

INFRARED SENSOR OPERATION & TROUBLESHOOTING:

Below is a list of the most common problems
and the solutions to solve them.

Points to consider.

- The Infrared sensor detects vehicles, intruders, guests, inlaws & outlaws by sensing their **heat** in conjunction with **motion**. When someone or something moves through the detection zone, the sensor detects the movement and transmits a coded signal to the receiver.
- The effective detection range of the sensor is 12 metres but it can 'See' large objects for example cars and cattle up to 30 metres.
- The radio transmission distance is up to 400 metres LINE of SIGHT. If there are obstructions in the way the working distance will be shorter.
- There is a special long range model available. Enquire.

With this in mind, here are some points to keep in mind when siting the the InfraALERT Transmitter and Receiver.

Sensor Siting Considerations

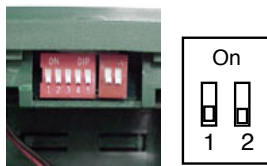
- 1/ Mount the sensor on a solid support that can not be moved - even slightly, approximately 1 metre above the ground and arranged so that small animals for example dogs,cats and especially opossums can not cause false alarming
- 2/ Be alert to situations where livestock or vehicles through a fence can be 'seen' by the sensor causing false trips.
- 3/ Do not mount the sensor facing directly into the sun,(Morning or Evening), bodies of water or any reflections. This causes variations in the temperature pattern 'seen' by the sensor and may cause false alarms or even possibly damage the lens or sensor.

Note:

As with all passive infrared devices certain weather conditions and other acts of nature may cause false alarms or reduce sensitivity. A shorter detection range may occur when the outside temperature falls below 6 degrees C. due to a natural drop in battery voltage. Lower sensitivity may occur during periods of fog, rain or snow. This is due to moisture diffusing the infrared energy. The sensors and transmitters are rated to -20 degrees C.

Detection Sensitivity

Optical sensitivity can be adjusted by means of the two switches on the right hand side of the address switches under the battery cover as follows.



- | | | |
|--------------|---|---------------|
| 1 & 2 Off | - | Normal |
| 1 On & 2 Off | - | sensitivity 2 |
| 1 Off & 2 On | - | sensitivity 3 |
| 1 & 2 On | - | Highest |

Be cautious, setting the sensitivity level too high may give false alarms.

FALSE TRIP Problem -can be caused by:-

- Use of low quality or non-alkaline battery. ONLY use ALKALINE Batteries. (A common cause)
- Use of an old or weak, or faulty battery. (Also a common cause)
- Sensor overheating in strong sunlight. Provide shade.
- Sun shining into the sensor lens at a certain time of the day.
- The sun reflecting off shiny objects into the sensor.
- The sun shining through wind blown branches into the sensor.
- A poorly secured sensor. (Moves in the wind)
- Too high a sensitivity setting.
- Sensor pointing too high or more importantly too low, and 'Seeing' small animals.
- The sensor 'seeing' livestock up to 30 metres away.
- The sensor 'seeing' vehicles up to 30 metres away. (The beam angle is around 30°)
- Animals in the detection zone - possibly even climbing over the sensor, - Curious Opossums especially!
- Spiders or insects on the lens of the sensor.
- Vegetation for example branches waving in the wind in front of the sensor.
- Sensor situated too close to an electric fence wire. Re-site the sensor further away.
- Interference may be the problem. Change the code switches in the Receiver and Transmitter to another unique code.

If poor RADIO range is a problem. -

Can cause intermittent operation.

- Check the obvious - Does the Tx have a fresh ALKALINE battery.
- Are both aerials able to 'see' each other - have trees grown to block the 'line of sight'. Can you improve the situation. i.e. Receiver upstairs, extension speaker down stairs.
- Is the aerial situated against metal i.e. Metal window frame, Stucco, (wire netting) reinforcing, brick work etc. etc.
- Is the transmitter close to fence wire netting or in a dense hedge or the like. The aerials should protrude clear of obstructions.
- Is the receiver situated close to an interference source, - Television, computer, cordless phone, microwave make nasty radio noise!
- If range still seems wanting, discuss the situation with your supplier. An external antenna can be supplied which can dramatically increase the working distance between the sensor and the receiver. If possible send several photos looking both ways along the transmission line from the Sensor to the Receiver. This can be of immense help for the serviceman in analysing a range problem.

Where poor optical range is a problem. -

Check the obvious again.

- Is the lens clean, & dry (water droplets shorten range)
- Is the lens damaged, scratched or dished in.
- Is the lens clear of insects such as spiders, webs or ants.
- Is Grass or vegetation obstructing its view.
- Is the problem caused by a weak, or faulty battery.
- Is the sensor overheating in strong sunlight. Provide shade.
- Is the sun shining into the sensor lens at a certain time of the day.
- Is the sun reflecting off a shiny object into the sensor.
- Is the sensor pointing too high or more importantly too low.
- Don't forget that the sensitivity can be increased with the two switches under the battery cover.

If still in need of assistance, Agronics are here to help:-
06 753 2859