Simply Better Connections

AP206 / AP212

Power Amplifier with DSP

User Manual

Compliance Statements

FEDERAL COMMUNICATIONS COMMISSION INTERFERENCE STATEMENT
This equipment has been tested and found to comply with the limits for a Class B digital service, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. Any changes or modifications made to this equipment may void the user's authority to operate this equipment. This equipment generates, uses, and can radiate radio frequency energy. If not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

E3914

KCC Statement

유선 제품용 / B 급 기기 (가정용 방송 통신 기기)
이 기기는 가정용 (B 급) 전자파적합기기로서 주로 가정에서 사용하는 것을 목적으로 하며 , 모든 지역에서 사용할 수 있습니다 .

Industry Canada Statement
This Class B digital apparatus complies with Canadian ICES-003.

CAN ICES-003 (B) / NMB-003 (B)

Trademark Statement
Audinate®, the Audinate logo and Dante are trademarks of Audinate Pty Ltd.
https://www.audinate.com/legal/patents-and-trademarks

RoHS
This product is RoHS compliant.

User Information

Online Registration

Be sure to register your product at our online support center:

International	http://eservice.aten.com

Telephone Support

For telephone support, call this number:

International	886-2-8692-6959
China	86-400-810-0-810
Japan	81-3-5615-5811
Korea	82-2-467-6789
North America	1-888-999-ATEN ext 4988 1-949-428-1111

User Notice

All information, documentation, and specifications contained in this manual are subject to change without prior notification by the manufacturer. The manufacturer makes no representations or warranties, either expressed or implied, with respect to the contents hereof and specifically disclaims any warranties as to merchantability or fitness for any particular purpose. Any of the manufacturer's software described in this manual is sold or licensed *as is*. Should the programs prove defective following their purchase, the buyer (and not the manufacturer, its distributor, or its dealer), assumes the entire cost of all necessary servicing, repair and any incidental or consequential damages resulting from any defect in the software.

The manufacturer of this system is not responsible for any radio and/or TV interference caused by unauthorized modifications to this device. It is the responsibility of the user to correct such interference.

The manufacturer is not responsible for any damage incurred in the operation of this system if the correct operational voltage setting was not selected prior to operation. PLEASE VERIFY THAT THE VOLTAGE SETTING IS CORRECT BEFORE USE.

Product Information

For information about all ATEN products and how they can help you connect without limits, visit ATEN on the Web or contact an ATEN Authorized Reseller. Visit ATEN on the Web for a list of locations and telephone numbers:

International	http://www.aten.com
North America	http://www.aten-usa.com

Package Contents

Check to make sure that all the components are in working order. If you encounter any problem, please contact your dealer.

- 1 AP206 / AP212 Power Amplifier with DSP
- 1 rack mount / surface mount kit
- 1 foot pad set (4 pcs)
- 2 3-pin Euroblock connectors with strain relief (3.5mm)
- 1 5-pin Euroblock connector with strain relief (3.5mm)
- 1 4-pin Euroblock connector with screw lock (5.08mm)
- 1 3-pin Euroblock connector (3.5mm)
- 1 power cord
- 1 user instructions

Table of Contents

3. Operation

Appendix

About this Manual

This user manual is provided to help you get the most from the AP206 / AP212 unit. It covers all aspects of installation, configuration, and operation. Devices and accessories covered in this manual include:

Models	Product Names
AP206	2 × 60W Power Amplifier with DSP
AP212	2 × 120W Power Amplifier with DSP
AP901	2-CH Dante Expansion Card for AP Series
AP902	2-CH Mic/Line Pre-AMP Expansion Card for AP Series

An overview of the information found in the manual is provided below.

Chapter 1, *Introduction* introduces you to the AP206 (2 × 60W) / AP212 (2 × 120W) Power Amplifier with DSP. Its purpose, features, installation considerations, and panel components are presented and described.

Chapter 2, *Hardware Setup* describes the steps that are necessary to quickly and safely set up your installation.

Chapter 3, *Operation* specifies how to process the web control and configuration for the unit through the Ethernet connection

Appendix, provides a list of safety instructions and precautions, contact information for ATEN technical support, product specifications, and other technical information.

Note:

- Read this manual thoroughly and follow the installation and operation procedures carefully to prevent any damage to the unit or any connected devices.
- This product may be updated, with features and functions added, improved or removed since the release of this manual. For an up-to-date user manual, visit http://www.aten.com/global/en/

Conventions

This manual uses the following conventions:

`Monospaced`	Indicates text that you should key in.
[ ]	Indicates keys you should press. For example, [Enter] means to press the **Enter** key. If keys need to be chorded, they appear together in the same bracket with a plus sign between them: [Ctrl+Alt].
1.	Numbered lists represent procedures with sequential steps.
♦	Bullet lists provide information, but do not involve sequential steps.
>	Indicates selecting the option (on a menu or dialog box, for example), that comes next. For example, Start > Run means to open the *Start* menu, and then select *Run*.
	Indicates critical information.

Chapter 1
Introduction

Overview

ATEN AP206 / AP212 is a dual-channel DSP-equipped amplifier that delivers 60 / 120 W per channel in a compact enclosure. The support for balanced / unbalanced line level inputs and the capability of driving 4 ohm low impedance or 70/100V line (in Bridge mode) loudspeaker systems have made AP206 / AP212 suit a wide range of public address applications. Configurable through an intuitive WebGUI, the built-in DSP allows Speaker EQ, 5-band EQ, delay, limiter, and up to 20 presets for precise tuning and extensive audio system protection purposes. Ground lift is deployed to eliminate unwanted hum noises from power circuit. Customizable Auto Standby mode enables the AP206 / AP212 to automatically switch to “sleep” when the signal level comes lower than -40 / -50 dBu for 10 / 15 / 25 minutes. Speaking of the system protection circuit, the AP206 / AP212, along with the speakers connected to it, are prevented from damages led by shorted outputs, over / under-voltage, high frequency overload, and overtemperature. Plus, the amplifier will be muted when the heat sink temperature exceeds the limit. The fanless design avoids fan noise and prevents dust from building up inside the chassis. Engineered to deliver the ultimate flexibility, the AP206 / AP212 features an expansion slot for plugging in AP901 2-CH Dante Expansion Card to make the sound system compatible with Dante network or AP902 2-CH Mic/Line Pre-AMP Expansion Card to receive two channels of mic / line input signals. The amplifier can also be integrated with VK Control System via RS-232 and Ethernet connection for comprehensive control even from a distance. Mounting hardware is available for rack or surface-mounting depending on the installation needs. With a rich set of features, the AP206 / AP212 assures reliable amplification with professional audio quality and high power efficiency for any enterprise-grade applications that require high quality sound reinforcement and distribution.

Features

- A dual-channel DSP-equipped amplifier that delivers 60 / 120 W per channel in a compact enclosure
- Supports balanced / unbalanced line level inputs and drives 4 ohm low impedance or 70/100V line (in Bridge mode) loudspeaker systems
- Built-in WebGUI-configurable DSP allows speaker EQ, 5-band EQ, delay, limiter, and up to 20 presets for precise tuning and system protection
- Ground lift deployed to eliminate unwanted noises from power circuit.
- Customizable Auto Standby mode — Amplifier automatically switches to “sleep” when the signal level comes lower than -40 / -50 dBu for 10 / 15 / 25 minutes
- Integrated protection circuit — Protects the system from damages caused by Amp shortcut, Amp output over/undervoltage, high frequency overload, and overtemperature
- Amplifier will be muted when the heat sink temperature exceeds the limit
- Fanless design — Avoids fan noise and prevents dust from building up
- Expansion slot for add-on expansion card — Install AP901 2-CH Dante Expansion Card to make the sound system compatible with Dante network or AP902 2-CH Mic/Line Pre-AMP Expansion Card to receive two channels of mic / line input signals
- Supports VK Control System via RS-232 and Ethernet connection
- Supports rack or surface-mounting
- Firmware upgradable

Planning the Installation

Requirements

Prepare the following before installing the AP206 / AP212 unit:

- 1 set of ceiling loudspeakers
- 1 or more audio source devices

Connecting Speakers

The AP206 and AP212 support both high-impedance (70V/100V) and low-impedance (4 Ω/8 Ω) speaker connections.

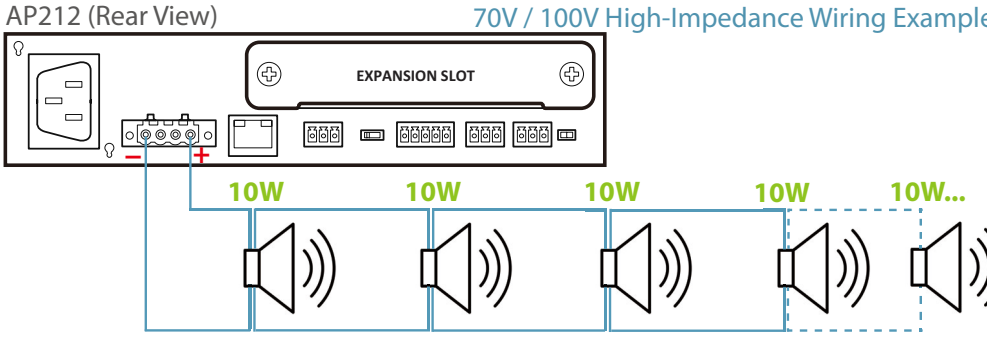
Before wiring the speakers, confirm the desired operation mode and ensure that the total load does not exceed the amplifier's rated output.

High-Impedance Connections (70V/100V)

In high-impedance installations, multiple speakers equipped with line transformers can be connected in parallel to a single amplifier output.

Each speaker's power tap determines its individual output level, while the amplifier delivers a constant voltage to all connected speakers. This configuration is commonly used in commercial or distributed sound systems where equal voltage but different wattage settings are required.

Always ensure that the sum of all speaker power taps does not exceed the amplifier's maximum rated power per channel.



Low-Impedance Connections (4 Ω / 8 Ω)

When using low-impedance speakers, the total load impedance depends on how the speakers are connected.

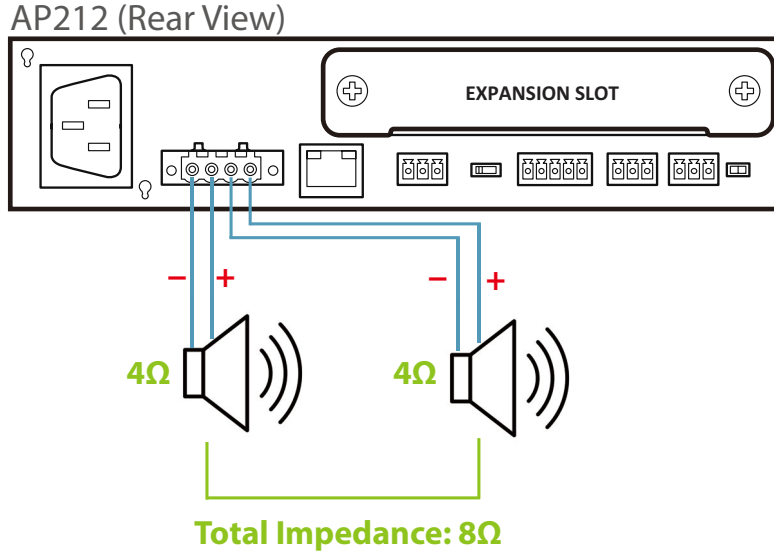
Parallel Connection

The total impedance is calculated as the reciprocal of the sum of the reciprocals of each speaker's impedance. (For example, two 8 Ω speakers in parallel result in a total impedance of 4 Ω.)

Ensure that the total impedance does not fall below the amplifier's rated output impedance.

Series Connection

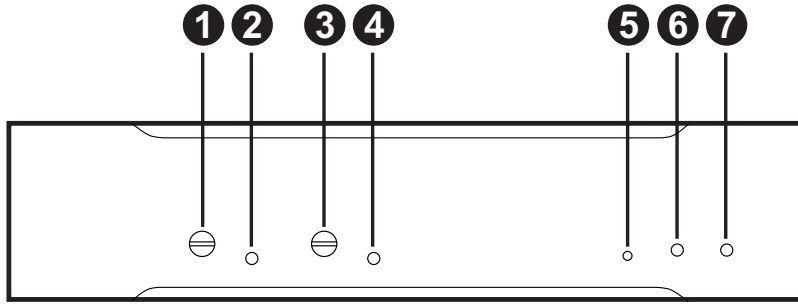
The total impedance equals the sum of each speaker's impedance. However, if one speaker fails or becomes disconnected, the signal to subsequent speakers will be interrupted. This configuration is less common and generally used only when parallel wiring is not possible.



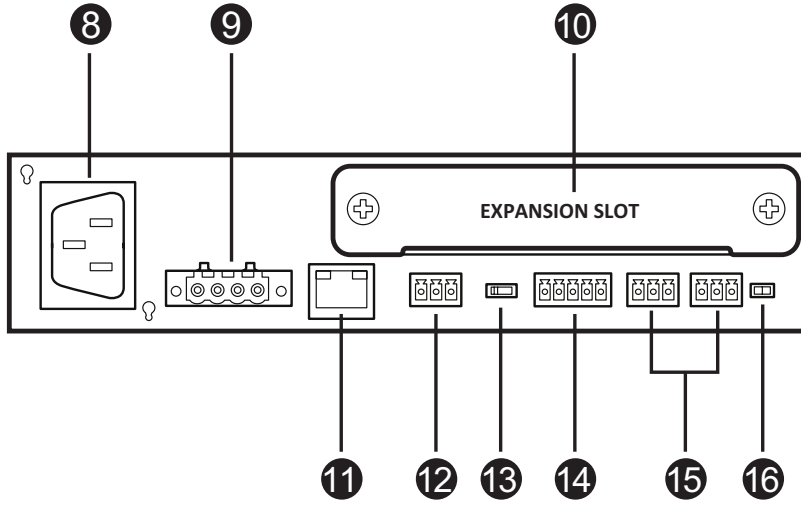
Note: Before powering on the amplifier, verify that the total load (impedance in Low-Z mode or total speaker wattage in High-Z mode) is within the rated output range to prevent damage.

Components

Front View



Rear View

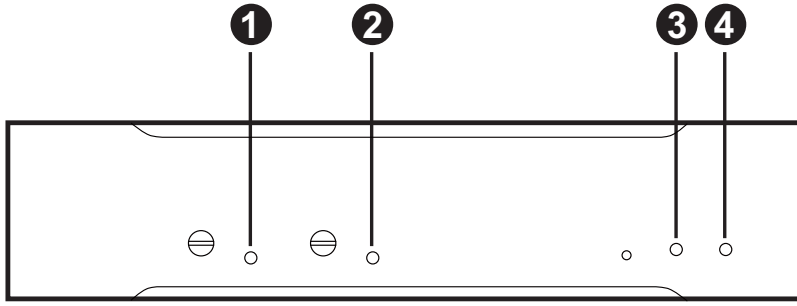


No.	Component	Description
1	volume control for channel A	Adjusts the audio output volume of channel A.

No.	Component	Description
2	signal / clip LED for channel A	Lights to indicate the audio signal status of channel A. Refer to *LED Status*, page 8 for details.
3	volume control for channel B	Adjusts the audio output volume of channel B.
4	signal / clip LED for channel B	Lights to indicate the audio signal status of channel B. Refer to *LED Status*, page 8 for details.
5	reset button	Press this button to reset the MCU of the unit.
6	standby LED	Lights to indicate the unit is in standby mode. Refer to *LED Status*, page 8 for details.
7	power LED	Lights to indicate the unit is powered on. Refer to *LED Status*, page 8 for details.
8	power socket	Connects to the power cord.
9	speaker out (4-pin Euroblock connector)	Connects to a set of passive speakers such as AS104 / AS106 / AS108.
10	expansion slot	Installs the expansion card, such as AP901 / AP902, into the expansion slot for flexible and expandable connectivity.
11	LAN port	Connects to a network switch or a PC.
12	RS-232 serial port	Connects to an ATEN Control Pad.
13	impedance switch	Adjusts the impedance between 4Ω, 70V, and 100V.
14	audio line output channel (5-pin Euroblock connector)	Connects to an active subwoofer or other audio equipment.
15	audio line input channels (3-pin Euroblock connectors)	Connects to your audio sources.
16	ground / lift switch	Switches to lift to eliminate hum noise from dirty AC electric power circuit.

LED Status

You can find the unit's LEDs on the front panel as illustrated below. See the table below for details on the LED indication.



No.	LED	Indication	Description
1	signal / clip LED for channel A	lights green	The audio signal strength is over -53dBFS.
		lights red	The audio signal strength reaches the hard-clipping limit (-3dBFS).
		off	There is no audio signal.
2	signal / clip LED for channel B	lights green	The audio signal strength is over -53dBFS.
		lights red	The audio signal strength reaches the hard-clipping limit (-3dBFS).
		off	There is no audio signal.
3	standby LED	lights amber	The unit is in standby mode and audio strength is less than -24dBu.
		blinks amber	The unit is in overheat protection mode.
		off	The unit is running and not in the standby mode.

No.	LED	Indication	Description
4	power LED	lights green	The unit is powered on.
		blinks green	Firmware upgrade of the unit is in process.
		off	The unit is powered off.

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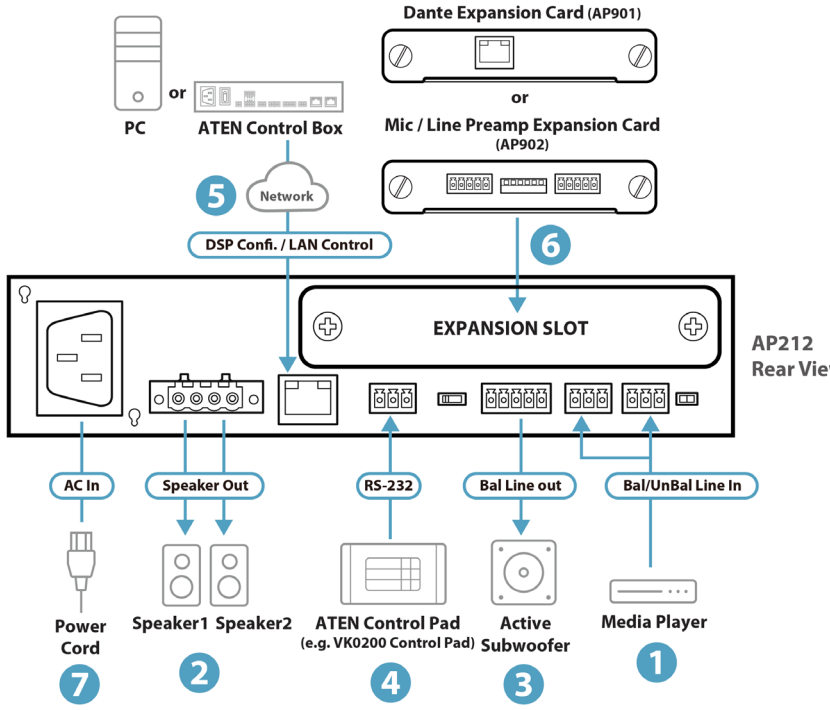
Chapter 2
Hardware Setup

1. Please review the safety information regarding the placement of this device in *Safety Instructions*, page 67.
2. Do not power on the AP206 / AP212 until all the necessary hardware is connected.

Connecting the AP206 / AP212 Unit

Follow the steps below to connect the AP206 / AP212 to audio source devices, a set of loud speakers, and an ATEN controller.



Note: Make sure all the equipment you are connecting to the unit is turned off and disconnected from the power source.

1. Connect your audio sources to the audio input channels.

2. Connect the speakers to the unit's speaker output.

Note:

1. To avoid damaging the amplifier, please connect the wires to your speakers first, and then connect the other end of the wire to the speaker output channels using the supplied 4-pin Euroblock connector with screw lock (5.08 mm).
2. Keep the unit and its small parts such as 4-Pin Euroblock connector out of the reach of children. Children can choke or suffocate on the released small parts through detachment or breakage.

3. Connect the subwoofer or other audio equipment to the unit.

4. (Optional) To control the unit using an ATEN Control Pad, connect the Control Pad to the unit's RS-232 port.

5. (Optional) Use the LAN port for firmware upgrades, DSP configuration, or remote management (using a hardware controller).
   - To control the unit using a hardware controller through the Ethernet, e.g. an ATEN Control Box, connect the LAN port to a network switch.
   - To upgrade firmware, configure DSP settings (via the web GUI), or manage the unit, connect the LAN port to a PC.

Note: The default IP address is *192.168.0.60*. Use the default login credentials *administrator* and *password* upon first login.

6. (Optional) To connect the unit to the Dante network or additional mic/ line level output device(s), install the Dante expansion card (AP901) or mic/line preamp expansion card (AP902) to the expansion slot in advanced.

Note:

1. AP901 and AP902 are sold separately.
2. Refer to *Installing / Removing the Expansion Card*, page 23 for how to install / remove the expansion card.

7. Connect the supplied power cord to the unit's power socket after powering on all other audio equipment. The unit's power LED lights green to indicate the unit is powered on.

   Note: The AP206 / AP212 unit enters network standby mode once it is powered on. To wake up the unit, feed a audio signal whose strength is more than –24dBu, or log in to the web GUI to activate the unit.

8. Adjust the volume from the unit's front panel.

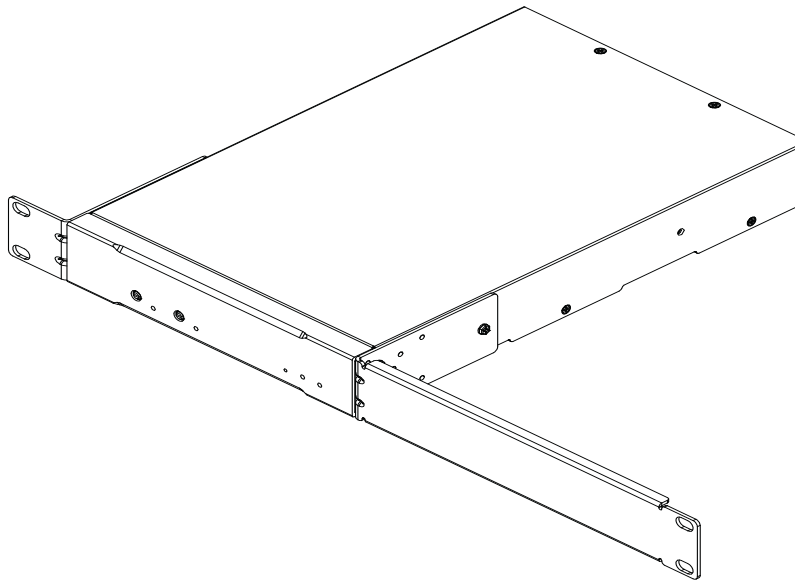
Mounting the AP206 / AP212 Unit

Note: The foot pad set is used only when placing the unit on a flat surface to prevent the unit from slipping. Do not attach the foot pads to the unit if you'd like to mount the unit onto a system rack or secure it on a flat surface.

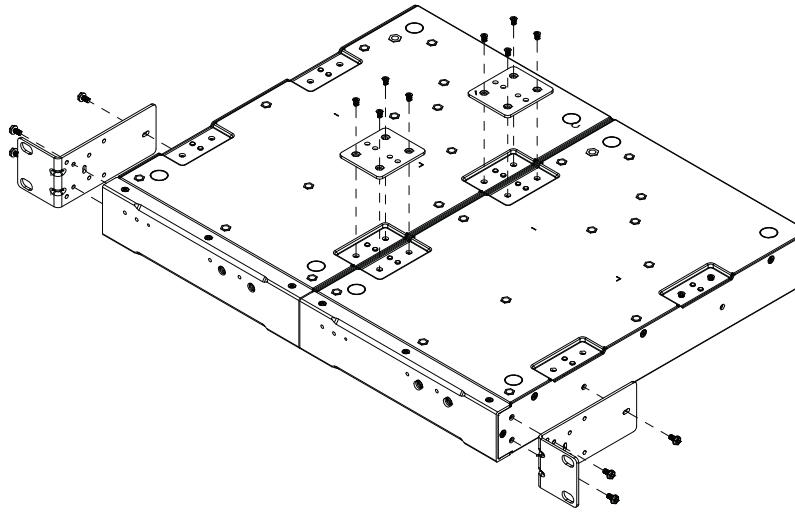
Rack Mount

To mount the unit onto a standard 19" rack:

- To mount a single unit, attach the two mounting brackets onto the sides of the unit with six M3 indented hex washer head screws provided. Align the mounting brackets' screw holes with that of the front of the rack, and secure the unit onto the rack using self-supplied screws.



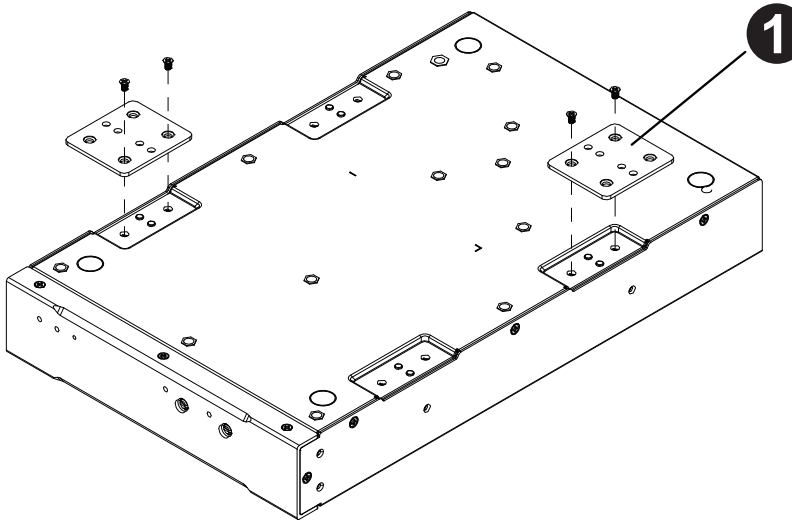
- To mount two units, screw the two line brackets onto the bottom side of the two units with eight M3 flat head screws. Attach the mounting brackets onto the units with six M3 indented hex washer head screws provided. Align the mounting brackets' screw holes with that of the front of the rack, and use self-supplied screws to secure the unit onto the system rack.



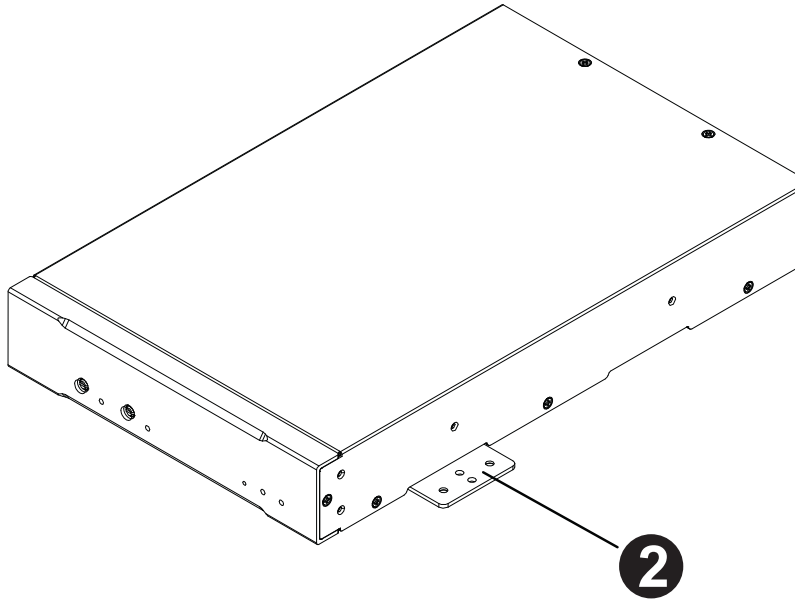
Surface Mount

To secure the unit on a flat surface:

1. Use four M3 flat head screws to fasten the line brackets to the bottom of the unit.



2. Place the unit on a flat surface, such as a desk, and secure the unit on the surface with self-supplied screws that fit 3 mm screw hole aperture.



Expansion Card

The expansion cards listed below are dedicated for use with ATEN's AP DSP Power Amplifier series:

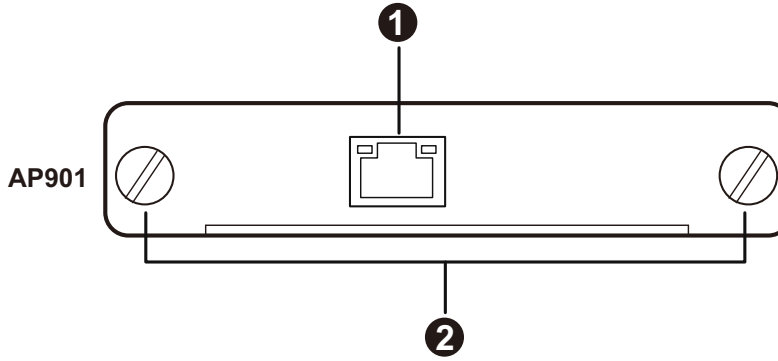
Note: The expansion cards are sold separately. Please contact your ATEN dealer or go to ATEN website for available accessories and product information.

- **AP901** 2-CH Dante Expansion Card for AP Series
  - Allows AP power amplifiers to receive 2 inputs of highquality, low-latency digital audio via Dante AoIP solution
  - Enables AP power amplifiers to easily integrate with Dante-enabled devices, such as digital mixers, processors, and media players
  - Supports 24-bit and sampling rates of 44.1k and 48kHz
  - Compatible with Dante Controller software to achieve streamlined workflow
  - Easy to be installed into the AP power amplifiers' expansion slot
  - Firmware upgradable via Dante LAN

- **AP902** 2-CH Mic/Line Pre-AMP Expansion Card for AP Series
  - Provides AP power amplifiers with dual-channel inputs for easier integration with balanced / unbalanced audio signals at mic / line level
  - Adjustable gain level – handles various strength levels of input sources
  - Preamp designed to lower the noise floor and improve the dynamic range for high-quality sound performance
  - Easy to be installed into the AP power amplifiers' expansion slot

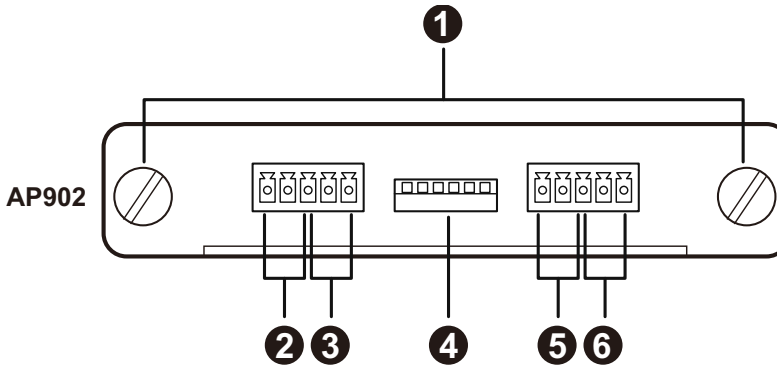
Hardware Overview

AP901



No.	Component	Description
1	Dante link port	Use an Ethernet cable to connect the Dante link port to a network switch. It is strongly recommended that you use a shielded Cat 5e cable (or higher) for better network connectivity.
2	screws	Fasten the expansion card to the slot of the AP DSP Power Amplifier using the screws. Tighten the screw by turning it clockwise while loosen the screw by turning it counterclockwise.

AP902



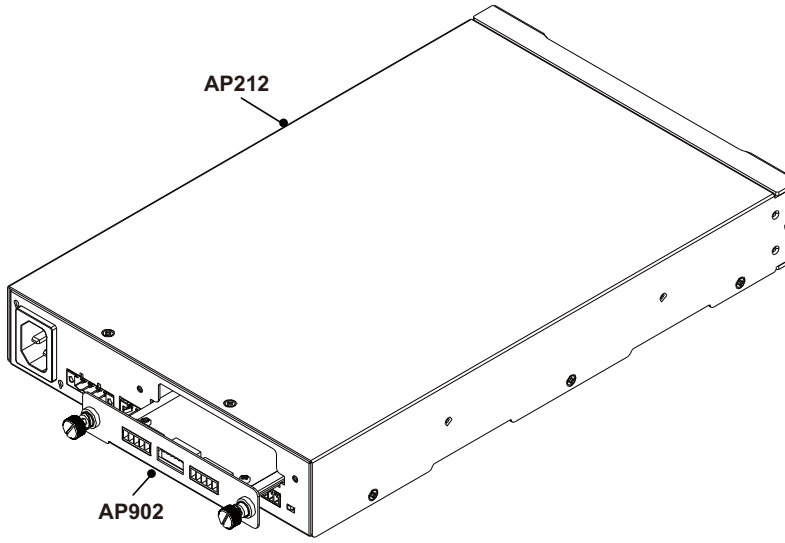
No.	Component	Description
1	screws	Fasten the expansion card to the slot of the AP DSP Power Amplifier using the screws. Tighten the screw by turning it clockwise while loosen the screw by turning it counterclockwise.
2	line input for channel 2	Connect the audio source devices to the input channel.
3	mic input for channel 2	Connect the audio source devices to the input channel.*
4	gain control switch	Switch on or off the pole(s) to adjust the audio gain level.
5	line input for channel 1	Connect the audio source devices to the input channel.
6	mic input for channel 1	Connect the audio source devices to the input channel.*

Note: 1. To prevent device damage, do not feed a line level signal to mic input channel.

2. Do not connect Mic/Line in the same channel at the same time.

Installing / Removing the Expansion Card

Make sure that you turn off the AP206/AP212 power amplifier and disconnect the unit from the power source before installing or removing the expansion card.



Installing

To install the expansion card into the AP206/AP212 power amplifier:

1. Remove the expansion slot plate on the rear side of the AP206/AP212 power amplifier.

2. Insert the expansion card into the amplifier's expansion slot.

   Note: Give a little push to get the expansion card fully seated in the slot.

3. Apply force to each screw head till it is in place, and then tighten the screw by turning it clockwise.

Removing

Note: For safety purpose, please power off the AP206/AP212 power amplifier and then wait for 50 seconds before removing the expansion card.

To remove the expansion card:

1. Alternately loosen each screw.

2. Hold the two screws and then gently pull out the expansion card.

3. Use the expansion slot plate to cover the blank slot, and secure it with the screws.

Chapter 3
Operation

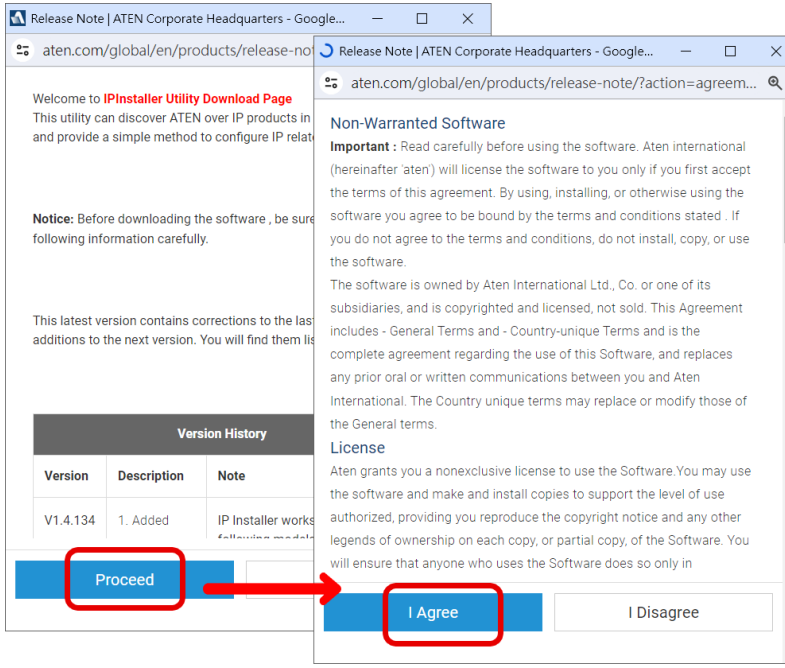
Browser Web Control

The AP206 / AP212 power amplifier offers the web control and configuration through the Ethernet connection. The default IP address of the unit's web GUI is *192.168.0.60* without DHCP environment. If you connect the AP206 / AP212 unit to a router, use the IP address that DHCP server allocates.

DHCP-assigned IP Address

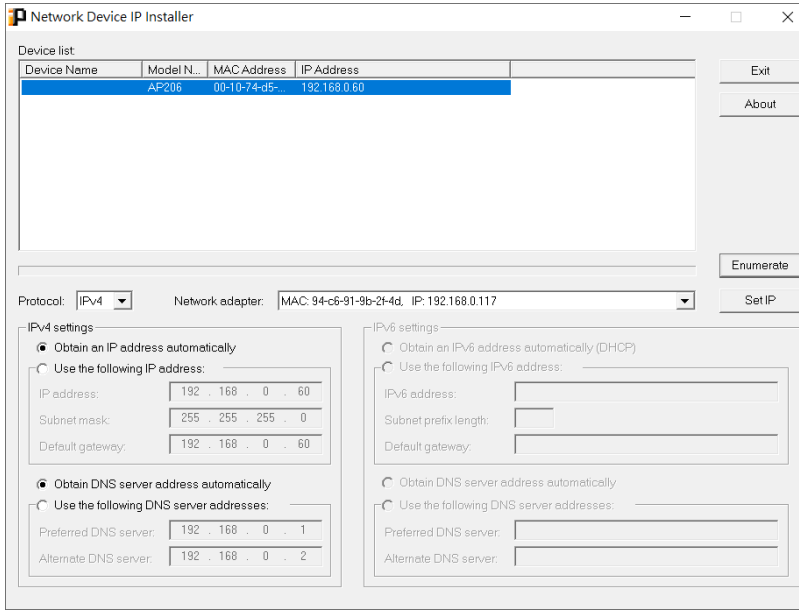
To get the DHCP-assign IP address, do the following:

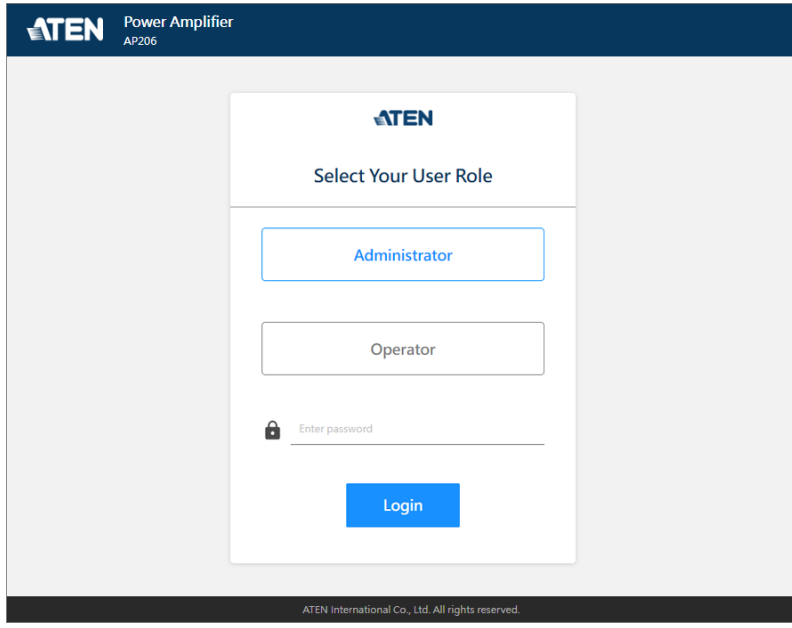
1. Download the IP Installer from the *Support and Download* tab of the product page.



2. Unzip the .zip file of the IP Installer and then run the .exe file.

3. Obtain the DHCP-assigned IP address of the unit from the Device List, and use this IP address to access the unit's web GUI .



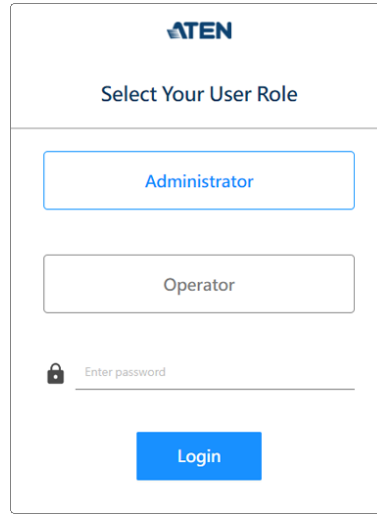


Note: All functions available in the Web GUI can also be configured through the ATEN Audio Wizard application.
ATEN Audio Wizard, downloadable from the product page on the ATEN website, provides the same operational capabilities and parameter controls as the Web GUI.

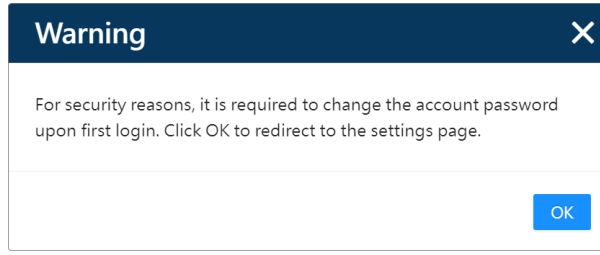
Login

To control the unit from a web control:

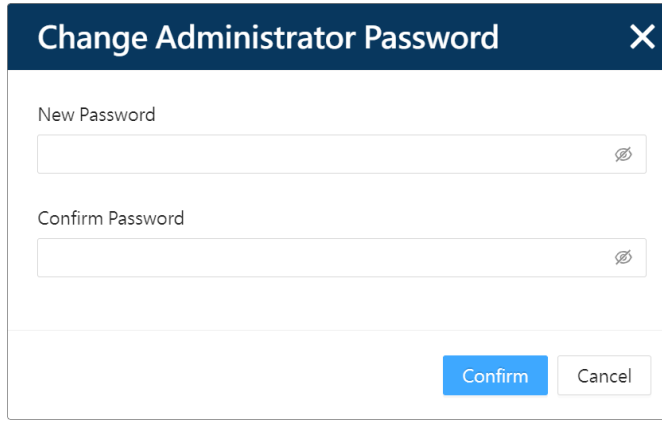
1. Start up the supported web browser, and then input the unit's IP address into the address bar.
2. The login page shows up. Upon first login, select *Administrator* as the user role type, and use the default password, *password*.



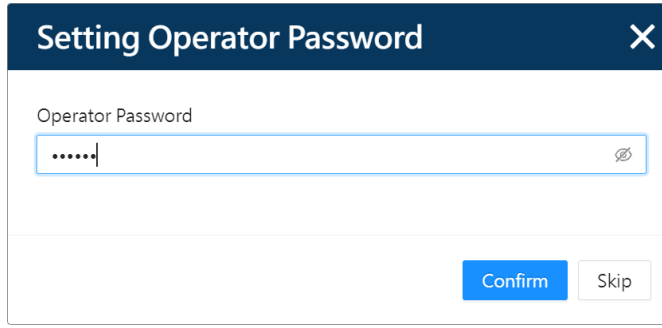
3. It requires to change the password for Administrator. Follow the on-screen instructions to complete.

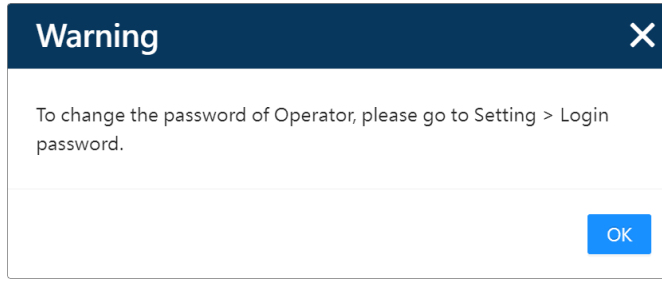


a) Enter the new password for Administrator, and confirm by entering the password again. Click on the Confirm button to continue.



b) Change the password for Operator. You can skip this steps and change the Operator's password later on.

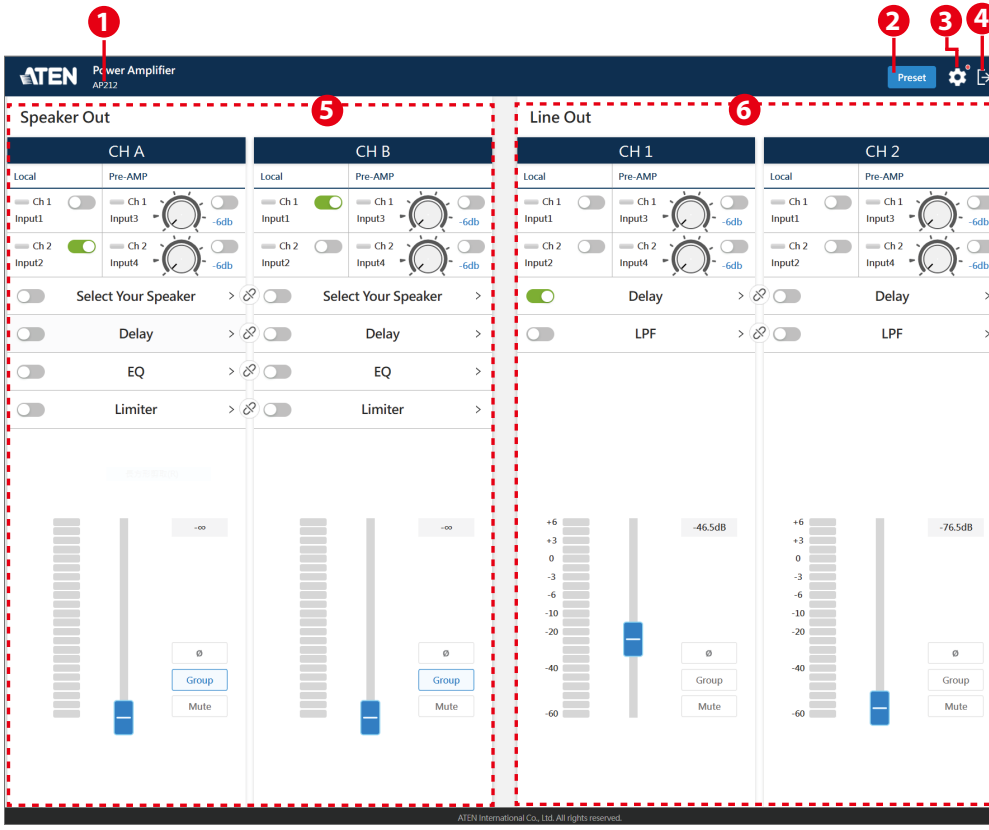




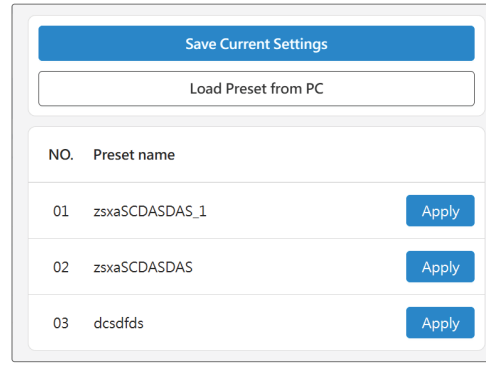
c) After successfully changed the password, you will be redirected to the login page again. Use the new password to log in to the unit's web GUI .

DSP Configuration

Digital Signal Processing (DSP) performs sound manipulation using the algorithms to filter, equalize, limit, and enhance the audio signal. After logging in or waking up the unit from the standby mode, you will enter the DSP configuration screen as illustrated below:

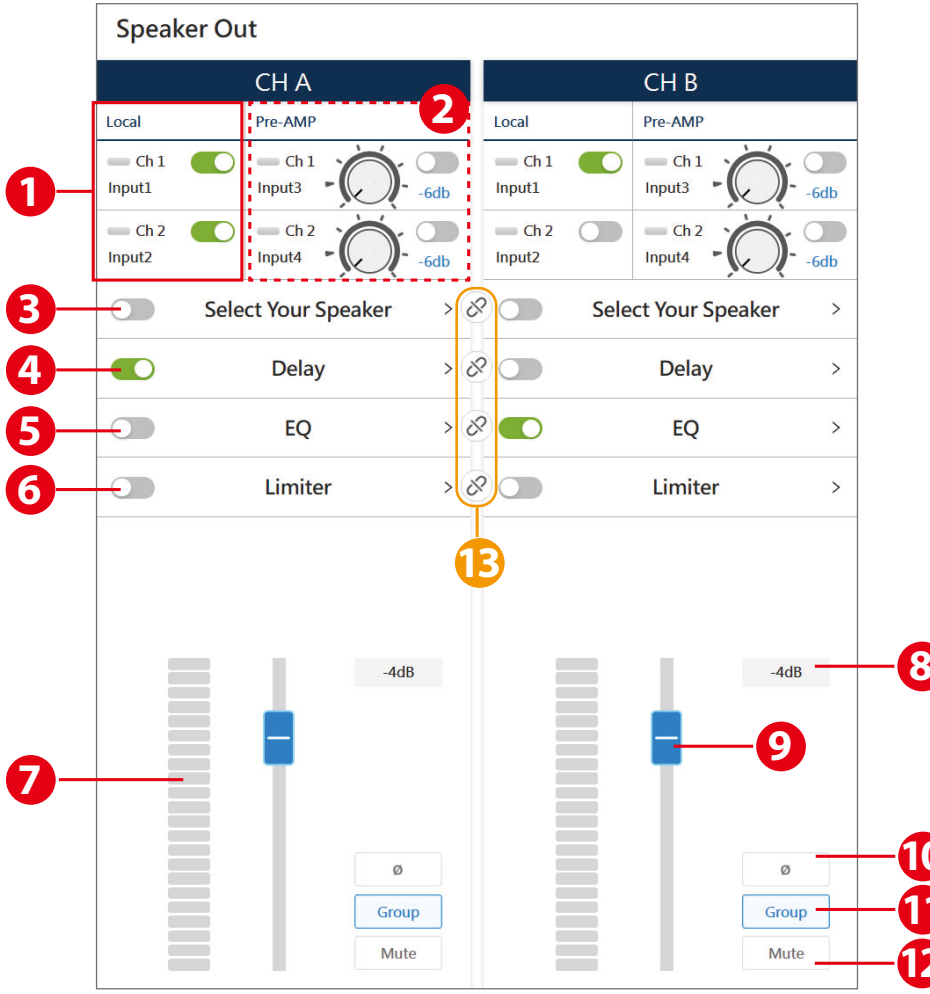


No.	Item	Description
1	model name	The model name of the connected unit

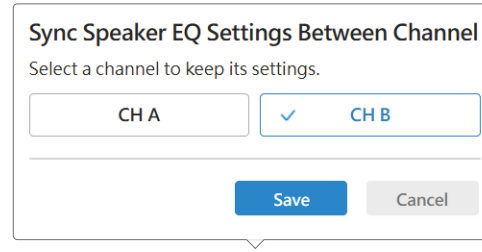
No.	Item	Description
2	preset configuration	A button for display preset configuration menu which contains the following:  ◆ **Save Current Settings**: A button for saving the current configurations to be a preset ◆ **Load Preset from PC**: A button for importing the present file (.bin format) that saved in the PC ◆ **preset menu**: A list of all the saved preset(s) for user to choose and apply See *Preset Management*, page 48 for details.
3	settings button	A button for switching to the system settings screen **Note:** This function button is only available for Administrator.
4	exit button	A button for logging out the web GUI
5	speaker out operation area	The configuration panel that the speaker-level audio signals are manipulated
6	line out operation area	The configuration panel that the line-level audio signals are processed

Speaker Out Processing

The speaker out operation panel offers the following settings for user to manipulate the speaker-level audio signals and output the processed audio signals to the speakers connected to the unit's speaker output channels.

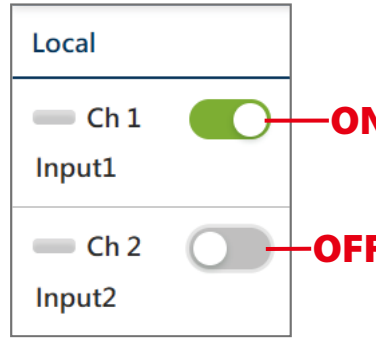


No.	Item	Description
1	input signal control area	In the input signal area, you can: ◆ Click to select the audio signal from input channel(s). You can select multiple input channels at a time. ◆ Rename the input channels. See *Input Signal Control*, page 32.
2	expansion card control panel	This section becomes available only when an expansion card is installed in the amplifier. The functions shown in this area depend on the installed card. For example, the AP902 Mic/Line Pre-AMP Expansion Card provides input selection and pre-amplifier gain controls for each channel, while the AP901 Dante Expansion Card displays Dante input routing options.
3	speaker selector	Click to select the speaker that connects to the speaker out channel.
4	delay switch	Switch on or off to apply or withdraw the delay settings to the audio signal. Click on the function name to open the popup for further configurations. See *Delay Configuration*, page 36.
5	equalizer switch	Switch on or off to apply or withdraw the EQ settings to the audio signal. Click on the function name to open the popup for further configurations. See *Equalizer Configuration*, page 38.
6	limiter switch	Switch on or off to apply or withdraw the limiter settings to the audio signal. Click on the function to open the popup for further configuration. See *Limiter Configuration*, page 40.
7	signal level meter	Show the audio signal levels in decibels (dB).
8	channel fader level	Show the gain or attenuation level in number of the audio signal to be output.

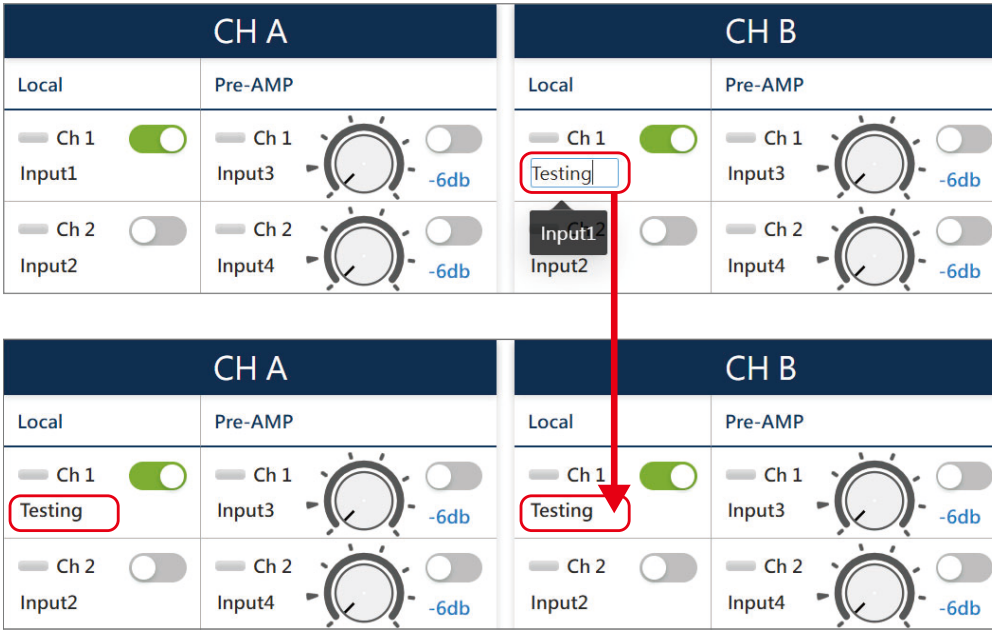
No.	Item	Description
9	channel fader	Adjust the gain or attenuation level of the audio signal to be output. Drag the fader to change the value in decibel. The volume value also displays in the channel fader level field next to the channel fader.
10	phase button	Click the button to invert the polarity of the phase. Disabling this function means that the phase polarity is normal.
11	fader group button	Enable the group function to add this channel to the linked channels to simultaneously control the volume levels.
12	mute button	Click on the mute button to enable or disable the mute function for this channel.
13	DSP Parameter Synchronization	Enable synchronization of DSP parameters, such as EQ and Delay, between two channels. Click the synchronization button, and select the channel whose settings you want to keep. The system will copy that channel's current parameters to the other channel.  After synchronization is established, both channels remain linked, and any subsequent adjustments made on either channel will automatically update the other.

Input Signal Control

To select the input audio signal, turn on the switch to select the channel(s).

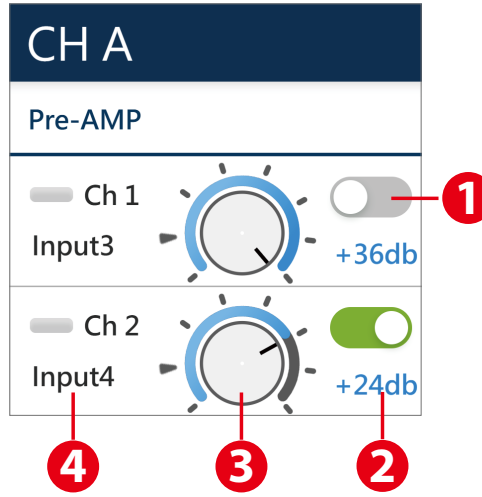


To rename the input channel, click on the name field to fill in the new name.



Expansion Card Control Panel: Gain Controls

After installing the AP902 2-CH Mic/Line Preamp Expansion Card into the unit, the web GUI displays the gain control panel.



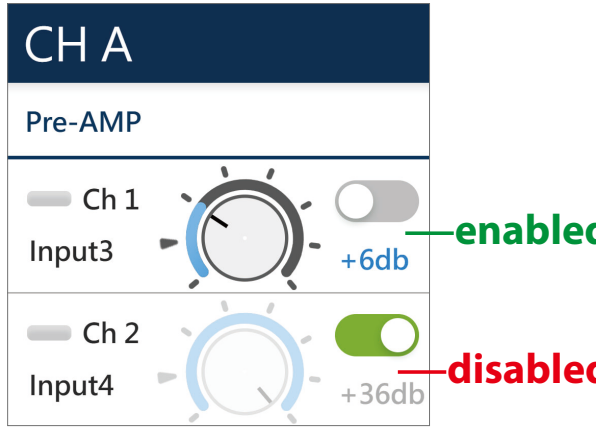
No.	Item	Description
1	on / off control switch	Turn the switch ON to enable the input audio signal for this channel.
2	gain level	Displays the channel gain level.
3	gain control knob	Adjusts the gain level using the cursor. This control is available only when the AP902 gain control DIP switch is set to **OFF**.
4	channel name	Click the name field to modify the channel name.

■ **DIP Switch and Web GUI Gain Control Behavior**

The AP902 provides two methods for setting the channel gain level: the hardware DIP switches and the Web GUI.

When all DIP switch poles for a channel are set to OFF (-6 dB), hardware gain control is disabled and the gain level can be adjusted through the Web GUI. When the DIP switches are set to any other combination, the channel's gain level continues to follow the DIP switch configuration, and the gain controls in the Web GUI become unavailable.

In the Web GUI:

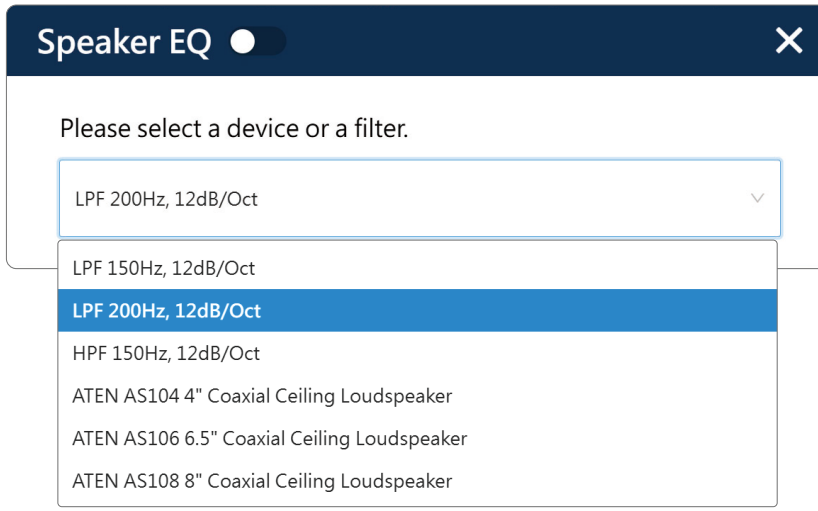


- When gain control is enabled (all DIP switches OFF):
  - The gain value is displayed normally.
  - The gain control knob is active and can be adjusted.
- When gain control is disabled (DIP switches not all OFF):
  - The gain value is shown as a fixed readout.
  - The gain control knob becomes inactive.
  - The on/off control switch remains functional but does not affect gain adjustment.

This behavior ensures that hardware settings take priority unless explicitly released for software control.

Speaker Selector

On the popup window, you can do the following:

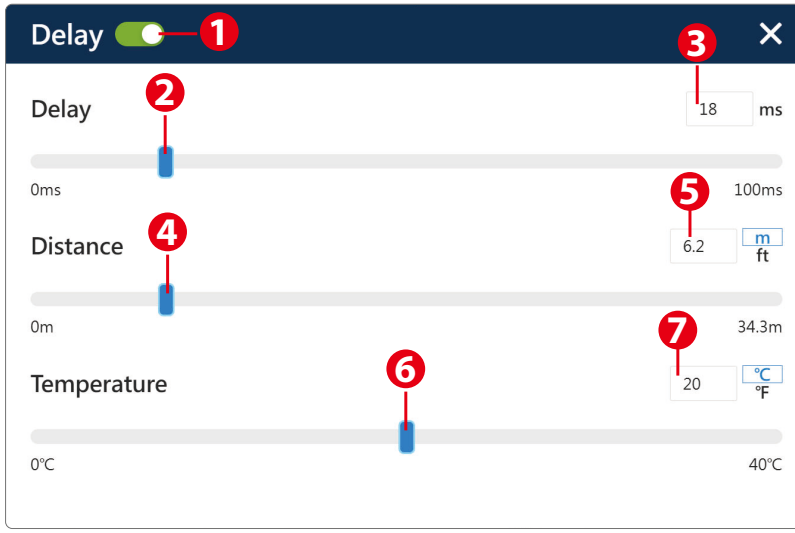


- Turn on the switch to enable the optimization of the audio signal to be output to the connected speaker.
- Select the filter to apply:
  - If this speaker output channel connects with an ATEN loudspeaker, directly select the model and the system will automatically apply the optimization.
  - If you use a self-supplied audio output device, select a filter that is suitable for your output device to apply.

Filter	Description
LPF 150Hz, 12dB/Oct	LPF are often used with subwoofers. Choose between 150Hz and 200Hz based on your connected subwoofer, and apply the low pass filter to filter out the high-frequency sounds from an audio signal.
LPF 200Hz, 12dB/Oct	
HPF 150Hz, 12dB/Oct	Apply the high pass filter to filter out the low-frequency content of the signal to increase the clarity and definition.

Delay Configuration

The delay settings helps to synchronize multiple sets of speakers and improve audio clarity.

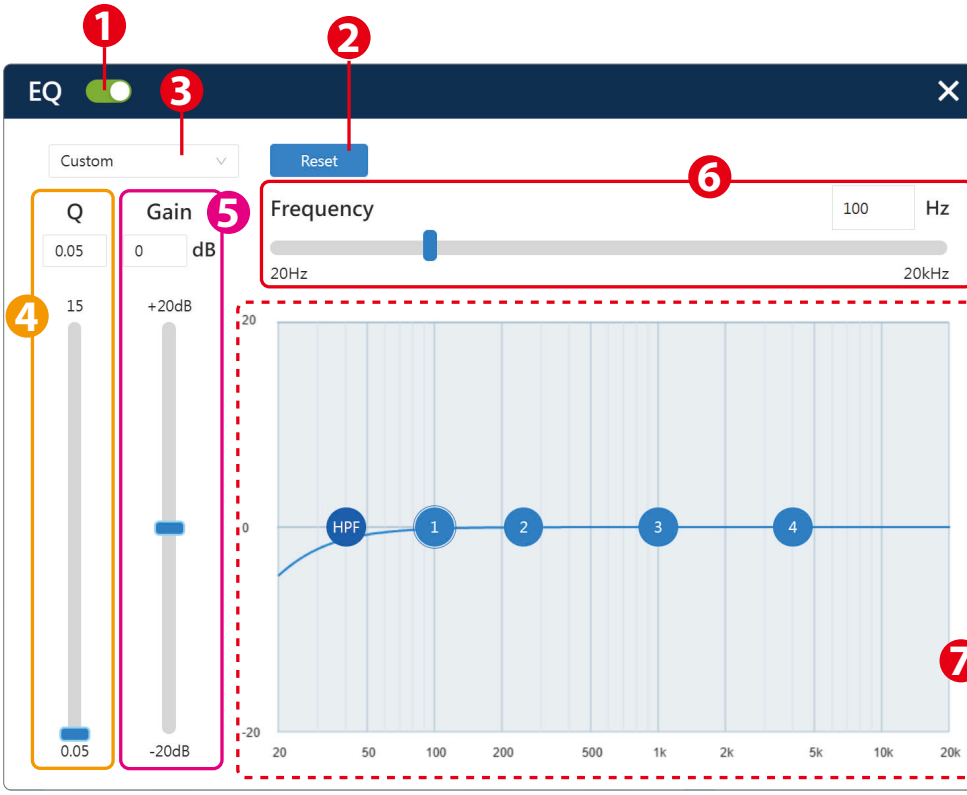


No.	Item	Description
1	delay settings switch	Turn on / off the switch to apply / withdraw the delay settings.
2	delay time slider	Drag the slider to set the delay time in millisecond. The time value is also shown in the delay time value field next to the slider.
3	delay time value	Show the delay time value in millisecond. You can directly input the value to this field to change the delay time value.
4	distance slider	Drag the slider to set the distance in feet or meters. The distance value is also shown in the distance value field next to the slider.
5	distance value	Show the distance in feet or meters. To change the value, do the following: a) Input the value in the field. b) Click to select the unit of length between feet and meters.

No.	Item	Description
6	temperature slider	Drag the slider to set the temperature in Celsius or Fahrenheit. The temperature value is also shown in the temperature value field next to the slider.
7	temperature value	Show the temperature in Celsius or Fahrenheit. To change the value, do the following: a) Input the value in the field. b) Click to select the temperature scale between Celsius and Fahrenheit.

Equalizer Configuration

EQ (equalizer) is used to adjust the level of an audio signal at particular frequencies. To configure the frequency, click to select HPF (high-pass filter) shown in the EQ graph and then set by dragging the HPF or inputting the frequency value field. To configure the gain value and the Q factor, click to select between band 1, 2, 3, and 4 in the EQ graph to continue setting.

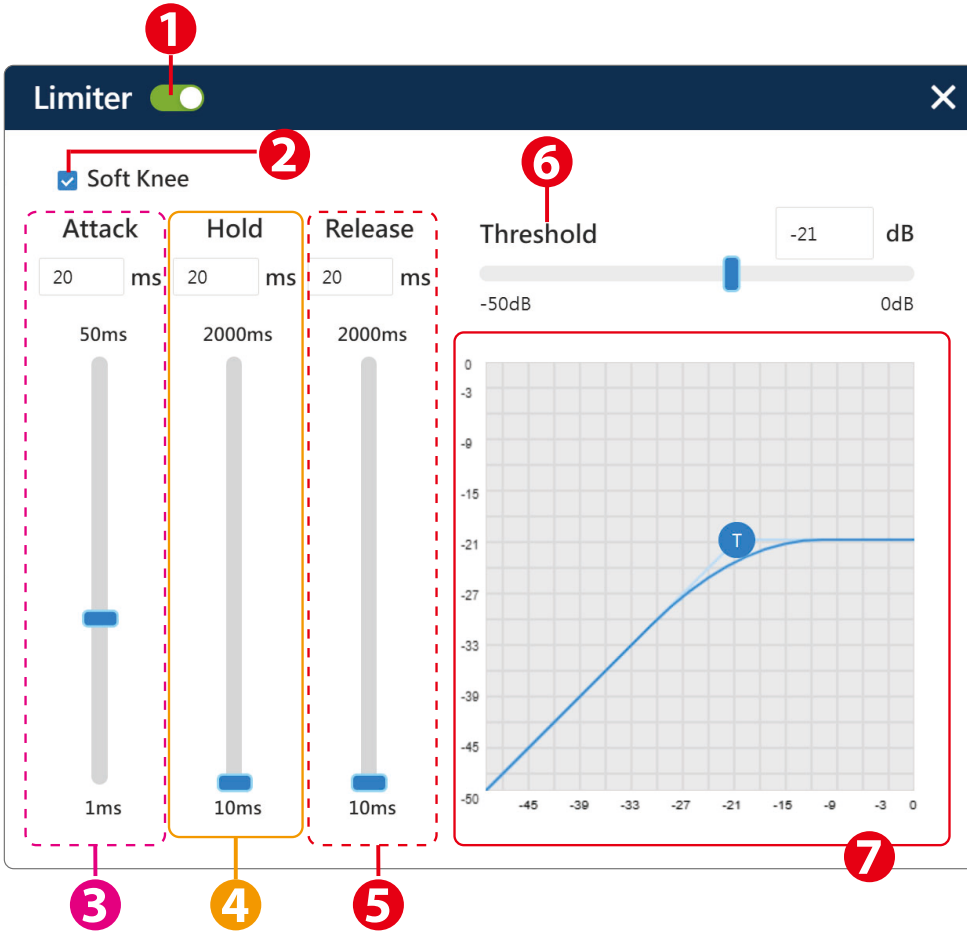


No.	Item	Description
1	EQ switch	Switch it on to enable the equalizer to boost or suppress the audio frequency bands.

No.	Item	Description
2	reset button	Click on the reset button to restore the EQ configurations to the default.
3	option menu	Select the mode from the drop-down menu to apply the EQ settings. Please note that the EQ settings are editable only in custome mode.
4	Q setting	Determine the frequency bandwidth by setting the value of Q (the quality factor). Q is the ratio of the center frequency to bandwidth, which means the width of the target frequency band is affected by the Q factor. The higher value of Q it is, the narrower bandwidth it will be. Specify the value for Q by dragging the slider or manually inputting the value to the field.
5	gain setting	Define the gain value to be positive to boost the target frequency while set a negative value to attenuate the target frequency. Set the gain value by dragging the slider or manually inputting the value to the field.
6	frequency setting	Define the frequency to be manipulated within the range between 20 Hz to 20 kHz. You can set the frequency by dragging the slider or directly inputting the hertz value in to the field.
7	EQ graph	Display the graph that illustrates your equalizer settings. User can directly click on **HPF** in the EQ graph and drag it to set the frequency. As to band 1, 2, 3, and 4, click to select it and drag it to adjust its frequency, gain, and Q.

Limiter Configuration

Limiter is to set level threshold values to limit the power output of an audio signal.



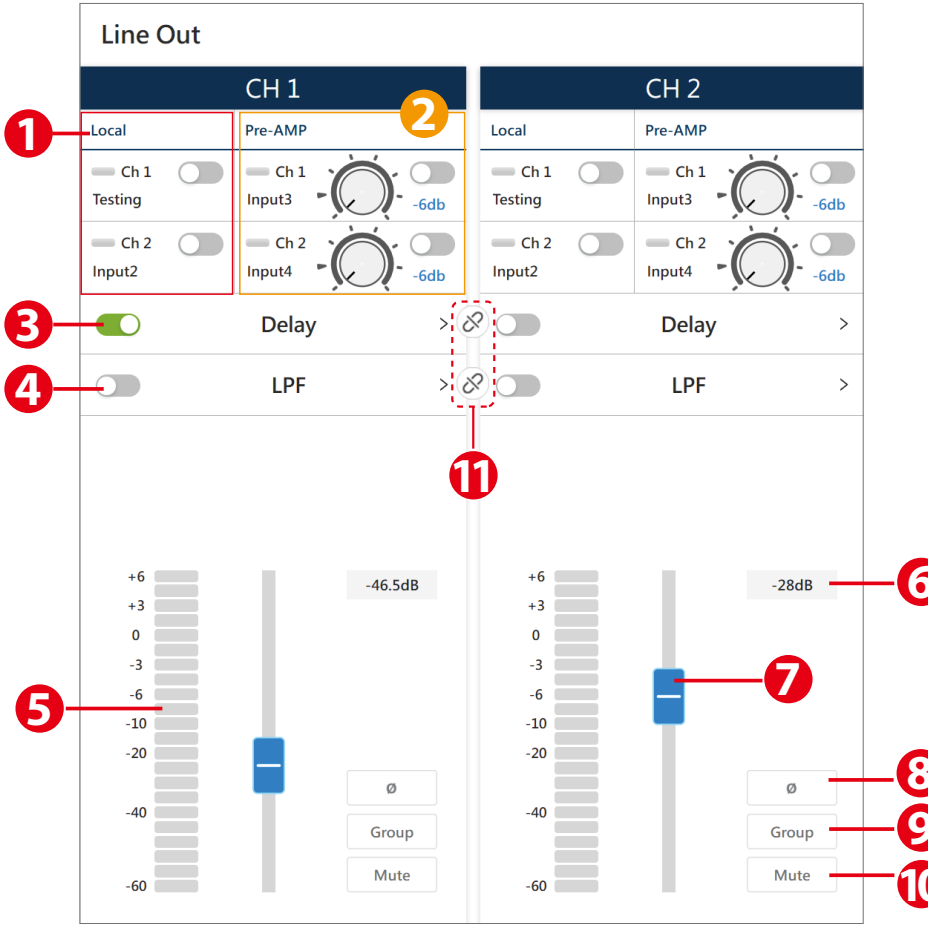
No.	Item	Description
1	limiter switch	Turn on the switch to enable the limiter to stop the audio signal from increasing in loudness by setting a threshold.

No.	Item	Description
2	soft knee	Set the knee setting that affects the limlting processing slope. The limiter gives a linear or non-linear response curve according to the knee settings that controls how the limiter effects on an audio signal. ◆ Hard knee: A hard knee setting is enabled when the checkbox of soft knee is unchecked. A hard knee curve in the graph is with a hard cutoff angle. The limiting process starts at the threshold, and the output audio sound is powerful and punchy. ◆ Soft knee: Check the checkbox to enable a soft knee setting, and the limiting process occurs gradually. The output audio sound is smoother and subtle. The curve of a soft knee in the graph is more rounded bended.
3	attack setting	Define the reaction speed that the limiter engage to limit peaks of an audio signal that exceeds the threshold. Specify a millisecond value for the attack setting by manually inputting the value in the field or dragging the slider.
4	hold setting	Set an additional amount of time that the full gain reduction is maintained after the signal drops below the threshold. The release phase will not begin until the hold period ends. Specify a millisecond value by manually inputting the value in the field or dragging the slider.
5	release setting	Determine the amount of time that the limiter stops applying limiting on the audio signal once the signal level goes below the threshold. Specify a millisecond value by manually inputting the value in the field or dragging the slider.

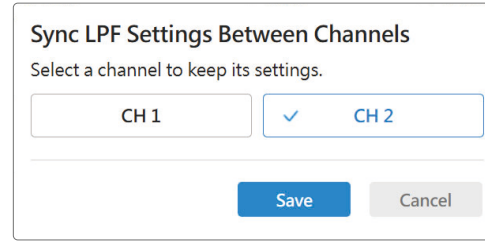
No.	Item	Description
6	threshold setting	Set a threshold that trigger the limiter to limit the amount of voltage by reducing the input gain. Specify a decibel value by manually inputting the value in the field or dragging the slider. **Note:** A hard knee setting starts the limiting process right after the signal reaches the threshold while a soft knee setting applies the limiting as the audio signal approaches the threshold.
7	limiter graph	Display the graph that illustrates the curve about how the limiter settings are applied. The T in the curve graph marks out the threshold, and you can drag the T or to change the threshold value.

Line Out Processing

Through the line out operation panel, user can process the input line-level audio signals and send out the line-level signals to the audio output devices that connected to the unit's line out channels. The line out operation panel contains the following functions:

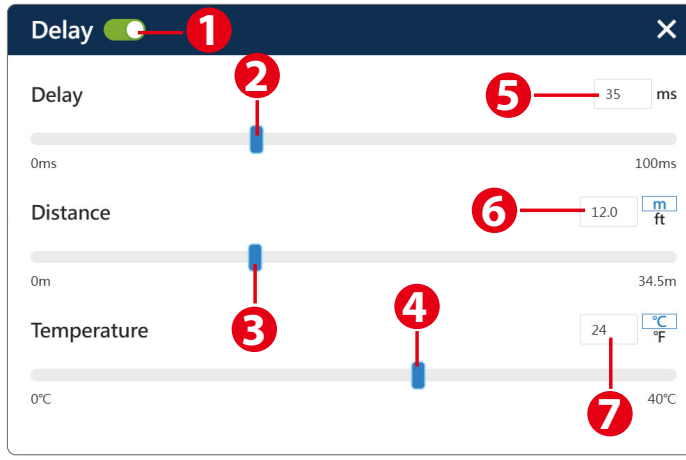


No.	Item	Description
1	input signal control area	In the input signal area, you can: ◆ Click to select the audio signal from input channel(s). You can select multiple input channels at a time. ◆ Rename the input channels. See *Input Signal Control*, page 32.
2	expansion card control panel	This section becomes available only when an expansion card is installed in the amplifier. The functions shown in this area depend on the installed card. For example, the AP902 Mic/Line Pre-AMP Expansion Card provides input selection and pre-amplifier gain controls for each channel, while the AP901 Dante Expansion Card displays Dante input routing options.
3	delay switch	Switch on or off to apply or withdraw the delay settings to the audio signal. Click on the function name to open the popup for further configurations. See , page 44.
4	low-pass filter switch	Switch it on to enable the low-pass filter to cut the high frequency of the audio signal. See *Low-pass Filter Configuration*, page 47.
5	signal level meter	Show the audio signal levels in decibel (dB).
6	channel fader level	Show the volume level of the audio signal to be output.
7	channel fader	Adjust the volume level of the audio signal to be output. Drag the fader to change the value in decibel. The volume value also displays in the channel fader level field next to the channel fader.
8	phase button	Click the button to invert the polarity of the phase. Disabling this function means that the phase polarity is normal.

No.	Item	Description
9	fader group button	Enable the group function to add this channel to the linked channels to simultaneously control the volume levels.
10	mute button	Click on the mute button to enable or disable the mute function for this channel.
11	DSP Parameter Synchronization	This function allows you to synchronize the **Delay** or **LPF** settings between CH 1 and CH 2. When sync is enabled for the first time, a dialog box appears asking you to select the channel whose setting you want to keep. The selected channel becomes the reference, and its Delay or LPF settings will be copied to the other channel.  After synchronization is enabled, both channels become linked. Adjusting the setting on either channel will automatically update the other. To cancel synchronization, simply toggle off the sync icon.

Delay Configuration

The delay settings helps to synchronize multiple sets of speakers and improve audio clarity.

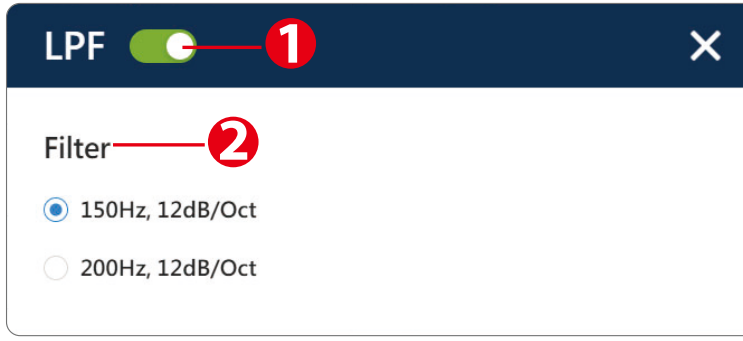


No.	Item	Description
1	delay settings switch	Turn on / off the switch to apply / withdraw the delay settings.
2	delay time slider	Drag the slider to set the delay time in millisecond. The time value is also shown in the delay time value field next to the slider.
3	delay time value	Show the delay time value in millisecond. You can directly input the value to this field to change the delay time value.
4	distance slider	Drag the slider to set the distance in feet or meters. The distance value is also shown in the distance value field next to the slider.
5	distance value	Show the distance in feet or meters. To change the value, do the following: a) Input the value in the field. b) Click to select the unit of length between feet and meters.
6	temperature slider	Drag the slider to set the temperature in Celsius or Fahrenheit. The temperature value is also shown in the temperature value field next to the slider.

No.	Item	Description
7	temperature value	Show the temperature in Celsius or Fahrenheit. To change the value, do the following: a) Input the value in the field. b) Click to select the temperature scale between Celsius and Fahrenheit.

Low-pass Filter Configuration

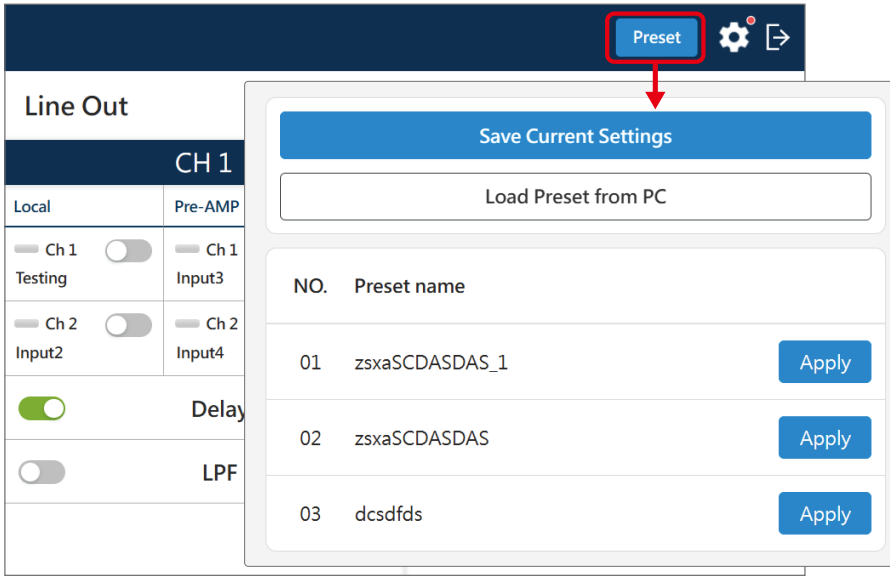
The low-pass filter (LPF) is to restricts the audio signal to be distributed below the configured frequency level. On this popup window, you can do the following:



1. Turn on or off the switch to apply or withdraw the LPF settings.
2. Click the radio button to select the frequency level you'd like to set as the LPF.

Preset Management

All the settings you configured on both speaker out operation area and line out operation area can be saved as a preset. You can easily switch to other set of settings by applying an existing preset.

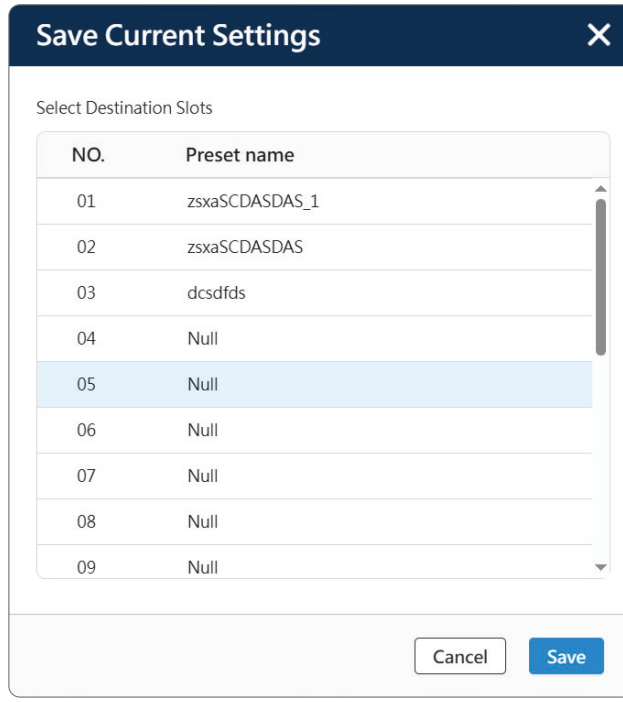


Click **Preset** button to expand the preset configuration menu for the following actions:

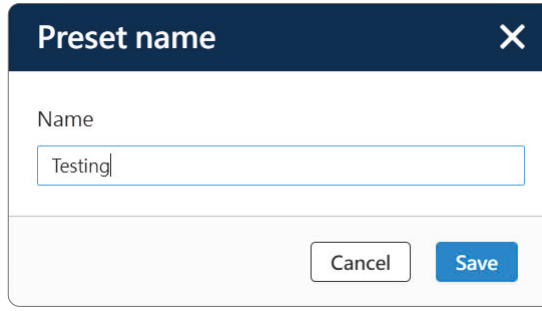
Save a New Preset

To save a new preset:

1. Click on **Save Current Settings** button to open **Save Current Settings** popup window.
2. Click to select a Null item, and click on the save button.

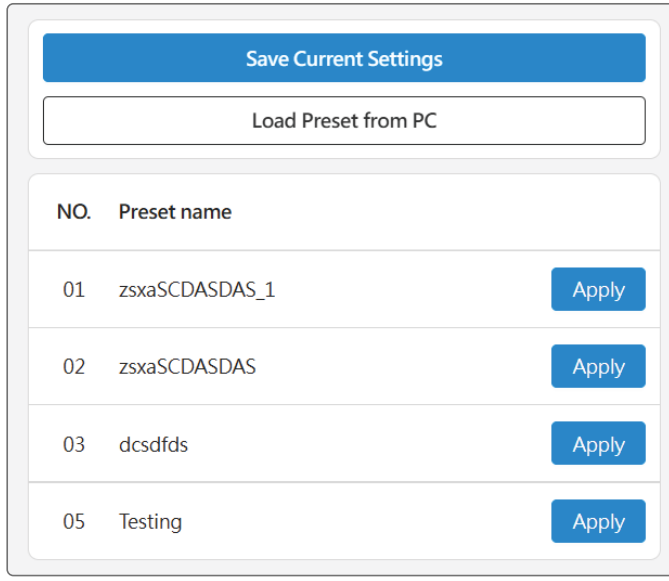


3. Enter the name for this preset to be saved , and click on the save button to complete.



Apply an Existing Preset

Click to open the preset configuration menu, and select the one you need to apply.



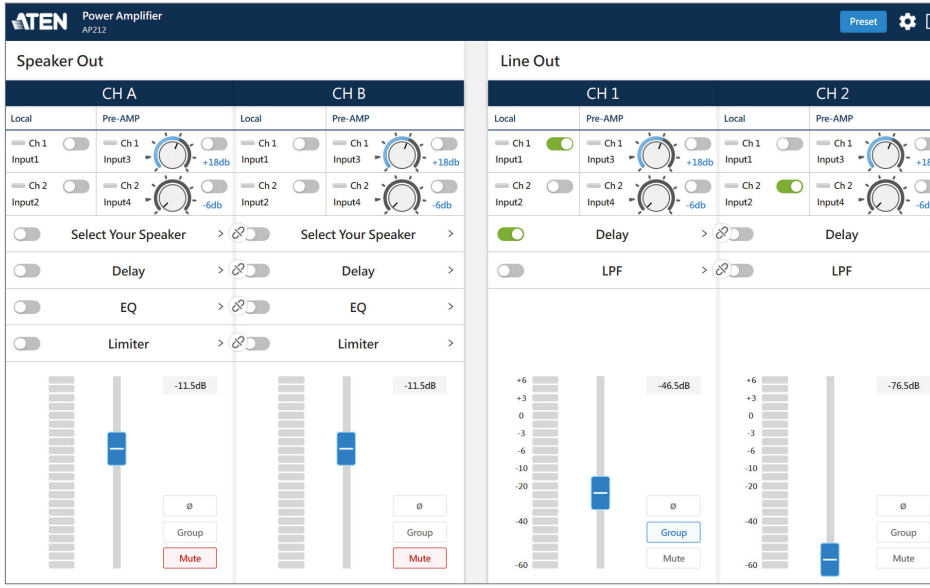
Edit an Existing Preset

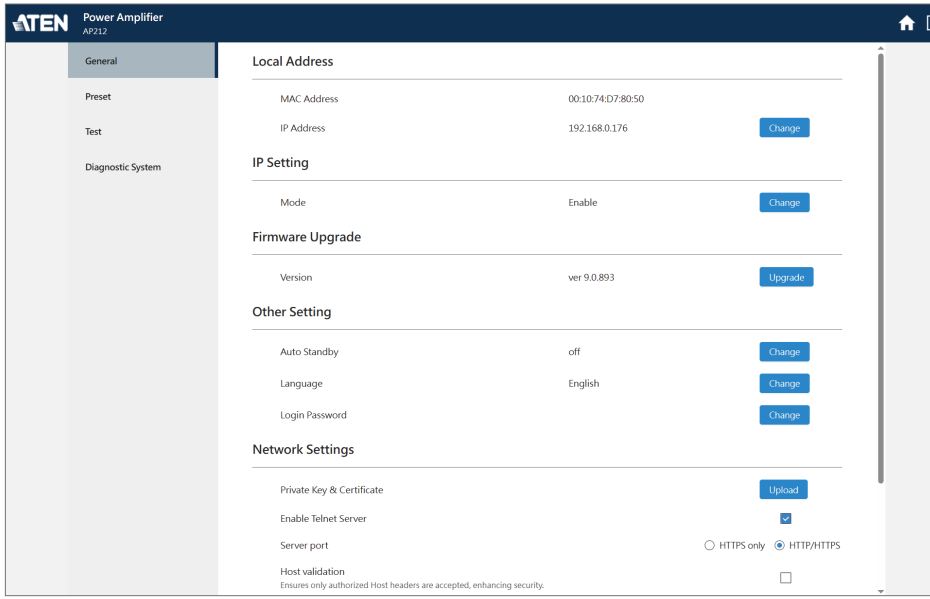
Fellow the steps below to edit an existing preset:

1. Apply the preset you'd like to edit.
2. Make changes of the preset. Once the configuration is done, click on the **Preset** button, then **Save Current Settings**.
3. The **Save Current Settings** popup window appears. Click on the preset name of this preset, and then click on the save button to save it.
4. Confirm to overwrite the preset to save your changed settings.

System Settings

Click on the setting button on the DSP configuration screen to switch to the system settings screen, and here you can configure the following:





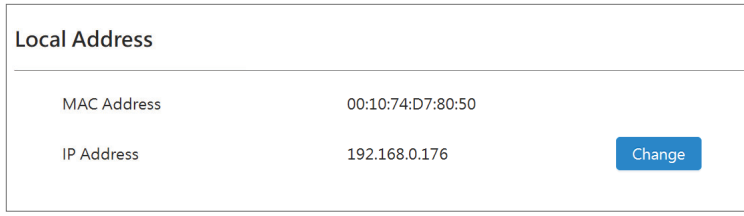
Tab	Supported Functions	Detailed Information
General	◆ Configure the network settings. ◆ Upgrade the unit's firmware. ◆ Set the inactivity duration that triggers the unit enters a low-power mode. ◆ Select the interface language. ◆ Configure the passwords for Administrator and Operator. ◆ Configure the account security settings.	For more information, see *General Tab*, page 53.
Preset	◆ Edit the existing preset(s). ◆ Delete the existing preset(s). ◆ Import and export the preset(s).	For more information, see *Preset Tab*, page 61.
Test	◆ Calibrate the connected audio equipments.	For more information, see *Test Tab*, page 64.
Dashboard	◆ Check the status of the unit. ◆ Export the status report of the unit.	For more information, see *DashboardDiagnostic System Tab*, page 65.

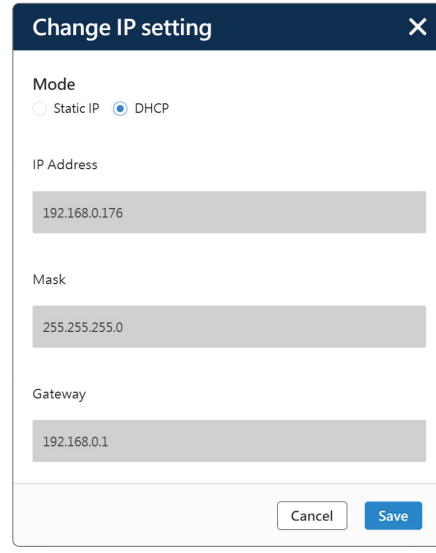
Note: Only **Administrator** can access to the system settings page.

General Tab

The **General** tab allows the **Administrator** to control or customize various settings that are used throughout the unit's configuration system.

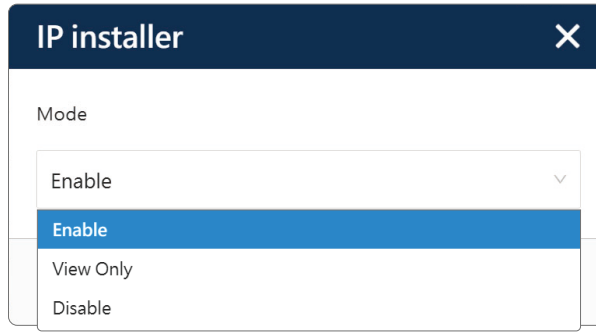
Local Address



Item	Description
MAC Address	Shows the MAC address (media access control address) that is assigned to the unit connected to the network.
IP Address	Shows the IP address of this unit. Click on the change button next to the IP addresss to open the popup window to select the mode using the radio button:  ◆ **Static IP**: By selecting Static IP, the fields IP Address, Mask, and Gateway in this popup are available for you to define a fixed IP address for this unit. ◆ **DHCP**: Get the IP address that is assigned dynamically.

IP Settings

IP Settings is the function that works with the ATEN's program, IP Installer (see *DHCP-assigned IP Address*, page 23). Click on the change button to open the popup window and select the mode from the drop-down menu:



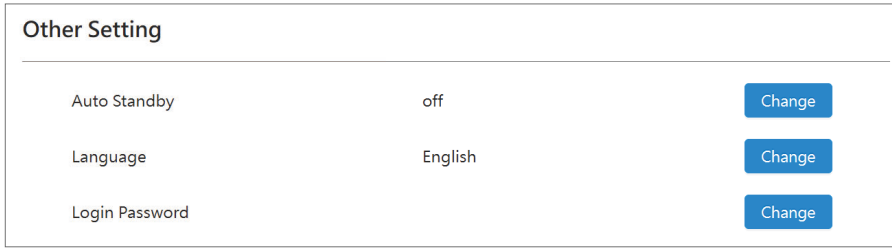
Item	Description
Enable	The unit's IP address can be found by IP Installer and configured through the Set IP function of IP Installer.
View Only	The unit's IP address can be found by IP Installer, but it cannot configured through IP Installer.
Disable	The unit's IP address cannot be found by IP Installer.

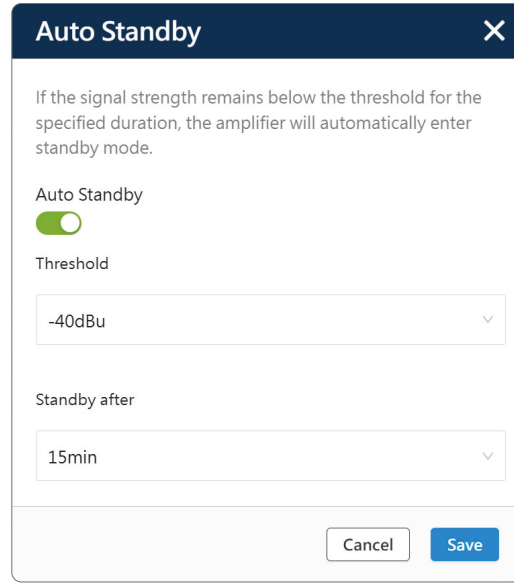
Firmware Upgrade

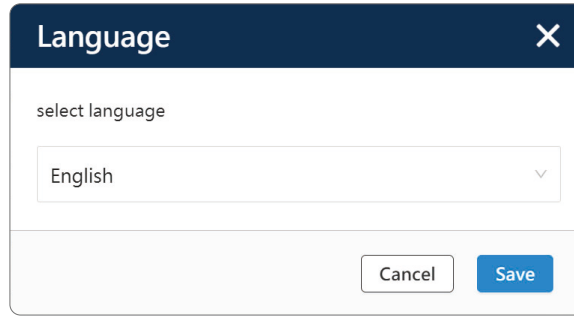
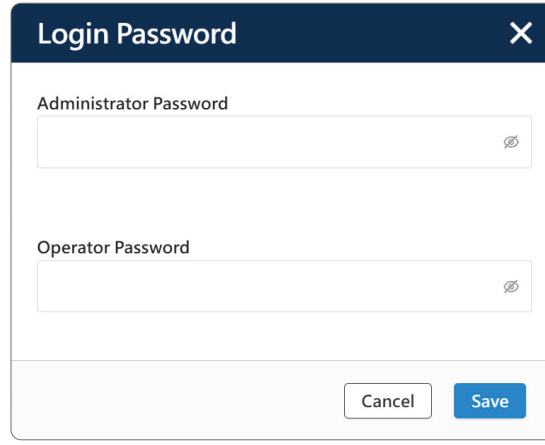
To upgrade the firmware of this unit, click the upgrade button to browse and select the firmware file from your PC.

Other Settings

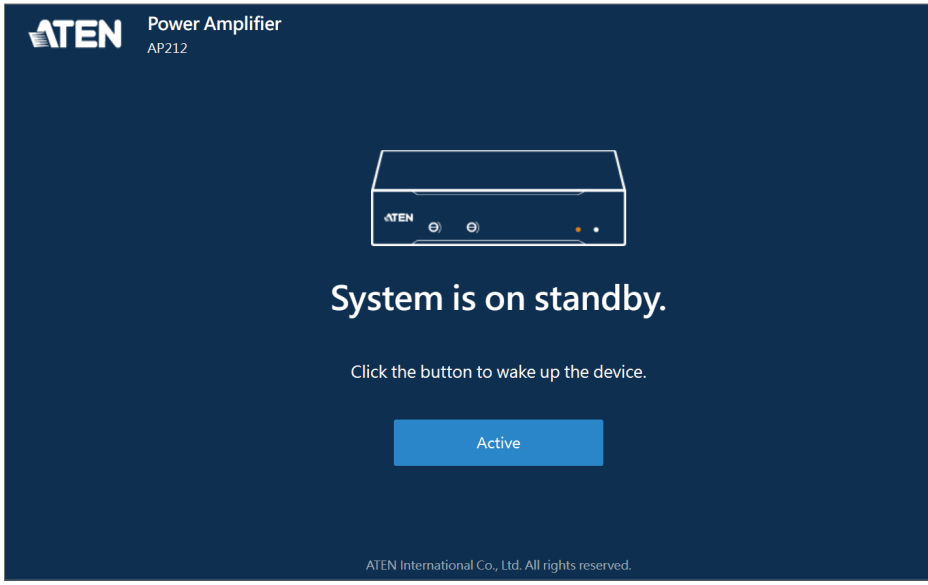
Click on the change button next to the function you'd like to configure to open its popup window for further settings:



Item	Description
Auto Standby	Turn on the **Auto Standby** switch, and define the following by selecting the options from the drop-down:  ◆ **Standby after** Set the duration that the unit automatically enters standby mode after an elapsed time of inactivity. The options are: ◆ **Threshold** Select the signal strength that trigger the wakeup of the unit.

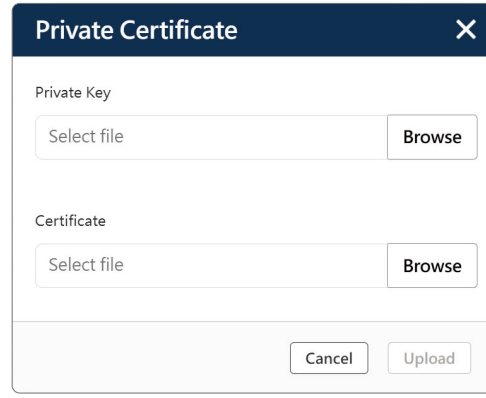
Item	Description
Language	Use the drop-down menu to select the web GUI interface language. 
Login Password	Change the password for **Administrator** and **Operator**. 

Note: By enabling the auto standby settings, you have to wake up the unit once the it enters the standby mode. Follow the on-screen instructions to complete.

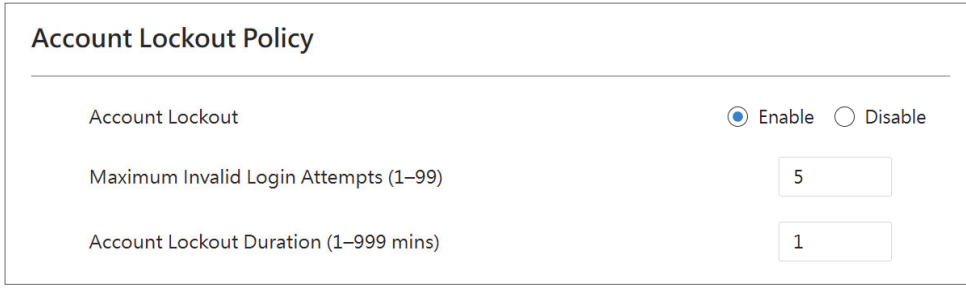


Network Settings

The **Network Settings** section allows you to configure secure access and communication parameters for the amplifier. It provides options for managing certificates, enabling network-based control interfaces, and selecting the preferred server protocol. These settings help ensure reliable connectivity and enhance overall system security.

Item	Description
Private Key & Certifcate	When logging in over a secure (SSL) connection, a signed certificate is used to verify that the user is logging in to the intended site. For enhanced security, the Private Certificate section allows you to use your own private encryption key and signed certificate, rather than the default ATEN certificate. 
Enable Telnet Server	Check the checkbox to enable the Telnet login function that connects to the unit over a network to provide text based management and control.
Server Port	Use the radio button to select only use HTTP for a browser login or both HTTP and HTTPS which is for a secure browser login.
Host validation	Enables or disables protection against forged HTTP Host headers. When enabled, the system validates the Host field in incoming HTTP requests to prevent attacks that exploit modified or fake Host headers, which could otherwise cause unauthorized redirects or security bypasses. ◆ **Enable**: Verifies the Host value in HTTP requests to enhance security. ◆ **Disable**: Turns off validation for compatibility or testing purposes.

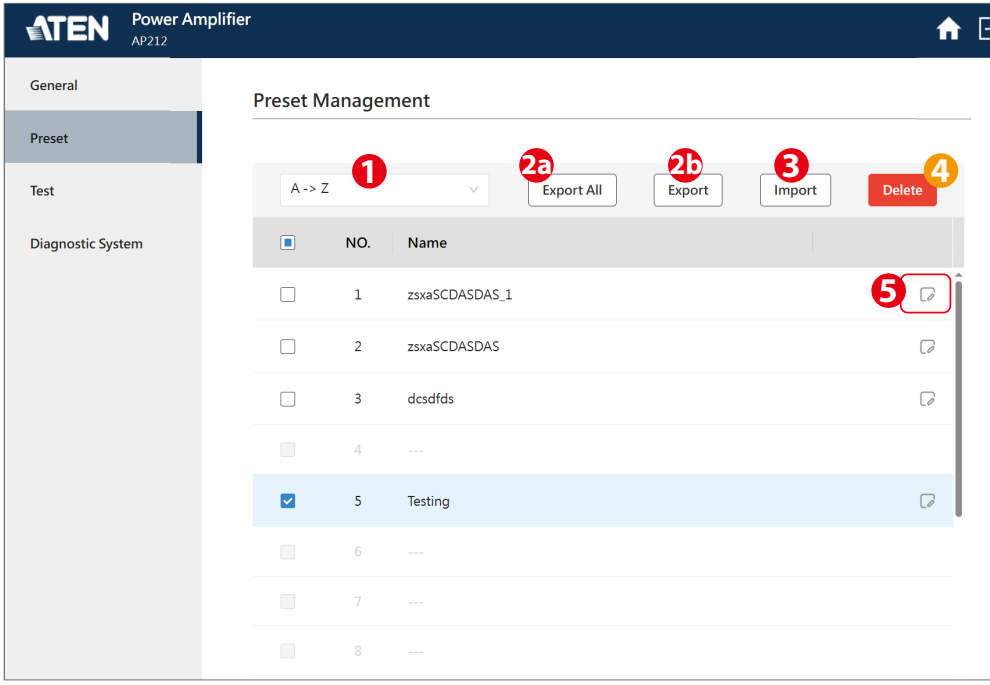
Account Lockout Policy



Account Lockout Policy helps to protect the accounts by limiting the number of failed login attempts.

Item	Description	Default
Account Lockout	To enable or disable the function that locks the login account after a certain number of failed sign-in attempts.	Enable
Maximum Invalid Login Attempts (1–99)	Enter the maximum number of failed sign-in attempts.	3 (attempts)
Account Lockout Duration (1–999 mins)	Define the number of minutes that a locked-out account remains locked out before it gets unlocked.	15 (minutes)

Preset Tab



A preset is a set of settings that defines how the DSP manipulate the audio signal and configured by users in the AP206 / AP212 web GUI . **Preset** tab lists all the saved presets, and on this tab page, **Administrator** can perform the following actions:

1. **Sort and Display the Presets Alphabetically**:
   To sort the saved preset(s) in ascending or descending alphabetical order, select **A -> Z** or **Z -> A** from the drop-down menu.

2. **Export the Preset(s)**:
   To export existing presets as a single .bin file that may contain one or multiple presets for backup or reuse.

   a) Click **Export All** to export all presets into one .bin file to your PC.

   b) Select the checkbox(es) of the preset(s) you'd like to export, click **Export**, and save the generated .bin to your PC.

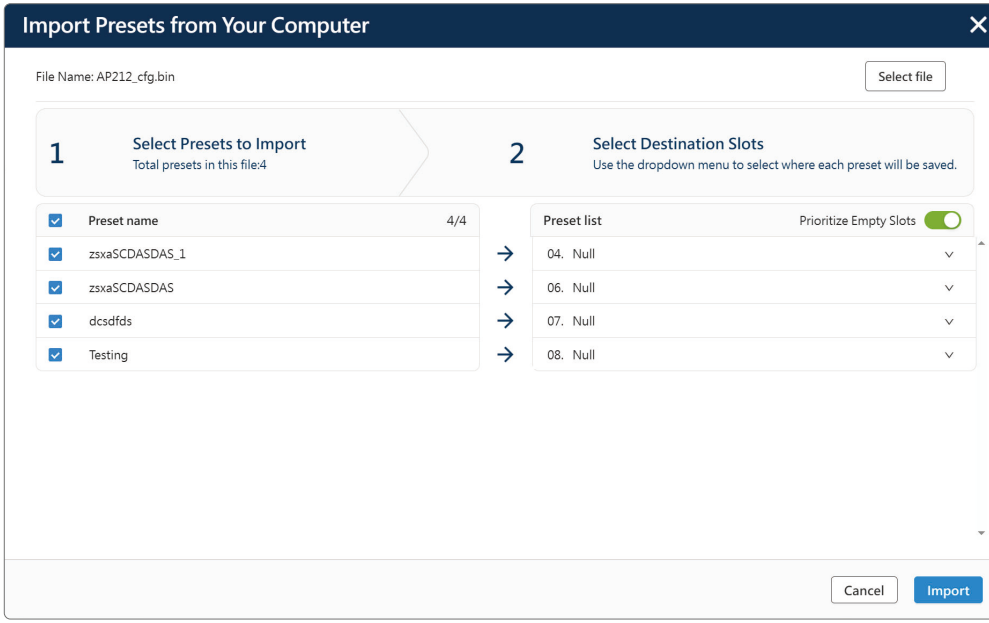
   Exported preset files can be imported again using the **Import** function.

3. **Import the Preset(s)**:
   To streamlining setup across units via configuration files, or to import your previously exported preset(s), do the following:

   a) Click the **Import** button to browse and select the .bin file saved on your PC.

   b) The **Import Presets from Your Computer** popup window appears.

   - Step 1 – **Select Presets to Import**:
     Select the preset(s) to be imported by checking the checkbox(es).
   - Step 2 – **Select Destination Slots**:
     Use the drop-down menus to assign each selected preset to a destination slot and arrange their order in the **Preset List**.

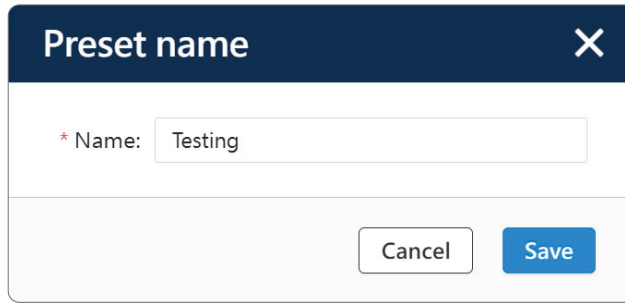


Note: By enabling **Prioritize Empty Slots** switch, the blank preset field will be preselected. To overwrite the existed preset field, manually select the field or disable **Prioritize Empty Slots** to preselect the filed from item no. 1.

   c) Click on the **Import** button to complete the action.

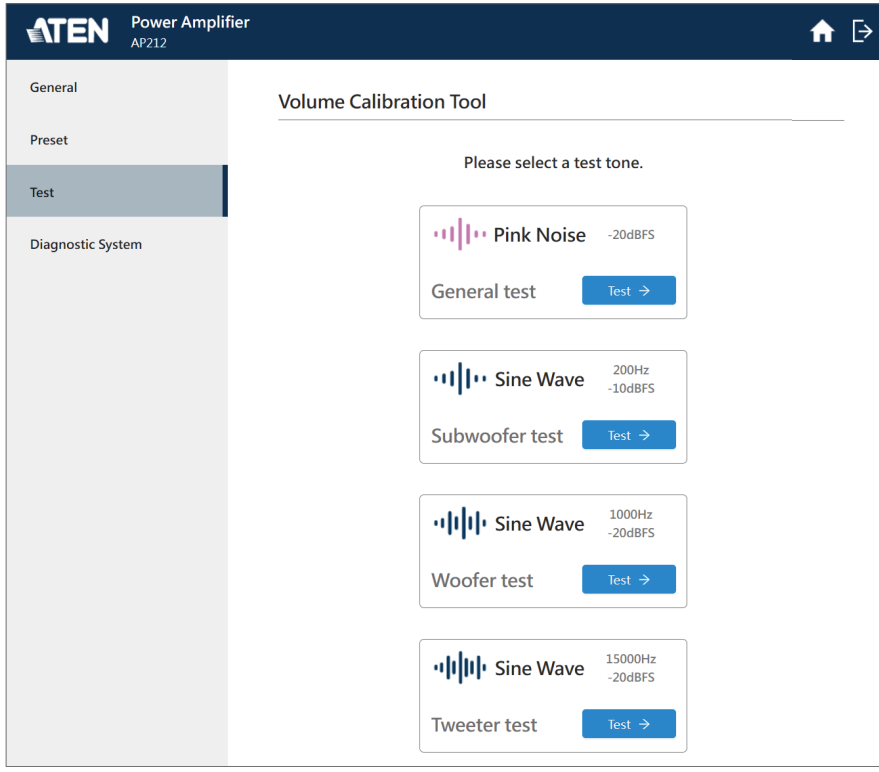
4. **Delete the Existing Preset(s):**
   Select the preset(s) to be removed, and then click on the **Delete** button.

5. Change the Preset Name:
   To change the name of the existed preset, click the edit button of the preset to be changed, enter the new name for this preset, and save the change. The preset name changes immediately.



Test Tab

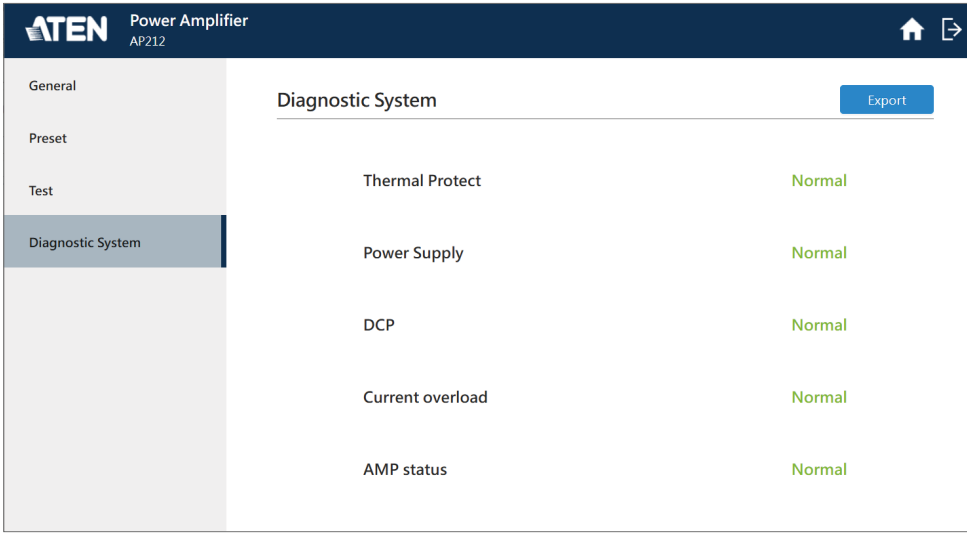
Test tab offers the methods that helps to calibrate the volume levels:



Item	Testing Wave-form	Description
General Test	Pink Noise	Pink noise is ideal for the output volume level calibration beacuse it consists of every frequency band at exactly the same level.
Subwoofer Test	Sine Wave	A sine wave represents a pure tone with a single frequency. Use the pure and consistent signal to measure and calibrate the performance of the audio equipments.
Woofer Test		
Tweeter Test		

Follow the on-screen instructions to complete the test procedure and take the suggested action to adjust the gain settings if needed.

Diagnostic System Tab



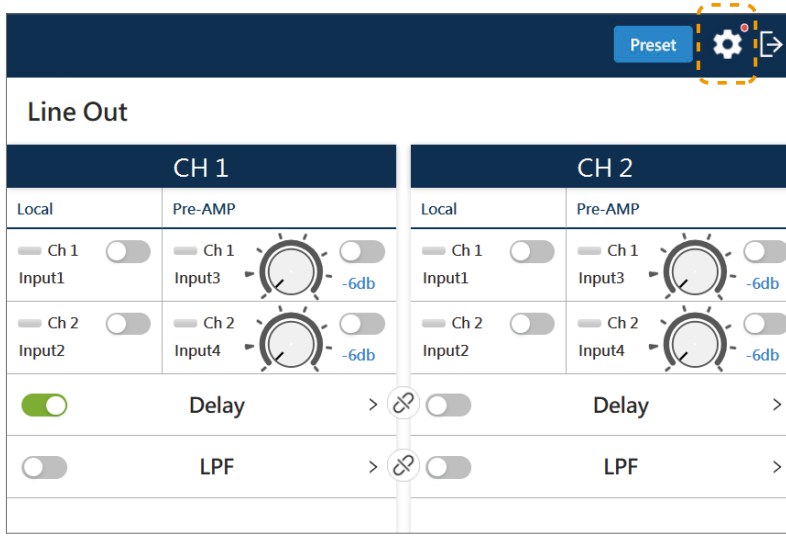
Diagnostic System tab identifies the following operational status and the problems on the AP206 / AP212 unit.

- Thermal Protect
- Power Supply
- DCP
- Current Overload
- AMP Status

Through the **Export** button, a report in .txt file format is generated. Use the generated report that contains the unit's event logs for troubleshooting if needed.

Critical Notifications

When a non-normal condition is detected on the amplifier, a red badge appears next to the Settings button on the DSP configuration screen. Go to the Diagnostic System tab to view the detailed notification.



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Appendix

Safety Instructions

General

- This product is for indoor use only.
- Read all of these instructions. Save them for future reference.
- Follow all warnings and instructions marked on the device.
- Do not place the device on any unstable surface (cart, stand, table, etc.). If the device falls, serious damage will result.
- Do not use the device near water.
- Do not place the device near, or over, radiators or heat registers.
- The device cabinet is provided with slots and openings to allow for adequate ventilation. To ensure reliable operation, and to protect against overheating, these openings must never be blocked or covered.
- The device should never be placed on a soft surface (bed, sofa, rug, etc.) as this will block its ventilation openings. Likewise, the device should not be placed in a built in enclosure unless adequate ventilation has been provided.
- Never spill liquid of any kind on the device.
- Unplug the device from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning.
- The device should be operated from the type of power source indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.
- To prevent damage to your installation it is important that all devices are properly grounded.
- Do not allow anything to rest on the power cord or cables. Route the power cord and cables so that they cannot be stepped on or tripped over.
- Position system cables and power cables carefully; Be sure that nothing rests on any cables.
- Never push objects of any kind into or through cabinet slots. They may touch dangerous voltage points or short out parts resulting in a risk of fire or electrical shock.

- Do not attempt to service the device yourself. Refer all servicing to qualified service personnel.
- If the following conditions occur, unplug the device from the wall outlet and bring it to qualified service personnel for repair.
  - The power cord or plug has become damaged or frayed.
  - Liquid has been spilled into the device.
  - The device has been exposed to rain or water.
  - The device has been dropped, or the cabinet has been damaged.
  - The device exhibits a distinct change in performance, indicating a need for service.
  - The device does not operate normally when the operating instructions are followed.
- Only adjust those controls that are covered in the operating instructions. Improper adjustment of other controls may result in damage that will require extensive work by a qualified technician to repair.
- To prevent electric shock, please do not remove the top cover as there are no user serviceable parts inside. Please refer to qualified service personnel for servicing.
- To completely disconnect this apparatus from the AC mains, disconnect the power supply cord plug from the AC receptacle.
- Exposed high voltage on the speaker out. Touching uninsulated terminals of wiring may result in an unpleasant sensation.

Rack Mounting

- Before working on the rack, make sure that the stabilizers are secured to the rack, extended to the floor, and that the full weight of the rack rests on the floor. Install front and side stabilizers on a single rack or front stabilizers for joined multiple racks before working on the rack.
- Always load the rack from the bottom up, and load the heaviest item in the rack first.
- Make sure that the rack is level and stable before extending a device from the rack.
- Use caution when pressing the device rail release latches and sliding a device into or out of a rack; the slide rails can pinch your fingers.
- After a device is inserted into the rack, carefully extend the rail into a locking position, and then slide the device into the rack.
- Do not overload the AC supply branch circuit that provides power to the rack. The total rack load should not exceed 80 percent of the branch circuit rating.
- Make sure that all equipment used on the rack – including power strips and other electrical connectors – is properly grounded.
- Ensure that proper airflow is provided to devices in the rack.
- Ensure that the operating ambient temperature of the rack environment does not exceed the maximum ambient temperature specified for the equipment by the manufacturer.
- Do not step on or stand on any device when servicing other devices in a rack.
- For desktop mounting, install the unit in an open and unobstructed area.

Technical Support

International

- For online technical support – including troubleshooting, documentation, and software updates: http://support.aten.com
- For telephone support, see *Telephone Support*, page iv:

North America

Email Support		support@aten-usa.com
Online Technical Support	Troubleshooting Documentation Software Updates	http://www.aten-usa.com/support
Telephone Support		1-888-999-ATEN ext 4988

When you contact us, please have the following information ready beforehand:

- Product model number, serial number, and date of purchase
- Your computer configuration, including operating system, revision level, expansion cards, and software
- Any error messages displayed at the time the error occurred
- The sequence of operations that led up to the error
- Any other information you feel may be of help

Specifications

AP206

Function	AP206
System Specification	
Rated Power	60Wrms / 120Wpeak per Channel @4Ω 120Wrms / 240Wpeak @70/100V Under Bridge Mode
Distortion	THD+N: <0.1%, 1kHz, 3dB before clipping
Frequency Response	50–20k Hz, +/-3dB @4Ω, 1W
Sensitivity	Balanced: +4dBu Unbalanced: -10dBV (0dBu=0.775Vrms, 0dBV=1Vrms)
Amplifier Type	Class D
Audio Inputs	
Interfaces	2 × 3-pin 3.5mm Euroblock (Bal/Unbal Line In)
Impedance	Balanced: 20kΩ / Unbalanced: 10kΩ
Detect Threshold	-50dBu
Audio Outputs	
Interfaces	Line Output: 1 × 5-pin 3.5mm Euroblock Speaker Output: 1 × 4-pin 5.08mm Euroblock
Impedance	Lo-Z: 4Ω / Hi-Z: 70V (40Ω), 100V (80Ω) Line Output: 600Ω
Audio Effects	Built-In DSP
Protection	Output Shortcut AMP Output over/under voltage High Frequency Overload Thermal Protect

Function	AP206
Communication	
RS-232	Connector: 3-pin, 3.5mm, Terminal Block Baud rate and protocol: Baud Rate: 19200, Data Bits: 8, Stop Bits:1, Parity: No, Flow Control: No
Power	
Maximum Input Power Rating	100–240V~, 50/60Hz, 2A with PFC
Power Consumption	AC110V; 18.6W; 87BTU/h AC220V; 18W; 84BTU/h **Note:** ◆ 1/8 max. power output
Compliance	
Certification	FCC, CE, UKCA
Environmental	
Operating Temperature	0°C–50°C
Humidity	0%–80% RH, Non-Condensing
Storage Temperature	-20°C–60°C
Physical Properties	
Weight	2.15 kg (4.74 lb)
Housing	Metal
Dimensions (L x W x H)	200mm × 300mm × 44mm 20.00 × 32.30 × 4.40 cm (7.87 × 12.72 × 1.73 in.)

AP212

Function	AP212
System Specification	
Rated Power	120Wrms / 240Wpeak per Channel @4Ω 240Wrms / 480Wpeak @70/100V Under Bridge Mode
Distortion	THD+N: <0.1%, 1kHz, 3dB before clipping
Frequency Response	50–20k Hz, +/-3dB @4Ω, 1W
Sensitivity	Balanced: +4dBu Unbalanced: -10dBV (0dBu=0.775Vrms, 0dBV=1Vrms)
Amplifier Type	Class D
Audio Inputs	
Interfaces	2 × 3-pin 3.5mm Euroblock (Bal/Unbal Line In)
Impedance	Balanced: 20kΩ / Unbalanced: 10kΩ
Detect Threshold	-50dBu
Audio Outputs	
Interfaces	Line Output: 1 × 5-pin 3.5mm Euroblock Speaker Output: 1 × 4-pin 5.08mm Euroblock
Impedance	Lo-Z: 4Ω / Hi-Z: 70V (20Ω), 100V (40Ω) Line Output: 600Ω
Audio Effects	Built-In DSP
Protection	Output Shortcut AMP Output over/under voltage High Frequency Overload Thermal Protect
Communication	
RS-232	Connector: 3-pin, 3.5mm, Terminal Block Baud rate and protocol: Baud Rate: 19200, Data Bits: 8, Stop Bits:1, Parity: No, Flow Control: No

Function	AP212
Power	
Maximum Input Power Rating	100–240V~, 50/60Hz, 4A with PFC
Power Consumption	AC110V; 41.9W; 196BTU/h AC220V; 39.6W; 186BTU/h **Note:** ◆ 1/8 max. power output
Compliance	
Certification	FCC, CE, UKCA
Environmental	
Operating Temperature	0°C–50°C
Humidity	0%–80% RH, Non-Condensing
Storage Temperature	-20°C–60°C
Physical Properties	
Weight	2.15 kg (4.74 lb)
Housing	Metal
Dimensions (L x W x H)	20.00 × 32.30 × 4.40 cm (7.87 × 12.72 × 1.73 in.)

ATEN Warranty Policy

The warranty policy may vary by product category and region of purchase. For details, please visit ATEN's official website, select your purchase counties/ regions and then go to the Support Center, or contact your local ATEN sales representative for further assistance.

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