



# 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:

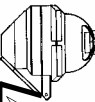
- Steel or aluminum siding can greatly reduce range of transmitter to receiver range.
- Metalized Celotex under siding or brick can have a huge effect on reduction of range.
- Brick and masonry will have a substantial range reduction.
- Height is a huge factor in performance of transmission distance.
- 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.



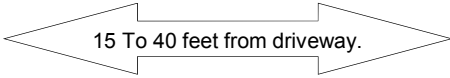
1000 feet maximum distance from outdoor sensor to indoor receiver.



Mount sensor 3 feet high and point across area that needs to be monitored.



Model 1000V shown with bracket.



15 To 40 feet from driveway.

60 feet maximum beam length

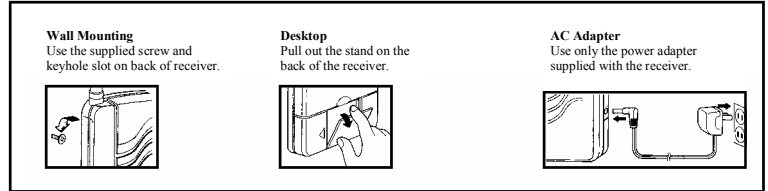
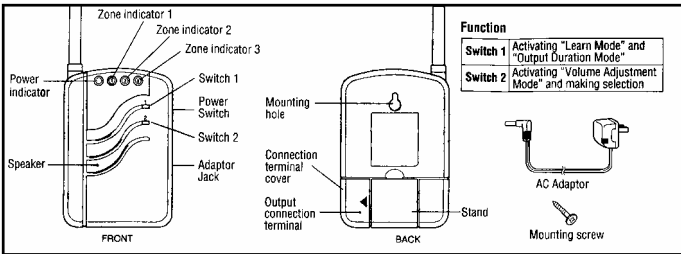
Any person or vehicle crossing the beam area will trigger the outdoor sensor.

Sensor mounted on pole. Can also mount on large tree, building, or other solid surface.



Main Road



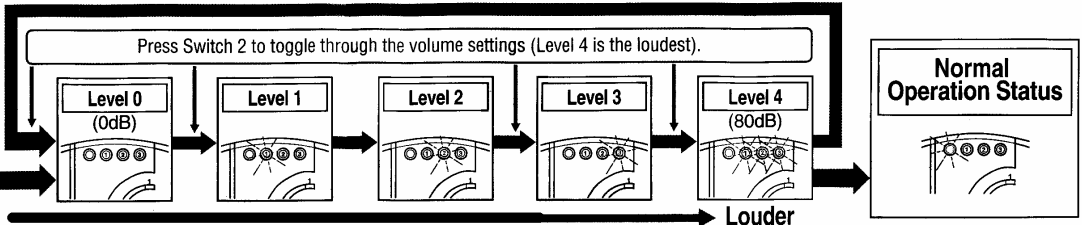
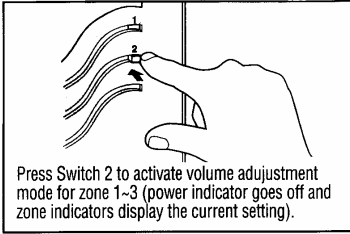


Chime volume for zone 1-3 can only be set as a group. There are 5 volume settings. Chime volume is set to level 3 at the factory.

## Adjusting Volume

After 5 seconds, the receiver will automatically return to normal operation status (zone indicators will go off and power indicator will remain lit).

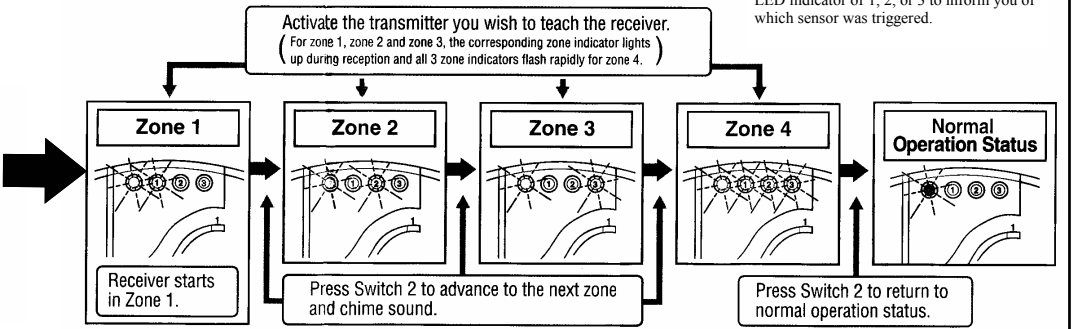
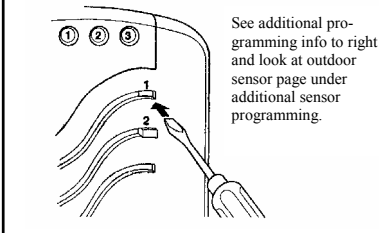
Note: Hold down Switch 2 five seconds for zone 4 (power indicator goes off and zone indicators display the current setting).



To set receiver into learn mode for additional sensors, press in switch # 1 and hold down until the green power indicator starts to flash along with zone 1 LED. Press switch # 2 to activate learn mode for second sensor. # 2 LED should be lit. Trigger your additional sensor and tone two will sound. Follow same procedure for zone 3.

## Programming Additional Sensors

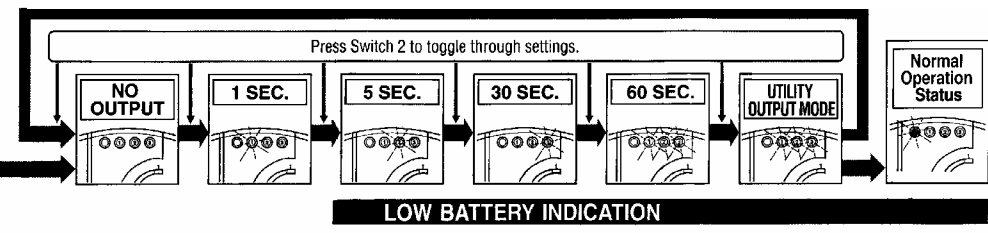
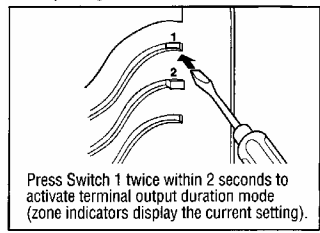
Each zone emits a different tone plus red LED indicator of 1, 2, or 3 to inform you of which sensor was triggered.



- In Regular Mode: terminal output duration can be set for zones 1-3 only as a group. Zone 4 always latches until it is reset by pressing Switch 2.
- In Utility Output Mode: terminal output (5 sec) is only for zone 3. Zone 1 and 2 will chime only and zone 4 will latch until it is reset by pressing Switch 2.
- Factory setting is 5 sec.

## For Programming Timer Duration For Relay Output Only.

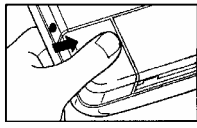
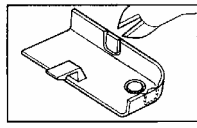
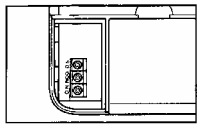
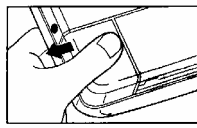
**Warning!** If you do not understand that the timer output relay is a low current switching, (500 ma) please consult with qualified assistance or call Jansen Electronics. Burned relay contacts or pc board traces will void the warranty of receiver if improper hookup occurs.

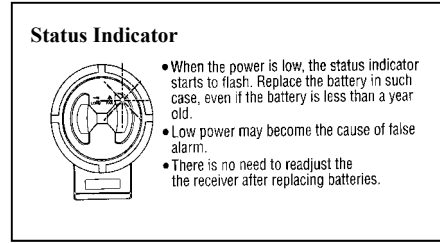
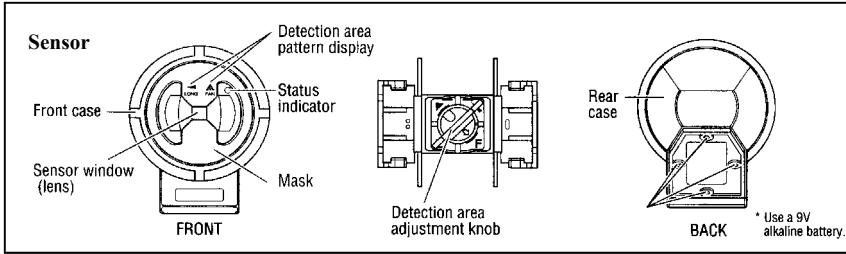


Zone indicators start flashing whenever corresponding transmitters have low battery. The receiver will sound chime followed by 2 beeps.

## How To Install A Device To The Relay Output. X-10, Pager, Phone Dialer, Lights, Etc.

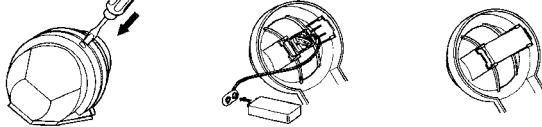
Any device with a zero voltage input terminal can be connected to this terminal. This may include electronic locks, emergency sounding devices, and automatic reporting equipment.





### Battery Installation

1. Use a screw driver to snap open the casing.
2. Attach the connector to the battery.
3. Fasten the battery with the battery clamp hook.



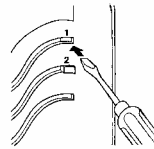
Note: Avoid turning the lens assembly while the battery is connected. Excessive turning can damage the wire connections.

You can use up to three sensors to monitor other areas such as a backyard, outbuildings, gas pumps, front or back doors, etc. Each sensor will have a different code with 3 different tones from the receiver plus a light on the receiver indicating at an instant which sensor was triggered.

### Additional Sensor Programming (Up to Three)

#### 1. Preparation

- Press Switch 1 of the receiver until power indicator starts to flash.
- Press switch 2 to select the zone you wish to assign to the sensor.



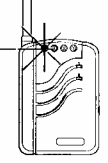
#### 2. Activation

- Wave your hand in front of the transmitter to trigger it.
- Verify that the receiver learned successfully by watching the zone indicators of the receiver. Zone indicators should have stopped flashing and remained continuously lit.



#### 3. Verification

- After teaching all the transmitter's codes (if you have more than one transmitter), return the receiver to normal operating status.
- Make sure that the receiver operates correctly with all the transmitters



Mount sensor on backside of pole and allow room to pivot bracket in semi circle slot holes for final adjustment. (Model 1000V shown) Model 1000 no bracket with unit.



Notice level view of sensor to driveway at about a 3 ft. height mounted behind the pole.



Driveway in upper right hand corner of this picture shows another angle of the behind the pole mount V bracket.



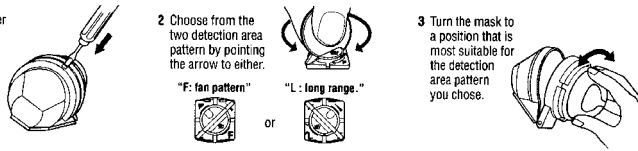
Front view of normal direction of detection lens placement. Arrows on lens pointing parallel to ground (horizontal) with long range pattern.



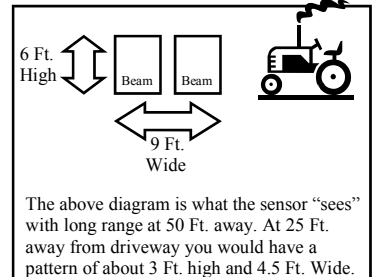
As experimentation, you may want to try rotating the lens assembly so arrows are pointing up and down (vertical) with long range pattern.

### Choosing A Detection Pattern

1. Use a screw driver to snap open the casing.
2. Choose from the two detection area pattern by pointing the arrow to either: "F: fan pattern" or "L: long range."
3. Turn the mask to a position that is most suitable for the detection area pattern you chose.

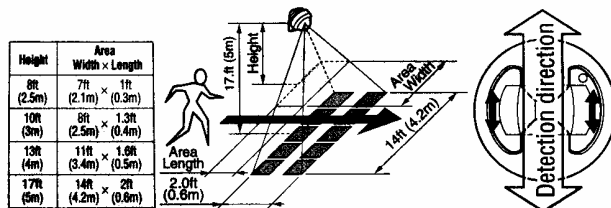


You can also mount the sensor higher to control the length of the beam to a shorter more pinpointed distance.



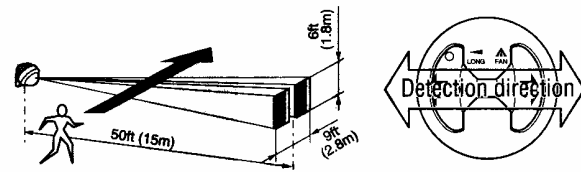
### Fan Pattern ( Recommended for wider shorter areas )

When using fan pattern, install sensor so an approaching car or person will pass through the detection area as shown. This pattern is good for a residential double car port or above the door mounting.



### Long Range Pattern ( Recommended for most uses )

When using the long range pattern, install the sensor so an approaching car or person will pass through the detection area as shown. Sensor shipped in long range pattern.



### Troubleshooting Tips:

- Try walk testing sensor at dawn, dusk, or at night when it will be the easiest to see red flash of status indicator. Remember that if indicator lights red but does not chime in house, you have exceeded the distance between receiver and transmitter. Reduced range can be caused by metal siding or metal buildings between sensor and receiver.
- Do not point sensor toward radiated heat sources such as the sun, cattle gates, metal buildings that would have the sun shining on them.
- Mount on a solid mounting surface. Windy days can sway telephone poles and trees more than you think causing sensor to trigger.
- Heavy snow or rain can affect the sensing and distance that radio frequency will travel.
- Always keep in mind that the sensor possibly will not sense a cold car when leaving driveway. Sensor must detect a combination of heat and motion.
- Tires and the front of a vehicle are good heat sources.
- Please keep in mind that the beam is **very focused** which may require a little more adjusting initially, but a true positive to this is that the beam will not be disturbed by stray movement in a distance or immediate surrounding area.