

MODEL SST3-MV

**INSTALLATION INSTRUCTIONS FOR FEDERAL MODEL SST3-MV
SELECTABLE SIRENTONE-MULTI VOLT**

Address all communications and shipments to:



FEDERAL SIGNAL CORPORATION
Electrical Products Division
Service Department
2645 Federal Signal Drive
University Park, IL 60466-3195

FOR REFERENCE ONLY
PLEASE SEE UPDATED DOCUMENT

**INSTALLATION INSTRUCTIONS
FOR
FEDERAL MODEL SST3-MV
SELECTABLE SIRENTONE-MULTI VOLT**

A. GENERAL.

The Federal Model SST3-MV is a solid-state signalling device that can be used for general purpose signalling. Any one of three distinctive signalling tones may be selected by dry contact closure at the appropriate connections of J4. The tone can easily be changed if the signalling requirements change. The Model SST3-MV can be installed either indoors or outdoors.

B. SPECIFICATIONS.

Operating Voltage	120/240VAC 50-60Hz, 24VDC	
Operating current	<u>Voltage</u>	<u>Current</u>
	120VAC	210MA
	240VAC	120MA
	24VDC	600MA
Sound Output	<u>dB(A) @ 10'</u>	<u>dB(A)</u>
	<u>on Axis</u>	<u>UL Rating</u>
	Wail	109.5
	Yelp	111
	Horn	107
Weight (approx.)	4.4 lbs. (2.173Kg)	
Dimensions (HWD)	14.5" x 12" x 9"	

C. UNPACKING.

After unpacking the unit, examine it carefully for damage that may have occurred in transit. If the equipment has been damaged, file a claim immediately with the carrier, stating the extent of the damage. Before proceeding, ensure that the parts listed in the KIT CONTENTS LIST have been supplied.

D. KIT CONTENTS LIST.

Qty.	Description	Part Number
1	Adapter	K8476121A-04
1	Gasket, Adapter	K8476122A
1	Connector Plug, 4-Position	K140340B
1	Connector Plug, Tone Selector	K140389A-04

E. INSTALLATION.

SAFETY MESSAGE TO INSTALLERS

People's lives depend on safe installation of our products. It is important to follow all instructions shipped with the products. This device is to be installed by a trained electrician who is thoroughly familiar with the National Electrical Code and will follow the NEC Guidelines as well as local codes.

The selection of the mounting location for the device, its controls and the routing of the wiring is 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 or operating 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 speaker. You should ensure that the front of the speaker is clear of any obstructions.
- All effective warning speakers produce loud sounds which may cause, in certain situations, permanent hearing loss. You should take appropriate precautions such as wearing hearing protection.
- 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, ensure that all bolts and threaded joints are tightened.
- Establish a procedure to routinely check the sound system for proper activation and operation.
- 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.

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

The Model SST3-MV can be attached to any relatively flat surface or to a variety of electrical wall boxes. A four position plug is supplied for electrical power connection. In addition, two #8-32 x 3-1/4" slotted machine screws are included to attach the unit to a four-inch square electrical box. After the mounting method and location have been selected, follow the procedure in the appropriate paragraph of this section. The speaker portion of SST3-MV is not shown in the installation figures for clarity. The speaker and its base assembly provides three degrees of freedom, allowing the horn to be oriented for any coverage pattern desired. Adjustment is accomplished with hand tightened nuts which require minimal torque to maintain horn position. When mounted outdoors, ensure that the rain guard on the swivel base is oriented to protect the speaker wire openings from falling rain.

CAUTION

Always provide sufficient support of the mounting boxes used to mount the horn. Failure to do so may result in property damage, serious injury or death to you or others.

1. *Weatherproof Mounting in WB Box.*

- a. See figure 1. Insert the two #8-32 x 3-1/4" slotted pan head screws into the SST3-MV base at opposite corners.
- b. Install the adapter gasket in the adapter, and place the adapter with installed gasket over the screws inserted in step a.
- c. Secure the SST3-MV base/adapter assembly in the WB with the pan head screws as shown in figure 1.

2. *Wall Mounting.*

Wall mounting the SST3-MV in an NB or NBL box is accomplished using the adapter, adapter gasket, and the #8-32 x 3-1/4" pan head screws as shown in figure 2.

- a. See figure 2. Insert the two #8-32 x 3-1/4" slotted round head screws into the SST3-MV base at opposite corners.
- b. Install the adapter gasket in the adapter, and place the adapter with installed gasket over the screws inserted in step a.
- c. Secure the SST3-MV base/adapter assembly in the NB or NBL box with the pan head screws as shown in figure 2.

3. Surface Mounting.

Surface mounting the SST3-MV in an NB or NBL box is accomplished using the adapter, adapter gasket, and the #8-32 x 3-1/4" pan head screws. Use figure 2 as guide.

- a. See figure 2. Insert the two #8-32 x 3-1/4" slotted pan head screws into the SST3-MV base at opposite corners.
- b. Install the adapter gasket in the adapter, and place the adapter with installed gasket over the screws inserted in step a.
- c. Secure the SST3-MV base/adapter assembly in the NB or NBL box with the pan head screws as shown in figure 2.

4. Concealed Conduit Mounting.

The concealed conduit mounting method is shown in the figure 3. This mounting method is recommended when an existing junction box or handy box will not accommodate the Model SST3-MV. In order to accomplish this type of mounting, a Federal Model NBL Outlet Box and an adapter plate are required. A pair of 6-32 and 8-32 flat head screws are included with the concealed mounting kit to secure the plate to the existing box. Two 10-32 x 1/4" round head screws are supplied to attach the NBL box to the plate. An insulated bushing is also supplied to protect electrical leads passing through the center knockout of the NBL box.

F. POWER CONNECTIONS.

Make sure that the AC power is off.

When the unit is to be operated from an AC source, set the voltage selector switch SW1 to the desired source voltage.

CAUTION

Use only 12 to 18 AWG wire for power connection. Strip no more than 0.25-inch of wire insulation from the ends of the power leads.

Connect the AC power leads to the 120/240VAC terminals of the four position connector plug supplied with the unit by inserting the stripped ends of the wire into the connector as far as they can travel. Make sure supply lead insulation is flush with connector. If stranded wire is used, be sure that there are no loose strands outside the connector plug that could touch the adjacent lead and cause a short circuit. Plug the connector into the receptacle provided on the printed circuit board.

For 24VDC operation, remove the jumper and connect the positive lead to the (+) terminal and negative lead to the (-) terminal of the four position connector as shown in figure 4.

Choose either AC or DC power operation. Do not try to operate the unit by connecting both AC and DC power sources at the same time.

G. TONE ACTIVATION WIRING.

1. Remote Tone Activation Connection.

Make sure that AC or 24VDC operating power to the unit is off.

The remote tone activation can be accomplished by applying a dry contact closure at J4 plug (see figure 1) between GND terminal and one of the tone (WAIL, YELP, HORN) terminals.

Use #18AWG shielded twisted pair wires, strip no more than 0.25-inch of wire insulation from the ends of leads to connect remotely located tone activating dry contact terminals between GND and WAIL, YELP or HORN terminal of four position connector plug supplied with unit. Make sure the lead insulation is flush with connector. If stranded wire is used, be sure that there are no loose strands outside the connector plug that could touch adjacent lead and cause a short. Plug the connector into the receptacle J4 on the printed circuit board.

The selected tone will play when unit is powered up and remote activation contacts are closed. For proper operation of the remote activating circuit the total loop (resistance of GND wire plus resistance of tone terminal wire plus the dry contact resistance) resistance of the circuit should not exceed 1000 ohms.

Connecting a dry set of contacts for each of three tones, any one tone can be activated by closing the appropriate contact. When contact closures are applied to all tone terminals simultaneously, HORN tone will override the other two tones. If contact closures are applied to HORN and any other tone HORN tone will override the other tone. If contact closures are applied to WAIL and YELP, the WAIL tone will override the YELP tone.

2. Wiring for Single Tone Activation at Power-Up.

Make sure that AC or 24VDC operating power to the unit is off.

The unit can be operated by switching operating power (AC or 24VDC) ON to the unit if a permanent short wire jumper is installed between GND and the desired tone terminal of the four-position connector plug instead of dry contact closure.

Connect a short (1" long) #22 AWG wire between GND and the desired tone terminal of the four position remote tone activation terminal connector plug supplied with the unit. Plug the connector into the J4 receptacle (see figure 1) on the printed circuit board. Switching ON the operating power will now activate the unit.

H. SERVICE.

SAFETY MESSAGE TO MAINTENANCE PERSONNEL

- Read and understand all instructions before performing any maintenance to this unit.
- To reduce the risk of electrical shock or ignition of hazardous atmospheres, do not perform maintenance/service on this device when circuits are energized.
- Optimum sound distribution will be reduced if speaker becomes clogged with a foreign substance. Periodic checks should be performed to ensure foreign substances are not packed into the speaker.
- 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. Safety in hazardous locations may be endangered if additional openings or alterations are made in units specifically designed for use in these locations.
- The nameplate, which may contain cautionary or other information of importance to maintenance personnel, should not be obscured if exterior of housings used in hazardous locations are painted.

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

The Federal factory will service your equipment or provide technical assistance with any problems that cannot be handled locally.

Any units returned to Federal Signal for service, inspection or repair must be accompanied by a Return Material Authorization. This R.M.A. can be obtained from your local Distributor or Manufacturer's Representative.

At that time a brief explanation of the service requested, or the nature of the malfunctions, should be provided.

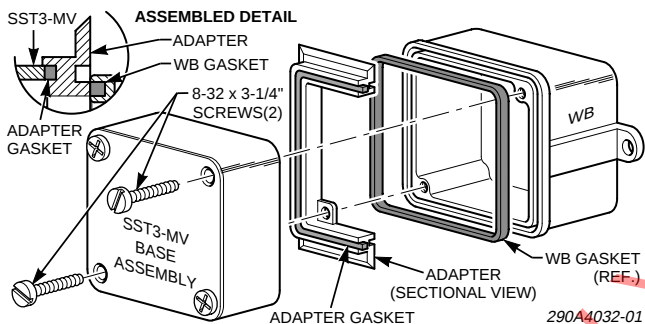
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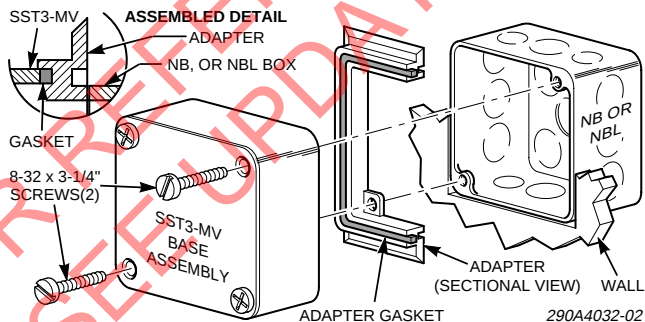
I. REPLACEMENT PARTS.

Description	Part Number
Board Assy, SST3-MV	K2001177
Connector Plug, 4-position	K140340
Connector Plug, Tone Selector	K140389A-04

1

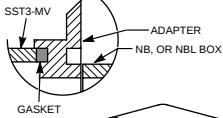


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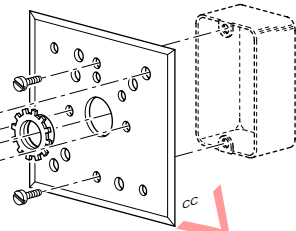
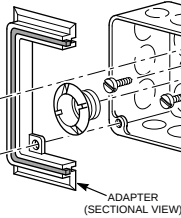
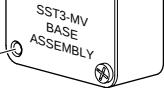


3

ASSEMBLED DETAIL



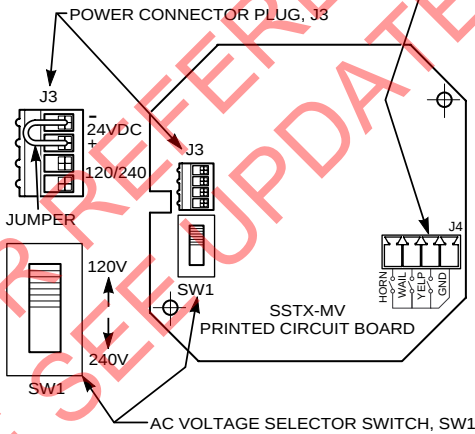
8-32 x 3-1/4"
SCREWS(2)



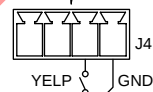
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4

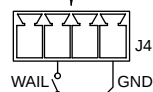
POWER CONNECTOR PLUG, J3



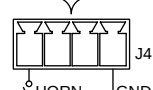
FOR YELP TONE



FOR WAIL TONE



FOR HORN TONE



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