Friedland

ENG

SPECTRA 140

Instruction Manual

BEFORE STARTING ANY INSTALLATION WORK, PLEASE READ CAREFULLY

List Numbers L210N BLK / L210N WHI

TOOLS NEEDED

- Drill and 6mm Masonry Drill Bit
- Wire cutters and Wire Strippers
- No.2 Philips Screwdriver
- Terminal or Electricians Screwdriver
- Large Bladed Screwdriver

SAFETY

Always follow the manufacturers advice when using power tools, steps, ladders etc. and wear suitable protective equipment (e.g. safety goggles when drilling holes). Before drilling holes in walls, check for hidden electricity cables and water pipes, the use of a cable/pipe locater maybe advisable if in doubt.

The mains supply to this product should be installed by a competent person (e.g. a qualified electrician) in accordance with these instructions and in accordance with the appropriate clauses of the current edition of the IEE wiring regulations (BS7671).

DANGER - 240 VOLTS. To prevent the risk of electrocution, always turn off the mains electricity supply before commencing any work on the installation or opening the detector.

It is essential that all connections are made as instructed, that cables are not stressed and that terminals are fully tightened.

1 SELECTING A LOCATION

Your PIR Detector has a number of detection zones at various horizontal and vertical angles, as shown. A moving human body crossing or entering one of the zones activates the Detector. Mount the Detector at a height of 2.5m for the best all-round coverage [Fig. 1]- it may be positioned up to 4m high for a greater detection range, but the detection pattern will be less effective.

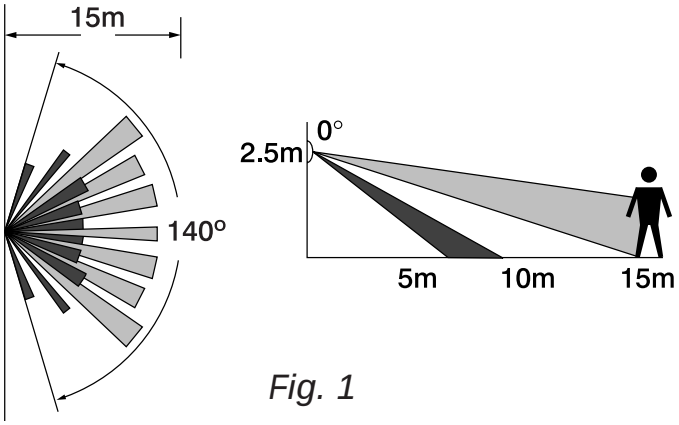


Fig. 1

Careful positioning of the tilt and swivel Detector head is needed to ensure optimum performance. When performing the WALK TEST [Section 4], the angle of the head may require slight adjustment, particularly when mounting your PIR Detector higher than the recommended 2.5m.

Also note that the PIR Detector is much more sensitive to movement ACROSS its field of vision, [Fig. 2], rather than movement directly toward it [Fig. 3]. So if possible, mount the PIR facing ACROSS the approach to your property.

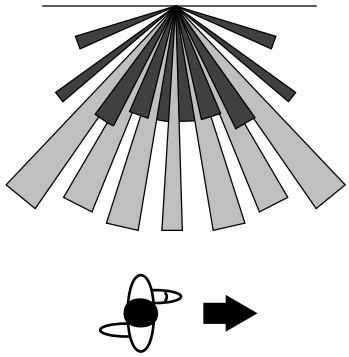


Fig. 2

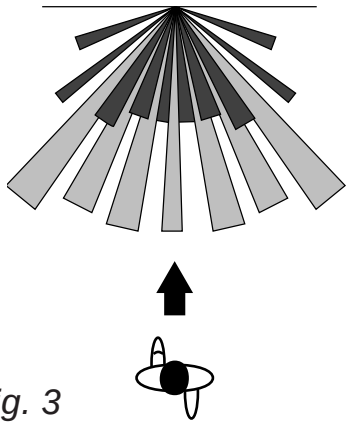


Fig. 3

False activation reduction technology makes your PIR Detector less prone to activation by wind, rain, moving branches, etc, but care should be taken to avoid siting near sources of heat - central heating outlets, tumble dryer exhausts and extractor fans, for instance. Under extreme conditions branches and reflective surfaces such as pools of water or white painted walls can also be a problem. Wherever possible, mount the PIR away from such sources of interference [Fig. 4].

If an object such as a moving branch repeatedly activates the Detector in normal operation, masking the lens of the Detector with the blanking strip provided or electrical tape is a simple solution [Fig. 5]. By trial and error, you will discover how much of the lens to mask to blank out the problem - note that the top half of the lens corresponds to long range detection, the bottom half to short range.

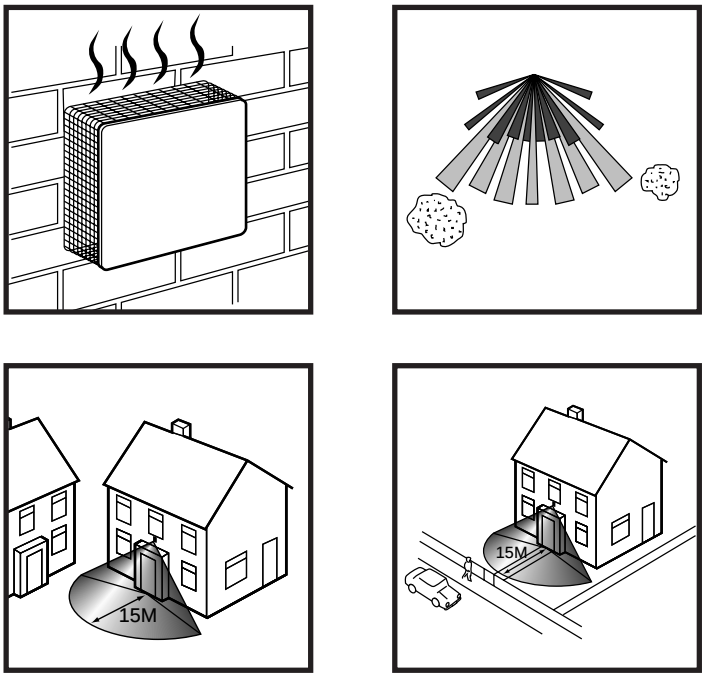


Fig. 4

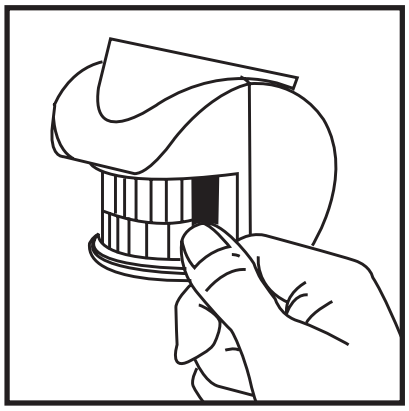
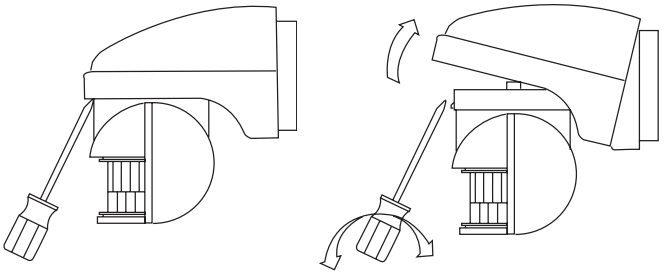


Fig. 5

2 MOUNTING

After choosing a suitable location, fit the unit as follows:

- Remove the top cover of the unit by gently twisting a flat bladed screwdriver blade in the slot provided, as shown in Fig. 6.
- Place the back plate of the unit in the desired position and mark the locations of the mounting holes [Fig. 6]. Next drill the holes to the required depth and insert the wall plugs.
- Cabling can either be from directly behind the unit through the wall, or along the surface from below - via the gaps provided in the housing [Fig. 7].
- Pierce the grommets and feed the recommended cable through them, ensuring a watertight seal.
- Screw the unit to the wall - do not over-tighten screws.
- Connect cables according to one of the diagrams in Section 3.
- Re-assemble the unit.



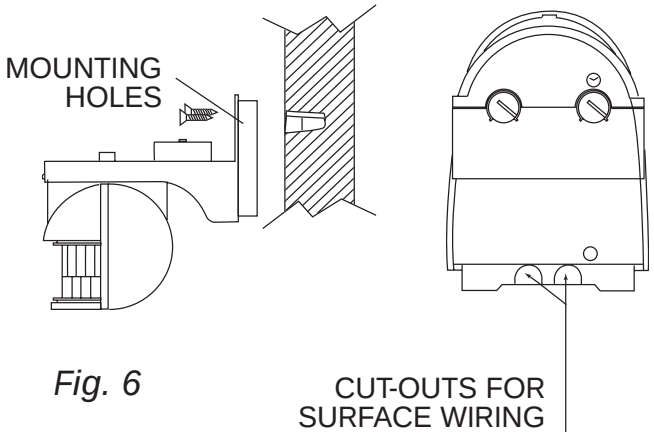


Fig. 6

Fig. 7

3 WIRING & CONNECTION

The unit requires connection to a 240Vac 50Hz mains electricity supply. This is best achieved by connecting the unit to the domestic lighting circuit. It is suggested that 3-core round flexible cable of at least 1mm^2 gauge is used. It is also allowable for the unit to be connected to the domestic socket ring main, though it is suggested that a 5 amp fused spur is used in this case.

IMPORTANT

ALWAYS switch OFF the mains power BEFORE attempting to install or maintain the PIR. If in doubt, consult a qualified electrician. All installations shall comply with National Wiring Regulations.

NOTE: when connecting to METAL LIGHT FITTINGS ensure an earth conductor is connected to provide earth continuity to the metal fitting.

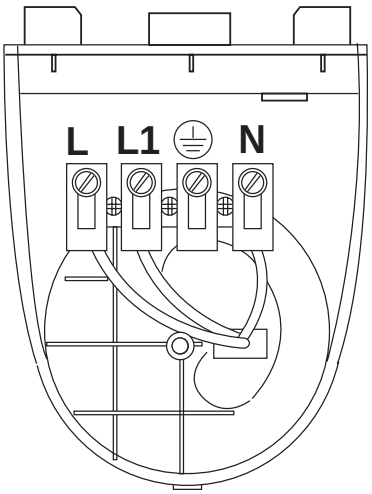


Fig. 8

- **Auto / Off** Wiring in this manner provides the following lighting options:
  Automatic operation (Switch closed)
  Permanently Off (Switch open)

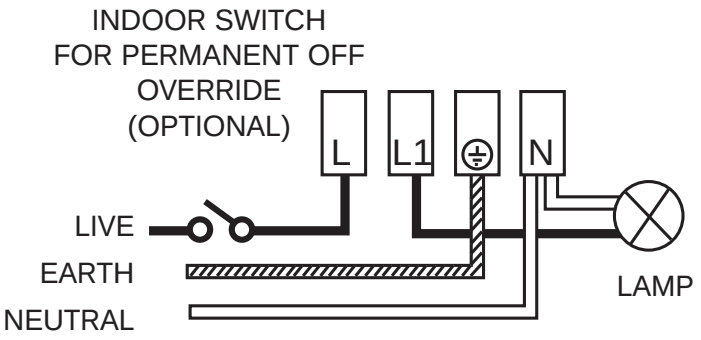


Fig. 9

Additional feature - when in Auto mode, switching off, then back on, will result in the lamp illuminating for the pre-set time period. This is ideal for lighting the way when leaving premises.

- **Auto / On** Provides the following lighting options:
  Automatic operation (Switch open)
  Permanently On (Switch closed)

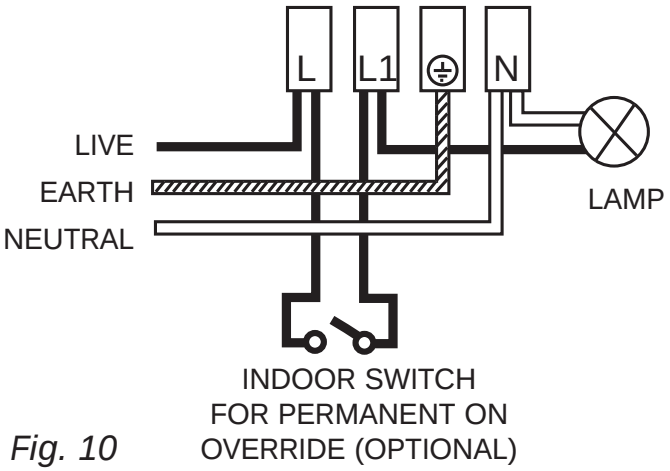


Fig. 10

- **Auto / Manual On and Off** Provides the following lighting options: Automatic operation (S1 closed, S2 open) Manual operation - with S1 open, the lamp is manually controlled by the use of S2.

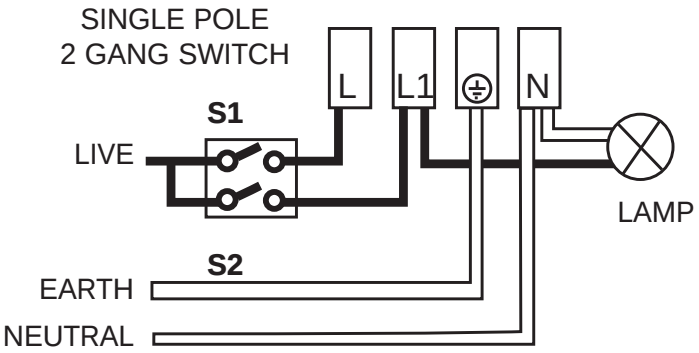


Fig. 11

- **Multiple lamps** More than one light-fitting can be wired in parallel to the detector using any of the above switching methods. The combined wattage of connected lighting must not exceed the 'Maximum Switchable Load' as given in the Technical Specifications section.

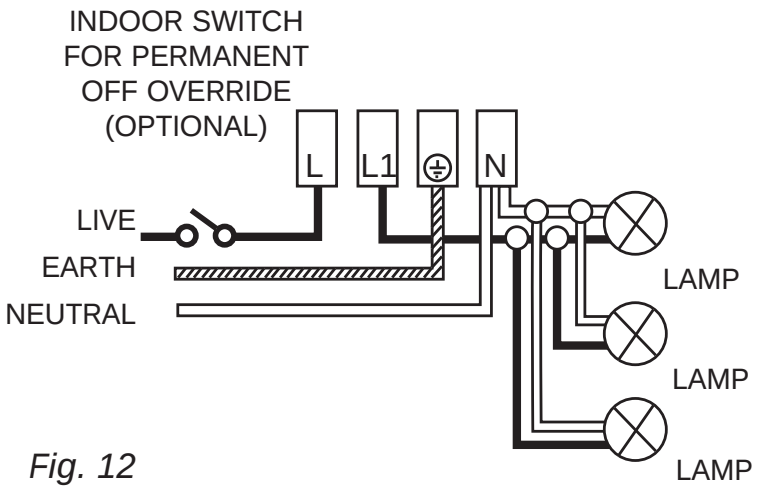


Fig. 12

4 OPERATION & TESTING

Walk Testing

When the installation procedure is complete, the unit is ready for testing.
The Walk Test procedure is as follows:

Step 1

Set the two adjustment controls on the underside of the PIR to the following positions:
TIME - Fully anti-clockwise
LUX - Fully clockwise

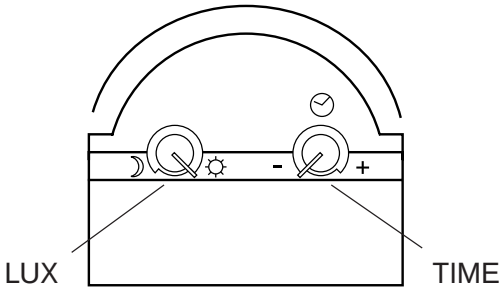


Fig. 13

With these settings, the unit will operate during daytime as well as at night, illuminating the floodlight for approx. 5 seconds each time movement is detected. This allows testing to be carried out following installation in order to establish the best position for the sensor head, ensuring optimum performance.

Step 2
Apply the power by switching on the circuit breaker/internal wall switch. The lamp will immediately illuminate as the system goes through its ‘warm-up’ period. After approximately 1-2 minutes the lamp will extinguish. Please try to remain outside the detection area during the warm-up period.

Step 3
Walk across the detection area approx. 5 metres from the unit. As you cross the first detection ‘zone’ the lamp should illuminate. Now stand still until the lamp extinguishes (this should take approx. 5 seconds).

Step 4
Start moving again. As you cross each ‘zone’ the lamp should illuminate as in step 3.

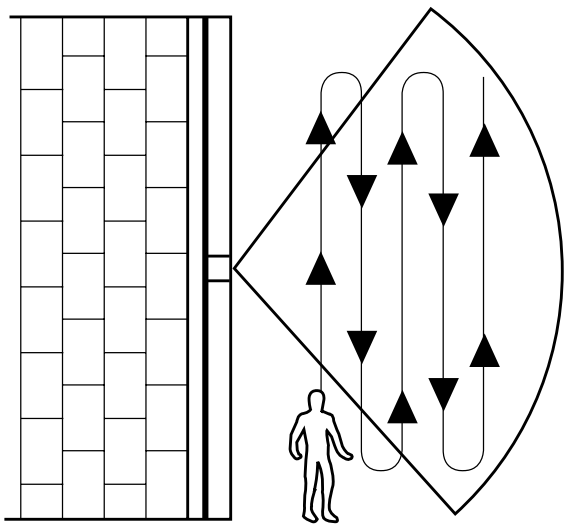


Fig. 14

Step 5
Repeat Steps 3 & 4, walking at various distances and angles to the unit (see Fig.14). This will help you to establish the detection pattern.

Step 6
If the detection area is too small for your requirements, try angling the sensor head up. This should increase the coverage distance. Similarly, angling the head downwards will reduce the range should a smaller coverage area be required.
For more unusual requirements (i.e. very short range), it may be necessary to ‘mask’ an area of the sensor lens to achieve the desired coverage.
Please refer to Section 1 for details.

Step 7
Carry out Walk Tests and adjustments until you are happy with the coverage area.

NOTE: Passive Infra Red sensors are less effective at detecting the movement of vehicles, e.g. on driveways. If this is a feature you require, some further adjustment of the sensor head may be required. Test by driving the vehicle in and back out of the detection zone when the engine is at its normal temperature.

Setting up for automatic operation

When Walk Tests are complete, the unit can be set for automatic operation as follows:

Step 1

The TIME setting controls how long the lamp load remains illuminated following activation and after no further movement is detected. The minimum time (TIME control fully anti-clockwise) is approx. 5 seconds, whilst the maximum time (TIME control fully clockwise) is approx. 15 minutes.
Set the control to the desired setting between these limits.
NB: It is important to understand that the time setting determines how long the lamp will remain illuminated *after* all motion ceases. For example, say the time is set at **1 minute**, someone then activates the sensor and remains in the detection area for **2 minutes** before leaving.
The lamp will remain illuminated for the 2 minutes whilst the intruder is present and a further 1 minute after he/she leaves, giving a total ON time of **3 minutes** (all timings are approximate).

Step 2

The LUX control determines the level of darkness required for the unit to start operating each evening. The setting is best achieved by the following procedure:
- Set the LUX control knob fully anti-clockwise. Wait until evening.
- When the ambient light level reaches the level of darkness at which you wish the lamp to become operative (i.e. at dusk), slowly rotate the control in a clockwise direction until a point is reached where the lamp illuminates. Leave the control set at this point.

At this position, the unit should become operative at approximately the same level of darkness each evening. Observe the operation of the unit over a period of a few days. If you find that the unit is starting to operate too early (i.e. when it is quite light), adjust the control slightly anti-clockwise. If the unit starts to operate too late (i.e. only when it is very dark), adjust the control slightly clockwise.

Continue to adjust until the unit operates as desired.

5 TROUBLESHOOTING GUIDE

REMEMBER *Always ensure the mains supply to the unit is isolated before removing covers which allow access to live parts.*

PROBLEM	SOLUTION
Light stays ON all the time at night, or PIR activates for no reason at random	Cover the Detector lens completely with thick cloth or a piece of cardboard to prevent it 'seeing'. If the unit now switches off after the set time duration, there has been interference from some source within range. Adjust the tilt and swivel head or mask off the required area of lens [see Section 1] to avoid the interference. Sometimes strong winds, passers-by, road traffic, small animals or pets can trigger the PIR. Mask or reposition the unit if necessary.
Light stays ON all the time day and night	Thoroughly check that your wiring is correct according to the wiring diagram. Be sure you allow the unit to complete its warm-up period - stay well out of the detection area and wait [warm-up should never take longer than 5 minutes].
PIR Detector will not operate at all	Check power is ON. If so, turn power OFF and check wiring is correct, and that no connections are loose. Check that lamps in the system have not failed, and that they are properly seated in their holders.
The PIR Detector will not operate at night	Ambient light level may be too high in operational area. Adjust the LUX control slowly clockwise until lamp illuminates [See Section 4 for details].
Unit activates in daytime	Ambient light level may be too low in operational area. During daylight, turn the LUX control slightly anti-clockwise. When lamp extinguishes, enter detection area, if PIR still activates, adjust LUX further in anti-clockwise direction and enter the detection zone again. Repeat procedure until PIR does not activate [See Section 4 for details].
PIR coverage is poor/sporadic	Check suitability of location - see Section 1 for advice, and reposition PIR if necessary.
Detection range changes from day to day	The PIR Detector operates by sensing body heat. On cold evenings, the Detector more easily 'sees' body heat; in warm weather, the opposite is true. For this reason, in some cases it may be necessary to make small seasonal adjustments to the Detector's head position, for trouble-free year round operation.

TECHNICAL SPECIFICATIONS

Detection Range	Up to 15 metres
Angle of Detection	140°
Power supply	230Vac ~ 50Hz
Maximum Switchable Load	1200W Tungsten filament 1200W Tungsten halogen
Time On Adjustment	5 seconds - 15 minutes
Lux Level Adjustment	Day & night or night only operation
Environmental Protection	IP44. Suitable for outdoor use.

The PIR sensor emits no radiation & is not harmful to people, animals or plants

This product complies with the European Low Voltage Directive 73/23/EEC and EMC Directive 89/336/EEC

DISPOSAL:

At the end of their useful life the packaging and product should be disposed of via a suitable Recycling Centre. Do not dispose of with your normal household waste.
DO NOT BURN.

GUARANTEE

Novar ED&S undertakes to replace or repair at its discretion goods should they become defective within 2 years solely as a result of faulty materials and workmanship. Understandably if the product has not been installed, operated or maintained in accordance with the instructions, has not been used appropriately or if any attempt has been made to rectify, dismantle or alter the product in any way the guarantee will be invalidated.
The guarantee states Novar ED&S entire liability. It does not extend to cover consequential loss or damage or installation costs arising from the defective product. This guarantee does not in any way affect the statutory or other rights of a consumer.
If an item develops a fault within the guarantee period, it should be returned to the point of sale with:
1) Proof of purchase.
2) A full description of the fault.
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HELPLINE

If you have any problems with this product, please call the Helpline on 01268 563066 (Lines open 9.00am to 5.00pm, Monday to Friday)

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