



***Hard Wired
PIR Detector
Installation
Handbook***

Type: LGHW-3020

Issue 2.

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PRE-INSTALLATION NOTES

Unpacking.

On receipt, inspect the package and contents for signs of damage. If damage has occurred, advise the carrier and/or suppliers immediately. Inspect the contents to confirm that all items are present and undamaged. If any items are missing or damaged, contact the supplier immediately. It is advisable that the original carton is retained as this forms the safest transport container in the event that a unit has to be returned for any reason.

Servicing.

This unit should not require general servicing. Any repair work should only be undertaken by qualified service personnel.

Moisture.

Do not expose the internal electronics of this unit to moisture i.e. take care during installation or when changing batteries not to allow rain or damp into the product. When the product is sealed it is water resistant to IP67.

Box Contents.

- 1 x GENESIS 3020 Hard wired PIR detector
- 1 x sun shield
- 4 x no 8 wall plugs
- 4 x no 8 2" screws
- 1 x 3 mm hexagonal key

LGWP-3020 Wireless PIR Detector Specification.

Lens type	30 metre x 20deg
Alarms	Detection / Anti Tamper / Anti Cloaking / Shock/ Inertia Temperature sensor compensates for extreme conditions
Contacts	1 pair of volt free volt free contacts for alarms 1 pair of volt free contacts for tamper
Voltage	Operating voltage 12 volts DC @ 15 m/a
IP rating	66
Enclosure	3 mm polycarbonate (except for fresnel lens)

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INDEX

	page
Introduction.	1
Mounting and avoiding false alarms.	2
Lens pattern.	3
Wiring and Switch settings.	4
Switches	5

Introduction

The LGHW3020 hard wired Passive Infra Red Detector (PIR) has been designed to meet the newest and most demanding requirements of the CCTV market. These detectors provide versatility and surpass the requirements needed for a BS8418 system.

Inside the PIR is a powerful microprocessor which uses logic to determine the validity of an activation. With this technology nuisance alarms are greatly reduced. In addition, there are two pyro sensors which split the zones and can be gated either as (A + B) or (A or B)

The PIR also contains a shock sensor to detect physical attack and a three axis sensor to detect unauthorised re-orientation and removal from the wall. IR transmission detects masking (cloak) and a light and thermal sensor allow the detector to compensate for the outdoor environment.

Operating voltage is 12 Volts DC.

Mounting.

The correct height for the PIR is 2.5 metres above the ground however it can be mounted up to 4 metres but must be angled down. Careful consideration when positioning the detector will greatly reduce nuisance alarms.

The detector requires a clear view of the area to be covered.

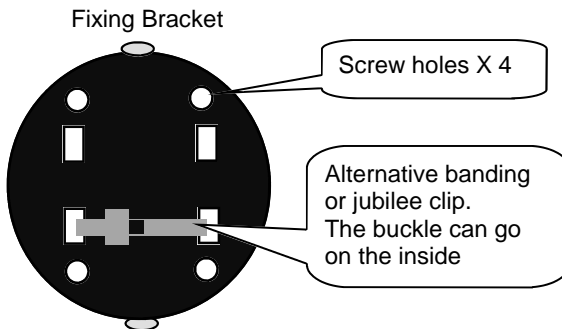
Make sure that nothing can move or flutter in front of the detector and avoid facing reflective surfaces. The fixing of the detector must be solid and not sway.

Avoid situations where the detector can over shoot the detection area.

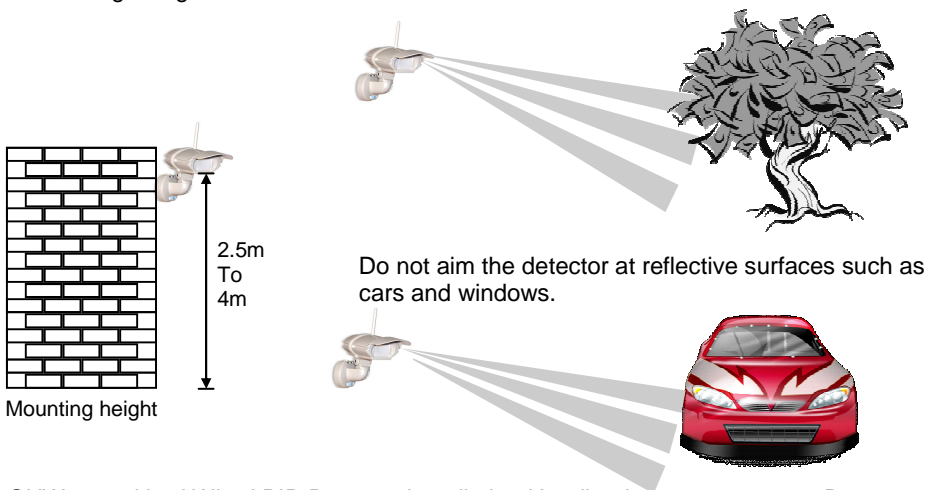
Undo the two socket screws from the wall plate and remove the black fixing bracket.

For WALL MOUNTING use the four screws and wall plugs provided.

For POST MOUNTING use banding or Jubilee clips. When it is secure, the wall plate may be hung back on the bracket and the two socket screws re-fitted.



Avoid facing foliage such as trees that can move in the wind.



Avoid areas where water can collect in puddles and reflect sun light to the detector.

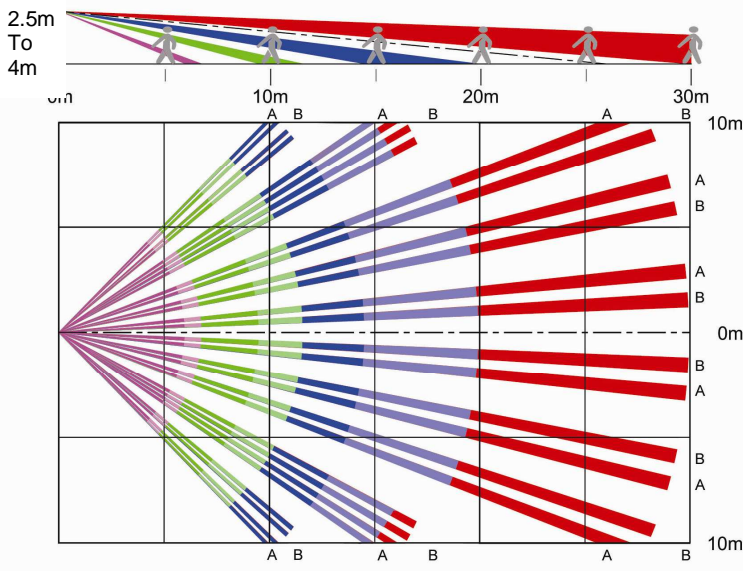


Lens pattern.

Detection range is 30 metres out x 20 metres across and the lens pattern on the opposite page shows a side and overhead view.

This product uses two dual element pyro sensors which splits each zone in two. These A and B zones can be used to increase the immunity from false activations by using AND gating. IE: A must be followed by B within a short time period. This helps reduce activations from fluttering material and reflections etc.

Detection works best when the subject walks ACROSS the beams and not TOWARDS the detector.



WIRING.

Remove the front of the detector by removing the two M5 screws using the hex key provided. Inside the front section you will see the circuit board as shown. The terminal block may be un-plugged for convenience.

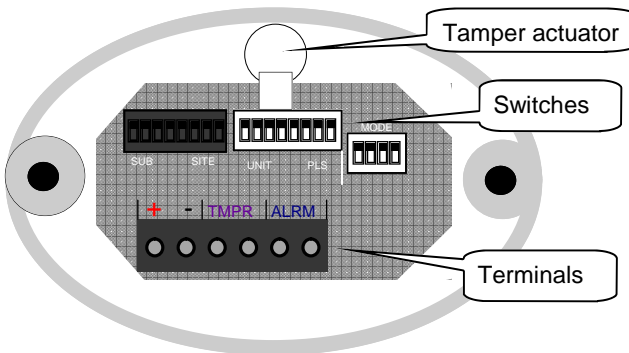
Pass the cable(s) through the cable gland(s) in the rear section of the detector and connect as follows.

12 volts DC power to + -

Tamper to **TMPR**. May be set as N/C or N/O

Alarm to **ALRM**. May be set as N/C or N/O

Now set the switches as described on page 6, plug the terminal block back into the circuit board, close the product and screw it back together with the two M5 screws.



Switch settings. Do not use the left hand switch bank marked FUNCTIONS.

The middle group of switches 1 & 2 are used to select normally open (N/O) or normally closed (N/C) contacts.

Switches 3 & 4 select how long the contacts stay changed for and switches 7 & 8 set the number of pulses that the detector needs to count before activating the alarm relay.

Typically the contacts are both N/C and set to 1 second.

Pulse counting.

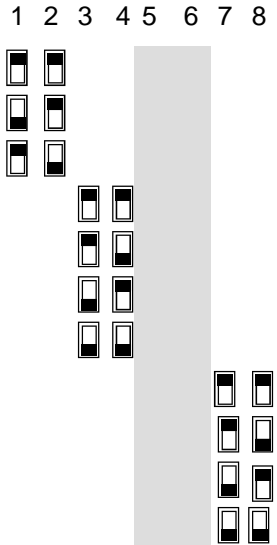
1 Pulse count is the most sensitive setting and is used to detect fast moving objects such as motor vehicles. For detecting people a setting of 2 or 3 is common. Pulse count 4 is much less sensitive and the target must cross many zones before an activation.

For challenging environments such as building sites where loose materials flap about or car compounds where there are many reflective surfaces it is recommended that AND detection is used by selecting switch 2 on the MODE switch bank. This requires that the target crosses both A and B zones to get an alarm. See lens pattern on page 3. Lower sensitivity can be set using switch 1 but should not be used with high levels of pulse counting.

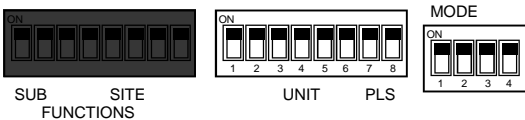
Light calibration and restore defaults are special features and covered in other documents.

Switches.

- Alarm N/C. Tamper N/C.
- Alarm N/O. Tamper N/C.
- Alarm N/C. Tamper N/O.
- Relay activity 1 second.
- Relay activity 2 seconds.
- Relay activity 5 seconds.
- Relay activity 10 seconds.
- Pulse count 1.
- Pulse count 2.
- Pulse count 3.
- Pulse count 4.



Do not use the left hand switch bank marked FUNCTIONS.



Mode

- | | 1 | 2 | 3 | 4 |
|---|--------------------------|--------------------------|--------------------------|--------------------------|
| Lower sensitivity. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| AND detection for reduced false alarms. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Light calibration. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Restore factory default. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

NB: The switch settings are read only once when the power is connected. If any switches need to be changed the power must be disconnected and re-connected in order for the change to take place.

Luminite *Genesis* product range

Wireless products

Wireless PIR's	30m x 20m	LGWP3020
Wireless PIR's	15m x 20m	LGWP1520
Wireless PIR's	40m x 4.5m	LGWP4004
Wireless PIR's	12m Horizontal curtain	LGWP12HC
Wireless PIR's	12m Vertical curtain	LGWP12VC
Masthead/Repeater		LGMT434
Masthead Relay Unit		LGMRU4x4
Relay Expansion Module		LGREM4x4
Walk Test Instrument		LGWT434
16 way relay unit		LGRU16
Relay module		LGRM8
16 way DM interface unit		LGDM16
16 way relay unit with end of line resistor		LGRU16ELR 3 versions
Relay module with end of line resistor		LGRM8ELR 3 versions
Optional antenna		AE434
Transmitter module		LGTX434
Portable KeyPoint		LGKP
Static KeyPoint		LGKS

Hard wired products

Wired PIR's	30m x 20m	LGHW3020
Wired PIR detector (RS485)	15m x 20m	LGRS1520
Wired PIR detector (RS485)	40m x 4.5m	LGRS4004
Wired PIR detector (RS485)	12m horizontal	LGRS12HC
Wired PIR detector (RS485)	12m vertical curtain	LGRS12VC
RS485-RS232 Adapter		LGA485

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