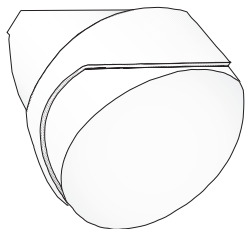# GJD ELITE EXTERNAL P.I.R.

221199

AN INDEPENDENT P.I.R. DETECTOR THAT SIMULTANEOUSLY OR INDIVIDUALLY CONTROLS CCTV SWITCHERS, VIDEO RECORDERS AND IF REQUIRED GJD LIGHTING CONTROLLERS

SPECIFICATION:

CE

Supply: 200 metre max. 7 / 0.2 mm cable	12VDC at 8mA nominal. (21mA Max) 12VDC at 5mA in low power mode.
Range: Coverage:	Adjustable to 35 metres 90 deg GJD Multifunction lens. With lens Masking facility (supplied)
Adjustment:	180 degrees pan and 90 degrees tilt.
CCTV Output: Solid State Relay	Voltage free signal contacts rated at 24VAC/DC with 80R series resistor. Selectable normally open or normally closed configuration with various timing options.
VIDEO Output Solid State Relay OR Trouble output	Voltage free signal contacts rated at 24VAC/DC with 80R series resistor. Selectable normally open or normally closed. Adjustable 2 to 60 seconds longer than detection.
'A' Output: NPN Open Collector 25mA max.	Switching negative for 0.4sec when detection takes place day or night. Compatible with GJD controllers.
'S' Output: NPN Open Collector 25mA max.	Switching negative for 1min longer than detection when dark. Adjustable 2 LUX to Daylight. Compatible with GJD controllers
Processing:	Intelligent Signal Processing - Digital Sunlight Compensation - Automatic Background Leveler Digital Temperature Compensation - NVM
Trouble: When selected.	Pulses 'A' and 'S' outputs for 1 minute when the front cover is removed. Can also activate VIDEO output for 2 seconds.
Temperature:	-20 to +55 Centigrade.
Protection Rating:	I P 5 5

GJD ELITE EXTERNAL PIR DETECTOR

The **ELITE** is a weatherproof PIR designed to simultaneously or individually control CCTV switchers VIDEO recorders and **GJD** Lighting Controllers.

Two sets of voltage free signal contacts provide the necessary signals to control CCTV switcher/s and video recorder/s. etc.

Two separate negative switching outputs are provided for further advanced applications if required. These signals are compatible with **GJD** security lighting controllers for activating security or infra-red camera lighting.

The microprocessor controlled electronics with a **Intelligent Signal Processing** achieves a more stable performance in all weather conditions.

CUSTOMISING THE ELITE:
All factory set parameters can be changed to suit individual requirements. The programming table on page 5 indicates the factory settings which suit most applications. Changes to the factory settings can be easily made either before installation or on site. Once changes have been made they are stored in a non-volatile memory and will be loaded every time the detector is powered.

TYPICAL OPERATION - MODE 6 = FACTORY SETTING
When a detection takes place the CCTV contacts close for 0.4 second selecting the required camera via a video switcher or multiplexer. At the same time the Video contacts close for a timed period starting the video recorder or time lapse recorder in real time recording. The recorder will stay in real time record mode whilst detection is taking place and for the timer period after detection.

MOUNTING AND INSTALLATION:
The unit is not recommended for mounting on metal clad buildings in direct sun as excessive heat and haze ripple can give rise to false activations. The electronics must be protected against water during installation 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 both the top fixing and the lower cable entry hole. The holes should be on 16mm centres, one vertically above the other. Feed standard 8 core alarm cable through the wall into the lower cable entry hole and remove 120mm of outer insulation and adjust the cable so that the outer insulation enters inside the case by a few millimetres.
3) Bare the wires and connect to the terminal block - this block plugs onto the circuit board and can be removed to make connections easier.
4) Replace the terminal block the correct way round and clip in the lens module into the fork bracket CAREFULLY the correct way up to provide the beam coverage required.

At this stage, (weather permitting), the unit can be walk tested with the front cover fitted.* Pan and tilt the lens module to obtain correct coverage area and adjust the range until the correct coverage is obtained.
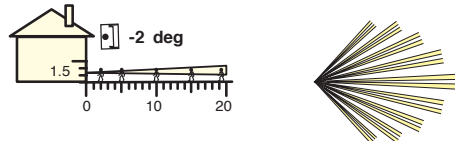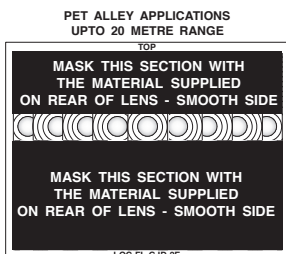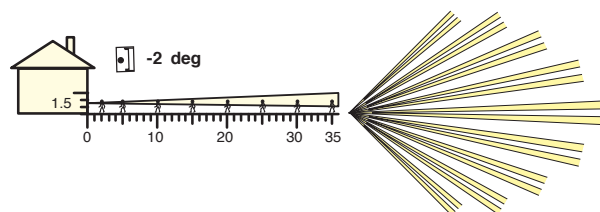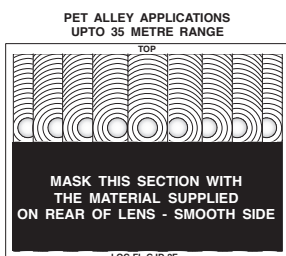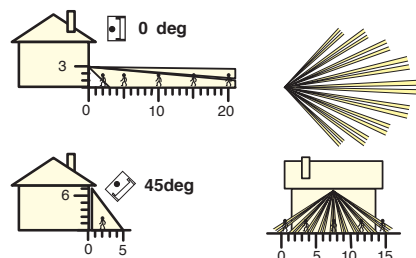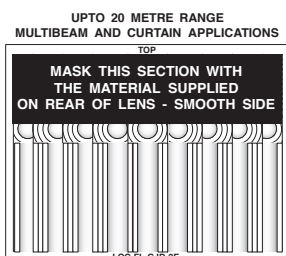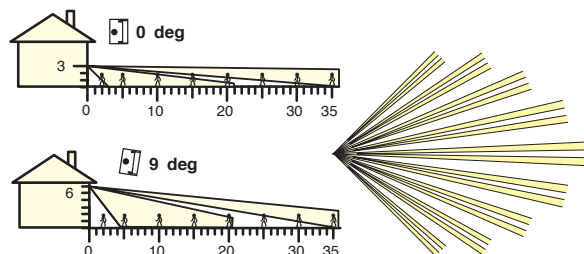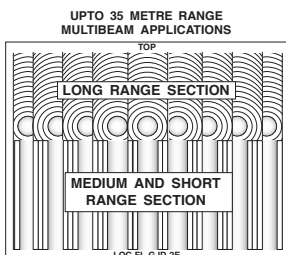
* IMPORTANT - THE FRONT COVER MUST BE FITTED WHEN IN WALK TEST
ONCE ALIGNMENT IS COMPLETE, REPLACE THE FRONT COVER WITH THE VENT HOLE AT THE BOTTOM. ENSURE THE FRONT COVER ENGAGES BOTH SIDES OF THE OUTER CASING BEFORE PRESSING FIRMLY HOME.

GJD MULTIFUNCTION LENS DATA
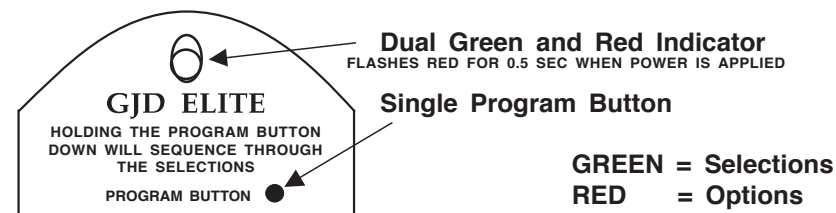*Always fit lens as shown*

Angle of module

Movement across the beams produces the best response and range, whilst movement towards the detector will be less responsive.

UPTO 35 METRE RANGE
MULTIBEAM APPLICATIONS
TOP

LONG RANGE SECTION

MEDIUM AND SHORT
RANGE SECTION

LOC-FL-GJD-2E

0 deg
3
0   10   20   30 35

9 deg
6
0   10   20   30 35

UPTO 20 METRE RANGE
MULTIBEAM AND CURTAIN APPLICATIONS
TOP

MASK THIS SECTION WITH
THE MATERIAL SUPPLIED
ON REAR OF LENS - SMOOTH SIDE

LOC-FL-GJD-2E

0 deg
3
0   10   20

45deg
6
0   5

0   5   10   15

PET ALLEY APPLICATIONS
UPTO 35 METRE RANGE
TOP

MASK THIS SECTION WITH
THE MATERIAL SUPPLIED
ON REAR OF LENS - SMOOTH SIDE

LOC-FL-GJD-2E

-2 deg
1.5
0   10   20   30 35

PET ALLEY APPLICATIONS
UPTO 20 METRE RANGE
TOP

MASK THIS SECTION WITH
THE MATERIAL SUPPLIED
ON REAR OF LENS - SMOOTH SIDE

MASK THIS SECTION WITH
THE MATERIAL SUPPLIED
ON REAR OF LENS - SMOOTH SIDE

LOC-FL-GJD-2E

-2 deg
1.5
0   10   20

all dimensions in metres

CHANGING THE EXISTING SETTINGS

GJD ELITE

HOLDING THE PROGRAM BUTTON
DOWN WILL SEQUENCE THROUGH
THE SELECTIONS

PROGRAM BUTTON ●

Dual Green and Red Indicator
FLASHES RED FOR 0.5 SEC WHEN POWER IS APPLIED

Single Program Button

GREEN = Selections
RED   = Options

1. Press and HOLD down the program button - the RED indicator will light.

2. Keeping the button in the HOLD position, the RED indicator stays on for 4 seconds, then the indicator will sequence through the six GREEN SELECTIONS.

3. Count the number of GREEN flashes that occur in rapid succession, this corresponds to the SELECTION. When the required SELECTION is reached, release the button.

4. Count the number of RED flashes that occur in rapid succession.
(this represents the present OPTION)

5. By holding the button down again within three seconds of the RED flashes finishing will allow amendment to the OPTION. The RED flashes will then sequence through the OPTIONS. Count the number of RED flashes required then release the button.

6. Three seconds after the flash sequence, the unit exits the program mode, and the amended OPTION is stored.

7. To amend further settings repeat steps 1 to 5.

   EXAMPLE 1: Altering the RANGE: Setting the RANGE to 28 metres

a) First, choose the SELECTION and OPTION required from the table.
(ie. 1x GREEN flash with 4x RED flashes)

b) Press and HOLD the program button until the GREEN light flashes ONCE, then release the button, after a pause, the indicator will then carry on to flash RED for the present OPTION. HOLD down the button (within 3 seconds) until the RED indicator flashes FOUR times in rapid succession then release the button.

   EXAMPLE 2: Altering the PULSE COUNT: Setting the PULSE COUNT to 3.

a) First, choose the SELECTION and OPTION required from the table.
(ie. 2x GREEN flash with 3x RED flashes)

b) Press and HOLD the program button until the GREEN light flashes TWICE, then release the button, after a pause, the indicator will then carry on to flash RED for the present OPTION. HOLD down the button (within 3 seconds) until the RED indicator flashes THREE times in rapid succession then release the button.

HIGHLIGHTED BOXES ARE GJD FACTORY SETTINGS

GREEN SELECTION

		1x	2x	3x	4x	5x	6x	7x	8x	9x
1x	RANGE mtr (approx)	12	15	**20**	28	35				
2x	PULSE COUNT	1	**2**	3	4					
3x	LED MONITOR	OFF	ON	**OFFnt**	ONnt	LP				
4x	LUX 'S' output only	2	**5**	15	30	60	120	240	24HR	
5x	MODE	1	2	3	4	5	**6**	7		
6x	TIMER seconds	2	5	10	**15**	20	25	30	45	60

RED OPTIONS ➝ 1x 2x 3x 4x 5x 6x 7x 8x 9x

PULSE COUNT: The range of the unit will decrease if there is little difference in temperature between the moving object and the background.
The unit detects a change in heat in its field of view, therefore trees, shrubs, ponds, washing, central heating boiler flues and animals should be considered. In changing sunny/cloudy conditions random detections can occur. In poor environments the pulse count can be increased on the Elite. When used in conjunction with a GJD Lighting Controller select pulse count '1' on the controller.

WALK TEST:
no trouble
output When the PROGRAM button is pressed momentarily the RED indicator lights, and will light every time a detection takes place irrespective of the LED MONITOR option. This mode will cancel 5 minutes after last detection or when the program mode is entered or when the power is turned off and on.

OFFnt: LED monitor off, TROUBLE function disabled.

ONnt: LED monitor on, TROUBLE function disabled.

LP: Low power requirement - LED, relays and trouble output disabled.

LUX: The approximate light level at which only the 'S' output only is activated.

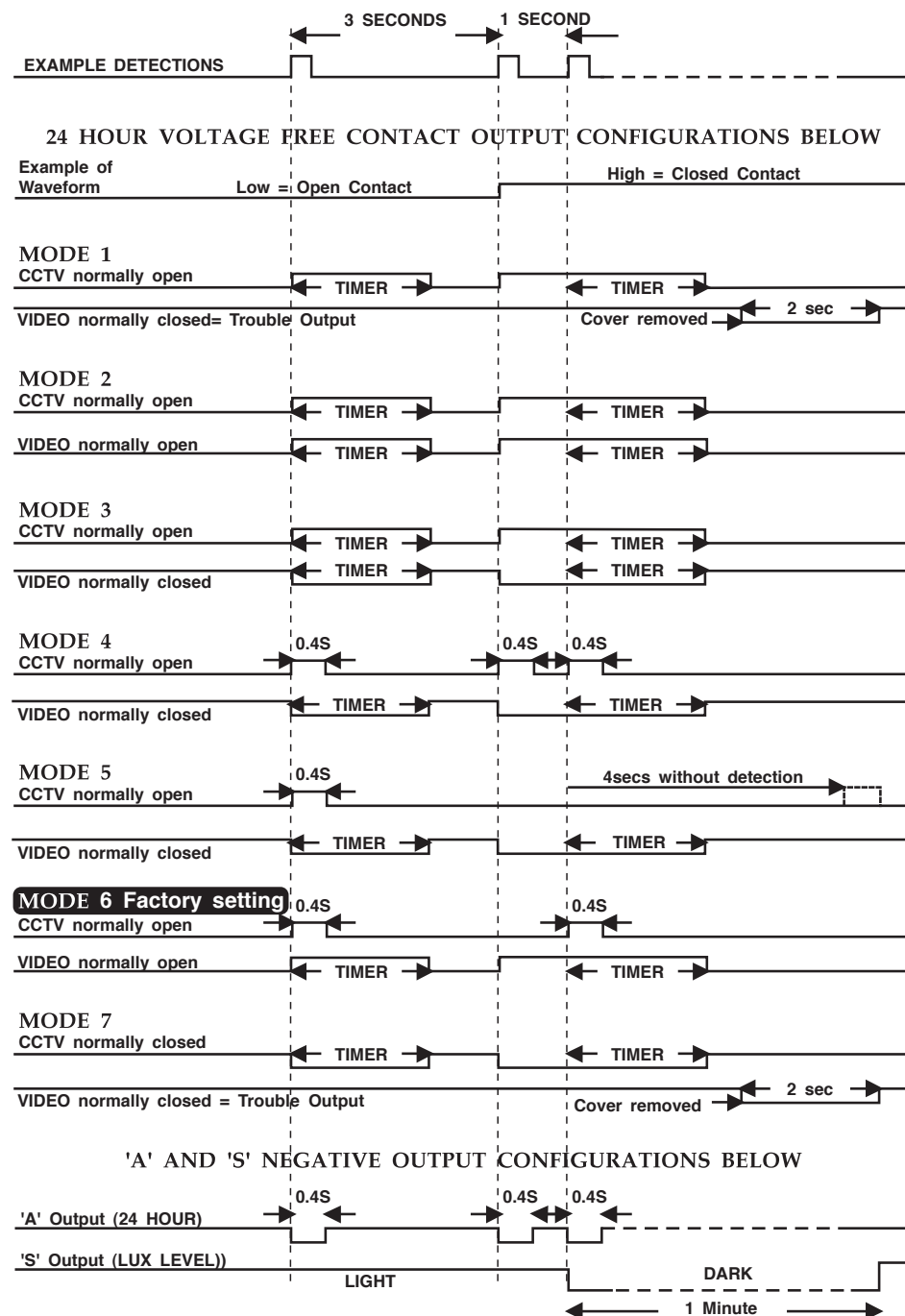**24HR:** The 'S' output will operate irrespective of the light level.

MODE: 24 hour volt free contact output modes,
See pages 6 and 7 for further information.

TIMER: The CCTV and VIDEO outputs use this timer,
see pages 6 and 7 for mode options.

TO RESET THE ELITE BACK TO GJD FACTORY SETTINGS:

Unplug the + / - 12VDC terminal block from the unit whilst the power is connected. Press and HOLD the program button whilst the terminal block is reconnected to the unit. The GREEN indicator will flash, then release the button.

EXAMPLE DETECTIONS — 3 SECONDS — 1 SECOND

24 HOUR VOLTAGE FREE CONTACT OUTPUT CONFIGURATIONS BELOW

Example of Waveform — Low = Open Contact — High = Closed Contact

MODE 1
CCTV normally open — TIMER — TIMER
VIDEO normally closed= Trouble Output — Cover removed — 2 sec

MODE 2
CCTV normally open — TIMER — TIMER
VIDEO normally open — TIMER — TIMER

MODE 3
CCTV normally open — TIMER — TIMER
VIDEO normally closed — TIMER — TIMER

MODE 4
CCTV normally open — 0.4S — 0.4S — 0.4S
VIDEO normally closed — TIMER — TIMER

MODE 5
CCTV normally open — 0.4S — 4secs without detection
VIDEO normally closed — TIMER — TIMER

MODE 6 Factory setting
CCTV normally open — 0.4S — 0.4S
VIDEO normally open — TIMER — TIMER

MODE 7
CCTV normally closed — TIMER — TIMER
VIDEO normally closed = Trouble Output — Cover removed — 2 sec

'A' AND 'S' NEGATIVE OUTPUT CONFIGURATIONS BELOW

'A' Output (24 HOUR) — 0.4S — 0.4S — 0.4S
'S' Output (LUX LEVEL)) — LIGHT — DARK — 1 Minute

CCTV AND VIDEO VOLT FREE OUTPUTS
MODES 1 TO 7

NO = Normally Open contact   NC = Normally Closed contact

* MODE 1:   CCTV = NO   VIDEO = NC
The normally open contacts of the CCTV output will close with detection for the length of the TIMER after detection.
The normally closed contacts of the VIDEO (TROUBLE) output will open for 2 seconds if the front cover is removed or seriously tampered with.

MODE 2:   CCTV = NO   VIDEO = NO
The normally open contacts of the CCTV output will close with detection for the length of the TIMER after detection.
The normally open contacts of the VIDEO output will close with detection for the length of the TIMER after detection.

MODE 3:   CCTV = NO   VIDEO = NC
The normally open contacts of the CCTV output will close with detection for the length of the TIMER after detection.
The normally closed contacts of the VIDEO output will open with detection for the length of the TIMER after detection.

MODE 4:   CCTV = NO   VIDEO = NC
The normally open contacts of the CCTV output will close for 0.4 seconds every time a detection takes place.
The normally closed contacts of the VIDEO output will open with detection for the length of the TIMER after detection.

MODE 5:   CCTV = NO   VIDEO = NC
The normally open contacts of the CCTV output will close for 0.4 seconds when a detection takes place and can only be retriggered if detection has not occurred for 4 seconds.
The normally closed contacts of the VIDEO output will open with detection for the length of the TIMER after detection.

MODE 6:   CCTV = NO   VIDEO = NO - GJD factory setting

The normally open contacts of the CCTV output will close for 0.4 seconds when a detection takes place and can only be retriggered every 4 seconds if detection is still taking place.
The normally open contacts of the VIDEO output will close with detection for the length of the TIMER after detection.
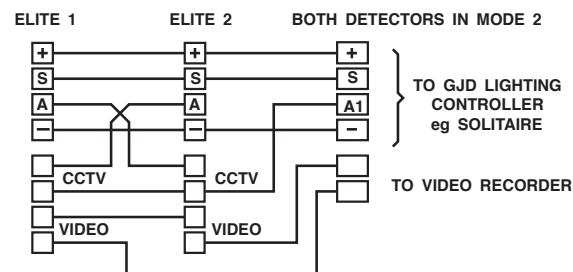
* MODE 7:   CCTV = NC   VIDEO = NC - Conventional alarm PIR
The normally closed contacts of the CCTV output will open for the length of the timer after last detection.
The normally closed contacts of the VIDEO output will open for 2 seconds if the front cover is removed or seriously tampered with.

* NB: The trouble option detects a sudden pressure change inside the unit. When selected care should be taken not to sight the unit in high pressure change environments to minimise false activation.


ALTERNATIVE APPLICATIONS

ELITE 1   ELITE 2   BOTH DETECTORS IN MODE 2

TO GJD LIGHTING
CONTROLLER
eg SOLITAIRE

TO VIDEO RECORDER

DUAL DETECTION
Both Elites have to detect within the timer period for the system to activate

LIGHTING OUTPUT:
The 'S' output of the Elite can drive a solid state relay directly to control Infra-red or Flood lighting.

12VDC

SOLID STATE
RELAY
ZPV6004A

LIVE

NEUTRAL

LIGHTING
240VAC
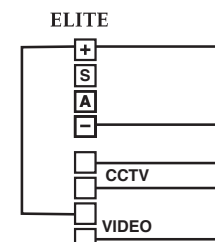1000W
Max

60cm min
to side
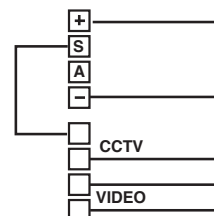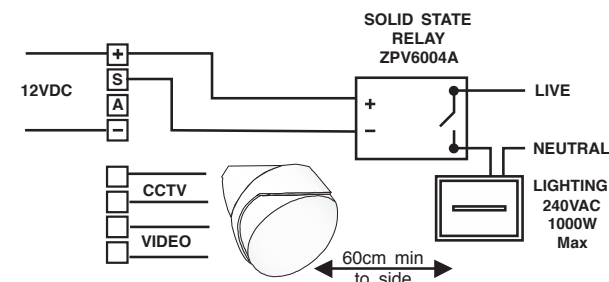
TIMED NEGATIVE SWITCHING (DARKNESS)
-VE output active with CCTV contacts that are controlled by the Lux level setting
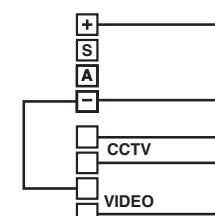
TIMED NEGATIVE SWITCHING (24 HOUR)
-VE output active with VIDEO contacts

ELITE

ELITE
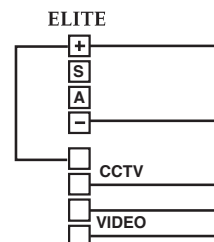
TIMED POSITIVE SWITCHING (24 HOUR)
12VDC output active with CCTV contacts

TIMED POSITIVE SWITCHING (24 HOUR)
12VDC output active with VIDEO contacts

GJD Manufacturing Ltd reserve the right to alter the specification without notice.