



MX-922 Installation Instructions

Introduction

The MX-922 is an addressable, hard-wired acoustic glass-break detector that is compatible with MX control panels and is addressable in an MX loop. The device detects the sound of glass breaking on an exterior wall.

Figure 1: General view

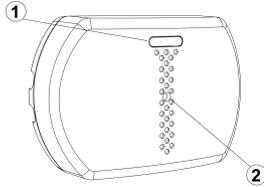


Table 1. Legend

Callout	Description
1	LED indicator
2	Microphone

The MX-922 has the following features:

- Omnidirectional coverage
- Wall and ceiling mountable
- Fully pre-calibrated detector requires no adjustment during installation
- Up to 7.6 m (25 ft) detection range
- Tamper proof
- Bicolor LED detection indicator
- Plate, tempered, laminated, wired, coated and sealed glass support

Important: The MX-922 detects the sound of glass breaking. However, the detector may not consistently detect the sound of cracks in glass, or bullets passing through glass. Always supplement glass-break detectors with additional protection.

Placement guidelines

To optimize detection and minimize false alarms, avoid installing the device in the following locations:

- Rooms with lined, insulating, or soundproof drapes.
- Rooms with closed wooden window shutters.
- Glass airlocks and glass vestibule areas.
- Noisy areas: Use shock sensor detectors for glass in noisy or occupied areas.
- Residential car garages.
- Rooms that are smaller than 3 m x 3 m (9.8 ft x 9.8 ft)
- Stairwells
- Humid rooms: The MX-922 is not hermetically sealed. Excess moisture on the circuit board can cause a short circuit and can lead to a false alarm.

Mounting guidelines

Wall mounting guidelines

Mount the device at least 1.8 m (6 ft) from the floor, and at least 30 cm (1 ft) from the ceiling. Mount the device on the wall directly opposite the glass for best detection and maximum range.

Ceiling mounting guidelines

Mount the device between 2 m and 4 m (6 ft and 12 ft) away from the protected glass on a ceiling to provide better detection.

Note:

- Do not mount the device on the same wall as the protected glass.
- Avoid obstructions between the device and the protected glass.
- Installing the MX-922 on 24-hour loops increases false alarms. Install the MX-922 on a perimeter loop which is armed whenever the door and window contacts are armed.

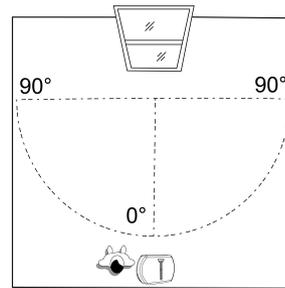
Mounting angles

The detection range depends on the angle between the device and the glass. Mounting the device at an angle, such as on a corner or adjoining wall, reduces the range of detection. Table 2 displays the mounting angles and their corresponding maximum range value. Figure 2 shows the installation angles relative to the protected glass from an overhead view.

Table 2. Mounting angle and range

Angle	Maximum range
0°	7.6 m (25 ft)
30°	7 m (23 ft)
45°	5.5 m (18 ft)
60°	4 m (13 ft)
75°	2.5 m (8 ft)
90°	0

Figure 2: Overhead view of mounting angle relative to protected glass.



Mounting and wiring the device

To mount and wire the device, complete the following steps:

1. Press the snap and separate the cover from the bracket. See Figure 3.
2. Hold the bracket in its final position and use the mounting holes in the break-away segment as a guide to mark holes in the mounting surface.
3. Drill at least two holes with which to mount the device.
4. Fasten the break away segment to the wall with the fastening screws. See Figure 4.

5. Wire the device.

- a. Remove the jacket at the end of both cables to expose the jacketed wires. To expose the wires, remove the insulation at the end of each wire. See Figure 5.
- b. Feed the wires through one of the pairs of openings on the mounting bracket. See Figure 6.
- c. For each cable, insert one wire in the positive terminal loop that is marked L+ and the other wire in the negative terminal loop that is marked L-. See Figure 7.
- d. Screw both terminals closed with a flat-head screwdriver. See Figure 8.

6. Replace the cover on the base by aligning the two plastic tabs at the top of the cover with the bracket and sliding on the cover. Secure the cover with a screw. See Figure 9.

Figure 3: Removing the cover

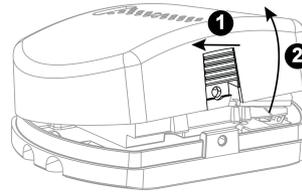


Figure 4: Marking, drilling and screwing the bracket

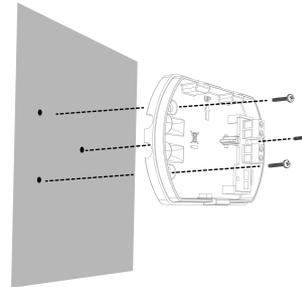


Figure 5: Removing the cable and wire jackets



Figure 6: Inserting the cables through opening

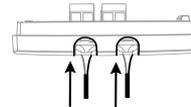


Figure 7: Positive and negative terminal loops

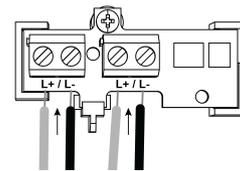


Figure 8: Closing the terminal with a screwdriver

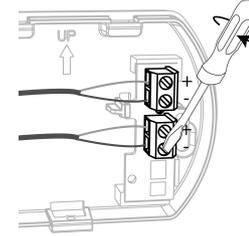
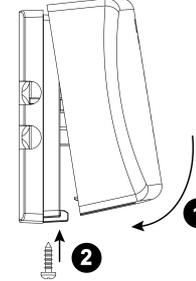


Figure 9: Closing the cover



Enrolling the device

Refer to the MX alarm control panel instruction manual for enrollment information.

Device settings

To change a default device setting, select **DEVICE SETTINGS** from the MX panel menu and configure one or more setting options in the following definition list:

- **Alarm LED:** To turn off the LED indication of alarm events, select **LED OFF**. The default setting is **LED ON**.
- **User test:** To enable a user test, select **Enable**. The default setting is **Disable**.
- **Installer test:** To enable an installer test, select **Enable**. The default setting is **Disable**.
- **Self test:** To enable a self test, select **Enable**. The default setting is **Disable**.

Switching the device to test mode

The MX-922 does not process most false alarm sounds. Switch the device to test mode to ensure accurate testing.

To enter test mode, complete the following steps:

1. Close the device cover, or power up the device.
2. Enable **User test** or **Installer test** mode via the control panel.
3. Perform the tests in [Testing the device](#).
4. Release the test mode button on the control panel to end testing.

Note: You can switch the device to test mode remotely using a user or installer code. For more information, refer to the *MX control panel installation guide*.

Testing the device

To perform a basic user test, complete the following steps:

1. Switch the device to test mode. For more information see [Switching the device to test mode](#).
2. Carefully strike the glass with a cushioned tool. The green LED lights for 2 seconds to indicate a successful test.

Testing the device with a simulator

To test the device response using a simulator such as the Intellisense FG-700 of FG-701, complete the following steps:

Note: Perform the simulation test on a glass pane that is no smaller than 0.5 m x 0.5 m (1.6 ft x 1.6 ft).

1. Switch the device to test mode. For more information refer to the section [Switching the device to test mode](#).
2. Carefully strike the glass with a cushioned tool and then simulate the sound of glass breaking using one of the following methods:
 - Use a simulator in manual mode. Refer to the manufacturer's instructions.
 - Clap your hands three times. This method works most effectively in small rooms at a maximum distance of 5 m from the device.

A red LED lights for two seconds if detection is successful. If the red LED does not light, repeat the procedure.

Note: Test the device annually to ensure consistent performance.

Specifications

- **Communication protocol:** MX
- **Microphone:** Omni-directional.
- **Tamper alert:** Reported when detector is opened.

Electrical

- **Current consumption:** 0.3 mA average quiescent, maximum 6 mA.
- **Power supply:** MX loop supply.

Environmental

- **Operating temperature:** -10° C to 50° C (14° F to 120° F) indoors.
- **Storage temperature:** -20° C to 60° C (-4° F to 140° F).
- **Humidity:** 5% to 93% with no condensation.

Maximum detection range

- 7.6 m (25 ft) if glass size is minimum 40 x 40 cm (15.75 in. x 15.75 in.).
- 6 m (20 ft) if glass size is 30 x 30 cm (12 in x 12 in.) to 40 x 40 cm (15.75 in. x 15.75 in.).

Glass types supported

- **UL tested:** Plate, tempered, wired, laminated, coated, and sealed insulated. Minimum size: 30 cm x 30 cm (12 in. x 12 in.).
- **EN tested:** Plate and wired. Minimum size: 40 cm x 40 cm (15.75 in. x 15.75 in.).

Glass thickness

- **UL tested:** Plate: 3.2 mm to 6.4 mm (1/8 in. to 1/4 in.); Tempered: 3.2 mm to 6.4 mm (1/8 in. to 1/4 in.); Wired: 6.4 mm (1/4 in.); Coated: 3.2 mm to 6.4 mm (1/8 in. to 1/4 in.); Laminated: 6.4 mm (1/4 in.); Sealed insulated: 3.2 mm to 6.4 mm 1/8 in. to 1/4 in.)
 - **EN tested:** Plate: 4 mm to 6 mm (3/16 in. to 1/4 in.); Wired: 6 mm (1/4 in.).
- Note:** Laminated and sealed insulated glass types are protected only if both plates of the unit are broken.

Room size: Not larger than 12 m x 12 m (36 x 36 ft); Not smaller than 3 m x 3 m (10 x 10 ft).

Minimum distance from protected glass: 1.5m (5ft).

Physical

- **Dimensions:** 88 mm x 62 mm x 30 mm (3.5 in. x 2.4 in. x 1.2 in.).
- **Weight:** 74 g
- **Housing material and color:** Flame retardant PC-ABS, white.



Event LED indications

The following table displays the LED pattern and the corresponding event it indicates:

Table 3. LED indication

LED	Indication
Three blinks	Stabilization
Fast blinks	Enrollment mode
Red LED on for two seconds	Glassbreak detection for Flex and sound
Green LED on for two seconds	Low frequency detection for Flex only
Green and red LED blink alternately	Self-test failure during test mode

Note: The device enters a stabilization period when you connect it to the power supply for the first time. Three LED blinks indicate this event only if the panel is in test mode.

Compliance with standards

The MX-922 complies with the following standards:

Europe: EN 301489, EN50130-4, EN50130-5, EN 50131-2-7-1, EN 50131-1 Grade 2 Class II



USA: UL639
Canada: ULC- S306

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