AUDIO ENHANCEMENT®

PA Mute
Terminals

Amplifier
Output

Ambient Mic and I/O
Connector

Power/Status
Indicator

NIC
Reset
Button

3.5 mm
Line
Output

24 Volt DC
Power Input

Mini-USB

Amplifier
Reset Button

RS-232 Serial
Ports

Unbalanced
Line Outputs

IP Audio Line
Output

TLD100 IR
Receiver Input

Mono-balanced
Line Input

Stereo-unbalanced
Line Inputs

Ethernet Port
802.3at/af

1.75"

4"

8.75"

The **MS-450** is a networked classroom amplifier and a central component in the Optimum Classroom System. This amplifier has network-based intercom, paging and emergency notification, providing full-duplex audio. It is easy-to-use, easy-to-install, and has a simple user interface software. The emergency speaker is powered over ethernet. Intercom and paging functionalities** are built-in. During emergencies, paging can still be heard, even when the power goes out. This unit can be installed as part of the SAFE (Security Alert For Education) System.

MS-450 Specifications

Line Inputs	For PC, DVD audio, MP3, auxiliary mic, or other multimedia sources • 1 Line balanced/unbalanced input (Euroblock), • 3 Line unbalanced stereo inputs (3.5 mm) • 1 Input connector for IR- Satellite/TLD100 (RJ45) • Internal Network Audio
Line Outputs	1 Unbalanced (3.5 mm) outputs 2 Unbalanced Line Outputs (RJ45 Connectors)
Equalizer	5-Band Equalizer
Mini USB	Control and configuration via software
Minimum Load Impedance	4 Ohms
Amplifier Type	92% Efficient Class D
Continuous Power @ 1% THD	32 Watts (16 Watts (rms) per channel x 2 channels @ 4 ohms), backup amp powered by PoE
S/N	>89 dB @ 20 Hz to 20 kHz at maximum output
Protection Circuits	Thermal and short circuit protected
PA Connector	Connects to public address system and mutes amplifier during announcements Input Voltage: 4.0 Volts RMS to 74 Volts RMS
Control Port	RS-232, 3-pin screw terminal block header, RJ45 remote control port • (2) RS-232 communication ports: (1) to control the MS-450, and (2) to control another classroom device such as a projector • (2) Remote Control Ports: for integration with wall plate controls
External Power Supply	100-240 VAC, 50/60 Hz, 1.5A; 24 VDC, 2.5 Amps (nominal), regulated
Temperature/Humidity	Storage: -40 to 158°F (-40 to +70°C)/ 10-90% non-condensing Operating: -32-122°F (0 to +50°C) / 10-90%
Enclosure Type	Metal
Ethernet I/F	10/100 Mbps
Power Input (Network)	PoE 802.3at or 802.3af for IP interface
Operating Temperature	14° F to 122° F (-10° C to 50° C)
Protocols	SIP RFC 3261 compatible UDP Directed Broadcast Multi-cast and VoIP enabled
Lineout: Output Signal Amplitudes	2.0 VPP maximum
Output Level	+2 dBm nominal
Total Harmonic Distortion	0.5% maximum
Paging Speaker: Audio Output Levels	802.3 AF 8 Watts 802.3 AT 25 Watts
Weight	1.71 lbs (775.64 g)
Dimensions	8.75 (H) x 4 (W) x 1.75 (D) in. (222.25 x 101.6 x 44.45 mm)

SAFE System™
Compatible

The SAFE System (patent pending) is an alert notification system not intended to be a life-saving device or prevent emergencies. Audio Enhancement, our agents, employees, subsidiaries, affiliates and parent companies are exempt from liability for any loss, damage, injury or other consequence arising directly or indirectly from the application of our equipment. In the event of misuse or malfunction of the SAFE System or any of its components, Audio Enhancement, our agents, employees, subsidiaries, affiliates and parent companies are exempt from liability for any loss, damage, injury or other consequence arising directly or indirectly therefrom.

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* All specifications subject to change.
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