

## Wirefree Passive Infra-Red Movement Detectors

### Installation and Operating Instructions

**These instructions should be read in conjunction with your System Installation and Operating Manual and be retained for future reference.**

#### Introduction

These Passive Infra-Red Movement Detectors are designed for use with Response Wirefree Intruder Alarm systems operating at 433MHz only.

PIR detectors are designed to detect movement in a protected area by detecting changes in infra-red radiation levels caused for example when a person moves within or across the devices field of vision. If movement is detected an alarm signal will be generated, (if the system is armed and the alarm zone active).

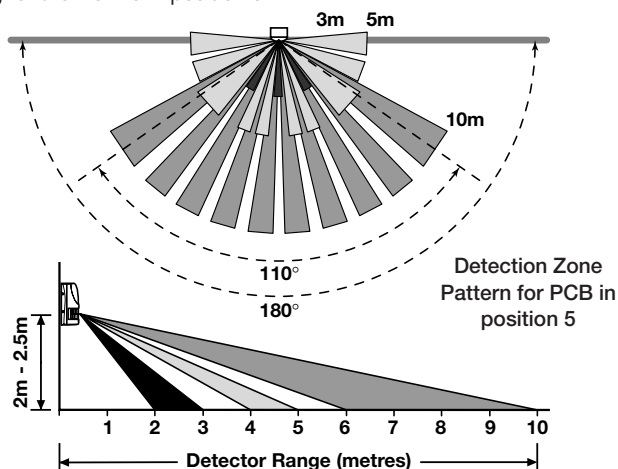
**Note:** PIR detectors will also detect animals, so ensure that pets are not permitted access to areas fitted with Passive Infra-Red Movement Detectors when the system is armed.

The PIR Detector is powered by a PP3 Alkaline battery which under normal conditions will have an expected life in excess of 1 year. When the battery level drops, with the PIR in normal operation mode and the battery cover fitted, the LED behind the detection window will flash. When this occurs the batteries should be replaced as soon as possible.

#### Positioning the PIR Movement Detector

The PIR Movement Detector is suitable for mounting in dry interior locations only.

The recommended position for a PIR Movement Detector is in the corner of a room mounted at a height between 2 and 2.5m. At this height, the detector will have a maximum range of up to 12m with a field of view of 110°. The Position of the PCB inside the PIR can be set to 5 different positions to adjust the range of the detector. Setting the PCB in position 3 will reduce the range to 9m approximately, with position 1 providing a range of 6m approximately. The recommended position setting for the PCB is in position 5.



When considering and deciding upon the mounting position for the detector the following points should be considered to ensure trouble free operation:

1. Do not position the detector facing a window or where it is exposed to or facing direct sunlight. PIR Movement Detectors are not suitable for use in conservatories.
2. Do not position the detector where it is exposed to draughts.

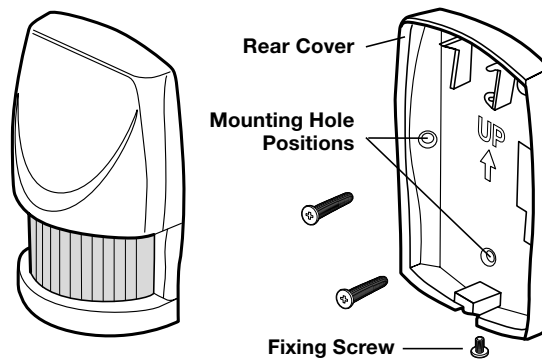
3. Do not position the detector directly above a heat source, (e.g. fire, radiator, boiler, etc).
4. Where possible, mount the detector in the corner of the room so that the logical path of an intruder would cut across the fan detection pattern. PIR detectors respond more effectively to movement across the device than to movement directly towards it.
5. Do not position the detector in a position where it is subject to excessive vibration.
6. Ensure that the position selected for the PIR detector is within effective range of the system, (refer to System Installation and Operating Manual).

**Note:** When the system is Armed, household pets should not be allowed into an area protected by a PIR Detector as their movement would trigger the PIR and trigger an alarm.

#### Installing the PIR Movement Detector

**Ensure that the system is in Test/Service Mode.**

1. Undo and remove the fixing screw from the bottom edge of the PIR. Carefully pull the bottom edge of the detector away from the rear cover and then slide down to release the top clips.
2. Carefully drill out the required mounting holes in the rear cover using 3mm drill according to whether the unit is being mounted in a corner or against a flat wall.

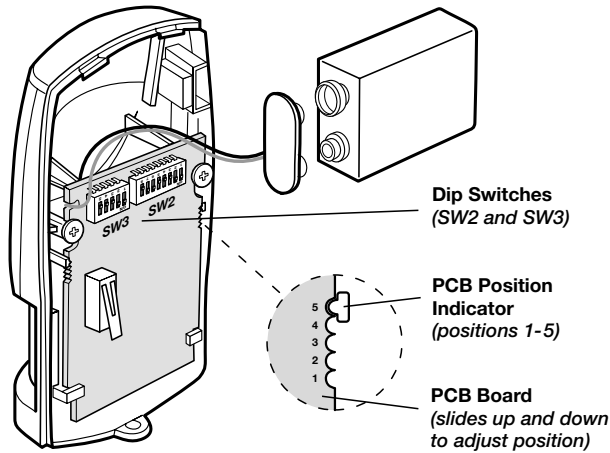


3. Using the rear cover as a template, mark the positions of the fixing holes on the wall.
4. Fix the rear cover to the wall using the two 18mm No.4 screws and 25mm wall plugs, (a 5mm hole will be required for the wall plugs). Do not over-tighten the fixing screws as this may distort or damage the cover.
5. Configure the PIR detector as described below. Remember that on initial installation that the device needs to be tested and should therefore be configured in Walk Test Mode.
6. Check that the detector PCB is located and set in the correct position to give the detection zone pattern required.
7. Check that the detector PCB is located and set in the correct position to provide the required detection range. To adjust the PCB position simply slide it up or down ensuring that the location legs are aligned with the required position number marked on the board.
8. To refit the PIR detector to the rear cover, offer the detector up to the wall bracket and locate the clips in the top edge into the rear cover. Push the lower edge of the detector into place and refit the

fixing screw in the bottom edge of the PIR to secure in position. Do not over-tighten the fixing screws as this may damage the casing.

## Configuring the PIR Movement Detector

Located on the PCB of the PIR Detector are two blocks of DIP switches (SW2 and SW3).



- DIP switches SW2 (labelled 1-8) are used to set the House Code for the PIR Detector and must be set to the same ON/OFF combination as all other system devices.
- If used with a "Siren Controlled" alarm system (i.e. a system without a separate internal Control Panel) DIP switches 1-3 of SW3 must be set as follows:

DIP 9	DIP 10	DIP 11
ON	ON	OFF

otherwise these DIP switches are used to configure the alarm zone which the detector operates on as follows:

	DIP 9	DIP 10	DIP 11
Zone 1	OFF	OFF	OFF
Zone 2	OFF	OFF	ON
Zone 3	OFF	ON	OFF
Zone 4	OFF	ON	ON
Zone 5	ON	OFF	OFF
Zone 6	ON	OFF	ON

- DIP 4 of SW3 is used to configure the PIR Detector for walk test mode, which allows the operation of the detector to be checked

during installation without triggering a Full Alarm.

ON	Walk Test mode
OFF	Normal operation

**Note:** On initial installation the detector should be configured into Walk-Test mode ready for testing.

- The PIR Detector incorporates an anti-false alarm feature designed to compensate for situations where the detector may be affected by environmental changes, (e.g. insects, air temperature, etc). This feature is called "Pulse Count" and may be selected for 1 or 2 pulse detection.

The recommended setting is for 1 pulse detection. However, in cases of extreme environmental problems or if unattributable false alarms are experienced, it may be necessary to select 2 pulse detection.

Set the required pulse count using DIP 5 of SW3 as follows:

ON	1 pulse detection
OFF	2 pulse detection

**Note:** The higher the Pulse Count the more movement will be necessary before the PIR detector will trigger the alarm.

- Connect the PP3 Alkaline battery to the battery clip.  
**Note:** When the battery is connected the LED behind the lens will flash for 2-3 minutes until the PIR has stabilised when the LED will then stop flashing and turn OFF.

## Testing the PIR Movement Detector

**Ensure that the system is in Test/Service Mode.**

With the PIR detector configured in Walk Test mode and mounted in position on the wall, allow 2-3 minutes for the detector to stabilise before commencing the Walk test.

Walk into and move slowly around the protected area, each time the detector senses movement the LED behind the lens will flash, (in normal operation the LED will not flash on movement detection). If necessary adjust the detection range by changing the mounting position of the PCB within the PIR housing.

**Note:** When the detector is fully installed i.e. battery cover is refitted; the unit will not detect movement for approx. 40 seconds after each activation.

It is recommended that the operation of the detector is also tested with the alarm in normal operating mode to ensure that the detector will successfully trigger a Full Alarm condition and that the Detector is operating on the correct zone (if installed on a multi zone alarm system). Refer to your System Installation and Operating Manual.

## Guarantee

This product is guaranteed for one year from the date of purchase against faulty materials and workmanship. We will repair or replace any faulty product. No liability can be accepted for any problems caused by fair wear and tear, buyers negligence, improper fitting or use, wilful or accidental damage, or any consequential loss or damage howsoever caused. This guarantee does not affect your statutory rights and is valid in the UK and EIRE only.

If an item develops a fault, the product must be returned to the "Response Technical Sales Services Department" at the address below in adequate packing with:

- 1) A copy of your original invoice/receipt and
- 2) A full description of the fault.

For security, Recorded or Registered post is recommended.



Response The Arnold Centre, Paycocke Road, Basildon, Essex. SS14 3EA.