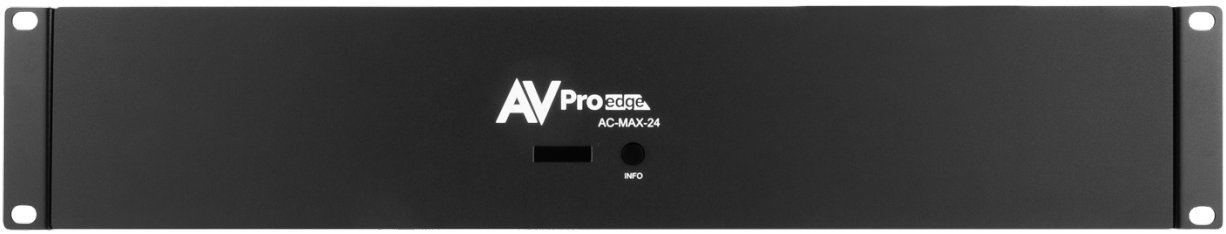
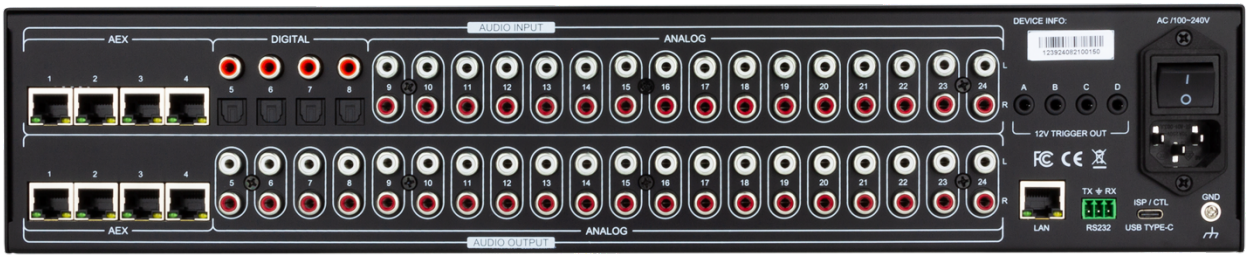




24 I/O STEREO AUDIO MATRIX WITH AUDIO EXTENSION

AC-MAX-24 User Manual

CONTENTS

IMPORTANT SAFETY INSTRUCTIONS

Before installing, configuring, and operating the devices and other vendor equipment, AVPro Edge recommends that each dealer, integrator, installer, and all other necessary personnel access and read all the required technical documentation, which can be located by visiting AVProEdge.com.

Read and understand all safety instructions, cautions, and warnings in this document and the labels on the equipment.

Safety Classifications in this Document

NOTE:	Provides special information for installing, configuring, and operating the devices.
TIP:	Provides suggestions and considerations for installing, configuring, and operating the devices.
IMPORTANT:	Provides special information that is critical for installing, configuring, and operating the equipment.
CAUTION:	Provides special information for avoiding situations that may cause damage to the devices.
WARNING:	Provides special information for avoiding situations that may cause physical danger to the installer, end user, etc.

Electrical Shock Prevention

ELECTRIC SHOCK:

The source power poses an electrical shock hazard that can potentially cause serious injury to installers and end users.

ELECTRICAL DISCONNECT:

The source power outlet and power supply input power sockets should be easily accessible to disconnect power in the event of an electrical hazard or malfunction.

Weight Injury Prevention

WEIGHT INJURY:

Installing some of the MXNet devices requires two installers to ensure safe handling during installation. Failure to use two installers may result in injury.

Safety Statements

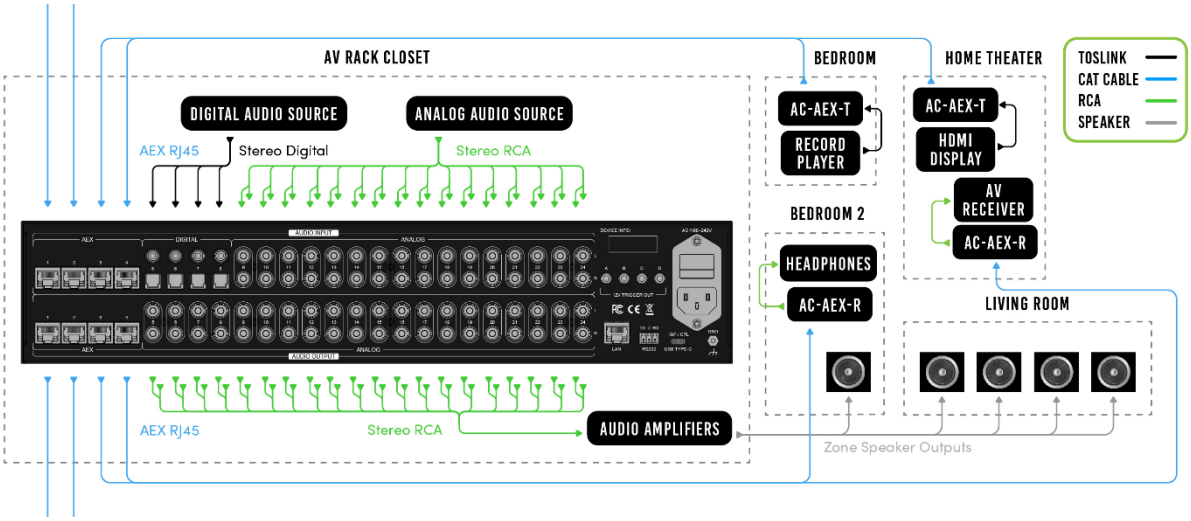
Follow all of the safety instructions listed below and apply them accordingly. Additional safety information will be included where applicable.

1. Read and keep these instructions.
2. Heed and follow all warnings.
3. Do not use these devices near water.
4. Clean only with a dry cloth.
5. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
6. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus that produce heat.
7. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
8. Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the devices.
9. Only use attachments and accessories specified by the manufacturer.
10. Unplug these devices during lightning storms or when unused for long periods of time.
11. To reduce the risk of electrical shock or damage to these devices, never handle or touch the devices and power cord if your hands are wet or damp. Do not expose these devices to rain or moisture.
12. Refer all servicing to qualified service personnel. Servicing is required when the devices have been damaged in any way, such as the power cord or plug is damaged, liquid has been spilled, objects have fallen into the devices, the devices have been exposed to rain or moisture, do not operate normally, or have been dropped.
13. The devices and their accessories should never be exposed to open flames or excessive heat.

INTRODUCTION

The AC-MAX-24 is a 24 I/O 2U rack-mountable audio matrix featuring dual RCA, TOSLINK, and Digital Coaxial ports, as well as 4 AEX inputs and 4 AEX outputs, allowing users to return audio from decentralized sources (such as a vinyl player) or extend audio out to a remote zone (such as a guest house or room with a local soundbar).

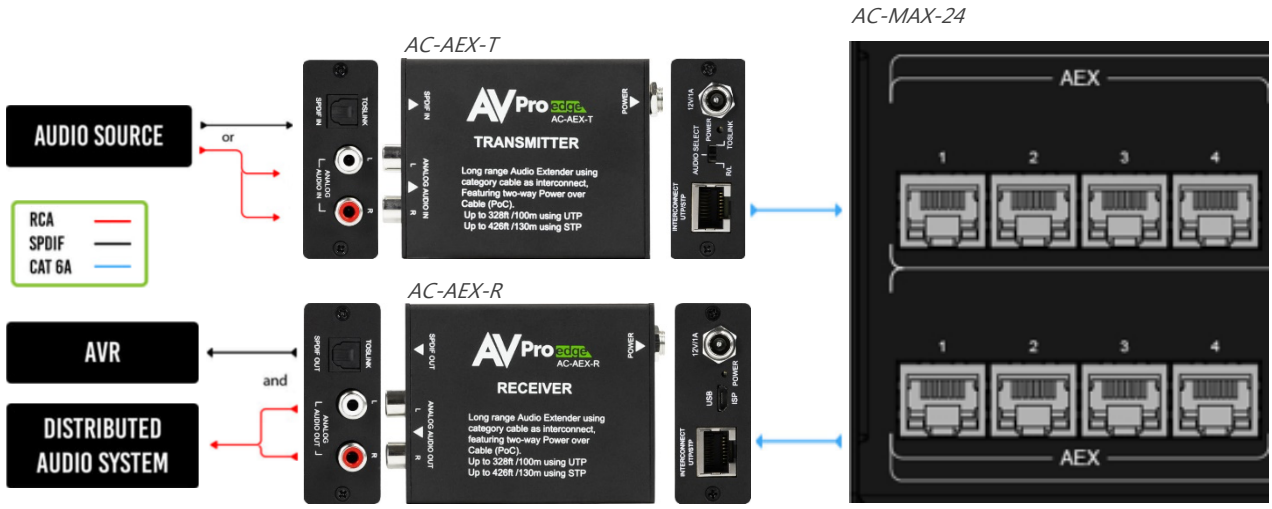
The diagram below shows the basic application of the AC-MAX-24. The audio path can either come from the audio sources directly or from remote audio sources via the AC-AEX-KIT as shown below.



Compatible Devices

AC-AEX-KIT

The AVPro Edge AC-AEX-KIT is a pair of PoC (Power over Cable) powered transmitter (AC-AEX-T) and receiver (AC-AEX-R) modules that extend 2-channel analog and digital audio signals over standard category cable via AVPro Edge's exclusive AEX technology. The AC-AEX-KIT is ideal for sending and receiving audio signals to/from decentralized devices to/from a centrally located audio distribution system such as the AC-MAX-24.



⚠ **IMPORTANT:**

Each AEX port on the AC-MAX-24 must be paired with an AC-AEX-T or AC-AEX-R for complete operation.

PRODUCT OVERVIEW

Box Contents

(1x) AC-MAX-24 Stereo Audio Matrix
(2x) 2U Rack Mounting Brackets (pre-attached)
(1x) 3-Pin Terminal Block Connector
(4x) Mounting Feet
(4x) Mounting Feet Screws
(1x) Ground Wire
(1x) AC Power Cord

Technical Specifications

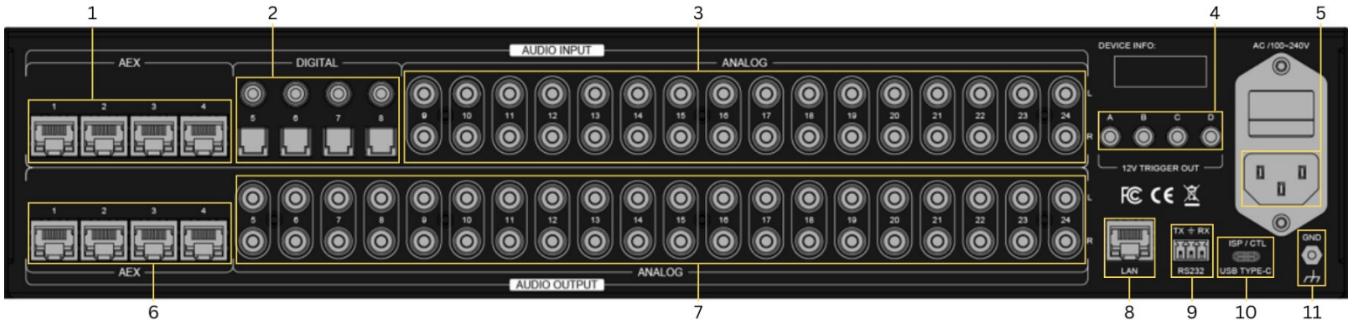
Audio	
Frequency Response	20-20 kHz
Analog Input Voltage	1.63 V_{RMS}, 4.6 V_{p-p}
Analog Output Voltage	1.63 V_{RMS}, 4.6 V_{p-p}
Digital	2 Channel PCM
Supported Sample Rates (kHz)	32, 44.1, 48, 88.2, 96, 176, 192
Latency	≤60 milliseconds
Mute	Available on all outputs
Audio Inputs	
AEX Audio	4
RCA	16
Digital TOSLINK	4
Digital Coaxial	4
Audio Outputs	
AEX Audio	4
RCA	20
Control	
Interfaces	RS-232, IP/LAN
Drivers	C4, RTI, ELAN, URC (for more - see Drivers Page)
Additional Connections	
In-System Programming	USB Type C
12V DC Trigger Output	4
Power	
Total Power Consumption	50 Watts Maximum
AC Power	100-240 VAC
Dimensions	
Height x Width x Depth (Standalone Unit)	Millimeters: 88 x 440 x 234.95 Inches: 3.5 x 17.5 x 9.25
Height x Width x Depth (Packaged Unit)	Millimeters: 172 x 578 x 375 Inches: 6.75 x 22.75 x 15
Weight (Standalone Unit)	8.7 lbs (3.95 kg)
Weight (Packaged Unit)	11.9 lbs (5.4 kg)
Rack Space	2U

*Specifications are subject to change without notice. Mass and dimensions are approximate.

Front and Rear Panel Overview

Front Panel

Rear Panel



1	**AEX INPUTS (1-4)**	• (4x) 8-pin RJ-45 female connector • Long-range audio extension input ports for connecting AC-AEX-KIT • Power over Cable (PoC) • Unshielded Twisted Pair (UTP): up to 100 meters (328 ft) • Shielded Twisted Pair (STP): up to 130 meters (426 ft)
2	**DIGITAL AUDIO INPUTS (5-8)**	• (4x) Digital Optical (TOSLINK) audio input ports
3	**ANALOG AUDIO INPUTS (9-24)**	• (20x) Stereo RCA line-level analog audio input ports
4	**12V TRIGGER OUT**	• (4x) 3.5mm output ports
5	**AC POWER INLET**	• Main AC power for the AC-MAX-24
6	**AEX OUTPUTS (1-4)**	• (4x) 8-pin RJ-45 female connector • Long-range audio extension input ports for connecting AC-AEX-KIT • Power over Cable (PoC) • Unshielded Twisted Pair (UTP): up to 100 meters (328 ft) • Shielded Twisted Pair (STP) up to 130 meters (426 ft)
7	**ANALOG AUDIO OUTPUTS (5-24)**	• (20x) Stereo RCA analog audio output ports
8	**LAN**	• 8-pin RJ-45 female connector

		• Connect to the LAN, router, or third-party control system
9	RS232 CONTROL	• 3-pin terminal block connector port
10	ISP / CTL USB TYPE-C	• Proprietary service port for AVPro Edge technical assistance
11	GND	• Ground screw • Connect with the provided ground wire to the conducting parts

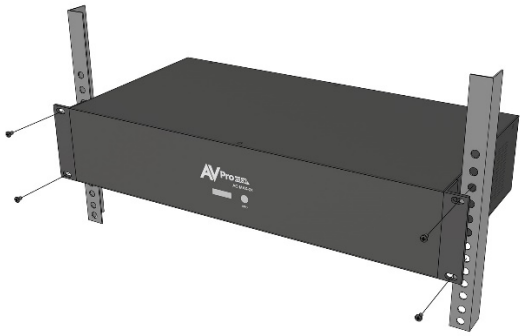
INSTALLATION

Rack Mounts

The AC-MAX-24 can be mounted in a 2U rack-style enclosure and is compatible with all standard 19-inch rack mounts. The (2x) mounting brackets are pre-assembled to the unit for quick installation.

1 Align the holes on the mounting brackets with the holes on both sides of the rack.

2 Attach the mounting brackets to the rack with rack screws (not included).

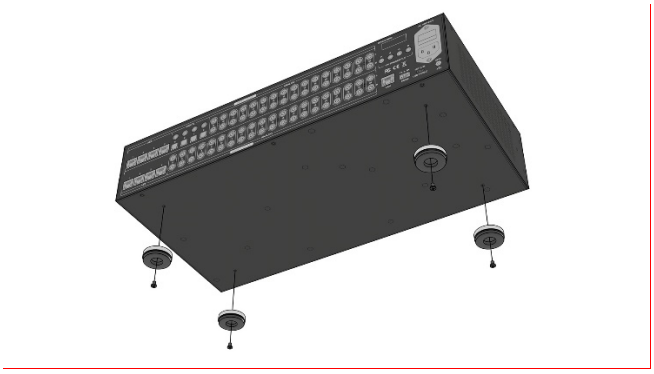


Mounting Feet Assembly

The (4x) mounting feet can be assembled to the unit with the (4x) provided mounting screws.

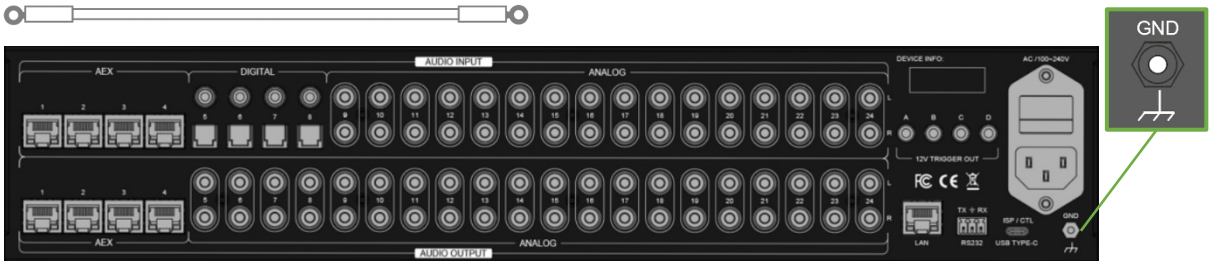
1 Align the holes on the mounting feet with the holes underneath the unit.

2 Attach the mounting feet to the unit with the provided screws.



Grounding Cable

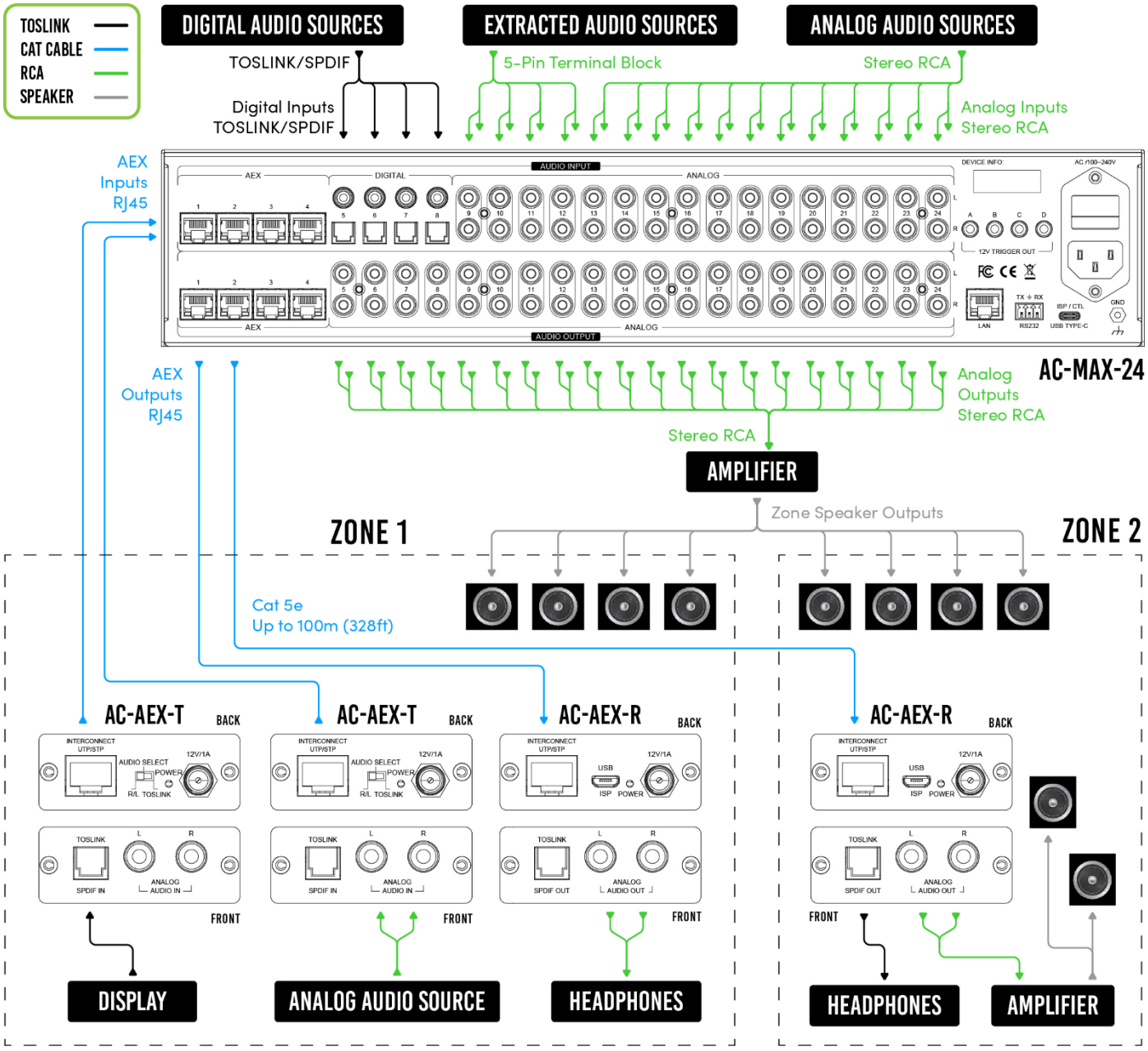
Use a screwdriver to attach the yellow ground cable to the pre-installed screw on the back of the unit, then attach the other end to a suitable grounded object.



Audio Connections

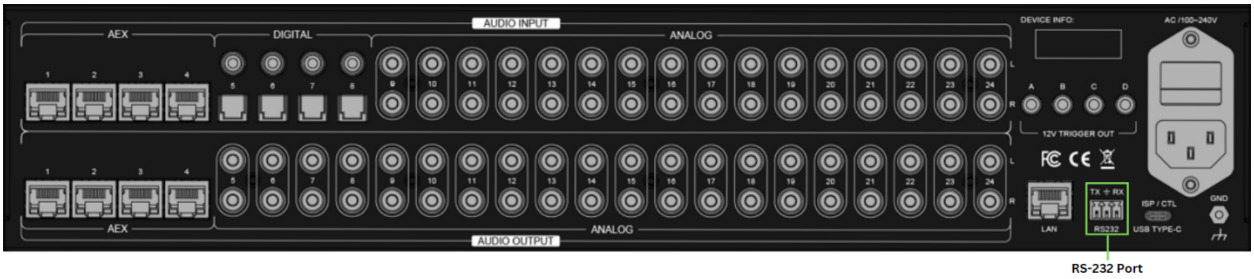
AVPro Edge recommends using shielded RCA interconnected cabling between the AC-MAX-24 and connected analog devices to maintain a high level of audio performance.

The diagram below shows the audio connections of the AC-MAX-24:

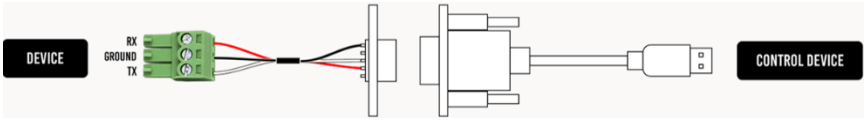


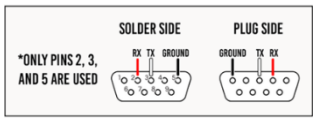
RS-232 Control

The RS-232 control port located in the bottom right corner on the rear panel is used to communicate with the AC-MAX-24 via a computer or third-party control system.



Wiring for this port uses a 3-pin terminal block connector to DB9, where only pins 2, 3, and 5 are used. If the control devices do not have a DB9 port, a USB to DB9 adapter may be required.



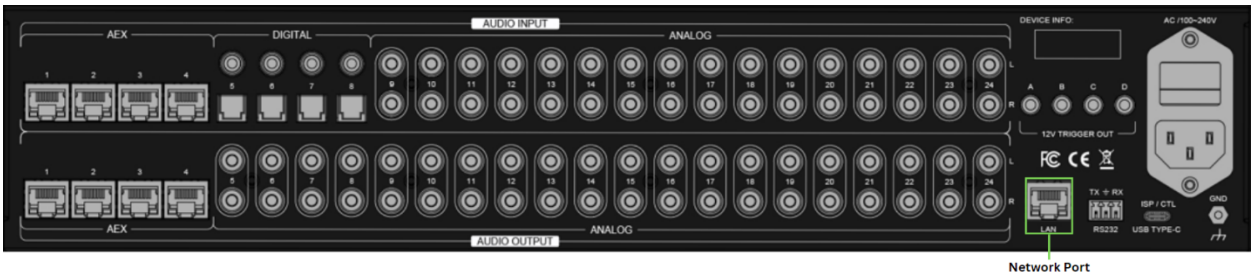


For RS-232 control, use a null modem serial cable adapter and set the serial communications to: Baud: 57600, no parity, 8 data bits, and 1 stop bit, with no handshaking.

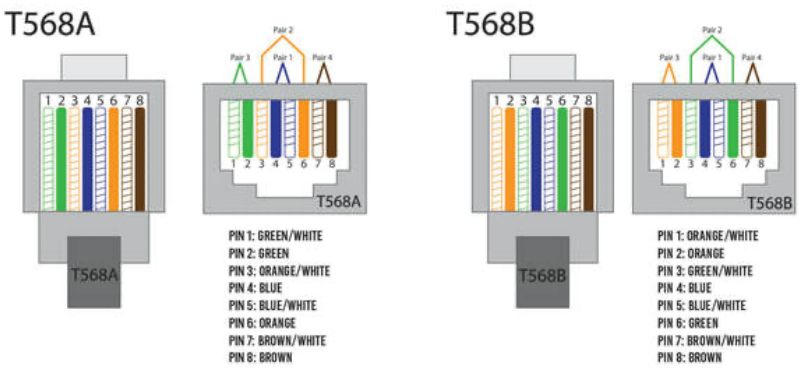
Add a carriage return (Enter key) after each command when using direct commands. The unified command list (ASCII) can be located here.

LAN Wiring

The IP control port located in the bottom right corner on the rear panel is used to communicate with the AC-MAX-24 via a LAN, router, or third-party control system processor. For TCP/IP control, commands use Telnet Port 23.



The recommended termination is based on TIA/EIA T568A or T568B standards for the wiring of the twisted pair cables:

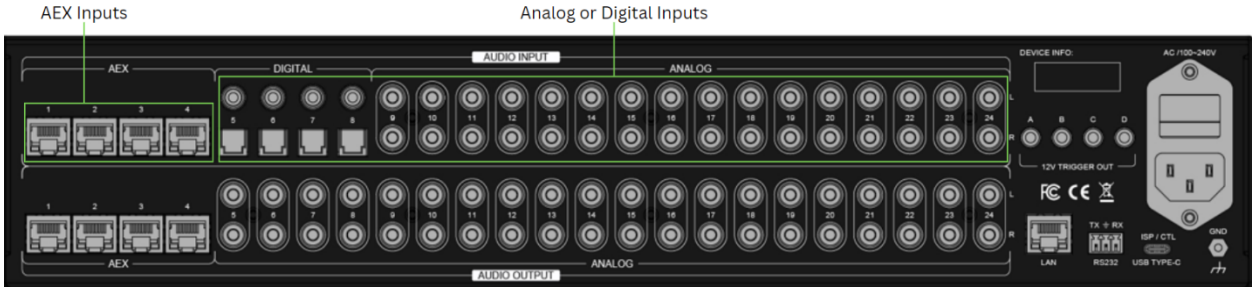


INITIAL SETUP

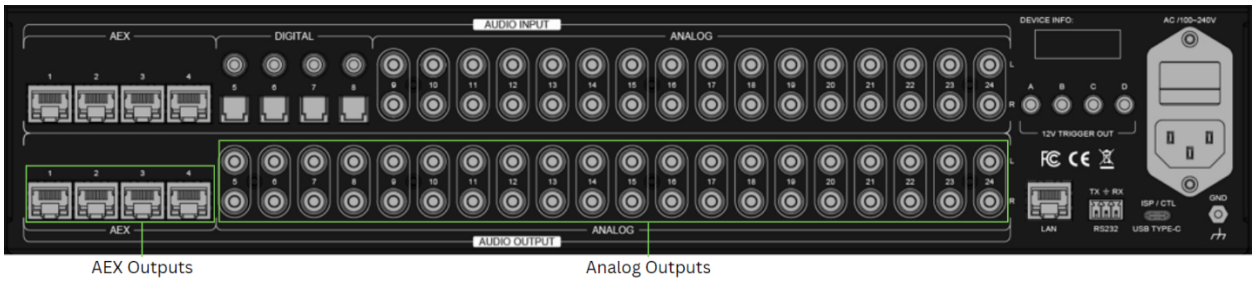
Make the physical connections to the input and output devices using the following steps below. For initial setup, it is recommended to connect the AC-MAX-24 to a LAN (Local Area Network) using a control PC on the same network once all the physical connections are made, followed by accessing the Web UI and checking for any firmware updates to the unit.

Connecting the Devices

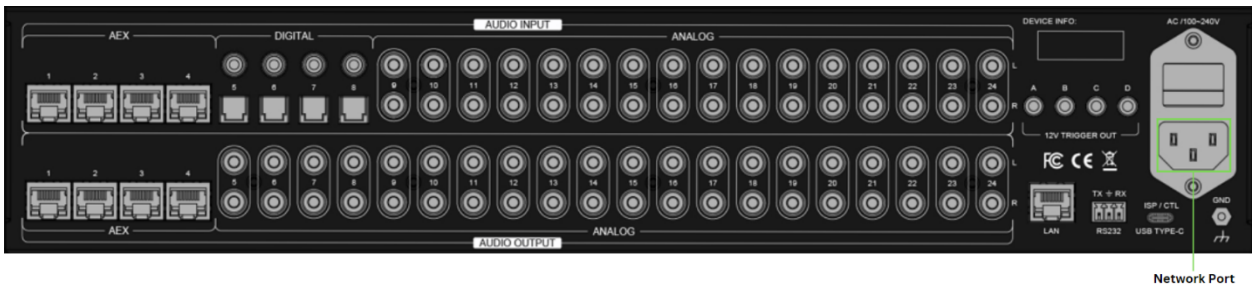
1 Connect the audio source devices to the audio inputs on the back of the unit.



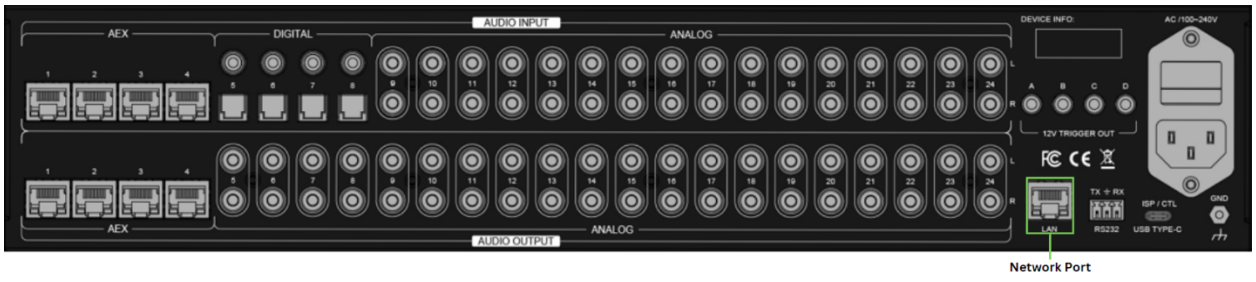
2 Connect the audio output devices to the audio outputs on the back of the unit.



3 Connect the provided power cable to the AC inlet on the back of the unit, then plug the power cable into a standard wall receptacle.



4 Connect the NETWORK port on the back of the unit to a LAN, router, or third-party control system.



Locating the IP Address

The default IP setting is DHCP mode, an IP address will be automatically assigned to the unit by the DHCP server. Press the front panel button to display the units IP address then enter it into a web browser (such as Chrome or Edge) to access the unit's Web UI. Once connected, you can use the Web UI to assign the unit a static IP address. If there is no DHCP server on the network, the unit's IP address can also be located by connecting to the RS-232 port on the back of the unit and sending serial commands using the API. For more information, see the *RS-232 Control* page.

Accessing the Web UI

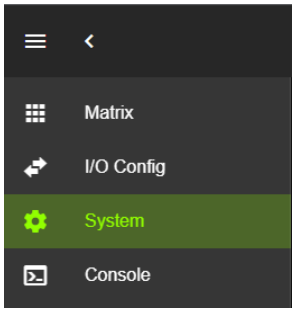
The AC-MAX-24 features the built-in AVPro Edge User Interface (AEUI) that can be accessed through a web browser for configuration and control. For initial setup, it is recommended to connect the AC-MAX-24 to a local area network (LAN) with a computer on the same network to access the built-in Web UI and check for any firmware updates to the unit.

OTA Cloud Services

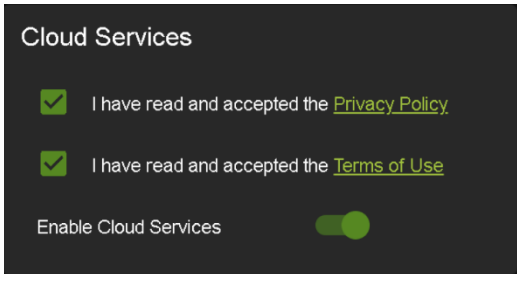
Firmware updates to the unit can be performed OTA (Over-the-Air) by enabling the *Cloud Services* setting on the Web UI. This allows the unit to search the Cloud for the latest versions of firmware. If a newer version of firmware is detected, a dialog box will prompt the new update is available from the Web UI.

1 Enter in the unit's IP address into a Chrome or Edge web browser to access the unit's Web UI.

2 Navigate to the *System* tab page.

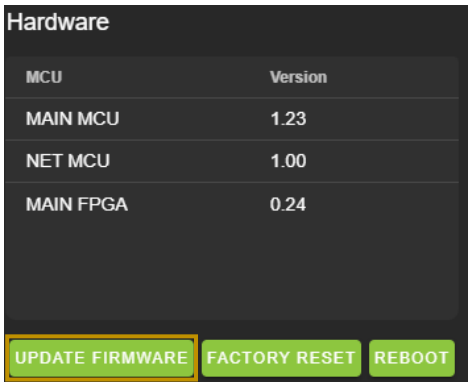


3 In the *Cloud Services* section, review the *Privacy Policy* and *Terms of Use*, then check both boxes and select the *Enable Cloud Services* toggle setting.

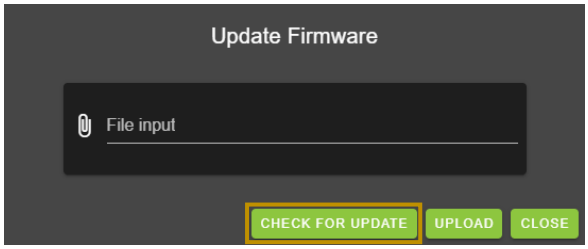


⚠ **IMPORTANT:** This is a required step in order for the unit to perform OTA firmware updates.

4 In the *Hardware* section, select the *Update Firmware* button. A new dialog box will open.



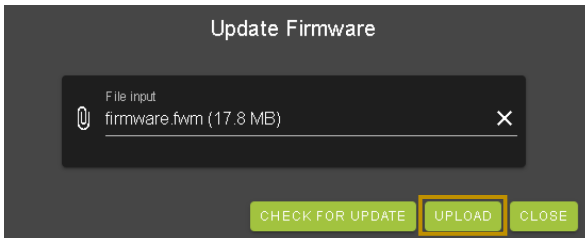
5 In the *Update Firmware* dialog box, select *Check for Update*. The unit will now check the Cloud for available firmware updates.



6 If the unit is already installed with the latest version of firmware, a notification window will prompt the message “No update available!” at the top of the page. Select the *Close* button.

7 If a newer version of firmware is detected from the Cloud, a notification window will prompt the message “New firmware update is available!”. Select the *Update* button.

8 The unit’s new firmware file will automatically populate into the *File input* field from the Cloud. Select the *Upload* button.



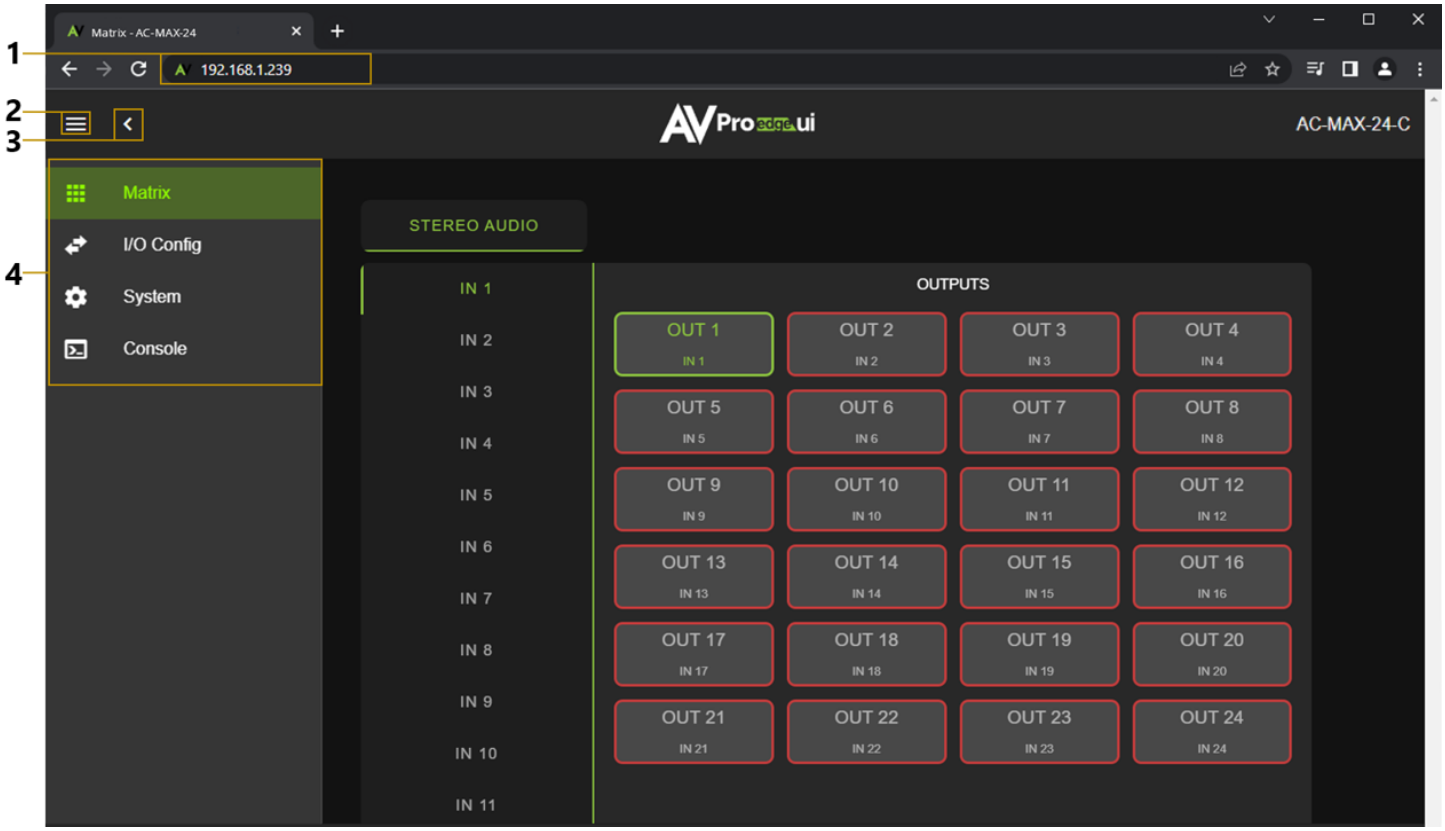
9 From this screen, newer versions of firmware can be viewed before they are installed. Select the *Upgrade* button. The unit will now begin installing the latest versions of firmware. DO NOT refresh the webpage or power off the unit during the update.

10 Once the progress bar reaches 100%, select the *Close* button and refresh the webpage.

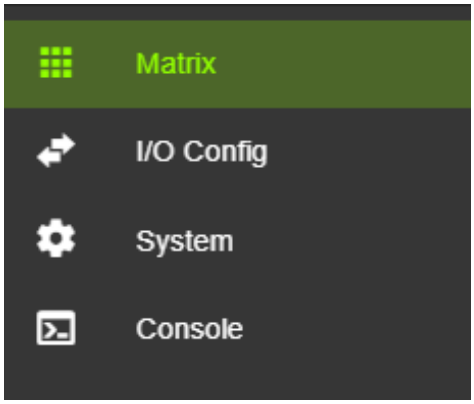
11 The unit will automatically reboot once the firmware updates are complete. After the unit reboots, refresh the webpage to verify that the firmware update was successful.

NAVIGATING THE WEB UI

The AC-MAX-24 features the built-in AVPro Edge User Interface (AEUI) that can be accessed through a web browser for configuration and control. Different tools and settings can be selected from the tab pages located on the navigation menu column on the left side of the screen.

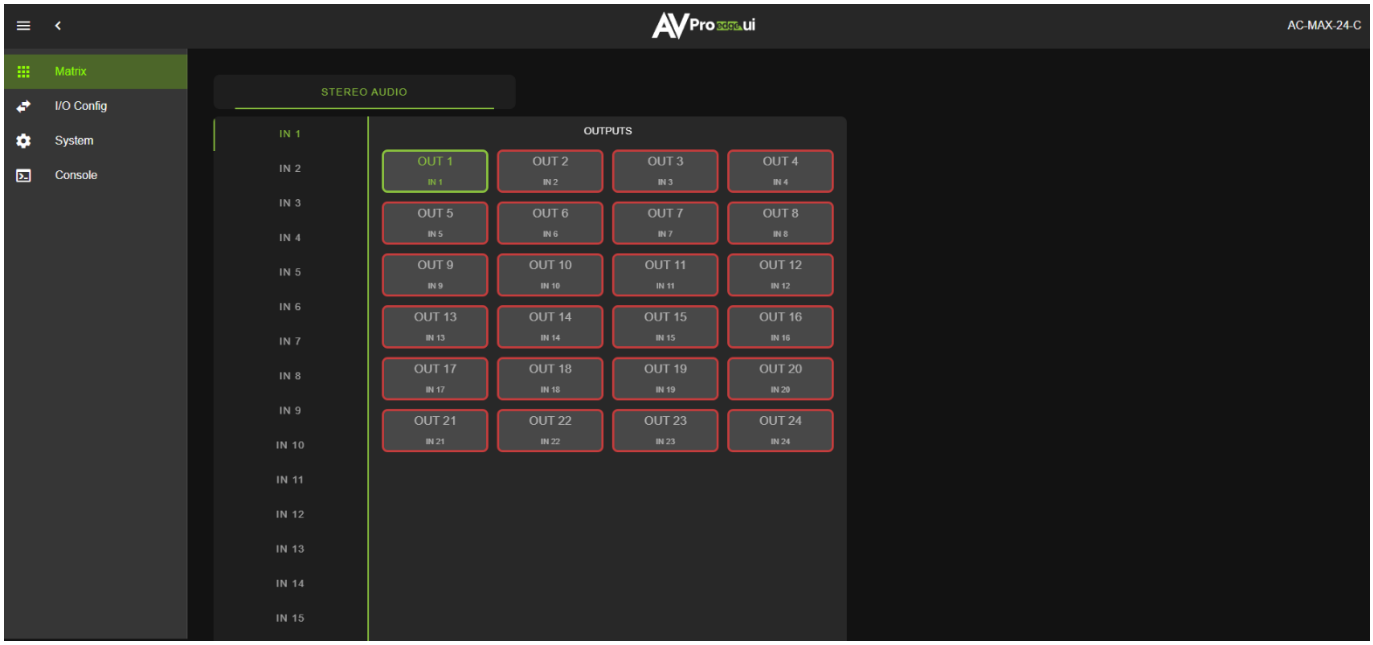


1. Enter the unit's IP address into a web browser, such as Chrome or Edge, to access the Web UI.
2. To hide the navigation menu, select the *hamburger menu* icon .
3. To hide the navigation menu text and show only the menu icons, select the *left arrow* icon .
4. To navigate through the different pages, select the individual *tab pages* from the navigation menu. This will highlight the tab page in green to indicate the currently selected page.



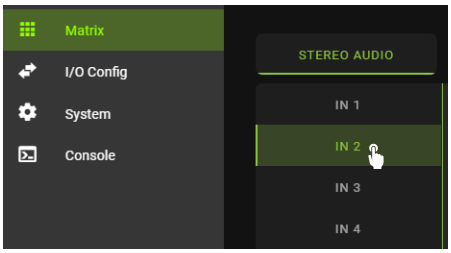
Matrix

The **Matrix** page layout consists of the **Stereo Audio** *Inputs* column on the left and the *Outputs* grid on the right. Each *Input* and *Output* can be individually selected to route the input's audio signals to the output(s).

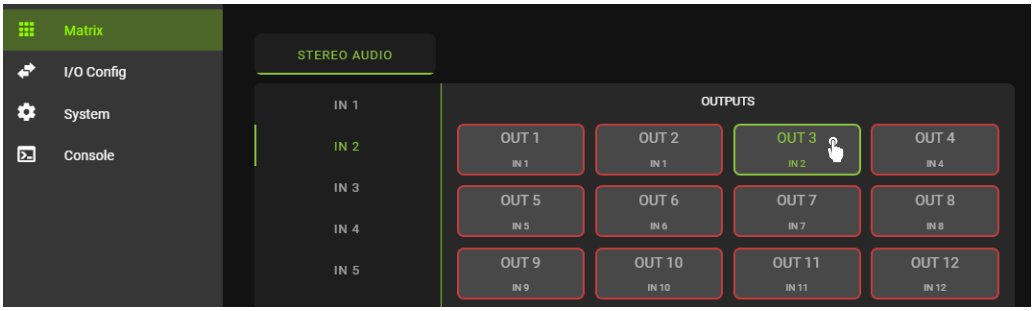


Matrix Switching

1 From the *Inputs* column, select the desired input. This will highlight the input with a green text to indicate the selection was made.



2 From the *Outputs* grid, select the desired output(s) to route the selected input to. This will highlight the output(s) with a green border to indicate the selection was made.

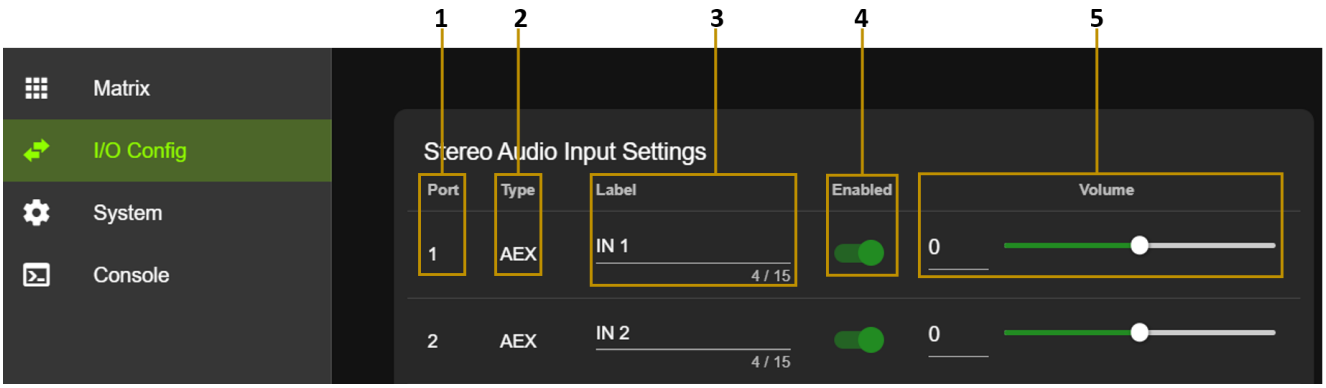


3 The selected input's audio signals are now routed to the selected output(s).

I/O Config

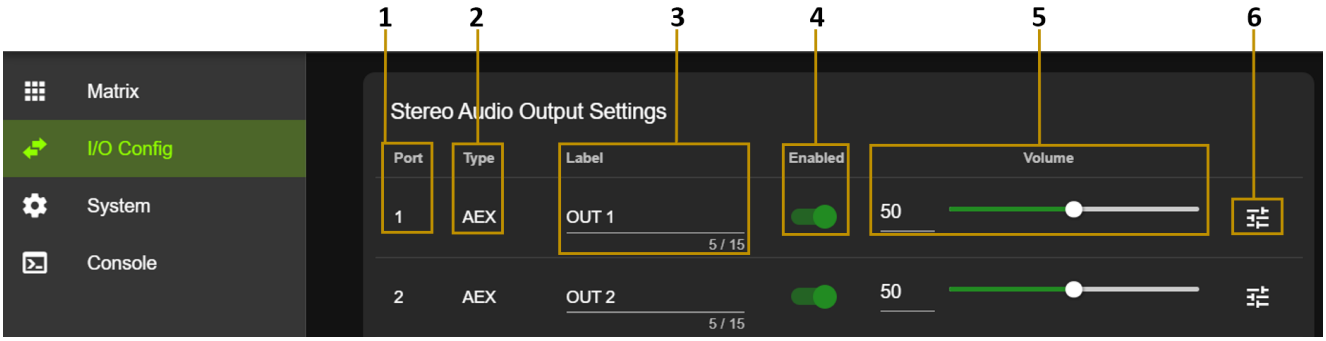
The **I/O Config** tab page features tools and settings for configuring the audio inputs and outputs.

Stereo Audio Input Settings



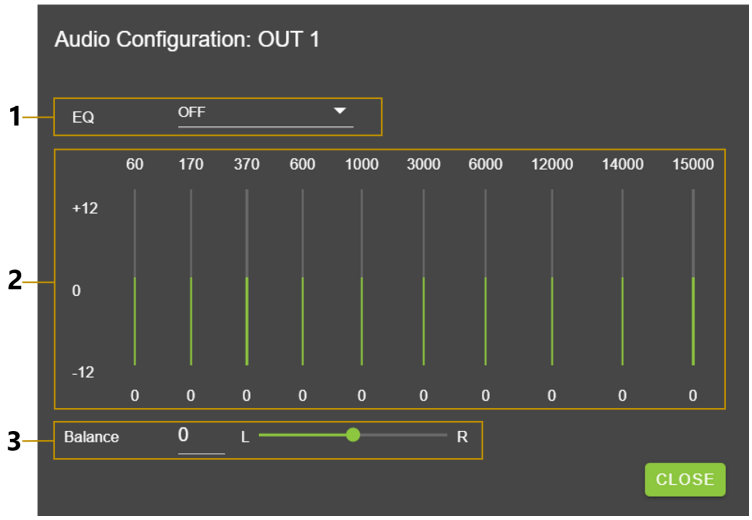
1	**Port**	Shows the audio input port number.
2	**Type**	Shows the audio input connection type.
3	**Label**	Select the text field to enter in a custom name for the input. *(Limit of 15 characters)*
4	**Enabled**	Select the toggle switch to enable or disable the audio input.
5	**Volume**	Adjust the volume by using the slider bar or entering a value (0~100) in the text field.

Stereo Audio Output Settings



1	**Port**	Shows the audio output port number.
2	**Type**	Shows the audio output connection type.
3	**Label**	Select the text field to enter in a custom name for the output. *(Limit of 15 characters)*
4	**Enabled**	Select the toggle switch to enable or disable the audio output.
5	**Volume**	Adjust the volume by using the slider bar or entering a value (0~100) in the text field.
7	**EQ**	Select to view the output's *Audio Configuration* settings.

Audio Configuration



1	**EQ**	Dropdown menu containing a list of several preset equalizer settings that can be applied to change the frequency response of the audio output.
2	**Frequency**	Graphic equalizer showing the individual frequency bands of the output's audio. **NOTE:** This graphic equalizer is only intended to be used as a visual reference of the individual audio frequency gains. Manual adjustments cannot be made to it.
3	**Balance**	Adjust the Left and Right volume by using the slider bar or entering a value (-10 to +10) in the text field. **NOTE:** -10 is balanced left, 0 is balanced, and +10 is balanced right.

Equalizer

The AC-MAX-24 features an advanced 5-band parametric equalizer (EQ) that is designed to enhance the audio experience by adjusting frequency ranges across multiple bands. This EQ offers 29 factory presets and 24 user-configurable EQ profiles, providing flexibility for both preset and custom sound configurations.

Factory Presets (EQ 1-29)

EQs 1-27: These presets are pre-configured to adjust bass, midrange, and treble frequencies in increments of 6 dB, allowing up to a total adjustment of 12 dB. Each preset applies a different combination of frequency attenuation to shape the sound output.

EQ 28: This is a high-pass filter that allows higher frequencies to pass while attenuating lower frequencies.

EQ 29: This is a low-pass filter that allows lower frequencies to pass while attenuating higher frequencies.

The table below provides the gain values for each of the EQ presets.

EQ	Bass	Mid	Treble	EQ	Bass	Mid	Treble	EQ	Bass	Mid	Treble
1	0	0	0	10	-6	0	0	19	-12	0	0
2	0	0	-6	11	-6	0	-6	20	-12	0	-6
3	0	0	-12	12	-6	0	-12	21	-12	0	-12
4	0	-6	0	13	-6	-6	0	22	-12	-6	0
5	0	-6	-6	14	-6	-6	-6	23	-12	-6	-6
6	0	-6	-12	15	-6	-6	-12	24	-12	-6	-12
7	0	-12	0	16	-6	-12	0	25	-12	-12	0
8	0	-12	-6	17	-6	-12	-6	26	-12	-12	-6
9	0	-12	-12	18	-6	-12	-12	27	-12	-12	-12

User-Configurable EQs (EQ 30-53)

The remaining EQ profiles, ranging from 30 to 53, are fully user configurable. For each of the 5 frequency bands, users can set the following parameters:

Center Frequency: The frequency point around which the EQ effect is applied.

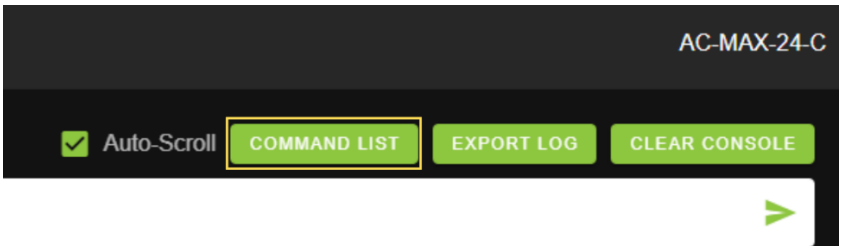
Gain: The amount of boost or attenuation applied to the selected frequency band.

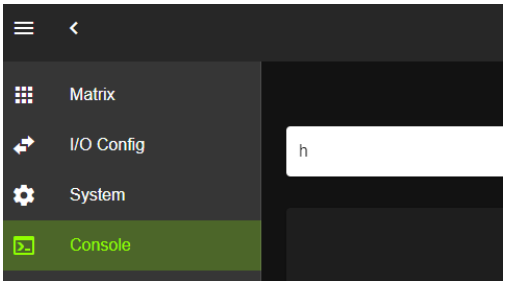
Q-Factor: The bandwidth or sharpness of the frequency adjustment.

Users can configure these settings using the Web UI Console or RS-232 commands by following the steps below.

1. Navigate to the Console tab

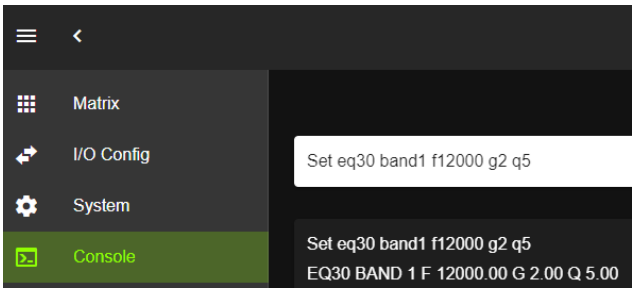
2. Get the full command list by selecting the command list button in the top right or by sending the Help command by entering H in the white text box.





3. Find the command needed in the Output Setup Commands section of the command list.
    a. **SET EQx BANDy Ff Gg Qq** : Set EQ Mode x Band Frequency, Gain, and Q values : {x=30~53, y=1~5, f=1~24000, g=-12.0~12.0, q=0.1~10.0}
    b. x: EQ Mode = 30~53
    c. y: Band = 1~5
    d. f: Frequency = 1~24000
    e. g: Gain = -12.0~12.0
    f. q: Q values = 0.1~10.0
    g. Example Command: Set eq30 band1 f12000 g2 q5 (The spacing shown are case sensitive)

4. Enter the SET EQx BANDy Ff Gg Qq command in the white text box.
    a. Example Command Sent: Set eq30 band1 f12000 g2 q5
    b. Correct Command Feedback: EQ30 BAND 1 F 12000.00 G 2.00 Q 5.00
    c. Incorrect Command Feedback: CMD ERR: Command structure doesn't match: SET EQx BANDy Ff Gg Qq



5. To fully Configure the User EQ mode, repeat step 4 without changing the EQ or X variable until bands 1-5 have been configured as needed.
6. Once the EQ modes have been configured you can switch between them without altering or having to reenter the information by entering the SET OUTx EQ y command in the white text box.
    a. SET OUTx EQ y : Set Output x to EQ y {x=[0-24](0=All),y=[0~53](0=OFF)}

Doorbell Settings

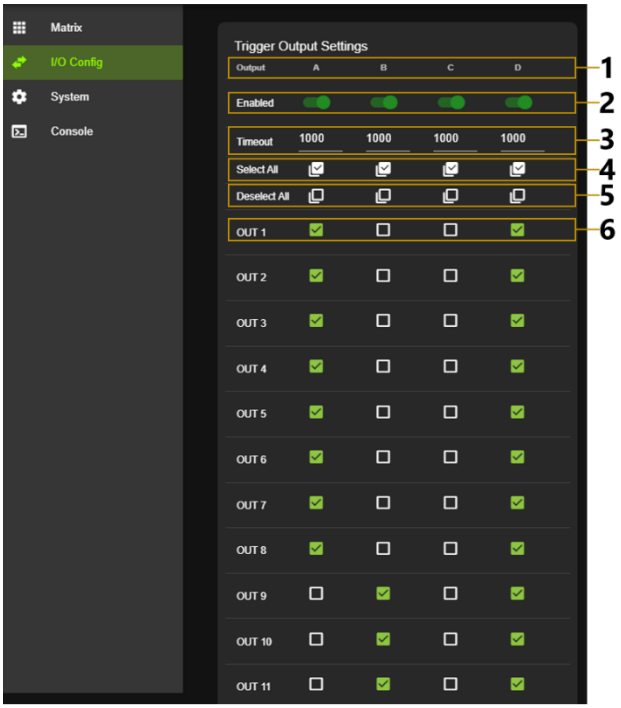
The Doorbell Settings allow users to trigger chimes that can be configured to use the audio coming from one of the AC-MAX-24's inputs or custom audio files (.mp3, .flac, .wma, .wav) that can be uploaded using the browse button up to 600MB.

1	**Port**	Shows the chime port number.
2	**Chime**	Shows the chime number.
3	**Play Chime**	Test the configuration of the selected chime
4	**Audio File Browse**	Select and upload files for use in chimes
5	**Chime Volume**	Adjust the volume by using the slider bar or entering a value (0~100) in the text field.
6	**Chime Duration**	Adjust the duration by using the slider bar or entering a value (1~ 65535) in the text field.
7	**Chime Source (input/File)**	Select the file or input that plays when the chime is activated.
8	**Output selection**	Select which outputs the chime will play from

Trigger Output Settings

The AC-MAX-24 is equipped with four 12V trigger ports that can be configured to automatically turn on/off an amplifier or AV receiver. The trigger port will continuously output 12 VDC when enabled and an audio signal is detected at **any** assigned audio output. When active, the trigger port will continue to output 12 VDC until no audio is detected at **all** assigned audio outputs for a minimum duration of the set *Timeout* period or when the trigger is disabled.

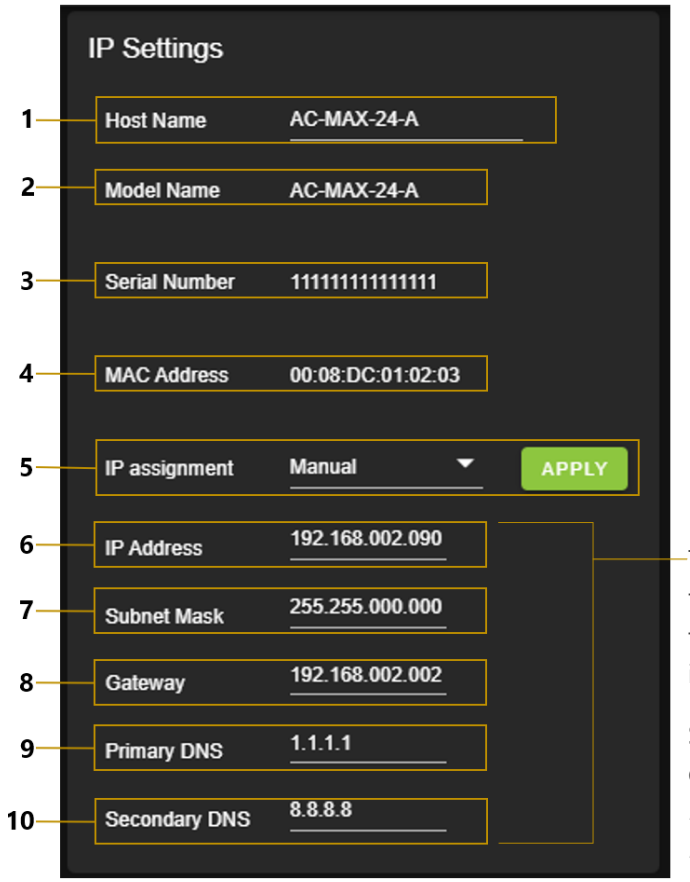
NOTE: An audio output and its routed input must both be enabled in order to detect audio at the output.



1	**Trigger Output**	Shows the trigger output port letter.
2	**Enabled**	Select the toggle switch to enable or disable the trigger output port.
3	**Timeout**	Select the text field to enter the trigger *Timeout* duration in milliseconds. (Limit of 5 characters)
4	**Select All**	Select the check box to assign all audio outputs to this column's trigger output port.
5	**Deselect All**	Select the check box to unassign all audio outputs from this column's trigger output port.
6	**Audio Output**	Check box to assign or unassign this row's audio output to this column's trigger output port.

System

IP Settings

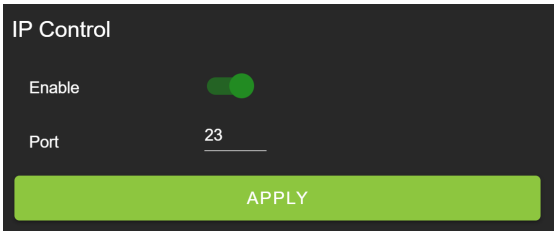


These will be assigned by a DHCP reservation from the router when the *IP Assignment* is set to *Automatic*, or they can be manually entered in when the *IP Assignment* is set to *Manual*.

Select the *Apply* button when manually entering in the *IP Assignment*, *IP Address*, *Subnet Mask*, *Gateway*, *Primary DNS*, and *Secondary DNS* for changes to take effect.

1	**Host Name**	Select the text field to enter in a custom name for the unit. The default shows the unit's model number.
2	**Model Name**	Shows the unit's AVPro Edge model number.
3	**Serial Number**	Shows the unit's unique serial number.
4	**MAC Address**	Shows the unit's unique MAC address.
5	**IP Assignment**	Select the dropdown menu to set the unit's IP mode to *DHCP* (default) or *Manual (Static IP)*, then select the *Apply* button.
6	**IP Address**	Shows the unit's IP address.
7	**Subnet Mask**	Shows the unit's subnet mask.
8	**Gateway**	Shows the unit's default gateway.
9	**Primary DNS**	Shows the unit's primary domain name server.
10	**Secondary DNS**	Shows the unit's secondary domain name server.

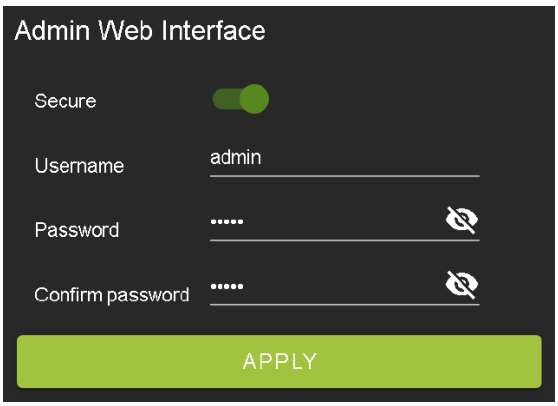
IP Control



2	**Enable**	Select the toggle switch to enable or disable IP/TCP control.
3	**Port**	Select the text field to set the Telnet port. Default is Telnet port 23.

Admin Web Interface

Select the *Secure* toggle switch to enable (green) or disable (red). When enabled, the username and password can be changed.



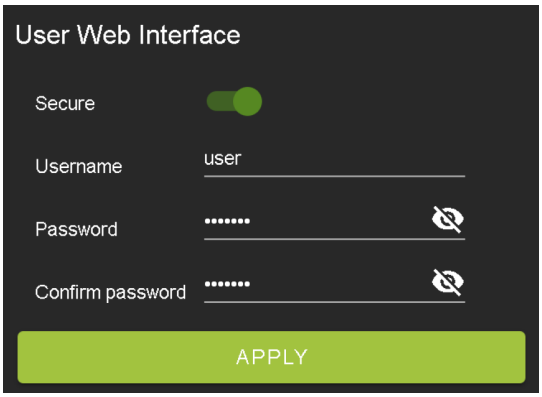
With the *Admin Web Interface* enabled, the only menu that will be accessible on the Web UI will be the **Matrix** tab page. The rest of the settings will require the *Admin* login.

Default username: *admin*
Default password: *admin*

User Web Interface

Select the *Secure* toggle switch to enable (green) or disable (grey). When enabled, the username and password can be changed.

NOTE: The *Admin Web Interface* must first be enabled before this setting can be changed.

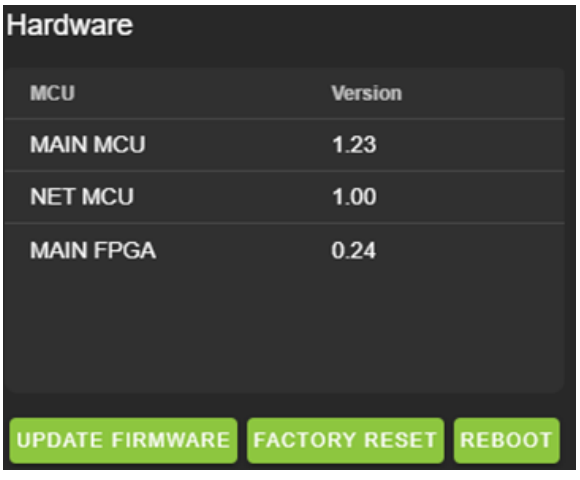


With the *Admin* and *User Web Interfaces* enabled, no menus will be accessible on the Web UI without first logging in.

Logging in with the *User* credentials, the only menu that will be accessible on the Web UI will be the **Matrix** tab page. The rest of the settings will require the *Admin* login.

Default username: *user*
Default password: *user123*

Hardware



This section shows the unit's current firmware versions and provides options for updating firmware, factory resetting the unit, and rebooting the unit.

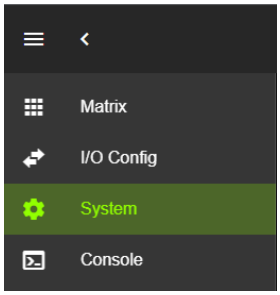
Cloud Services

Cloud Services allows OTA (Over-the-Air) firmware updates to be performed onto the unit. This allows the unit to search the Cloud for the latest versions of firmware, as well as enable third-party remote management services. If the *Cloud Services* setting is disabled, the unit will opt out of any previously enabled services and will not be able to access OTA firmware updates.

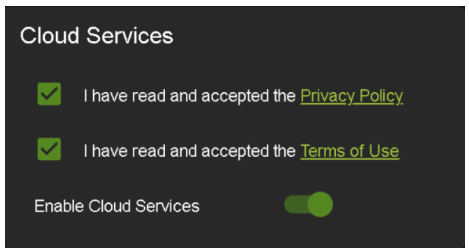
> **NOTE:** When updating firmware, some settings and configurations may revert back to their original factory default settings and may need to be re-applied after the firmware updates are complete. It is always recommended to backup and save your settings and configurations before updating firmware.

1 Enter in the unit's IP address into a Chrome or Edge web browser to access the unit's Web UI.

2 Navigate to the *System* tab page.

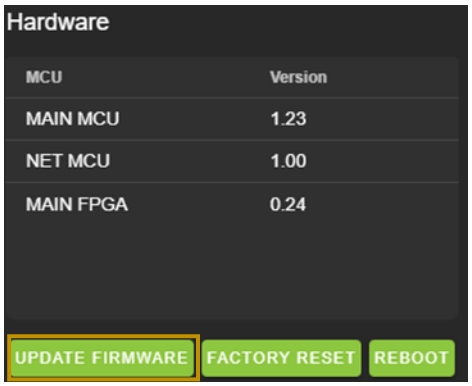


3 In the *Cloud Services* section, review the *Privacy Policy* and *Terms of Use*, then check both boxes and select the *Enable Cloud Services* toggle setting.

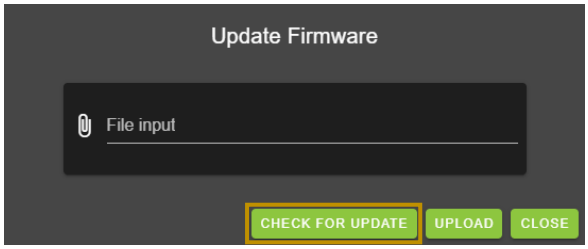


> **IMPORTANT:** This is a required step in order for the unit to perform OTA firmware updates.

4 In the *Hardware* section, select the *Update Firmware* button. A new dialog box will open.



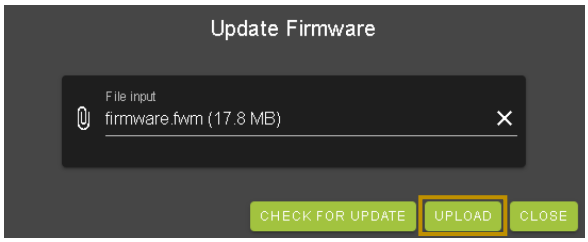
5 In the *Update Firmware* dialog box, select *Check for Update*. The unit will now check the Cloud for available firmware updates.



6 If the unit is already installed with the latest version of firmware, a notification window will prompt the message “No update available!” at the top of the page. Select the *Close* button.

7 If a newer version of firmware is detected from the Cloud, a notification window will prompt the message “New firmware update is available!”. Select the *Update* button.

8 The unit’s new firmware file will automatically populate into the *File input* field from the Cloud. Select the *Upload* button.

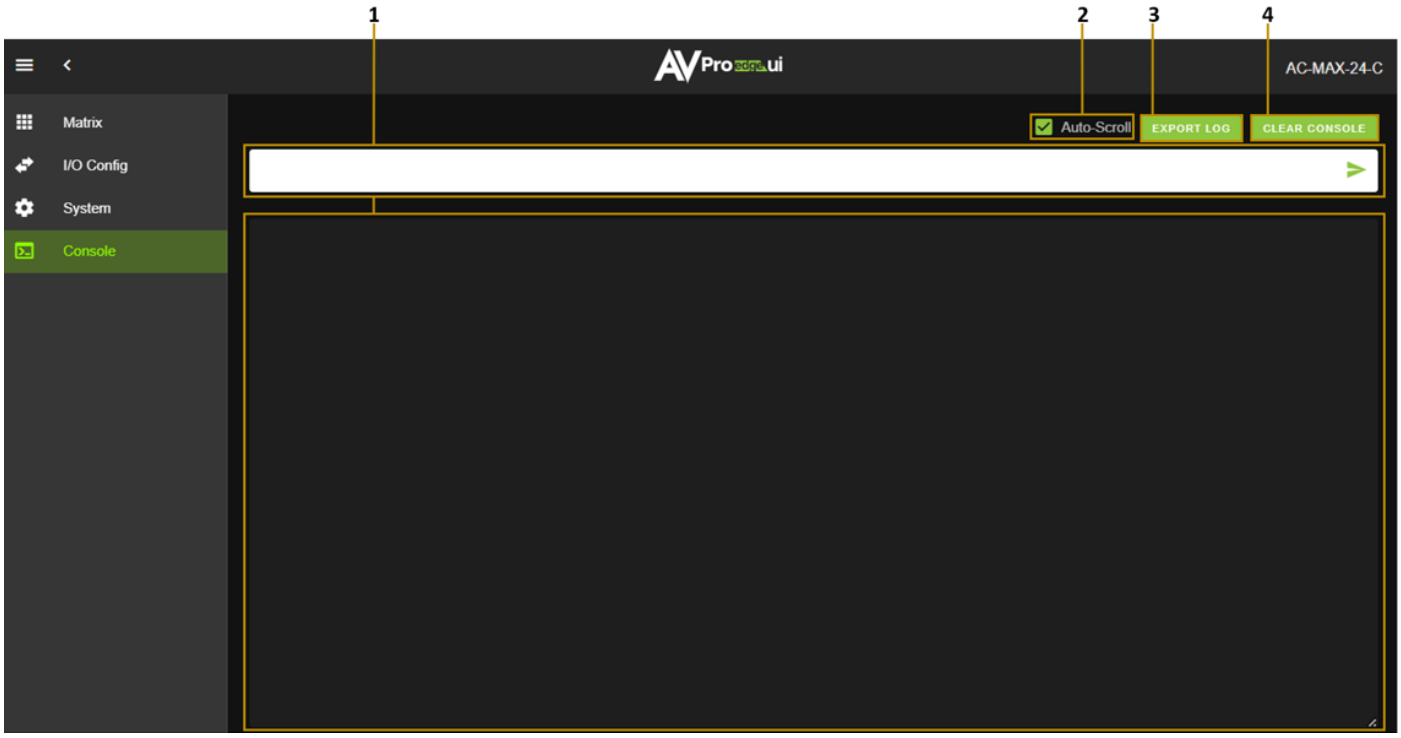


9 From this screen, newer versions of firmware can be viewed before they are installed. Select the *Upgrade* button. The unit will now begin installing the latest versions of firmware. DO NOT refresh the webpage or power off the unit during the update.

10 Once the progress bar reaches 100%, select the *Close* button. The unit will automatically reboot once the firmware updates are complete. After the unit reboots, refresh the webpage.

Console

The Web UI features a built-in command console that allows API commands to be sent directly to the unit.



1	**Text Field**	Enter the unit's API commands into this field. System events generated by the unit will record in a continuous stream while the *Console* tab page is open within the Web UI.
2	**Auto-Scroll**	Check box that enables or disables auto-scrolling as system events are generated.
3	**Export Log**	Select to download a .txt file of the information recorded by the console log. The console log only records information while the unit's Web UI is opened to the *Console* tab page and does not record or store information internally.
4	**Clear Console**	Select to clear the information recorded in the console log.

Command List

Command	Description
H	Help
STA	Show Global System Status
SET RST	Reset to Factory Defaults
SET RBT	System Reset to Reboot
SET LAN RBT	SET LAN MCU Reset to Reboot
SET ADDR xx	Set System Address to xx
SET BAUDR x	Set System BaudRate to x
GET ADDR	Get System Address
GET STA	Get System System Status
GET CONFIG	Get Complete Setting Configuration
GET BAUDR	Get System BaudRate
Input Setup Commands	
SET INx EN/DIS	Set Audio Input Enable/Disable {x=[0-24](0=All)}
SET INx VOLUME y	Set Input x Audio Volume work in Gain/Atten level y {x=[0-24](0=All), y=-6~6}
GET INx EN	Get Audio Input Enable/Disable {x=[0-24](0=All)}
GET INx VOLUME	Get Input Audio Volume work in Gain/Atten mode
GET INx SIG STA	Get Input x Signal Status 0 = Left no audio, Right no audio, 1 = Left has audio, Right no audio 2 = Left no audio, Right has audio, 3 = Left has audio, Right has audio
Output Setup Commands	
SET OUTx EN/DIS	Set Audio Output Enable/Disable
SET OUTx AS INy	Set Audio Output x To Input y
SET OUTx FOLLOW y OUTz	Set Audio Output x follow settings y ==> Follow Modes= 0: None, 1: Source, 2: Volume, 3: Source + Volume If Follow Mode != 0, then OUTz is the output that will be followed
SET OUTx MUTE/UNMUTE	Set Audio Output Mute/Unmute {x=[0-24](0=ALL)}
SET OUTx VOL y	Set Output x Volume Level y {x=[0~24](0=All),y=[0~100]}

SET OUTx VOL+ y	Increase Output x Volume by y {x=[1~24](0=All),y=[1~100, optional default=1]}
SET OUTx VOL- y	Decrease Output x Volume by y {x=[1~24](0=All),y=[1~100, optional default=1]}
SET OUTx VOL LIMIT y	Set Audio Output x Maximum Volume Limit y {x=[0~24](0=All), y=[0~100]} Remaps 0-100 volume range as 0-y volume levels
SET OUTx VOL LOCK/UNLOCK	Lock / Unlock Output x Volume {x=[0~24](0=ALL)}
SET OUTx CH CONFIG y	Set Output x Mono/Stereo Channel Configuration {x=[0~24](0=ALL),y=[0~3] y:0 = Stereo Audio y:1 = Left Audio Input Channel Routed to Left and Right Audio Output Channels y:2 = Right Audio Input Channel Routed to Left and Right Audio Output Channels y:3 = Left and Right Audio Input Channels Mono-Summed and Routed to Both Left and Right Audio Output Channels
SET OUTx BAL y	Set Output x Balance y {x=[0~24](0=All),y=[-20~20, Left = -20, Right = 20, Balanced = 0]}
SET OUTx BAL+ y	Increase Output x Balance by y {x=[0~24](0=All),y=[1~20, optional default=1]}
SET OUTx BAL- y	Decrease Output x Balance by y {x=[0~24](0=All),y=[1~20, optional default=1]}
SET OUTx PHASE INV y	Set Output x Audio Signal Polarity {x=[0~24](0=All),y=[0~1, optional default=0]} y:0 = Output Audio Signal Polarity Matches Input y:1 = Output Audio Signal Polarity inverted in Reference to Input
SET OUTx EQ y	Set Output x to EQ y {x=[0-24](0=All),y=[0~53](0=OFF)}
SET EQx BANDy Ff Gg Qq	Set EQ Mode x Band Frequency, Gain, and Q values {x=3053, y=15, f=124000, g=-12.012.0, q=0.1~10.0}
SET OUTx DELAY y	Set Output x Audio Signal Delay {x=[0~24](0=All),y=[0~7]} {y:(0=0ms, 1=90ms, 2=180ms, 3=270ms, 4=360ms, 5=450ms, 6=540ms, 7=630ms)}
GET OUTx EN	Get Audio Output Enable/Disable Status {x=[0-24](0=All)}
GET OUTx AS	Get Output x Audio Route {x=[0~24](0=All)}
GET OUTx FOLLOW	Get Audio Output x follow settings{x=[0~24](0=All [excluding self])} Follow Modes= 0: None, 1: Source, 2: Volume, 3: Source + Volume If Follow Mode != 0, then OUTz is the output that will be followed
GET OUTx MUTE	Get Audio Output Mute/Unmute {x=[0-24](0=ALL)}
GET OUTx VOL	Get Output x Volume Level {x=[0~24](0=All)}

GET OUTx VOL LIMIT	Get Audio Output x Maximum Volume Limit {x=[0~24](0=All)}
GET OUTx VOL LOCK	Get Output x Volume Lock Status {x=[0~24](0=ALL)}
GET OUTx CH CONFIG	Get Output x Mono/Stereo Channel Configuration {x=[0~24](0=ALL)
GET OUTx BAL	Get Output x Balance {x=[0~24](0=All),y=[0~40, Left = 0, Right = 40, Balanced = 20]}
GET OUTx PHASE INV	Get Output x Audio Signal Polarity {x=[0~24](0=All)}
GET OUTx EQ	Get Output x EQ {x=[0-24](0=All)}
GET EQx BANDy	Get EQ Mode x Band Frequency, Gain, and Q values {x=305 (0=All)}
GET OUTx DELAY	Get Output x Audio Signal Delay {x=[0~24](0=All),y=[0~7]} {y:(0=0ms, 1=90ms, 2=180ms, 3=270ms, 4=360ms, 5=450ms, 6=540ms, 7=630ms)}
Doorbell Chime Commands	
PLAY CHIME c INx/FILEx DURt VOLy OUTz1.z2.z3z24 d	Playback Chime Configuration c {c=[1~5]} Play Chime {x=[1~24 (IN), 1~512 (FILE)], t=[1~65535] ms, y=[-1~100, y = -1 does not change output volume] zn=[1~24(audio output number)], d=[0~1, 1 = Active on output zn]
PLAY CHIME x EN/DIS	Playback Chime Configuration x EN/DIS {x=[1~5]}
SET CHIME x OUTy1.y2.y3y24 d	Set Chime x Audio Output y d {x=[0~5, 0=ALL]], y=[1~24], d=[0~1, d=audio output switch, 1 = Active on output]}
SET CHIME x DURATION y	Set Chime x Playback Duration y (ms) {x=[0~5, 0=ALL], y=[1~65535]}
SET CHIME x VOL y	Set Chime x Playback Volume y {x=[0~5, 0=ALL], y=[-1~100, y=-1 does not change output volume]}
SET CHIME x SRC INy/FILEy	Set Chime x Audio Source y {x=[0~5, 0=ALL]], y=[1~512 (FILE), 1~24 (IN)}
GET PLAY CHIME	Get Chime that is playing
GET CHIME x OUT	Get Chime x Audio Output Map {x=[0~5, 0=ALL]}
GET CHIME x DURATION	Get Chime x Playback Duration in ms {x=[0~5, 0=ALL]}
GET CHIME x VOL	Get Chime x Playback Volume {x=[0~5, 0=ALL]}
GET CHIME x SRC IN/FILE	Get Chime x Audio Source {x=[0~5, 0=ALL]}
Output Trigger Commands	
SET TRIGGERy EN/DIS	Set Trigger y Enabled/Disabled {y=[0=All,1-4]}
SET TRIGGERy OUTx ON/OFF	Set Trigger y Output x mapping ON/OFF {x=[0-24](0=ALL), y=[0=All,1-4]}

SET TRIGGERy TIMEOUT x	Set Trigger y disable timeout to x (ms) {x=[0-65535](0=Instant), y=[0=All,1-4]}
GET TRIGGERy EN	Get Trigger y Enabled/Disabled {y=[0=All,1-4]}
GET TRIGGERy OUTx	Get Trigger y Output x mapping ON/OFF {x=[0-24](0=ALL), y=[0=All,1-4]}
GET TRIGGERy TIMEOUT	Get Trigger y disable timeout in ms {y=[0=All,1-4]}
Network Setup Command	
SET RIP xxx.xxx.xxx.xxx	Set Route IP Address to xxx.xxx.xxx.xxx
SET HIP xxx.xxx.xxx.xxx	Set Host IP Address to xxx.xxx.xxx.xxx
SET NMK xxx.xxx.xxx.xxx	Set Net Mask to xxx.xxx.xxx.xxx
SET MAC xxx.xxx.xxx.xxx.xxx.xxx	Set Net Mac to xxx:xxx:xxx:xxx:xxx:xxx
SET TIP zzzz	Set TCP/IP Port to zzzz
SET DHCP y	Set DHCP {y=[0~1](0=Dis,1=Enable)}
GET RIP	Get Route IP Address
GET HIP	Get Host IP Address
GET NMK	Get Net Mask
GET TIP	Get TCP/IP Port
GET DHCP	Get DHCP Status
GET MAC	Get MAC Address

TROUBLESHOOTING

- Verify Power -Check that the power supply is properly connected and on an active circuit.
- Verify Connections - Check that all cables are securely connected and properly terminated.
- Verify Current Versions - Check if are any firmware/software/driver updates available for the devices.
- No Sound - Verify the signal being sent is compatible with the connected devices in the signal chain. Ensure the device's volume level is properly adjusted and not set to mute. If a signal is present from the input source, the selected output(s) will have a visible red optical light that can be seen from the TOSLINK port.
- Static, Buzzing, or Humming Noises - Use shielded RCA cabling between the AC-MAX-24 and the connected analog devices to maintain a high level of audio performance. Ground the matrix to the conducting parts (equipment rack, mounting devices, truss systems, electrical switchboards, metal electrical conduits, etc.) This technique ensures all the equipment in an electrical system will use the same reference value for their signals and reduces the possibility of a ground loop, which can result in a shift in video signals and mains frequencies to exhibit a buzzing or humming noise in audio systems.

MAINTENANCE

To ensure reliable operation of this product as well as protecting the safety of any person using or

- handling this device while powered, please observe the following instructions.
- Use the power supplies provided. If an alternate supply is required, check voltage, polarity and that it has sufficient power to supply the device it is connected to.
- Do not operate these products outside the specified temperature and humidity range given in the above specifications.
- Ensure there is adequate ventilation to allow this product to operate efficiently.
- Repair of the equipment should only be carried out by qualified professionals as these products contain sensitive components that may be damaged by any mistreatment.
- Only use this product in a dry environment. Do not allow any liquids or harmful chemicals to come into contact with these products.
- Clean this unit with a soft, dry cloth. Never use alcohol, paint thinner or benzene to clean this unit.

DAMAGE REQUIRING SERVICE

The unit should be serviced by qualified service personnel if:

- The DC power supply cord or AC adapter has been damaged
- Objects or liquids have gotten into the unit
- The unit has been exposed to rain
- The unit does not operate normally or exhibits a marked change in performance
- The unit has been dropped or the housing damaged

SUPPORT

Should you experience any problems while using this product, first, refer to the Troubleshooting section of this manual before contacting Technical Support. When calling, the following information should be provided:

- Product name and model number
- Product serial number
- Details of the issue and any conditions under which the issue is occurring
- Clean this unit with a soft, dry cloth. Never use alcohol, paint thinner or benzene to clean this unit.

WARRANTY

The Basics

AVPro Edge warranties its products that are purchased from all Authorized AVPro Edge Resellers or direct purchases. Products are guaranteed to be free from manufacturing defects and of sound physical and electronic condition.

AVPro Edge has developed a warranty that anyone can get behind. We really wanted to take all the “red tape” out of a warranty and just make is simple. Our 10 YEAR NO BS warranty hinges on 3 elements.

- If you are having trouble, call us. We will attempt to troubleshoot your issue over the phone.
- If it’s broken, we will replace it in advance on our dime and we’ll also cover the return shipping. Repair is an option too, but it’s YOUR call.
- We know you know what you are doing. We will not make you go through unnecessary steps to troubleshoot an extender…

Coverage Details

AVPro Edge will replace or repair (at customer choice) the defective product. If the product is out of stock or on backorder it can either be replaced with a comparable product of equal value/feature set (if available) or repaired.

Your warranty begins at receipt of product (as confirmed by shipping firm tracking). If tracking information is unavailable for any reason, the warranty will commence 30 ARO (After Receipt of Order). The coverage continues for 10 years.

Red Tape

AVPro Edge is not responsible for untraceable purchases or those that were made outside of an authorized channel.

If we conclude that a product or serial number has been tampered with as identified by warranty seal or physical examination the warranty will be void. Additionally, excessive physical damage (beyond normal wear & tear) the warranty may be voided or prorated based on the extent of the damage as examined by an AVPro Edge representative.

Damage caused by “acts of God” are not covered. They can include natural disasters, power surges, storms, earthquakes, tornadoes, sink holes, typhoons, tidal waves, hurricanes, or any other uncontrollable event related to nature.

Damage caused by incorrect installation will not be covered. Incorrect power supply, inadequate cooling, improper cabling, inadequate protection, static discharge are examples of this.

Products installed or sold by a third party to AVPro Edge will be serviced by the Authorized AVPro Edge Reseller. Accessories (IR Cables, RS-232, Power Supplies, etc.) are not included in the warranty. We will make acceptable efforts to source and supply replacements for defective accessories at a discounted rate as needed.

Obtaining an RMA

Dealers, Re-sellers, and Installers can request an RMA from AVPro Edge Tech Support Rep or their Sales Engineer.

You may also email support@avproedge.com or fill out the general contact form at avproedge.com/contact

End users may not request an RMA directly from AVPro Edge and will be referred back to the Dealer, Re-seller, or Installer.

Shipping

For USA (not including Alaska and Hawaii). Shipping is covered on advanced replacements for FedEx Ground (some expressed exceptions may apply). Defective product return shipping is covered by AVPro Edge using an emailed return label. Items must be returned within 30 days of receipt of the replacement product, after 30 days, the customer will be billed. Other return shipping methods will not be covered.

For International (and Alaska and Hawaii) return shipping costs will be the responsibility of the returnee. Once the unit is scanned for return shipping AVPro Edge will ship the new unit for replacement.

Limitation on Liability

The maximum liability of AVPro Global Holdings LLC under this limited warranty shall not exceed the actual purchase price paid for the product. AVPro Global Holdings LLC is not responsible for direct, special, incidental, or consequential damages resulting from any breach of warranty or condition, or under any other legal theory to the maximum extent permitted by law. Taxes, Duties, VAT, and freight forwarding service charges are not covered or paid for by this warranty.

Obsolescence or incompatibility with newly invented technologies (after manufacture of product) is not covered by this warranty.

Obsolescence is defined as:

“Peripherals are rendered obsolete when current technology does not support product repair or re-manufacture. Obsolete products cannot be re-manufactured because advanced technologies supersede original product manufacturer capabilities. Because of performance, price and functionality issues, product redevelopment is not an option.”

Discontinued or out of production items will be credited at fair market value towards a current product of equal or comparable capabilities and cost. Fair market value is determined by AVPro Edge.

Exclusive Remedy

To the maximum extent permitted by law, this limited warranty and the remedies set forth above are exclusive and in lieu of all other warranties, remedies, and conditions, whether oral or written, express or implied. To the maximum extent permitted by law, AVPro Global Holdings LLC specifically disclaims any and all implied warranties, including, without limitation, warranties of merchantability and fitness for a particular purpose. If AVPro Global Holdings LLC cannot lawfully disclaim or exclude implied warranties under applicable law, then all implied warranties covering this product, including warranties of merchantability and fitness for a particular purpose, shall apply to this product as provided under applicable law.

This warranty supersedes all other warranties, remedies, and conditions, whether oral or written, express or implied.