

# ESD-1,2&3 WIRELESS PIR DETECTOR

## Installation & operating instructions

### INTRODUCTION

#### HOW THE ESD WORKS

The ESD is a battery operated PIR detector with a built in radio transmitter.

Each time the ESD detects movement it transmits a coded signal, which will operate easyswitch receivers. The code also contains information, which tells the receiver if it is day or night and also how long to switch the load on for.

#### TYPES OF RECEIVERS

**ESR-1.** 240 volt operated ON/OFF switching receiver with change over contacts.

**ESR-2.** 12 volt operated ON/OFF switching receiver with change over contacts.

**ESA-1.** Mains powered plug in adaptor for switching table lamps remotely.

**ESB-1.** Plug in bleeper.

#### BEGINNING THE INSTALLATION

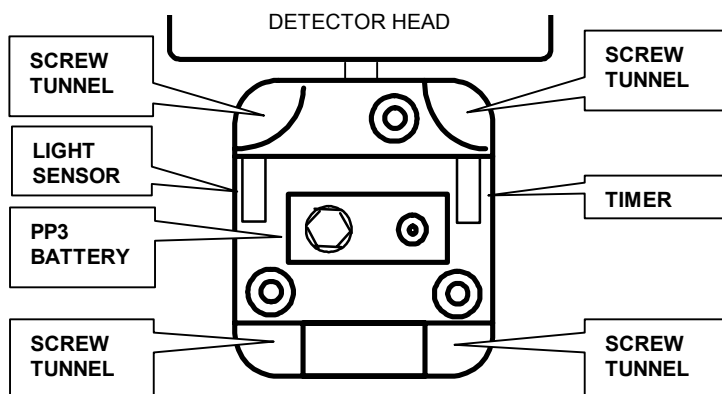
There are two important considerations to remember when positioning the ESD.

*Firstly* there should be minimum obstruction between the ESD and the receiver. Any obstruction such as trees and especially buildings will reduce the radio transmission range.

*Secondly*, the ESD should be positioned for best detection and minimum false activations. To achieve this, fit the detector at the correct height (2.5 metres) and avoid reflective surfaces such as windows, water, cars etc.

Fix the ESD to the wall using 4 x No6 x3/4" countersunk screws which should be inserted into the four screw fixing tunnels in the corners of the battery compartment as shown.

Adjust the head so that it covers the required area by twisting it. The head can then be locked in position by tightening the two screws at the rear of the detector.



#### BATTERY COMPARTMENT

The battery compartment is accessed by unscrewing the three front cover screws and removing the cover. With the cover removed, the light sensor and timer controls are accessible. This is where the pp3 9 volt battery is housed and also where the screw fixing tunnels are located.

The **TIMER** adjuster will set the "lights on time" and is adjustable from 5 seconds MIN to 10 minutes MAX.

The **LIGHT SENSOR** adjuster can be set to DAY to make an ON/OFF receiver work during daylight. If it is set to NIGHT, only an ESB-1 bleeper will work during daylight and all other receivers will work only at night. Do not turn the adjuster more than  $\frac{3}{4}$  of the way anti-clockwise.

NB: Light levels are taken as an average over the last two minutes and therefore you will not be able to simulate darkness by putting your hand over the lens.

## BATTERY LIFE

Use PP3 9 volt Alkaline or Lithium.

Because the ESD has very low power consumption when idle (typically 20 micro amps) it means that the battery will last for a long time. The battery life will depend upon the amount of activations but it is usual for a standard alkaline battery to last about eighteen months. In very busy locations where the ESD operates many times a day it is recommended that a lithium battery be used which has a much higher capacity.

## AERIAL

Fit the aerial to the small screw on the rear top centre of the detector. To achieve the best range results you will need to fit the ESD where it has the least amount of obstacles between it and the receiver. The aerial should be vertical for best results and the detector should be fitted at 2.5metres above the ground. The higher the receiver is placed above the ground the greater the range will be. Avoid fitting the ESD to metal cladding or near large metal objects, as this will also affect range.

## CODE SETTING

Each ESD detector has a fixed unique code, which has to be learnt by any receiver that is to operate with it.

1. Press the learn button on the receiver until the red learn led lights.
2. Now connect the battery to the ESD and observe the learn led which will flash twice indicating that it has successfully learnt the code. If the receiver has already learnt the code the led will not flash. The receiver can learn up to 16 detector and switches. (See receiver instructions)

## SET-UP NOTES

The ESD will transmit immediately the battery is fitted so have the receiver ready in learn mode as you do this.

Turn the timer adjuster to MIN and the light sensor adjuster to DAY.

Fit the aerial to the rear of the detector head.

The ESD can only be tested with the aid of a receiver. There is no visible indication from the detector.

Using an ESR-1, ESR-2 or ESA-1 receiver wired to lighting, walk about within the detection area and observe the lighting that will switch on for the minimum period (5 seconds).

If an ESB-1 is used, listen for a bleep each time detection occurs. When you are happy with the operation turn the light sensor adjuster anti-clockwise about  $\frac{3}{4}$  of it's travel. Do not turn fully anti-clockwise as it may never get dark enough to operate. Now turn the timer adjuster clockwise as required. Fully clockwise will give a time of 10 minutes. This timer will only affect ON/OFF receivers such as the ESR-1 and ESA-1. It will not affect the ESB-1 bleep duration. This is fixed at 4 seconds regardless.

## TECHNICAL DATA

Operating voltage      9 volts DC from a PP3 battery (not supplied)  
Enclosure                ABS UV stabilized IP55 weather resistant  
                                 Fully adjustable, left, right, up and down

Temperature            -10 to +40c

Detection patterns:

ESD-1                    15 metre by 90 degrees

ESD-2                    40 metre by 1 degree

ESD-3                    12 metre Horizontal Curtain

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