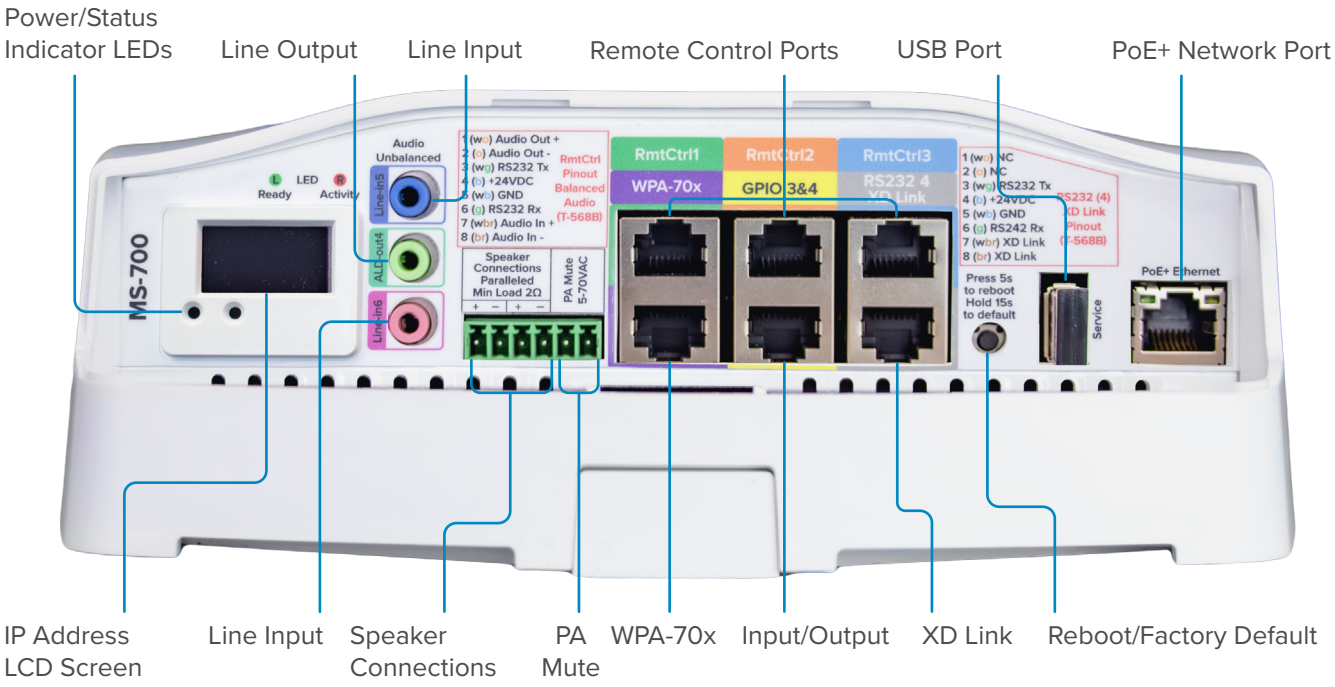
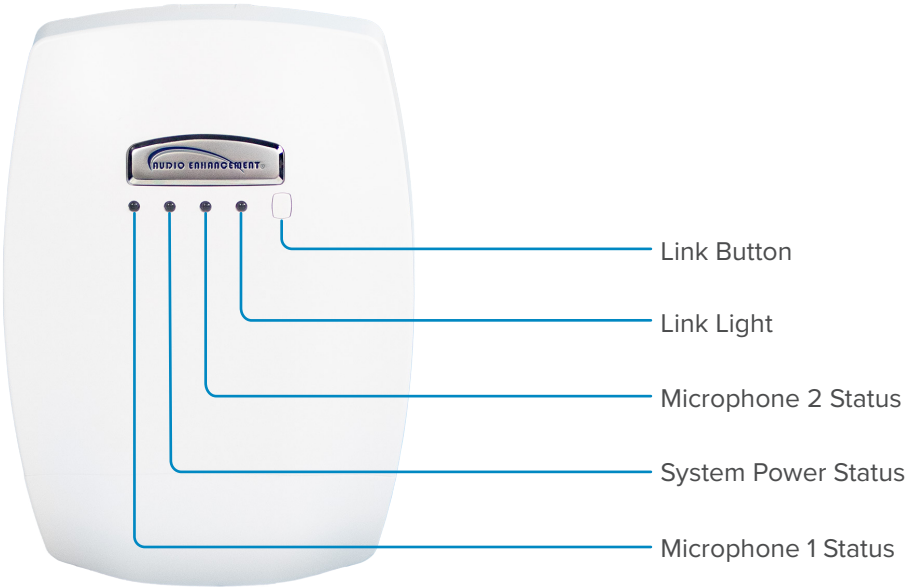
MS-700 OPTIMUM AMPLIFIER

QUICK START GUIDE

AUDIO ENHANCEMENT +
Est. 1978





DESCRIPTION

The **MS-700 Optimum Amplifier** is a fully integrated networked classroom amplifier and wireless microphone receiver. This amplifier has network-based intercom, paging and emergency notifications, and provides full-duplex audio. It is easy-to-use, easy-to-install, and has a simple user interface software. The entire unit utilizes Power over Ethernet (PoE+). Intercom and paging functionalities are built-in. When used in conjunction with an Uninterruptable Power Supply (UPS), during emergencies, paging can still be heard, even when the power goes out. This unit can be installed as part of the SAFE (Signal Alert For Education) System®.

FUNCTIONAL SUMMARY

GENERAL PURPOSE IO

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

SERIAL COMMUNICATION

- (4) RS232 Connections

WALL PLATE ACCESSORY

- (1) Port

AUDIO

- (2) Unbalanced Audio In
- (3) Balanced Audio In
- (1) Unbalanced Audio Out
- (3) Balanced Audio Out
- Amplified Audio Out (min 2Ω load)

REMOTE POWER

- (4) 24V Out Ports

INTERFACES

REMOTE PORTS (RMTCTRL)

- Audio Out (Balanced)
- Audio In (Balanced)
- RS232
- 24VDC
- Also Connects to the ITC2

WALL PLATE AUDIO (WPA) PORT

- Connects to Audio Enhancement Wall Plates

IO PORT (GPIO 3 & 4)

- (2) Input
- (2) Output

SERIAL + XD LINK (RS232 4 XD LINK)

- RS232
- 24VDC
- XD Link

USB PORT (FOR SERVICE ONLY) DISPLAY

- PoE+ Warning
- IP Address
- Firmware Version

LEDS

Front LEDS

- Power - Green when powered on
- Link - Blinking yellow when linking
- Microphone 1 Status - Green when connected to mic
- Microphone 2 Status - Green when connected to mic

Power LED

- Red while booting
- Green when operational

Status LED

- Red while booting and getting an IP address.
- Green blink when operational and there is activity on the ethernet port.

3.5MM AUDIO

- (2) Line In (Unbalanced)
- (1) Line Out (Unbalanced)

SPEAKER CONNECTION X2 (2Ω MIN LOAD)

- Amplified Audio Out (min 2Ω load)

PA MUTE

- Audio is muted when 5-70VAC is present

POE+ ETHERNET

- IEEF 802.3 at required

RESET BUTTON

CONFIGURATION SET UP IN EPIC

Follow the instructions in the EPIC System Admin Manual - Managing Devices.

Click or Scan QR code to access.

XD TEACHER MICROPHONE VOLUME CONTROL

1. Press *SELECT* to choose the desired source to control. An LED will illuminate to indicate the selected source. *OWN* will control the level of the microphone currently in use. *CH3* will control the other microphone if a second microphone has been linked.

2. Press the *Up* or *Down* arrows on the XD Teacher Microphone to adjust the volume accordingly.

XD TEACHER MICROPHONE LINKING

1. With the microphone off, press the *Link* button on the front of the amplifier (Look for the blinking yellow LED).

2. With the microphone off, press and hold *REC* button. Then promptly press and hold *PWR* until microphone is linked.

3. Successful microphone linking will produce a *beep* through the system, and on the front of the amplifier you will see an additional green LED.

XD STUDENT MICROPHONE LINKING

1. With the microphone off, press the *Link* button on the front of the amplifier. (Look for the blinking yellow LED)

2. Press and hold the *PWR LINK* button on the back of the XD Student Microphone.

3. While holding the *PWR LINK* button, use your thumb to slide the *TALK* button up into the on position. Successful linking will produce an audible beep as well as an additional green LED.

LINKING THE MEDIA CHANNEL

1. The microphone cannot be linked to the Media channel unless *MIC 1* and *MIC 2* channels are on.
2. Make sure the microphone needing to be linked, either the Teacher or Student, is turned off.
3. Confirm that both *Channel 1* and *Channel 2* mics are on and connected to the amplifier.
4. Follow XD Teacher or XD Student Microphone Linking section instructions.
5. In around 10 seconds you should hear a beep and the amplifier *LINK* LED will be solid yellow.

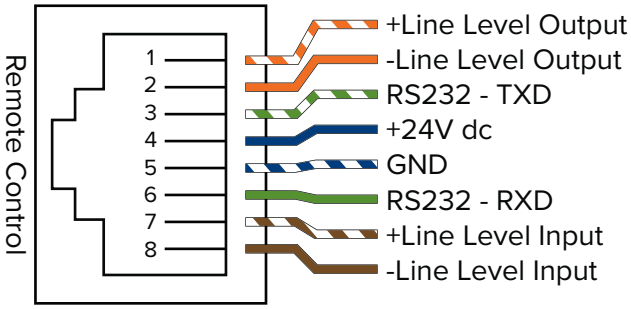
CHARGING YOUR XD MICROPHONE

1. Charge the microphone at the end of each day.
2. Connect the USB-C plug of the charger to the DC input terminal of the microphone. After connecting the microphone to the charger, the charging indicator light will turn red, indicating charging status.
3. When the charge indicator stops blinking, the microphone is fully charged. If the charge indicator begins blinking rapidly, check the connection of the USB-C charging cable.

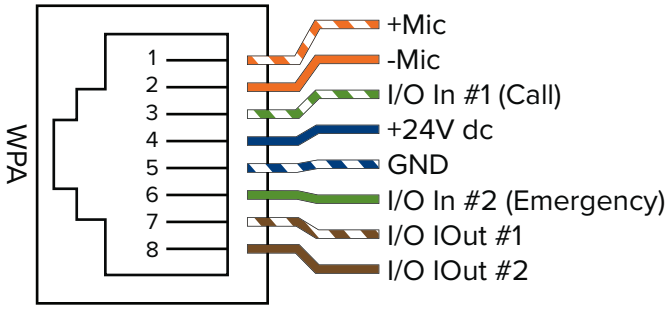
CONNECTOR DETAILS

NOTE
Some pinouts for the MS-700 are different than the MS-600.

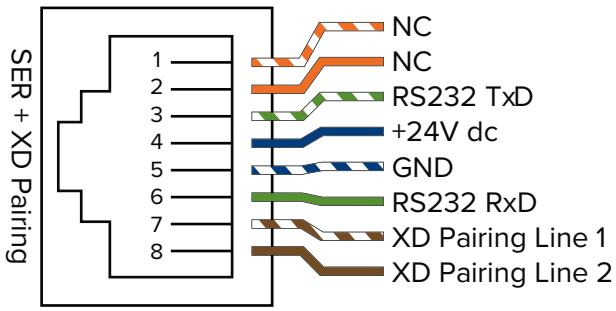
RMTCTRL PORTS



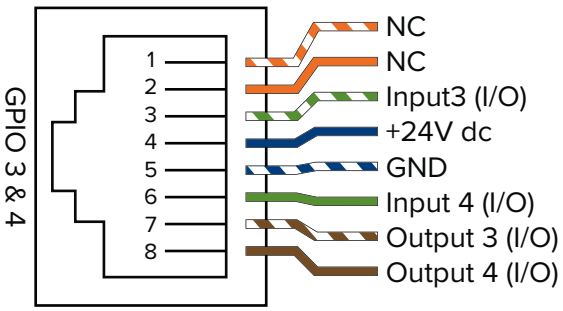
WALL PLATE AUDIO



SER + XD LINK



GPIO 3 & 4



TROUBLESHOOTING

REBOOT BUTTON FUNCTIONALITY

Reboot

Press and hold button (5 seconds).

Factory Reset Procedure

Press and hold for 10 seconds wait for *Status LED* to flash green and release.

REBOOTING ISSUE

If MS-700 is constantly rebooting and has peripherals plugged in, such as an ITC, it might be pulling too much power.

NO AUDIO

If there is no audio going through the speakers (bells, paging, intercom, teacher mic) 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 of the MS-700 and playing audio through the MS-700. If you hear audio through the headphones, it is most likely not a problem with the MS-700 and more related to the speakers or speaker wiring.