

PATROL – 601 «QUAD PIR»

DIGITAL COMBINED CURTAIN PIR & GLASS BREAK DETECTOR

INSTALLATION INSTRUCTION



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GSN Electronic Company Ltd.

FEATURES.

- Excellent light immunity – no less than 10000 Lux.
- High RFI & EMI immunity.
- Two microphones for the frequency separation of sound signals: Shock/Glass breakage.
- Two optoelectronic switch relays: for PIR detector and Glass Break detector.
- Two independent test modes: for the adjustment and for the testing of the glass break detector.
- Two sensitivity regulators: for PIR detector and Glass Break detector.
- Detection range of PIR detector – 15m.
- Detection range of Glass Break detector – 15m.
- The installation height – up to 10m.
- «QUAD» PIR sensor.
- Digital mathematical algorithm of signal processing.
- Automatic microphone overload protection.
- Ideal protection of all known glass types.
- Elegantly designed to blend into any decor.

DESCRIPTION.

The «PATROL-601» is a combination of PIR and acoustic glass break detectors.

The PIR detector analyzes the environment and detects the person's motion crossing the infrared beam.

The acoustic glass break detector identifies the sound signals of glass breakage.

For creating an alarm the PATROL-601 must register any of the alarm signals coming either from PIR detector or from glass break detector.

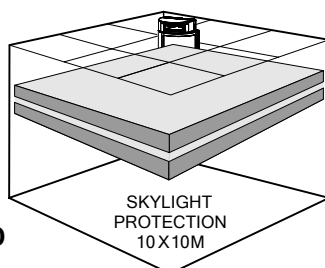
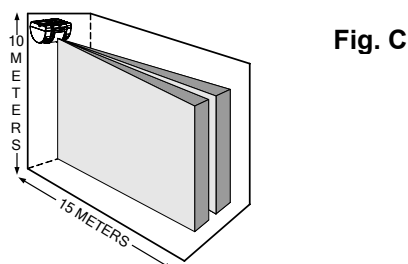
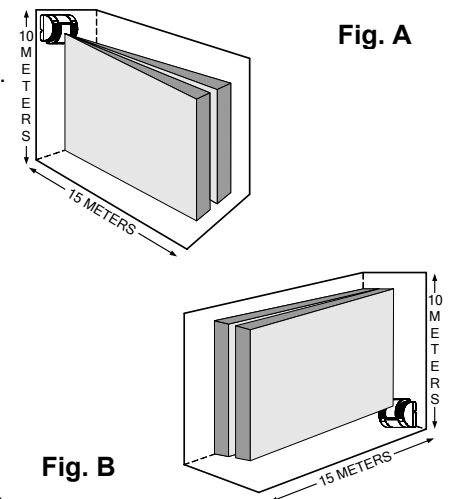
The alarm will occur when the relay contacts of PIR detector or glass break detector open for 3 seconds.

MOUNTING LOCATION.

The «PATROL-601» can be installed on the wall or on the ceiling (see the figures A - D). The maximum mounting height is 10m. Select the mounting location so that the expected motion path of an intruder will cross the curtain pattern. For the wall or ceiling mounting install the detector so that the coverage pattern will provide the solid curtain to the show windows, glass doors, etc (Figure A, B, C). For the skylight or ceiling protection install the detector so that the coverage pattern will be parallel to the floor (Figure D).

NOTE! If heavy blinds or curtains cover the glass, locate the detector so that the blinds will not block the sound.

«PATROL-601» VARIOUS MOUNTING LOCATIONS.



PIR ADJUSTMENT.

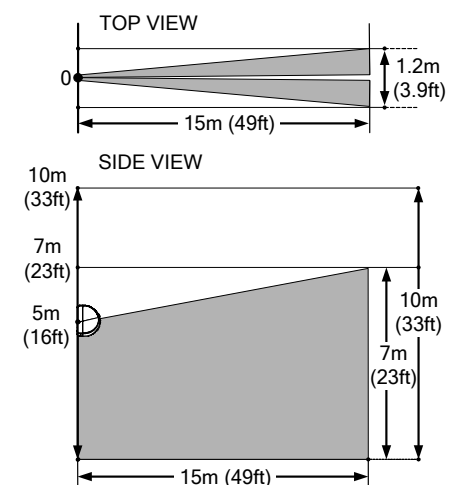
1. Use the **1 PULSE** operation mode (Jumper W2) for premises with the stable environment.

Use the **2 PULSE** operation mode (Jumper W2) for locations with unstable environment – thermal or other streams of air, vibration, etc.

2. Use the trimmer marked “PIR SENSITIVITY” to adjust the sensitivity of the PIR detector according to the certain surround conditions.

3. Test the PIR detector's operation on person's motion.

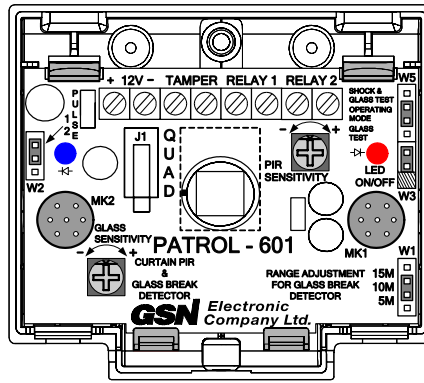
DETECTION PATTERNS.



GLASS BREAK DETECTOR ADJUSTMENT.

1. Set the jumper **W1** according to the required zone of the acoustic signals detection (5m, 10m or 15 meters).
2. Set the jumper **W5** to the "GLASS TEST" position.
3. Simulate the high frequency signal of the glass breakage by using the glass break simulator - the blue LED will light steadily, the red LED will flash with each simulator activation.

Use the trimmer marked "GLASS SENSITIVITY" for sensitivity adjustment of the acoustic glass break detector.



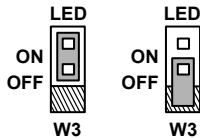
TERMINALS "RELAY 1" – relay output (N.C.) of the PIR detector.

TERMINALS "RELAY 2" – relay output (N.C.) of the glass break detector.

SHOCK & GLASS BREAK TEST.

1. Set the jumper **W5** to the "SHOCK & GLASS TEST" position.
2. Replace the cover.
3. Tap gently the protected glass and activate the glass break simulator at the same time. The relay output of the glass break detector will open for 3 sec. The red LED will be ON.
4. Use the trimmer marked "GLASS SENSITIVITY" if more sensitivity is required.
5. After testing, set the jumper **W5** to the "OPERATING MODE" position.

LED INDICATION. THE RED LED.



Jumper **W3** enables/disables the alarm LED.

Jumper **W3** is **ON** – LED will be activated on alarm.

Jumper **W3** is **OFF** – LED will be disabled on alarm.

THE BLUE LED.

The blue LED blinks – the acoustic detector analyzes the sound signals.

«PATROL-601» OPERATING MODES.

1. "GLASS TEST" MODE.

The PIR detector is off; the RELAY 1 and RELAY 2 are open.

2. "SHOCK & GLASS TEST" MODE.

The PIR detector is off, the RELAY 1 is open and the RELAY 2 is closed.

3. "OPERATING MODE".

The PIR and Glass Break detectors are operating; the RELAY 1 and RELAY 2 are closed.

PROTECTED GLASS TYPES.

Glass Type	Min. Thickness	Max. Thickness
Plate	2 mm	14 mm
Tempered	3 mm	10 mm
Patterned	3 mm	12 mm
Laminated	3.2 mm	14.3 mm
Wired	5 mm	6.4 mm
Coated (Triplex)	2,5 mm	8.4 mm
Sealed Insulating	3.2 mm	6.4 mm

The detection range of the acoustic glass break detector is reduced up to 10meters for the following glass types:

- 1) Laminated
- 2) Wired
- 3) Coated (Triplex)
- 4) Sealed Insulating.

TECHNICAL SPECIFICATIONS.

Detection speed range:.....	0.20-3.0m/sec
Power input:.....	8.5-16Vdc
Current consumption in stand-by mode:.....	20mA
In alarm mode with LED on:.....	21mA
In alarm mode with LED off:.....	16mA
Pulse mode:.....	1,2
Alarm period:.....	3sec
Warm up period:.....	50 ± 2sec
Reset time:.....	5 ± 1sec
Relay output:.....	NC;60V;120mA;17Ω

PIR detection range:.....	15m
Glass break detection range:.....	15m x 180°
Installation height:.....	up to 10m
Light immunity no less than:.....	10000 Lux
Operating temperature range:.....	- 30°C + 50°C
Storage temperature range:.....	- 50°C + 80°C
RFI immunity:.....	30 V/m at a frequency range 10MHz-1000MHz
EMI immunity:.....	50 000V
Dimensions:.....	75x66x49mm
Weight:.....	106gr.

WARRANTY.

GSN Electronic Company Ltd. warrants the product to be free from defects in materials and workmanship under condition of observance of service regulations and to be repaired or replaced under absence of mechanical damages for a limited period of five years from the date of sale.

