FEDERAL SIGNAL
Safety and Security Systems

AM302X

Explosion-Proof Speaker

2562143 Rev A1 1123

Limited Warranty: This product's limited warranty can be found at www.fedsig.com/SSG-Warranty.

SAFETY MESSAGES TO INSTALLERS AND USERS ⚠:

It is important to follow all instructions shipped with this product. This beacon is to be installed by a trained electrician who is thoroughly familiar with and will follow all applicable national and local codes in the country of use.

- Read and understand all instructions before installing or operating this equipment.
- This unit must be installed by a qualified electrician in accordance with all National and local Electrical and Fire Codes, under the direction of the authority having jurisdiction.
- Do not connect this unit to the system when circuits are energized.
- All effective warning speakers produce loud sounds, which may cause, in certain situations, permanent hearing loss. The device should be installed far enough away from potential listeners to limit their exposure while still maintaining its effectiveness. The OSHA Code of Federal Regulations 1910.95 Noise Standard provides guidelines which may be used regarding permissible noise exposure levels.
- After installation, test the sound system to ensure proper operation.
- Any maintenance to this unit MUST be performed by a trained electrician in accordance with NEC guidelines and local codes.
- **WARNING: EXPLOSION-PROOF — Effectiveness of explosion-proof enclosure must be maintained. Use caution to avoid damaging machined surfaces.**
- **WARNING: EXPLOSION HAZARD — Substitution of components may impair suitability for Class I, Division 2, and Class I, Zone 2.**
- Even if your warning system is operating properly, it may not be completely effective. People may not hear or heed your warning signal. You must recognize this fact and ensure that your warning signal achieves its intended effect through proper test/training sequences within your specific application(s).
- Never alter this unit in any manner. Safety in hazardous locations may be jeopardized if additional openings or alterations are made to this device.
- The nameplates, which contain cautionary or other information of importance to maintenance personnel, should not be obscured if the device's exterior is painted.
- Show these instructions to your Safety Engineer and then file them in a safe place and refer to them when maintaining and/or reinstalling the unit.
- After installation and completion of the initial system test, a program of periodic testing of this device must be established. Refer to NFPA 72G, local Fire Codes and the authority having jurisdiction for this information.
- Periodic checks should be made to ensure that effectiveness of this device has not been reduced because the speaker has become clogged with a foreign substance or because objects have been placed in front of the speaker.
- Consult the authority having jurisdiction in your area regarding the proper use and installation of this product.

Failure to follow all safety precautions and instructions may result in property damage, serious injury, or death to you or others.

The AudioMaster Model AM302X is a 25 V_{RMS} and 70 V_{RMS}, indoor/outdoor rated, selectable power output (8, 15, or 30 watts), hazardous location loudspeaker for use with general signaling systems such as Federal Signal's SelecTone® system. This model is suitable for use in areas with high ambient noise levels. It is designed to reproduce electronically generated warning tones, which command rapid recognition and full -ange voice communication. An adjustable mounting bracket is provided to allow positioning for the desired sound coverage.

Table 1 Specifications

Operating Voltage	25 V_{RMS} or 70 V_{RMS}
Power Input (selectable)	8 W, 15 W, and 30 W
Maximum Supervisory Voltage	50 Vdc
Weight (approx.)	17.1 lb (7.8 kg)
Size (L x H x W)	19.5 x 18.8 x 16.7 inches 496 x 478 x 425 mm
Construction	Aluminum enclosure and adjustable steel mounting bracket with a powder coat finish
Frequency Response	Voice: 800 - 3150Hz Tone: 400 - 4000Hz
Approval Agency Listings	Reference product nameplate

Audibility information is shown in Table 1.

Table 2 Sound Level

Power Tap	UL Sound Level at 10' (3 m) dB(A)		UL Sound Level at 10' (3 m) dB(A) on axis	
	25 V_{RMS}	70 V_{RMS}	25 V_{RMS}	70 V_{RMS}
8 watt	97.1	97	106	106
15 watt	100.8	100.8	110	110
30 watt	103.4	103.4	114	114

Unpacking the Device – After unpacking the device, examine it for damage and verify the parts. If a part is missing or damaged, do not attempt to install the device. Contact Federal Signal Customer Support.

Installation

The speaker can be mounted on any relatively flat surface capable of supporting the speaker's weight. Conduit connections can be made to the 1/2" NPT threaded openings at the bottom of the housing. See Figure 2.

⚠ WARNING

OBSTRUCTION HAZARD: Property damage, serious injury, or death could occur if an object or an accumulation of water, snow, dust, etc. resides in the speaker projector, severely reducing or preventing operation of this device. Mount the unit so the speaker projector is pointed horizontally or slightly downward.

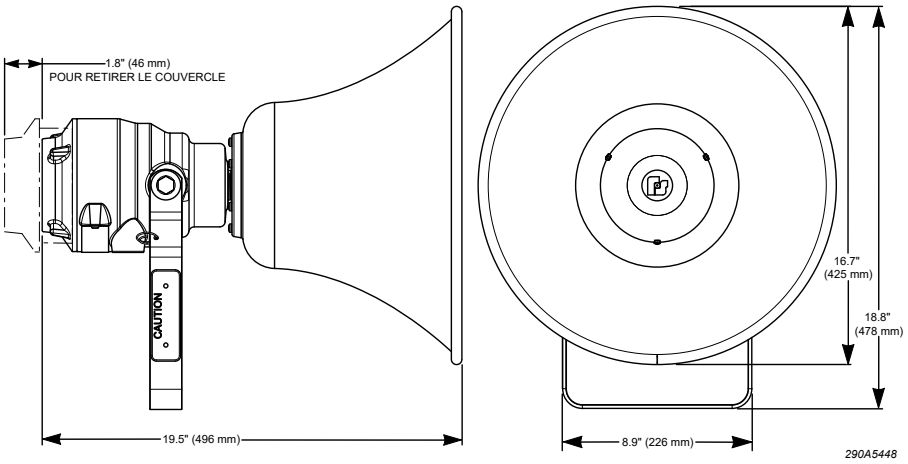
To install the speaker:

1. Remove the two 1/2-13 hex head bolts, flat washers, and lockwashers that secure the mounting bracket to the unit. Disconnect the lanyard from the mounting bracket at the cotter ring.
2. Select the mounting location.
3. Using the mounting bracket as a template, scribe drill position marks on the mounting surface. See Figure 1 for mounting hole locations and dimensions.

NOTICE

DRILLING PRECAUTION: Before drilling holes in any surface, ensure that both sides of surface are clear of anything that could be damaged.

Figure 1 Mounting Hole Locations



4. Drill holes at the previously scribed drill position marks to accommodate 1/2" diameter screws.
5. Secure the bracket to the mounting surface with 1/2" diameter screws appropriate for the type of mounting surface material.

⚠ WARNING

MAINTAIN SEALING SURFACE: Property damage, serious injury, or death could occur if the machined sealing surfaces are damaged on this product. To maintain the effectiveness of the explosion-proof enclosure, be careful to avoid damaging the machined sealing surfaces of cover and housing.

6. Reattach the unit to its mounting bracket with the two 1/2-13 hex head bolts, flat washers, and lockwashers that had been previously removed. Position the speaker so as to obtain the desired sound coverage and then tighten these bolts securely.
7. Reattach the lanyard to the cotter ring and mounting bracket. Verify that it is securely attached to both the cover and the mounting bracket. Loosen and remove the threaded cover by turning it counterclockwise. Allow the cover to hang by the attached lanyard.
8. Route the wires through the 1/2" NPT threaded openings into the housing in accordance with national and local electrical and fire codes. Wire size depends on the operating current and the distance from the power source.
9. Before reinstalling the housing cover, see the Electrical Connections section below and make the necessary connections.

Electrical Connections

⚠ DANGER

SHOCK HAZARD: To avoid electrical shock, do not connect the wires when circuits are energized.

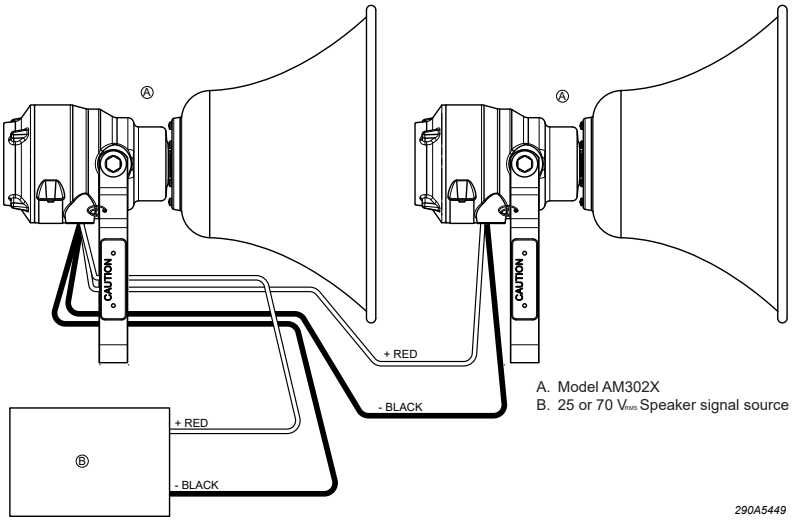
NOTE: Audio wires should be sized properly by a licensed installation electrician for your service application. This cable requires a twisted shielded pair with an 18 AWG minimum and should produce no more than 15% signal line loss over the length of the cable run.

National Electrical Code, as well as local codes, must be followed during installation of these models. All electrical wiring must be routed through conduit and fittings approved for explosion-proof installations.

To wire the speaker:

1. Connect the audio common leads (-) to the speaker's common terminal (marked COM) and the audio positive (+) leads to the appropriate operating voltage. See Figures 2 and 3.

Figure 2 Wiring

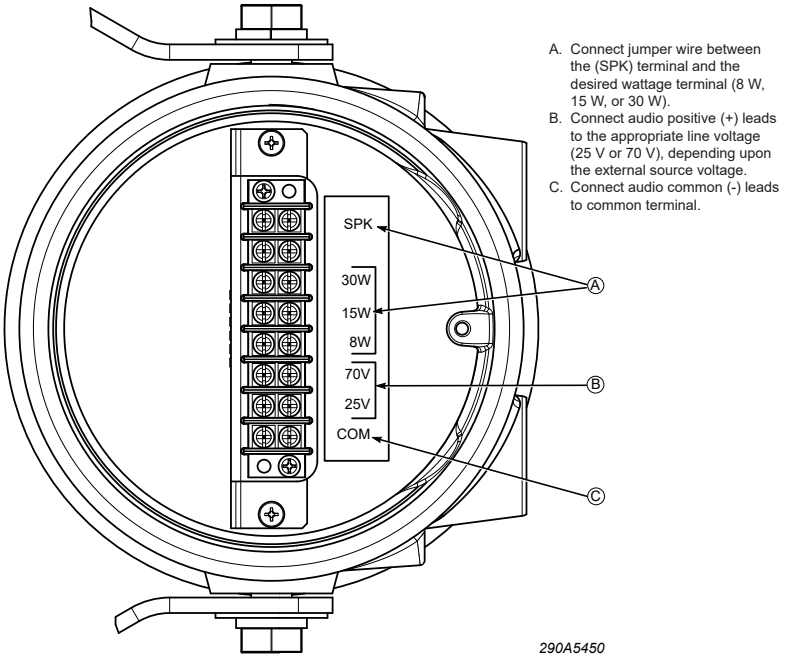


⚠ WARNING

An uninsulated section of a single conductor must NOT be looped around a terminal and used as two separate connections. NFPA 72 requires that the wire be severed to provide electrical supervision of the connection.

2. Using the supplied jumper wire, connect one end of the jumper wire to the terminal marked with the desired wattage terminal. See Figure 3. Connect the other end to the terminal marked "SPK."

Figure 3 Wire Connections



3. Carefully reinstall the housing cover and tighten it until the cover flange makes contact with the housing. Tighten the set screw on the cover to secure the cover. Verify that the mounting bolts have been securely tightened.

⚠ WARNING

EXPLOSION HAZARD: Property damage, serious injury, or death could occur if the housing is not closed properly. To reduce the possibility of explosion, the housing cover must be kept tight while the circuits are energized.

Testing/Operation

⚠ WARNING

SOUND HAZARD: All effective sirens and horns produce loud sounds (120 dB) that may cause permanent hearing loss. Always minimize your exposure to siren sound and wear hearing protection. Do not sound the siren indoors or in enclosed areas where you and others will be exposed to the sound.

1. After installation is complete, test the system to verify that each speaker operates satisfactorily. If the unit is too loud for its location, a lower wattage tap may be selected. Carefully remove the housing cover and move the positive (+) lead to a lower wattage tap. See Figure 3. Reinstall the housing cover and retest.

⚠ WARNING

EXPLOSION HAZARD: Property damage, serious injury, or death could occur if the housing is not closed properly. To reduce the possibility of explosion, the housing cover must be kept tight while the circuits are energized.

2. After completion of the initial system test, establish a program for periodic testing of this device. Refer to NFPA 72G, local Fire Codes and the authority having jurisdiction for this information.

3. Provide a copy of these instructions for the Safety Engineer, system operator(s), and maintenance personnel.

Servicing

⚠ WARNING

WARNING: REPAIR/SERVICING — Unauthorized repair/servicing of the unit may result in degradation of performance and/or property damage, serious injury, or death to you or others. If a malfunctioning unit is encountered, do not attempt any field repair/retrofit of parts.

Maintenance and Service

Technical Assistance: Contact our Technical Support Team at +1 708-587-3587 or signalsupport@fedsig.com.

Repair Service: A return authorization is required. Contact your Authorized Distributor or Federal Signal Customer Support. Defective products under warranty will be repaired or replaced at Federal Signal's discretion.

Product Returns: Returns require authorization from Federal Signal. Contact your Authorized Distributor for more information on our return policy or to request a return.

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Additional translations available at signaling.fedsig.com
Traducciones adicionales disponibles en signaling.fedsig.com

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