Keeping Control with Rain Bird’s New Remote Control Systems

Troubleshooting Tips Keep Remote Controls Trouble-Free

Rain Bird now offers two remote control systems designed specifically for residential use. Both the One-Button and Multi-Function Remote Control Systems provide battery-operated communication with controllers from virtually any place on a job site.

These remote control systems were developed to make start-up, customer walk-throughs, ongoing maintenance and winterization easier for contractors, maintenance personnel and homeowners. While the technology is versatile and virtually worry-free, correct installation and a few troubleshooting tips are important to ensure the reliability of these tools, explained Product Manager Miguel Lackenbacher.

Controller Compatibility

Make sure you have the right controllers! The remote control systems are designed to function with Rain Bird’s ESP-LX+ and ESP-Si controllers. To work with the remote control systems, controllers must be remote-ready. These controllers are identified by the remote-ready icon located on the front panel. Rain Bird began offering the remote-ready ESP-LX+ in November 1999 and the ESP-Si in January 2000. Older ESP-LX+ controllers can be retrofitted by replacing the front panel with the remote-ready version.

Multi-Function Vs. One-Button Remote Control

The Multi-Function Remote Control System allows the operator to advance through the watering stations, stop any active irrigation, or reprogram the ESP-LX+ controller using the system’s keypad transmitter. The operator can program up to 999 specific access codes, one for each site he or she is installing or maintaining. This allows the contractor to simply carry one Multi-Button transmitter for all sites.

The One-Button Sequencing System also allows the user to advance through watering stations in sequence or stop irrigation. This system cannot change programs or skip around, but works well for ESP-Si controllers, which only advance in sequence, or as a remote to leave behind with the homeowner.

If you find that you are unable to use all the functions of the Multi-Function transmitter, check your controller to determine if it’s the ESP-LX+.

The One-Button transmitter will function with the Multi-Function receiver or the Multi-Function transmitter with the One-Button receiver. Both remote systems provide the basic function of sequencing. Just remember that the system will follow instructions from the lowest-capable element.
Receiver Installation and Operation

Transmitters rely on a clear path to the receiver. Each receiver, in turn, must be mounted close to each controller at the site to work properly. One receiver can respond to up to 16 different transmitters. The One-Button remote control systems work at distances of 500 feet or more, while the Multi-Function system operates at 700 feet or greater. Installing an extended range antenna vertically can improve reception 20-30%.

To guarantee strong reception, Lackenbacher recommends that contractors avoid installing receivers close to air conditioners, washing machines, or refrigerators where power surges and radio frequency “noise” caused by electrical motors can affect the reception. Receivers and their harnesses have been weather-tested and can be installed outside.

If the controller is not responding...

If your remote control system has been properly installed, but is not working, try these suggestions before contacting Rain Bird’s Technical Services at 800-247-3782 or your distributor.

1. Make sure you have programmed time on the stations.

Make sure you have at least one minute or more in the program and station you want to operate with the remote. The remote will only turn on the stations/zones that have times programmed into them.

2. Check connections.

Make sure there are no breaks in the wires and that all wiring is well-connected to the controller. Don’t simply assume. Open up the controller and check. Make sure the receiver is tightly secured on the bracket. Try slipping the receiver on and off to check the connections. Then try again.

If you’re having trouble with the controller responding from a distance, make sure the antennas are well-tightened.

3. Check for power.

Verify that the controller is receiving power. You can do this by running a station manually. Make sure power is also reaching the receiver. Check this by pressing the Channel 1 button and making sure the LED on the receiver turns on and off after a few seconds.

4. If you are still having trouble...

Try to determine if the problem is in the transmitter, receiver or controller. Troubleshoot by exchanging or switching out one component at a time. Try a different transmitter. Change out the receiver. If the system still doesn’t work, test the controller without the remote. Does the controller run manually? The problem could be between the controller and valve, such as the valve solenoid.

If the system is not sending or receiving information on the ESP-Si controller, be sure to check the second fuse that has been added for the remote. Replace it if needed.

5. If the system is still not working...

Try to re-register your individual transmitter with the receiver. To do this, press and release the Channel 1 button on the receiver. The LED will light for five seconds.

ON THE ONE-BUTTON REMOTE...

Before the light goes out, quickly press the button on the transmitter while pointing it toward the receiver. That will register it. The light will flicker, which indicates it’s registered.

ON THE MULTI-FUNCTION TRANSMITTER...

Press the clear button on the transmitter and press the end-session button to clear the keypad memory. Quickly enter the access code for the receiver (up to three digits). Press the on/advance button (top left button on transmitter). Press and release the Channel 1 button on the receiver. The LED will light for 5 seconds. Before the light goes out, quickly press the on/advance button on the transmitter and the transmitter will be registered.

NOTE: Remember, you must program the transmitter very quickly once after you press the Channel 1 button in order for the code to register.
You can also try erasing the memory on the receiver. Then reprogram the transmitter(s) to the receiver. You’ll find a quick reference guide inside the receiver case. To re-register the transmitters, press the Channel 1 button. Hold it down while the LED blinks once for each transmitter registered in the receiver. Continue holding the button until the LED blinks one more time. At that point, all previously registered transmitters are erased! Register the One-Button or Multi-Button transmitters again using the steps in #5.

Other Troubleshooting Tips:
Light flickering on and off – On the receiver itself, it’s common for the light to go on and off, even when no one is pressing any buttons. This simply indicates the receiver is picking up a radio frequency. The receiver will recognize it is not the proper signal and will NOT send it to the controller. This signal could come from a television remote or other electronic device on the same frequency and does not indicate a problem. If you see water in the receiver case… make sure you have closed it tightly after registering the transmitter(s) or after attaching the receiver to the mounting brackets. The receivers and brackets are tested to be water- and weather-resistant.

On-going maintenance -

ON THE MULTI-FUNCTION TRANSMITTER...

Remember to replace the 9-volt battery after a year of operation.

ON THE ONE-BUTTON TRANSMITTER...
The battery is a 3-volt lithium cell battery with a three-year life. By following these tips, you and your customers will keep trouble remote and convenience high with the One-Button or Multi-Function Remote Control Systems.

All Inline Tubing is Not Created Equal

Inline drip tubing has become increasingly popular and for good reason. Preinstalled emitters, pressure compensation for even coverage, and a variety of spacings and flow rates make design and installation of a water-saving system easy. Unfortunately, customer complaints about clogging and flooding are common with the installation and use of conventional inline tubing. Here’s a look at these two problems and how Rain Bird’s Landscape Dripline eliminates them.

How Does Your Inline Tubing Pressure Compensate?
One of the main reasons conventional inline tubing clogs is the way it pressure compensates. To achieve pressure compensation, conventional inline tubing squeezes down the emitter’s flow path. The result? Contaminants in the water get stuck in the narrow flow path, plugging the emitter. Landscape Dripline’s emitters achieve pressure compensation by “lengthening” the flow path rather than squeezing it, so its flow path is nearly 10 times the diameter of a conventional inline emitter. Contaminants that might clog conventional inline emitters won’t clog Landscape Dripline’s emitters so plants get the water they need.

Does Your Inline Tubing Require an Automatic Flush Valve?
Increasing the chance of clogging even further, conventional flat-shaped emitters often end up facing filter-side up when the tubing is installed. This allows contaminants in the water to settle onto the emitter’s very small inlet filter after each watering cycle. To prevent this settling, an automatic flush valve is needed to purge contaminants after each irrigation cycle. Unfortunately, if this mechanical flush valve sticks open, flooding occurs and pressure drops throughout the entire tubing grid, resulting in uneven or no coverage! Landscape Dripline’s cylindrical shape allows the entire outer surface (360 degrees) of Rain Bird’s inline emitter to be used, creating a filtration surface area that is five times the size of the filter area in a conventional inline emitter. This assures that only clean water enters the emitter regardless of how the tubing is laid. And, since the chance of clogging the emitter filter is greatly reduced, Landscape Dripline doesn’t require an automatic flush valve.

“We’ve tried all the alternatives and found that Landscape Dripline has the most dependable pressure-compensating emitters on the market. It’s easy to install, easy to maintain and will not clog like other brands,” says Mike Boyles of TrueGreen Landcare, Minneapolis, MN.

Try a Better Inline Tubing
For details on Landscape Dripline, our full line of Xerigation® Drip products or a Landscape Dripline Design Guide, contact Rain Bird Technical Services at 1-800-247-3782 or visit our Web site at www.rainbird.com. When you call, you’ll have the option of using our automated fax system.
Part II - Xerigation Designed for Success

While drip irrigation systems continue to gain popularity for their economical water usage, getting the most from a system - ensuring it delivers the water plants need now and years into the future begins with effective design.

To establish a reliable drip system, it's important to always use tubing stakes and diffuser bug caps at the end of the quarter-inch tubing that is connected to the drip emitter. Drip systems deliver a precise amount of water directly to the root zones. Stakes prevent even small shifting of system components, which could be detrimental to plant health.

How Can You be Sure Water is Flowing?

One of the most common concerns with drip systems is how to be sure the system is working properly. Many designers prefer to install the stake and diffuser bug cap under mulch because this further conserves water by protecting the system from the elements. Of course, components can also be installed on top of mulch, so that watering can actually be seen flowing through the system.

To combine the best of both solutions, you can install the components under mulch, but add a Xeri-Spray on a short riser at the end of the poly-drip tubing run. This allows an easy visual check of the system. To ensure the drip system is working, simply open the adjustable Xeri-Spray at any time and confirm that it's spraying as far and as strongly as it did when the drip system was initially installed. If it's not, try cleaning the screen.

If no water is coming from the end-of-the line Xeri-Spray, water is not flowing through the tubing at all, possibly because of a break in the line. This quick-check method allows you to immediately uncover and correct problems, before plants start to suffer.

Which Drip Option Is Best for Your System?

When deciding which drip emission devices are most suitable for a particular planting area, it's important to first consider the planting scheme. Are the plantings dense or sparse?

Dense plantings are those where the space between the plants' mature canopies is less than two feet or where some type of ground cover is used. Dense plantings require emission devices that supply a precise amount of water across the entire area. The best devices for dense plantings include Landscape Dripline tubing, Xeri-Sprays and Xeri-Pops.

Sparse or individual planting areas are easily recognized by the larger areas of ground visible between the plants. Irrigating these planting areas with sprays would water a lot of open space, waste water, and encourage weed growth - which would ultimately lead to more work! Instead, individual emission devices such as single- and multi-outlet emitters as well as Xeri-Bubblers work well.

Once you know the planting scheme, your drip product selection becomes straightforward.

Putting Emitters in Their Proper Place

To ensure optimal wetting of the root zone, place emitters in a circle, three-quarters of the way between the trunk or stalk of the plant and its dripline. Find the dripline by determining where the canopy would cast its shadow on the ground with the sun directly overhead.

Use at least two emitters per plant, and place the emitters so they are evenly spaced around the plant. If quarter-inch tubing runs exceed five feet from a drip emitter to the plant, use an SPB-025 connector and install the emitter at the end of the quarter-inch tubing run. We recommend attaching another piece of quarter-inch tubing to the outlet barb of the emitter, installing the tubing into a stake and attaching the diffuser bug cap to the end of the tubing. This will ensure proper watering of the plant and long-term reliability.

For additional information on Xerigation design and maintenance, visit the Rain Bird Web site at www.rainbird.com. By following these design and operation tips, you can be sure your drip irrigation system delivers the precision and reliability plants need for a water-wise, healthy future.