



# **EZ-Remote™**

## **Remote Control System for GreenKeeper 212™ Controller**

### **User's Guide**

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## Specifications

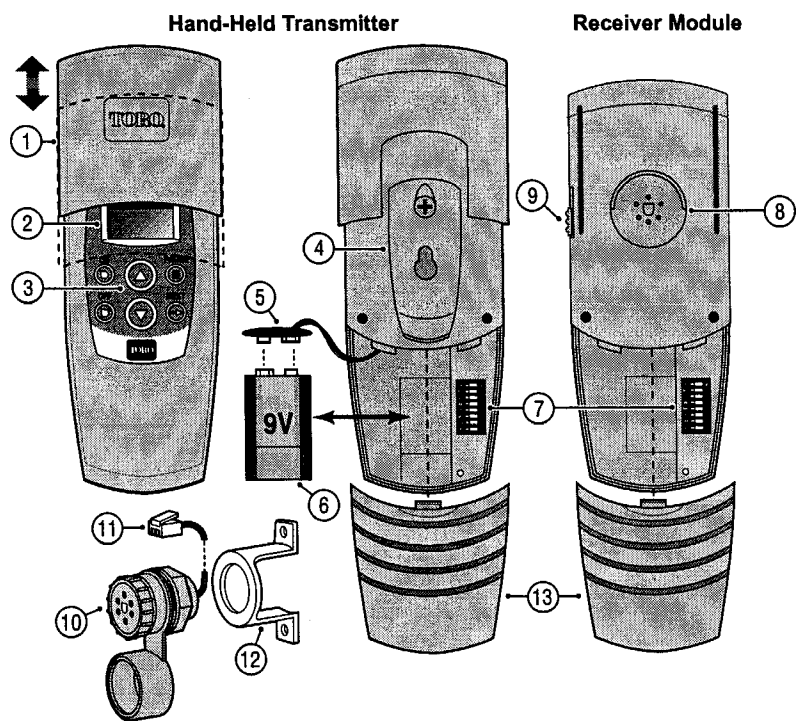
- Works only with Toro GreenKeeper 212 controller
- Transmitter Power Source: 9-Volt Alkaline Battery (supplied)
- Receiver Power Source: 5 V d.c. @ 10mA (supplied from controller)
- Maximum Number of Stations Controlled: 64 (default setting is 12 stations)
- Transmitter Operating Range (line of sight): Approximately 160' (49m)
- Preset Station Run Time: 10 minutes (non changeable)
- Operating Temperature: +14°F to +140°F (-10°C to +60°C)
- Storage Temperature: -22°F to +149°F ( -30°C to +65°C )
- Weather Resistance: Transmitter/Receiver – Not Protected, Receiver Plug Assembly – Protected\*

\*When installed in conduit and protective cover is in place.

## Parts and Accessories

- EZ-Remote Transmitter Kit, P/N 102-0741 (includes transmitter only)
- EZ-Remote Receiver Kit, P/N 102-0742 (includes receiver only)
- EZ-Remote Standard Cable Harness Kit, P/N 102-0740 (includes 4' (1.2m) modular cable, receiver plug assembly and mounting bracket)
- EZ-Remote 25' Cable Harness Kit, P/N 102-0743 (includes 25' (7.6m) modular cable, receiver plug assembly and mounting bracket)

**Figure 1**



- 1 - Display Cover** - Sliding cover protects the LCD screen when not in use.
- 2 - LCD Screen** - Displays the station number being operated and other information.
- 3 - Keypad** - Six push buttons for remote control operation.
- 4 - Belt/Storage Clip**
- 5 - Battery Connector**
- 6 - 9-Volt Alkaline Battery**
- 7 - Address Code DIP Switches**  
- For setting the transmitter and receiver address code. See page 7 for details.
- 8 - Receiver Plug Receptacle**
- 9 - Receiver Lock**
- 10 - Receiver Plug Assembly**
- 11 - Controller Connection Plug**
- 12 - Receiver Plug Bracket**
- 13 - Access Covers**

### Connecting the Transmitter Battery

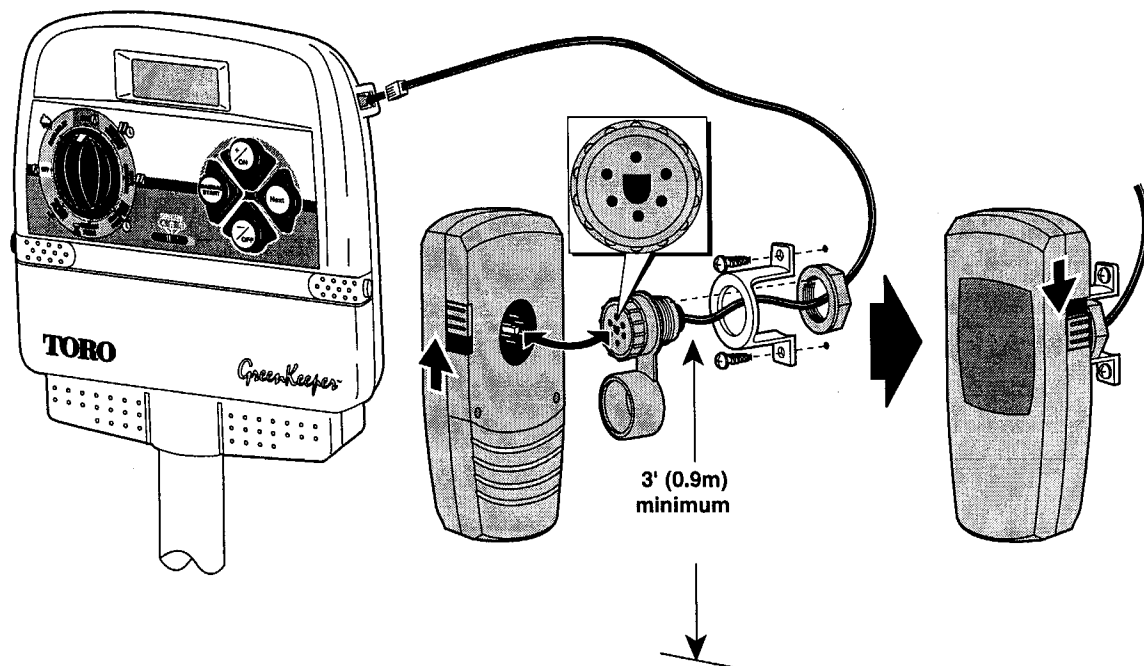
1. Press the top edge of the access cover in and down to remove.
2. Remove the battery and the insulation tape from the battery terminals.
3. Attach the battery clip, insert the battery into the receiver and install the access cover.

**Important: When replacing the battery, use only an equivalent 9V alkaline type. Properly dispose of the used battery as recommended by the battery manufacturer.**

### Installing the Receiver Indoors (Refer to Figure 2)

1. Using two wood screws supplied (and drywall screw anchors as necessary), secure the receiver plug bracket to the wall within 3' (0.9m) of the controller and at least 3' (0.9m) above the floor.  
**Note:** A 25' (7.6m) receiver cable kit is available. Order P/N 102-0743.  
**Note:** Receiver reception can be impaired if the receiver is installed less than 3' above the floor.
2. Install the receiver plug assembly to the mounting bracket orienting the D - shaped slot as shown.  
**Important: Ensure the controller and receiver plug assembly are securely fastened to the wall before connecting the cable.**
3. Plug the cable connector into the GreenKeeper 212 receptacle as shown.
4. With the receiver lock up, install the receiver to the plug and slide the lock down to secure.

Figure 2



### Installing the Receiver Plug Outdoors ( Refer to Figure 3)

**⚠ Caution:** The receiver plug is weather resistant only when installed in PVC conduit and the protective cover is in place. The receiver module is not weather resistant and should only be installed to the receiver plug for temporary, immediate use. During sprinkler operation, do not allow the receiver to come in contact with the irrigation spray.

**Always consult and comply with local building codes before proceeding with the installation.**

1. Using 3/4" (19mm) PVC fittings and pipe, construct and secure the receiver plug bracket to the wall within 3' (0.9m) of the controller and at least 3' (0.9m) above the floor. The installation method shown in **Figure 3** is only one possible solution. Any installation method can be used if it provides a secure waterproof enclosure for the receiver plug assembly.

**Note:** A 25' (7.6m) receiver cable kit is available. Order P/N 102-0743.

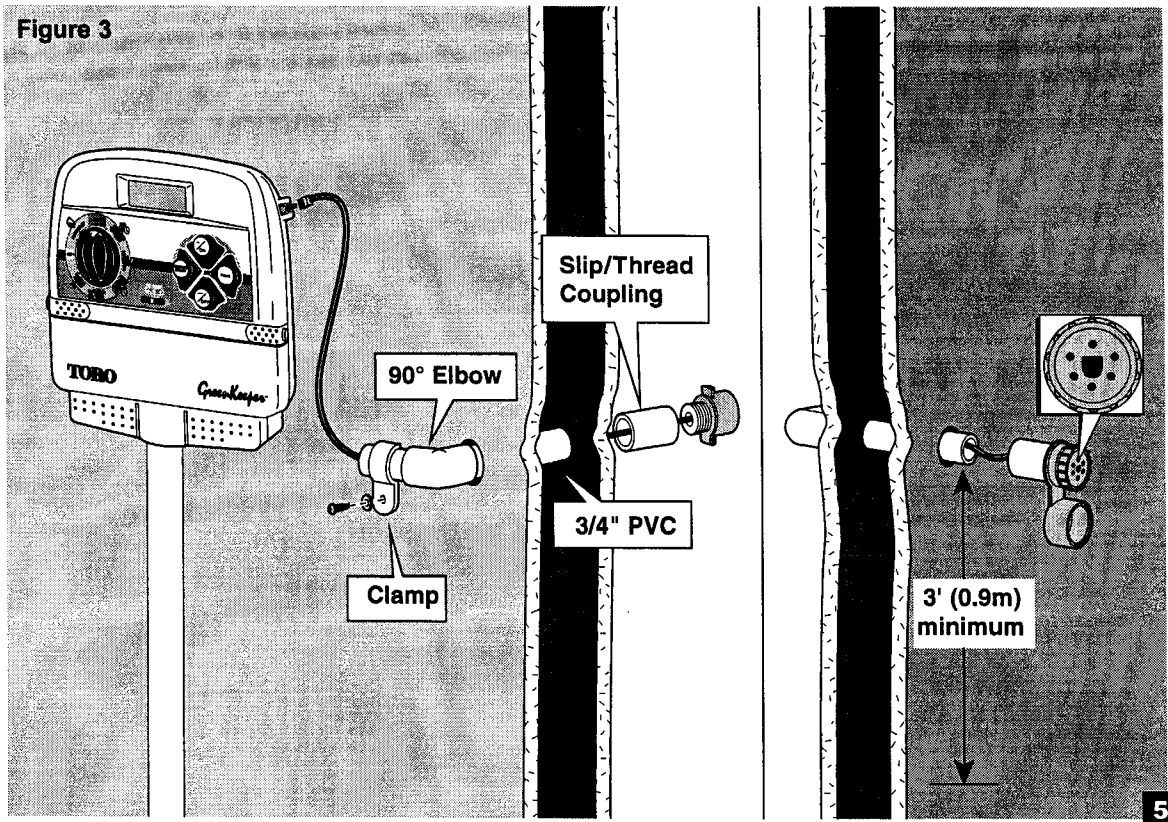
**Note:** Receiver reception can be impaired if the receiver is installed less than 3' above the floor.

2. Install the receiver plug assembly to the threaded fitting, orienting the "D" - shaped slot as shown.

**Important:** Ensure the controller and receiver plug assembly are securely fastened to the wall before connecting the cable.


3. Plug the cable connector into the GreenKeeper 212 receptacle as shown.
4. With the receiver lock up, install the receiver to the plug and slide the lock down to secure.

Figure 3




## Operating the EZ-Remote Control System

Please note the following operating characteristics of the EZ-Remote system:

- When the EZ-Remote is used to operate the controller, all automatic and manual controller operations are suspended. For example, if an automatic watering cycle should occur during a remote control operation, the watering cycle will be skipped. The EZ-Remote enables any station to be selected and operated for 10 minutes of run time regardless of the station's program assignment. Only one station at a time can be operated.
- For optimum range, the transmitter should be operated from a location in which a direct, unrestricted view of the receiver is possible. The distance between the transmitter and receiver under these conditions may exceed 160' (49m). The operating range may be significantly reduced by interference due to obstructions and/or other site conditions.
- The transmitter is preset to operate up to 12 controller stations, but is adjustable from one to 64 stations. For best results, the maximum station number set should match the number of controller stations being used. To adjust this number, refer to "Adjusting the Maximum Station Number" on page 7.
- The transmitter and receiver are preset to the same address code enabling signal communication without additional set up. To select an alternate or universal address code, refer to "Changing the Address Code" on page 8.
- Each time a command is sent to the receiver, an antenna icon  will be displayed to indicate a signal transmission.
- To conserve battery power, the transmitter display screen will automatically turn off approximately 10 seconds after pressing any button.


### To operate a station:

- Press the transmitter  or  button until the desired station number is displayed.

- 6** • Press the  ON button to start the station. The station will run for 10 minutes, then shut off.





**To pause station operation:**

- Press the  **PAUSE** button once to pause station operation; press the button again to release the pause. If pause is not manually released, the station will remain paused for 10 minutes, then shut off.

**To turn off the station operation:**








- Press the  **OFF** button.

**To advance through the station sequence:**

- Press the  **NEXT** button. The first station number displayed will automatically begin running. Each time the  **NEXT** button is pressed, the next station in sequence will be started and the previous station will shut off. Continuing to advance past the last station will automatically start the first station again.

**Adjusting the Transmitter Maximum Station Number**

The transmitter is preset to operate 12 controller stations. The maximum station number is adjustable from 1 to 64 stations. For best results, the station number in the transmitter should be set to match the number of controller stations being used. For example, if the controller has eight stations or is only using eight stations out of a possible 12, the transmitter should be reset to eight as follows:

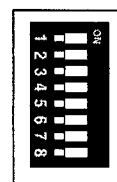
- Simultaneously press the  and  buttons – a display number will begin flashing.
- Adjust the maximum station number by pressing (or pressing and holding) either the  or  button until the desired number is displayed, then immediately release the button. When the number is correctly displayed, simultaneously press the  and  buttons again to enter the number.
- To check the new maximum station number, press the  button repeatedly. The display number should return to 1 after passing the new maximum station number.

## Changing the Address Code

The transmitter and receiver are preset to the same address code enabling communication without further set up. To change the address code use one of the following procedures:

### To set the same address code for the transmitter and receiver:

- Start with all eight DIP switches on both units in the left (Off) position.
  - Move any switch or combination of switches to the right (On) position.
- The DIP switches must be set in the same positions on both the transmitter and receiver to enable communication.



Address Code  
DIP Switches

### To set a universal address code for the transmitter or receiver:

- Set all eight DIP switches of either unit to the right (On) position. If the transmitter has the universal address code, it will communicate with any receiver address code. If the receiver has the universal address code, it will communicate with any transmitter address code.

## Troubleshooting

- The transmitter display will automatically turn off after 10 seconds of inactivity. If the display remains blank after pressing a button, check the battery connection and/or replace the battery.  
**Note:** If the battery condition is low, "bt" will be displayed. The battery should be replaced at this time.  
**Important: Replace only with a 9V alkaline battery. Properly dispose of used batteries as recommended by the battery manufacturer.**
- If the receiver is not responding, check the installation to ensure the receiver is properly attached to the receiver plug and the cable connector is fully inserted into the controller receptacle. Check the transmitter and receiver address code for proper setting. Ensure the receiver is installed at least 3' (0.9m) above ground level and relocate as necessary.
- If the controller performs erratically when connected to the receiver, momentarily disconnect the battery and main power to the controller to reset.

**Notes:**

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

**Electromagnetic Compatibility – Domestic:** This device complies with FCC rules Part 15. Operation is subject to the following two conditions: (1) This device may not cause harmful interference and (2) this device must accept any interference that may be received, including interference that may cause undesired operation.

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a FCC Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient the receiving antenna, relocate the remote control receiver with respect to the radio/TV antenna or plug the irrigation controller into a different outlet so that the irrigation controller and radio/TV are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful:

"How to Identify and Resolve Radio-TV Interference Problems". This booklet is available from the U.S. Government Printing Office, Washington, DC 20402. Stock No. 004-000-00345-4.

**-International:** This is a CSPR 22 Class B product.