

# IDS Training Guide

## IDS Xwave Wireless



SOUTH AFRICA'S LEADING MANUFACTURER AND DISTRIBUTOR OF  
ELECTRONIC SECURITY PRODUCTS



## Introduction

IDS have innovatively introduced their Xwave wireless technology to the well-renowned and trusted Optex Detectors.

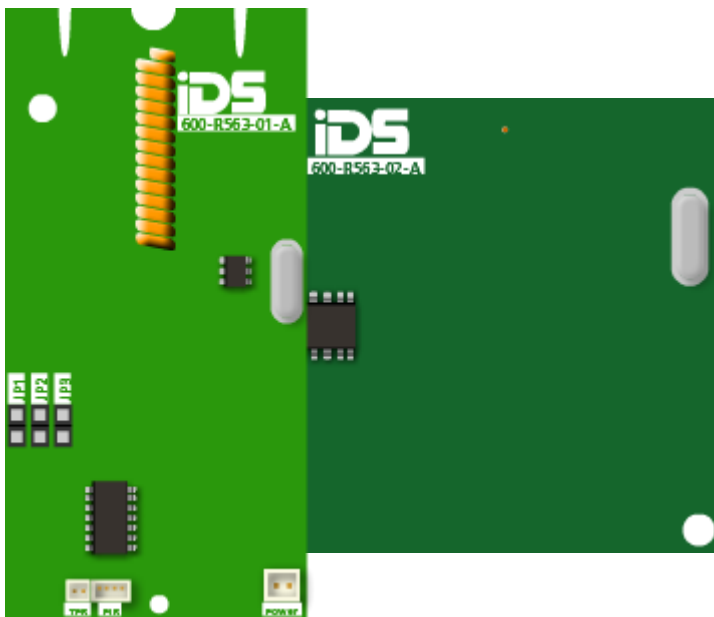
This guide provides basic steps to configure the IDS Optex Xwave Wireless Detectors. The guide will cover installing your detector correctly, and what situation each detector is designed for. Although this guide does give detailed steps, an understanding and knowledge of alarm systems and concepts should be known.



# 1.IDS Wireless Transmitters

## 1.1. Transmitters

The IDS Xwave wireless transmitters transmit on the 433MHz range, and is designed to work with the IDS Xwave wireless receivers. There are two variants of the IDS Xwave wireless transmitters, 600-R563-01-A which is designed to fit into the outdoor sensors, and the 600-R563-02-A which is designed to fit the indoor detectors.



## 1.2. Transmitter Power

The IDS Xwave outdoor wireless transmitter gets its power from a battery connector that will power the transmitter and the sensor. The IDS indoor wireless transmitter shares the sensors internal battery.

The IDS transmitters are designed to operate at 3VDC, the IDS transmitters use 8mA current when sending a transmission, and only 3uA current when inactive.

## 1.3. Supervision

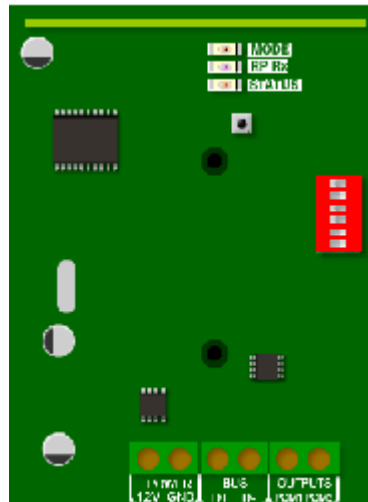
The IDS Xwave transmitters send a supervision signal at regular intervals to confirm it is functioning. Jumper J1 allows you to select how often these supervision signals are sent. If there is a jumper on J1 then the transmitter will send a supervision signal every 90 minutes, if there is no jumper on J1, then the transmitter will send a supervision signal every 12 hours.

**Note:** This setting must coincide with your supervision time set on your IDS X-Series panel.

## 2. Learning the IDS Optex Wireless Detectors to the X-Series Panel

### 2.1. X-Series Wireless Receiver

For the IDS Optex Xwave Wireless Detectors to work with the IDS X-Series panel, you will need an IDS Xwave Wireless Receiver connected on the X-Series Bus.



**NB:** The IDS Xwave Receivers do not support the Duevi range of detectors; similarly the Duevi Receiver does not support the IDS Xwave detectors.

### 2.2. Programming

To learn an IDS Optex Xwave wireless detector to the X-Series panel you must program it into Location 260, Sub-location 1. You must then select the zone number, or scroll to the desired zone number.

Each wireless device must then be taught into a zone location.

There are two ways of adding devices:

1. Type the device serial number into the sub-location
2. When in sub-location 1 and you have selected the zone number, tamper the device to for the system to receive the serial number and enter it into the sub-location automatically

Once a wireless device is taught into the system, the wired zone is disabled automatically

## 2.3. Supervision

Supervision time is the time that the system waits to receive a check-in signal or a violation signal.

The X-Series system has two settings:

- 3 hours
- 24 hours

Each device can be set to send a check-in signal every 90 minutes or 12 hours.

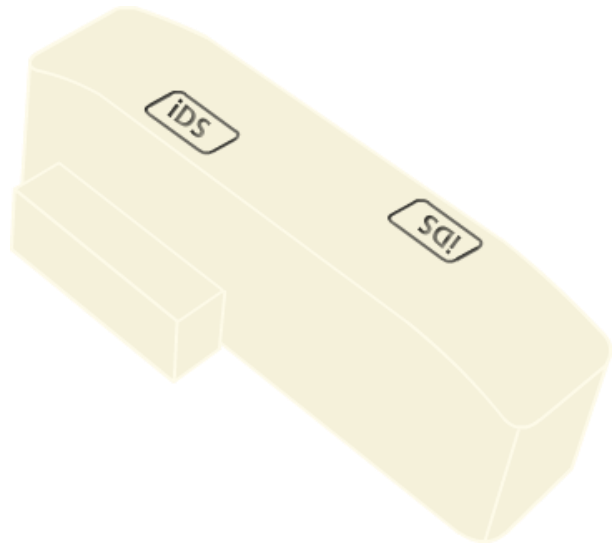
This means that if the system is set to a supervision time of “3 hours” and each device is set to “90 minutes”, the device will send two check-in signals within the “3 hours”.

The system must receive one signal within the supervision time.

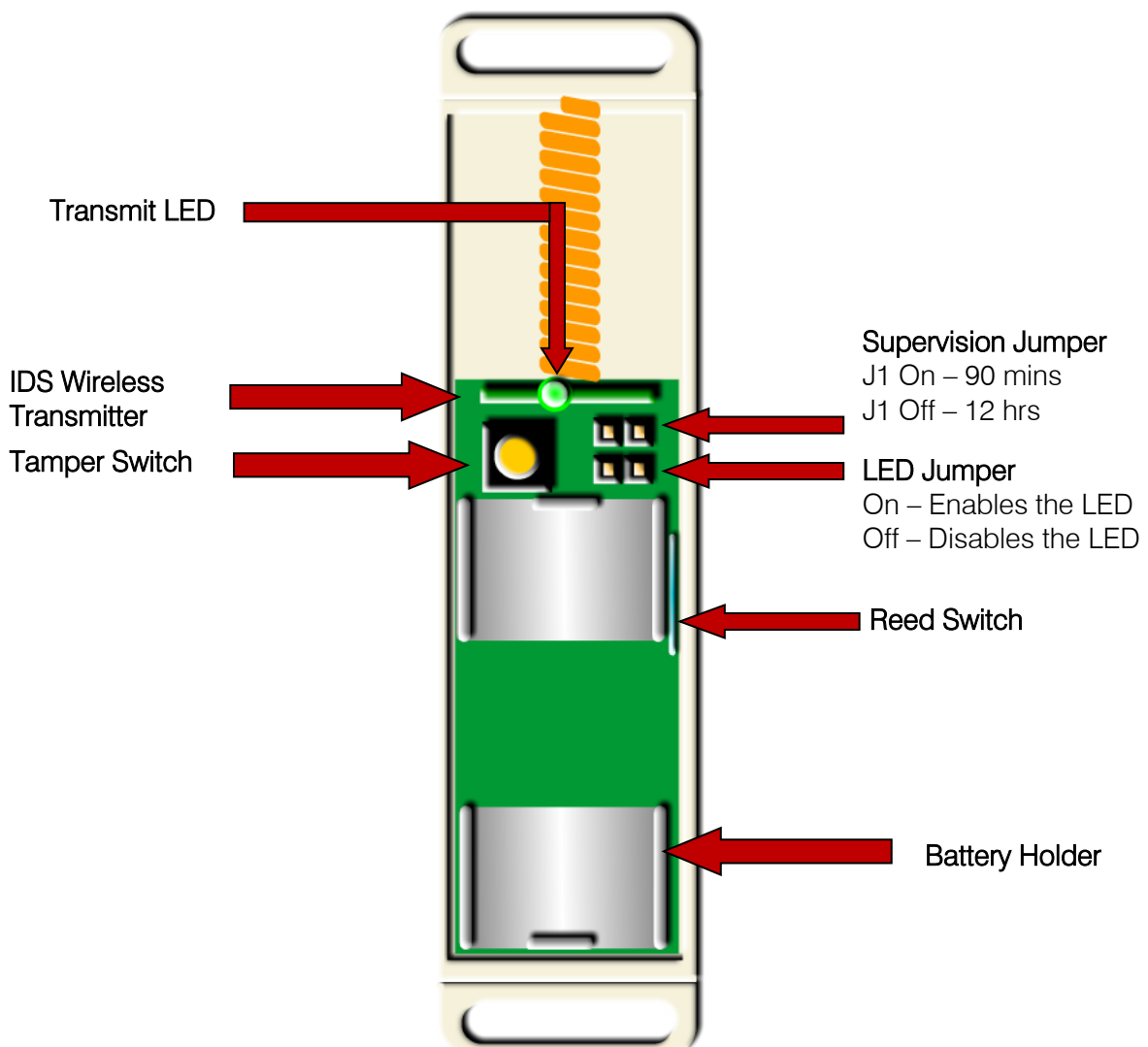
To set the X-Series panel's supervision time you must program it into Location 260, Sub-location 4.

## 3.860-07-587

The 860-07-587 door contact has a built-in wireless transmitter.



### 3.1. Hardware



### **3.2. Installation**

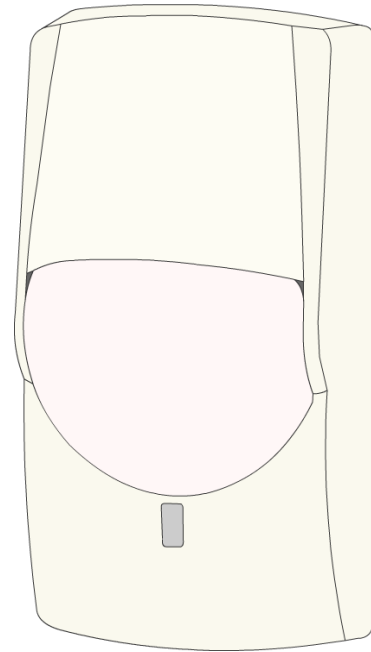
Mount the wireless door contact to the door frame via the mounting holes. (Making sure that the base does not extrude passed the frame and catch on the door when it opens or closes.)

Close the door and mount the magnet onto the door next to the reed switch. (Make sure that the magnet does not interfere with the wireless door contact when opening and closing the door. Make sure that when opening the door the magnet moves a sufficient distance away from the reed switch to activate the wireless door contact )

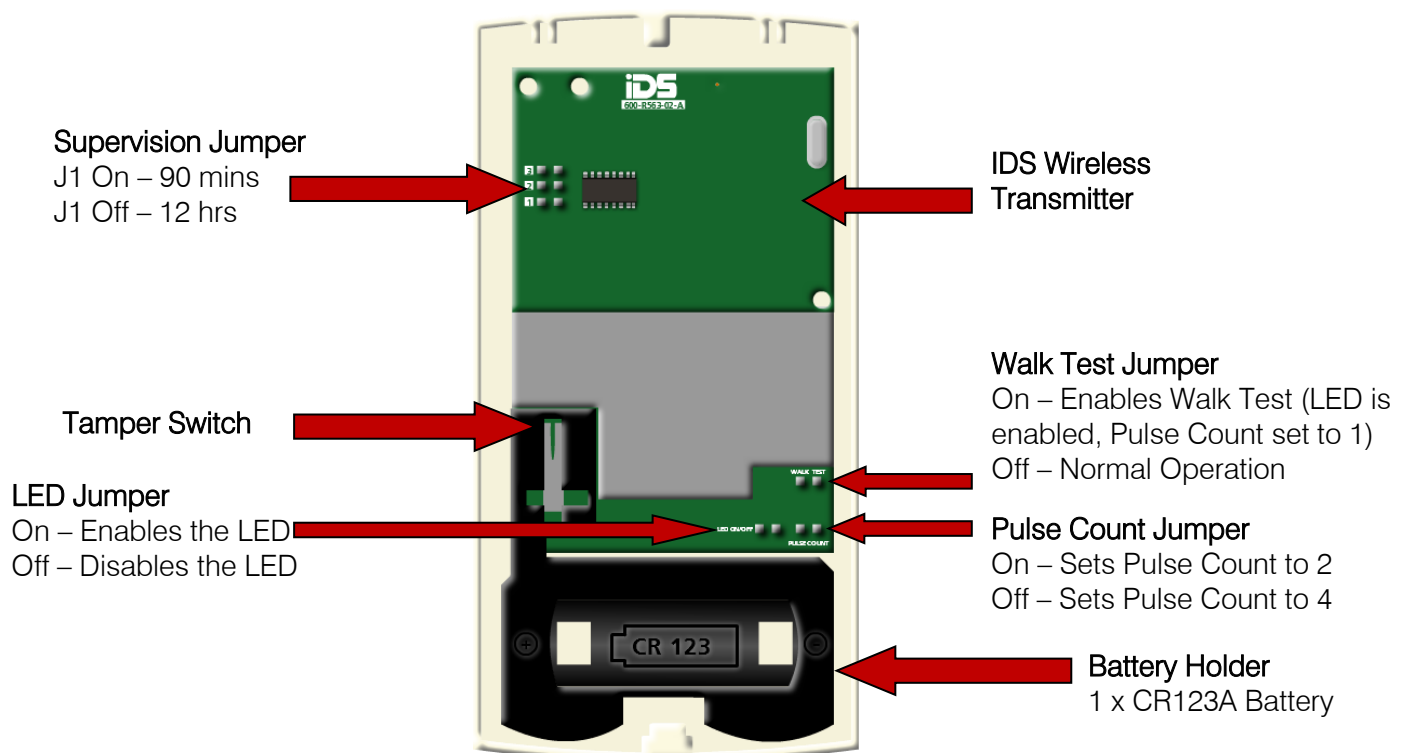
Set the jumper settings (seen in the Hardware section) to your needs.

## 4.862-01-WNX-40PI-T

The 862-01-WNX-40PI-T is a highly reliable indoor PIR detector.



### 4.1. Hardware

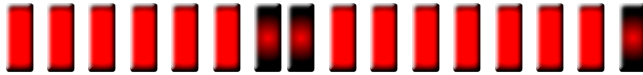


Pulse Count is the amount of times the detector needs to be triggered within a 20 second period before an alarm condition is sent.

When the 862-01-WNX-40PI-T detector is in Normal Operation it will only send an alarm after a wait period of 120 seconds from the last alarm condition.

### LEDs

Warm-up – Red LED blinks for approximately 60 seconds

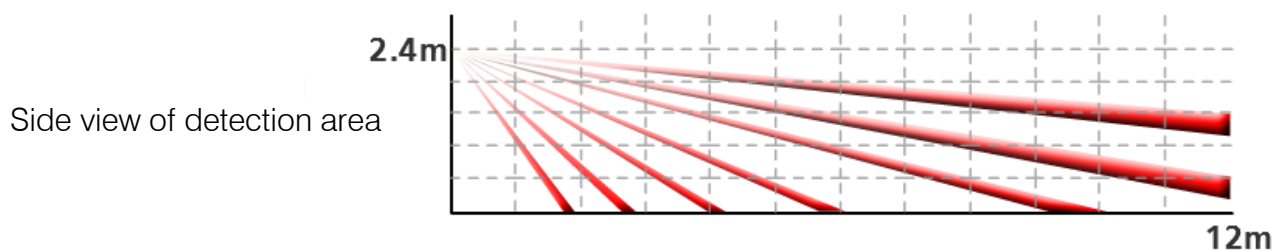
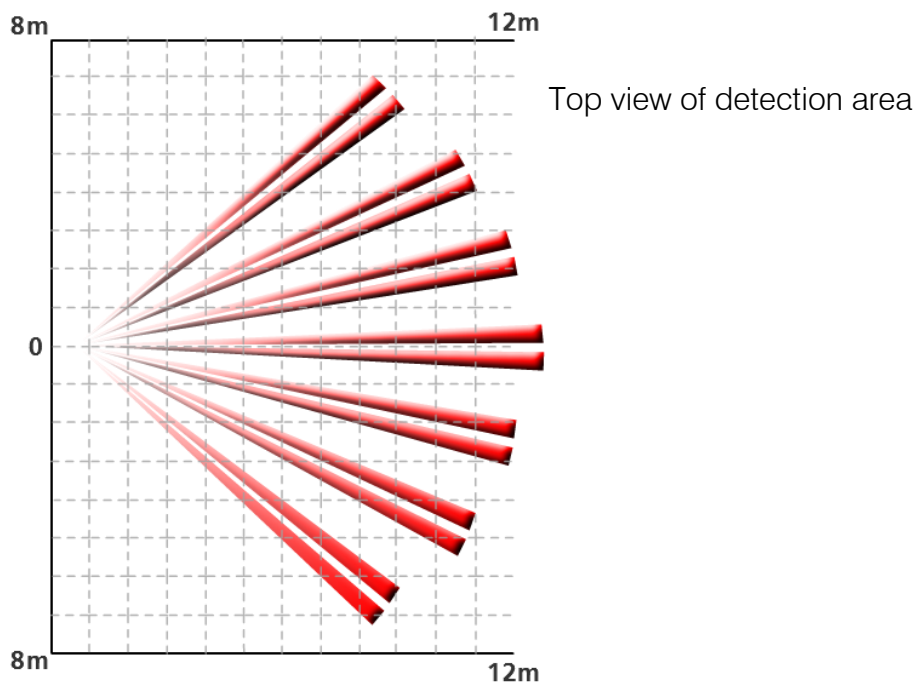


Alarm – Red LED turns on for 2 seconds



## 4.2. Detection Area

The 862-01-WNX-40PI-T has a detection range of up to 12 metres at an 85° angle.





### 4.3. Installation

Decide where to mount your 862-01-WNX-40PI-T detector, mounting height must be 1.5m – 2.4m.

Set the jumper settings (seen in the Hardware section) to your needs. Leave the Walk Test jumper ON to allow for testing.

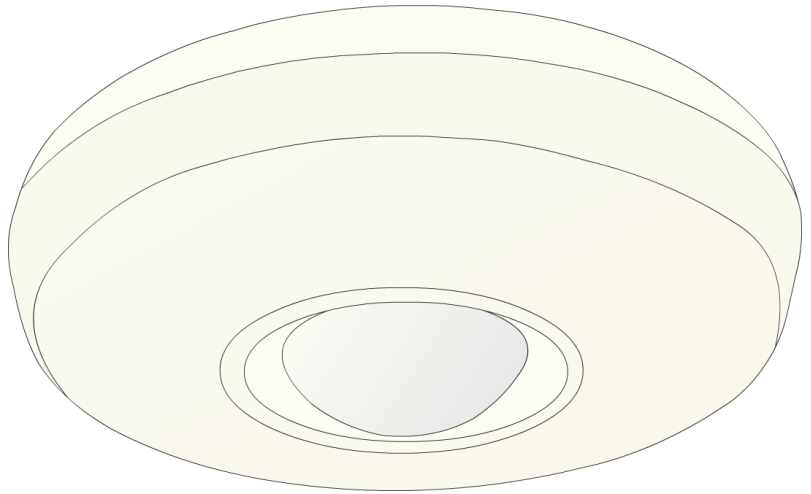
Choose the Pulse Count you require by using the Pulse Count jumper (seen in the Hardware section.)

Do a thorough Walk Test. Walk in the areas that require detection and make sure the LED turns on for 2 seconds to indicate detection. Then walk in the areas that do not require detection and make sure the LED does not turn on.

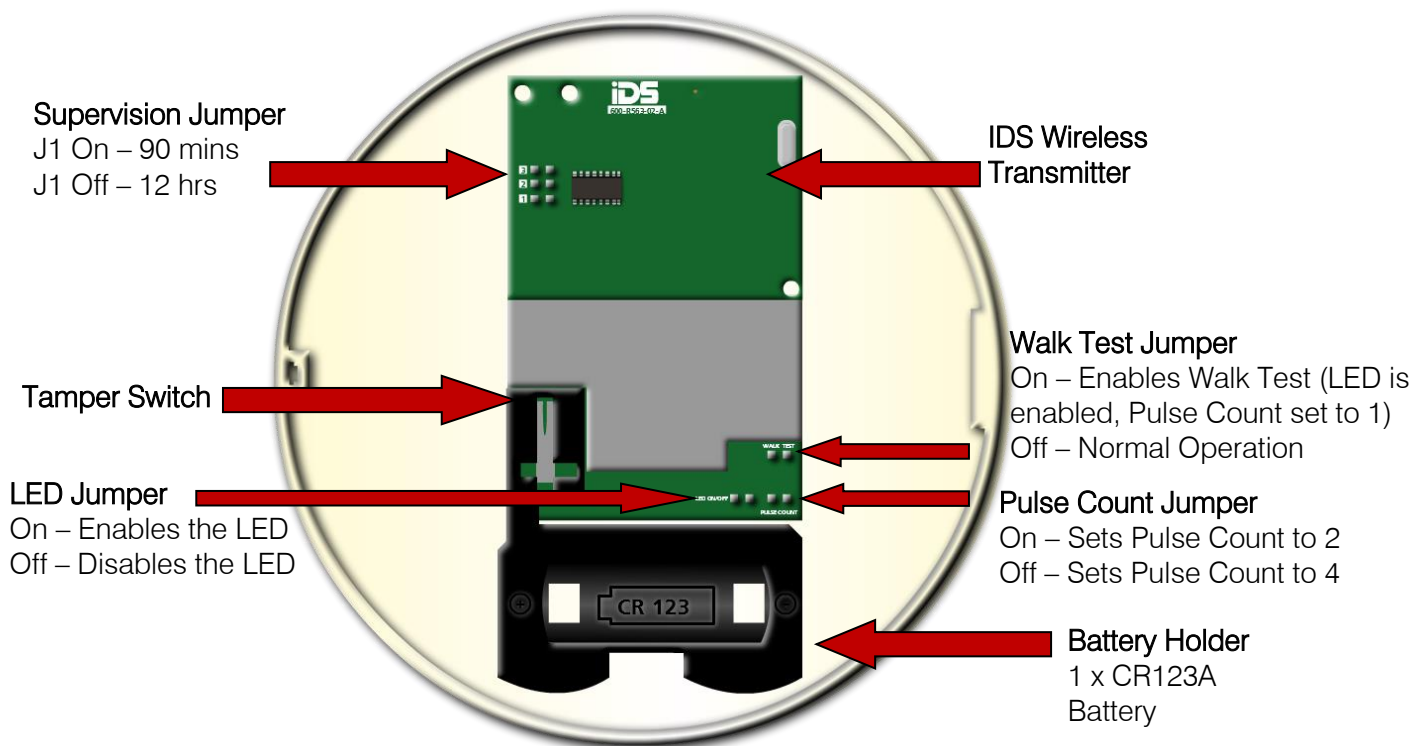
After completing your Walk Test take the Walk Test jumper off to exit Test Mode.

## 5.862-01-WFX-360-1B

The 862-01-WFX-360-1B with its highly durable spherical lens which offers unparalleled 360° detection performance.



### 5.1. Hardware



Pulse Count is the amount of times the detector needs to be triggered within a 20 second period before an alarm condition is sent.

When the 862-01-WFX-360-1B detector is in Normal Operation it will only send an alarm after a wait period of 120 seconds from the last alarm condition.

## LEDs

Warm-up – Red LED blinks for approximately 30 seconds



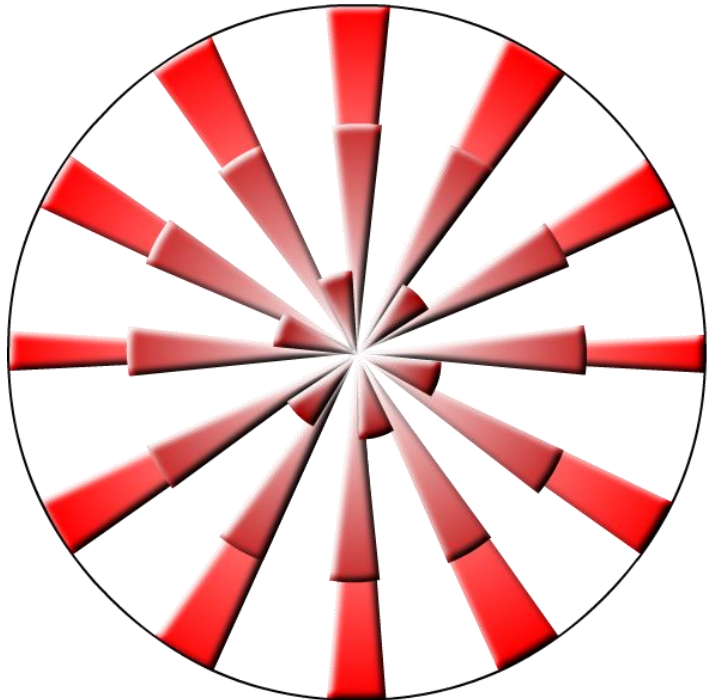
Alarm Condition – Red LED turns on for 2 seconds



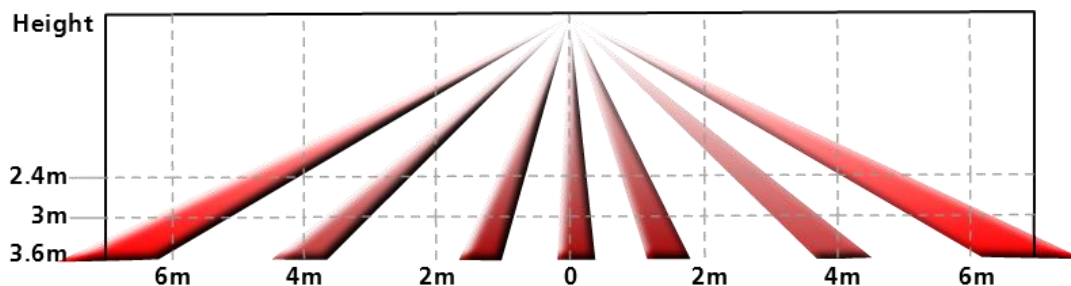
## 5.2. Detection Area

The 862-01-WFX-360-1B has a detection range of up to 12 metres at a 360° angle, depending on the installation height.

Top view of detection area



Side view of detection area



Installation Height	Detection Area Diameter
2.4m	8m
3.0m	10m
3.6m	12m

### 5.3. Installation

Decide where to mount your 862-01-WFX-360-1B detector, mounting height should be 2.4m – 3.6m.

Set the jumper settings (seen in the Hardware section) to your needs. Leave the Walk Test jumper ON to allow for testing.

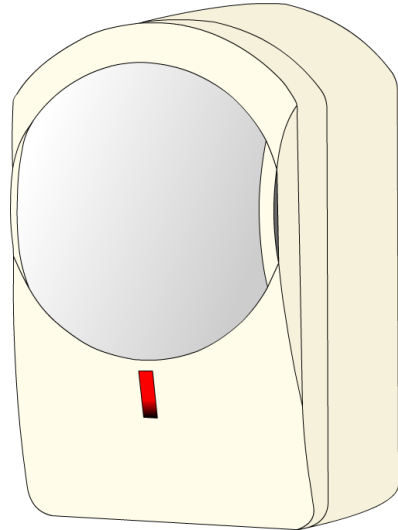
Choose the Pulse Count you require by using the Pulse Count jumper (seen in the Hardware section.)

Do a thorough Walk Test. Walk in the areas that require detection and make sure the LED turns on for 2 seconds to indicate detection. Then walk in the areas that do not require detection and make sure the LED does not turn on.

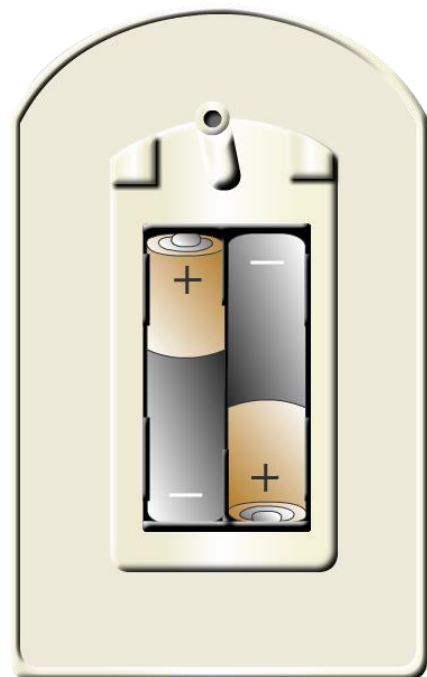
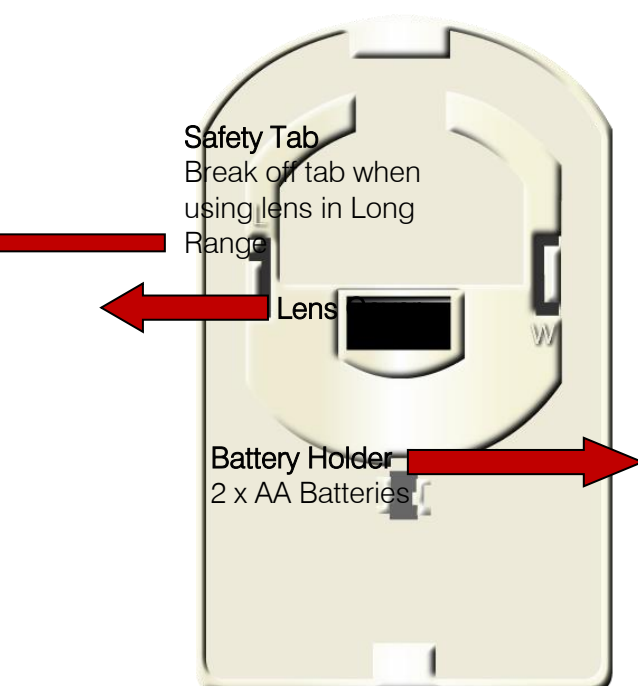
After completing your Walk Test take the Walk Test jumper off to exit Test Mode.

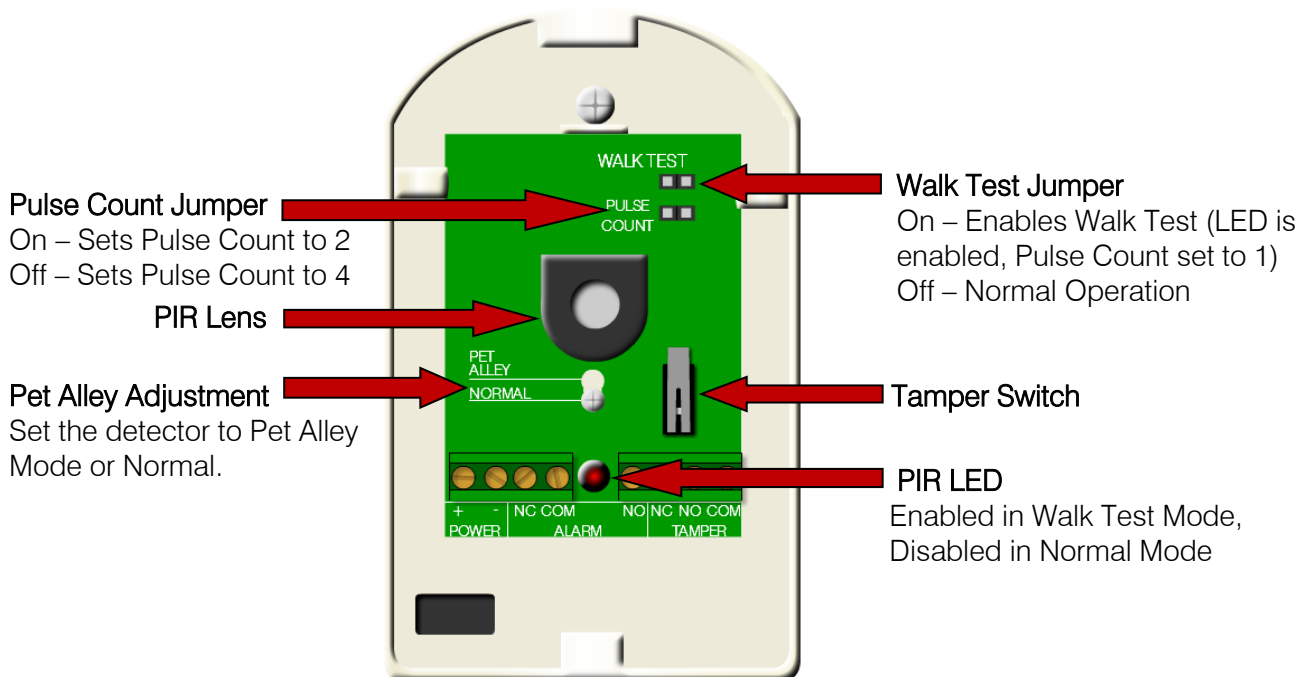
## 6.862-01-EX-35RC

The 862-01-EX-35RC is a very versatile indoor PIR detector that allows for Wide Angle or Long Range detection with the benefit of a pet alley feature.



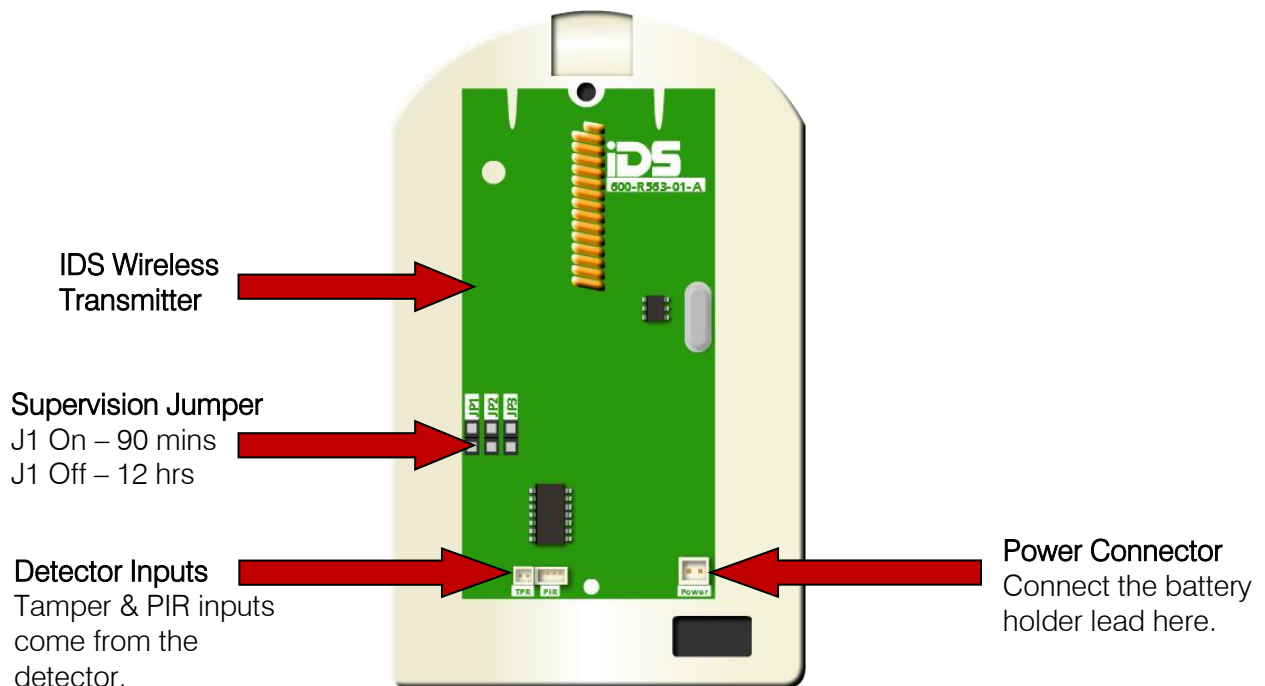
### 6.1. Hardware





Pulse Count is the amount of times the detector needs to be triggered within a 20 second period before an alarm condition is sent.  
When the 862-01-EX-35RC detector is in Normal Operation it will only send an alarm after 120 seconds of inactivity in the detection area.

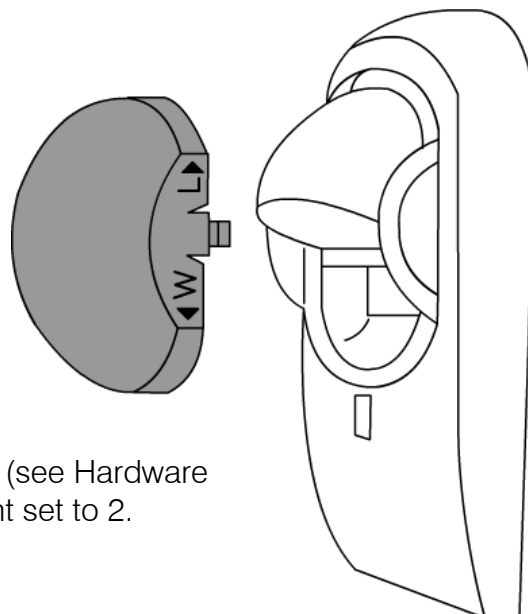
Pet Alley Mode allows a corridor beneath the detector that allows pets to move without detection. Loosen the PCB screw and slide the PCB up or down to line up with either the Pet Alley or Normal indicators according to the desired detection pattern.



## 6.2. Detection Area

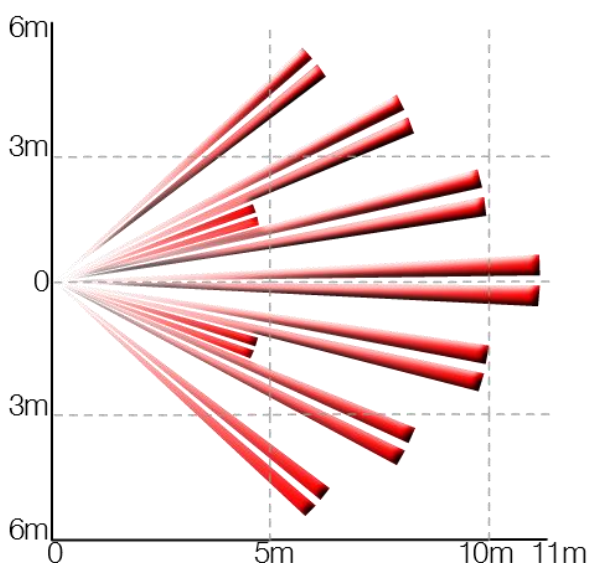
With the 862-01-EX-35RC you can select either Wide Angle detection or Long Range detection. You also have the option of a Pet Alley mode that gives the detection an “alley” for pets to move undetected.

To select either Wide Angle or Long Range detection, remove the lens from the detector, and change its orientation. There are markings to indicate which detection type you have chosen. For Wide Angle a “W” will point downwards, and an “L” will point downwards for Long Range.

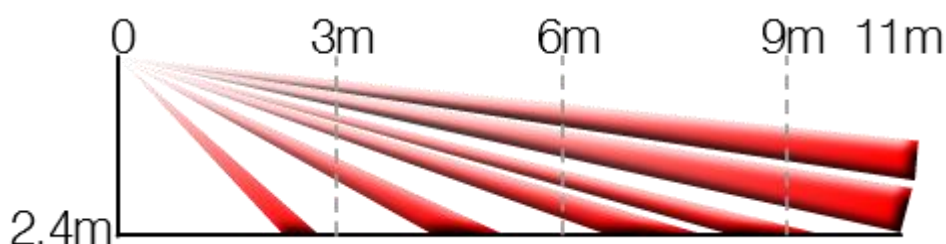


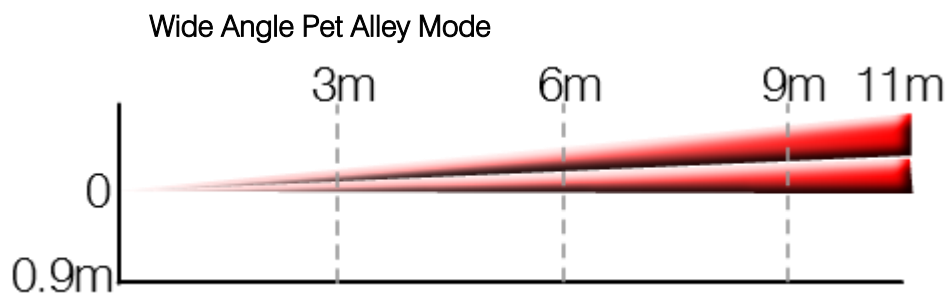
**NB:** When Long Range is used the Safety Tab (see Hardware section) must be removed and the Pulse Count set to 2.

**Wide Angle Top View**  
Wide Angle detection will detect up to 11m at an angle of 85°



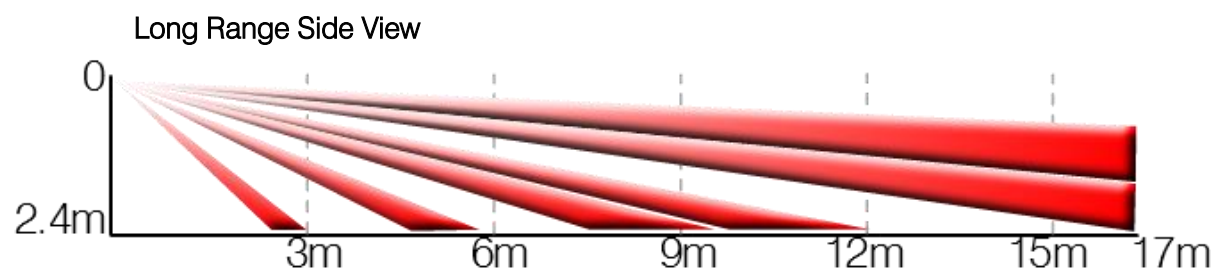
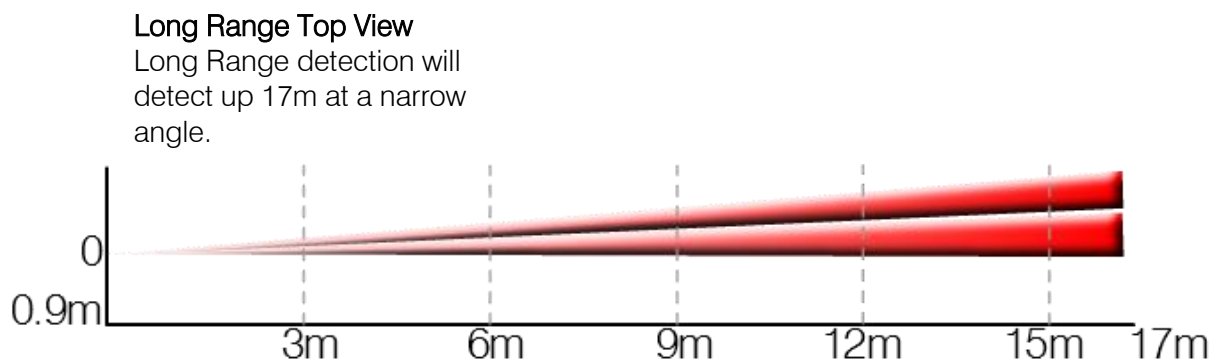
**Wide Angle Side View**



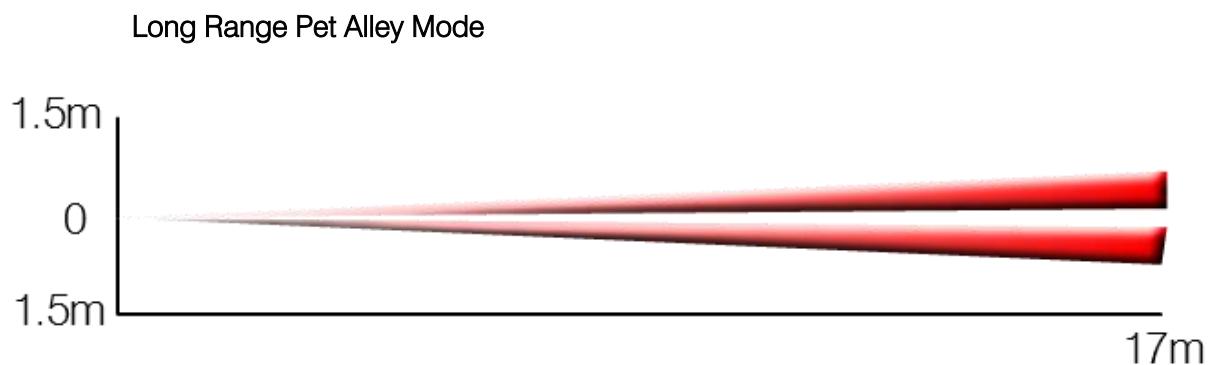


Wide Angle Mounting Height/Detection Distance

Mounting Height	0.6m	0.9m	1.2m	1.5m	1.8m	2.1m	2.4m
Normal Mode	4.5m	7m	9m	11m	11m	11m	11m
Pet Alley Mode	11m	11m	9m	NA	NA	NA	NA







**Long Range Mounting Height/Detection Distance**

<b>Mounting Height</b>	<b>0.6m</b>	<b>0.9m</b>	<b>1.2m</b>	<b>1.5m</b>	<b>1.8m</b>	<b>2.1m</b>	<b>2.4m</b>
<b>Normal Mode</b>	5m	9m	12.5m	17m	17m	17m	17m
<b>Pet Alley Mode</b>	17m	17m	12.5m	NA	NA	NA	NA

### **6.3. Installation**

Decide where to mount your EX-345RC detector, the mounting height for Normal Mode should be 1.2m - 2.4m and for Pet Alley Mode should be 0.6m – 1.2m.

Set the detector to either Long Range or Wide Angle and set the PCB for Normal Mode or Pet Alley Mode as desired.

Make sure the Walk Test jumper is ON to allow for testing.

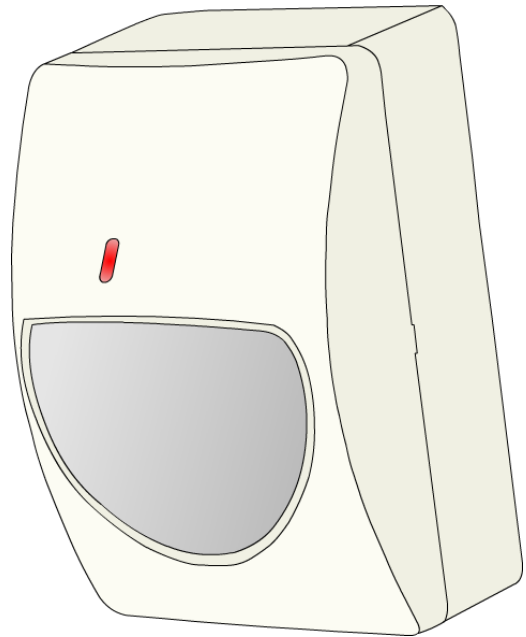
Choose the Pulse Count you require by using the Pulse Count jumper (seen in the Hardware section.)

Do a thorough Walk Test. Walk in the areas that require detection and make sure the LED turns on to indicate detection. Then walk in the areas that do not require detection and make sure the LED does not turn on.

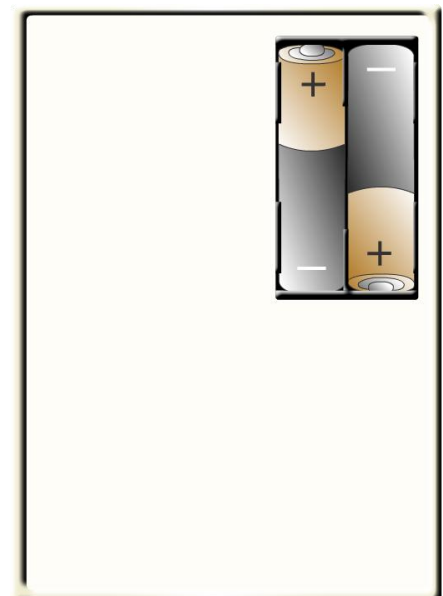
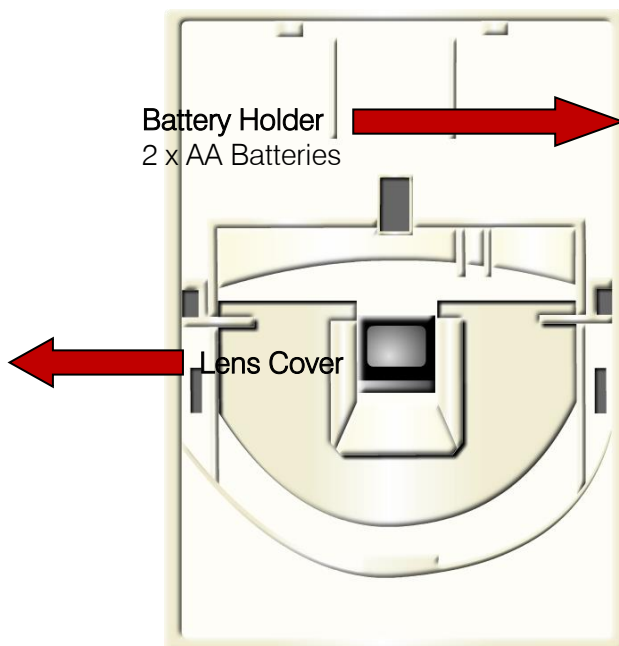
After completing your Walk Test take the Walk Test jumper off to exit Test Mode.

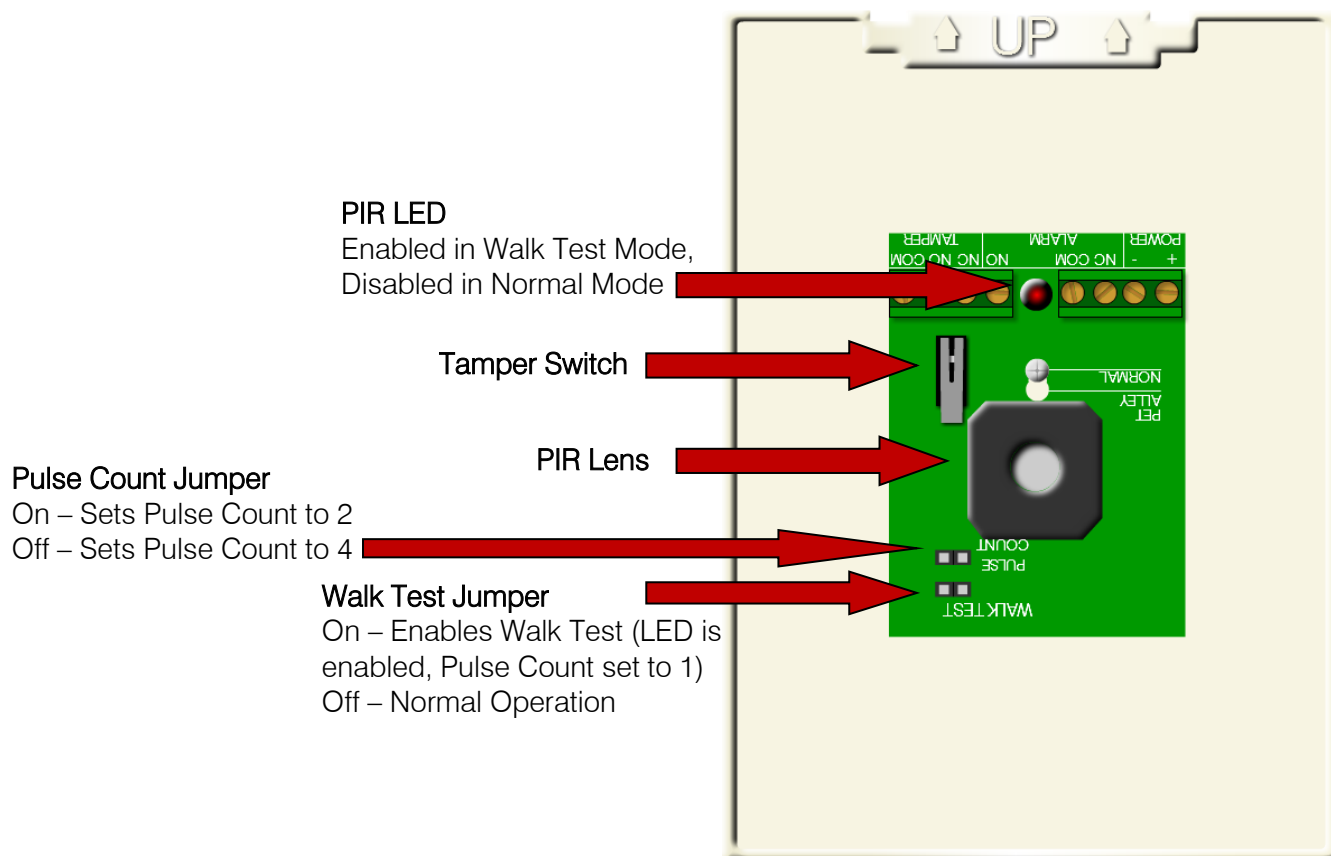
## 7.862-01-CX-702RSC

The 862-01-CX-702RSC is an indoor PIR detector with the ability to do either wide angle or long range detection.



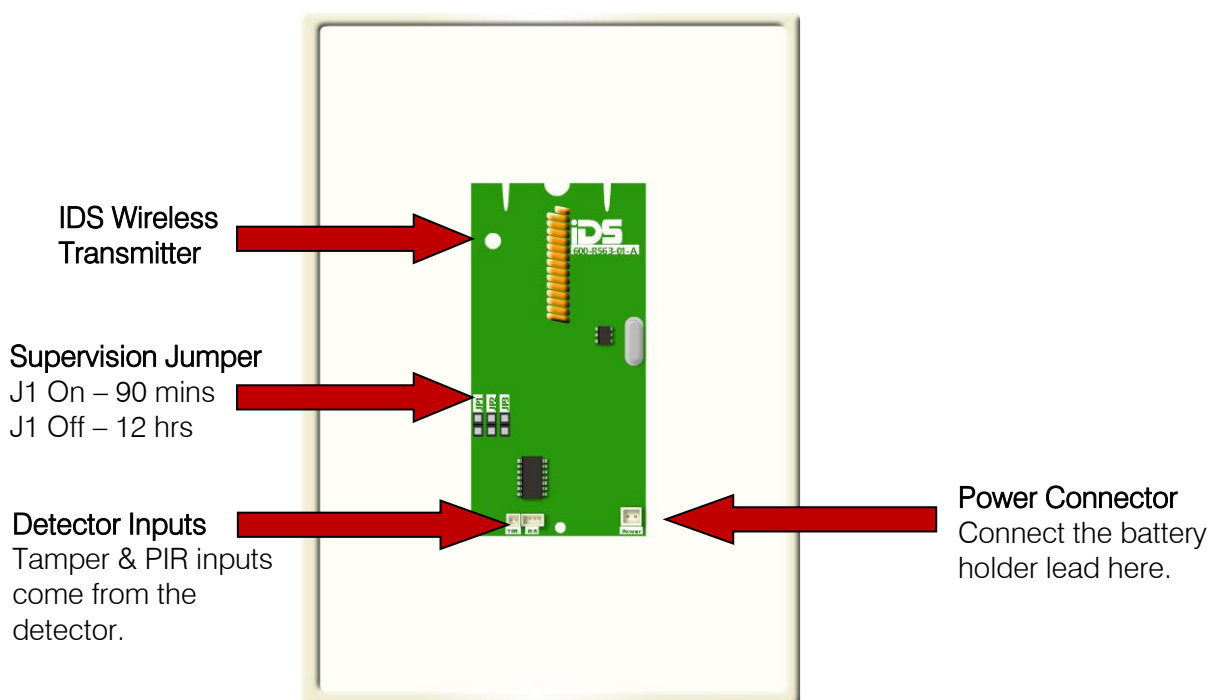
### 7.1. Hardware





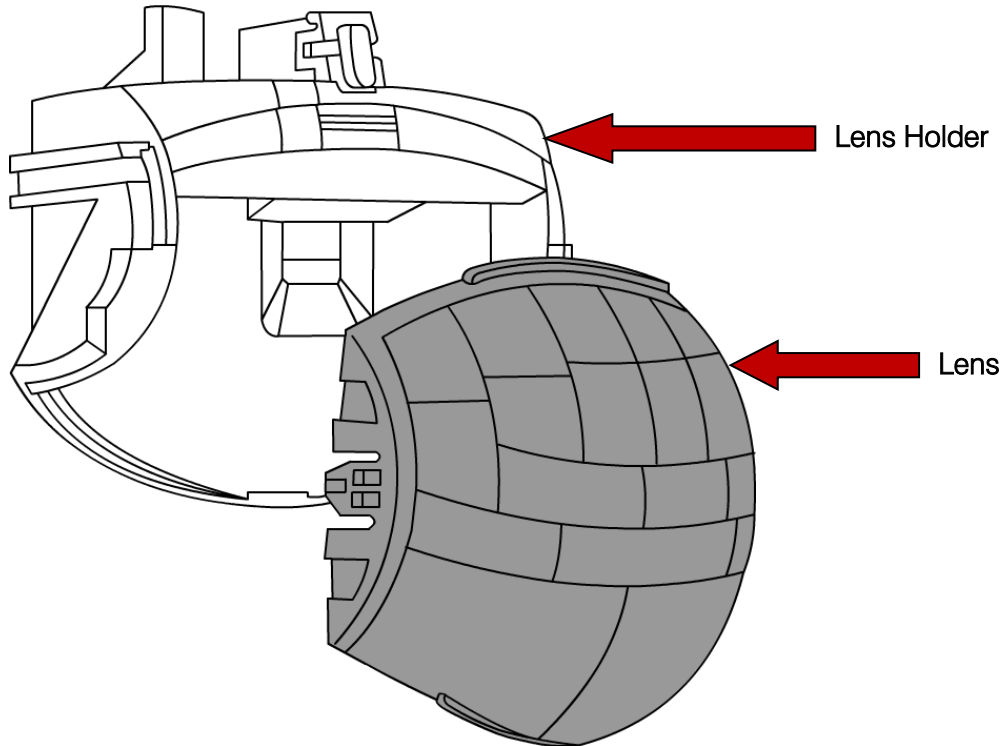
Pulse Count is the amount of times the detector needs to be triggered within a 20 second period before an alarm condition is sent.

When the 862-01-CX-702RSC detector is in Normal Operation it will only send an alarm after a wait period of 120 seconds from the last alarm condition.



## 7.2. Detection Area

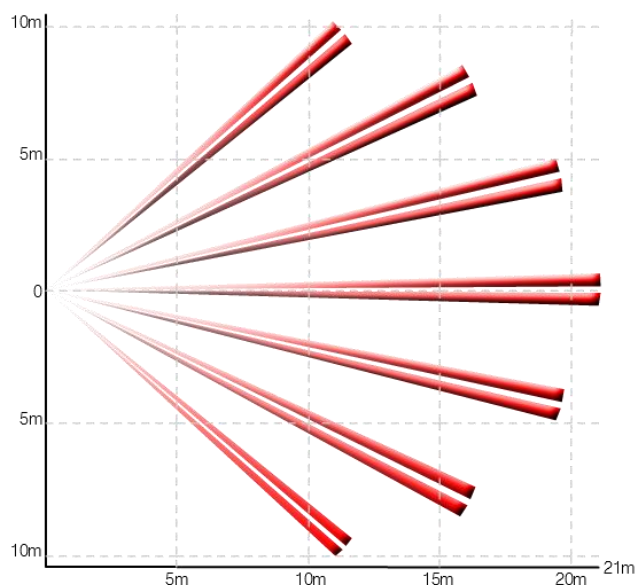
The 862-01-CX-702RSC has a variety of option detection area options. You can select Wide Angle detection or Long Range detection. You can also adjust the vertical angle according to your desired detection range.

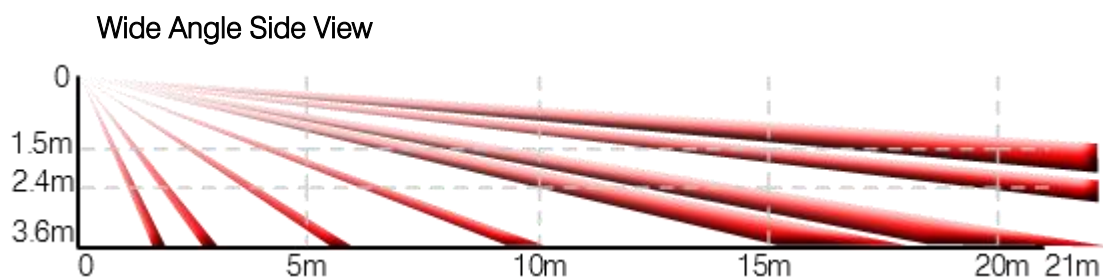


To select either Wide Angle or Long Range detection, remove the lens holder from the detector, and change the orientation of the lens. There are markings to indicate which detection type you have chosen. A “W” will show on top of the lens for Wide Angle, and an “L” will show on top of the lens for Long Range.

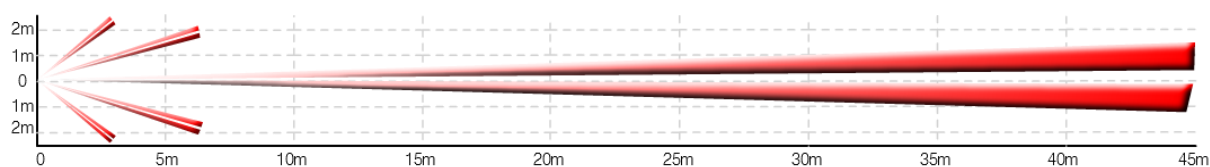
### Wide Angle Top View

Wide Angle detection will detect up to 21m at an angle of 85°

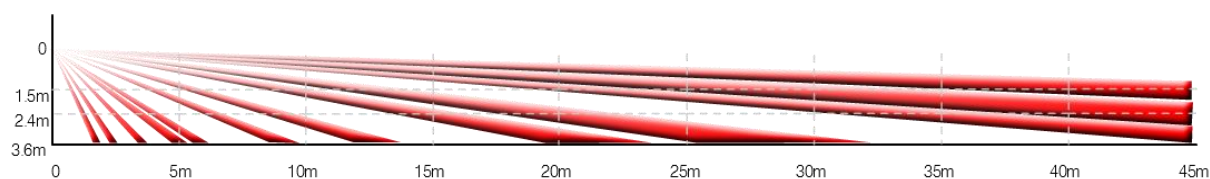




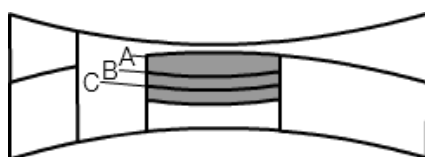
**Long Range Top View**  
 Long Range detection will detect up to 45m at a narrow angle.



**Long Range Side View**



You can adjust the vertical angle to change the detection distance. To do this, clip the lens into the lens holder at either position A, B or C. See the table below for the detection distance for each position.



**Wide Angle Detection**

Detection Distance

Mounting Height	Detection Distance			
	12m	15m	18m	21m
	1.8m	B	A	A
	2.4m	C	C	C
	3.6m	C	C	C

## Long Range Detection

		Detection Distance			
Mounting Height		14m	30m	36m	45m
	1.8m	B	B	A	A
	2.4m	C	C	C	C
	3.6m	C	C	C	C

### 7.3. Installation

Decide where to mount your CX-720RSC detector, the mounting height should be 1.5m, 2.4m or 3.6m.

Set the detector to either Long Range or Wide Angle and set the Vertical Adjustment as desired (seen in the Detection Area section.)

Make sure the Walk Test jumper is ON to allow for testing.

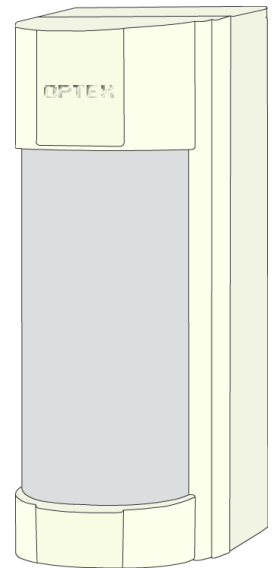
Choose the Pulse Count you require by using the Pulse Count jumper (seen in the Hardware section.)

Do a thorough Walk Test. Walk in the areas that require detection and make sure the LED turns on to indicate detection. Then walk in the areas that do not require detection and make sure the LED does not turn on.

After completing your Walk Test take the Walk Test jumper off to exit Test Mode.

## 8.VX Infinity Series

There are three detectors in the VX Infinity Series; 862-01-VXI-R which has two PIR lenses, 862-01-VXI-RAM which has two PIR lenses with anti-masking functionality, and 862-01-VXI-RDAM-X5 which has two PIR lenses and a microwave sensor with anti-masking functionality.



### 8.1. Hardware

#### Dip Switch

- 1 – Walk Test Mode
- 2 – Battery Saving Timer
- 3 – Alarm & Trouble Output
- 4 – LED
- 5 – Anti-Masking (Ram & RDAM models only)
- 6 – Microwave Immunity (RDAM model only)

#### PIR Sensitivity Selector

- H – High
- M – Medium
- L – Low

Top PIR Lens

Tamper Switch

Microwave Sensitivity Adjustment

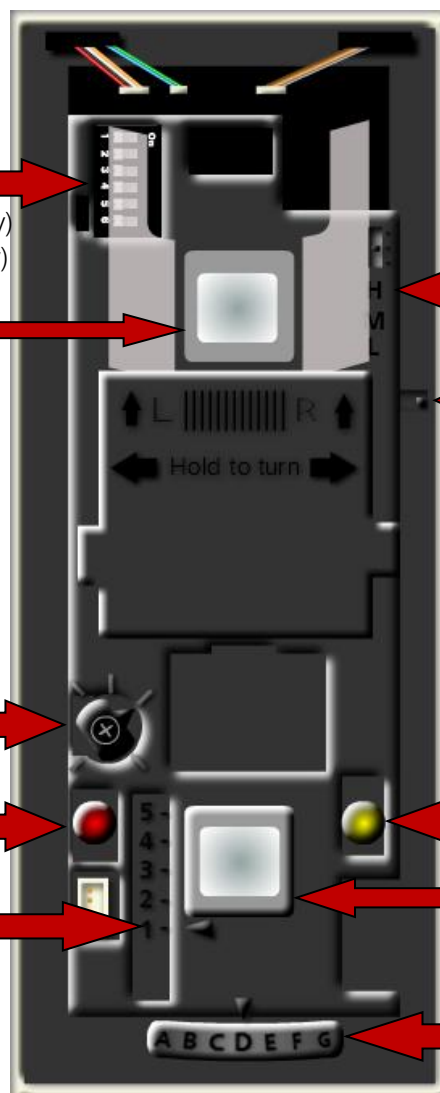
PIR LED Indicator

Microwave LED Indicator

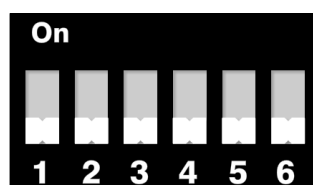
Detection Length Adjustment

Bottom PIR Lens

Area Angle Adjustment



## Dip Switch



### Dip Switch 1 - Walk Test Mode

Position	Function
ON	Test Mode On. The LED lights irrespective of the Dip switch 4 setting. Dip switch 2, Battery Saving Timer, is inactive.
OFF	Normal Mode. LED and Battery Saving Timer works according to their setting.

**NB:** Once the walk test is complete always set the detector to Normal Mode. Using the detector in Test Mode will shorten the battery life.

### Dip Switch 2 – Battery Saving Timer

Position	Function
ON	Even if there are continuous alarms, the alarm is only generated once in a 5 second time.
OFF	Even if there are continuous alarms, the alarm is only generated once in a 120 second time. To lengthen battery life.

### Dip Switch 3 – Alarm & Trouble Output

Position	Function
ON	Sets the alarm type to Normally Open (N.O.)
OFF	Sets the alarm type to Normally Closed (N.C.)

**NB:** This settings must be set to ON, or Anti-Masking and Tamper conditions will not be sent from the Wireless Transmitter.

### Dip Switch 4 - LED

Position	Function
ON	Enables the LED.
OFF	Disables the LED. To lengthen battery life.

### Dip Switch 5 – Anti-Masking (RAM & RDAM Only)

Position	Function
ON	Enables anti-masking. A trouble is generated after 20 seconds of masking.
OFF	Disables anti-masking. A trouble is generated after 3 minutes of masking.

**NB:** Be careful not to leave any objects within 1 metre of the detector. Anti-Masking is sent as a tamper to the X-Series Panel.

### Dip Switch 6 – Microwave Immunity (RDAM Only)

Position	Function
ON	Microwave Immunity logic is activated. Use this setting in harsher environments, such as moving trees or bushes.
OFF	Microwave Immunity logic is deactivated.



## LEDs

### VXI-R and 862-01-VXI-RAM

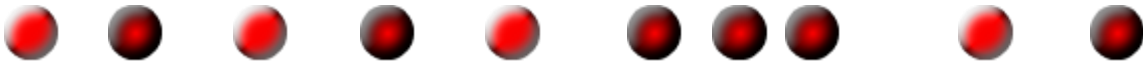
Warm-up – Red LED blinks for approximately 60 seconds



Alarm Condition – Red LED turns on for 2 seconds



Masking Detection (862-01-VXI-RAM Only) – Red LED blinks 3 times and then repeats



### 862-01-VXI-RDAM-X5

Warm-up – Red and Yellow LEDs blink for approximately 60 seconds



PIR Detection – Red LED turns on for 2 seconds

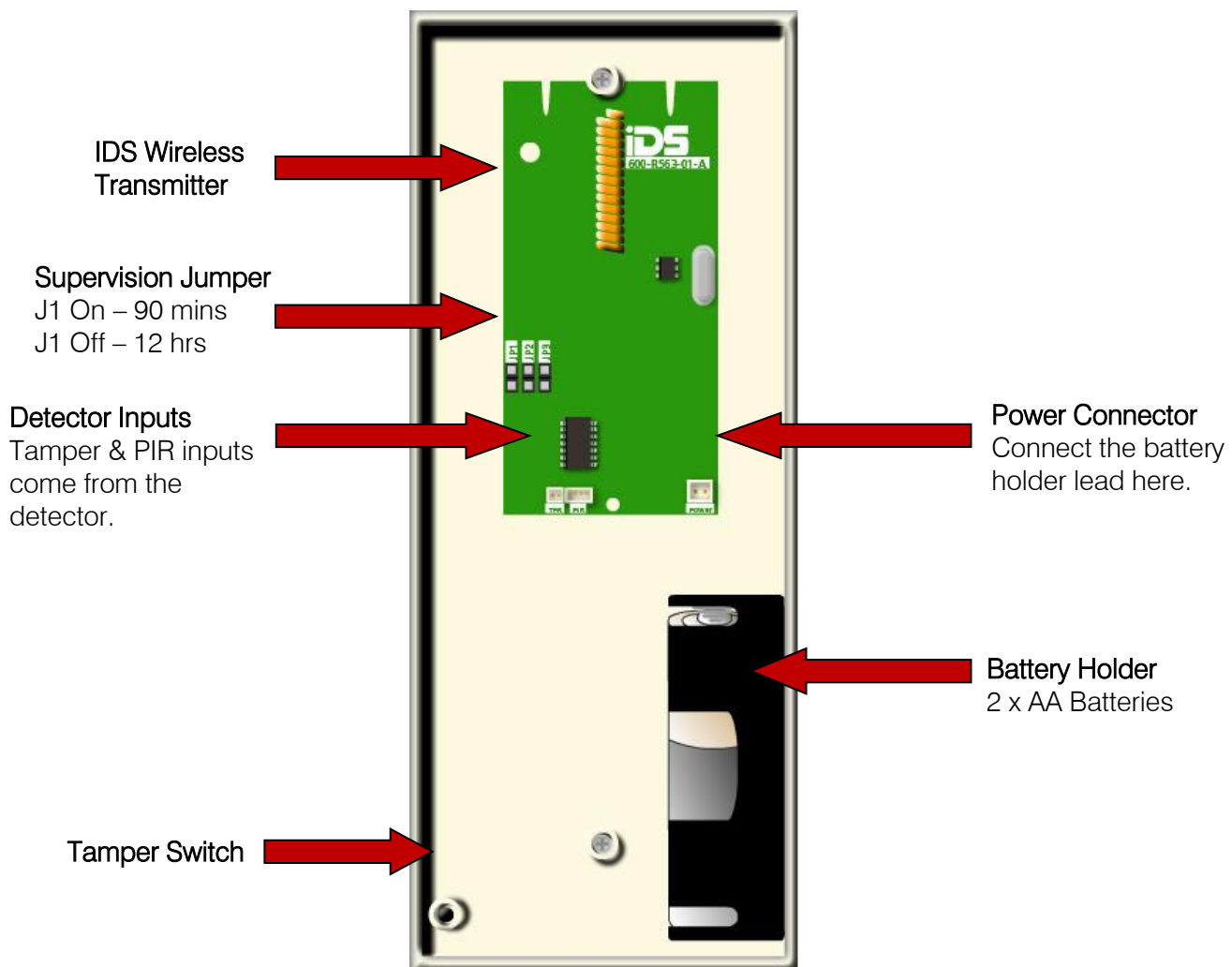


Microwave Detection – Yellow LED turns on for 2 seconds



Masking Detection – Red LED blinks 3 times then repeats





## 8.2. Detection Area

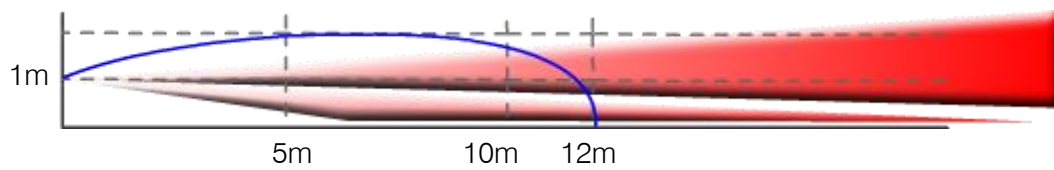
The VX-Infinity series has a detection range of up to 12 metres at a 90° angle. The detection area is customisable to suit most situations. There are 3 ways in which you can customise the detection area; detection length, area angle, and area masking (seen in the next section).

The detection length can be adjusted by moving the Detection Length Adjustment up or down. The detector needs both PIR lenses to trigger to generate an alarm; the VX-RDAM requires the microwave sensor to also trigger. This allows for the detection length to be adjusted by only changing the angle of the lower PIR, and microwave sensitivity for the VX-RDAM.

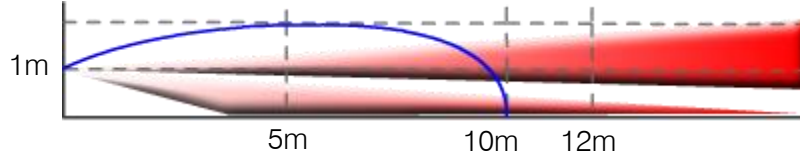
The red beams represent the top and bottom PIR detection zones; the blue line represents the microwave detection zone. The microwave sensitivity adjustment must be adjusted in accordance with the detection length position. The microwave sensitivity adjustment position can be seen to the right of each image.



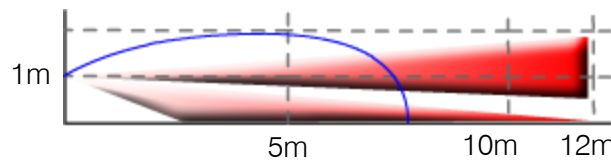
Position 1



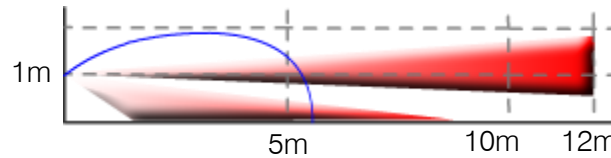
Position 2



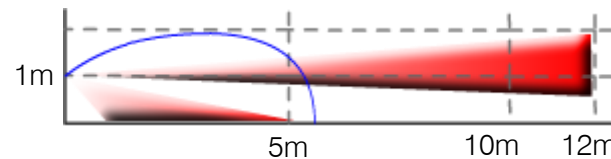
Position 3



Position 4

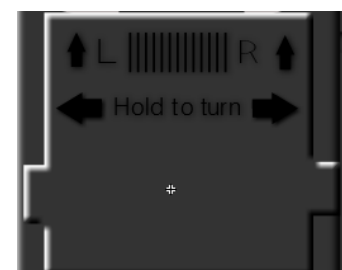


Position 5



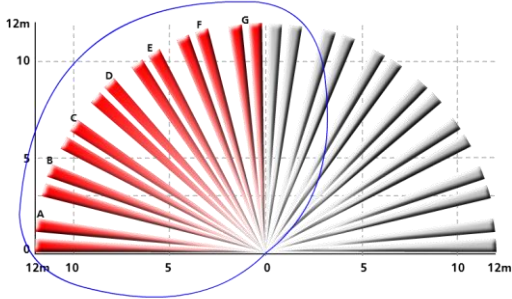
The detection area angle can be adjusted by holding where it says 'Hold to turn' and turning the sensor plate left or right.

The Area Angle Adjustment indicates what angle you have selected.

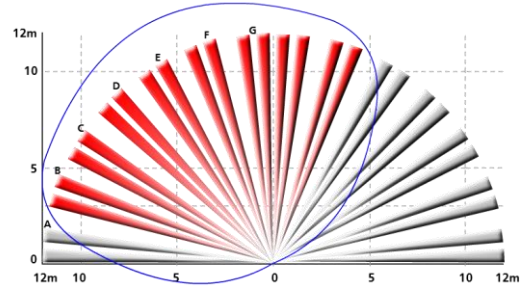


There are 16 zones of PIR detection on all angles except angle A and G, which only have 14 zones of PIR detection. The red beams represent the PIR detection zone. The blue line represents the microwave detection area.

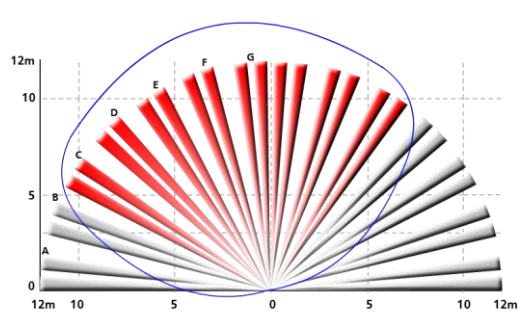
Angle A



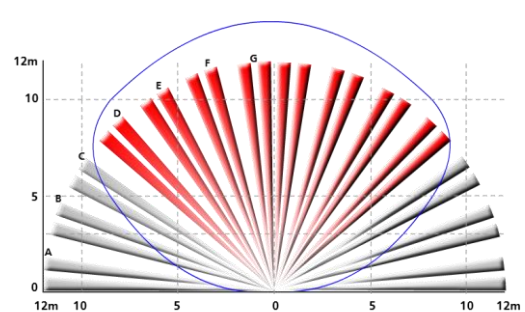
Angle B



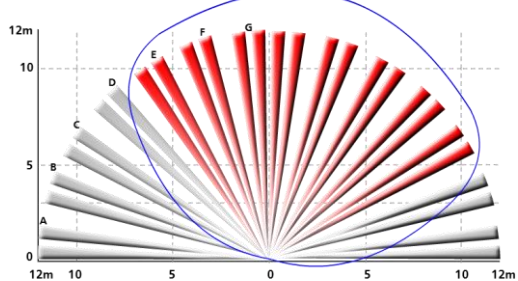
Angle C



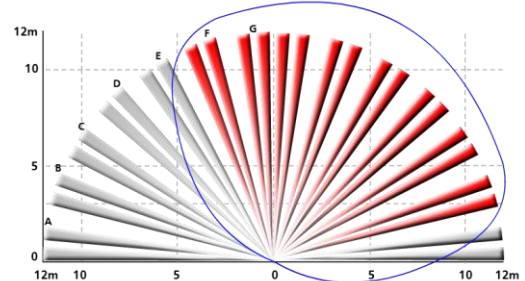
Angle D



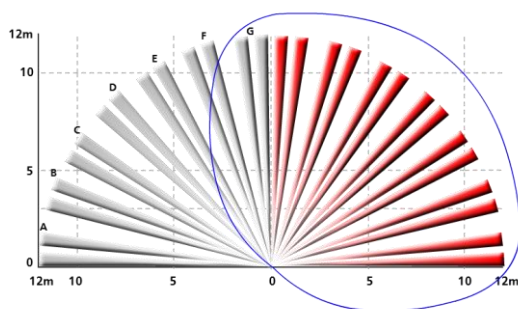
Angle E



Angle F



Angle G



### 8.3. Area Masking

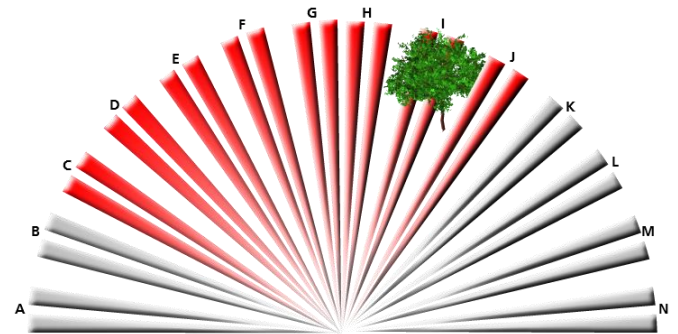
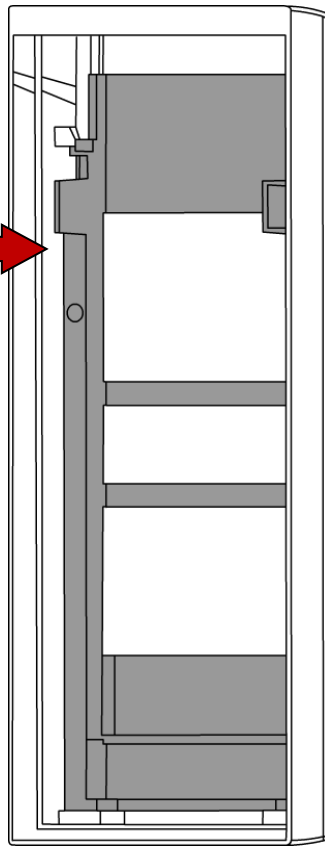
In the event that there are objects, such as a bush or a pool, inside the detection area, you are able to block certain zones by applying an area masking label.

In this situation you have a small tree that will give you false alarms if not masked.

1. First you must slide the lens holder and remove it from the cover.

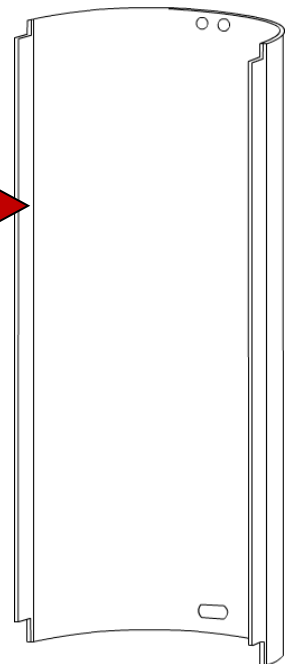
**Lens Holder**

Slide up and remove from lens cover



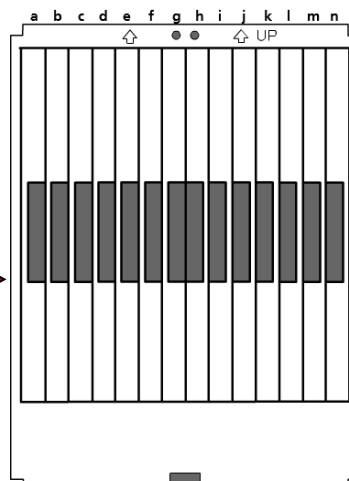
2. Then remove the lens from the cover.

**Lens**

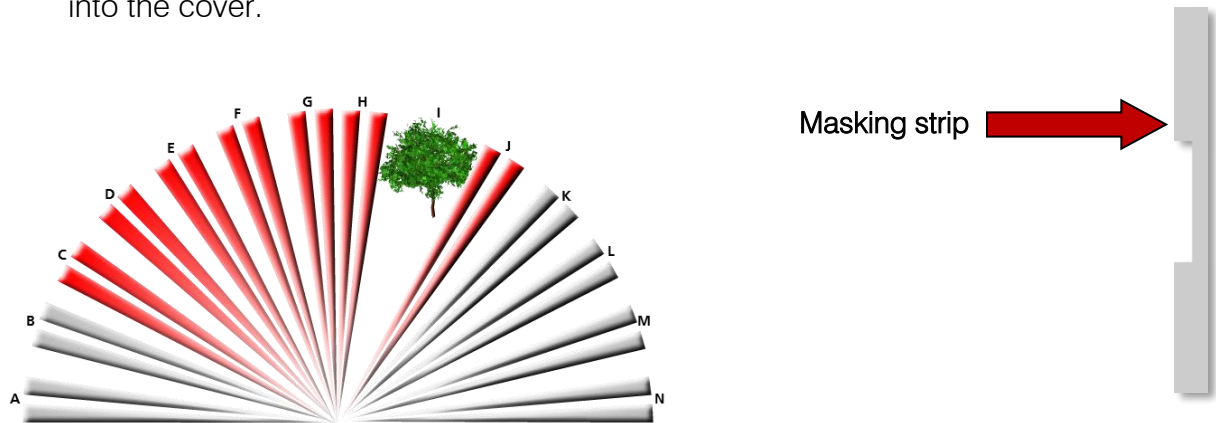


3. Decide which zone you need to mask, and remove the corresponding strip. (In this case we need to mask zone I)

**Masking Sheet 1**



4. Place the strip in the I zone of the lens, and replace the lens and lens holder back into the cover.



This will now mask the I zone, preventing the tree from causing any alarms.

## 8.4. Installation

Decide where to mount your VX-Infinity detector, mounting height must be 0.8m – 1.2m.

Set the dipswitch settings (seen in the Hardware section) to your needs. Leave dipswitch 1 ON to allow for the walk test.

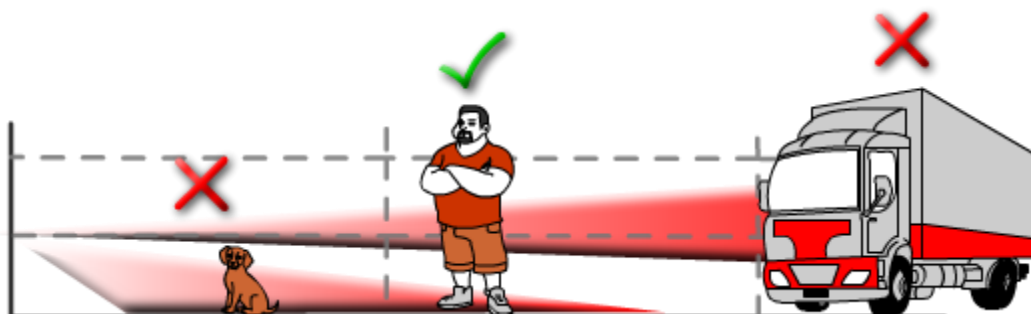
Choose and set the detection length and area angle you require (seen in the Detection Area section)

Mask any trouble areas that may cause false detection (seen in the Area Masking section)

Do a thorough Walk Test with the cover on the detection. Walk in the areas that require detection and make sure the LED turns on for 2 seconds to indicate detection. Then walk in the areas that do not require detection and make sure the LED does not turn on.

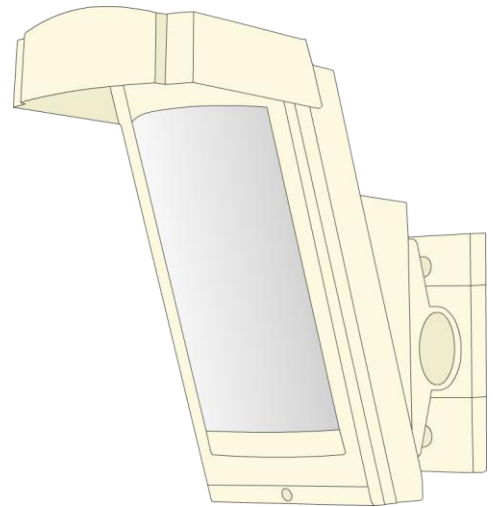
After completing your Walk Test turn dipswitch 1 off to exit Test Mode.

**NB:** Both detection areas must be blocked for detection

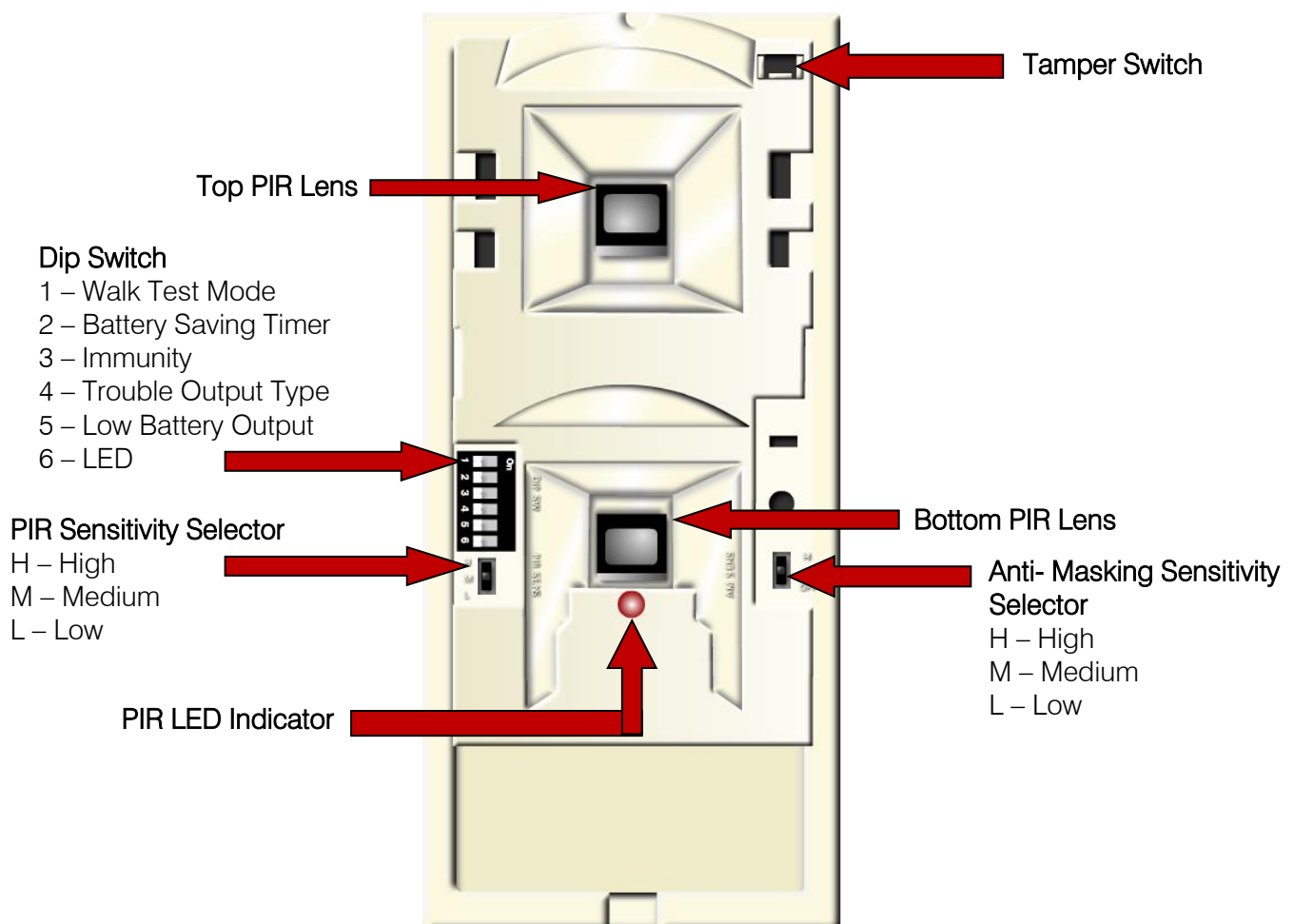


## 9.862-01-HX-40RAMC

The 862-01-HX-40RAMC is an intelligent pet friendly outdoor detector with two PIR lenses and Anti-Masking protection.

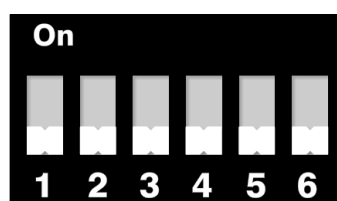


### 9.1. Hardware





## Dip Switch



### Dip Switch 1 - Walk Test Mode

Position	Function
ON	Test Mode On. The LED lights irrespective of the Dip switch 6 setting. Dip switch 2, Battery Saving Timer, is inactive.
OFF	Normal Mode. LED and Battery Saving Timer works according to their setting.

**NB:** Once the walk test is complete always set the detector to Normal Mode. Using the detector in Test Mode will shorten the battery life.

### Dip Switch 2 – Battery Saving Timer

Position	Function
ON	Even if there are continuous alarms, the alarm is only generated once in a 5 second time.
OFF	Even if there are continuous alarms, the alarm is only generated once in a 120 second time. To lengthen battery life.

### Dip Switch 3 – Immunity

Position	Function
ON	Immunity logic is activated. Use this setting in harsher environments, such as moving trees or bushes.
OFF	Normal Sensitivity.

### Dip Switch 4 - Trouble Output

Position	Function
ON	Sets the output type to Normally Open (N.O.)
OFF	Sets the output type to Normally Closed (N.C.)

**NB:** This setting must be set to ON, or Anti-Masking will not be sent from the Wireless Transmitter. Anti-Masking is sent as a tamper to the X-Series Panel.

### Dip Switch 5 – Low Battery Output

Position	Function
ON	Low Battery signal is sent to the Trouble Output.
OFF	Low battery output is not operational.

**NB:** The Trouble Output is a wired connector, and will not be sent from the Wireless Transmitter. The Wireless Transmitter monitors the battery and will send a Low Battery signal when the battery gets low.

### Dip Switch 6 – LED

Position	Function
ON	Enables the LED.
OFF	Disables the LED. To lengthen battery life.



## LEDs

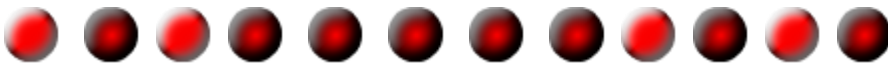
Alarm – Red LED turns on for 2 seconds



Warm-up – Red LED blinks for approximately 90 seconds



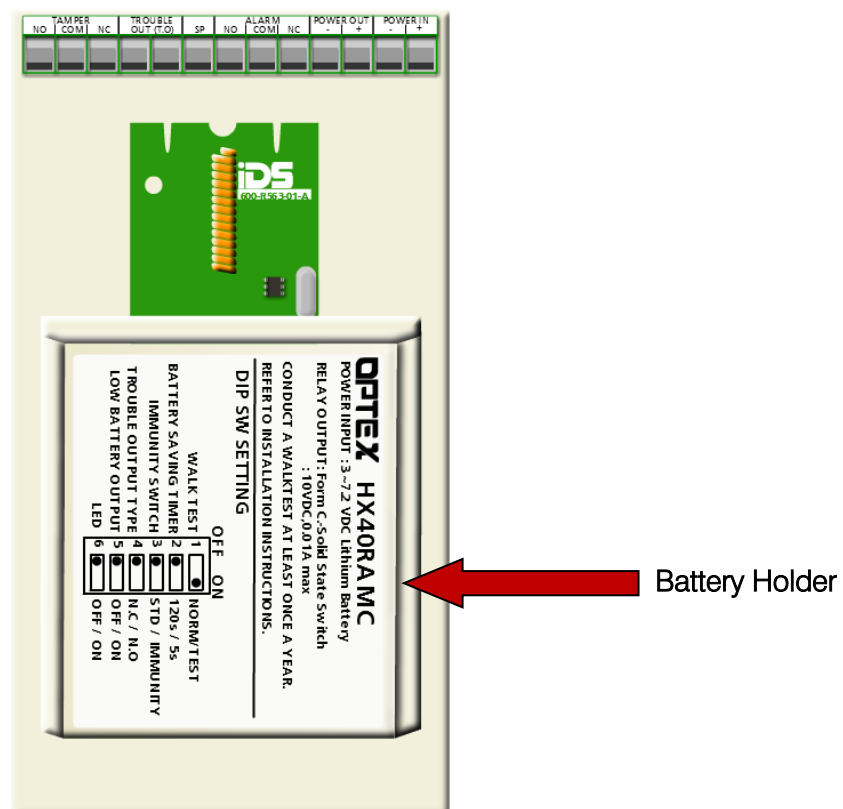
Anti-Masking Start Up – Red LED blinks 2 times every 5 seconds

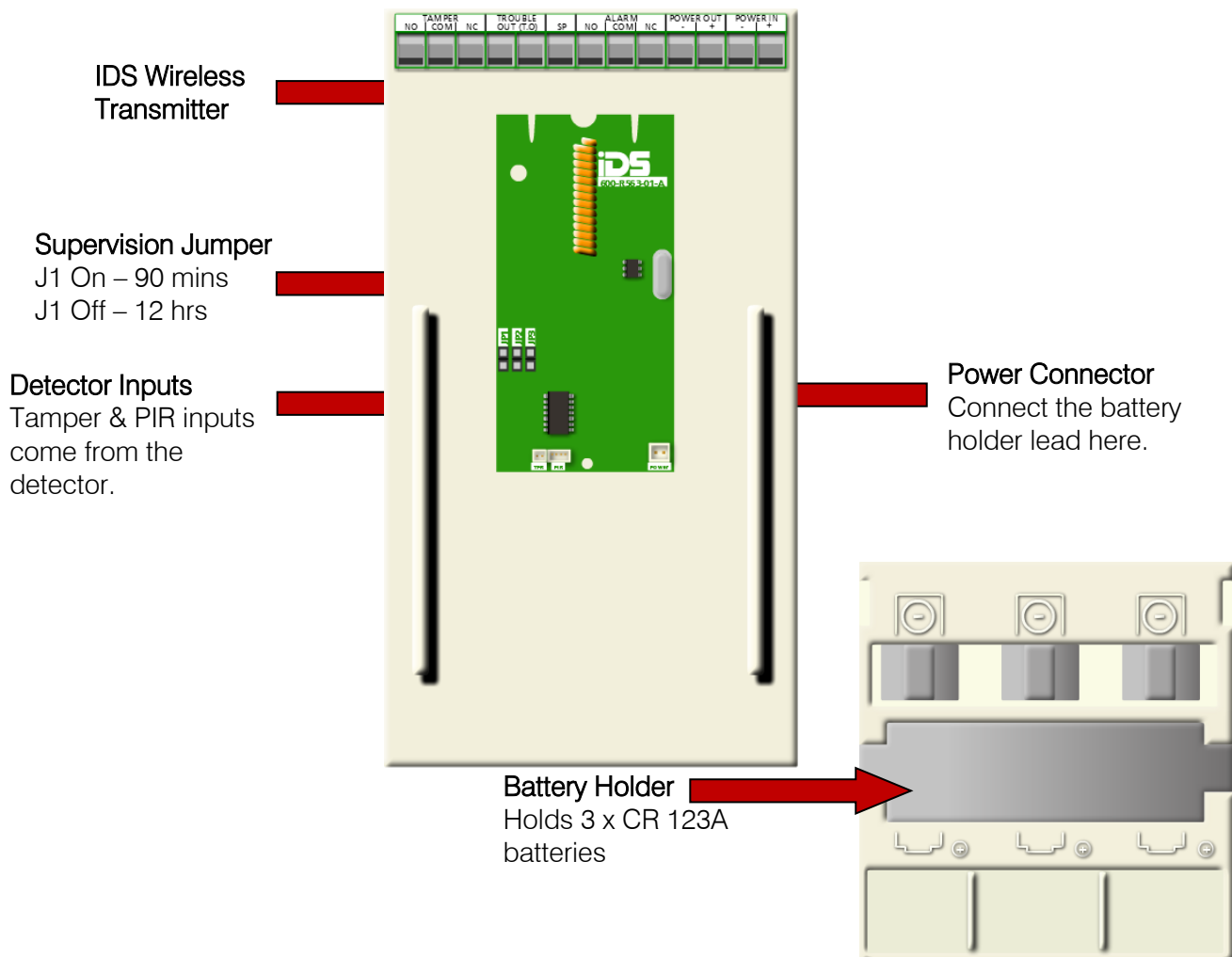


Anti-Masking Detection – Red LED blinks 3 times every 3 seconds



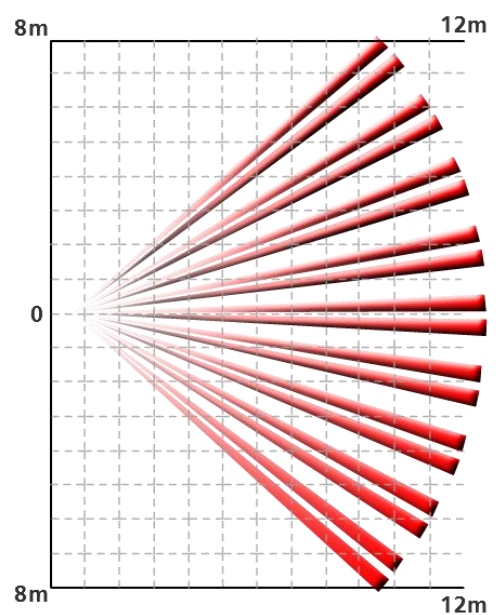
Low Battery – Red LED blinks 4 times every 3 seconds



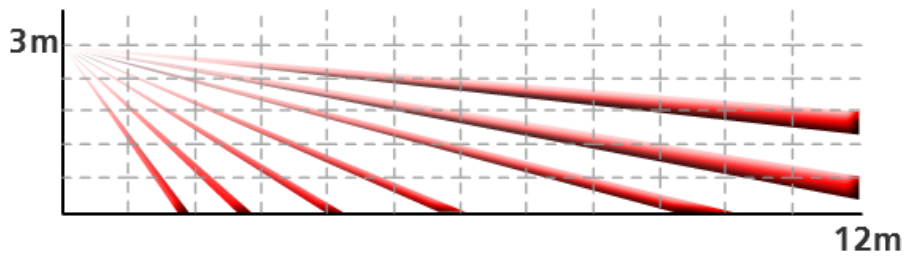


## 9.2. Detection Area

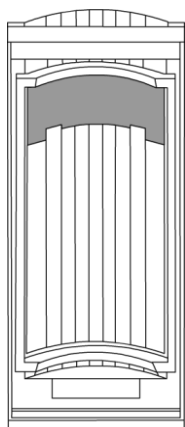
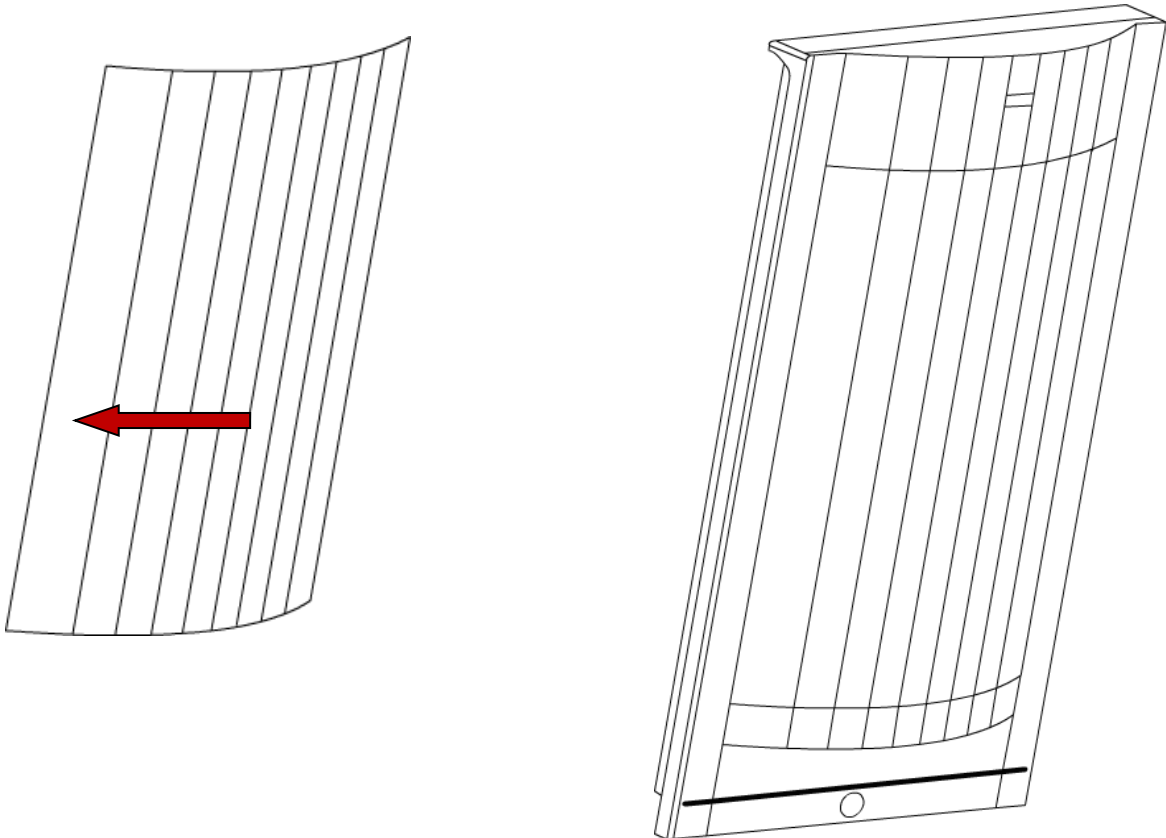
The HX-40Ram has a detection range of up to 12 metres at an 85° angle. The detection area is customisable with the use of Area Masking.



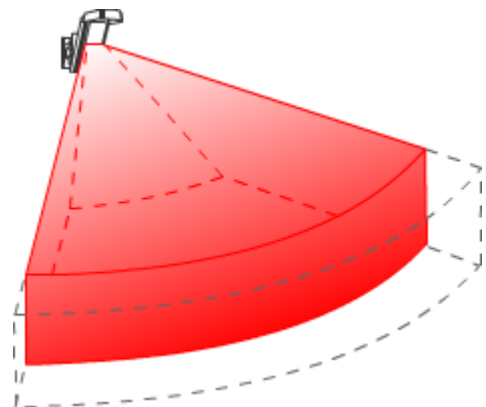
With an installation height of 3.0m the detection length is 12m.

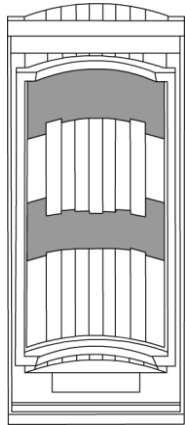


You can shorten the detection length by using masking seals. To apply the masking seals, remove the lens from the lens cover, and apply the seals to the lens.

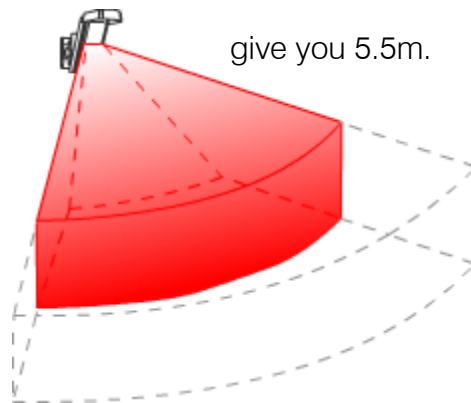


Masking seal 1 will give you 9m.

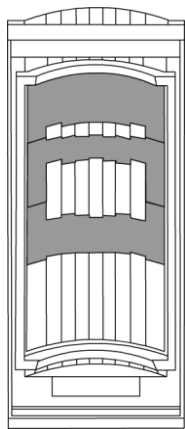




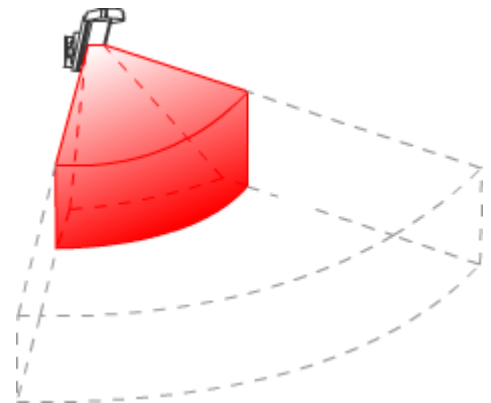
Masking seal 1 & 2 will



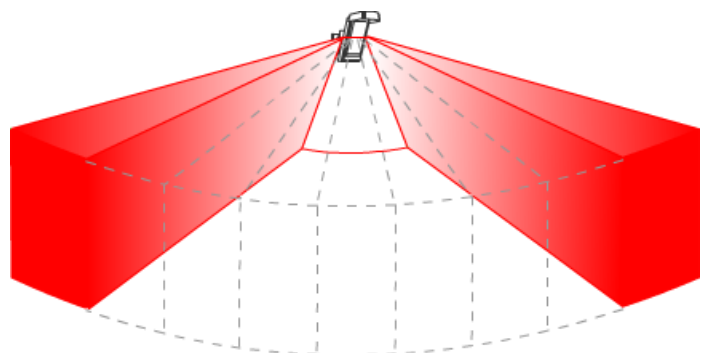
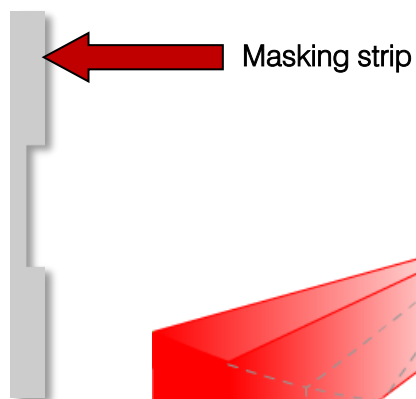
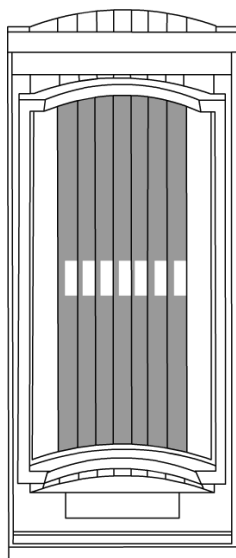
give you 5.5m.



Masking seal 1, 2 & 3 will give you 4m.



You can also use masking strips to block of certain detection zones.



### 9.3. Installation

Decide where to mount your 862-01-HX-40RAMC, the detector must be parallel to the ground for best performance. If the ground is not flat, adjust the vertical angle of the mounting bracket until the detector is parallel to the ground.

The suggested mounting height is 3.0m. You can however install the detector at 2.5m and still maintain the 12m detection length by adjusting the vertical angle by 2.5% upwards.

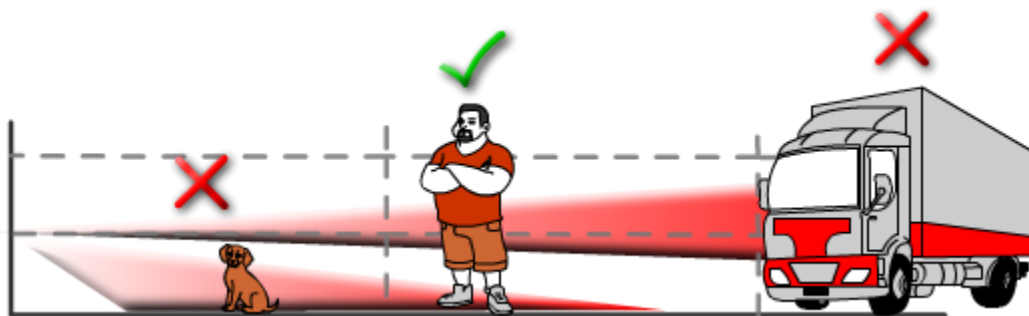
Set the dipswitch settings (seen in the Hardware section) to your needs. Leave dipswitch 1 ON to allow for the walk test.

Use masking seals and strips to set the detection length and area that you require (seen in the Detection Area section)

Do a thorough Walk Test with the cover on the detector. Walk in the areas that require detection and make sure the LED turns on for 2 seconds to indicate detection. Then walk in the areas that do not require detection and make sure the LED does not turn on.

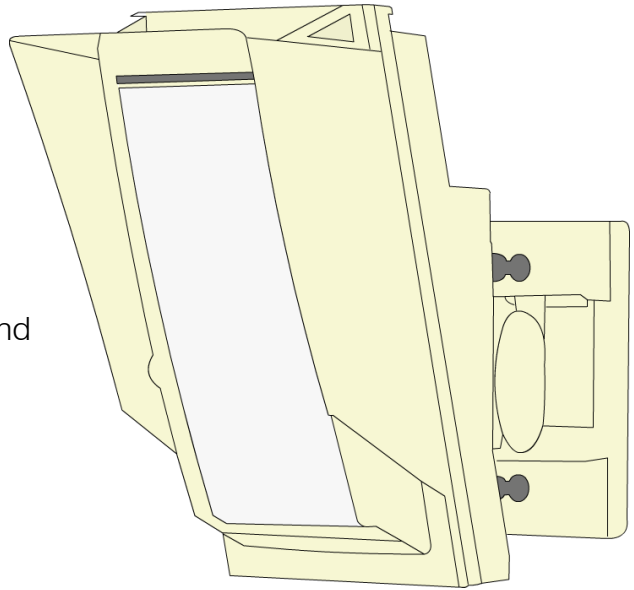
After completing your Walk Test turn dipswitch 1 off to exit Test Mode.

**NB:** Both detection areas must be blocked for detection

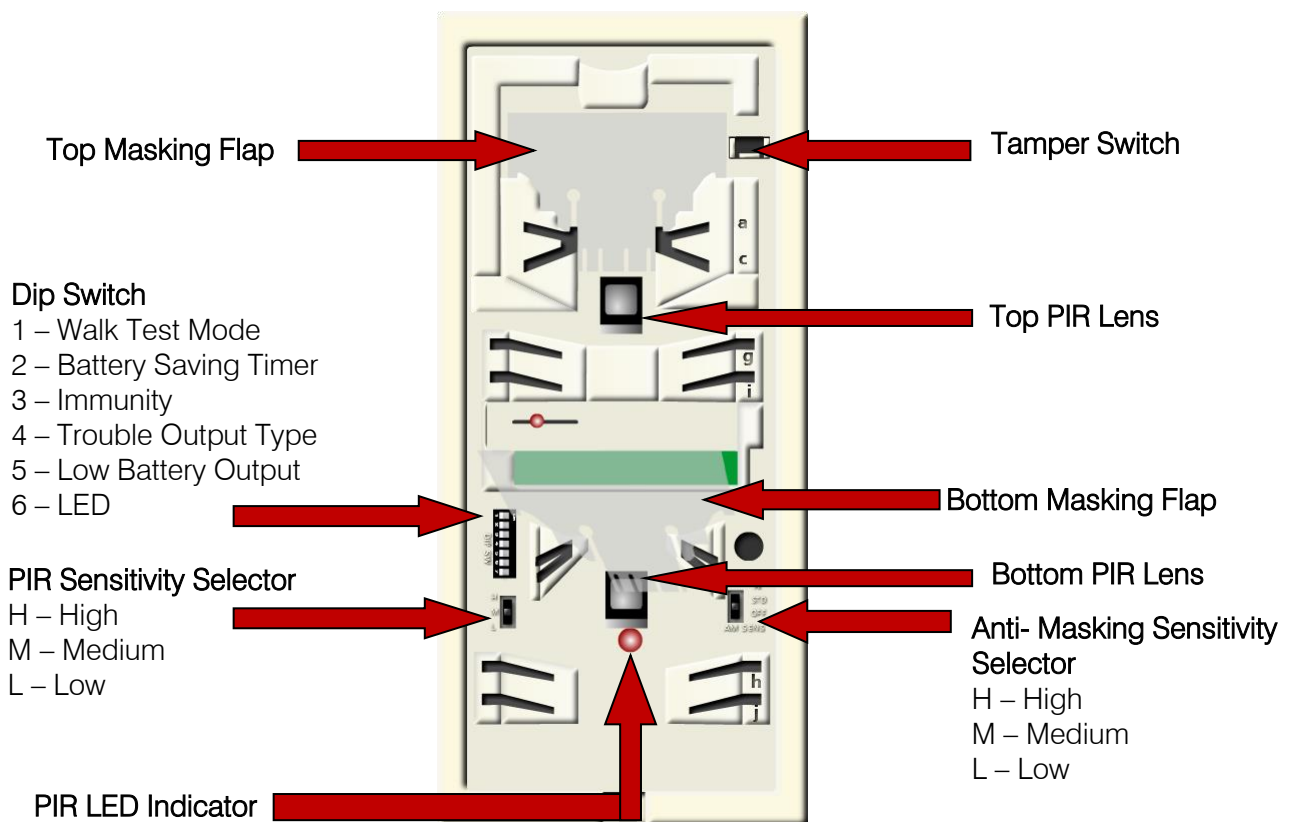


## 10. HX-80NRAM

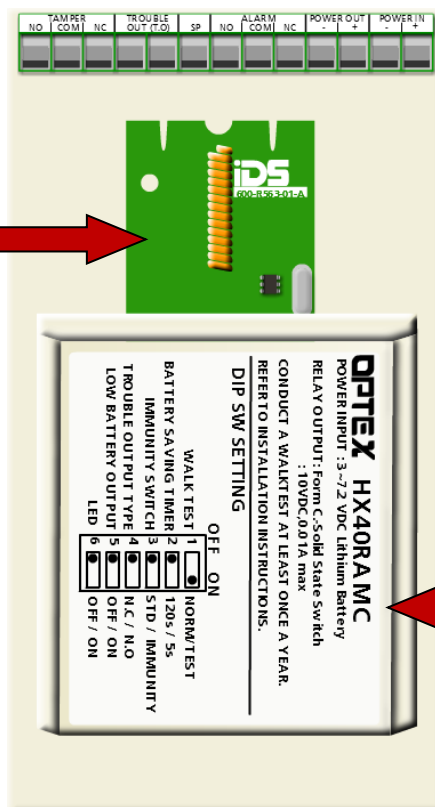
The 862-01-HX-80NRAM is an intelligent long range outdoor detector with two PIR lenses and Anti-Masking protection.



### 10.1. Hardware



IDS Wireless Transmitter

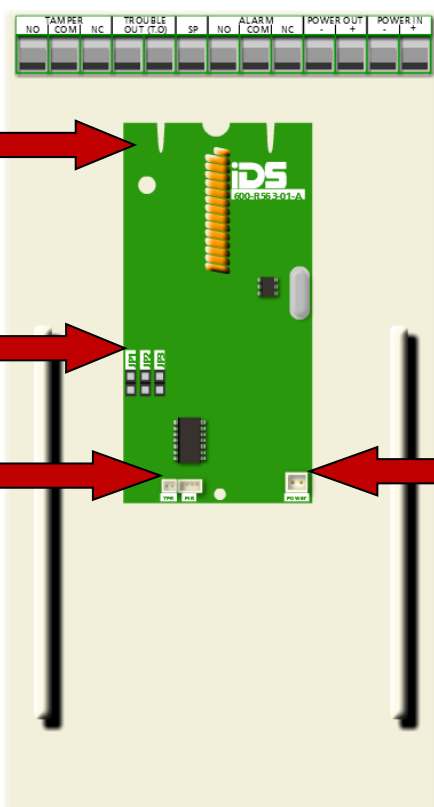


Battery Holder

IDS Wireless Transmitter

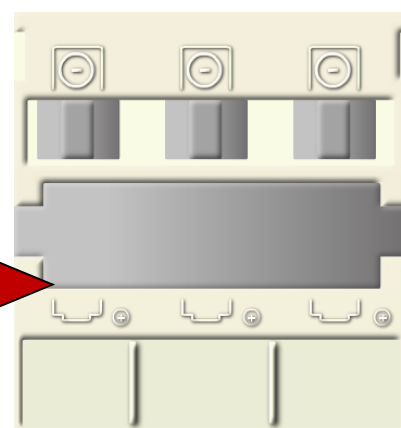
Supervision Jumper  
J1 On – 90 mins  
J1 Off – 12 hrs

Detector Inputs  
Tamper & PIR inputs  
come from the  
detector.

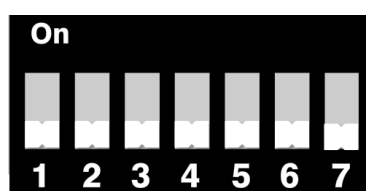


Power Connector  
Connect the battery  
holder lead here.

Battery Holder  
Holds 3 x CR 123A  
batteries



## Dip Switch



### Dip Switch 1 - Walk Test Mode

Position	Function
ON	Test Mode On. The LED lights irrespective of the Dip switch 6 setting. Dip switch 2, Battery Saving Timer, is inactive.
OFF	Normal Mode. LED and Battery Saving Timer works according to their setting.

**NB:** Once the walk test is complete always set the detector to Normal Mode. Using the detector in Test Mode will shorten the battery life.

### Dip Switch 2 – Battery Saving Timer

Position	Function
ON	Even if there are continuous alarms, the alarm is only generated once in a 5 second time.
OFF	Even if there are continuous alarms, the alarm is only generated once in a 120 second time. To lengthen battery life.

### Dip Switch 3 – Immunity

Position	Function
ON	Immunity logic is activated. Use this setting in harsher environments, such as moving trees or bushes.
OFF	Normal Sensitivity.

### Dip Switch 4 - Trouble Output

Position	Function
ON	Sets the output type to Normally Open (N.O.)
OFF	Sets the output type to Normally Closed (N.C.)

**NB:** This setting must be set to ON, or Anti-Masking will not be sent from the Wireless Transmitter. Anti-Masking is sent as a tamper to the X-Series Panel.

### Dip Switch 5 – Low Battery Output

Position	Function
ON	Low Battery signal is sent to the Trouble Output.
OFF	Low battery output is not operational.

**NB:** The Wireless Transmitter monitors the battery and will send a Low Battery signal when the battery gets low.

### Dip Switch 6 – LED

Position	Function
ON	Enables the LED.
OFF	Disables the LED. To lengthen battery life.



#### Dip Switch 7 – AND/OR

Position	Function
ON	OR Mode, an alarm is generated when either PIR's are triggered.
OFF	AND Mode, an alarm is generated when both top and bottom PIRs are triggered.

**NB:** When the detector is in OR Mode there is a larger chance of false detections, as only 1 PIR needs detection.

#### LEDs

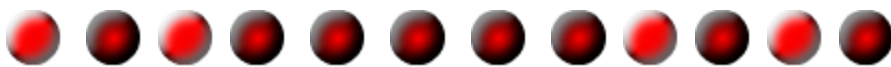
Alarm – Red LED turns on for 2 seconds



Warm-up – Red LED blinks for approximately 60 seconds



Anti-Masking Start Up – Red LED blinks 2 times every 5 seconds



Anti-Masking Detection – Red LED blinks 3 times every 3 seconds

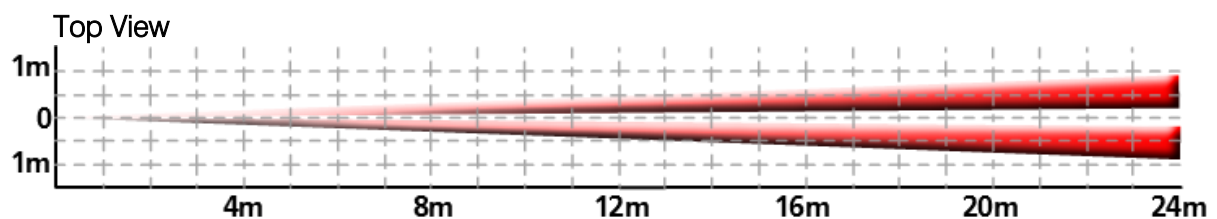


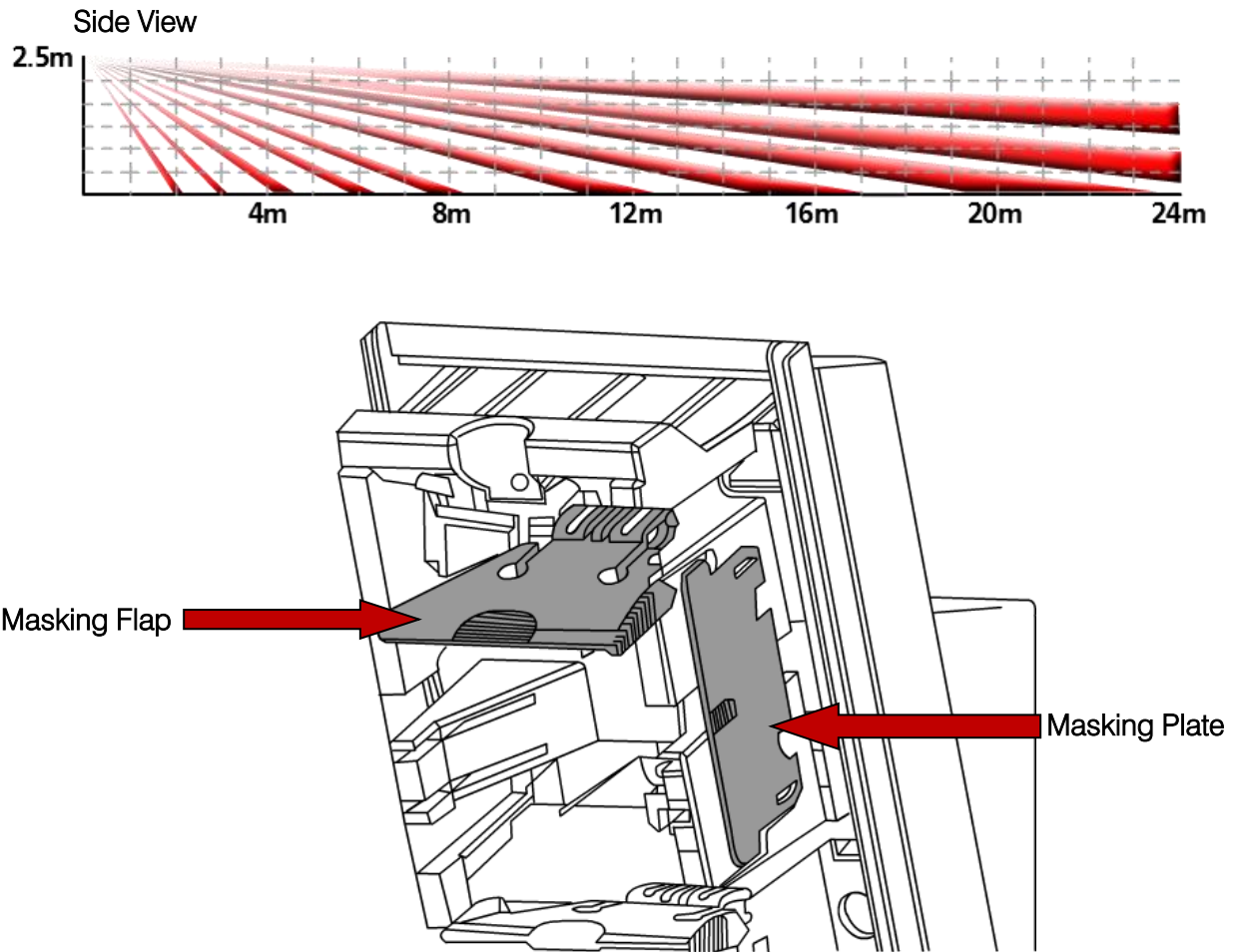
Low Battery – Red LED blinks 4 times every 3 seconds



## 10.2. Detection Area

The 862-01-HX-80N RAM has a detection range of up to 24 metres at a narrow angle. The detection area is customisable with the use of Masking Flaps and Plates.

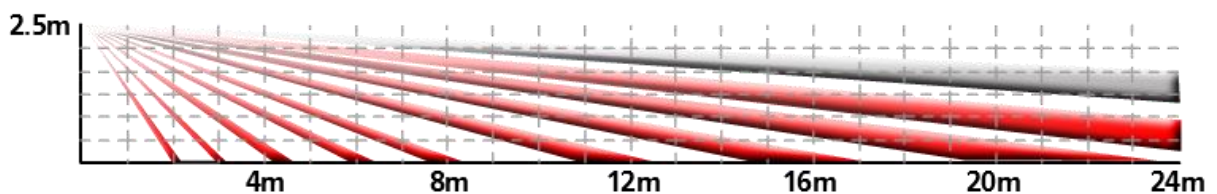




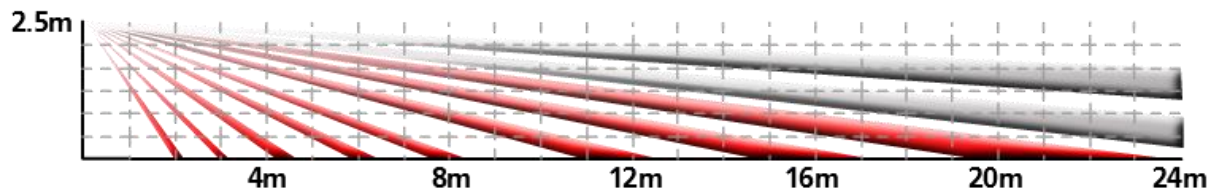
There are 2 Masking plates and 2 Masking Flaps, one each for the top PIR and one each for the bottom PIR. The Masking Flaps are used to mask the long distance detection zones, i.e. shortening the detection distance. The Masking Plates are used to mask the short range detection area, i.e. masking the area closest to the detector.

### Masking Flaps

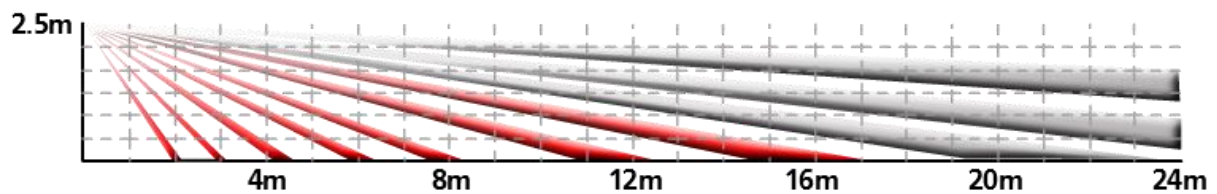
- 1.) Put the Top Masking Flap to position A. Detection length is 18m.



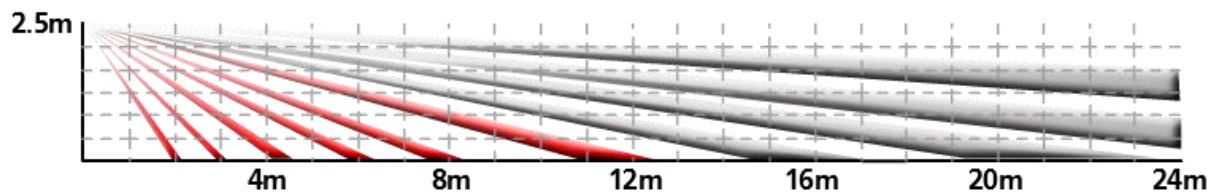
- 2.) Put the Top Masking Flap to position A and the Bottom Flap to B. Detection length is 13m.



- 3.) Put the Top Masking Flap to position C and the Bottom Flap to B. Detection length is 10m.

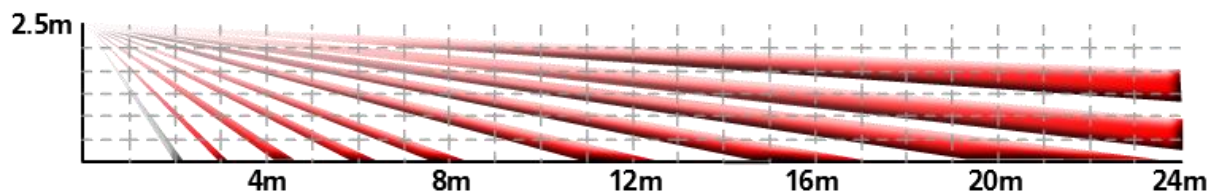


- 4.) Put the Top Masking Flap to position C and the Bottom Flap to D. Detection length is 6.5m.

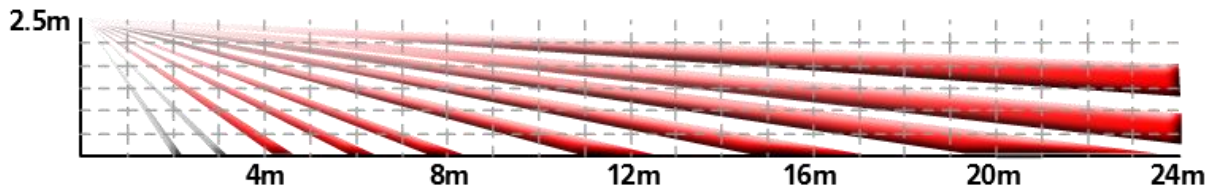


### Masking Plates

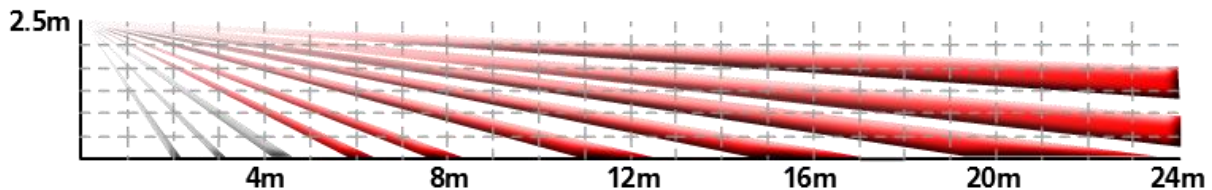
- 1.) Put the Bottom Masking Plate to position J. No detection within 2m of the detector.



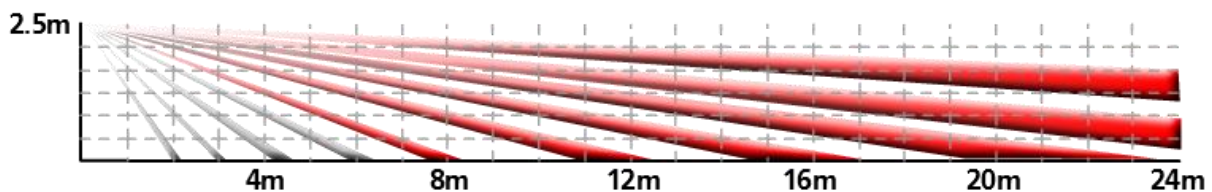
- 2.) Put the Top Masking Plate to position I and the Bottom Masking Plate to position J. No detection within 3m of the detector.



- 3.) Put the Top Masking Plate to position I and the Bottom Masking Plate to position H. No detection within 4m of the detector.



- 4.) Put the Top Masking Plate to position G and the Bottom Masking Plate to position H. No detection within 5m of the detector.



### 10.3. Installation

Decide where to mount your 862-01-HX-80NRAM; the detector must be parallel to the ground for best performance. If the ground is not flat, adjust the vertical angle of the mounting bracket until the detector is parallel to the ground.

The recommended mounting height is 2.5m – 3.0m.

Set the dipswitch settings (seen in the Hardware section) to your needs. Leave dipswitch 1 ON to allow for the walk test.

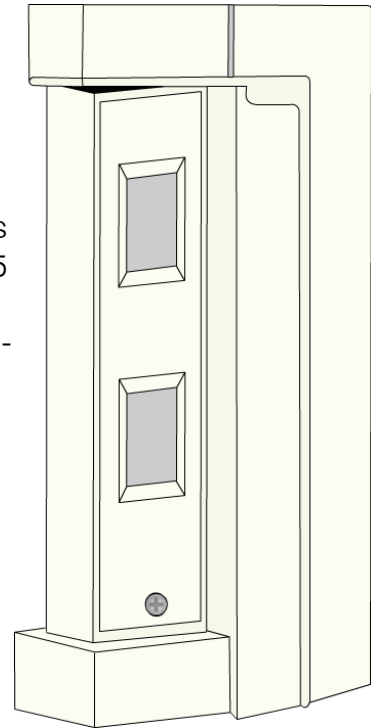
Use Masking Flaps and Plates to set the detection length that you require (seen in the Detection Area section)

Do a thorough Walk Test with the cover on the detector. Walk in the areas that require detection and make sure the LED turns on for 2 seconds to indicate detection. Then walk in the areas that do not require detection and make sure the LED does not turn on.

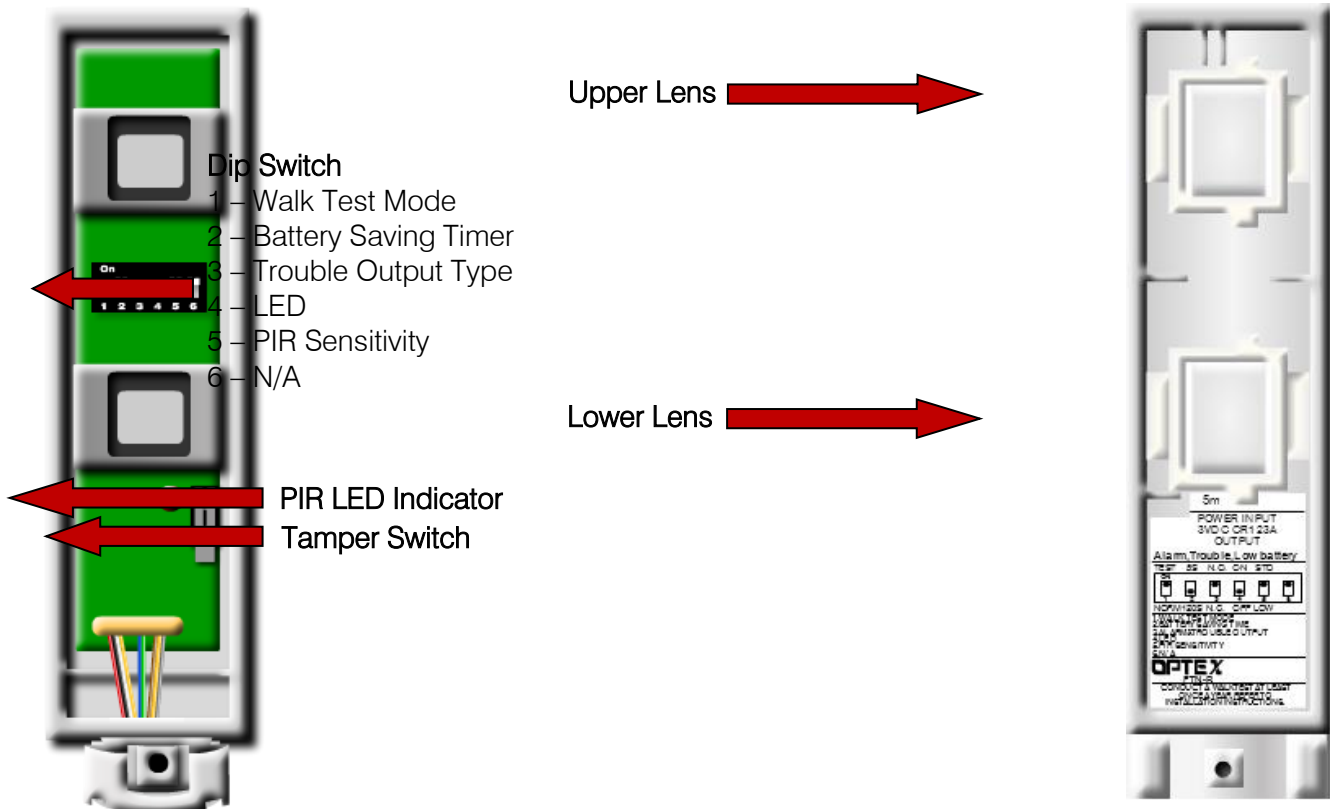
After completing your Walk Test turn dipswitch 1 off to exit Test Mode.

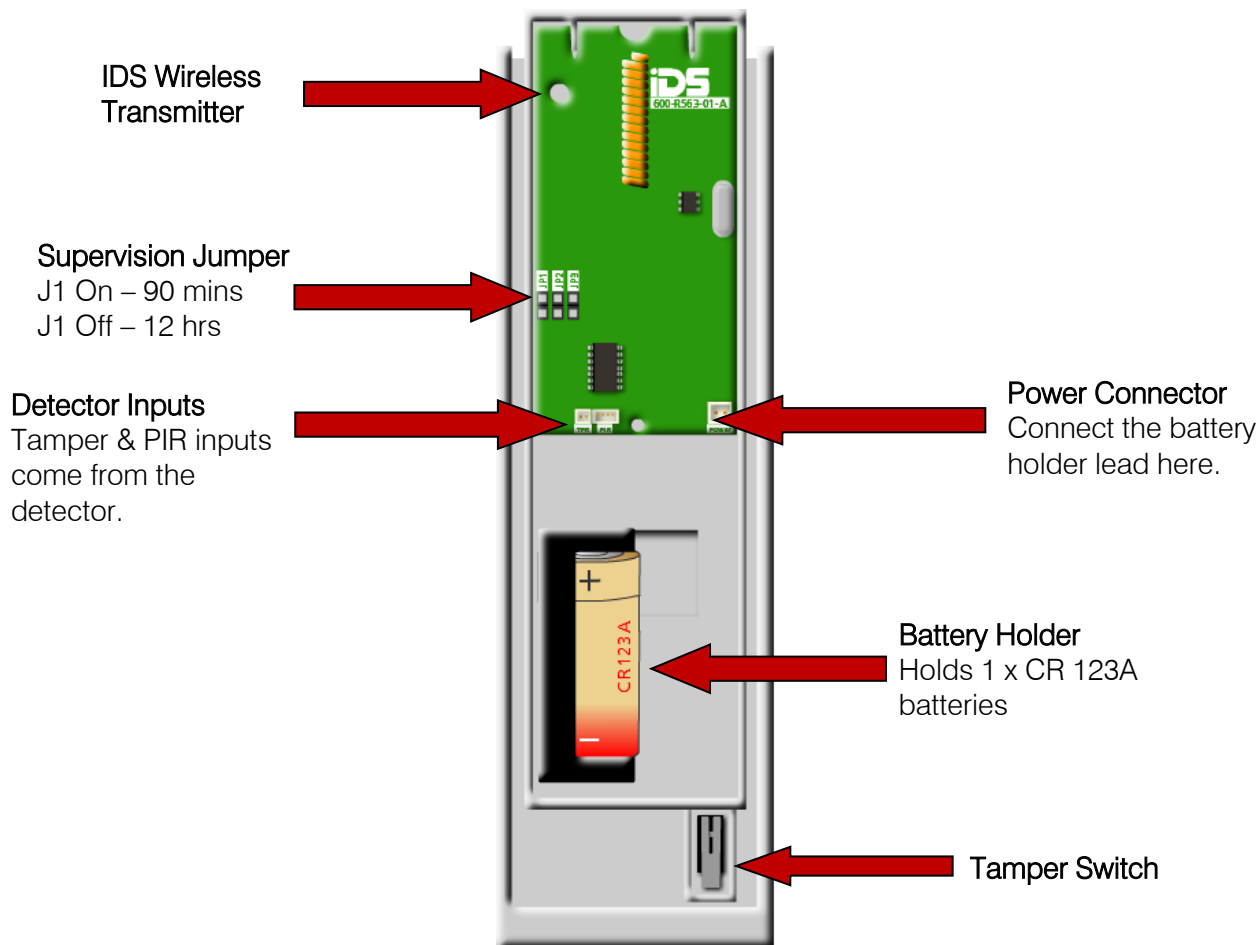
## 11. FTN Series

The FTN Series has two detectors; both with two PIR lenses and both are designed to be wall-mounted and give up to 5 metres of detection with a width of 1 metre. The FTN detectors can be rotated horizontally 190°. The 862-01-FTN-RAM detector has an anti-masking function to prevent covering of the detector.

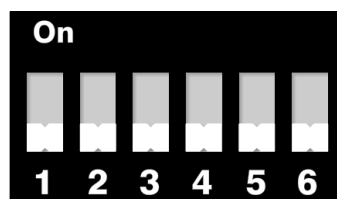


## 11.1. Hardware





Dip Switch



Dip Switch 1 - Walk Test Mode

Position	Function
ON	Test Mode On. The LED lights irrespective of the Dip switch 4 setting. Dip switch 2, Battery Saving Timer, is inactive.
OFF	Normal Mode. LED and Battery Saving Timer works according to their setting.

**NB:** Once the walk test is complete always set the detector to Normal Mode. Using the detector in Test Mode will shorten the battery life.

#### Dip Switch 2 – Battery Saving Timer

Position	Function
ON	Even if there are continuous alarms, the alarm is only generated once in a 5 second time.
OFF	Even if there are continuous alarms, the alarm is only generated once in a 120 second time. To lengthen battery life.

#### Dip Switch 3 – Trouble Output

Position	Function
ON	Sets the output type to Normally Open (N.O.)
OFF	Sets the output type to Normally Closed (N.C.)

**NB:** This setting must be set to ON, or Anti-Masking will not be sent from the Wireless Transmitter. Anti-Masking is sent as a tamper to the X-Series Panel.

#### Dip Switch 4 - LED

Position	Function
ON	Enables the LED.
OFF	Disables the LED. To lengthen battery life.

#### Dip Switch 5 – PIR Sensitivity

Position	Function
ON	Normal PIR sensitivity.
OFF	Low PIR sensitivity.

#### Dip Switch 6 – Not Used

### LEDs

Warm-up – Red LED blinks for approximately 120 seconds



Alarm Condition – Red LED turns on for 2 seconds



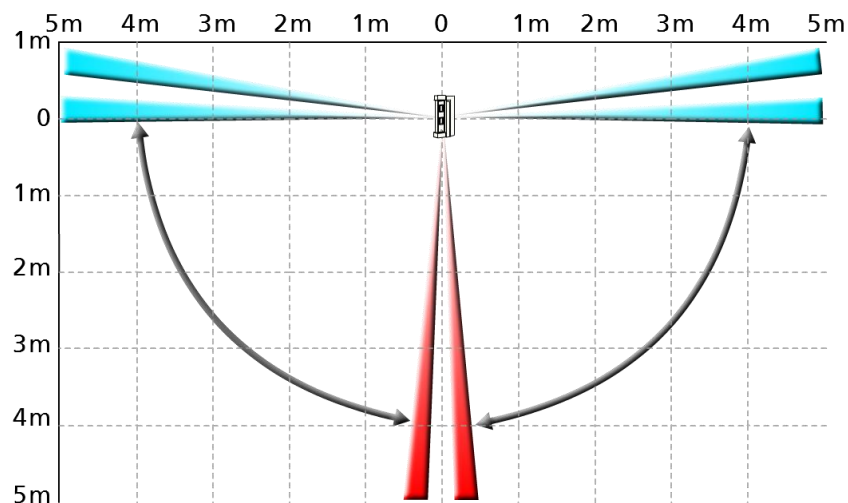
Masking Detection (862-01-FTN-RAM Only) – Red LED blinks 3 times and then repeats



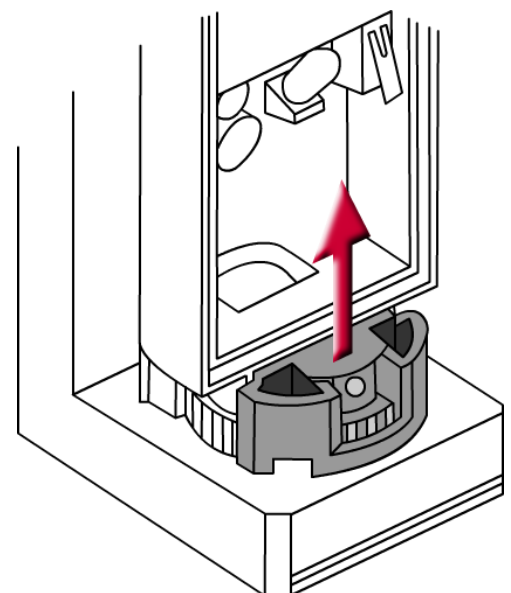


## 11.2. Detection Area

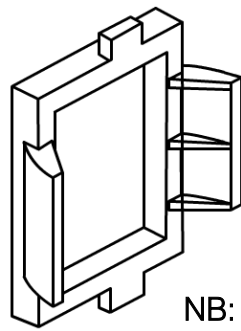
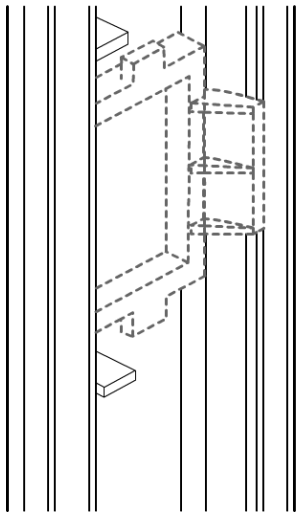
The FTN Series of detectors have a narrow detection area with up to 5m detection length. You can rotate the detector 190° to give you a wall of protection in any direction.



To rotate the detector, remove the fixture (shown on the right) and turn the detector to the desired horizontal angle. Make sure to secure the fixture once you are happy with the detector's position to hold it in place.

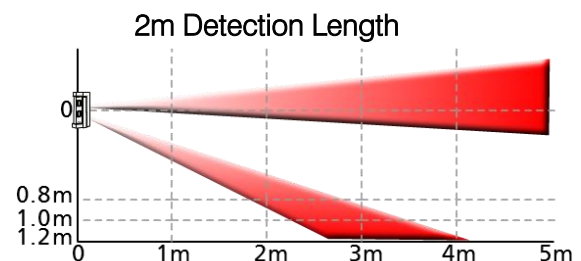
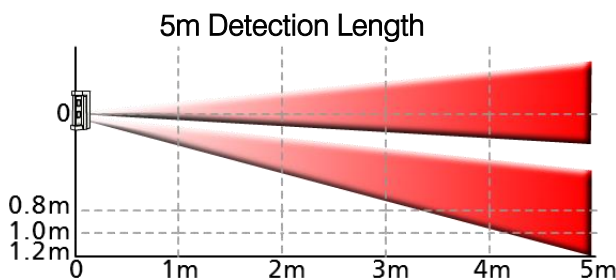






To change the detection length between 5m and 2m, remove the lower lens and rotate it to the desired position. There is a 5m and a 2m label on the lens cover, the chosen detection length will be visible.

**NB:** Do not change the orientation of the upper lens.



### 11.3. Installation

Decide where to mount your FTN detector the recommended mounting height is 0.8m – 1.2m.

Set the dipswitch settings (seen in the Hardware section) to your needs. Leave dipswitch 1 ON to allow for the walk test.

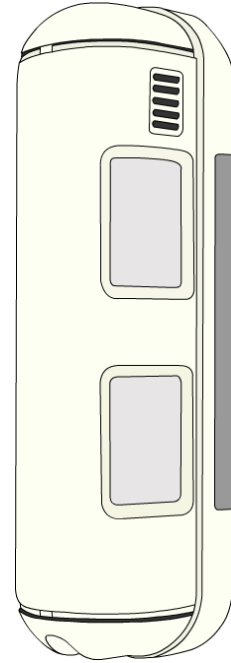
Adjust the lenses in the lens holder to set the detection length and rotate the detector to the angle that you require (seen in the Detection Area section)

Do a thorough Walk Test with the cover on the detector. Walk in the areas that require detection and make sure the LED turns on for 2 seconds to indicate detection. Then walk in the areas that do not require detection and make sure the LED does not turn on.

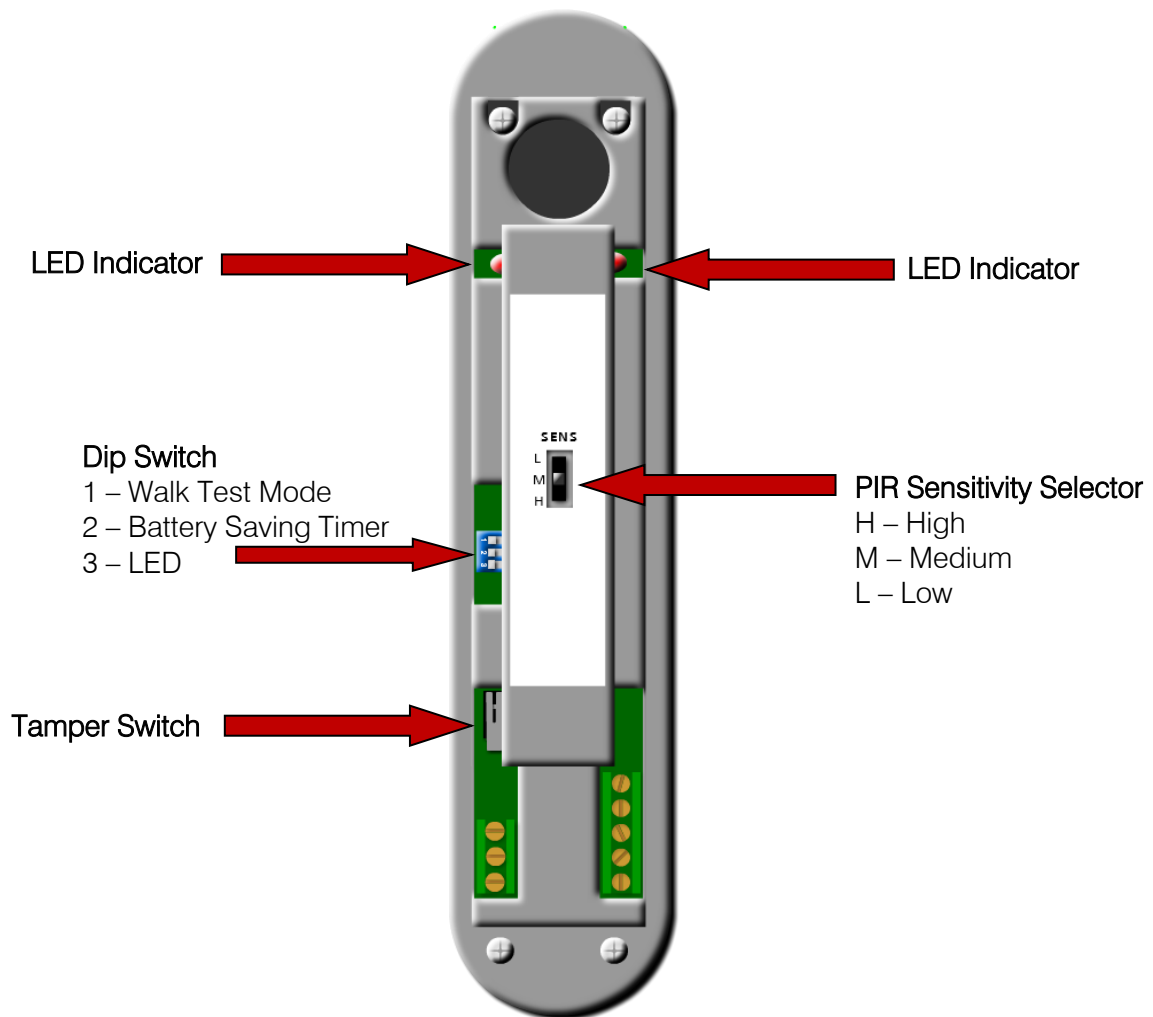
After completing your Walk Test turn dipswitch 1 off to exit Test Mode.

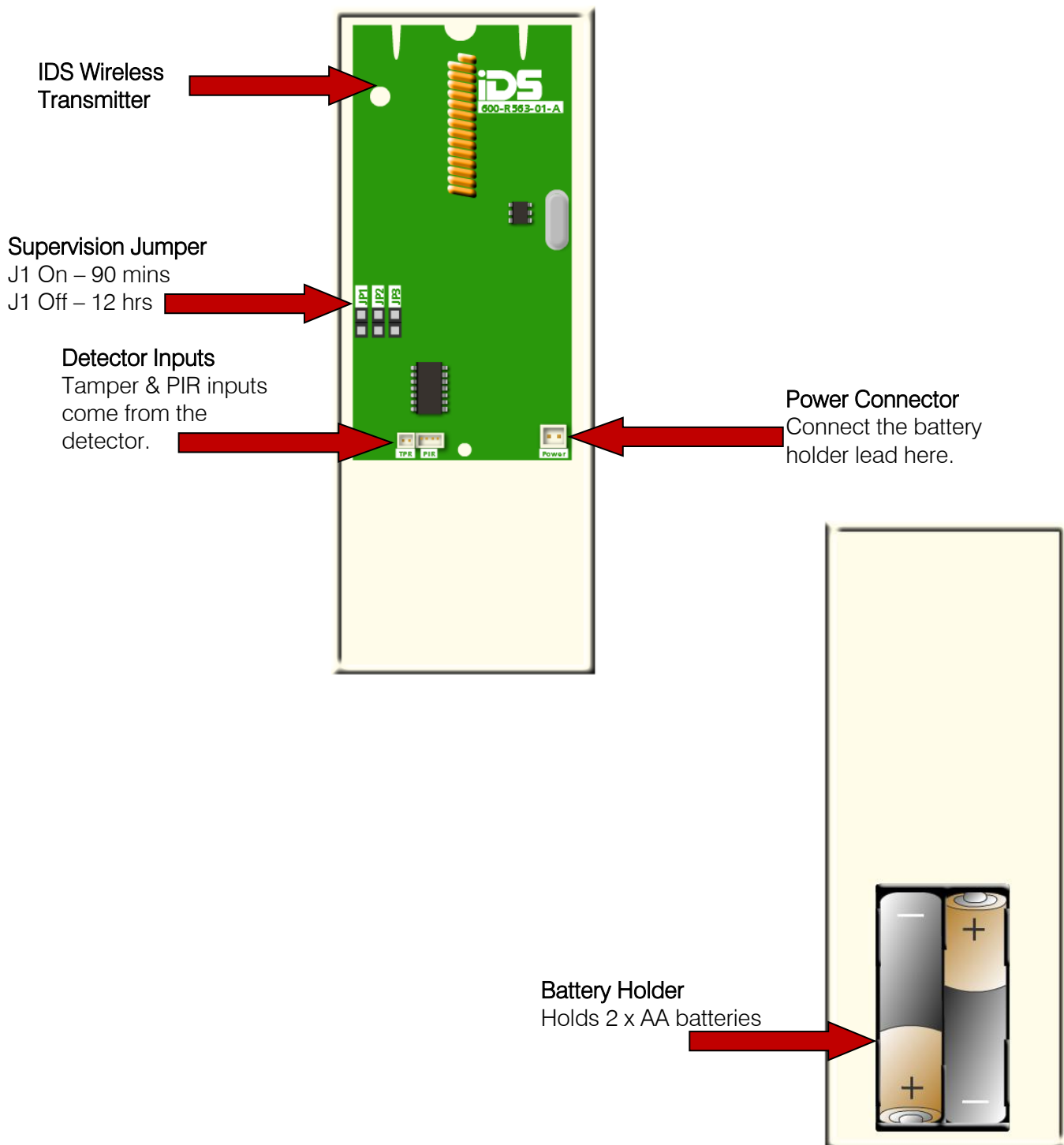
## 12. 862-01-BX-80NRC

The 862-01-BX-80NRC is designed to be wall-mounted centrally on a building. It gives up to 24 metres of protection, 12 metres on either side of the detector.

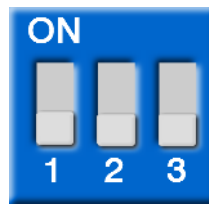


### 12.1. Hardware





### Dip Switch



#### Dip Switch 1 - Walk Test Mode

Position	Function
ON	Test Mode On. The LED lights irrespective of the Dip switch 6 setting. Dip switch 2, Battery Saving Timer, is inactive.
OFF	Normal Mode. LED and Battery Saving Timer works according to their setting.

**NB:** Once the walk test is complete always set the detector to Normal Mode. Using the detector in Test Mode will shorten the battery life.

#### Dip Switch 2 – Battery Saving Timer

Position	Function
ON	Even if there are continuous alarms, the alarm is only generated once in a 5 second time.
OFF	Even if there are continuous alarms, the alarm is only generated once in a 120 second time. To lengthen battery life.

#### Dip Switch 3 – LED

Position	Function
ON	Enables the LED.
OFF	Disables the LED. To lengthen battery life.

### LEDs

Alarm – Both red LEDs turns on for 2 seconds



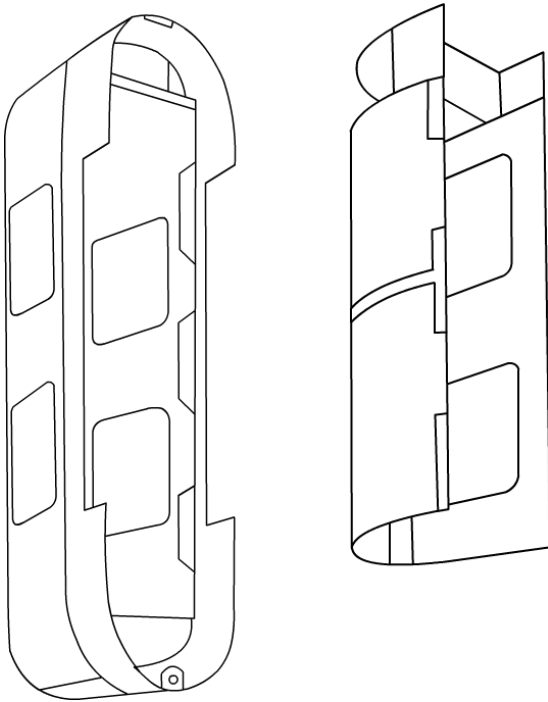
Warm-up – Both red LEDs blink once. (Warm-up takes approximately 120 seconds)



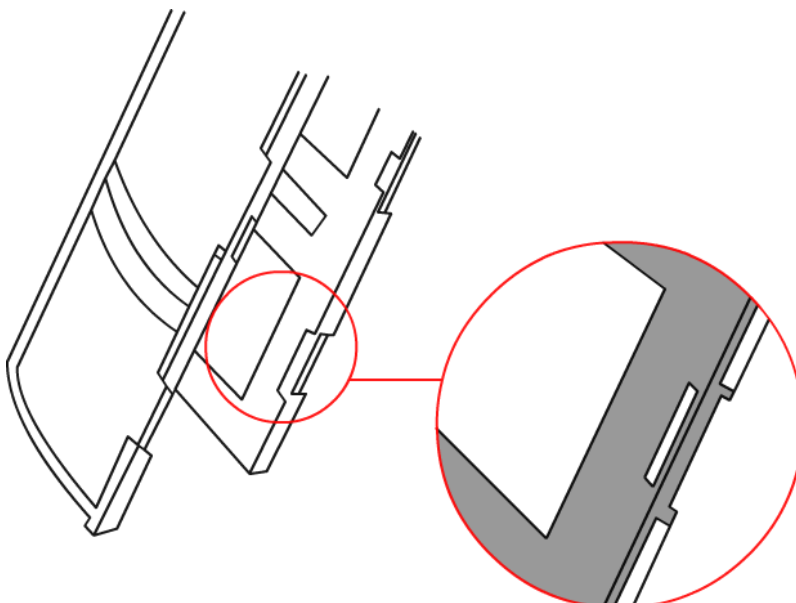
## 12.2. Detection Area

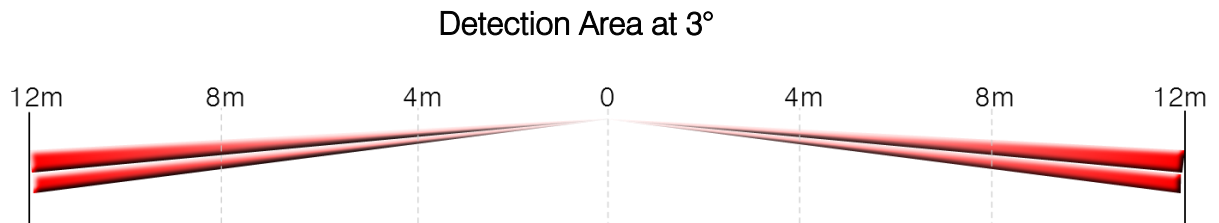
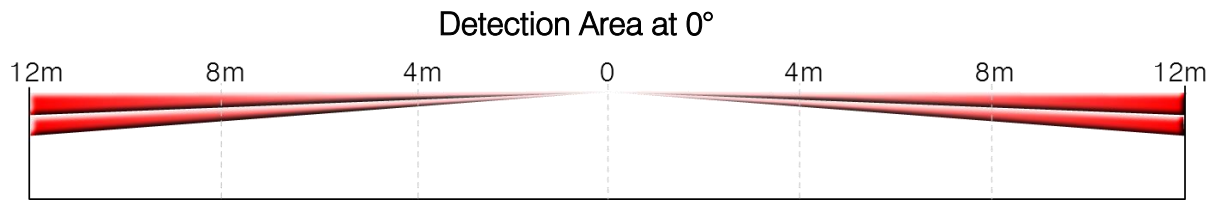
The 862-01-BX-80NRC has a detection length of up to 12 metres per side. The detection area can be adjusted in two ways: The angle of the beams from the wall and the detection length.

Both detection adjustments require the lens holder to be removed from the front cover, as seen below.



The detection beams run at 0° from the wall the detector is mounted. To adjust the angle of the detection beams from the wall, slide the lens inwards inside the lens holder the lens will become unhooked from the groove on the lens holder. It is a small adjustment that gives an angle of 3° from the wall. This is used in the case of an obstacle blocking the detection area.

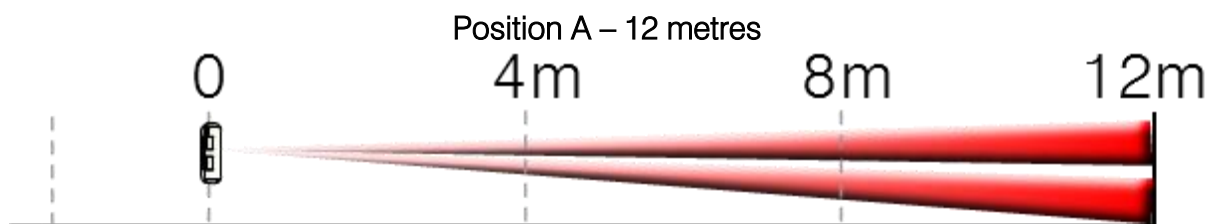
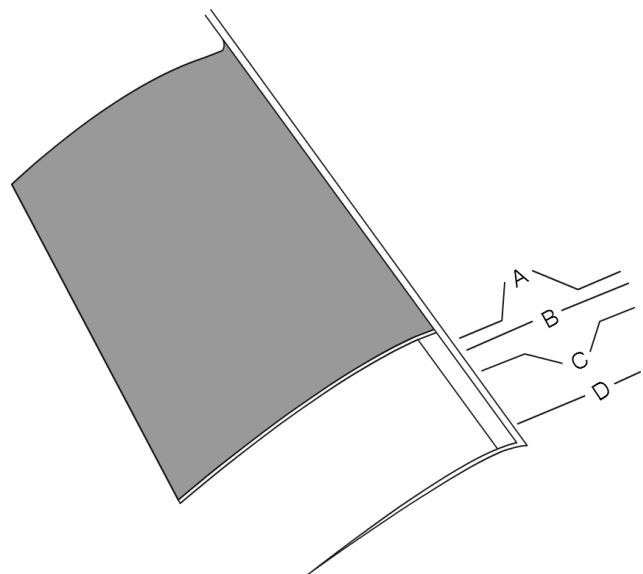




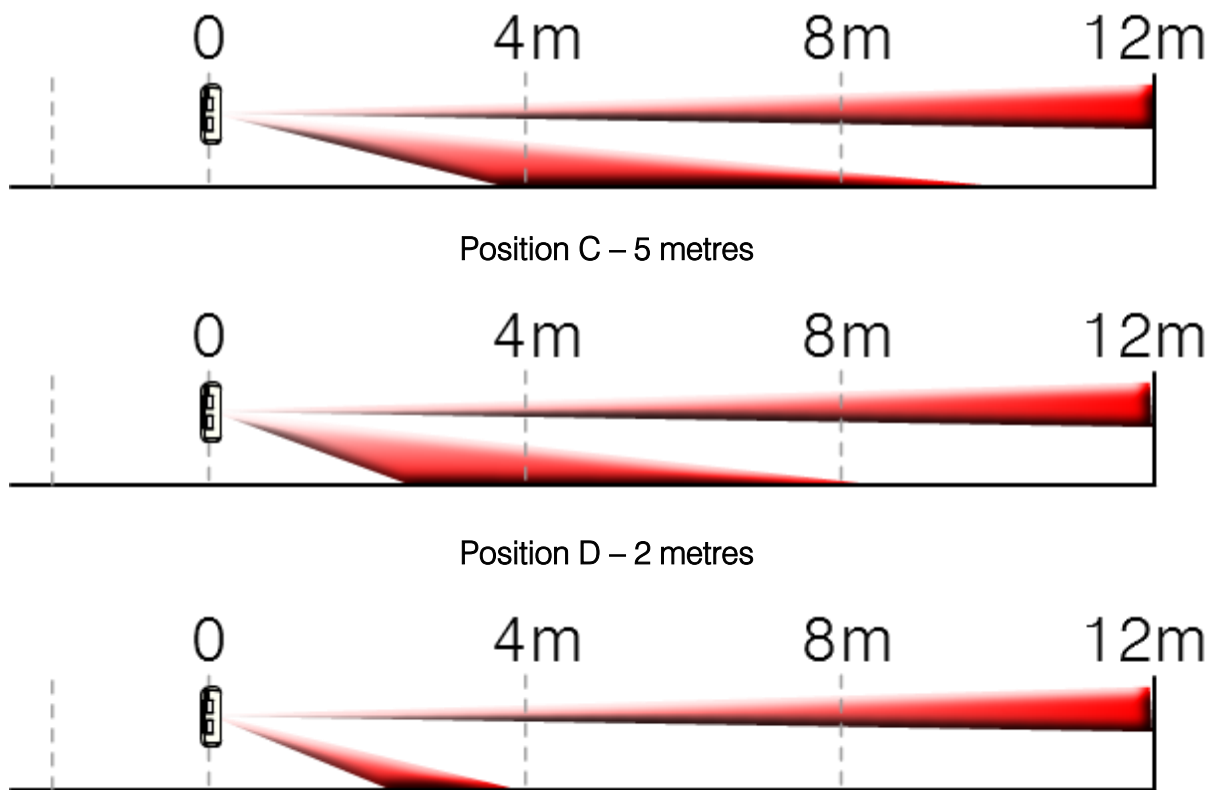
**NB:** Avoid adjusting just the upper or lower lens as the detector requires both upper and lower beams to be broken.

The upper detection beam stays parallel to the ground, to adjust the detection length you must slide the lower lens up or down to the appropriate position.

	Detection Length
Position A	12m
Position B	8m
Position C	5m
Position D	2m



Position B – 8 metres



### 12.3. Installation

Decide where to mount your 862-01-BX-80NRC, keeping in mind the detector detects on both sides of the detector.

The suggested mounting height is 0.8m – 1.2m.

Set the dipswitch settings (seen in the Hardware section) to your needs. Leave dipswitch 1 ON to allow for the walk test.

Adjust the lenses in the lens holder to set the detection length and angle that you require (seen in the Detection Area section)

Do a thorough Walk Test with the cover on the detector. Walk in the areas that require detection and make sure the LED turns on for 2 seconds to indicate detection. Then walk in the areas that do not require detection and make sure the LED does not turn on.

After completing your Walk Test turn dipswitch 1 off to exit Test Mode.

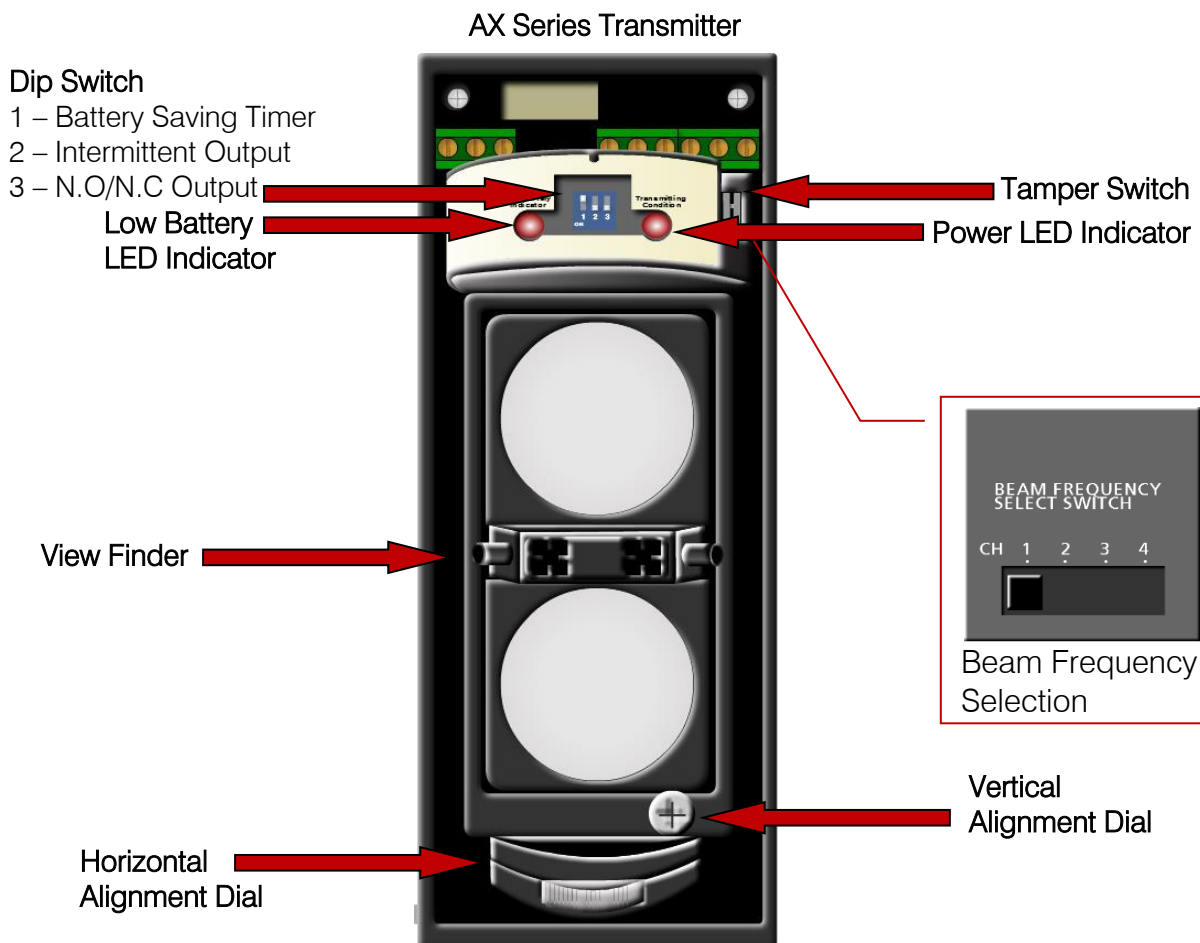
## 13. AX-Series



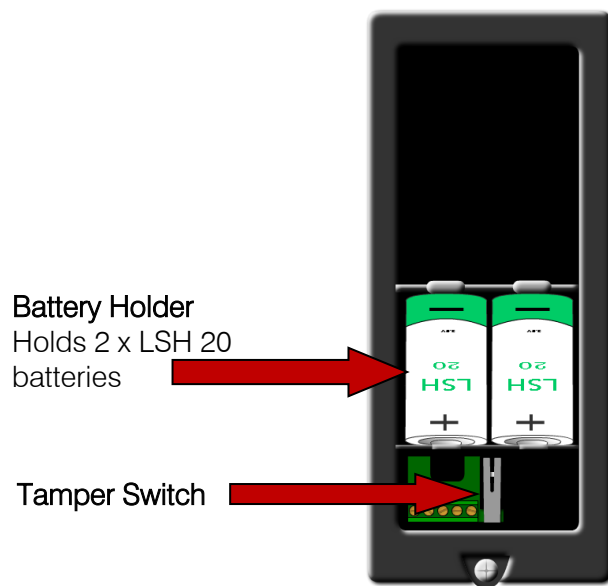
The AX Series of beams come in two versions, 30 metres and 60 metres. These photoelectric beams are very customisable to suit your situation and to prevent interference.

## 13.1. Hardware

The AX Beams come in pairs, a transmitter and a receiver. The transmitter sends a beam to the receiver and when that beam is broken then an alarm condition occurs.







Dip Switch



Dip Switch 1 - Battery Saving Timer

Position	Function
ON	Even if there are continuous alarms, the alarm is only generated once in a 120 second time. To lengthen battery life.
OFF	The alarm is generated whenever there is an alarm condition.

Dip Switch 2 – Intermittent Output Function

Position	Function
ON	Sets the Alarm output to trigger intermittently (every 1 minute) if a continuous alarm condition occurs.
OFF	The Alarm output triggers only once on an alarm condition.

Dip Switch 3 – Alarm Output

Position	Function
ON	Sets the output type to Normally Open (N.O.)
OFF	Sets the output type to Normally Closed (N.C.)

### Dip Switch

- 1/2 – Beam Interruption
- 3 – Battery Saving Timer
- 4 – Intermittent Output
- 5 – N.O/N.C Output

Low Battery  
LED Indicator

Voltage Monitor  
Jack

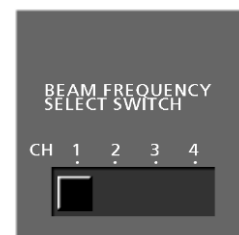
View Finder

Horizontal  
Alignment Dial

### AX Series Receiver

Tamper Switch

Alarm LED Indicator



Beam Frequency  
Selection

Vertical  
Alignment Dial

IDS Wireless  
Transmitter

Supervision Jumper

- J1 On – 90 mins
- J1 Off – 12 hrs

Detector Inputs

Tamper & PIR inputs  
come from the  
detector.

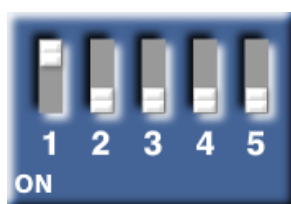
Power Connector

Connect the battery  
holder lead here.

Battery Holder  
Holds 2 x LSH 20  
batteries

Tamper Switch

## Dip Switch



### Dip Switch 1/2 – Beam Interruption Adjustment

Dipswitch Position				
Interruption Time Setting	Running (50 msec)	Jogging (100 msec)	Walking (250 msec)	Slow Movement (500 msec)

### Dip Switch 3 - Battery Saving Timer

Position	Function
ON	Even if there are continuous alarms, the alarm is only generated once in a 120 second time. To lengthen battery life.
OFF	The alarm is generated whenever there is an alarm condition.

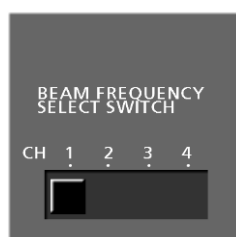
### Dip Switch 4 – Intermittent Output Function

Position	Function
ON	Sets the Alarm output to trigger intermittently (every 1 minute) if a continuous alarm condition occurs.
OFF	The Alarm output triggers only once on an alarm condition.

### Dip Switch 5 – Alarm Output

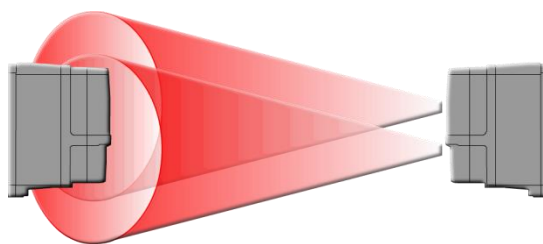
Position	Function
ON	Sets the output type to Normally Open (N.O.)
OFF	Sets the output type to Normally Closed (N.C.)

## Beam Frequency



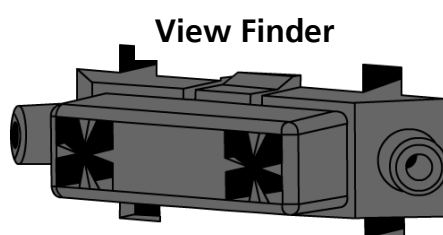
The 4 channel beam frequency selector is used to avoid crosstalk when using more than 1 pair of beams. The receiver and the transmitter that are paired must be on the same frequency channel. If you are stacking 2 sets of beams (putting beams on top of each other) then you must use frequencies that are 2 channels apart, i.e. channel 1 for one pair and channel 3 for the second pair of beams.

## 13.2. Aligning Beams

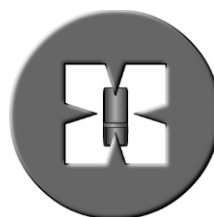


Beams must be aligned correctly for optimal detection and reduced false alarms.

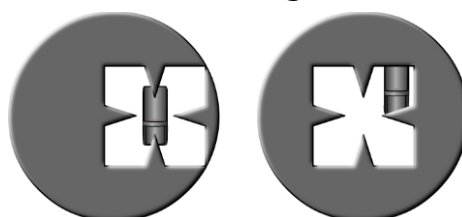
While looking through viewfinder, adjust the horizontal and vertical angles until the pairing detector is in the centre of the sight. Use the Alarm Indicator LED on the Beam Receiver for a rough alignment.






**Correct Alignment**



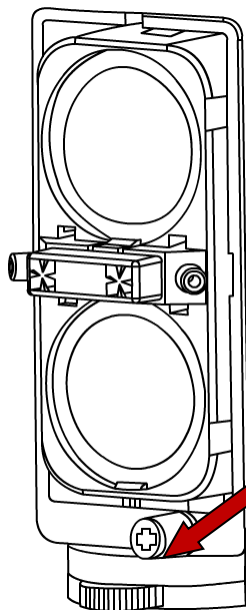
**Incorrect Alignment**



Use the Alarm Indicator LED on the Beam Receiver for a rough alignment.

Alarm Indicator LED	No Light	Light Received					OFF
	ON 	Fast Blink 		Slow Blink 			
Adjustment Level	Realign						Aligned

**NB:** The Alarm Indicator LED is a tool for easy alignment. You must use the Voltage Monitor Jack for fine adjustments to get the best performance.

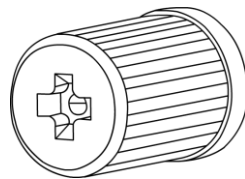


To adjust the horizontal angle hold and turn the lens holder left or right.

You can make fine adjustments using the horizontal alignment dial.

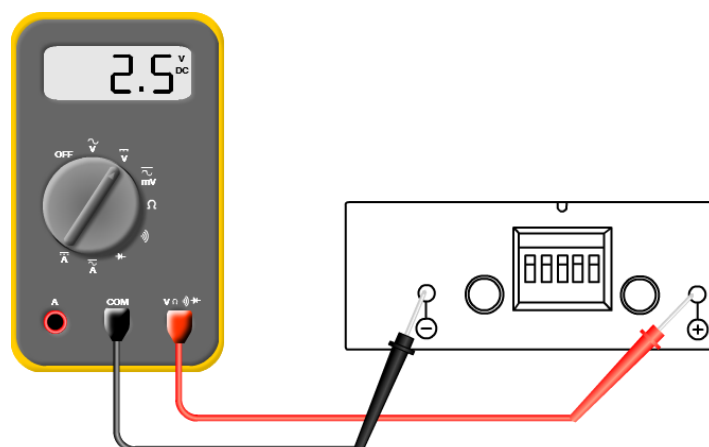
To adjust the vertical angle of the lens, turn the vertical alignment dial.

Counter-clockwise turns the lens downwards.



Clockwise turns the lens upwards.

Connect a multimeter, set to DC Voltage, to the Voltage Monitor Jack. Make fine alignment adjustments until the multimeter reaches maximum output.  
**Voltage should be over 2.5V**

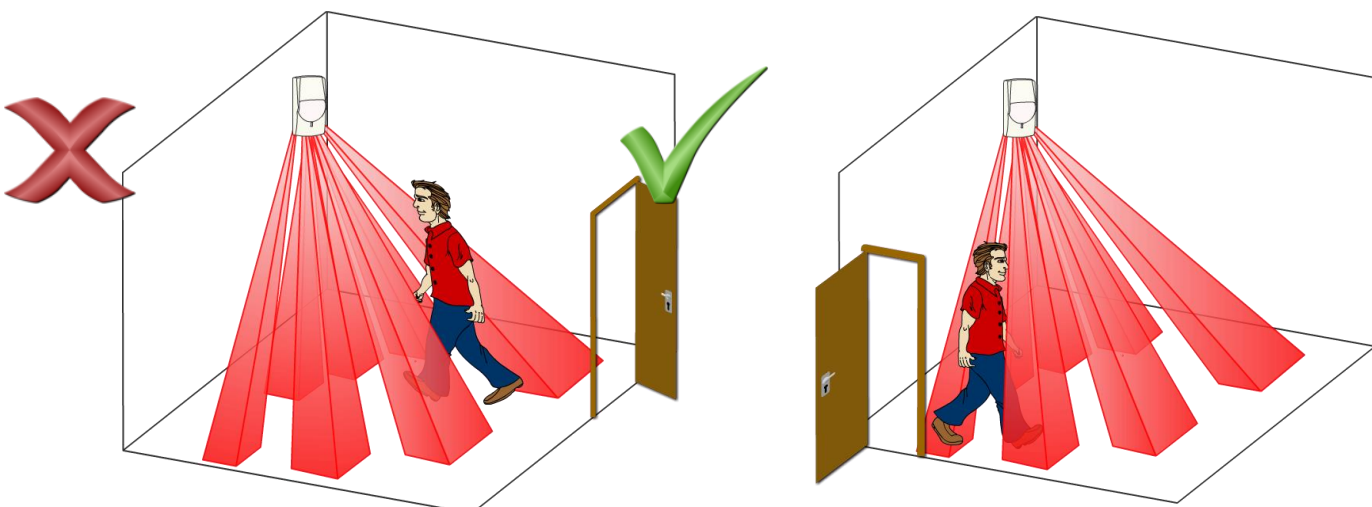
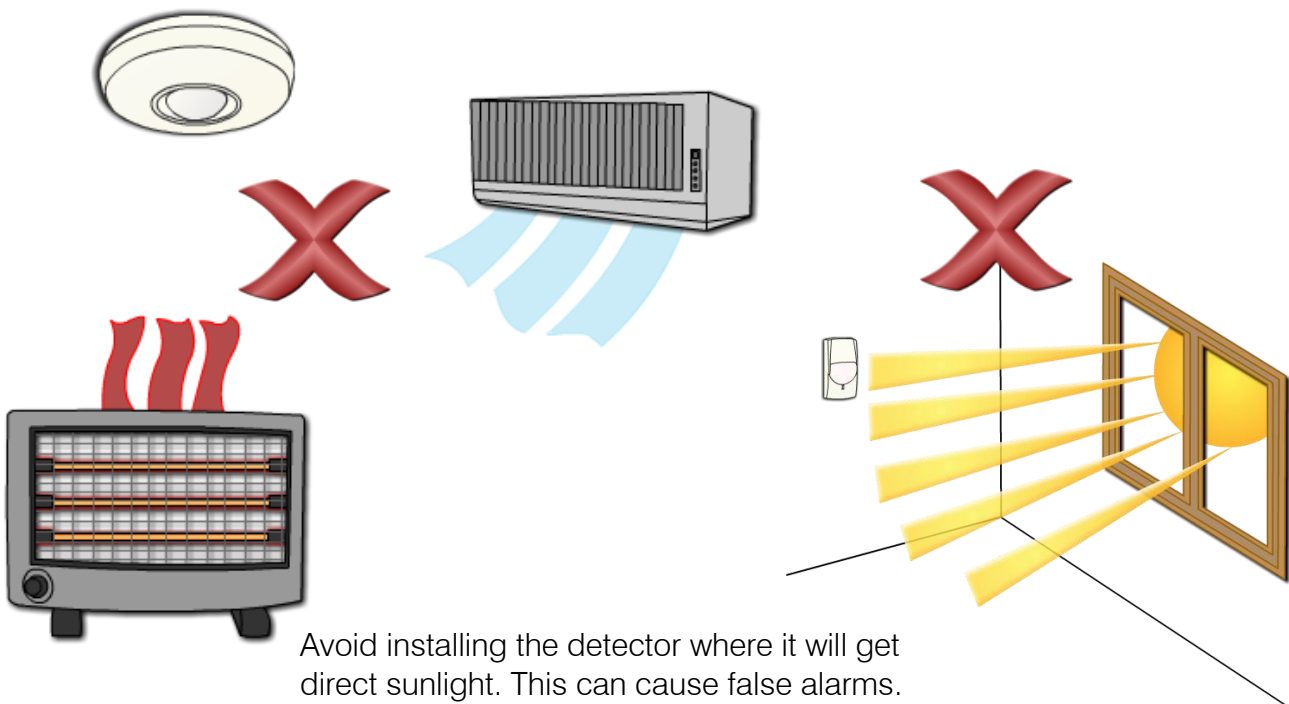


## 14. Installation Recommendation

For optimum performance and reduced risk of false alarms, please follow these installation recommendations.

### 14.1. Indoor Detectors

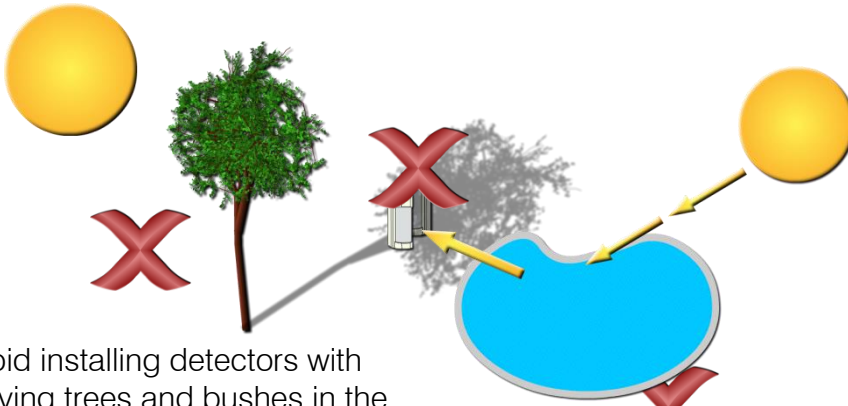
Be aware of temperature altering appliances in the detection area. Placing a heater or air-conditioner in the detection area can cause false alarms.



Place the detector where it is most likely that an intruder will walk across the detection beams, and NOT straight towards it. This will provide quicker detection at a further distance.

## 14.2. Outdoor Detectors

When installing any PIR detectors you must take into account that it detects change in temperature. This is especially important outdoors as the sun and trees move about causing these changes in temperature.

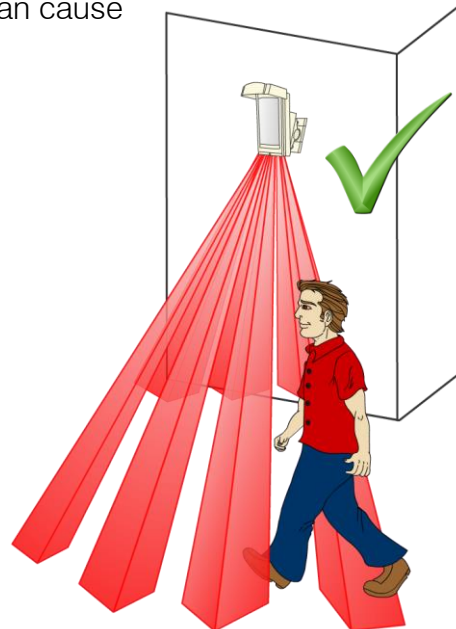
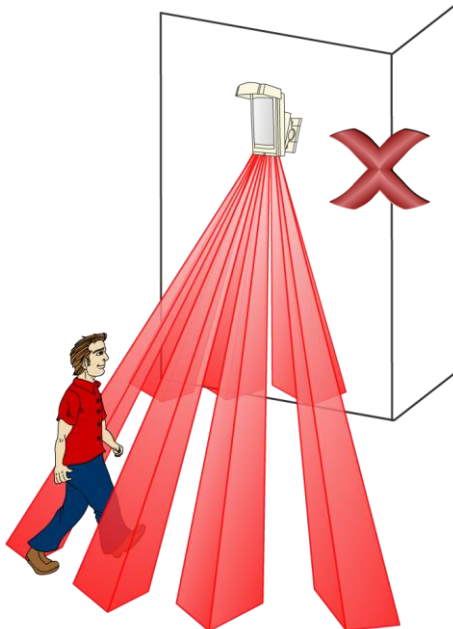


Avoid installing detectors with moving trees and bushes in the detection area.



Be aware of reflective surfaces in the detection area

Know where the sun rises and sets. Direct sunlight can cause false alarms.



Place the detector where it is most likely that an intruder will walk across the detection beams, and NOT straight towards it. This will provide quicker detection at a further distance.