Friedland

SPECTRA WIREFREE

140º PIR Movement Detector/Transmitter

For easy installation and earlier detection

Instructions and Guarantee

6500

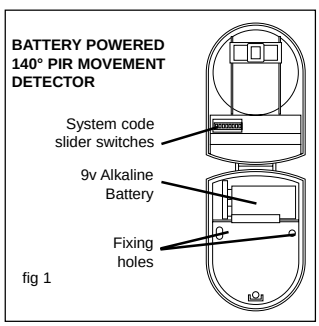


fig 1

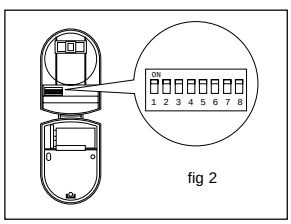
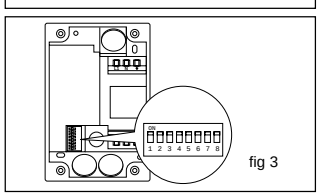


fig 2



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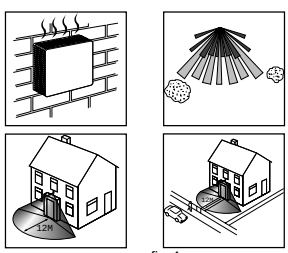
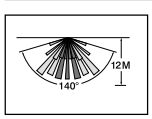


fig 4



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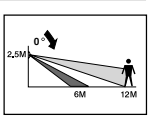

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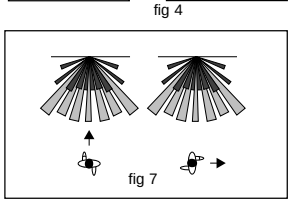
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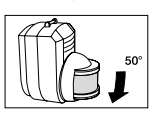

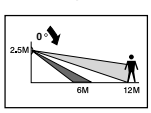

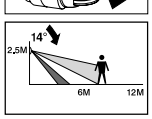

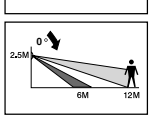

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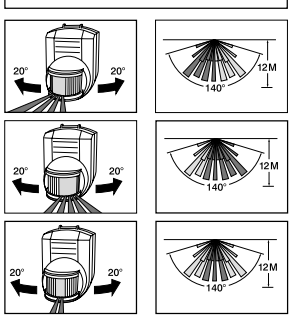
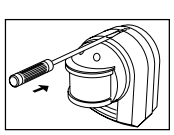


fig 9


fig 10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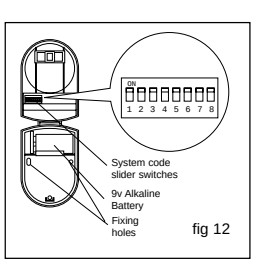
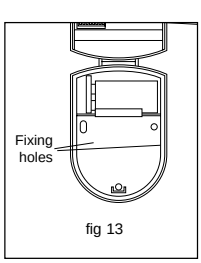


fig 12



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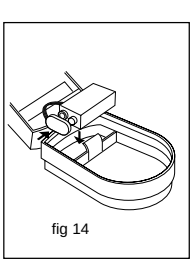
fig 14

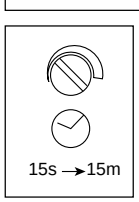

fig 15

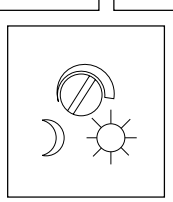
fig 16

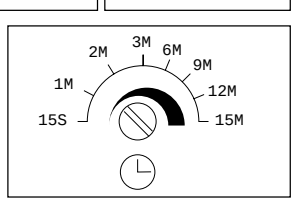

fig 17

1. SPECTRA WIREFREE PIR MOVEMENT DETECTOR

This PIR Movement Detector with radio transmitter is only for use with the Spectra Wirefree PIR Movement Detector and Receiver System. Use of an additional movement detector will allow approach from other directions to activate lighting connected to a Receiver Unit. The system code in this additional Detector must be set to the same system code as in the Receiver Unit.
There is no limit to the number of PIR Movement Detectors which can be used with one Receiver Unit.

2. PACK CONTENTS

1 wirefree (battery powered) 140° coverage PIR Movement Detector with built-in radio transmitter. (Requires 1 x PP3/6LR61 9V *Alkaline Battery)*
2 Slot-in PIR lens screening panels
2 Plastic wall plugs plus 2 securing screws

3. TOOLS YOU WILL NEED

Flat bladed screwdriver, cross-head screwdriver, electric hand drill, drill bit to suit wall plug dimensions.

4. SYSTEM CODING

The wirefree PIR detector communicates with its Receiver by means of a system code. This is to prevent activation by other systems - such as a neighbour's wirefree system, or your own additional but separate system.

THE SYSTEM CODE in the Detector must match that in the Receiver Unit (see figs 2 and 3). See fig 11 on page 5 for instructions on how to open the Dectector unit. Make a note of the Receiver Unit settings and, if necessary, simply move the slider-switches in the PIR Detector unit to match.

I M P O R-
T A N T : Mains electricity supply to the

5. PIR MOVEMENT DETECTOR FITTING INSTRUCTIONS

5.1. Where to position the PIR Movement Detector

- Position the wirefree PIR Detector anywhere within 50 metres of the Receiver Unit, but avoid mounting it on or near a large metal object, on something which is likely to move - such as a small tree or loose fence panel - or where the light can shine directly at the PIR Detector. Also avoid siting where the unit may detect any of the following: heat sources (extractor fans, tumble dryer exhausts, etc.), reflective surfaces (pools of water, white-painted walls, etc.), nearby overhanging branches (see fig 4).
- The ideal height to mount your PIR Detector is 2.5 metres, which makes the best use of the unit's detection zones as shown in the diagrams (see figs 5 and 6). Mounting the PIR Detector in a higher position (maximum 4 metres) may give a greater range, but the detection pattern will be less effective. The PIR Detector is much more sensitive to movement across its field of vision (see fig 7A) than movement directly towards it, so site the unit so that it looks across the normal approach to your property.
- The Wirefree PIR Movement Detector has a swivel sensor head to allow you to adjust the area of detection (see Testing Procedure in Section 6): tilting the head upwards will increase the detection distance, tilting it downward will reduce the detection distance. The sensor head will also turn to the left and right (see figs 8 and 9).
- You can further tailor the detection area to suit your needs by using the slot-in lens screening panels provided (see fig 10). To discover how much screening is needed, first obscure the PIR unit's lens with masking tape, progressively covering more of the lens until the required detection area is achieved. Then simply cut a piece of the plastic screening to cover the same area as the tape, remove the tape - being sure to remove any adhesive residue left behind - and slot the screening into the PIR Detector (see fig 10).

N.B. *If in normal conditions you find that something such as a tree or shrub is repeatedly activating the system, you can partially 'mask' the detector lens with electrical tape to stop the detector 'seeing' the disturbance. As a guide, the top half of the PIR detector lens deals with long-range detection, the bottom half is for short range. Alternatively, the PIR detector can be easily re-positioned in a more suitable location.*

5.2. Fitting the Wirefree PIR Movement Detector

NOTE: *Before fixing the PIR unit to the mounting surface, it is advisable to check that the system works correctly (i.e. that the transmitter and receiver are within radio range of each other) by temporarily fixing the PIR Detector in the chosen location.*

- Open the PIR Detector by inserting a small slotted screwdriver into the slot at the base of the unit. Push screwdriver gently to release catch and to allow front cover to be opened fully - the cover is hinged at the top (see fig 11).
- Check inside to identify the battery connector and the row of eight slider-switches (see fig 12).
- Make sure you have set the same code in the PIR Detector as in the Receiver Unit (section 4).
- Place the backplate of the unit in the desired position and mark the locations of the fixing holes (fig 13). Next drill the holes to the required depth and insert the wall plugs.
- Clip a 9V PP3 (6LR61) ALKALINE battery to the connector and place the battery in its holder (see fig 14).
- Fit the unit in place, close the cover and click it shut.

6. TESTING YOUR SYSTEM

Once your wirefree Detector is installed, test it by following the 'Walk Test' steps below.

1 .
Sel two adjustment controls on the underside of the PIR Detector as follows:

TIME - turn fully anticlockwise to min. (see fig 15)

LUX - turn fully clockwise to max. (see fig 16)

With these settings the system is in test mode and will work in full daylight. A small red light (LED) behind the PIR Detector lens will illuminate briefly each time movement in front of the PIR is detected.

2 .
Ensure mains power is being supplied to the Receiver Unit.

3 .
Walk across the detection area approximately 5 metres from the PIR Detector. As you walk through the first detection zone, the LED should light up. Now stand still until the LED goes out - this should take about 1 second. The light fitting wired to the Receiver Unit will also turn on for 3 seconds.

4 Start moving again. As you cross each zone the LED and light fitting should illuminate as in step 3.

5 .
Repeat steps 3 and 4, walking at various distances and angles to the unit. This will enable you to discover the detection pattern.

6 . If the detection area

7. SETTING FOR AUTOMATIC OPERATION

Having completed the 'walk test' procedure, you can set the unit for automatic operation as follows:

- Adjust the TIME control to the setting you require. This controls the length of time the security light stays on once activated, after all motion stops. The minimum time (control set fully anticlockwise) is about 15 seconds; the maximum (control set fully clockwise) is approximately 15 minutes. Set the control at whichever timing suits you between these limits. (see fig 17 for approximate position of time settings).

N . B
. Remember that the time you set relates to how long the lamp remains on after all motion stops. If someone triggers your lamp it will remain on for as long as that person keeps moving in the detection area, then continue to illuminate for the timing you have set after all motion stops.

- The 'LUX' control enables you to set the system to become active when a certain level of darkness has fallen each evening. Set the LUX by turning the control fully anticlockwise, and wait until darkness begins to fall. When it is dark enough for you to want the lamp to be operative, turn the LUX control clockwise slightly, move your hand slowly in front of the PIR, turn the LUX control a little more and repeat the procedure until the light activates. Leave the control set at this point.

8. BATTERY REPLACEMENT

The PP3 9 volt battery should provide the PIR Detector with around 18 months operation*. When the battery is nearing the end of its life - about 30 days before failure - the PIR Detector sends a message to the receiver, EACH TIME IT IS ACTIVATED so that THE LIGHT BRIEFLY TURNS ON, THEN OFF THEN ON AGAIN IN QUICK SUCCESSION. THIS NOTIFIES YOU TO CHANGE THE BATTERY.

As this 'change battery' message will not occur for some time and you may forget about it in the future, we have included a reminder sticker which should be positioned in a prominent place.

**Depending on the number of activations each day and the effect of low temperatures.*

9. CLEANING

Occasionally use a soft damp cloth to gently clean the PIR unit lens and plastic case. Take care not to accidentally move the detector head.

10. FAULT FINDING

If your wirefree system fails to work properly, complete the relevant test or tests which follow.

PROBLEM *Light does not operate when it should…*

…Ever Confirm that bulb, mains supply, and battery are operating correctly. *Also ensure that the system codes in each unit match,* and that the PIR is within the operating range of 50 metres. If all these are OK,

…Intermittently

…At night Although this is most likely to be an incorrect lux setting, first confirm that there is not another cause by following the next step.

TEST THE SYSTEM'S OPERATION

Carry out a 'Walk Test' (see section 6). This allows you to check that the PIR **is** functioning, **when** it is functioning and whether the Receiver is

TEST OK → **SOLUTION** Set timing control back as it was **and** set lux control to a 'brighter' setting than before. The conditions may have generally been too bright for the detector setting. An intermittent problem may also be due to occasional radio interference.

PROBLEM
PIR
The PIR 'view' may be obscured by objects that partially hide persons to be detected (e.g. posts, pillars). The PIR position or sensor alignment

→ **SOLUTION** Try repositioning or adjusting the angle or direction of the PIR

PROBLEM
PIR detects effectively but light doesn't operate
Radio transmission is not being received due to distance or obstructions or radio interference. Also large metal objects (including vehicles) close to the Detector Transmitter or Receiver Unit can

→ **SOLUTION** Try repositioning the detector to allow a stronger signal to reach the receiver.

PROBLEM	SOLUTION
Light stays on continually at night.	■ The PIR Detector may be suffering from false activation. Check this by completely covering the Detector's lens with a thick cloth, masking tape or a piece of cardboard. This will stop the Detector 'seeing' anything. If the Detector now lets the light switch off after the set time and does not light it again, this indicates that the sensor has been picking up movement within its range. Slightly adjust the position/angle of the PIR Detector to solve the problem. Masking the area of the lens corresponding to the location of the interference is another solution; and since the PIR Detector is wirefree, even moving it to a new location is easy.
PIR Detector activates the light in daytime.	■ The level of light at the Detector may be too low for the current photocell LUX setting, activating the unit as though it were night-time. In normal daylight, adjust the LUX control slightly anticlockwise. Wait outside the detection area until the light goes out, then re-enter it. If the PIR Detector still activates, the LUX setting is still too high. Adjust and test again until the unit stops activating the light.
Detection range varies from day to day.	■ The PIR Detector operates by sensing temperature differences. On a cold winter's night, body heat stands out more contrastingly from the surrounding cold conditions, so the PIR Detector is more effective. On a warm night the contrast is not so great, and the detector is less effective. For this reason, it may be necessary to make seasonal adjustments to the PIR Detector.
Light activates for no obvious reason, at random.	■ The PIR Detector may be suffering from false activation. Check this by completely covering the detector's lens with a thick cloth, masking tape or a piece of cardboard. This will stop the Detector 'seeing' anything. If the Detector now lets the light switch off after the set time and does not light it again, this indicates that the sensor has been picking up movement within its range. Slightly adjust the position/angle of the PIR Detector to solve the problem. Masking the area of the lens corresponding to the location of the disturbance is another solution; and since the PIR detector is wirefree, even moving it to a new location is easy. ■ Wind may be activating the detector, due to where it is sited; try it in a different location. ■ Small animals and pets may be affecting the unit - try masking the bottom half of the lens to stop the Detector from picking up low level objects. ■ Also check that the PIR Detector is not sensing movement from nearby traffic or pedestrians. Alternatively, for the above problems, check if a nearby wirefree system is operating with the same code. In this instance the light would still operate if the detector lens was completely masked off or if the battery was removed - change the coding if necessary.

11. TECHNICAL SPECIFICATIONS

PIR MOVEMENT DETECTOR

Transmitter range -	Up to 50 metres
Detection range -	Up to 12 metres
Angle of detection -	140°
Battery life -	Minimum 18 months, at 8 activations per day and constant 15°C
Battery type -	PP3 (6LR61) 9 volt alkaline
Time on adjustment -	15 secs - 15 mins
Photocell adjustment -	5 lux to daylight
Temperature operating range -	-20°C to +35°C

GUARANTEE

Friedland Limited guarantee that should any defects in workmanship or materials occur in this product within 3 years from the date of purchase, it will be replaced provided it has not been dismantled, altered, or a repair attempted. To comply with the 3 year guarantee, the installation and usage of the product must be in accordance with the Technical Specification above and in particular, care should be taken to ensure the maximum switching loads are not exceeded. The product should be returned to place of purchase along with this manual, the purchase receipt and details of circumstances of the malfunction given. This undertaking is in addition to the consumer's statutory rights and does not affect these rights in any way.

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