

Activ8 BG

PROFESSIONAL PASSIVE INFRARED SHOCK & BREAKAGE DETECTORS With PET IMMUNITY

INSTALLATION INSTRUCTIONS

P/N 7101493 REV. A A.Y.

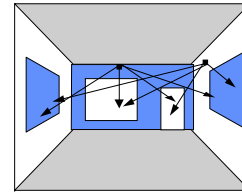
PRODUCT DESCRIPTION

A new generation of professional movement spread spectrum analyzing PIR, Shock & Glass Breakage detectors.

The detector provides an analysis of environmental conditions through the entire movement spread frequency spectrum. It listens for sounds of breaking glass, which produces two sequential signals of different frequencies "SHOCK" and "GLASS". The unique phased frequency detection circuitry of this detector allows detection of both shock signal and the strong signal of glass breakage creating a false alarm free detector.

The detector does not need to be attached to the window, providing volume protection, and allowing you to protect several windows with one detector.

MOUNTING THE DETECTOR



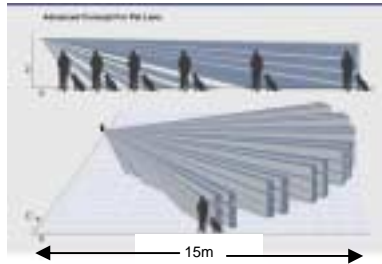
The Activ8 BG provides immunity up to 25Kg. For better immunity avoid installation in areas where pets can reach upwards.

Activ8 BG FEATURES

FEATURES

- Quad (Four element) pyrosensor.
- Two independent relay outputs for GLASS/SHOCK and PIR alarm signals.
- VLSI SMD technology.
- PIR sensitivity adjustment.
- GLASS sensitivity adjustment.
- SHOCK sensitivity adjustment.
- Volume protection.
- Automatic temperature compensation.
- Height installation calibrations free.
- Environmental immunity.
- The Activ8 BG provides *pet immunity* up to 25Kg. Pet active below 1m.

DETECTION PATTERN



TYPICAL INSTALLATION

SELECT MOUNTING LOCATION

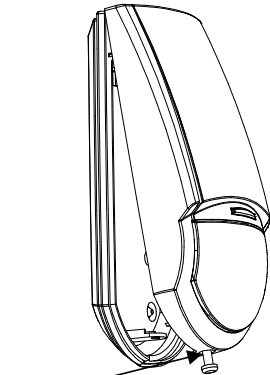
Choose a location in front of the protected windows, in direct line of sight within 4.5m. In case of more than one window, place the detector in the center area facing the windows, make sure that this location will be most likely to intercept an intruder, that may cross the PIR beams. See PIR detection beams.

See SHOCK and GLASS detection area. 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.

AVOID THE FOLLOWING LOCATIONS

- * Facing direct sunlight.
- * Facing areas subject with temperature changes.
- * Areas with air ducts or substantial air flows.
- * Facing metal doors.
- * Close to door entrance bells measuring 2" (or larger) in diameter.

REMOVAL OF FRONT COVER

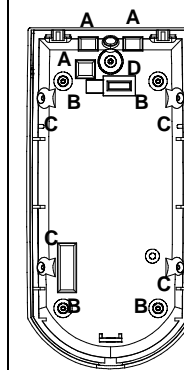


Unscrew the holding screw and open base

1. To remove the front cover, unscrew the holding screw and gently raise the front cover.
2. To remove the PC board, carefully unscrew the holding screw located on the PC board.
3. Break out the desired holes for proper installing.
4. The circular and rectangular indentations at the bottom base are the knockout holes for wire entry. You may also use mounting holes that are not in use for running the wiring into the detector. (For option with bracket - lead wire through the bracket)
5. Mount the detector base to the wall, corner or ceiling. (For option with bracket install bracket).
6. Reinstall the PC board by fully tightening the holding screw. Connect wire to terminal block.
7. Replace the cover by inserting it back in the appropriate closing pins and screw in the holding screw.

MOUNTING DETECTOR BASE

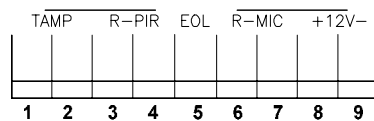
KNOCKOUT HOLES



- A. Wire access holes
- B. Use for flat wall mounting
- C. Corner mounting - use all 4 holes. Sharp left or right angle mounting - use 2 holes (top and bottom)
- D. For bracket mounting

DETECTOR INSTALLATION

TERMINAL BLOCK CONNECTIONS



Terminals 1 & 2 - Marked "TAMPER"

If a Tamper function is required connect these terminals to a 24-hour 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 3 & 4 - Marked "R-PIR"

These are the output PIR relay contacts of the detector. Connect to a normally closed zone in the control panel.

Terminal 5 - Marked "EOL" - End of line option.

Terminals 6 & 7 - Marked "R-MIC"

These are the output MICROPHONE relay contacts of the detector. Connect to a normally closed zone in the control panel.

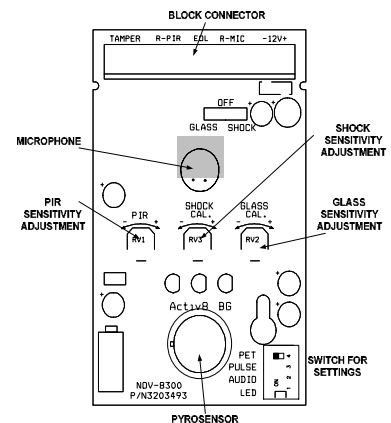
Terminal 8 - Marked "+" (+12V)

Connect to a positive Voltage output of 8.2 -16Vdc source (usually from the alar control unit)

Terminal 9 - Marked "-" (gnd)

Connect to the negative Voltage output or ground of the control panel.

CIRCUIT LAYOUT



SETTING UP THE DETECTOR

PIR SENSITIVITY ADJUSTMENT

SWITCH 3 OF DIP-4 SWITCH FOR SETTINGS
"PULSE" - provides sensitivity control of PIR according to the environment.
Position Left - "On" - High sensitivity
 For stable environments.
Position Right - "OFF" - Low sensitivity
 For harsh environments.

POTENTIOMETER RV1 "PIR" - adjustment according to protected area range.

For high-risk locations, the sensitivity should be adjusted close to MIN (9%). In low risk situations, the sensitivity should be adjusted closer to MAX (100%) factory set to 54%.
 Always walk test and re-adjust if required.

LED INDICATION OF ALARM SIGNAL SWITCH 1 OF DIP-4 SWITCH FOR SETTINGS
"LED" - provide control of Alarm signal LED indication.
Position Left - "On" - LED enable.
Position Right - "OFF" - LED disable.

SOUND SENSITIVITY ADJUSTMENT SWITCH 2 OF DIP-4 SWITCH FOR SETTINGS
"AUDIO" - provide control of sound detection sensitivity.
Position Left - "On" - reducing the sensitivity of sound detection by 50%. (Use in small room)
Position Right - "OFF" - LED disable.

PET IMMUNITY SETTING SWITCH 4 OF DIP-4 SWITCH FOR SETTINGS
"PET" 15kg - 25kg
Position Left "ON" Immunity to PET up to 15 kg
Position Right "OFF" Immunity to PET up to 25 kg

TEST PROCEDURES.

Wait for one minute warm up time after applying 12-Vdc power. Conduct testing with the protected area cleared of all people. Make sure to test the unit thoroughly for proper detection.

Walk test

1. Remove front cover.
Set "PULSE" to "ON" position, and set "LED" to "ON" position.
2. Replace the front cover.
3. Start walking slowly across the detection area.
4. Observe that the red led lights whenever motion is detected.
5. Allow 5 sec. between each test for the detector to stabilize.
6. After the walk test is completed, you can set the "LED" to "OFF" position.

NOTE:

Walk tests should be conducted, at least once a year, to confirm proper operation and coverage of the detector.

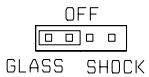
ADJUSTMENT

SHOCK / GLASS ADJUSTMENT

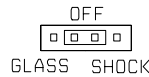
Use only during testing and setting



SHOCK - for adjustment of the low frequency sensitivity with potentiometer "SHOCK"



GLASS - for adjustment of the high frequency sensitivity with potentiometer GLASS



OFF - for regular operation

GLASS BREAK ADJUSTMENT

To adjust the glass break sensitivity, place the jumper below the GLASS marking. Green (SHOCK) LED is constantly ON.

Now you can adjust the sensitivity by rotating the GLASS potentiometer.

Operate the Sound Break Simulator* near the protected window and rotate the potentiometer GLASS clock-wise to increase sensitivity, and counter-clock-wise to decrease sensitivity until the Yellow and Red LEDs are illuminating for each glass break sound.

Note:

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

*It is recommended to use GLASS-BREAK Simulator FG-701 (CROW p/n 004001)

SHOCK ADJUSTMENT

To adjust the shock setting (increase/decrease sensitivity) place the jumper below the SHOCK - Yellow (GLASS) LED is constantly ON.

Now you can adjust the sensitivity by rotating the potentiometer SHOCK.

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 LEDs are illuminating for each hit.

Note:

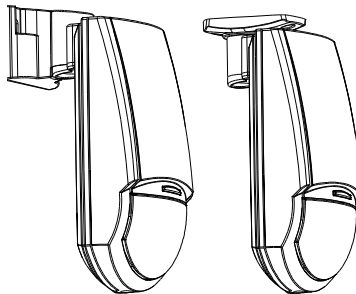
When the jumper is set for SHOCK adjustment, only the low frequency of the shock signal prior to glass breakage is detected.

SHOCK/GLASS TEST PROCEDURE

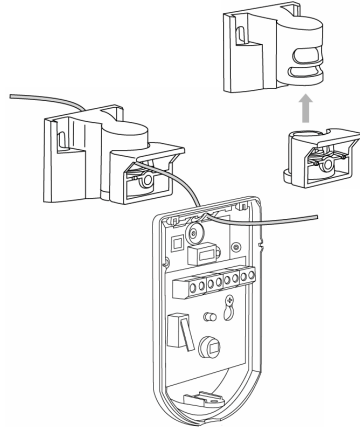
FINAL TESTING

- Make sure to set jumper "GLASS/SHOCK" in position OFF. When the jumper is in this position, the detector will detect both shock and sound frequencies.
- To ensure maximum protection against false alarms, activate any device in the area, which might automatically cycle pumps, generators, heating/air conditioning units, etc. If the cycling devices trigger an alarm, mount the unit in a different location.

WALL AND CEILING INSTALLATION OPTIONS



BRACKET INSTALLATION



TECHNICAL SPECIFICATION

Detection Method	Quad (Four element) PIR & electret microphone
Detection Speed	0.15 - 3.6 m/sec
Power Input	7.8 - 16 Vdc
Current Draw	Alarm PIR :16.5mA; Alarm Shock & Glass 22mA; Alarm all: 18mA Standby: 16.5 mA
BI Directional Temperature Comp.	YES
Pulse Count	1, AUTO
Alarm Period	2 sec
Alarm Output	N.C 28Vdc 0.1 A with 10 Ohm series protection resistors
Tamper Switch	N.C 28Vdc 0.1A with 10 Ohm series protection resistor - open when cover is removed
Warm Up Period	60 sec
Operating Temperature	-20°C to +50°C
RFI Protection	30V/m 10 - 1000MHz
EMI Protection	50,000V of electrical interference from lighting
Visible Light Protection	stable against halogen light 2.4m (8ft) or reflected light
Detection range	Glass up to 10m (90°); PIR up to 15m (WA lens)
LEDs indicator	Yellow LED (GLASS) - glass break signal for testing & adjustment Green LED (SHOCK) - shock signal for testing & adjustment Red LED (ALARM) - alarm signal: Flashing light - glass & break detection or glass & shock & PIR detection Constant light - PIR detection
Dimensions	121mm x 60mm x 37mm
Weight (inc. battery)	110 gr.

For Technical Support, please
call 01268 563 247.