D-TECT 50 IP
GJD250 IP Motion Detector

GJD
Detect.Illuminate.Deter

PACKAGE CONTENTS
- 1 x D-TECT 50 IP
- 1 x Drilling template for fixing holes
- 3 x 31.75mm wall plugs
- 3 x 31.75mm screws
- 2 x Tamper feet
- 1 x Tamper cup
- 1 x Creep mirror
- 1 x Installation manual
- 1 x 5m wide Fresnel lens (Lens2, Fig.13)

INTRODUCTION
The D-TECT 50 IP is a highly sophisticated, but user friendly, IP-based motion detection device and alarm trigger that harnesses the power of IP with PoE (Power over Ethernet) connectivity, advanced signal processing, quad pyro scanning and unique optical systems to provide state-of-the-art alarm capture.

MOUNTING THE UNIT
WARNING
- **NYLON WASHERS PROVIDED MUST BE USED WITH SCREWS**
- **ENSURE CABLE ENTRY AND SCREW HOLES ARE SEALED WITH WATER BASED SEALANT**
- **DO NOT USE SILICONE BASED SEALANT**

During installation, protect the electronics against water, as trapped moisture can affect or damage the unit.

1. Drill the wall to accept the fixing screws, the cable entry, and the tamper cup (if used). See Figures 1 and 2. A hole-drilling template is provided. Note: GJD recommend using the tamper cup on uneven wall surfaces.
2. Remove the cover assembly by loosening the locking screw. The cover hinges from the top and lifts out of the location slot. See Figure 3.
3. Feed standard CAT5 cable into the cable entry. See Figures 2, 4 & 5.
4. Screw the unit to the wall ensuring that the rear tamper pin is correctly located and that the tamper micro switch is closed. See Figure 6. To aid installation, two spare tamper feet are provided. One is 1mm longer and the other is 2mm longer than the tamper foot originally fitted. The tamper foot is a push fit and can be removed by carefully pulling it from the pin. See Figure 2.
5. When the detector is aligned, connected, and programmed to suit the installation, replace the front cover and lock as shown. See Figure 7.

CONNECTING THE UNIT
Fit the RJ45 plug to the cable and plug into the socket on the top PCB. This must be done before the cable is connected to the PoE switch.

There are 2 volt free relay contacts on the top PCB for connecting auxiliary equipment. These are programmable in the web browser set-up page.

BEAM ALIGNMENT
PIR circuitry detects changes in heat and movement in the beam pattern. Objects such as trees, shrubs, ponds, flues, and animals should be considered when positioning the detector.

Note: The PIR sensor is more sensitive to movement across the beams, and less sensitive to movement directly towards or away from the beams.

When coverage exceeds the desired detection area, adjust the module as required to avoid unwanted detection.

Optimum mounting height for the detector with Lens1 (Fig. 12) is 3m. Heights above 3m could result in a significant reduction in the range of detection and the target will have to move a greater distance within the field of view to alarm.

Mounting height for the narrow width Lens2 is maximum 2.6m.

Figures 8/9 show side and top down views of the 10m wide (Lens1) pattern. Figures 10/11 show the 5m wide (Lens2) pattern.

A separate creep mirror is supplied. It can be pushed on to the pyro sensor as shown below. This creates a detection zone directly underneath the detector.

Creep mirror fitted

Note: The maximum mounting height is 3m (Lens1) & 2.6m (Lens2) when utilising the creep detection zone.

PROGRAMMING
There are 2 different ways of programming the detection range, pulse count and LED setting.
1. Using the programming button, programming LED and programming chart below.
2. Via the web based interface. The user can individually program a number of configurable settings, as illustrated in the programming chart.

Programming Chart

			SETTING				
			1	**2**	**3**	**4**	**5**
O	1	**RANGE (m)**	25	30	40	45	50
P	2	**Pulse Count**	1	2			
T							
I							
O	3	**LED**	Off	On			
N							
S							

To change any of the D-TECT 50 IP settings:
1. Press the program button, as shown in figure 4, for the number of the Option to be changed, i.e. once for range, twice for pulse count, three times for LED.
2. Wait until the blue LED indicator goes off (typically four seconds).
3. The indicator will then flash out the existing settings.
4. To change the settings for that option, press the program button the number of times for the required new setting.
5. The indicator blinks twice and the changes are stored in the D-TECT 50 IP's non volatile memory.

Example: To change the LED setting from OFF to ON:

1. Press the program button three times.
2. Wait until the blue LED indicator goes off (typically four seconds).
3. The indicator will then flash once, indicating the current LED setting is OFF.
4. Press the program button twice to change the setting to ON.
5. The indicator blinks twice and the changes are stored in the D-TECT 50 IP 's non-volatile memory.

PROGRAMMING OPTIONS DEFINITIONS
Pulse Count
This is the number of times the unit has to detect on both of its sensors before signalling an output.

LED
LED Off – LED disabled.
LED On – LED signals a detection

Relay outputs
Output 1 and output 2
These are magnetically immune volt free relay contacts used to trigger alarm inputs on connected equipment. The contacts are rated at a maximum of 24V AC/DC @ 50mA.

The contact operating timer can be adjusted in the web based user interface.

WALK TEST

In walk test mode, the detection LED option is set to ON, and the pulse count option is set to 1.

1. The detection LED lights each time the D-TECT 50 IP detects your presence
2. To enter the walk test mode, press the programming button once. The detection LED is enabled and pulse count 1 is automatically selected. Alternatively, the walk test mode can be entered via the web based user interface. The unit can then be aligned.
3. The test mode ends automatically five minutes after the last activation. Alternatively, press the program button three times, to cancel the walk test mode.

Note: When you conduct a walk test, make sure that the front cover is in place. Do not conduct walk tests with the cover removed.

The range of the detector increases without the protective front cover. Therefore the front cover must be fitted to establish the correct beam pattern. Use programming chart to adjust the range as necessary. Pan and tilt the lens module over the field of view to obtain the correct coverage area.

| Certifications	CE UKCA

1

2

3

4

RJ45

Program

Reset

5

6

7

8

3m

50m

9

77°

21.5°

14°

29°

5m

2.5m

6.5°

0m

10m

2.5m

5m

10

Max.
2.6m

50m

11

84°

28°

2.4m

0

5m

11.3°

2.4m
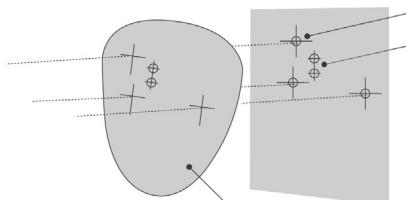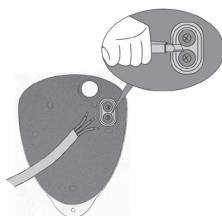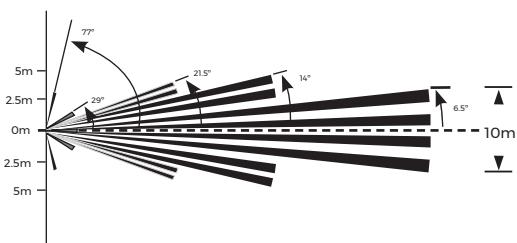
12

LENS 1 FITTED AS STANDARD

14.4mm

42.6mm

61mm

13

LENS 2 OPTIONAL

20.6mm

42.6mm

61mm
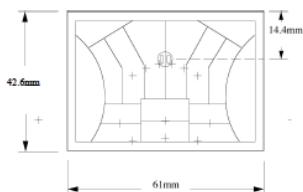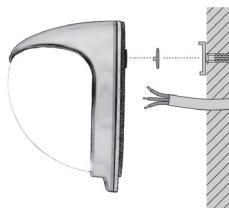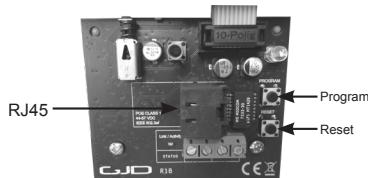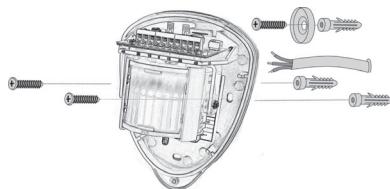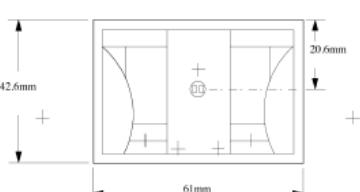
Before operation

This section of the manual uses the following warning indications to provide information regarding usage of the product to prevent you and others from being harmed and your assets from being damaged. These warning indications are described below. Ensure you understand these precautions before proceeding with the installation.

⚠️ Warning	Failure to follow the instructions provided by this warning and improper handling may cause death or serious injury
⚠️ Caution	Failure to follow the instructions provided by this caution and improper handling may cause injury and/or property damage

🚫 This symbol indicates prohibition. The specific prohibited action is provided in and/or around the figure.

❗ This symbol requires an action or gives an instruction.

⚠️ **Warning**	
Never attempt to disassemble or repair the product. It may cause fire or damage to the devices.	
Hold the main unit securely when you install or service it. Exercise care not to bump the product against nearby objects or drop it inadvertently.	
⚠️ **Caution**	
Only use approved Power over Ethernet power supplies. Never try to power the device other than with the RJ45 PoE connection.	❗
Do not touch the unit connections with a wet hand or when the products is wet from rain. It may cause a short circuit and damage the unit.	❗
Clean and check the products periodically for safe use. If any problem is found, contact GJD or authorised partners to solve the issue before continuing to use the product.	❗
This product is intended to detect people and is not designed to prevent theft, disasters or accidents. The manufacturer shall not be held liable for any damage to user's property resulting from theft, disasters or accidents.	❗

PROGRAMMING - USING PROGRAMMING BUTTON

General connection
1. Connect the network cable and verify that the unit powers up and that the network connection is working.

Factory reset
1. Make sure the detector is powered on.
2. Hold down the reset button for 8 seconds.
3. Release reset button, the status LED on the board will turn off for a second.
4. The units IP address and login details are now reset back to factory values.

USER INTERFACE

Settings are made through the web based user interface: all that is needed is a modern web browser to access and change settings .

The instructions for the user interface described below are valid for firmware 3.08.

Factory default settings
When using the system for the first time, or if a factory reset has been made, the following settings are used:

Product IP number   192.168.0.10
Subnet mask   255.255.255.0
Default router   192.168.0.1

Login
1. Open a web browser.
2. In the address field, type in the selected unit is IP-address. Default is 192.168.0.10.
3. The user interface login page is shown.

4. The user is prompted to create a username and password based on the password policy.

INSTALLATION AND CONFIGURATION

Detector configuration
1. Open the sensor settings tab.
2. Pressing the Factory default button then the Save settings button will restore the default range, pulse count and LED settings.
3. To change any of the detectors settings use the drop down boxes to select the required setting
4. To enable walk test mode press the Walk test ON button and to disable walk test mode press the Walk test OFF button.

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| Events | **Sensor settings** | Unit configuration | Import and export settings | Firmware update | Logout |

Sensor settings

Range:	30 m ▼
Pulse Count:	1 ▼
Detection LED:	ON ▼

Save settings   Factory default

Walk test

Walk test status: OFF

ON   OFF

Sensor status

PIR: No alarm
Lux level: 50 lux
Tampering: Triggered
Temperature: 19 °C

Manual control

Digital Output 1
Open   Close   ●

Digital Output 2
Open   Close   ●

Unit configuration
1. Open the unit configuration tab.
2. Current settings are shown.

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| Events | Sensor settings | **Unit configuration** | Import and export settings | Firmware update | Logout |

TCP/IP

DHCP	○ Enabled ◉ Disabled
IP address	192.168.0.10
Subnet mask	255.255.255.0
Default router	192.168.0.1
DNS	○ Enabled ◉ Disabled
DNS address	xxx.xxx.xxx.xxx
Web server port	80
Hostname	

Save

Login

Username	admin
Password	
Confirm password	

Save

3. Enter desired settings and press the save button. Remember to reload the page with the new IP address if changed.

Login

The password must have at least 8 characters and at least three of the following groups; small letters, capital letters, numbers, special characters.

Username	test
Password	
Confirm password	

Save

4. To change login, enter a new username and password.
5. Press the save button to confirm.

Import and export settings
Alarm settings and I/O configuration can be exported as a file for backup purposes and to copy the settings to other units. IP address and Login settings are not included in this file.

1. Open the import and export settings tab.
2. Export all current alarm settings and I/O configuration by pressing the Download button. Pay attention to the file location on your hard drive. The file name is individual for each unit as it includes the unit MAC-address.

D-TECT IP

Events | Sensor settings | Unit configuration | Import and export settings | Firmware update | Logout

Export settings

Download settings

Import settings

Browse...

Upload settings

1. To import a setting file, press Browse button and navigate to the location of your setting file on your hard drive.
2. When the file is selected it is possible to import it with the Upload button. Pay attention to the status message next to the button. Importing a setting file will overwrite all current settings.

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DETECT & SECURE

| Events | Sensor settings | Unit configuration | Import and export settings | Firmware update | Logout |

Export settings

Download settings

Import settings

C:\Users\ipdev\Download Browse...

Upload settings   Warning, all settings will be overwritten!

Firmware update
The D-Tect IP firmware can be updated to add new functions or resolve software issues.
1. Open the Firmware update tab. The current firmware version is displayed.

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DETECT & SECURE

| Events | Sensor settings | Unit configuration | Import and export settings | Firmware update | Logout |

Firmware

Current firmware version: 3.08

Select firmware file   Upload firmware

Warning: All user settings might be cleared, make sure to export the settings before uploading a new firmware file.

2. Press the select firmware file button. Locate the downloaded firmware file, then click open.
3. The selected file will be present. Click upload firmware.
4. When back onto the login page, this indicates that the firmware has uploaded.

Alarm settings
All alarm settings are made in the events tab. The D-Tect IP works on the principle "Alarm - Action". This means that alarms are created based on all types of input signals. For each alarm it is possible to create one or more actions. The actions can be a network alarm message or to trigger a relay.

Alarm inputs
1. Go to the events tab.
2. Press "Add event button".
3. Enter a unique alarm name.
4. From the Input dropdown menu, choose the action to generate the alarm.

Delay   Alarm delay specifies the time for which the alarm conditions must be continuously fulfilled before the alarm is enabled. Default value is 0 seconds, maximum is 120 seconds.

Timeout   Timeout specifies the time before the alarm is disabled after the alarm conditions are no longer met. Default value is 0 seconds, maximum is 120 seconds.

Alarm activation   Always – Always active
Above light limit – Will become active when LUX level is above the light limit setting.
Below light limit – Will become active when LUX level is below the light limit setting.

Light limit   This is the light level (LUX) that the Above light limit and Below light limit reacts.
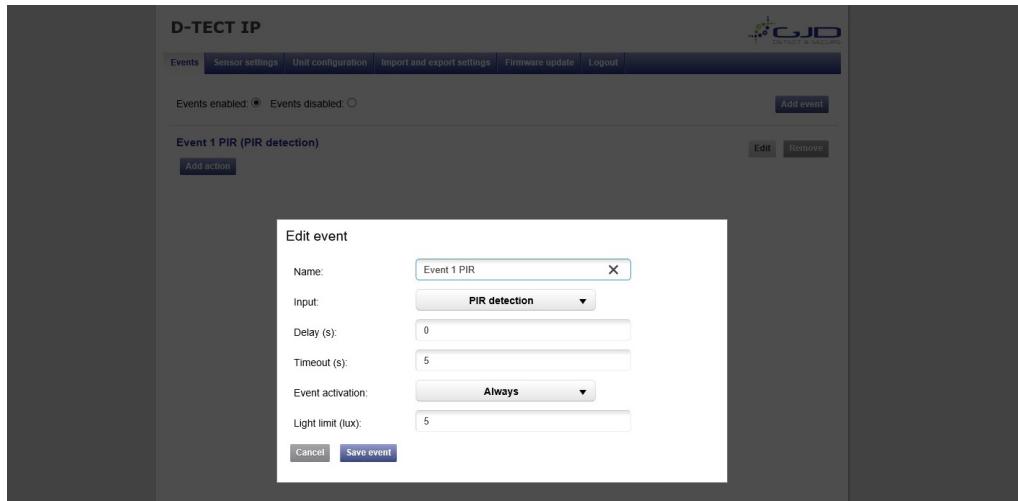
5. Press the Add event button to save.
6. Repeat step 2 to 6 for all required alarm actions.

Create alarm actions

1. Press + Add action under the desired alarm. Input fields appear to the right.
2. Choose action type from the Event type dropdown menu.

Connect to URL   Connect to URL is used to create any type of network alarm. This allows one URL request at alarm enable and one URL request at alarm disable.

Output 1   This turns output 1 on when the detector is activated and turns it off when the alarm clears.

Output 2   This turns output 2 on when the detector is activated and turns it off when the alarm clears.

Partner list   The products listed have a built-in wizard in the D-Tect IP that creates the specific URL request needed for the application. This list is continuously expanding. Please refer to separate documents regarding integration of these products.

3. Fill in required data fields for the selected Event type.
4. Press the Add action button to save the action.
5. Press Test next to the action for an alarm to test the action.
6. Repeat step 1-5 for each alarm.

ENGINEER NOTES