



# Radio Frequency Do's & Don'ts

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## Please read before installing !

Almost all of us have used a cordless phone, cellular phone, or FRS radios by now. They all work with the same principles as our wireless products only they have the advantage of us listening to hear when we are in a bad location by hearing static or noise and knowing we have to move closer or move to a hill (higher) to acquire better signal reception. Radio frequency (wireless) in simple terms consists of a transmitter and a receiver. Our transmitters send data via radio frequency (wireless) to the receiver (inside) triggering a tone or alert inside your home. Line of sight with no obstructions between outside device and inside receiver are always favorable for the best results. 98% of our tech support phone calls are asking why my sensor isn't working or is intermittent in sensing. And 98% of the time it is poor communications between outside sensor and inside receiver. A good example is using your cordless phone or cell phone and stepping one direction or the other to sound clear or full of static and noise. The difference is you are able to hear the noise and adjust your location. Because our devices send data, the only way to determine "noise" or "static" is by your system not "beeping" or intermittent and/or erratic operation.

Learn how your sensing device works by trying it first in your house before mounting it at the location that you want to install it. All variables are less of a factor the closer the receiver and sensor are to each other. In other words it is more critical at 700 foot distance than at 100 foot distance from transmitter to receiver.

### Do's

- Mount the receiver as high as possible in your home.
- Make transmitter to receiver as clear of obstructions as possible.
- Try your sensor and receiver inside before mounting to understand how unit operates.
- Set the receiver at a window on the same side of the house as the sensor.

### Don'ts

- Do not set the receiver on the floor inside your home.
- Do not place the receiver in a basement.
- Do not set your receiver next to cordless phones, computers, or any other electronic devices.
- Do not set the receiver next to metal devices.
- Do not mount the outside sensor on metal.
- Do not set your outdoor sensor on the ground to test.

#### Other Wireless Facts:

- Steel or aluminum siding can greatly reduce range of transmitter to receiver range.
- Metalized Celotex under siding or brick can have a huge effect on reduction of range.
- Brick and masonry will have a substantial range reduction.
- Height is a huge factor in performance of transmission distance.
- Glass windows provide the least resistance to radio frequency.
- Always try to place your receiver at a window on the same side of your home as the sensor outside.
- The closer the sensor is to the receiver, the less that the above play into as factors.
- Mounting an outdoor sensor over a hill has the most reducing effect of radio frequency distance.
- Usually small receiver relocations are all that is needed.
- 2nd story placement of the receiver can result in a huge distance increase if applicable.
- Maximum height and minimum obstructions are the largest benefit in range.
- Our units distance are rated line of sight average. You can experience more or less range than rated.
- Weather conditions can also change performance of distance.
- Over a period of time range can slightly degrade as product ages, frequencies of product slightly shift, foliage growth, or local RF interference changes. You may need to relocate the sensor closer to the receiver.



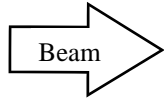
# Example Of Proper Performance

Experiment with a few different positions or locations.  
Total installation should take just several minutes!!!

**Experiment for best results!**

Radio signal transmits equally in all directions.  
(Omnidirectional)  
Like cordless phone, cell phone,  
2 way radio, CB, AM/FM radio etc.

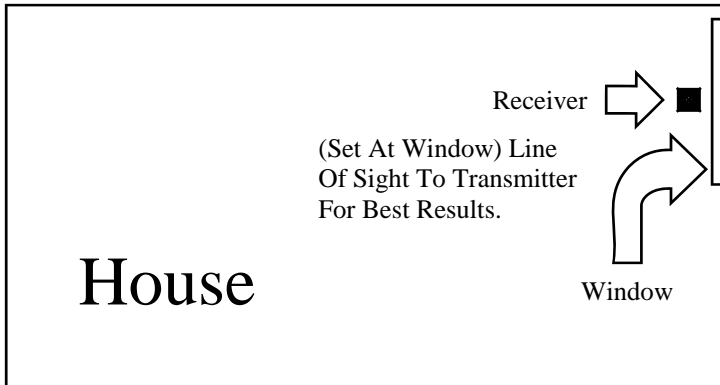
Length Of Invisible  
Beam Approx. 80 Ft.



Approx. 10-30  
Ft.



**Driveway Alarm**  
Mount On Pole Or Large Object  
Point Across Driveway



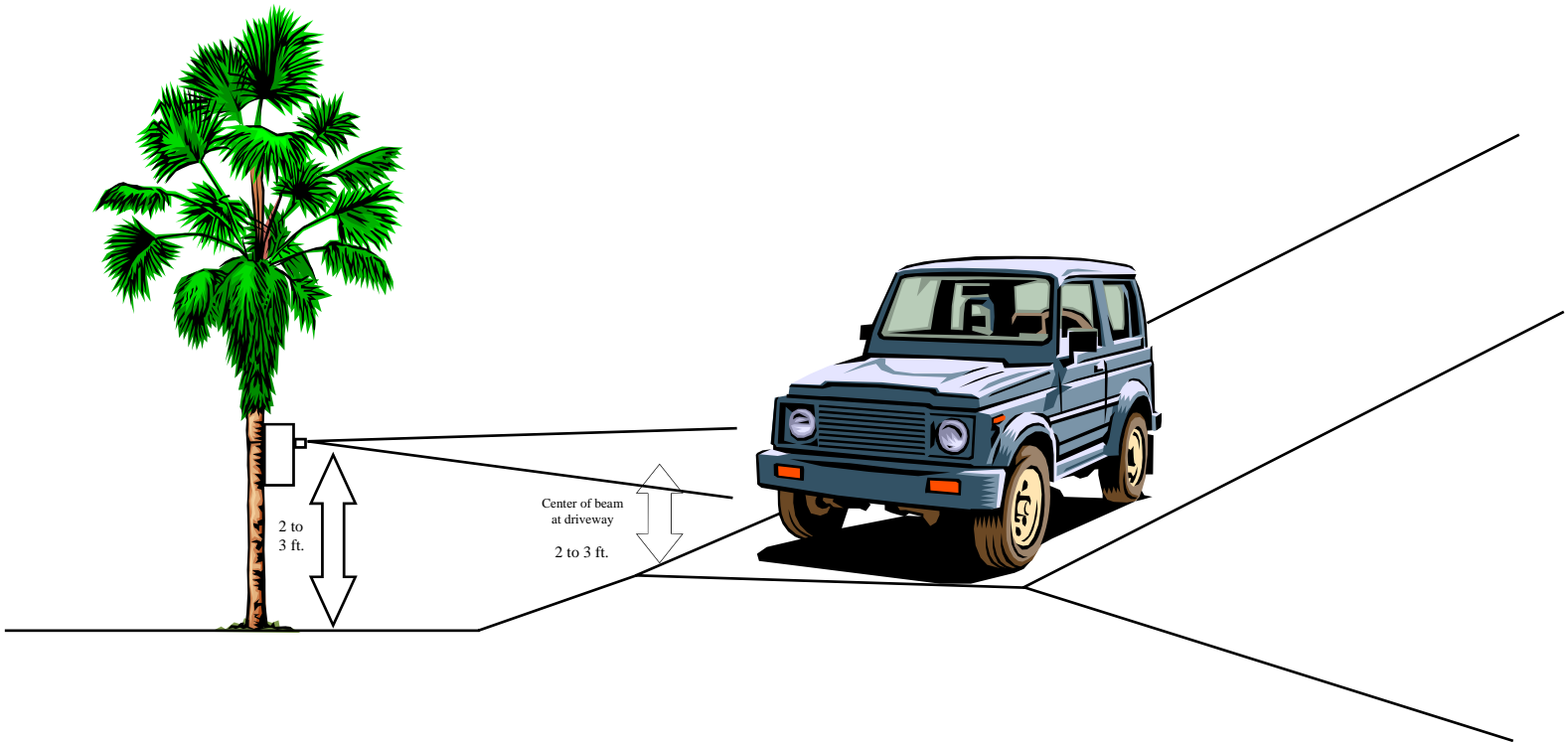
Maximum Transmitter To Receiver  
Range 1,500 or 5,000 Ft.  
(Depending On Model Of Alarm)  
No Obstructions Between  
Units For Longest Range.

To Measure Distance One Human  
Step Equals About 3 Ft.

500 Steps = 1500 Ft. 1666 Steps = 5,000 Ft.



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If you have level ground in relationship to your driveway, then you will want to mount your sensor box at a 2-3 ft. height from ground. The sensor should be lower if it is mounted closer to the driveway, higher if it is mounted further back.

Tipping sensor up or down can result in controlling length of beam pattern. If sensor detects semis but not cars you probably have unit mounted too high or tipped too much toward the sky. Sensor eye should be level. Kneel in center of driveway and look at eye at a 2-3 ft. height to make sure it is centered at that level.

## Every mounting situation is different. Experiment!!!

- Usually, mounting the sensor 10-30 ft. back from driveway is best.
- Keep beam height at 2-3 ft. at driveway center.
- Make sure sensor is level. Stand to side at a distance to check.
- It is also a good idea to point the sensor at the center of the driveway to prevent it from “looking” further than needed. The more distance it covers, the more chance for distant objects triggering it.
- Kneel in center of driveway and look at eye at 2-3 ft. height.
- Clean lens gently with mild soap and water. *Gently !*
- Toilet tissue works great to clean eye.
- **The closer to the driveway the lower you should mount sensor.**
- Damage to the eye is not covered under warranty!!! Be careful !!! **Do not poke objects into the eye.**
- Obstructions between the transmitter and receiver will result in less distance and or erratic operation.

### Important Note:

Battery Changing — Loosen 4 front panel screws about 1/4 in. and remove front cover. You will find the battery at the bottom of case. Tighten screws firmly by hand only! **Do not use a power screwdrivers.** Don't forget to press tiny yellow reset button on transmitter after changing battery. Located next to the 3 gold pins.

# Trouble Shooting Tips

## Tips on radio frequency signal. (Transmitter to Receiver)

- Most problems occur with receiver and transmitter not communicating because of many variables.
- We recommend initially to set your receiver in a window and at line of sight to “see” the transmitter outside.
- The higher the receiver the better. Setting the receiver in an upstairs window if applicable can add an extra 400 ft. or more additional distance ! We have a 1500 ft. unit working at 2920 ft. ! However, conditions will definitely vary.
- Moving receiver only several feet in a different location or moving outside sensor to another location can also improve distance.
- Trees, buildings, terrain, weather, radio interference can all effect the distance of your driveway alarm.
- To verify that outside sensor is working, bring sensor indoors and set on flat surface pointing towards ceiling in house, then slowly wave hand in front of eye. Receiver should beep, indicating it is sensing.
- Radio frequency interference in your area will degrade distance of units. (Not as common in rural areas but possible)
- Heavy snow or rain can affect the distance of transmission from transmitter to receiver.
- If you set up unit and have problems, **Experiment ! Try different locations ! Small movements is usually all that is needed !**

## Falsing Of Unit (Beeping but nothing crossing path of sensor.)

- Pointing sensor toward sun or other heat source. Heat can rise or reflect off of buildings or roads.
- Detecting traffic off of main road if pointed in general direction.
- Excessive wind causing movement of sensor. Must be mounted securely and on large object.
- Low battery may cause falsing or erratic operation.
- Very high winds 40 mph and above, may occasionally trigger unit.
- Higher winds can sway telephone poles and trees more than you think. Movement of objects will cause unit to trigger.
- A 1 in. diameter 5 ft. long piece of water or conduit pipe driven into the ground several feet is a good mount for sensor.
- For best results, mount sensor about 2 to 3 ft. high and 10 to 30 ft. back from driveway.
- Tip sensor down so it doesn't look into the distance as much or relocate to other side of driveway and try.
- Weeds and long grass directly in front of the sensors eye will cause triggering of sensor.

## Not Sensing Vehicles or People

- Snow with wind blowing in direction of eye can cause snow buildup in eye. Blow snow out or clean gently with tissue.
  - Low battery may will cause improper or weak sensing.
  - It is possible that sensor will not detect a cold car leaving drive. (must sense heat and movement)
  - Dirty lens will cause poor detection. Clean with soft tissue and mild soap & water, **Gently!**
  - Make sure sensor is about 2 to 3 ft. high and level to ground.
  - Rain or snow may reduce sensitivity of detection. Especially if 20 ft. or more from driveway.
  - The closer to driveway the lower sensor should be. (2 ft.) The further sensor is mounted from driveway, the higher it should be. (3 ft.)
  - Remember that sensor must detect both heat and movement. Tires and underneath of vehicle, are good heat sources.
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- Do not pound with hammer and nails to mount sensor outside. Use only screws and tighten firmly.
  - There are no serviceable parts inside sensor other than battery. Any tampering will void warranty.
  - Do not over tighten mount screws or poke objects into eye ! Any physical damage to units are not covered under warranty !
  - Do not use cordless screwdrivers to tighten 4 front panel screws. They may crack case or strip threads. Only hand tighten firmly.
  - After changing battery, unit will operate erratically for approximately 5-10 minutes.

**Attention !!!! If receiver hangs up (keeps beeping after receiver is triggered) you must relocate receiver or sensor to “see “ each other better. The reason this happens is to tell you that communication between the outside sensor and indoor receiver is not reliable or marginal. It is not a defect in the system. Please make sure that you read and understand our tips on radio frequency sheet.**



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## 1 Overview

The Xtralert digital receiver allows you to add up to four transmitters to any application. With diversity reception and advanced signal processing, Jansen Electronics Xtralert digital technology is designed to minimize dead spots in transmission areas.

### 1.1 Jansen Electronics Contact Information

If you have any problems with this procedure, contact Jansen Electronics technical services:

- E-mail: info@jansenelectronics.com
- Phone: (815)232-3093

### 1.2 LEDs and Buttons

Alarm LED: Lights when the selected transmitter is sending an alarm transmission.

Tamper LED: Lights when the selected transmitter is sending a tamper transmission.

Low Battery LED: Lights when the selected transmitter has a low battery

Fault LED: Lights when the selected transmitter is inactive.

Power LED: Lights when receiving power.

Transmitter Number LEDs: Shows status of the transmitter assigned to that number when lit.

Advance Button: Scrolls through transmitters to display status.

**Note: If none of the transmitters are selected, none of the status LEDs will be lit. LEDs only light to display the transmitter currently selected.**



Figure 1: Receiver LEDs and Buttons

## 2 Mount the Receiver

1. Use the provided anchors and screws to mount the receiver in a location accessible for future maintenance.
2. Perform a walk test, activating each transmitter assigned to the receiver and ensuring that an ensuring an appropriate response.

**Caution: Mount the receiver in a location removed from metal. Metal objects will reduce RF range.**

### Warranty/Disclaimer

Jansen Electronics "JE" warrants its products ("Product" or "Products") to conform to its own specifications and to be free of defects in materials and workmanship under normal use for a period of 12 months (unless otherwise stated) from the date of purchase. Within the warranty period, JE will repair or replace, at its option, all or any part of the warranted product. JE will not be responsible for dismantling and or reinstallation charges. To exercise the warranty, the user ("user", "installer" or "consumer") must contact JE and receive a Return Material Authorization ("RMA") number by JE. This warranty is void in cases of improper installation, misuse, failure to follow installation and operating instructions, alteration, accident or tampering and repair by anyone other than JE.

This warranty is exclusive and expressly in lieu of all other warranties, obligations or liabilities, whether written, oral, express, or implied. There is no warranty by JE that JE product will be merchantable or fit for any particular purpose, nor is there any other warranty, expressed or implied, except as such is expressly set forth herein. In no event shall JE be liable for an incidental, consequential, indirect, special or exemplary damages, including but not limited to loss of profit, revenue, or contract, loss of use, cost of down time, or interruption of business, nor any claim made by distributor's customers or any other person or entity. This warranty will not be modified or extended. JE does not authorize any person to act on its behalf to modify or extend this warranty. This warranty will apply only to JE products. JE will not be liable for any direct, incidental or consequential damage or loss whatsoever, caused by the malfunction of product due to products, accessories, or attachments of other manufacturers, including batteries, used in conjunction with JE products.

**Caution: Changes or modifications to this unit not expressly approved by Jansen Electronics may void the installer's authority to operate the equipment as well as the product warranty.**