

# The Wireless Rain Sensor

For Irrigation Systems

## **INTRODUCTION:**

Congratulations on your purchase of the Wireless Rain Sensor. Not only is the Wireless Rain Sensor the easiest to install rain sensor on the market today, but its rugged design will provide you with years of hassle free service, backed up by our 3 year warranty. No special tools are required to install the Wireless Rain Sensor, so don't worry about having to make any last minute trips to the hardware store - you'll be up and running in minutes, not hours.

Please read through these instructions in their entirety before attempting to install the Wireless Rain Sensor - this will save time and prevent mistakes. Also, if you are unsure about the proper wiring of irrigation valve controllers or common electrical installations, please have a qualified contractor perform the installation for you.

## **INSTALLATION:**

There are two main components supplied with your Wireless Rain Sensor, the transmitter and the receiver (See Fig.1). Always install the receiver first - at a location in close proximity to the irrigation controller (See Fig.2). Mount the receiver using the enclosed screws to a solid surface within the wire range of the supplied hookup wire.

The receiver control wires (2 white, 1 blue) are used to break the 24VAC common ground circuit of the solenoid valves or can be hooked up directly to the sensor input of the controller itself. The white/white combination are used in 90% of installations however in the event the controller requires a normally open sensor (such as the Toro Greenkeeper) the white/blue combination is used.

If the controller has a space on the terminal strip marked "Sensor" or "SEN" then directly wire the two white wires to the two terminals (unless the controller requires a normally open sensor circuit in which case attach one of the white wires and the blue wire to the terminals). Now attach the red and black wires to the 24VAC supply terminals on the controller, assuring that the red goes to the terminal marked + or POS and the black wire is attached to the - or NEG terminal if so marked. Make sure that the antenna wire is kept straight and that it is not touching any other wire or other metal object. Your receiver is now completely installed!

You now should test your wiring by lightly pressing on the spindle of the transmitter and holding it down for a few seconds - the "System Off - Rain" light should illuminate for the duration of the actuation. If the light does not illuminate, please recheck your wiring (you may also look on the web at [www.rainsensor.com](http://www.rainsensor.com) for additional help and specialized wiring configurations).

The transmitter should be adjusted prior to installation. The Wireless Rain Sensor can be adjusted to prevent the irrigation system from starting or continuing after rainfall quantities of 1/8", 1/4", 1/2", 3/4" or 1". To adjust it to the desired shut-off quantity, rotate the cap on the switch housing so that the pins are located in the proper slots (See Fig.4). Do not use excessive force to twist the cap as this may break the pins. The time that it takes the Wireless Rain Sensor to reset for normal sprinkler operation after the rain has stopped is determined by weather conditions (wind, sunlight, humidity, etc.) These conditions will determine how fast the hygroscopic discs dry out, and since the turf is also experiencing the same conditions, their respective drying rates will roughly parallel each other. So when the turf needs more water, the Wireless Rain Sensor is already reset to allow the sprinkler system to go at the next scheduled cycle.

The best location to mount the transmitter should be as close to the receiver as possible to avoid structures

that could possibly cause interference of the signal. The transmitter should be mounted on any surface where it will be exposed to unobstructed rainfall, but not in the path of sprinkler spray. Gutters are ideal locations for the transmitter, and the specially designed bracket makes this installation as simple as tightening the supplied thumbscrew onto the gutter lip once the transmitter is in place. However, the transmitter can be mounted on any suitable surface using the enclosed screws. The unit should be mounted in a vertical orientation with the antenna wire protruding straight down from the housing. Once again, avoid an installation where the antenna wire comes in contact with any metallic object.

Prior to final placement, the transmitter should be tested once again by lightly pressing on the spindle for a few seconds, the "System Off - Rain" light should illuminate. If the light is not visible to the installer, simply set the controller to water a zone which is visible from the installation location and the activation of the transmitter will shut off water flow to the "test" zone.

Note: If for some reason the location of the transmitter is not providing a valid signal to the receiver (this could be due to an out of range installation or possible electric or sub-material interference), verify the transmitter at close range and choose another mounting location as close as possible to the receiver/valve controller.

### **OPERATION:**

The Wireless Rain Sensor is now fully functional and should provide you with years of worry free, water saving service. When the rain sensor activates due to sufficient rainfall the "System Off - Rain" light will illuminate on the receiver - there is no guessing when your rain sensor is active. Should it be necessary to temporarily deactivate your Wireless Rain Sensor, it can be bypassed using the built in by-pass switch. Simply press this switch once and the "System Off - Rain" light will go out until the next time the Wireless Rain Sensor resets - all automatically.

When the "Battery Low" indicator light illuminates, this serves as a warning that the battery in the transmitter is getting low. The battery should be replaced at the next convenient time - don't panic when this happens, the Wireless Rain Sensor will function properly for some time after this indicator is present. To replace the batteries, simply remove the transmitter from its bracket, slide the cover off the housing and gently pull the circuit board partially out of the unit. The two batteries should then be accessible and can be replaced.

Fig.1



Fig.2

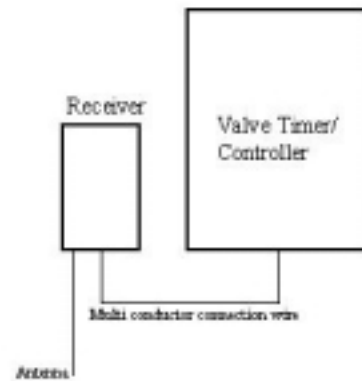


Fig.3A

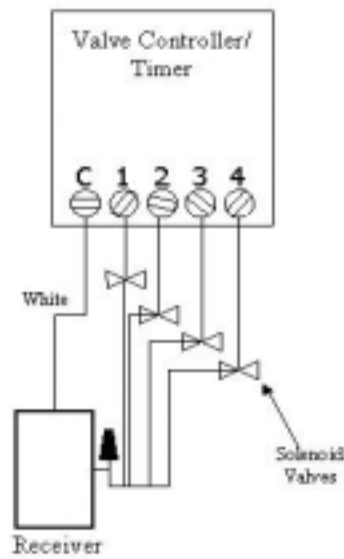
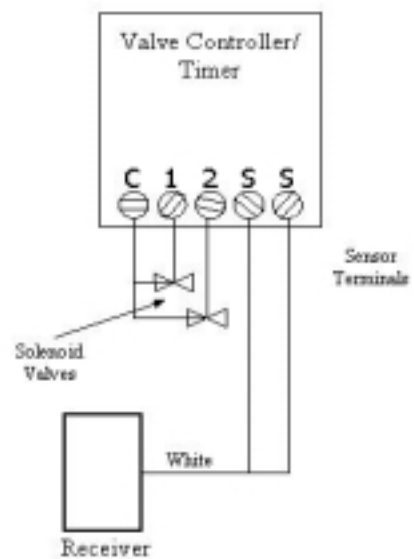


Fig.3B



**SPECIFICATIONS:**

Rain Sensor Transmitting Range: 300 feet

Rain Sensor Height: 4 inches

Rain Sensor: Hygroscopic discs with adjustable rain sensitivity

Optional Freeze Sensor available now!

Transmitter Average Battery Life: 5 years

Operating Temperature: -20°F to 120°F

Tx/Rx: SAW based 418Mhz, 256 unique codes

Receiver Power: 10-30VAC, 100mA (tap from existing timer or optional transformer)

Output: Dry contacts (NO/NC), 3A@24VAC

Receiver Controls: Status indicator, built-in **Smart** Bypass Switch™, Repairman Assist™ compatible, low transmitter battery indicator

Warranty: 3 years

Patents Pending

Over 10 years in the Irrigation Industry

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