ELITE

GJD022 / GJD023 35m External PIR

An independent passive infrared detector that simultaneously or individually controls cameras, VCR's, DVR's and all low voltage switching requirements.

The Elite offers a high level of adaptability, there are seven different modes of operation giving various permutations of normally open and normally closed arrangements for the two pairs of volt-free relays, plus a selection of timing and functional options for the relay changeover contacts.

Other programmable parameters include the duration of timed changeover, a pulse count feature and a choice of detection ranges from 10 to 35 metres.

In addition there are two switched negative outputs. The 'A' output gives a single 400ms trigger every time the detector activates and is generally used in conjunction with the GJD lighting controllers to give 24 hour visual and audible alarm indication. The 'S' output is the only photocell- controlled output giving a fixed 60-second trigger on activation.

The flexibility of the four outputs and timers allows the Elite to be used in multiple situations without the need for any further customised equipment.

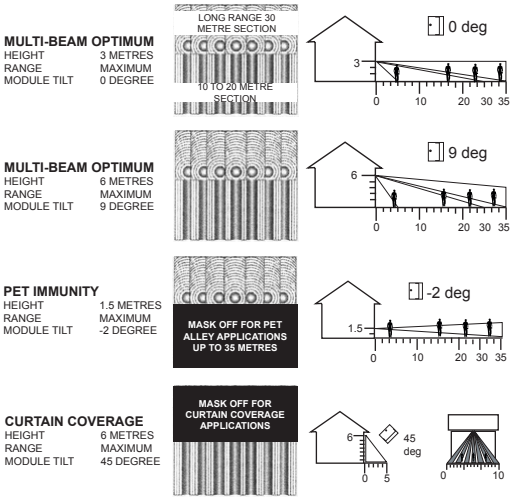
The integral dual axis tilt sensor allows 180º of pan and 90º tilt. This increases the speed of the outdoor installation and provides incredibly accurate aiming of the detection pattern. The electronics module is acrylic coated for additional component stability. It is encased in a vandal-resistant high impact ABS housing with a UV stabilised translucent front cover ensuring the sensor is impervious to and unaffected by weather conditions.

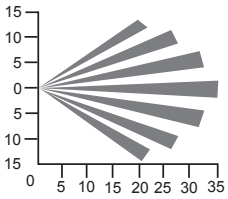
The Elites effective design gives a neat appearance with no visible indication of the orientation of the detector head, and totally hides the wiring.

MULTI BEAM LENS DATA

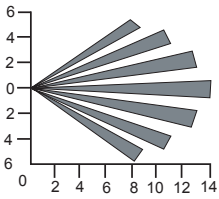
The GJD multifunction lens fitted to the GJD Elite detector produces 9 long range beams and 9 medium to short range curtain beams. Movement across the beams produces the best response and range, whilst movement towards the detector will be less responsive.

When mounting higher than boundary fences rotate the module and mask off any beams, either vertically or horizontally, that fall outside the area being covered. Use portions of the self-adhesive silver mask supplied to the rear, smooth side, of the lens and always replace the correct way up as shown to obtain the exact beam pattern coverage.





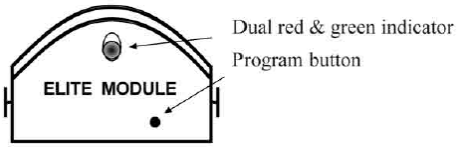
Beam Pattern set to maximum range. Masking top section of lens will reduce range to 20 metres



Beam Pattern set to maximum range. Masking top section of lens will reduce range to 6 metres

CHANGING THE EXISTING SETTING

All settings can be changed to suit individual requirements. The programm table indicates the factory settings. Changes to the existing settings can be easily made either before installation (e.g temporarily power the unit with a PP3 battery) or by applying 12 volt to the unit on site. Once changes are made they are stored in the non-volatile memory, When power is applied the red indicator lights for 0.5 of a second.



1. To enter program mode press and hold down the program button - the 'RED' indicator lights for 4 seconds then the 'GREEN' indicator sequences through the six 'selections'. One flash for the range, two for the pulse count. Three- LED monitor. Four- 'S' lux level. Five for contact mode and six to change the timer setting. (see program chart Page 2)
2. When the required 'selection' is reached, release the button.
3. The 'red' led then flashes for the number representing the present 'option' setting.
4. If you want to change the present option setting - hold down the button again within 3 seconds. The red flashes will then sequence through the options available for that selection. Release when the number of red flashes corresponds to your option.
5. The program mode exits after 3 seconds - all amendments are stored in the non-volatile memory.

EXAMPLE 1: Altering the range from 20 metres to 35 metres

Hold down the program button. The 'red' indicator lights - keep held until the 'green' led flashes once then release - the red led will flash three times - hold again until four red flashes, then five red flashes - then release.

EXAMPLE 2: Altering the Alarm 2/ Alarm 1 output mode from mode 6 to mode 1

Hold down the program button. The 'red' indicator lights - keep held until the sequence of five 'green' flashes then release - the red led will flash six times - hold again until seven red, then one red flash then release.

To reset to factory settings

Power down the unit and then power back up whilst holding the program button in. Release the program button when the indicator flashes green.

ELITE PROGRAM TABLE

GREEN SELECTIONS											
	1x	Range - Mtrs (Approx)	10	15	20	28	35				
	2x	Pulse Count	1	2	3	4					
	3x	LED Monitor	OFF/ TP	ON/ TP	OFF/ NT	ON/ NT	OFF/ LO				
	4x	'S' Output Lux Level	2	5	25	30	60	120	240	24 HR	
	5x	Alarm 2 / Alarm 1 Mode	1	2	3	4	5	6	7		
	6x	Alarm 2 / Alarm 1	2	5	10	15	20	25	30	45	60
		Red Options	1x	2x	3x	4x	5x	6x	7x	8x	9x

Shaded boxes are the factory settings

RANGE

The range of the detector can be set from 10 to 35 metres. See the multi-beam lens data on page 1 for masking off areas to reduce the range further or pet alley requirements.

PULSE COUNT

The number of beams that have to be crossed before activation.
1 - will give a fast response
2 - gives good immunity & response
3 - gives high immunity to false alarms
4 - slow repose use in areas with poor environments (e.g excessive foliage)

The unit detects the changes in heat and movement in the beam pattern area, therefore trees, shrubs, ponds, boiler flues and animals should be considered when positioning the detector.

LED MONITOR

OFF/tp: Detection indicator 'off' select this when requiring Tamper outputs with mode 1 and mode 7

ON/tp: Detection indicator 'on' select this option when requiring Tamper outputs with mode 1 and mode 7 (see page 3)

OFF/nt: The indicator is'off; - both Alarm 2 & Alarm 1 outputs activate on detection

ON/nt: The indicator is on - both Alarm 2 and Alarm 1 outputs activate on detection.

OFF/lo: Low power mode supply 5mA - only the 'A' and 'S" output operate - no led indication.

'S' OUTPUT

The light level that the 'S' -ve output operates. The factory setting is '5' lux. This is generally considered the average light level at dusk. 24 hr activates the 'S' output irrespective of light level.

ALARM 2 / ALARM 1 MODE

There are seven different normally open and normally closed modes that the 24 hour volt free contacts can be utilised.

TIMER ALARM 2 / ALARM 1

The timer settings available for the Alarm 1 and Alarm 2 volt free outputs.

VOLT FREE OUTPUTS ALARM 1, ALARM 2 & TAMPER

MODE	VOLT FREE OUTPUT	STATE	ACTION ON DETECTION
Mode 1	Alarm 2	Normally Open	will close for the TIMER period after detection
	ALARM 1 TAMPER e.g. Alarm panel option	Normally Closed	remain closed on detection. Utilise the Alarm 1 connection for tamper loop. The output will also open for 2 seconds if the front cover is removed.
Mode 2	Alarm 2	Normally Open	will close for the TIMER period after detection
	Alarm 1	Normally Open	will close for the TIMER period after detection
Mode 3	Alarm 2 (Factory Settings)	Normally Open	Will close for the TIMER period after detection
	Alarm 1 (Factory Settings)	Normally Closed	Will open for the TIMER period after detection
Mode 4	Alarm 2	Normally Open	will close for 0.4 second every time a detection takes place
	Alarm 1	Normally Closed	will open for the TIMER period after detection
Mode 5	Alarm 2	Normally Open	will close for 0.4 second and can only re-trigger with detection after 4 seconds of non-activity
	Alarm 1	Normally Closed	will open for the TIMER period after detection
Mode 6	Alarm 2	Normally Open	will close for 0.4 second and can only ve re-triggered every 4 seconds with detection
	Alarm 1	Normally Open	will close for the TIMER period after detection
Mode 7	Alarm 2	Normally Closed	will open for the TIMER period after detection
	ALARM 1 TAMPER e.g. alarm panel option	Normally Closed	remain closed on detection. Utilise the Alarm 1 connections for tamper loop. The housing is pressure regulated - the output will also open for 2 seconds if the front cover is removed

INSTALLATION

During installation the electronics must be protected against water, as trapped moisture can effect or damage the unit.

1.First remove the front polythene cover by pulling forwards, then remove the lens module by pulling it out of the forked bracket.

2. Drill the wall to accept the top fixing and the lower cable entry. The holes should be on 16mm centres.

3. Feed standard 8 core alarm cable into lower cable entry: bare the wires and connect to the removable terminal blocks.

4. Always ensure when replacing the module that it is the correct way up for the correct alignment of the beam pattern.

5. Replace the front cover with the ventilation hole at the bottom. Ensure the cover engages both sides of the outer casing before pressing firmly to locate it securely.

At this stage the unit can be walk tested with the front cover fitted. Use the program table on page 3 to adjust the range as necessary and pan and tilt the lens module over the field of view to obtain the correct coverage area.

TESTING USING A METER

Testing the volt free contacts - as the Elite has an integral 25R series resistor the meter should be set to greater than 100 ohms rather than a continuity test setting.

WALK TEST

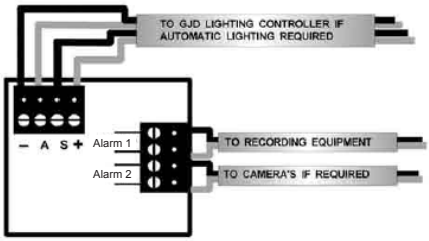
Alignment of detection beams

The range of the detector increases without the front protective cover. Therefore the front cover must be fitted to establish the correct beam pattern alignment and when testing the outputs. When the ‘program’ button is pressed momentarily the red indicator lights and pulse count ‘1’ is automatically selected. The unit can then be aligned. The red indicator will light on the Elite every time a detection takes place. This test mode will automatically cancel five minutes after last detection. Alternatively, remove the power and then re-apply.

If automatic lighting is required to illuminate the area during recording, the Elite PIR connects directly into any of the GJD lighting controllers for simultaneous recording and automatic lighting at dusk. The signals from the detector can also provide an audible and visual indication of the detection activity 24 hours a day. As the controllers also have a pulse count option, this must be set to ‘1’ on the controller when using the Elite PIR for event recording.

ELITE APPLICATIONS

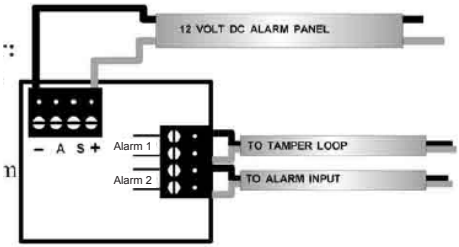
STANDARD WIRING
Alarm 1 and Alarm 2 outputs active on detection 24 hours a day see page 3 for configurations of normally open or normally closed contacts. Mode-2 to Mode-6



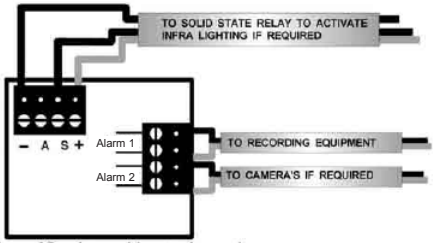
ALARM PANEL:
When tamper is required select either:
Mode-1 Normally Open - Alarm 2/Alarm 1
Normally Closed - Tamper

or
Mode-7 Normally Closed - Alarm 2/Alarm 1
Normally Closed - Tamper

select LED OFF/tp or LED ON/tp



STANDARD
Standard wiring - two pairs of 24 hour volt free outputs combined with infra red lighting activated at dusk for 60 seconds after last detection.
Mode-2 to Mode-6.



Elite Specifications		
Detection Area	10 to 35 metres (adjustable) up to 750 sq metres	
Coverage	90 degree 35 metres x 30 metres max	
Adjustment	180 degree pan + 90 degree tilt Area reduction mask (if required)	
Fresnel Lens	36 zone-White Light Filter	
Customised Optics	Double silicon shielded dual element eliminates 50,000 lux of white light	
Outputs	Silent solid state magnetically immune	
No.1	Alarm 2 Output	Volt free relay signal contact - 24VAC/DC @50mA with an integral 25R series resistor; selectable normally open/normally closed. Adjustable timer options: 2 to 60 seconds
No.2	Alarm 1 Output	Volt free relay signal contact- 24VAC/DC @ 50mA. Selectable normally open/normally closed with an integral 25R series resistor. Adjustable timer options: 2 to 60 seconds
No.3	Output 'A'	Open collector negative switching - 25mA max. Alarm period 400ms
No.4	Output 'S'	Open collector negative - 25mA max. Alarm period: detection + 60 seconds Adjustable: Dusk (2 lux) to 24 hour
Power Input	9 to 15 VDC	
Current	10mA (12V nominal)	
Pulse Count	1 (2,3 & 4 previous Detection < 6 seconds)	
Tamper	Selectable - Mode 1 or 7 output opens for 2 seconds when cover removed and/or 'A' & 'S' outputs pulse for 60 seconds	
Temp.Compensation	Digital sensitivity adjustment	
Control	Digital ASIC/microprocessor - non volatile memory	
Walk Test	Output test mode with LED indication	
Operating Temp.	-20 to +55 centigrade Conformally coated electronics for increased stability	
Housing	High Impact ABS	
Protection Rating	IP55	
Dimension	104 x 104 x 94mm	
Weight	145 grams	
Mounting Height	Variable - optimum height 3 metres	
Cable <200 metres **Cable <500 metres**	Utilising all four outputs - 8 core 7/0.2mm Utilising all four outputs - 8 core 16/0.2mm	
Certifications	CE UKCA	

ENGINEER NOTES

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