

Active Edge

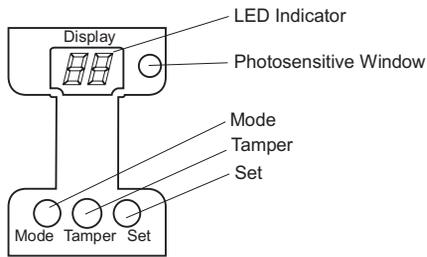
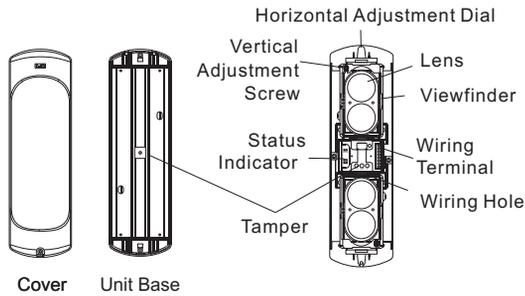
GJD970 Quad Infra-Red Beams

GJD
TAKE CONTROL

Features

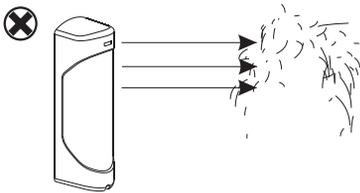
1. 10 Selectable transmission frequencies to allow a number of beams to be used in close proximity.
2. Both sets of dual beams can be tested individually.
3. Digital display to show signal strength reception.
4. And / or mode to give 2 dual or 1 quad beam function.
5. 10 Interruption period settings.
6. Automatic environmental sensitivity adjustment.

Parts Description

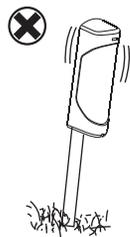


Positioning

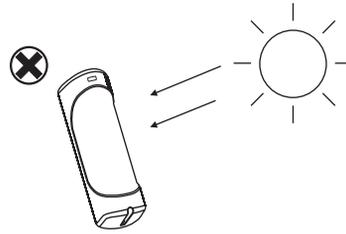
Do not mount the detector in the following areas:



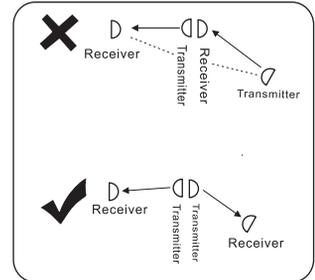
Care must be taken when positioning the beams; Items such as trees, plants, washing etc. must be avoided.



The transmitter and receiver must be mounted on a solid base.



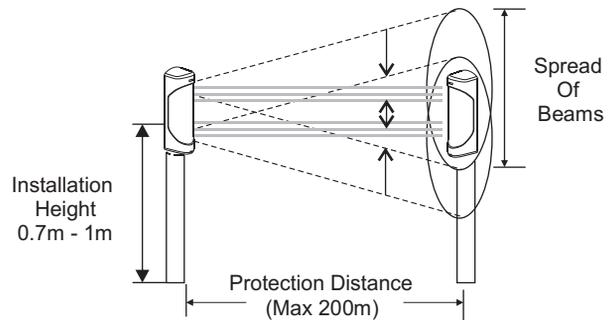
Avoid positioning the beams where they could be affected by direct sunlight and vehicle lights.



When beams are fitted in close proximity to other beams the top configuration must be avoided; the bottom example is correct.

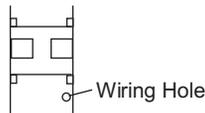
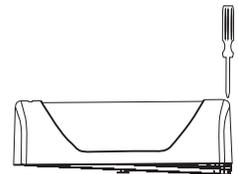
Mounting Height & Detection Distance

Model	Detection Distance	Beam Spread
GJD970	200m	3.4m



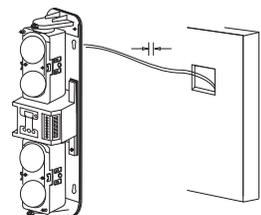
Installation

1. Loosen the cover fixing screw and remove the cover.

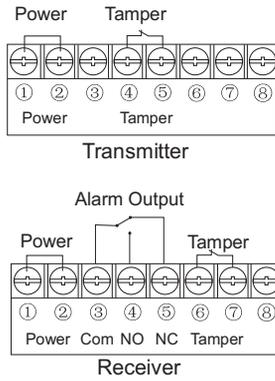


2. Attach the mounting template to the wall, mark the installation holes and drill the holes.

3. Fix the base unit firmly on the wall.



Terminal Wiring Patterns



Note: Heater and power share the same connection port , no polarity requirement

Wiring Distances

Diameter	DC 12V	DC 24V
0.5mm ² (Diameter 0.8)	300m	300m
0.75mm ² (Diameter 1.0)	400m	800m
1.25mm ² (Diameter 1.2)	700m	1400m
2.0mm ² (Diameter 1.6)	1000m	2000m

When the programmable options have been set replace the front cover and secure.

Programming

All of the programming options can be changed using the 2 programming buttons 'Mode' and 'Set' in conjunction with the digital display.

'Mode'– This button is used to select the option; pressing this button sequences through the options.

'Set'– This button is used to select the setting for the selected option; pressing this button sequences through the settings.

Transmitter Programming

OPTIONS:

- Frequency
- Test mode
- And / Or
- LED

To restore factory settings press and hold the 'Set' button for 3 seconds.

Factory settings are: 10 – 32 – 40 – 50

Note: Factory setting values refer to the LED display value.

Receiver Programming

Options:

- Frequency
- Interruption period
- Test mode
- And / Or
- LED
- Buzzer
- Signal strength

To restore factory settings press and hold the 'Set' button for 3 seconds.

Factory settings are: 10 – 25 – 32 – 40 – 50 – 60

Note: Factory setting values refer to the LED display value.

Transmitter Programming Chart

Option	Setting										Instruction	Factory Default	
1: Frequency	0	1	2	3	4	5	6	7	8	9	0-9 are the 10 selectable frequencies	10	
2: Test Mode	0	1	2									0 means use upper two beams 1 means only use lower two beams 2 means use upper and lower beams	32
3: Detection Method	0	1									0 means AND mode 1 means OR mode	40	
4: LED Switch	0	1									0 means LED on 1 means LED off	50	

Receiver Programming Chart

Option	Setting										Instruction	Factory Default	
1: Frequency	0	1	2	3	4	5	6	7	8	9	0-9 are the 10 selectable frequencies	10	
2: Sensitivity	0	1	2	3	4	5	6	7	8	9	0-9 are the selectable sensitivities	25	
3: Test Mode	0	1	2									0 means use upper two beams 1 means only use lower two beams 2 means use upper and lower beams	32
4: Detection Method	0	1									0 means AND mode 1 means OR mode	40	
5: LED Switch	0	1									0 means LED on 1 means LED off	50	
6: Buzzer Switch	0	1									0 means buzzer function on 1 means buzzer function off	60	
7: Signal Intensity	Two LEDs are used for displaying signal intensity. For example: 15 means received signal intensity is 1.5V												

Example programming instructions:

Receiver programming

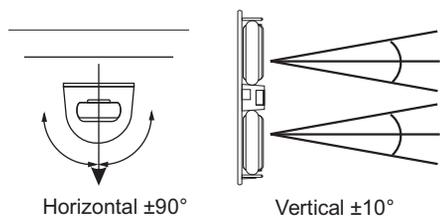
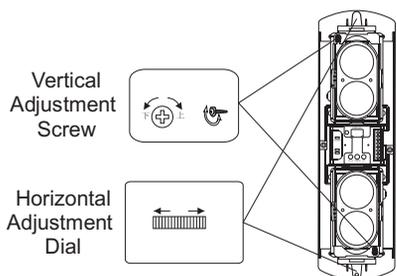
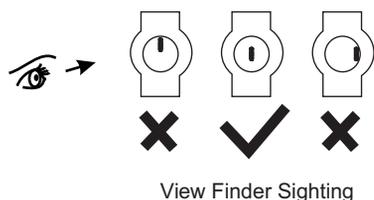
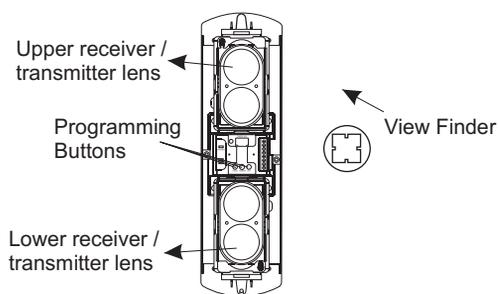
1. Frequency : Press the 'Mode' button once; the left digit will show 1 and the right digit will show the current setting between 0 and 9. Pressing the 'Set' button will increment this setting.
2. Interruption period : Press the 'Mode' button twice; the left digit will show 2 and the right digit will show the current setting between 0 and 9. Pressing the 'Set' button will increment this setting.
3. Test mode : Press the 'Mode' button three times; the left digit will show 3 and the right digit will show the current setting between 0 and 2. Pressing the 'Set' button will increment this setting.

4. And / Or mode : Press the 'Mode' button four times; the left digit will show 4 and the right digit will show the current setting, either 0 or 1. Pressing the 'Set' button will increment this setting.
5. LED : Press the 'Mode' button five times; the left digit will show 5 and the right digit will show the current setting, either 0 or 1. Pressing the 'Set' button will increment this setting.
6. Buzzer : Press the 'Mode' button six times; the left digit will show 6 and the right digit will show the current setting, either 0 or 1. Pressing the 'Set' button will increment this setting.
7. Signal strength indicator : Press the 'MODE' button seven times; the display will show the signal strength ranging from 00 minimum to 15 maximum.

Important Notes:

- Both the transmitter and receiver must have the same settings for the Frequency and the And / Or mode.
- When set up and testing is completed it is recommended to disable the LEDs and buzzer.
- During programming the display will switch off after 15 seconds of inactivity unless the display is in signal strength mode.

Beam Alignment



1. Remove the cover and apply the power; the L1, L2 and power LEDs should be lit on both the transmitter and receiver.
2. Look through the view finder from a distance of approximately 10 cm and adjust the lens module until the other end of the beam can be seen.
3. Program the 'Test Mode' to 30 on both the transmitter and receiver then select the receiver 'Signal Strength' mode to test the upper beam.
4. Adjust the upper beam alignment until the highest reading is showing on the receiver signal strength indicator, the maximum reading is 1.5. When the beam is aligned the L1 LED will be lit.
5. Program the 'Test Mode' to 31 on both the transmitter and receiver then select the receiver 'Signal Strength' mode to test the lower beam.
6. Adjust the lower beam alignment until the highest reading is showing on the receiver signal strength indicator, the maximum reading is 1.5. When the beam is aligned the L2 LED will be lit.
7. Program the 'Test Mode' to 32 on both the transmitter and receiver then select the receiver 'Signal Strength' mode, the reading should be 1.5.
8. When alignment is complete the green L1 and L2 LEDs should be lit and the red L3 and L4 LEDs should be off.

Trouble Shooting

Symptom	Possible Cause	Remedy
Power light doesn't light.	Improper voltage supplied.	Check the power supply and wiring.
Alarm LED does not light, even when beams are blocked.	1.Beam reflected to the receiver by other objects. 2.4 beams are not blocked simultaneously. 3.Interruption time setting is too high.	1.Remove the reflect object or change the lens direction. 2.Block 4 beams simultaneous. 3.Reduce the interruption time setting.
When the beams are blocked, the receiver LED is on, but not causing an alarm.	There is a short circuit in the wiring.	Check wiring and connection point.
The alarm LED indicator on the receiver is always on.	1.The lens is not properly adjusted. 2.There are blocks between the transmitter and receiver. 3.The detector covers are dirty.	1.Adjust the lens directions. 2.Remove the blocks. 3.Polish the cover with a soft cloth.
Intermittent alarm.	1.Bad wiring. 2.Wrong voltage supplied. 3.Movable blocks between the transmitter and receiver. 4.The installation base is unstable. 5.Improper lens direction. 6.Interruption time is too short. 7.Detection methods differ. 8.Frequencies are different between receiver and transmitter.	1.Check wiring. 2.Check the power supply. 3.Remove the blocks or relocate. 4.Fix the mounting. 5.Adjust the lens direction. 6.Adjust the interruption time. 7.Program transmitter and receiver to use the same detection method. 8.Program the transmitter and receiver to use the same frequency.

Accessories

GJD is able to supply the following accessories to aid Installation:

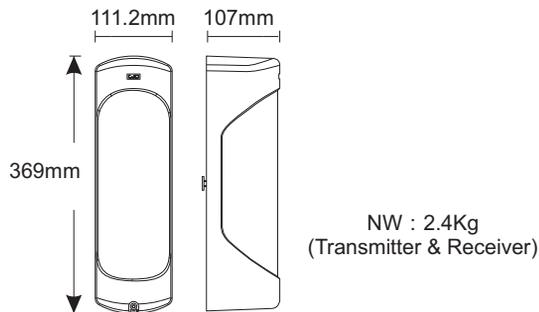
GJD950 'U' Bracket

Specifications

Range	Outdoor	200m
	Indoor	600m
Detection Method		Pulsed infra-red quad beams
Interruption Period		35-700msec selectable
Alarm Output		Form C Relay (DC30V 0.5A Max)
Power Input		DC10.5-28V; AC9-24V
Current Consumption		160mA
Operating Temperature		-25°C- +55°C
Tamper Switch		NC. Opens when cover is removed.
Alignment Angle		±90°horizontal, ±10°vertical
Environment Humidity		95% Max

GJD reserve the right to amend specifications without prior notice

Dimensions & Weight



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Engineering Notes