TH-S

V 3.2.1

User’s guide

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Introduction

TH-S, the Theater System or The Harddisk Sampler, offers 7 Audio-Players on Apple Macintosh hardware basis. The operation follows the clear structure of tape recorders with photoelectric control. Theatre performances or broadcast productions etc. can be operated as precisely as usual.

As well TH-S offers all the advantages of harddisk based systems namely undelayed reaction on manual actions, fast access to the complete audio material (also via network) and extensive means for MIDI and USB remote control.

Beneath all other new features explained below TH-S X 3.2 contains a completely new Media Player (Player 7), which plays all QuickTime compatible Audio/Video formats over the integrated Matrix via Digidesign or Core Audio Hardware.

On the Audio side, beneath all linear formats, TH-S plays all MPEG –formats (.mp3, .mp4, “DIGAS” etc.) as well as “lossy” codec like μlaw, Alaw, IMA, MS ADPCM, Qualcomm etc.

On the Video side all formats could be played directly via fire wire in DV PAL/NTSC respectively DVCPro format or via additional Graphic Cards / Monitors. The, in the Media player, integrated Video Grabber makes it possible for you to simply record Video Cues which are time-stamped and are accessible immediately in the play list of the Media Player.

For navigation of connected DV-Cameras/Decks you can use Player 8.

For the user it makes no different to play audio or video material because of a complete identical remote and snapshot integration.

For maximum flexibility in your studio all players can be controlled additionally via cell phones with Bluetooth (OSX only)

Overview of functions

- TH-S is an audio file player system on Apple OSX and Windows XP basis on multiple audio hardware.

- TH-S provides up to 6 stereo hard disk player, 4 stereo + two 8-track- or 4 stereo + one 16-track-player.
- Playback takes place from up to 36 outputs. The players can freely be routed to these outputs via an integrated audio matrix (34x18) (Inputs: 18 line + 26 player chan. To36 outputs, depending on used interface).
- Each TH-S Player can manage up to 999 cues. The first 127 can be addressed via midi NoteOn.

- The internal CD-rom drive is completely integrated into the automation and the audio matrix.

- TH-S starts every sound file without any delay, as the first128k of any sound files are kept ready in the RAM of the Macintosh.

- TH-S provides a 34x18 audio matrix fully integrated into the automation.

- TH-S provides an integrated multichannel sound file editor.

- TH-S reproduces AIFF-, SDII-, Wave, Next/SUN – Mono/Stereo and Multichannel files 16 and 24 bit

- TH-S incorporates an Integrated Real-time Sample rate Conversion. Sound files will automatically be converted to the correct system sample rate during playback.

- Each TH-S player has an individually switchable AUTOCUE mode simulating the behaviour of a tape recorder with photoelectric beam, i.e. the player positions itself at the beginning of the next cue when stopped or when running out.

- TH-S provides per player an individually switchable LOOP function to enable endless reproduction of a cue.

- TH-S provides per player a PFL function, which enables you to safely prelisten to stereo- and mono files, even with open fader or while another file is running at the same time.

- With TH-S you can select, prelisten and finally start any file without any problems, even while the player is running.

- With TH-S you can add sound files (also via network) to the play list in background, while the player is running.

- Sound files can be edited in background with an integrated sample editor. (Editor is supplied with TH-S).

- TH-S can give out MIDI Program Change commands, e.g. to control an automated mixing desks.
- TH-S provides a snapshot function. In 99 snapshots you can store and recall fades positions, cue selections, loop setting and MIDI Program Change commands as well as output matrix settings.

- The snapshots can be triggered by external Program Change commands.

- TH-S provides a MIDI Fader start function which works e.g. with Yamaha O2R fader start commands.

- TH-S can be controlled with a moving fader remote control. This involves fader, start-, stop-, pause buttons and cue selection as well as information about any necessary data with an 80 sign display. It is possible to control TH-S completely remote from the audio hardware via MIDI, e.g. in the auditorium.

Minimum System Requirements

MacOS X:

MacOS X Version ≥10.3.2
G3 or G4 CPU, min. 800 MHz, min. 100 MHz System bus for Video
G3 CPU allows only limited video capabilities
G5 CPU min. 1600 MHz
≥512 MByte of RAM
Monitor min. 1024x768
QuickTime ≥6.4
Open GL
Core Audio compatible Audio Hardware

Windows XP:

Windows XP Home or Pro
P4 CPU, min. 1000 MHz
≥512 MByte of RAM
Monitor min. 1024x768
Complete QuickTime Installation ≥6.4
Open GL
ASIO compatible Audio Hardware

IMPORTANT:
Installed "Interlok" Extensions. If not already installed by other programs, "Interlok Extensions Install" can be found in the "Goodies" folder. These extensions are necessary for the copy protection scheme used by TH-S.
Always use the latest drivers of attached audio hardware, DV cameras, Web Cams, etc to ensure trouble free operation.

Important for Digidesign hardware users under OSX:

Before the first usage the Digidesign “Core Audio Setup” as a valid application must notify TH-S. Without that there will be no audio output over this hardware.
Also the standard audio output in the sound control panel (AMS) should not be set to Digidesign.

Installation

Installation of the TH-S Software

Note: Before installing TH-S be sure to have installed your Digidesign Pro Tools® hard- and software or your ASIO-compatible audio-hardware installed properly. Comply exactly with manufacturer's instructions.

TH-S is copy protected. Start the ***Installer*** supplied on the TH-S CD-rom and follow the instructions. After the first start TH-S will calculate a „Challenge-Code" (string of characters) out of several parameters of your computer. This code must be transmitted to APB-Tools via email (support@apbtools.com), telephone or FAX. The corresponding response code will be sent back within one working day usually. After entering the response code this copy of TH-S will be authorized on this CPU.

Note: The installer offers a 30-day test mode, so you can start working immediately.
In case of a hard disk damage the test mode will also be at your disposal if you replace the disk with a new one. This provides safety (on condition that the audio data are backed up)

On your hard disk a TH-S folder will be created. It is important that you always make a copy of the entire folder for every new project! This can be done manually (e.g. <Cmd>D duplicate) or via the installer.
`It is recommendable to rename the TH-S folder with for example the title of your project.`
Then you must start the copy of the program from inside the respective folder of your project.

Hint: Create an alias of this program copy and put it to the desktop.

Important: Switch off the autoplay-funktion for CDs and DVDs in the „QuickTime" control panel. Otherwise a CD starts playing automatically at insertion and TH-S cannot access it.

OSX Installation

The „TH-S 3.2.1" Show Template and the helping tool „Current TH-S Show" will be placed in the Application Filder of the System Disk. From there you can coppy it to any place you like.

It is recommendable to put he App. „Current TH-S Show" into the dock and into the sidebar so it will be accesable anytime.

Compatibility with "Tiger"

This version is compatible with OSX 10.3. OSx 10.4 or higher is recommanded.

Native OSX "Bundle" Format

TH-S now works as a OSX native "bundle" application. From v2.6 on complete shows appear in OSX as clickable applications in the Finder. All player folders are located "inside" the

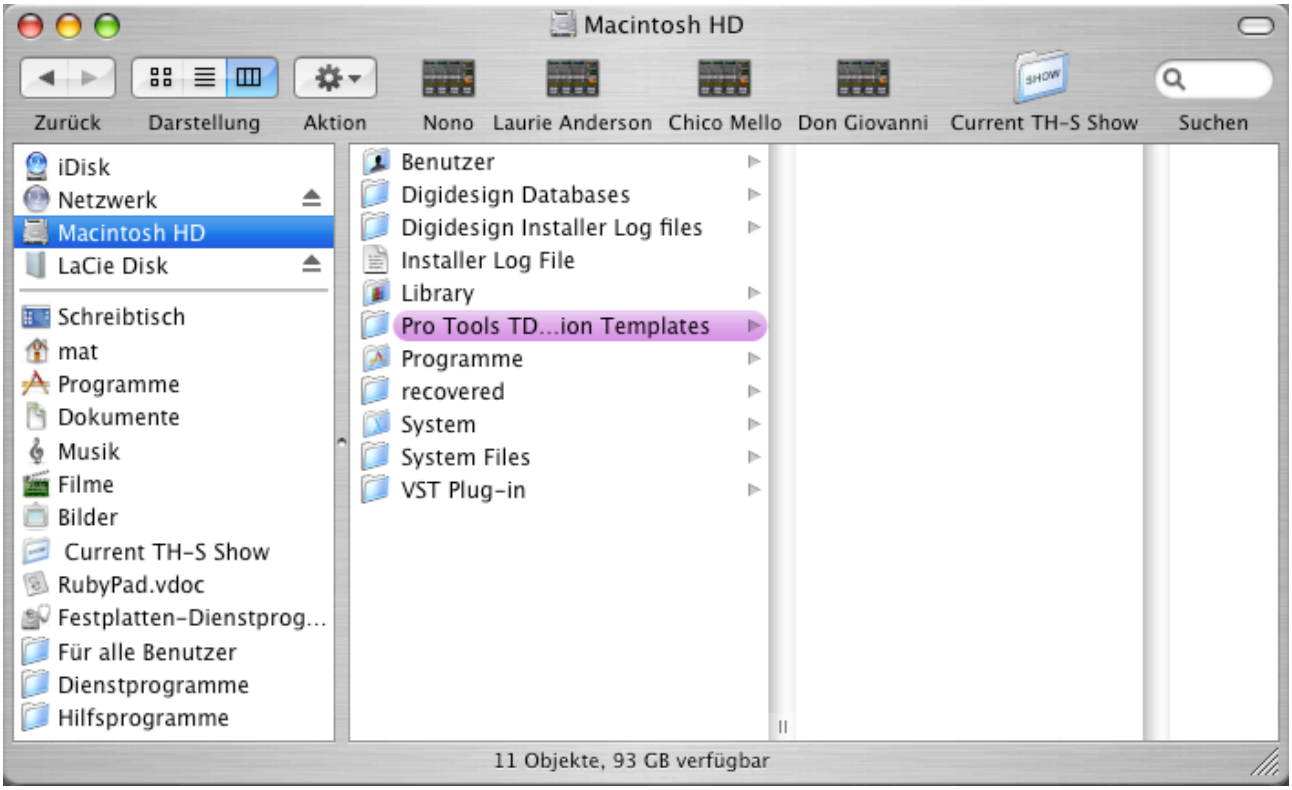
application. This makes the handling during copying/archiving much easier and reduces a lot the danger of accidently deleting/moving audio files from already finished shows.
Files which are located inside of bundle applications are not listed during normal finder search operations, and therefore cannot be moved accidently.

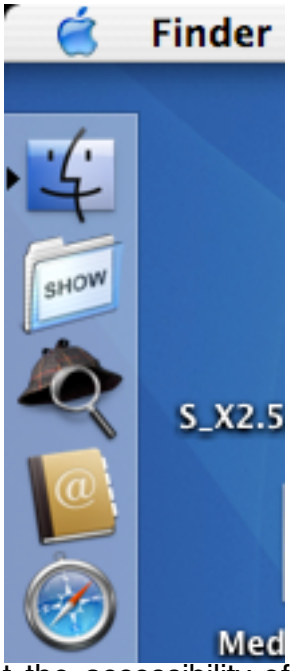
Application-Bundles can either be opened by "<Ctrl>Click ->Show Package Content" (the player folders M1 etc. are located in the "/Content/MacOS" folder), or more comfotable with the included "Current TH-S Show" applet while running TH-S.

"Current TH-S Show" opens automatically the current running show folder out of arbitrary programs. After installation it can be found in the "Applications" folder as well as in the Applescript menu.

For optimal access it is highly recommended to drag "Current TH-S Show" from the Applications" folder onto the application bar of OSX 10.2/10.3 resp. the sidebar of OSX 10.3 as well as into the Dock ("Current TH-S Show" is located in the "Applications" folder).

For system wide activation of the AppleScript menu one has to doubleclick "Install Script Menu" in the /Applications/AppleScript folder.





This additionally speeds up a lot the accessibility of whole folder contents for drag&drop operations.
"TH-S Current Show" works only under OSX.

TH-S v3.0 - The new Playout Standard

TH-S v3.0 is the result of 5 years of ongoing development based on the experience with performance playout systems in mostly all areas.
All players are completely new designed from scratch and allow for the first time to save and recall all related parameters for EACH individual Soundfile/Videofile.

Cue based Automation

One of the most important and far reaching innovations for the user is the change from a "snapshot based" to a "cue based" automation system.
All relevant playout informations can be directly saved and recalled together with the actual soundfile.

Word Definition:
Besides the actual soundfile a "Cue" contains all parameters like Routing,Start-/Stop time, LOOP-/AUTOCUE settings etc. (see below)

The user can now define for each soundfile loop points, matrix outputs, fader level etc. which simplifies and speeds up working in complex shows.

All settings are AUTOMATICALLY SAVED after usage.The user has only to set everything one time right and does not have to care further about saving parameters etc.

This "Auto-Save-to-disk" function now also works for Snapshots, which now only save the combinations of soundfiles, the parameters for Player 8 (MIDI) and the textbook contents.

SAVE... resaves a "Showfile" within the Show Template. SAVE AS... saves the "Showfile" outside the show for Backup/Editing purposes or for fast exchange of complete Snapshot sets (by exchanging the "Showfile").

List of parameters saved within a Cue (soundfile):

- LINE IN SWITCH
- LOOP SWITCH
- AUTOCUE SWITCH
- MONO/MUX SWITCH
- START/STOP and LOOP POINTS (non-destructive, new in v3.0-> see below)
- FADER POSITION (new function, new in v3.0-> see below)
- Standard Audio routing
- Matrix Audio routing
- SIGMA1 soundpaths (with TH-S XL created soundpaths)

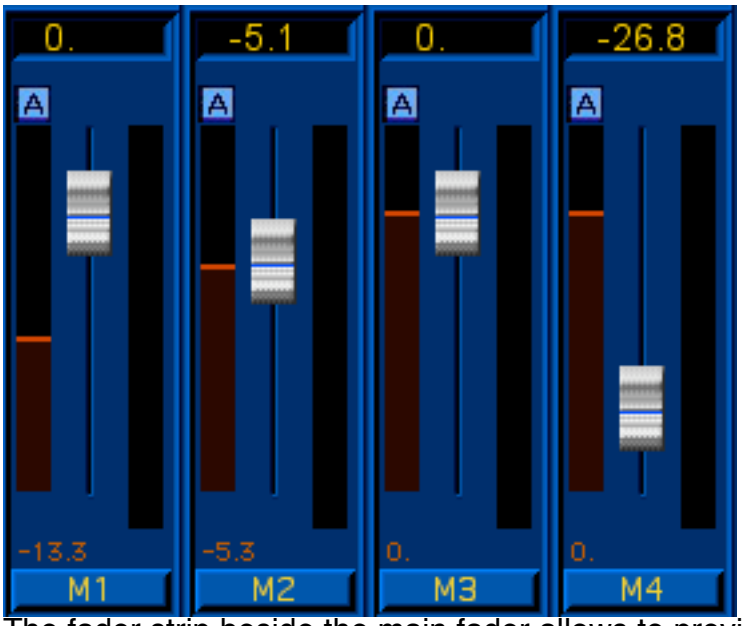
All playlists of each player are located in their Player folders (M1,M2, etc.). These are plain text files and can be edited offline with any text editor.

List of parameters saved within a Snapshot:

- Current soundfile name of each player
- Snapshot name
- Textbook entry
- Fader Position Player 8 (MIDI VOLUME)
- Program Change Nummer (MIDI PGM CHG)

The Snapshot "Showfile" is a plain text file and can be edited offline with any text editor.

Fader Automation Preview



The fader strip beside the main fader allows to preview and to set the fader position of the CURRENTLY DISPLAYED cue in the popup menu.

Case a)
During playback the playlist can be scrolled through and the fader values of the coming cues are displayed (red).
By clickdragging on the strip these values can be changed (without having to be played actively) and are immediately stored to the automation.

Case b)
The fader strip can be used to comfortably adjust the trigger level of the currently playing cue.
When starting the next time, the level is automatically adjusted to the selected level and stored in the automation.

Example a):
After playing back a few cues one knows that all coming cues should also be lowered ~10dB.
While one cue is playing all cues can be adjusted to -10dB lower in advance. All values are stored directly in the automation.

Example b):
The current cue should be triggered the next time 6dB higher in volume.
Just clickdrag the strip to a 6dB higher position. Next time the cue is started it will be triggered with that level.

Fader Automation On/Off can be stored in Snapshots

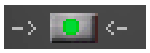
With switched on 

(default) the fader value for each cue is automatically read out when playing back.

When switching off  , the fader automation for all cues of this player is switched off.

The setting can be stored in a Snapshot. As the first Snapshot is always loaded automatically, it is possible to create in rehearsals for example a Snapshot 1 that has no fader automation. This first snapshot then will always be loaded when launching the show.
(remoteable from Motormix row A-H and Mackie Control Rec/Ready 1-8).

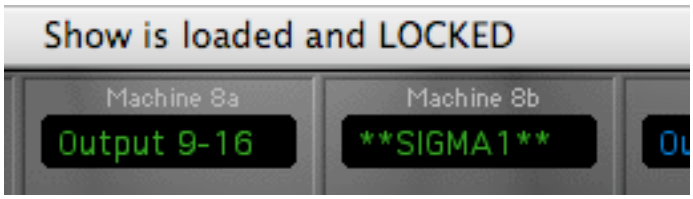
IMPORTANT:

The automation values can be stored with the fader strips or the  button although the fader automation is switched off. This allows easily adjusting the faders to the desired level and later using these values when switching on the fader automation.

Simplified Start/Stop Time Setting

Clickdragging the green time bar defines the start time.
<Shift>Clickdragging the green time bar defines the end time.
The start time can be fine adjusted by clickdragging the digits.

Lock / Unlock Show (in "Setup" Menu)



In "Lock Mode" one can change all parameters in a show but these changes are not written to the harddisk.
After a "Reload" (in Menu "File") or relaunching, the show reverts to the last saved state.

Fastforward/Fastrewind scrubbing

Beside the start buttons there is now a small fader strip  for fastforward/-rewind scrubbing.
If Loop mode is selected the sound will also loop in reverse.
After releasing the mouse the original speed is used again.

MIDI Ports can be stored in Snapshots

All MIDI ports can now be saved and recalled in Snapshots. As the first snapshot is always loaded automatically it is a good idea to save the desired ports in Snapshot1.

Auto-Consolidation

Auto-Consolidation of single files can be achieved by <Ctrl> Clicking (PC right mouse button) on the player surface. A file selection dialog appears and the selected file is inserted at the current playlist position AND is copied (consolidated) to the appropriate player folder.

AUTOCUE "Playthrough"-Mode

The "Playthrough" Mode allows the succesive playback of cue-groups.

Each individual cue can be set to "Playthrough" Mode with <Shift> Clicking the AUTOCUE button. This mode automatically starts the next cue when the current cue has finished. By this one can easily put together whole playback groups within a playlist.

STOP -> AUTOCUE in Setup Menu ("Nikki-Mode")

When in AUTOCUE Mode (also in "Playthrough Mode"), a cue that is stopped by the user keeps at the same position and the player is not advanced one step (default).

By selecting STOP -> AUTOCUE this behaviour is changed globally for all players. When stopping the player it then jumps to the next cue. (IMPORTANT: also in "Playthrough" Mode).

This mode is especially useful when for example a long atmosphere SFX shall be stopped after a not defined time span and the next cue has to be loaded/triggered directly after stopping.

Digital Cinema Desktop (installed by Final Cut HD)

If the main screen is used as fullscreen output for the SD/HD video device "Digital Cinema Desktop" (selectable in "Firewire" and "AV Output Mode" Popup Menu), one can switch back to preview mode by pushing <alt><p> (Preview).

Starttime is now always shown in STOP Mode

The selected start time is now always shown when in STOP. This allows easier navigating to exact starttimes by clickdragging the time bar or the digits of the time display.

FADER Position

The fader position is saved within the current Cue by pushing the " -> <-" button.

The green LED highlights if the fader position equals the saved automation value (Toleranz +/- 0,4 dB).
The function of the green LED as used in former versions of TH-S has been omitted.
For newly created empty Cues (----------) the fader position is 0dB.

Nominal Level

When clicking on the player name in the fader window the fader level is reset to 0dB and the value is saved to the cue.

Hint:
When playing back a soundfile without prior testing of the level, it is recommended to move down the fader (-144dB) and save this value by pushing the " -> <-" button.
This avoids the "snapping" to 0dB when playing back unknown soundfiles.

When using a Mackie Control (XT) touching the faders disconnects the fader automation temporarily thus avoiding the described "snapping" to fader positions.

Operation

Arrangement of the players

TH-S incorporates 6 harddisk player. Players 1-4 are stereo machines, players 5-6 are 8 track machines.
The stereo machines are called M1, M2, M3 and M4, the 8 track machines are called M8a and M8b.
The 8 track maschinen can also be used as mono or stereo players.
The two 8 track players can be linked together (sample accurate) to a16 track player.

Examples for possible configurations:

6x Stereo, + Mediaplayer
5x Stereo + 1x 8-Spur, + Mediaplayer
4x Stereo + 2x 8-Spur + Mediaplayer oder
4x Stereo + 1x 16-Spur + Mediaplayer.

A new development is the Media-player, which is Player 7 (see media-player)

Player 8 serves as output device for MIDI control data (see chapter **MIDI**).

The outputs of the 7 audio players can be routed freely to the outputs of the existing audio hardware via the audio matrix (see chapter **Matrix**). A maximum of 18 outputs is available

TH-S Player	***Audio output***
M1	1-2
M2	3-4
M3	5-6
M4	7-8
M8a	9-16
M8b	9-16
Media-player	Mute

Management of the soundfiles

For each player there exists a particular folder in the current TH-S folder, named after this player („M1“...“M8b“). This folder contains the soundfiles (up to 999).

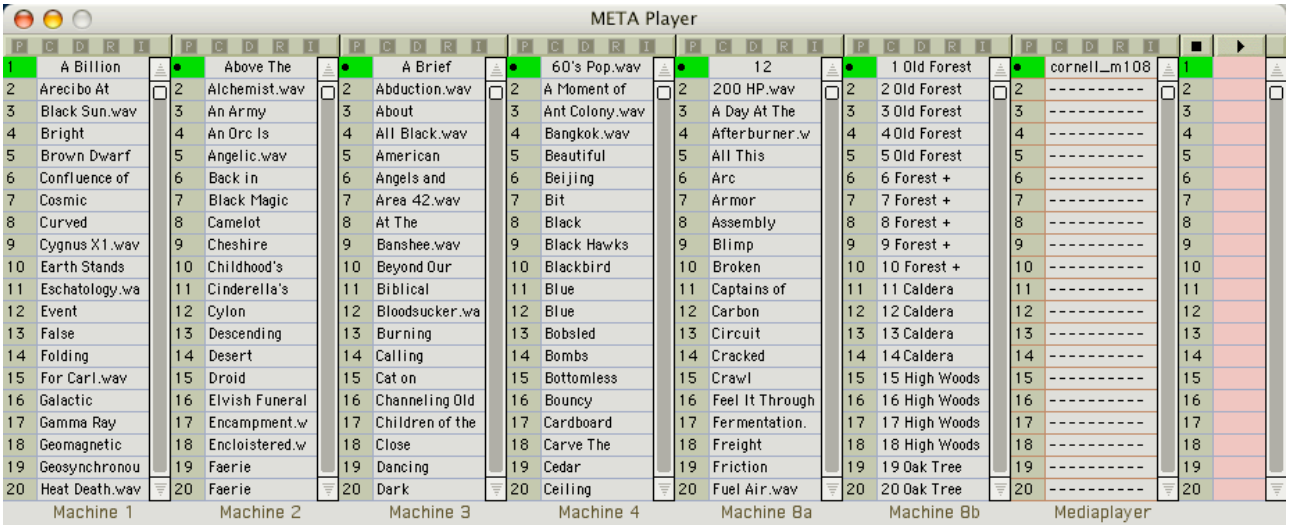
The assignment of the soundfiles to the respective player M1 ... M4 and M8a + M8b works as follows:

- by moving or copying a soundfile (or its alias) into the respective folder M1 ... M8b on the **Desktop**.
- by moving a soundfile to the surface (upper half) of a player. This creates a copy in the respective folder.
- by moving a soundfile to the surface of a player while pressing the **<Shift>-button.** This create an alias in the player which is time- and space saving.
- by **<Ctrl>-click** to the surface of a player. This opens a file select box (with possibility to prelisten) for this player. After selecting and confirming a file with **Open** a copy of the file will be put into the player folder. When holding the **<Shift>**-button during the selection An alias will be created.

The original file of an alias-link may be situated in the same folder, in another folder, on another hard drive (e.g. external Firewire disk) or even on a Remote File Server liegen.

Note: You can drag only one file at the same time to a player surface. If you wish to copy or move several files, you must do this with a desktop operation.

The Meta-Player



Non-destructive arrangement of playlists

All playlists can now be created by drag&drop onto the player surfaces or the correponding META player columns. The new functions ("P","C","D","R","I") in the META Player can be used to organize the playlists (see "New functions of the "META Player" below). Only references to the soundfiles are handled, so the manual copying and renaming of the Cues of former versions is now obsolete (automatic consolidation of the playlists to "self contained" shows see "Consolidate" below).

Soundfiles, folders, whole CDs (OSX only) or whole harddisk volumes can be dragged onto the players (even on several players simultaneously).

• Dragging a soundfile onto a player replaces the current soundfile. "Empty" cues are filled, existing soundfiles are replaced.

• All parameter settings from the former soundfile are kept (Routing,Autocue etc.) when replacing it.

• If more than one soundfile shall be dragged to a player they must be placed inside a folder and the folder has to be dragged onto the player.

• Dragging a folder always replaces the existing soundfiles up to the number of soundfiles contained in the folder. This allows fast combining various sound archive folders into one playlist by moving the existing cues further behind and then add a new folder (see Example 3).

• Dragging a mp3 or mp4 format file onto a player it is auto converted to a linear format (AIFF or WAVE) and copied to the appropriate local show folder .
Exception is the Mediaplayer (Player 7) that is able to playout directly all Quicktime compatible media formats without conversion.

In OSX it is possible to drag the CD icon onto 3 or 4 players and play back VARIOUS TITLES SIMULTANEOUSLY from one CD. The number of cues that can be played that way depends on the DVD/CD drive installed (see Example 5).

Under WIN XP CD titles must first be imported.

Non-destructive Start/Stop/Loop point definition

In the player window below the time display is a white bar that represents the length of a soundfile. After playing a soundfile the first time the bar gets completely light green. This reflects the selection of the soundfile from 0 seconds until end.

Clickdragging the green area lets you define the start and stop time of the soundfile non-destructively.

<Shift> Click dragging left from the selection lets you change the start time only.

<Shift> Click dragging right from the selection lets you change the stop time only.

All time points can be changed during playback and are saved automatically.
The new time points are active when the soundfile is started again.

If the LOOP button is ON the start and end points are used as looping points.

If you want to navigate to a defined start point (i.e. 1 min 25 sec after the beginning of a soundfile) this is done by clickdragging the time display:

1) Clickdrag the "One digit" (sec) until 5
2) Clickdrag the "Ten digit" (sec) until 2
3) Clickdrag the "One digit" (min) until 1

Start point is now 1min25 sec.

If a selection has to be more precise than 100ms then the built in editor should be used for selection.

Functions of the "META Player"

The "META Player" window can now be opened by pushing one of the "M" buttons in the player window or by selecting it in the menu.

In addition to the already existing playback functions the META Player now contains all functions for organizing the playlists.

This new functionality inside the META Player is especially usefull for the design- and rehearsal times of a show, while the player window, due its information reduced display, is more optimized for the actual performances.
Depending on type of show, user preference and production methods there surely exist overlapping uses.

New functions of the Meta-Player

"I"nsert -> Inserts an empty Cue (----------) at the current position
"R"eplace -> Opens the file dialog box and replaces the current soundfile with the selected one (all other settings persist)
"D"elete -> Deletes current Cue, the following Cues are moved one position forward.
"C"lear -> After confirmation the whole playlist is deleted and 127 empty Cues are created
"P"aste -> Allows copying of settings from one Cue to another
"<Shift> P"aste -> Allows copying of settings from one Cue to another, including the soundfile name
PLAY/STOP Button -> Allows simultaneous Start/Stop of selected files (selection is done by clicking on Cue numbers), same as <Cmd> 1 ("Play All").
PLAY/STOP Red Column -> Allows simultaneous Start/Stop of one row of Cues within the META Player grid.

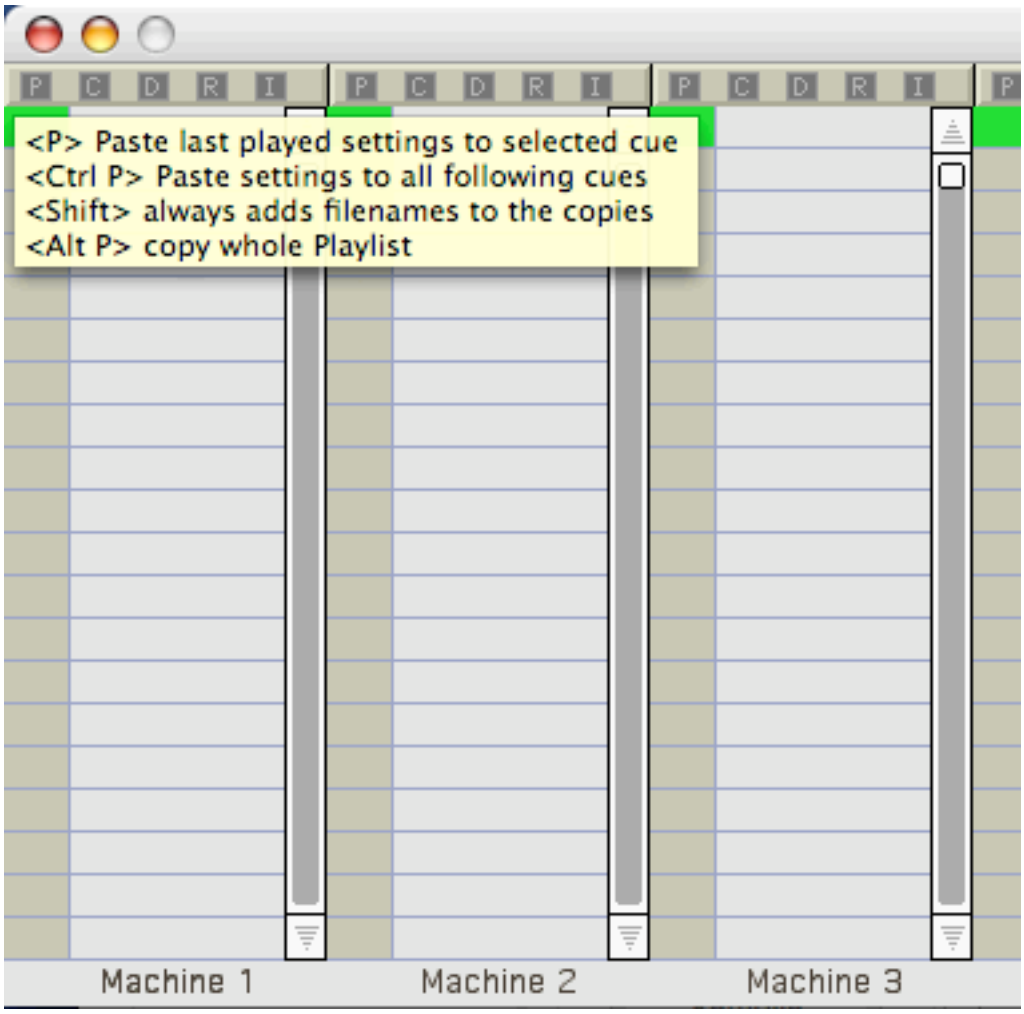
Important: Sigma 1 movements will not be copied at the time

Windows Users: <Ctrl> is equal to the right mouse click

How to copy cues with "P"aste resp. "<Shift> P"aste within the META Player window

1. Always the settings of the last PLAYED Cue are held in memory.
2. Clicking on the desired Cue number (STOP) defines the target Cue.

3. Pushing the "P" button copies all settings to the target Cue. When using "<Shift> P" also the filename is copied to the target Cue.

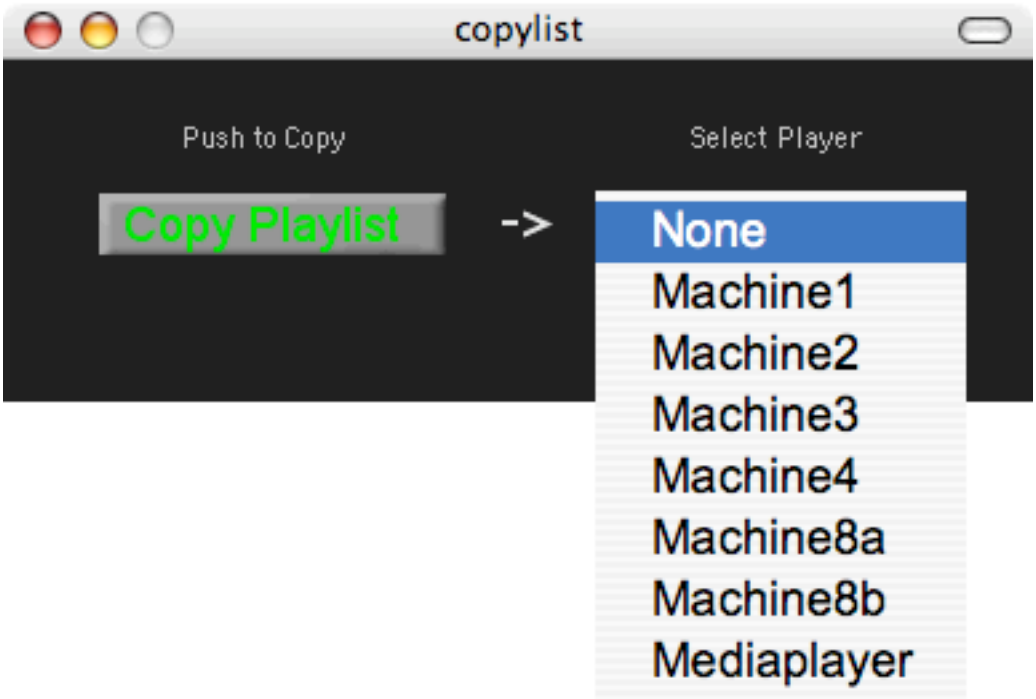


New: Now also Start- and Stop Times are copied.

The copy procedure keeps the same as before:

Copying whole playlists between arbitrary players with <Alt> P

Pushing <Alt> P in the source player opens the following dialog:



One can choose now the target player to which the playilst of the source player should be copied.
After selecting push the "Copy Playlist" button and the playlist is copied to the target player.

Special Cases when copying playlists between stero- and 8-track players

Copying **stereo** playlists **to 8-track** players the "Matrix" routings are copied, the standard stereo routings have to be manually adjusted.
Hint: Before copying just save the standard stereo routings as "Matrix" routings and then copy the playlist.

Copying **8-track** playlists **to stereo** players routings have to be manually adjusted in the stereo player.

Copying whole playlists also copies the SIGMA1 movements of the source player.

Examples

Example 1
To copy the 3 times necessary Cue 3 to Cue 23, 24, 25 first play a short part of Cue 3.

Then click on 23 and push "<Shift> P".
Then click on 24 and push "<Shift> P".
Then click on 25 and push "<Shift> P".

Example 2
You want to insert 5 new Cues before Cue 3.

Click on Cue 3 (Stop- or Play column).
Push "I" 5 times, the empty Cues before Cue 3 are created.
Then fill the empty Cues by drag&drop etc.

Example 3
You want to combine two sound archive folders, second folder contains ten items.

Drag the first folder on the player, the playlist is created.
Click on Cue1 (Stop- or Play column).
Click 10 times "I", empty Cues are created, all existing Cues are moved 10 numbers towards the end.
Drag the second folder on the player, the 10 empty Cues are filled with the folder items.

Example 4
You want to trigger a soundfile with MIDI Note 45, CH11,another one with MIDI Note 23, CH14, a video file with MIDI Note 12, CH10

Click on Cue 45 in Player 1 (Stop- oder Play column)
Use Drag&drop or use "R" to assign a soundfile to the Cue.

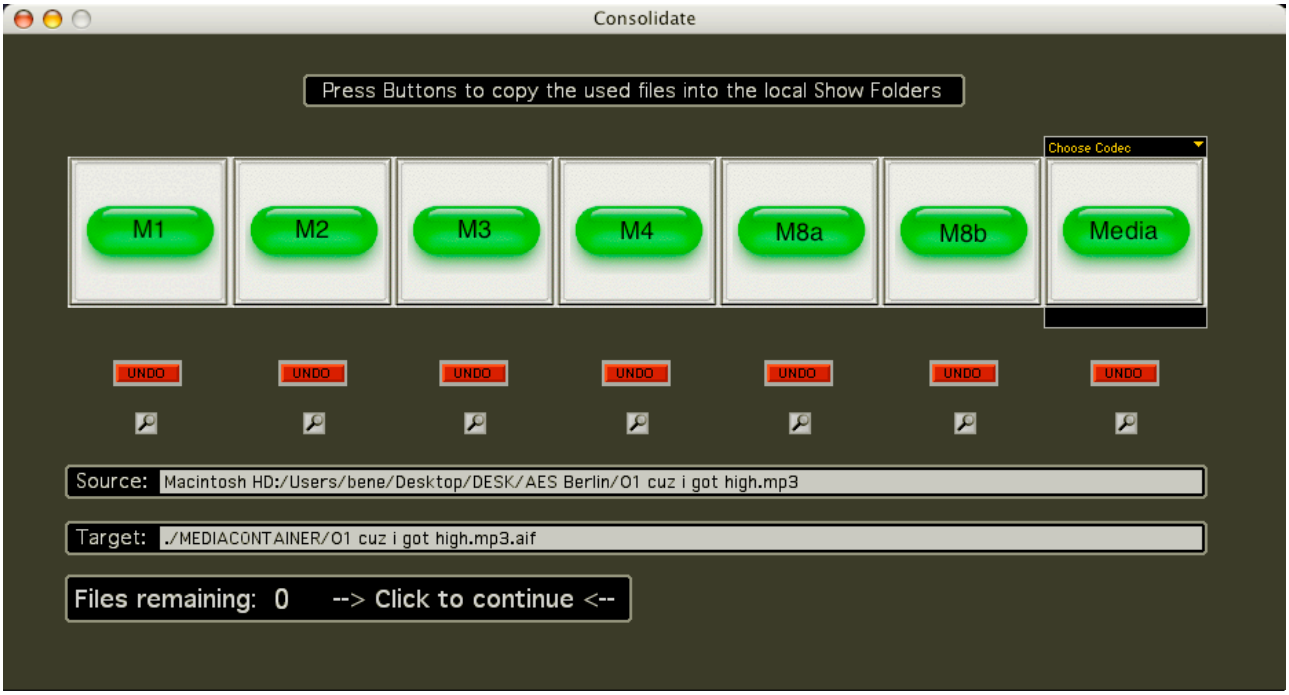
Click on Cue 23 in Player 4 (Stop- oder Play column)
Use Drag&drop or use "R" to assign a soundfile to the Cue.

Click on Cue 45 in the Mediaplayer (Stop- oder Play column)
Use Drag&drop or use "R" to assign a soundfile to the Cue.

Example 5 (OSX only)
The composer arrives 3 minutes before the first main rehearsal with a CD of his latest mixes. The combination of the cues has still to be figured out, some of the tracks have to be played out in parallel.

Drag the CD Icon on player 1, player 2, player 3, player 4.
Select different titles in the different players.
Eventually create snapshots of the combinations.
Play different cues from the same CD on different players.
After the rehearsal delete the not used cues in the players.
Go to the "Consolidate" window and auto-copy the cues to the current show.
The premiere is prepared :-)
"Consolidate Show..."

Consolidate



This function allows the creation of a so called "selfcontained Show". It´s a show that contains all necessary sound- and videofiles within itself and does have no more references to other volumes.

Because of the ability to play back from arbitrary volumes it is important for guest play or backup purposes to have all files available in one show on one volume.

Pushing the green player buttons copies all used files automatically into the appropriate local player folders (M1,M2 etc.).
The display below shows which files are currently copied and how many have still to be copied (Files remaining).

"->Click to continue<-" has to be pushed if a file was not found during the copy procedure, a error message is displayed and the copying has stopped.
The copy procedure is then continued without the file that was missing.

Adding soundfiles later to the playlist only the new ones are consolidated (copied) and added to the existing ones.

Clicking on the magnifying glass lets you view in the "Pathview" window the complete path of each used soundfile.

After consolidation the local files start with a "." before the player folder names (i.e. ./M2/music.aif) and therefore are easily to differentiate from the not already copied files.

The "undo" buttons let you undo the last step of consolidation (the path is reset to the state before, although the soundfiles keep existing in the local folder).

For the Mediaplayer (Player 7) after each copy process TH-S asks whether to use or change the current Codec.This is because of the ability of player 7 that ANY media format can be played and therefore can be easily translated while consolidating (i.e. JPEG to DV etc.).

Also one has to choose a Codec before the first consolidation in player 7.

Important
1. Error

Error (37) signals that the file name is to long. It should be not longer than 28 sign incl. suffix!

2. Currently the automatical consolidation of files in M8a and M8b is not supported and therefore have to be copied manually.

Workaround:

1) Copy the files manually to the appropriate player folders.
2) Drag the folders one time onto the appropriate player surface to redirect the paths correctly.

This inconvenience will be changed in an update.

Supported file formats

On the Audio side Th-S supports beneath all linear formats all MPEG-Formats (.mp3, .mp4, „DIGAS“ etc.) as well as „lossy codecs such as µlaw, Alaw, IMA, MS ADPCM, Qualcomm etc.

On the Video side all formats can be playerd over firewire (IEEE 1394) in DV PAL/NTSC as well as DVCPro or over additional graphic cards / mobitors. The integrated Video Grabber allows simple recording of „time-stamped“ Video Cues which can be played directly from the playlist in the Media-Player.

For the user it makes no differents to play cue audio or video material, because of a total identical operation and cue inegration in all players.

You can use 16-bit and 24-bit files and all samplerates. The samplerates will be converted in realtime to the setted up samplerate.

For the 8-track machines a special 8-track-interleaved fileformat is used which can be generated with the integrated „Interleaver“ from Mono/Stereo files. (see „Interleaver“) This format is compatible to ProTools multichanel-bounces.

Alternative you can play Mono Files with the Stereo-Player and any interleaved file from Mono to 8-chan. from the 8-track Player.

Improved CD/DVD Volume support

On the surface of the Media-Player you can drag any CD/DVD/mp3-CD/JPEG CD etc or whole HD-Volumes which will be shown immediately in the play list.

If you press the Eject-Button the play list will be erased and the CD/DVD will be ejected or the volume will be unmounted.

Cds/mp3-Cds can be dragged also on any other player.

Audio Conversion "On-the-Fly"

When dragging audio files onto the player surfaces, the file is automatically converted into AIFF(or WAVE if selected in the menu) and is updated in the playlist.
Supports all common linear and data reduced audio formats
(CD Audio-Tracks,AIFF,AIFC,WAVE,SDII,mp3,mp4,MPEG,SND etc.).

VIDEO/AUDIO Scrubbing in Player 7

Holding down the <alt> key while moving the time slider in player 7 allows scrubbing on the audio /video content. Without holding down the <alt> key the slider works as "flying locator" like in the other players.
The left/right arrow keys allow framewise stepping forwards/backwards.

Tools Menüpunkt "Universal Converter"

The Universal Converter allows the conversion from arbitrary video/audio formats into arbitrary formats.
After selecting in the menu just select the source file, then select the conversion format and the storage location.

VIDEO -> MON 2

The On/Off button switches the video signal of the Media Player to the second VGA/DVI port for i.e. directly sending it to a connected video beamer etc.

Video/picture fies can be viewed fullscreen in the first monitor by pushing the <esc> key.

Playing out over the second monitor the user can define the size of the picture with the "Movie Size" popup menu (Fullscreen, Original, Half, Double). Default is Fullscreen.

During the first installation the "Blackdesk" file is installed in the "Desktop Pictures" folder which can be used as a black desktop background for the first or second monitor OSX).

max. 18ch "Sync-to-picture" playback

Selecting the Link button between the Media Player and player M8b enables synchronuous start and stop.
This allows easy playback of video content with independent multichannel audio material.
Scrolling through the Mediaplayer timeline automatically scrolls M8b.
Selecting the 16ch Link button enables up to 18channel audio-sync-to-picture.

Supports 96kHz samplerate

TH-S now supports samplerates up to 96kHz if the connected hardware supports it.

Textbook Function (<Cmd>T)

Within each snapshot it is now possible to store textbook entries which are displayed by selecting the snapshot
Clicking into the text window changes from read to write mode.When typing, the red X gets green to symbol write mode..
Five seconds after the last text input (or by manually clicking on the green X) the window changes back to read mode (green X goes red).
Copy/Paste of text blocks fom other programs is possible.
This allows easily adding short comments, hints and text fragments for a scene based approach.
Each change in the text must be stored afterwards within
the snapshot (<Shift ><Enter>).

The distinction between read and write mode is important, as during the write mode the function keys are not available for Start/Stop purposes (No F-Keys while Editing).
The same is true for the +/- keys which will not in-/decrement the snapshots during write mode.
When scrolling through Snapshots the entries are displayed now even when the Snapshot is only selected, not loaded. This allows easy previewing of Snapshot entries.

Pause function over keyboard

A new keyboard shortcut allows pausing the players via keyboard.
The shortcut is <Shift> 1 - 8 corresponding to the player numbers.

Function Key Utility for Powerbook/Ibook

For activating the standard function key behaviour on newer Ibooks/Powerbooks the utility "fnSwitch_1.1.1".dmg" is placed in the "Goodies" folder of the CD.
To trigger TH-S as usual on OSX Ibooks/Powerbooks over the function keys, please install and activate in the system preferences under "fnSwitch".

Mediaplayer (Player 7)

The Mediaplayer plays out arbitrarily mixed Quicktime compatible formats, like i.e. DV Video, JPEG, BMP, PICT, TIFF, PDF, AVI, MPEG, Sd2, AIFF, WAVE, mp3, mp4, TEXT, .VOB (with APPLE MPEG Extension) etc. In principle ALL common linear and data reduced media formats used on the Macintosh/PC can be played out.

For text files for example this is a outstanding tool for projecting simultaneous translations above the stage (see also "Quicktime Tutorial" in the Manual folder).

Stopping video content a "Black" is inserted into the video display. The Clip "Black.dv" is located in the /Mediacontainer/DV_Support folder.
It can be replaced by another arbitrary Quicktime compatible file that has the name "Black.dv".

Switching On the LOOP function and pressing Start, single pictures (i.e. JPEG) can be displayed until the Stop button is pushed. if there is no need for a Black between the pictures, the "Black.dv" file can be removed or renamed. Also the Loop function is then not needed.

The player automatically distinguishes between video/picture or audio content. In the case of video/picture content first a preview window in the current monitor is displayed (320x240 pixel,resizable). Clicking on the magnifier icon the video/picture can be switched on/off.
Pushing the <esc> key the video/picture can be viewed fullscreen.

The first 127 cues in player 7 can be triggered sampler-like via MIDI CH 10, Note ON 1 – 127. The volume for the Cue is saved by pushing the " -> <-" Buttons above the Play/Stop button (see above "FADER Position").

Important:
The system samplerate for the Media Player to play out properly MUST be set to 44.1kHz. Files with 48kHz samplerate can be played back with no problems because of the integrated samplerate conversion.

Enhanced Video Scrubbing in Player 7

Like in the other players it is possible to adjust the time selection with "Clickdrag" and "<Shift> Clickdrag right/left" from the light green area during playback. After starting again the new selection is active.

When also holding down the <alt> key the video pictures are displayed while clickdragging.

Pushing the STOP button always creates a BLACK window.

Defining START and STOP/LOOP points by viewing the pictures one has now several possibilities:

Example1: <alt> Clickdragging within the selection bar

1) <alt> Clickdragging the selection bar defines the start point after releasing the mouse (Hint: Start dragging from the end point)

2) <Shift><alt> Clickdragging right from the selection defines the stop point after releasing the mouse

You can always adjust the points optically with <Shift><alt> Clickdragging right/left from the green selection.

Example2: Adjusting the Start/Stop times with the arrow keys

The arrow keys (<-,->) allow framewise stepping forward and backward at the LAST STOPPED time point. The current picture is displayed.

<Shiftt> "<-" or <Shift> "->" saves the start point
<Shiftt><alt> "<-" or <Shift> <alt> "->" saves the end point

Defining START point:
1) Start the videofile
2) Stop at desired location
3) with "<-" or "->" locate the exact time point (picture is displayed)
4) <Shiftt> "<-" or <Shift> "->" saves the start point

Defining END point::
1) Start the videofile
2) Stop at desired location
3) with "<-" or "->" locate the exact time point (picture is displayed)
4) <Shiftt><alt> "<-" or <Shift> <alt> "->" saves the end point

Example3: Adjusting the Start time with Clickdragging the time display

If you want to navigate to a defined start point (i.e. 1 min 25 sec after the beginning of a video file) this is done by clickdragging the time display:

1. Clickdrag the "One digit" (sec) until 5
2. Clickdrag the "Ten digit" (sec) until 2

Start point is now 25 sec.

When also holding the <alt> key the current video pictures at that point is displayed after releasing the mouse

Pushing the STOP button always creates a BLACK window.

AV Output / AV Input

AV Output:

After switching On the AV output the video content is played out by default via Firewire over an attached DV device. If further hardware components are connected for video playout, they can be selected in the Firewire popup menu (do not mix up with a second or third monitor graphics board).

Above the On/Off switch the playout video format can be selected (PAL/NTSC/DVCPro etc., default FW PAL). When the AV output is activated, the AV Input (Grabber) and DV Remote (see below) are deactivated and are not selectable.
The playout function in v3.0 over Firewire is not available on Windows XP machines.

AV Input (Grabber):

After switching On the AV input, the list of connected video sources appears in the popup menu (DV Camera, WebCam, Component Video etc) which can be selected.
In the popup menu above the physical input port of the source can be selected (Composite, S-VHS, DV-VCR etc.).
After switching on the input, another menu window "AV-Settings" appears.This window allows to define the video and audio settings for the recorded file. Clicking on the magnifier icon opens the video parameter settings for choosing codecs, fps etc.

After setting all parameters the picture in the Miniatur Window gets visible.
Clicking on the magnifier icon displays the picture in the Preview window (320x240 pixel, resizable). For a more zoomed view of the picture there are two possibilities:

1) Pushing the <esc> key allows viewing the video signal in fullscreen mode on the first monitor.
2) Switching on VIDEO -> MON 2 the signal can be viewed fullscreen in the second monitor (see below)

VIDEO -> MON 2

The On/Off button switches the video signal of the Media Player to the second VGA/DVI port for i.e. directly sending it to a connected video beamer etc.

Playing out over the second monitor the user can define the size of the picture with the "Movie Size" popup menu (Fullscreen, Original, Half, Double). Default size is Fullscreen.

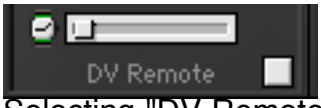
During the first installation the "Blackdesk" file is installed in the "Desktop Pictures" folder which can be used as a black desktop background for the first or second monitor (only OSX).

Recording:

The recording starts by clicking on the Miniatur Window. During the recording the green "LED" is blinking. A second click on the Miniatur Window stops the recording.

After a short break (file is being written) the current picture is again visible in the window and the "LED" stops blinking.
The resulting video clip is written to the MEDIACONTAINER folder. The name of the file is automatically set to time and date.
The clip appears at the end of the playlist in player 7 and is instantly available for playback.
This allows very easy creating documentation snippets of for example ballet rehearsals which can be played back instantly for analysis.

Recording of various scenes from a DV tape (raw cut):



Selecting "DV Remote" player 8 can be used as a remote for attached DV cameras/decks. Moving the time slider or choosing a time by clickdragging the time display winds a connected DV device to that time point and goes into pause mode. Pushing Start plays back the tape at that point.
Pushing Stop the tape goes into stop mode. Pushing <Shift> arrow left/right moves the tape framewise back and forth when in Pause mode.
Using the DV Remote it is easy to grab a raw preselection of video content without the need for complicated video editing programs. Organization of the video cues is easy because of the time stamping during the record sessions.

MMC Locate as well as MIDI program change are still played out in parallel when pushing the Start button.

The DV Remote also is an outstanding tool for integrating external DV video devices into the show.

The grabber function over Firewire needs additional Quicktime VDIG components if they are not provided by the device manufacturer.

Adress:
http://www.vdig.com/WinVDIG (free)
http://www.abstractplane.com/products/vdig.jsp (~40 US$)

Integrated v1.x/v2.x "Show Translator"

Conversion of version 1.x oder 2.x Shows is done by selecting the "Translate pre3.0 Show..." point in the "Functions" Menu.

Conversion into a "selfcontained" (all including) v3-Show:

1) Replace the empty player folders M1,M2 etc. of a v3 Show template with the folders of a existing show.
2)Push the "Translate" button and select the Snapshot-Show file of the existing show (conversion takes about 20 seconds).
3) Quit show and restart

Conversion into a "reference" v3-Show (needs no Translator):

All folders of an old show can be dragged onto the appropriate player surfaces of a v3 Show template thus creating the references to the all necessary files.
Also the empty "Show File" must be replaced by the already existing (Snapshots)Show File . This file then must be renamed into "Showfile".

Important for both methods:

After the conversion please step through all cues of the show!

The old format only saved the state of the snapshots.

When a snapshot was recalled and afterwards more cues were played with these settings, the conversion routine cannot recognize this situation.

In this case all settings for the following cues must be copied manually by the new META Player functions (see above).

Example:

If the AutoCue function was activated with the recall of a snapshot, and this setting was used for the next 5 soundfiles, one now has to copy this setting to the following 5 cues with the "P"aste button in the META player.

ReWire functionality

Selecting "ReWire" in the "Choose Driver..." menu point allows to play out 16 output channels into arbitrary ReWire-compatible mixer applications like Cubase, ProTools, Logic, Digital Performer etc.

The 16 output channels represent the outputs 1 - 16 in TH-S and are visible as additional Mixer channels inside the ReWire mixer application (TH-S 1, TH-S 2 etc.).
The mixer application has to be started first.

The selection of the ReWire source channels is different in each application and it should be read in the manual of the used application how to handle these channels.

A Rewire Demo Session for TH-S -> ProTools is on the installation CD.

Other Funtions

New time bar display for duration of cue

Each player has now a red time bar that displays the elapsed time of the cue by moving over the surface of each player.

Increased Audio-Matrix size 26/18x36

The Audio-Matrix now supports 36 discrete output channels, 18 Live-Inputs (Line In) and the 26 inputs of the players

Additional display for follow-up cue

Inside the player window the next Cue after the current Cue is now also displayed for better preview of following actions during a show..

Enhanced "Mackie Control" support

When launching TH-S or setting the MIDI ports "Mackie Control Universal" resp. "Mackie Control Universal XT" are queried and the appropriate IDs are set.
If both MIDI cables are connected the message "Mackie Control (XT) recognized" is displayed for about 5 seconds in the lower window of TH-S.

So now both the extender and the main Mackie/Logic Control can be used with TH-S.

Support for Behringer BCF2000 MIDI Remote

The "Behringer BCF2000 " is now supported as an inexpensive MIDI remote solution for TH-S.
The SysEx File for Parameter-Mapping of the Remote is on the Installation CD.

Installation of the SysEx file:

1)
With a SysEx Dump Utility copy the file to the desired preset in the BCF 2000.

2)
Save the Preset in the BCF2000.

Mapping:

Encoder 1-7: Selects Cue for Player 1-7
Encoder 8: Selects Snapshot, PUSHING activates the selected Snapshot

For saving a snapshot HOLD DOWN BOTH buttons on the righthand side below and PUSH encoder 8.

Fader 1-7: Volume for Player 1-7 (14bit resolution)
Fader 8: Volume for MIDI Volume (7 bit)

Schalter 1-8 upper row: PLAY for Player 1-8
Schalter 1-8 lower row: STOP for Player 1-8

max. 18ch "Sync-to-picture" playback

Selecting the Link button between the Media Player and Player M8b enables synchronuous start and stop.
This allows easy playback of video content with independent multichannel audio material.
Scrolling through the Mediaplayer timeline automatically scrolls M8b.
Selecting the 16ch Link button enables up to 18channel audio-sync-to-picture.

Supports 96kHz samplerate

TH-S now supports samplerates up to 96kHz if the connected hardware supports it.

Textbook Function (<Cmd>T)

Within each snapshot it is now possible to store textbook entries which are displayed by selecting the snapshot
Clicking into the text window changes from read to write mode.When typing, the red X gets green to symbol write mode..
Five seconds after the last text input (or by manually clicking on the green X) the window changes back to read mode (green X goes red).
Copy/Paste of text blocks fom other programs is possible.
This allows easily adding short comments, hints and text fragments for a scene based approach.

The distinction between read and write mode is important, as during the write mode the function keys are not available for Start/Stop purposes (No F-Keys while Editing).
The same is true for the +/- keys which will not in-/decrement the snapshots during write mode.
When scrolling through Snapshots the entries are displayed now even when the Snapshot is only selected, not loaded. This allows easy previewing of Snapshot entries.

Pause function over keyboard

A new keyboard shortcut allows pausing the players via keyboard.
The shortcut is <Shift> 1 - 8 corresponding to the player numbers.

Function Key Utility for Powerbook/Ibook

For activating the standard function key behaviour on newer Ibooks/Powerbooks the utility "fnSwitch_1.1.1".dmg" is placed in the "Goodies" folder of the CD.

To trigger TH-S as usual on OSX Ibooks/Powerbooks over the function keys, please install and activate in the system preferences under "fnSwitch".

This is obsolete for OSX ≥10.3.2 users.

Operation of TH-S

How to start the program

Start TH-S by double clicking on the program icon within the TH-S show folder.

Open the corresponding show folder and double click on the icon of the program (or, if existing, on the alias at the desktop).

TH-S will be started an all files within the show folder will be initiated (during the initialisation operation will not be possible for some seconds).

The program can be operated as follows:

- with the remote control MotorMix™ (see chapter **MotorMix™**)
- via MIDI Note-On-commands (see chapter **MIDI**)
- via fader start (see chapter **MIDI**)
- with USB input devices (see chapter **USB**)
- with the computer keyboard

Operation via keyboard, mouse and monitor

The operatig elements of the graphic user interface are to a great extent self explaining. Every player has a start- and a stop button and a display of the playing time.

The players can also be started and stopped by means of the function keys of the Macintosh keyboard:

key	**player**
F1	M1
F2	M2
F3	M3
F4	M4
F5	M8a
F6	M8b
F7	Mediaplayer
F8	MIDI Out Maschine

Global operation:

All STOP: <Cmd>0
All PLAY: <Cmd>1
All Pause: <Cmd>4
All Isolate: <Cmd>7

This means the keypad related to the motormix layout.
But the digits of the keyboard can also be used.
ISOLATE: see capter **Motormix™.**

Loop Feature

Machine 1 to 7 have a loop switcher, where loop operations/features can be switched on and off.
The loop feature can be switched on and off for all players together via Loop All (<Cmd>L) in the function menu.
The present soundfiles will be endlessly played by switching on the loop feature.

Autocue-feature (autostop feature)

Machine 1 to 7 have a autocue button where the autocue features can be switched on or off.
The autocue feature can be switched on or off for all players together via autocue all (<Cmd> A) in the function menu.
In autocue mode the player will automatically bounce to the beginning of the next soundfile as soon as the present soundfile will be stopped or is running out.
Hint: In loop mode the player will not go further on if the file will be stopped. He will remain on the present file.

Input feature

Machine 1 to 7 have an input switcher where the input features will be switched on or off. The input feature can be switched on or off in the function menu (Cmd I) for all players together by the comand "Input All" (<Cmd >I).
While the input feature is in use, the corresponding stereo input of the respective audio hardware of player M1-M4 and the cd player, will be activated.
For the 8 track players - the 8 equivalent channel inputs.

The input level will be individually controlled by the player faders and added post fader to the player`s signals.
In this way external sources (e.g.Live, CD, DVD or multi track machines) can be integrated into the automation.

File Selection

You will find the display of the selected soundfiles between the loop an the autocue switcher.
To select another file, simply click onto the display by holding the mouse button.

The playlist of the machine will pop up. By moving the mouse arrow on another file and releasing the button, the file will be selected.
The update button in the top row will only be needed if a soundfile on the finder level had to be renamed (use TOC for the CD Player).
While copying, the file lists will be updated automatically (no need for pressing the "update" button).
Are the selected file and the present played file the same, the green LED under the time feature will be lit.

File selection with keyboard

Machine	increment/decrement
M1	<Ctrl>q/<Ctrl>a
M2	<Ctrl>w/<Ctrl>s
M3	<Ctrl>e/<Ctrl>d
M4	<Ctrl>r/<Ctrl>f
M8a	<Ctrl>t/<Ctrl>g
M8b	<Ctrl>z/<Ctrl>h
Mediaplayer	<Ctrl>u/<Ctrl>j
Midi-Player	<Ctrl>i/<Ctrl>k

General rule: the in/decreasing keys are placed directly under the keys, labelling the position of the player (M1(1, M8a(5 etc).

PFL Pre Listening

Machines 1-4 have PLF buttons where the prelistening function can be activated.

A pre listening windows will be opened that can be positioned freely.

By clicking the start button the selected audio file will be played through the computer`s audio output The starting point can be freely selected with the help of the slider.
Hint: The respective preselected file will be pre listened. According to this it is also possible to prelisten an other file than the present played file.

Time display

Soundfiles start at playtime 00:00:00.0 after selection.
For changing the starting point of the file, simply click with the mouse into the time display.

Keep the mouse button pressed and move the curser up or down to adjust the new time.
By additionally pressing the comand button, you will be able to adjust the resolution more precisely (0.1s). Pressing the Shift button simultaneously the resolution will be more coarse: 10s.

You can also adjust another starting point by using the time slider under the play/stop buttons.
Until it will be selected again the sound file always start from the selected time.

Hint: A new start time can also be adjusted while the player is running (resp. if you notice the soundfile is to short and you wish to restart the file from a point within the file)

The file will immediately be played from the new start time by clicking the play button again.

Selecting a start time after the current play time, the time display will stop on the new value and starts to run as soon as "Play" is pressed.
Using a start time before the current play time, the time display will not change until the playbutton is pressed again.
The counter direction will be reversed by clicking the small clock beside the time display.
The remaining time will be displayed and the time slider moves from right to left while playing.

Big Time (<Cmd>B)

The time display of machine 1 will be shown in large size. Clicking onto the playername inside the big time window allows to choose a different player.

Snapshots

Selection of snapshots is working by clicking into the list (similar as in the file selection), selecting with the mouse and release the mouse button.
It is also possible folding forward and backward by simply using the +/- buttons of the number block.
The snapshots will be activated after selection through the enter button (ENTER) of the figures block.
Hint: If you are using the Ibook you will find ENTER beside the right <CMD> button.
Storing of any snapshots in a snapshot list will be done by using the SHIFT and ENTER keys of the number block.
Select the snapshot in which you want to store without activating it.
After adjusting all parameters, press ENTER button while holding the shift button.
Renaming of a snapshot: click rename button on the top of the snapshot list.
Simply overwrite the old name in the appearing window and confirm it with ok.

Deleting: Delete the contain of the selected snapshot with the DELETE button (exept the matrix setting)
Snapshot lists can be saved and reloaded on the hard disk by file > save or file > load..

If you desire to use a snapshot list for your show it will be necessary loading it after every program start - it will not be loaded automatically!
Hint:The TH-S application should not to be launched by doubleclick on a snapshot-list icon!

TH-S provides 99 snapshot memories, which can be loaded by the keyboard, the remote control or via MIDI program change order.
In every snapshot (all can be labelled with an own name) will be stored:

- Soundfile selection of all players (also CD players)
- Output level
- Loop settings
- Autocue settings
- Line-In settings
- Adjustment of the MIDI -Out configuration
- Mono > L/R resp. Channel MUX (see capter: Matrix)

as well as the:

- Output Matrix settings (see capter: Matrix)

Further Operating Functions:

16ch LINK

Both 8 track players will be linked sampleprecise to a 16 track machine.

Mono->L/R, Channel MUX

Mono files will be played throught both stereo outputs. Same for the multi track players.(see capter Matrix)

NOTE ON

Activation of the Possibility to trigger the first 127 files of each playerlist by Note-ON command (referring capter: MIDI)

F-START

Activation of Fader Start Function. (referring capter: MIDI)

USB

Activation of USB Remote Control Function. (referring capter USB)

MotorMix™

Before installing the MotorMix™ Remote Control you must configure your MIDI-Interface by means of the OMS setup (see chapter **MIDI**).

Installation of the MotorMix™ Remote Control

For the following Installation you need at least two MIDI cables. For longer MIDI-distances the usage of a MIDI-conduction-driver is recommended.
The MIDI- Ports of the Motor Mix™ are located on the back of the device.

- Connect the Motor Mix™- *MIDI Out*-socket with the *MIDI In* of your MIDI interface.
- Connect the *MIDI Out* socket of your MIDI Interface with *MIDI in* of the Motor Mix™ .
- Make sure that the powerplug is connected.
- Activate the Motor Mix[a] with the Power-button on the back.

After the short selftest of the Motor Mix™ take a look at the display. In the case you shouldn't see anything displayed, turn the contrast button at the back of the device to find an optimal setup.
Watch the display now. If you read *Open a Pro Tools Session to begin* the Motor Mix™ is in Pro Tools mode and cannot be used for TH-S. Disable the Pro Tools mode as follows:

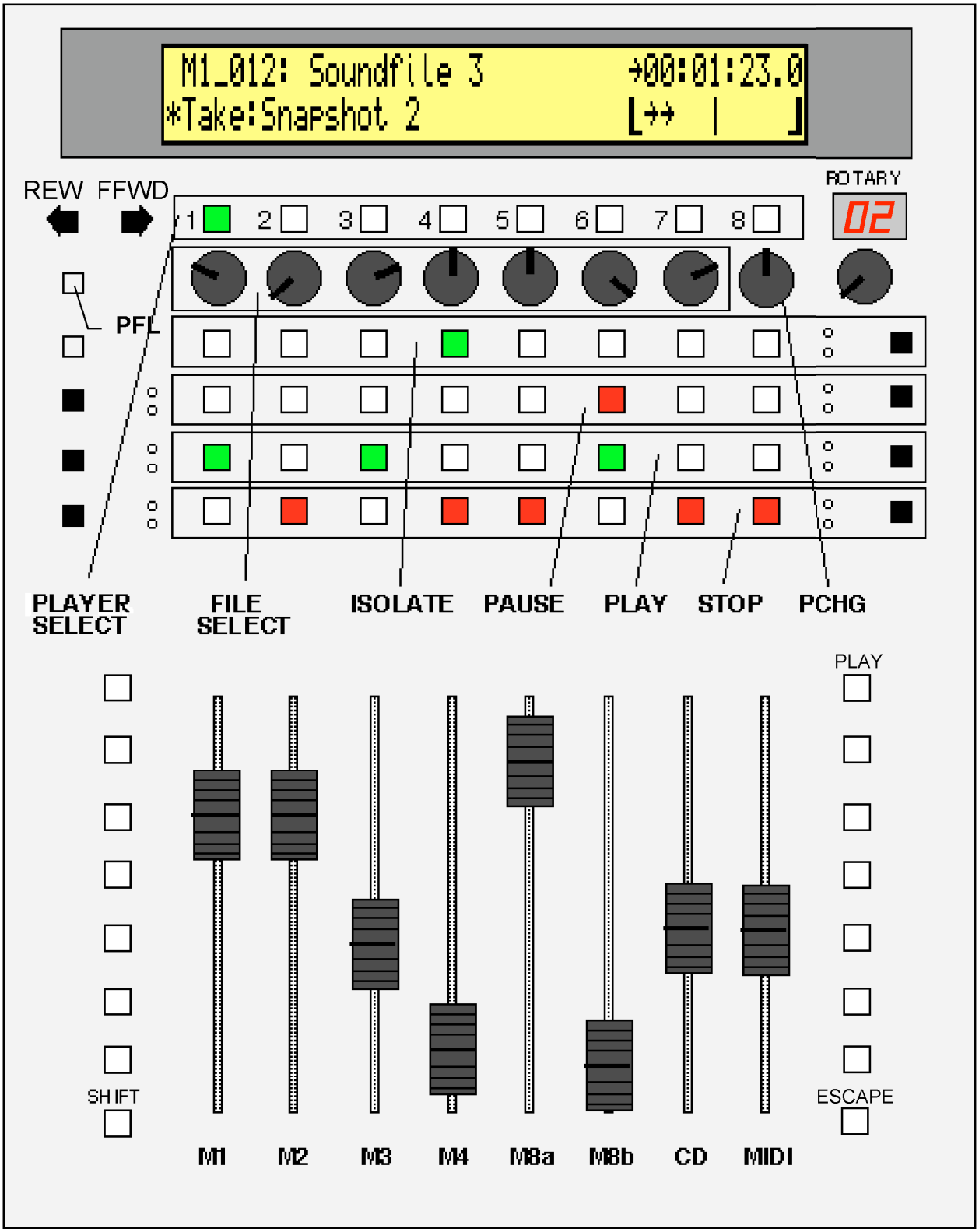
- Press *Escape*- and *Play*-button at the MotorMix™ simultaneously. The message *Standard Mode ON* will appear.

(With older MotorMix™-devices it will possibly be necessary to:

- Switch off Motor Mix™ with the power button at the rear.
- Press *F1*- and *Escape* buttons at the same time.
- Keep both buttons depressed and switch on Motor Mix™.)

For the usage with Pro Tools® you can switch the Motor Mix™ back to Pro Tools® Mode in the same way.

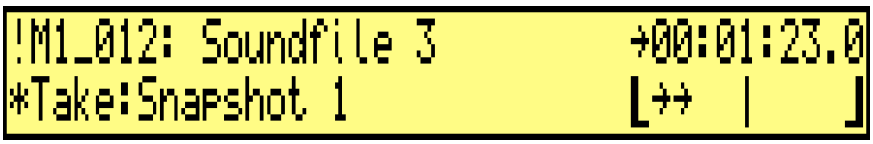
Operation via MotorMix™ control



Die TH-S- user interface of the Motormix™ control consists of 8 motor faders with which the output levels of the players are controlled and of the buttons and knobs above.

The faders 1 to 4 control the levels of the players 1-4 , fader 5 and 6 control the 8 track players M8a and M8b. Fader 7 controls the CD player. Fader 8 sends a MIDI Master volume to the MIDI Program Change output.

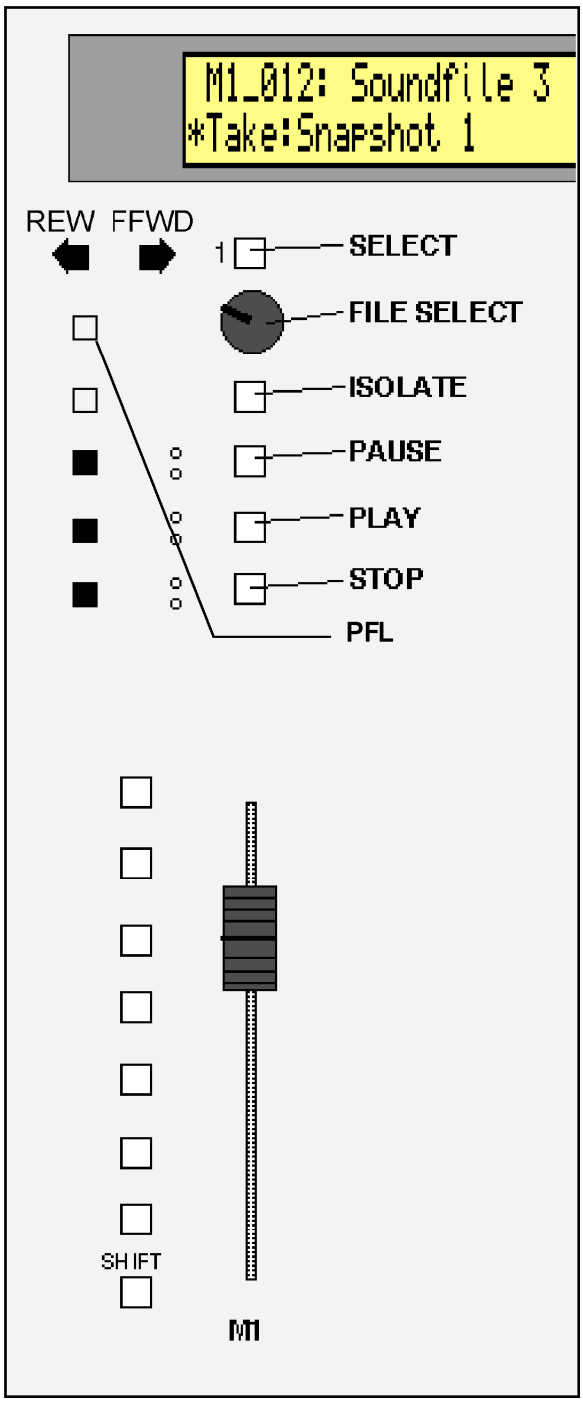
After pressing the select-button above the fader the LCD-display shows the parameters of the selected player.



At the top left the selected player is displayed, after the underscore the position number of the soundfile in the file list and after the colon the filename.

At the top right you find the running time. The arrows below the time display clarify the playing position in the soundfile. Every segment represents a tenth of the file length.
If you select another than the currently playing file the time display will go out.

At the bottom left behind *Take:* the name of the selected snapshot is displayed. The *-symbol in front of *Take:* indicates the current snapshot.
If the selected player is in loop mode the display shows an exclamation mark in front of the player name and the stop button at the MotorMix™ flashes during playback.



Fileselection: pressSELECT at the corresponding player. Select an audio file with the FILE-SELECT-knob. (If you turn the knob beyond the last entry the selection starts at the beginning again). File selection is also possible during playback .

PLAY: press PLAY. The player does not have to be selected.

STOP: pressSTOP. If the player is in Autocue mode the next file in the list will be selected automatically. When a file is reproduced in loop mode the stop button will flash during playback.

PAUSE: press PAUSE (button will flash). Pressing PAUSE once again will restart at the break point. During the interruption you can rewind and fast forwind using the arrow buttons REW/FFWD at the top left of the device. (Player must be selected). Doing this a new start position will be set (corresponding to the adjustment of the time slider on the computer screen). Pressing PLAY during pause starts at the beginning of the file or at the new start position if REW/FFWD was carried out.

ISOLATE: the fader value will not be affected when calling a snapshot.

PFL: With the PFL button the selected soundfile will be prelistened at the selected player. You can prelisten another file than the one currently played back. During prelistening the small LED on the right side of the PFL button will flash.

Additional functionkeys:

eff-1: Auto Isolate All

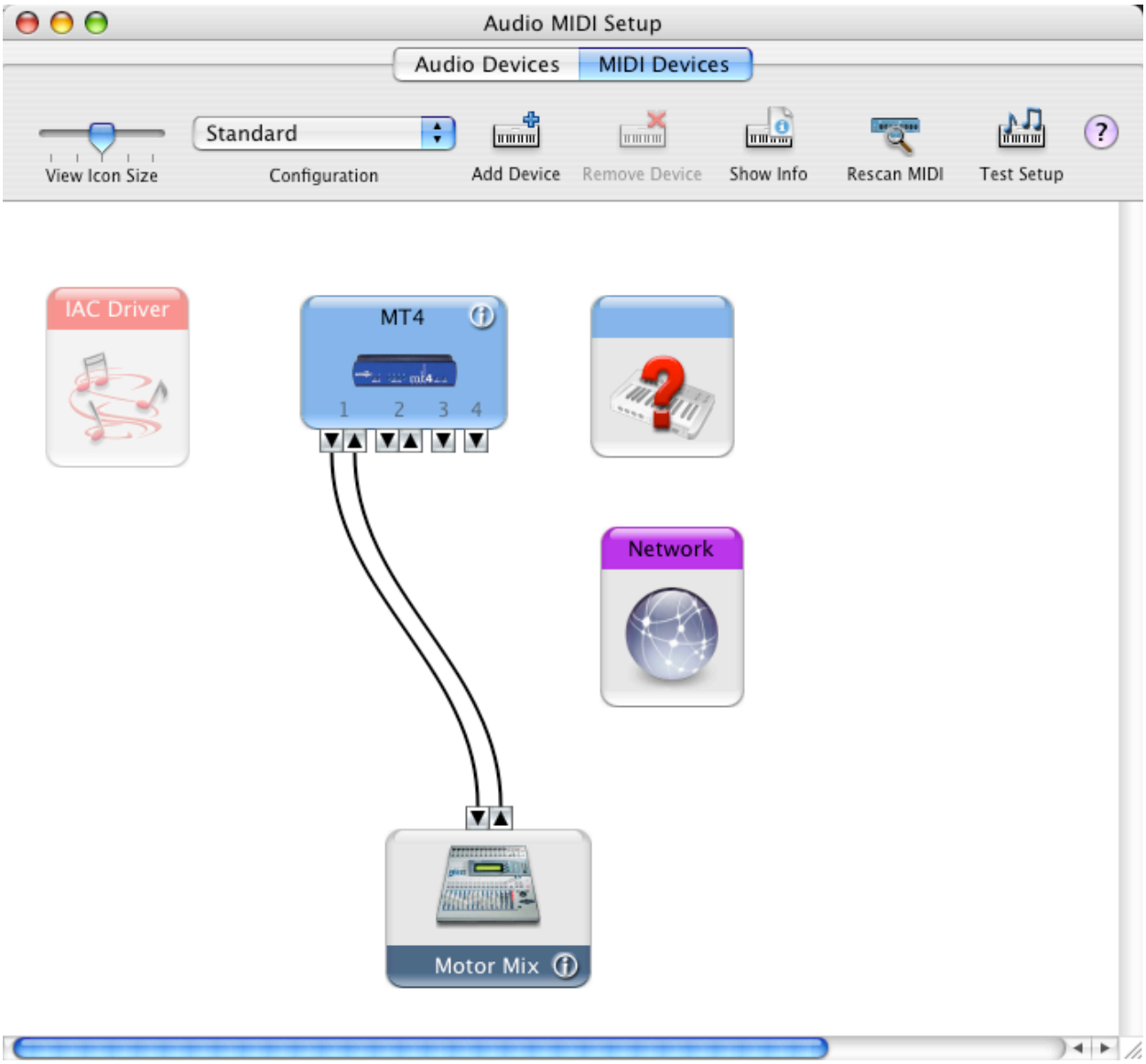
eff-2: Pause All
eff-3: Play All
eff-4: Stop All

Loading snapshots: By turning the *ROTARY* knob the snapshot numbers are scrolled through on the 7 segment display. At the same time the names of the snapshots will be indicated in the LCD-display. Pressing the *ROTARY* knob will activate the indicated snapshot. This will be shown by asterisk in front of the snapshot name.

Saving snapshots: Select a free snapshot by turning the *ROTARY*-knob (don't push). Save the current setting of the Motor Mix™ in the selected snapshot by pressing *SHIFT* + *ROTARY* knob simultaneously.

MIDI

Open in the folder Utilities the Audio MIDI Setup or inm TH-S choose Driver Details under the Setup Menue. Under Midi Devices you should see your Midi Interface. If not rescan. With add Device you can add new Devies (Midi Mixers and other Controlers and Midi Instruments) Simply pull “cables” to the in- and outputs of your controller.



Setting up the MIDI communikation

After the programstart you will have to set up the MIDI-communication.

Click into the field above the text MIDI IN and keep the mouse clicked.

Now the MIDI-ports and the devices you have installed in the OMS are displayed.

Choose MOTORMIX or the correspondimg port and release he mouse button.

Repeat this procedure above MIDI OUT.

The connection with MotorMix is now established. On top of the window the writing *Console is online* appears.
In the same way you set up the devices or MIDI ports to which or from which you want to send or receive commands at PGM CHG IN and PGM CHG OUT.

MIDI In/Out funtions

Faderstart

The function *faderstart* is adressed via the MIDI Program Change input.
To activate faderstart you must set source and channel of the sending device in the window „Console is online“ and bring the button *F-START* into the position *ON*.
With a NOTE ON command (touch 127) the players M1 to M8 can be started, with NOTE ON / touch 0 they can be stopped.
The MIDI-Note-values which need to be sent are shown in the table below. They equal the Faderstart functions of the Yamaha O2R Mixing console.

Player	Dezimal	Hexadezimal
M1	37	25h
M2	38	26h
M3	39	27h
M4	40	28h
M8a	41	29h
M8b	42	2Ah
Mediaplayer	43	2Bh
MIDI	44	2Ch

In addition the faderstart offers a pause funktion (MIDI Note On 45-52, Velocity 0):

Player	Dezimal	Hexadezimal
M1	45	2Dh
M2	46	2Eh

M3	47	2Fh
M4	48	30h
M8a	49	31h
M8b	50	32h
Mediaplayer	51	33h
MIDI	52	34h

Hint: The faderstart funktion makes it possible to use self designed Start/Stop/Pause buttons. To achieve this the contact of the buttons must be converted into a MIDI signal by means of a standard relay-to- MIDI converter.

Fileselection via MIDI

By the following MIDI commands the cues in the individual players can be incremented and decremented respectively:

Player	Decrementation	Incrementation
M1	Ch1 Ctrl 64 Value <64	Ch1 Ctrl 64 Value >64
M2	Ch1 Ctrl 65 Value <64	Ch1 Ctrl 65 Value >64
M3	Ch1 Ctrl 66 Value <64	Ch1 Ctrl 66 Value >64
M4	Ch1 Ctrl 67 Value <64	Ch1 Ctrl 67 Value >64
M8a	Ch1 Ctrl 68 Value <64	Ch1 Ctrl 68 Value >64
M8b	Ch1 Ctrl 69 Value <64	Ch1 Ctrl 69 Value >64
Mediaplayer	Ch1 Ctrl 70 Value <64	Ch1 Ctrl 70 Value >64
MIDI	Ch1 Ctrl 71 Value <64	Ch1 Ctrl 71 Value >64

MIDI Note On/Velocity Trigger:

To trigger individual cues with MIDI Note On commands the *Note On* button in the bottom window must be set to "On".
This allows triggering the first 127 cues of every player via MIDI Note On commands 0-127 as well as the volume via MIDI Velocity 0-127:

M1: MIDI CH 11 NoteON 0-127 ⇒ Cue 1 - 128 Velocity 0-127 ⇒ -144dB - 0dB
M2: MIDI CH 12 NoteON 0-127 ⇒ Cue 1 - 128 Velocity 0-127 ⇒ -144dB - 0dB
M3: MIDI CH 13 NoteON 0-127 ⇒ Cue 1 - 128 Velocity 0-127 ⇒ -144dB - 0dB
M4: MIDI CH 14 NoteON 0-127 ⇒ Cue 1 - 128 Velocity 0-127 ⇒ -144dB - 0dB
M8a: MIDI CH 15 NoteON 0-127 ⇒ Cue 1 - 128 Velocity 0-127 ⇒ -144dB - 0dB
M8b: MIDI CH 16 NoteON 0-127 ⇒ Cue 1 - 128 Velocity 0-127 ⇒ -144dB - 0dB

This method to start cues can be used in parallel with MotorMix™, faderstart and USB.
The velocity values will be reproduced with the faders of MotorMix™ and on the screen.

When switching on "Note On" all players will be scanned and the beginnings of the first 127 cues will be loaded into RAM. This will be indicated by flashing of the green LEDs in the respective payers. After that all cues can be started as used to like with a sampler (play until end).

Tip: If you position the „MUTE“ file in a suitable way in the file you ca use it as a STOP button. Example: rename „MUTE“ into „000-MUTE“ (⇒first entry in the cue list). All cues can now be stopped by sending MIDI Note 0.

In the Utilities folder you will find an example for the simple assignment of sound files to MIDI Note Ons via alias files.

Method of proceeding:

- Copy all files out of the folder „*NoteOn 0-127 Template“* into the desired Player.
- Activate MIDI Note On funktion.
- Press a key of your MIDI keyboard which you want to relate with a certain sound file.
- The „xxx-MUTE“-Alias belonging to that key appears in the file selections window.
- Open the corresponding player window in the Finder using **<Cmd>K**. Double click the determined „xxx-MUTE“-Alias. The Operating System then will offer the opportunity(„*Alias zuweisen...“*) to combine the desired soundfile with the respective alias.

With this method you can quickly build a keyboard setup.

MIDI Player

Player 8 serves as an output device for MIDI program change commands. Additionally it outputs MMC-PLAY-/STOP-commands. The output of MIDI commands occurs at the MIDI port that is configured with „PGM CHG OUT“ in the bottom window.

Pressing the *START* button will send the Program Change Command indicated in the selection window.

In this context means:

„Programm 1“ ⇔ MIDI Prg. Chg. 0
...
„Programm 127“ ⇔ MIDI Prg. Chg. 126

At the same time (strictly speaking after PRG CHG command) a MIDI Machine Control (MMC) PLAY command will be output to control a MMC capable device, connected under the ID# 127.
ID# 127 is the default setting (broadcast). To select a different setting click into ID#127, select another ID and release the mouse button.

Pressing the *STOP* button will produce an MMC-STOP-command.

The PLAY command is a "Deferred Play" that carries out playback automatically when reaching a certain location on tape based machines.
This is useful as the time display and the time slider likewise output MMC Locate Commands.
Clickdragging into time display or time slider makes possible a coarse setting of the Locator position. Fine setting can be done by clicking into the figures of the time display (Shift x10 / Cmd x0.1).
The Locator time is rounded to 100ms indicated in the time display, output in a 25 fps Timecode format. This Locator time will then be output as "Full Frame MMC Locate". The maximum Locator start time is ca. 4,5 hours.

It is uncritical to use another Timecode format at the exteral device as the positioning mistake will always be bigger than the difference between the timecode formats (the maximum possible positionioning difference within one second when using 25fps for a 30fps external device is 5x 40ms=200ms).

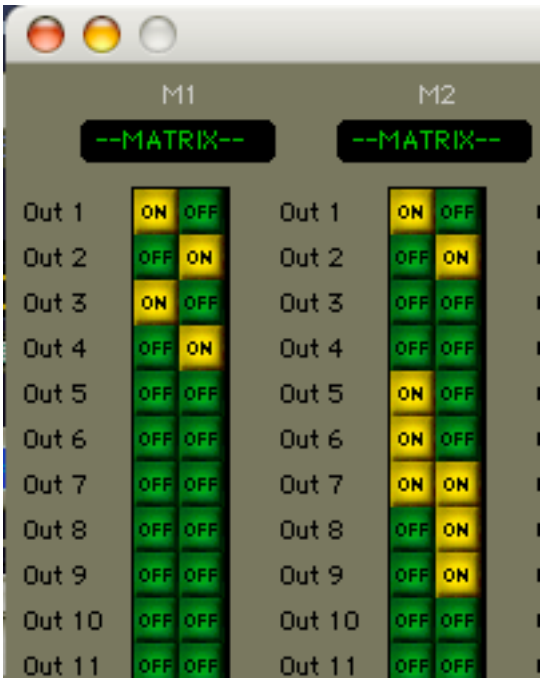
Remark: The MMC Play command will always be output **after** the PGM Change command. In this way a device provided e.g. with SIGMA1 will first be positioned via PGM Change to start playback afterwards from this point of time.

Matrix

The matrix window is reached by selecting „Setup->Audio-Matrix“ or <Cmd>M. The current routing will become visible (yellow buttons). On the upper edge below the name tags of the 7 audio-players there are pop-ups, which offer the following options:

- MUTE: no output routing.
- Output 1/2 ... 17/18: stereo-players (M1-M4, CD) are routed directly to the stereo-outputs.
- Output 1-8 ... 9-16: 8-track-players (M8a, M8b) are routed directly to the outputs 1-8 and 9-16 respectively.
- Downmix: the particular 8-track-player will be mixed (even/odd) to the outputs 1/2.
- MATRIX: the routing of the particular player can be set manually.

These options can also be reached from the individual players. The settings „MUTE“, „Output x/y“ and „Downmix 1/2“ are executed immediately. Choosing „MATRIX“ opens the matrix window first to enable manual adjustment.



The output configurations of all players (no matter if pre-defined or set manually) can be stored in any snapshots by clicking the „*Save to:*“-button in the matrix window (selektion via pop-up menu).

Mono->L/R or Channel MUX:

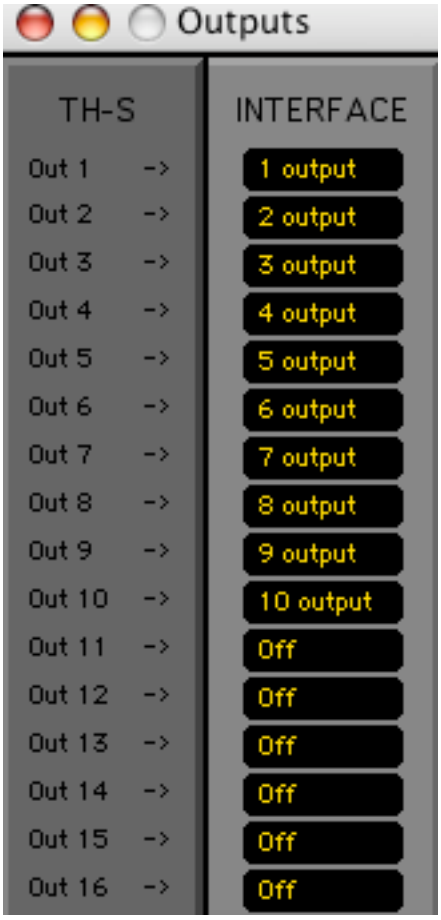
When the *Mono->L/R* tick is set in the stereo players M1-M4 the playback of monophonic soundfiles routed to both player outputs. This setting can be stored in the automation snapshots.
Basic setting is "On".

When the *Channel MUX* tick is set in the 8-track players, the audio tracks will be mirrored in the player output as follows:

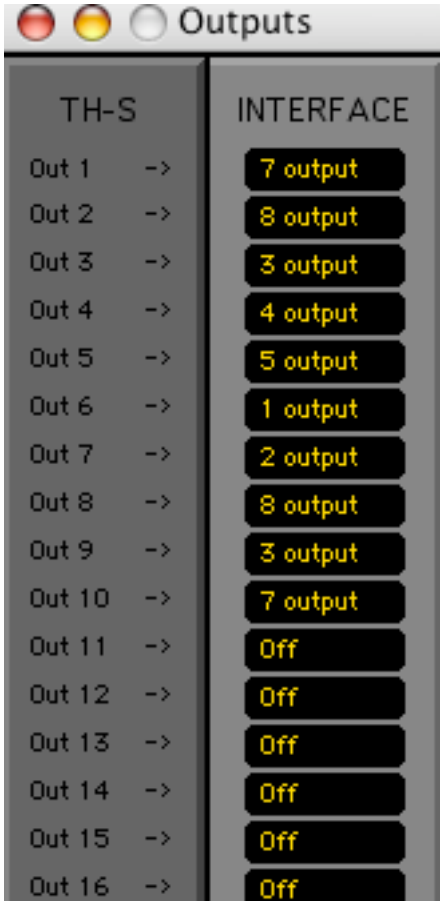
- Monophonic files will be routed to all 8 outputs.
- Stereo files will be played in pairs (1/2, 3/4, 5/6, 7/8).
- 4 channel files will be doubled in the player outputs 5-8.

This enables simple setups for timedelay or pseudo-surround-applications without explicitly using multichannel files.
Channel MUX can also be stored in the automation snapshots. gespeichert werden. Basic setting is "Off".

Output Mapping

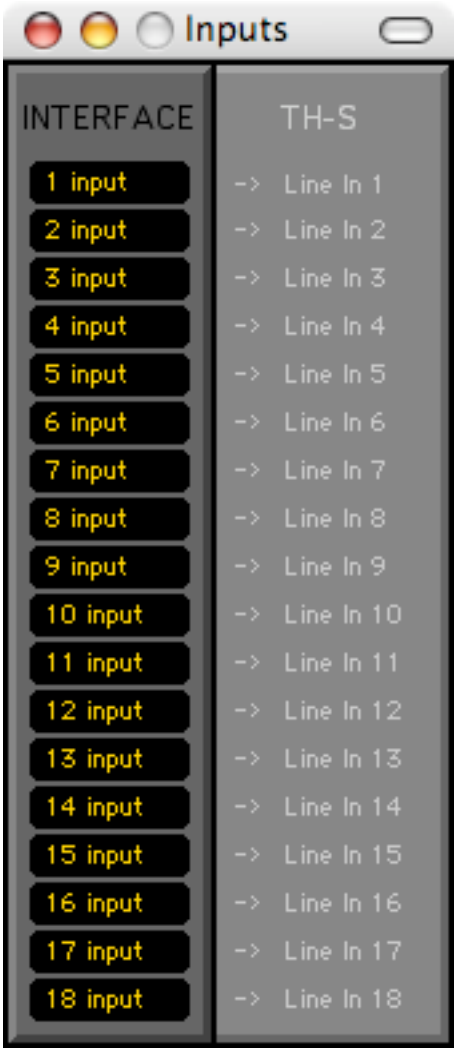


TH-S has up to 36 outputs, depending on the audio interface. The mapping is normaly 1 to 1, but can be adapted to different situations and conditions without changing any routing in the players.



Complex routings, also matrix and Sigma 1 movements can be controlled under studio condition i.e. 2 or 4 chanels. Even 5.1 or 7.1 Downmixes as any other routing can be made without any changes to the ajusttmens in the players.

18x18 Line-Input Matrix



With the Setup Menu point "Input Mapping" the line inputs of the players can be mapped to the actual physical inputs of the audio interfaces.
This mapping is saved individually for each driver in the TH-S preferences.

This allows a more flexible mapping of i.e. microphone inputs of an audio interface to Matrix or SIGMA1-Panning inputs.

The mapping should not be changed during playback, as the signal chain is initialized again (drop out).

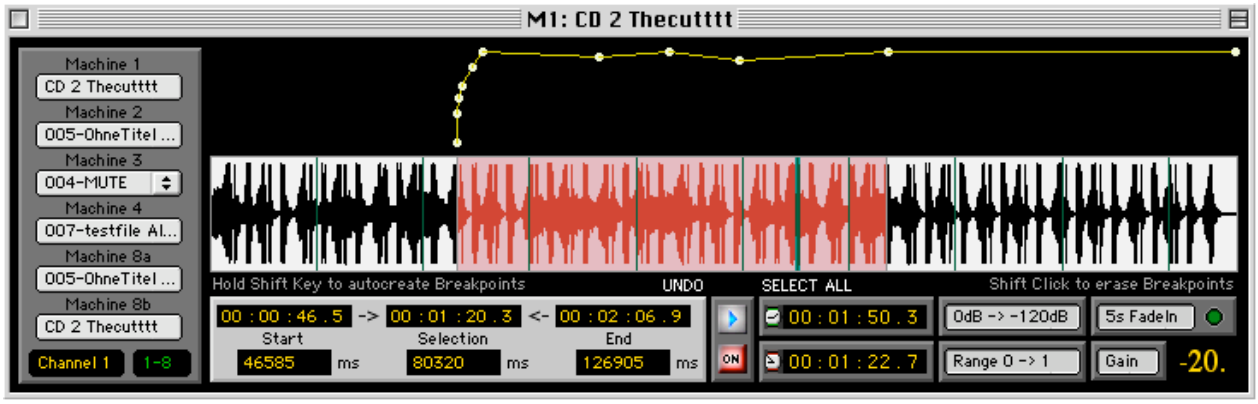
Easy Matrix Switching for Line Sources

It is now possible to assign to each empty placeholder (----------) all cue functions like AutoCue, Routing etc.
This allows easily stepping through complex output matrix cues via AutoCue and the Start button, i.e. for wireless microphone setups. The insertion of silent "Dummy" cues is no longer necessary.
Für SIGMA1 Movements which shall move a Line Source on a predefined path the "Dummy" cues are still necessary as a time reference.
These "(----------)-Cues" can now also be stored and recalled through Snapshots.

Stop -> AutoCue now globally stored per Show

The setting is now automatically stored and is recalled when the Show is launched the next time.

Editor



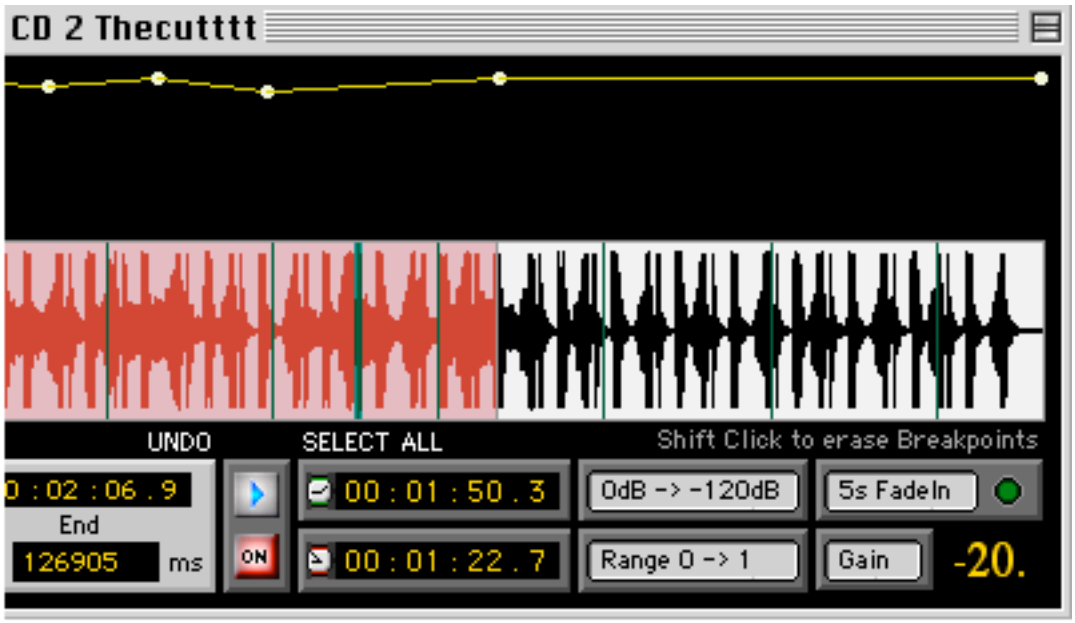
The editor is intended as a fast and efficient tool for extending, shortening, looping and dynamic level controlling multichannel soundfiles from 1 up to 8 channels with 1 ms display resolution. The insert points are set automatically to zero-crossings inside the frequency cycles. The <ctrl> key changes the usermode from "selecting" to "move-and-zoom". While holding down click dragging inside the selection towards the top of the screen zooms into the soundfile. Clickdragging towards the bottom of the screen zooms out. Further by moving the mouse left or right, the soundfile can be moved in time forward and backward inside the waveform display. As long as the <ctrl> key is held down, all volume breakpoints above the soundfile display are temporarily bypassed, thus allowing an easy comparison between the original and the enveloped sound.

Cuelist popups:

On the left hand side the cue list pop up menus of the 6 Hard Disk players are doubled. Selecting a title from one of the pop up menus instantly loads it into the editor. This means that you can instantly select and playback any point inside the soundfile. The wave form display is loaded in independently from the playback routine at 8x realtime. The name of the selected soundfile is displayed in the window title of the editor window. The wave form display shows the channel which is selected in the "Channel 1" pop up menu. Selecting another channel in this menu reloads the view of the appropriate audio channel into the wave form display. By default ("Mix") the audio signal is played out on output 1/2. Multichannel files are also downmixed to channel 1/2 for playing out. For multichannel playout you can select output "1-8" or "9-16". Also a MUTE menu point is provided.

- Click dragging inside the wave form display defines the start and end points of the soundfile selection which is automatically played and looped.
- Holding the <shift> key autocreates breakpoints at the start and stop location of the selection.
- Clicking on "select all" selects the whole file from start to end, clicking "undo" allows switching between the current and the previous selection for easy comparing of e.g. loop points.
- Playback can be stopped or started with the <space> key or by clicking on the start/stop button. Also the loop function can be switched on/off by clicking on the loop button.
- The selection start and end time can be extended or shortened by click dragging either inside the time displays (resolution 1 sec, <cmd> clickdrag 0,1 sec., shift clickdrag equals 10 sec. steps) or inside the ms displays for fine adjustment. Everytime a start or end time is changed the playback starts automatically with the new boundaries.

- The elapsed/remaining time of the current selection is displayed simultaneously in the time displays on the right hand side of the start/stop and loop buttons.



Gain Parameter:

Allows adjusting the overall volume of the editor (default -20 dB)

- Click dragging inside the place position allows fine adjusting of the gain value
- Click dragging inside the digit position allows coarse adjusting of the gain value
- you also can type in the exact value (e.g. -2.5) by using the keyboard while the number is selected.
- Selecting a new soundfile resets the gain/speed parameters to their default values (-20dB/1.0).

Speed Parameter:

Allows adjusting the playback speed of the editor between factor 8 (+3 octaves) and -4 (backwards +2 octaves, default 1). The speed value can also be dynamically adjusted during an "•export" bounce.

- Click dragging inside the place position allows fine adjusting of the speed value
- Click dragging inside the digit position allows coarse adjusting of the speed value

You can also type the exact value (e.g. 2.3758) by using the keyboard while the number is selected.

Reaching the start of a selection while playing back backwards stops the playback in loop mode too.

Volume Graph:

The volume graph above the wave form display allows setting arbitrary breakpoints for dynamic volume changes. Clicking on the volume graph creates a new breakpoint which can be positioned arbitrarily between the previous and the next point. Shift clicking on breakpoints erases them.

Clearing all points can be achieved with the " Clear All" menu point in the "Keep All" pop up menu or by selecting a new soundfile. This menu also allows to create a 5 sec. fade in at the selection start point and a 9 sec. fade out at the end point. Also this menu houses the export (bounce) function for the audio files.

The displayed resolution of the volume function can be adjusted with the " 0dB->-120dB" and the range "0->1" pop up menus.

Exporting edited soundfiles:

1. Select "•export" in the "Keep All" pop up menu

2. Name the new file, select file type (AIFF,SD2, WAVE, etc.) if necessary. Navigate to the appropriate folder and click "Save".

3. The green LED of the pop up menu is highlighted and shows that the playback of the current selection will now be recorded. Also the loop button is switched off by default (When switching "on" the exported soundfile will contain as many loops of the selection until you hit the start/stop button or the space key).

4. Hitting the start/stop or the space key bounces the resulting soundfile to disc. Any volume changes in the breakpoint function as well as changes in the overall volume and the speed are recorded to the new file. The volume graph thereby calculates the volumes globally for ALL audio channels in the soundfile.

5. When the end of the selection playback is reached the bounce is stopped automatically (loop see above). The editor recognizes how many channels a soundfile contains and keeps the appropriate number of channels in the soundfile.

Note: The overall volume of the editor is set to -20dB by default. When exporting a soundfile, one has to set the gain to 0dB to preserve the original overall volume (This is when the "mute" menu point in the output selection sometimes comes in handy).

Closing the editor window stops a currently playing selection, also the <cmd>O (Stop All) command will stop playback.

Further one can use the editor as an aditional independent multichannel player in the background by using the <space> key.

- Depending on the size of the loaded soundfile a time grid of 10 or 20 sec. is provided for easier navigation inside the soundfile.

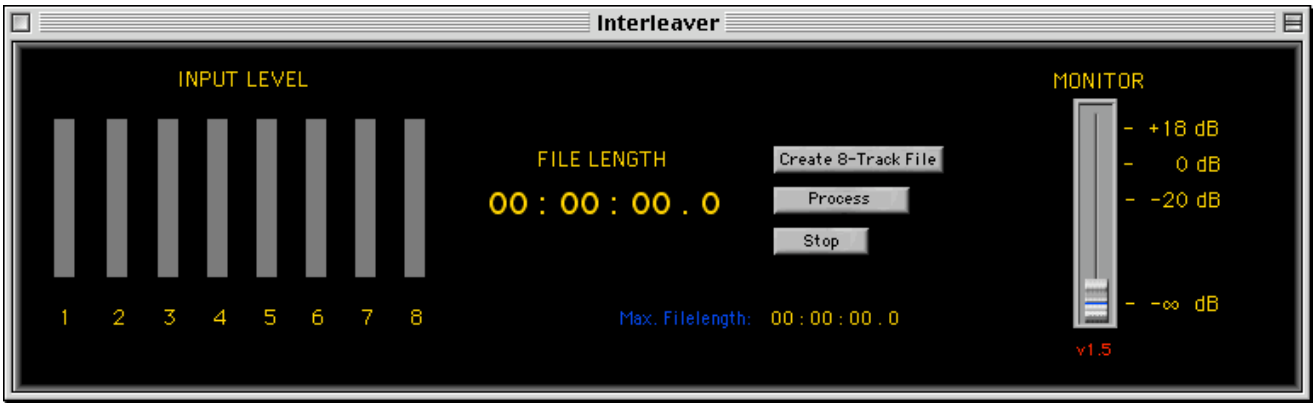
Editor window shortcuts:

- Click dragging inside the wave form display defines the start and end points of the soundfile selection which is automatically played and looped.
- Holding the <shift> key autocreates breakpoints at the start and stop location of the selection.
- Clicking on "select all" selects the whole file from start to end, clicking "undo" allows switching between the current and the previous selection for easy comparing of e.g. loop.
- <alt> 1 -> Reset overall volume or speed to their default values (depending which one is currently selected
- <alt> C -> Clear all breakpoints in the display
- <alt> F -> 5 seconds fade in at selection start
- <shift> <alt> F -> 9 seconds fade out at selection end

As long as the <ctrl> key is held down, all volume breakpoints above the soundfile display are temporarily bypassed, thus allowing an easy comparison between the original and the enveloped sound.

Interleaver

The Interleaver produces the 8-channel-Interleaved file format which the TH-S 8-track player use. The Interleaver needs 8 monophonic files to do this. When using stereo soundfiles the left channel will be used for processing.



- Choose the menu point *Interleaver* or the shortcut **<Cmd>J.**
- Click on *Create 8-Track File*

Now you will be prompted for the desired name of the 8-track file. After entering the name and the storing location a dialog opens where you can specify the mono-file for the first track.
This will be repeated seven times. Choosing *„Abbrechen“* you can create an empty track respectively.

- Click *Process.*

The Interleaver starts recording the new file. With the *Monitor*-fader you can adjust the listening volume during recording. This will not affect the recording level.

Clicking on *„Max. Filelength“* you can check the duration of the multitrack file to be produced.
If you intend to generate a shorter multitrack-bounce than the single monofiles are, you can set the desired file length by clicking onto the time display below the *„Stop“* button (click-scroll). Before this you must click on*„Max Filelength“* .
Feinere Auflösung (0,1s) wird durch gleichzeitiges Drücken der Apfel-Taste, größere Auflösung (10s) durch gleichzeitiges Drücken der <Shift>-Taste erreicht.
Alternativ kann die *„Stop“*-Taste gedrückt werden, wenn die gewünschte Aufnahmedauer erreicht wurde.
Finer resolution (0,1s) will be achieved by simulatanous pressing the apple key, lower resolutior (10s) by simultanous pressing the shift key.
Or by pressing the stop key while arriving the desired recording time.

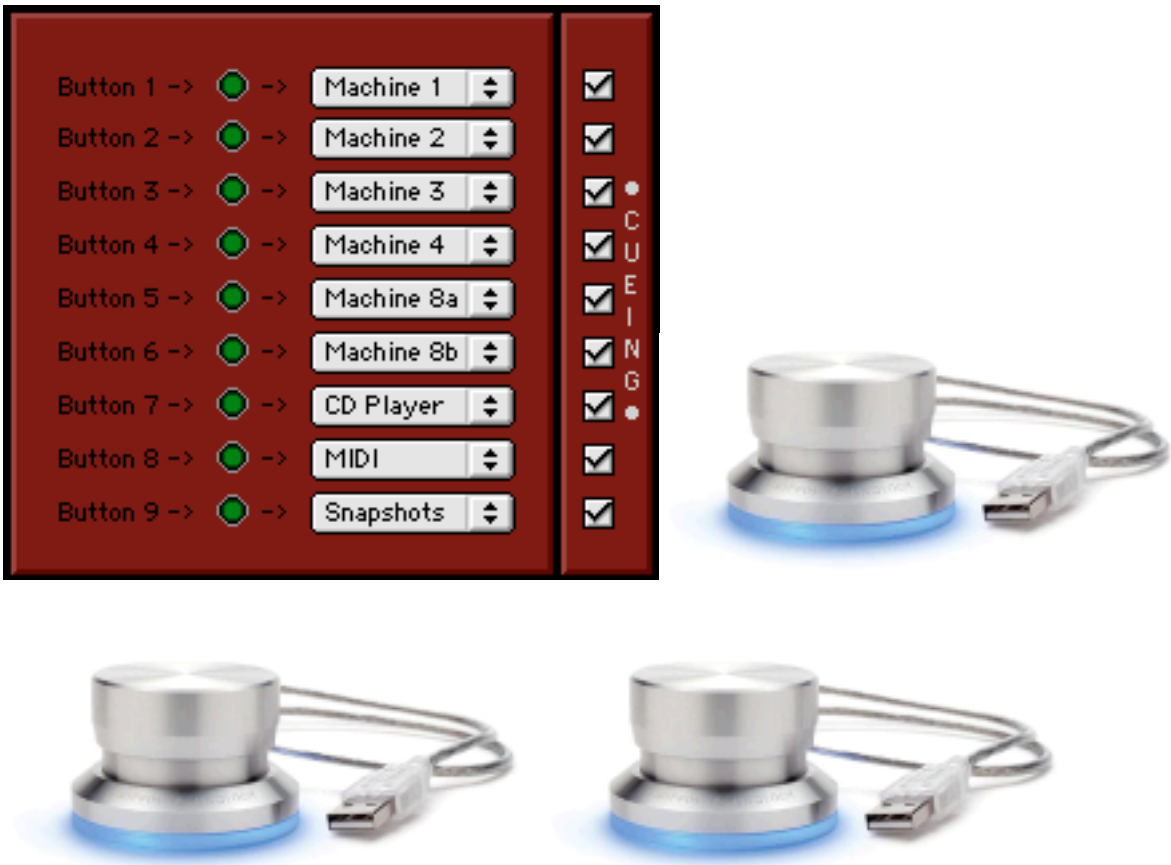
USB

1. The Powermates (Griffin)

Operation: Each TH-S player can be controlled by a USB Remote Button „Powermate“.

Note: It is important to deactivate any driver that are shipped with the Powermates!

Switch on ***„USB“*** in the lower window.
Open the USB mapping window with **<Cmd>U**.

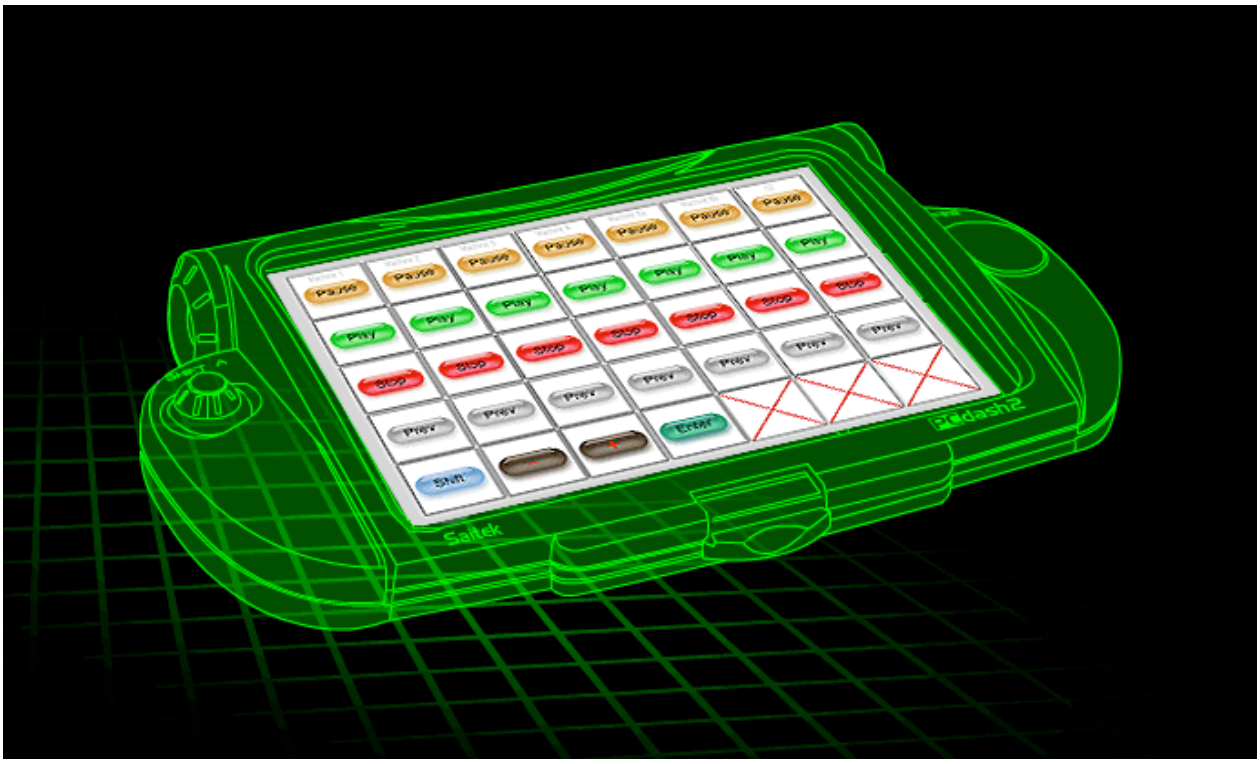


This window allows the mapping of up to 9 "Powermate" USB Buttons to arbitrary players. The first time the programm is launched the numbering of buttons is defined by the loading mechanism of the USB Interface. To know the order of the Buttons, you can press the "Powermates" and a green LED will show which button has been assigned to which number. By default button No. 1 is assigned to machine 1, button No. 2 to machine 2 etc. With the pop up menu you can redirect the USB commands to different machines. Having e.g. 4 Buttons allows easy control of machine 1 and 2, CD-Player and snapshot automation. This mapping can be changed arbitrarily at any point during the show.
The cueing check marks are enabled by default. This means by turning the wheel of a "Powermate" to the right, the cuelist steps forward, by turning the wheel to the left, the cuelist is stepping backward on the appropriate machine. Unchecking the cueing check marks disables the cue selection abilities. This e.g. is very handy as a safety measure working in autocue mode for just firing cues.

Note: Note: For safety reasons the USB connections have to be made always before launching TH-S. Also unplugging any USB device causes a renumbering of the USB IDs, which may lead to undesired results.

Rule of thumb: Always plug in your USB device before launching TH-S. TH-S with USB is not hot pluggable!

2. The Saitek PC Dash 2



The Saitek PC Dash 2 is intended as an inexpensive remote device without any visual feedback. It allows to control the 6 Harddisk Players, the CD-Player and to store and recall automation snapshots.
The most efficient way of working with the PC Dash 2 is in autocue mode as it provides 7 buttons to step to a previous cue. This allows easy navigating through the cuelist with the "Prev" and "Play/Stop" buttons. Also a Pause function is provided.

3. Using a USB HUB

When using USB HUBs to connect more than 1 device to an USB Port, you have to care to not overdraw the maximum current of the USB interface of your computer. When connecting to a keyboard or monitor USB Port you should always power your HUB with an external power adapter. Currently we recommend up to 4 "Powermates" on a 4 Port HUB at the USB Port on the computer itself. Using more than 4 "Powermates" therefore needs two 4 Port HUBs.

4. Using other USB devices than the currently supported ones

1. Make sure that the USB switch in TH-S is in the "OFF" position. This is necessary because TH-S otherwise would interprete the incoming data in a not foreseeable manner (this is especially true for USB track balls and mice).
2. Go to the control window of your USB device and map the key aquivalents or functions of TH-S to your USB device.

5. MIDI and USB

When using a MIDI -> USB interface (for e.g. the motormix etc.) always try to have it working on a single USB Port if possible.

6. IMPORTANT

All supported USB devices work also in the background. This means, when working e.g. in the Finder one still has control over the players with the " Powermate" buttons. Mapping other USB devices to TH-S functions with device specific controls this is not the case.

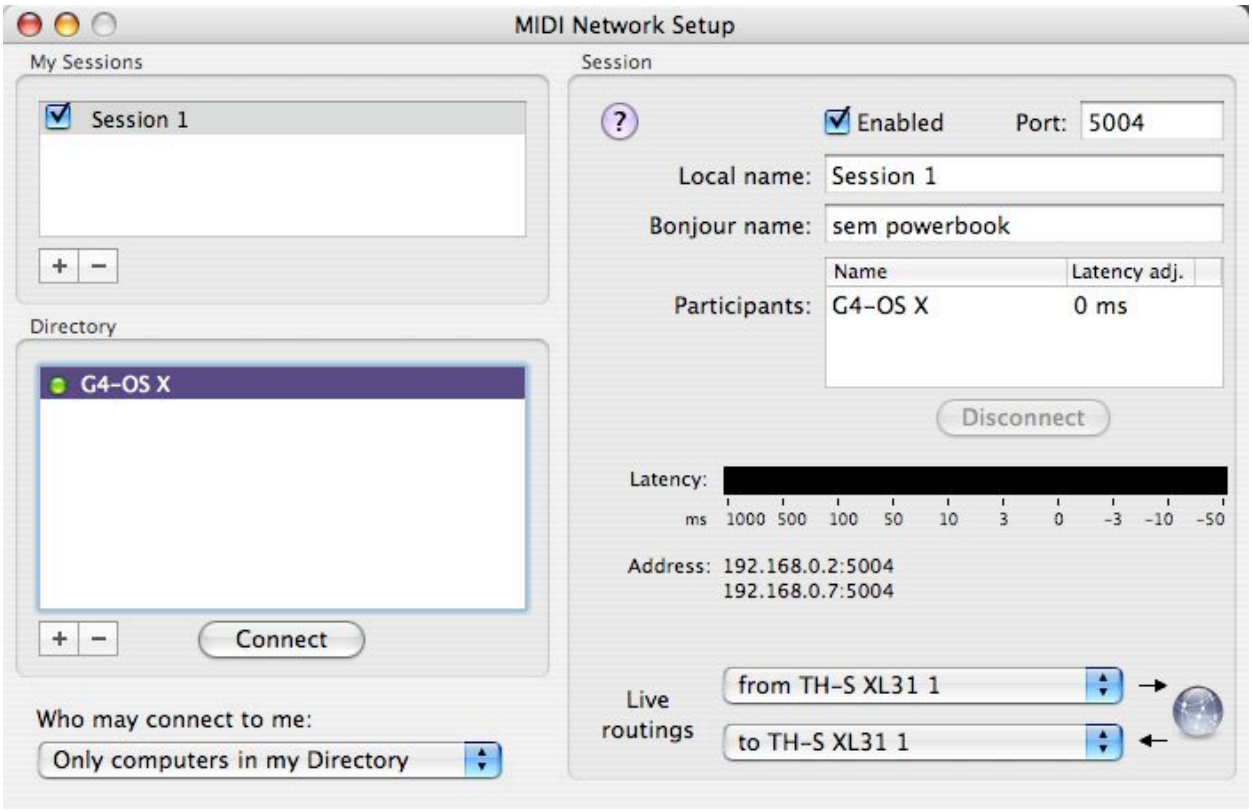
Optimizing The System

Screen Resolution

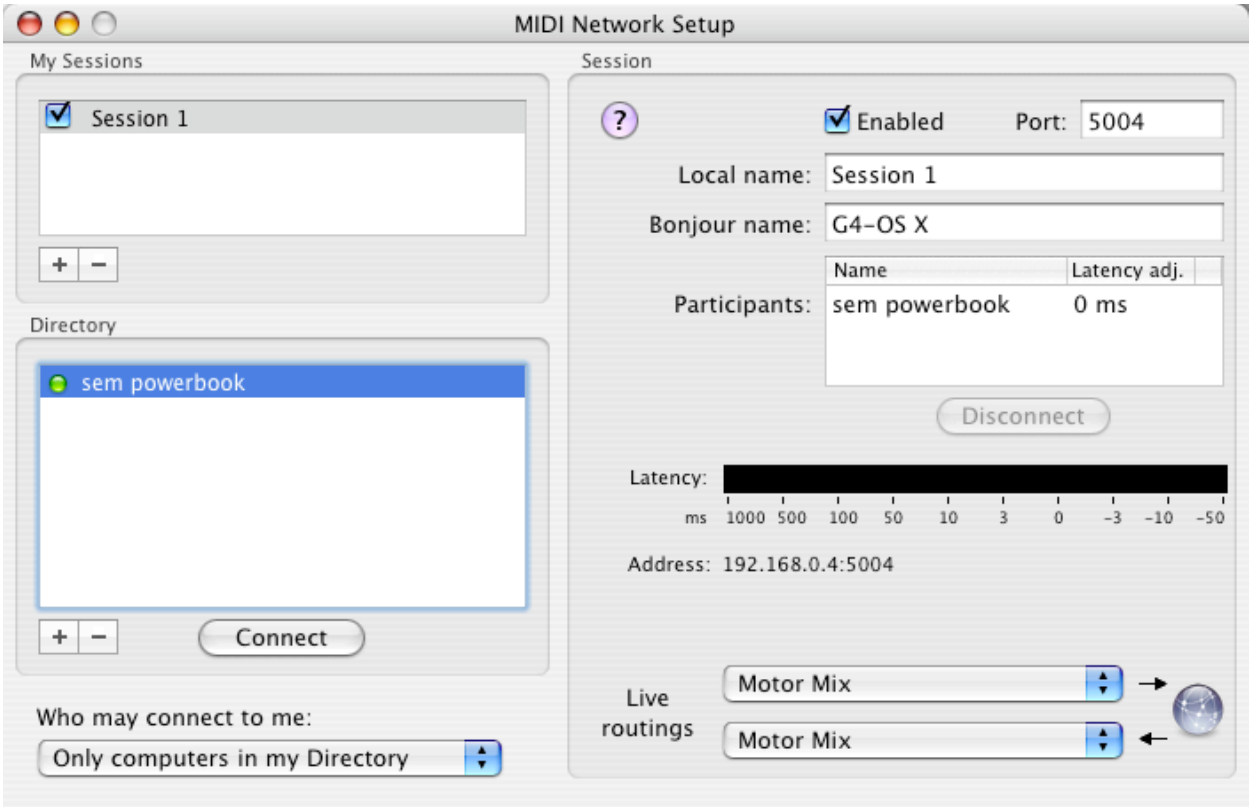
Recommanded resolution at least 1024x768 better 1280x960

Network

You can remote TH-S via Network connections. You have to dobble-click on Remote in the Audio-MIDI setup. You get the folloing Window:



In the Directory choose the Computer you want to connect to and press connect. The Computer now should apear unter Participants (right side). In the Live-Routing PopUps choose from TH-S and to TH-S.
On the other side you open the same window, connect the Computers und choose your MIDI-controller (Motormix).



In TH-S you will have to choose now the right MIDI connections for “MIDI in/out” and “PGM CHG in/out”. In the PopUps take “Network Session 1”

Now you can remote TH-S via another Computer

Log Window

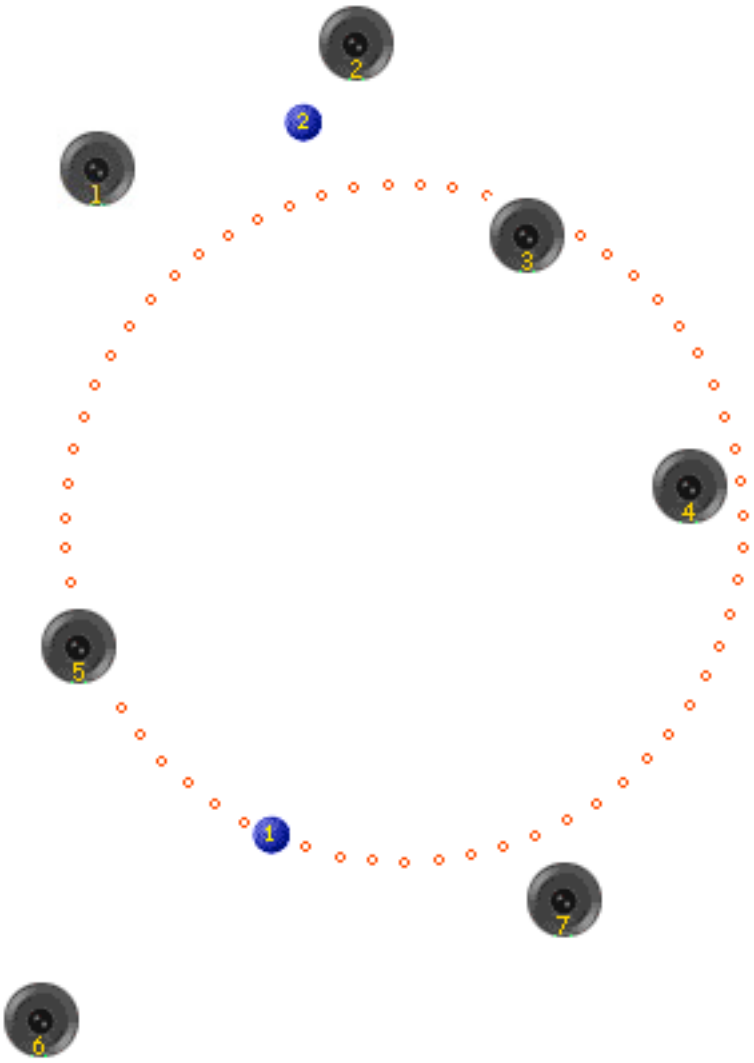
Through the function menu you can select the log window which shows you the time stamped erro report. This is a very convenient tool to find any problems (e.g. missing files, missing hardware and so on.)

In case of enduring problems not to be able to be solved by the user, the window can be edited.
This makes it possible entering questions or observations concerning the present problem and transferring it by copy/paste function via E-Mail program to (support@apbtools.com).

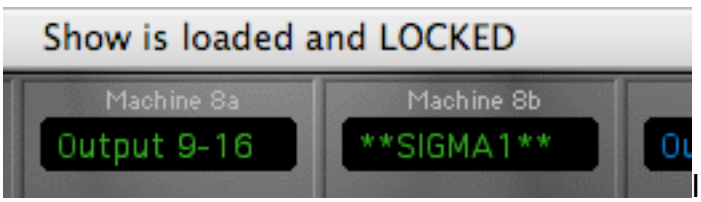
iTunes

Importing CDs in AIFF format: select AIFF encoder in the import menu of the preferences.
ITunes enables a confortable and very fast construction of an audio database with a very fast accesse and import for TH-S.
E.g. it is possible to show the selected sound in the Finder by clicking <Cmd> R and drag it directly to the selected player in TH-S.

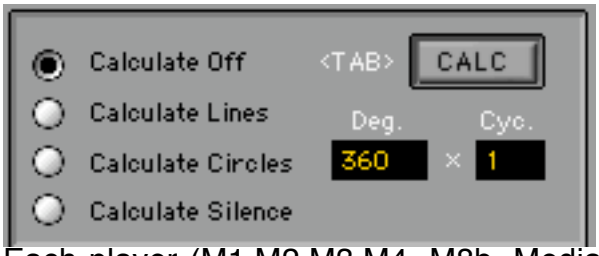
TH-S XL Version (SIGMA1 Multispeaker Panning):



TH-S XL allows for the first time the seamless integration of the SIGMA1 Multispeaker Surround Panning System and the playout system TH-S.
The playback of moving soundsources is transparently integrated within the TH-S automation system.
The user during a show notices completely no difference between conventional matrix output routing and dynamical "Multi-Speaker-Panning".

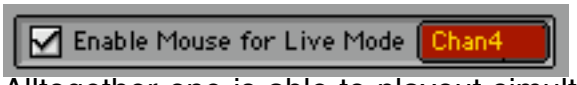


All sound movements can either be recorded manually by Mouse/Joystick/MIDI etc. interface or can be calculated time based.



Each player (M1,M2,M3,M4, M8b, Mediaplayer) is able to handle the first 99 Cues with different sound paths. Also the individual audio channels of these cues can contain different sound movements.

In "LIVE Mode" one is able to move 18 external sources (Line-Ins of the Audio Interface) or the player sources **without a time base** through the speaker setup.
This allows also applications like complex actor tracking, interactive sound movements through dancers, video etc.
The selection of the individual live-soundpaths is done by clicking the "Chan1" popup menu or with the arrow up/down keys.
Currently LIVE Mode is only activated for Mouse/Tablet/Jostick control.
A extension for individual MIDI control is under development.



Alltogether one is able to playout simultaneously 18 soundpaths over 24 graphically free positionable loudspeakers plus 12 directly adressable matrix outputs (dynamic 18x36 Audio Matrix).

The relation between the graphical distance of the source to a loudspeaker and the level at the loudspeaker output ("Diversity") can be changed during playback and is saved automatically.

Realtime recording of the Soundpaths

1) Select SIGMA1 in the Routing Popup Menu of a player or in the Setup Menu

2) Click the  button. You are now in "Speaker Positioning Mode".
3) Click on the surface to place the first speaker at this position.
4) In the"Speaker 1" Popup Menu select other speakers and place them.

The speakers can also be selected by using the <arrow up/down> keys on the keyboard.
When all speakers are set click again on the speaker symbol.You are now in "Playback/Recording Mode".
The position of the speakers is automatically saved and also recalled when launching the show the next time.

5) In the popup menu of the players (i.e. M1) select the soundfile you want to be moved. The Rec button shows that the player is enabled for movement recording (no audio is recorded).

6) Shortly play M1 (with F1 key oder remote) to read in the start/stop selection. In the time bar the selection of that cue gets visible. The start/stop times can be changed here anytime (Clickdrag, Shift Clickdrag) and will be automatically stored to the automation.

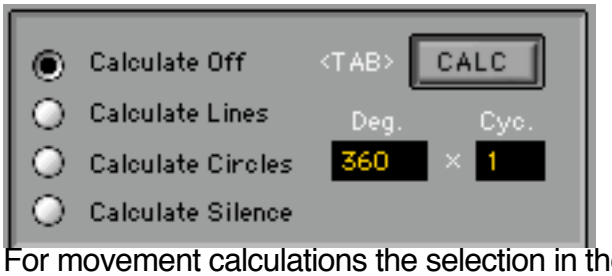
7) Click on the surface to define where the the movement should start.
Then start M1. As soon as you are pressing the mouse, the position and movements of the mouse are recorded. Always when the mouse is released playback mode is active.

8) STOP M1. Start again and see/hear the recorded soundpath.

Changes to the current recordings can be easily made by just overwriting at the desired time location.

When moving the time bar the position of the sound objects can be viewed in relation to the time. By dragging the start/stop points one is able to easily put together various movement pieces.

Calculation of Soundpaths



For movement calculations the selection in the time bar is used as the time frame.

Example Lines:

1-5) See above(if not already done)
2) Select time frame (if not already done)
3) Select "Calculate Lines"
4) Click on the surface --> START POINT of movement
<SHIFT> click on the surface --> END POINT of movement
5) Click on "CALC" or push <TAB> key
6) Movement is calculated

Hint:
If you want the second audio channel to end in the same point as the first one, you only have to specify the next START point and press "Calc". Both lines will end then in the same point. This is because the system always remembers the endpoint of the last calculation.

Example Circles:

1-5) See above(if not already done)
2) Select time frame (if not already done)
3) Select "Calculate Circles"
3a) Direction and value of rotation (Deg)
Positive -> clockwise
Negative -> counter clockwise
For multiple circles one can set a multiplicator value (Cyc)
4) Click on the surface --> CENTER of circle
<SHIFT> click on surface --> RADIUS of circle
5) Click on "CALC" or push <TAB> key
6) Movement is calculated

Hint:
If you want the second audio channel to have the same radius as the first one, you only have to specify the new CENTER point and press "Calc". Both circles will have the same radius and direction of movement. This is because the system always remembers the endpoint of the last calculation.
If you want to reverse the movement just change the deg to a negative value and calculate.

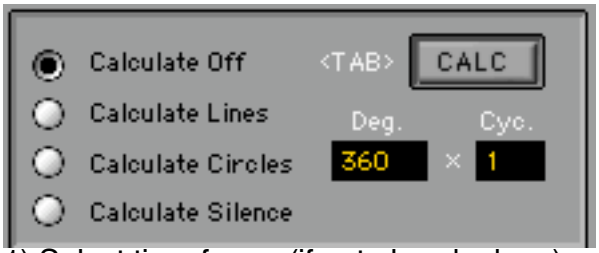
Deleting Soundpaths

With DELETE the movements of the CURRENT SELECTION are erased.

When checking  before, ALL movements of that path are erased (DELETE ALL)

IMPORTANT:
When erasing with DELETE no movement changes within that time selection will occur.
If there are recordings before and after the selection, the movements will stay at the last position when the start of the selection is reached, and will move further when the end of the selection is passed.
The audio signal is not muted within the selected time frame (exception DELETE ALL).

If a audio source shall be explicitly muted for a certain amount of time within a movement one has to use "Calculate Silence".



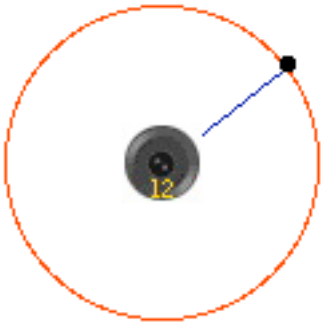
1) Select time frame (if not already done)
2) Select "Calculate Silence"
3) Click on "CALC" or push <TAB> key
4) Muted time frame is calculated

Deleting Individual Speakers

When being in the "Speaker Positioning Mode" (after clicking ) the currently displayed speaker in the popup menu can be deleted with the <Backspace> key. The output of the audio interface for that speaker is muted.

Diversity

After pushing "Diversity" the sensitivity and the panning behaviour between the speakers can be defined.



By clickdragging on the surface a circle line can be drawn that represents the -6dB line of the speakers.

All sound objects will be played out 0dB in the speaker centers. The red line marks a -6dB level drop from the center. Outside the red line the level drops another 6dB by each doubling of the circle distance.

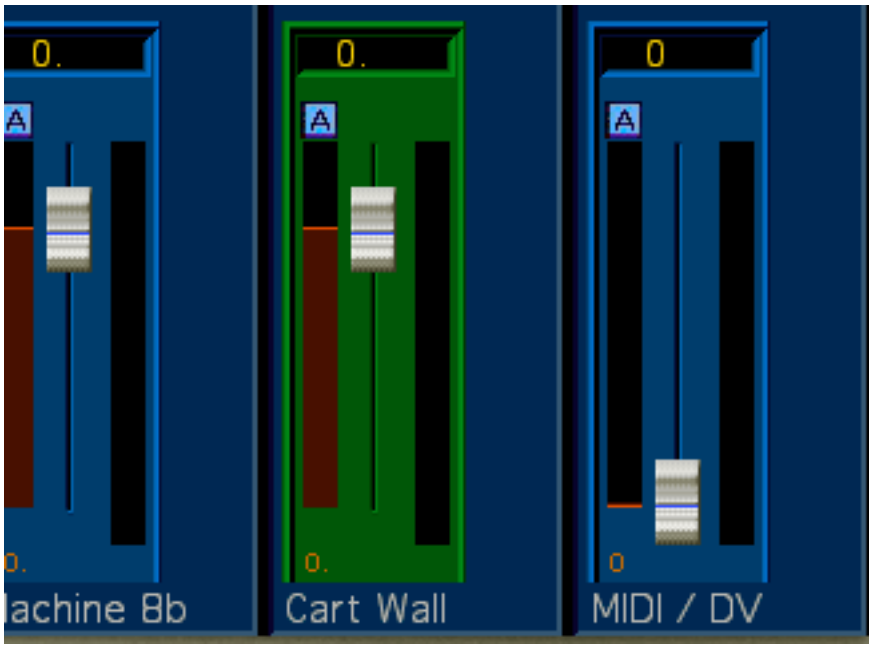
By cleverly defining Diversity and the positions of the speakers one can easily achieve a optimal panning behaviour between the loudspeakers.

Both loudspeaker positioning and diversity setting can be done during playback. This allows a very intuitive optimization of all settings while simultaneously hearing the results.

Currently the Diversity setting is set the same in all speakers. This can change in further versions to individual settings for each speaker.

TH-S 3.2 Cart Wall Edition

The Card Wall Edition was created especially for Radio but can be used for all other creativ situations.
Instead of the mediaplayer you find the Card Wall Player as Player 7



The Card Wall Player manage at first 16 sound files. They can be loaded as in the other players.
When you click on Card Wall you will get the following window:

Each of the 16 fields is one player, each plays one sound. You can choose the outputs in the popup. Under the play button you find several switches whith the following functions:

L	T	⇑	⇓	M	E
Loop	Trigger	Einblenden	Ausblenden	Metaplayer	Editor

Loop

The sound loops until you press the stopp button

Trigger

If the sound ends or if you press stop, you can trigger another sound (up to 16 sounds). Which sound will be triggert you can set up in the Card Wall Setting.

⇑⇓ These two switches achive a FadeIn/FadeOut. The fade time can be set up in the Card Wall Setting

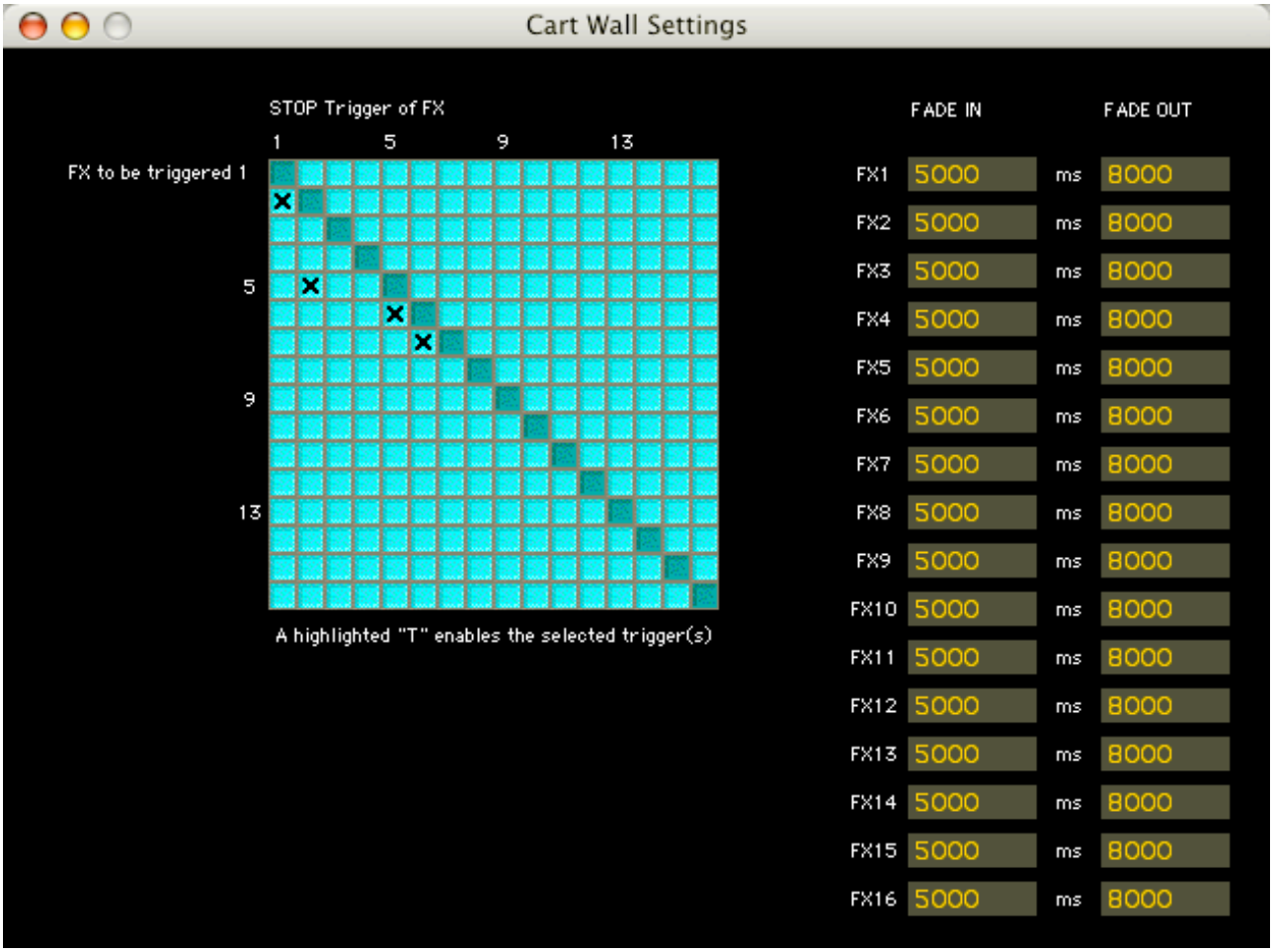
Meta Player

Opens the Meta Player (see Meta player)

Editor

Opens the Editor, where you can edit the sound (see Editor)

Cart Wall Setting



Here you can set up the fade in and fade out times. Here you also can adjust which will be triggert by which player. You also can trigger multiple player at the time. Also trigger loops are possible.

Layers

Whith the Card Wall Player you can manage up to four layers. You can switch them with the buttons on the right side (A to D). Each of them can handle up to 16 sounds

Important: The card wall setting keeps the same in each layer.

TH-S Pro Video Edition

Tips and Tricks

Backup Strategies

Goodies on CD

TH-S 3.2.1 is "Soundflower" compatible (OSX only)

"Soundflower" von "Cycling74" is a virtual audio device that provides an easy and simple way for TH-S and other CoreAudio compatible applications to send and receive audio to and from these applications.

After the installation (Installer is located in the "Goodies" folder) the virtual "Soundflower" drivers show up in the "Choose Driver" popup menu of TH-S
Selecting for example "CoreAudio Soundflower (16ch)" as device and selecting this device as an input device in another CoreAudio compatible application, all audio cues of TH-S are then played out through that application (channel 1 - 16).
For more information please read the "Soundflower README" in the Soundflower folder.

Timecode Tracks (not in Evaluation Versions)

More than 4,5 hours of optimized SMPTE timecode files with 25 resp. 30 Frames/s for the playout of timecode bursts over audio outputs are provided.
The audio files can be shortened to the appropriate time frame with the built-in Editor.
The files start with 3 seconds of "halting" 0:00:00.0 timecode.
Audio programs that have no integrated realtime Samplerate Conversion like TH-S cannot play back these files in the right format.
The timecode files are located in the "Goodies" folder of the CD.

For performance reasons DV files should be played out over the Firewire port if possible, as the decoding task of the DV files is then handled by the attached DV device.

Various

For compatibility reasons regarding TH-S XP2.6 (Windows XP) file names should´t contain the characters \/:*?"<>|,; as they are not supported by the Windows XP operating system.

The selectable time in player 8 has been reduced to 59min 59sec 9/100 (DV length). The MMC "Locate command therefore is now only be send within this time span.

TH-S v2.6 can be controlled completely by the "Remote" function of the Yamaha DM1000/2000 mixing desks.

For a mixed working approach Mixer/TH-S the "User Defined Keys" can be easily mapped to the Start/Stop/Pause functions of TH-S.

DVD files (.VOB) cannot be played out in DV format over Firewire because of the Encode/Decode process this would involve. First convert these files to DV format.

For performance reasons DVD files should be converted on non-G5 CPUs to less CPU intensive codecs (DV,JPEG etc). This can be easily achieved by using the Universal Converter in the Tools menu.

For performance reasons DV files should be played out over the Firewire port if possible, as the decoding task of the DV files is then handled by the attached DV device.

Video

TH-S now supports the playout of DVCPRO and DVCPRO50 for highquality video playback.

DVD Video files (.VOB files) should ALWAYS been played out in original size on the second monitor, as the dynamic resizing to fullscreen gets lost after Start and Stop (other video formats are not affected).

DVD files (.VOB) cannot be played out in DV format over Firewire because of the Encode/Decode process this would involve. First convert these files to DV format.

For performance reasons DVD files should be converted on non-G5 CPUs to less CPU intensive codecs (DV,JPEG etc). This can be easily achieved by using the Universal Converter in the Tools menu.