VHD5000 GUI Touchscreen Control, Web Control

User Guide

This User Guide shows how to Control the VHD5 system using the VHD5000 amplifier Touchscreen control system, and/or Web control using a web browser.

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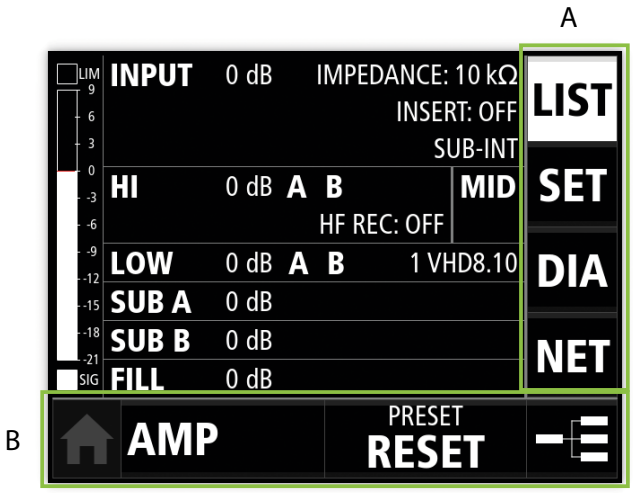
VHD5000 Introduction

On the front panel of the VHD5000 amplifier is a 3.7" Color Transreflective LCD touch display, a standby button and a rotary encoder with a push-button function for controlling the system. After powering on, the VHD5000 will display the KV2 logo until it has completed booting up.
Once the amp has booted, it will then change to the system overview screen. (Pic 1)



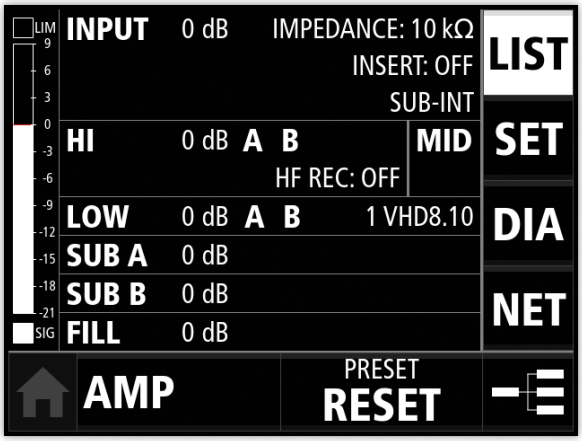
Pic 1

Pic 2

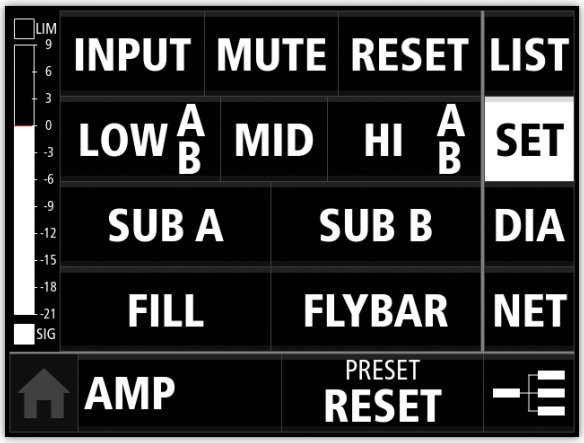
This page has a side menu (A) and a bottom menu (B).
To navigate in the application you can use the touch screen or the encoder. Turn the encoder left or right to focus, (C) - focused button) and then press the encoder to select the button (D) - selected button) or to produce a specific action depending on the button type, (which will be explained below).

Touchscreen Control System

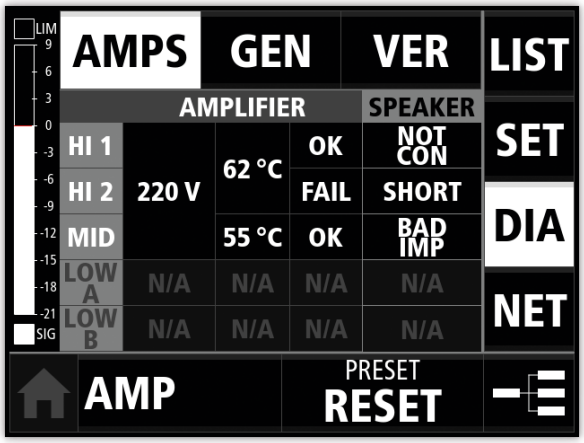
Use the side menu to switch between the four main tabs.



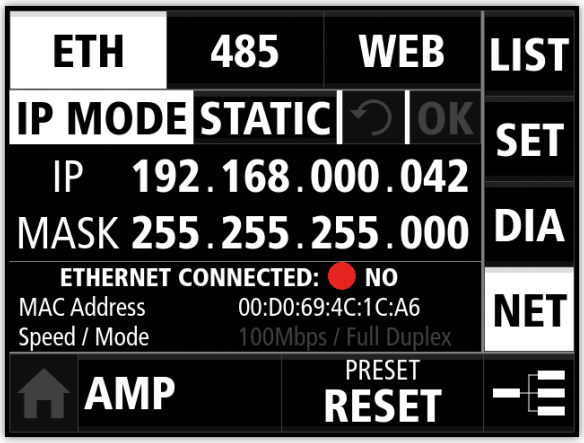
Pic 3: LIST - System settings overview



Pic 4: SET - Amplifier settings, flybar control



Pic 5: DIA - diagnostics, signal generator, software version



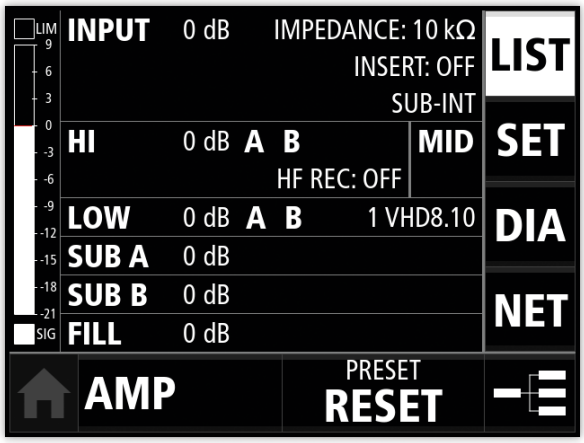
Pic 6: NET - network connection

Pic 7

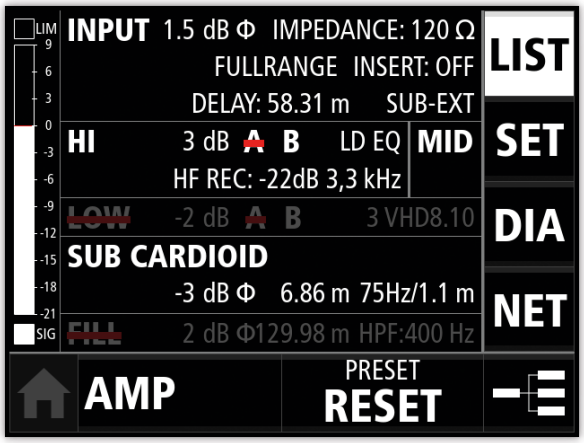
The bottom menu of the overview page contains four button options (see page 17):

(A) Home
(B) "AMP" - device setup
(C) PRESET - presets management
(D) K-NET - remote control of amplifiers and group management

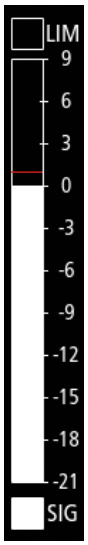
Amplifier Settings



Pic 8



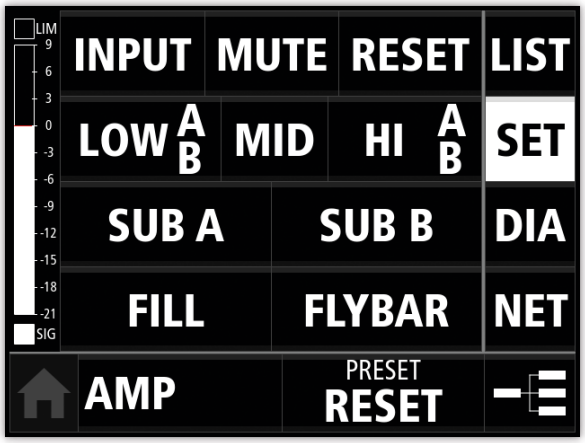
Pic 9



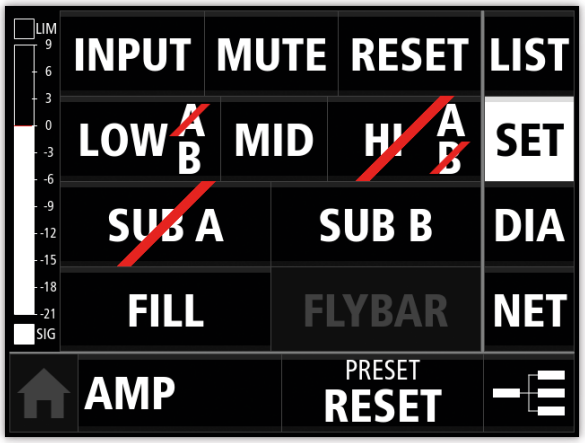
Pic 10

The LIST tab provides a view of the whole amplifier setup. Each amplifier channel has a box with its settings. On Pic 8 you can see the system default values. Pic 9 shows a custom user setting. Muted channels are shown with a red line through the band, and the text is grayed out.
wSUB-INT/EXT = Internal or external sub input, LD EQ = long distance equalizer for HF band.
When cardioid SUB mode is set, there is only one row for the SUBS - SUB CARDIOID
This screen also shows all of the other system settings; PHASE, GAIN, INPUT IMPEDANCE, SYSTEM DELAY, etc.
The SIGNAL METER (Pic 3) shows input level from -21 to +9dB with a 1sec peak as well as the SIGnal and LIMiter indicators. The SIGNAL METER is included in the LIST, SETting and DIAgnostic tabs.

Setting



Pic 11



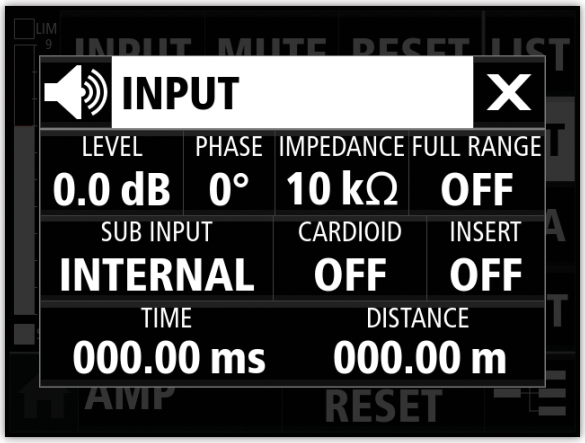
Pic 12

In the SETting tab (Pic 11) you can manage the amplifier settings.
INPUT, LOW, MID, HI, SUB A, SUB B (or one button for SUB CARDIOID) and FILL buttons represent individual channels. Press the channel button to open a window showing the advanced settings (except the MID channel which can only be muted. This is because the MID band is treated as the baseline for the system and the other bands are gained against the MIDS). Press and hold the channel button to mute or unmute each channel. A Red cross-hatch indicates that the channel is muted (Pic 12). The LOW and HI bands have A and B channels which can be muted in the advanced settings window. The MUTE button opens a window where you can mute output channels or unmute all channels. The RESET button opens a window where you can confirm if you want to reset amplifier settings to default. The Button for controlling the FLYBAR is enabled when the VHD5.0 speaker multi-cable & flybar POWER UNIT is connected.

Input

Press the INPUT button to open the advanced settings window (Pic 13)

Press **X**, or touch anywhere outside the window (gray zone) to close the window.



Pic 13

Specification table
UNMUTE/MUTE
LEVEL: -20, -19, -18, -17, -16, -15, -14, -13, -12, -11, -10, -9, -8.5, -8, -7.5, -7, -6.5, -6, -5.5, -5, -4.5, -4, -3.5, -3, -2.5, -2, -1.5, -1, -0.5, 0, 0.5, 1, 1.5, 2, 2.5, 3 dB
PHASE: 0°, 180°
IMPEDANCE: 120Ω, 10kΩ
FULL RANGE: ON/OFF
SUB INPUT: INTERNAL, EXTERNAL
CARDIOID: ON/OFF
INSERT: ON/OFF
enabled if SUB INPUT: INTERNAL DELAY - TIME: 0 - 379ms, 0.05ms step;
DISTANCE: 0 - 130m, cca 0.02m step

Buttons description:

Toggle buttons:

Pic 14 Pic 15

UNMUTE/MUTE
Press to toggle

Pic 16 Pic 17

PHASE button
Press to toggle

Enabled button

Pic 18

Disabled button

Pic 19

Pic 20

Focused button
When using the encoder to navigate in the interface, the focused button is highlighted in a white box. Use the touch screen, or press encoder to select function.

Pic 21

Selected button
(See Specifications Table above for step values).

Pic 22

When the field is selected, you can rotate encoder to change its value. Rotate clockwise to increase, and counter-clockwise to decrease value.

Delay Setting

Pic 23: Delay (TIME DISTANCE box) can be set in meters or milliseconds.

Pic 24: Touch box or use encoder to focus on the first number.

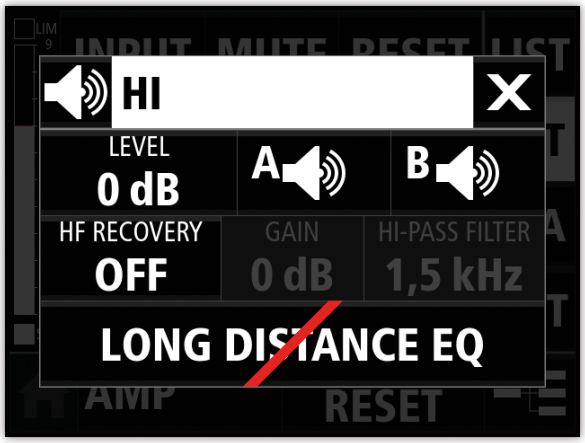
Pic 25: Focus on specific range using encoder.

Pic 26: Press encoder to select range.

Pic 27: Rotate encoder to set value. This will change the value in 0.05ms steps which is approximately 0.02m. For that reason, when setting meters, it adds or subtracts approximately 0.02, 0.1, 1, 10, or 100 meters depending on the selected range.

Pic 28: When the maximum allowable delay is reached, MAX will appear at the top of the display

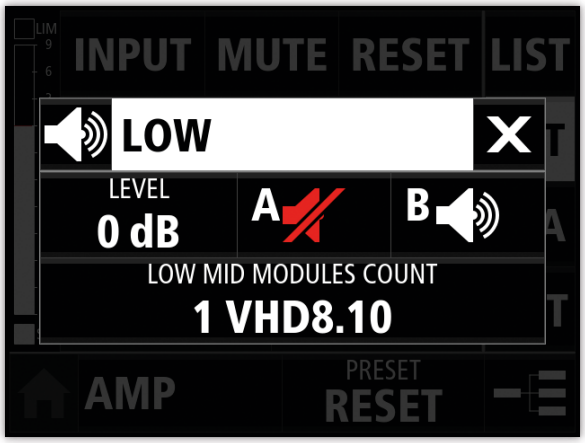
Hi



Pic 29

UNMUTE/MUTE
LEVEL: -6, -5, -4, -3, -2, -1, 0, 1, 2, 3, 4 dB
A: UNMUTE/MUTE
B: UNMUTE/MUTE
HF RECOVERY: ON/OFF
GAIN: -60, -57, -54, -51, -48, -45, -42, -39, -36, -34, -32, -30, -28, -26, -24, -22, -20, -18, -16, -14, -12, -11, -10, -9, -8, -7, -6, -5, -4, -3, -2, -1, 0 dB
If HF RECOVERY is enabled:
HI-PASS FILTER: 7.2, 3.3, 2.2, 1.5kHz
GAIN
LONG DISTANCE EQ: ON/OFF
This setting increases gain to increase long throw characteristics of HF in larger venues.

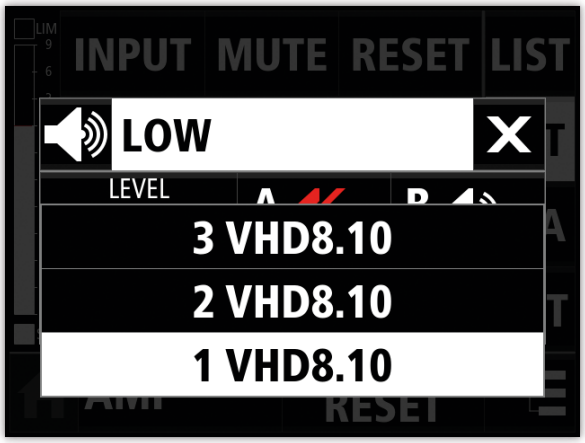
Low



Pic 30

UNMUTE/MUTE
LEVEL: -6, -4, -2, -1, 0, 1, 2, 3, 4, 5, 6 dB
A: UNMUTE/MUTE
B: UNMUTE/MUTE
LOW MID MODULE COUNT: 1, 2, 3 VHD8.10

You can individually mute the A or B channels when a VHD5000S is connected. Otherwise these two buttons are disabled.

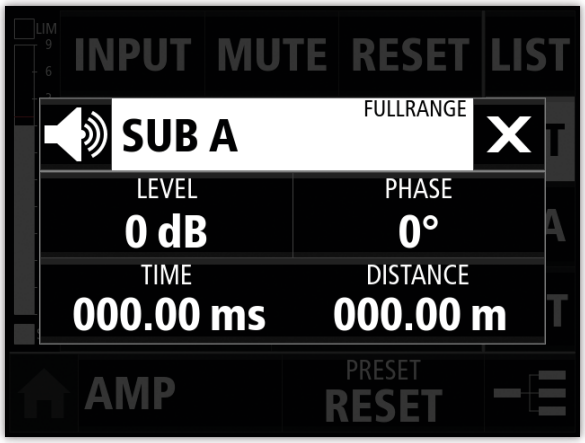


Pic 30

LOW MID MODULES COUNT
This function is used to tell the controller how many VHD8.10 are connected to the system.

A drop down list is displayed where you can select how many VHD8.10 cabinets are being deployed in the system using the touch screen or with the push button function of the encoder.

Sub A, B



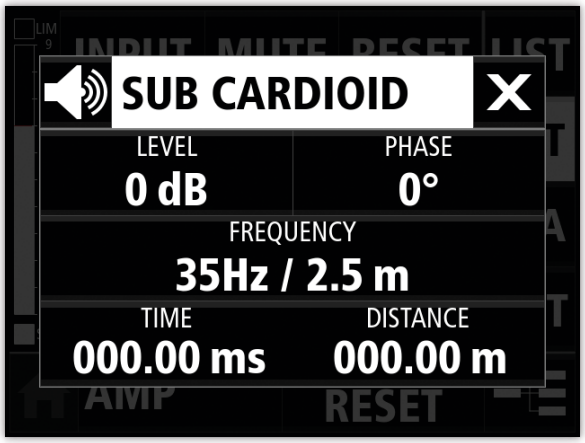
Pic 31

UNMUTE/MUTE
LEVEL: -20, -18, -16, -14, -12, -10, -8, -6, -4, -2, -1, 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 dB
PHASE: 0°, 180°
DELAY - TIME: 0 - 109.2ms, 0.05ms step;
DISTANCE: 0 - 37.46m, cca 0.02m steps

FULLRANGE label is visible when LOW FULLRANGE is selected to ON

Sub Cardioid

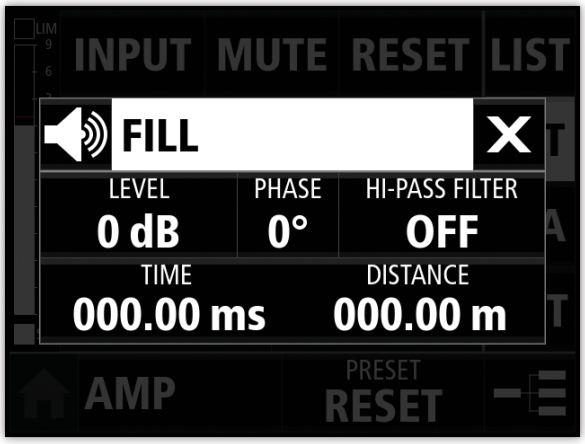
Set sub channels mode in input window



Pic 32

UNMUTE/MUTE
LEVEL: -20, -18, -16, -14, -12, -10, -8, -6, -4, -2, -1, 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 dB
PHASE: 0°, 180°
PREQUENCY: 35, 40, 45, 50, 55, 60, 65, 70, 75 Hz
DELAY - TIME: 0 -102.1ms, 0.05ms step;
DISTANCE: 0 - 35.2m, cca 0.02m steps

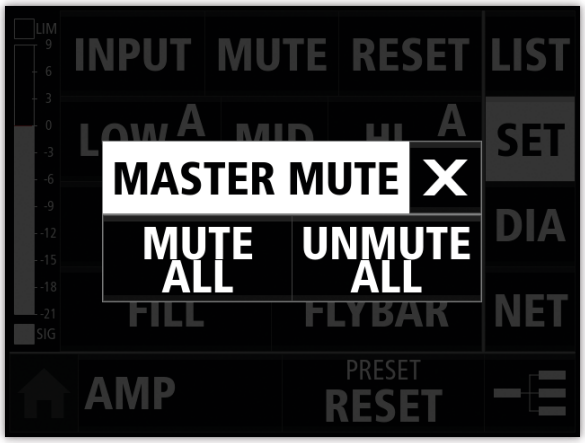
Fill



Pic 33

UNMUTE/MUTE
LEVEL: -54, -51, -48, -45, -42, -39, -36, -33, -30, -28, -26, -24, -22, -20, -18, -16, -14, -12, -10, -8, -6, -5, -4, -3, -2, -1, 0, 1, 2, 3, 4, 5, 6 dB
PHASE: 0°, 180°
HI-PASS FILTER: 800Hz, 400Hz, 100Hz,
OFF DELAY - TIME: 0 - 379ms, 0.05ms step;
DISTANCE: 0 - 130m, cca 0.02m step

Mute

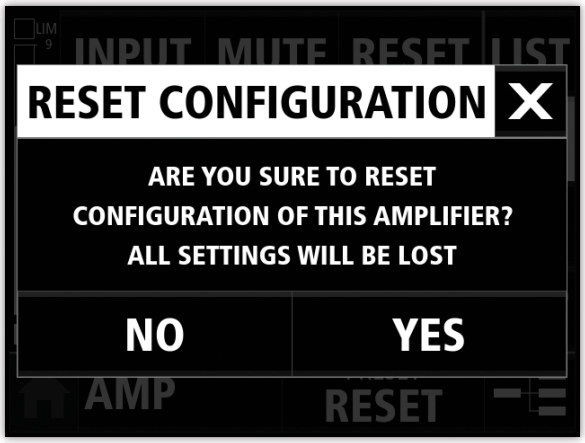


Pic 34

MUTE ALL
mutes LOW A, LOW B, MID, HI A, HI B, SUB A, SUB B, CARDIOID and FILL

UNMUTE ALL
unmutes INPUT, LOW, LOW A, LOW B, MID, HI, HI A, HI B, SUB A, SUB B, CARDIOID, FILL

Reset Configuration



Pic 35: Confirm to reset amplifier to default values.

Default values

INPUT
unmute
LEVEL: 0dB
IMPEDANCE: 10kΩ
FULL RANGE: OFF
SUB INPUT: INTERNAL
CARDIOID: OFF
INSERT: OFF
DELAY: 0ms/m

LOW A/B
unmute
LEVEL: 0dB
A: unmute
B: unmute
Low Mid Modules Count: 3 VHD8.10

MID
unmute

HI
unmute
LEVEL: 0dB
A: unmute
B: unmute
HF RECOVERY: OFF
GAIN: -60dB
HI-PASS FILTER:
EQ: OFF

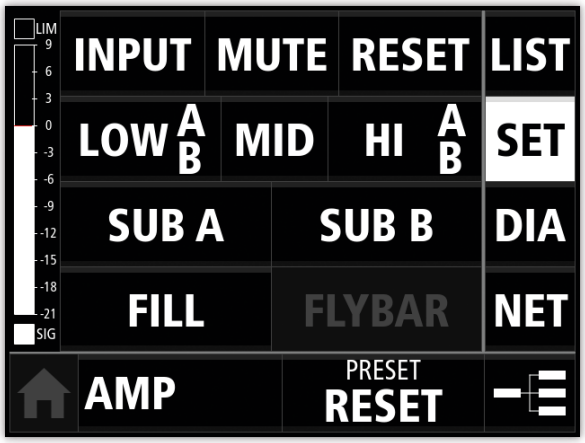
SUB A/B
unmute
LEVEL: 0dB
PHASE: 0°
DELAY: 0ms/m

CARDIOID
unmute
LEVEL: 0dB
PHASE: 0°
PREQUENCY: 60Hz
DELAY: 0ms/m

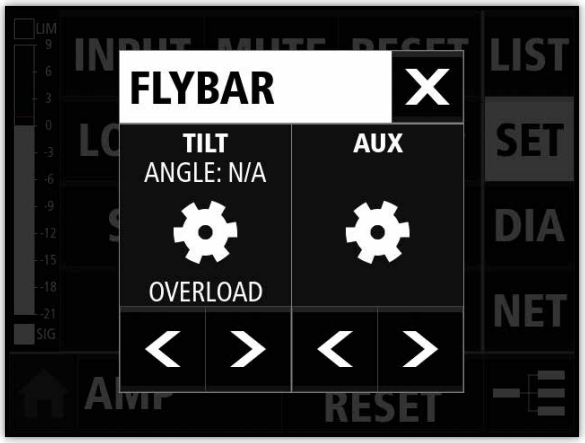
FILL
unmute
LEVEL: 0dB
PHASE: 0°
HI-PASS FILTER: OFF
DELAY: 0ms/m

WARNING! RESET CONFIGURATION WILL UNMUTE ALL CHANNELS AT 0DB. THIS COULD CAUSE SERIOUS HEARING OR SYSTEM DAMAGE IF THERE IS PROGRAM MATERIAL PASSING THROUGH THE SYSTEM.

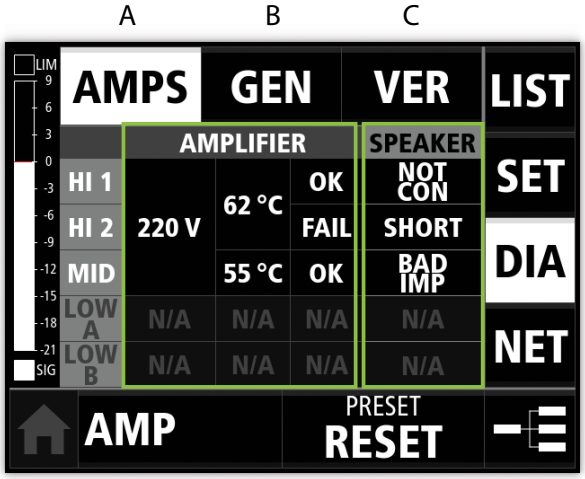
Flybar



Pic 36: The FLYBAR button is disabled when VHD5.0 SIGNAL & POWER UNIT is not connected to the system.



Pic 37: ANGLE: When the flybar is connected to a VHD5.0 SIGNAL & POWER UNIT, this display shows the currently measured angle for TILT with accuracy to 1°, N/A if flybar is not connected. Push and Hold arrow to move TILT or AUX (for Downfill). When the flybar is in motion, it is signaled by the rotating wheel. If the flybar cannot be moved (cable unplugged, short circuit, motor stuck), the OVERLOAD label is displayed.



Pic 38

The Diagnostic page has a top menu to select from these tabs:

(A) AMPS - amplifier and speaker status
(B) GEN - signal generator
(C) VER - software versions

AMPS

Shows current status. There are rows for channels HI 1, HI 2, MID (VHD5000) LOW A and LOW B (VHD8.10).

AMPLIFIER STATUS

The first three columns show:

MAIN VOLTAGE

(one sensor for HI 1, HI 2 and MID): ideal 200-250V, working 160-270V, undervoltage less than 200V LOW A LOW B

TEMPERATURE

(one sensor for HI 1, HI 2): 280°C over temperature shutdown
MID
LOW A
LOW B

ERROR STATUS

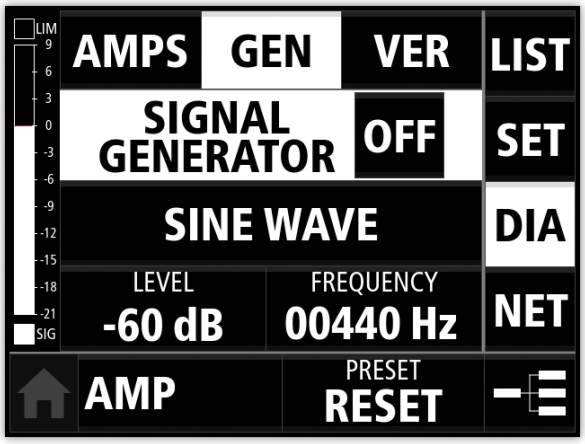
OK
FAIL

SPEAKER STATUS

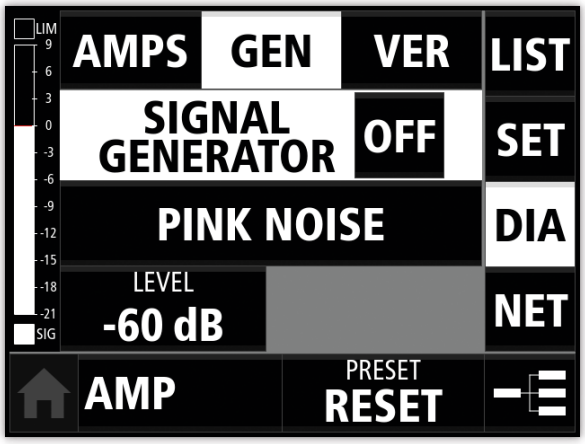
OK
NOT CON - not connected
SHORT - shorted
LOW SIG - low signal

All status cells for channels LOW A and LOW B can indicate:
N/A - VHD8.10 not connected
OFF - no voltage detected on VHD8.10

GEN - signal generator



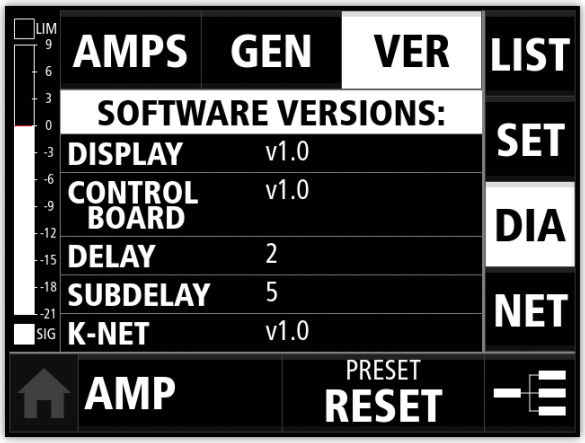
Pic 39



Pic 40

Turn SIGNAL GENERATOR ON to generate signal. Choose SINE WAVE or PINK NOISE
Adjust LEVEL of generated signal from -127 to 0dB
You can set the FREQUENCY of sine from 20Hz to 20000Hz (1Hz step)
SIGNAL GENERATOR can only be turned on when system is in EDIT mode.

VER - software versions

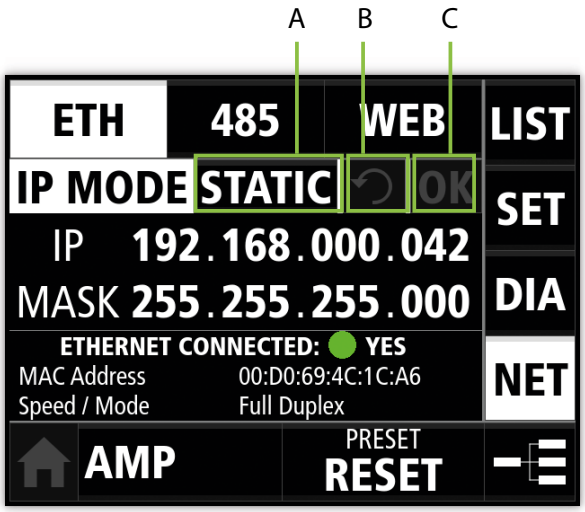


Pic 41

Side menu - NETwork - connection

Ethernet

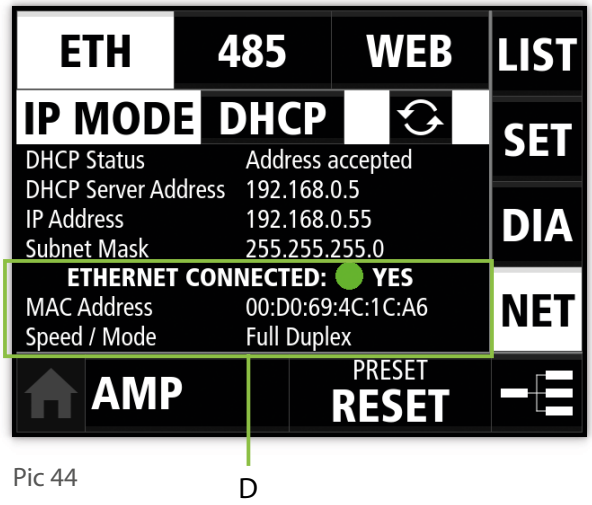
Set ETHERNET configuration by pressing DHCP/STATIC button (pic 42 - A).



Pic 42

Pic 43

In STATIC mode (Pic 42): set the IP and MASK. When you change it, a validity indicator appears (Pic 43).
Red frame indicates invalid change, green frame (IP) indicates acceptable change. When your changes are marked green, the OK button (C) is enabled. Press it to apply changes. Reset (B) IP address and mask to the current setting.



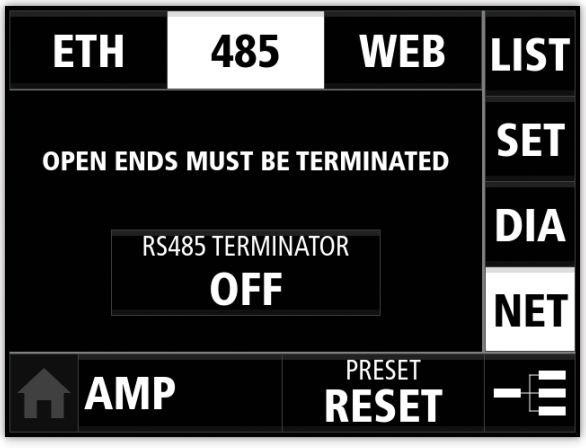
Pic 44

DHCP mode: The IP address is set automatically from DHCP server, push the RENEW ADDRESS button (D) to refresh connection.

DHCP Status:
"Discovering server",
"Server found" / "No DHCP server found"
"Address accepted" / "Address refused"

Check DHCP Server Address, IP Address and Subnet Mask.

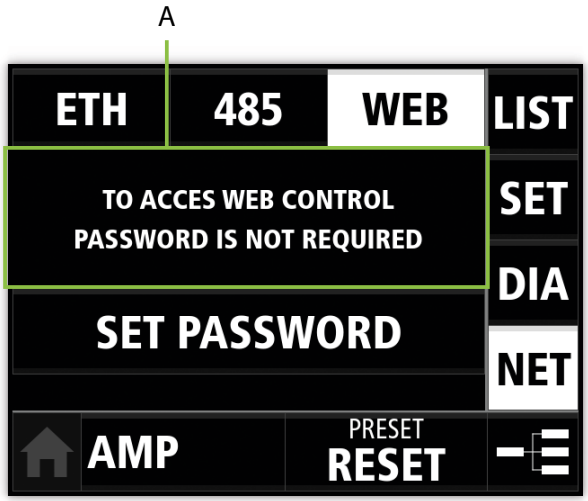
ETHERNET CONNECTED: YES/NO MAC ADDRESS
Speed / Mode - "Half Duplex", "Full



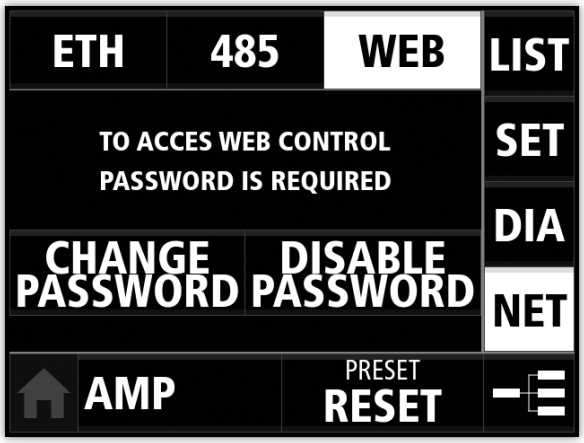
Pic 45

Set RS485 TERMINATOR ON/OFF.

Basic controls



Pic 46



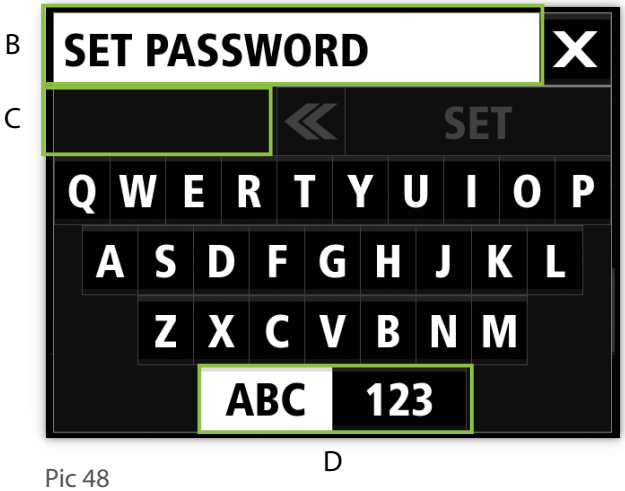
Pic 47

WEB

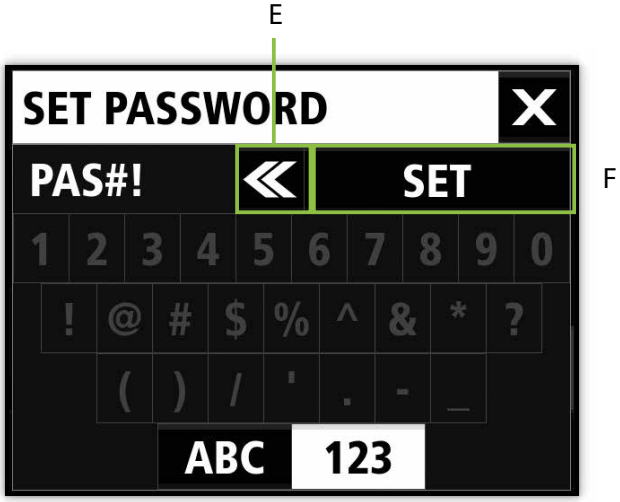
This text (pic 46 - A) informs you whether a password is required to access this amplifier via web control.

You can use SET PASSWORD to protect access via web control.
Once set, you can CHANGE the password or DISABLE it. (Pic 47)

Keyboard window



Pic 48



Pic 49

Keyboard window (Pic 48 and Pic 49).
Label describes you are going to SET PASSWORD (Pic B).
Text field - maximum 5 chars enabled (C).
Double arrow - backspace - removes last character (E).
ABC and 123 button changes charset (D).
SET button sets the password (F).
Use letters, numbers, and !, @, #, $, %, ^, &, *, ?, (,), /, ', ., -, _

Bottom menu

A B

Pic 50

Pic 50 (A) - HOME button
When a VHD5000 is controlled from the GUI the home button shows this icon and is disabled (Pic 51). When a second VHD5000 is controlled from the first amplifier GUI this icon is displayed (Pic 52). Pressing this button returns control to the local amplifier.

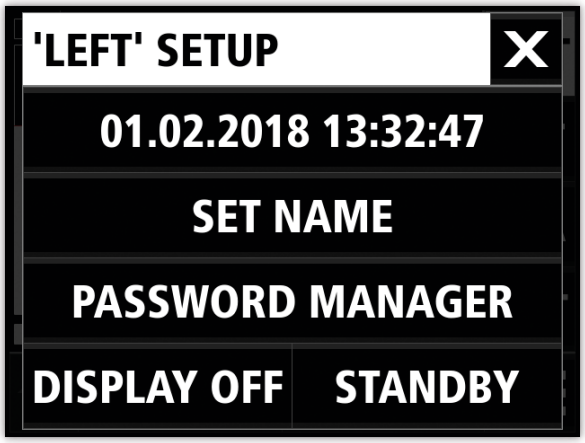
Pic 51 Pic 52

C
D

(B) - Device SETUP button - shows the name of currently controlled amplifier (D - "LEFT") and the name of group (C - "VOCAL")
Pushing the amplifier (LEFT) button, opens window for the device setup Pic 54.

Pic 53

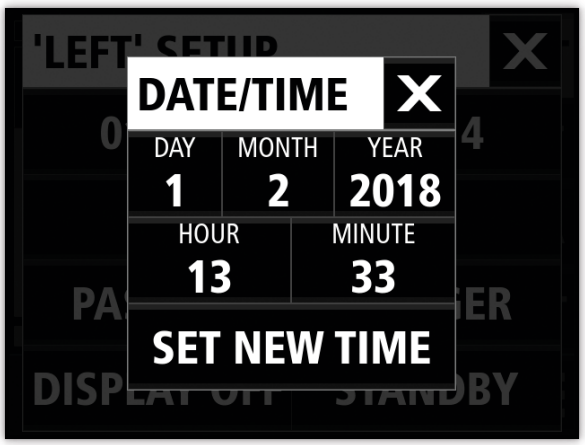
E



Pic 54

(E) DATE TIME - button shows current date and time, opens window Pic 55.

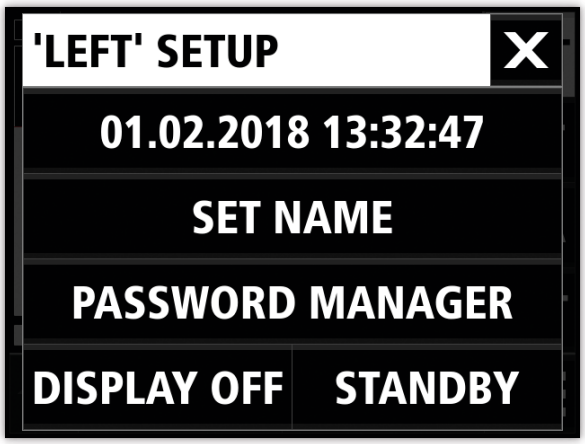
SET NAME - button opens window to rename amplifier



Pic 55

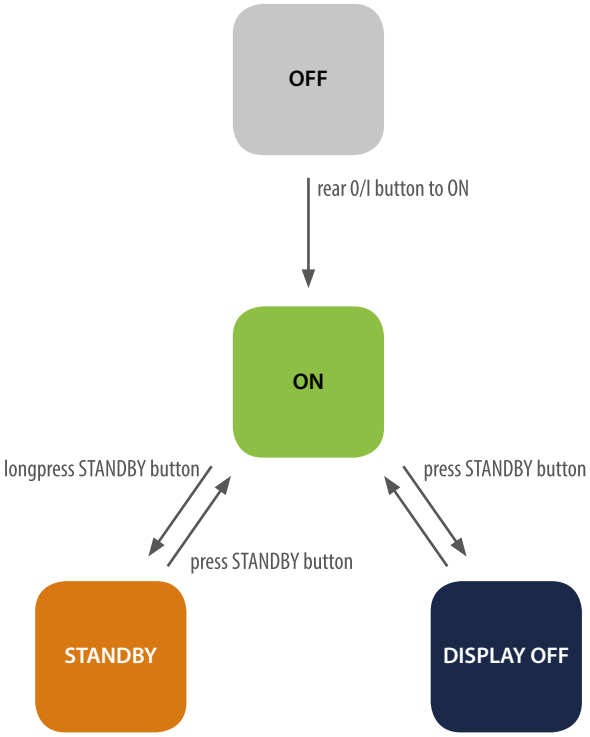
To set date and time, select a field and change with the encoder and confirm with SET NEW TIME button.

Bottom menu



Pic 56: PASSWORD MANAGER - opens window Pic 57
DISPLAY OFF/ LOCK - turn off display or LOCK device when password is set.
STANDBY - go standby

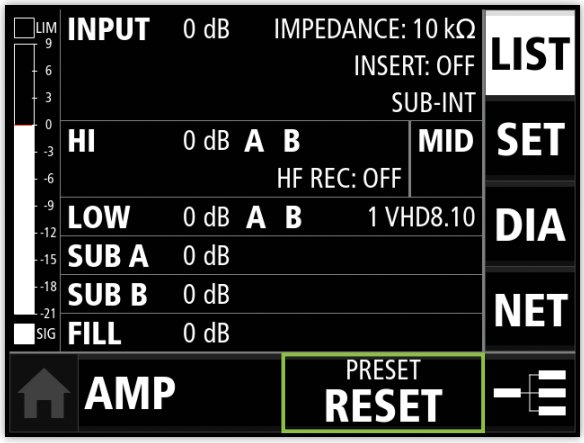
Pic 57: You can SET PASSWORD which will need to be entered to access amplifier when it is in STANDBY mode or if its DISPLAY is OFF. Once set, you can CHANGE the password or DISABLE it.



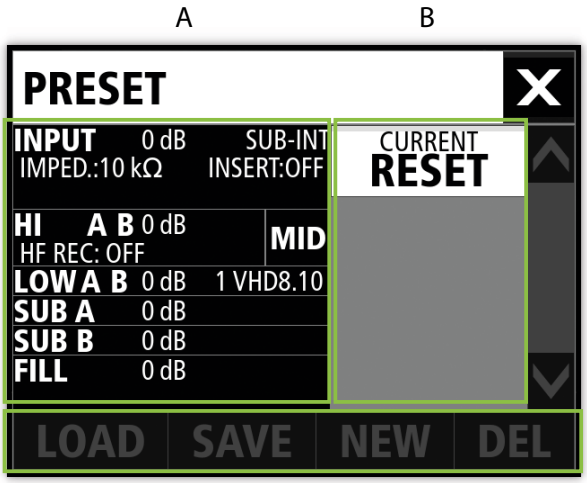
Pic 58: Use the STANDBY HW button on the VHD5000 front panel to turn DISPLAY OFF or to go into STANDBY

Pic 59: When amplifier is locked with password, after turning on display or turning on display or turning on from standby you need to enter this password.

Bottom menu - PRESET

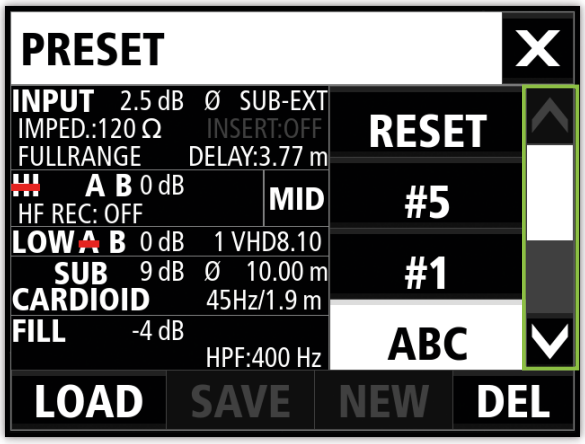


Pic 60

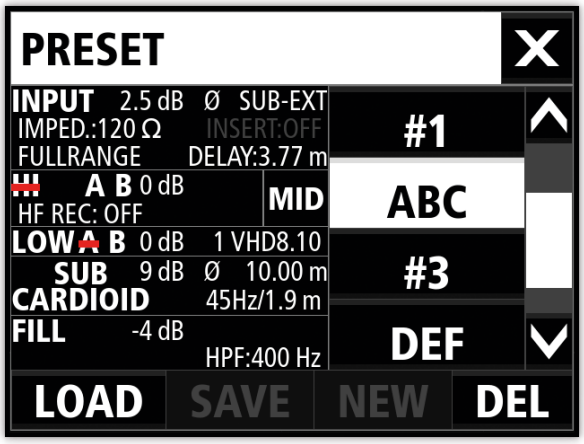


Pic 61

The PRESET button shows the name of last loaded preset (example "RESET"). This button opens a window for preset management (Pic 61). There is a box (A) representing the settings of selected preset in list (B). Until you create your custom presets, there is only the default preset, called RESET, which cannot be overwritten or deleted.
The last loaded preset is marked with CURRENT label, and then when you edit amplifier settings (so settings are different to the current preset), the label displays EDITED.



Pic 62



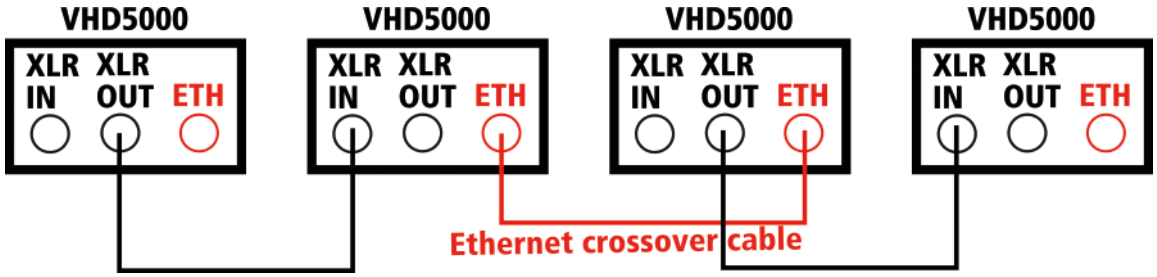
Pic 63

For example here is list of custom presets: #5, #1, ABC, #3, DEF and #2. There is list of presets you can scroll using scrollbar (C) arrows . Each new preset is added to the end of the list.

You can manage presets using bottom menu buttons:
LOAD selected preset. Enabled when current settings are different from selected preset settings.
SAVE rewrites selected preset with current settings. Enabled when current settings are different from selected preset settings, default RESET cannot be rewritten.
NEW creates a preset with current settings. Set its name in keyboard window. Enabled when current settings are different from the currently selected preset.
DEL - delete selected preset.

K-NET interconnection VHD5000/VHD5000

There are various options for how to interconnect VHD5 systems. It is recommended to use an Ethernet connection, however you can also our proprietary K-Net connection, using conventional XLR microphone cables, or a combination of XLR and ethernet, (Although at the time of publishing, K-NET still in Beta).

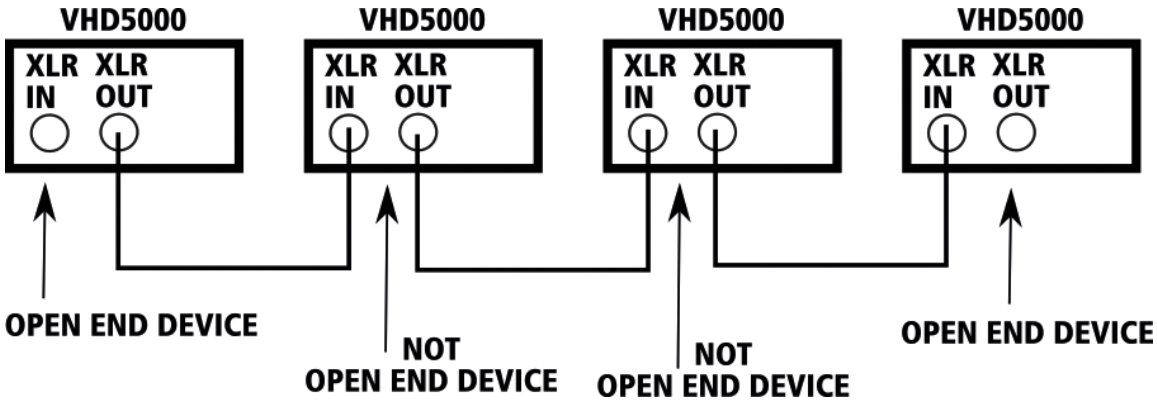


Pic 64

Connecting two VHD5 systems needs crossover Ethernet cable or preferably a network switch or router.
Use STATIC IP mode, (See chapter Ethernet) and set proper IP addresses on both devices.

This is an example:

device A	device B
ip: 192.168.0.1	ip: 192.168.0.2
mask: 255.255.255.0	mask: 255.255.255.0

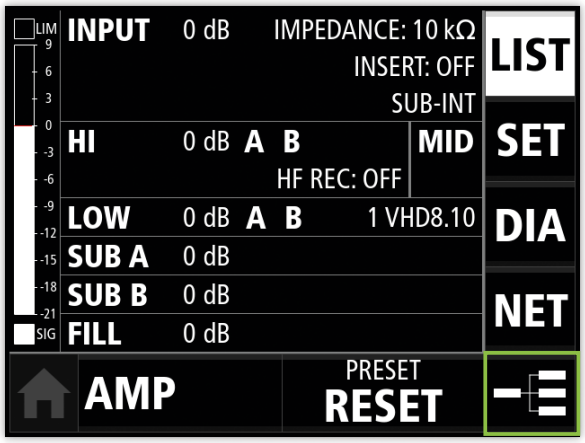


Pic 65

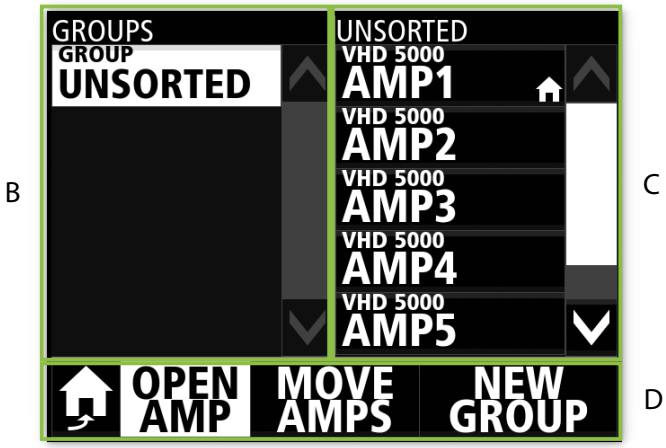
When using the K-Net XLR network, termination must be set correctly.
Set TERMINATOR: ON for OPEN END DEVICEs and OFF for NOT OPEN DEVICEs).
(See chapter Ethernet)

K-NET

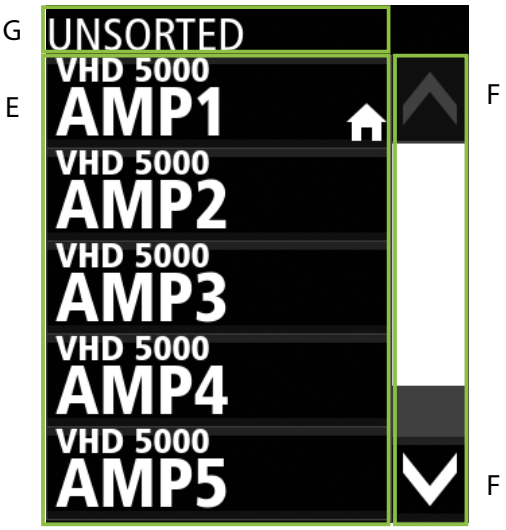
K-NET allows you to control remote amplifiers and create groups of amplifiers so they can be controlled together. To describe how K-NET works we can use this example. You have six amplifiers connected together and you have named them: AMP1, AMP2, AMP3, AMP4, AMP5 and AMP6. Interconnected amplifiers (which have not yet been added to any group) you find in the UNSORTED group. This special group cannot be deleted and has no influence on amplifier settings.



Pic 66



Pic 67



Pic 68

Pressing the K-NET button (A) takes you to the K-NET page (Pic 67). There you can see two panels (B and C) and bottom menu (D). The HOME icon moves you back to the local device control page (Pic 66). There are three modes: OPEN AMP, MOVE AMPS and NEW GROUP.

Each panel (Pic 68) has a list of amplifiers or groups (E), scrollbar (F) and GROUP label (G). In this example the GROUP label is "UNSORTED", which means you can see amplifiers (E) that are in the UNSORTED group.

Amplifiers and groups are represented by these boxes:

Pic 69

Pic 70

Pic 71

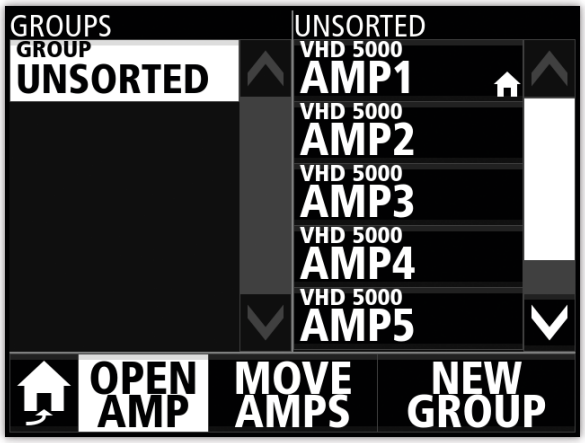
The AMP box has VHD 5000 label and the name of the amplifier. It indicates:

- ERROR – (red dot) the amplifier detects an error, (more information in the diagnostic tab).
- Key icon means amplifier is locked with password.
- Standby icon – shows that the amplifier is in standby mode.
- Home icon - marks your home. amplifier

The GROUP box has GROUP label and the name of group.

- NEED SYNC - amplifiers in group don't have same settings.
- ERROR - when one or more amplifiers in group has error, group shows this icon.

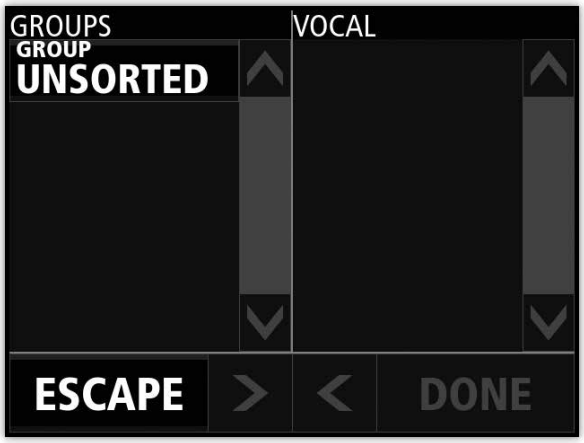
Bottom menu - K-NET



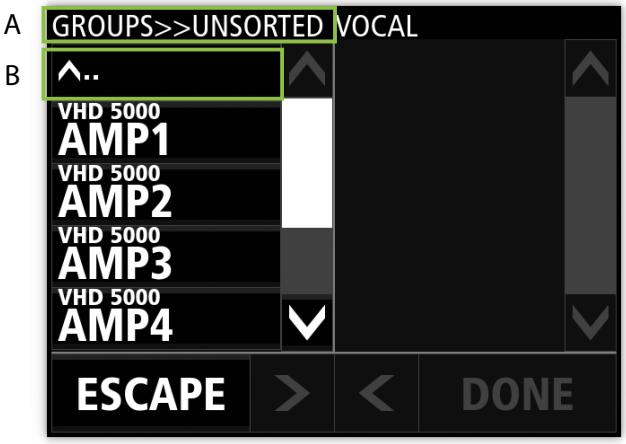
Pic 72: In OPEN AMP mode, you can see all of the groups in left LEFT panel, here showing only UNSORTED. The Right panel shows amplifiers of the group selected in left panel (white highlighted group is selected). Press any of the amplifiers in the RIGHT panel to open the AMPlifiers control page.

If you want to create a new group, press the NEW GROUP button.

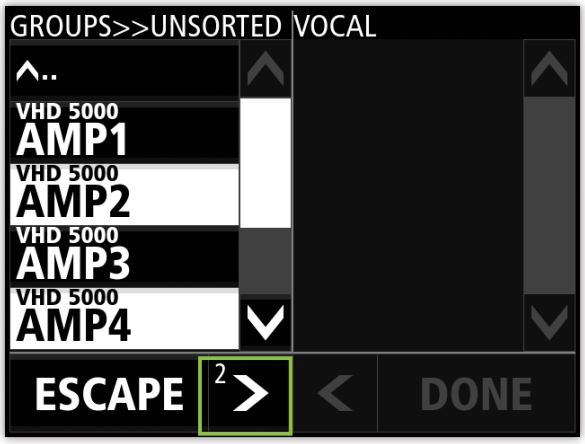
Pic 73: Enter the name of the new group (example VOCAL) and confirm with the SET NAME button.



Pic 74: The Right panel represents the new "VOCAL" group you are going to create. To create a group it must contain at least one amplifier. The Left panel shows a list of groups (now only UNSORTED group), press it to open.

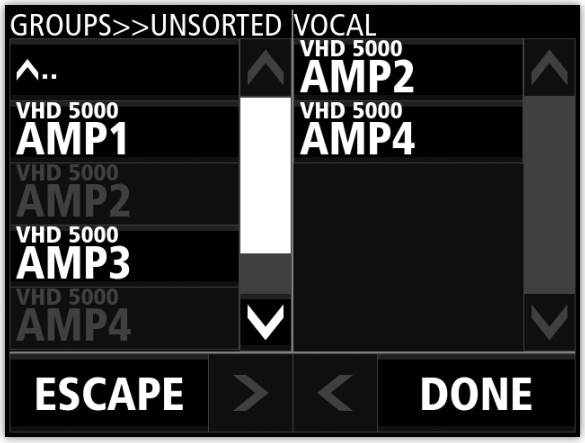


Pic 75: Breadcrumb trail (A) shows that you have opened the UNSORTED group. Press ^.. button (B) to go back to the parent directory (GROUPS).

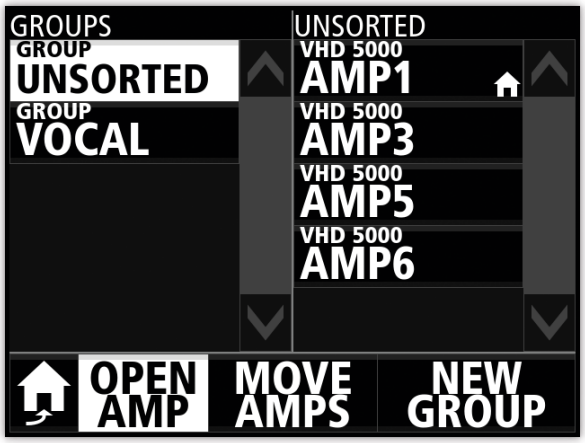


Pic 76: Select amplifiers you want to add to new group and press the arrow to add them to the group (C). The small Number on the arrow button is the number of selected amplifiers in that group.

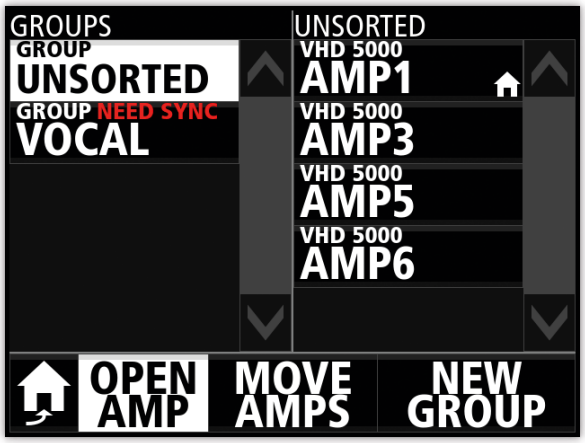
K-NET



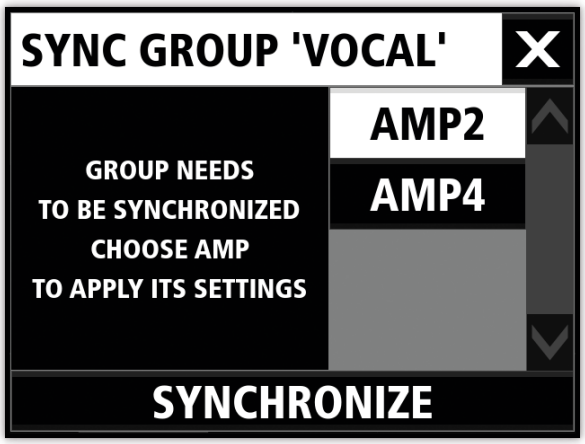
Pic 77: After being added to the new group, these amplifiers turn gray.
If you want to put them back, just select them in right panel and press the arrow - they will automatically return to the group where they were, or press ESCAPE button to cancel the creating of group. All amplifiers in the right panel stay in their previous groups. To create a new group it must contain at least one amplifier.
Press DONE to finish.



Pic 78: You can see your new group in the list of groups. Select VOCAL group to see its amplifiers in right panel.



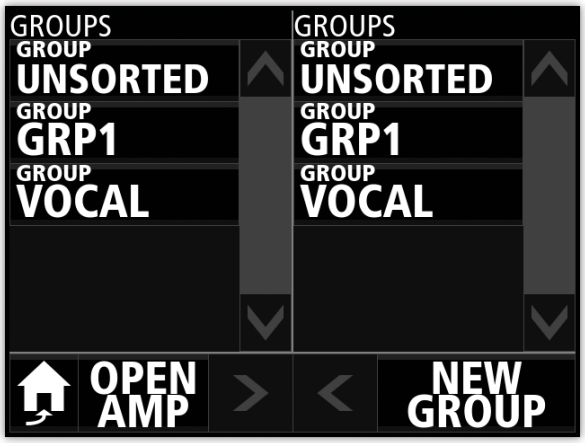
Pic 79: It might happen that amplifiers in a group don't have same settings, for example you put two amplifiers in a group with different settings. This is indicated by the NEED SYNC label on the group box. When you are in OPEN AMP mode, press group box to open the synchronization window.



Pic 80: Select the amplifier which settings you want to use, which will then apply its settings to all of the other amplifiers in the group.
Confirm with SYNCHRONIZE button.

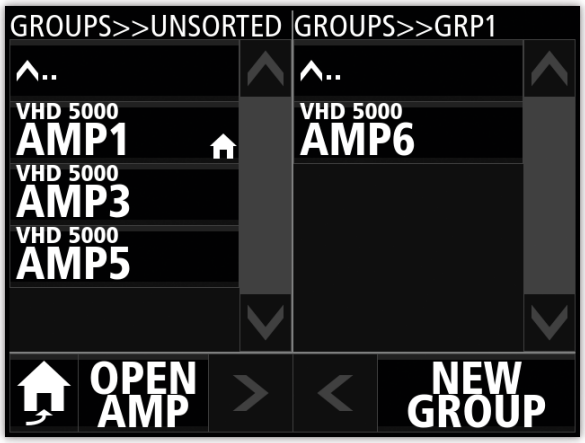
Be careful as this cannot be undone!

K-NET

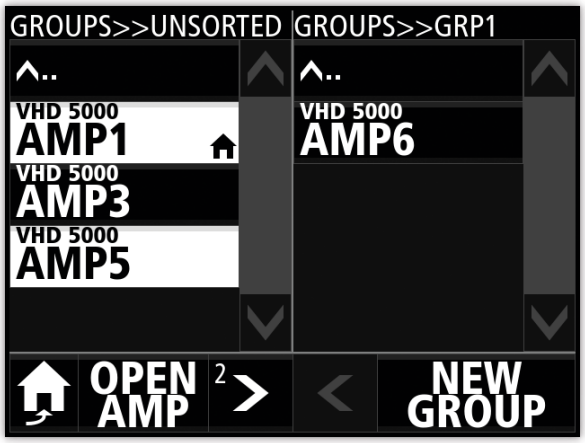


Pic 81: MOVE AMPS
If you want to move amps from one group to another, press MOVE AMPS button in bottom menu. You can see in both panels the same list of groups - for example we have UNSORTED, GRP1, and VOCAL groups.

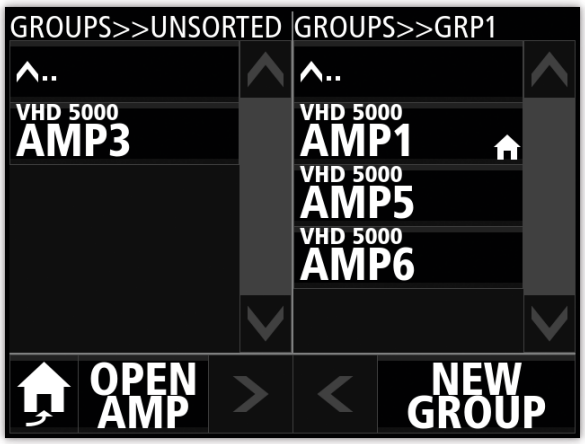
Pic 82: Press UNSORTED group in the left panel. The label shows GROUPS>>UNSORTED is opened and you can see its amplifiers in left panel. In the right panel the UNSORTED group is then disabled.



Pic 83: Select GRP1 in second panel



Pic 84: Select amps and move them with the ARROWS in direction you want. The Number on the arrow button is the number of amps you have selected to move.



Pic 85: After clicking on the arrow, the selected devices move to the opened group in the direction of the arrow you pushed. When you move all of the amplifiers from a group, that group will automatically be deleted (except for the amplifiers in the UNSORTED group).

Web Control

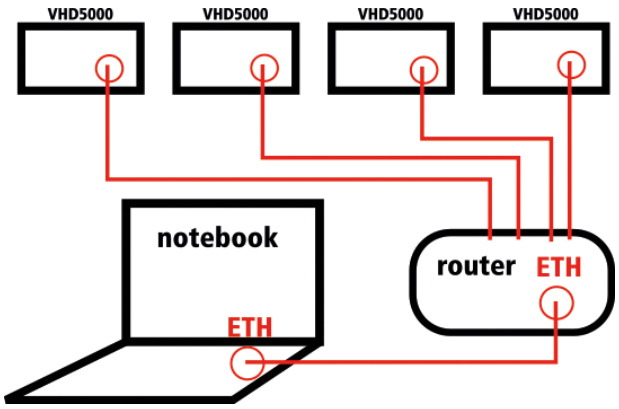
K-NET

Control a VHD5 system from your notebook, tablet or smartphone, Responsive graphics adapts to every device with resolution higher than 720x390px.

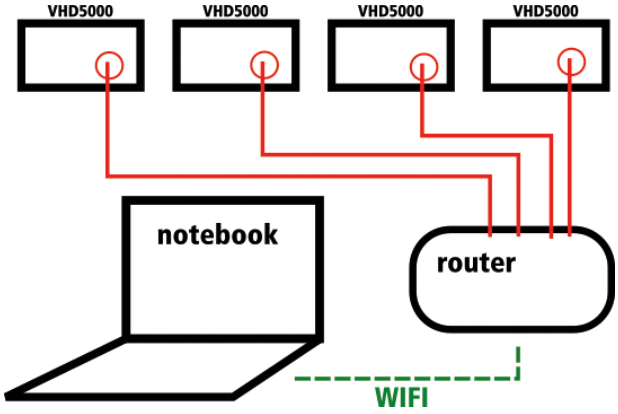
It is recomended to use the latest version of Chrome web browser. Apple iOS devices are not recommended. Use an Android device or Mac/PC laptop for best results.

K-NET interconnection Notebook/VHD5000

You can connect your notebook (or tablet ect.) directly to the VHD5000 using an ethernet crossover cable.
This is the recommended method, if you wish to control more than one amplifier: (Pic 86 and 87)



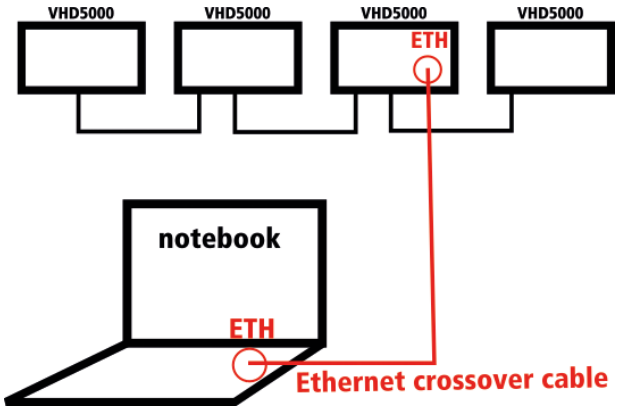
Pic 86



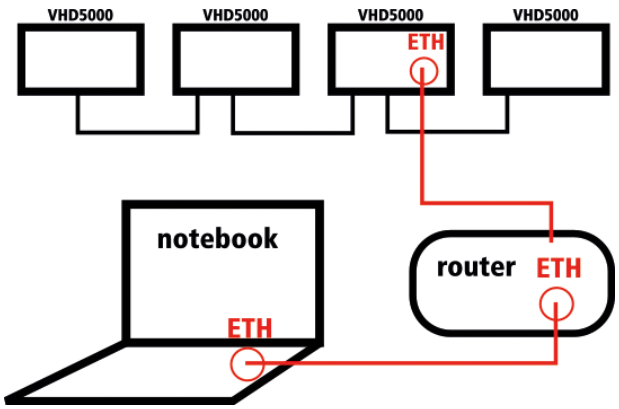
Pic 87

Connect your laptop to the router, using either ethernet or WiFi, and then the router outputs to all of the amplifiers. (Pic 86, 87).
Set DHCP (see page 35 NET - connection->ETH DHCP) mode on router and amplifiers and refresh connection.

You can use standard XLR cables to interconnect the amplifiers using the KV2 K-NET protocol. This functionality is currently in beta testing.

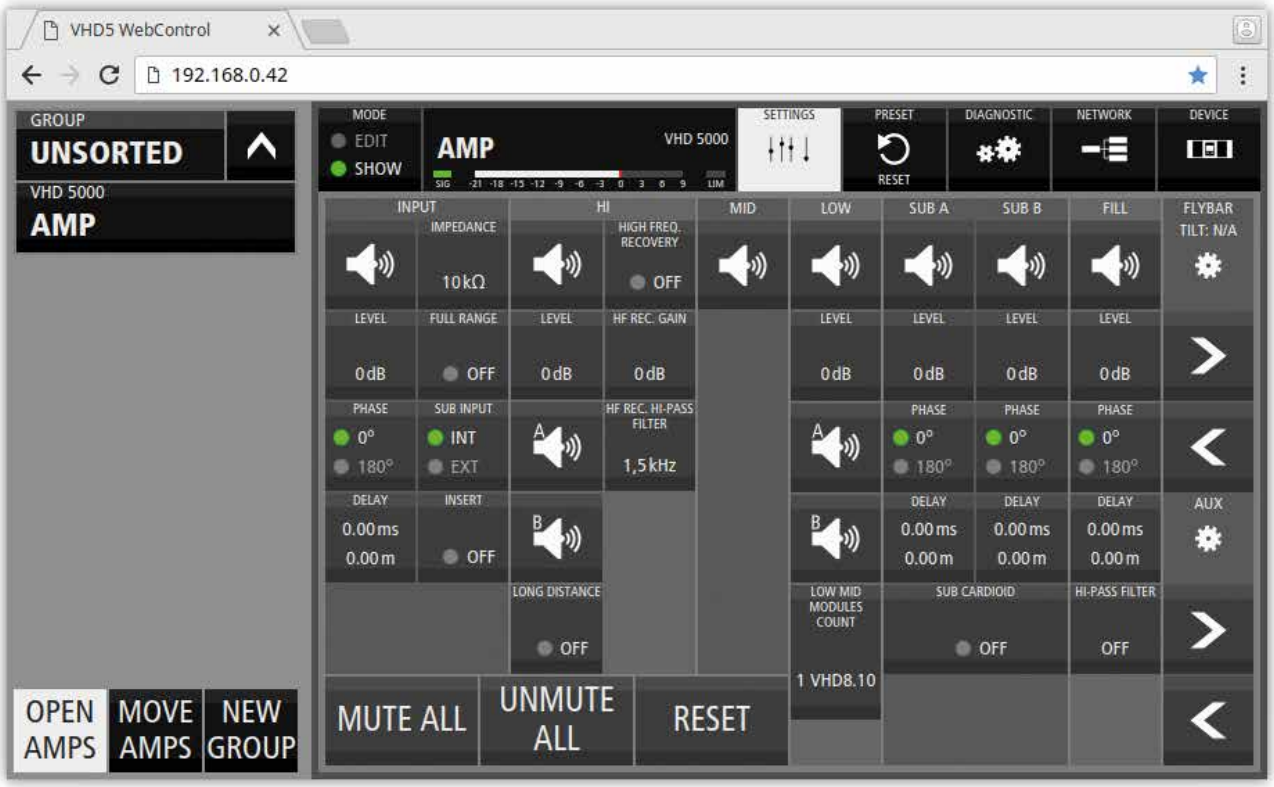


Pic 88: Connect notebook with one of the VHD5000 amplifiers using an ethernet crossover cable.

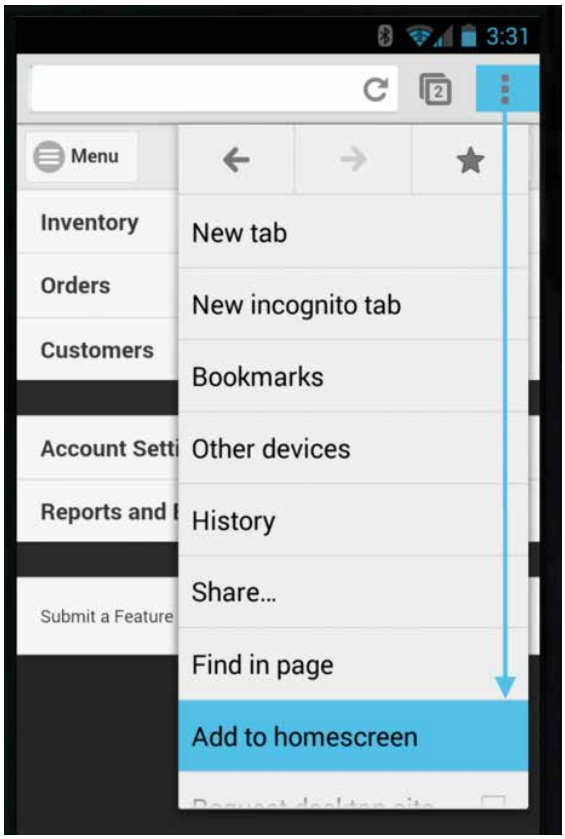


Pic 89: Connect one of the VHD5000 amplifiers via ethernet to the router and set DHCP mode (see page 35 NET - connection->ETH DHCP) on both devices.
Connect router to laptop via ethernet cable or wifi and type proper IP address (which appears on connected VHD5 system, see (see page 35 NET - connection->ETH DHCP)) to the web browser.

K-NET interconnection Notebook/VHD5000

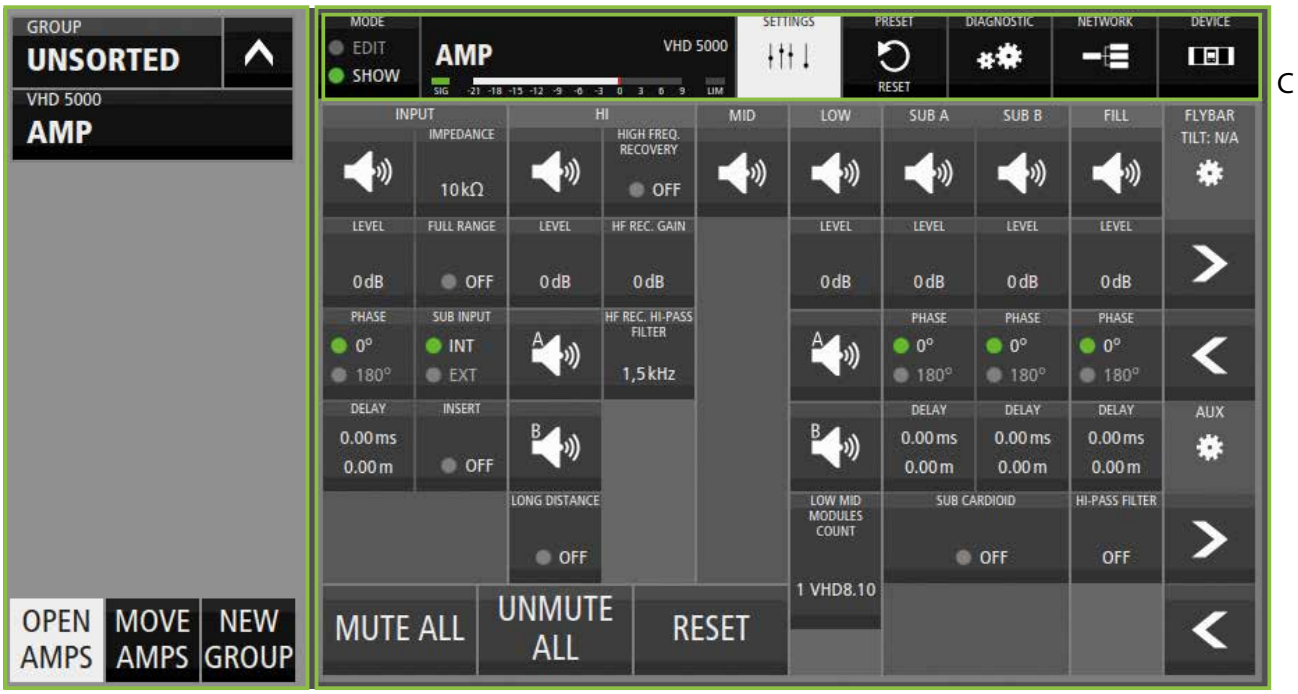


Pic 90: Open your web browser and enter the IP address that shows on the VHD5000 NET screen. The web control application will open on the browser. You now have control of the selected amplifier.



Pic 91: For a better experience on tablet/smartphone devices, you can create a desktop shortcut. When you have accessed the web application, press "Add to homescreen" in your browser setup. Close the browser and you can then access the application using the desktop icon.

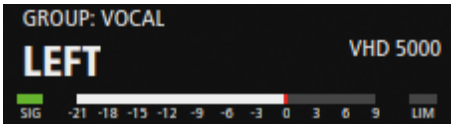
Remote Control System



Pic 92:

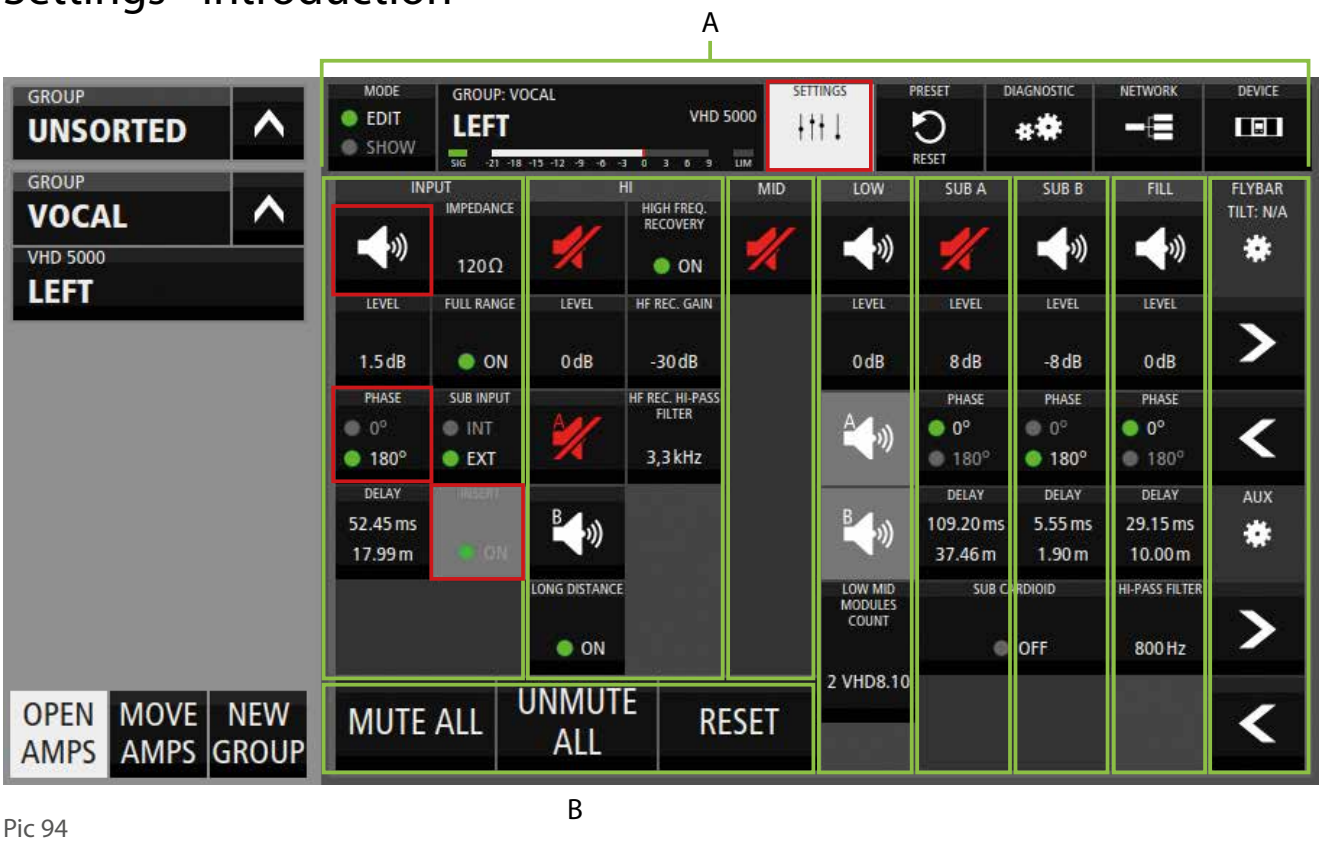
(A) In the K-NET panel you can see all of the interconnected amplifiers. In this example there is only one VHD5000 "AMP" in the UNSORTED group. This panel is explained on Pages 18 - 22.

(B) The amplifier control window has a top menu (C):
Press to toggle SHOW/EDIT mode. SHOW mode disables all audio and control functions turning all of these controls gray. EDIT Mode allows changes to all settings and audio functions.
Name box (see Pic 93)
Switch between
SETTINGS, PRESET, DIAGNOSTIC, NETWORK and DEVICE tabs.



Pic 93 - shows the name of currently controlled amplifier ("LEFT"), and if it is in a group, the group name (GROUP: VOCAL)
SIGNAL METER from -21 to 9dB with a 1sec peak and the SIGnal and LIMiter indicators.

Settings - introduction



Pic 94

There are columns for each channel and the flybar (Pic 94 - A), and three Master buttons (B).

Buttons can be:

Pic 95 - enabled

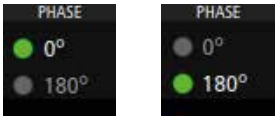
Pic 96 - disabled

Pic 97 - mouse over

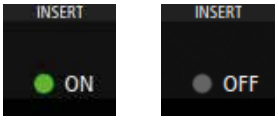
Pic 98 - pressed/selected

Toggle buttons: press it to toggle

Pic 99 mute, Pic 100 unmute button, may be signed A or B



Pic 101, 102 toggle button (exp phase)



Pic 103, 104 ON/OFF button (exp insert)

MUTE ALL - mutes:
LOW A, LOW B, MID, HI A, HI B, SUB A, SUB B, CARDIOID and FILL

UNMUTE ALL - opens window to confirm or deny unmuting all channels (INPUT, LOW, LOW A, LOW B, MID, HI, HI A, HI B, SUB A, SUB B, CARDIOID, FILL)

RESET - opens window, confirm to reset amplifier to default values
(see page 9 - RESET CONFIGURATION)

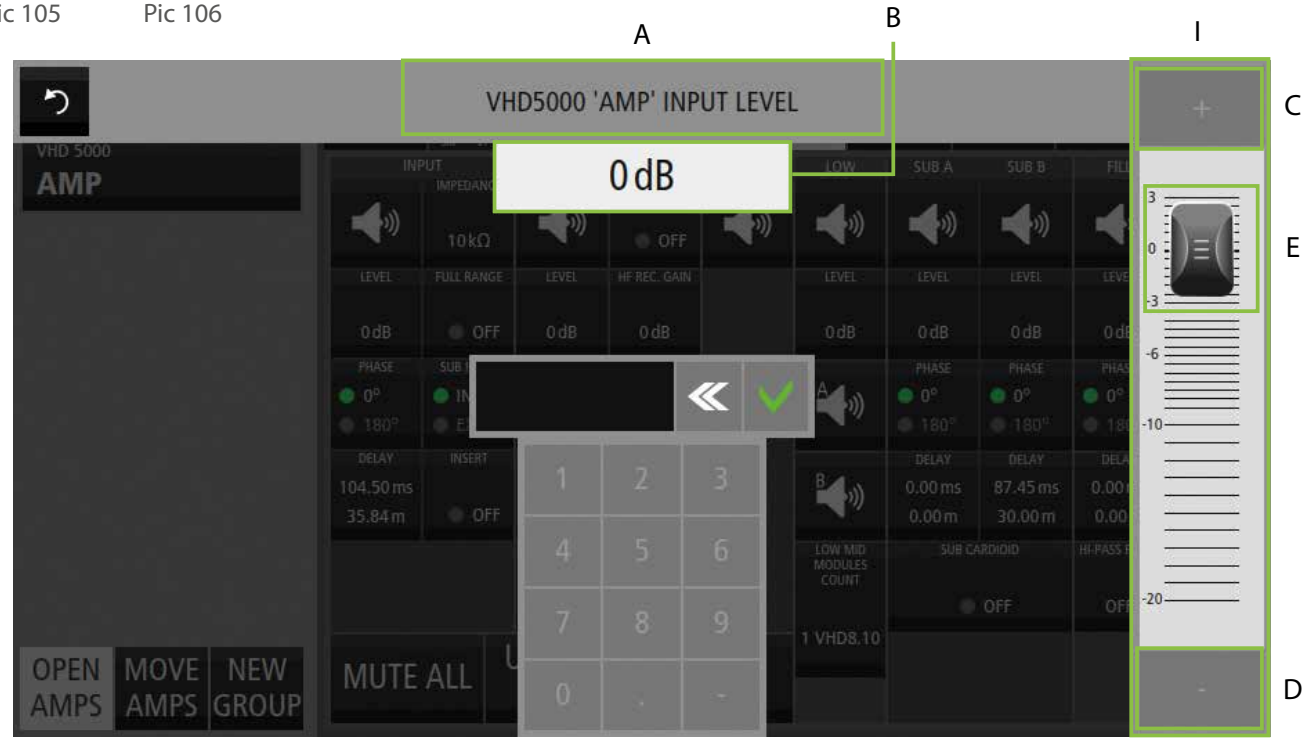
WARNING! RESET CONFIGURATION WILL UNMUTE ALL CHANNELS AT 0DB. THIS COULD CAUSE SERIOUS HEARING OR SYSTEM DAMAGE IF THERE IS PROGRAM MATERIAL PASSING THROUGH THE SYSTEM.

Settings - buttons

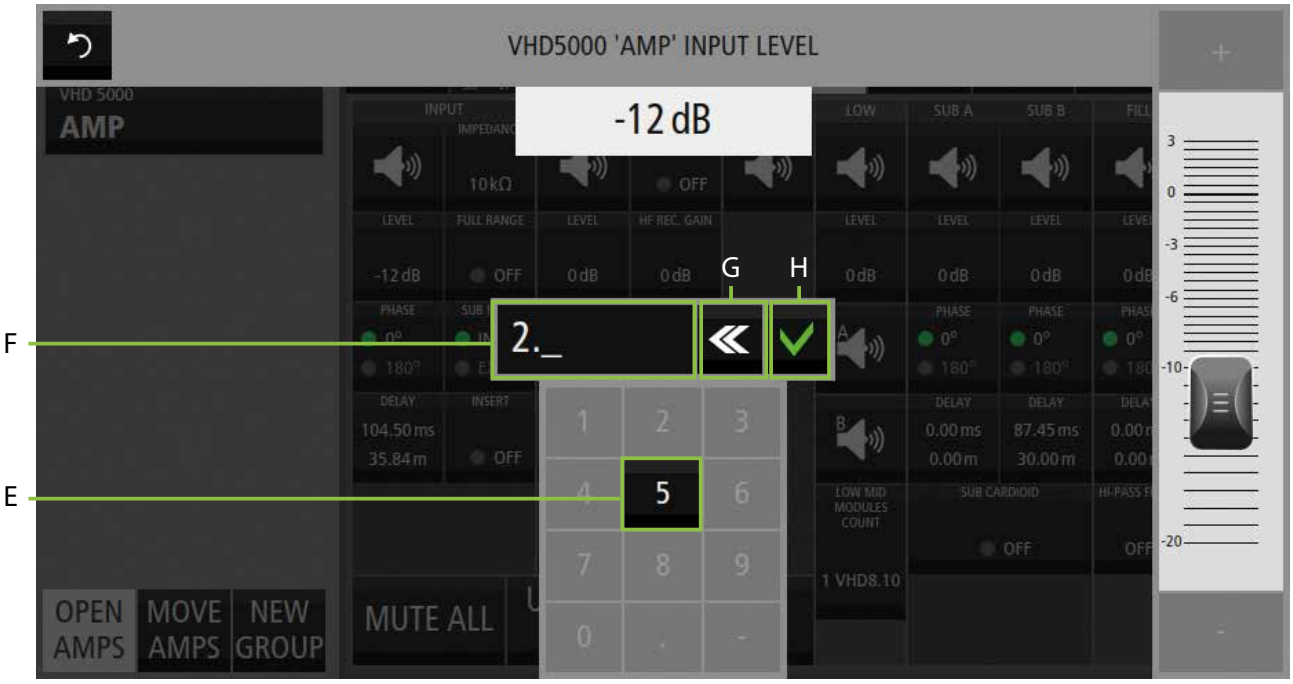
Pic 105

Pic 106

Some buttons (example LEVEL - Pic 105, 106) open the data entry overlay (Pic 107), where you can set the required value. Label (A) indicates that you are setting INPUT LEVEL on amplifier named "AMP". Current level is 0 dB (B).

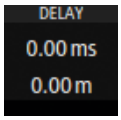


Pic 107: Set the level using slider - hold knob (E) and drag it to the desired value. Clicking on the fader (I) activates "+" and "-" buttons (C, D) to add or subtract by one step. When "+" and "-" buttons are active, you can also use the +, - keyboard buttons.

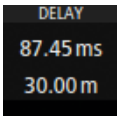


Pic 108: You can also click on the input line (F) to enable keyboard input, set the value using displayed numberpad (E) or use the computer / tablet keyboard when the input line is active. (G) Deletes the last character, and (H) sets the value. You can enter only the numbers that are enabled on the number pad. - in this case, the number 5.

Settings - buttons

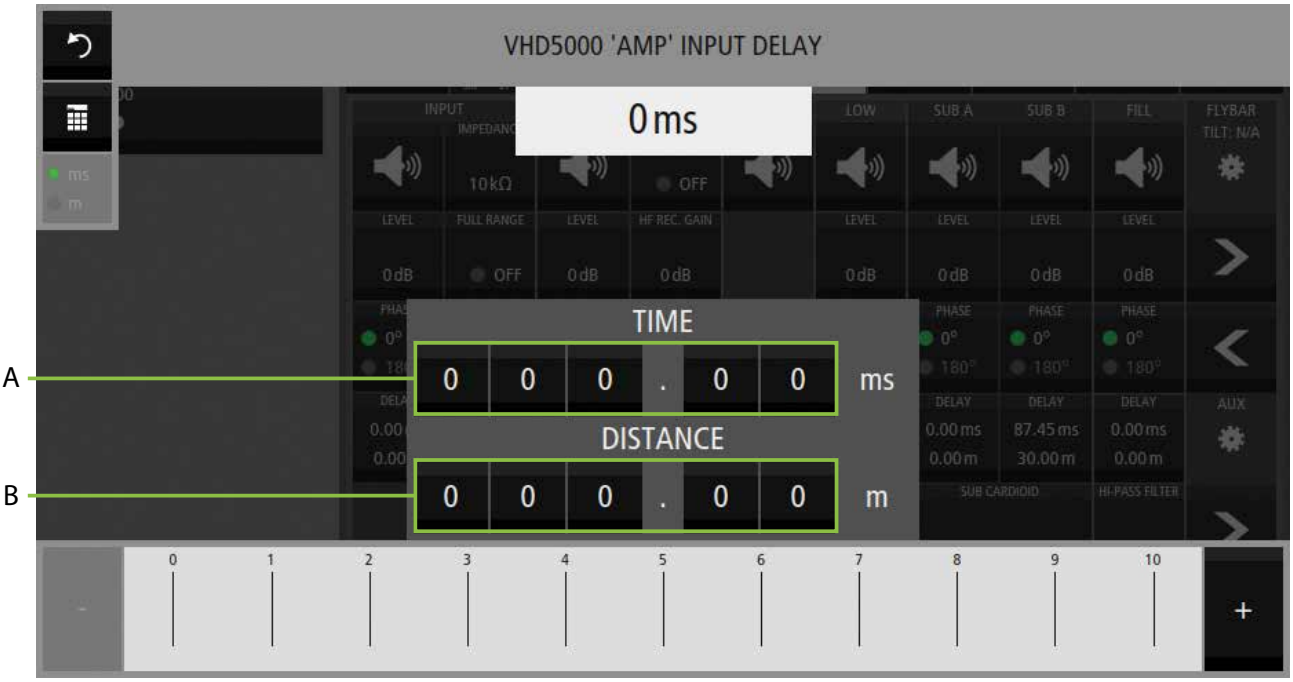


Pic 109

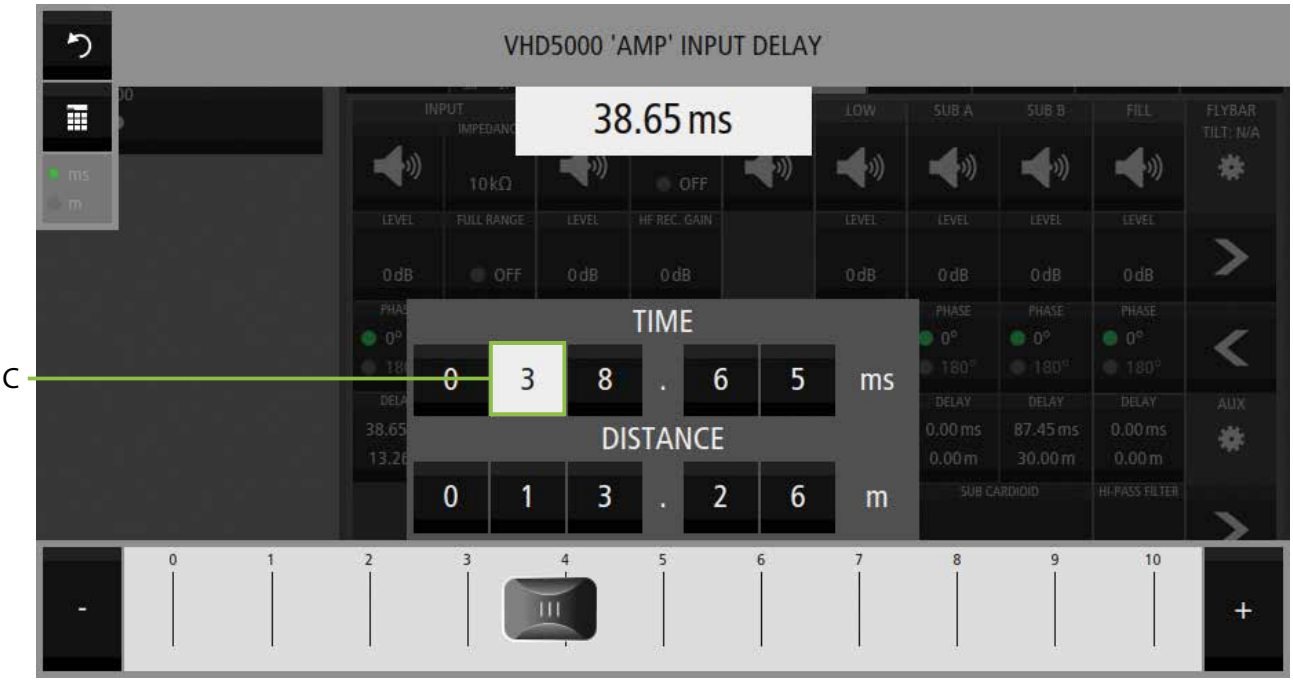


Pic 110

Delay button (Pic 109, 110).



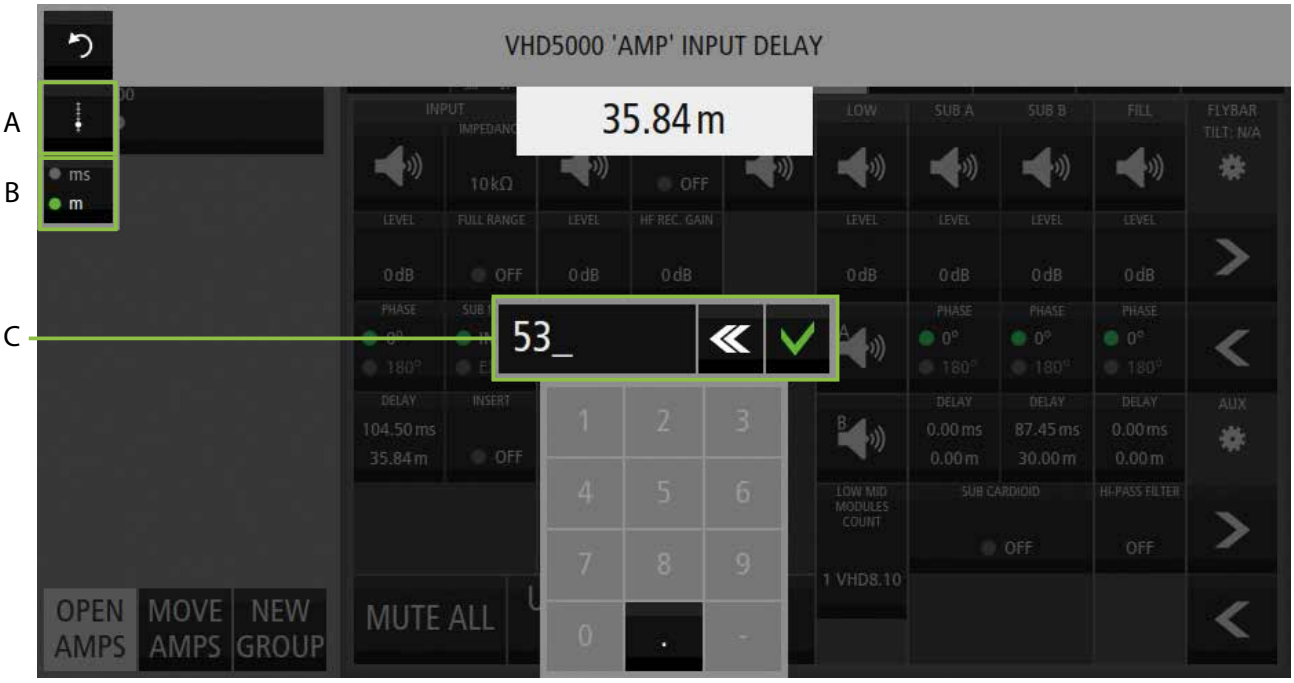
Pic 111: Delay can be set in miliseconds (A) or meters (B). These are in 0.05ms steps, which is approximately 0.02m. For that reason, when setting meters, it adds or subtracts approximately 0.02, 0.1, 1, 10, or 100 meters depending on the selected range.



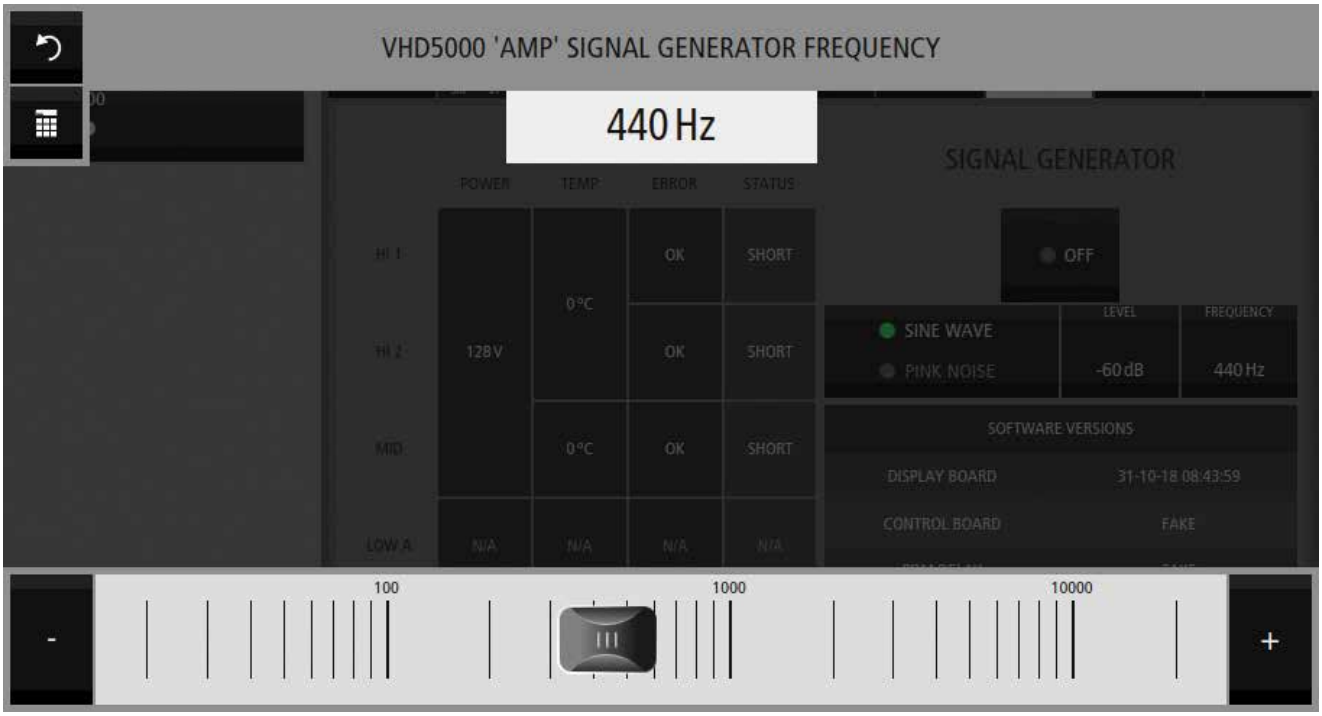
Pic 112: When you want to set a delay, you may select the range (C) and use the fader to set the value. For more precise setting use the + and - buttons.

Settings - buttons

You can also press this button (A) to switch between the fader and keyboard input. Choose meters or miliseconds with button (B), then use the numberpad or keyboard input (C).

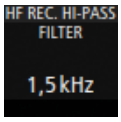


Pic 113



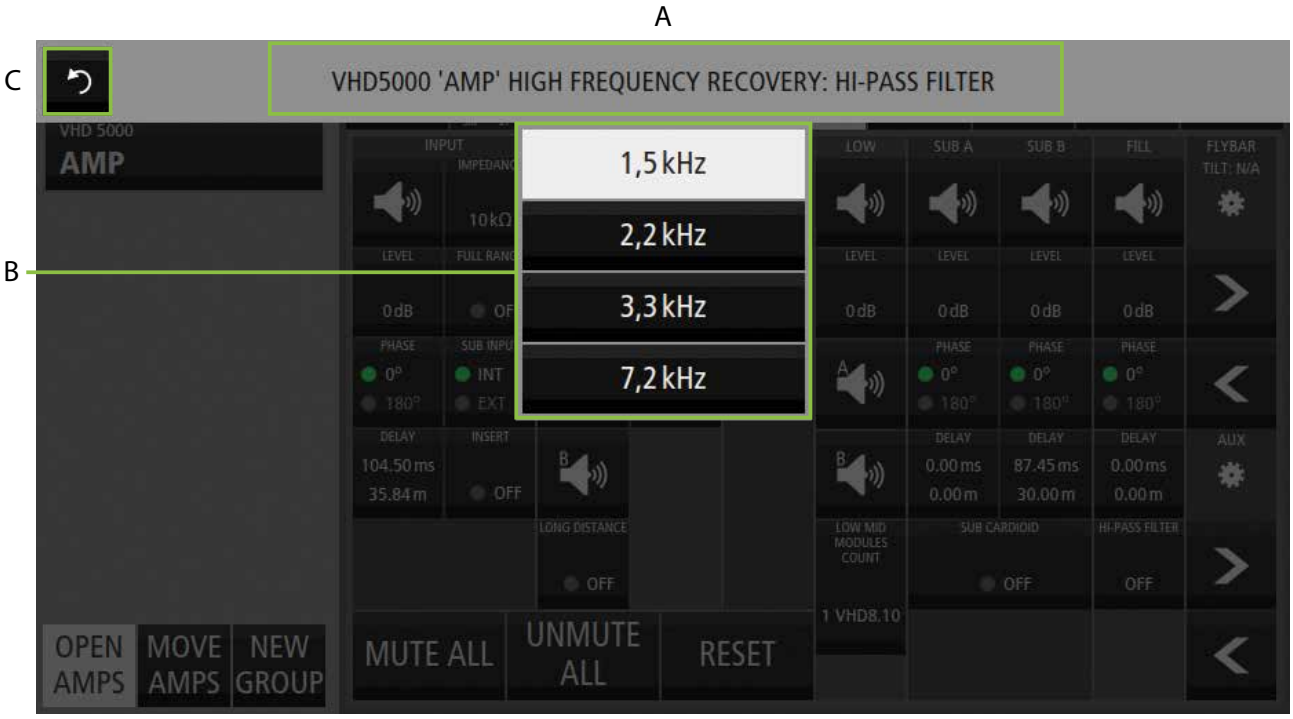
Pic 114: Setting the frequency of the signal generator is similar to setting a delay, use the fader or numberpad to change the value. The fader scale is logarithmic.

Settings - buttons



Pic 115

Some buttons (example Pic 115) open windows with a list of values (Pic 116 - B), that you can choose from. Label (Pic 116 - A) indicates that you are editing HIGH FREQUENCY RECOVERY: HI-PASS FILTER for the amplifier named "AMP".
Select one of the buttons to immediately change the value.
Close the window by clicking on this button (C) or press anywhere outside the open window.



Pic 116

Settings - Flybar

Pic 117

The FLYBAR column (Pic 117) is disabled when the VHD5.0 SIGNAL & POWER UNIT is not connected to the system.

When a flybar is connected to the VHD5.0 SIGNAL & POWER UNIT, the GUI displays the currently measured angle for TILT (C) with an accuracy of 1°, or N/A if the flybar is not connected.
Click on and hold an arrow in one or another direction to move the main flybar (TILT) (A) or AUX (B) flybar.
When the flybar is in motion, it is signaled by the rotating wheel (F, G).
When the flybar cannot be moved, the OVERLOAD label is displayed here (F, G).

Preset

Pic 118

(A) PRESET button shows the name of last loaded preset.

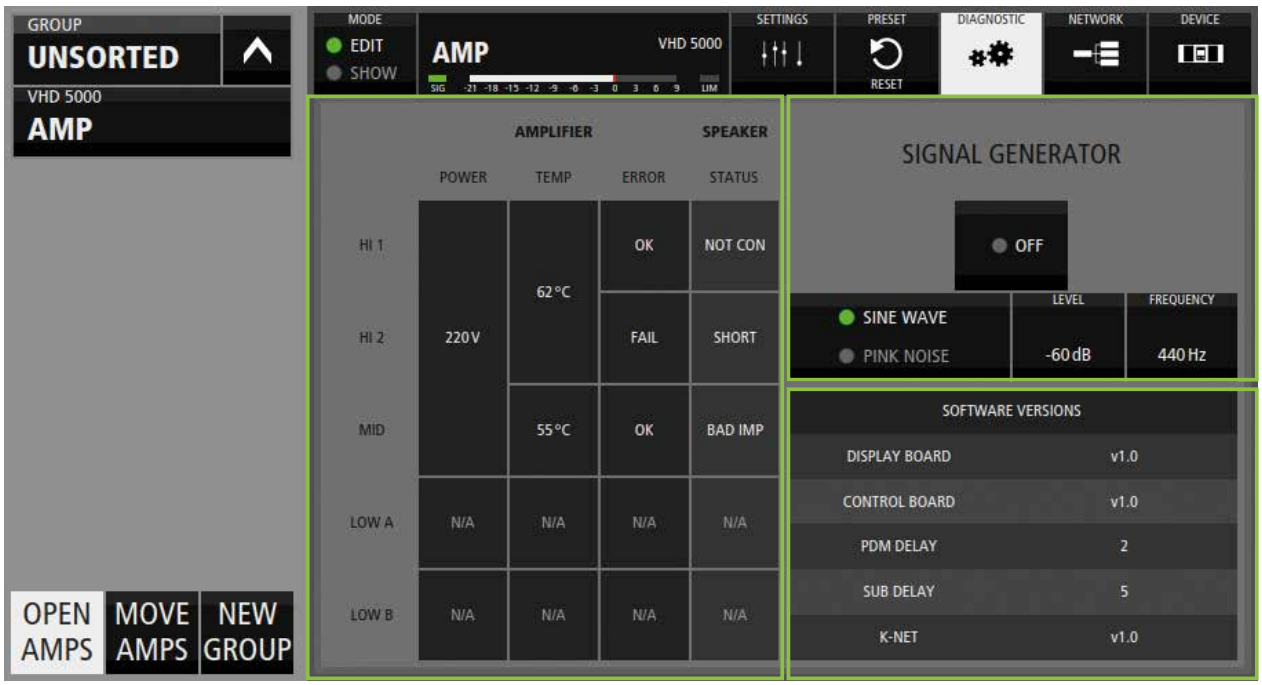
There is a list of presets (B) that you can scroll through with the mouse wheel or touch and drag. They are not sorted alphabetically, however each new preset is added to the end of the list. Until you create your custom presets, there is only default RESET (F), which cannot be rewritten or deleted. The last loaded preset is marked with CURRENT (E) label, and then when you edit any of the amplifier settings (so settings are different to the current preset), the label displays EDITED.

(C) Box shows the settings of the selected preset (white highlighted button).

(D) You can manage presets using the bottom menu buttons;
LOAD selected preset. Enabled when current settings are different from selected preset settings.
SAVE rewrites selected preset with current settings. Enabled when current settings are different from selected preset settings, default RESET cannot be rewrited.
NEW creates preset with current settings. Set its name in keyboard window.
DEL - delete selected preset.

SHOW MODE - disables LOAD and DELETE buttons.

Diagnostics



Pic 119

(A) Amplifier and speaker current status. There are rows for channels HI 1, HI 2, MID (VHD5000) LOW A and LOW B (VHD5000S).

AMPLIFIER status - first three columns shows:

MAINS VOLTAGE:
(one sensor for HI 1, HI 2 and MID): ideal 200-250V, working 160-270V, undervoltage less than 200V
LOW A
LOW B

TEMPERATURE:
(one sensor for HI 1, HI 2): 280°C over temperature shutdown
MID
LOW A
LOW B

ERROR STATUS: OK, FAIL

SPEAKER STATUS:
OK
NOT CON - not connected
SHORT - shorted
BAD IMP - bad impedance
LOW SIG - low signal

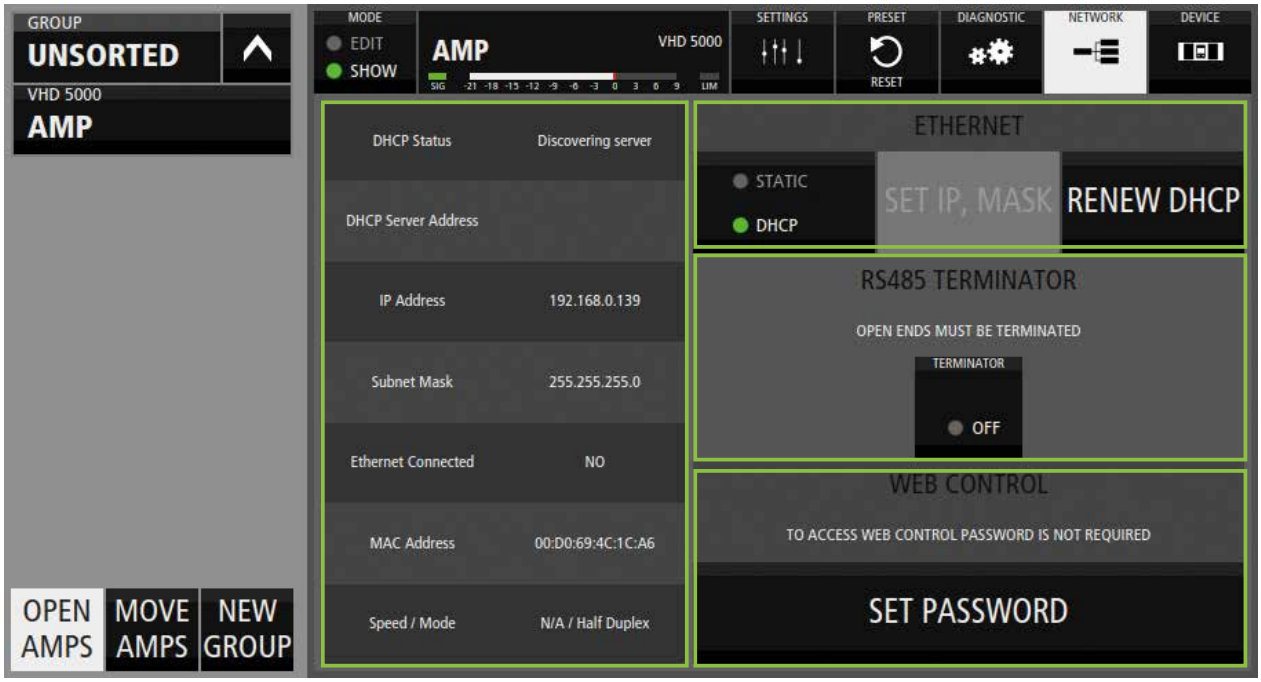
All status cells for channels LOW A and LOW B can indicate:
N/A - VHD8.10 not connected
OFF - no voltage detected on VHD8.10

(B) Turn SIGNAL GENERATOR ON to generate signal.
Choose SINE WAVE or PINK NOISE
Adjust LEVEL of generated signal from -127 to 0dB
You can set the FREQUENCY of sine from 20Hz to 20000Hz (1Hz step)

(C) SOFTWARE VERSIONS

SHOW MODE - disables changing of generator setup. This should also MUTE generator and set level to -127dB

Network



Pic 120

(A) Network status
DHCP Status - Address accepted,
"Discovering server",
"Address refused",
"Server found",
"No DHCP server found"
Check DHCP Server Address, IP Address and Subnet Mask

ETHERNET CONNECTED: YES/NO
MAC ADDRESS
Speed / Mode - "Half Duplex", "Full Duplex"

(B) Set ETHERNET configuration by pressing DHCP/ STATIC button. Changes will presumably cause loss of connection.

DHCP mode: IP is set automaticaly from DHCP server, use RENEW DHCP button to refresh connection.
STATIC mode: see page 13.

(C) Set RS485 TERMINATOR ON/OFF.
See page 13 - proper termination.

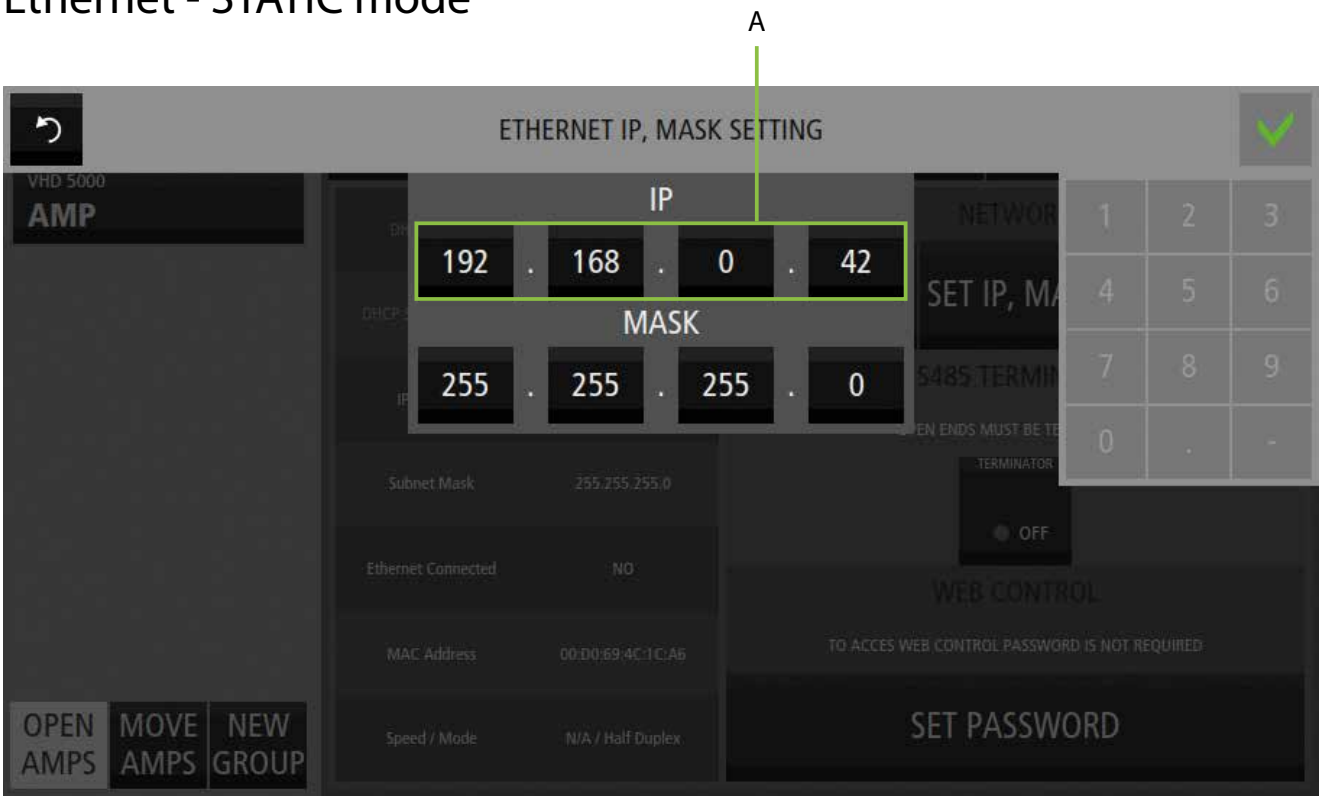
(D) WEB CONTROL
The text informs you whether a password IS or IS NOT required to access this amplifier via web control.
You can SET PASSWORD which will be needed to acces web control. Once set, you can CHANGE the password or DISABLE it.

Keyboard

Pic 121: Keyboard overlay.
Press text field (A) to activate the keyboard first. Maximum 5 chars enabled.
(B) deletes last char.
(C) sets the password, or press ENTER/ RETURN on your keyboard.
(D) ABC and 123 buttons changes characterset.
Use letters, numbers, and !, @, #, $, %, ^, &, *, ?, (,), /, ', ., -, _

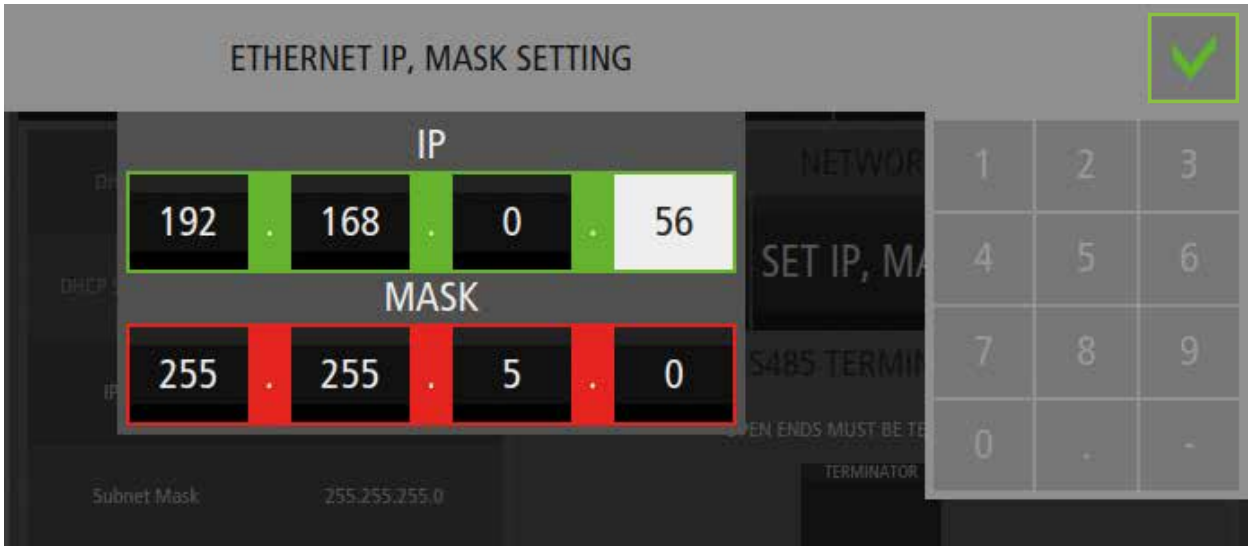
Pic 122: If the web control is locked, you must enter the password when attempting to access.

Ethernet - STATIC mode



Pic 123

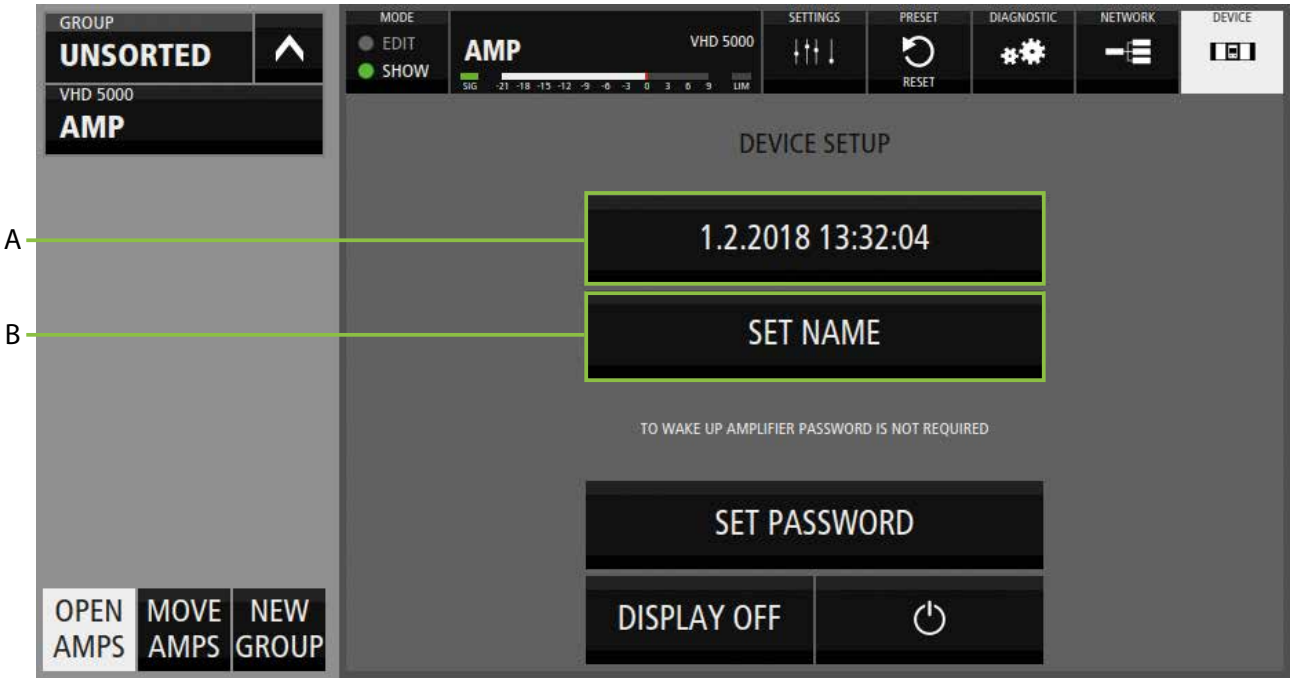
SET IP, MASK button opens this overlay. Click on the number field number (example A) you want to change and use the number pad or your keyboard.



Pic 124

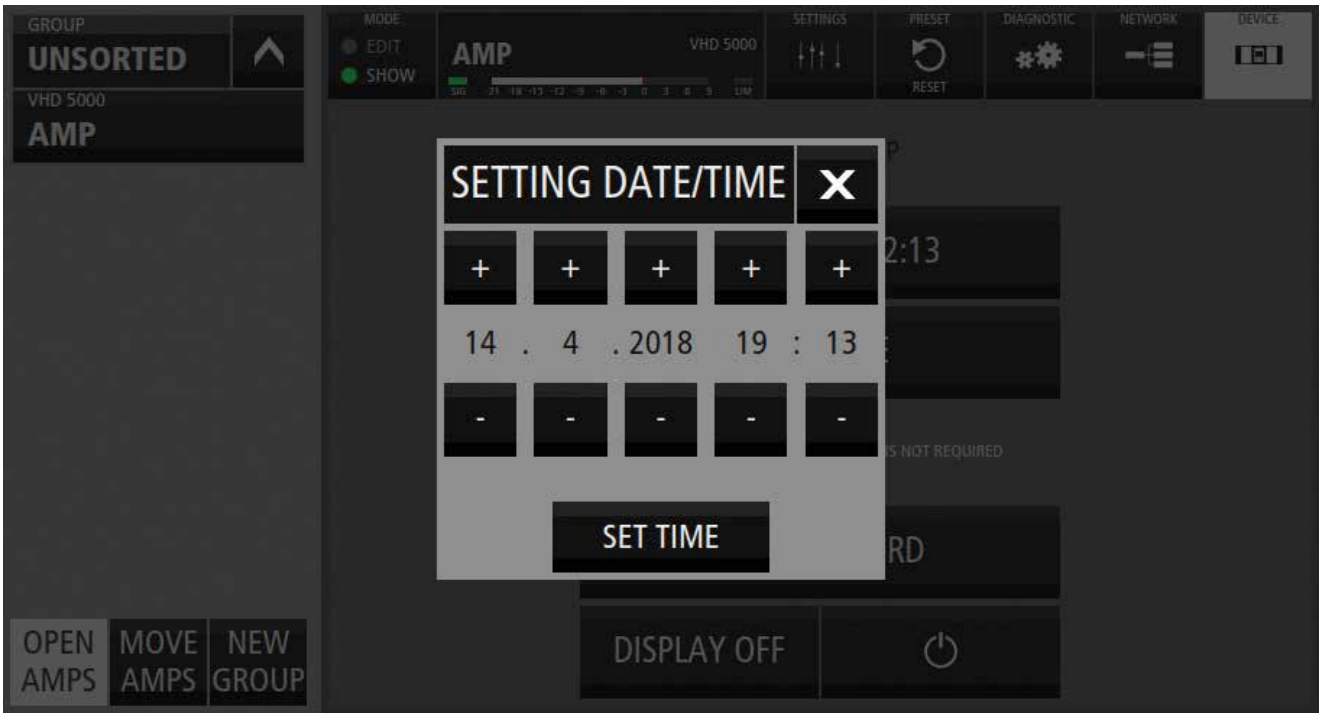
When you change the IP address, a validity indicator appears (Pic 124). Red frame indicates invalid change, green frame indicates acceptable change. When all your changes are marked green, confirm buton (B) is enabled, Press it to apply changes.

Device Setup



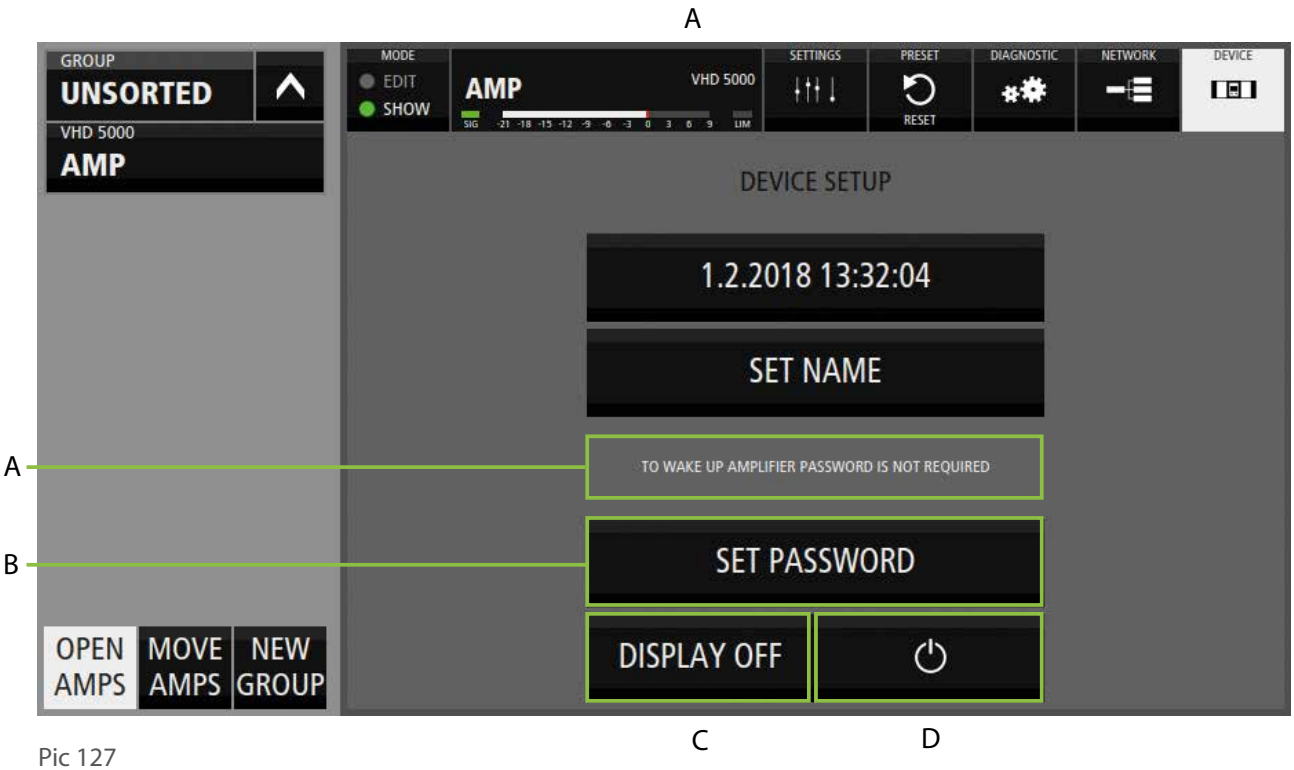
Pic 125

(A) DATE TIME - button shows current date and time, opens window (Pic 126)
(B) SET NAME - button opens window for renaming amplifier (see page 15 - Keyboard window)



Pic 126: You can set the date and time by pressing "+" and "-" buttons, and confirm with the SET TIME button. When you open this window, it presets your system time so you can just press the SET TIME button to synchronize the time on your VHD5000 with your notebook.

Device Setup



Pic 127

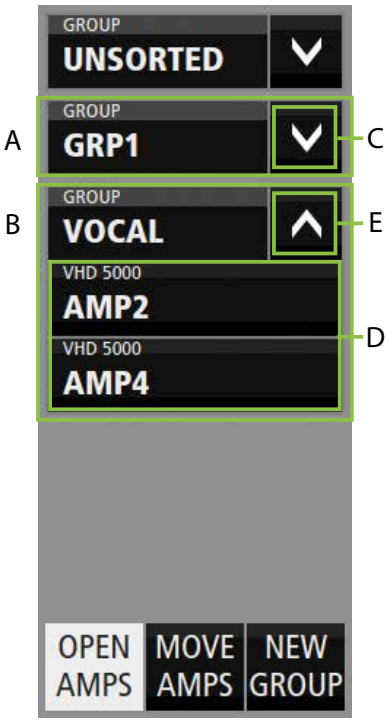
(A) This text informs you whether the password IS or IS NOT required to turn on VHD5000 from STANDBY or LOCKED state (display off).

(B) You can SET PASSWORD in keyboard overlay (see page 14, 15, 16). Once set, you can CHANGE the password or DISABLE it.

(C) DISPLAY OFF/ LOCK - turn of display or LOCK device when password is set.

(D) STANDBY - go standby

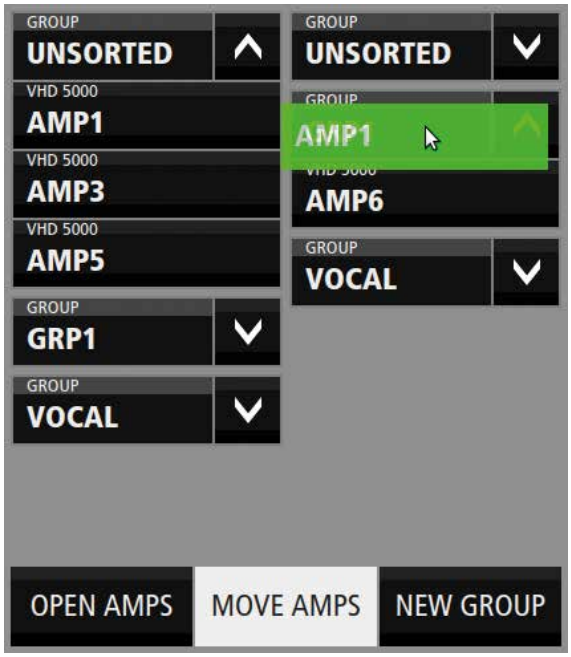
K-NET panel



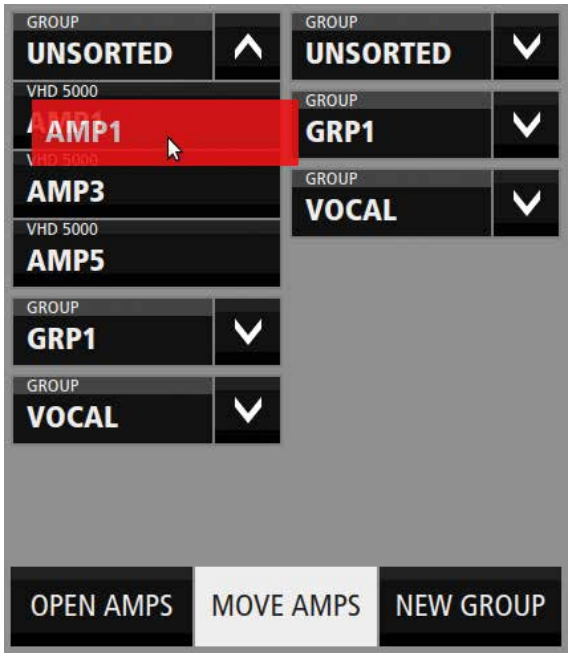
Pic 128

This panel works the same as the touchscreen application, see page 18 - 22.

You can see all groups: example UNSORTED, GRP1 and VOCAL. UNSORTED and GRP1 (A) are closed, press the arrow (C) to open it. VOCAL (B) group is opened, you can see its amplifiers (D AMP2 and AMP4. Press the arrow (E) to close the group.



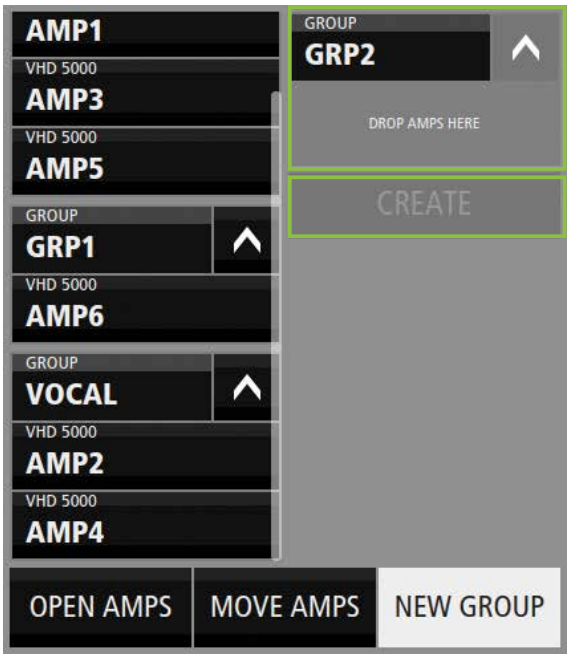
Pic 129



Pic 130

When you want to MOVE AMPS, drag it with the mouse and move to the desired group. Green box means you can drop it.

K-NET panel



A

B

Pic 131

If you want to create new group, press NEW GROUP button. Enter a name for the new group (exp. GRP2) and confirm. Then you will see this screen (Pic 131). Drag amps from left panel to area (A) and CREATE the new group with this button (B).

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