

# D-TECT X Wireless Receiver

GJD392 Wireless CCTV Receiver



## INTRODUCTION

The D-Tect X Receiver is an IP65 weatherproof, tamper protected, four channel module which can be expanded by the addition of 3 further four channel expander PCB modules to allow the receiver unit to monitor the active state of up to 16 wireless D-Tect X Movement Detectors.

The receiver can be mounted externally or internally and has a communication distance of up to 500 metres, in line of sight to the detectors.

It is always advisable to conduct an RF continuity test when mounting the receiver internally to ensure that the radio signal strength from the detector can be received in the desired location. ( see RF CONTINUITY TEST SECTION ).

Each channel of the receiver has individual volt free normally open and normally closed outputs for detection and normally closed outputs for tamper, low battery and loss of detector signal.

All the volt free contacts also have individual LED indication. There are also 2 open collector negative switching outputs which are compatible with all GJD lighting controllers.

The unit has a universal supply voltage of 12-24 volts AC or DC.

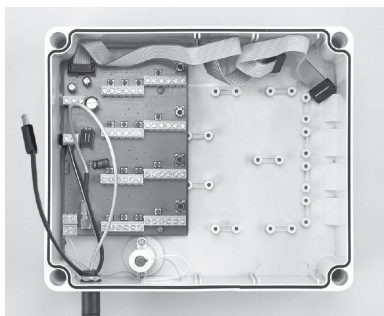


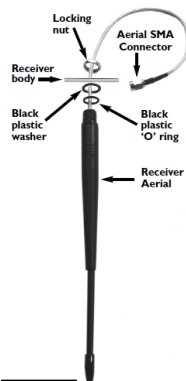
fig 1 STANDARD RECEIVER UNIT WITH PRE-INSTALLED 4 CHANNEL MODULE

## WIRELESS TRANSMISSION

The D-Tect X Detector automatically sends out a signal every 2 minutes to confirm that every one of up to 16 detectors are active. If a signal is not received within 6 minutes from a registered detector an 'RF loss' indicator and contact is activated.

Each D-Tect X Detector transmits radio signals to the receiver and has over 16.7 million individual codes. The receiver only responds to the transmissions of the detector that has been linked to the channel that identifies it. The Receiver can only analyse this information after the individual codes has been transferred via the secure wire code learning link ( see 'SET-UP' information ). This transfer is only required on the initial set-up and any subsequent changes to the detector programming will be relayed automatically and wirelessly to the receiver.

## FITTING RECEIVER AERIAL



## SET-UP PROGRAMMING THE LINK BETWEEN THE RECEIVER AND THE DETECTOR

1. Connect a 12-24 volt power source to the receiver, (see Diagram 1) and insert the 3 x AA batteries into the detector, as described in Diagram 2. Always check that the batteries have been inserted correctly. Alternatively the detector can be powered up from the 4.5 Volt output plug on the receiver (Diagrams 1 & 4).

The detector takes approximately 2-3 minutes to stabilise itself and the red LED on the detector module will flash 3 times within a 4 second period when the power is connected. When power is applied to both the receiver and the detectors, any channels with a detector assigned to it will show RF LOSS until a signal is received from the detector. To check if a channel is blank, press and release the channel programme button on the receiver. If the four LED's flash three times then a detector has already been assigned to this channel. If the LED's remain lit then channel is blank.

2. Plug in the link wire from the detector into the socket on the receiver module. (see Diagrams 1 & 4).
3. Press the 'Program button' on the detector once (see Diagram 1 & 5). The red LED will light up.
4. Within 2 seconds press the respective 'Channel button' on the receiver module once and the LED's will light up for the selected channel. When the red LED on the detector turns off the code is transferred and the 3 LED's on the selected channel will flash. The code has now been transferred from the detector to the receiver.
5. Remove the link wire from the receiver module and plug it into the tamper PCB in the top of the detector (see Diagram 5). Detection signals will be immediately transmitted to the receiver. Repeat Steps 2 to 5 for all the detectors to be on the receiver module. The receiver box is equipped with one 4 way PCB module as standard but can accept up to 3 additional expander modules in total. As each module can communicate with 4 detectors, each receiver box is able to monitor 16 separate wireless D-Tect X detectors.
6. To verify that a code has been stored for any individual detector - press the channel button on the receiver module once and 4 LED's will flash 3 times to indicate a code has been stored.
7. To delete a code from a channel, press and hold the channel program button, all four LED's will light. Keep the channel button pressed for approximately 4 seconds until the alarm LED flashes then release the button. The channel is now blank.

## OUTPUTS

### Alarm Contacts

1 Normally open and 1 normally closed with LED indication rated at 24 vdc 100 mA with variable timing options, programmable on the detector.

### Tamper Contact

1 Normally closed rated at 24 vdc 100 mA with LED indication. Operates with front and rear tamper switches on the detector.

### Low Battery Contact

1 Normally closed rated at 24 vdc 100 mA with LED indication. Operates when the detector battery voltage drops to about 4 volts.

### Loss of Signal Contact

1 Normally closed rated at 24 vdc 100 mA with LED indication. Operates when the receiver has not received a signal for about 6 minutes.

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. Rated at 25 mA.

The 'S' output is a photocell-controlled signal giving a fixed 60- second trigger on activation. Rated at 25 mA.

## RF CONTINUITY TEST

It is always advisable to test the RF signal at the receiver location prior to installation.

To enter the RF continuity test mode - press the program button on the D-Tect X detector 8 times.

On the eighth press, 'hold' down the button for 5 seconds until the LED goes out - the LED indicator will then flash and transmit one signal per second to the receiver.

The corresponding channel indicator on the receiver module will also flash once per second if a strong enough RF link has been established.

This test mode will automatically cancel after five minutes. Alternatively - to cancel the RF continuity test immediately, press and hold the program button on the detector until the LED illuminates, then release the button.

If it is necessary to conduct a site survey prior to installation of this equipment, it is advisable to power up the receiver temporarily with a PP3 (9 volt) battery.

Register one detector as described in 'PROGRAMMING THE DETECTOR' on D-Tect X detector instruction sheet, then conduct a RF continuity test as detailed above.

As the signals to the receiver are sent once per second, the optimum position of both the D-Tect X detector and the D-Tect X receiver box can easily and quickly be established.

## MOUNTING THE UNIT

**Important** - During the installation the electronics must be protected against water, as trapped moisture can affect or damage the electronic components within the unit.

1. Using the template provided, drill the wall to accept the four wall plugs and fixing screws - and the tamper cup (if used). See Diagram 7.

**Note:** - We recommend using the tamper cup on uneven wall surfaces.

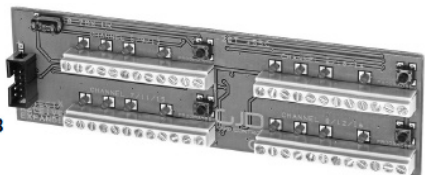
2. Remove the receiver's cover by loosening the four screws.
3. Screw the receiver unit to the wall ensuring that the tamper pin is correctly located. See Diagram 7.

## INSTALLING AN EXPANSION MODULE IN THE RECEIVER

The D-Tect X receiver is supplied as standard with a 4 channel module pre-installed but there are expansion slots which will accommodate up to 3 additional 4 channel modules giving a total of 16 channels. Therefore the receiver is able to control and monitor up to 16 D-Tect X detectors.

1. To install a module, carefully remove the 4 channel expansion module ( fig 3 ) from its protective wrapper.
2. Slide the expansion module into the next available mounting slot and plug the module's ribbon connector into the first slot of the 3 way connector block located on the circuit board of the pre-installed 4 channel module. See diagram 6.
3. Repeat the process for any further expansion modules using the next mounting slot and plugging module's ribbon cable into the next slot on the pre-installed module's connector block.

fig 3



## ACCESSORIES

GJD 393 - 4 Channel Expander Modules ( fig 3 )

## SIMPLIFIED EU DECLARATION OF CONFORMITY

Hereby, GJD Manufacturing Ltd declares that the radio equipment type GJD392 D-Tect X Receiver is in compliance with Directive 2014/53/EU.

The full text of the EU declaration of conformity is available at the following internet address: [gjd.co.uk](http://gjd.co.uk)

## GJD 393 - 4 CHANNEL EXPANDER MODULE

### SIMPLIFIED EU DECLARATION OF CONFORMITY

Hereby, GJD Manufacturing Ltd declares that the radio equipment type GJD393 D-Tect X Receiver Expander Module is in compliance with Directive 2014/53/EU.

The full text of the EU declaration of conformity is available at the following internet address: [gjd.co.uk](http://gjd.co.uk)

Certifications	
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# ENGINEER NOTES

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