



FEDERAL SIGNAL
Safety and Security Systems

Model 450EWBX-024 **Electronic Horn**

For Use in Hazardous Locations



Installation and Maintenance Instructions

25500214
Rev. A0 0815
Printed in U.S.A.



Warranty – Seller warrants all goods for five years on parts and 2-1/2 years on labor, under the following conditions and exceptions: Seller warrants that all goods of Seller's manufacture will conform to any descriptions thereof for specifications which are expressly made a part of this sales contract and at the time of sale by Seller such goods shall be commercially free from defects in material or workmanship. Seller reserves the right at the Seller's discretion to "Repair and Return" or "Replace" any item deemed defective during the warranty period. This warranty does not cover travel expenses, the cost of specialized equipment for gaining access to the product, or labor charges for removal and reinstallation of the product. This warranty shall be ineffective and shall not apply to goods that have been subjected to misuse, neglect, accident, damage, improper maintenance, or to goods altered or repaired by anyone other than Seller or its authorized representative, or if five years have elapsed from the date of shipment of the goods by Seller with the following exceptions: lamps and strobe tubes are not covered under this warranty. Outdoor warning sirens and controllers manufactured by Federal Warning Systems are warranted for two years on parts and one year on labor. No agent, employee, representative or distributor of Seller has any authority to bind the Seller to any representation, affirmation, or warranty concerning the goods and any such representation, affirmation or warranty shall not be deemed to have become a part of the basics of the sales contract and shall be unenforceable. THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES OR MERCHANTABILITY, FITNESS FOR PURPOSE AND OF ANY OTHER TYPE, WHETHER EXPRESS OR IMPLIED. These warranties shall not apply unless Seller shall be given reasonable opportunity to investigate all claims for allegedly defective goods. Upon Seller's instruction a sample only of allegedly defective goods shall be returned to Seller for its inspection and approval. The basis of all claims for alleged defects in the goods not discoverable upon reasonable inspection thereof pursuant to paragraph 8 hereof must be fully explained in writing and received by Seller within thirty days after Buyer learns of the defect or such claim shall be deemed waived.



FEDERAL SIGNAL

Safety and Security Systems / **Industrial**

Industrial Systems

2645 Federal Signal Drive • University Park, IL 60484-3167

Tel: 708-534-4756 • 877-289-3246 • Fax: 708-534-4852

Email: elp@federalsignal.com • www.federalsignal-indust.com

Contents

| | |
|--|----|
| Safety Message to Installers and Users | 5 |
| Unpacking the Horn | 7 |
| An Overview of the Model 450EWBX-024..... | 7 |
| Wiring the Horn..... | 8 |
| Mounting the Horn..... | 9 |
| Getting Repair Service or Technical Assistance | 10 |
| Returning the Product for Credit | 10 |

Tables

| | |
|-----------------------------------|---|
| Table 1 Horn specifications | 7 |
|-----------------------------------|---|

Figures

| | |
|-----------------------------------|---|
| Figure 1 Wiring connections | 9 |
|-----------------------------------|---|

| | |
|----------------------------------|----|
| Figure 2 Horn with backbox | 10 |
|----------------------------------|----|

PLEASE SEE UPDATED DOCUMENT FOR REFERENCE ONLY

© 2015 Federal Signal Corporation. All rights reserved.

by Gross Automation | +1 (262) 252-1600 | sales@grossauto.com

Safety Message to Installers and Users

⚠ WARNING

People's lives depend on your safe installation of our products. It is important to follow all instructions shipped with this product. This device is to be installed by a trained electrician who is thoroughly familiar with the National Electrical Code and/or Canadian Electrical Code and will follow the NEC and/or CEC Guidelines as well as all local codes. This horn should be considered a part of the warning system and not the entire warning system.

The selection of the mounting location for this horn, its controls and the routing of the wiring are to be accomplished under the direction of the Facilities Engineer and the Safety Engineer. In addition, listed below are some other important safety instructions and precautions you should follow:

- Read and understand all instructions before installing, operating, or maintaining this equipment.
- Do not connect this unit to the system when power is on.
- Optimum sound distribution will be severely reduced if any objects are in front of the horn. You should ensure that the front of the horn is clear of any obstructions.
- All effective warning horns 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, ensure that all mounting screws are tightened.
- Establish a procedure to routinely check the signal system for proper activation and operation.

Installation and Maintenance Instructions

- Any maintenance to the unit MUST be performed by a trained electrician in accordance with NEC Guidelines and local codes.
- Never alter the unit in any manner.
- The nameplate should NOT be obscured, as it contains cautionary and/or other information of importance to maintenance personnel.
- Provide a copy of these instructions to the Safety Engineer, operator(s) and maintenance personnel.
- File these instructions in a safe place and refer to them when maintaining and/or reinstalling the device.
- **Explosion Hazard:** Substitution of any components may impair suitability for Class I, Division 2, Groups A, B, C, and D; Class II, Division 2, Groups F and G; and Class III.
- **Risque d'explosion:** Remplacement de tous les composants peut nuire à la conformité de Classe I, Division 2, Groupes A, B, C, et d; Classe II, Division 2, Groupes F et G; et de classe III.
- **Explosion Hazard:** Do not disconnect equipment unless power has been switched off or unless the area is known to be non-hazardous.
- **Risque d'explosion:** Ne débranchez pas l'équipement que l'alimentation a été coupée ou si la zone est connue pour être non dangereux.
- This equipment is suitable for use in Class I, Division 2, Groups A, B, C, D; Class II, Division 2, Groups F and G; Class III or non-hazardous locations only.
- Cet équipement est adapté à une utilisation en Classe I, Division 2, Groupes A, B, C, D; Classe II, Division 2, Groupes F et G; Classe III ou zones non dangereuses uniquement.

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

Unpacking the Horn

After unpacking the horn, examine it for damage that may have occurred in transit. If the horn has been damaged, do not attempt to install or operate it. File a claim immediately with the carrier, stating the extent of the damage. Carefully check all envelopes, shipping labels, and tags before removing or discarding them. Disposal of all shipping materials must be carried out in accordance with national and local codes and standards. If any parts are missing, please call Federal Signal Customer Support at 708-534-4756 or 877-289-3246.

An Overview of the Model 450EWBX-024

⚠ WARNING

SOUND RESTRICTION: Do not paint the horn. No finish or coating is required. Paint may obstruct the sound output, reducing the effectiveness of the horn. Failure to heed this warning may cause serious injury or death.

The Model 450EWBX-024E electronic horn is 24 Vdc, polarized, high-output, continuous duty, and indoor/outdoor-rated. It is suitable for use in hazardous locations and is capable of reproducing coded blasts or sustained tones.

The horn is excellent for general alarm, start and dismissal, coded paging, and process control signaling in areas of high ambient noise levels. It can be used indoors or outdoors and meets Type 4X and IP66 requirements.

Table 1 Horn specifications

| | |
|--------------------|---------------------------------------|
| Operating Voltage: | 12-24 Vdc |
| Current: | 0.25 A |
| Inrush Current: | 764 mA rms over a 16.7 ms time window |

Wiring the Horn

⚠ WARNING

SHOCK HAZARD: *To avoid electrical shock hazards, do not connect wires when power is applied. Failure to heed this warning may cause serious injury or death.*

⚠ WARNING

WIRING PRECAUTION: *National Electrical Codes as well as local codes must be adhered to in the installation of the Model 450EWBX-024 horn. All electrical wiring must be routed through approved conduit and fittings as specified. Failure to heed this warning may cause an electrical shock or render the horn inoperable, causing serious injury or death.*

⚠ WARNING

WIRING PRECAUTION: *Refer to NFPA 70 (NEC) and CSA C22.1 Canadian Electrical Code, Part 1, Safety Standard for Electrical Installation, Section 32. Failure to heed this warning may cause an electrical shock or render the horn inoperable, causing serious injury or death.*

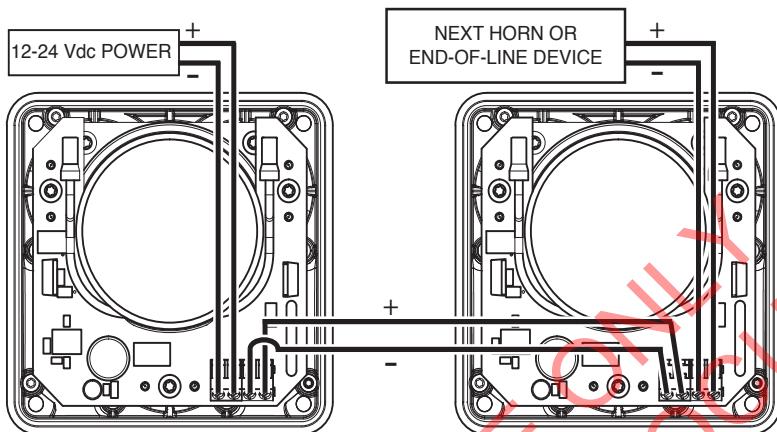
For power connections, use only wire sized 12 AWG to 18 AWG (2.5 mm² to 1.0 mm²). Strip no more than 0.25" (6 mm) of insulation from the ends of the power wires. Torque the terminal screws to 4.5 in-lb (0.51 Nm) maximum.

NOTE: This device is polarized by a diode for use in supervised systems.

To wire the horn:

1. Connect the positive (+) lead from the power source to one of the positive terminals of the connector plug.
2. Connect the negative (-) lead from the power source to one of the negative terminals of the connector plug.
3. See Figure 1. Connect the remaining positive (+) and negative (-) terminals on the connector plug to the next horn or an end-of-line device.

Figure 1 Wiring connections



Mounting the Horn

⚠ WARNING

SHOCK HAZARD: To avoid electrical shock hazards and equipment failure, refer to the warning messages to installers and the installation instructions before installing the horn. Failure to heed this warning may cause serious injury or death.

See Figure 2. The Model 450EWBX-024 has two 3/4" tapped opening and one 1/2" opening to accommodate 3/4" conduit.

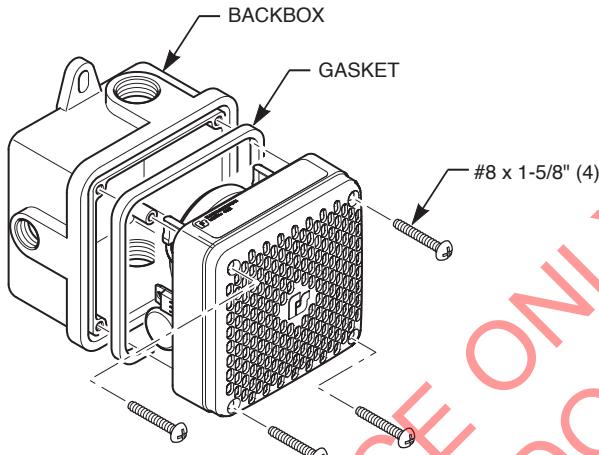
There is no specific mounting orientation required for the horn. After wiring the horn, mount it on the backbox with the provided #8 x 1-5/8" self-tapping screws. Torque the mounting screws 12 in-lb to 16 in-lb (1.4 Nm to 1.8 Nm).

The backbox is fitted with factory-molded knockout seals.

⚠ WARNING

EXPLOSION HAZARD: Open holes in the backbox must be sealed. If sealing an unused hole, use Listed liquid-tight plugs to maintain the hazardous location protection, Type 4X, and IP66 enclosure ratings. Failure to heed this warning may result in an explosion causing serious injury or death.

Figure 2 Horn with backbox



Getting Repair Service or Technical Assistance

Products returned for repair require a Return Authorization form from your local distributor or from Federal Signal. To obtain repair service or technical assistance from Federal Signal, call 708-534-4756 or 877-289-3246. For instruction manuals and information on related products, visit:

www.federalsignal-indust.com

Returning the Product for Credit

Product returns for credit require a return authorization from your local distributor prior to returning the product to Federal Signal. Please contact your distributor for assistance.

A product is qualified to be returned for credit when the following conditions are met:

- The product is resalable and in the original cartons.
- The product has not been previously installed.
- The product is the current revision.

- The product has not been previously repaired.
- The product is a standard product.
- The product is not a service part.

All returns are subject to a re-stock fee.

Defective products that are returned within the warranty period will be repaired or replaced at Federal Signal's sole discretion. Defective products do not include those products with lamp failure.

Circumstances other than those listed above will be addressed on a case-by-case basis.

LEASE FOR REFERENCE ONLY
SEE UPDATED DOCUMENT



FEDERAL SIGNAL

Safety and Security Systems

Industrial Systems

2645 Federal Signal Drive • University Park, IL 60484-3167

Tel: 708-534-4756 • Fax: 708-534-4852

Email: elp@federalsignal.com

www.federalsignal-indust.com