

# GJD RADIUS PLUS

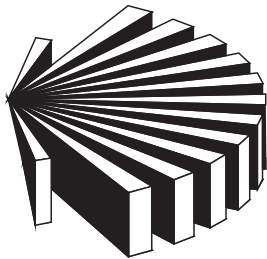
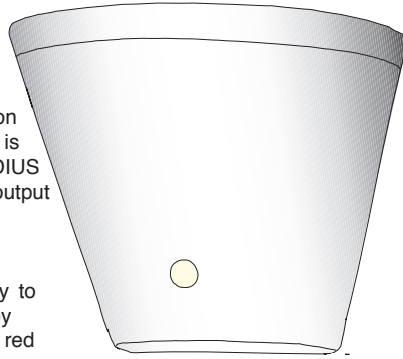
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The RADIUS PLUS is a versatile internal high specification PIR detector compatible with all standard alarm panels. Additional facilities include:-

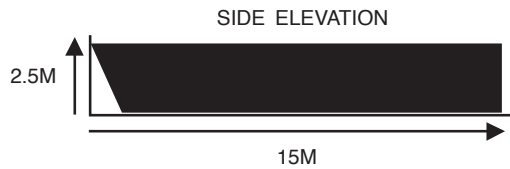
**Sequence to alarm** - allows up to 14 detectors to be connected on one 8 core cable with individual sequence to trip indication.

**Distress output** - designed for someone living on their own. With the alarm panel off, if no movement is detected for a selectable period of time the RADIUS PLUS will automatically call for help. This separate output is capable of driving a remote low voltage sounder, indicator, solid state relay or autodialler etc.

The RADIUS PLUS is supplied preprogrammed ready to use. These settings can be easily modified on site by the installer using the rear program button and front red and green indicators.



## BEAM PATTERN



## SPECIFICATIONS:



Version 3.2

- RANGE: 15 Metres over 140 Degrees - Multi-curtain lens
- VOLTAGE: 10 to 16 VDC at 11 mA reverse polarity protected
- PROCESSING: Digital - microprocessor controlled - see programming table.
- ALARM: Normally closed contacts rated at 100mA at 50 VDC with 22 ohm 1/8W series resistor.
- TAMPER: Normally closed contacts rated at 500mA at 50 VDC.
- 'C': 12VDC positive switching input from alarm panel when set. Enables and resets alarm memory, and disables distress output.
- 'H': Connected to further detectors on the same circuit to indicate:-  
Sequence to alarm ( 14th ) selected - factory setting.  
First to alarm ( 1st ) selected - programmable.  
Disables LED movement indicator when negative.  
Distress output 50mA negative switching when selected.
- TEMPERATURE: -10 to +50 Centigrade

# GJD RADIUS PLUS

## INSTALLATION

Mount indoors in a dry position on a rigid surface to avoid movement of the detector. The multi curtain beam pattern allows the unit to be mounted between 2 and 4 metres high without the need to align the beam pattern. If the unit is mounted high the blind area below the detector will increase (see beam pattern). The ideal position for the unit is one which detects movement across its field of view (not towards the unit) which will give the best detection response.

As a PIR detector detects a heat change in its field of view, AVOID:-

Radiated, convected heat sources, and ventilation ducts. Direct and reflected sunshine.

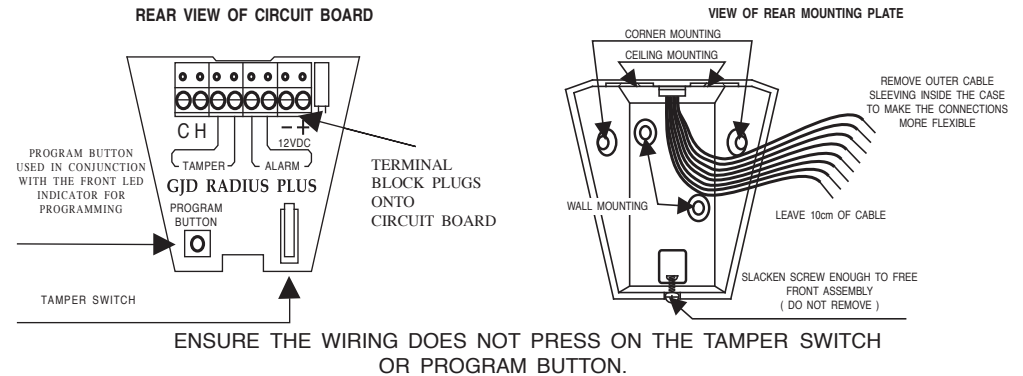
Position the unit far enough away from light fittings to prevent excessive heat affecting the normal operation of the unit.

## TO SEPARATE THE RADIUS PLUS

- 1) Slacken the screw at the base of the unit DO NOT REMOVE.
- 2) Ease the bottom of the front assembly forwards.
- 3) Ease the assembly downwards.

Fix the rear mounting plate in the selected position using the supplied screws/fixings. Avoid overtightening the screws or the rear mounting plate will be distorted.

Standard alarm cable is recommended for all connections. Remove the outer sleeving from the cable inside the case to make the connections more flexible and easier to connect. Reverse the procedure when assembling the unit, taking care NOT TO OVERTIGHTEN the base screw or trap wires against the tamper switch or program button.



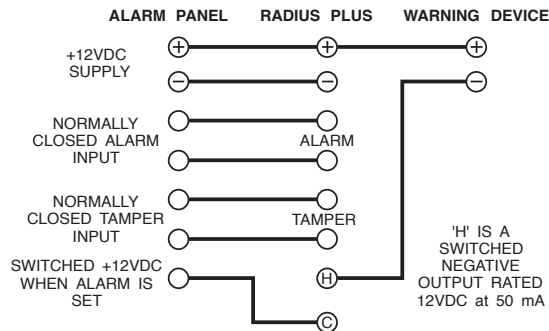
The **DISTRESS FEATURE** of the Radius Plus works independently of the normal alarm outputs of the detector. This is designed to call for help if no movement is detected for a set time in occupied premises. If help is needed, a person living alone would feel more secure knowing that someone could be alerted if they were unable to call personally.

If the alarm is set, a +12 VDC signal from the alarm panel is applied to the 'C' terminal on the RADIUS PLUS. This signal prevents the distress output 'H' from operating when the property is unoccupied.

If the internal intruder alarm is switched off, the +12 VDC signal is removed from the 'C' terminal on the RADIUS PLUS, enabling the distress timer. When movement is detected the distress timer is reset. If no movement is detected for the set time, the RADIUS PLUS will produce a switched negative 12 VDC pulsed or steady output on terminal 'H'. This output is suitable for driving low power piezo sounders, high brightness LED indicators, solid state relays and automatic diallers etc.

The distress output will continue to operate until the detector receives movement, or until the alarm panel is switched on. A pulsed distress output is recommended for audible and visual warning devices. The steady output is more suitable for auto diallers etc.

**CONNECTIONS:  
in the distress mode.**



The **ALARM MEMORY** feature of the RADIUS PLUS works independently of the normal alarm outputs of the detector.

**14th SELECTED 1st to 14th to alarm**

Up to 14 RADIUS PLUS detectors can be connected on the same alarm loop, each detector will indicate 1st, 2nd, 3rd -- 14th to alarm. The RED movement indicator flashes a number of times corresponding to the order that activations took place.

When the alarm is set, a +12VDC signal from the control panel feeds terminal 'C' on all the detectors. After 8 seconds, the movement indicator will be inhibited, any previous stored information will be cleared and any flash sequences cancelled. The first detector to give an alarm signal will memorise the activation and momentarily switch 'H' negative. When 'H' is connected to other RADIUS PLUS detectors on the circuit, further activations will be memorised.

When the alarm is turned off, the positive is removed from the 'C' terminals. Detectors which activated on the same circuit will flash the RED movement indicator a number of times corresponding to the sequence that activations took place. This makes it easy to define the intruders route. Any detectors not activated work normally.

1 flash, then a pause = the first detector to activate  
2 flashes, then a pause repeated = the second detector to activate etc.

To reset the detectors back to normal operation set the alarm for a minimum of 0.5 seconds and then off within 7 seconds. This applies a positive signal to the 'C' terminals.

**1st SELECTED Conventional 1st to alarm**

When the alarm is set, a +12VDC signal from the control panel feeds terminal 'C' on all the detectors. After 8 seconds, the movement indicator will be inhibited, any previous stored information will be cleared. The first detector to give an alarm signal will memorise the activation and switch 'H' negative. When 'H' is connected to other RADIUS PLUS detectors on the circuit, further activations will not be memorised.

When the alarm is turned off, the positive is removed from 'C', if any detector on the same circuit had activated, the one which activated first will indicate by repeatedly flashing the RED movement indicator once. All other detectors on the same circuit will not indicate. If no detection takes place, all detectors work normally.

To reset the detectors back to normal operation set the alarm for a minimum of 0.5 seconds and then off within 7 seconds. This applies a positive signal to the 'C' terminals.

**RADIUS PLUS PROGRAMMING TABLE**

GREEN FLASHES      **GJD factory settings**      \* = approx.

↓ SELECTIONS

1x	RANGE metres*	8	<b>12</b>	15										
<b>2x</b>	PULSE COUNT	GJD	<b>2</b>	3	4	5								
3x	LED MONITOR	OFF	<b>ON</b>	NPC										
4x	MODE	1st	<b>14th</b>	Hp	Hs									
5x	TIME hours*	<b>1/60</b>	1	3	6	12	18	24	36	48				
	RED FLASHES	→ 1x	2x	3x	4x	5x	6x	7x	8x	9x				

OPTIONS

- GJD** = Reset back to factory settings.
- NPC** = RED movement indicator has no pulse count.
- 14th** = 1st to 14th alarm memory sequence - New from GJD.
- 1st** = 1st to alarm - for earlier alarm memory PIR's.
- Hp** = Pulsed 'H' distress output. **Hs** = Steady 'H' distress output.

**PROGRAMMING**

The program button is located inside the unit on the rear of the circuit board. When programming the RED and GREEN indicators can be seen from the front of the lens. To familiarise yourself with the unit, first check the existing settings. View the unit from the front and BE READY TO COUNT THE FLASHES. Press the program button MOMENTARILY then :-  
Count the number of GREEN flashes (this represents the present **selection**)  
Count the number of RED flashes (this corresponds to the present **option**)  
After 3 seconds the GREEN indicator blinks once, the unit exits the program mode.

**Example 1.** To set a pulsed 'H' distress output

- a) First, choose the SELECTION and OPTION required from the table. ( i.e. 4x GREEN flashes, 3x RED flashes ) :-
- b) Press and HOLD the program button until the GREEN light flashes 4x in rapid succession, then release the button. After a pause, the indicator will flash RED.
- c) Count the RED flashes, and if they need to be changed press and HOLD the program button ( within 3 seconds ) until the RED indicator flashes 3x, then release the button.  
After 3 seconds the GREEN indicator blinks once, the change is stored and the unit exits from the program mode .

**Example 2.** To set the pulse count to 3

- a) First, choose the SELECTION and OPTION required from the table. ( i.e. 2x GREEN flashes, 3x RED flashes ) :-
- b) Press and HOLD the program button until the GREEN light flashes 2x in rapid succession, then release the button. After a pause, the indicator will flash RED
- c) Count the RED flashes, and if they need to be changed press and HOLD the program button ( within 3 seconds ) until the RED indicator flashes 3x in rapid succession, then release the button.

To reset back to GJD factory settings EITHER (a) Select the factory setting from the programming table OR (b) Disconnect the +12VDC power from the unit. Then **Press** and **HOLD** the program button whilst power is reconnected to the unit, then release the button.

GJD reserve the right to alter the specification without notice

*Technical 01204 363998*