

## Helpful Installation Tips

Included in the purchase of any TRC Irrigation Remotes product is the experience of over 25 years in the irrigation industry. That experience goes in to every product. As a result, TRC Irrigation Remotes offers one of the best warranties in the industry.

All TRC Irrigation Remotes transmitters and receivers include a three year limited warranty. Starting from the date of purchase, TRC Irrigation Remotes will repair or replace any product or part found to be defective as result of improper workmanship or faulty materials. This warranty is not extended to damage to a TRC Irrigation Remotes product resulting from misuse, neglect or abuse, improper installation or any other uncontrollable event.

### *Receiver Installation*

#### **Location**

As with any RF receiver, care must be taken in choosing the installation location. Installing the receiver in a location with variable frequency drives, large power transformers, other radio equipment, or any unshielded electrical device may cause interference with the operation of the receiver. A good location would be 20-40 feet from any device that would cause interference.

#### **Power Source**

Prior to the installation of any receiver, TRC irrigation Remotes recommends that the installer read and understand all user manuals and installation materials of the products to be installed. The source of power used to operate all TRC Irrigation Remotes receivers is supplied from the irrigation controller, which the receiver is to be installed. Ensuring that the correct power is supplied from the irrigation controller will prevent damage to the receiver and the controller. Every irrigation controller supplies power differently, consult the irrigation controller manufacture for more details on where. Here is a listing of receiver types and power source:

- Universal Commander and Sidekick receivers: This receiver type is designed to operate on 24 VAC. The controller terminal block is a typical location for the 24 VAC and Valve common power connection.
- Receiver cards: With the exception of the receiver card for Griswald® (12VDC) irrigation controllers, these receivers are designed to operate on 24 VAC through a connector specifically designed for the controller. The receiver card is installed inside the irrigation controller
- Controller specific receivers: These receivers are designed for a specific irrigation controller and have different power requirements. Power and data are provided through a connector specific to each irrigation controller. With the exception of the receiver for Rain Bird® (12VDC) irrigation controllers, these receivers are designed to operate on 24 VAC through a connector specifically designed for the controller. The receiver card is installed outside the irrigation controller.

The demands and quality of power vary from location to location. This may cause the voltage supplied to the irrigation controller and receiver to vary beyond the normal operating voltage of the receiver. Damage of this type is not covered under warranty so it is important to maintain the correct voltage. Using a voltage regulator or line conditioner may help prevent unnecessary damage to both the irrigation controller and receiver.

### Antenna Installation

Successful wireless communication range is achievable in most locations as long as these installation practices are observed. TRC can supply connectors and RG58 Coaxial Cable in lengths of 3, 10, 25, 50, and 100 feet (specify when ordering). Range will be maximized by following these guidelines:

- Mount the antennas at least 40 feet away from electric motors, large power transformers, power lines, variable frequency drives or any equipment that produces ambient electrical noise. Otherwise, the receiver may have trouble distinguishing the FM transmitter signal from this noise.
- Mount all antennas outdoors. All TRC Irrigation Remotes FM transmitters and receivers communicate in the RF radio frequency spectrum at 27 MHz. This frequency has great characteristics for long range but the signals will not go through walls. For equipment located indoors, run a length of RG-58 coaxial cable from the receiver to an antenna mounted outdoors.
- Mount antennas as high as possible, at least 3 feet away from vertical surfaces and not under roof awnings.
- Use only high-quality antenna and cable connectors, which are available from TRC.
- Do not loop excess coax cable into a coil. This will cause a RF radio frequency choke and reduce signal range. If possible, loosely route it back and forth in an "S" configuration.