



Simply Better Connections

AP901 / AP902

Expansion Card for AP Series

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.

AP901

- ♦ 1 AP901 2-CH Dante Expansion Card for AP Series
- ♦ 1 user instructions

AP902

- ♦ 1 AP902 2-CH Mic/Line Preamp Expansion Card for AP Series
- ♦ 2 5-pin Euroblock connectors with strain relief (3.5mm)
- ♦ 1 user instructions

Table of Contents

Compliance Statements	ii
User Information	iv
Online Registration	iv
Telephone Support	iv
User Notice.....	iv
Product Information	v
Package Contents	v
AP901.....	v
AP902.....	v
Table of Contents	vi
About this Manual	viii
Conventions	ix

1. Introduction

Overview.....	1
AP901 2-CH Dante Expansion Card	1
AP902 2-CH Mic/Line Pre-AMP Expansion Card	1
Features.....	2
AP901 2-CH Dante Expansion Card	2
AP902 2-CH Mic/Line Pre-AMP Expansion Card	2
Components	3
AP901	3
AP902.....	4

2. Hardware Setup

Installing and Removing the Expansion Card	5
Installing.....	6
Removing	6
Connecting ATEN's AP DSP Power Amplifier Series.....	7
Using the Dante Expansion Card (AP901).....	7
Using the Mic/Line Preamp Expansion Card (AP902)	10
Configuring Audio Gain on AP902.....	13

Appendix

- Safety Instructions.....15
 - General15
 - Rack Mounting17
- Technical Support18
 - International18
 - North America18
- Specifications19
 - AP90119
 - AP902.....20
- ATEN Warranty Policy21

About this Manual

This manual provides detailed information on the AP901 and AP902 expansion cards intended for use with ATEN's AP DSP Power Amplifier series. It describes their functions, features, and setup requirements. The models covered in this manual are listed below:

Models	Product Names
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* gives an overview of the AP901 Dante Expansion Card and AP902 Mic/Line Pre-AMP Expansion Card for ATEN's AP DSP Power Amplifier series, outlining their purpose, features, and main components.

Chapter 2, *Hardware Setup* describes how to install and remove the expansion cards on ATEN's AP DSP Power Amplifier series. It also explains the connection methods for AP amplifiers equipped with AP901 or AP902, using the AP212 2 × 120W Power Amplifier with DSP as an example.

Appendix, contains safety guidelines, technical support contacts, product specifications, and warranty 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.

This Page Intentionally Left Blank

Chapter 1

Introduction

Overview

AP901 2-CH Dante Expansion Card

Dedicated for use with ATEN's AP DSP Power Amplifier series, the AP901 allows the AP amplifiers to receive 2 inputs of high-quality, low-latency digital audio via the Dante® AoIP solution. The range of Dante-based applications are broadened thanks to the easy integration with various Dante-enabled equipment, from digital mixers, DSPs, and more, brought by the AP901 working in conjunction with the AP amplifiers. The AP901 delivers industry standard audio quality at 24bit depth and supports sampling rates of 44.1 / 48 kHz, ensuring excellent audio integrity while fulfilling different environment needs. The installation into the AP power amplifiers' expansion slot is easy. With all the Dante-enabled devices being manageable and configurable fully through the Dante Controller software, the utilization of AP901 helps further enhance flexibility and streamline workflows in any Dante network infrastructure including broadcasting, recording, and other professional audio distribution scenarios. Furthermore, with just one Ethernet cable and some simple mouse clicks, ATEN's Dante networking technology eliminates the need for traditional analog cables, expanding Dante network coverage and distributing AV signals across multiple locations at once.

AP902 2-CH Mic/Line Pre-AMP Expansion Card

Dedicated for use with ATEN's AP DSP Power Amplifier series, the AP902 is a plug-in expansion card providing the AP amplifiers with dual-channel inputs. It is capable of handling balanced / unbalanced audio signals ranging from mic level to line level, making it easier to combine the amplifiers with sources coming from mixers, media players, or other audio equipment utilized in pro-level live sound applications, enhancing audio system flexibility and versatility. The preamp's circuitry is designed to lower the noise floor and improve the dynamic range to assure superior audio reproduction for the two extra microphone inputs it adds to the AP2 power amplifier series, making it a perfect solution for sound reinforcement applications such as paging systems and lecture halls.

Features

AP901 2-CH Dante Expansion Card

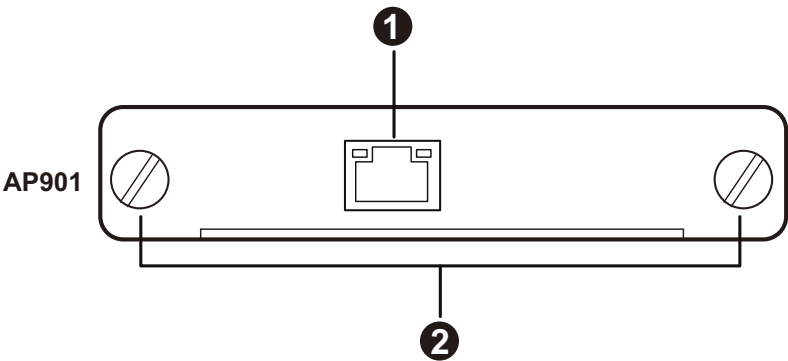
- ♦ Allows AP power amplifiers to receive 2 inputs of highquality, low-latency digital audio via Dante AoIP solution
- ♦ Enables AP power amplifiers to easily integrate with Dante-enabled devices, such as digital mixers, processors, and media players
- ♦ Supports 24-bit and sampling rates of 44.1k and 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

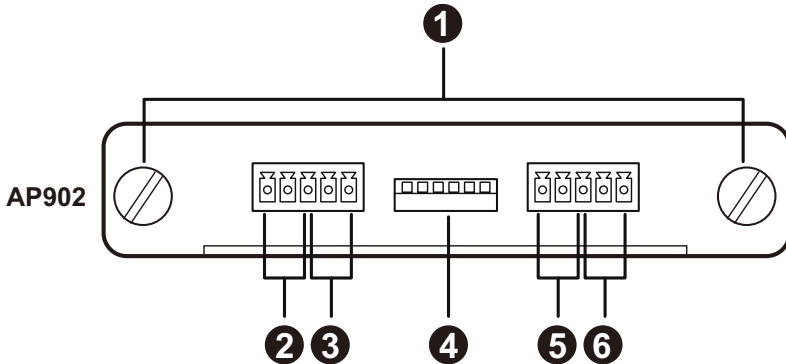
- ♦ Provides AP power amplifiers with dual-channel inputs for easier integration with balanced / unbalanced audio signals at mic / line level
- ♦ Adjustable gain level – handles various strength levels of input sources
- ♦ Preamp designed to lower the noise floor and improve the dynamic range for high-quality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

Components

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 loosening 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.

Chapter 2

Hardware Setup

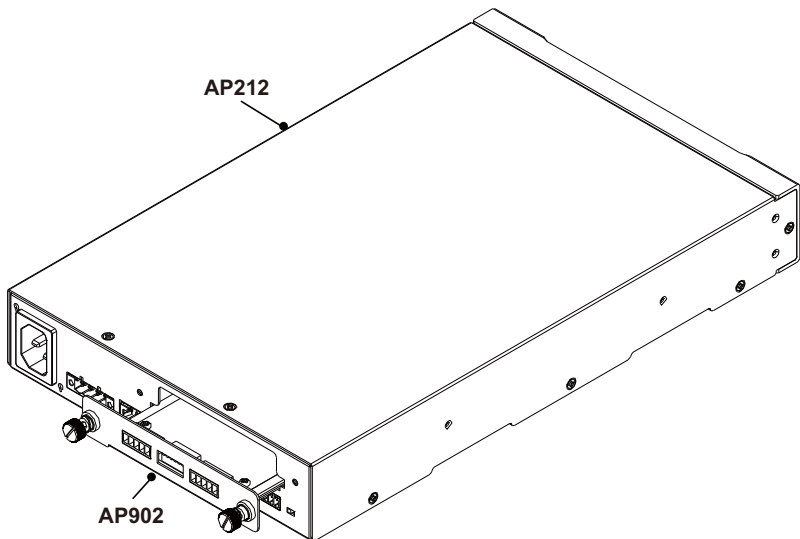


1. Please review the safety information regarding the placement of this device in *Safety Instructions*, page 15.
2. Do not power on ATEN's AP DSP Power Amplifier series until all required hardware components are properly connected.

Installing and Removing the Expansion Card

Expansion cards are designed for use with ATEN's AP DSP Power Amplifier series. Before installation or removal, always power off the amplifier and disconnect it from the power source.

The illustration in this section use the **AP212** 2 × 120W Power Amplifier with DSP as an example.



Installing

To install the expansion card into ATEN's AP DSP Power Amplifier series:

1. Remove the expansion slot plate on the rear side of the amplifier.
2. Insert the expansion card into the amplifier's expansion slot.

Note: Gently push the expansion card until it is fully seated in the slot.

3. Apply light pressure on each thumb screw head to align it with the screw hole, then tighten it by turning clockwise.

Removing

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

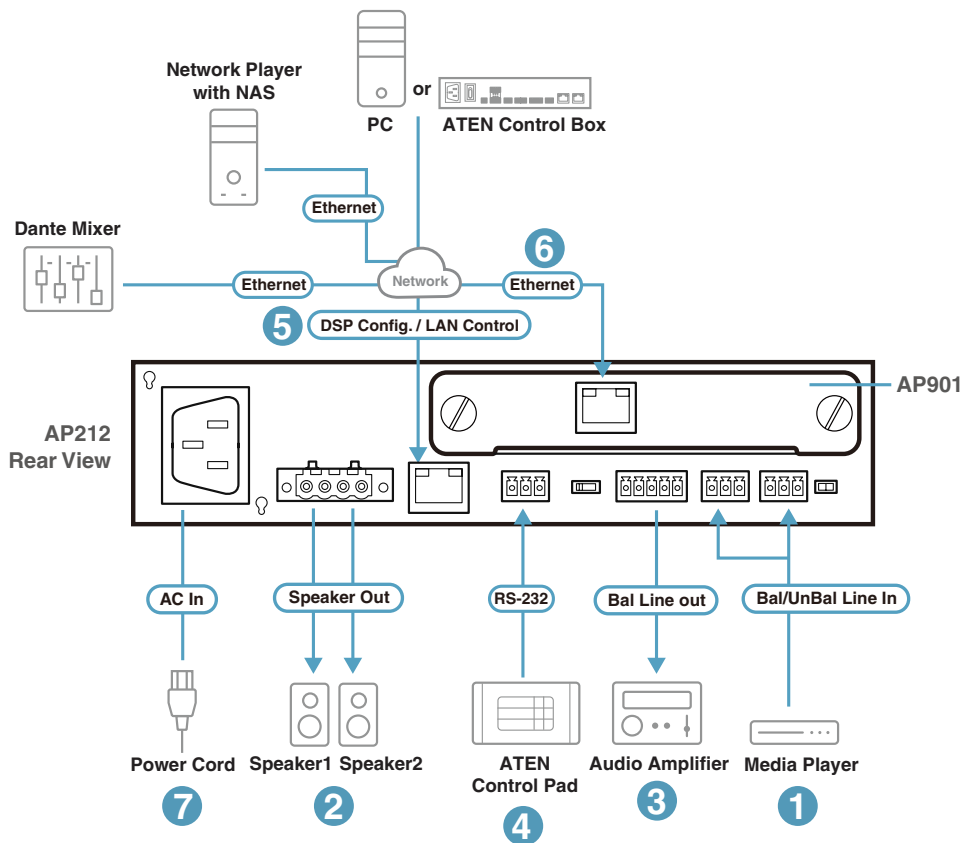
To remove the expansion card:

1. Loosen the thumb screws in an alternating sequence.
2. While holding the two thumb screws, gently pull the expansion card out of the slot.
3. Reinstall the expansion slot plate to cover the blank slot, and secure it with the screws.

Connecting ATEN's AP DSP Power Amplifier Series

This section describes how to connect ATEN's AP DSP Power Amplifier series to external devices when equipped with expansion cards. The **AP212 2 × 120 W Power Amplifier with DSP** is used as the example model in the following illustrations.

Using the Dante Expansion Card (AP901)



Note: It is strongly recommended that you use a shielded Cat 5e cable (or higher) for better network connectivity.

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:

- ♦ 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).
 - ♦ 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 an external audio amplifier or other audio equipment to the unit's audio output via the 5-pin Euroblock connector.
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) With the AP901 Dante Expansion Card installed, connect the unit to the Dante network via the Ethernet port. The unit can then receive audio streams from other Dante-enabled devices or from a network player (e.g., NAS, PC, or Dante mixer) on the same network.

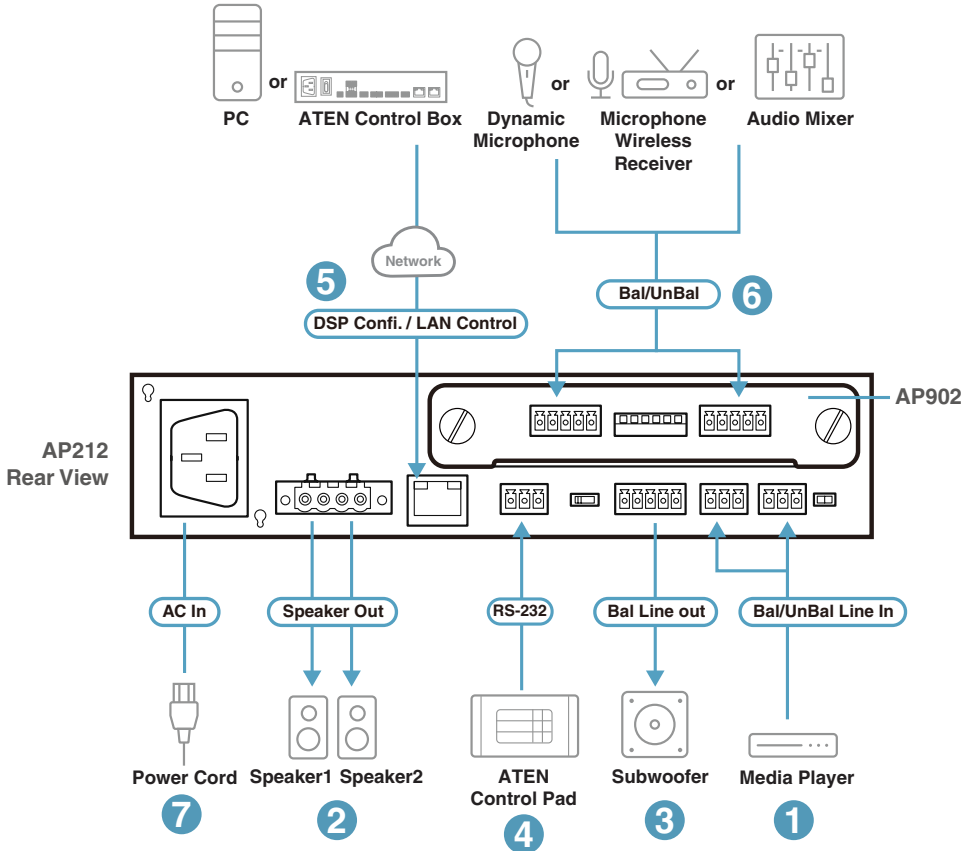
7. Connect the supplied power cord to the unit's power socket after powering on all other audio equipment. The unit's power LED lights green to indicate the unit is powered on.

Note:

- ♦ Upon power-up, AP DSP Power Amplifier series enters network standby mode.
 - ♦ To resume operation, apply an audio signal greater than -24 dBu, or log in to the web GUI to activate the unit.
-

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

Using the Mic/Line Preamp Expansion Card (AP902)



Note: It is strongly recommended that you use a shielded Cat 5e cable (or higher) for better network connectivity.

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:

- ♦ 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).
 - ♦ 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 microphones or an external audio mixer, use the Mic/Line preamp expansion card (AP902). Connect a dynamic microphone, a wireless microphone receiver, or an audio mixer to the 5-pin Euroblock input.
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:

- ◆ Upon power-up, AP DSP Power Amplifier series enters network standby mode.
 - ◆ To resume operation, apply an audio signal greater than -24 dBu, or log in to the web GUI to activate the unit.
-

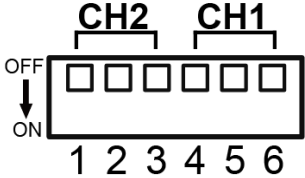
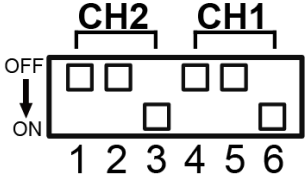
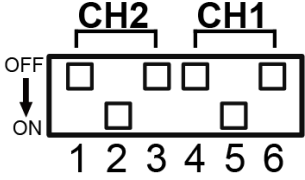
8. Adjust the volume from the unit's front panel.

Configuring Audio Gain on AP902

To adjust the audio gain level, switch on or off the pole(s) as the following table shows:

Note:

- Pole 1 to pole 3 are for channel 2 while pole 4 to pole 6 are for channel 1.
- When all poles are set to OFF(-6dB), Web GUI is able to control gain level of this channel. Otherwise, channel gain level is still controlled by DIP switch (gain control switch).

Gain Level	Position of Individual Switches
-6dB	
0dB	
+6dB	

Gain Level	Position of Individual Switches
+12dB	<div><div>CH2CH1</div><div>OFF</div><div>ON</div><div><div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div></div><div>123456</div></div></div>
+18dB	<div><div>CH2CH1</div><div>OFF</div><div>ON</div><div><div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div></div><div>123456</div></div></div>
+24dB	<div><div>CH2CH1</div><div>OFF</div><div>ON</div><div><div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div></div><div>123456</div></div></div>
+30dB	<div><div>CH2CH1</div><div>OFF</div><div>ON</div><div><div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div></div><div>123456</div></div></div>
+36dB	<div><div>CH2CH1</div><div>OFF</div><div>ON</div><div><div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div></div><div>123456</div></div></div>

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

AP901

Function	AP901
Network Protocol	
1000/10000 Mbps	Dante Ultimo
Connector	RJ-45
Audio Sampling	24-bit, 44.1/48kHz
Compliance	
Certification	FCC, CE, UKCA Tested with AP2 Amplifier
Environmental	
Operating Temperature	0°C–50°C
Humidity	0%–80% RH, Non-Condensing
Storage Temperature	-20°C–60°C
Physical Properties	
Weight	0.12 kg (0.27 lb)
Housing	Metal Panel
Dimensions (L x W x H)	11.50 × 2.20 × 1.00 cm (4.53 × 0.87 × 4.33 in.)

AP902

Function	AP902
Microphone Inputs	
Gain Range	-6—+36dB
Impedance	3k Ω
Line Inputs	
Gain Range	-6—+36dB
Maximum Input Level	+24dBu, Nominal Input Level: +4dBu
Impedance	Balanced: 20k Ω Unbalanced: 10k Ω
System Specification	
Distortion	THD+N: Line In <0.01%, +4dBu @1kHz, 0dB Gain Mic In <0.25%, -20dBu, @1kHz, 0dB Gain
Frequency Response	50–20kHz, +/-0.5dB, Line In to ATEN AP2 Line Out
Compliance	
Certification	FCC, CE, UKCA Tested with AP2 Amplifier
Environmental	
Operating Temperature	0°C–50°C
Humidity	0%–80% RH, Non-Condensing
Storage Temperature	-20°C–60°C
Physical Properties	
Weight	0.12 kg (0.27 lb)
Housing	Metal Panel
Dimensions (L x W x H)	11.50 × 2.20 × 1.00 cm (4.53 × 0.87 × 4.33 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 countries/ regions and then go to the Support Center, or contact your local ATEN sales representative for further assistance.

© Copyright 2025 ATEN® International Co., Ltd.
Released: 2025-09-24

ATEN and the ATEN logo are registered trademarks of ATEN International Co., Ltd. All rights reserved. All other brand names and trademarks are the registered property of their respective owners.