Simply Better Connections

AD004E / AD400E / AD202E

Audio Digital Signal Processor with Dante
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.

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 AD004E / AD400E / AD202E Audio Digital Signal Processor with Dante
- 1 rack mount / surface mount kit
- 1 foot pad set (4 pcs)
- 5 3-pin Euroblocks
- 1 user instructions

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1. Introduction

2. Hardware Setup

3. Operation

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About this Manual

This user manual is provided to help you get the most from the AD400E / AD004E / AD202E unit. It covers all aspects of installation, configuration, and operation. An overview of the information found in the manual is provided below.

Chapter 1, *Introduction* introduces you to the Audio Digital Signal Processor with Dante. Its purpose, features, installation considerations, and 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* explains the audio source input operation using the Audio Digital Signal Processor with Dante and its limitations.

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

AD400E

The AD400E converts 4 channels of balanced / unbalanced microphone / line-level audio signals into Dante packets to work with Dante-compliant equipment. It is also AES67 compliant, elevating interoperability between different audio networking protocols and devices. The unit supports 24 bit and offers sampling rate options of 44.1k, 48k, 88.2k, and 96 kHz to meet different commercial-grade application needs. The professional preamp circuitry AD400E comes with delivers a wide dynamic range, high signal headroom, and great Signal-to-Noise Ratio (SNR). Phantom power (+48V) can be enabled on any individual input, supporting condenser microphones while causing little signal distortion.

The built-in DSP allows 24 presets and quick setting adjustment through the PC-based app Audio Wizard / ATEN VK control system via LAN / RS232. Plus, the unit comes with a selectable automatic Standby Mode for energy-saving purposes, switching the AD400E to Standby Mode automatically when the signal level runs lower than -50 / -60 / -70 dBu for a selected duration (10 / 30 / 60 minutes), allowing the system to consume less power. The AD400E enables redundancy operation thanks to its PoE functionality, eliminating the need for additional cable installations. Furthermore, with the support for Dante Daisy Chaining, the AD400E helps simplify system infrastructure wiring. All the features come in a compact half-rack size enclosure, and consequently, less rack space is needed and installation under desks or on any flat surface is made easy.

Built to enhance interoperability among AoIP devices, the AD400E is suitable for professional audio scenarios utilizing the Dante networking technology due to the system connectivity and manageability it has to offer. Its audio performance also fulfills various requirements of a multitude of audio processing applications such as boardrooms, conference rooms, and hospitality venues such as restaurants and bars.

AD004E

The AD004E converts Dante inputs into 4-channel analog line outputs, integrating analog and digital audio devices into one single system through Dante AoIP media networking technology. It supports 24 bit and offers sampling rate options of 44.1k, 48k, 88.2k, and 96 kHz to meet different environment needs.

The built-in DSP allows 24 presets and speaker functionality management through the PC-based app Audio Wizard / ATEN VK control system via LAN / RS232. A DSP matrix mixer is also contained to deliver DSP mixing and routing functions, enabling users to assign Dante inputs to any of the four analog outputs.

The AD004E is AES67 compliant, elevating interoperability between different audio networking protocols and devices. Plus, the unit comes with a selectable automatic Standby Mode for energy-saving purposes, switching the AD004E to Standby Mode automatically when the signal level runs lower than -50 / -60 / -70 dBu for a selected duration (10 / 30 / 60 minutes), allowing the system to consume less power. The AD004E supports redundancy operation thanks to its PoE functionality, eliminating the need for additional cable installations. All the features come in a compact half-rack size enclosure, and consequently, less rack space is needed and installation under desks or on any flat surface is made easy.

AD004E is suitable for professional audio scenarios utilizing the Dante AoIP technology with the system connectivity and manageability it has to offer. Its audio performance also fulfills various requirements of a multitude of audio processing applications such as boardrooms, conference rooms, and hospitality venues such as restaurants and bars.

AD202E

The AD202E supports the conversion of 2 balanced / unbalanced Line/Mic level audio inputs with selectable individual 48V Phantom power into 2 Dante outputs as well as 2 Dante audio channels into 2 balanced / unbalanced line level outputs for versatile connectivity. It also enables 4 × 4 analog and Dante matrix mixing, allowing users to flexibly route any input to the assigned output, elevating sound performance. It supports 24 bit and offers sampling rate options of 44.1k, 48k, 88.2k, and 96 kHz to meet different environment needs. With AES67 compliance, the AD202E enhances interoperability between different audio networking protocols and devices.

Designed to enhance meeting experiences, the AD202E adopts Acoustic Echo Cancellation (AEC) technology to prevent echoes in a conferencing environment and Feedback Suppressor (FBS) to automatically detect and reduce feedback. Its built-in DSP allows 24 presets and quick setting adjustment through the PC-based app Audio Wizard / ATEN VK control system via LAN / RS-232. Plus, the AD202E comes with a selectable automatic Standby Mode for energy-saving purposes, switching the unit to Standby Mode automatically when the signal level runs lower than −50 / −60 / −70 dBu for a selected duration (10 / 30 / 60 minutes).

Other highlights include the support for Dante Daisy Chaining to help simplify system infrastructure wiring and for redundancy operation via PoE to eliminate the need for additional cable installations. The AD202E's compact, half-rack size enclosure makes installation under desks or on any flat surface easy. It is perfect for on-line conferences or distance learning applications that require high quality, dynamic sound performance and intelligible audio at the far end within Dante audio networking environments.

Features

AD400E

- Dante AoIP technology—replaces heavy, costly analog audio cables with cost-effective, easy-to-manage Cat cables
- AES67 compliant
- Converts 4 channels of balanced / unbalanced microphone / line-level audio signals into Dante packets
- Supports 24 bit and offers sampling rate options of 44.1k, 48k, 88.2k, and 96 kHz
- Euroblock connectors come with the package for analog input connection
- Professional preamp circuitry—delivers a wide dynamic range and great Signal-to-Noise Ratio (SNR)
- Phantom power (+48V)—can be enabled on any individual input, supporting condenser microphones while causing little signal distortion
- 4 additional channels—serve as side chain inputs, combining an original signal with a compressed copy to polish the sound
- Built-in DSP - allows 24 presets and quick setting adjustment through PC-based app Audio Wizard / ATEN VK control system via LAN / RS232
- Selectable automatic Standby Mode—the unit enters Standby Mode automatically when the signal level runs lower than −50 / −60 / −70 dBu for a selected duration (10 / 15 / 25 minutes)
- Supports PoE for redundancy operation and eliminating the need for additional wiring installations
- Supports Dante Daisy Chaining for simplifying system infrastructure wiring
- Compact half-rack size chassis—flexible installation inside racks and easy placement under desks or on flat surfaces

AD004E

- Converts Dante inputs into 4-channel analog line outputs
- Dante AoIP technology—replaces heavy, costly analog audio cables with cost-effective, easy-to-manage Cat cables
- AES67 compliant
- Supports 24 bit and offers sampling rate options of 44.1k, 48k, 88.2k, and 96 kHz
- Built-in DSP - allows 24 presets and speaker functionality management through PC-based app Audio Wizard / ATEN VK control system via LAN / RS232
- Built-in DSP matrix mixer—enables users to assign Dante inputs to any of the four analog outputs
- Selectable automatic Standby Mode—the unit enters Standby Mode automatically when the signal level runs lower than −50 / −60 / −70 dBu for a selected duration (10 / 15 / 25 minutes)
- Supports PoE for redundancy operation and eliminating the need for additional wiring installations
- Compact half-rack size chassis—flexible installation inside racks and easy placement under desks or on flat surfaces

AD202E

- Converts 2 balanced / unbalanced Line / Mic level audio inputs with selectable individual 48V Phantom power into 2 Dante outputs and 2 Dante audio channels into 2 balanced / unbalanced line level outputs
- Enables 4 × 4 analog and Dante matrix mixing
- Acoustic Echo Cancellation (AEC)—prevents echoes in a conferencing environment
- Feedback Suppressor (FBS)—automatically detects and reduces feedback
- AES67 compliant
- Supports 24 bit and offers sampling rate options of 44.1k, 48k, 88.2k, and 96 kHz
- Built-in DSP—allows 24 presets and speaker functionality management through PC-based app Audio Wizard / ATEN
- VK control system via LAN / RS-232
- Selectable automatic Standby Mode—the unit enters Standby Mode automatically when the signal level runs lower than −50 / −60 / −70 dBu for a selected duration (10 / 30 / 60 minutes)
- Supports PoE for redundancy operation and eliminating the need for additional wiring installations
- Supports Dante Daisy Chaining for simplifying system infrastructure wiring
- Compact half-rack size chassis—flexible installation inside racks and easy placement under desks or on flat surfaces

Planning the Installation

Requirements

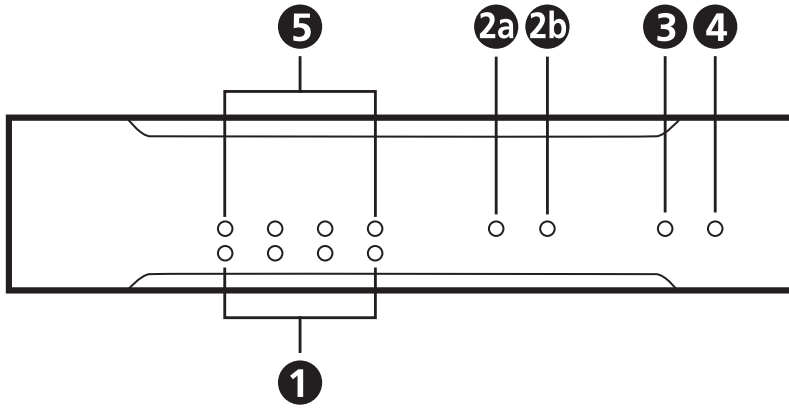
Prepare the following before installing the AD400E / AD004E / AD202E unit:

- 1 set of ceiling loudspeakers and power amplifier
- 1 or more audio source devices
- 1 network switch or router

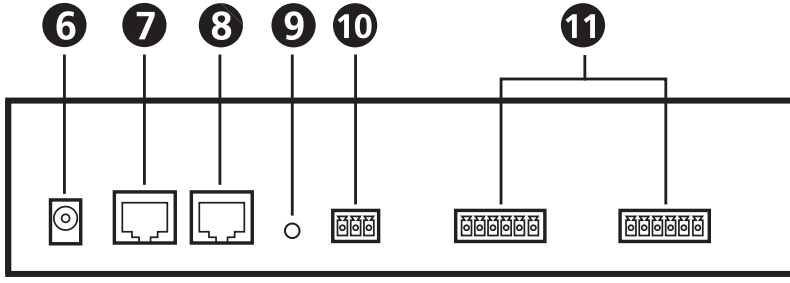
Components

AD400E

Front View



Rear View

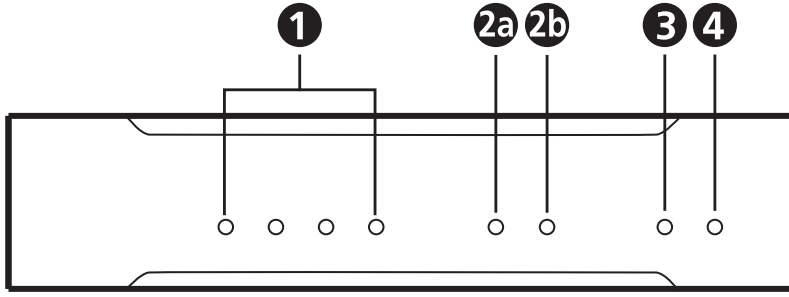


No.	Component	Description
1	input level LEDs	The LED(s) lights green to indicate the amplitude level is more than -50dBu while it lights red if it reaches +18dBu.

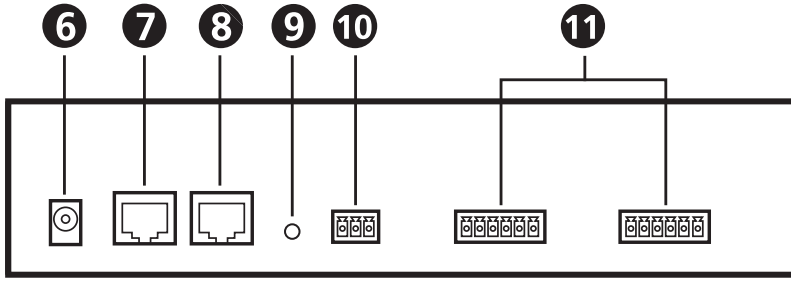
No.	Component	Description
2	sampling rate LEDs	a) The LED lights green if the signal sampling rate is at 44.1kHz, and it lights red if the signal sampling rate is at 88.2kHz. b) The LED lights green if the signal sampling rate is at 48kHz, and it lights red if the signal sampling rate is at 96kHz.
3	standby LED	The LED lights amber when the unit goes into standby mode, and it blinks in amber if system error occurs.
4	power LED	The LED lights green to indicate the unit is powered on, and it blinks in green when firmware upgrade is in process.
5	phantom power LEDs	The LED(s) lights amber to indicate the phantom power is on.
6	power jack	Plug the power adapter to the power jack.
7	Dante link / PoE port	Use an RJ-45 cable to connect the Dante link port to a network switch or ATEN Control System. Power over Ethernet (PoE Class 0, IEEE802.3af) is supported.
8	Dante link port	Use an RJ-45 cable to connect the Dante link port to a network switch or ATEN Control System.
9	reset button	Use a paper clip to reset the unit. Insert the point end to press and hold the button for 5 seconds to reset Dante settings while press and hold the button for 10 seconds to reset the unit to its factory default settings.
10	RS-232 serial port	A 3-pin RS-232 serial port with Tx, Rx, and GND for connecting to ATEN Control System.
11	audio mic / line input channels	Connect the cables from your audio source device to the channels.

AD004E

Front View



Rear View

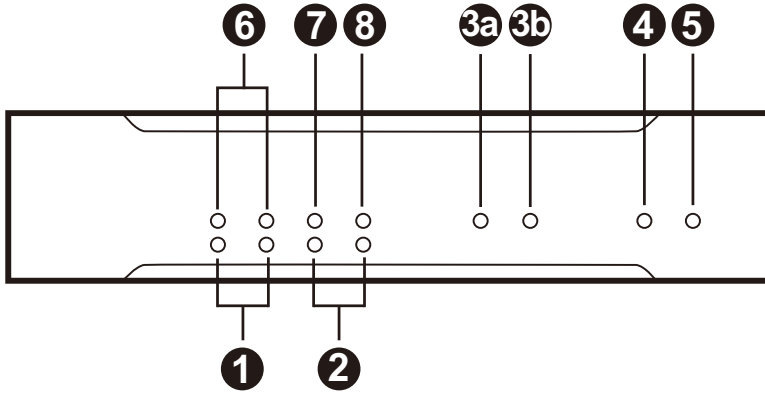


No.	Component	Description
1	output level LEDs	The LED(s) lights green to indicate the amplitude level is more than -50dBu while it lights red if it reaches +18dBu.
2	sampling rate LEDs	a) The LED lights green if the signal sampling rate is at 44.1kHz, and it lights red if the signal sampling rate is at 88.2kHz. b) The LED lights green if the signal sampling rate is at 48kHz, and it lights red if the signal sampling rate is at 96kHz.
3	standby LED	The LED lights amber when the unit goes into standby mode, and it blinks in amber if system error occurs.

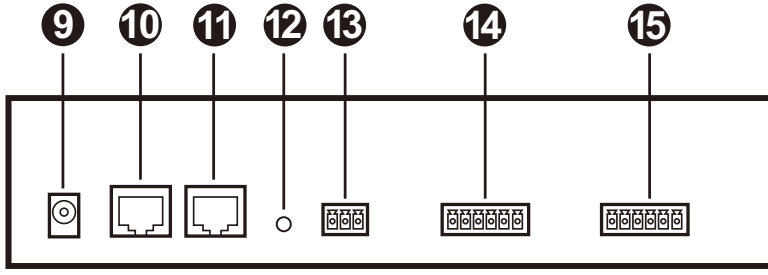
No.	Component	Description
4	power LED	The LED lights green to indicate the unit is powered on, and it blinks in green when firmware upgrade is in process.
6	power jack	Plug the power adapter to the power jack.
7	Dante link / PoE port	Use an RJ-45 cable to connect the Dante link port to a network switch or ATEN Control System. Power over Ethernet (PoE Class 0, IEEE802.3af) is supported.
8	Dante link port	Use an RJ-45 cable to connect the Dante link port to a network switch or ATEN Control System.
9	reset button	Use a paper clip to reset the unit. Insert the point end to press and hold the button for 5 seconds to reset Dante settings while press and hold the button for 10 seconds to reset the unit to its factory default settings.
10	RS-232 serial port	A 3-pin RS-232 serial port with Tx, Rx, and GND for connecting to ATEN Control System.
11	audio line output channels	Connect the audio output devices via balanced or unbalanced audio cables.

AD202E

Front View



Rear View



No.	Component	Description
1	input level LEDs	The LED(s) lights green to indicate the amplitude level is more than -50dBu while it lights red if it reaches +18dBu.
2	output level LEDs	The LED(s) lights green to indicate the amplitude level is more than -50dBu while it lights red if it reaches +18dBu.

No.	Component	Description
3	sampling rate LEDs	a) The LED lights green if the signal sampling rate is at 44.1kHz, and it lights red if the signal sampling rate is at 88.2kHz. b) The LED lights green if the signal sampling rate is at 48kHz, and it lights red if the signal sampling rate is at 96kHz.
4	standby LED	The LED lights amber when the unit goes into standby mode, and it blinks in amber if system error occurs.
5	power LED	The LED lights green to indicate the unit is powered on, and it blinks in green when firmware upgrade is in process.
6	phantom power LEDs	The LED(s) lights amber to indicate the phantom power is on.
7	AEC (acoustic echo cancellation) LED	The LED lights blue to indicate acoustic echo cancellation (AEC) is activated.
8	FBS (feedback suppressor) LED	The LED lights blue to indicate feedback suppressor (FBS) is activated.
9	power jack	Plug the power adapter to the power jack.
10	Dante link / PoE port	Use an RJ-45 cable to connect the Dante link port to a network switch or ATEN Control System. Power over Ethernet (PoE Class 0, IEEE802.3af) is supported.
11	Dante link port	Use an RJ-45 cable to connect the Dante link port to a network switch or ATEN Control System.
12	reset button	Use a paper clip to reset the unit. Insert the point end to press and hold the button for 5 seconds to reset Dante settings while press and hold the button for 10 seconds to reset the unit to its factory default settings.
13	RS-232 serial port	A 3-pin RS-232 serial port with Tx, Rx, and GND for connecting to ATEN Control System.
14	audio line output channels	Connect the audio output devices via balanced or unbalanced audio cables.
15	audio mic / line input channels	Connect the cables from your audio source device to the channels.

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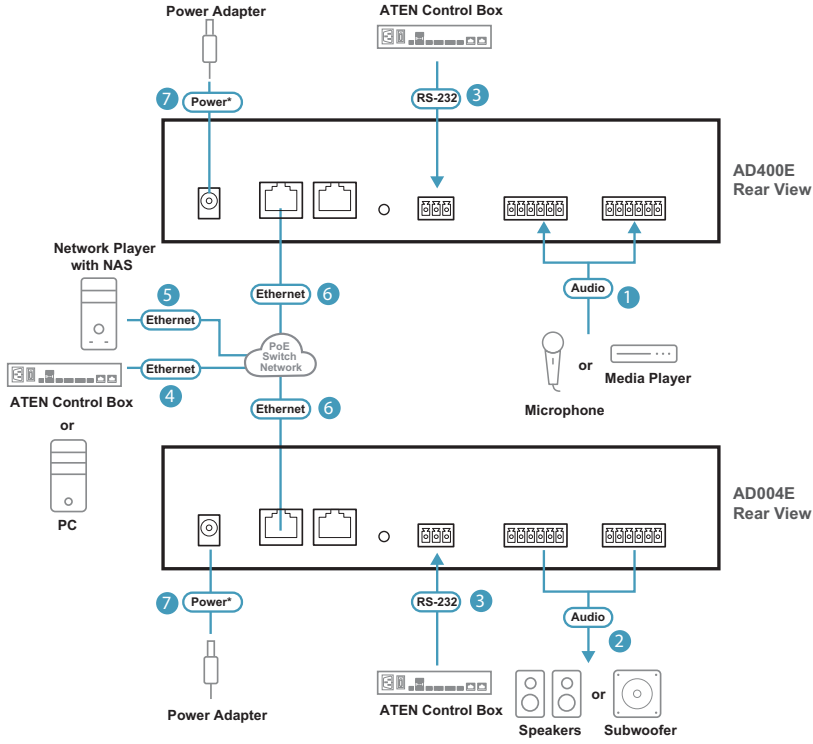
Chapter 2
Hardware Setup

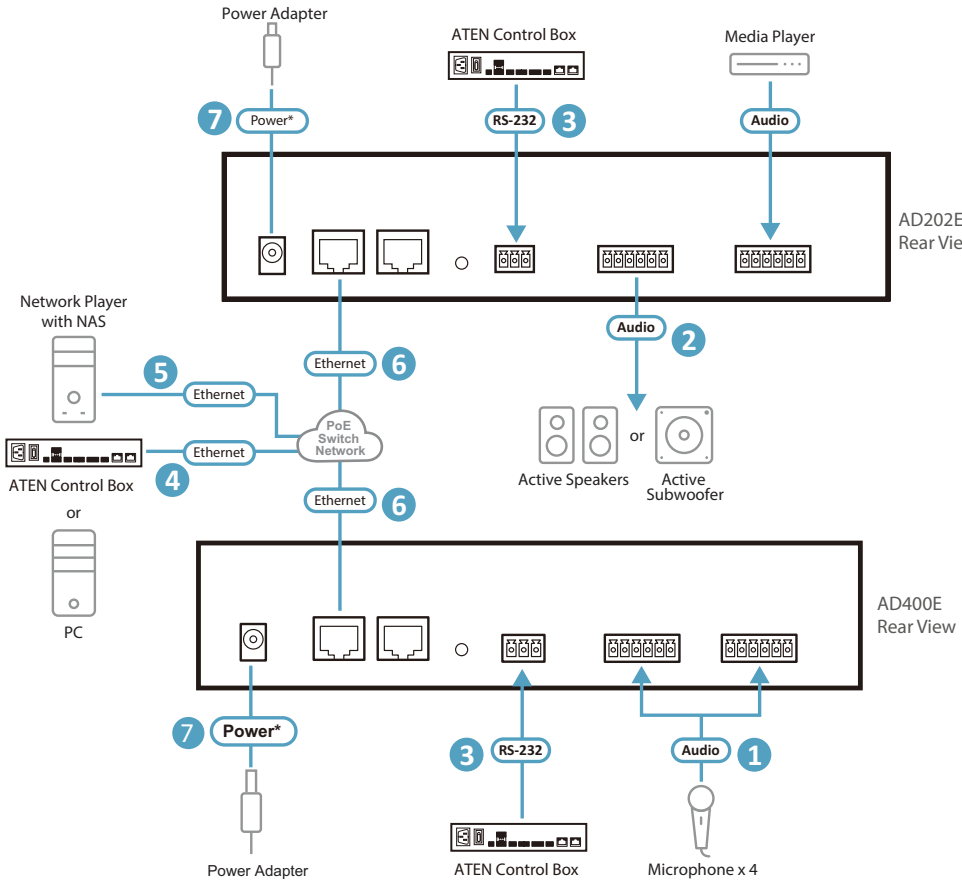
1. Please review the safety information regarding the placement of this device in *Safety Instructions*, page 67.
2. Do not power on the AD004E / AD400E / AD202E until all the necessary hardware is connected.

Connecting the AD400E / AD004E / AD202E Unit

Follow the steps below to connect the AD400E / AD004E / AD202E to audio source devices, a set of active speakers, and an ATEN controller.

PoE Redundancy





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

1. Connect the cables from your audio source device to the ports. It is strongly recommended that you use signal cables of AWG18 or higher.

2. Connect the audio output devices via balanced or unbalanced audio cables. It is strongly recommended that you use signal cables of AWG18 or higher.

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

4. (Optional) To remotely control the unit(s) using an ATEN Control Box / PC, connect the ATEN Control Box / PC to the network the unit(s) to be connected in step 6.

5. (Optional) Connect your network player to the network the unit(s) is going to connect in step 6.

6. Use an Ethernet cable to connect the Dante link / PoE port to a network switch after powering on all other audio equipment. The AD400E / AD004E / AD202E can be powered on via an Ethernet cable by connecting its Dante link port to a PoE network switch. The unit's power LED lights green to indicate the unit is powered on.

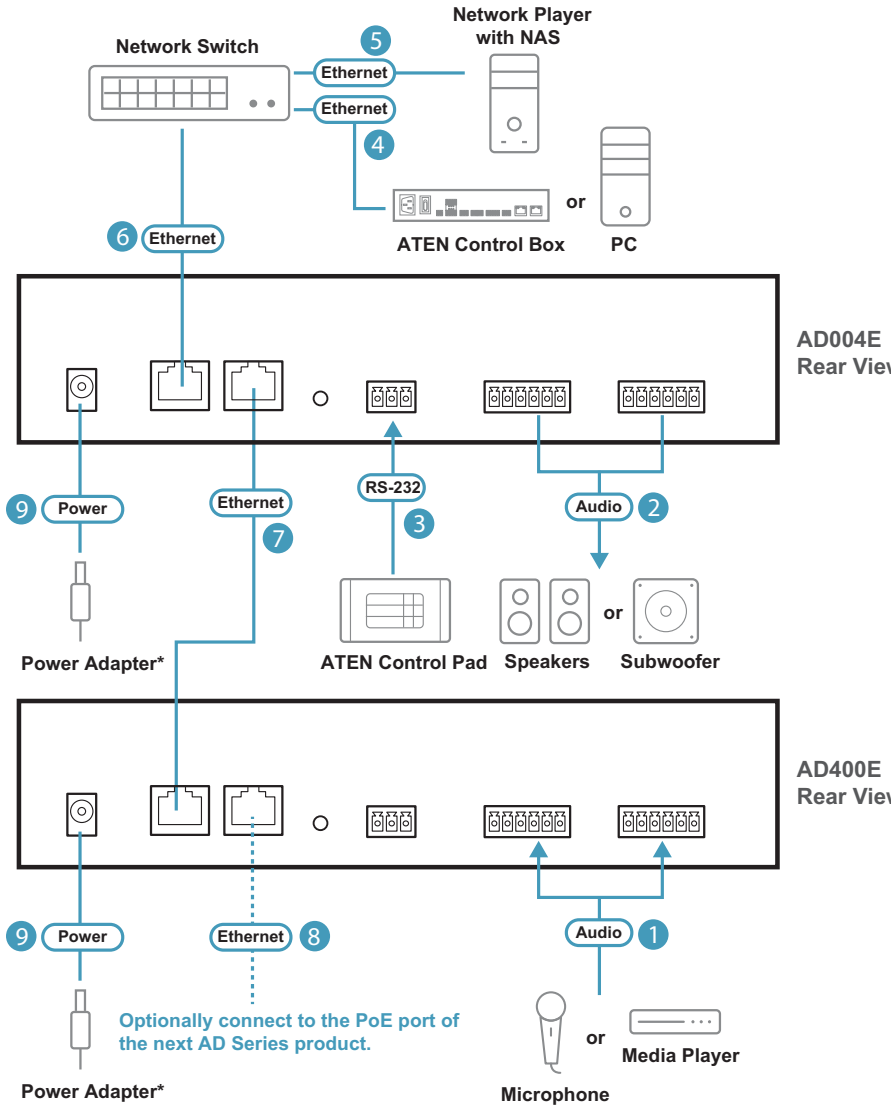
Note: It is strongly recommended that you use a Cat 5e cable (or higher) for better network connectivity and preventing EMI (Electromagnetic Interference).

7. (Optional) Plug the power adapter to the power jack.

Note: 1. The power adapter is sold separately and it supplies redundant power when PoE becomes unavailable. Please contact your ATEN dealer or go to ATEN website for available accessories and product information.

2. Do not boot up the unit right after disconnecting the unit from the power source. Please wait at least 10 seconds and then connect the unit to the power source again.

Dante Daisy Chaining



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

1. Connect the cables from your audio source device to the ports. It is strongly recommended that you use signal cables of AWG18 or higher.

2. Connect the audio output devices via balanced or unbalanced audio cables. It is strongly recommended that you use signal cables of AWG18 or higher.

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

4. (Optional) To remotely control the unit(s) using an ATEN Control Box / PC, connect the ATEN Control Box / PC to the network the unit(s) to be connected in step 6.

5. (Optional) Connect your network player to the network the unit(s) is going to connect in step 6.

6. Use an Ethernet cable to connect the Dante link / PoE port of the 1st unit to a network switch.

   Note: It is strongly recommended that you use a Cat 5e cable (or higher) for better network connectivity and preventing EMI (Electromagnetic Interference).

7. Use an Ethernet cable to connect the Dante link port of the 1st unit to the Dante link / PoE port of the 2nd unit.

8. (Optional) Connect the Dante link port to the next unit's the Dante link / PoE port. Repeat this step to link your AD series devices together in series.

9. Power on all other connected audio equipment, and then plug the power adapter to the unit's power jack. The unit's power LED lights green to indicate the unit is powered on.

   Note: 1. The power adapter is sold separately. Please contact your ATEN dealer or go to ATEN website for available accessories and product information.

2. Do not boot up the unit right after disconnecting the unit from the power source. Please wait at least 10 seconds and then connect the unit to the power source again.

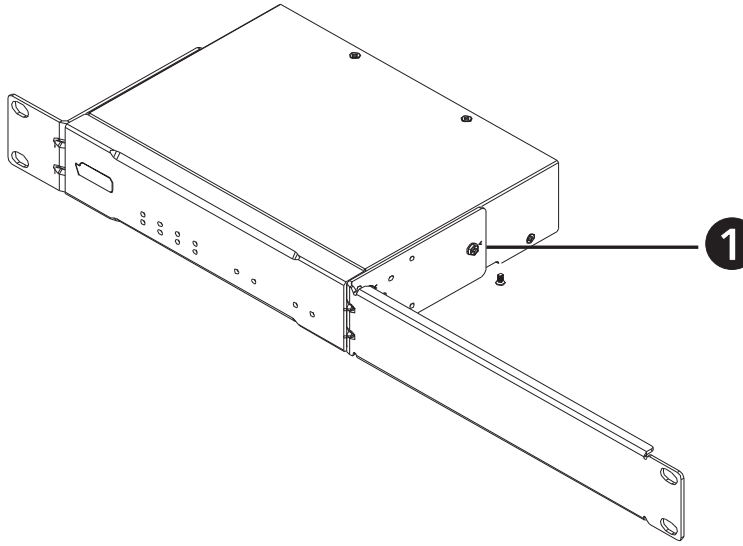
Mounting the AD400E / AD004E / AD202E Unit

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.

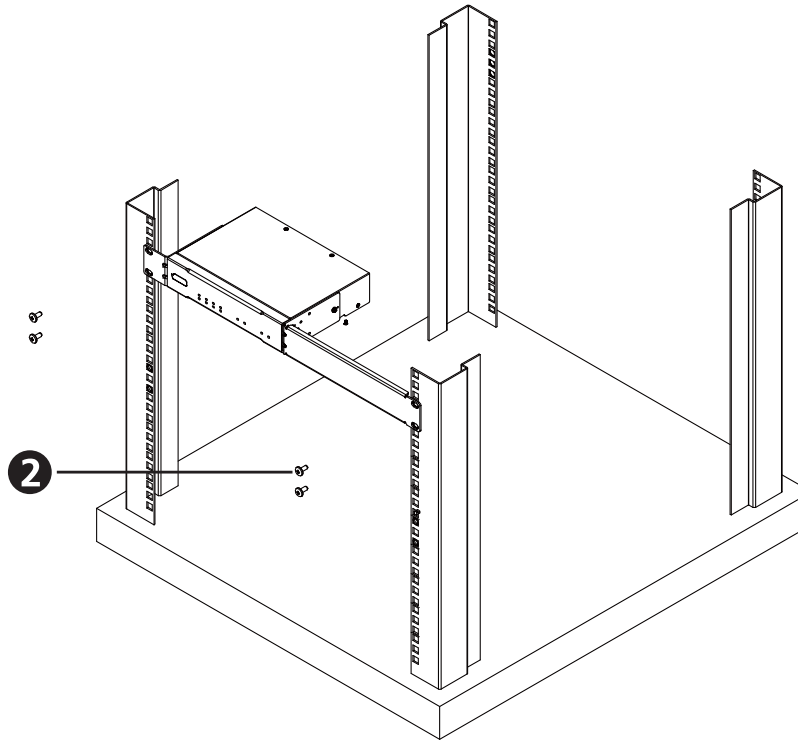
Rack Mount

To mount the unit onto a 19" (1U) system rack:

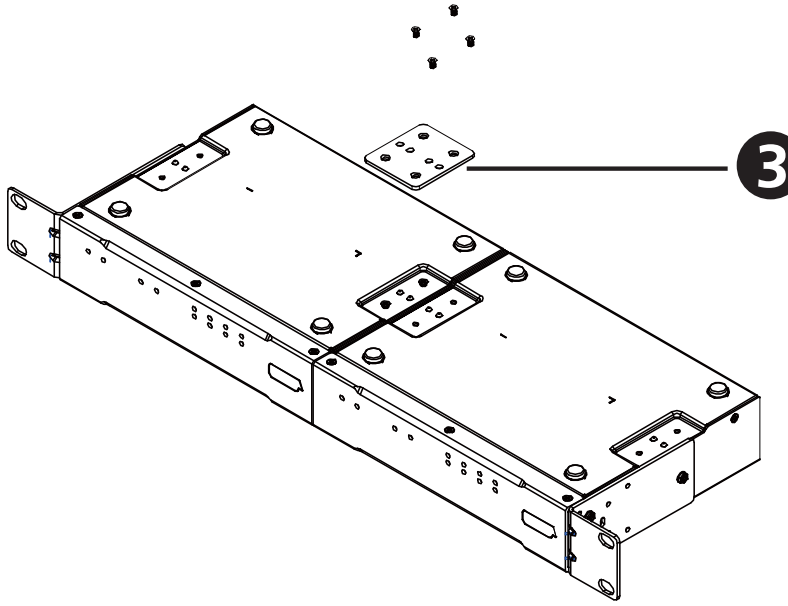
1. Using the rack mount kit, attach the 2 mounting brackets onto the sides of the unit with six M3 indented hex washer head screws provided.



2. 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.



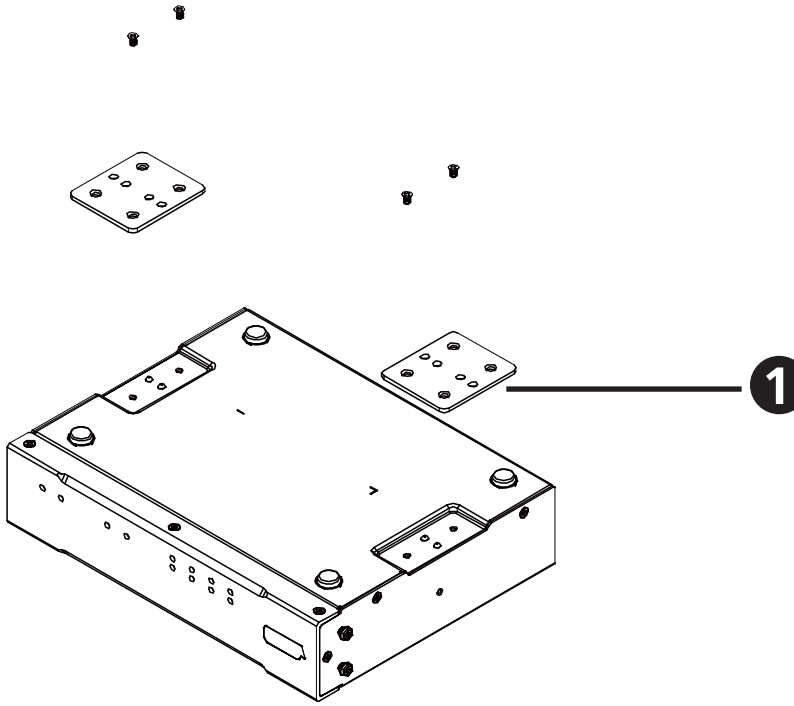
3. For dual rack mount, screw the line bracket onto the bottom side of the two units with four M3 flat head screws. Attach the mounting brackets onto the units with six M3 indented hex washer head screws provided. Follow step 2 to secure the unit onto the system rack.



Surface Mount

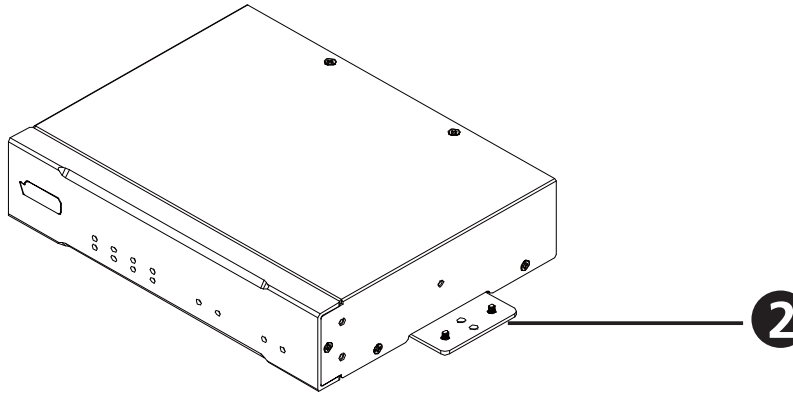
To secure the unit on a flat surface:

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



2. Place the unit on a flat surface, such as a desk, and secure the unit on the surface with self-supplied screws.

Note: Please use the screws that fit 3mm screw hole diameter.



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Chapter 3
Operation

Prerequisite

To configure the DSP settings via the PC-based app **Audio Wizard**, followings are required:

Dante Controller

Download **Dante Controller** from Audinate website to your PC, and install it by following its on-screen instructions. After completing installation, launch Audinate's **Dante Controller** to configure the transmit/receive channels of the connected device(s).

Audio Wizard

The PC-based app, ATEN **Audio Wizard,** can be downloaded from the *Support and Download* tab of the product page. Install the app on your PC and launch it.

Note: 1. Audio Wizard supports Mac and Windows 64-bit OS only; C++ redistributable for Visual Studio 2015 is required.

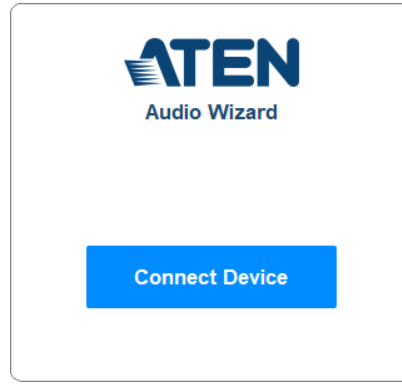
2. Install Audio Wizard after you have Dante Controller configured.

Logging in to Audio Wizard

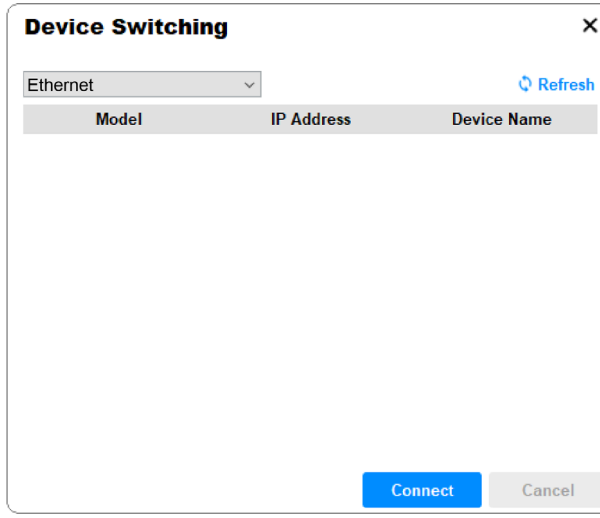
Login

Follow the steps to log in to ATEN Audio Wizard:

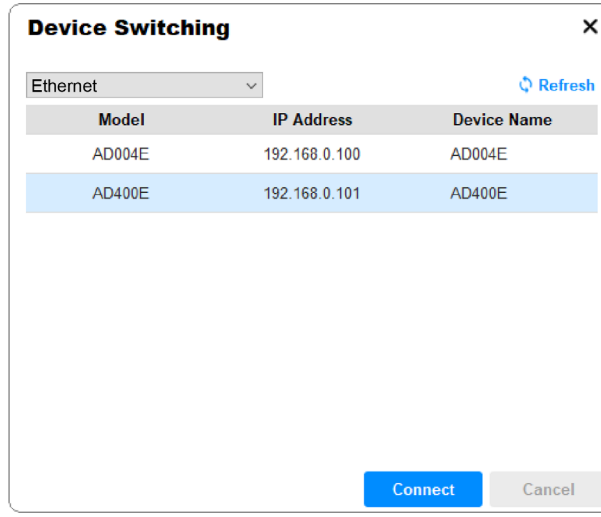
1. Launch the app Audio Wizard, and the pre-login screen shows up. Click on Connect Device to proceed.



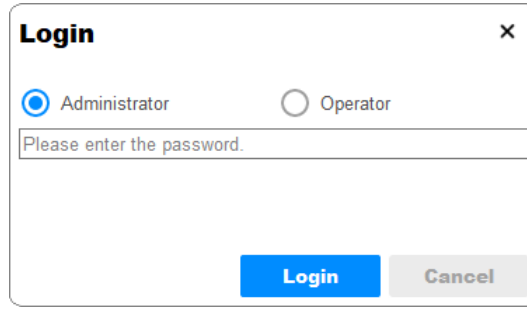
2. On Device Switching popup, click on Refresh to list the units to be configured.



3. Click to select the unit, and then click on the Connect button.

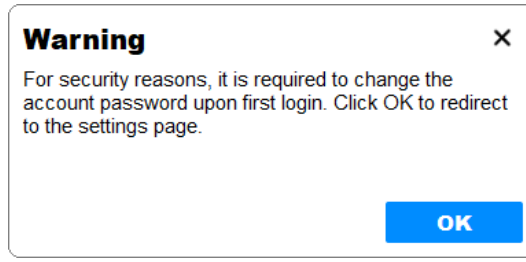


4. The Login popup shows up. Select your user role by clicking the radio button, enter the password, and click the Login button to submit.

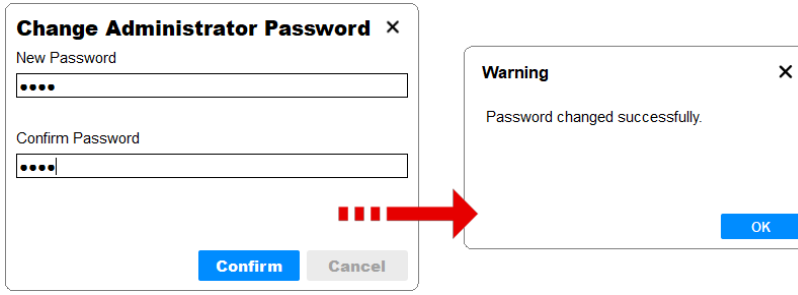


Note: The default password for Administrator and Operator is *1234*.

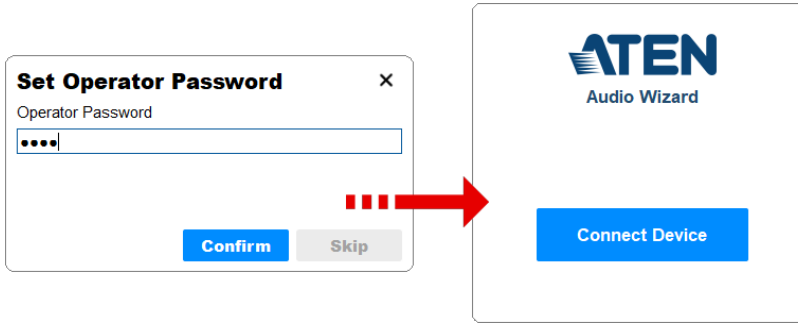
5. For the very first time you log in to Auido Wizard (including the first time you log in to Auido Wizard after resetting the unit), you are required to change the password. Click the OK button to proceed.



a) Enter the new password for **Administrator** and confirm your changed password in the relevant fields. Click Confirm. A message "Password changed successfully" will be displayed. Click the OK button to continue to the next step.

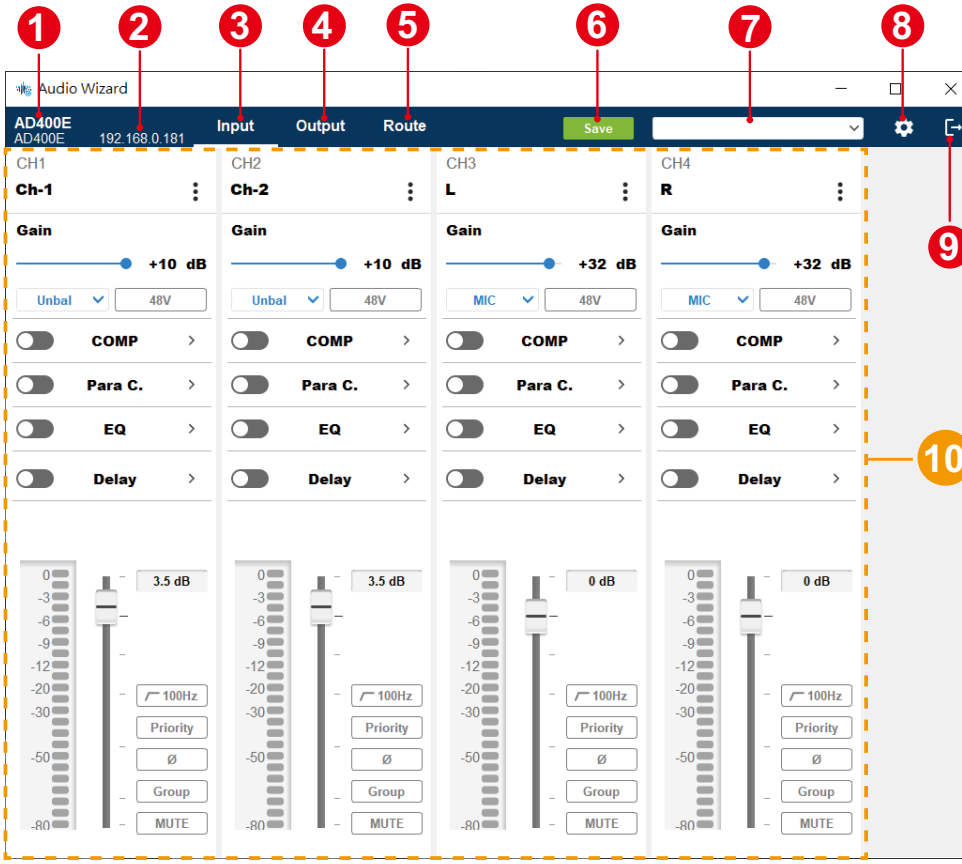


b) Enter your new password for **Operator** and then click on the Confirm button to make the change. You will redirect to the pre-login screen once the change is done. Repeat step 1 to step 4 with the new password to log in to Audio Wizard.



6. Once you successfully log in to Audio Wizard, you will enter the selected unit's DSP configuration screen similar to the figure below:

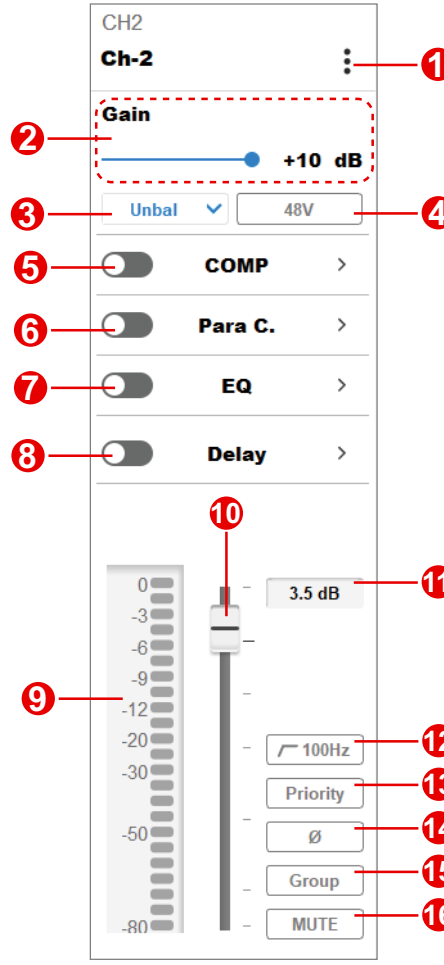
Note: The available functions differ based on the user role (*Administrator* or *Operator*) you selected to log in and the device model you are accessing.



No.	Item	Description
1	model name / device name	Show the unit's model name and device name. The model name is irrevocable while the device name can be changed by user (Administrator) for differentiating between multiple units with the same model name. The default device name is identical to the model name. To change the device name, please go to **Settings** > **General** > **Device Name**. See *General Tab*, page 61 for details.
2	IP address	Show the DHCP-assigned IP address or static IP address of this unit.
3	input tab	List the input channels and the configuration panel of each channel for user to configure the processing to be applied to the input audio signal. See *Input Tab*, page 33.
4	output tab	List the output channels and the configuration panel of each channel for user to configure the processing to be applied to the output audio signal. See *Output Tab*, page 43.
5	route tab	Configure the signal routing control. See *Route Tab*, page 53.
6	save button	Save the current configurations to be a preset. See *Preset Management*, page 54.
7	preset menu	Click to expand the drop-down menu which contains all the saved preset(s) for user to choose to load the preset settings. See *Preset Management*, page 54.
8	settings button	Click the button to switch to the setting screen. This function button is only available for Administrator. See *Settings*, page 61.
9	exit button	Click the exit button to leave the current configured unit by logging out ATEN Audio Wizard or switching to other unit connected to the same network. See *Switch to Settings Screen / Exit the App*, page 58.
10	operation area	Shows the audio signal configuration panel of the channels.

Input Tab

On Input tab, user can use the following DSP functions to configure the input processing for each channel:



No.	Item	Description
1	more button	Click on the more button to open the option menu for further settings: ◆ **Rename**: Input a new name for this channel. ◆ **Copy**: Copy the settings of this channel and apply them to the selected channel(s).

No.	Item	Description
2	input gain slider	To increase or decrease the audio signal (expressed in 0.5dBs), drag the slider to control the gain.
3	MIC / balanced / unbalanced selection menu	Select the input signal type between MIC, balanced, and unbalanced.
4	phantom power button	Click the button to enable or disable the phantom power.
5	compressor switch	Switch on/off to apply/withdraw the compressor settings to this channel. Click on the function name to open the popup for further configurations. See *Compressor Configuration*, page 35 for details.
6	parallel compression switch	Switch on/off to apply/withdraw the parallel compression settings to this channel. Click on the function name to open the popup for further configurations. See *Parallel Compression Configuration*, page 38 for details. **Note:** The parallel compression function is only supported by AD400E.
7	equalizer switch	Switch on or off to apply or withdraw the equalizer settings to this channel. Click on the function name to open the popup for further configurations. See *Channel Equalizer Configuration*, page 40 for details.
8	delay switch	Switch on or off to apply or withdraw the delay settings to this channel. Click on the function name to open the popup for further configurations. See *Delay Configuration*, page 42 for details.
9	signal level meter	Show the input signal levels in decibels (dB).
10	channel fader	Adjust the volume level of the audio signal to be output from the channel. 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.
11	channel fader level	Show the volume level of the audio signal to be output from the channel.
12	high-pass filter	Enable this function to remove the signal below the cut-off frequency of 100Hz, -18dB/OCT.
13	priority button	Click the button to set the audio signal input to this channel to have the priority. Other input channels will be attenuated/suppressed by 20dB.
14	phase button	Click the button to invert the polarity of the phase. Disabling this function means that the phase polarity is normal.
15	fader group button	Enable the group function to add this channel to the linked channels to simultaneously control the volume levels.
16	mute button	Click on the mute button to enable or disable the mute function for this channel.

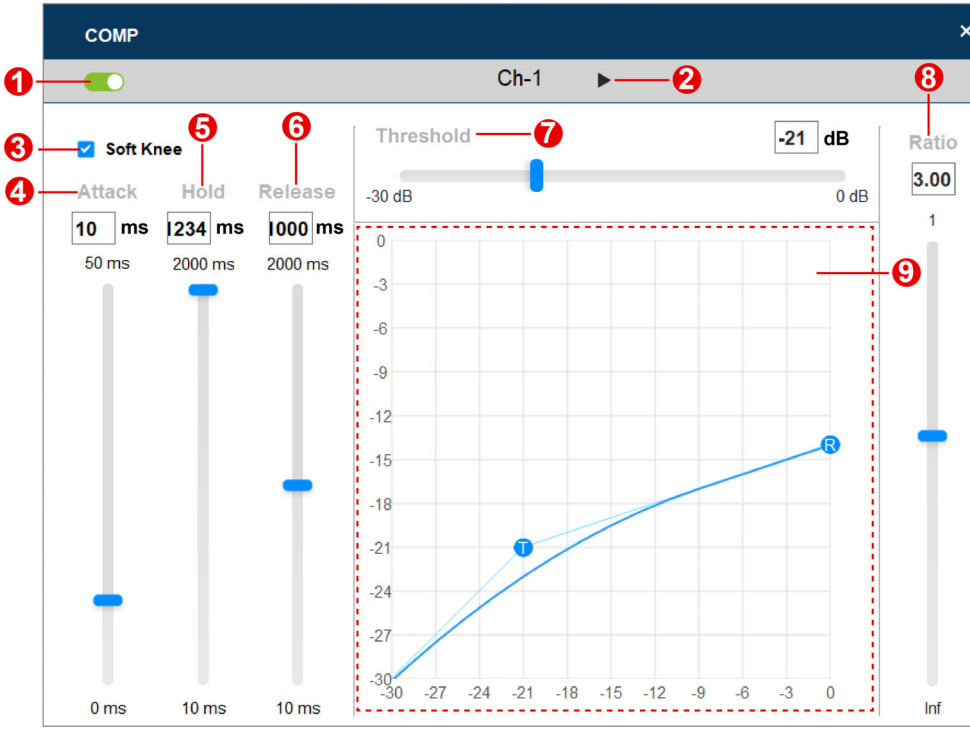
Note: 1. The processing order of the input audio signal is COMP > Para. C > EQ > Delay. Disabling a certain setting means that the disabled procedure will be skipped.

2. The parallel compression function is only supported by AD400E.

Compressor Configuration

Compressor offers the facility that turns the audio signal volume down if the volume exceeds the threshold set by the user. Through the compressor, user can control the audio signal level by reducing the dynamic range of the input audio signal, bringing down the loudest amplitude peak, and turning up the lowest one.

On the compressor popup, user can configure the followings for this channel:



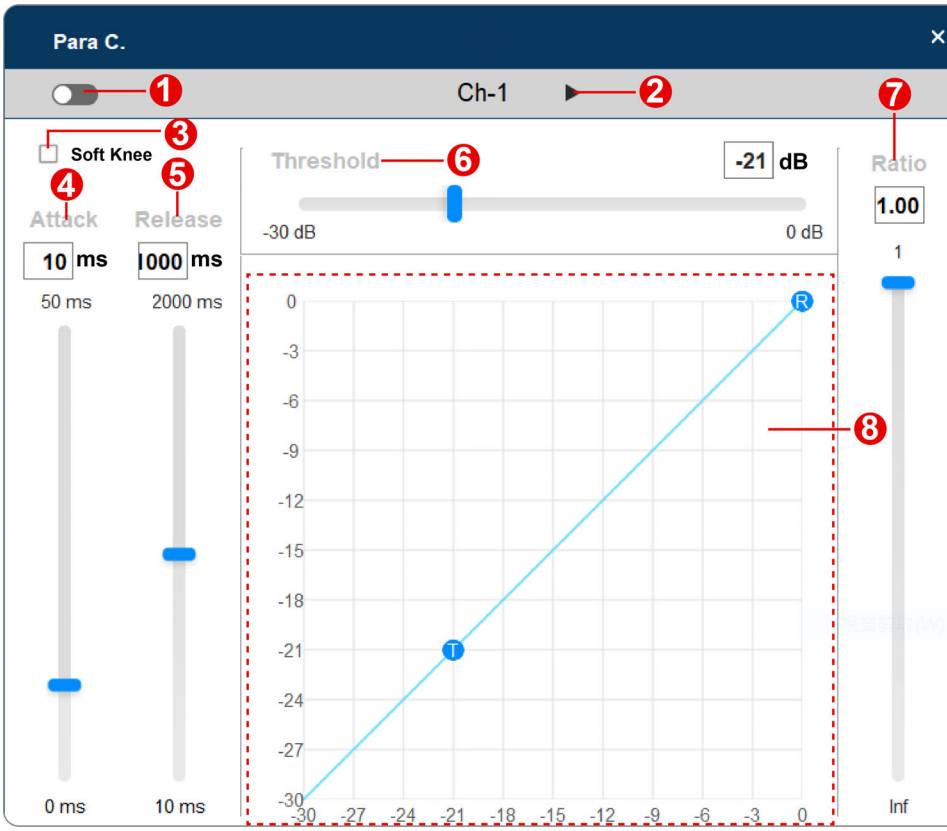
No.	Item	Description
1	compressor switch	Click to switch it on or off to apply or withdraw the compressor settings to this channel.
2	channel switcher	Click to toggle between the input channels.
3	soft knee setting	Set the knee setting that affects the compression processing slope. The compressor gives a linear or non-linear response curve according to the knee settings that controls how the compressor effects on an audio signal. ◆ **Hard knee**: A hard knee setting is enable by default (the checkbox of soft knee is unchecked). A hard knee curve in the compressor graph is with a hard cutoff angle. The compression process starts at the threshold. ◆ **Soft knee**: Check the checkbox to enable a soft knee setting, and the compression process occurs gradually. The output audio sound is smoother and subtle. The curve of a soft knee in the compressor graph is more rounded bended.
4	attack setting	Define the reaction speed that the compressor clamps down on 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.
5	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.
6	release setting	Define how quickly the gain reduction stops once the signal level goes below the threshold. The audio signal rises back up to the uncompressed state after the release is triggered. Specify a millisecond value by manually inputting the value in the field or dragging the slider.

No.	Item	Description
7	threshold setting	The compression is applied once the audio signal crosses or approaches the threshold, and it stops at the full ratio value/amount. Specify a decibel value by manually inputting the value in the field or dragging the slider. **Note:** A hard knee setting starts the compression process right after the signal reaches the threshold while a soft knee setting applies the compression as the audio signal approaches the threshold.
8	ratio setting	Set the ratio amount that dictates the reduced output audio signal. Specify a value by manually inputting the value in the field or dragging the slider.
9	compression graph	Display the graph that illustrates the compression curve according to your settings about threshold, ratio, and knee. In the chart, it shows the input audio value in decibel at x-axis while y-axis indicates the output audio value in decibel. The T in the curve graph marks out the threshold, and the R is the ratio. You can drag the T or the R in the curve graph to change the value of the threshold and ratio.

Parallel Compression Configuration

Parallel compression is to duplicate the audio signal to compress it and then combines the compressed audio signal with the original one. The low volume of the audio signal is increased after the parallel compression process.

The suggested values are R = 1:10; Attack = 50ms; Release = 100ms. Please note that if the ratio is set to be 1:1, no compression is applied and the volume will be doubled.



Note: The parallel compression function is only supported by AD400E.

No.	Item	Description
1	parallel compression switch	Switch it on to enable the parallel compression process to the audio signal input to this channel.
2	channel switcher	Click to toggle between the input channels.
3	soft knee	Set the knee setting that affects the compression processing slope. The compressor gives a linear or non-linear response curve according to the knee settings that controls how the compressor effects on an audio signal. ◆ **Hard knee**: A hard knee setting is enable by default (the checkbox of soft knee is unchecked). A hard knee curve in the graph is with a hard cutoff angle. The compression process starts at the threshold. ◆ **Soft knee**: Check the checkbox to enable a soft knee setting, and the compression process occurs gradually. The output audio sound is smoother and subtle. The curve of a soft knee in the graph is more rounded bended.
4	attack setting	Define the reaction speed that the compressor clamps down on 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.
5	release setting	Define how quickly the gain reduction stops once the signal level goes below the threshold. The audio signal rises back up to the uncompressed state after the release is triggered. Specify a millisecond value by manually inputting the value in the field or dragging the slider.
6	threshold setting	The compression is applied once the audio signal crosses or approaches the threshold, and it stops at the full ratio value/amount. Specify a decibel value by manually inputting the value in the field or dragging the slider. **Note:** A hard knee setting starts the compression process right after the signal reaches the threshold while a soft knee setting applies the compression as the audio signal approaches the threshold.
7	ratio setting	Set the ratio amount that dictates the reduced output audio signal. Specify a value by manually inputting the value in the field or dragging the slider.

No.	Item	Description
8	compression graph	Display the graph that illustrates the compression curve according to your settings about threshold, ratio, and knee. In the chart, it shows the input audio value in decibel at x-axis while y-axis indicates the output audio value in decibel. The T in the curve graph marks out the threshold, and the R is the ratio. You can drag the T or the R in the curve graph to change the value of the threshold and ratio.

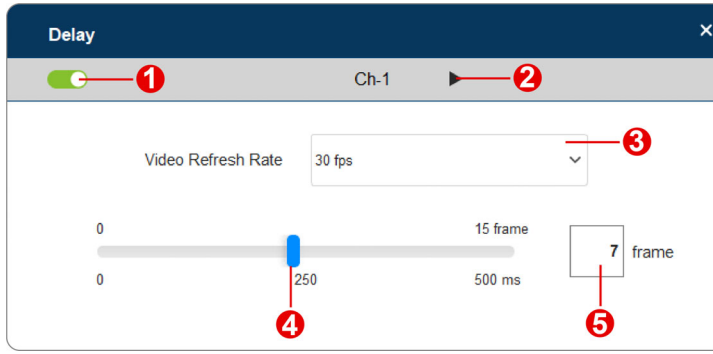
Channel Equalizer Configuration

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.
2	channel switcher	Click to toggle between the input channels.
3	frequency setting	Define the frequency to be manipulated within the range between 20 Hz to 22 kHz. You can set the frequency by dragging the slider or directly inputting the hertz value in to the field.
4	reset button	Restore your EQ configuration to the default.
5	gain setting	Define the gain value to be positive to boost the target frequency while set a negative value to cut the target frequency. Set the gain value by dragging the slider or manually inputting the value to the field.
6	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.
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.

Delay Configuration

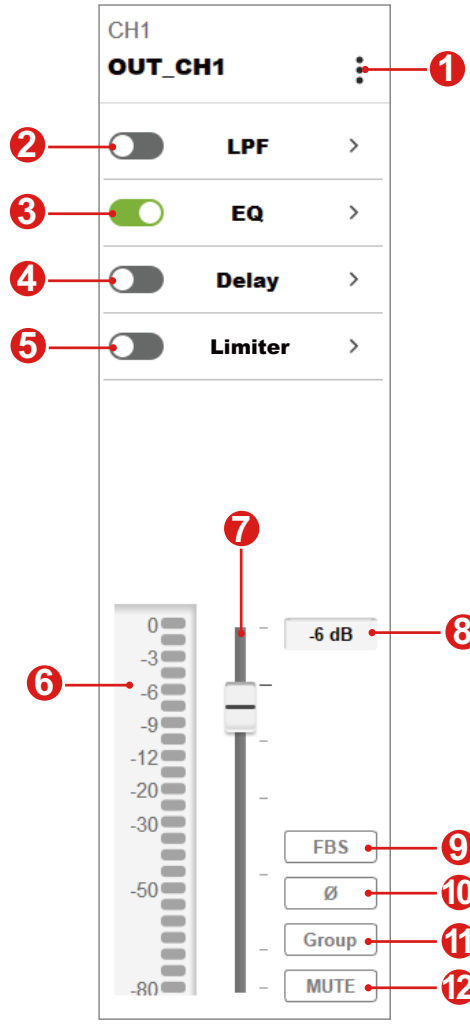
The function **Delay** for input audio signal is designed for synchronization of video and audio, so called "Lip Sync.". In most case, audio processing is faster than video, that is why audio should be delayed.



No.	Item	Description
1	delay switch	Switch it on to enable the equalizer to boost or suppress the audio frequency bands.
2	channel switcher	Click to toggle between the input channels.
3	video refresh rate selection	Click to select the video refresh rate of the video.
4	slider	Drag the slider to configure the frame delay.
5	frame offset setting	Enter the number of frames that offset.

Output Tab

Configure the following settings for the audio signal to be output:



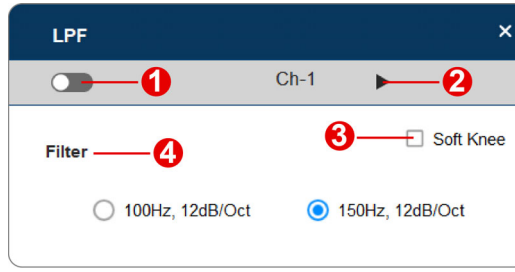
Note: AD400E only offers the output channel as master fader on the output tab screen.

No.	Item	Description
1	more button	Click on the more button to open the option menu for further settings: ◆ **Rename**: Input a new name for this channel. ◆ **Copy**: Copy the settings of this channel and apply them to the selected channel(s).
2	low-pass filter switch	Switch on or off to apply or withdraw the low-pass filter settings to the audio signal output from other device to this channel through the Dante network. Click on the function name to open the popup for further configurations. See *Low-pass Filter Configuration*, page 45 for details.
3	equalizer switch	Switch on or off to apply or withdraw the EQ settings to the audio signal output from other device to this channel through the Dante network. Click on the function name to open the popup for further configurations. See *Equalizer Configuration*, page 46 for details.
4	delay switch	Switch on or off to apply or withdraw the delay settings to the audio signal output from other device to this channel through the Dante network. Click on the function name to open the popup for further configurations. See *Delay Configuration*, page 48 for details.
5	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 49.
6	signal level meter	Show the audio signal levels in decibels (dB).
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	channel fader level	Show the volume level of the audio signal to be output.
9	feedback suppressor	The FBS (feedback suppressor) function is only supported by AD202E. FBS detects and suppresses feedback from happening by using specific EQ setting.
10	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
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.

Low-pass Filter Configuration

The low-pass filter settings controls the pass of the audio signal below the designated frequency and the attenuation of the signal higher than the cutoff frequency.

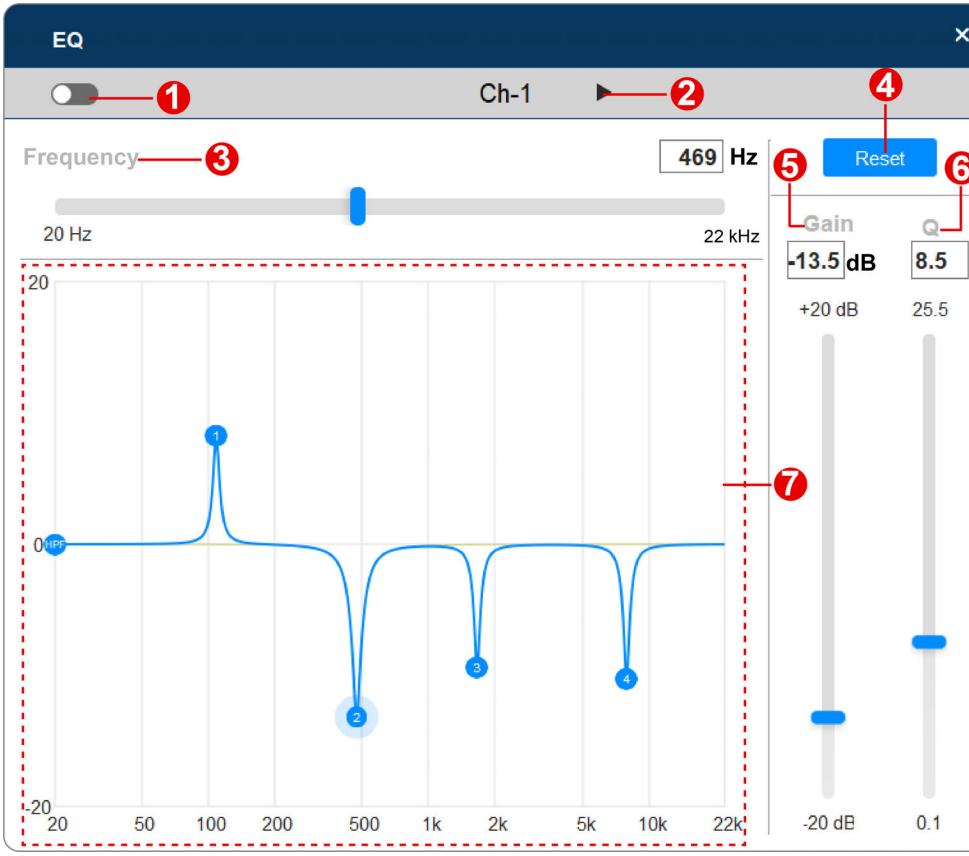


No.	Item	Description
1	low-pass filter switch	Switch it on to enable the low-pass filter to cut the high frequency of the audio signal.
2	channel switcher	Click to toggle between the input channels.
3	soft knee setting	Check the checkbox to enable the soft knee setting to make the transition that attenuating the frequency high than the determined cutoff to be less noticeable.
4	filter selection	The unit offers two different cross-over frequency for subwoofer. Click the radio button to select the cutoff.

Equalizer Configuration

To select a specific part of the frequency range of an audio signal and adjust its strength, use the EQ settings to specify the frequency to be boosted:

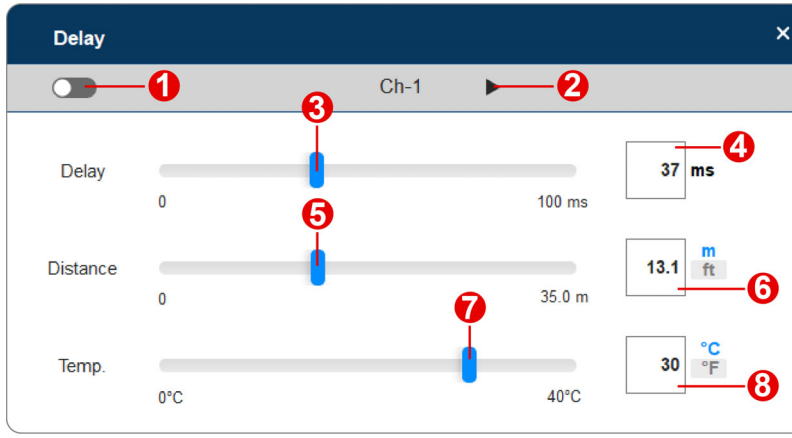
- To configure the frequency, click to select HPF (high-pass filter) shown in the EQ graph and then set by dragging the HPF or inputting the frequency value field.
- To configure the gain value and the Q factor, click to select between band 1, 2, 3, and 4 in the EQ graph to continue setting.



No.	Item	Description
1	EQ switch	Switch it on to enable the equalizer to boost or suppress the audio frequency bands.
2	channel switcher	Click to toggle between the channels.
3	frequency setting	Define the frequency to be manipulated within the range between 20 Hz to 22 kHz. You can set the frequency by dragging the slider or directly inputting the hertz value in to the field.
4	reset button	Click on the reset button to restore the EQ configurations to the default.
5	gain setting	Define the gain value to be positive to boost the target frequency while set a negative value to cut the target frequency. Set the gain value by dragging the slider or manually inputting the value to the field.
6	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.
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.

Delay Configuration

To control the output audio to arrives at the listening position concurrently, use the delay settings to define the delay time, the distance of the speakers, and the ambient temperature for each channels.

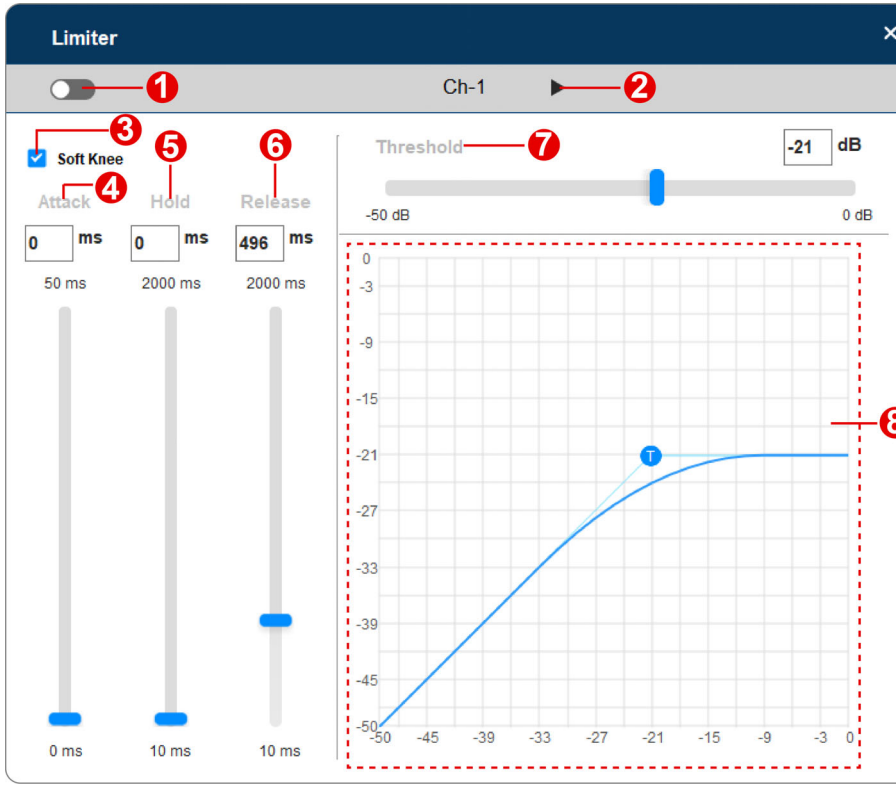


No.	Item	Description
1	delay settings switch	Turn on / off the switch to apply / withdraw the delay settings.
2	channel switcher	Click to toggle between the channels.
3	delay time slider	Drag the slider to set the delay time in millisecond. The time value is also shown in the delay time value field next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

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

Limiter Configuration

To restrict an audio signal beyond the threshold to get through, use the limiter settings to limit the audio signal to the threshold level.

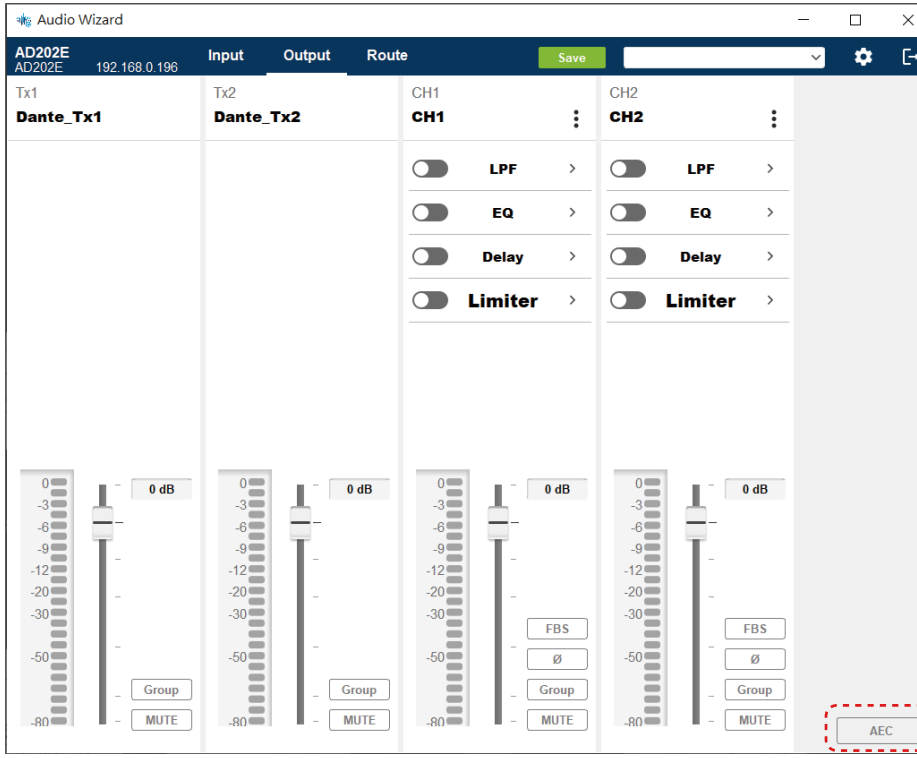


No.	Item	Description
1	limiter switch	Turn on the switch to enable the limiter to stop the audio signal from increasing in loudness by setting a threshold.
2	channel switcher	Click to toggle between the channels.
3	soft knee	Set the knee setting that affects the limiting processing slope. The limiter 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 enable 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. ◆ 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.
4	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.
5	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.
6	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.
7	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.

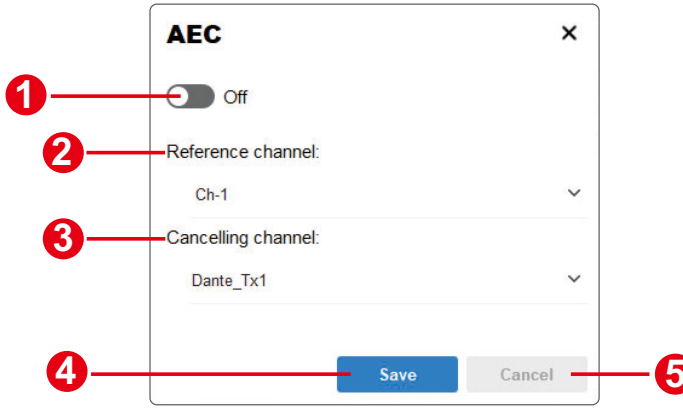
No.	Item	Description
8	limiter graph	Display the graph that illustrates the curve about how the limiter settings are applied. The T in the curve graph marks out the threshold, and you can drag the T or to change the threshold value.

Acoustic Echo Cancellation (AEC)

An "AEC" button is displayed on the bottom-right of the AD202E Output tab. It is to remove acoustic echo and improve audio clarity for distant participants in a conference meeting or other on-line application.



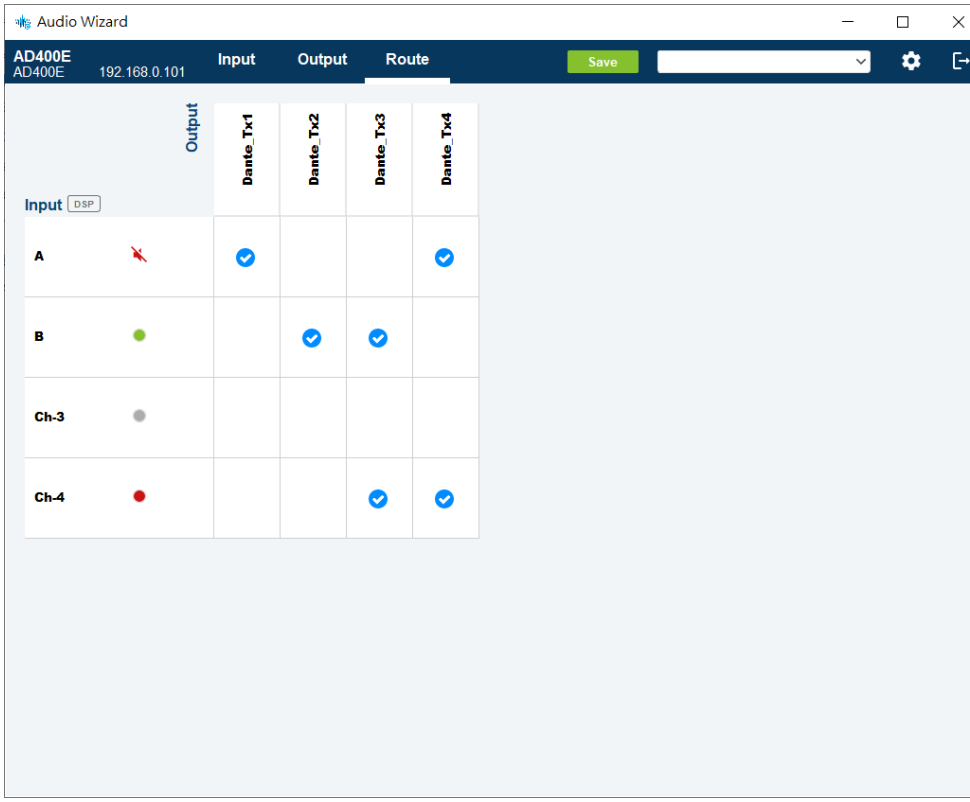
Click on the AEC button to open the AEC popup to configure the followings:



1. AEC switch:
   Switch on or off to enable or disable the acoustic echo cancellation function.
2. Reference channel:
   The channel that you receive the audio signal from the far end. Click to expand the drop-down menu to select the reference channel.
3. Cancelling channel:
   The channel that you send the audio signal to the far end. Click to expand the drop-down menu to select the cancelling channel.
4. Save:
   Once the configuration is done, click on the save button to apply the changed settings.
5. Cancel:
   Click the cancel button to close the AEC popup and discard the changed settings you just made.

Route Tab

The route tab offers the audio signal routing control function that allows the signal from any input to be routed to any output. With the audio signal routing flexibility, user can configure which input(s) is sent to which output(s) through the Dante network.



On the graphical crossbar, simply click on the crosspoint to enable the signal routing path. To disable, click on the selected crosspoint to unmark it.

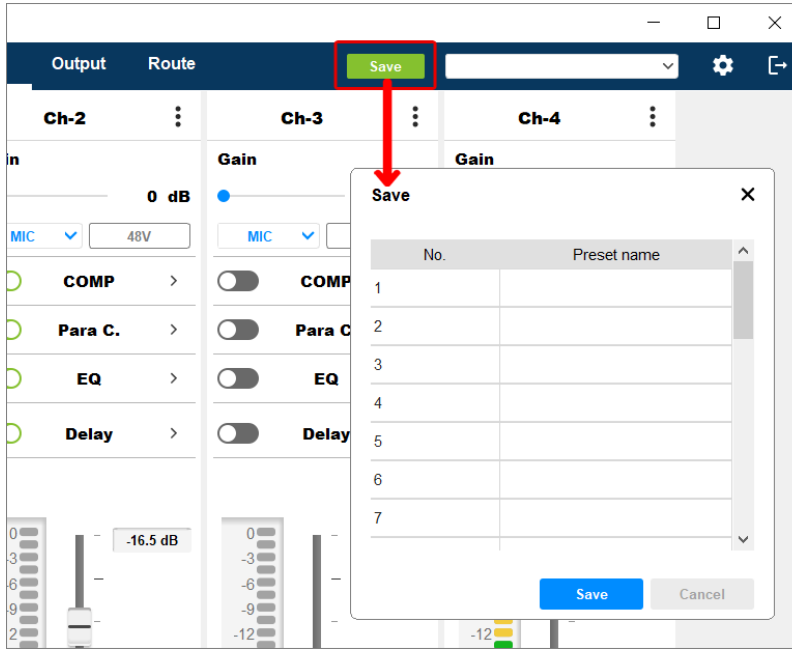
Preset Management

A preset is a set of settings that defines how the DSP manipulate the audio signal, the signal route control, and configured by users in Audio Wizard. All the DSP settings you configured on the input / output screen and the route screen can be saved as a preset. You can easily switch to other set of settings by applying an existing preset.

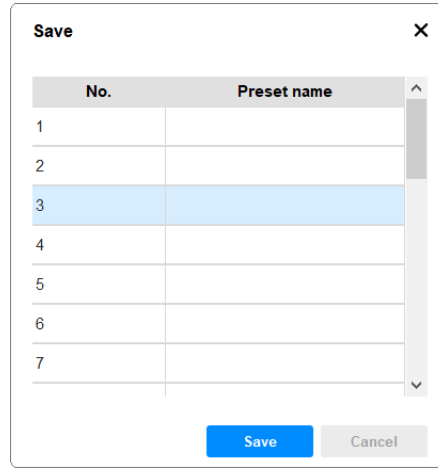
Save a New Preset

To save your current DSP settings to be a new preset:

1. Click on the save button on DSP configuration screen to open the popup window.

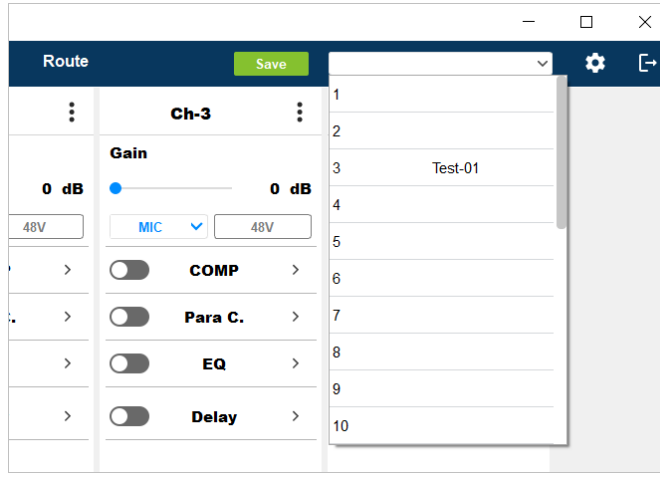


2. Click to select an item, and then click on the save button to continue.



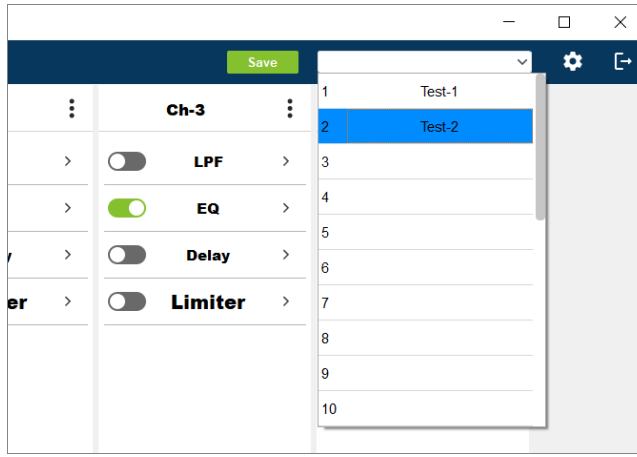
3. Enter a name for this new preset and save it.

Now the newly-craeted preset is listed on the preset menu.



Apply an Existing Preset

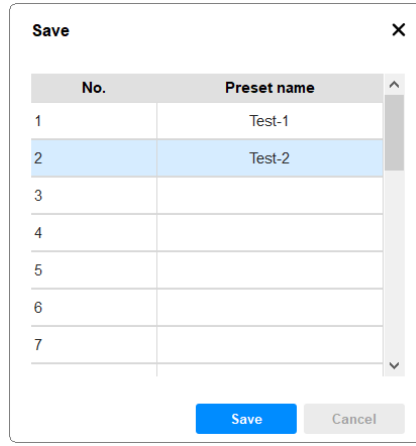
Click to open the preset menu, and select the one you need to apply.



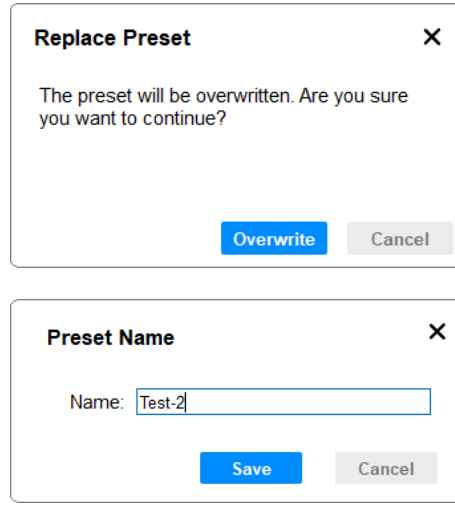
Edit an Existing Preset

Follow 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 save button.
3. The save 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.



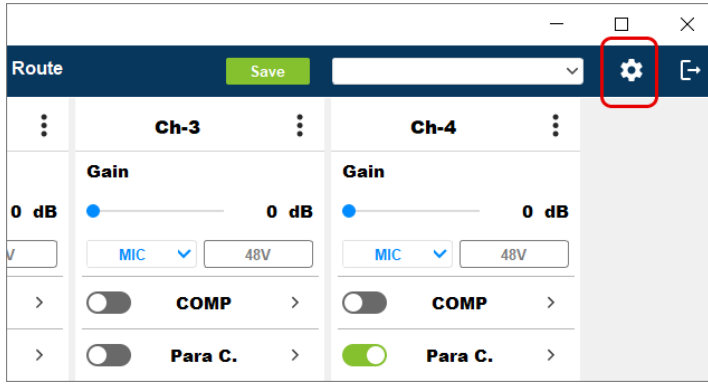
Switch to Settings Screen / Exit the App

Use the buttons on the toolbar to perform the following operations:

Buttons		Description
	settings	Click to switch to the settings screen. See *Switch to Settings Screen*, page 58.
	home	Click to switch to the DSP configuration screen. See *Switch to DSP Configuration Screen*, page 58.
	exit	Click to open an option menu to select whether to log out or to switch to other unit. See *Logout and Exit*, page 59 and *Switch to Other Unit*, page 60 for details.

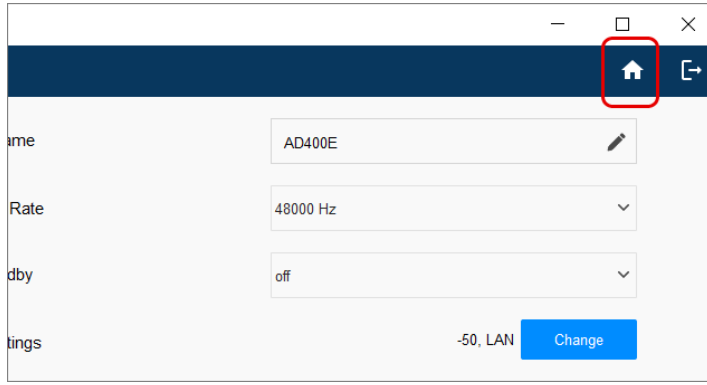
Switch to Settings Screen

To configure the device settings except the DSP configuration, click on the settings button  to switch to the settings screen as illustrated below.



Switch to DSP Configuration Screen

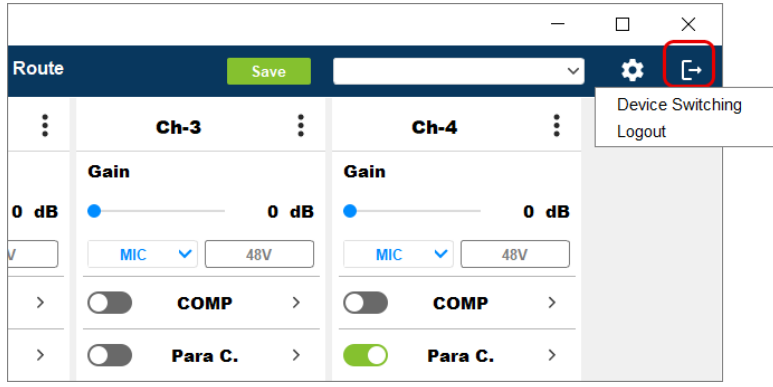
You can return back to the DSP configuration screen by clicking the home button. For the further configurations on the settings screen, see *Settings*, page 61.



Note: The settings screen is only available to the administrator.

Logout and Exit

To leave the program or to quit configuring the unit you are currently accessing, click on the exist button and select your action from the option menu:

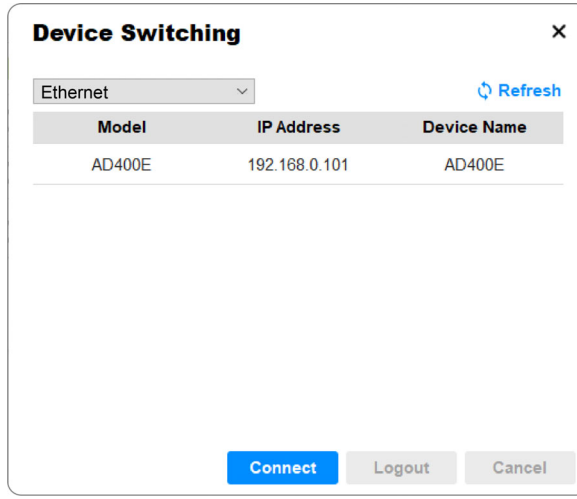


By selecting Logout from the option menu, you will exit Audio Wizard and jump to the pre-login screen.

Switch to Other Unit

To access the control of other connected unit:

1. Click on the exit button to open the option menu.
2. Select Device Switching to open the Device Switching popup to select the unit you'd like to access.



Item	Description
Refresh	Click to list the connected units.
Connect	After selecting the unit to be accessed, click the connect button to enter the unit's DSP configuration screen.
Logout	Click the logout button to exit out of the screen you are in and bring you back to the pre-login screen.
Cancel	Click to close the Device Switching popup without making any change.

Settings

The settings screen contains 3 tab pages: **General**, **Preset**, and **Maintenance**.

General Tab

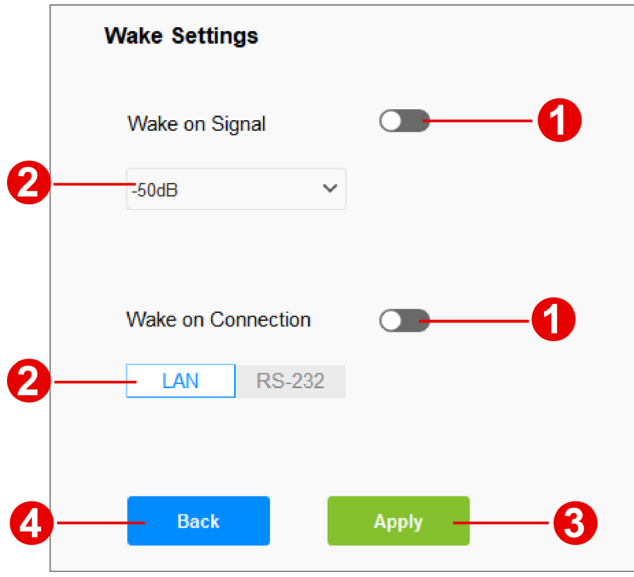
General allows the administrator to define the system preferences and configure the behavior that the unit should follow. Define system preferences by filling the following fields or click on configuration button to enter the detailed setting page.

Item	Description
Device Name	Define the name for the unit.
Sampling Rate	Select the sampling rate between 44100Hz, 48000Hz, 88200Hz, and 96000Hz. A higher sample rate means that the sound quality is better and the digital file is larger.
Auto Standby	Set the duration that the unit automatically enters standby mode after an elapsed time of inactivity. The options are off, 10 minutes, 30 minutes, and 60 minutes. **Off** means that the auto standby function is disabled; thus, the unit never enters standy mode.
Wake Settings	Click on the change button to enter the detailed settings screen to define how to wake the unit from standby mode. See *Wake Settings*, page 62.

Item	Description
Password Settings	Click on the change button to show the Login Password popup and make change of the login password for **Administrator** / **Operator**.

Wake Settings

On **Wake Settings** screen, follow the steps to configure the wake function(s) for the unit:

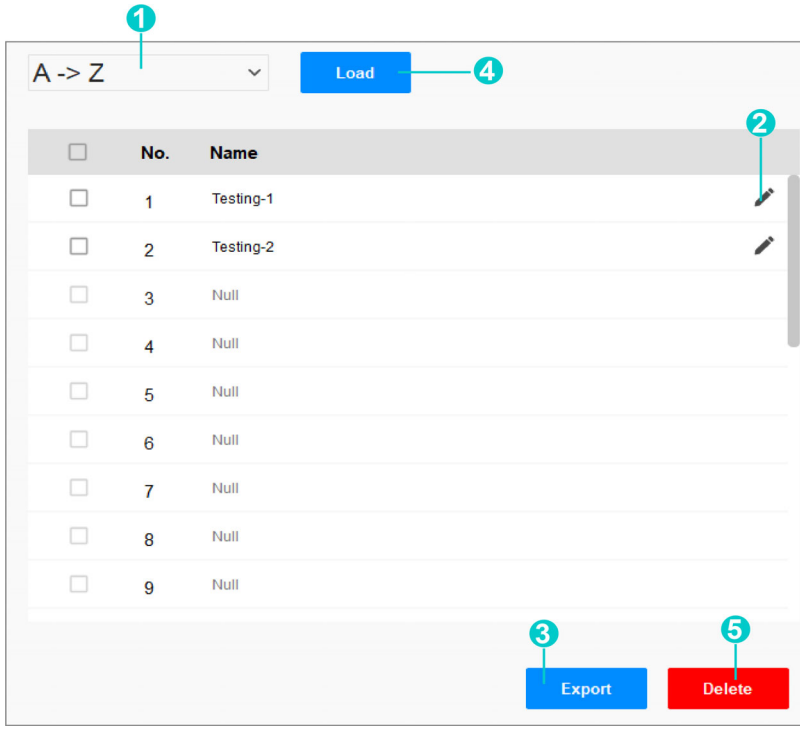


1. Click the switch to turn on or off the wake function(s):
   - **Wake on Signal**:
     Specify an audio signal that triggers the unit to be awakened from standby mode.
   - **Wake on Connection**:
     Wake up the unit from standby mode on using its connection.
2. For **Wake on Signal**, select the signal strength that activates the suspended unit. For **Wake on Connection,** choose the connection that the unit uses to communicate with another device (ATEN Control Box or PC) which remotly controls the unit.
3. Click on the apply button to apply the settings.
4. Click on the back button to return back to **General** tab.

Note: By enabling both **Wake on Signal** and **Wake on Connection**, the unit is awakened either when it detects an audio signal with the designated strength or when it receives a wake-up message send from the ATEN Control Box or PC via LAN or RS-232.

Preset Tab

Preset tab lists all the saved presets. On **Preset** tab screen, **Administrator** can do the followings:

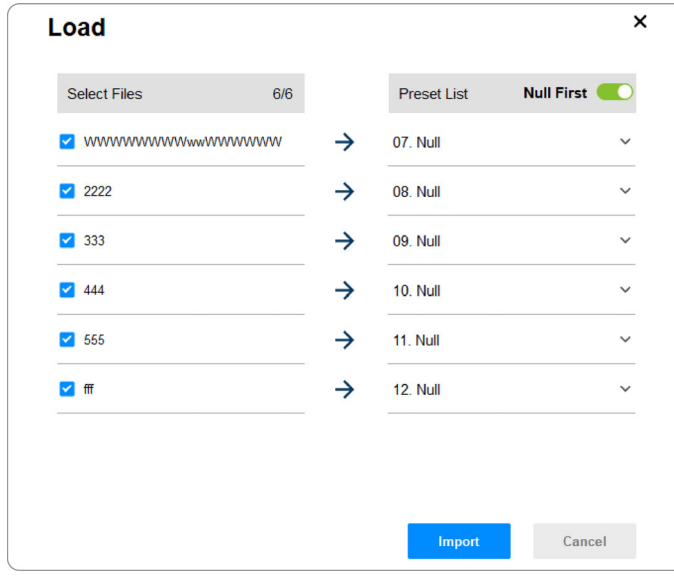


1. Sort and Display the Presets Alphabetically:
   To alphabetically sort and display the saved preset(s) in ascending order or in descending order, select **A -> Z** or **Z -> A** from the drop-down menu.
2. Change the Preset Name:
   To change the name of the existed preset, click the edit button of the preset to be changed, enter the new name for this preset, and exit the editing filed. The preset name changes immediately.
3. Export the Preset(s) Settings:
   To save the existed preset settings and export them as a .json file, please select all the presets or check the checkbox(es) of the preset(s) to be exported, click the export button, and save them to your PC. Previously exported preset(s) can be imported again by **Load** function.

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

   a) Click the load button browse the .json file saved in your PC, and select the one you'd like to load.

   b) In **Select Files** list, choose the preset(s) to be imported by checking the checkbox(es), and then arrange for each preset the item order on **Preset List**.



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

   c) Click on the import button to complete the action.

5. Delete the Existed Preset(s)
   Check the preset(s) to be removed, and then click on the delete button.

Maintenance Tab

The maintaince tab offers the unit's firmware upgrade function and the version information about ATEN Audio Wizard. Simply follow the on-screen instrcutions to browse the firmware file from the PC and upload it to cpmplete the upgrade process.

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.

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.

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

AD400E

Function	AD400E
Microphone Inputs	
Gain Range	0dB to +34dB
Maximum Input Level	-30dBu
Impedance	3kΩ
Phantom Power	+48V, Individual Control in Each Input Channel
Line Inputs	
Gain Range	Balanced: -8dB to +4dB Unbalanced: -8dB to +10dB
Maximum Input Level	+24dBu Nominal Input Level: +4dBu
Impedance	Balanced: 20kΩ Unbalanced: 10kΩ
System Specification	
Distortion	THD+N: <0.01%, 1kHz, Max. Gain
Frequency Response	20 to 20k Hz, +/-0.5dB
Audio Sampling	24-bit, 44.1k/48k/88.2k/96kHz
Crosstalk	<-95dB
Power	
Power Consumption	DC12V; 6.84W; 23.34BTU/h PoE: 6.29W; 21.46BTU/h **Note:** ◆ The measurement in Watts indicates the typical power consumption of the device with no external loading. ◆ The measurement in BTU/h indicates the power consumption of the device when it is fully loaded.
Power over Ethernet (PoE)	Standard compliance: Class 0, IEEE802.3af
Control	
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
Ethernet	RJ-45

Function	AD400E
Compliance	
Certification	FCC, CE, UKCA
Environmental	
Operating Temperature	0°C–40°C
Humidity	0%–80% RH, Non-Condensing
Storage Temperature	-20°C–60°C
Physical Properties	
Weight	0.92 kg (2.04 lb)
Housing	Metal
Dimensions (L × W × H)	20.00cm × 4.40cm × 15.40cm (7.87 × 1.73 × 6.06 in.)

Note:

The power adapter is sold separately. Please contact your ATEN dealer or go to ATEN website for available accessories and product information.

AD004E

Function	AD004E
Line Outputs	
Maximum output Level	+24dBu Nominal Input Level: +4dBu
Impedance	600Ω
System Specification	
Distortion	THD+N: <0.01%, 1kHz, Max. Gain
Frequency Response	20 to 20k Hz, +/-0.5dB
Audio Sampling	24-bit, 44.1k/48k/88.2k/96kHz
Crosstalk	<-95dB
Power	
Power Consumption	DC12V; 3.83W; 13.07BTU/h PoE: 4.22W; 14.40BTU/h **Note:** ◆ The measurement in Watts indicates the typical power consumption of the device with no external loading. ◆ The measurement in BTU/h indicates the power consumption of the device when it is fully loaded.
Power over Ethernet (PoE)	Standard compliance: Class 0, IEEE802.3af
Control	
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
Ethernet	RJ-45
Compliance	
Certification	FCC, CE, UKCA
Environmental	
Operating Temperature	0°C–40°C
Humidity	0%–80% RH, Non-Condensing
Storage Temperature	-20°C–60°C
Physical Properties	
Weight	0.92 kg (2.04 lb)
Housing	Metal

Function	AD004E
Dimensions (L x W x H)	20.00cm × 4.40cm × 15.40cm (7.87 × 1.73 × 6.06 in.)

Note:

The power adapter is sold separately. Please contact your ATEN dealer or go to ATEN website for available accessories and product information.

AD202E

Function	AD202E
Microphone Inputs	
Gain Range	0dB to +34dB
Maximum Input Level	-30dBu
Impedance	3kΩ
Phantom Power	+48V, Individual Control in Each Input Channel
Line Inputs	
Gain Range	Balanced: -8dB to +4dB Unbalanced: -8dB to +10dB
Maximum Input Level	+24dBu Nominal Input Level: +4dBu
Impedance	Balanced: 20kΩ Unbalanced: 10kΩ
Line Outputs	
Maximum output Level	+24dBu Nominal Input Level: +4dBu
Impedance	600Ω
System Specification	
Distortion	THD+N: <0.01%, 1kHz, Max. Gain
Frequency Response	20 to 20k Hz, +/-0.5dB
Audio Sampling	24-bit, 44.1k/48k/88.2k/96kHz
Crosstalk	<-95dB
Power	
Power Consumption	DC12V; 5.17W; 24BTU/h PoE: 6.11W; 29BTU/h **Note:** ◆ The measurement in Watts indicates the typical power consumption of the device with no external loading. ◆ The measurement in BTU/h indicates the power consumption of the device when it is fully loaded.
Power over Ethernet (PoE)	Standard compliance: Class 0, IEEE802.3af
Control	
RS-232	3-pin, 3.5mm, Terminal Block
Ethernet	RJ-45

Function	AD202E
Compliance	
Certification	FCC, CE, UKCA
Environmental	
Operating Temperature	0°C–40°C
Humidity	0%–80% RH, Non-Condensing
Storage Temperature	-20°C–60°C
Physical Properties	
Weight	0.92 kg (2.04 lb)
Housing	Metal
Dimensions (L × W × H)	20.00cm × 4.40cm × 15.40cm (7.87 × 1.73 × 6.06 in.)

Note:

The power adapter is sold separately. Please contact your ATEN dealer or go to ATEN website for available accessories and product information.

ATEN Standard Warranty Policy

Limited Hardware Warranty

ATEN warrants its hardware in the country of purchase against flaws in materials and workmanship for a Warranty Period of two [2] years (warranty period may vary in certain regions/countries) commencing on the date of original purchase. This warranty period includes the LCD panel of ATEN LCD KVM switches. For UPS products, the device warranty is two [2] years but battery is one [1] year. Select products are warranted for an additional year (see *A+ Warranty* for further details). Cables and accessories are not covered by the Standard Warranty.

What is covered by the Limited Hardware Warranty

ATEN will provide a repair service, without charge, during the Warranty Period. If a product is detective, ATEN will, at its discretion, have the option to (1) repair said product with new or repaired components, or (2) replace the entire product with an identical product or with a similar product which fulfills the same function as the defective product. Replaced products assume the warranty of the original product for the remaining period or a period of 90 days, whichever is longer. When the products or components are replaced, the replacing articles shall become customer property and the replaced articles shall become the property of ATEN.

To learn more about our warranty policies, please visit our website:
http://www.aten.com/global/en/legal/policies/warranty-policy/