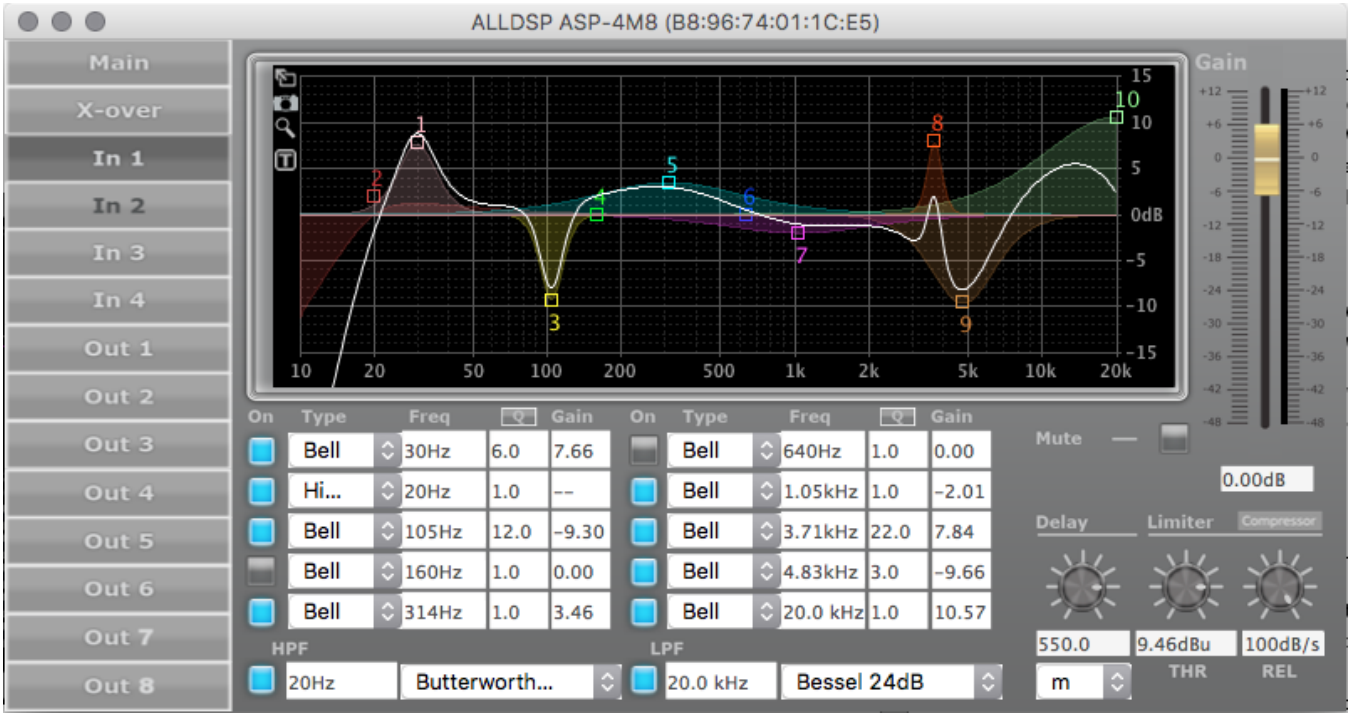
OHMTECH

HIGH POWER DIGITAL AMPLIFIER

ALLDSP

ALLDSP ALLControl



Remote Operation

Software Manual

1. Introduction

The ALLDSP DSP enabled amplifiers, plate amps and speaker management processors can be operated from their respective front panels or control panels to a varying degree, depending on model. However, for maximum flexibility, remote operation from a Windows PC as well as from an Apple computer running OSX or an iPad or iPhone running iOS is also possible. In this manual the amplifier, plate amp or other ALLDSP product is referred to as the unit or the DSP, because this manual centers around the DSP functions. For this remote functionality, the device must be connected via a wired Ethernet or a USB connection to the same network as the control computer. The control computer can be connected to the network wired or through Wi-Fi.

Note: Because of continuous development, some screens may differ from the representation in this document. Screenshot may differ slightly over various operation systems.

IMPORTANT: Not all features are available in all devices. This manual describes the features that are available across ALLDSP equipment. Some devices will not have Dante, or FIR filter, etc., please check the datasheet for the feature set of your device. If the datasheet does not list a feature, the device will not have it. Lastly the sample rate, number of inputs, input types and amount of delay available may be different across various devices.

2. Getting started

It is recommended that a router with DHCP server is connected to the network so that it assigns the unit an IP address.

When the controller is connected to the network, you can check or set its IP address via the unit window under Hardware - > Configure - > Network Settings → IP address. The default setting is DHCP (Auto IP). If Fixed IP address has been set, and this is no longer known or been forgotten, it can be requested via the display on the device. Press the menu button four times and turn the encoder wheel to the right three times to display the IP address.

Note that you cannot connect the unit to the network through the USB or Ethernet at the same time. You can only control the unit from one platform at the same time – if you switch from one platform to another, you MUST shut down the control software at the previous platform first.

Local connectivity of the device to the control computer from a front-panel USB connector is also possible to download initial settings or as a fallback in case of network failure.

This Software Manual explains the remote setup and operation of the system through a network. The operation is basically same for all platforms; where differences exist they will be noted.

Installation and setup

Download and install the latest software from the ALLDSP website. Note that for a Windows computer, there are separate applications for

Windows 32 bit and 64 bit. The application for iPad or iPhone can be downloaded and installed from the Apple Store.

The software consists of a network window that list all known ALLDSP devices on the local network, and one or more unit windows for settings of a device. In the following sections we will discuss the ALLDSP ALLControl program for Windows. Screenshots are typically from the McIntosh program. The mac version works very similar to the Windows version. The mac menu bar is different from Windows for most programs, the same differences are present with ALLControl.

Note, there is also an iOS app available for control, which is not discussed here.

ALLDSP ALLControl

The Windows ALLDSP ALLControl Network window is shown in Figure 1: ALLcontrol network panel. During installation your firewall setting are configured to allow communication over the network. However if you experience problems, please check these settings.

Switch on the DSP and launch the ALLDSP software. It will show the devices found on the network together with their mac address and IP address, similar to Figure.

Note: you can control the unit from only one PC (or iPad) at the same time. If you want to switch control from one to the other, shut down the ALLDSP ALLControl software on the previous control platform first.

The '>' icon at the right side may be either > or >. When >, the unit is on line and can be activated by clicking the >.

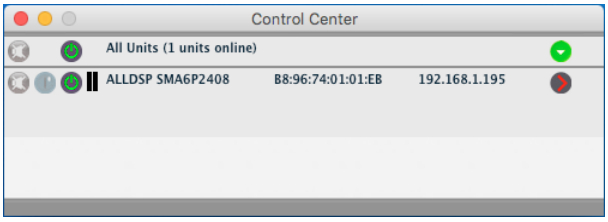


Figure 1: ALLcontrol network panel

The main purpose of the control app is to select a particular unit for manipulation and/or to group several units in a Group.

*Note: a similar screen is shown on iOS devices. Instead of clicking the **>** symbol to get access to the actual unit, you need to click the 'Mixer' button in the top right of the screen.*

The File menu item functions to Exit the program. The available Tools commands are shown in Figure 2: Tools menu items.

Note: you can modify the Unit Name in the ALLDSP ALLControl program slot for the connected unit by just typing a new name.

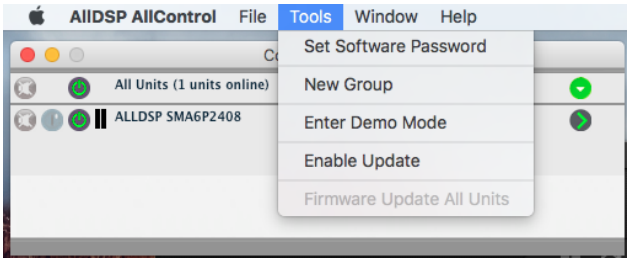


Figure 2: Tools menu items

1. Tools

Tools|Set Software Password Allows you to set up a password to access the graphical DSP software unit window. The DSP software has a separate, extensive system of operation modes with passwords and access controls and system locking. This systems is described in 157.

Tools|New Group

This command allows you to combine several on-line units into a named group. The group will be shown in the Control screen, see Figure 3.

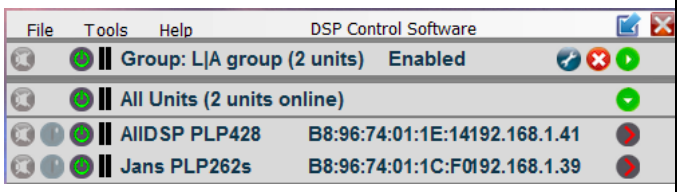


Figure 3: network window showing a named Group consisting of two units

Clicking the cross icon on the right deletes the Group; clicking the blue tool icon opens a screen where you can select the members of the Group; you will be able to select any unit which is on-line to become a member of the group. A further selection from this screen opens a dialog where you can specify which parameter, for which setting and for which channel you wish to link within the Group. For instance, you can link only gain, or gain and limiter settings for only output channels. An example Group setting screen is shown in Figure 4.

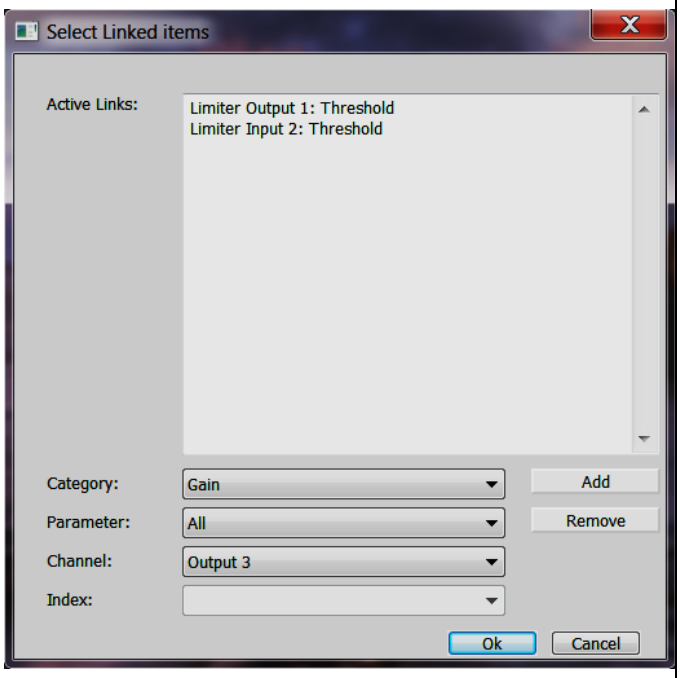


Figure 4: Sample selecting dialog box showing some linked items for a Group

Tools|Enter Demo Mode Allows you to exercise the functionality of an ALLDSP unit without hardware present for training and familiarization purposes.

Tools|Disable/Enable Updates When set to Enable Updates, there will be an indication when firmware updates for the unit will be available. This is shown on the right edge of the unit identification in the control program with a 'rotary' icon, see Figure 5. The icon turns yellow color when updates are available. Clicking the icon will initiate the update.

Figure 5: rotary' icon yellow color at right indicates firmware update for this unit is available

This is a 'brute force' update which will also restore the unit after a crash or other unrecoverable situation. All presets and other settings will be lost however.

Clicking the green > symbol at the right of the connected unit info line in the ALLDSP ALLControl window will load the software for the unit. At this point, the software will go through a synchronization cycle and, if a Personal Identification Number (PIN) was defined before, will ask for the PIN.

The Main graphical interface screen will come up similar to Figure 6; this is the opening screen of the actual application controlling the settings of the unit.

Other settings

Power-On Preset

In the menu item Hardware - > Configure - > Power On Preset, a preset can be selected, which is automatically loaded when the device starts.

Read Only Preset Range:

When you are logged on as Developer or higher, you can block a certain preset range from being altered. In Hardware - > Configure - > Read-Only Preset. If the value is, for example, set to 10, the first 10 memory locations in the preset list for User and Admin mode are read only and the user cannot save presets to those locations.

2. Unit window: main panel

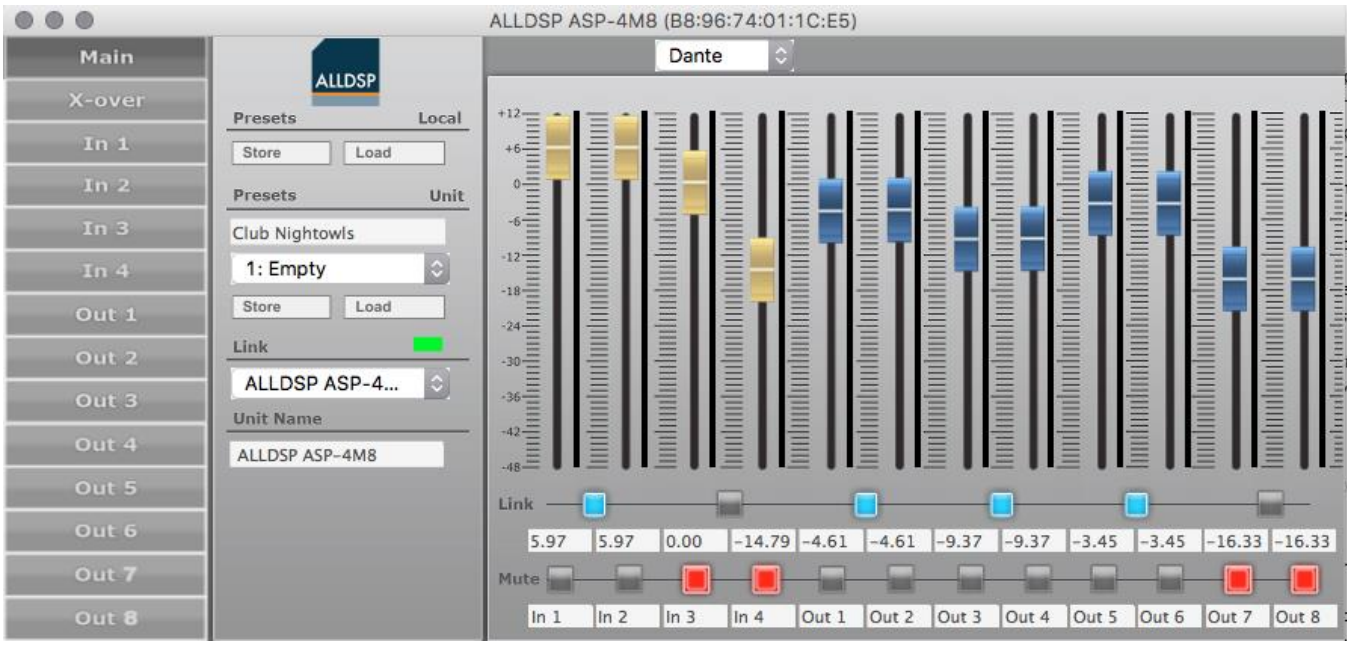


Figure 6: unit window

Unit window menu

Figure 6: unit window shows the unit window from which all setup screens and options can be reached. Clicking the exit cross will close the software but leave the network Control program running.

File commands

File|Open and **File|Save**

Presets are the snapshot of all settings for a particular configuration. With these commands you can save a preset, and reload it at a later time. In addition it offers the choice to use the .preset file format or the .txt format. Text files are a way to archive settings for documentation purposes.

File|Backup presets and File|Restore presets

These commands operate similarly to Save and Open, but will save all presets in the unit in one directory, or load all presets from a directory.

File|Quit – self-explanatory

Hardware commands

The Hardware menu offers several functions as shown in Figure 7: unit panel Hardware menu items.

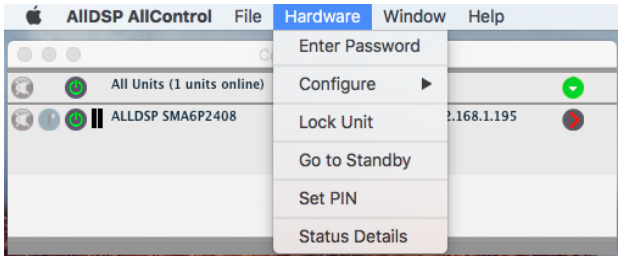


Figure 7: unit panel Hardware menu items

Hardware|Enter password

The unit has three access levels plus locked. Entering the right access level password unlocks that access level. Please see password protection, access Control and Locking

Hardware|Configure

The Configure menu item opens an additional screen where several options are presented. *However, the options shown will depend on the access level currently in force – to be discussed*

Hardware|Configure|Power On Preset allows you to select a preset that will be automatically loaded at power-on; however any changes to this preset will not be carried over to the next power-on cycle unless you have saved the new setting, i.e. it will revert to the saved preset.

Hardware|Lock Unit Clicking this menu item will lock the unit. When locked, the unit window shows input levels but no controls or other settings, and nothing can be changed, as shown in Figure 8: detail of unit panel in locked state**.**

An attempt to lock the unit will generate a warning that unlocking will only be possible with a valid password. *The actual operation of this function depends on the access level as described later.*

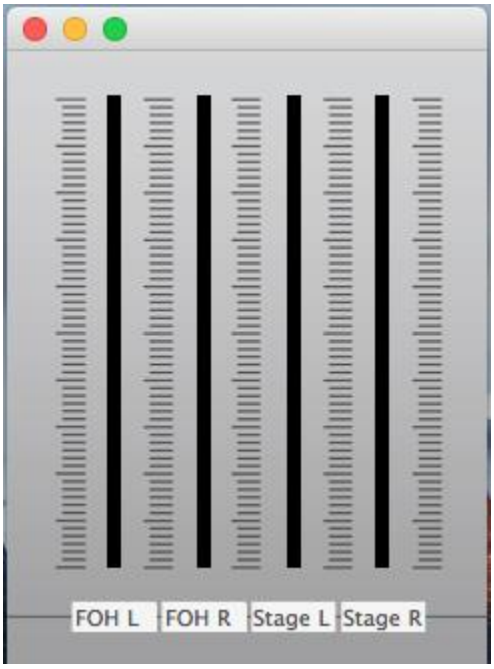


Figure 8: detail of unit panel in locked state.

Hardware|Go to Standby will place the unit in Standby. In this state, outputs are disabled but all settings can still be manipulated.

Hardware|Set PIN

Clicking this option allows you to enter a 4-digit PIN number. When this is set, you will need to enter the PIN number at any time you connect to the unit. *Note: the PIN control can be switched off by setting the PIN to 0000.*

3. Main setup screen functions

Unit window functionality

On the left side, the Unit window (**figure 4-1**) gives access to the cross-over settings screen as well as all settings screens for each individual Input- and Output channels. These will be discussed later. The following commands are found in the center of the Unit window:

Presets - Local

These commands allow you to save and re-load configurations as .preset files on the connected PC.

Presets - Unit

These commands are similar as the other Save and Load commands but with the distinction that presets can be saved to and reloaded from the unit internal memory. The drop-down menu under Default Preset shows a list of memory slots where named presets can be stored and recalled. Since this is internal in the unit they will be available independent of the stored presets in a computer.

Link

Under **Link** there are several status related indications. The indicator at the right will be green for an active link with the unit or red when the unit is off-line. The name and MAC address of the connected unit is also shown.

Unit Name

Shows the unit name of the connected unit, which can be edited by typing in a new name. The new name will be reflected in the Link slot as well as in the name field in the ALLDSP ALLControl window (fig 1-1).

Unit window Channel settings

On the right side are the Channel settings. This area is divided into several subsections:

- **Level faders for Input channels**

These faders control the level from each of the physical input connectors as sent to the Input processing channels. Channel names are shown at the bottom line. Level settings are also shown numerically below the faders, and can also be set by entering a specific value in the corresponding text field.

- **Input selection for input faders**

When your unit is equipped with AES3 (AES/EBU) or Dante inputs, you can select the source for inputs 3 and 4 from this pull down menu.

- **Level faders for Output channels**

These faders control the levels for the physical Output channels at the rear-panel output connectors. Level settings are also shown numerically below the faders, and can also be set by entering a specific value in the corresponding text field.

***Faders auto-zero**: Whenever you double-click on a fader, that fader moves to the default position. This is usually 0dB (unity gain) for gain faders. This operates on all views and screens.*
When two channels are linked, the odd-numbered channel can be used to manipulate both linked channels.

- **Link buttons**

When activated, all settings for the related pair of channels pairs are linked together and can only be changed with the left (odd numbered) fader of the

pair. The right fader will follow. Similarly, entering numeric values in the level fields will only be accepted for the left channel of a pair, with the right-channel numeric value following. The even-numbered channel of a linked pair will be unresponsive but follow the odd-numbered channel settings. To reset a paired level to 0dB you must therefore double-click the odd-numbered fader.

- **Mute buttons**

Mute buttons allow muting of an Input- or Output channel on a per-channel basis, independent of any linking in effect.

Digital inputs (option)

When your device is equipped with and AES3 (AES / EBU) and/or Dante input, you can set the source of input channels 3 and 4.

The AES3 (AES / EBU) input signal can be fed via AES XLR socket in the controller. The Dante input is fed to the units via the same RJ-45 connector that is also used for control. Available are: analog, AES / EBU and DANTE.

AES failover:

In the menu item Hardware -> Configure -> AES analog failover, a radio button can be turned on so that when there is no AES / EBU signal, the unit automatically switches to the analog input.

4. Input channel settings screen

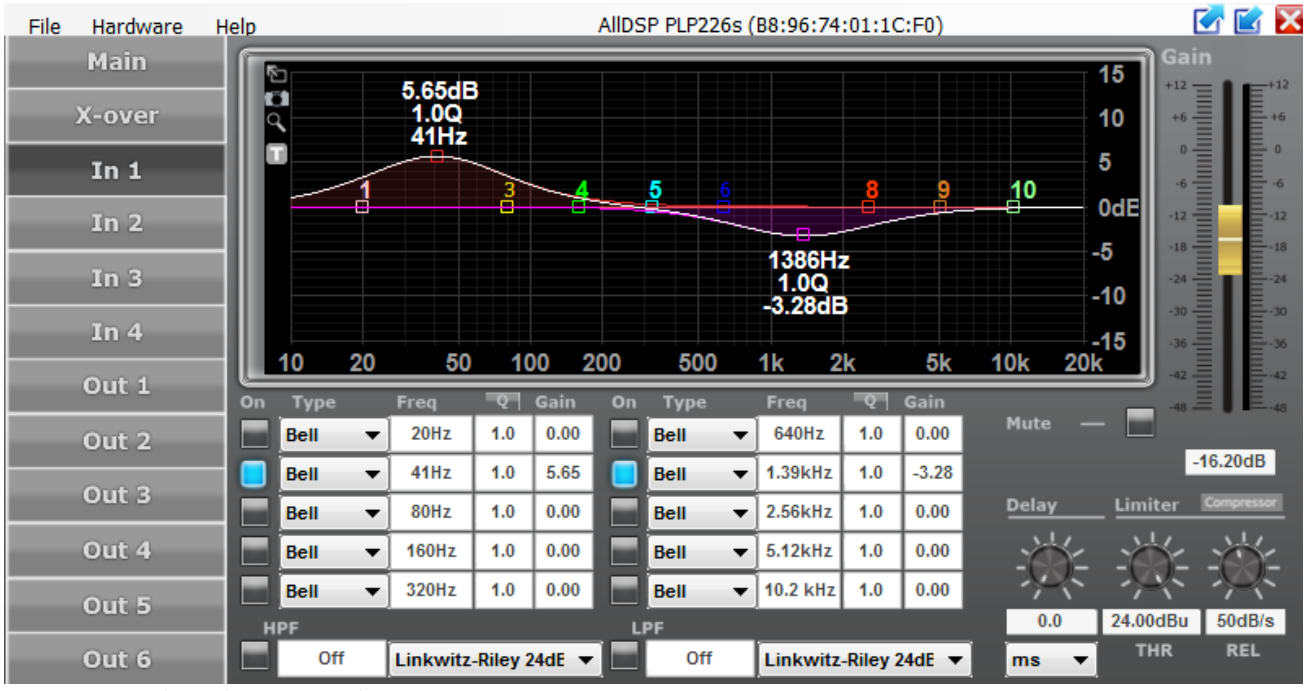


Figure 9: Input channel settings window

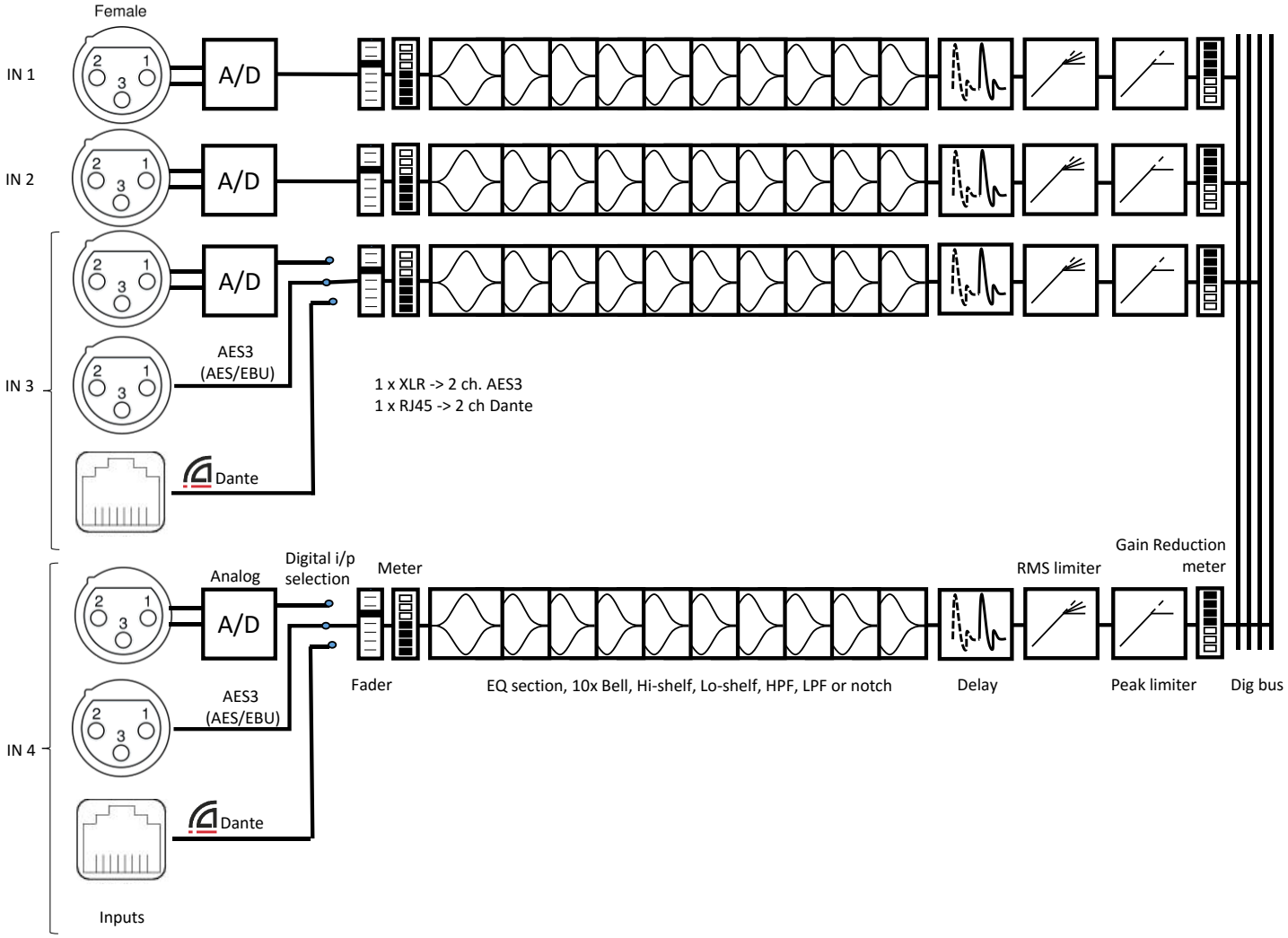


Figure 10: Input signal flow

Clicking on an Input channel number in the Unit window will bring up the input channel settings screen see Figure 9. In this screen, individual input channels can be equalized and/or filtered.

Filtering and EQ

All input channels can have filtering and equalization applied individually, or as linked pairs. Input channels can be linked in the Unit window, and in that case, all EQ and filter settings for the pair will be linked. If input channels are linked, EQ and filters for each pair can only be set for the odd number – for example, setting an EQ for input channels 1 and 2 can thus only be done in the Input 1 screen.

EQ can be set either in the graphical screen by cursor dragging, or in the numerical fields and drop-down lists below the graphical screen. Type, Freq., Q/BW and Gain can be set for each input or pair of linked inputs. All settings are reflected real-time in the graphical screen. The Q/BW column toggles from indicating Q or bandwidth (BW) every time the column label is clicked.

Input channel transfer function curve

On the graphical screen, a white curve represents the compound transfer curve for that input channel. The various elements that make up the curve like EQ settings and the crossover filters are indicated by their respective colors and EQ numbers.

There are two ways to toggle the contribution of an EQ or crossover element to the white compound curve on or off. You can either click the black/blue button next to each EQ or the HPF or LPF filter at the bottom of the screen, or you can double-click on the numbered square of the elements in the graphical screen. Even if the effect of the element on the compound curve is removed, the colored non-contributing curve of the element remains visible. This is a useful functionality to review the contribution of several interacting filter and EQ settings on a channel.

Screen expansion and legends

Figure 11: precise setting tools

On the left-hand side of the graphical screen are four icons to help precise settings. The top Arrow icon expands the graphical screen to the size of the window. Clicking this icon again from the expanded screen expands it to the full display size. In either of the expanded settings, clicking the X-icon at the top left will collapse the graphical area to the default setting.

The **Camera** icon will generate a .png picture file similar to a screen shot which you can save for documentation or instruction purposes.

The **T**(ext) icon will place the frequency, Q and gain values of each EQ and filter setting in the graphical screen. These settings will anyway be visible when changes are being made, but with the T icon activated, they will be visible continuously. This duplicates the numerical indications in the lower part of the screen but it will be useful with the expanded screens mentioned before.

For very accurate settings of EQ or filtering you can click the **Looking Glass** icon. All movements of the cursor now have a much smaller effect and you can drag curves with much greater precision. Clicking the Looking Glass again reverts to normal operation.

Input Gain, Mute

The right hand side of the screen shows the fader to set Input channel gain and, next to it, a Mute button. Settings are individual per channel unless input channels have been linked in the Unit window.

Delay, limiter, compressor

In the bottom right of the Input screen there are

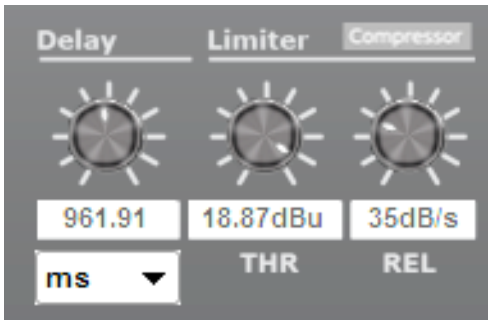


Figure 12: Detail of Delay, Limiter & compressor in input window

settings for channel delay, limiter (-48 to +24 dBu) and Limiter release rate (10 to 100 dB/s) settings. Plus a button to enter the rms compressor menus. Channel delay can be set in a variety of distance or time units from the drop-down list.

RMS compressor

Clicking on the compressor button brings up the compressor menu.

Delay, limiter, compressor

In the compressor menu you can set the parameters of the rms compressor

You can set the threshold, attack, hold, and release time, the compression ratio and the make-up gain.

Next to the controls is a VU meter that also displays the gain reduction (GR). Be sure to use the 'Back' button to return to the output menu.

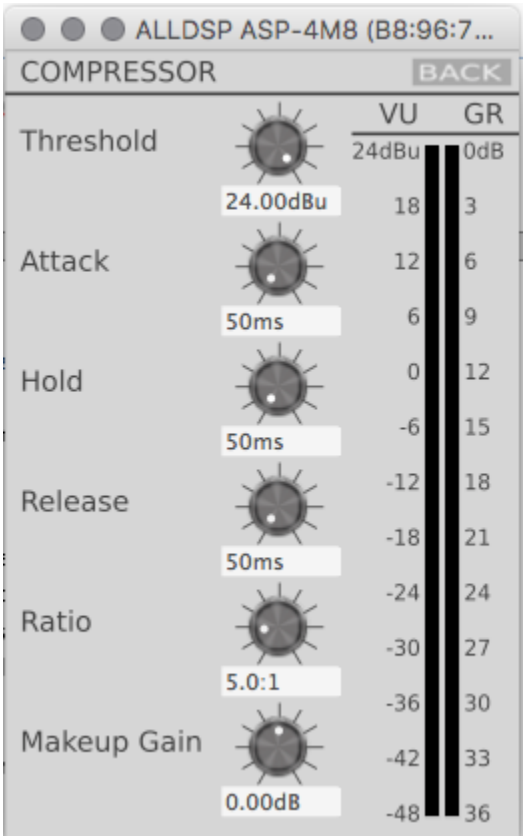


Figure 13: Compressor settings window

5. Crossover Settings window

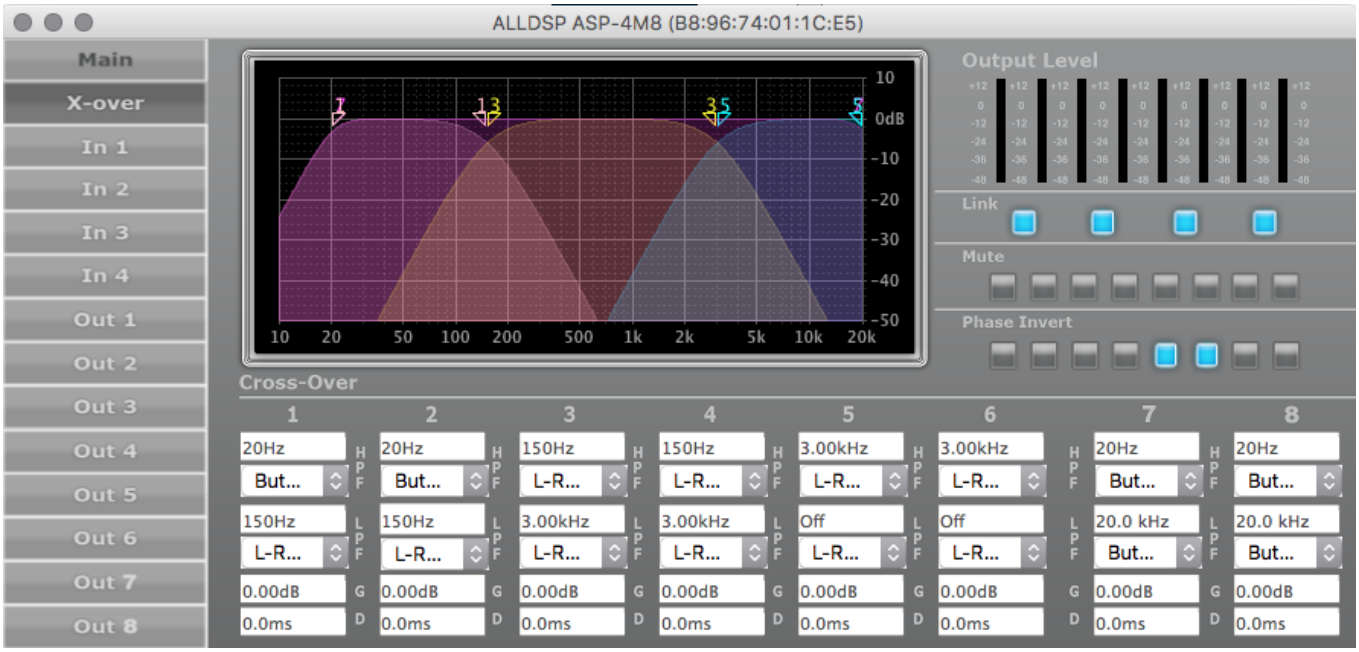


Figure 14: Crossover window

When you click X-over in the left unit window function list, most of the screen is dedicated to the controls and indicators for setting up the cross over filters as shown in *Figure 28*.

Graphical control

The graphical window shows the crossover settings for each of the output channels in dedicated colors. The numbers for each channel have a triangle shape and the direction of the triangle denotes whether the triangle controls the upper or lower frequency setting (figure 6-1).

For each channel, the cross-over frequency on either side of the band can be set with the cursor or by entering a value in the numeric fields below the channel. To change the frequency setting by mouse, move the cursor over the number of the channel you want to change in the graphical screen until the cursor changes to a 4-way arrow. Now you can click-and-drag the number triangle and the frequency value will change real time, and will be reflected both in the screen curve and the numerical value. Frequency limits are 20Hz and 20kHz in each case.

Filter type

The filter type and slope for each Output channel and at each end of the band can be set by selecting the desired type from the drop-down menu below the graphical area, for that channel. Separate filter types are available for the HP and the LP setting.

Gain

The Output channel gain, in dB, can be set by entering a numerical value in the field indicated by 'G'.

Note: the Gain value entered here will be reflected in the setting for the channel in the Unit window level setting; alternatively, changing the Gain setting for a channel in the Unit window will be reflected in the Crossover screen gain setting!

Delay

For each channel a delay can be introduced in the numeric field indicated by 'D', in milli-seconds.

Link

When two channels are linked by activating the related Link button in the top right-hand side of the screen, the settings for that pair are combined and only a single color and number icon for the pair is shown in the graphical screen (only the odd number of the pair is shown). Also in this case, all numerical values and filter types for the two channels are linked and can only be changed in the left hand side (odd numbered) channel of the linked pair.

Note: Changing the Link status of a pair of Output channels will also be reflected in the Link status for that pair in the Unit window; alternatively, changing the Link status for a pair in the Unit window will also carry over to the Crossover screen!

Mute, Phase Invert

The top right side of the screen shows these additional options which are self-explanatory. Changes to the Mute status of a channel or channel pair will also reflect in the Unit window and *vice versa*. Mute status of an individual channel can be changed independent of whether a channel is linked to another channel. However, the Phase invert status will be linked for two channels if the channels are linked. The phase invert button changes the polarity of the output channel. The signal is changed 180 degrees.

6. Output channel settings window

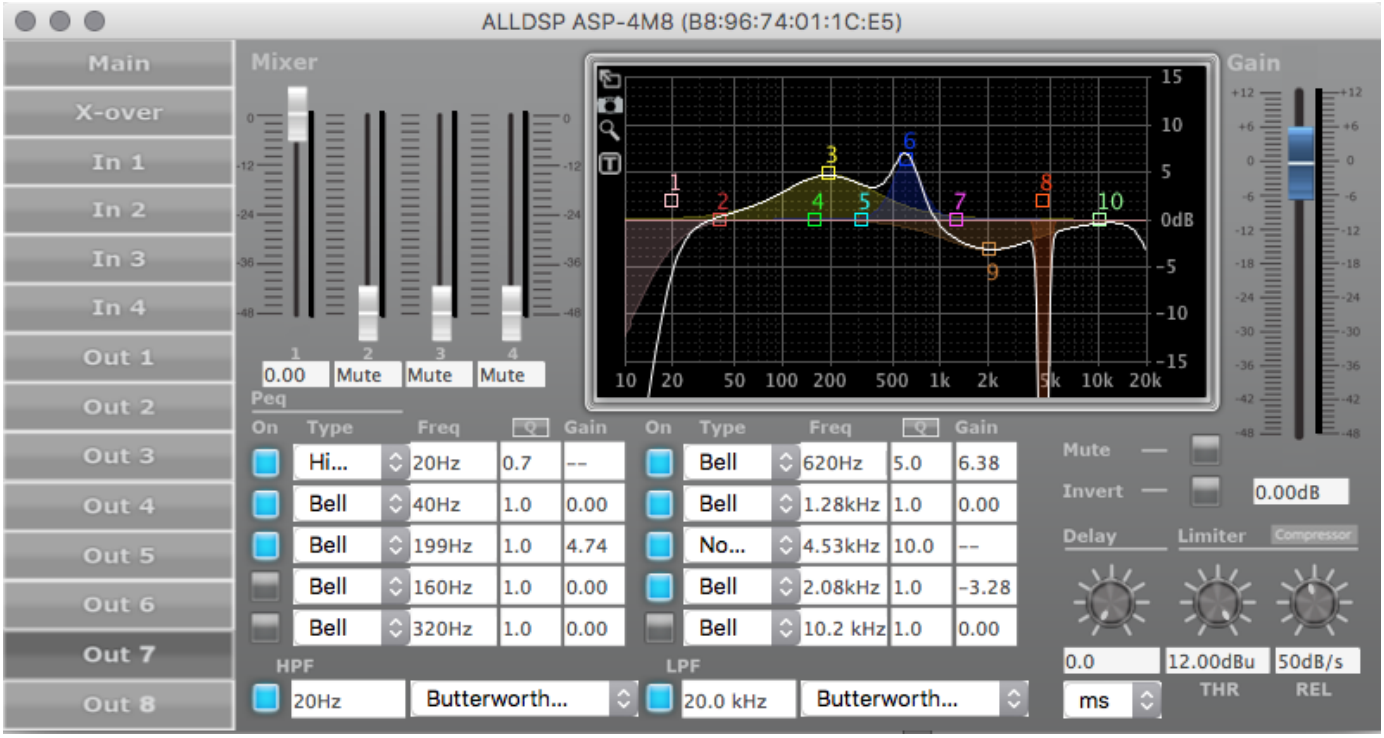


Figure 15: Output channel window

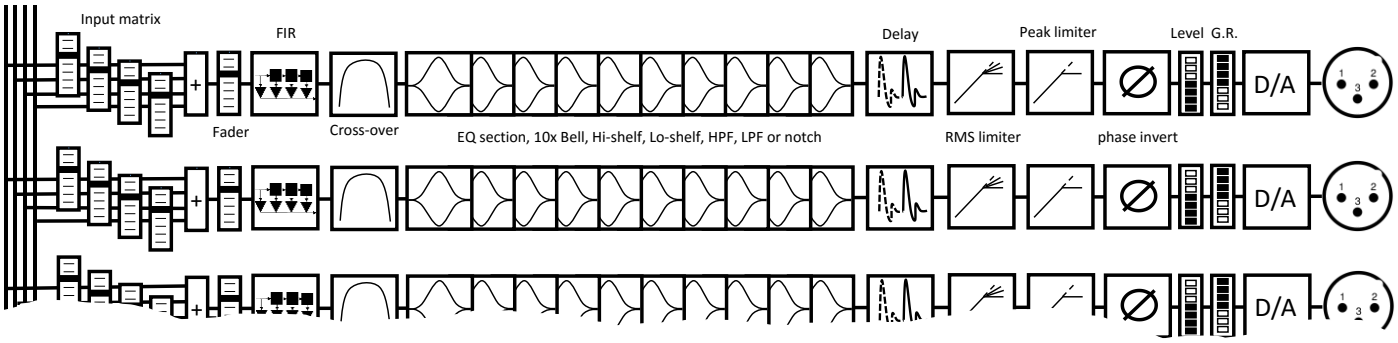


Figure 16: Output signal flow

Input output matrix

Figure *15*: Output channel window), faders are shown for each of the input channels. This will allow mixing each of the input signals to each individual Output channel. Even if Input channels are set to Linked in the Unit window, it is still possible here to mix individual Input channels to an Output channel in any desired ratio. Level setting are shown numerically below each fader. The available range is from -48 dB to 0 dB. As in other screen, double-clicking a fader resets it to default.

Graphical screen

A complete control screen is available for each Output channel. The graphical area reflects the Crossover settings for the channel in addition to any equalization settings set up in this screen, and is

very similar to the available settings in the individual Input channel screens.

The status of an element is always reflected in the blue on/off button next to each element.

Relationship between Input- and Output settings

At the bottom of the Output channel settings screen (figure 14) you will see the high-pass and low-pass settings from the cross-over settings for the particular Output channel repeated. Both the slope and the filter type are shown, and the curves are also shown in the Output graphic screen. Any changes you make here are also reflected in the X-over screen. This way, you have control over the main crossover settings as well as the EQ and filtering for a specific Output from a single screen. In contrast, the crossover screen gives you the overview of all cross-over settings for all channels in a single screen.

Both the HPF and LPF filter can be disabled here, this will also be visible in the Crossover screen.

Output filtering and EQ

Similarly as described for the Input channels, each Output channel can have up to 10 EQ's and filters attached to it (figure 7-1 again). For each of these, EQ type, Frequency, Q or BW and Gain can be set.

Each EQ can be set in the graphical screen by dragging the appropriate EQ number as described earlier, as well as by entering the desired numerical values in the fields. When using the mouse to drag settings, the actual numerical values for Gain, Q or BW and Frequency are shown in the screen.

Note: The four icons in the top left area of the screen (expansion arrow, camera, 'T' and Looking Glass) act as described for the Input screen.

Output channel transfer curve

On the graphical screen, a white curve shows the compound transfer curve for that output channel. The various elements that make up the curve like EQ settings and the crossover filters are indicated by their respective colors and EQ numbers.

Note that the white compound transfer curve also reflects any cross-over settings made in the X-over screen, when activated.

Delay, limiter, compressor

Like the input channel, each output is also equipped with a dynamics processing section, like the inputs (depending on model of DSP).

The compressor and limiter at the input limits the entire signal. In the bottom right of the Input screen there are settings for channel delay, limiter (-48 to +24 dBu or absolute peak voltage when a power amplifier is built in) and Limiter release rate (10 to 100 dB/s) settings. Plus a button to enter the rms compressor menus. Channel delay can be set in a variety of distance or time units from the drop-down list.

RMS compressor

Clicking on the compressor button brings up the compressor menu.

In the compressor menu you can set the parameters of the compressor such as threshold, attack, hold and release times, ratio and makeup gain.

Next to the controls is a VU meter that also displays the gain reduction (GR). Be sure to use the 'Back' button to return to the output menu

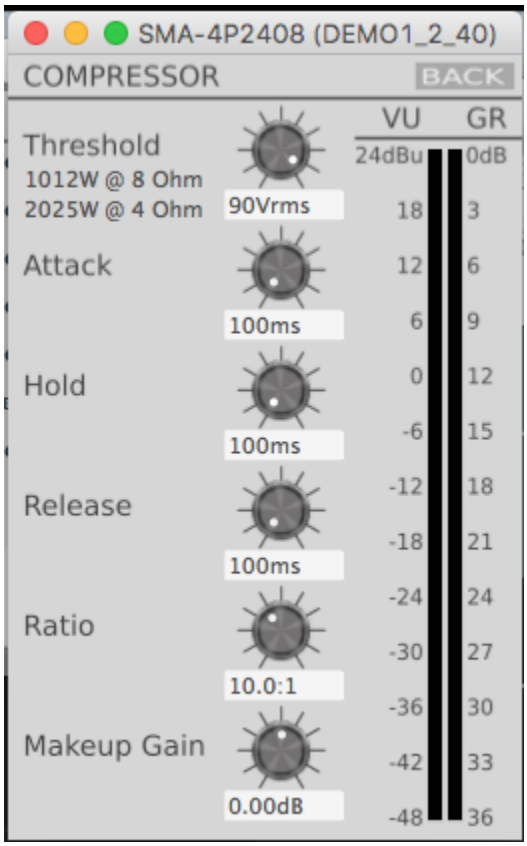


Figure 17: Output rms compressor

Note, is selected equipment with power amplification built in, it is possible to set the threshold as an absolute (rms) voltage. The system then displays the corresponding output power for 4 and 8 ohms loudspeaker system. This makes it easy to set the maximum power that power amplifier will apply to the connected loudspeaker making it easy to set the threshold so that the attached loudspeaker is not thermically overloaded.

Note: Applying too much electrical power is not the sole failure mode for a loudspeaker. Applying power outside of the rated frequency range can easily damage a loudspeaker at low power levels. ALLDSP advises to carefully consider the correct settings for each driver. The rms compressor and peak limiter can be valuable tools to protect drivers, but will not guarantee that the driver cannot be damaged.

Change / adjusting Values :

To change a value in the input fields in a Windows PC, it is also possible to adjust the value using the arrow keys or the scroll wheel on the mouse.

7. Access control and Locking

This unit has three access levels, plus locked mode. It is intended to enable the right amount of control to each type user.

The three levels are:

- User (user of the system)
  The user is the person that makes use of the system that the DSP product drives. This can be the FOH engineer, venue engineer, owner. This user level has the lowest amount of control of the configuration
- Administrator, e.g. installer, rental company.
  The administrator is the person that changes the system. In some cases this can still be the DJ or FOH engineer, typically when they are familiar with the venue. It can also be the designated maintenance engineer
- Developer (the person responsible for the acoustic performance)
  The developer tunes the crossovers, equalizes the outputs, and sets the output limiter so that it protects the system.

This can be explained with the example of a powered speaker with an ALLDSP plate amplifier, used in a club

Typically the **user** can choose the preset or input gain to match the sensitivity of the loudspeaker to the used mixer or interface. He may be allowed to set the input equalizer to match the output to his taste.

The **administrator** chooses presets and changes the input EQ to match the loudspeaker to the acoustics or change location, or subjective taste of the audience. Additionally he can set the input limiter and/or compressor to limit the loudness to comply to local regulations or taste

The **developer** sets the crossover point so that each driver gets the right frequency band. He adjusts the output EQ so that the (anechoic) performance of the loudspeaker is neutral. He sets the output delay to time align each driver and set the limiter and compressor to protect each driver from overload and to adapt the high frequency output to the power compression of the low frequency driver.

The standard passwords are as follows
User: Password
Administrator mode: Ad_min
Developer mode: Develo_p

Note: Please change these passwords as soon as possible to prevent unauthorized access to your system
Note: Please store your changed passwords securely. There is no way to retrieve lost passwords. If you brick your unit by setting and forgetting a password, we cannot help you without an RMA process. Resetting your unit can only be done in the factory. We do not have or give out a master password, Please head this warning and keep your password in a secure location.

The privileges of each level are now explained in more detail.

At start-up the unit will be in User Mode by default, and will have access privileges as configured previously for that Mode. There is no specific indication that you are in User Mode. However, Administrator and Developer Mode will be indicated at the top of the window next to the unit name. As developer, you have access to and can set all passwords, access levels and privileges.

You should receive a Developer password with your unit; if you log on with that password you can then set up a User and Administrator password and the privileges for each level as described in this Chapter

Note that there is no functional relation between the software password in the network window of the control software, the PIN control system and the hardware-related access control functionality for the DSP software. Each operates separately.

If you enter your Developer password, the Hardware drop-down menu will show additional options that will not be visible in the other modes. In addition to change your Developer password, you have the option to set the passwords for Administrator and User modes (Figure 18**Error! Reference source not found.**).

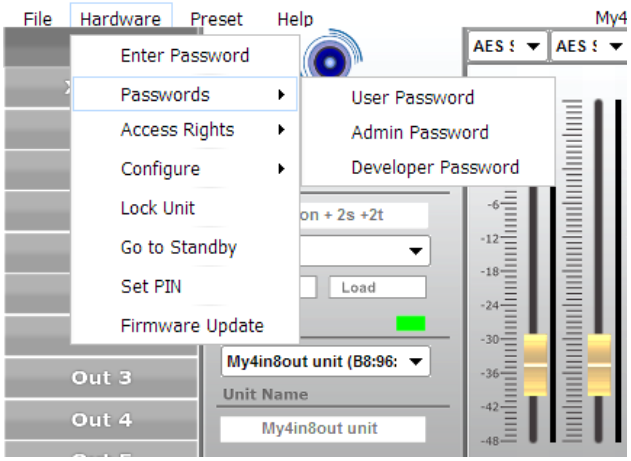


Figure 18: Additional functionality available in Developer mode

You can also set all Access rights for the other modes as shown in Figure 19.

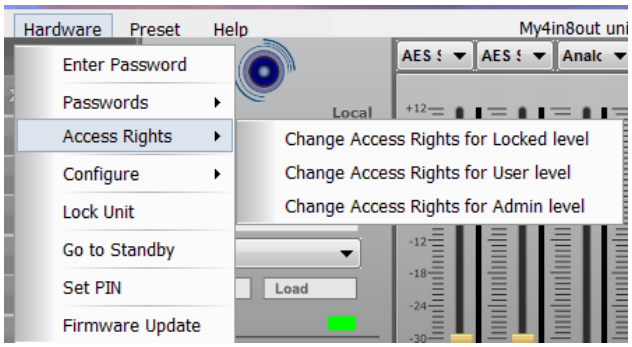


Figure 19: As Developer you can set Access rights for all other operation modes.

For each level, there is a dialog screen with privileges that you can set for that level, accessed through the **Hardware|Access Rights** menu. You set the User Mode privileges that are required to work with the unit as a user, while with Administrator and Developer level access, you can allow progressively more detailed settings and adjustments to be made. For this reason, the Access Rights dialog window will show more privileges with higher access levels. The User Mode privileges list with a sample setting is shown in Figure 20**.**

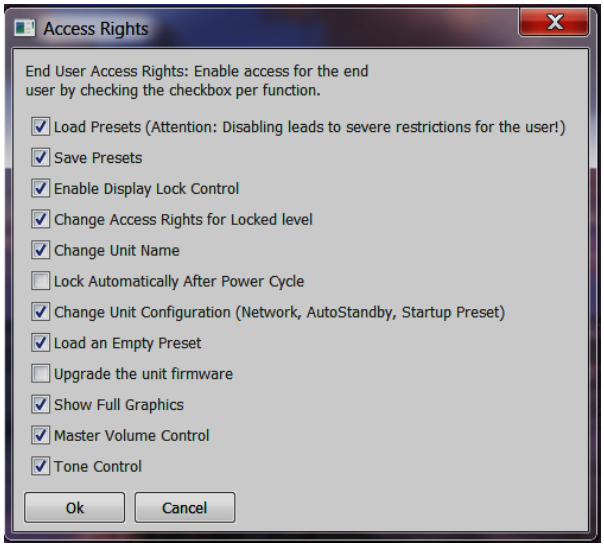


Figure 20: Sample User access level privileges dialog box

A similar screen will be shown for Administrator mode; Figure 21.

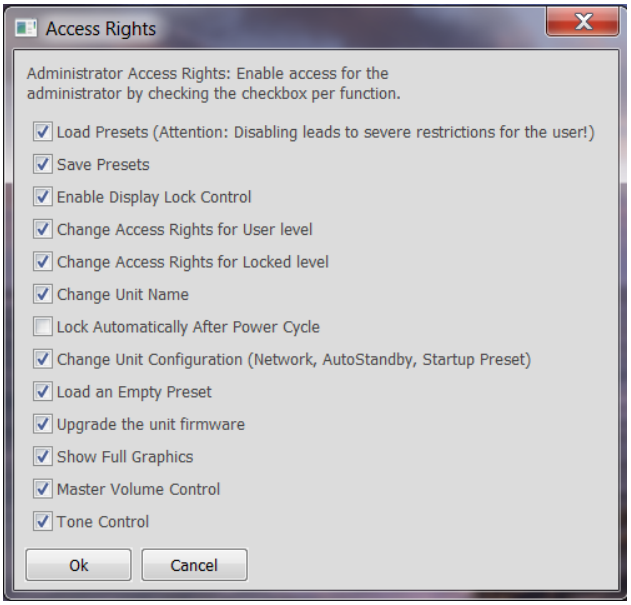


Figure 21: User access level privileges dialog box.

Finally, there is a dialog screen to set the access levels in locked level mode as shown in Figure 22.

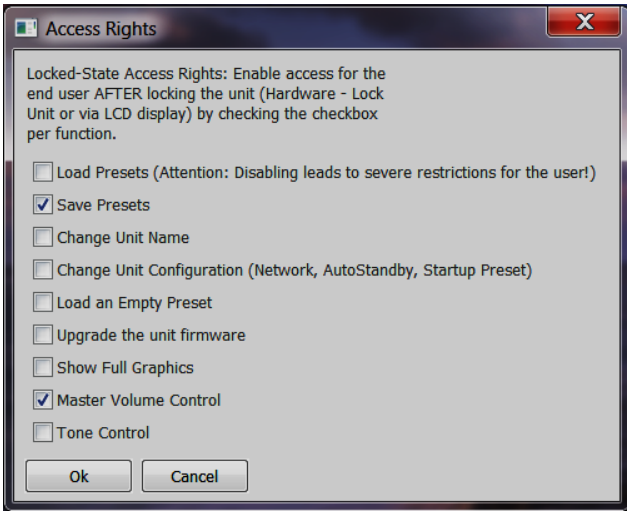


Figure 22: Locked level access settings dialog box

A typical Locked screen is shown in Figure 23: Sample Locked screen**.**

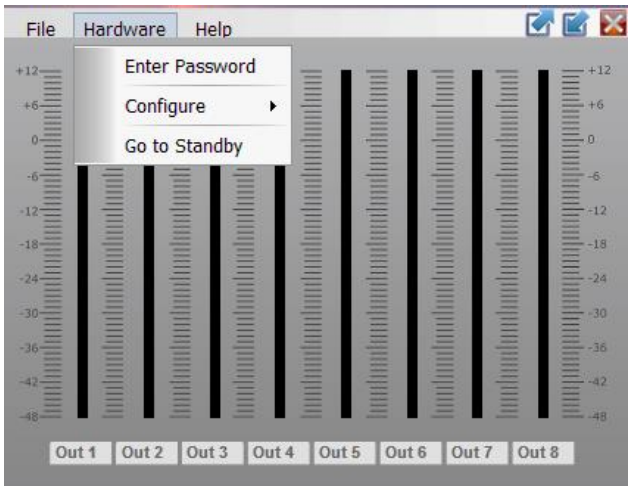


Figure 23: Sample Locked screen

Access rights

Most descriptions are self-explanatory, the following rights can be controlled:

- Load presets – loading presets from the device preset list
- Save presets – Saving presets to the device memory
- Enable Display Lock Control – Locking and unlocking the unit
- Change Access Rights of Locked level – change the access rights for lower level(s)
- Change Unit Name
- Lock Automatically after Power Cycle – The Unit can be set to lock automatically after a power cycle (be careful, if the user sets this to on he/she may be locked out after a power cycle)
- Change Unit Configuration – Change the configuration of the Network, Autostandby, Startup preset setting. Again, mistakes here can lock a user out of the device control
- Load an empty Preset – For an experienced user, loading an empty preset can easily reset the unit for a clean slate. But for an inexperienced user, it can damage loudspeakers. So when unchecked, the user can only load presets that have been defined
- Upgrade unit firmware
- Show full graphics – when checked the full settings, like crossover, EQ, and limiter settings are visible to the user, even when they cannot be changed
- Master volume control – it enables master volume control via the iOS app (Master fader app) for the unit
- Tone control – it enables the tone control for the Master Fader App.

8. Firmware Update Process

The controller firmware can be updated via the PC software. It is strongly recommended that the DSP is updated via the Ethernet interface (if present). The update is performed in administrator mode. On models with a display, the firmware version can be checked via pressing the encoder button 4 times and turning the encoder until the firmware version is displayed. You can also check the firmware

version in the PC software via Help -> about -> version.

An available update is indicated by the suffix "(Update Available)". If an update is available, it can be performed as follows:

Hardware - > Firmware Update. The program may run in several stages through the update process. If the update fails, restart the software and device and try again.

Through a firmware update (at least Admin or Developer mode), all presets from the DSP controller can be cleared. You will be prompted for the option to backup and restore all presets. If that is not done, the update removes all presets from memory.

In user-level "Developer", presets can be cleared "Preset" → "Clear all User Presets". All presets are deleted hat are not protected by the "read-only preset range". To clear Read-Only Presets: In user-level "Developer", choose "Preset" → "Clear all Read-Only Presets.

9. Factory files and flash images

Factory files are files that contain all presets and global settings. It does not contain the firmware. Presets are copied one at a time. It is great for a production process, it can take a few minutes. It can take a while when a file contains many presets. So, a factory file does not change the firmware. Intended primarily for developer to upload all settings after a firmware update to load its settings. You must be in developer mode to create them, and load in admin mode. With rental companies it can be used to ensure that no renter settings are preset in the system for the next renter.

A flash image contains all settings, preset and the firmware of the unit. It also contains the firmware.

The distinction between the two is that a factory file is for internal use in production, a flash image is for external use, it can be mailed to an end user for instance. When emailing a flash image, a unit can be configured without have to give access to the settings. The process takes approx. 1 minute.

The administrator and developer can make flash images. The developer can create factory files. Only an administrator can load a flash image or factory file.
It is strongly recommended to do this with a wired connection. Flash images can only be made with a wired connection.

10. Loudspeaker Library

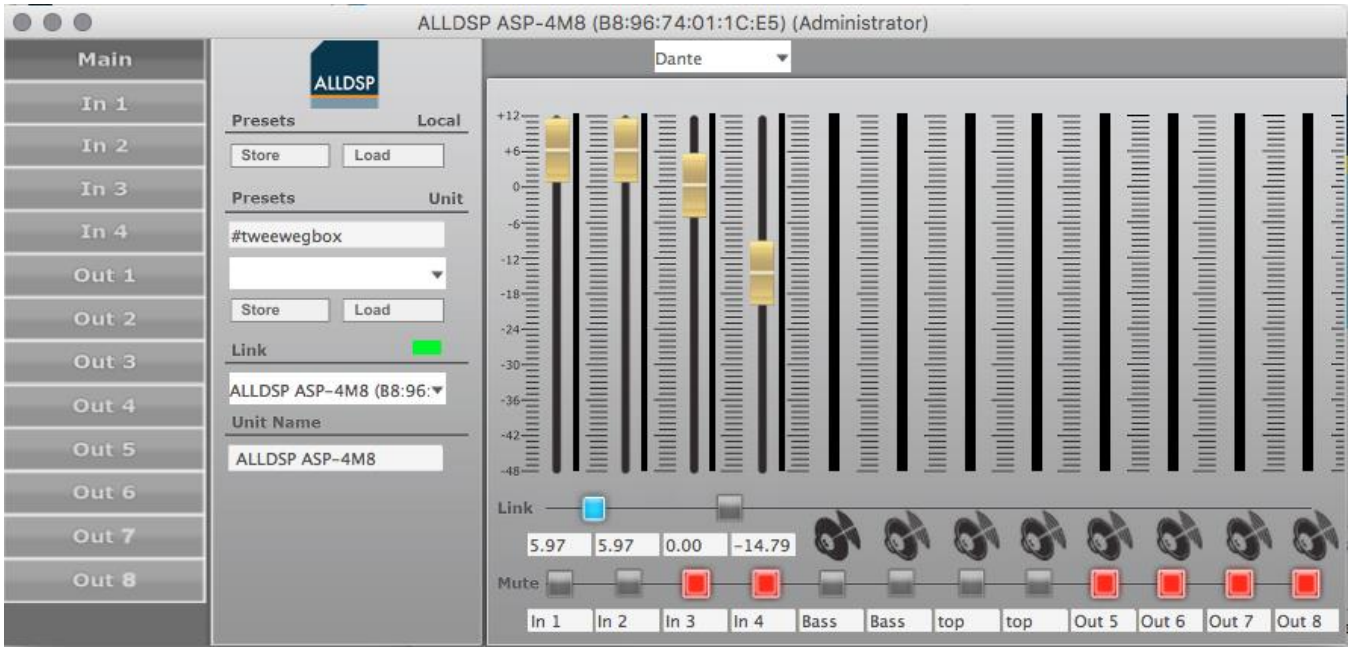


Figure 24: Device panel with loudspeaker library options

The loudspeaker Library function is a function that enables administrators to easily change the system configuration to adapt to varying combinations of preset loudspeakers. For instance various satellite loudspeakers combined with a subwoofer. This way the administrator can choose the right loudspeaker combination for a system.

To create a Loudspeaker Library file

Please do the following:

- Enter Developer mode
- Use the output channels starting at output one (1, 2, 3, .. and not 4, 5, 6)
- Mute all outputs that are not part of the system (for a one way use out 1 and mute the rest)
- You can define one-way, multi-way systems, setup a one loudspeaker of a stereo set
- Set-up the DSP to your liking for one system.
- Turn off “Show full graphics” for administrator mode. (The administrator needs it see the right skin)
- Name each output appropriately with clear labels that enable an easy check by the administrators
- Store the setting with a name starting with # in the highest position on the device (i.e. 100, 99, 98, 97, etc.)

To load a Loudspeaker Library

- Enter Administrator mode
- Click on the appropriate loudspeaker icon for the output channel that you want to load the loudspeaker to. This does not have to start at channel 1. (e.g. it is possible to define a two way loudspeaker, which must be done on output 1 and 2, and to load that to output 5 and 6 later)
- Select the appropriate loudspeaker file from the pull down list
- Mute all outputs

- Check for each output if the correct signal is applied to that channel
- Unmute the channels and slowly turn up the signal and check to make sure that each driver gets the right signal