



# CZA-1300 AMPLIFIER

## MANUAL

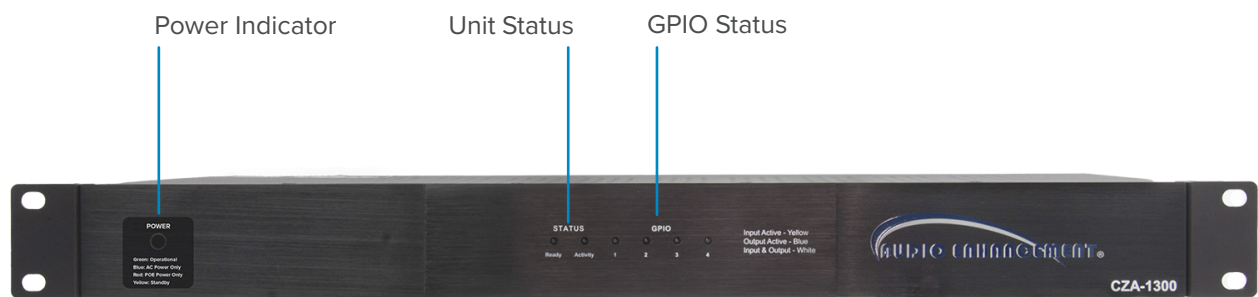
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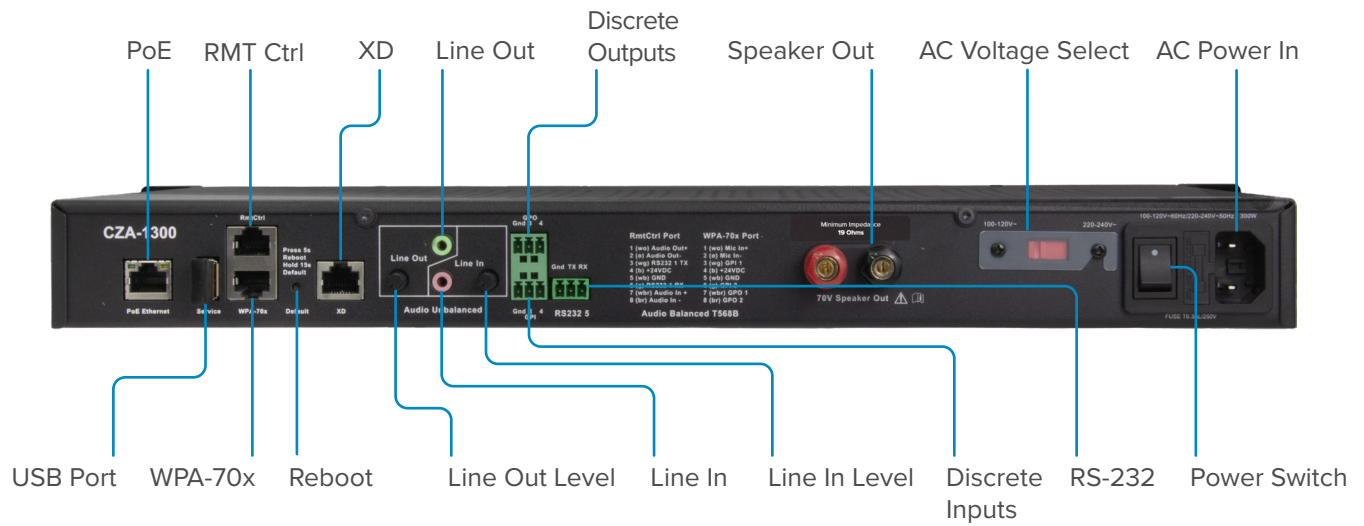
## OVERVIEW

The **CZA-1300 Amplifier** is a fully integrated 70 V amplifier designed to integrate seamlessly with the EPIC (Education Paging & Intercom Communications) System® platform and provide audio in large areas like cafeterias, gymnasiums, and hallways. This is a network connected amplifier which facilitates paging and emergency notifications as part of the EPIC System. It is easy-to-use, easy-to-install, and has a simple user interface. When used in conjunction with an Uninterruptible Power Supply (UPS), paging will remain operational during emergencies. This unit can be installed as part of the SAFE (Signal Alert For Education) System®. It can also be connected to an XD Receiver and used as an intercom for full duplex audio.

# SPECIFICATIONS



Front



Back

## CZA-1300 Amplifier

LED Information	<p>Power</p> <ul style="list-style-type: none"> <li>Green - Powered On</li> <li>Blue - AC Power Only</li> <li>Red - Power over Ethernet (PoE) Power Only</li> <li>Yellow - Standby</li> </ul> <p>GPIO (General Purpose I/O)</p> <ul style="list-style-type: none"> <li>Yellow - Input Active</li> <li>Blue - Output Active</li> <li>White - Input &amp; Output Active</li> </ul> <p>Activity Status</p> <ul style="list-style-type: none"> <li>Off - No Active Event</li> <li>Red - Active Event</li> </ul>
Line Inputs	<p>For PC, DVD audio, MP3, auxiliary mic, or other multimedia sources</p> <ul style="list-style-type: none"> <li>(1) Unbalanced inputs (3.5 mm)</li> <li>(1) Microphone Input</li> <li>(2) Balanced inputs RJ45 connectors</li> </ul> <p>Internal Network Audio</p>
Input Sensitivity	780 mV
Output Power	(3) 24 V RJ45 connectors
Line Outputs	<ul style="list-style-type: none"> <li>(1) Unbalanced (3.5 mm) output</li> <li>(1) Balanced line outputs (RJ45 connectors)</li> </ul>
USB	Control and configuration via software. BLE Dongle for easy setup
Speakers	70 V Speakers
Amplifier Type	92% Efficient Class D
Continuous Power @ 1% THD	300 W
S/N	>89 dB @ 20 Hz - 20 kHz at maximum output
Minimum Impedance Load	19 $\Omega$
Protection Circuits	Thermal and short circuit protected
Control Port	<ul style="list-style-type: none"> <li>(1) RS-232 communication ports to facilitate SAFE System communications or used to control another device such as a projector</li> <li>(1) RMT CTRL Ports: for integration with LCD ITC wall plate control, RJ45</li> <li>(1) WPA Port, RJ45</li> <li>(1) GPO port, 3 pin Phoenix</li> <li>(1) GPI port, 3 pin Phoenix</li> </ul>
Power Supply	<p>100 V – 120 V/220 V – 240 V @ 300 W powers amplifier</p> <p>PoE (PoE 802.3af ) Powers all electronics except for the 70 V Speaker Out Amplifier</p> <p>Both AC power and PoE power must be connected for the unit to operate.</p>
Controls	Power On/Off Switch (Rear Panel)
Temperature/Humidity	<p>Storage: -40 - 158° F (-40 - +70° C)/10-90% non-condensing</p> <p>Operating: -32 - 122° F (0 - +50° C)/10-90%</p>
Enclosure Type	Steel
Ethernet I/F	10/100 Mbps
Protocols	<p>SIP RFC 3261 compatible</p> <p>UDP Directed Broadcast</p> <p>Multi-cast and VoIP enabled</p>
Output Signal Amplitudes	2.0 VPP maximum
Output Level	+2 dBm nominal
Total Harmonic Distortion	THD+N: 1.20%
Weight	8.5 lbs (136 oz)
Dimensions	1.75 (H) x 19 (W) x 10 (D) in (44 x 483 x 254 mm)

# FUNCTIONS

## GENERAL PURPOSE IO

- (4) Discrete Inputs
- (4) Discrete Outputs

## SERIAL COMMUNICATION

- (2) RS-232 Connections

## AUDIO

- (1) Unbalanced Audio In with level adjustment
- (3) Balanced Audio In (Remote Port and WPA Port)
- (1) Unbalanced Audio Out with level adjustment
- (1) Balanced Audio Out (Remote Port)
- (1) Amplified 70 V Speaker Audio Out (Minimum Impedance load 19  $\Omega$ )

## REMOTE POWER

- (3) 24 V Out (Remote port, WPA Port and XD Port)

## POWER

- PoE – Used to drive electronics other than the Amplifier (PoE 802.3af)
- AC Power In – Used to power the Amplifier

# INTERFACES

## REMOTE PORTS (RMTCTRL)

- (1) Port
- Audio Out (Balanced)
- Audio In (Balanced)
- RS-232
- 24 V DC

## WALL PLATE AUDIO (WPA) PORT

- Connects to the WPA
  - Input 1
  - Input 2
  - Output 1
  - Output 2

## IO OUTPUT PORT

- Output 3
- Output 4

## IO INPUT PORT

- Input 3
- Input 4

## XD

- Connects to an XD Receiver

## ETHERNET

- PoE Ethernet

## POWER

- Reset Button
- AC Input Power Select
- AC Power Switch

## VOLUME CONTROL

- Master over the SP and Streaming Volume
- EPIC Volume Port Range 0-100%

## USB PORT (FOR SERVICE ONLY)

## 3.5MM AUDIO

- Line In (Unbalanced)
- Line Out (Unbalanced)

## SPEAKER CONNECTION

- 70 V Speaker Out

## LEDS

### Power LED:

- Green when operational
- Red PoE power only  
(power cord not connected, or physical power switch on rear panel is turned off)
- Blue Amp Power, without PoE+
- Off if no power and no PoE+

### Status LED:

#### Ready

- Red while booting and getting an IP address
- Green when connected to an Ethernet port and operational

#### Activity

- Red while event is active

#### GPIO

- Blue when the output is closed
- Yellow when the input is closed
- White when both input and output are closed
- Off when everything is open

# PROCESS

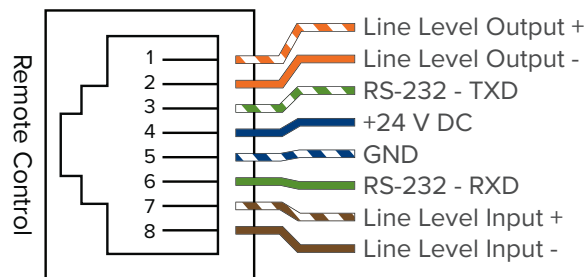
1. Physically install components in the room such as Speakers and/or AV Touch Wall Control.
2. Confirm dongle is connected to USB port.
3. Verify Input power is selected correctly. In the US, set to 100 V – 120 V.
4. Turn the Amplifier on by toggling the power switch.
5. Start EPIC System, update the firmware, and continue the setup using the EPIC System software.

EPIC System setup information can be found at [AudioEnhancement.com/Downloads](https://AudioEnhancement.com/Downloads), or by clicking the following link: [EPIC 2.5 Admin Manual](#)

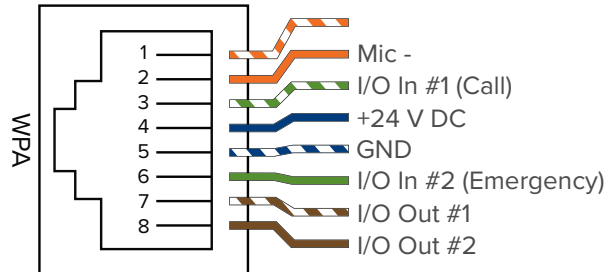


# CONNECTOR DETAILS

## RMTCTRL PORT



## WALL PLATE AUDIO



## GPO – GENERAL PURPOSE OUTPUT

- Pin 1 – GND
- Pin 2 – GPO 3
- Pin 3 – GPO 4

## GPI – GENERAL PURPOSE INPUT

- Pin 1 – GND
- Pin 2 – GPI 3
- Pin 3 – GPI 4

## RS-232

- Pin 1 – GND
- Pin 2 – TX
- Pin 3 – RX

## SPEAKER CONNECTOR

The CZA-1300 features binding posts to make connecting your speaker wire easy and secure. This flexible connector can be used to screw down onto bare wire. Alternatively, the installer can choose to use banana jacks, spade connectors, or pins (optional connection hardware is not provided).

## STAND BY MODE

The CZA-1300 features a standby mode that is controlled from the network electronics. It allows the amplifier to be powered down during periods of non-use but re-activated in advance of any network audio based on a command from the EPIC platform.

### NOTE

Default Standby Mode is Off.

## DEVICE CONNECTOR EXAMPLES



# CONFIGURATION

1. Start EPIC System.
2. Update the firmware.
3. Continue setup using the EPIC System Software.

# SAFETY INSTRUCTIONS

- Carefully read and retain all safety instructions for future reference.
- Adhere to all warnings and follow the operating guidelines provided.
- Do not use the product near water, and clean only with a dry cloth.
- Ensure that ventilation openings are not obstructed.
- Install the unit in accordance with the manufacturer's instructions, away from heat sources or flammable materials.
- Do not modify or bypass the polarized or grounding plug.
- Route the power cord to prevent it from being pinched, crimped, or damaged.
- Place the unit only on lower shelves of carts, stands, or racks rated to support its weight to minimize the risk of tipping and injury.

# TROUBLESHOOTING

## REBOOT

Press and hold the *Reboot* button for 5 seconds.

## FACTORY RESET PROCEDURE

Press and hold until the *Activity Indicator* flashes green (10 seconds) and then release.

## RESCUE MODE

Press and hold until the *Activity Indicator* illuminates red (15 seconds) and then release. Or disconnect PoE power, press and hold the *Reboot* button while applying PoE power.

## SIP NOT CONNECTED

Verify that the SIP settings are correct on the device. Try pushing SIP settings from the *Configure* tab on EPIC System again. Pushing settings from the *Devices List* does not push SIP settings.

## NO AUDIO

If there is no audio going through the speakers (bells, paging, intercom, teacher microphone), check the audio output to see if there is any audio passing through there. This can be done by connecting a pair of wired headphones to the *Audio Out* port of the CZA-1300 and playing audio through the amplifier. If you hear audio through the headphones, it is most likely not a problem with the CZA-1300 and related to the speakers or speaker wiring.

Please check to see that AC Power is applied and that the *AC Power Switch* is activated. There is also a fuse accessible through the *AC Power In* connector that should be checked.

# FCC STATEMENT

## FEDERAL COMMUNICATIONS COMMISSION STATEMENT

This 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.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to protect reasonably against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, 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. Suppose this equipment does cause harmful interference to radio or television reception, as determined by turning the equipment off and on. In that case, the user is encouraged to try to correct the interference by one 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.

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.

## WARNING

Do not expose this product to rain or moisture to reduce the risk of electric shock. It should also not be exposed to dripping or splashing, and avoid placing it near any object filled with water, such as a vase or an aquarium.

## IMPORTANT SYMBOLS

The lightning flash arrowhead triangular symbol alerts the user to the presence of uninsulated dangerous voltage within the product sufficient to constitute a risk of electric shock.



# DISCLAIMER

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