RM-1R Sequencing Remote Control Receiver (with STX™ Security)

Contents

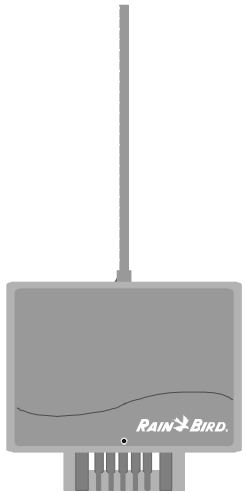
FEATURES AND BENEFITS

Description

The Rain Bird RM-1R Sequencing Remote Control Receiver is a two-channel radio-frequency (RF) receiver that lets you send remote commands to remote-ready Rain Bird irrigation controllers. This function can be useful when you are:

- installing and debugging an irrigation system
- winterizing an irrigation system
- spot-watering
- performing routine maintenance.

This manual describes how to install, test, and troubleshoot the RM-1R Receiver. The RM-1R Receiver works with either the One-Button Transmitter (RM-1T) or the Keypad Transmitter (RMX-1T). Instructions for using these transmitters are contained in the manual that accompanies each transmitter.



System Components

To run the Rain Bird RM-1 Sequencing Remote System, you need four major components, as shown in the illustration:

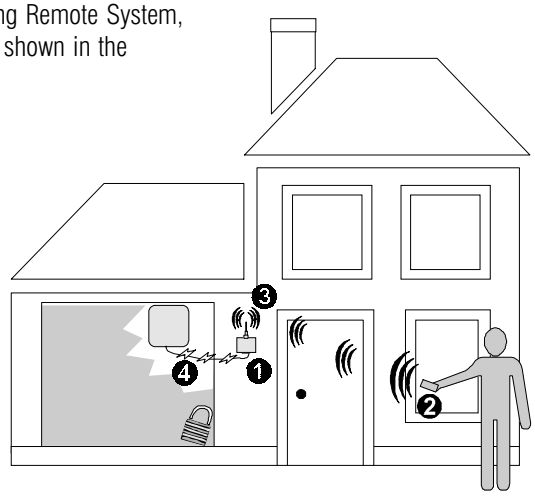
❶ a receiver

❷ a transmitter

❸ an antenna

❹ a connection to a remote-ready Rain Bird controller.

NOTE: All Rain Bird remote-ready controllers have a radio antenna icon on the face plate (see illustration).



Look for this icon on remote-ready Rain Bird controllers.

Tools Required

To install and use the RM-1R, you will need the following:

- small Phillips-head screwdriver
- pencil
- fasteners, drill bit, and / or screwdriver appropriate for the surface where you are mounting the receiver.

COMPONENTS OF THE RM-1R RECEIVER

The cover of the receiver is secured to the body with a screw (❶).

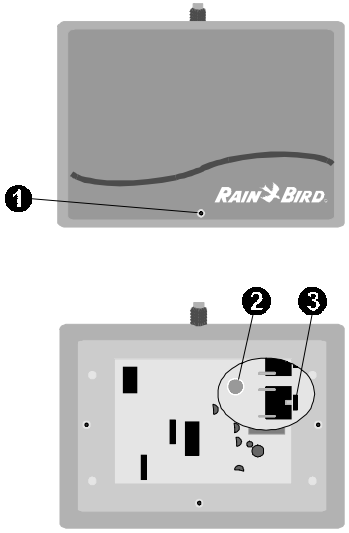
Internal Components

Important internal components of the receiver are the LED indicator (❷) and the Channel 1 button (❸).

The LED indicator lights when the receiver detects RF signals from either a Rain Bird transmitter or other RF sources. The LED also provides information about the number of transmitters registered in the receiver.

NOTE: The system uses the proprietary STX™ communication protocol, which prevents the receiver from responding to random RF signals. For example, a neighbor's garage door opener will not start the sprinklers.

The Channel 1 button is used to register transmitters in the receiver. "Registering" a transmitter allows the transmitter to be used with the receiver.

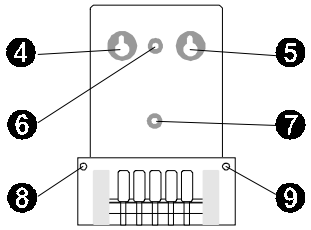


Each transmitter can be registered in multiple receivers, and multiple transmitters can be registered in the same receiver. An RM-1R Receiver can work with up to 16 transmitters.

Mounting Bracket

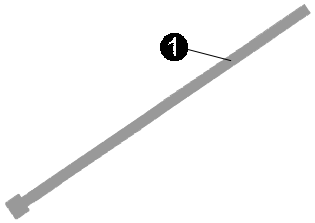
The mounting bracket attaches to a wall or post, and provides a convenient "docking station" for the receiver. The mounting bracket offers a variety of installation options:

- When mounting the RM-1R on a flat surface, use holes 4, 5, and 7.
- If you need to mount the RM-1R on a narrow post or exposed wall stud, use holes 6 and 7.
- Use holes 8 and 9 for permanent mounting. You can drive two screws through the rear of the receiver cabinet and through the mounting bracket.



Antenna

A 9-inch (23 cm) wire whip antenna (❶) comes with the RM-1R Receiver. An optional remote antenna (RM-1E) may be purchased separately to improve operating range.



Controller Connection

The controller cable connection (❷) links the receiver to the controller.

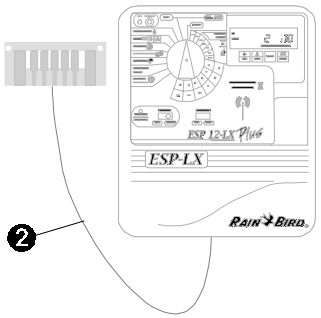
INSTALLATION

Decide on Location for Receiver

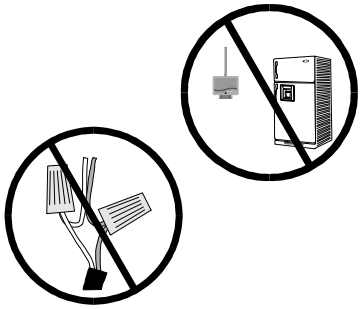
You may install the RM-1R Remote Control Receiver either indoors or outdoors. Indoor installation provides better security for the receiver, while outdoor installation typically results in better reception.

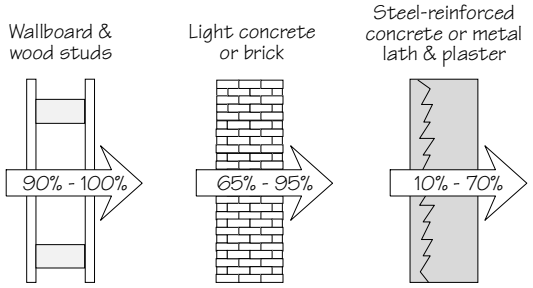
Regardless of the installation you choose:

- Keep the receiver and antenna away from RF sources such as motors, fans, and other devices that may cause interference.



- When using the local whip antenna, DO NOT install the receiver near metal objects. Metal objects can shield the signal and decrease radio range.
- DO NOT splice additional wire into the line. Wire splices add noise to the line.
- Construction materials such as concrete, brick, steel reinforcements, and plaster decrease the radio range.
- Place the RM-1R as high above ground level as possible.
- The RM-1R comes with a standard 36" (92 cm) cable. If you need to position the receiver more than 36" (92 cm) from the controller, use a Rain Bird Remote Control Extra Length cable with bracket (EXB), which will allow you to place the receiver up to 30' (9 m) from the controller.





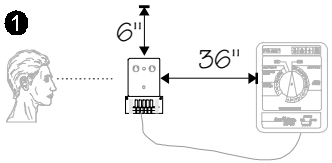
Mount the RM-1R

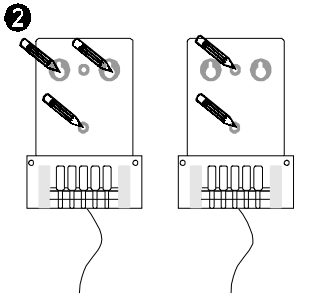
❶ Position the bracket at about eye level, or as high above ground level as possible. If you need to position the antenna more than 36" (92 cm) from the controller, use a Rain Bird Remote Control Extra Length cable with bracket (EXB), which will allow you to place the receiver up to 30' (9 m) from the controller.

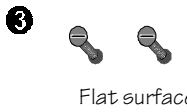
Leave about 6" (15 cm) of space above the bracket to slide the receiver down over the bracket guides.

❷ The RM-1R Receiver can be mounted on either a flat surface or a narrow post or exposed wall stud. Mark the locations of the mounting holes as shown in the illustrations.

❸ For a flat-surface installation, drive two fasteners into the upper marks. Leave about ¼" (6 mm) of the screw exposed. The mounting points are sized for a #8 self-tapping screw; however, use the appropriate type of fasteners for your surface.



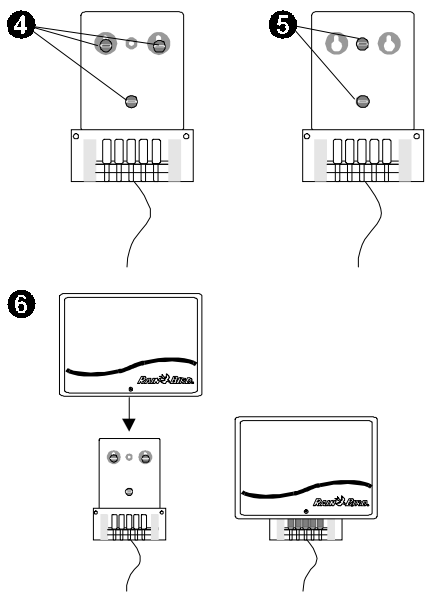




❹ On a flat surface, hang the bracket on the fasteners. Tighten down the upper fasteners. Then drive a fastener into the lower mark.

❺ For a narrow surface, position the bracket over the marks and drive in two fasteners.

❻ Using the guides on the back of the receiver, slide the receiver down onto the bracket until the connection is complete.



Connect Receiver Cable to Controller

❶ Open the front door of the controller.

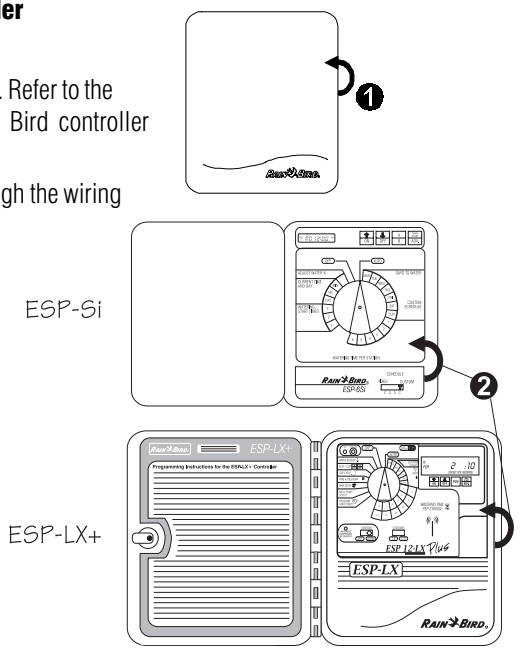
❷ Open the face panel of the controller. Refer to the drawing for the remote-ready Rain Bird controller you are using.

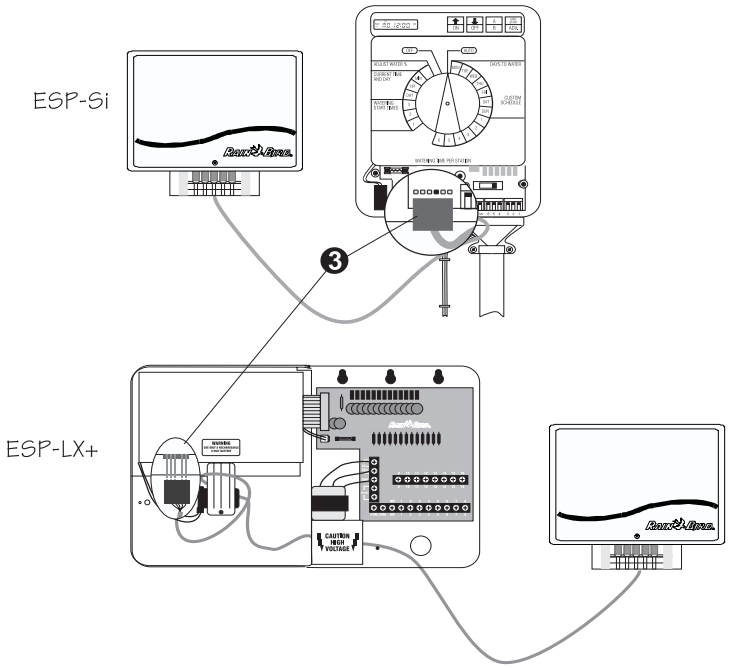
❸ Run the cable from the RM-1R through the wiring opening in the controller case to the controller connector.

On the ESP-Si, route the cable through the notch provided in the wiring skirt.

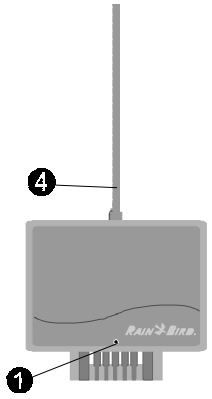
On the ESP-LX+, route the cable through the battery holder.

Align the pins on the connectors and plug the cable in.




ESP-Si
3
ESP-LX+
CAUTION
HIGH
VOLTAGE

❹ If you are using the local whip antenna, screw it onto the top of the receiver. If you are using a remote antenna, see the directions supplied with the antenna (RM-1E).



REGISTERING TRANSMITTERS

See your transmitter manual for directions on registering a transmitter in the RM-1R's memory.

CHECK RECEIVER'S MEMORY

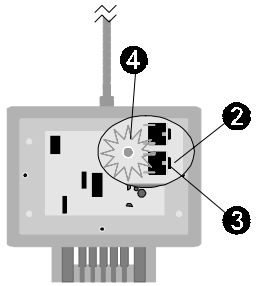
The RM-1R receiver can store codes for up to 16 transmitters. Follow these steps if you want to find out how many transmitter codes are stored in the RM-1R's memory.

❶ Remove the lower screw and remove the receiver's cover.

❷ Press and hold the Channel 1 button until the indicator LED lights up.

❸ Release the button.

❹ Count the number of times the LED blinks. The number of blinks is equal to the number of transmitters currently registered in the receiver.

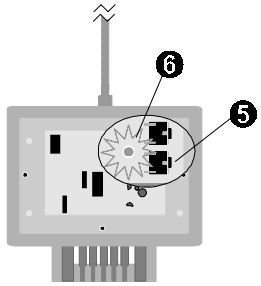


ERASE RECEIVER'S MEMORY

You may need to erase the receiver's memory to remove the codes for transmitters you no longer want to work with the receiver.

❺ After removing the receiver's cover, press the Channel 1 button and hold it down until the indicator light blinks one time for each transmitter currently registered.

❻ After the final blink, hold the button down for a count of 5. The light will blink once more, indicating that memory has been erased. Release the Channel 1 button.



Notes

Notes

CANADA: Complies with IC RSS-210; en conformité avec IC: CNR-210: 1078 102 1858A5 3

This device complies with FCC Part 15 and IC Rules and Regulations. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

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