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INSTALLATION AND MAINTENACE INSTRUCTIONS

# MIX-4003-S Sounder Base

**CAUTION / ATTENTION**
DO NOT PAINT OR ALTER
FACTORY APPLIED FINISH IN ANY WAY

NE PAS PEINDRE OU MODIFIER
LA FINITION ORIGINALE

## ABOUT THIS MANUAL

This manual is included as a quick reference for installation and should be left with the owner/operator of this equipment. For further information on the use of this device with a FACP, please refer to the panel's manual.

Note: This manual should be left with the owner/operator of this equipment.

## SOUNDER BASE DESCRIPTION

The MIX-4003-S sounder base horn is designed to meet UL268/ULC S529 requirements for smoke detector, UL521/ULC S530 requirements for heat detector, and UL464/ULC S525 requirements for audible notification appliances.

The MGC MIX-4003-S is providing localized alarm sounding capability for the MIX-4000 family of fire detection devices. They can be used in place of external sounders to minimize installation cost and footprint while allowing individual control of signal rate and on-off state for each device. The MIX-4003-S must be used with a compatible MGC control panel. Operational mode and levels are selected at the Fire alarm panel through the MGC MP configuration tool.

The MIX-4003-S produces an alarm signal at SPL of Table 2.

*Figure 1 MODEL FRONT AND SIDE VIEW WITH MIX-4000 SERIES DETECTOR*

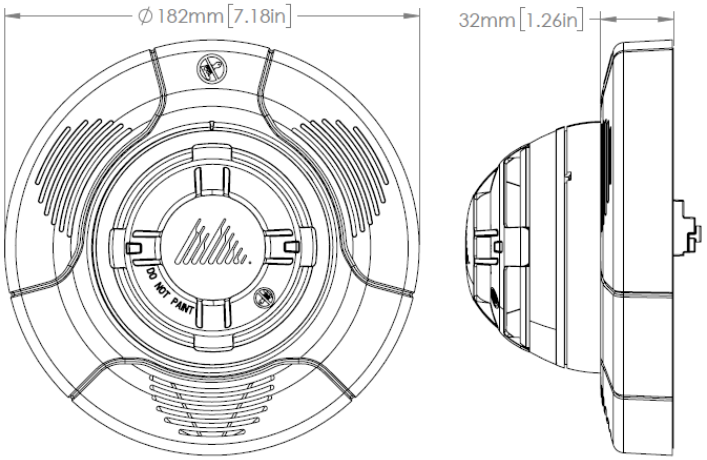



*Table 1 SPECIFICATION*

| | |
|---|---|
| **Operating temperature** | 0°C to 49°C (32°F to 120°F) |
| **Humidity range** | 0% to 93% |
| **Nominal voltage** | Regulated 24VDC/VFWR |
| **SLC Standby Current** | 1.56mA |
| **SLC Alarm Current** | 2.34 mA |
| **Base Diameter** | 182mm [7-3/16 in] |
| **Base Height** | 32mm [ 1-1/4 in] |
| **Terminal wire gauge** | 12-22 AWG |

**KEY COMPONENT**

*Figure 2 SOUNDER BASE ASSEMBLY COMPONENTS*

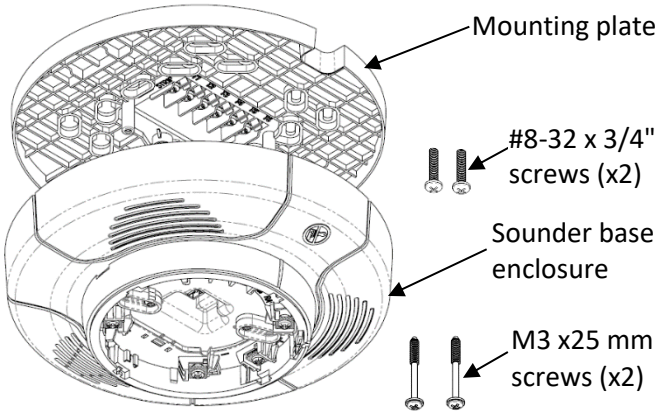
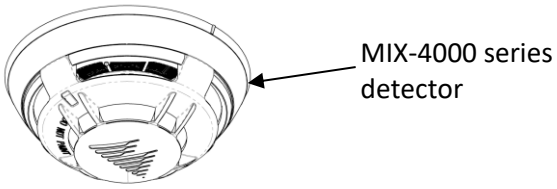



*Figure 3 MIX-4000 SEREIS DETECTOR*



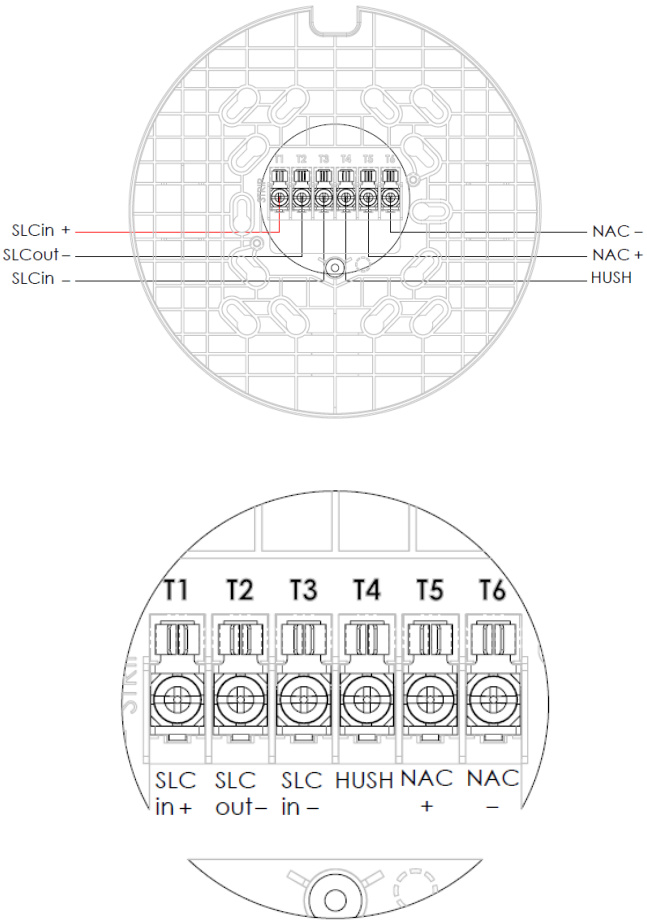

A mounting plate in figure 2 is mounted first on the electrical box and all wiring is done on integral screw connectors. The connections are apparent and can be visually inspected before the sounder base itself is mounted. Then, the enclosure containing the electronics, the sounder and the detector base can plugged-in and secured.

Note: This device should be installed as per applicable requirements of the authorities having jurisdiction.

**WIRING**

Before installing this device seek guidance from the compatible control panel instructions for the device operation modes and the configuration requirements. It is recommended to remove power from SLC and NAC lines before performing installation.

*Figure 4 WIRING TABS*




Use the information in this document to determine the total current draw of the devices. The total current draw of the devices must not exceed the NAC output capacity of the panel. In all cases, the installer should consider the voltage drop to ensure that the last device on the circuit operates within its rated voltage. Please consult fire panel installation manual for guidance on wire resistance and length. For maximum strobe operating current, please refer to Table 4.

Do not loop signal circuit field wires around terminals. Electrical supervision requires wire run to be broken at each end.

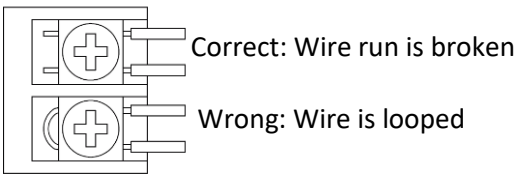
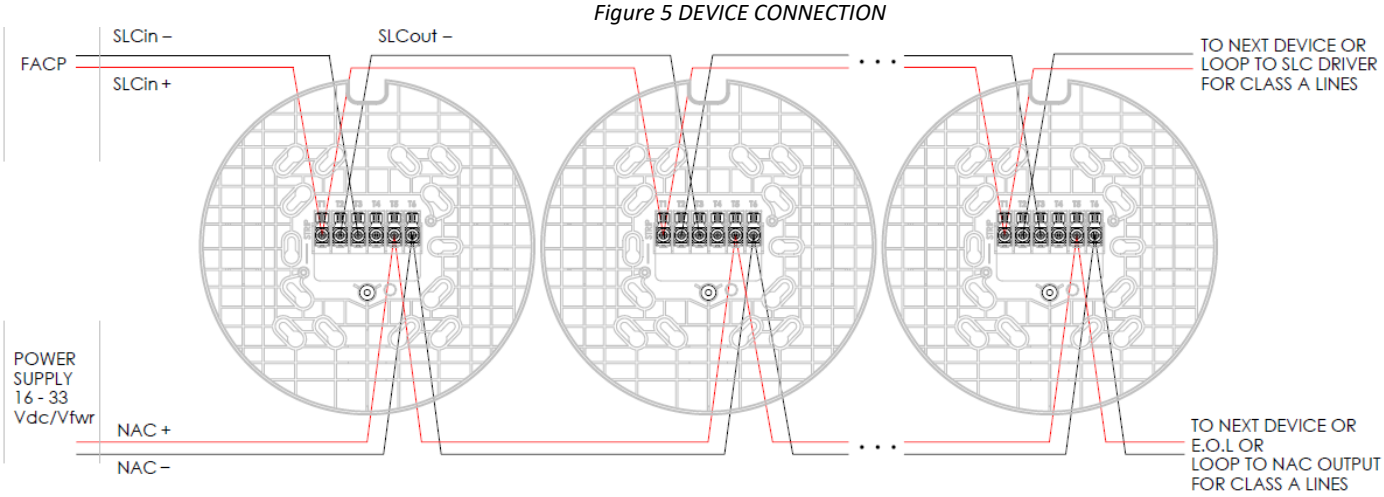


*Figure 5 DEVICE CONNECTION*




Note: Wiring must be in accordance with CSA C22.1, Canadian Electrical Code, Part I, Safety Standard for Electrical Installations, section 32 and/or NFPA 70.

**CAUTION**

FOR SYSTEM SUPERVISION, FOR ALL TERMINAL TAPS, DO NOT USE LOOPED WIRE UNDER TERMINALS. BREAK WIRE RUN TO PROVIDE SUPERVISION OF CONNECTIONS.

**ATTENTION**

NE PAS UTILISER DE FILS EN BOUCLE SOUS LES BORNES. POUR FOURNIR UN BON SUIVI DES CONNEXIONS. INTERROMPRE LA CONTIUITÉ DES CÂBLES.

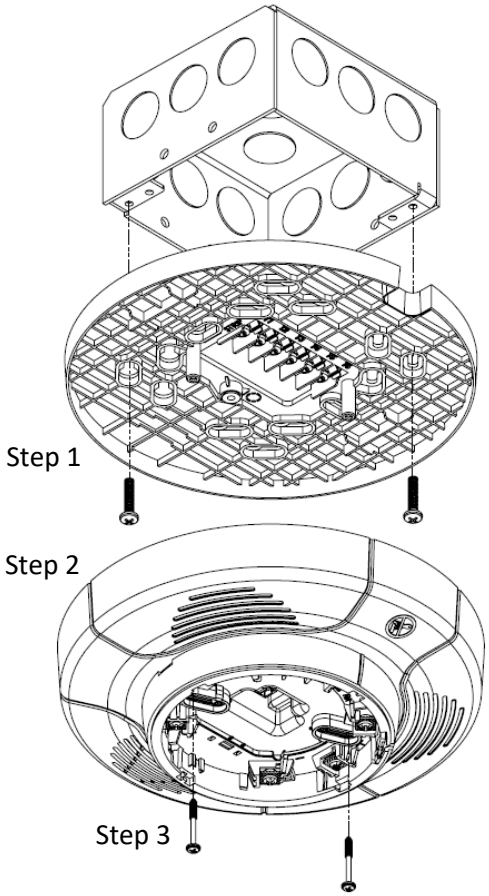
**MOUNTING**

MGC recommends spacing speaker strobe appliances in compliance with CAN/ULC S524 and/or NFPA72.

The mounting plate is compatible with 3” by 2” single gang device boxes, 3−3/4” by 4” double gang boxes, 4” by 2” single gang utility boxes, standard 4” by 4” boxes, and standard 4” octagon boxes.

1. Attach the mounting plate to electrical box with two mounting #8-32 x 3/4" screws.
2. Slide down the sounder base enclosure until the connection blades touch the clips on the mounting plate.
3. Secure the mounting plate with securing M3 x25 mm screws.

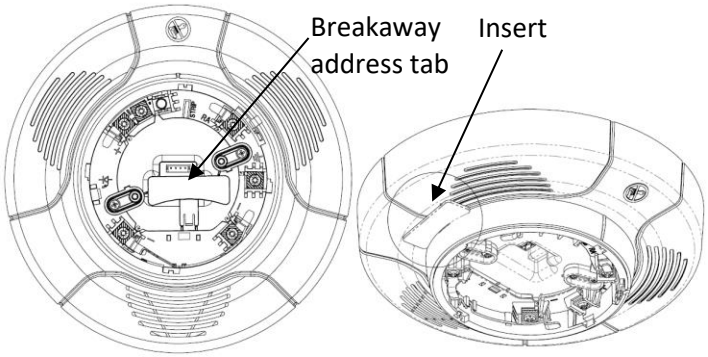
*Figure 6 MOUTING DIAGRAM*



**MOUNTING DETECTOR**

If the detector type and address has be visible from the outside, break the address tab inside the detector base and insert it in the outer rim of the base. See figures 7.

*Figure 7 ADDRESS TAB INSERT*




The detector can then be placed on the top base using the following steps (figure 8):

1. Position the detector centrally on its adapter base ensuring it is level.

2. Rotate clockwise applying gentle pressure. The detector will drop into its keyed location.

3. Continue to rotate clockwise a few degrees until the detector has fully engaged in the adapter base.

4. When the detector is firmly engaged, check the alignment of the raised reference marks on the detector and on the base (figure 9).

*Figure 8 MOUNTING DETECTOR*

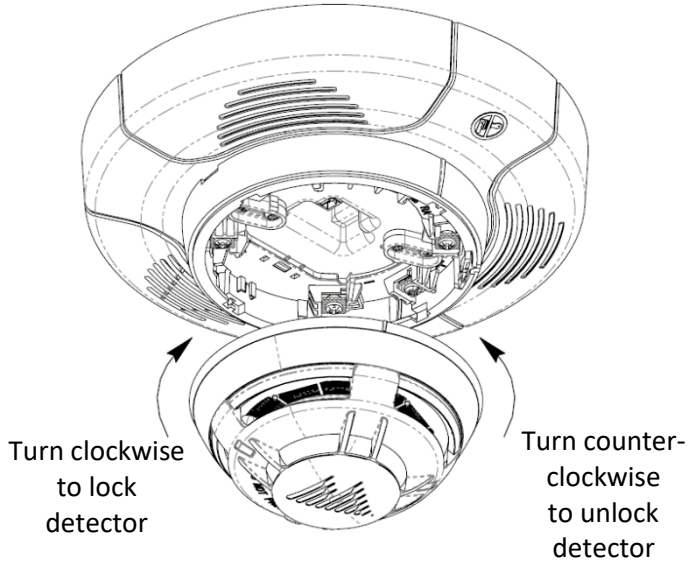
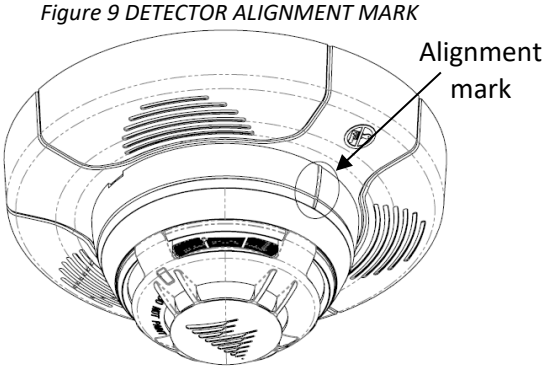



*Figure 9 DETECTOR ALIGNMENT MARK*



**AUDIBLE RATINGS**

*Table 2 SOUND PRESSURE LEVEL OUTPUT*

| MIX-4003-S | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Sound Pattern** | Volume | UL Reverberant (dBA@10ft) | | | | | |
| | | 16 VDC | Regulated 24 VDC | 33 VDC | 16 VFWR | Regulated 24 VFWR | 33 VFWR |
| Temporal | High | 83.8 | 84.5 | 83.8 | 84.2 | 84.6 | 83.6 |
| | Low | 79.3 | 81.1 | 81.5 | 81.0 | 82.5 | 82.3 |
| Continuous | High | 83.8 | 84.5 | 83.8 | 84.2 | 84.6 | 83.6 |
| | Low | 79.3 | 81.1 | 81.5 | 81.0 | 82.5 | 82.3 |
| 20 BPM | High | 83.8 | 84.5 | 83.8 | 84.2 | 84.6 | 83.6 |
| | Low | 79.3 | 81.1 | 81.5 | 81.0 | 82.5 | 82.3 |
| March | High | 83.8 | 84.5 | 83.8 | 84.2 | 84.6 | 83.6 |
| | Low | 79.3 | 81.1 | 81.5 | 81.0 | 82.5 | 82.3 |

| MIX-4003-S | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Sound Pattern** | Volume | ULC Anechoic (dBA@3m) | | | | | |
| | | 16 VDC | Regulated 24 VDC | 33 VDC | 16 VFWR | Regulated 24 VFWR | 33 VFWR |
| Temporal | High | 90.6 | 91.5 | 90.8 | 91.2 | 91.7 | 90.5 |
| | Low | 86.1 | 88.2 | 88.5 | 88.0 | 89.5 | 89.2 |
| Continuous | High | 90.6 | 91.5 | 90.8 | 91.2 | 91.7 | 90.5 |
| | Low | 86.1 | 88.2 | 88.5 | 88.0 | 89.5 | 89.2 |
| 20 BPM | High | 90.6 | 91.5 | 90.8 | 91.2 | 91.7 | 90.5 |
| | Low | 86.1 | 88.2 | 88.5 | 88.0 | 89.5 | 89.2 |
| March | High | 90.6 | 91.5 | 90.8 | 91.2 | 91.7 | 90.5 |
| | Low | 86.1 | 88.2 | 88.5 | 88.0 | 89.5 | 89.2 |

*Table 3 DIRECTIONAL SOUND CHARACTERISTICS*

| MIX-4003-S | | |
|---|---|---|
| **HORIZONTAL ANGLE** | **VERTICAL ANGLE** | **OSPL (dBA)** |
| +/- 34 | +/- 36 | -3 |
| +/- 41 | +/- 42 | -6 |
| +/- 90 | +/- 90 | -10 in horizontal<br>-7 in vertical |

**OPERATING RMS CURRENTS**

*Table 4 OPERATING RMS CURRENTS (mA)*

| MIX-4003-S | | | |
|---|---|---|---|
| **Sound Pattern** | **Volume** | **Regulated 24VDC** | **Regulated 24VFWR** |
| Continuous | High | 22 | 44 |
| | Low | 19 | 41 |
| Temporal | High | 22 | 44 |
| | Low | 18 | 41 |
| 20 BPM | High | 21 | 45 |
| | Low | 18 | 41 |
| March | High | 21 | 46 |
| | Low | 18 | 41 |

The sounder base is capable of producing a variety of tone patterns, including the distinctive three-pulse temporal pattern (ANSI Temporal 3) fire alarm signal now required by NFPA 72 for commercial and residential applications and is configured in this default mode. The device offers two volume levels: low and high. The available tones are Continuous, ANSI Temporal 3, 20 BPM, and March. Refer to the appropriate fire alarm control panel manual for more information on selection of these tones. NOTE: For NFPA 72 Installations, the Temporal 3 tone at high volume should be used for emergency and public mode evacuation. The use of other tone styles and low volume level will be at the discretion of the local Authority Having Jurisdiction (AHJ).

**Model Numbers**
**MIX-4003-S** 4000 SERIES SOUNDER BASE

**Accessories**
**4000 SERIES DETECTORS:**
**MIX-4010** Non-isolated photoelectric detector
**MIX-4011** Non-isolated photoelectric detector Rev7
**MIX-4010-ISO** Isolated photoelectric detector
**MIX-4011-ISO** Isolated photoelectric detector Rev7
**MIX-4020** Non-isolated photoelectric/heat detector
**MIX-4021** Non-isolated photoelectric/heat detector Rev7
**MIX-4020-ISO** Isolated photoelectric/heat detector
**MIX-4021-ISO** Isolated photoelectric/heat detector Rev7
**MIX-4030** Non-isolated heat detector
**MIX-4030-ISO** Isolated heat detector
**CH-1298** NAC shorting clip