



Quotation

#1976

9/15/2021

Bill To:

NEWPORT INDEPENDENT SCHOOL
30 WEST 8TH STREET
NEWPORT KY 41071
United States

Ship To:

Sales Rep : DAVE D HILLMANN
Email: davehillmann@asei.cc
Cell Phone: (859) 512-3966

Project

Classroom Sound Reinforcement - Audio enhancement

This ** Proposal ** is Valid for 30 Days

Qty	Manufacturer	Item	Description	Rate	Extended Cost
** Classroom Audio Reinforcement System and Associated					
127	AUDIO ENHANCEMENT	XD-8004	Optimum System PAL w 4 CS-12s	\$2,585.82	\$328,399.27
28	AUDIO ENHANCEMENT	XD-8004	Optimum System PAL w 4 WS-09s	\$2,451.13	\$68,631.72
155	AUDIO ENHANCEMENT	AC-9001	Enclosed Wall Mount Box KIT	\$127.65	\$19,785.75
155	AUDIO ENHANCEMENT	NE-2016	Network PoE Injector	\$115.06	\$17,833.91
155	ASE	NSH	Miscellaneous Hardware & Cabling	\$69.00	\$10,695.00
1	ASE	NSL	LABOR / INSTALLATION & TESTING	\$79,200.00	\$79,200.00
		Subtotal	** Sound Reinforcement System Unit Price for Quantity of (155) Locations Specified.		\$524,545.65

**** SCOPE OF WORK / PROJECT NOTES:**

**1) UNIT PRICING FOR INSTALLATION
AND TESING OF LISTED EQUIPMET.**

**2) CLASSROOM AUDIO REINFORCEMENT
SYSTEM INCLUDES INSTALLATION AND
TESTING OF (1) COMPLETE SYSTEMS
WITH (2) MICROPHONES AND (4)
SPEAERKS. SEE ATTACHED PRODUCT
DATA FOR COMPLETE DETAILS.**

**** INCLUDES A ONE YEAR WARRANTY
ON ALL LABOR AND EQUIPMENT**

**** Assuems project is TAX Exempt.**

Subtotal \$524,545.65

Tax Total (6%) \$0.00

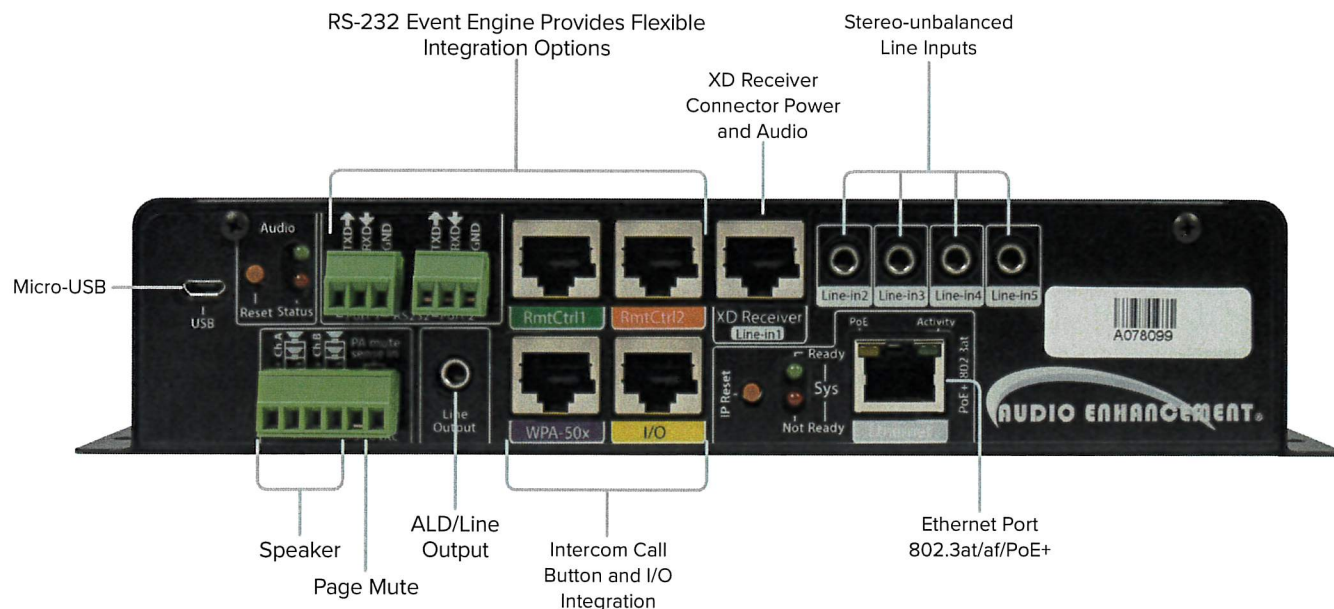
Total \$524,545.65

Signature: _____

Date: _____



MS-500 Networked Amplifier Specifications*



The **MS-500** 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 entire unit is Powered over Ethernet (PoE). 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 (Signal Alert For Education) System™.

The MS-500 features the following key benefits:

- PoE Powered!
- Full Duplex SIP Communications
- EPIC Integration
- SAFE System Interface
- Flexible Integration with other building systems (access control, strobes, etc.)



MS-500 Specifications*

Line Inputs	For PC, DVD audio, MP3, auxiliary mic, or other multimedia sources <ul style="list-style-type: none"> • 4 Line unbalanced stereo inputs (3.5 mm) • 1 Input connector for XD Receiver • Internal Network Audio
Line Outputs	1 Unbalanced (3.5 mm) output 2 Unbalanced line outputs (RJ45 connectors)
Equalizer	5-Band Equalizer
Mini USB	Control and configuration via software
Minimum Load Impedance	4 Ohms on each pair of terminals (2 Ohm load overall is nominal)
Amplifier Type	92% Efficient Class D
Continuous Power @ 1% THD	30 Watts 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 <ul style="list-style-type: none"> • (2) RS-232 communication ports: (1) for XD Receiver, and (1) to control another classroom device such as a projector • (2) Remote Control Ports: for integration with LCD wall plate controls • XD Receiver, power out and audio input • Intercom call, emergency alert, room microphone wall plate port (WPA-50x) • Input/output (I/O) aux port for sense, strobe, etc.
Power Supply	PoE + 802.3af/at‡
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 802.3af/at‡
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
Weight	1.3 lbs (589.67 g)
Dimensions	1.81 (H) x 9.19 (W) x 3.56 (D) in. (45.97 x 233.43 x 90.42 mm)

SAFE System.
Signal Alert For Education

Compatible

SAFE (Signal Alert For Education) 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.

* All specifications subject to change.

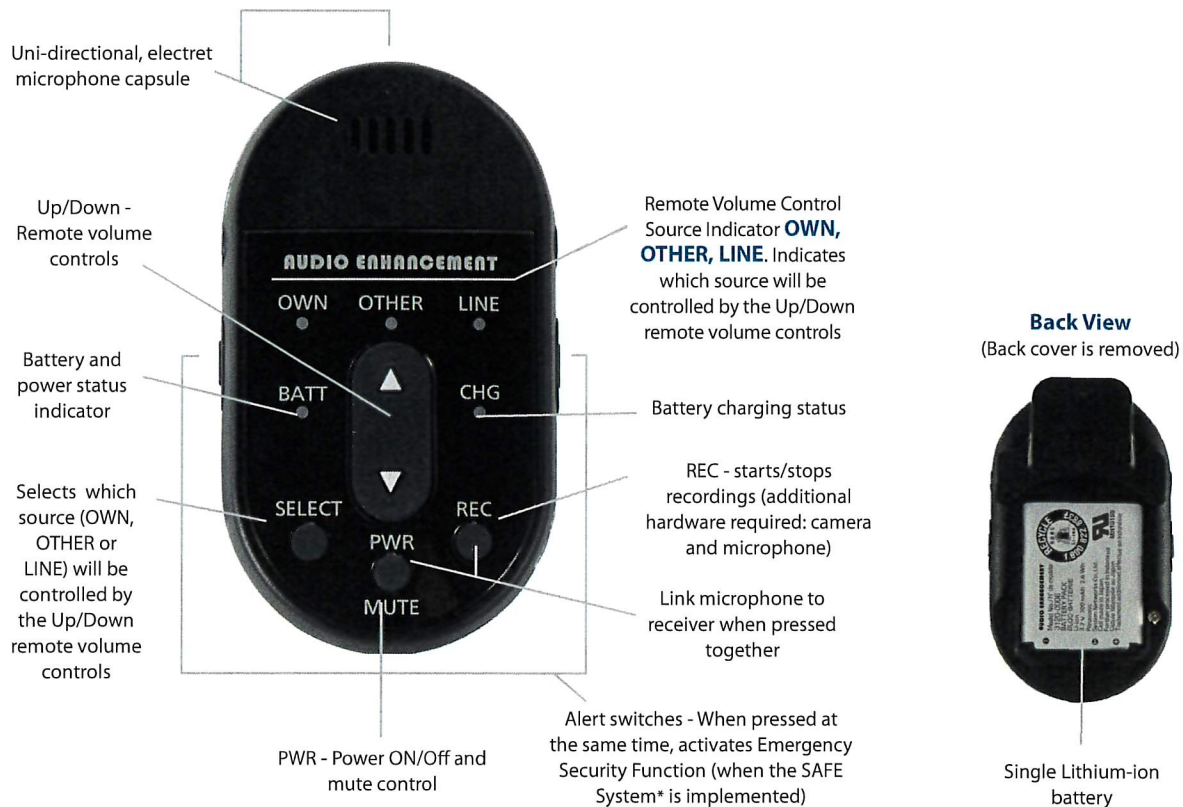
† Dependent on PoE switch.

**Third party SIP License required.





XD Teacher Microphone Specifications



Right Side View



Left Side View



The **XD Teacher Microphone** is the perfect teacher option for reaching every student in large spaces, classrooms with windows, libraries, and gymnasiums. Teachers get the same great audio quality you've come to expect from Audio Enhancement, Inc. in more teaching spaces than ever before!



XD Teacher Microphone Specifications

Microphone Controls

"PWR", "MUTE"- Power/Mute: On/Off & Mute

"SELECT"- Select: Own - Other - Line input for remote control

Remote volume buttons (up/down)

Alert Switches:

- Emergency Security Function (SAFE System)– Press and hold both side buttons for 2 seconds to activate

System Frequency	XD Technology 1.9 GHz
Coverage	Adjustable for optimal coverage from small classrooms to cafes, gyms and other large spaces
Microphone type	Unidirectional electret condenser microphone
Auxiliary Input Level	Line Level 3.5 mini jack (plug-in power compatible)
Auxiliary Input	Line Level 3.5 stereo mini jack (monaural mix)
Battery Type	Lithium-Ion Battery (rechargeable)
Talk Time	8 - 10 Hours
Charge Time	~4 Hours (5V/500mA)
Charging Method	Micro USB charger (supplied)
Temperature Range	41°F - 95°F (5°C ~ +35°C). Maximum Temperature 95°F
Humidity Range	~90%
Weight & Dimensions with Batteries	1.8 oz (50 g) 3.31 (H) x 1.89 (W) x 0.63 (D) in. (84 H x 48 W x 16 D mm)

*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.

*Sold only in the USA and Canada



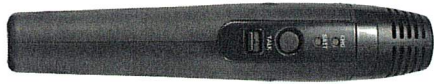
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XD Handheld Microphone Specifications




The **XD Handheld Microphone** engages students in class discussion and make their voices heard for all to hear! Students that use the handheld microphone speak more confidently and thoughtfully. XD patented technologies now allow Handhelds to be taken into rooms that are larger—e.g. gyms, band rooms, cafeterias—contain open windows, are open plan classrooms and have objects often come between the microphone and receiver.



Microphone Specifications

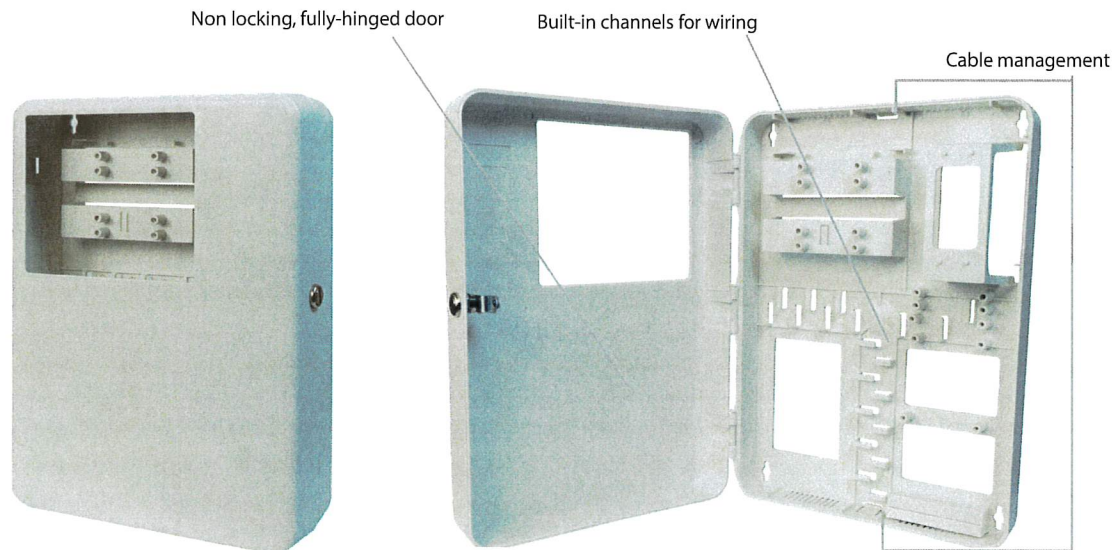
System Frequency	XD Technology 1.9 GHz
Microphone Controls	"PWR Link" & "TALK (button)" - Link to receiver "TALK" (button) - press to temporarily unmute microphone "TALK" (switch) - switch up/down to unmute/mute microphone
Coverage	Adjustable for optimal coverage from small classrooms to cafes, gyms and other large spaces
Microphone type	Unidirectional electret condenser microphone
Auxiliary Input	Line level stereo mini jack (monaural mix)
Battery Type	Lithium-Ion (Rechargeable)
Talk Time	8 - 10 Hours
Charge Time	~4 Hours
Charging Method	Micro USB charger (supplied)
Temperature Range	41 °F - 95 °F (5°C ~ +35°C)
Humidity Range	~90%
Weight & Dimensions with Batteries	4.8 oz (136 g) 8 1/2 (H) x 13/4 (W) x 1 9/16 (D) in. (217 H x 44 W x 40 D mm)



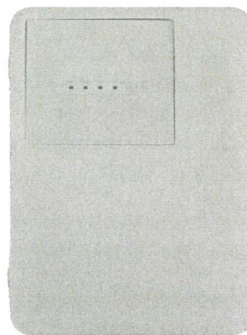
 Sold only in the USA



Classroom Wall Box Specifications



Non-metallic enclosure condenses and protects your Audio Enhancement classroom equipment. This enclosure is built to house all of the necessities for an amplified classroom including: amplifier, receiver, wall plate, power supply, AVConnect (HDBaseT™), and wiring, making the Classroom Wall Box a quick and easy installation. The box can be mounted directly over the cutout for speaker or sensor wire, a single gang outlet or a power strip. Cabling can be neatly concealed using the integral wire management tie down points. Cable raceway or conduit can be conveniently terminated. The Classroom Wall Box includes mounting screws for Audio Enhancement equipment.



Classroom Wall Box assembled

Classroom Wall Box

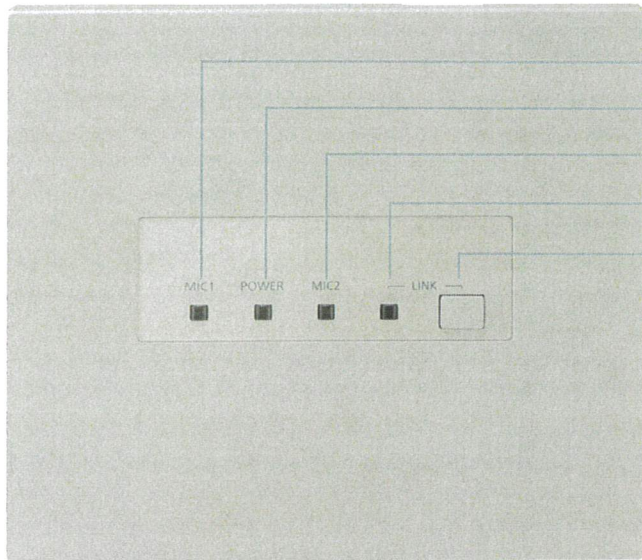
Material	ABS Plastic - White
Weight	2.85 lbs (1.29 kg)
Dimensions	16.25 (H) x 11.75 (W) x 3.5 (D) in. (412.75 x 298.45 x 88.9 mm)
Regulatory	Complies with ADA standards 307.2 Protrusion Limits

Optional Upgrade

- Locking door latch



XD Receiver Specifications



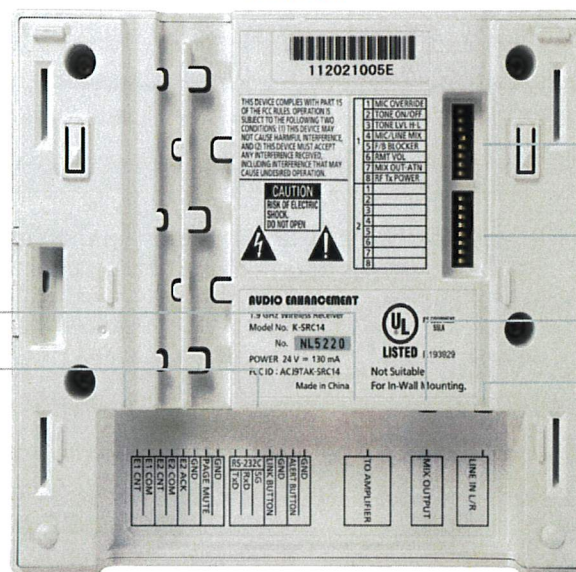
- Microphone 1 audio link
- Power status
- Microphone 2 audio link
- Link status
- Link button. Puts receiver in pairing mode

Right Side View



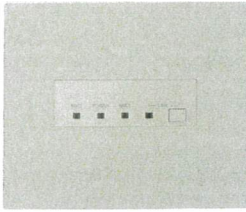
Screw Cover

Back View



- Amplifier interface connector
- Control terminals
- DIP switches (receiver options)
- DIP switches (access point registration)
- Mix out (unbalanced) connector
- Audio input (line level summed mono)

The **XD Receiver** is the control center for the XD classroom microphones. This device receives audio signals and translates them into crystal-clear instruction through cutting-edge Audio Enhancement speakers. This receiver does not permit unpaired microphone audio to bleed into its speaker system.



XD Receiver Specifications

System Frequency	XD Technology 1.9 GHz
Coverage	Adjustable for optimal coverage from small classrooms to cafes, gyms and other large spaces
Microphone Type	Unidirectional electret condenser microphone
Auxiliary Input	Line level 3.5 stereo mini jack (monaural mix)
Power Requirement	24 VDC @ 130 mA
Temperature Range	32 °F - 104 °F (0°C - 40°C)
Audio	
General Signal to Noise Ratio	85 dB or more (Receiver to Mix/MIC output) By auto level control function in Microphone
Line In	Line level 3.5 mm stereo mini jack
MIC1 / MIC2 (Microphone Output)	-5 dBV Balanced, Adaptive impedance 10 kΩ or more, ϕ3.5 mm (ø1/8 inches) stereo mini jack (Tip: Hot, Ring: Cold, Sleeve: GND)
Mix Out Line Level	RJ45 line level output, line level 3.5 mm stereo output
Audio Out (Mix Out)	Line level 3.5 mm output mini jack (Tip, Ring: Hot, Sleeve: GND)
Audio control	Feedback blocker
Control Terminal	
REC/E1	Output terminal
Alert/E2	Output terminal
Remote Link Button	
Remote Alert/E2 Button	
RS-232C	TxD, Rx D, Gnd, 9600 Baud
Interface, Other, and Exterior	
Audio/Power Connection	RJ-45, audio/power
Remote control via Microphone and RS-232	Audio controls Mic 1, Mic 2, Line Input levels REC/E1 REC/E2
Accessories	Ceiling tile bridge available Ceiling/wall mount bracket included
Finish	ABS resin white color
Weight & Dimensions	11.52 oz (325 g) 6 3/16 (H) x 7 3/16 (W) x 1 3/8 (D) in. (157 H x 183 W x 35 D mm)

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Ceiling Speaker Specifications

Angled View

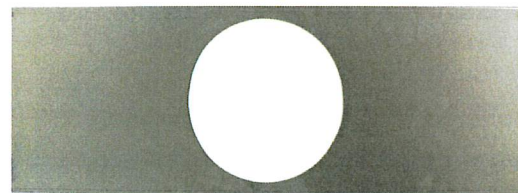


Side View

Spring Loaded
Mounting Tabs

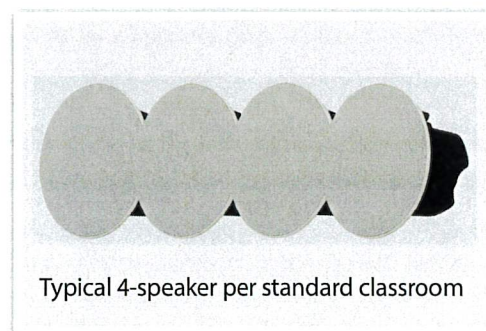


Tile Bridge



Included with each CS-12 speaker.

The **Celing Speaker** (CS-12) has a tuned ported enclosure that provides superior bass reponse while maintaining efficiency. Speaker grill comes pre-installed from factory. Spring-loaded mounting tabs make for easy and secure installation. Metal speaker back meets UL 2043 criteria for plenum installation. All metal, spring-loaded terminals provide easy and convenient attachment of speaker wires.



Typical 4-speaker per standard classroom



Speaker Specifications

Frequency Response	70 Hz to 15 kHz (-10dB) 100 Hz to 14 kHz +/- 2 dB
Power Handling	50 W continuous pink noise
Sensitivity	88 dB 1 Watt / 1 meter
Impedance	8 Ohms nominal
Type	Vented enclosure
Mounting	Spring-loaded mounting tabs
UL 2043	Speaker back can meets UL 2043 criteria for plenum installation
Weight	3.0 lbs. (1.36 kg)
Dimensions	Depth 5.8 in. (147.3 mm) Grill Diameter 8.5 in. (216.0 mm) Mounting hole 7.0 in. (178.0 mm)



Back can is RoHS and UL compliant.





FS-21 2x2 Flat Panel Speaker Specifications

Angled View



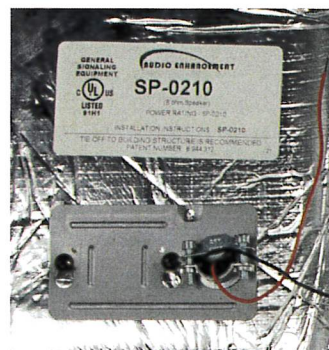
Speaker Grill

Back View



Tie-Off Tabs

Wiring Access



The **FS-21 2x2 Flat Panel Speaker** is a custom, fully assembled speaker. Enjoy crystal-clear audio in schools and district buildings. No need to assemble or cut tiles in the field—just lay in the ceiling tile grid, and secure tie-off tabs for additional security. Meets UL2043 criteria for plenum installation.



Speaker Specifications



Frequency Response	70 Hz - 15 kHz (-10 dB) 100 Hz - 14 kHz +/-2 dB)
Power Handling	50 W continuous pink noise
Sensitivity	88 dB (1W/1M)
Impedance	8 Ohm nominal
Type	Vented Enclosure
Mounting	Lay in, four tie-off tabs for additional mounting integrity
Plenum Rated Back Can	Speaker back can meets UL2043 criteria for plenum installation
Speaker Wire Terminals	Speaker wires
Weight	5.8 lbs. (2.64 kg)
Dimensions	Height 24 in. (609.6 mm) Width 24 in. (609.6 mm) Depth 3.75 in. (95.25 mm)



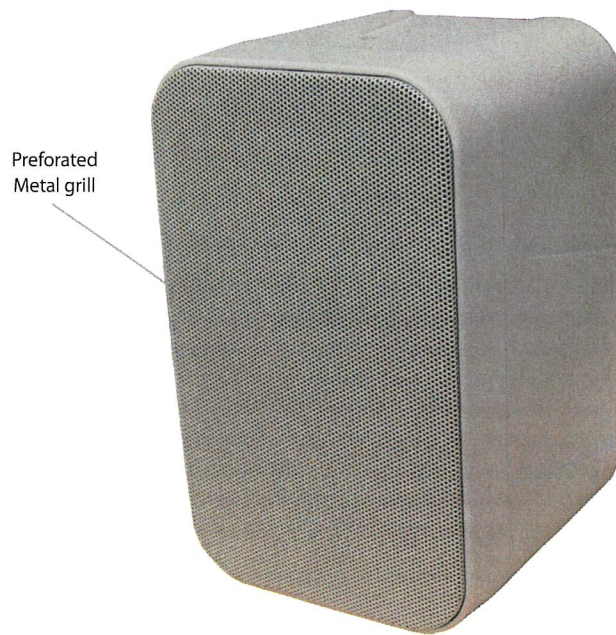
Back can is RoHS and UL compliant.





Wall Speaker Specifications

Angled View



Preforated
Metal grill

Woofer



3.50" (89 mm) mica-filled
compression-molded polymer
cone woofer with rubber surround.

Mounting Tab



Allows up
to 180° of
rotation

The **Wall Speaker** (WS-09) provides quality sound with basic form and function. Made to fit ideally on classroom walls or can be attached to interactive whiteboards. Simple to use with swivel action.



Speaker Specifications

Frequency Response	80 Hz to 20 kHz +/-2dB
Power Handling	50 W continuous pink noise
Sensitivity	88 dB 1 Watt/1 meter
Impedance	8 Ohms nominal
Type	2-Way system with vented enclosure
Weight	4.0 lbs. (1.8 kg)
Dimensions	7.25 (H) x 4.56 (W) x 4.68 (D) in. (184.5 x 116.5 118.8 mm)



Audio Enhancement products are RoHS and UL compliant.

