Interrogator® 200 Audio Verification Module (AVM)

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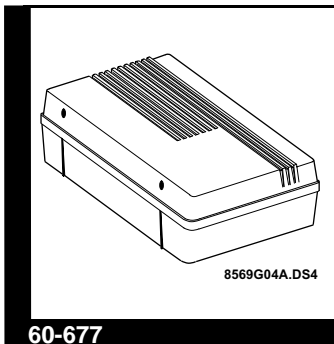
Installation Instructions

Product Summary

The Interrogator 200 Audio Verification Module (AVM) gives the central station operator the ability to hear what's happening at the premises during an alarm and speak directly to the system owner. The operator can determine how serious an alarm is, find out what kind of help is needed, and dispatch the appropriate assistance.

Installation Guidelines

Use the following guidelines when installing the AVM:

ν   You can have no more than two AVMs per panel.

ν   Wire speakers (voice terminals) in series and the DC voltage, ground, and microphone wires in parallel.

ν   Wiring more than two speakers to the panel voice terminals or wiring them in parallel can damage the panel.

ν   Use separate cables for the speakers and the power, ground, and microphone wires to prevent cross talk between the microphone and the speaker.

ν   Use 3-conductor, 22-gauge shielded wire from the AVM power, ground and microphone to the panel. Shielded cable reduces electrical noise and cross talk.

ν   Use 2-conductor, 18-gauge wire from the speakers to the panel.

ν   Use a maximum of 500 feet of cable for all speakers and microphones. For example, if you're using two AVMs and one is 300 feet from the panel, the other AVM can't use more than 200 feet of cable.

Tools Needed

ν   Phillips screwdriver

ν   Mounting screws and anchors (included)

ν   Drill and bits

ν   3-conductor, 22-gauge shielded stranded wire

ν   2-conductor, 18-gauge stranded wire

Installation

To mount the AVM:

1.   Route both 2 and 3-conductor wire cables from the module to the panel.

2.   Remove the cover screws from the module cover and rotate it away from the base. Set the cover and screws aside.

3.   Remove the speaker plate screws and lift the speaker plate off the back box (figure 1).
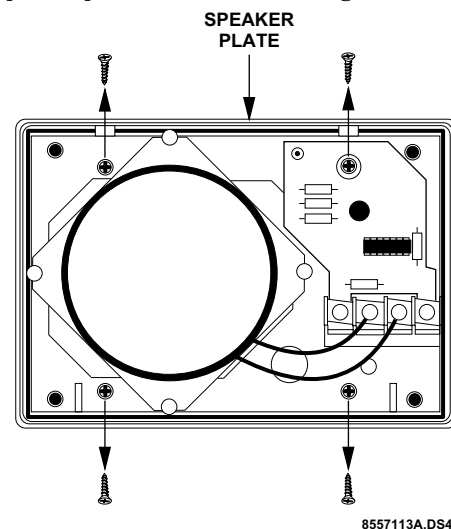

SPEAKER PLATE

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Figure 1   Speaker Plate

4. Place the back box on the wall at the desired location and mark mounting holes (figure 2).

**MOUNTING SCREW
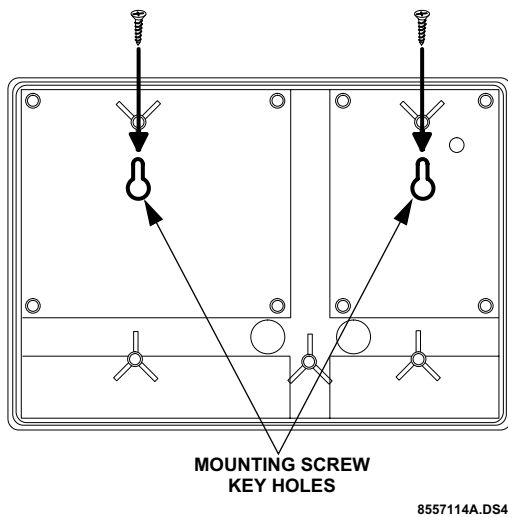KEY HOLES**

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Figure 2 Mounting Hole Locations

5. Install anchors if needed and secure the back box to the wall with the enclosed screws.
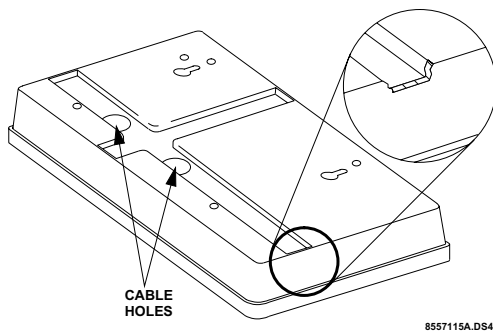6. Feed the cables through one of the cable holes in the back box (figure 3).

**CABLE
HOLES**

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Figure 3 Cable Holes and Channels

7. Align the back box mounting screw key holes with the two mounting screws and slide down.
8. Level the back box and tighten the mounting screws.
9. Feed the cable through the large hole on the speaker plate.
10. Replace the speaker plate on the back box.

UltraGard Wiring

To wire the AVM to an UltraGard panel:

1. Turn off the panel power switch.
2. Strip about ½ inch from cables and module wires.

3. Connect terminals as shown in figure 4. Use 18-gauge wire for speakers and 22-gauge for +12V, ground, and microphone.
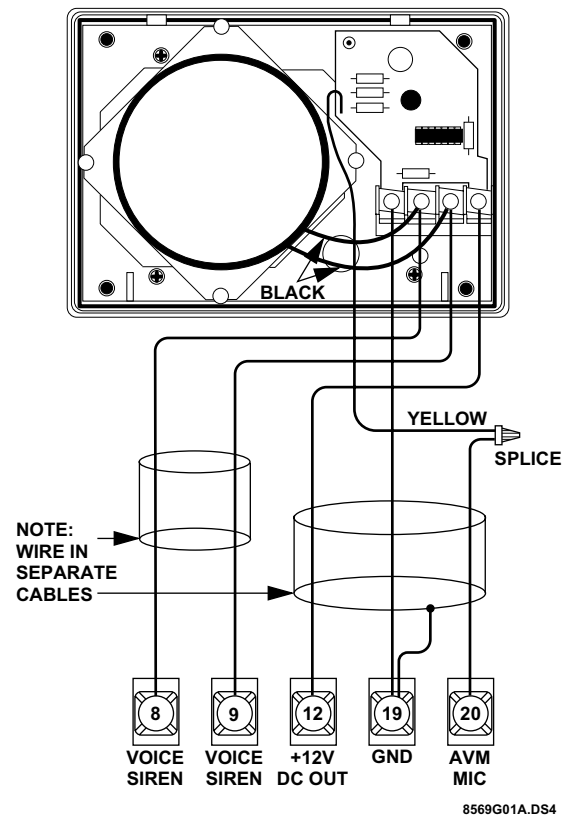

BLACK

YELLOW

SPLICE

**NOTE:
WIRE IN
SEPARATE
CABLES**

| 8 | 9 | 12 | 19 | 20 |

**VOICE
SIREN** **VOICE
SIREN** **+12V
DC OUT** **GND** **AVM
MIC**

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Figure 4 AVM Wiring Connections

4. Splice the yellow wire to the microphone cable.
5. Connect the black speaker wires on the module to the two center terminals.
6. Connect the shielded cable drain wire (bare wire as shown in figure 5) to ground terminal 19.
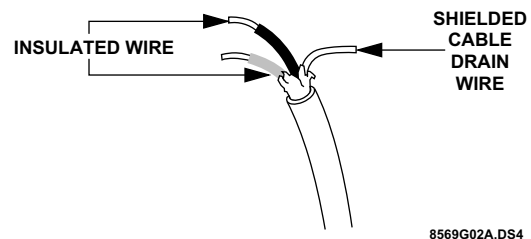

**SHIELDED
CABLE
DRAIN
WIRE**

INSULATED WIRE

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Figure 5 Shielded Cable Detail

7. Replace the AVM cover and screws.

Powering Up

To power up the panel:

1. Make sure all wires are connected properly and securely crimped.
2. Turn the panel power switch on.

Programming

Programming the AVM involves entering the following:

ν   AVM mode of operation

ν   AVM time-out

ν   AVM access code

Note: UltraGard optional feature number F20 (AVM Enable) must be turned on to use the AVM. Optional feature number F00 (Remote Phone Access) must be on to access the AVM from a remote phone.

AVM Modes

The following describes the available AVM operating modes.

One-ring

After reporting an alarm, the panel answers on the first ring. A 5 minute window allows remote access alarm verification after an alarm is reported. Once the panel has answered, the AVM access code must be entered (within 20 seconds) to use the AVM.

Note: If an AVM access code has not been programmed, the AVM cannot be used in the one-ring mode.

This window is activated after an alarm has been reported and allows access to the AVM after one ring at the alarm site. No reports to the central station are allowed during this 5 minute interval except fire alarms. The 5 minute window is cleared when the monitoring service operator hangs up using 99 or the system is disarmed from the customer site during an audio session.

One-ring Silent

Same as one-ring, except on-premises telephones do not ring.

Note: Some electronic phones may ring for about 1/8 of a second when this mode is selected.

Instant

The CS-4000 traps the panel when it reports an alarm. Monitoring personnel can then initiate an audio session from a CS-4000 parallel telephone, without using the AVM access code.

One-ring Fire Siren Shutdown

Same as one-ring, except fire sirens will be shut down at the customer site when audio access is gained. Instead of sirens, the system will announce *Fire. Fire.* every ten seconds (10-second annunciator).

One-ring Silent Fire Siren Shutdown

Same as one-ring silent, except fire sirens may be shut down at the customer site (10-second annunciator).

Note: Some electronic phones may ring for about 1/8 of a second when this mode is selected.

Instant Fire Siren Shutdown

Same as instant, except fire sirens may be shut down at the customer site (10-second annunciator).

If a fire alarm occurs during either the access time-out interval (Instant) or the five minute call back window (One-ring), the fire alarm will be reported by the panel. After report completion, the AVM will return to the state it was in prior to the fire alarm.

The AVM can be accessed from off-site using the AVM access code even when no alarm has occurred. If this off-site access is gained and then an alarm occurs, the panel disconnects premises phones and reports the alarm to the monitoring service.

Note: If an AVM access code is not programmed, you cannot access the AVM.

To accommodate other communication formats and avoid conflict, the AVM has a programmable (via CS-4000 or Downloader only) delay period for the annunciation of beeps that request the audio access code or star (*) telephone access key. This delay period is programmable from 2 to 300 seconds in 2-second increments. In instant mode, the delay is in effect when the system has completed its reports and has released the telephone line to the AVM. In one-ring mode, the delay is in effect when the system answers the telephone after one ring. In off-site access, the delay is not in effect.

The AVM mode factory default value is *03 - Instant*.

To set the AVM mode of operation:

1. In *PROGRAM MODE*, press **BYPASS** until *AVM MODE* is displayed.
2. Press **COMMAND** to display *AVM MODE - [default or present AVM mode number]*.
3. Enter the desired two-digit AVM mode number:
4. 01 - One-ring
5. 02 - One-ring Silent
6. 03 - Instant
7. 09 - One-ring Fire Siren Shutdown
8. 10 - One-ring Silent Fire Siren Shutdown
9. 11 - Instant Fire Siren Shutdown
10. Press **COMMAND**. *AVM MODE - [new mode number]* is displayed.
11. Press **FIRE** to exit.

Setting the AVM Time-Out

The AVM time-out determines how long the AVM holds the telephone line in the instant mode while waiting for the star (*) telephone access key, after reporting an alarm. The AVM controls the panel's telephone line for the duration of the access time-out period.

The time-out value defaults to 90 seconds and can be set from 30 to 300 seconds, in 2-second increments.

To set the AVM time-out:

1. In *PROGRAM MODE*, press **BYPASS** until *AVM TIME-OUT* is displayed.
2. Press **COMMAND** to display *AVM TIME-OUT - [default or present time-out in seconds]*.
3. Enter the desired three-digit AVM time-out (030 to 300 seconds in 2-second increments).
4. Press **COMMAND**. *AVM TIME-OUT - [new time-out]* is displayed.
5. Press **FIRE** to exit.

Setting the AVM Access Code

The AVM access code is required by the central station in order to access the AVM listen-in/talk-back feature for one-ring mode settings or in non-alarm conditions. AVM access codes can be any four-digits from 0001 through 9998, except:

ν   The install, primary, secondary, or arm/disarm access codes (or their duress codes, if enabled).

ν   0000, 1111, or 1234, or similar, which are too simple to guess.

ν   7777, 8888, or 9999, which are reserved phone panic codes.

ν   6s (any number or combination), which are reserved for sensor bypassing.

The AVM access code default value is blank (****).

To enter the AVM access code:

1. In *PROGRAM MODE*, press **BYPASS** until *AVM CODE* is displayed.
2. Press **COMMAND** to display *AVM CODE - [present AVM access code]*.
3. Enter the desired four-digit AVM access code (0001 to 9998) or press **POLICE** to clear the displayed code.
4. Press **COMMAND**. *AVM CODE - [new AVM access code]* is displayed.
5. Press **FIRE** to exit.

Testing

The panel must be programmed before testing. Refer to the panel *Reference Manual* for complete instructions.

When the installation and programming are complete, test the AVM installation as follows.

UltraGard Off-Site Testing

You will need a helper and touch-tone phone at an off-site location to perform this test.

Note: When testing the AVM from an off-site phone, optional feature numbers F00 (Remote Phone Access) and F20 (AVM Enable) must be turned on, and the system must be in a non-alarm state. F00 defaults on and F20 defaults off.

Optional feature number F01 (Ring Twice, Hang-up, Ring, Answer) must be on to work with steps 1 and 2. Otherwise, let the phone ring 12 times and the panel will pick up, automatically.

To test the module from off-site:

1. The off-site helper calls the panel, lets the phone ring twice, and hangs up.
2. The helper must call the panel again in 10 to 40 seconds. The panel answers *System hello.*
3. The helper dials the following on the phone:
   # # AVM access CODE *

   The helper should now be able to hear you through the AVM.
4. Walk through the area the module covers while speaking at a normal conversation level.
5. Tell the helper to dial a **1** and speak to you. To return to listen mode, the helper dials a **3**.
6. When testing is complete, have the helper dial **99** and hang up.

Central Station Testing

You can also use the central station to test the module.

To test the module from the central station:

1. Inform the central station that you will be sending an alarm and testing an AVM.
2. Give them the programming selections you made for the panel.
3. Use a touchpad panic button to initiate an auxiliary alarm.
4. The central station operator waits for the alarm to be reported and initiates an audio session.
5. Walk through the AVM area of coverage while speaking at a normal conversation level.
6. Have the operator speak to you.
7. When testing is complete, the operator will end the session.

Sound Volume

The AVM microphone volume is automatically controlled and is not adjustable. The speaker volume is preset to full volume.

If It Doesn't Work

AVM Communication failure usually occurs because of panel programming errors. Check the programming selections you made at the panel.

Specifications

Compatibility: UltraGard and Custom Versions

Power Requirements: 12 VDC, 10 mA (maximum)

Dimensions: 6.9" L x 4.9" H x 2.5" D

Color: Belgian Grey

Notices

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

1) This device may not cause harmful interference.
2) This device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by Interactive Technologies, Inc. can void the users' authority to operate the equipment

ITI

WIRELESS

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Automation
Access Control

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