

MAGICO

TITAN-15

OWNER'S MANUAL



THANK YOU FOR PURCHASING THE MAGICO TITAN-15 SUBWOOFER. THE TITAN-15 INCORPORATES ALL WE HAVE LEARNED IN THE PAST TWO DECADES ABOUT LOUDSPEAKER DESIGN AND MANUFACTURING. LIKE ALL MAGICO LOUDSPEAKERS, THE TITAN-15 IS A PRECISION INSTRUMENT FOR MUSIC AND HOME THEATER REPRODUCTION. PROPERLY SET UP AND MAINTAINED, IT WILL PROVIDE YOU WITH A GREAT MUSICAL EXPERIENCE FOR MANY YEARS. BEFORE UNPACKING AND PLAYING YOUR SPEAKER(S), PLEASE READ THE FOLLOWING MANUAL FULLY. IT WILL PROVIDE YOU WITH DIRECTIONS FOR PROPERLY SETTING UP, POSITIONING, CONNECTING, AND CARING FOR YOUR SPEAKER(S). FOLLOWING THESE INSTRUCTIONS WILL ENSURE A SMOOTH INSTALLATION AND OPTIMUM SPEAKER PERFORMANCE. IF YOU HAVE ANY QUESTIONS, PLEASE CONTACT YOUR AUTHORIZED MAGICO DEALER. MAGICO MAINTAINS A NETWORK OF DEDICATED DISTRIBUTORS WHO WILL BE ABLE TO HELP YOU, SHOULD YOU HAVE ANY PROBLEMS YOUR DEALER CANNOT RESOLVE. FOR THE LATEST INFORMATION ON ALL MAGICO PRODUCTS, PLEASE VISIT OUR WEBSITE: WWW.MAGICOAUDIO.COM

I WISH YOU MANY HOURS OF LISTENING PLEASURE.

KINDEST REGARDS,

A handwritten signature in black ink that reads "Alon Wolf". The signature is fluid and cursive, with a large, sweeping initial "A" and a distinct "Wolf" at the end.

ALON WOLF, CEO
MAGICO, LLC

Magico Subwoofer Control Manual

Revision 1.0

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Table of Contents

1.	Introduction	2
1.1.	Welcome	2
1.2.	System Requirements	2
2.	Getting Started	3
2.1.	Installing the Software	3
2.2.	Enabling Virtual Demo Devices for a Test Drive	3
2.3.	Connecting to a Device	3-4
2.4.	Changing Presets	4
3.	Subwoofer Control Manager Window	5
3.1.	General Overview	5-6
3.2.	Maintenance Menu	6-7
4.	Controller Window	8
4.1.	Main View	8-11
4.2.	EQ Editor	11-12
4.3.	Output View	12-13
5.	Touch Display Operation	14
5.1.	General Features and Operation	14
5.2.	Main Screen	14-15
5.3.	Preset Selection	15
5.4.	Input Selection	15-16
5.5.	Master Gain and Mute	16
5.6.	Channel Settings	16-17
6.	Glossary	18
7.	Index	19

1 Introduction

1.1 Welcome

This document explains the use of the Magico Subwoofer Control Software to control Magico's DSP based subwoofers.

1.2 System Requirements

Windows 7 and higher

Mac OS as of 10.10

2 GB RAM

100 MB hard disk space at least

2 Getting Started

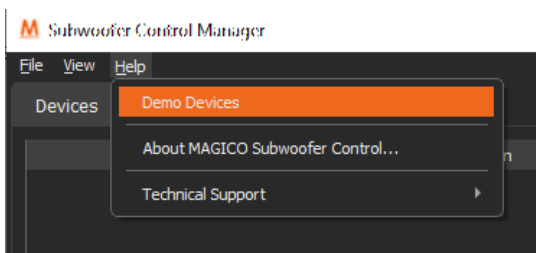
2.1 Installing the Software

Download the installer from the [Magico website](#) for Windows and Mac OSX.

Simply, start the downloaded file and follow the instructions.

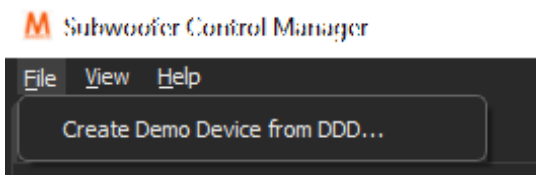
2.2 Enabling Virtual Demo Devices for a Test Drive

When there is no real device available / connected, you can enable demo devices to test drive the Controller software.



Simply check the "Demo Devices" menu entry. The devices list will be populated with a number of devices with connection type "virtual".

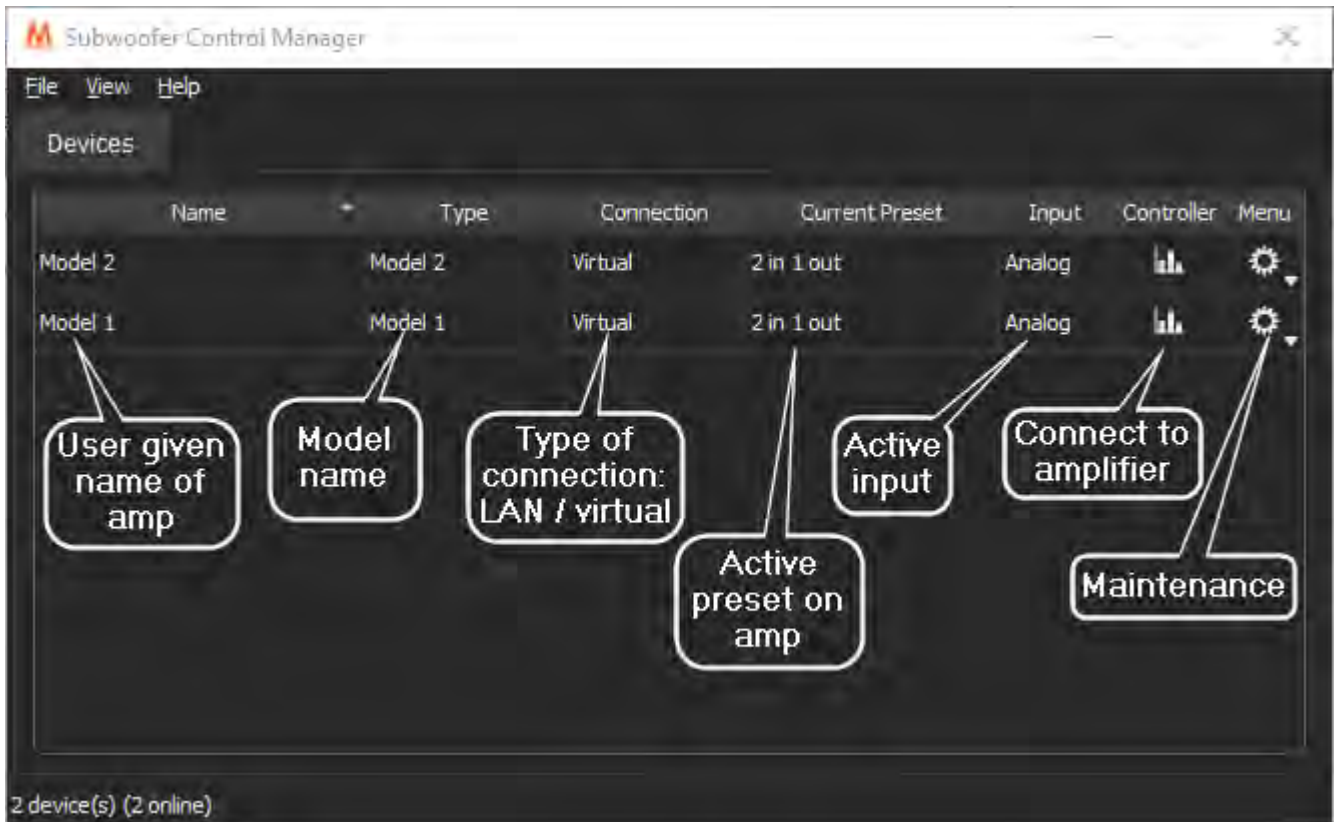
Secondly, you can create a demo device from DDD files that you received from Magico.



Click on "Create Demo Device From DDD ..." and locate the file you received.

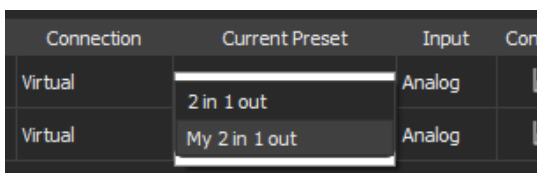
2.3 Connecting to a Device

After installing the software, and either adding the demo devices or including a read device into the network, the software UI looks like the following



To connect to the device, simply click on the icon in the "Controller" column for the desired device. A Controller window for this device will open and synchronize the contents.

2.4 Changing Presets

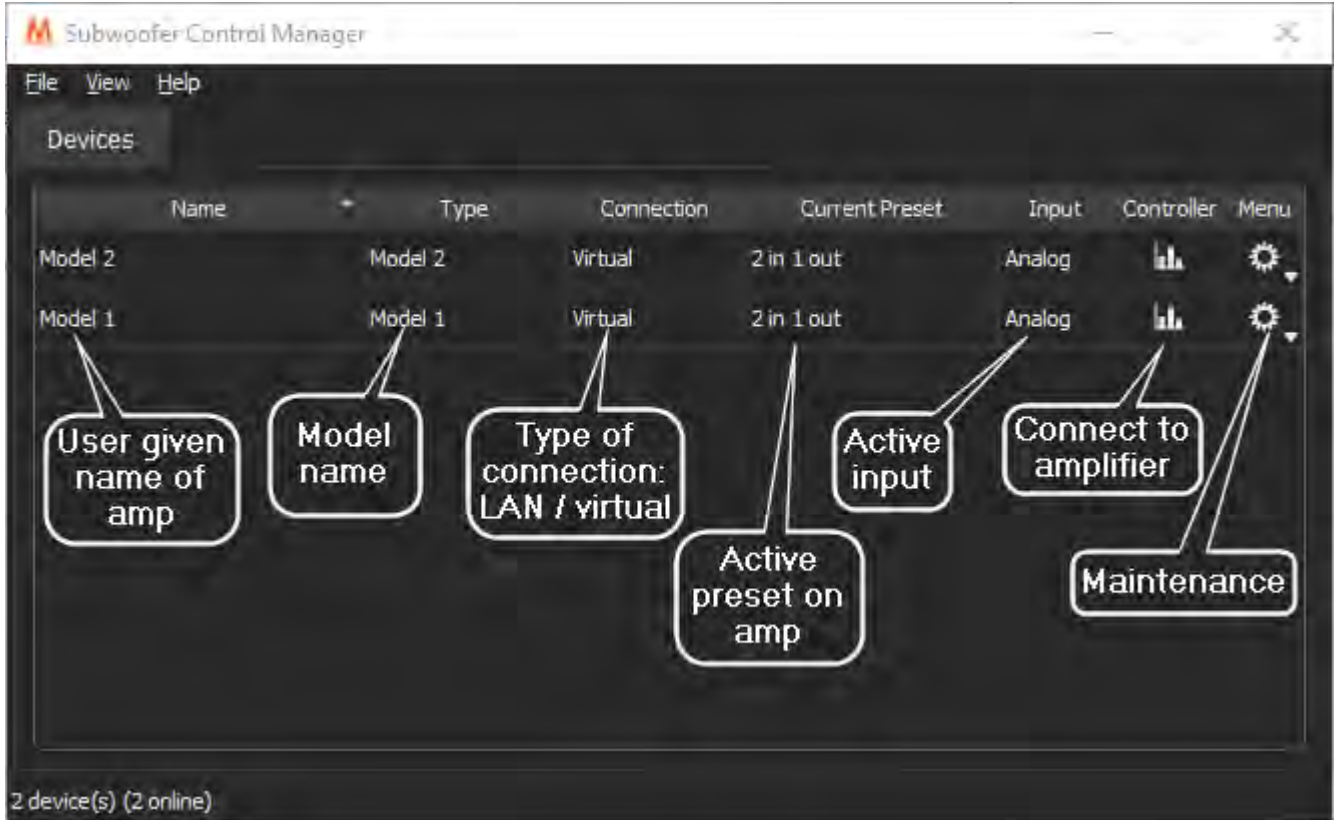


In the Subwoofer Control Manager window, double click on the "Current Preset" column for the desired device. This activates the drop-down control inside the table.

A second click opens the drop-down list. Select the desired preset by mouse or keyboard and click or press enter. The device will switch to the desired preset immediately.

3 Subwoofer Control Manager Window

3.1 General Overview



The Subwoofer Control Manager window is the central window displayed after starting up the software. From here, all subwindows or software modules can be accessed.

The standard menu bar at the top provides file operations like creating demo devices from DDD files containing presets.

The Help menu allows to enable demo devices and determine the version of the software.

A status bar at the bottom shows some status information on current activities if present.

The central widget is the table of devices showing general information on connected devices (and demo devices) and providing access to the Controller window and a settings or maintenance menu.

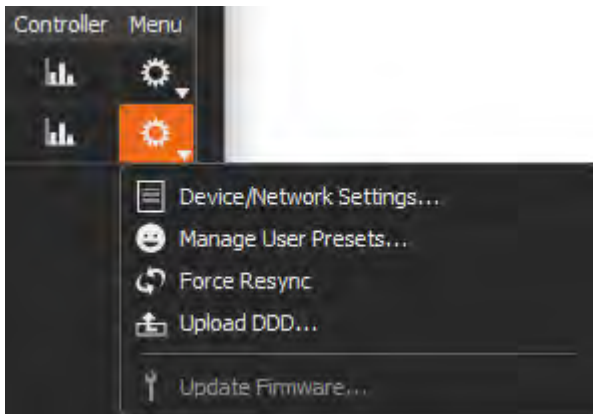
In the following, the contents of the table columns are explained

Name	The name given to the device like "left", "right" or "My precious little amp". Can be assigned by the end user from the Menu/Settings icon.
Type	The model type which was assigned by Magico, e.g. "PRS 1200" or "Euphonia". Belongs to the model ID. DDD files with presets need to have the same model ID. If no model ID was assigned, the device type is displayed, e.g. "Generic Device".
Connection	The type of connection which is used to access the device. Currently, "virtual" (demo devices), or the IP address for ethernet based units are displayed.
Current Preset	The preset that is currently active on the device. If marked with an asterisk (*), the preset is dirty, meaning the user has modified the preset without saving it.
Input	The audio input that is currently in use. The number of different inputs depends on the features of the device.

Controller	Clicking the icon in this column opens the Controller window for this unit. If the icon is displayed shaded (inactive), the unit is not accessible due to missing user privileges. Contact Magico in this case.
Menu	Clicking the settings icon in the Menu column displays a drop down list which allows to configure the device, display status information or carry out firmware updates.

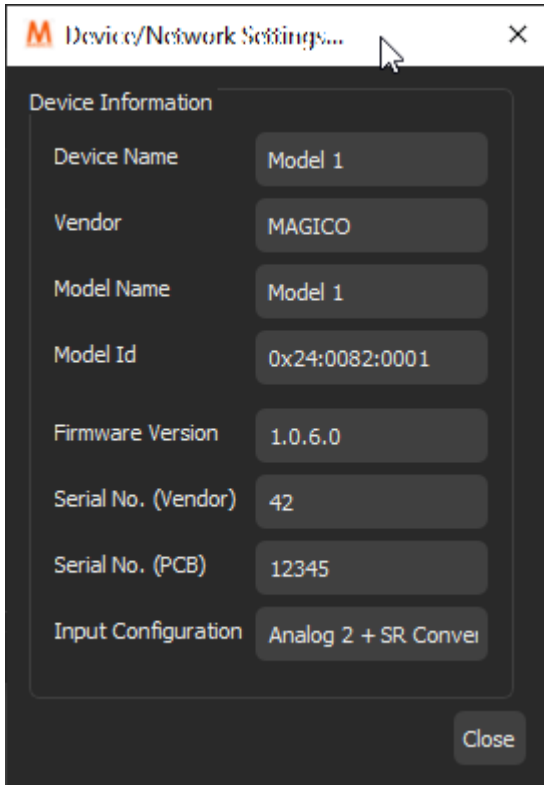
3.2 Maintenance Menu

Clicking the Maintenance Menu item opens a drop-down list with the following entries



Device/Network Settings	Opens a dialog displaying general information on the device like installed firmware, serial number, etc. See below for more information.
Manage User Presets	Opens a dialog with a list of user presets for management (delete / rename, etc.)
Force Resync	Re-requests the above mentioned information from the device.
Upload DDD ...	Opens a file dialog to select a DDD file containing system presets to be uploaded to the unit. This file is shipped by Magico, if necessary.
Update Firmware...	A firmware file is shipped with the software installation. If the version of this file is newer than the installed firmware version, this menu entry is active.

Device/Network Settings Dialog



- Device Name** The user given name of the device. Can be changed right here by entering a new name. On modification, an additional button labelled "Upload Changes" appears at the bottom of the dialog.
- Vendor** The name of the vendor company (Magico).
- Model Name** The model name given to this unit by Magico.
- Model Id** The complete model Id which is a sequence of numbers representing the vendor, the device type, and model Id.
- Firmware Version** The firmware version which is currently installed on this device. It is a 4 digit number. New firmware versions come with fixes, modifications or complete new features. The leftmost digit represents the strongest changes. The rightmost numbers change when applying small bugfixes.
- Input Configuration** Shows in full text the input configuration of the unit.
- Serial No.** The vendor given serial number.

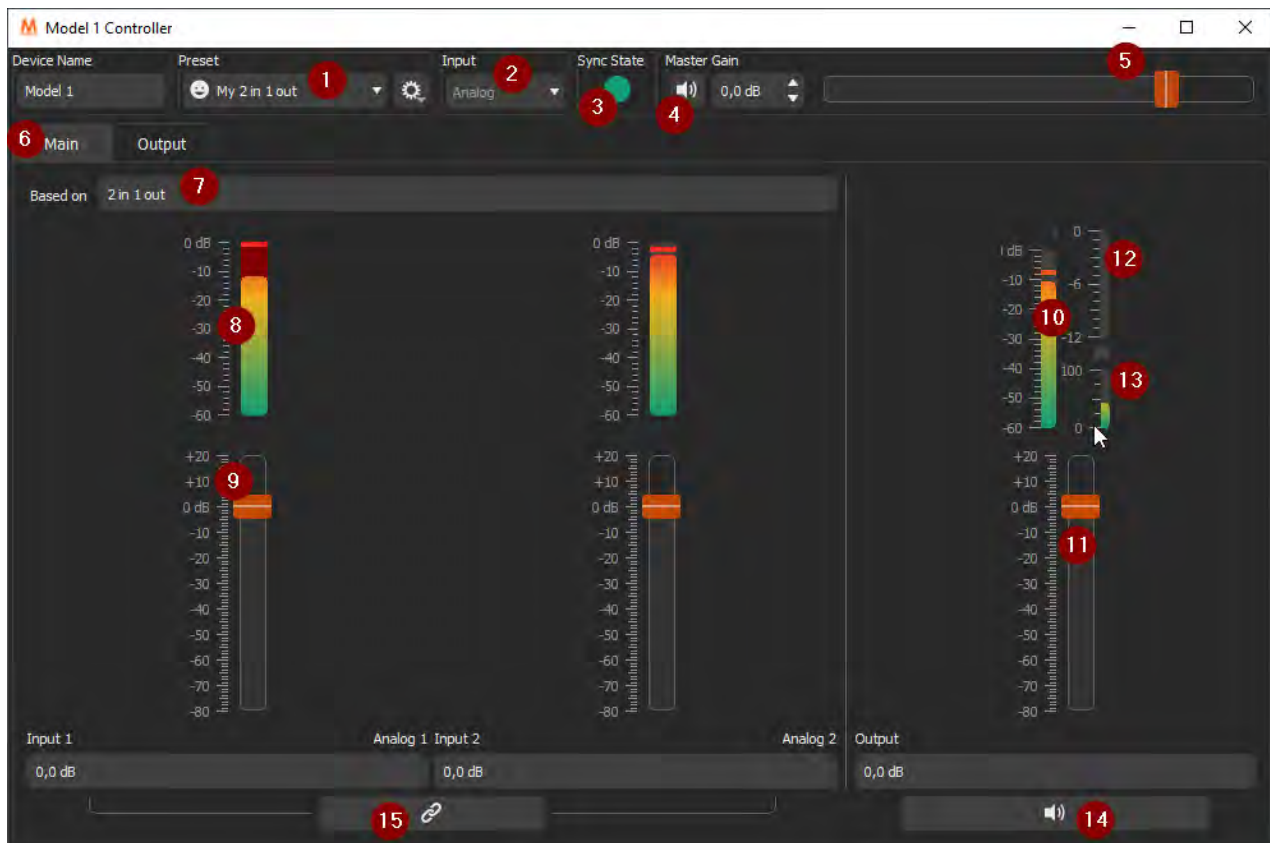
4 Controller Window

4.1 Main View

After opening the controller window, the software is synchronising to the device and downloads the contents of the current preset.

The ui elements show at all times the current state of the device.

In the following, the display and control elements in the main view are explained.



- | | |
|---|--|
| <p>1 Preset Selection and Storage</p> <p>2 Input Selector</p> <p>3 Sync State Indicator</p> <p>4 Master Mute Button</p> | <p>Displays the currently active preset and allows to switch between presets. An asterisk (*) appended to the preset name indicates that the preset has been modified / has unsaved changes.</p> <p>The settings icon opens a drop-down list to load or store user presets. See below.</p> <p>Displays the currently selected input and allows to switch to a different input, if any.</p> <p>Indicates the synchronization state:</p> <p>Green - controller window contents and device are in sync</p> <p>Orange - sync in progress (e.g after sending a command to the device and waiting for the acknowledgement)</p> <p>Red - synchronization lost (device did not respond to last command or responded with an error)</p> <p>Allows to mute the device completely.</p> |
|---|--|

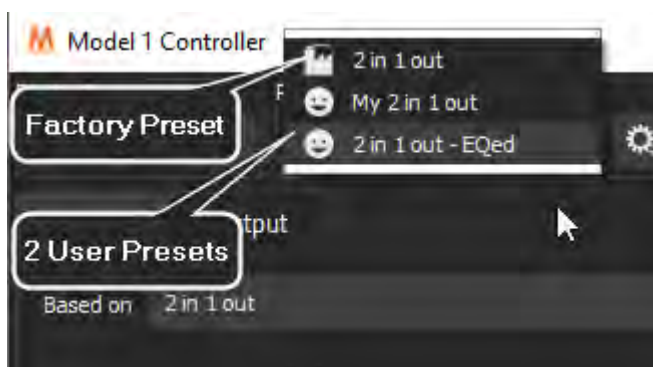
 = Unmuted  = Muted

- | | | |
|----|----------------------------------|---|
| 5 | Master Gain Slider and Spin Box | Allow to adjust the current master gain by either entering the desired value into the spinbox or using the slider. |
| 6 | Channel Tabs | Allow to switch between Main or Output view. |
| 7 | Base Preset Indicator | If a user preset is active, this text box shows the factory preset that this user preset is based on. |
| 8 | Input Level Indicator | Displays the level at the input in real-time. |
| 9 | Input Gain Fader and Edit Field | Display and allow to adjust the gain of the corresponding input. The type of input is shown above the edit field. |
| 10 | Output Level Indicator | Displays the level at the output in real-time. |
| 11 | Output Gain Fader and Edit Field | Display and allow to adjust the gain of the corresponding output. |
| 12 | Gain Reduction Indicator | Displays the gain reduction in case a limiter is active |
| 13 | RMS Limiter Charging | Shows the current charging of the RMS limiter. As this gets near 100% the RMS limiter is activated and starts reducing the level at this output. |
| 14 | Output Mute Button | Mute or unmute the corresponding output and indicate the current mute state. |
| 15 | Input Link Button | Links/Unlinks the settings for the inputs. If linked, all settings will affect the inputs simultaneously.

When linking is selected when both inputs are not in sync, a dialogue pops up for the user to select which of both inputs will be used for synchronizing to the other input. |

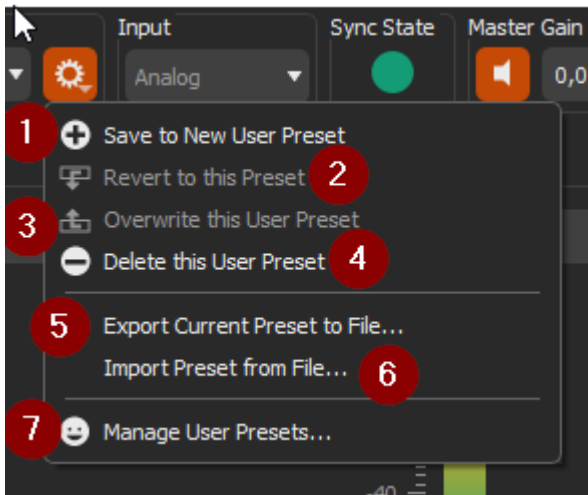
Preset Selection and User Preset Storage

The modifications that are applied to the device in the Controller window are stored in a so-called live preset which is permanently stored. After a power-cycle, these settings persist until a system preset is being recalled. The patches can also be stored permanently as user presets (*.pup files) under a given name.



The picture to the left shows an example for the opened Preset drop-down list with 3 system presets (factory icon) and one user preset.

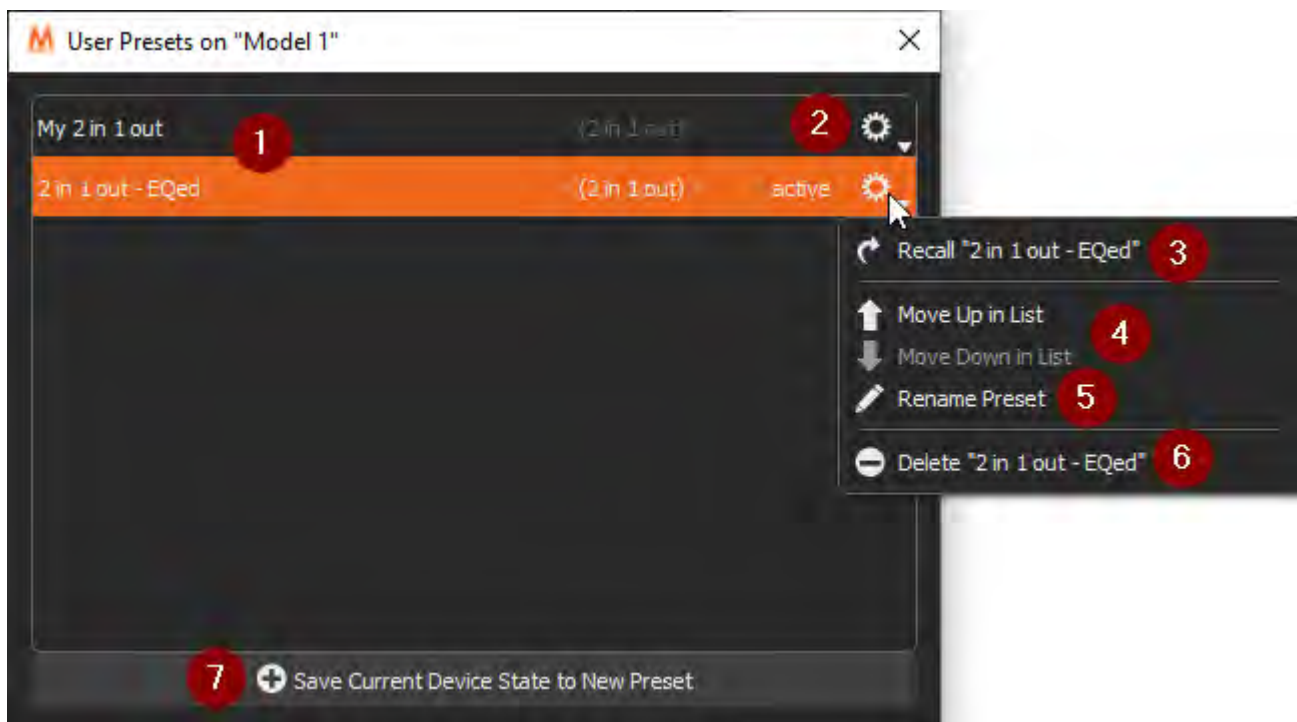
When the user preset is selected / recalled, the device first loads the base preset and then applies the user preset as a patch to it.



- 1 Saves the current device state to a new user preset. As a default, the name of the current preset prefixed with "My " is suggested and can be changed by the user.
- 2 Reverts the state of the device to the preset displayed in the drop-down list (to undo changes).
- 3 If a user preset is currently selected, this option overwrites the user preset with the current state.
- 4 Deletes the currently active user preset.
- 5 Saves the currently selected user preset to a file (*.pup)
- 6 Loads a user preset from a *.pup file
- 7 Opens a dialog to manage the available user presets, see below

User Preset Management

The user preset manager allows to edit the present user presets.



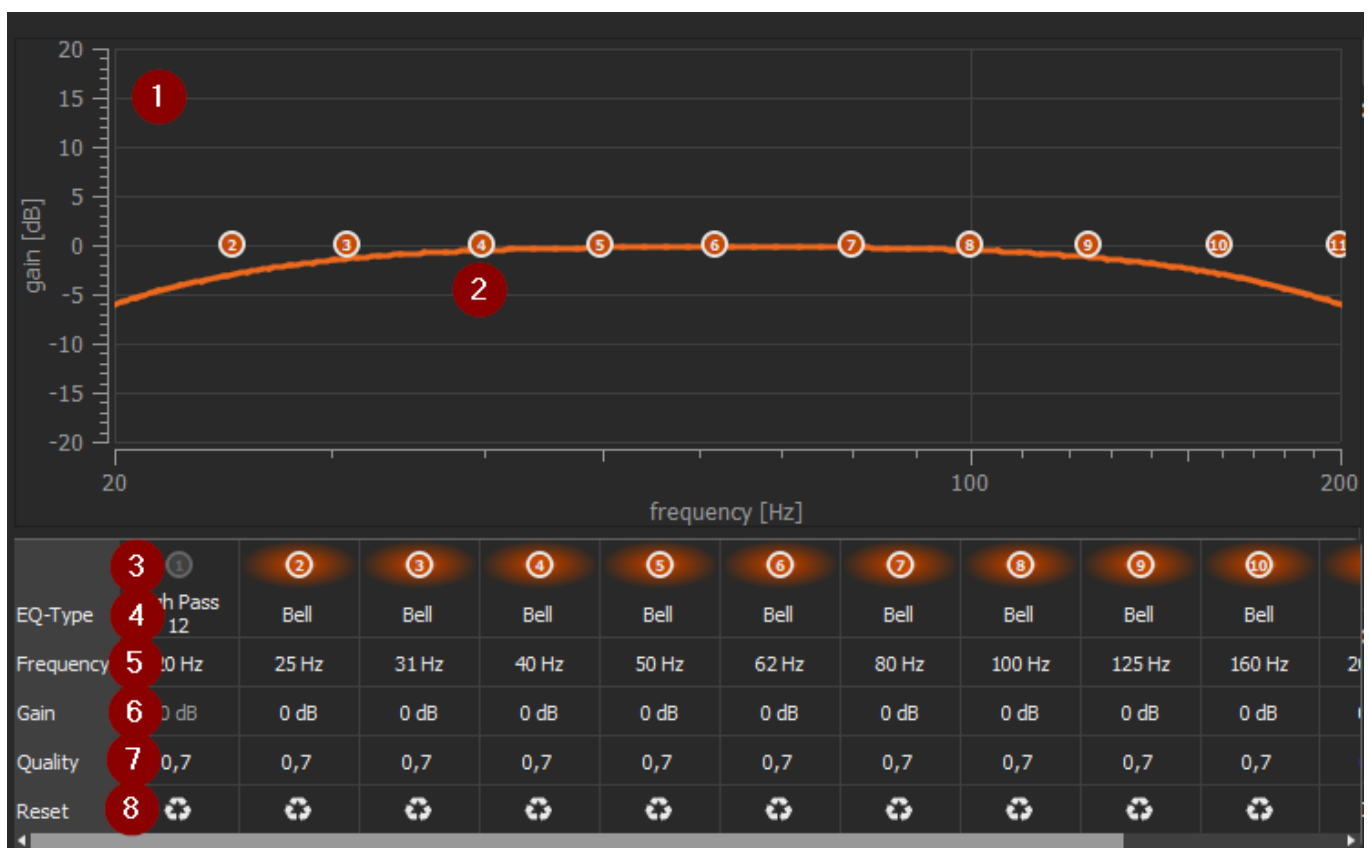
- 1 List of user presets available on the device. Second column with name in brackets shows the factory preset which the user preset is based on
- 2 Property button. Opens menu for modifying the item / list.
- 3 Recalls the selected preset on the device.
- 4 Move the preset up/down in the list (which is reflected on the touch panel of the device as well).
- 5 Renames the current preset on the device.
- 6 Deletes the current preset from the device.
- 7 Saves the current state of the device to a new preset.

4.2 EQ Editor

The EQ editor allows to activate / modify fully parametric EQs either by entering their parameters or by dragging them using the corresponding handles.

The editor is located in the input and output tabs and behaves the same in both views.

All actions are sent to the DSP immediately, so the EQs are controlled in real-time.



- 1 Frequency Response Plot Displays the overall frequency response of the EQs (white line). The EQ handles are located at the center frequencies of the corresponding EQs. The frequency response of a single highlighted EQ is displayed shaded.
- 2 EQ Handles Allow to adjust active EQs by dragging. Using the Ctrl key while dragging up/down adjusts the quality. When deactivated, the handle for the specific EQ disappears.
- 3 EQ Active Button with status indicator to de-/activate the EQ. When lit, EQ is active

- 4 EQ Type Control to change EQ-Type. Available: HP/LP 6/12 dB, LoShelve/HiShelve 6/12 dB, Bell filter, Allpass 6/12 dB
- 5 EQ Frequency Control for EQ frequency. Adjustable between 20 Hz and 200 Hz.
- 6 EQ Gain EQ gain. Grayed out for certain EQ types (LP/HP, Allpass)
- 7 EQ Quality Quality of EQ. Not adjustable for LP6 / HP6 / AP6. Adjustable between 0.1 (broad filter) and 1000 (sharp notch filter when using Bell filter)
- 8 Reset to Defaults Resets the EQ to the default parameters of the system preset.

4.3 Output View

The output view let's you adjust gain, delay, mute and phase inversion for the corresponding output if the system preset allows modification of these values.

Furthermore, output EQs, X-Over filters and limiters can be adjusted if the preset grants access to these parameters.



The EQ Editor is explained in its own chapter. See **EQ Editor (Section 4.2)**

Crossover Controls

- 1,2 Frequency Cross-Over frequencies for high and lowpass filters
- 3,4 Characteristic Characteristic of Cross-Over filters
- 5,6 Order Order of Cross-Over filters. The slope of the Cross-Over is 6 dB per order.

The cross-over controls are only visible if the system preset grants access to the cross-over settings. Cross-Overs are activated using the check-boxes in the top left corner of the controls.

Output Controls

- | | | |
|----|----------------------|---|
| 7 | Output Level | Displays the level at the output. |
| 8 | Output Gain Control | Allows to adjust the output gain by using the slider or editing the value in the edit field below. |
| 9 | Output Delay Control | Allows to adjust the delay by entering the value in samples, milliseconds or millimeters, or using the spinbox arrows. |
| 10 | Phase Inversion | State-button to switch the polarity of the output signal. An active button (highlighted) signals a phase-inverted signal. |
| 11 | Output Mute | State-button to mute / unmute the output. An active button (highlighted) signals a muted output. |

5 Touch Display Operation

5.1 General Features and Operation

The unit comes with a 176x220px TFT display and a touch panel. It displays the current state inside of the unit and provides the following functions

- Show input and output levels and limiter operation
- Display the currently selected preset and switch to a different one
- Display the currently active input and switch to a different one
- Show master gain and mute and adjust both
- Show output gain / phase inversion / mute and delay and modify them (if the preset grants these rights to the user)

General operation of the touch panel

The touch panel can be operated by pushing the available buttons. You can not use sliders, they are only for displaying purposes.

Swiping left and right can be used to navigate between screens. Swiping up and down turns the display on / off.

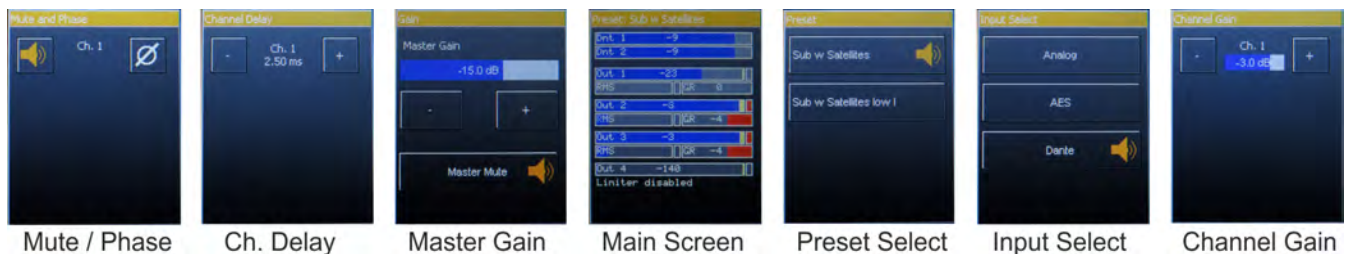
To swipe, press firmly and move left/right or up/down over the whole screen.

Since the touch panel is resistive, it is possible to use a pen which allows more precise operation.

Switch Between the Different Views

After starting up the module, the unit shows the main screen with level information.

To switch between the different views swipe left and right. They are arranged in a circular manner as follows:



When the user navigates to a screen other than the Main Screen by swiping, the display returns to the Main Screen after 25s.

Switching Off the Display

Swiping down turns off the display.

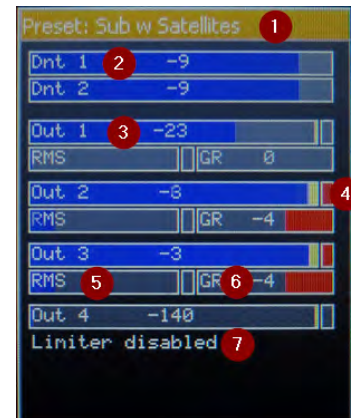
Swiping up activates the display.

The state of the display is stored. If you turn off the display and power-cycle the device it starts normally with activated display but turns off the display after 25s.

5.2 Main Screen

After powering up the PPA module, the Main Screen with level meters and the currently active preset is shown.

The table below describes the UI elements on the Main Screen.



- 1 Titlebar showing the currently active preset.
- 2 Input level meter showing the type of input and the corresponding input level. Values are
 DRC : analog input with dual range conversion
 Ana 1, Ana 2 : single range analog inputs
 AES 1, AES 2: Digital AES inputs
 Dnt 1, Dnt 2: Digital Dante inputs
- 3 Output level meter showing the processing channel and the corresponding level.
- 4 Peak limiter indicator. Turns red when peak limiter is active.
- 5 RMS limiter charging indicator. When charging gets near 100%, the RMS limiter gets active.
- 6 Gain reduction indicator. Shows the currently applied gain reduction in dB (negative number, 0: no gain reduction).
- 7 Limiter disabled is displayed if the limiter for this channel is set to off in the preset

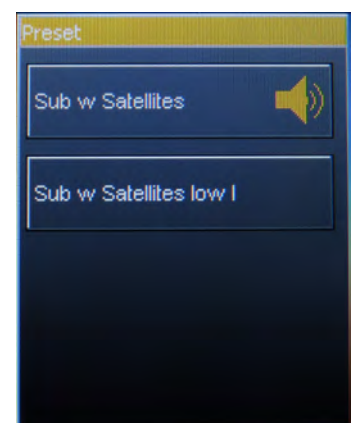
5.3 Preset Selection

Swiping from the main screen to the right gets you to the Preset Selection dialog. Each preset is represented as a button with a state. The currently active preset is shown with a speaker symbol.

The screen shows up to 4 presets per page. If there are more presets present, swiping right will update the screen with the next 4 presets.

User presets are shown before the system presets.

To select a preset, simply push the button and wait until the speaker symbol changes position.



5.4 Input Selection

Swiping to the right from the (last) Preset Selection page, gets you to the Input Selection dialog.

Up to three inputs may be present on the module

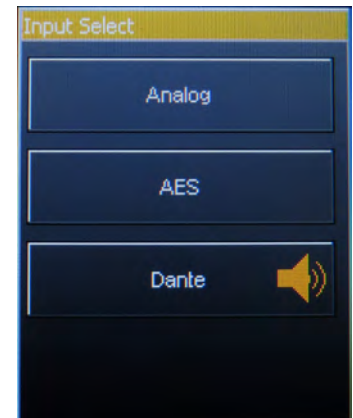
1. Analog
2. AES
3. Dante

The Input Selection dialog only appears if there is more than 1 input present.

Why does the input not change according to the display content?

The designer may have created presets that are always tied to a specific input (say, Analog 1). In this case, the selected input at the display is not considered.

Only, if the designer selects "Device Setting #" as inputs in the preset the user is able to switch to a different input.



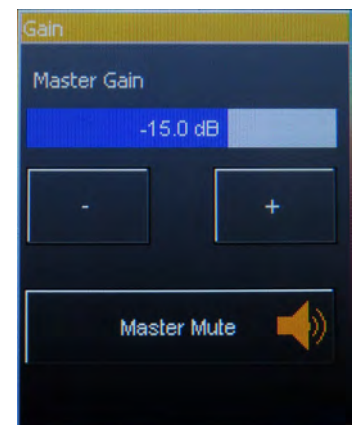
5.5 Master Gain and Mute

The overall master gain can be adjusted by the buttons labelled "+" and "-". Each push will increment or decrement the gain by 1 dB. The maximum master gain is +20 dB, the minimum is -80 dB.

The master gain setting is stored permanently and restored after a power-cycle.

The Master Mute button displays the current mute state. Pushing the button inverses this state, thus, the complete unit can be muted.

The master mute state is not stored permanently. After a power-cycle, the device comes up unmuted again.



5.6 Channel Settings

In case the developer of the preset granted access rights for individual output/channel settings to the user, 3 more dialogs are available to modify

gain / delay / mute / phase inversion for these channels

In general, the current value and channel name / number are displayed in the middle between the modifier buttons.

Modifications are stored in the live preset, that is, after a power-cycle, these changes are still present until a different preset is being recalled.

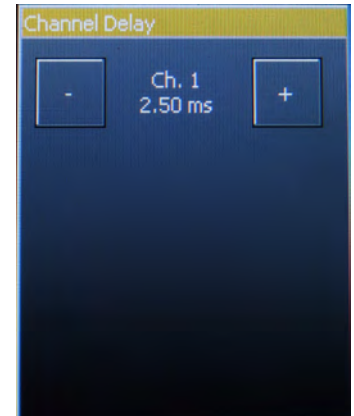
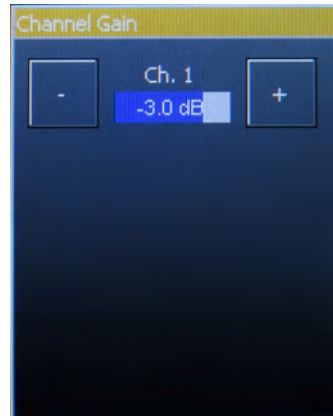
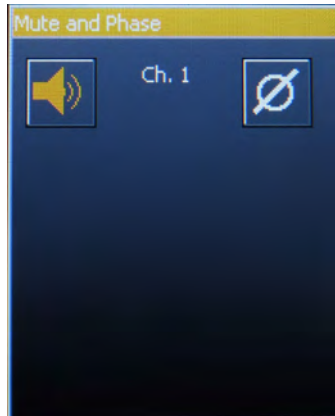
To store the modifications permanently in a user preset, a connection to the System Software is necessary.

The values displayed initially are based on the current settings in the system preset and can be different from 0 / neutral.

Gain is modified in +/- 1dB steps.

Delay is modified in steps of +/-0.33 ms.

Mute and Phase status are represented by image buttons.



6 Glossary

D

DDD file

Contains one or more system presets for a device with a specific model ID. Can be uploaded by the end user.

DSP

Digital Signal Processor - integrated circuit specialized for signal processing tasks

F

Firmware Version

The firmware version which is currently installed on this device. It is a 4 digit number. New firmware versions come with fixes, modifications or complete new features. The leftmost digit represents the strongest changes. The rightmost numbers change when applying small bugfixes.

It is advisable to install newer versions if present. In case of doubt, connect the support.

M

Model ID

A unique number which can be assigned to a device by the developer. End users can upload DDD files with that same model ID only.

P

pup files

Contain a user preset which can be uploaded to the unit.

U

User Preset

A collection of settings which can be adjusted by the end user like channel gains, delays, EQs, mute and phase inversion states. The presets can be stored on the device and are applied as patches on the system presets. They can also be stored as PUP files on the host computer.

7 Index

- audio input, 4
- Base Preset, 8-11
- Changing Presets, 4
- Channel Settings, 16-17
- Connecting to a Device, 3-4
- Cover Page, 0
- DDD file, 3
- demo device, 3
- Device Info, 6-7
- Enabling Virtual Demo Devices for a Test Drive, 3
- EQ Editor, 11-12
- firmware, 6-7
- Firmware Version, 6-7
- Gain Reduction, 8-11
- General Features and Operation, 14
- General Overview, 5-6
- Glossary, 18
- Input Selection, 15-16
- Installing the Software, 3
- Main Screen, 14-15
- Main View, 8-11
- Maintenance Menu, 6-7
- master gain, 16
- Master Gain and Mute, 16
- Master Mute, 8-11 , 16
- Model Id, 6-7
- Output View, 12-13
- parametric EQ, 11-12
- preset, 4
- Preset Selection, 15
- pup files, 8-11
- Subwoofer Control Manager , 5-6
- Swiping, 14
- Sync State Indicator, 8-11
- System Requirements, 2
- touch panel, 14
- user presets, 8-11
- Welcome, 2

