Poetenweg 52c • 14612 Falkensee • Tel.: +49(0) 3322 423112 • Fax: +49(0) 721 151372150
Web: http://www.apbtools.com Email: support@apbtools.com

TH-S X2.6 Manual Addendum

TH-S v2.6 is available now on the operating systems MacOS 9, MacOS X and Windows XP

Introduction to TH-S X2.6

Besides the various additions shown below, TH-S X2.6 features a completely rewritten Media Player (Player 7) which is able to play out any Quicktime compatible audio/video format over the integrated matrix via Digidesign- or ASIO resp. CoreAudio Hardware.

On the audio side this contains, besides all linear formats, MPEG formats (mp3, mp4, "DIGAS" etc) as well as "lossy" codecs like µlaw, Alaw, IMA, MS ADPCM, Qualcomm etc.

On the video side all formats can be played out directly over Firewire in DV PAL/NTSC resp. DVCPro format or over additional VGA/DVI graphic boards. The integrated video grabber allows easy recording of time stamped video cues which instantly show up in the playlist of the Media Player. For easy navigation player 8 is able to remotely control a connected DV camera/deck.

For the user there is no longer a difference between playing back a audio or video cue because of the completely identical remote- and snapshot integration of the Media Player within all other players.
For maximum flexibility in the studio all players can even be remotely controlled by a compatible, Bluetooth enabled mobile phone (OSX only).

Minimum System Requirements

MacOS X:

MacOS X Version ≥10.2.8
G3 or G4 CPU, min. 800 MHz, min. 100 MHz Systembus 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
CoreAudio compatible Audio Hardware

MacOS 9:

MacOS 9 Version ≥9.2
G3 or G4 CPU, min. 500 MHz,
G3 CPU allows only limited video capabilities
≥512 MByte of RAM
Monitor min. 1024x768
Quicktime ≥6.03
Open GL
ASIO 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, WebCams, etc to ensure troublefree operation.

Important for Digidesign hardware users under OSX:
Before the first usage TH-S must be notified by the Digidesign "CoreAudio Setup" as a valid application. 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.

OSX Installation:
"TH-S X2.6 Show Template" and the applet "Current TH-S Show" will be installed in the "Applications" folder on the root drive. From there the template can be copied to arbitrary volumes.

New Features

Compatibility with "Panther"

This version is compatible to OSX 10.3, OSX 10.3.2 or higher is recommended.

Native OSX "Bundle" Format

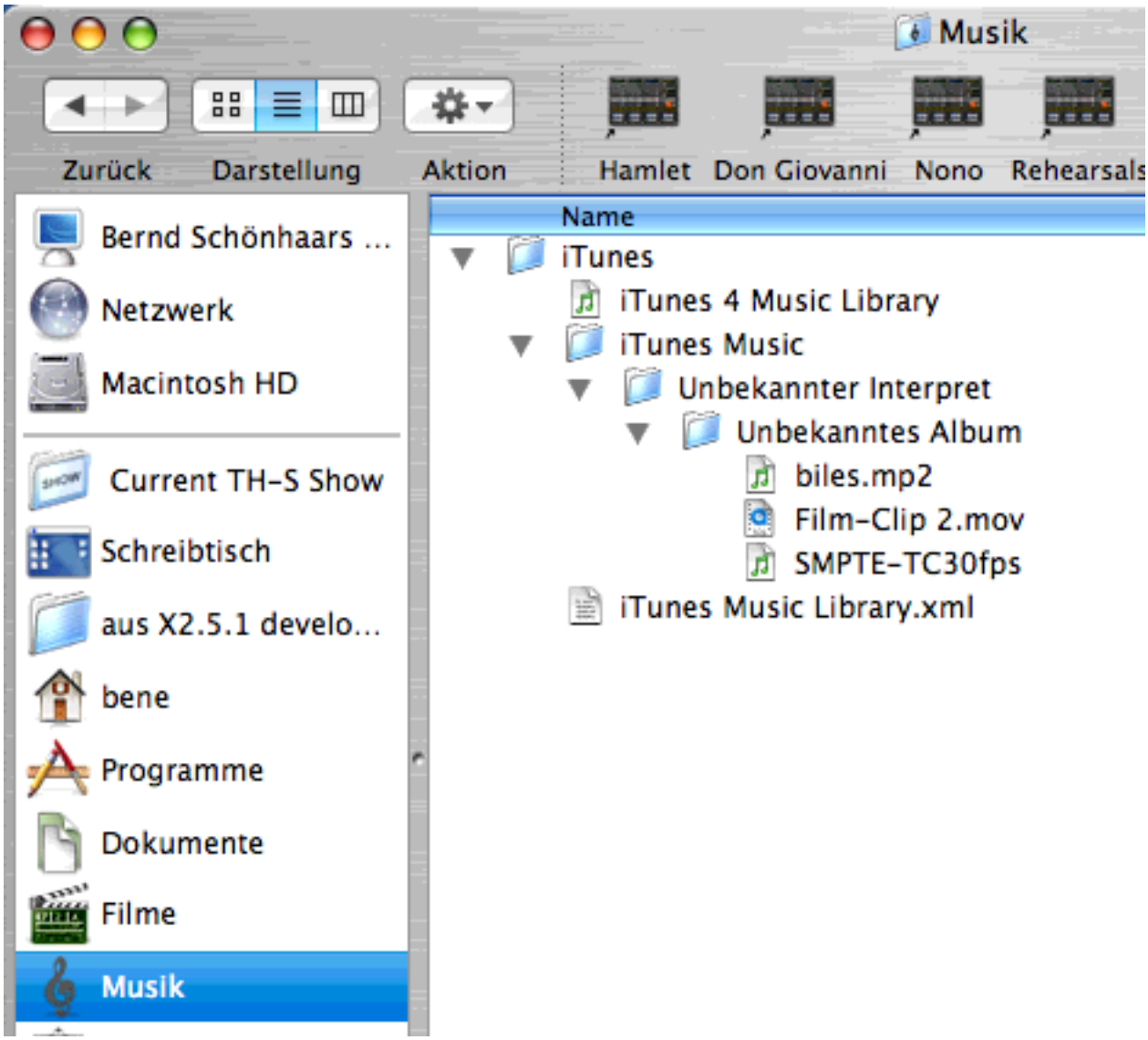
TH-S now works as a OSX native "bundle" application. From v2.6 on complete shows appear in OSX as clickable applications in the Finder. All player folders are located "inside" the application. This makes the handling during copying/archiving much easier and reduces a lot the danger of accidently deleting/moving 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.

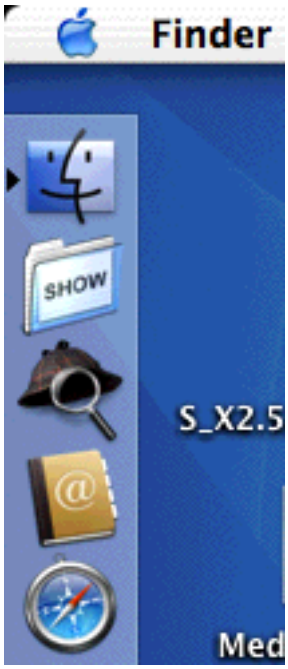
Application-Bundles can either be opened by "<Ctrl>Click ->Show Package Content" (the player folders M1 etc. are located in the "/Content/MacOS" folder), or more comfotable with the included "Current TH-S Show" applet while running TH-S.

"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.

Mediaplayer (Player 7)

The Mediaplayer in TH-S has been completely reengineered from scratch.

The Media Player is especially useful for trying out new sound/video ideas, as the playlist generated by drag&drop only holds links to the physical location of the files without really copying the files. With this method whole folders, CDs, DVDs or Harddisk Volumes with files for testing or tryout purposes can be delivered VERY fast.

There is no alphabetical sorting like in the other players. A displayed cue is replaced by the cue dragged onto the player surface (or was selected with <Ctrl> Click surface).

The order of the files is defined by the positioning within the playlist. Dragging whole folders or volumes onto the player surface, the playlist is deleted and replaced with the folder /volume content playlist.

Clicking on "INSERT CUE" creates an empty cue before the displayed cue which then can be filled with video/audio content by <Ctrl>clicking on the surface or by drag and drop operation.
The playlist is saved in the /MEDIAPLAYER/DV_Support folder and can be edited with any arbitrary text editor.

These can be 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".
This allows easy inserting of count downs, logos, texts etc. before each player 7 cue.

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 + Velocity

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

AV Output / AV Input (also see "Videofunctions in TH-S.pdf")

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 v2.6 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 (default)

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 within the 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 snapshot automation.

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$)

Compatibility with MacOS 9

For playing back OSX built shows on OS 9 systems, it is enough to copy "TH-S 2.x Classic" in the "MacOS" folder of the appropriate show and launch it.
The Classic application can be even left there while operating again in OSX. This allow easy operating in heterogeneous environments (in OS9, bundle applications appear as simple folders).

For the playback of a OS9 built show under OSX the empty folders of a new OSX show must be filled or replaced by the M1,M2 etc.folders of the OS9 show.

Improved CD/DVD/Volume Support

Now whole CD/DVD/mp3-CDs/JPEG CDs or Volume Icons can be dragged onto the Mediaplayer surface (Player 7) and are directly activated in the playlist.
Pushing the Eject button, the playlist is deleted, the CD/DVD is ejected or the Volume is unmounted.

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".

Goodies on CD

TH-S v2.6 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.

Hints

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.

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.