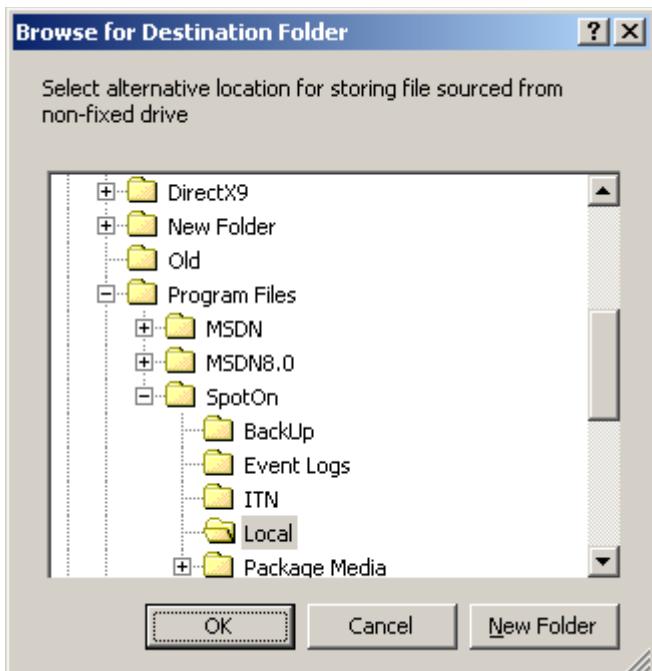
Clicking on the Change button will show a Folder Selection dialog.



By default any files sourced from a network connection or a CD will be stored in the location defined in Folder Locations, however a dialog box will appear each time a remote file is loaded.



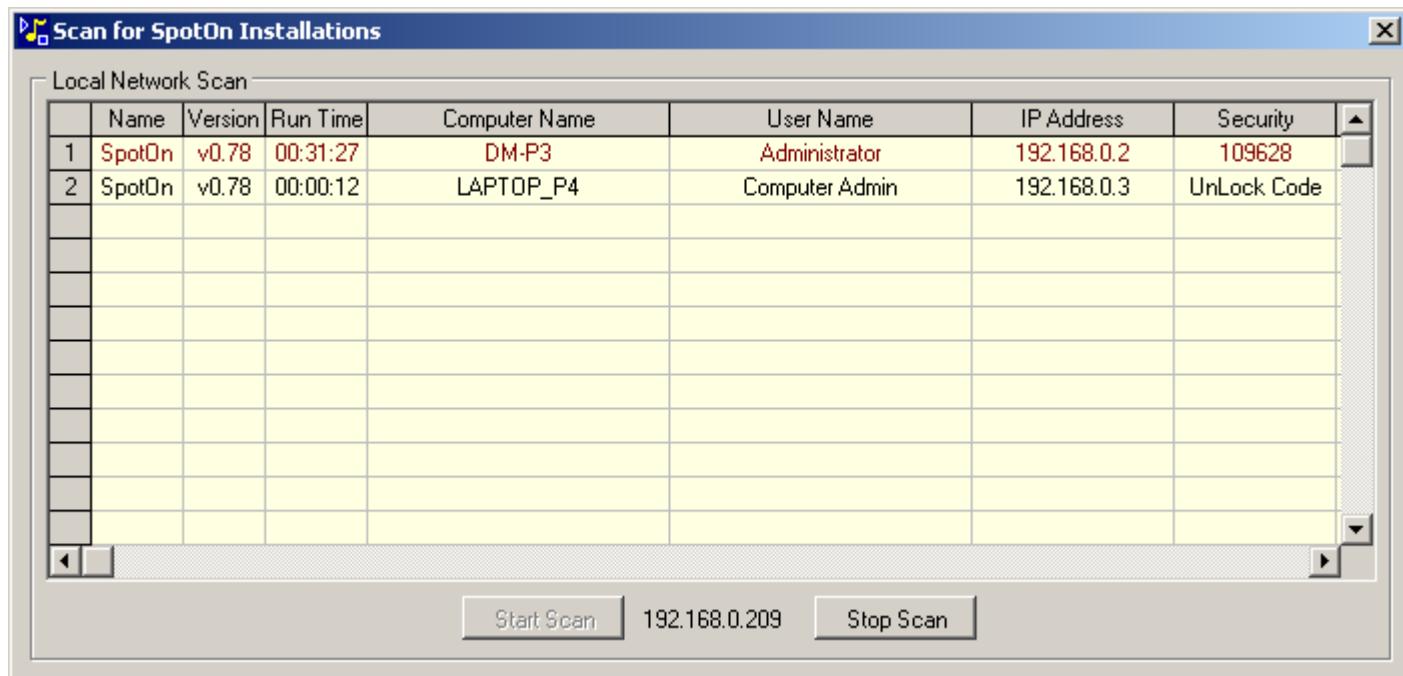
This gives the opportunity to save the file to a more appropriate - programme related - folder. If "Yes" is selected then a further folder selection dialog is shown.



## Scan Network

In order to administer a network containing several SpotOn installations, it is useful to be able to scan through all of the installations currently running and list the version number along with other system parameters.

The window below shows the result of running the scan on a small network with two installations



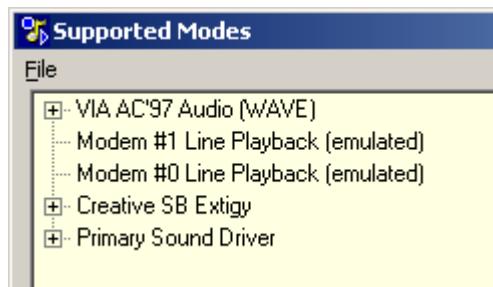
The addresses scanned are limited to the host's class C IP address space, which in the above example is 192.168.0.1 >> 192.168.0.254

Some Anti-Virus Firewall programs may prevent this from scan from working, ask your system administrator to grant SpotOn the appropriate access rights

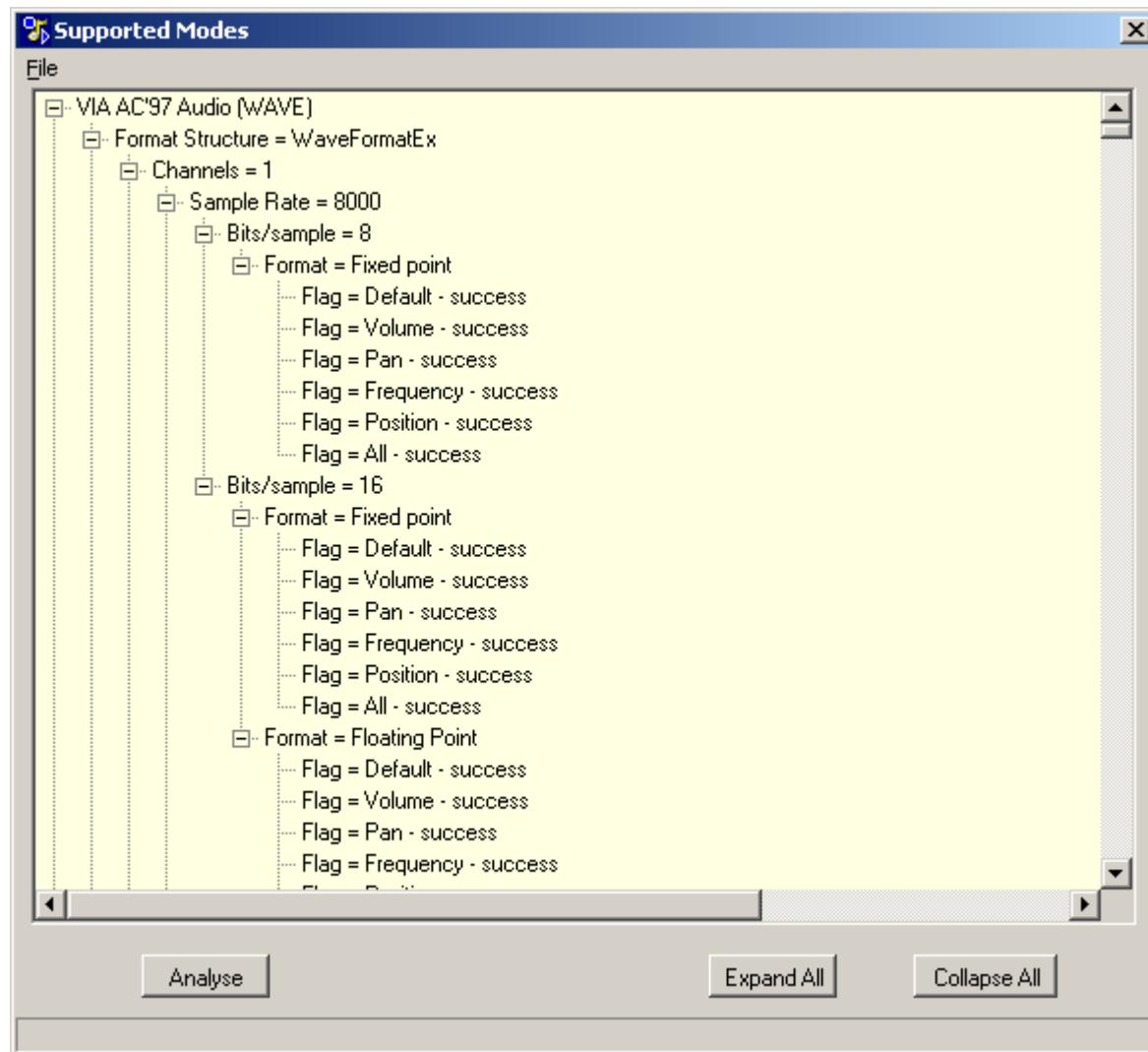
## **Supported Modes**

As an aid to problem diagnosis the Supported Modes option scans all the available audio output devices and tries to set up a wide range of a WAV file formats (1680) on each output.

The results are displayed in a tree view

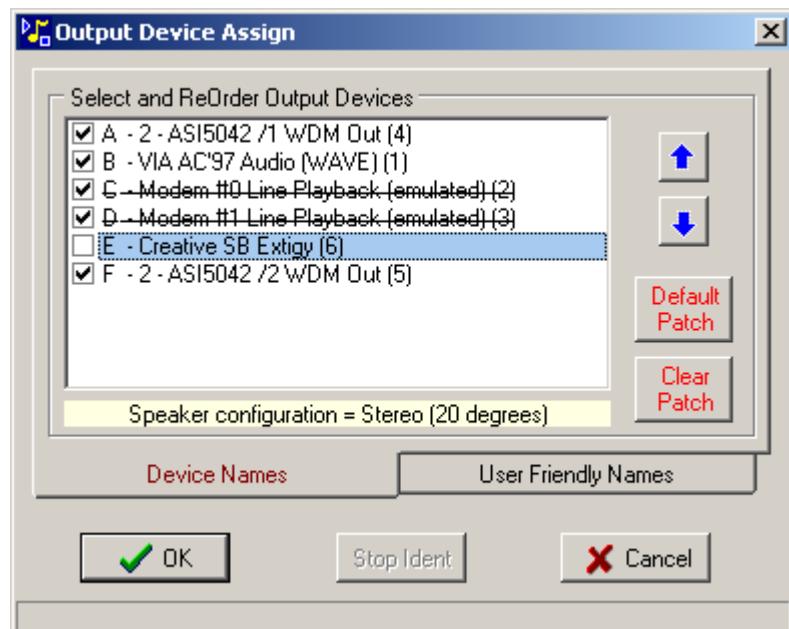


With the tree view fully expanded the individual format results can be seen.



The results can be saved to a text file via the File|Save As menu option.

## **Output Device Assign**



[See Output Device Assign page](#)

## Enter 5.1 Unlock Code



Before SpotOn can be used in 5.1 surround sound mode, an unlock code must be entered, the unlock code will be supplied when SpotOn upgrade is purchased.

If the unlock code supplied is of the form "/multi6 /MCA1CF316F76107CE" then the code should be entered without prefix "/multi6 /MC"



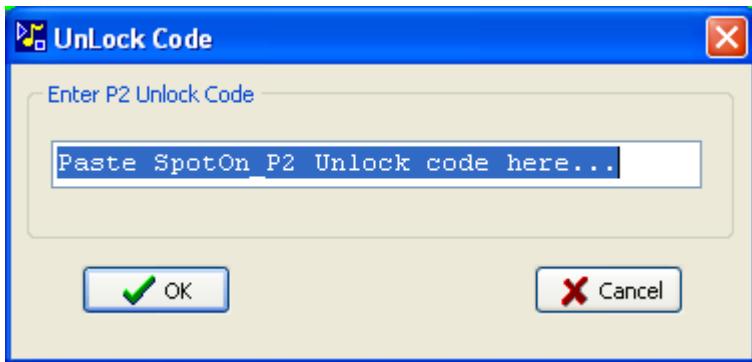
If the code entered was found to be invalid a warning dialog box is shown



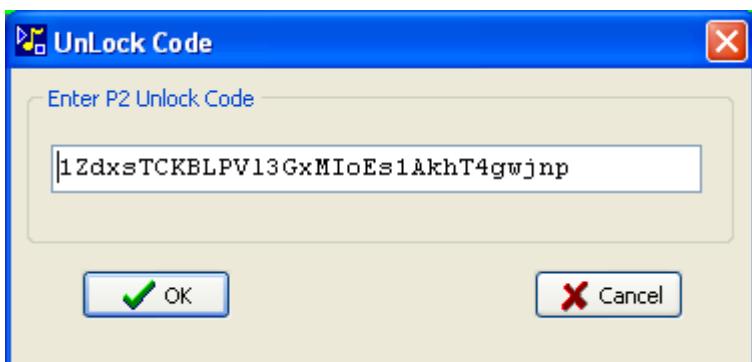
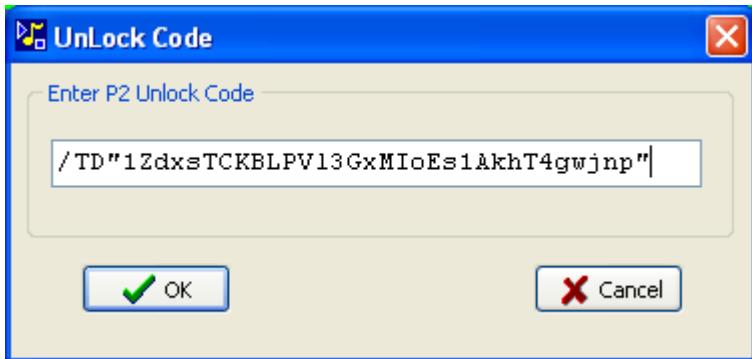
If the code was valid then a shortcut placed on the Windows desktop.



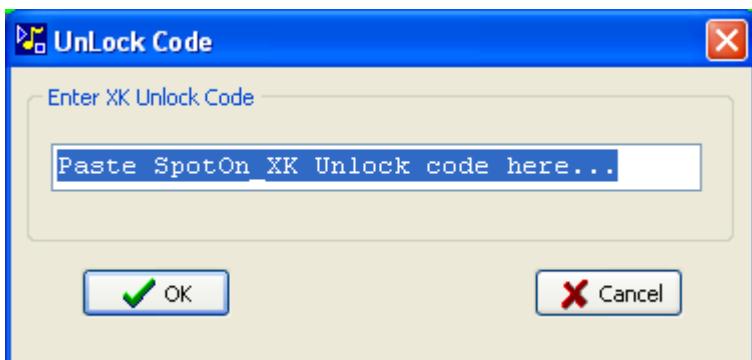
## Enter P2 Unlock Code



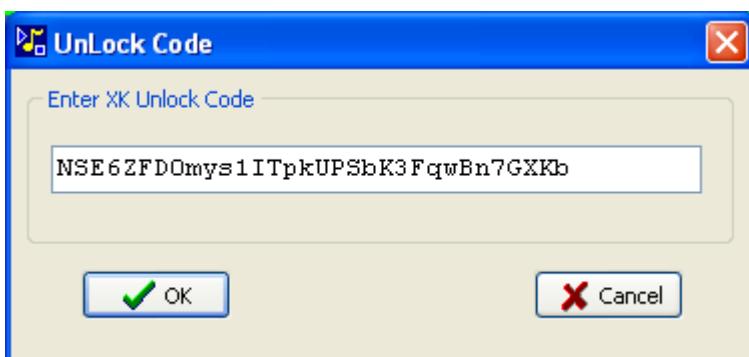
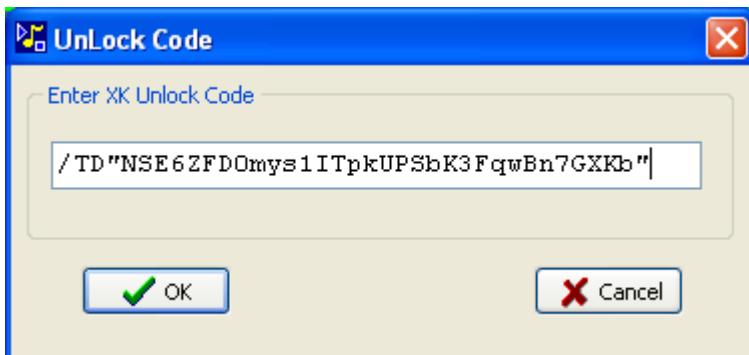
The SpotOn\_P2 utility is installed with SpotOn but not enabled, to enable it enter the unlock code in one of the two formats shown below.



## Enter XK Unlock Code



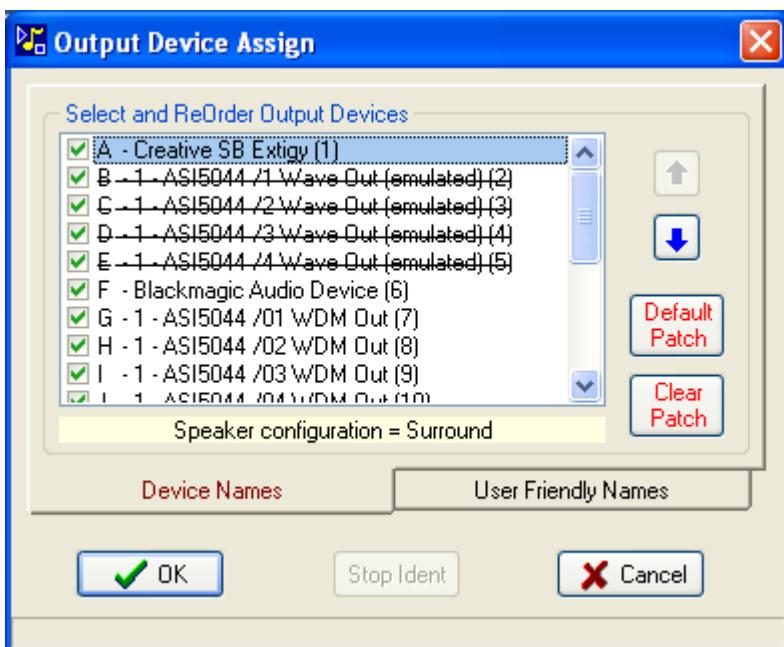
The SpotOn\_Xk utility is installed with SpotOn but not enabled, to enable it enter the unlock code in one of the two formats shown below.



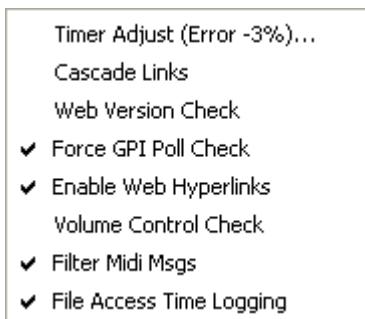
## Ignore Emulated Output Devices

With some sound card drivers a single output may be presented with more than one implementation, below an AudioScience ASI5044 card shows two entries "/1 Wave Out (Emulated)" and "/01 WDM Out" that refer to the same output device.

The WDM version is the one preferred for use with SpotOn, so to allow this to be used the "Emulated" version must be ignored by checking the Ignore Emulated Devices option.



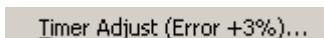
## Misc



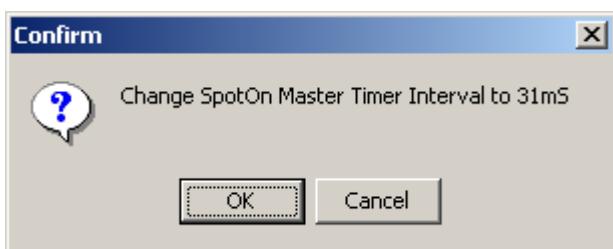
### Misc - Timer Adjust

Due to the variation in performance of the Windows timing routines it may be necessary to adjust the base timer period in SpotOn this can either be 20mS or 31mS.

The menu item text shows the error, in the example below timer is 3% too long a +/- 15% error is acceptable



If the option is chosen to change the timer period then the following confirmation dialog box will be shown



### Misc - Cascade Links

In normal operation of Master/Slave links, the Play Slave link is only effective if the Master button has been triggered by a mouse click or external trigger.

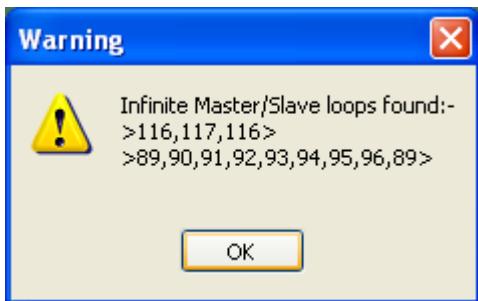
The Play Slave link is not effective if the Master button has been played as a result of itself being a Play Slave.

For example if Btn 2 is a play slave of Btn 1 and Btn 3 is a play slave of Btn 2, playing Btn 1 will play Btn1 and the slave Btn 2, the play slave on Btn 3 will not automatically be triggered.

When the Cascade Links option is checked the play slave action can itself be triggered from another play slave, so in the case above, playing button 1 will cause buttons 1, 2 & 3 to play.

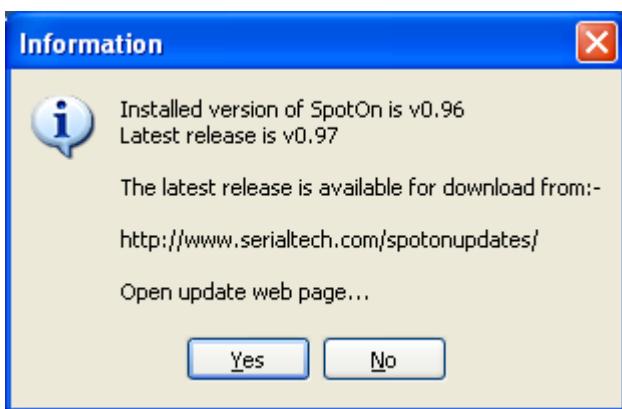
There is a trap to fall into with Cascaded Links, it is now possible to set up an infinite loop where a Master button ends up being triggered by itself via various Master/Play Slave links. Playing such a link could lock up SpotOn and require Task Manager to close it down, so to avoid this a limit of 32 cascaded links has been set.

Warning dialogs will appear when an infinite loop is detected.

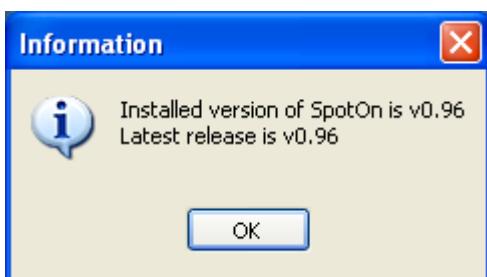


## Misc - Web Version Check

If [Web Hyperlinks](#) are enabled SpotOn will attempt to check each week for new updates, if a new version is ready for download then a message dialog similar to the one shown below will appear.



If Admin mode is enabled and an update is not available then a message will be shown indicating the current and latest versions



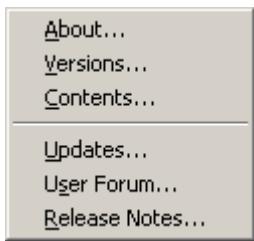
## Force GPI Poll Check

Only present as a debug aid, SpotOn continuously poll GPI devices and if a device is disconnected whilst SpotOn is running it can cause problems by modulating the audio output with a 50Hz square wave.

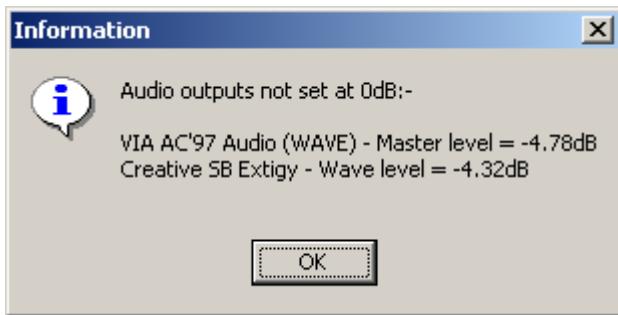
With this option unchecked, as soon as the device is detected as being disconnected it is removed from the polling list and so the disturbance is minimised. However, this is then sensitive to a poor connection to the GPI device which may be briefly unplugged in which case the GPI would be disabled until reassigned.

## Misc - Enable Web Hyperlinks

In the situation where a WWW internet connection is not provided the help menu options that access the internet can be disabled



## Misc - Volume Control Check



At startup SpotOn checks the settings of the Windows audio output levels, if any are not set to maximum (0dB) then a warning message is displayed, unchecking this option suppresses this warning dialog box.

## Misc - Filter Midi Msgs

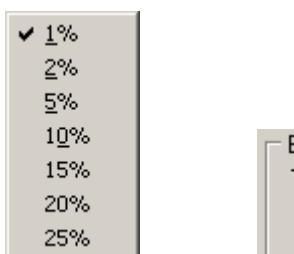
When Midi messages are being received very quickly SpotOn may not have time to implement all the actions, Filter Midi Msgs option was added to only act on the last messages for each channel/Note - intended for Debug use only.

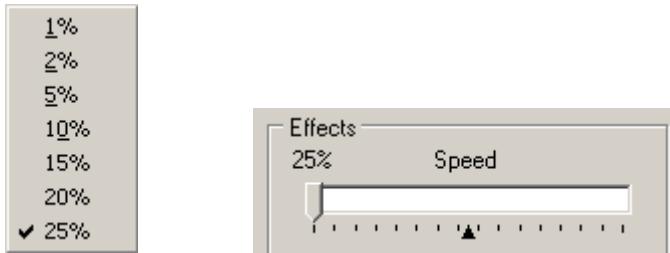
## Misc - File Access Time Logging

Indicates whether the Operating System keeps a record of when files were last accessed, when enabled this can slightly slow down file access speeds.

## Speed Bar Lower Limit

The speed bar shown in the [Audio SetUp](#) dialog window has an upper limit of 400% (4x normal speed) and a lower limit set by the following menu option in the range 1%..25%





This setting also applies to the floating SpeedBars

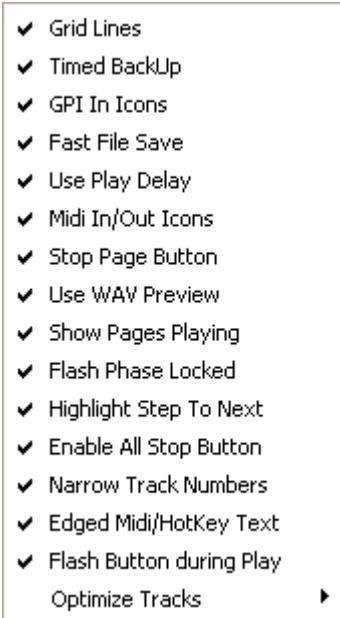
## Primary Mixer Frequency



The audio tracks are mixed together to form the main output of SpotOn, as the tracks could have different sample rates they all have to be converted to a common rate before mixing, this rate can be either of the two standards 44100Hz or 48000Hz.

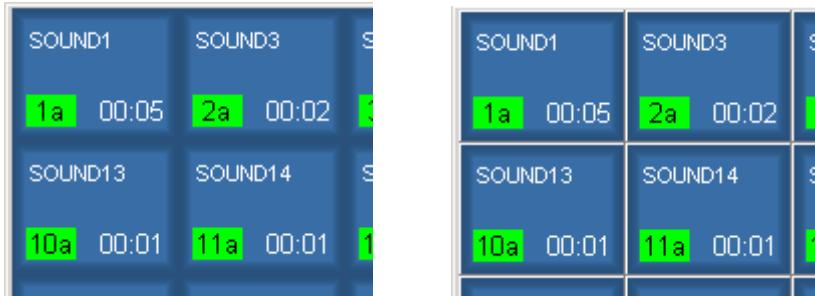
SpotOn will have to be restarted for this change to take effect.

## Old Menus



## Old Menus - Grid Lines

Under some circumstances it may be necessary to highlight the gaps between the buttons, this option adds a grid of white lines between the buttons



## Old Menus- Timed BackUp

Backups of the current session are automatically made every 5 minutes and the last 16 files are retained - which equates to 80 minutes usage

## Old Menus - GPI In Icons

By checking this option buttons that have GPIs assigned can be indicated by an extra button icon, a diamond on the left hand edge



## Old Menus - Fast File Save

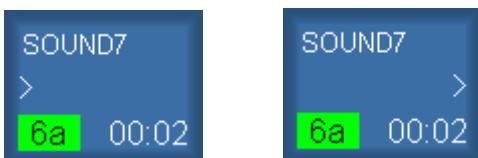
There are two methods of regularly saving system files in the background task routines, checking this item will cause SpotOn to use the "Fast" method instead of the "Threaded" method - intended for Debug use only.

## Old Menus - Play Delay

Allow delayed play on Play Next and linked Slave buttons

## Old Menus - Midi In/Out Icons

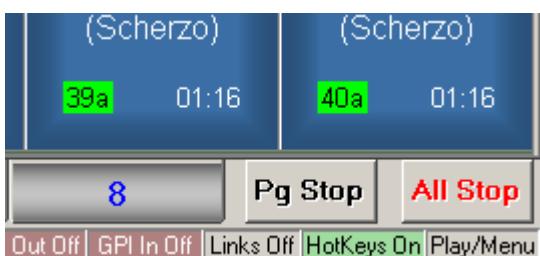
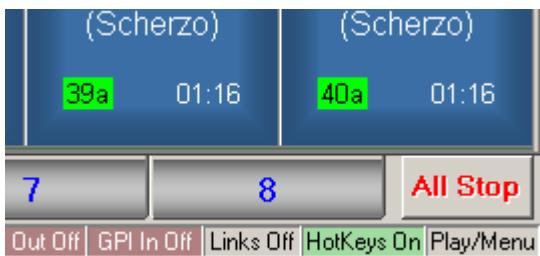
In order to easily see which buttons have Midi In or Out assignments this option adds the button icons shown below designating Midi In and Midi Out respectively



## Old Menus - Stop Page Button

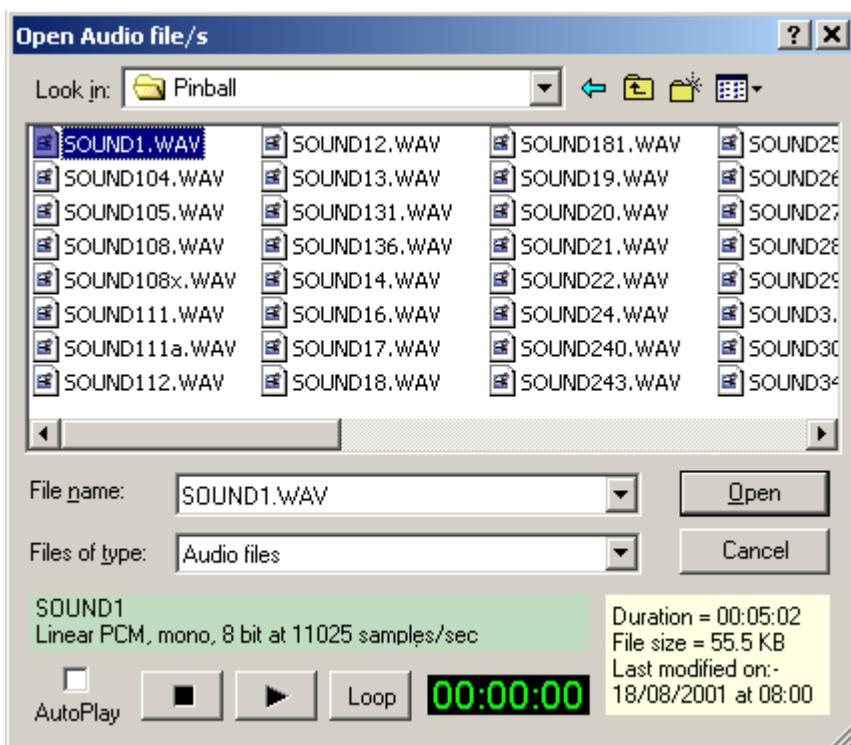
In addition to the All Stop button which stops all tracks on all pages, there is a Page Stop button which will stop all tracks on the current page, by default the page Stop button is hidden.

The All Stop button can be enabled/disabled via [this menu](#)



## Old Menus - Use WAV Preview

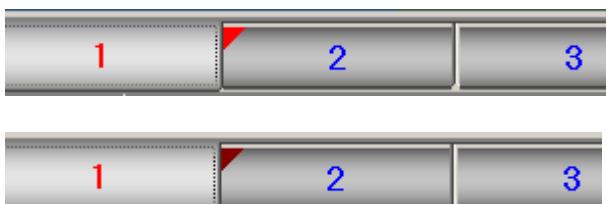
Checking this option adds a track preview area to the "Load" file selector dialog



The track will be played out on the output assigned to the button about to be loaded at the [default output level](#)

## Old Menus - Show Pages Playing

As an aid to know on which page tracks are being played, this option marks the page tabs in the upper left corner with a red triangle, this will flash if the Options|Flash Button During Play option is set.



## **Old Menus - Flash Phase Locked**

Synchronize flashing of all button numbers

## **Old Menus - Highlight Step to Next**

Step to Next mode shows the selected button with a white background to the track number

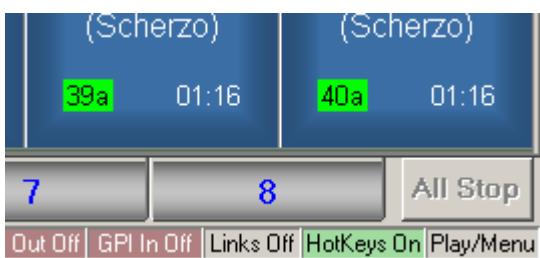
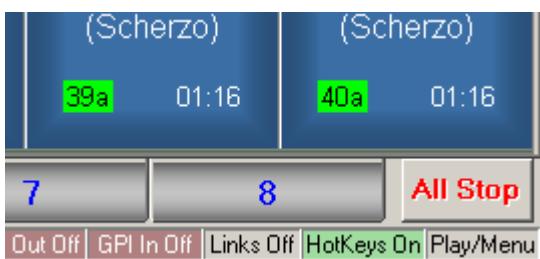


In some circumstances this may not be obvious on the screen so the Highlight Step to Next option adds extra highlighting in the corners of the button



## **Old Menus - Enable All Stop Button**

This will disable/enable the All Stop button in the status bar



## Old Menus - Narrow Track Numbers

The coloured background on the track numbers sometimes extends over the duration numbers, so hiding some or all of the modifier symbols.



Links Off

Links On

In the situation above the switching on of the Master/Slave links causes the green text background to extend towards the right hand side of the button, this is to allow for indication of all the possible combinations of links. All buttons on a page have the text background set to the same width.

To reduce the instances of the track number hiding the duration modifiers the Narrow Track Numbers option can be checked, this will set the width of the background to be as wide as possible whilst avoiding overlapping the duration text except when absolutely necessary.



Links On

Links On

## Old Menus - Edged Midi/HotKey Text

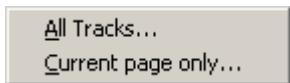
In order to improve visibility of the button Midi and HotKey text this option will add a drop shadow effect to the text



## Old Menus - Flash Button During Play

Flash button number bright/dark red when playing

## Old Menus - Optimize Tracks



Tracks can be optimized either globally covering all tracks on all pages, or just on the current page, so assigning the most frequently played tracks to hardware mixers.

## Use Win XP Themes - enabled by default

Check the Use Win XP Themes\_menu item to enable the Windows "XP theme" look when running under Windows XP or above, SpotOn will have to be restarted for this to take effect.

XP themes disabled:-



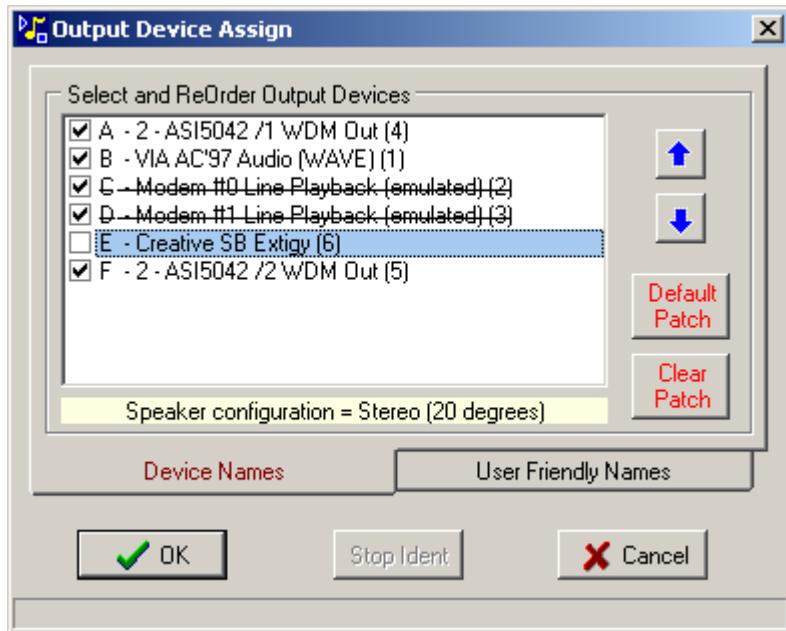
XP Themes enabled:-



Note: the actual representation will depend on the particular color scheme selected under WinXP themes, and consequentially the readability of some sections of the program may be reduced.

# Output Device Assign

## Output Device Assign - Clear Patch



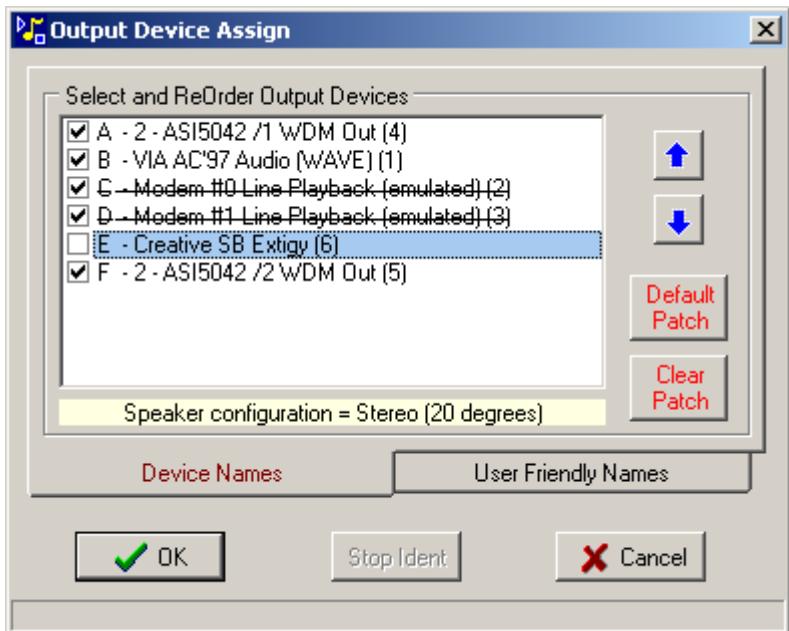
When assigning outputs for the first time or after a change of output devices eg Multi-channel/Stereo, it is recommended that the Clear Patch button is used to clear any ambiguous settings in the SpotOn configuration file.

Clicking on Clear Patch will display the dialog box below



Choosing OK will close the Output Device Assign dialog and return to the main SpotOn screen.

## Output Device Assign - Default Patch

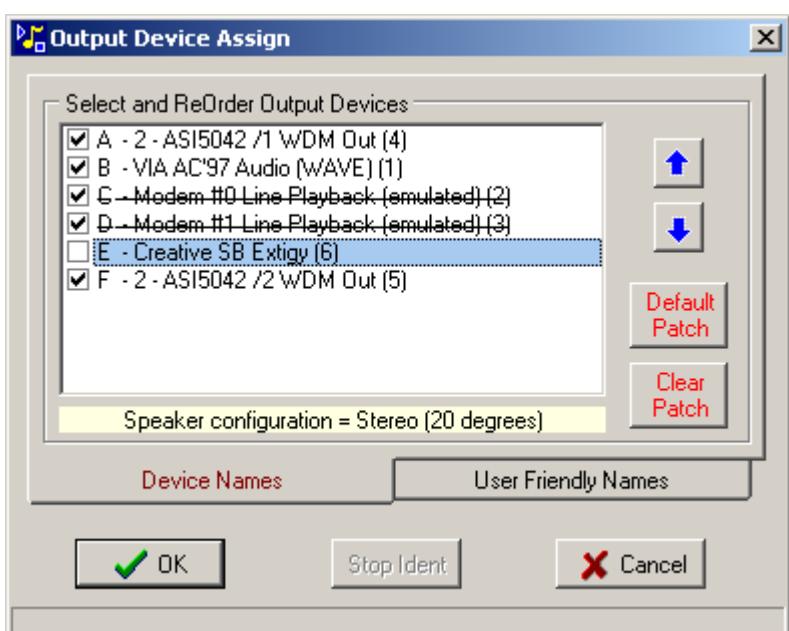


The Default Patch is saved on installation when the outputs have been initially configured. If necessary the Default Patch button will return the output device patch and masking to the installation settings.

Clicking on Default Patch will display the dialog box below



## Output Device Assign - Masking



Some sound cards do not allow more than one application to access an output port simultaneously, in this case it is useful to force SpotOn to not use a specific output port so making it available for other applications.

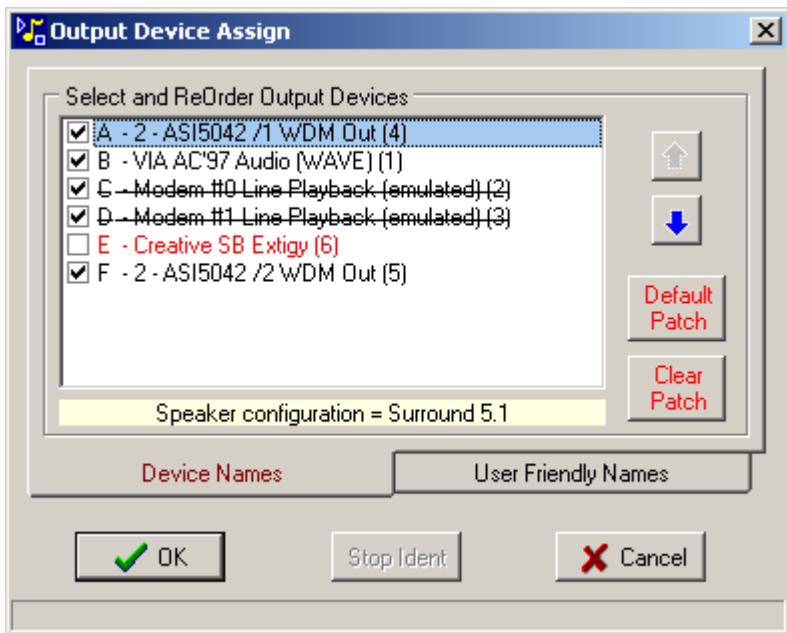
In the example above there are seven output ports listed A..F.

Items A, B and F are sound card outputs being used by SpotOn

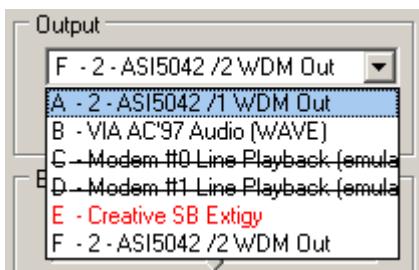
Items C and D are not available because they are virtual outputs provided by two modems and not in fact real sound card ports.

The remaining item E has been unchecked and therefore will be masked out of ports used by SpotOn, the masking of ports will only take effect the next time SpotOn is restarted. If there are buttons using any port/s that are masked on restart then those buttons will be assigned to device designated as the Windows Preferred audio output device, designated by the subscript '(1)' in the device list. If the Windows preferred audio output device is also masked then the buttons concerned will not be loaded.

After a restart output E is shown in red text



The example below shows the effect of masking outputs in the [Audio SetUp](#) dialog, where output E cannot be selected.

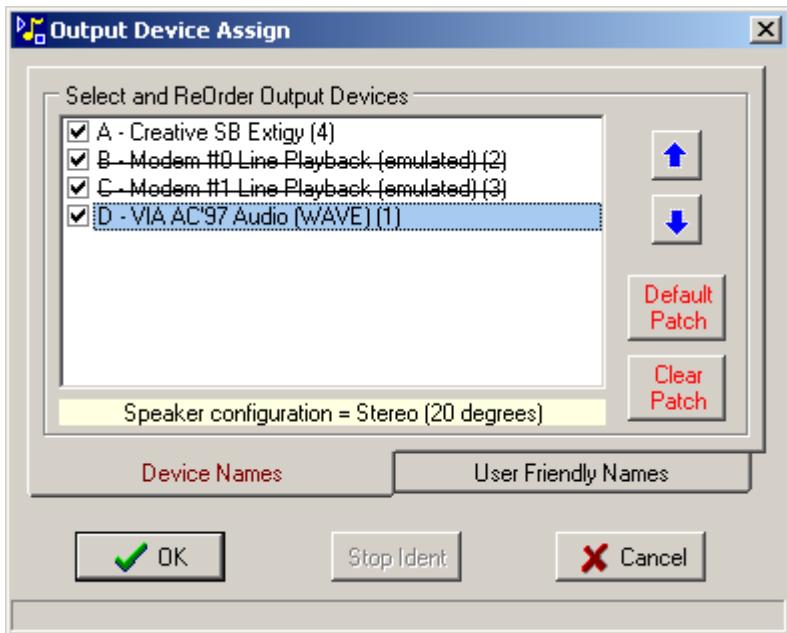


### Output Device Assign - Order

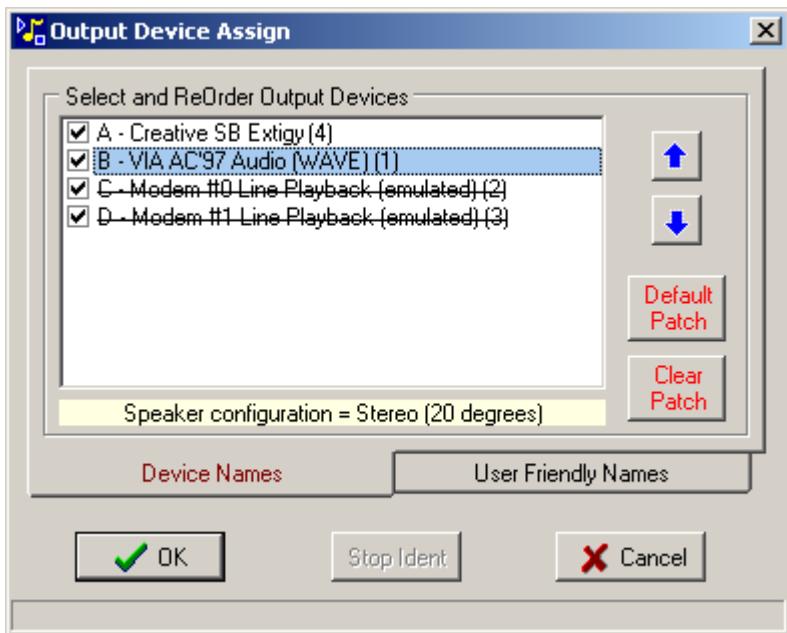
The up, down and reset buttons on the right hand side of the window allows the ordering of the output devices.

If outputs currently known as A and D were to be the main options it would be useful to move them to the first two positions in the list so appearing as A and B

To do this first highlight the line describing output D



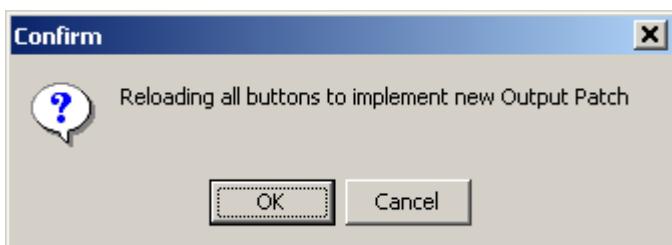
By clicking the up arrow twice the order now appears as



Reset Order button will restore the output device order to that which was found by the Windows OS.

Identically loaded computers may not always report the output devices in the same order, so this option is useful in making the computers 'look' the same to the user.

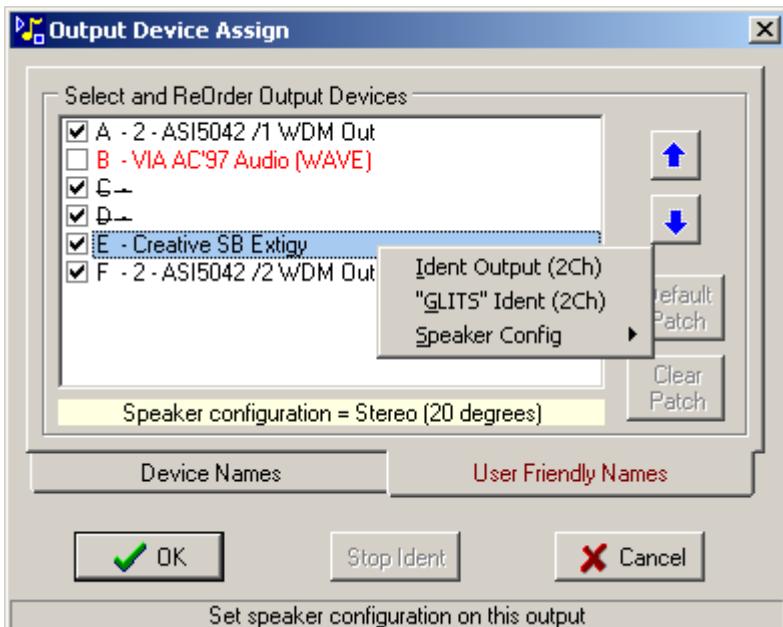
Exiting with OK produces a confirmation dialog box to warn that all buttons will be reloaded to in order to implement the change



## Output Device Assign - Names

The names that appear alongside the output ports are those obtained from Windows, often more informative names are required, selecting the User Friendly Names tab show the alternative names defined - these initially default to the Windows name.

The new names are enabled via the Options|Display|Use Friendly Output Names menu item.



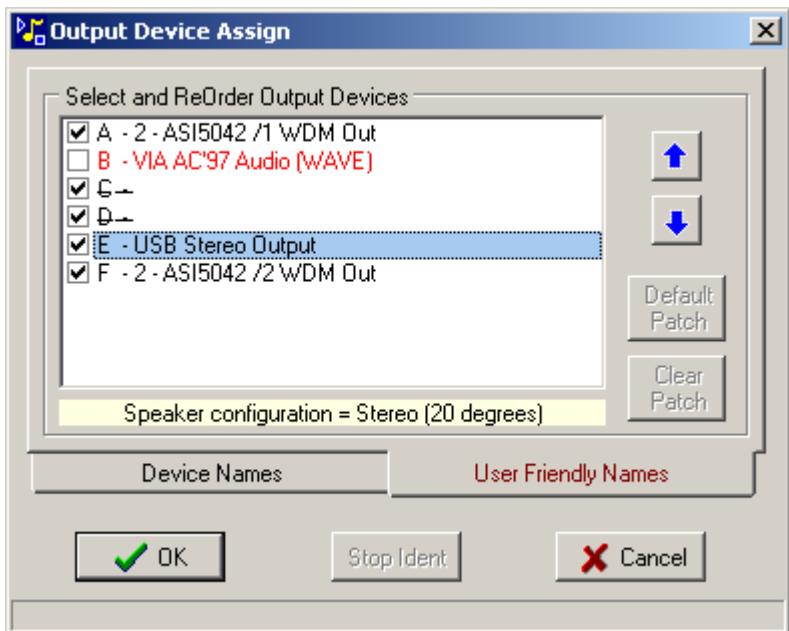
Right-click an entry and select Edit User Name, which displays the edit box below



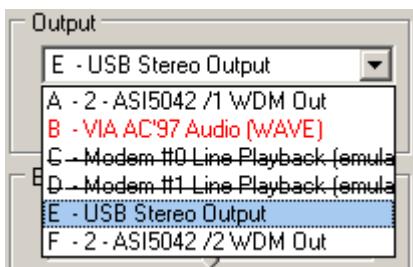
Enter the new name



On closing the editor the name is up dated



The User Friendly Names are only used in the button menu - option Audio|Output as below:-

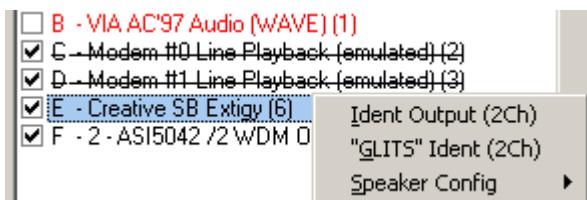


### Output Device Assign - Mode

Under the list of output devices there is a panel showing the 'Speaker Configuration' of that output

Speaker configuration = Stereo (20 degrees)

To change the 'Speaker Configuration' right-click an entry and select the Speaker Config option.



The full list of modes is shown with the three most common modes enabled.

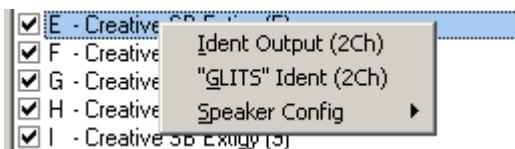


Check the appropriate option to change the mode of that output, in some cases it will also be necessary to use the manufacturers setup utility to change the hardware mode.

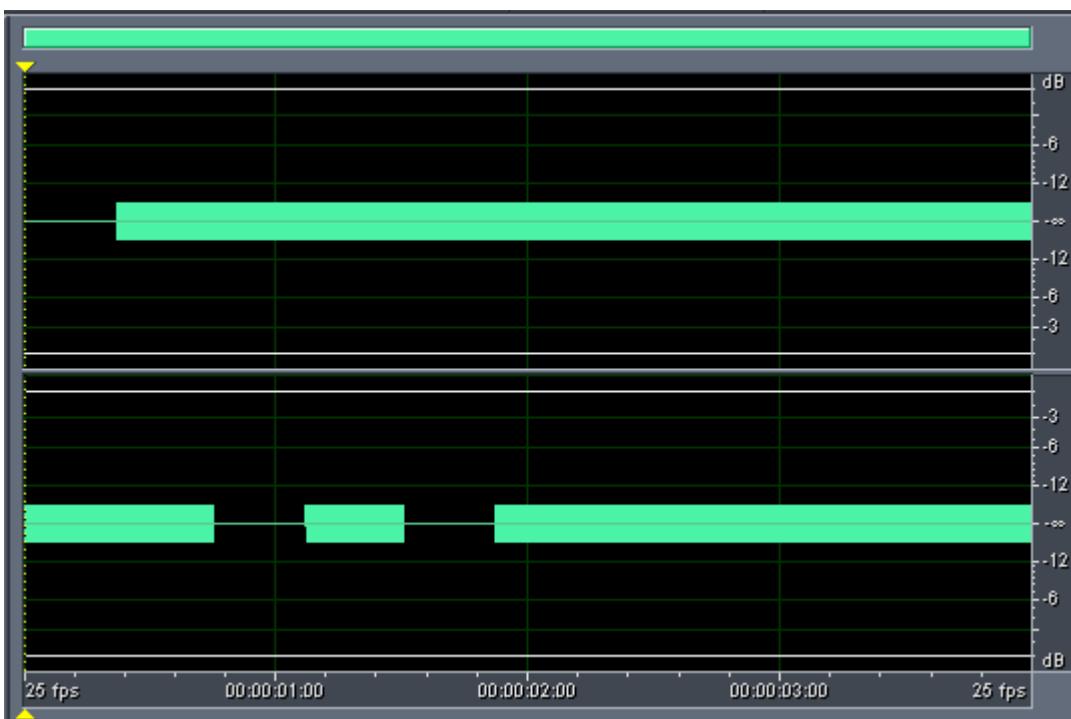
## Output Device Assign - Idents

As SpotOn can operate in conventional 2 channel stereo and multi-channel modes, it may be useful to identify the individual output ports.

To identify output right-click the entry and select Ident option, this will start a voice ident loop spanning all output channels.

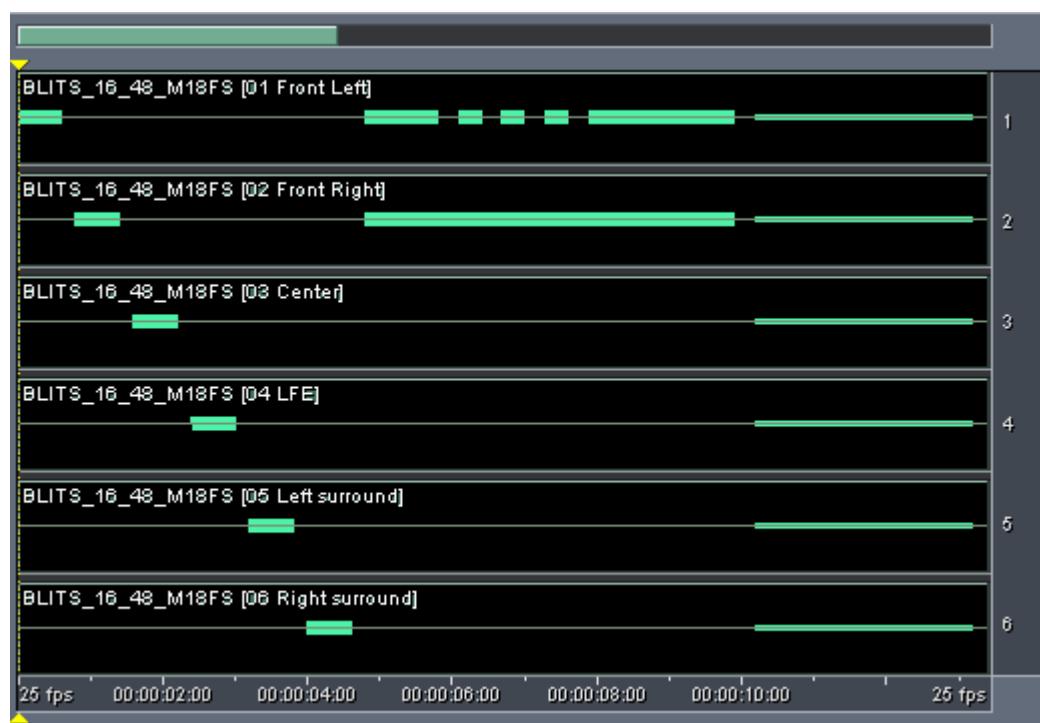


The "GLITS" test tone sequence is available for stereo sound configurations and is formed by interrupted 1kHz tone with one break on the left channel followed by two breaks on the right channel.

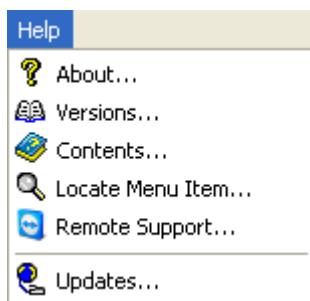


Similarly the "BLITS" test tone sequence is available for 5.1 surround sound configurations - see [BLITS](#) page for further details

- A - 2 - ASI5042 /1 WDM Out (4)
  - B - VIA AC'97 Audio (WAVE) (1)
  - C - Modem #0 Line Playback (em)
  - D - Modem #1 Line Playback (em)
- [Ident Output \(6Ch\)](#)  
["BLITS" Ident \(6Ch\)](#)  
[Speaker Config](#) >



# Help Menu



About Just displays an 'About Box'

Versions Shows Versions page from help file

Contents Opens this help file

[Locate Menu Item](#) Search dialog for finding menu items

[Remote Support](#) Utility to provide remote support of the SpotOn system

\*Updates Accesses SpotOn updates web page

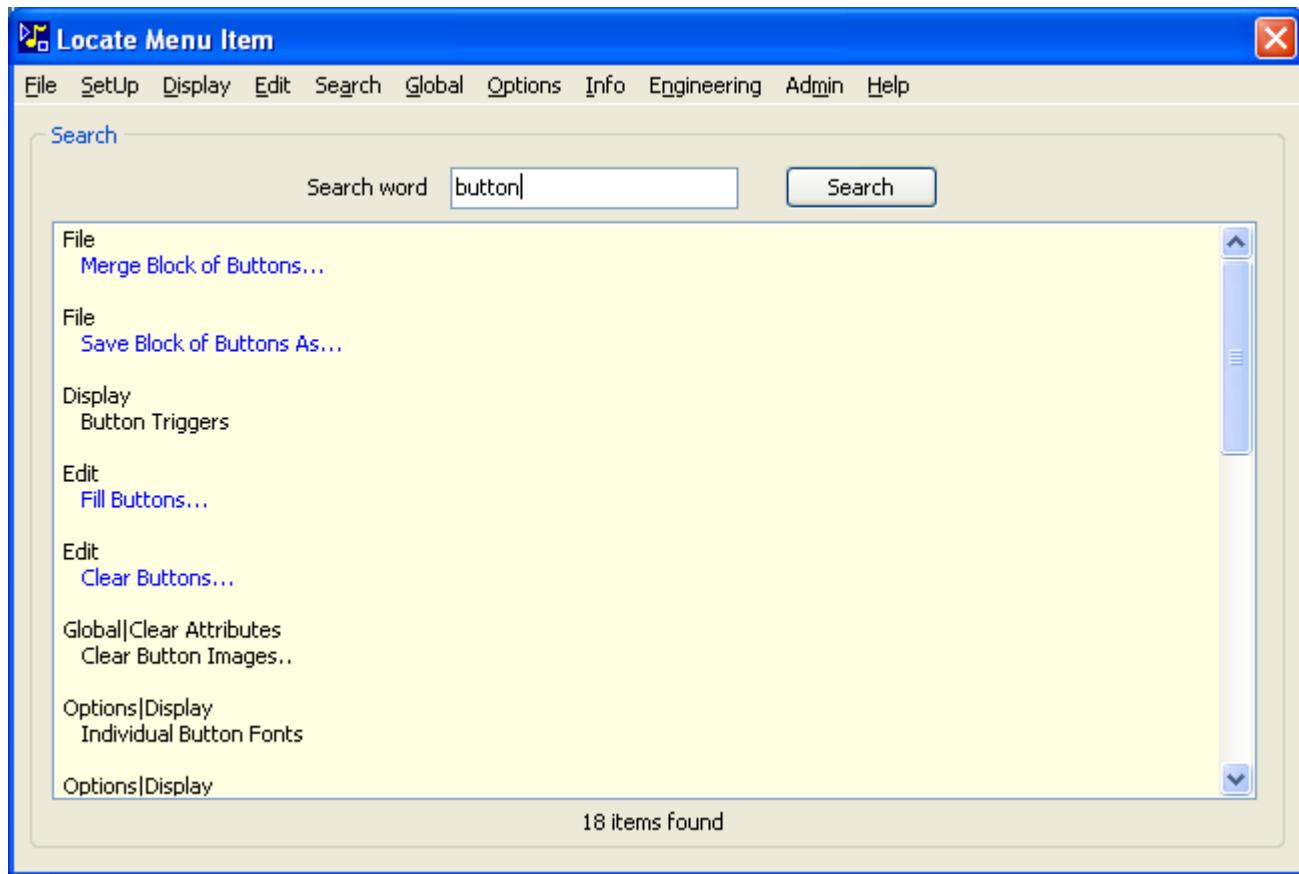
\*Enabled via [Admin menu](#)

## Locate Menu Item

The dialog below allows the menus to be searched for a keyword, the search term 'button' lists 18 items.

The results shown in blue text are hyperlinks to menu dialogs and can be clicked to open up the appropriate dialog box.

The format of the results includes the main menu item followed by a number of menu subitems eg Options | Display.

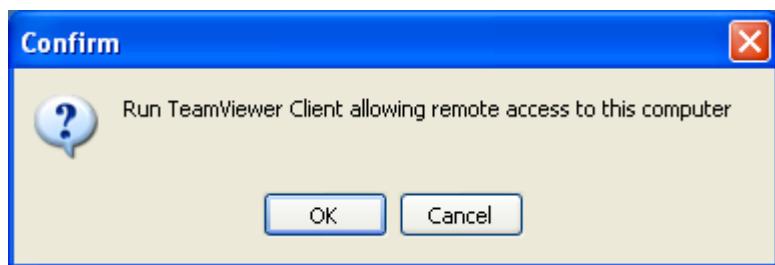


The menu bar shown at the top of the dialog is a copy of the main SpotOn menu and is live.

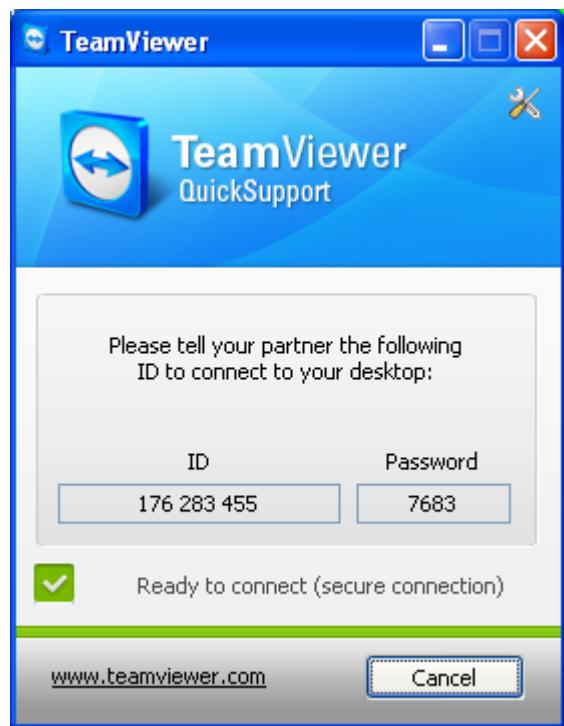
## Remote Support

Remote support is available for SpotOn, prior arrangement with the supplier is required for this facility. The [TeamViewer](#) utility is used to provide remote access to the SpotOn computer.

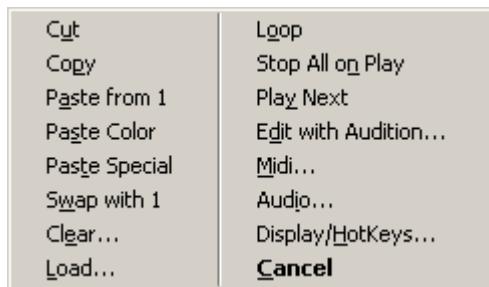
A client application needs to be run on the local computer to allow access.



The ID and password displayed on the SpotOn computer should be passed on to the SpotOn supplier so that remote access can be initiated.



# Button PopUp Menu



The items in the left hand column deal with the button as a whole, the items on the right cover the parameters of the track loaded into the button.

The **Cut**-to clipboard, **Copy**-to clipboard and **Paste**-from clipboard options allow tracks to be moved between buttons, Paste Colour will take the colour of the "Copied" button and paste it to a destination button enabling say, a set of buttons with similar sounds to have the same colour.

**Swap** will exchange the button "Copied" to the clipboard with the destination button.

**Clear** will remove all references to a track from a single button

**Load** and **Browse** display file selection dialogs for loading of tracks to buttons.

The first three items in the right hand column as options that can be checked or unchecked.

**Loop** when checked will cause the track play command to start playing the

**Stop All on Play** if this option is checked when the track begins to play all other tracks being played will fade out using their individual fade times, this is indicated by a small square halfway up the right hand edge of the button.

Alternatively tracks can be set to stop immediately without fades by muting the audio on this button (see [Audio SetUp](#)), in this case the square box icon is replaced by a square outline

An advanced operation of Stop on Mouse Up is available by ctrl+clicking this option. When selected the track will play whilst the left mouse button is held down and stop when it is released, the mode is indicated by a white outlined red square on the right hand side of the button

**Play Next** checking this option will cause the track contained in the next highest button to play when this track reaches the end, this is indicated by a small right facing arrow halfway up the right hand edge of the button



When the track on button 1 reaches the end, Button 2 will begin to play

When button 2 plays any other tracks that may be playing will be stopped

When button 3 plays it will also stop any other tracks that are currently playing and will then play button 4 when the track on button 3 reaches the end.

Button 4 is set to loop continuously

**Edit** opens up the user defined WAV file editor, this editor is selected via SetUp|Editor menu

**Midi** see [Midi Assignment](#)

**Audio** see [Audio Setup](#)

**Display** see [Display Options](#)

For a full description of the popup menu options see [Button Menus](#) page