

# **User Manual**

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# **User Interface**

The TH2 interface is split into six stacked horizontal panels: Header, Sound, Overview, Module, Smart and Footer. Each of these panels is dedicated to particular functionalities of TH2. Let's take a look.

## **HEADER PANEL**

The Header panel features the global controls of TH2, with the input-related ones on the left side while the output-related ones are located at the right end.

| TH2   | ASTER LIVE IN LEV  | V LINE IN   | TUNER   | MUTE  | _  |       |
|---|--|---|---|---|--|-------|
|   |  |   | Fig 1 - H   | leader Panel  |  |       |
| LIVE<br>IN LEV<br>IN<br>TUNER<br>OUT<br>OUT | Toggles b<br>Shows the<br>Input leve<br>TH2 Tune<br>Output lev<br>Output lev | netween normal and<br>e Input Level Adjus<br>el meter<br>er; press ON to turr<br>vel knob: adjusts T<br>vel meter | d Live Mode (i<br>tment window<br>it on, MUTE<br>H2 output leve | no prompts to sav<br>v which helps in se<br>to temporarily sile<br>el | e when changing tone)<br>tting the optimal input l<br>nce TH2 output | level |

By clicking the MASTER button near the TH2 logo, the sound panel opens up giving you access to TH2 Global controls. Global controls act as an overall "Master" control that affects TH2 sound regardless of the Variation being loaded.



Fig 2 - Header Panel with Master controls made visible

- INPUT Input sensitivity: changes input sensitivity as much as it would be on a real amp. LOW is best suited for single coils, HIGH for usually works better with humbuckers GATE The Global Noise Gate threshold level. It works as a combined Expander/Gate for maximum efficiency
- LOW Use this to dial in a global Low frequencies EQ for all TH2 Sounds/Variations
- HIGH Use this to dial in a global High frequencies EQ for all TH2 Sounds/Variations
- REVERB Use this to trim Reverb levels in all TH2 Sounds/Variations DELAY Use this to trim Delay levels in all TH2 Sounds/Variations

## SOUND PANEL

The Sound panel is dedicated to TH2 Banks, Sounds and Variations management.

|  | <b>00.1</b>   | Experience T<br>TH1 Sampler  | H1  |   |  |                | SEARCH                 |
|--|---|--|---|---|--|----------------|------------------------|
| Clean Verb                               | Full Metal  | 70s Amp  | Guitar Hero   | TremWorld   | Big Stack 80   | Wah Solo       | Modern Clear           |
|  |   |  | Fig 3 - Sc  | ound Panel  |  |                |                        |
| BANK<br>ER/FACTORY<br>SOUND<br>VARIATION | Bank number.<br>The User/Factor<br>Sound number<br>Variation numb<br>Sound.Variatio | TH2 features S<br>ory selector is I<br>. Each Bank fe<br>er. Each Sour<br>n (E.g.: 07.3 is | 999 Factory plu<br>located under t<br>atures 13 Sou<br>Id has 8 of ther<br>s Sound 7, Var | is 999 User Ban<br>he Bank numbe<br>nds, from 00 to<br>n; the yellow 3-6<br>iation 3) | iks<br>er; Factory Banks<br>12<br>digit number is la | s cannot be ov | erwritten<br>to show a |
| BANK NAME<br>SOUND NAME                  | Bank name (te:<br>Sound name (te:<br>8 buttons to se                                | xt color matche<br>ext color match<br>lect Variations                                      | es Bank numbe<br>hes Sound num  | er color)<br>nber color)<br>ariations 1 to 4:   | lower row: Varia                                     | tions 5 to 8   |                        |



**SEARCH** | Search the database for a particular Sound or Variation

## **OVERVIEW PANEL**

The Overview panel shows an interactive view of the full TH2 Sound Chain. You can easily modify the composition of each Sound Chain by way of simple mouse actions.



#### Fig 4 - Overview

### **MODULE VIEW PANEL**

The Module view panel shows a zoomed coordinated view of the sound chain. This view allows for a full editing capability of all parameters of the single modules in the Sound Chain. In order to have the Module view focus on one particular module in the Sound Chain, just click on the module itself in the Overview.



Fig 5 - Module View

#### **SMART PANEL**

The Smart panel has 8 customizable controls that you can easily program in order to control as many parameters at same time as you want and need.



Fig 6 - Smart Panel

## **FOOTER PANEL**

The Footer panel contains BPM (Beat Per Minute) Tempo controls, a complimentary display and buttons.







| BPM          | Shows the current BPM, be it Host-driven or internally generated         |
|--------------|--|
| HOST/INT/VAR | Toggles between Host, Int (own generated) and Var (per-variation) tempos |
| HELP TEXT    | Help text display  |
| PREFERENCES  | Opens the Preferences window   |
| HELP         | Activates the interactive Help Text display                              |
| MANUAL       | Opens the TH2 Manual   |
| INFO         | Opens the TH2 Product Information window                                 |

## FREELY RESIZABLE WINDOW

TH2 Window is freely resizable in real time (no need to re-instantiate TH2 or tweaking numbers in a Preference window. Just click and drag the lower-right corner of TH2 interface in any direction. TH2 will remember its size when you reopen it next time.

| Preferences | Help | Manual | Info |  |
|-------------|------|--------|------|--|
|             |      |        |      |  |

Fig 8 - Bottom right corner of TH2 window

#### SHOW/HIDE THE OVERVIEW PANEL

In case you fall short on screen-estate, TH2 allows you to hide the Overview panel. Just click on the View Map tab



Fig 9 – The auto hide overview preference

When closed the Panel looks like this:

| Clean Verb | Full Metal | 70s Amp | Guitar Hero | TremWorld | Big Stack 80 | Wah Solo | Modern Clean |
|------------|------------|---------|-------------|-----------|--------------|----------|--------------|
| View Map   |            |         |             |           |              |          |              |

Fig 10 – Overview panel: closed view

Click again on the View Map tab and the panel will open again.









# Playing with TH2

## **Connecting the Guitar**

Guitar pickups have high electrical impedance while computer standard line inputs have low impedance. For this reason you cannot connect the guitar to your computer directly (doing so, you would get a muddy and dark tone).

You need to connect the guitar to a proper instrument input. Many audio interfaces offer such an input, which can have different names: "Instrument", "Inst", "Guitar", "Hi-Z", "DI" are just a few examples.

Once you have connected a guitar to the proper input, you'll have to adjust the input level of the audio interface using its level knob. When you play very hard the guitar and the input level is almost approaching its upper limit, it means that you have reached an optimal setting.

This setting is critical to TH2 proper functionality, especially regarding all gain-based modules (amplifiers, distortion pedals...).

If you adjust the level in the digital realm through your DAW (Digital Audio Workstation) or using a plug-in inserted in a track before TH2, you will most likely not get an optimal tone. For example, if the input level is too high and the audio interface input is clipping, lowering the level on the DAW track will not solve the clipping, which happens at the Analog to Digital converter.

So, the only way to set the proper input level is by adjusting your audio interface level following these guidelines:

- Connect your guitar to the audio interface directly (the fewer processing prior to conversion, the best);
- Select the pickup next to the bridge of your guitar; switch it to the humbucker position if it's a split pickup;
- Ride the guitar volume and tone pots to their maximum setting;
- Play very hard on the guitar, while still being musical usually some strong open-position chords will make it;
- Raise the input level so that the input is close to clipping, but a clip doesn't yet happen.

#### **TH2 Standalone Options**

When using TH2 in Standalone mode, you have to set the proper connections and settings for your audio and MIDI hardware.



Fig 12 – TH2 Standalone Options: click on Audio Settings

Click the Options button and you'll be shown a window like this:

Fig 13 – The Audio (and MIDI) Settings window

#### Audio Device Selection

| ×                      | Audio Settings        |    |      |
|------------------------|-----------------------|----|------|
|                        |                       |    |      |
| output:                | Built-in Output       | Ŷ  | Test |
| input:                 | Built-in Microphone   | \$ |      |
| Anthe terror descenter | Input 1               |    |      |
| Active input channels: | Input 2               |    |      |
|                        |                       |    |      |
| Sample rate:           | 44100 Hz              | ÷  |      |
| Audio buffer size:     | 512 samples (11.6 ms) | \$ |      |
| Active midi inputs:    |                       |    |      |
|                        |                       |    |      |
|                        |                       |    |      |
|                        |                       |    |      |
|                        |                       |    |      |

Select you Audio device, which should be listed in the drop down menu.

#### Setting Sample Rate

Set the Sample rate: if you don't have particular needs, go for 44100 Hz.

#### Audio Buffer Size

Audio buffer size is very much dependant on your computer overall performance and on the kind of audio device connected. Usually 256 samples is a good starting point; you might want to lower this to 128 samples or even to 64 samples if your audio hardware supports them. Pay attention that a too much low setting can affect TH2 or the whole computer performance bringing to clicking and crackling, better known as buffer dropouts.

#### Active Input Channels

Click to activate or de-activate the Audio Device inputs according to your needs. Usually a guitar is mono and is going to be connected on most audio devices to input 1 or 2.

Some Audio Devices might not allow you to select a single input (for example, Input 1). In such a case, there's a solution explained in the next paragraph.

#### Active MIDI Inputs

Please select the physical or virtual MIDI inputs you mean to use to remotely control TH2.

TH2, by design, listens to MIDI input flow on all channels of the selected ports, simplifying your work.

## Input Channel Choice in TH2

Some Audio Devices (for Standalone use) and hosts (in plug-in mode) don't allow for Mono input to Stereo out-

#### TH2 Manual



put operation which is the one you'll more likely need most of the times.

To solve this problem, TH2 features a right-click (Ctrlclick on Mac) pop-up menu on its phantom input module.

When TH2 senses a stereo input, this options is available, allowing you to choose to which side of the stereo connection your instrument is connected.



Fig 14 – TH2-bound Input Channel Selection

This is also a welcome feature for people playing live and often switching between two guitars; you don't need to unplug and re-plug cables and re-set input levels, just right click and select the proper input.

#### **Input Level Adjustment**

By clicking on the IN LEV button, you'll see the Input Level Adjustment window.



Fig 15- Input Level Adjustment window

This window will guide you through in setting the proper input level on your audio hardware following the rules just mentioned in the former paragraph.

### **Banks, Sound, Variations**

TH2 memory is organized in Banks, Sounds and Variations.

TH2 has Factory and User areas. You can switch between these areas by clicking on the button under the Bank number in the Sound panel.

Each area (Factory or User) features up to 999 Banks ranging from 001 to 999.

Each Bank features 13 Sounds ranging from 00 to12.

Each Sound features 8 Variations ranging from 1 to 8.

| Bank 001 | Sound 00 | Variation 1 |
|----------|----------|-------------|
|          |          |             |
|          |          | Variation 8 |
|          | Sound 01 | Variation 1 |
|          |          |             |
|          |          | Variation 8 |
|          |          |             |
|          | Sound 12 | Variation 1 |
|          |          |             |
|          |          | Variation 8 |
| Bank 002 | Sound 00 | Variation 1 |
|          |          |             |

Use the up and down arrows to navigate Banks and Sounds. Alternatively, you can double click on the Bank or Sound number and type the desired go-to Bank or Sound. Switch between Variations using the 8 Variation buttons on the right side of the Sound panel.

# **Live Mode**

TH2 keeps trace of any modification you do to a Variation or a Sound as a whole. As soon as you change anything in a Variation, both the Variation and the Write buttons will show an asterisk (\*) mark, meaning that you need to write to disk the Variation or Sound in order to keep those changes for future needs. Furthermore, when switching Sound or Bank, TH2 will prompt you to write the changed Sound to disk.

This is perfect when you are creating your Sound, preparing for a rig or mixing your project, but can be very annoying when you're playing live or dealing with TH2 in a recording session.

For this reason we are also featuring the Live Mode (click on the Live button on the upper left side of TH2, in the Header panel). This mode allows you to play freely with all TH2 controls, locally or remotely, without incurring any dialog boxes requiring you to take your hands away from your instrument. When this mode is activated, any changes you may wish to write to disk have to be done intentionally, since you will not get any alert when abandoning a modified Variation or Sound.





# **Editing TH2**

# The Sound Chain and the Module Panel

TH2 graphic interface is mostly filled by the Sound Chain and Module Panel showing the Modules connected in order to form the signal path of the currently loaded Variation.

The Sound Chain is the upper horizontal panel showing an overview of the entire signal path.

The Module View shows you a closer view of your current selection. To focus the Module Panel on what you need to edit, click on any Module in the Sound Chain Panel.

The semi-transparent guitar at the left side of the signal path represents the input to TH2, while the semitransparent mixer at the right end represents the output from TH2 (either to the DAW host or to your audio interface).

Between the aforementioned guitar and mixer, these panels show all the processing being applied to your sound by TH2 in order to create its tones.

The signal path carries by default a serial-parallel-serial layout.

You can add as many modules as you need to any part of the signal path, either from Sound Chain or Module Panel.



Fig 16 – TH2 Default Sound Chain

There are five different kinds of modules in TH2:

Stomp boxes Expression pedals Amplifiers Cabinets Rack effects

The above-mentioned modules can be loaded in any order and number and in any position inside the TH2 signal path, either in the Sound Chain or Module Panel.

Having this power, joined together with the serial/parallel insertion points will allow you to create either basic, down to earth configurations or very complex dual/parallel mono/stereo processing kind of signal paths.

## TH2 signal flow explained

The signal path is strictly serial (one module's output signal always feeds the following module's input) apart from the section where the signal gets clearly split in two. This section has parallel processing capabilities, further powered by TH2 Mixer at the end of it.

A serial path is where all Modules are connected directly one into the next. A parallel path is where the signal splits into two signals running in parallel allowing you to apply processing independently to the two paths.

Since you can place any module type in any position, it's very easy to build Dual Cabinet, Dual Amp, Dual FX or any other kind of parallel processing using this section together with the serial paths at both ends in the signal flow.

Please note that even if in real life you are forced to have an amplifier connected to a cabinet, in TH2 you are totally free to create any signal path you can imagine. You could, for example, put two amplifiers in series, or have rack effects placed between amplifier and cabinet. It's easy to set up a traditional signal path, but it's also easy to experiment with new sounds and with unconventional sequences of modules. The possibilities are endless.

#### **TH2 Splitter Module**

The TH2 Splitter is placed at the beginning of the parallel processing section.

Its function would have been almost self-explanatory wasn't it for some extra features we added.



Fig 17 – Splitter Module

#### **X-Over Modes**

There are three so-called crossover modes:

Off: when in this position, all controls but Balance are deactivated. The Splitter acts as an off-the-shelf splitter.

Normal: the crossover functions as a common hipass/lo-pass network. You can process lower and higher frequencies separately in the two parallel paths. X-Over Freq. and Swap are active in this mode.



Bandpass: the crossover works as a band-pass/bandreject filter network. You can process 'mid' frequencies and high/lo ones separately in the two parallel paths. All parameters are active.

#### **Splitter Parameters**

Swap button: this button swaps the destination paths of the filter networks when X-Over Mode is not in the Off position.

X-Over Freq.: sets the frequency around which the filters operate.

Freq. Spread: in Bandpass mode it controls the width of the band-reject filter allowing for a partial layering of the signals for added flexibility.

Balance: it simply sets the amount of signal directed to the upper (1) and lower (2) paths.

## **TH2 Mixer Pro Module**

The TH2 Mixer is placed at the end of the parallel processing section and allows you to trim each path's signal to your needs.



Fig 18 – Mixer Pro Module

Phase: controls the phase (0° or 180°) of the input channel.

- Delay: controls the amount of delay of the input channel in hundreds of milliseconds from zero to 2.3 ms. Optimal control to correct phase delay problems or as a creative tool to dial in complex comb-filtering like effects.
- Width: sets the stereo width of the input channel. 0 equals to Mono, 100 to stereo and -100 to inverse stereo (swap of L and R inputs)
- Pan: sets the panpot or panorama position of the input channel at the output. For stereo signal it acts as a balance control: at minimum it will only pickup the left channel signal, at maximum only the right channel will be preset at the mixer output.
- Level: the reference level, in dB, of the channel.
- Balance: this control allows you to dial-in a real time balance between the two mixer channels.
- Mono/Stereo switch: sets the output mode of the mixer. Mono will merge all inputs to mono.

All controls in this custom module are available as Smart Connections.

#### Interacting with Modules

Our goal in designing TH2 was to keep things simple while still retaining a lot of power and flexibility. This will allow you to focus on what's really important, creating your sound and playing, not worrying too much about how to do that.

Highlights and Icons will help you understanding the functions of TH2 and you will also get some interactive help about what you are doing from the highlights and small icons shown while you are performing your actions.

#### **Inserting a Module**

When working on a Variation from scratch, to insert a module, in any of the two views click on the grey square insertion area, if available, and choose the module from the popup menu.



Fig 19 - Click the grey square area to insert a module

In any other case, inserting a new module is done by right-clicking (or Ctrl-click on Mac) on the cable where you would like the module to be positioned.



Fig 20 - Right/Ctrl clicking a cable to insert a module

#### **Replacing a Module**

You can load a new module in place of another one by right-clicking (or Ctrl-click on Mac) the module's name in the Module view.





Fig 21 - Right/Ctrl clicking a module to replace it

#### Moving a Module

In order to move a Module, click on a module and drag it around the signal path, either in the Sound Chain or Module view and drop it on a cable in the desired place. You will see a small down arrow icon showing you where you can drop it.



Fig 22 - Dragging a module to move it

#### Swapping Modules

Click on a module and drag it around the Sound Chain or Module Panel. Dropping it on another module will swap their positions.



Fig 23 - Dragging a module over another one to swap them

#### Copying a Module - 1

You can copy a module by way of Ctrl-click (PC) or Altclick (Mac) an existing module and dragging it anywhere in the signal path, either in the Sound Chain or Module Panel. When dropped on a cable, a copy of the dragged module will be created. When dropped on an existing module, a copy will be created overwriting the former module.



Fig 24 - Ctrl/Alt dragging a module to duplicate it

#### Copying a Module – 2

Right-click (or Ctrl-click on Mac) a module in the Sound Chain or Module View and select Copy.



Fig 25 – Copy via right-click (or Ctrl-click on Mac)



Fig 26 – Paste a module via right-click (Ctrl-click on Mac) menu

Pointing to another module will overwrite it with the pasted, pointing to an empty place-holder or on a cable will insert the copied module.

NOTE: this method works across Variations and plug-in instances.

#### Removing a Module – 1

Right-click (right-click or Ctrl-click on Mac) and choose Remove from the contextual menu in order to remove a module (see picture above). You also can remove a module by dragging it out of either the Sound Chain or Module Panel.





Fig 27 - Drag a module out of the panels to remove it

#### Removing a Module – 2

Right-click (or Ctrl-click on Mac) a module in the Sound Chain or Module View and select Remove.



Fig 28 – Remove a module via right-click (Ctrl-click on Mac)

#### **Bypassing a Module**

Each Module in TH2 can be bypassed; even if this is something not achievable in real life (you can bypass the Amplifier and Cabinet modules for example).

This feature makes it easy to create hybrid hardware and modeled setups, re-amping schemes or combinations using external third-party plug-ins.

In the Module Panel, just click on the proper zone (Power Led or Bypass switch) to bypass that Module. While in the Sound Chain Panel, double click the module icon.

#### Focusing on a Module

While the signal path management can be dealt with either in the Sound Chain or Module Panel, editing of the Modules can only happen in the Module panel.

In order to focus on the desired Module, you can:

- **Click on a Module in the Overview**; you will see the four white corners move 'around' the clicked Module; these four corners represent in the Overview, the portion of it that is 'zoomed' in the Module view
- Click and drag the background in the Module view to move around the Sound Chain

#### **Module Presets**

With the exception of the Cab IR, each Module in TH2 carries its own preset management system.

In the Module View panel, double-click on the Module name or anywhere but on parameters and the Module Preset panel will appear.



Fig 29 – Preset panel on opening

The panel will show 'Unsaved Setting' until you load a preset or write your own custom preset.



Fig 30 – Preset Panel with a saved preset

The two arrows scroll through all the available presets. The plus and minus signs work as 'Add current to presets list' and 'Remove current from presets list', while the cross sign simply closes the window. Clicking on the currently selected preset name will open the dropdown menu, showing all presets.



# TH2 Memory - Basic Concepts

### User and Factory memory locations

Factory memory locations are for factory installed Banks. This memory zone is not writable. TH2 can feature up to 103,896 factory installed Variations.

User memory locations are at the user's disposal. You have a total of up to 103,896 writable Variations; more than anyone can even think of.

#### What is a Bank?

A Bank is a collection of Sounds. It responds to MIDI Bank Change messages, so you can remotely change Banks inside TH2.

Each Bank features up to 13 Sounds and its content should be consistent: a set of Sounds for a live gig, for a particular style or guitar in your setup or for different instruments (TH2 is for guitars, but nothing stops you from using it on other instruments or on vocals).

#### What is a Sound?

A Sound is the main reference for your... well, sound! A song name, a style name, a set of a gig, anything can fit into a Sound.

Each Sound can feature up to 8 Variations.

#### What is a Variation?

Thinking of the way guitarists usually need to access different sounds in their rig, we conceived the concept of Variations.

Situations when you need to get things organized the way you want, usually involve playing different sections of a song with different sounds, playing a whole gig or a set in a gig using your set of sounds.

This translates into the power of creating variations on the theme (a change of amplifier channel, a change of stomp box bypass or more complex things) while keeping to the sound concept intact. TH2 Sound and Variation concepts come from here. These will still all fit into a common umbrella like a song title, a gig title or something like it.

This said, a Variation could really be anything you wish or need.

#### Naming memories

**Bank:** double click on the Bank name display (the upper part of the big display in the Sound panel, pale blue text)

- **Sound:** double click on the Bank name display (the upper part of the big display in the Sound panel, pale yellow text). Alternatively right-click (or Ctrl-click on Mac) on the Write button and choose Rename Sound.
- Variation: double click or right-click (or Ctrl-click on Mac) and choose Rename Variation on the desired Variation button



Fig 31 – Right-click (or Ctrl-Click on Mac) on a Variation button brings up the Variation menu

#### **Basic browsing**

To browse through TH2 memories, use the arrows to change Bank (pale blue number), Sound (pale yellow number) and click with your mouse on any of the 8 Variation buttons on the right in the Sound panel.

Alternatively, Rolling with your mouse over the Variation number right next to the Sound number, a set of arrows appear. You can use those arrows to browse quicker through Variations in different Sounds and Banks.



Fig 32 – Pop-out Variation change arrows

Direct access to Banks and Sounds is done by way of double clicking on either the Bank or Sound number and typing a number (1 to 999 for Banks, 0 to 12 for Sounds).

#### When to write to disk

When a Variation or a Sound is changed you will see an asterisk (\*) appear on the left side of the Variation button and of the Write button.

## Clean Verb Full Metal 70s Amp Guitar Hero

#### Fig 33 - Asterisks indicating changes to be saved

This is the way TH2 informs you that there are unsaved changes in your edits and that you need to write those changes to disk before switching Sound in order to keep those changes.





Based on the Playing Mode selected (when not in any of the two Live modes) you will also get a prompt to save the Sound when changing a Sound with unsaved modifications.

#### Writing to disk – Basic method

There are two methods for writing a Variation or a Sound and in this paragraph we're exploring the simplest.

To write a Variation to disk:

- Click and hold the Variation button
- The button text will turn red after a moment
- The button text reverts to black and the asterisk (\*) mark disappears
- Your Variation is successfully written to disk

To write a Sound to disk:

- Click and hold the Write button
- The button text will turn red after a moment
- The button text reverts to black and the asterisk (\*) mark disappears
- Your Sound is successfully written to disk

This dual system allows you to selectively write to disk only the Variations you need or the Sound as a whole.

#### **Copy and Paste of memories**

Right-click (or Ctrl-click on Mac) a Variation button and select Copy Variation, then paste it on the desired memory location (User).

Right-click (or Ctrl-click on Mac) the Write button and select Copy Sound, then paste it on the desired memory location (User).

#### **Clearing memories**

Right-click (or Ctrl-click on Mac) a Variation button and select Clear Variation.

Right-click (or Ctrl-click on Mac) the Write button and select Clear Sound.

#### Reverting to a saved memory

Right-click (or Ctrl-click on Mac) a Variation button and select Reload Variation.

Right-click (or Ctrl-click on Mac) the Write button and select Reload Sound.

NOTE: all these operations are not complete until you commit them to disk with a Write command.



Fig 34 – The Variation right-click (or Ctrl-click on Mac) Menu



Fig 35 - The Write right-click (or Ctrl-click on Mac) Menu



# TH2 Memory – Advanced Concepts

#### **Sound Browser panel**

TH2 has a dedicated Sound Browser panel putting the whole memory database under your fingertips. This panel has two operating modes: Search and Write, linked to the buttons in the Sound View of TH2.



Fig 36 - Write and Search buttons

When hitting either buttons you will be presented with this panel.

|     |                            |                             | Clean Verb |                |          |               |            |               | Modern Clear |
|-----|----------------------------|-----------------------------|------------|----------------|----------|---------------|------------|---------------|--------------|
|     |                            |                             | Darkface   |                |          |               |            |               |              |
|     |                            |                             |            |                |          |               |            |               |              |
|     |                            |                             |            |                |          |               |            |               |              |
|     |                            |                             |            |                |          |               |            |               |              |
|     |                            |                             |            |                |          |               |            |               |              |
|     |                            |                             |            |                |          |               |            |               |              |
|     |                            |                             |            |                |          |               |            |               |              |
|     |                            |                             |            |                |          |               |            |               |              |
|     |                            |                             |            |                |          |               |            |               |              |
|     |                            |                             |            |                |          |               |            |               |              |
|     |                            |                             |            |                |          |               |            |               |              |
|     |                            |                             |            |                |          |               |            |               |              |
|     |                            |                             |            |                |          |               |            |               |              |
|     |                            |                             |            |                |          |               |            | FlexiTrem Rig |              |
|     |                            |                             |            |                |          |               |            |               |              |
|     |                            | ModernVintage [SC]          |            |                |          |               |            |               |              |
|     |                            |                             |            |                |          |               |            | Pretty Ugly   |              |
|     |                            |                             |            |                |          |               |            |               |              |
|     |                            | Crunchy Town [CC]           |            |                | Bend-age |               |            |               |              |
|     |                            |                             |            |                |          |               |            |               |              |
|     |                            |                             |            |                | Tidy Up  | Wall Of Waves |            |               |              |
|     |                            | California PopPunk [SS]     | Bridge HB  |                |          | LeadFuz B     | LeadFlange |               |              |
|     |                            | Huge Backliner [SM]         |            | Clssc Bckine B |          | Evangelio     |            |               |              |
|     |                            |                             |            |                |          |               |            |               |              |
|     |                            |                             |            |                |          |               |            |               |              |
|     | Classic Sounds Part 2 Bank | My Smooth Way - Jazzy (CEA) | LeadClean  | Bodiest        |          |               |            |               |              |
|     |                            |                             |            |                |          |               |            |               |              |
| 003 | Classic Sounds Part 2 Bank | Overloud Tango (CEA)        | Lead       | Bright Lead    |          |               |            |               |              |

Fig 37 – The Sound Browser panel

On the upper left side of the panel, you'll find two selector buttons for Factory and User presets. Here you're selecting which kind of Banks you're browsing.

In the Write mode the Factory presets button is of course deactivated since you can't write to Factory presets.



Fig 38 - Factory/User presets selector

Next to them, there's "Ignore empty banks/sounds" selector. Activating it will filter out all Banks and Sounds with no written Variations on them, making it easier for you especially in the Search operating mode, where you will only see Sounds with an actual memory content. Ignore empty banks/sounds

Fig 39 - The Ignore empty banks/sounds option button

On the right of it, there's a text-input field. This serves as a direct text search tool for the whole database names. Looking for a Rock sound? Just type 'Rock' here and the Browser will only show you Banks, Sounds or Variations with the word Rock in their name.

#### Fig 40 - Search text edit control

The main window is filled with the results of the Search or a simple list of the Banks, Sounds and Variations if no Search value was typed in.



#### **Pre-listening**

If the Listen check box is activated, then while you browse Variations you'll be able to have a real-time prelisten of that tone if you play some audio (a track or a guitar) through it. This is a great feature when you're looking for a hard to identify tone or before overwriting an existing Variation you might need.



Nothing changes in the main TH2 window until you eventually commit a Load or Write action in the Sound Browser.

While in Listen mode, you can eventually set an output level for this feature.

NOTE: using the Arrow keys on your keyboard, you can browse very quickly through all the Variations, eventually filtered by your search.

#### Write options

When you hit the Write button on the main TH2 window, the Sound Browser will open in Write mode.

Once in this window, you can select the Sound or Variation you want to write the current Sound or Variation to. The Listen feature comes in handy here since it helps in identifying which Sound or Variation you eventually want to overwrite.





Operation is as easy as selecting the proper Variation or Sound by clicking either on the Variation button or the Sound row, then clicking on either Write Variation or Write Sound.

#### Search options

When you hit the Search button on the main TH2 window, the Sound Browser will open in Search mode.

Once in this window, you can select the Sound or Variation you want to load.

Load Variation will load the selected Variation in place of the currently selected Variation in TH2.

Load Sound will locate TH2 to the Bank and Sound you selected in the Search Browser.

#### Right-click operations in Browser

Right-clicking (or Ctrl-click on Mac) on different places in the Sound Browser brings to a set a different options.

#### Variation



Fig 43 – Copy, Paste, Clear or set a Variation to be loaded at Startup time

NOTE: the Load at Startup command is also available as a right-click (or Ctrl-click on Mac) command on a Variation button in the main window.

#### Sound

| Classic Amps Sampler | Darkface    | Top 30         | R   |
|----------------------|-------------|----------------|-----|
| Clean Stuff          | Copy Sound  | Chr            | Tre |
| Rock Sampler         |             | <sup>l</sup> h |     |
| Metal Sampler        |             | I              |     |
| Hard Rock Sampler    | Guitar Hero | Rhythm         | s   |

Fig 44 – Copy, Paste & Clear a Sound

#### Bank

| Experience TH1 | 01 0        | cı |
|----------------|-------------|----|
| Experience TH1 | Copy Bank   | cı |
| Experience TH1 | Paste Bank  | Rc |
| Experience TH1 | Export Bank | N  |
| Experience TH1 | Import Bank | на |
| Experience TH1 | Clear Bank  | Sn |
|                |             |    |

Fig 45 – Copy, Paste & Clear a Bank

### Import and Export Bank

Right-clicking (or Ctrl-click on Mac) on a Bank name in the Browser window allows for Importing and Exporting of your Banks.

Calling such commands brings on a file system dialog window, which you can navigate in order to locate the Bank to be imported or locate the destination and name for the Bank to be exported.







Fig 47 – Import Bank file system dialog box (Mac)

NOTE: all copy, paste and clear operations in the Browser window are immediately effective and cannot be undone in any way. Please pay attention before committing to actions like these.



# **Taking control locally**

## **Smart Controls**

Smart Controls is another revolutionary feature of TH2, giving you local, host or remote control of TH2 in ways unheard of before both in the software and hardware worlds.



The idea behind Smart Controls is having one knob (or switch) that can easily and intuitively automate turning groups of knobs or ON/OFF switches and more just by engaging a Smart Control. This is a way to act on the current Variation in different ways at the same time.

Smart Controls are MIDI remote-able and host automate-able, further widening the already astonishing expressive power of TH2.

When any parameter is under Smart Control management, we refer to it as being *connected* to a Smart Control.

You can hide or show the Smart Control panel by clicking on the View Smart tab.



#### How to setup a connection

To connect a parameter from a Module to a Smart Control:

**Sound Chain Panel:** click on the Module, drag and drop it over the Smart Control of your choice.

**Module Panel:** click on the Module name, drag and drop it over the Smart Control of your choice.



Fig 49 - Dragging a module to a Smart Control to assign parameters

A popup menu appears right away, listing all the parameters of the Module. Select the parameter you wish to assign to that Smart Control. Already assigned parameters are marked with a '•'.



#### Fig 50 - Assigning more parameters to the same Smart Control

If you need to assign more than one parameter, from the same Module or from a different Module, repeat the steps above.

#### **Connecting Global parameters**

Drag and drop the Tuner/Global section to a Smart Control will allow you to assign:

- Input Sensitivity Low/High
- Input Level
- Noise Gate Threshold
- Global Low EQ
- Global High EQ
- Master Reverb Level
- Master Delay Level
- Output Level
- Tuner ON/OFF
- Tuner/Global Mute



Fig 51 - Assigning Master parameters to Smart Controls

NOTE: Input Level is available as a parameter only here. Please use it with care, since changing this parameter can affect heavily the way TH2 sounds and behaves, especially with distortion. Digital Input Level, if set wrong, can bring to very poor noise performance.

# Connecting the Global Internal BPM Parameter

When in VAR or INT modes the BPM indicator number can be dragged to any Smart Control.



Fig 52 - Assigning Global BPM to a Smart Control



#### **Editing Smart names**

A double click on an active Smart Display (the display above each Smart Control), will open the Rename popup window.

Just type a name and click Ok to rename the control.



Fig 53 - Smart name editing window

#### Smart connections window

A right-click (right-click or Ctrl-click on Mac) on the Smart Display will open the Smart connections window.

A table lists all the parameters connected to that Smart. For each of them: min value, max value (or 1 to 4), and curve.

**MIN:** the value corresponding to the Minimum or OFF setting of the Smart Control.

**MAX**: the value corresponding to the Maximum or ON setting of the Smart Control.

**1 to 4:** with Step types of controls, define the values for each of the single steps.

**CURVE**: how fast the controlled parameter will go from Min to Max along the Smart Control run. A linear action corresponds to the intermediate setting, while moving it to the left/right will gradually make the parameter rise slower in the initial/ending part of the Smart Control run. Extreme settings correspond to hard MIN to MAX switching behaviors.

| x =       | DRIV                       | E!!! - Si  | mart co          | onnecti      | ons |                       |    |
|-----------|----------------------------|------------|------------------|--------------|-----|-----------------------|----|
| MODUL     | E PARAMETER                | MIN        | CURRE            | NT %         | MAX | CURVE                 |    |
| Amplifier | Drive                      | 12         | 27               | ⇒ ⇒          | 100 |                       | •  |
| Amplifier | Level                      | 50         | <b>4</b> 8       | ⇒ ⇒          | 43  |                       |    |
| TubeNine  | Drive                      | 62         | 56               | ⇒ ⇒          | 42  |                       |    |
| × 0       | Step up Step<br>Knob Swite | down<br>ch | Step up<br>Touch | /down<br>● T | ap  | <b>•</b> 1 1 <b>•</b> | 11 |

Fig 54 - Smart connections window

| × -                   | DRIVE!!! -    | Sma                                | rt co       | onr | necti      | on | s  |      | _    | _    |   |
|-----------------------|---------------|------------------------------------|-------------|-----|------------|----|----|------|------|------|---|
| MODULE                | PARAMETER     |                                    |             |     |            |    |    |      |      | CUR. |   |
| Amplifier             | Drive         |                                    | 12          | •   | 100        |    | 27 | •    | 27   |      | • |
| Amplifier             | Level         |                                    | 50          |     | 43         |    | 48 |      | 48   |      |   |
| TubeNine              | Drive         | \$                                 | 62          | ¢   | 42         | ¢  | 56 | ♦    | 56   |      |   |
| i⊚ Step u<br>X ● Knob | p 🕒 Step down | <ul> <li>St</li> <li>To</li> </ul> | ep u<br>uch | p/d | own<br>• T | ap | ş  | Step | s: 4 | -1+  |   |

Fig 55 - Smart connections window: Step mode

#### How to configure Smart connections

Set the parameter(s) under Smart control to the settings corresponding to your needs then click:

- Sets the "Current %" parameter value as MIN
- Sets the "Current %" parameter value as MAX
- Swaps MIN and MAX
- Sets the current parameter value as Step #1 to 4
- Sets the ALL "Current %" parameter value as MIN
- Sets the ALL "Current %" parameter value as MAX

Test you Smart behavior either locally or remotely to see if it fits your needs.

#### Smart Control types



Fig 56 - Smart Controls types: Switch, Knob, Step Up, Down and Up/Down, Touch and Tap

**Knob:** any parameter assigned to this type of control will change gradually, based on the knob position and on the assignment settings.

**Switch:** parameters assigned to this type of control will be hard-switched between their Min and Max settings.

**Touch:** is a temporary switch. When pressed sets mapped parameters to Max. When released sets to Min.

**Tap:** this special type of control is devoted to the Internal Global BPM Tap-able control or to each single Tapactivated parameter in any of TH2 Modules.

**Step Up:** each action on this Smart triggers a change of status. This type of control cycles through up to 4 different statuses, from the lowest to the highest numbered.

**Step Down:** each action on this Smart triggers a change of status. This type of control cycles through up



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to 4 different statuses, from the highest to the lowest numbered.

**Step Up/Down:** each action on this Smart triggers a change of status. This type of control cycles through up to 4 different statuses, from the lowest to highest, back to the lowest numbered, then again up and so on.

Smart type can be configured in the lower-left part of the Smart connection window.

| Step up | 💓 🔵 Step down | Step up/ | down  |                       |
|---------|---------------|----------|-------|-----------------------|
| Knob    | Switch        | Touch    | 🔵 Тар | <b>€</b> 1 1 <b>)</b> |
| _       |               |          |       | _                     |

Fig 57 - Controls to choose a Smart Control type

#### Managing Smart Controls

You can clear, copy or swap Smart Controls like you do with Modules.

Click-Dragging a Smart or its display and releasing the mouse over another Smart or its display will make the two Smart Controls swap positions.



Fig 58 - Smart Control swap

Click-Dragging a Smart or its display and releasing it outside of the Smart panel will delete the Smart Control.



Fig 59 - Smart Control clear

Ctrl-Click + Drag (Alt-Click + Drag on Mac) of a Smart or its display copies a Smart to another.

NOTE: copying of Smart Controls is useful if you want to have the same parameters mapped, but with a different Smart type (like Stepper Up and Down).

NOTE: swapping Smart Controls makes it easy to setup your Smart Controls to reflect your desires when it comes to MIDI remote control, since each Smart responds to a particular MIDI message, hence physical controller.

#### Smart applications

- ON/OFF switching of a single Module (a Wah or an Overdrive for example);
- Easily step through different amp channel settings;
- Complex step through completely different tones;
- Human-triggered temporary On/Off effects;



- Continuous control of a single parameter;
- Continuous control of a set of parameters from a single Module
- Continuous control of a coherent set of parameters from many Modules (all distortion-related parameters under the control of a macro distortion parameter);
- Complex switching of bypass states and pre-set parameter settings, making Variation switch almost useless in some applications;
- Global or Module Tap Tempo control;

Your imagination is the limit.



# Taking control via Host Automation

TH2 allows you to control its inner parameters through host-based automation making room for complex in-mix sound changes.

Since TH2 has a very large number of parameters (hundreds, if not thousands), we decided to make life simpler for users while, at the same time, allowing you to achieve a greatly expanded degree of host-based control.

How? We simply linked the host (your DAW) to the main Global parameters and the Smart Controls.



Fig 60 – Automation Parameter choice in Apple Logic Pro 8

The advantages of this solution are:

You don't have to learn different ways of assigning parameters to very similar functions.

Smart Controls for their very nature, expand the capabilities of your automation controls by a large amount: via a single automation parameter, you can control as many parameters as you want in TH2.

You still keep control over the Global controls, which could be automated also for stage usage.

## Automatable Parameters Table

| PARAMETER    | FUNCTION |
|--------------|----------|
| High/Low     | Global   |
| Master Delay | Global   |
| Master High  | Global   |

| Master Low    | Global          |
|---------------|-----------------|
| Master Reverb | Global          |
| Noise Gate    | Global          |
| Output Level  | Global          |
| Tuner Mute    | Global          |
| Tuner Power   | Global          |
| Smart 1       | Variation-based |
| Smart 2       | Variation-based |
| Smart 3       | Variation-based |
| Smart 4       | Variation-based |
| Smart 5       | Variation-based |
| Smart 6       | Variation-based |
| Smart 7       | Variation-based |
| Smart 8       | Variation-based |



# Taking control via MIDI – MIDI Bindings

TH2 has a very deep MIDI implementation allowing for very powerful MIDI routings with almost any kind of remote MIDI Controller, be it a keyboard, a table-top controller or a foot-controller.

All MIDI activity is regulated in the MIDI Bindings preference panel, accessed by clicking Preferences on the lower-right on the main window.



Fig 61 – The MIDI Bindings Preference panel

## **MIDI Bindings Preset menu**

Once you set your MIDI Bindings preferences, you can save the settings to disk using this section. Hit the plus sign and type a name in the dialog window to add a preset; click on the minus sign to remove a preset from the list.

# Program Change recalls internal memory

When deselected, all incoming Program Change messages can be routed to other functions in the MIDI Bindings panel.

When this preference is activated, if a Program Change is received by TH2 it routed directly to the internal memory system as described below.

#### **MIDI Bank Change**

MIDI Bank change is fully supported: you can select all 999 banks, as well as you can switch between Factory and User Banks.

#### **MIDI Program Change**

When you look at the Sound panel of TH2, you can see that Sound numbers are displayed in a SS.V format where SS stands for the Sound number (00 to 12) and V stands for the Variation number (1 to 8).

Quite simply this number (leaving out the dot) represents the MIDI Program Change you have to send remotely in order to select that Variation inside TH2.

As an example, if you want to select Variation 2 in Sound 03 (reading 03.2 on TH2 Sound panel), then you will have to send a MIDI Program Change 032.

# How to program MIDI events to control TH2

In the MIDI Bindings panel, each entry is shaped as a button in the Learn columns.

Clicking it will put TH2 in Auto-Learn mode: any meaningful incoming MIDI message is directly mapped to the parameter linked to that button.

An alternative way of assigning MIDI events is handpicking the event type in the Event menu and its number in the # field.

#### Miscellaneous

These parameters are Global and don't change function when switching Variations.

| PARAME-<br>TER  | FUNCTION  | EVENT                                  |
|-----------------|---|--|
| Volume<br>Pedal | The first Volume Pedal in<br>any Variation is controlled<br>via the eventually assigned<br>MIDI message | CC                                     |
| Wah Pedal       | The first Wah Pedal in any<br>Variation is controlled via<br>the eventually assigned<br>MIDI message    | CC                                     |
| Тар             | Controls the Internal and<br>Variation-based Tap Tempo<br>feature                                       | CC,<br>Note,<br>Pro-<br>gram<br>Change |
| Tuner           | Global switch to control<br>Tuner status  | CC,<br>Note,<br>Pro-<br>gram<br>Change |



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| Mute             |     | Global switch to control out-<br>put Mute status                             | CC,<br>Note,<br>Pro-<br>gram<br>Change |
|------------------|-----|--|--|
| Output V<br>lume | /0- | Global control for the main<br>Output Volume parameter -<br>handle with care | СС                                     |

#### **Memory Navigation**

These functions are unique to the MIDI remote control. Any viable message can help you browse through TH2 internal memory system.

| PARAMETER  | FUNCTION   | EVENT                             |
|------------|--|-----------------------------------|
| Bank Up    | Increases Bank number<br>by one unit (+1)        | CC,<br>Note,<br>Program<br>Change |
| Bank Down  | Decreases Bank number<br>by one unit (-1)        | CC,<br>Note,<br>Program<br>Change |
| Sound Up   | Increases Sound number<br>by one unit (+1)       | CC,<br>Note,<br>Program<br>Change |
| Sound Down | Decreases Sound number<br>by one unit (-1)       | CC,<br>Note,<br>Program<br>Change |
| Var. Up    | Increases Variation num-<br>ber by one unit (+1) | CC,<br>Note,<br>Program<br>Change |
| Var. Down  | Decreases Variation<br>number by one unit (-1)   | CC,<br>Note,<br>Program<br>Change |

#### Smart Controls

Link any valid MIDI Message to TH2 Smart Control system for expanded real-time control.

| Smart 1 to 8 | Controls<br>named Sm | the<br>nart Co | equally<br>ntrol | CC,<br>Note,<br>Program<br>Change |
|--------------|----------------------|----------------|------------------|-----------------------------------|
|--------------|----------------------|----------------|------------------|-----------------------------------|

#### **Direct Variation Recall**

MIDI Messages can directly recall any Variation in the currently selected Sound.

| PARAMETER           | FUNCTION  | EVENT                             |
|---------------------|---|-----------------------------------|
| Variation 1 to<br>8 | When assigned recalls<br>the equally numbered<br>Variation in the currently<br>active Sound | CC,<br>Note,<br>Program<br>Change |

NOTE: when using some hosts, some MIDI Messages might be 'stolen', especially the most common MIDI CC#7 and #10.



## **Cosmetics**

#### **TH2 Floor management**

TH2 has the capability to change its skin to the user's taste. This user selectable cosmetic behavior can be global or linked to each Variation (see the Interface Preferences chapter for more on this).

Just right-click (and Ctrl-click on Mac) in any place in the background of the Module View or Overview panels and you'll be presented with the Floor choice menu, which looks like this:

|                        | Solid Burgundy        |  |
|------------------------|-----------------------|--|
| Set ourrent as default | Solid Carmine Red     |  |
| Use default            | Solid Cerulean Blue   |  |
| Use delault            | Solid Cobalt Blue     |  |
| TH1 factory floor      | Solid Dark Grey       |  |
| 70c Pluc               | Solid Emerald Green   |  |
| 70s Blue               | Solid Gold            |  |
| 70s Green              | Solid Green           |  |
| 70s Keu                | Solid Jade Green      |  |
| /US                    | Solid Lavender        |  |
| Bordeaux               | Solid Red Pigment     |  |
| Carpet Black           | Solid Steel Blue      |  |
| Carpet Dark Grey       | Solid Tangerine       |  |
| Carpet Grey-Cyan       | Solid UN Blue         |  |
| Carpet Red             | Soundproof            |  |
| Carton                 | Squared               |  |
| Concrete               | Starship              |  |
| Dark                   | Striped Carpet Autumn |  |
| Diamonds               | Striped Carpet Bluey  |  |
| Orange                 | Striped Carpet Vivid  |  |
| Paper                  | Stripes Light Grev    |  |
| Sand                   | Under Construction    |  |
| Sky                    | Underground           |  |
| Solid Army Green       | Wallpaper             |  |
| Solid Blue             | мапрарен              |  |
| Solid Bondi Blue       | Add new from file     |  |

Fig 62 – the righ-click (and Ctrl-click on Mac) menu to select custom Floors with a long list of user-added Floors

#### Add new from file

Selecting this option opens up a OS dialog window. Point to the place your graphic file of choice is located to load it into TH2. Once selected, the file is copied to the TH2 internal working directory so that all files are kept in a safe and common place.

TH2 accepts both PNG and JPG files.

NOTE: an additional method of adding Floors to TH2 is by means of drag and drop of the graphic file from your OS files system windows to TH2. The file will be applied immediately and copied to the internal working directory.

#### Set current as default

Sets the currently selected Floor as the default Floor being loaded when no Variation-based Floor is assigned or when the 'Ignore Variation Floors' preference is selected.

#### Use default

Selects the currently default Floor for the active Variation.





# **Interface Preferences**

Clicking Preferences (lower-right of TH2) will open the equally named window. Here, you can set some TH2 functions and global behaviors.



Fig 63 – Preferences: Interface

#### Knob Mode

In Linear Mode, knobs are turned with vertical linear movements of the cursor (up rises, down lowers values). In Rotating Mode, knobs are turned by way of circular movements of the mouse around the knobs themselves.

#### **Tooltips**

When Show tooltips is selected, you will see tooltip *clouds* appearing when you stop over an interface control, suggesting you how to use it.

#### Views

**Overview for navigation only**: by checking this option, editing operations (copying, moving, deleting, etc.) will not be allowed in the Overview Panel, thus avoiding accidental changes in case your hands are focusing on your instrument.

**Ignore Variation Floors**: TH2 saves the currently selected Floor (background) with each Variation. When this preference is selected, TH2 will always show the currently default Floor.

#### **Tuner Mode**

TH2 Tuner can work in two ways. In Dot Mode, the tuner has a single LED lit to indicate the currently measured tuning. In Bar Mode the tuner turn on all LEDs between the middle LED the currently measured tuning.

#### Auto Mute

This setting, when activated, automatically selects the Tuner Mute each time you turn the Tuner on.

Tuner Mute serves also as a Global Mute function.

#### Microphone distance unit

You can choose whether to use Centimeters or Inches as distance measure for the Microphones in the Cabinet Module.



# Advanced usage of TH2

## **The Amplifier Module**



Fig 64 - TH2 Amplifier

While the Amplifier Module carries a rather familiar look and set of parameters, it also has some unique features to it.

#### SLR – Seamless Live Remodeling

The horizontal fader is dedicated to one of TH2 most unique features. Acting on this fader will make TH2 engine morph in real time between the A and B Amplifiers.



Fig 65 - SLR fader

When the fader is full left, only Amp A will be processing the incoming sound. When the fader is full right, only Amp B will be heard.

We're not talking about a simple cross-fade between two amplifiers (for that, you just need to use the parallel processing section in TH2 with two Amplifier Modules and use the TH2 Mixer Balance control to cross-fade between two amplifiers).

With SLR engaged, every single position of the fader between its extreme settings will create a hybrid amplifier based on both Amplifier A and B characteristics. The more you drag the fader to the right the more Amplifier B-like the amplifier will be, the more you keep it on the left side the more Amplifier A-like the hybrid amplifier will be.

This feature lets you explore virtual experimental amplifiers, something that could take ages to achieve in real life, just for a single setting of the SLR fader.

#### **Cabinet Linking**

Located on the right side of Amplifier A and Amplifier B selectors, find the Cabinet Linking zone.

Depending on TH2 state and on your input (just click on the icon), this zone will indicate the linking status of the Amplifier Module and the Cabinet Module following it.

| €   | Þ    | D   | ark | face | e '65 | 5 (U | IS)  | ?     |
|-----|------|-----|-----|------|-------|------|------|-------|
| Fic | 1 66 | ) – | No  | cabi | net   | to k | be l | inked |

A question mark will indicate that there's no Cabinet Module loaded after the Amplifier module. Obviously, no linking can happen in this situation.

| ◀ | Þ | Darkface '65 (US)        | 65 |
|---|---|--------------------------|----|
|   | F | ig 67 - Cabinet link off | _  |

A grayed-out chain will indicate Cabinet Linking is OFF. Changing amplifier model will not change cabinet model in the Cabinet Module.



The lit chain stands for an active Cabinet Linking. With this setting every amplifier model you select from the dropdown list or the arrow selectors will automatically load its own cabinet (Darkface '65 Amplifier and Darkface '65 Cabinet).

Darkface '65 (US) 10

Fig 69 - Cabinet link temporarily suspended

A slashed chain means that Cabinet Linking is selected but temporarily deactivated. This happens when you selected a different cabinet model directly from the Cabinet Module while Cabinet Linking was active. Once you choose a different amplifier model, the Cabinet Linking function will be automatically reactivated.

#### VariFire

When rolling over the amplifier module, a semitransparent ear shows up on the rightmost side of the module. Placing the mouse over this zone will show the VariFire module in all its glory.



Fig 70 - VariFire

This control goes from 0 to 12 and it's a proprietary technology developed by Overloud for TH2 exclusively.





VariFire acts on a great number of internal parameters practically changing in a dramatic way the whole gaincharacter of TH2. When driven hard the color of the distortion changes in a different way (some would say more raw) and the sound becomes more alive and fatter, while keeping a very good image focus. The default setting of '0' equals to the default sound of the modeled amplifier.

## **The Cabinet Module**

This Module features two edit modes.

When you double click on the Cabinet Module while in the Module Panel, you'll be presented with the editing panels for that Module.

The Cabinet Module features four microphones: the Mic-A and Mic-B can be positioned in the 3D space in front of the cabinet. There are two additional microphones: one is rotated at 45° and placed in axis to one cone. The second is a microphone positioned to the back of the cabinet.



Fig 71 - TH2 Cabinet

#### **Cabinet Model panel**



Fig 72 - Cabinet Model selector

Cabinet Module Bypass: when highlighted, the whole cabinet and mics module is bypassed.

Cabinet Selector: click on the selector arrows to scroll through the different cabinets; click on the cabinet name to reveal the popup menu for direct cabinet choice.

ReSPiRe: Real Sound Pressure Response is an Overloud custom technology developed in order to reproduce the same kind of sound pressure feeling you get when playing in front of a real amplifier and cabinet. This is the default setting (ON) and will sound best in most situations. However you might want to deactivate it when your mix tends to be muddy.

# Mic-A Model, Mic-B Model and Mixer panels



Fig 73 - Mic-A Model and positioning controls

The Mic-A and Mic-B Model panels are very similar:

- Mic-A/B Model: click on the selector arrows to scroll through the different microphones; click on the microphone name to reveal the popup menu for direct cabinet choice.
- Mic-A/B Horizontal: gives a readout of the microphone horizontal position (X-Axis). To change this value, just click and drag horizontally the relative microphone.
- Mic-A/B Vertical: gives readout of the microphone vertical position (Y-Axis). To change this value, just click and drag vertical the relative microphone.
- Mic-A/B Distance: use this slider to set the distance between the speaker grill and the microphone (Z-Axis).
- Mic-B Invert Phase: with this button lit, the microphone B channel is phase-reversed relative to the microphone A channel.

| Mic-B Model      | Mic-B Dis |                  |
|------------------|-----------|------------------|
| ▲ ► AustriaGold  |           |                  |
| Mic-B Horizontal | 0.0 cm    |                  |
| Mic-B Vertical   | 0.0 cm    |                  |
| Ø Mic-B Invert   | Phase     | - '- •<br>0.0 cm |

Fig 74 - Mic-B Model, positioning and phase controls

The Mixer panel allows you to set the level of all the four available microphones independently.

| Mis      |    |   |       |        |
|----------|----|---|-------|--------|
| Mic-A    |    | 1 | - CD- | 0.0 dB |
| Mic-B    | œ: |   |       | -00    |
| Rear Mic | D  |   |       | -00    |
| 45' Mic  |    |   |       | -00    |

Fig 75 – Microphone mixer panel





This Module with all of its features really allows for a life-like microphone positioning and balancing, making TH2 one of the most powerful modeling-based products on the market.

The microphone selection and positioning tool can be a good learning tool for students wishing to learn the secrets of cabinet micing.

## The Cabinet IR module

The Cabinet IR is a custom module allowing users to load preset IRs or to import their own IRs.

First of all, IR stands for Impulse Response, which is a particular technique allowing for the 'sampling' of the acoustic response of a real cabinet (or any linear acoustic system like room reverbs) through a technique called Convolution. This 'sample', once captured and deconvoluted, can be applied to your signal chain in TH2 thanks to this module.

Find more information on Impulse Responses and Convolution here:

http://en.wikipedia.org/wiki/Impulse\_response

http://acoustics.net/content.asp?id=19

 $http://noisevault.com/nv/index.php?option=com\_remository\&ltemid=29$ 

http://emusician.com/mag/emusic\_convolution\_reverb\_beyond /

http://emusician.com/tutorials/audio\_alchemy/



Fig 76 – The Cabinet IR module showing its editing panels

#### Import IR

TH2 accepts WAV files as sources, with any resolution (best is 24 bit or 32 bit floating) and sample rate. The Cabinet IR module is mono, meaning that it will accept only mono IR (each cabinet speaker is mono by definition).

A useful source for custom cabinet IRs is:

http://www.guitarampmodeling.com/viewforum.php?f=3 2



#### Fig 77 – Import IR menu

Hit 'Import IR'.

Select either one of the already available groups or click on 'New group...'.

The OS file management window opens up.

Dive to the place your IR(s) is (are) placed.

Select it or shift-select them.

IRs are loaded, automatically trimmed, maximized, DC offset, phase-regulated, analyzed, converted and copied to TH2 own internal file directory.

#### The Cabinet IR panel features and controls

- Dual IR: you can load up to two different Impulse Responses (Cab-1 and Cab-2) either coming from totally different cabinets or from the same cabinet with different settings, positioning or mic choice.
- Invert Phase:inverts or reverses the phase of the selected IR for augmented phasecancellation effect when balancing two different IRs.
- Balance: balances the relative level of Cab-1 and Cab-2.
- Power: bypasses or activates the Cabinet IR module.
- Accuracy: sets the overall accuracy of the IR in the lowest frequencies (sub 80 hz). Usually Low (L) is good for CPU overhead, unless you need a very faithful and deep bass response, then choose either Mid (M) or High (H).
- Filters: apply a steep hi-pass and/or low-pass filter to the cabinet sound to get rid of annoying frequencies.
- Delay: sets a delay in hundreds of milliseconds between the two IRs, emulating different distances of the virtual mics from the speakers, thus introducing lots of combfiltering. Drag to the left to delay Cab-1, drag to the right to delay Cab-2.





#### **BPM Modes**

When dealing with BPM (Beat Per Minute) tempo information, TH2 behaves in three different ways based on its settings.

Clicking in the BPM area (lower-left of TH2) on either HOST, INT or VAR, cycles through these settings.

#### Host BPM

When in HOST BPM mode, TH2 derives its BPM reference from the host (the DAW) TH2 is running in. If your Host changes BPM, TH2 will quickly follow it and adapt its BPM reference to the new host BPM.



Fig 78 – HOST BPM readout

#### Internal BPM

When in internal BPM mode (INT), TH2 sets its own BPM based on the tempo you either type to its left (double-click to edit), tap via the pop-up TAP icon or set with a TAP Tempo control via Smart or MIDI message.

| BPM      | 120.00 | INT    |   |
|----------|--------|--------|---|
| Fig 79 - |        | readou | t |

#### Variation **BPM**

When in Variation BPM mode (VAR), TH2 reads its BPM setting when loading every Variation. Entry is done just like in the INT mode (data entry, TAP icon, TAP Tempo Smart or MIDI message).





Fig 81 – The pop-up TAP control



Fig 82 – Data entry mode

NOTE: when in INT mode, TH2 will never load Variation-specific BPM settings, allowing you to change Variation in a Live situation without losing the BPM you dialed in before. Be careful to select your preferred operation mode before the start of your live set.



# **Technical Support**

#### FAQ – Frequently Asked Questions

If you need technical support please first take a look at our FAQ pages online at **www.overloud.com**. There you'll find answers to the most common questions.

## **Free Technical Support**

If the FAQ pages didn't help, you can get free technical support online at **www.overloud.com** or writing to **support@overloud.com**.

While submitting a technical support request, please be as more precise and detailed as you can. The goal is to let us reproduce your issue.

Therefore, don't forget to report: your system specs, settings, version, host application name and version and provide a step-by-step sequence to spot the problem.





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