IntelliCloud ™

Browser-based Web UI

Software Operation Manual V1.1



CloudPower™ Series

REMOTE CONTROLLABLE CLASS-D INSTALLATION AMPLIFIERS

Software Operation Manual V1.1

Software version 2.0.0 and above

For any support related questions please contact: info@apex-audio.be
Keep this manual and a record of the product serial number for future reference.

This document has been put together with as much care as possible.
The information within is complete and correct on the date of publication. However, updates on the specifications, functionality or software may have occurred since publication. To obtain the latest version of both manual and software, please visit https://www.apex-audio.be/downloads





Serial number of this product

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Important Safety Instructions



Read the operation manual fully before using device.



CAUTION: to reduce the risk of electric shock, do not remove cover (or back). No user-serviceable parts inside. Refer servicing to qualified service personnel.
The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of an uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation mark within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the equipment.

Instructions

Before installing or operating the equipment, read all safety instructions, warnings and operating instructions. Heed all warnings. Follow all instructions. Keep all safety, installation and operating instructions for future reference.

Installing and Operation Location

Do not use this apparatus near water. Do not expose this apparatus to drips or splashes. Do not place any objects filled with liquids, such as vases, on the apparatus.

Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat. No naked flames, such as lighted candles, should be placed on the apparatus.

Do not install the apparatus in a confined space such as a book case or similar unit. Do not block any ventilation openings. The CloudPower™ is only intended for use/ installed within a 19” rack mount system.

Ensure that foreign objects and liquids cannot get into the equipment.

Power Source and Grounding

This product should be operated only from the power source indicated on the apparatus or in the operating instructions. If you are not sure of the type of power supply to the premises where the equipment is to be used, consult your product dealer or local power company.

Do not defeat the safety purpose of the polarised or grounding-type plug. A polarised plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

Connect Class I construction apparatus to an AC outlet with a protective grounding connection.
Do not overload wall outlets, extension cords or integral convenience receptacles, as this can result in a risk of fire or electric shock.
Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles and the point where they exit from the apparatus.
Unplug this apparatus during lightning storms or when unused for long periods of time.

Power supply class I grounding requirements:

For protection from fault currents, the equipment shall be connected to a grounding terminal. Plug the system
Power cord into an AC outlet that provides a ground connection. Substitute cords may not provide adequate fault Protection.

Use only approved power supply cord that complies with the applicable standard in the country where it is intended to be used with a maximum length of 3m and minimum 1.5m and minimum cable section of: 1.5mm^2 (16AWG) for models with 16A inlet

CP354X / CP354XD
CP704X / CP704XD.

Minimum 2.5mm^2 (14AWG) for models with 32A inlet

CP1504X / CP1504XD
CP3004X / CP3004XD



THIS DEVICE MUST BE POWERED EXCLUSIVELY BY EARTH CONNECTED MAINS SOCKETS IN ELECTRICAL NETWORKS COMPLIANT TO THE IEC 364 OR SIMILAR RULES
DISCONNECT THE AC MAINS SOURCE BEFORE ATTEMPTING TO CLEAN ANY PART OF THE AMPLIFIER
APEX SUGGESTS TO PLUG THE CloudPower SERIES CP354, CP704 TO A 16 A RATING, C OR D CURVE, 10 kA SECTIONING BREAKER. 20A RATING FOR CP1504, CP3004, CP716. see below.



REFER TO THE ELECTRICAL INSTALLATIONS WIRING PRACTICE BY REGION OR COUNTRY THE APPARATUS IS THE BE USED!

Cleaning, Maintenance and Servicing

Unplug the apparatus from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

Do not attempt to service this product yourself, as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personal.

Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally or has been dropped.

Intended Use

The equipment may only be used for the purpose described in the operation instructions. Never carry out any work on the equipment other than as specified in the operating manual.

Never push objects of any kind into this product through openings, as they may touch dangerous voltage points or short-cut parts, which could result in a fire or electric shock.

This equipment is not suitable for use in locations where children are likely to be present

WARNING: Excessive sound pressure levels can cause hearing loss.

Environmental Precaution

Electrical and electronic equipment may contain hazardous substances for humans and their environment.



The “crossed out wheelie bin” symbol present on the device and represented above is there to remind one of the obligation of selective collection of waste. This label is applied to various products to indicate that the product is not to be thrown away as unsorted municipal waste. At the end of life, dispose of this product by returning it to the point of sale or to your local municipal collection point for recycling of electric and electronic devices. Customer participation is important to minimize the potential affects on the environment and human health that can result from hazardous substances that may be contained in this product.
Please, dispose of this product and its packaging in accordance with local and national disposal regulations including those governing the recovery and recycling of waste electrical and electronic equipment.



Contact your local waste administration, waste collection company or dealer.

Safety notices:

Denmark:
Apparatets stikprop skal tilsluttes en stikkontakt med jord, som giver forbindelse til stikproppens jord.

Finland:
Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan.

Norway:
Apparatet må tilkoples jordet stikkontakt.

Sweden:
Apparaten skall anslutas till jordat uttag

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IntelliCloud Web Interface

Simple. Intuitive. Accessible Anywhere.

At the heart of the CloudPower™ amplifier is the powerful and intuitive IntelliCloud interface. Fully web-based and hosted directly on the amplifier, IntelliCloud gives you instant access to amplifier control from virtually any device with a web browser—without the need to install software or worry about operating system compatibility.

Designed with flexibility in mind, the responsive interface delivers a seamless user experience across desktops, laptops, and landscape-oriented tablets and smartphones. Whether you're in the control room or on the move, IntelliCloud puts effortless amplifier management right at your fingertips.



Connecting to IntelliCloud

To access the IntelliCloud interface, establish a connection between your device and the CloudPower™ amplifier's built-in server. Several connection methods are available, allowing you to choose the option that best suits your system configuration.

For detailed information on available connection methods and network configuration, refer to Web UI → Settings → Network in this manual.

Via a LAN

1. Connect the CONTROL port of the amplifier to the same LAN as your device.
2. If the IP mode is set to DHCP (default), the amplifier will get an IP address assigned by the router. You can view this IP address from the amplifier's front panel: Settings → Network. If the mode is set to Static, you might need to adjust the IP adres from the front panel.
3. Enter the amplifiers's IP address into your web browser's URL.
4. Enter the login credentials to access the web interface, both are set to "admin" by default.

Remotely via the Cloud, from anywhere in the world

1. Both the amplifier's CONTROL port and your device must be conneted to a router which has access to the internet.
2. The amplifier's cloud feature must be turned on. You can access this setting from the amplifier's front panel: Settings → Cloud.
3. Enter the amplifiers cloudconnect link into your web browser's URL: **http://cloudname.apexconnect.me**
4. Enter the login credentials to access the web interface, both are set to "admin" by default. Note: You will be prompted for the login credentials twice — first by the relay server, and then by the amplifier's server. Both sets of credentials are the same.

Via the amplifier's internal Hotspot, wireless

1. Ensure that the amplifier's internal hotspot is activated. This is can be done through the front panel under Settings > Hotspot.
2. Look for the Hotspot's SSID name among your device's Wi-Fi networks. By default, this name is set to "AMP_XXXX".
3. Connect to the hotspot and enter its password. By default, this is set to "12345678".
4. Enter IP address **172.24.0.1** into your web browser's URL.
5. Enter the login credentials to access the web interface, both are set to "admin" by default.

Directly via a network cable

1. Connect the ethernet port of your computer directly to the CONTROL port of the amplifier using a network cable.
2. Make sure the amplifier is in DHCP mode (default), which can be adjusted through the front panel under Settings → Network.
3. In a brief period, the amplifier will be assigned an automatic IP address within the 169.x.x.x range.
4. Note this address from the front panel and enter it into your web browser's URL.
5. Enter the login credentials to access the web interface, both are set to "admin" by default.

Login

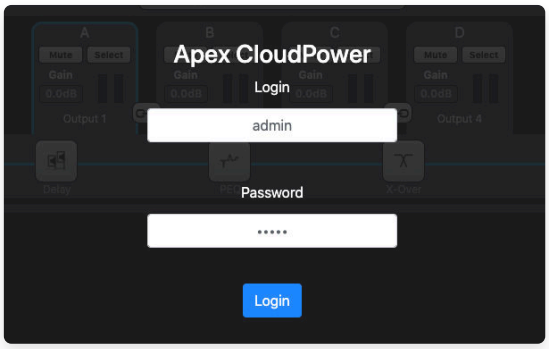
When connection has been established, the interface will prompt you for the login and password.

The default login details are shown below.

Login: admin

Password: admin

You can change these credidentials via the web interface → Settings → Network



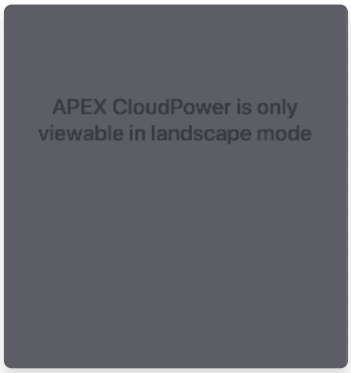
Browser Info and Advice

- For optimal performance, we recommend using Google Chrome or Mozilla Firefox.
- On desktops and laptops, use a full HD (1920 × 1080 px) window size for the best user exprerience.
- After a firmware update, it is advised to clear your browser cache if you have been using a previous version of the IntelliCloud software on the same device. This will ensure that the interface is displayed correctly.
- Avoid opening multible browser tabs connecting to the same device on the same network.

Display Orientation

The IntelliCloud interface is optimized for landscape orientation on smartphones and tablets. If you hold your device in portrait orientation, a message will appear reminding you to rotate the device.

On a desktop computer or laptop, the same message indicates that the browser window is too narrow. Simply increase the width of the browser window to display the interface correctly.

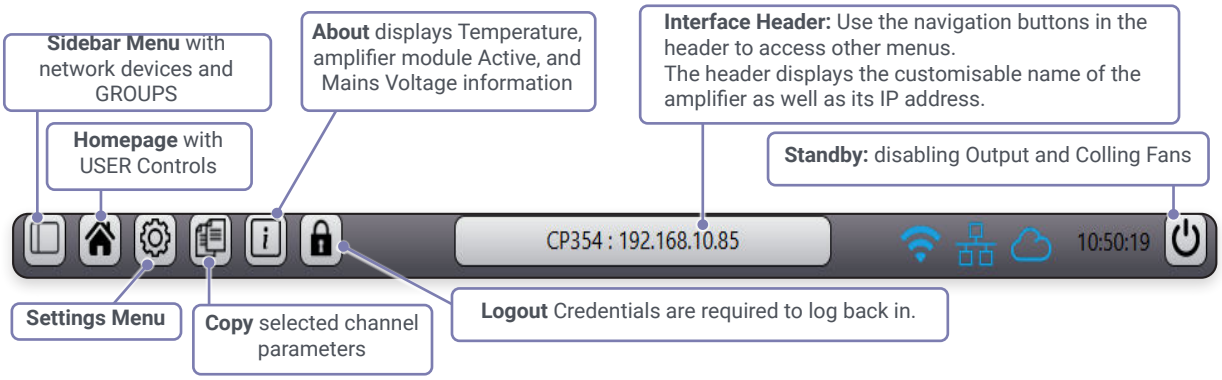


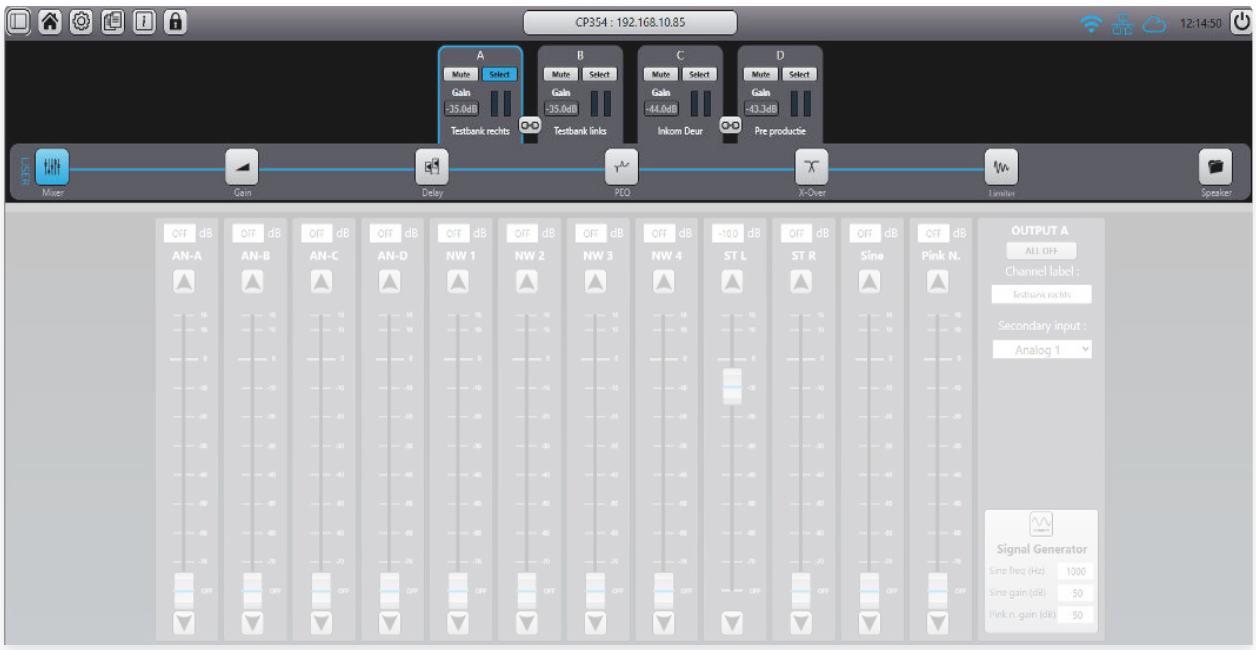
Homepage | USER Processing

After logging in, the Homepage is displayed. It provides an overview of all available channels and gives you access to the various **USER** submenus.

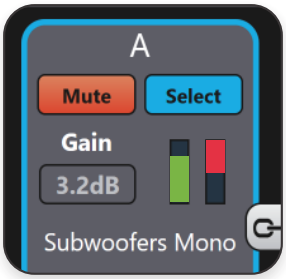
The image below shows the Homepage for the four-channel models. The top section provides access to the different submenus and allows you to mute and select channels. This section remains visible as you navigate through the **USER** submenus.

The bottom section displays the submenu currently selected for the active channel. In the example below, the Mixer submenu is displayed for **Channel A**.





Irrelevant parts of the interface have been faded for demonstration purposes.

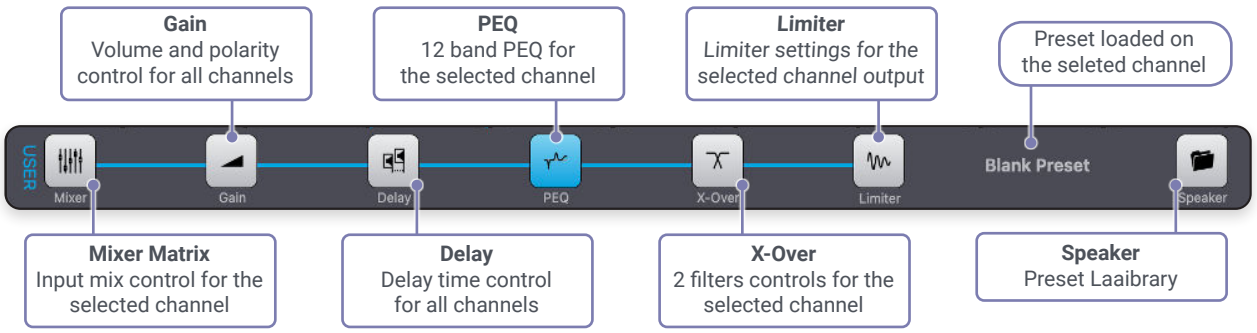


Channel Header - 4 channel models

- Press **Mute** to silence the channel. The button turns red when muted.
- The selected channel is indicated by a blue outline and blue **Select** button.
- The amount of **Gain** is displayed but cannot be controlled here.
- The **VU meters** give an indication of the output voltage and limiting.
- The channel numbering (A,B,C ...) is diplayed at the top, the customisable channel label at the bottom.

USER Processing Submenus

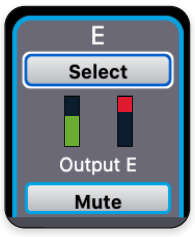
The **USER** menu contains all channel-based processing options available to the user. The Mixer, PEQ, X-Over, Limiter, and Speaker menus pertain to individual channels; ensure you have the correct channel selected. The Gain and Delay menus display controls for all channels simultaneously.



16 Channel Homepage Variation

Depicted below is the homepage for the 16 channel amplifiers. In order to save screenspace, the channel headers are simplified. Note the grey channel background alternates in tint every 4 channels to help you orientate.





Channel Header - 16 channel CP716D

- **Select** a channel to take controll over it's user functions. The selected channels is highligted with a blue line.
- Press **Mute** to silence the channel. It turns red when muted.
- The **VU meters** give an indication of the output voltage and limiting.
- The channel numbering (A,B,C ...) is diplayed at the top, the customisable channel label at the bottom.

Momentary Parameter Linking

The 4-channel amplifier models provide a momentary linking feature between channels A-B and C-D. When activated, any action performed on one channel will be duplicated on the linked channel. Parameters that are not touched will not synchronize and remain in their individual positions.

This linking feature is designed as a temporary control to speed up the setup process when adjacent channels require the same parameter adjustments.

It is not intended for permanent stereo linking and should not be used as such. Its status will not be stored in the global settings.



Press the **Link** button to activate momentary parameter linking. When activated, the button will turn red and begin flashing.

USER / Mixer Matrix

The **Mixer** matrix enables users to route and blend input signals for each individual channel. Within its side menu, you can rename channels and access the internal signal generator.

Select the channel you want to control

Select the **Mixer** submenu

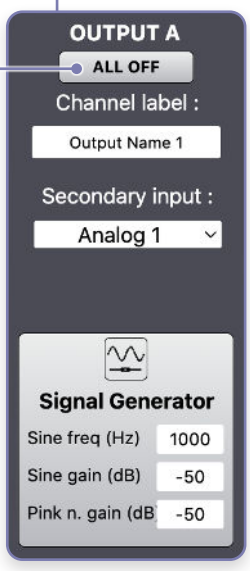


All faders can be operated in five different ways:

- Slide using your mouse or finger.
- Tap the arrow buttons for small increments.
- Enter a specific value in the data input field at the top.
- Use the up and down keyboard arrows when a fader is selected.
- Double-click on a fader to set it to unity (0.0 dB).

Available Mixer Inputs

- AN Four analog line inputs located on the rear of the amplifier.
- NW Dante™ network inputs (4 for 4 ch. amps, 1 per channel for 16 ch. amps).
- ST Spotify and Apple Airplay streaming Left and Right inputs.
- Internal sine wave generator.
- Internal pink noise generator.



ALL OFF acts as a reset and sets every input fader for the selected channel to OFF, the lowest position.

Channel label allows you to give the channel a custom name. This name is displayed in the channel header, the GROUPS routing and on the front panel display (for the 4ch. models).

The **Secondary input** will act as an automatic backup input in case of an audio network connection failure. Please note: this feature is slated for implementation in firmware versions beyond 1.3

The settings of the internal **Signal Generator** can be customized. The volumes are intentionally kept low and are restricted to -20 dB (sine) and -10 dB (pink noise) for safety precautions, and will reset to their default of -50 dB after a reboot.

USER / Gain

The **Gain** submenu show the master input faders for every channels. This is where you will control the volume for each amplifier output. Note: the gain values can be offset if the channel is assinged to a GROUP with gain settings other then unity (0.0 dB).

You do not have to select a channel, every channel's gain control is visable from the same submenu.



Polarity inverts the channel's phase by 180°.

Adjust the faders to reach the desired **output volume**.

Be cautious when double-clicking the fader, as it will set it to unity gain and could potentially result in a high voltage output if an audio source is presented.

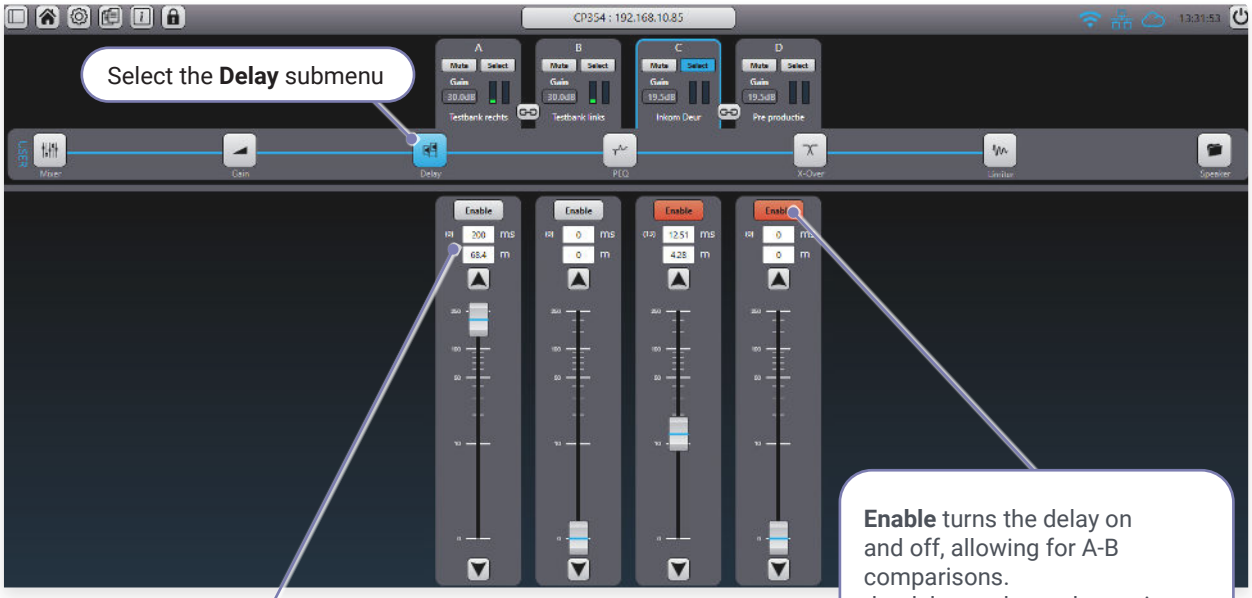
It would also be wise to check and set the channel's limiters before applying high gain levels.

Gain Scale
At 0 dB gain setting, the amplification from the line input to the amplifier output is 26 dB. At +15 dB, the amplification reaches 41 dB.

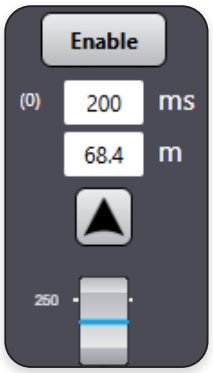
USER / Delay

The **Delay** submenu enables users to set a delay time for each channel, ranging from 0 to 250 ms, with increments of 0.1 ms. The limit of 250 ms is shared between the USER and GROUP delay.

You do not have to select a channel, every channel's delay control is visable from the same submenu.



Set the desired **delay time** or distance for each channel using the fader, arrows, keyboard, or input field.
Double-click on the fader to reset it to 0 ms.



Enable turns the delay on and off, allowing for A-B comparisons.
the delay vaule can be set in one or two way by inputting the milliseconds (ms), or the distance in meters (m).

The value inside the parentheses () beside the data input field indicates the sum of GROUP delay and USER delay, which cannot surpass 250 ms, or 85.5m
For example: If this channel is assigned to a group that has a 50 ms delay time, you will not be able to set the USER delay higher than 200 ms or 68.4m

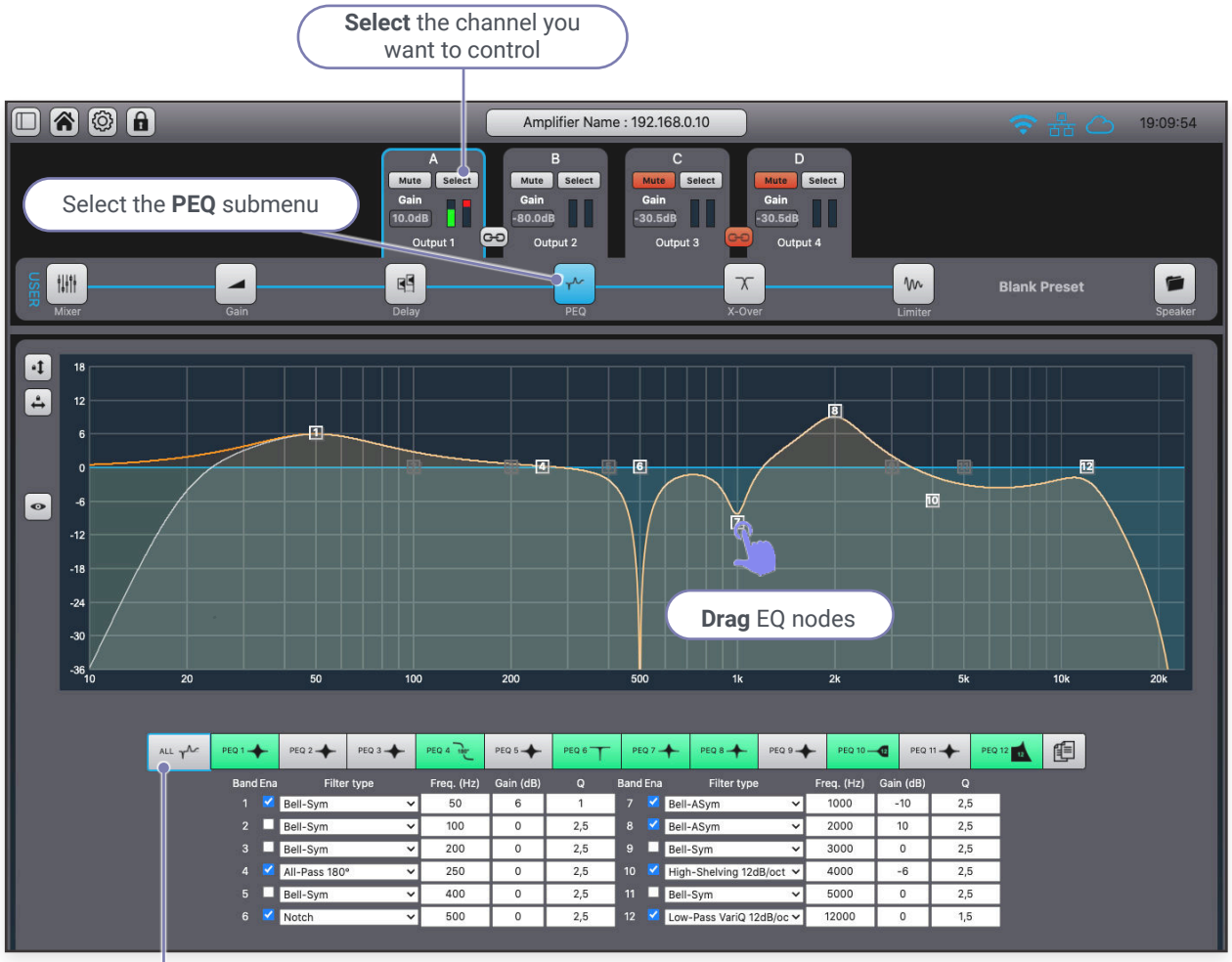
Front Panel Delay Control

Adding a delay via the front panel can only be done in ms

The delay time can also be set from the front panel, though it does not offer the Enable button. If you increase the delay time from the front panel to anything above 0 ms, the Enable button will be automatically activated. Similarly, reducing the delay time back to 0 ms from the front panel will switch off the Enable button.

USER / PEQ

The CloudPower™ offers 12 bands of USER **EQ** per channel, with a wide variation of filter types to choose from.



The EQ bands can be set in multible ways:

- Enter the data into in the ALL tab.
- Drag the EQ nodes on the chart.
- Select a specific band's tab and utilize the detailed controls.
- Copy the settings from another channel.

The **ALL** tab provides an overview of all 12 band settings and allows control over the full PEQ.

To activate a band, click the **checkbox**.

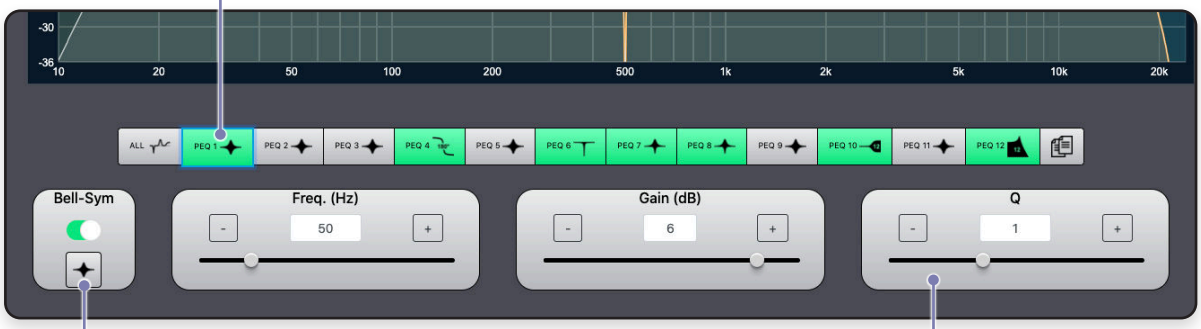
Select a **Filter Type** from the list.

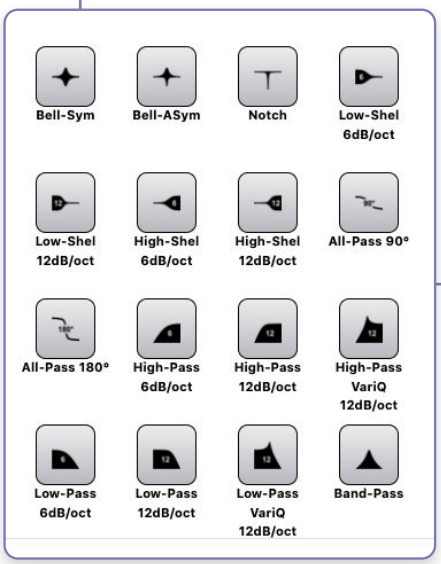
Adjust the **Frequency** within the range of 10 Hz to 22 kHz.

Set the **Gain** between -40 and +15 dB.

Select a **Q**-factor value between 0.1 and 48.

Tap a filter band for detailed control, which can be particularly useful when using tablets or phones. The tab will turn green when its filter is activated, and the selected tab will be outlined in blue.



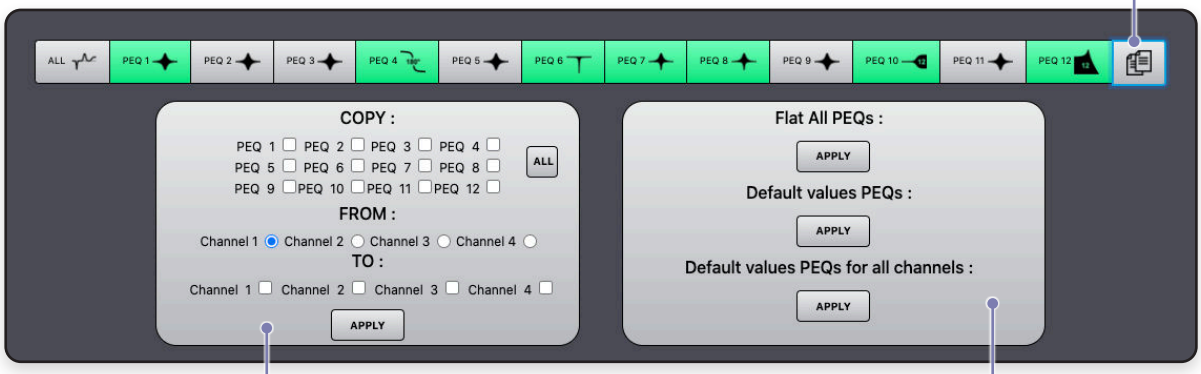


Use the three value boxes to enter the data by sliding the fader, clicking the - and + buttons for small increments or entering the data in the input filed.

Clicking or swiping the latch switch will **activate** the selected filter and display the curve on the chart.

Click the **filter** icon to bring up the filter selection window.

Click on the last tab to access the **Copy** feauture and **Reset** controls.



To **copy** PEQ bands, select the bands and the source channel from which you wish to copy, then select the destination channels where these band settings will be pasted. Finally, click **Apply** to execute the copy command.

Flat All PEQs sets the gain of all 12 bands of the active channel to 0 dB. It will not affect the frequency and Q settings, or other channel PEQs.

Default values PEQs resets all PEQ settings for the channel. It will not affect other channels.

Default values PEQs for all channels resets all PEQ settings on every channel.

Chart Features

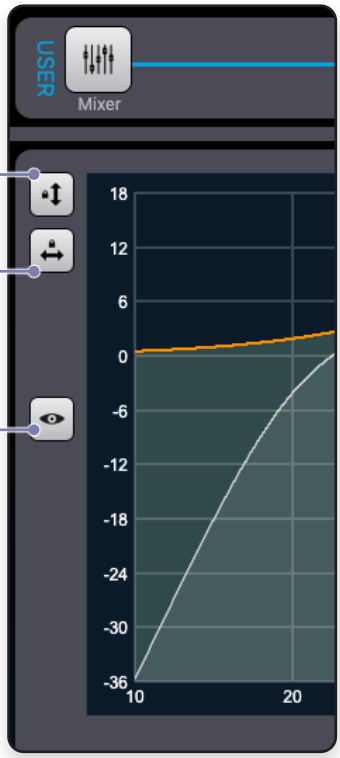
Both the PEQ and the X-Over charts offer features to enhance usability and provide feedback.

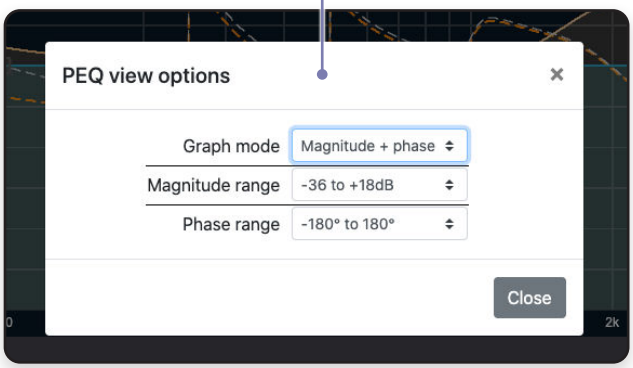
The active nodes on the chart can be moved by **dragging** them with your finger or mouse.

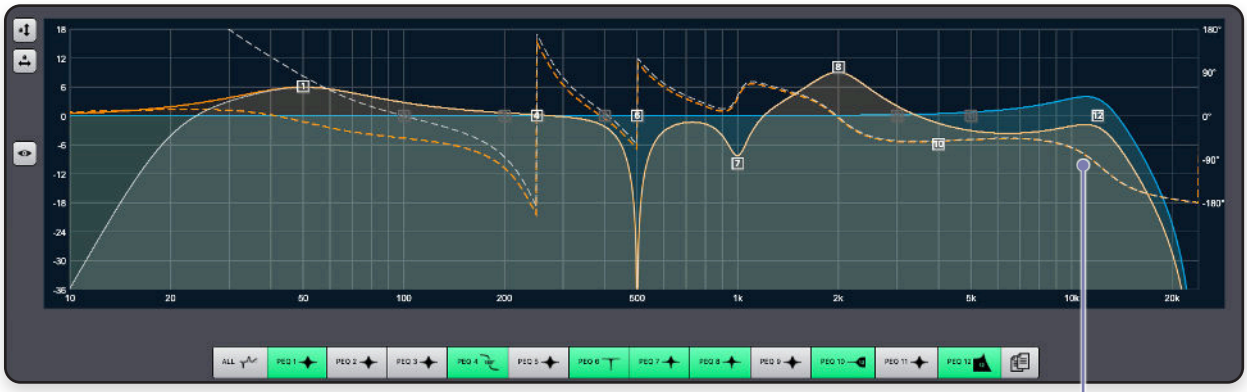
Lock **horizontal** movement of the notes in order to avoid changing the **frequency**.

Lock **vertical** movement of the notes in order to avoid changing the **gain**.

The **view options** allow you to choose between viewing the magnitude, phase, or both. You can also control the range for both magnitude and phase scales.





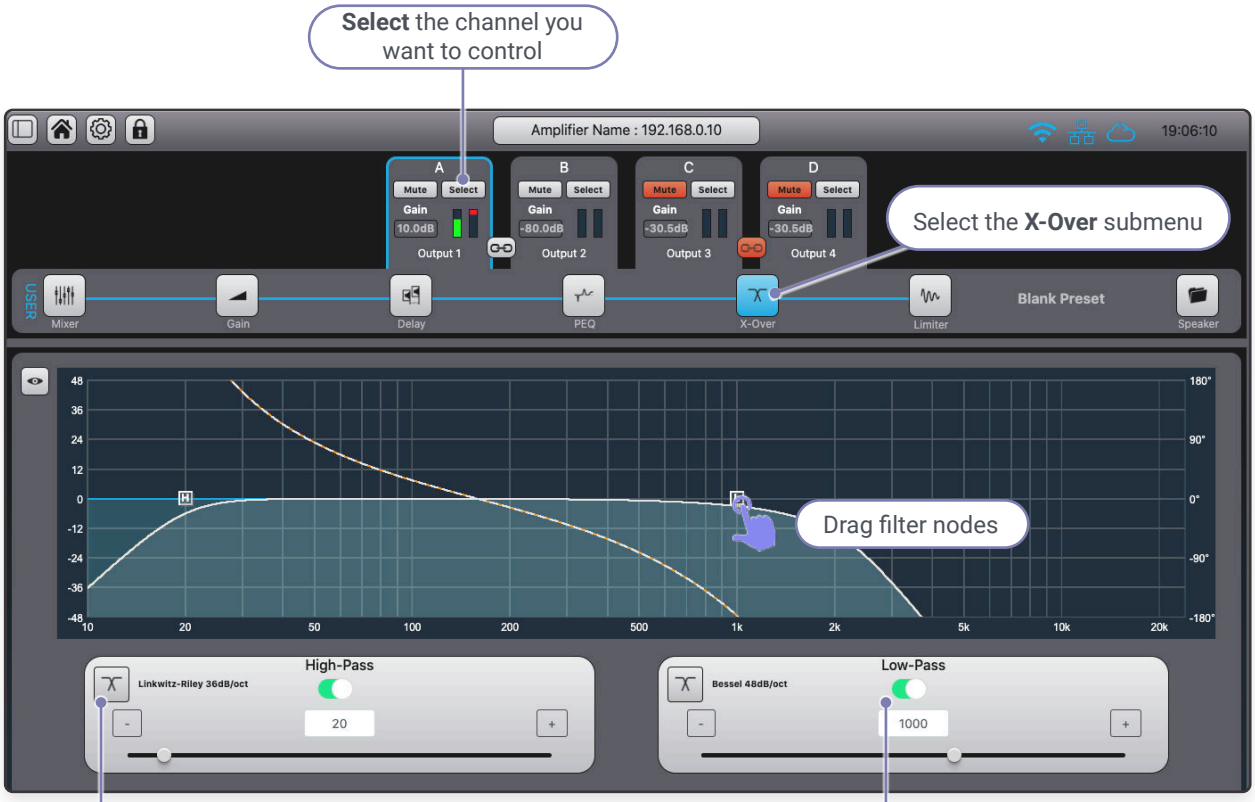


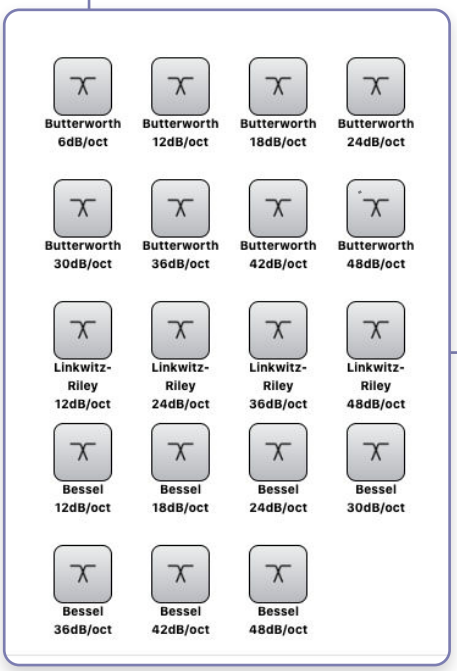
The lines on the chart are color-coded to maintain clarity:

- Orange: Indicates the total effect of either the PEQ or X-Over, depending on the **active** menu.
- White: Reflects the **combined effect** of both the PEQ and X-Over.
- Blue: Highlights the currently **selected band** or filter.
- Solid line: Illustrates the effect on the **Magnitude**, with its scale on the left of the chart.
- Dotted line: Depicts the **Phase** shift, with its scale on the right of the chart.

USER / X-Over

The CloudPower™ amplifier provides both a **high-pass** and a **low-pass filters** in its user interface. These filters offer a choice of 19 different classic X-over filter types, including Bessel, Butterworth, and Linkwitz Riley, with slopes ranging from 6 to 48 dB/octave.





Click the **filter** icon to bring up the filter selection window

Clicking or swiping the **latch switch** will activate the selected filter and display its curve on the chart.

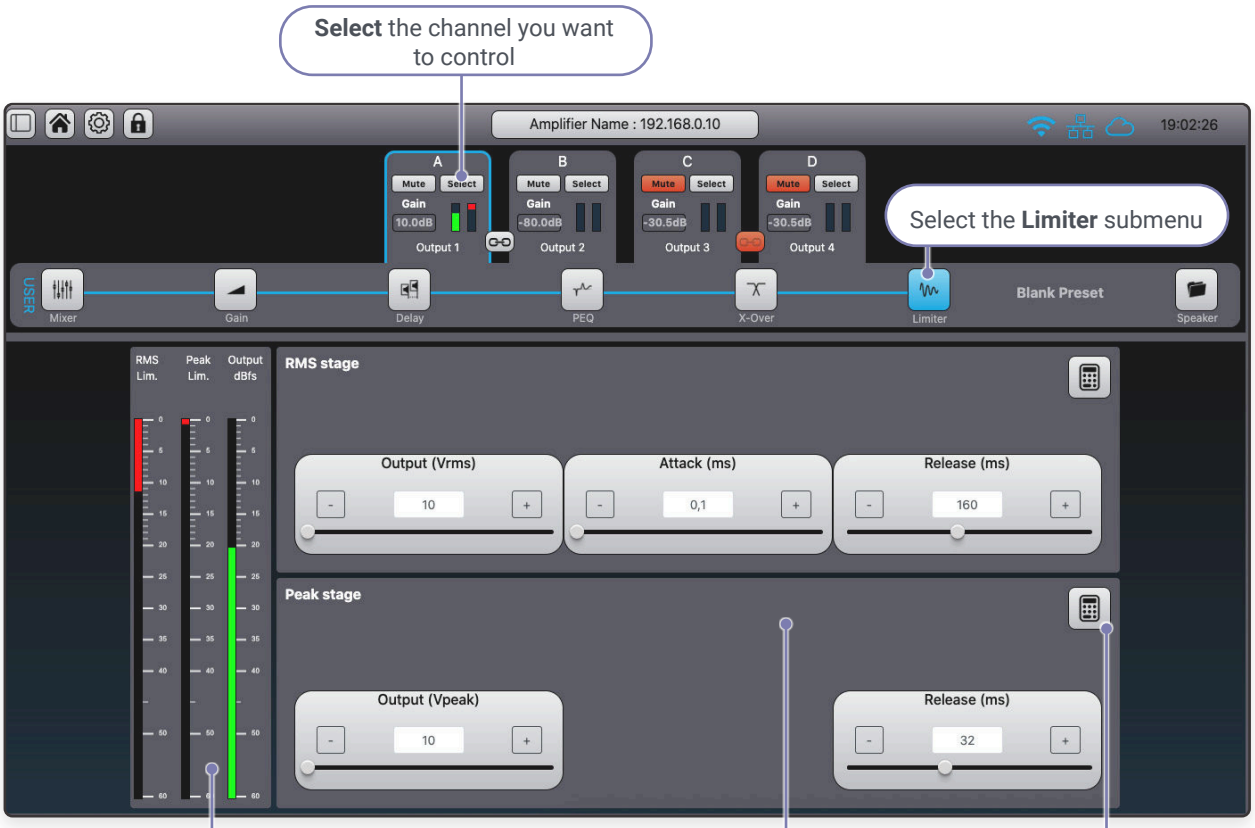
To set the **cutoff frequency**, you can drag the nodes on the chart, use the slider, - and + buttons, or manually enter the value in the input field.
Both filters can be set from 10 Hz to 22 kHz.

70/100V System Warning

When utilizing the amplifier with a 70 or 100V transformer system, ensure that you employ a high-pass filter (HPF) to prevent significant transformer saturation. Our recommended configuration is a 63Hz HPF with a 24dB/octave roll-off. The minimum response requirement is -3dB at 70Hz with a 12dB/octave slope. Firmware version 1.3 and higher offer an additional 100Hz 12dB/octave HPF at the end stage of the processing for this purpose. You can activate this additional HPF through the web interface via Settings > Output.

USER / Limiter

To protect the connected loudspeakers from damage, each CloudPower™ channel is equipped with a dual-stage **Limiter** that includes an RMS stage which responds to the signal's average power, and a Peak stage designed to react to fast signal spikes and transients.



The **red meters** show the selected channel's RMS and Peak gain reduction in dB , while the **green meter** displays the output level after limiting in dBFS.

The **calculators** can be used to calculate settings specific to your speaker.

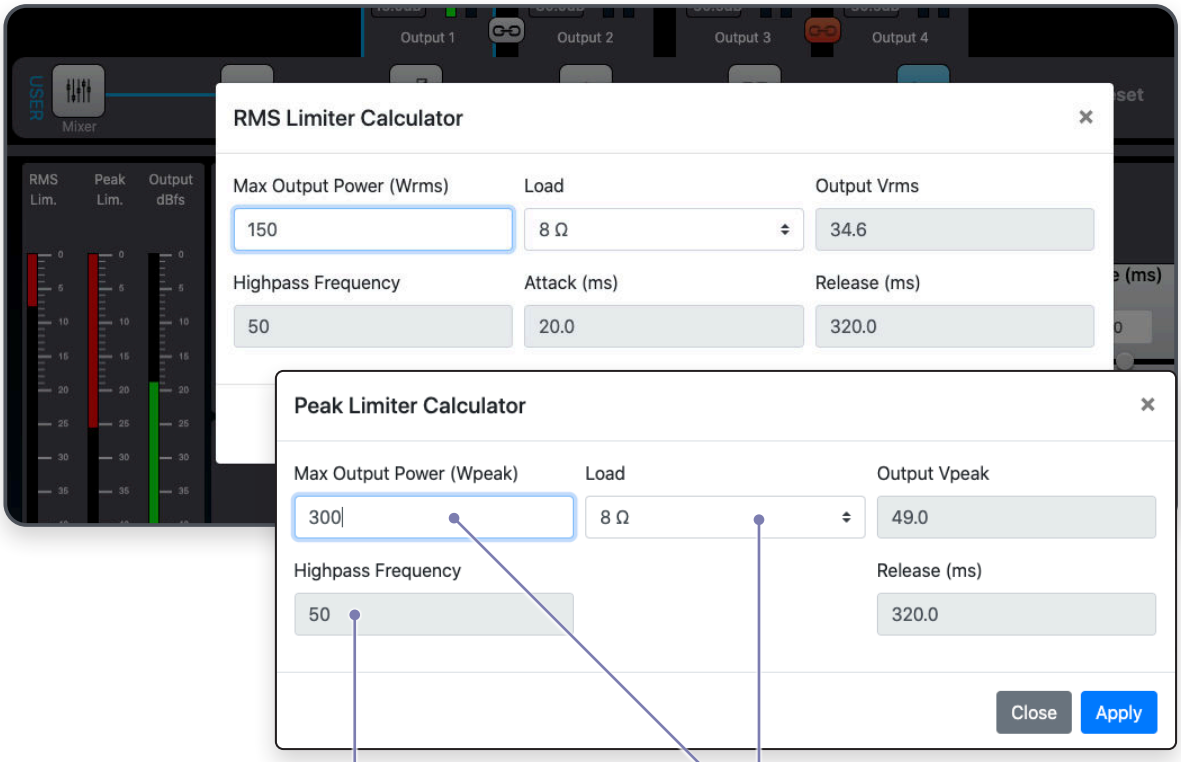
Output (Vrms) and **(Vpeak)** serve as **threshold** controls that determine the signal level at which the limiter engages. These thresholds can be adjusted within the range of -56 to +24 dBu.
It's important to ensure that the Peak threshold is set higher than the RMS threshold.
If not, the RMS limiter won't have an impact as the faster responding Peak limiter will eat its dinner.

Attack can only be set for the RMS stage and determines the speed at which the limiter responds when the signal level surpasses the RMS threshold. It can be set between 0.1 and 6.000 ms.
The Peak limiter is naturally equipped with a very fast attack setting.

Release determines the time it takes for the limiter to recover once the signal falls back below the threshold. Faster release settings might lead to audible distortion or a pumping effect, which can be smoothed by using slower release times.
The range for the RMS stage is 5 to 10,000 ms.
The range for the Peak stage is 5 to 500 ms.

Limiter Calculator Tool

Clicking the calculator icon opens a window where you can calculate appropriate starting values for your limiter. This calculation is based on the impedance and the maximum output wattage of your speaker and the high-pass filter settings from the crossover menu.



The frequency of the **X-Over**'s high-pass filter (HPF) is used to determine attack and release times that will preserve the integrity of lower frequencies with longer wavelengths. If the HPF is set to a higher frequency, the calculator will permit quicker attack and release settings.

Please note that the calculator also considers the HPF frequency even when the filter is disabled.

Enter the impedance and maximum peak wattage of your loudspeaker.

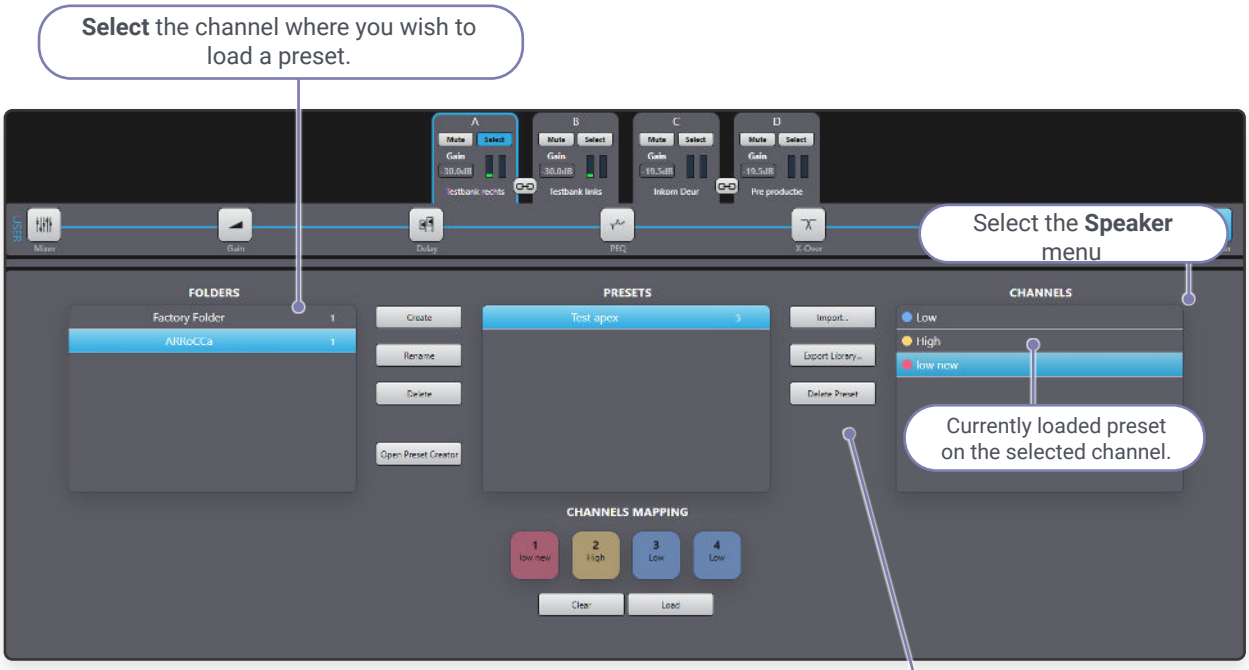
This information is typically found on the rear of the speaker or in a datasheet.

Click **Apply** to implement the calculated values.

USER / Speaker Preset Library

The CloudPower™ provides a feature to load pre-made processing **presets** onto each channel, specifically designed to apply speaker-specific settings. These presets can be created using the speaker preset creator or can be supplied by speaker manufacturers.

It's important to note that a **speaker preset** doesn't alter the parameters of the USER processing; instead, it introduces an entirely new layer of processing on top of the existing USER and GROUP processing. You can manage and load these presets as follows:



Adding presets to the library

By default, the library consists only of the **Factory Folder**, containing a blank preset.
You can upload new presets to the library either in bundles or as individual files.

To upload a **bundle** of presets: (.cpspkrfr extention)

- **Create** and **name** a new **folder** and **select** it.
- Press **Upload Folder** and select the .cpspkrfr file from your computer.
- Press **Upload in folder** to confirm.

To upload a **single** preset file (.cpspkr extention)

- Select a user folder.
- Press **Upload Preset** and select the .cpspkr file from your computer.
- Press **Upload** to confirm.

Folder can be renamed with the **Rename** button.

Both folders and individual presets can be removed with the **Delete Folder** and **Delete Preset** buttons.

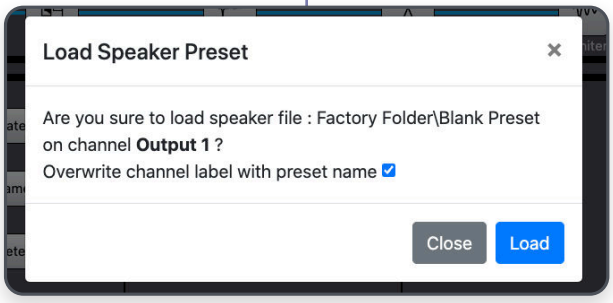
Loading a preset onto a channel

- Make sure to have the correct channel selected.
- Select the desired preset from a folder.
- Press Load.

  A popup will ask for confirmation and offer to replace the channel label with the preset name.
- Click **Load** to confirm and apply the preset.

The name of the preset should be shown in the USER menu header between *Limiter* and *Speaker*.

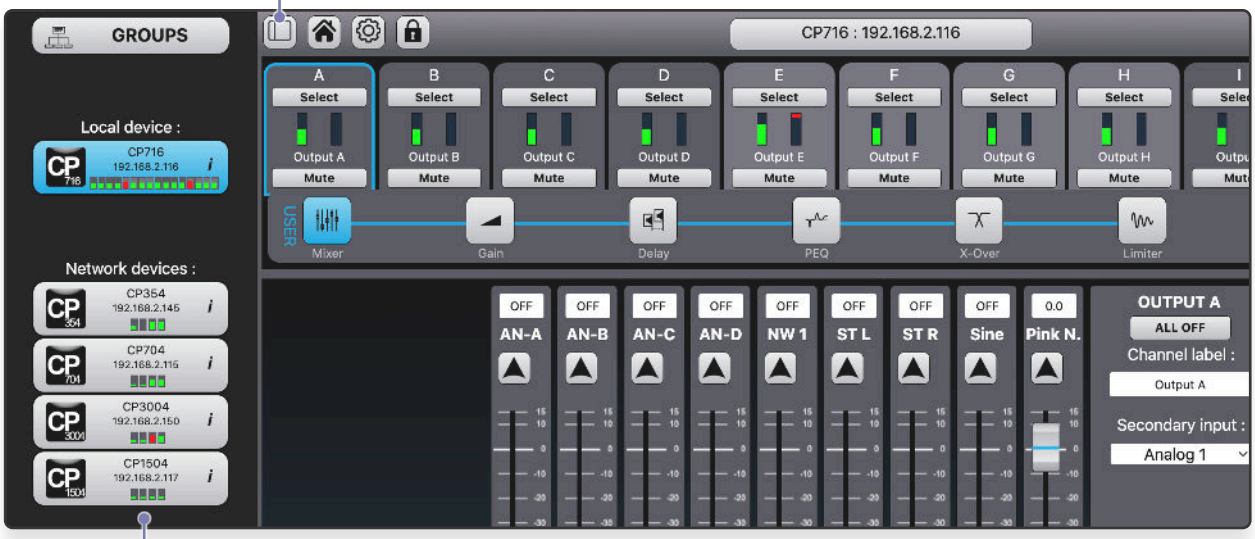
In the library, the active preset is highlighted between angle brackets: **>name<**



Sidebar Menu | Network Devices

The sidebar menu grands access to the network devices and the GROUP processing.

Click the **Sidebar** button to exand it



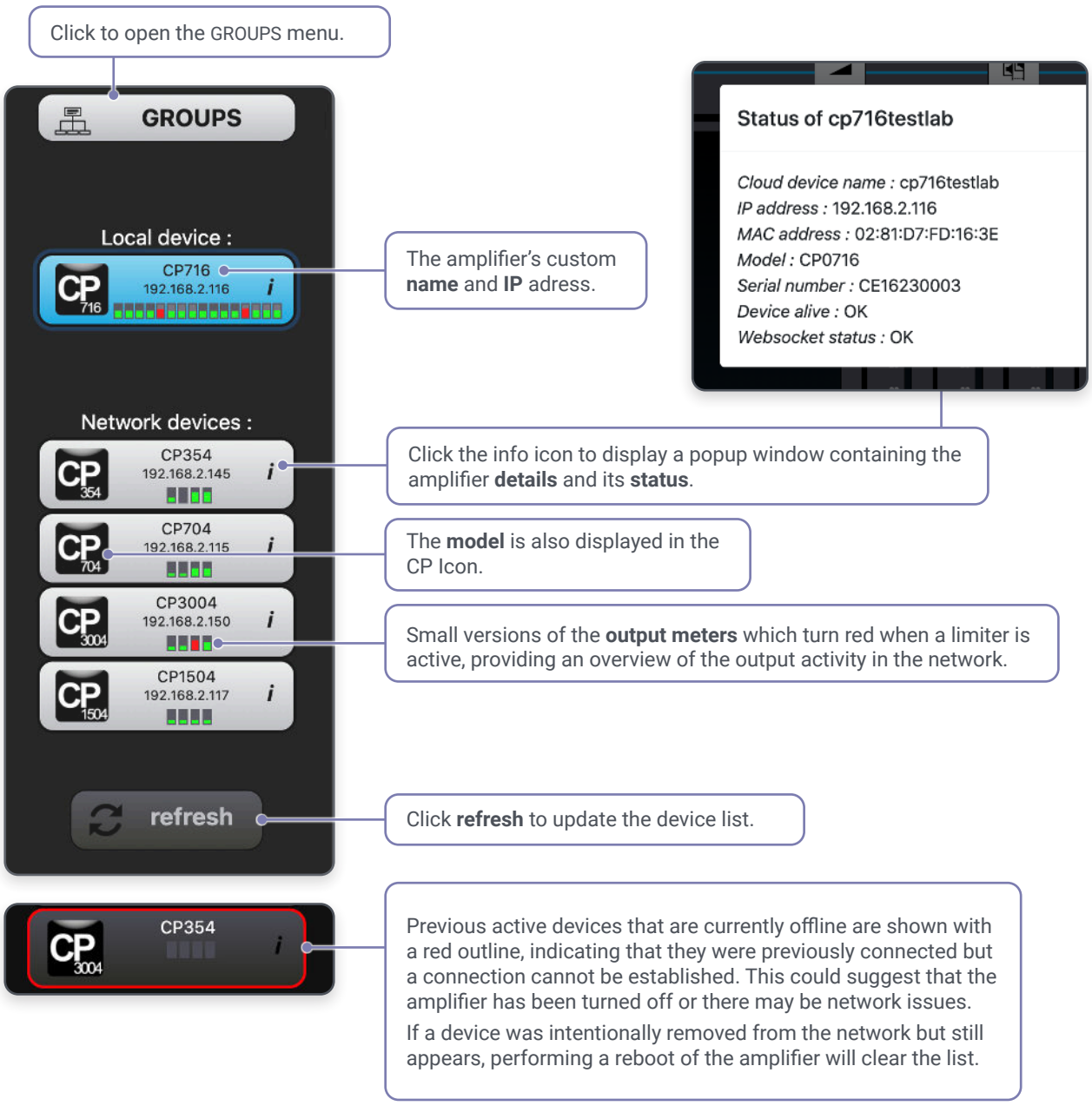
The sidebar displays the currently connected device as the "**Local device**," and it lists other CloudPower™ amplifiers in the network as "**Network devices**."



When you select another CloudPower™ amplifier within the network, its USER interface will be displayed, allowing you to operate it.

Important: To access other devices through "Network devices" in the sidebar menu, it's necessary that all CloudPower™ devices on the network use **the same login credentials**.

Sidebar Features



GROUPS

Groups offer robust control over all the channels within a system. Amplifier channels can be linked to several groups, with each channel potentially belonging to up to six distinct groups. Modifying group settings will impact all amplifier channels within the network assigned to that specific group.

Employing multiple groups can be useful in logically segmenting a expansive system. For instance, amplifier channels responsible for a restaurant area can be grouped together to establish a restaurant sub-master. A master group can also be formed, granting access to system-wide EQ and level adjustments, enabling instantaneous modifications across all amplifier channels in the network.

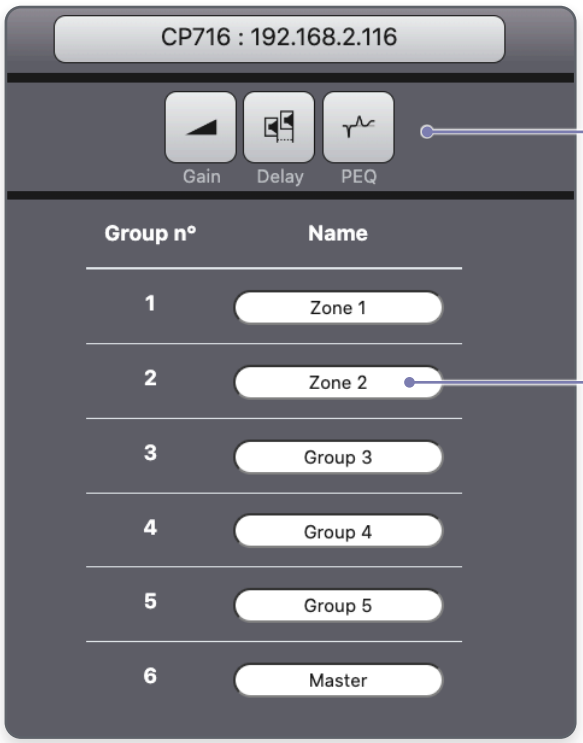
Edit Groups

The first thing you want to do is give your groups a custom name. This is done in the **Edit Group** menu.

With the sidebar expanded, click on **GROUPS** to open the menu.

Click on **Edit Groups** to access the page where you can customize the names of the six groups.





The three GROUP processing menus.

Enter custom **names** for your groups.

When controlling multiple devices from the same web interface, please ensure all devices have the same login credentials.

Assign Groups

Next, you'll want to assign the channels to one or multiple groups. You can easily do this using the routing matrix in the **Group Assign** menu.

Click on **Assign Groups** to show the routing matrix.

Click on the amplifier **headers** to show their channels in the matrix.
The selected amplifiers header is **blue**.



Assign the amplifier's channels to the groups by pressing the buttons in the matrix.
Green buttons indicate assignment.

Clear all assignments for the selected amplifier with the **Dot** button.

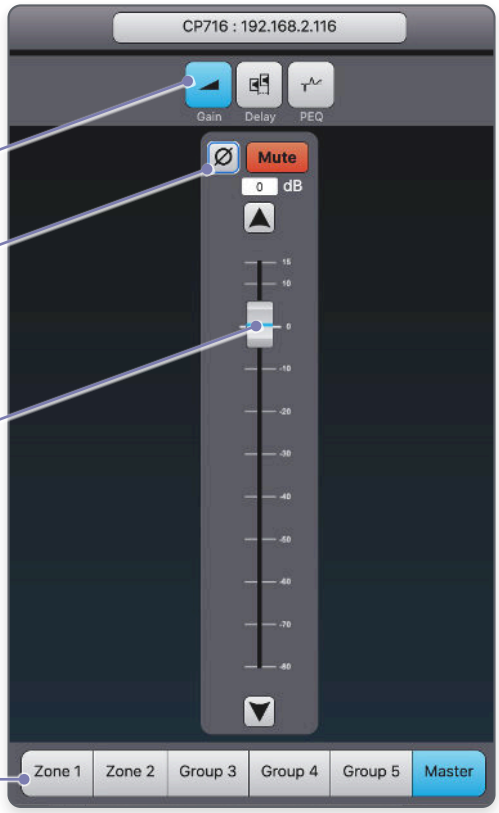
Toggle the **Arrow** buttons to **expand or collaps** the submenus.
The two arrows at the top allow you to expand and collapse **all** submenus.

The grey and green **dots** offer a clear **overview** of the assignments.

When controlling multiple devices from the same web interface, please ensure all devices have the same login credentials.

GROUP / Gain

You are now ready to start using the GROUP processing. First in the chain is the **GROUP Gain**. Be sure to select the correct group at the bottom of the screen first.



Click **Gain** to access the gain contols.

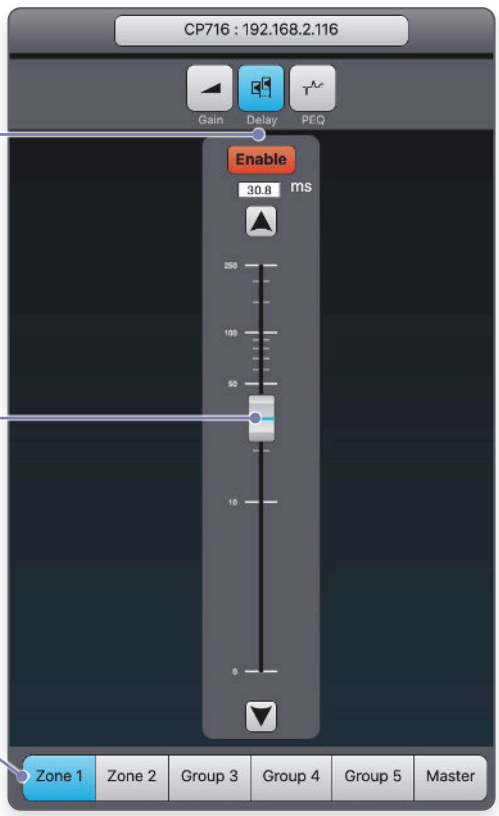
Click the phase button to flip the **Polarty** of every channel in the group with 180°.
Click **Mute** to silence every channel in the group.

Gain Fader
Relatively add or subtract gain from every channel assigned to this group. The range is between -80 and +15 dB.

Select which group to operate.

GROUP / Delay

In the delay window you can adjust the **GROUP Delay**.



Click **Delay** to access the delay contols.
Enable toggles the delay on or off.

Delay Fader
Relatively add up to 250 ms of delay to every channel of this group.
Note: the 250 ms is shared with the USER delay time.

Select which group to operate.

GROUP / PEQ

The **GROUP PEQ** enables you to apply an additional layer of EQ processing to all the channels assigned to the group. If a single channel is assigned to multiple groups, it will undergo processing from all the PEQs of those groups.

The GROUP PEQ works exactly the same way as the USER PEQ.
For a detailed explanation, refer to the corresponding section in the manual on page 38.



When controlling multiple devices from the same web interface, please ensure all devices have the same login credentials.

Web UI / Settings Menu

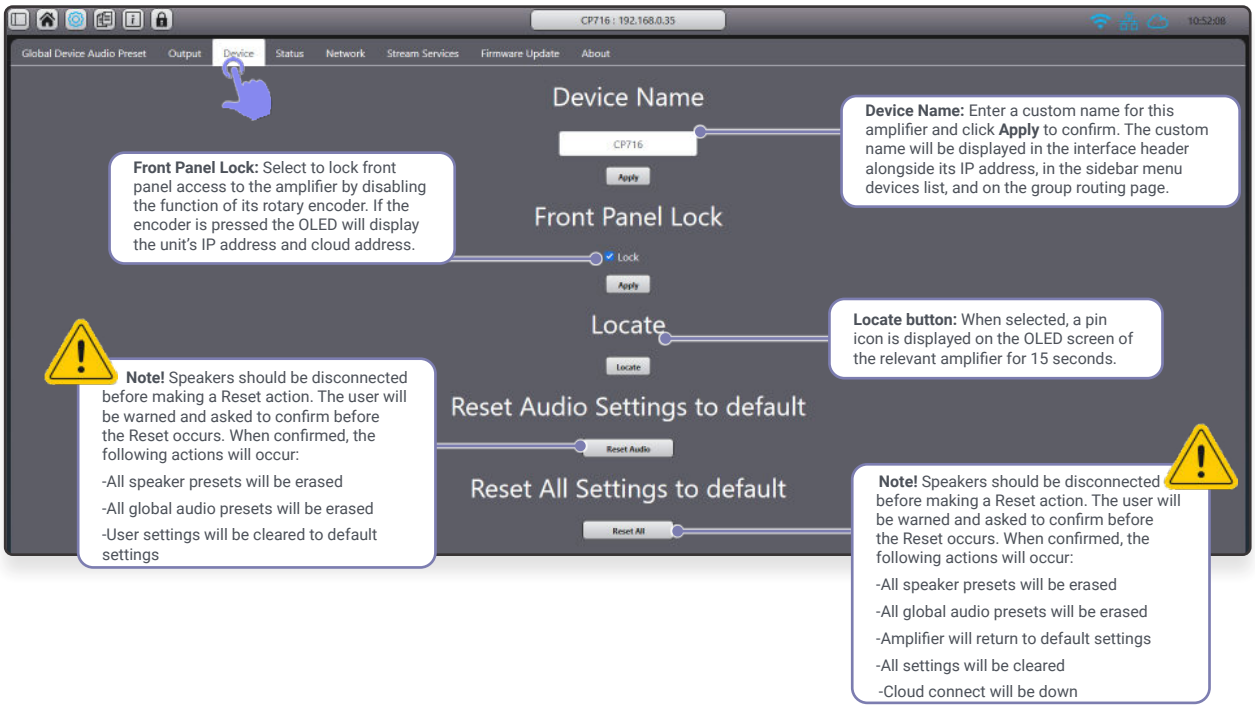
To access the CloudPower™ settings menu, click on the gear icon located in the interface's header. This will open a new page with various setting tabs.



Click on the **Gear** icon in the interface's header to open the **settings** menu.

Web UI / Settings / Device Name

In the **Device Name** tab, you have the option to assign a custom name to your amplifier.



Web UI / Settings / Global Presets Library

Global Preset files contains all audio DSP settings of every channels of the amplifier, including: USER, GROUP and SPEAKER PRESET parameters.

They do not contain any other settings found in the settings menu such as: Output operation and configuration (100V HPF, bridge mode), network settings and streaming account details.



Saving and Loading Presets

By default, the library includes only the **Default Folder**, which contains a **Default Preset** that resets all parameters when loaded.

To **save** the current settings **as** a new preset:

- **Create** and **name** a new user folder.
- With a user folder selected, press **Save As Preset.**
- In the popup window, enter a **name** for the preset and press **Save As Preset** to confirm.

To **overwrite** an existing preset:

- Select the preset and press **Save Preset.**
- In the popup window, press **Save Preset** to confirm.

To **Load** a global preset:

- Select the preset and press **Load Preset.**
- In the popup window, press **Load Preset** to confirm.

Uploading and Downloading Presets

The user-made global presets can be downloaded and uploaded.
These files have a .cpglob extension.

To **Download** a global preset:

- Select it and press **Download Preset.**

To **Upload** a global preset:

- Select the folder where you want to place it.
- Press **Upload Preset.**
- In the popup window, localise the .cpglob file on your device and press **Upload.**

Folders and individual presets can be removed with the **Delete** buttons.

CAUTION

Exercise caution when loading user-made global presets, as they may contain high gain settings that can result in sudden loud volume output, potentially causing speaker or hearing damage.

When loading the **default** global preset, the amplifier will **mute** all outputs to prevent this.

Web UI / Settings / Output Mode

In the output window, you have the option to configure channel **bridging** for both A-B (1-2) and C-D (3-4) on the 4-channel CP354 and CP704 models. When the bridge mode is enabled, refer to the diagram below for the correct wiring configuration of the output terminals.

Additionally, there's a **70/100V mode** available per channel. This mode applies a **100Hz 12dB/octave High-Pass Filter** at the final processing stage. The HPF is designed to prevent distortion and potential damage to transformers. Apart from the HPF, this mode does not affect the amplifier's operation.

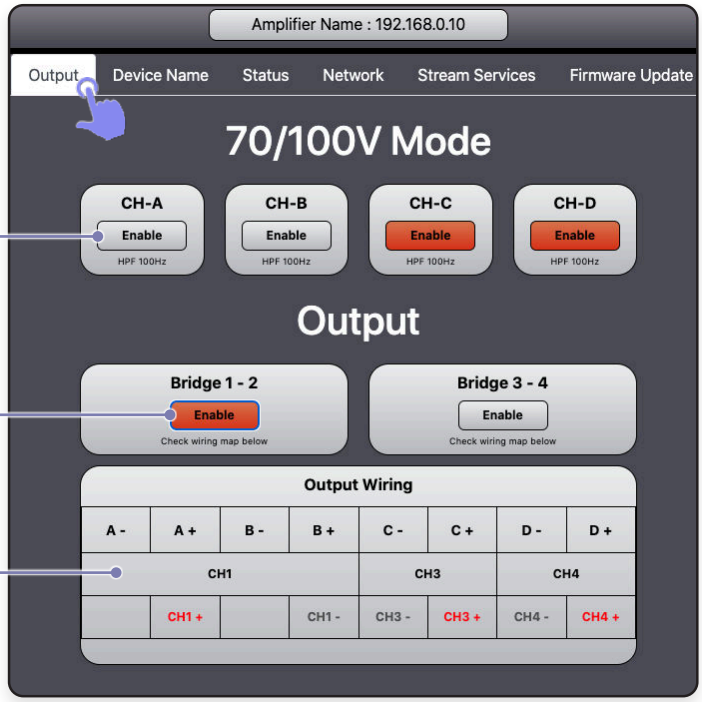
Keep in mind that any adjustments made within the Output window will not be stored in the global presets.

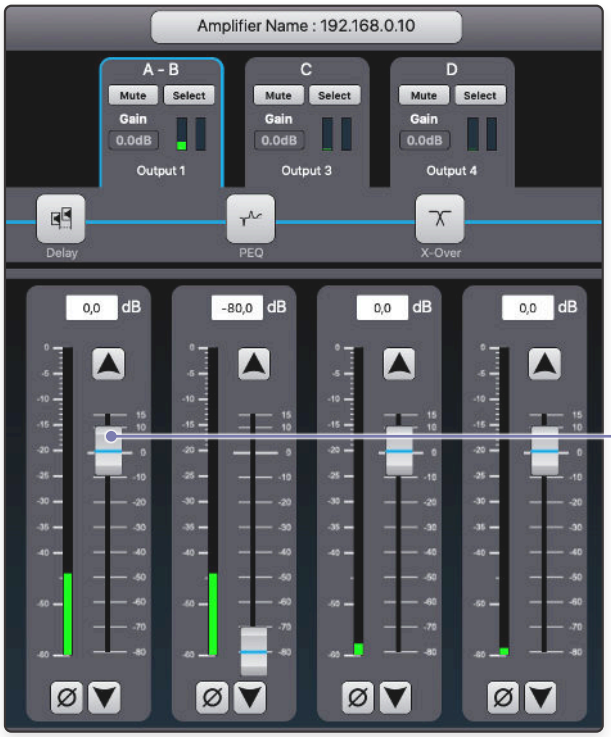
Press **Enable** to turn on the 70/100V **100Hz 12dB/octavte HPF**.

Press **Enable** to **bridge** adjacent channels on the 4-channel models.

The **Output Wiring** diagram illustrates how to connect the terminals.

Bridged speakers are connected between the positive poles of both amplifier channels, the negative poles are not used.





Please note:
Bridging is only available for the following models:
- CP354 / 354D
- CP704 / 704D

When **bridged**, the channel headers of the two channels will merge. Please note that only channels A and C settings are retained after switching to bridge mode.

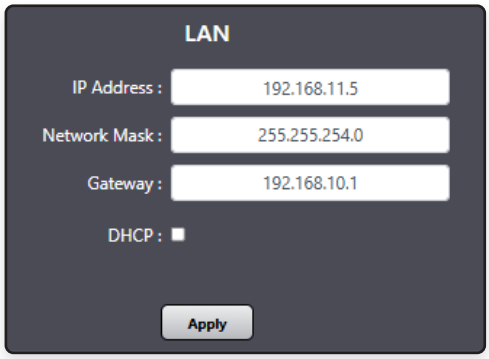
The gain and delay faders of the first channel (A and C) will control the bridged channel.

Web UI / Settings / Network

In the network tab, you can access all network-related settings, including the device's LAN, hotspot and cloud settings, and login credentials.

LAN

The LAN section gives control over the amplifiers IP configuration.



IP
In DHCP mode, an IP address will be automatically displayed when a connection is established with the router.
In static mode, you need to manually enter an IP address.

Subnet Mask
For DHCP mode, the subnet will also be automatically displayed when the connection is established.
In static mode, you must manually enter the subnet mask.

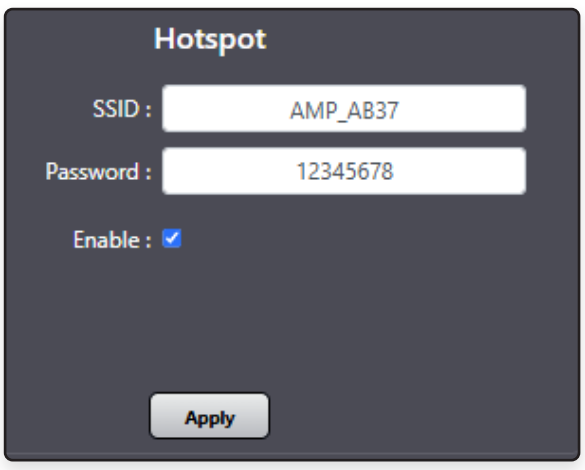
Gateway
For DHCP mode, the gateway will also be automatically filled in.
In static mode, provide the router's address, typically ending with "1".

Connect via a router
Connect the CloudPower™ device(s) CONTROL connector together with a PC to a router. The use of a router is mandatory in DHCP mode to obtain IP addresses. After a connection is established with the router, the CloudPower™ device will receive an IP address that will be displayed in the network menu. Enter this address in your device's browser, and the IntelliCloud software will open on your device.

Hotspot

Each CloudPower™ amplifier features a Hotspot, enabling users to control the amplifier using any mobile device (smartphone, tablet, or laptop) without needing access to the local network to which the amplifier is connected through its CONTROL port. The CloudPower™ software is web-based, eliminating the need for software installation. Its primary purpose is to ensure accessibility to the web interface when the LAN cannot be accessed or is experiencing issues.

Activate the **Hotspot** by ticking the checkbox. Then search for the **SSID** name within your device's available Wi-Fi networks. Connect to the hotspot and enter IP address **172.24.0.1** in your browser's URL. This will automatically open the IntelliCloud web interface on your device.



SSID is the name of the generated hotspot, which you can find in your list of available Wi-Fi networks.

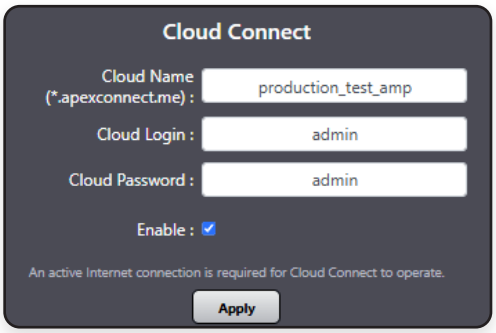
The **Password** will be prompted by your device when attempting to connect to the hotspot.

After making changes to either the name or password, click the **Apply.**Both can also be viewed from the front panel.

Please note that the web interface will also prompt you for a login and password. By default, both are set to "**admin**" and can be altered in the credentials section of this menu.

Cloud Connect | Remote Access

Every CloudPower™ amplifier is equipped with a Cloud feature. This feature enables users to remotely manage the amplifier via the internet. To enable this, the CONTROL port (on the rear side of the amplifier) must be connected to a router with an internet connection. Using a secure connection, users can operate the amplifier and all other CloudPower™ devices within the same network from anywhere in the world.



Enter a cloud name for your device enable, check **ENABLE** and click **Apply**.

The name can only consist of alphanumeric characters and must be minimum 10 characters in length.

When assigning cloud names to your amplifiers, make sure to create unique names by including detailed descriptions or codes. This ensures that no two CloudPower™ amplifiers in the world share the same cloud name. For example: “AmpCompanyLocationA1234”

With the Cloud feature enabled, open a web browser connected to the internet and enter the following URL:

http://cloudname.apexconnect.me

This will enable you to connect to the amplifier, which will then prompt you for the login and password. By default, both are set to “**admin**”.

Note: You will be prompted for the login credentials twice — first by the relay server, and then by the amplifier’s server. Both sets of credentials are the same.

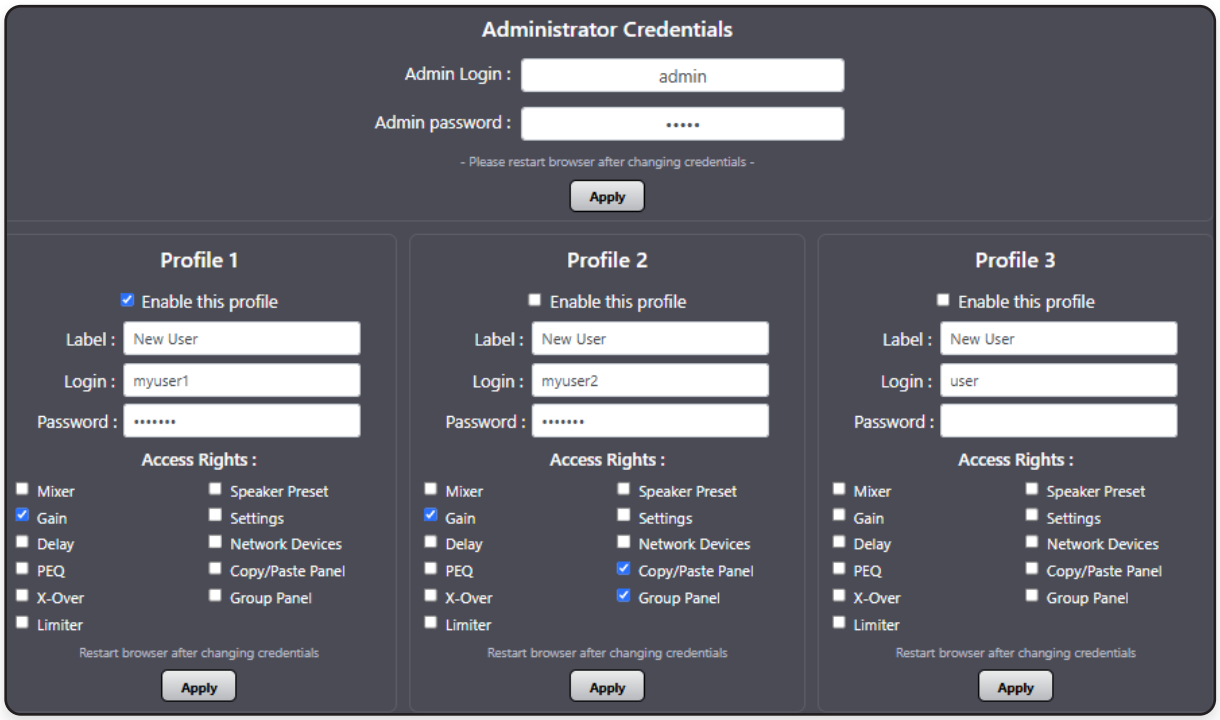
Please take note:
When multiple CloudPower™ amplifiers are installed within a single network, accessing one amplifier through the Cloud will provide access to all other amplifiers via the sidebar menu in the IntelliCloud web UI.
However, we recommend enabling the cloud feature for all amplifiers individually. This allows each amplifier to be accessed directly, without relying on the functionality of another unit.

User Profiles

This page allows for Administrator Credentials and user profiles. This gives a total of 4 profiles

Alter editing this page, click **Apply** to confirm the changes.

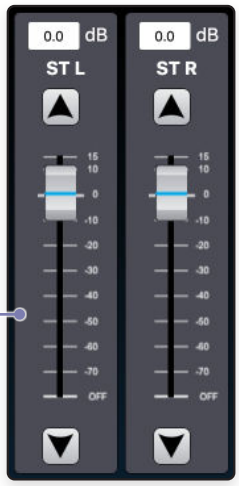
You must also restart your browser



Web UI / Settings / Stream Services

CloudPower™ is the first amplifier in its class with an integrated audio source and streaming capability, allowing easy streaming of background music from devices running apps such as Spotify or AirPlay.

Please note it is not possible to stream Spotify and Airplay simultaneously.



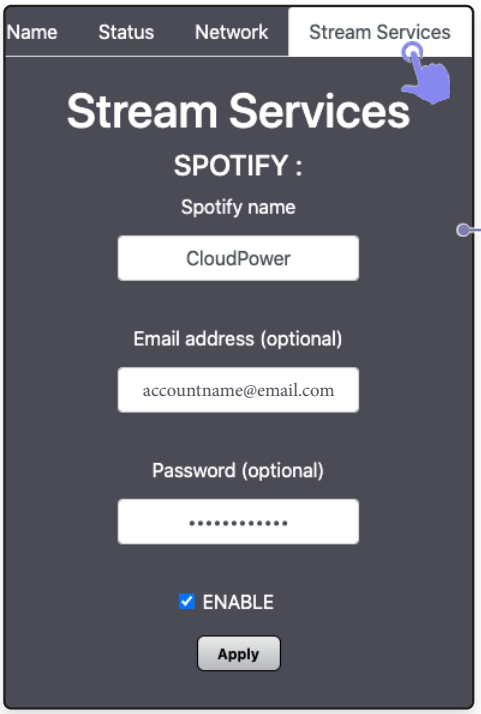
The output from the streaming sources will be audible through the **ST L** and **ST R** faders located in the **Mixer** of the **USER** section.

In a **stereo** setup, one channel will carry ST L, while an other channel will carry ST R.

In a **mono** setup, both ST L and ST R signals need to be combined.

Spotify

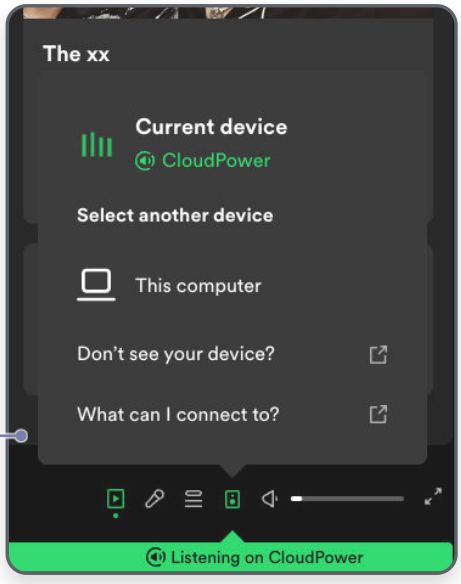
If enabled, the CloudPower™ will function as a playback device for Spotify applications on the same network. If premium account credentials are supplied, only that account will be able to connect with the amplifier, and playback can be controlled from multiple locations.



Spotify name
This is the name that will be displayed in the playback devices of your Spotify interface.

Email Address & Password
Optionally, you can choose to provide the credentials of your premium Spotify account. This will enable you to play music from various locations and restrict access to non-public users.

Mark the **ENABLE** checkbox and then click on **Apply** to confirm the changes.



Open your **Spotify** application.

In your list of **playback devices**, you will find the custom CloudPower name available for selection.

Upon connection, the volume will be initially set to around 10% to prevent sudden loudness.
Adjust the fader to achieve a suitable volume level.

Apple Airplay

AirPlay streaming can be enabled and customized. Ensure that your mobile device is connected to the same network as your CloudPower™ device.



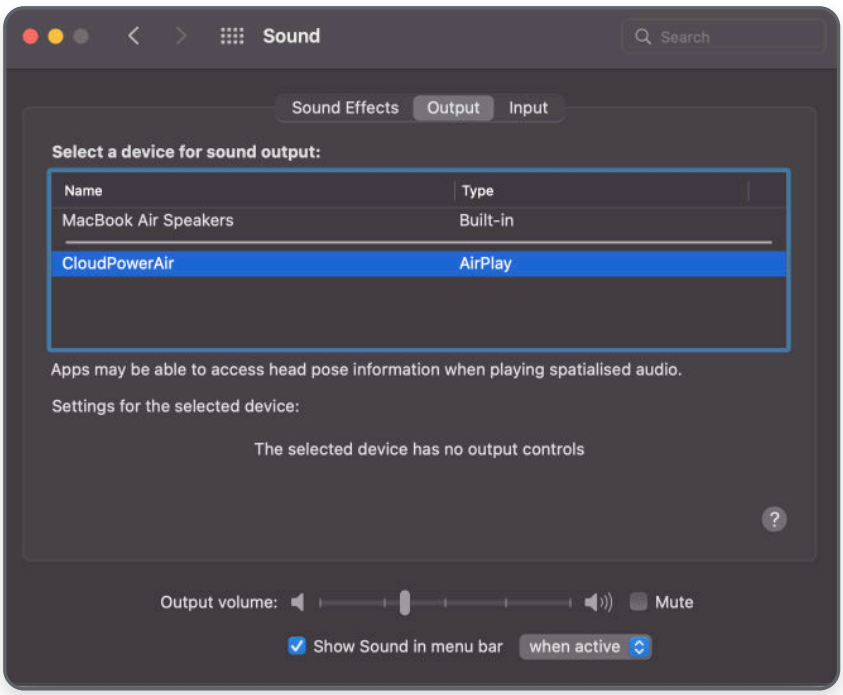
Airplay name
This is the name that will be displayed on your devices.

Password
Optionally, you can set a password to prevent unauthorized individuals from connecting to the CloudPower.

Check **ENABLE** and then click **Apply**.

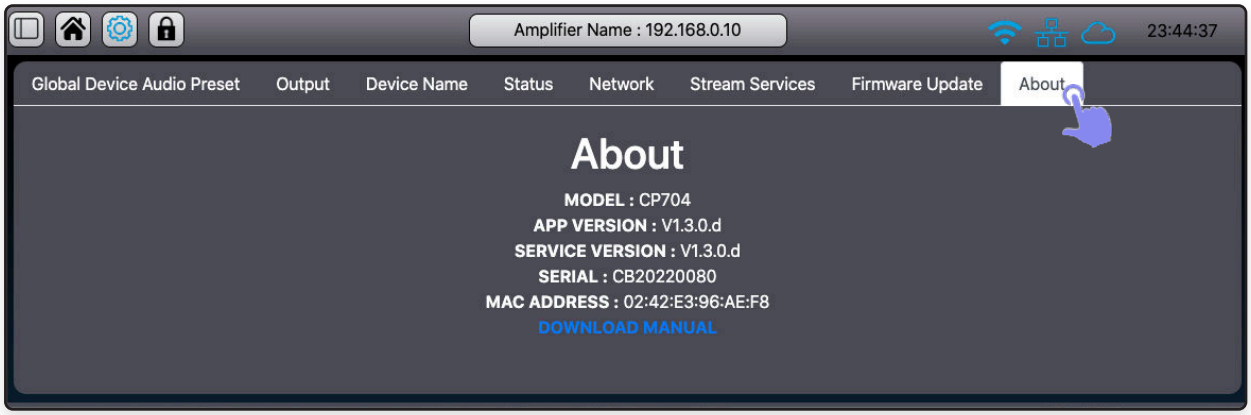
The CloudPower should now appear among the selectable devices that support AirPlay.

When you connect, the volume will initially be set to approximately 30% to avoid sudden loudness. Adjust the volume to reach a suitable level.



Web UI / Settings / About

Lastly, the **About** menu will present the device's model, serial number, MAC address, and current firmware version. You can also download the latest manual from this section.



Copy Channel Parameters

The Copy Channel Parameters tool saves time during configuration by allowing selected parameters (Mixer, Gain, PEQ, Xover, Limiter, Preset) from an amplifier channel to be copied and pasted to one or more of an amplifier's other channels.



Speaker Preset Creator

The web interface hosts its own **Preset Creator** software for designing speaker presets.
To access this feature, simply add "/preset.html" after the IP address in the URL. When controlling a 16 channel amplifier add "/preset16.html" after the IP address in the URL.

For instance: http://192.168.0.10/preset**.html**
http://192.168.0.10/preset16**.html**

Access to this preset creator page can be secured with an OEM code if necessary.
The control interface operates similarly to the USER and GROUP interfaces, with a few exceptions.

Mute will mute or unmute the amplifier's channel output. This status is not saved within the preset.
Select is used to select the channel to which the connected speaker is allocated while designing a preset.

When a modification is made within any of the submenus, the **ON/OFF** led's will turn to a green **ON** status indicating processing is active.
You can remove the processing on that element using the **CLEAR** button.

Access and **Manage** the preset library.



Added capability to incorporate a **FIR filter** with 768 taps.
To activate the filter:

- Press the filter icon.
- Locate the file on your computer.
- Confirm to upload.
- Toggle the latch switch to the on position.

The X-Over's **Enable Overwrite** feature permits users to modify the crossover frequency of a protected speaker preset using the USER controls.

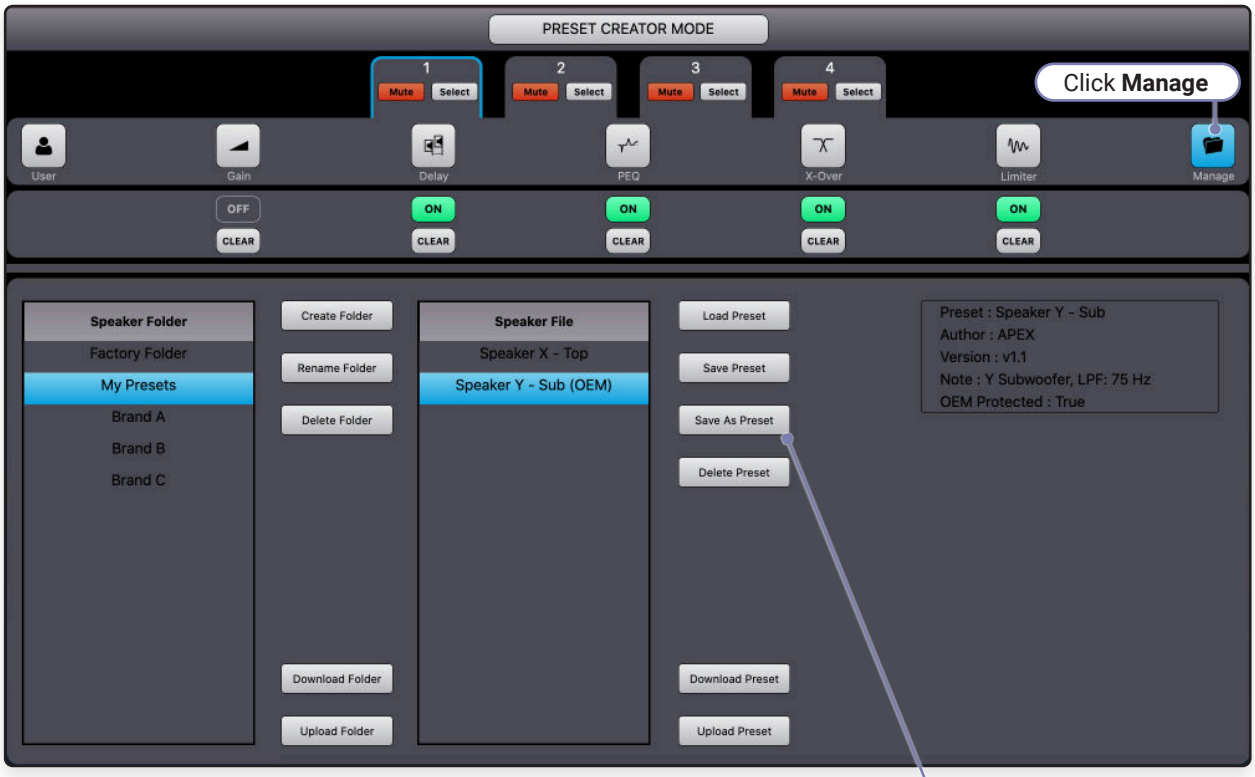
The frequency specified here becomes the minimum for the HPF or the maximum for the LPF, but it can be adjusted in the opposite direction to attenuate frequencies.

Usage example: The top speaker preset can operate with various subwoofers. Depending on the specific subwoofer in use, adjustments can be made to the top speaker's HPF settings.

The **Delay** function is designed for phase alignment and can be adjusted up to 30 milliseconds.
The **Gain** fader offers additional information regarding the output voltage.
The **Limiter** functions in the same manner as with the user controls.

Speaker Preset Library

After designing a preset, it can be stored in the **speaker preset library** and optionally protected with an OEM code. These presets can be included with the amplifier upon shipping or made available through a speaker manufacturer's website.



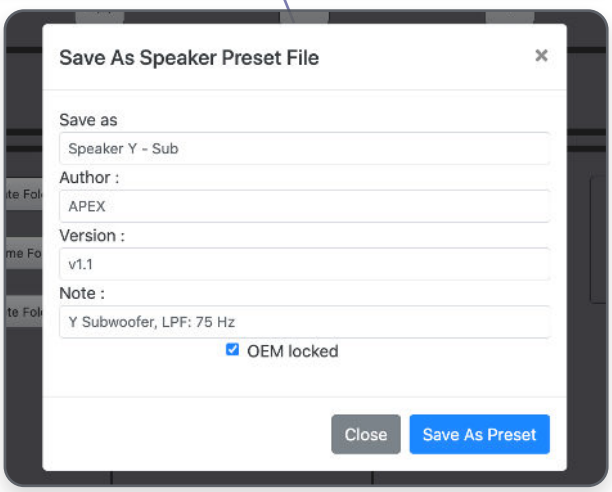
New speaker presets can be saved in **User Folders** using the **Save As Preset** button.

Each preset's name must be unique within the same folder. Trying to use **Save As Preset** with a name that's already in the folder won't work.

To **overwrite** a preset, select it and then press **Save Preset.**

When **saving as** presets, you can add extra information like author, version, and notes. You can also choose to lock presets using an OEM code.

The **OEM locked** presets are specific to amplifiers sharing the same OEM code and cannot be used on amplifiers without the same code.



If **multiple** presets are created and stored together in one folder, they can be **downloaded** as a **bundle** using the **.cpspkrfr** extension.

- **Select** the folder and press **Download Folder.**

To download **individual** presets with the **.cpspkr** extension,

- **Select** the preset and press **Download Preset.**

Folders and individual presets can be removed with the **Delete Folder** and **Delete Preset** buttons.

Upload presets as bundles (**.cpspkrfr** extension)

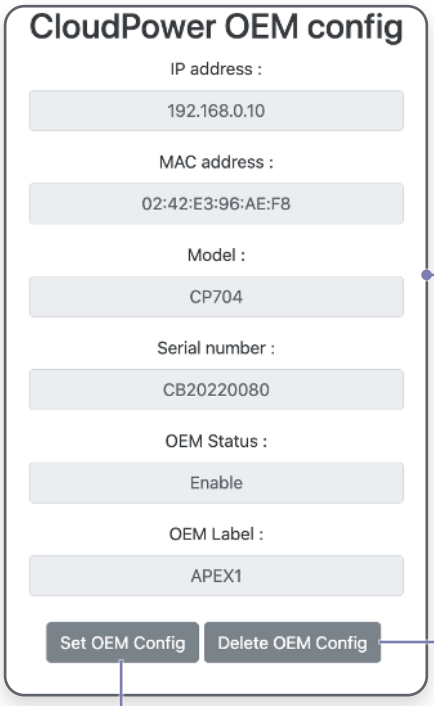
- **Create, name** and **select** a new user folder.
- Press **Upload Folder.**
- In the popup window, localise the .cpspkrfr file on your device and press **Upload in folder.**

Upload individual presets (**.cpspkr** extension)

- **Select** a user folder.
- Press **Upload Preset.**
- In the popup window, localise the .cpspkr file on your device and press **Upload.**

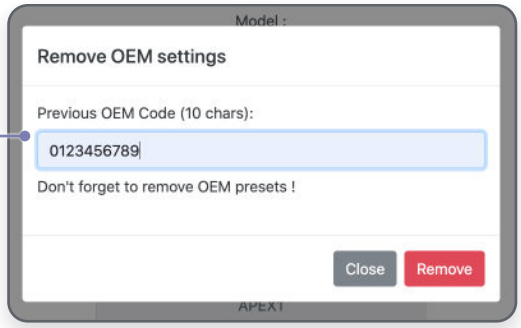
OEM Configuration

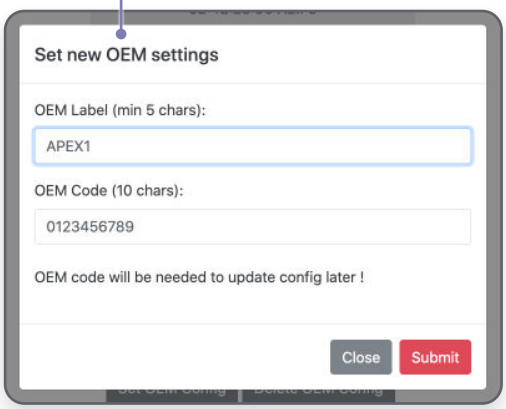
To secure the speaker creator and avoid incorrect presets from being loaded, an OEM code can be set in the OEM Config window. To reach this page, add "/oem.html" after the IP address in the URL.
For example: http://192.168.0.10**/oem.html**



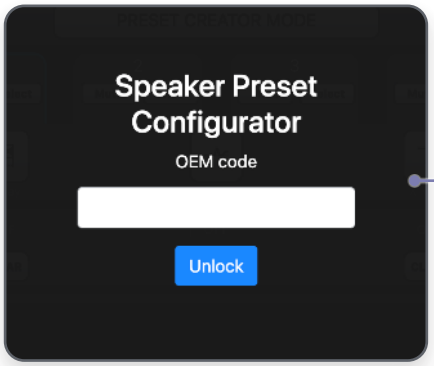
To **set up** an OEM configuration:
- Click **Set OEM Config**
- Enter an **OEM Label** and **OEM Code** and **Submit**

To **remove** the OEM configuration:
- Click **Delete OEM Config**
- Enter the **OEM Code** and click **Remove**





Speaker Presets created under the OEM locked checkbox are now linked to this OEM code. They cannot be uploaded or downloaded to an amplifier unless the same OEM code is set up on that amplifier.



When an OEM mode is set up, you will need the OEM code to be able to access the **Speaker Preset Creator**.