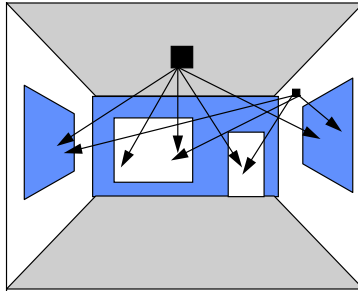# SIM

SECURITY IN MOTION

SIM-05

SHOCK AND GLASS BREAKE DETECTOR

CE

INSTALLATION INSTRUCTIONS
P/N 7107527 Rev A

DETECTOR PATTERN COVERAGE

The detector offers flexible installation. It can be either ceiling mounted or wall mounted as shown in the figure above.
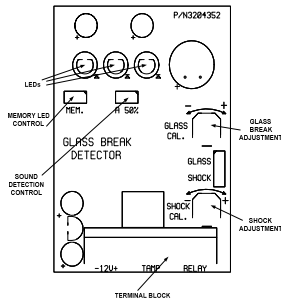
- If heavy blinds or curtains cover the glass, you must locate the detector behind the blinds on the window frame or above it, otherwise the blinds might block the sound. Make sure to test the unit thoroughly for proper detection.
- Install the detector in a direct line of sight with the protected glass.
- Do not mount the unit in front of air ducts, or close to bells (measuring 0.5m (or larger) in diameter).
- For a few protected glasses in one room, locate the detector in optimal distance from them to achieve the best detection.

SPECIFICATION

Sensor	Microphone Electro Condenser
Power Input	9 - 16 Vdc
Current Consumption	Standby: 22mA at 12Vdc Active: 25mA at 12Vdc
Detection Range	10m, Adjustable
Mounting	Ceiling or Wall
Alarm Output Relay	N.C 50mA/24Vdc with 27 Ohm in line resistor
Tamper Switch	N.C 50mA 24Vdc with 10 Ohm in line resistor
Operating Temperature	-20°C to 50°C
Operating Humidity Range	95% max relative non condensing
Storage Temperature	-30°C to 70°C
RFI Protection	30V/m 10 -1000MHz
EMI Protection	50,000V electrical Interference from lightning
Dimensions	78mm x 51mm x 21mm

INSTALLING THE DETECTOR

PCB LAYOUT

P/N3204352

LEDs

MEMORY LED CONTROL

MEM.

A 50%

GLASS BREAK DETECTOR

SOUND DETECTION CONTROL

GLASS CAL.

GLASS BREAK ADJUSTMENT

GLASS SHOCK

SHOCK CAL.

SHOCK ADJUSTMENT

-12V+   TAMP   RELAY

TERMINAL BLOCK

1. Use a small screwdriver to push the prong on top of the case and open the case.
2. Snap out the detector PCB.
3. Insert the wires through the wiring hole (B).
4. Use the mounting holes (A) to mount the detector.
5. Connect the wires to the terminal.(See Terminal Connections)
6. Reinstall the detector PCB.
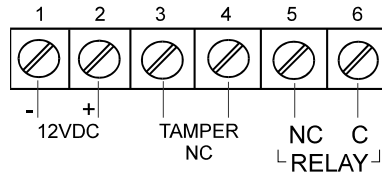7. Close the case.

JUMPERS (FIG. 4)

- **JP1** - Shock / Glass selector for detection calibration.
- **JP2** - Memory LED control.
- **JP3** - Reduces the sensitivity of sound detection by 50%.

WIRE REQUIREMENTS

Use #22 AWG (0.5mm) or wires with a larger diameter. Use the following table to determine required wire gauge (diameter) and length of wire between the detector and the control panel.

Wire Length	m	200	300	400	800
Wire Diameter	mm	.5	.75	1.0	1.5
Wire Length	ft	800	1200	2000	3400
Wire Gauge	#	22	20	18	16

WIRE CONNECTIONS

1	2	3	4	5	6
⊘	⊘	⊘	⊘	⊘	⊘
-	+		TAMPER	NC	C
12VDC			NC	RELAY	

Terminal 1 - Marked - (GND)
Connect to ground of the control panel.

Terminal 2 - Marked + (+12V)
Connect to the positive Voltage output of 9-16 Vdc source (usually from the alarm control unit).

Terminals 3 & 4 - Marked TAMPER
If a Tamper function is required connect these terminals to a 24hour normally closed protective zone in the control unit. If the front cover of the detector is opened, an immediate alarm signal will be sent to the control unit.

Terminals 5 & 6 - Marked RELAY
These are the output relay contacts of the detector. Connect to the control at zone input.

GLASS BREAK ADJUSTMENT

To adjust the glass break setting (increase/decrease sensitivity) place the jumper JP1 according the GLASS marking (connecting the middle pin with the upper pin) - Green LED is constantly ON.

Now you can adjust the sensitivity by rotating the upper potentiometer (marked as GLASS CAL.).

Operate the Sound Break Simulator and rotate the potentiometer clock-wise to increase sensitivity, and counter-clock-wise to decrease sensitivity until the Yellow and Red LED's are illuminating for each glass break sound.

Remember that rotating the potentiometer will have no effect upon the settings if the middle pin of JP1 is not connected to the upper pin.

Note
When the jumper is set for GLASS adjustment, only the high frequency sound of breaking glass is detected

SHOCK ADJUSTMENT

To adjust the shock setting (increase/decrease sensitivity) place the jumper JP1 according the SHOCK marking (connecting the middle pin with the lower pin) - Yellow LED is constantly ON.

Now you can adjust the sensitivity by rotating the lower potentiometer (marked as SHOCK CAL).

Hit gently on the protected glass and rotate the potentiometer clock-wise to increase sensitivity, and counter-clock-wise to decrease sensitivity until the Green and Red LED's are illuminating for each hit.

Remember that rotating the potentiometer will have no effect upon the settings if the middle pin of JP1 is not connected to the lower pin.

Note
When the jumper is set for SHOCK adjustment, only the low frequency of the shock signal prior to glass breakage is detected.

MEMORY FUNCTION

The alarm memory function allows the identification of an alerting detector out of multiple detectors connected to one (or the same) zone of the control panel.
To enable this function, Set ON jumper JP2 (MEM) (connected on both pins)
In case of an alarm, the Red LED will stay ON until memory function is reset.

To reset the memory function, switch OFF (disconnect) the voltage wire (+12V) from the TERMINAL BLOCK for minimum 15 seconds then switch on (reconnect) voltage wire (+12V). (The control panel key ON/OFF can be used for this application if it control the voltage (+12V).

SENSITIVITY SETTING

For some installations you may find that VIG is too sensitive. Use JUMPER JP3 to decrease sensitivity to 50%.
JP3 OPEN - 100% sensitivity
JP3 CONNECTED - 50% sensitivity