



Single Station Waterproof Timer Installation and Programming Guide

Features

- Up to four irrigation cycles per day
- Easy installation and programming
- Battery powered
- Waterproof and weather resistant



Part No.: 53887

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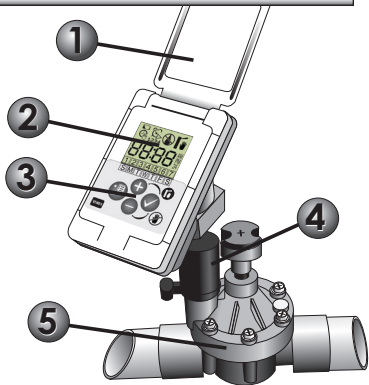
Parts Identification

Congratulations on purchasing a Toro® Single Station Timer (SST). You have a powerful but easy to use battery-operated valve controller that fits most common valves*. The SST comes with a DC-Latching solenoid attached, making connecting to your valve simple and easy.

Please review the graphic to the right to familiarize yourself with all components.

1. Top cover
2. Timer display
3. Timer control panel
4. Solenoid (DC-Latching)
5. Valve (not included)

* The SST is not recommended for use with Lawn Genie valve model 54048 at pressures above 130 psi.



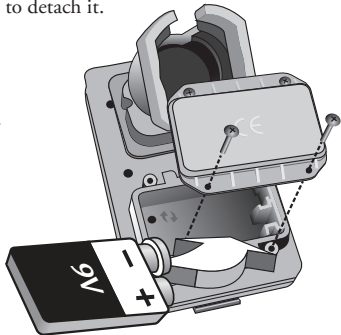
Battery Installation

Battery installation should take place before attaching the SST to a valve. If you have already attached the SST to a valve, you will need to detach it.

1. Place the SST face down. The battery compartment is sealed with four (4) screws.
2. Unscrew all screws and remove the battery compartment lid using a Phillips screw driver.
3. Install one 9-volt battery (not included). Observe the polarity of the picture.
4. Reattach the lid and screws, ensuring the rubber sealing gasket is in place.



The battery should be replaced as part of yearly maintenance. The controller will maintain time/day/program for 32 minutes without a battery installed.



Attaching the SST to a Valve

The SST includes a pre-wired DC-latching solenoid*. The existing solenoid on your valve is not necessary. Follow the directions below to attach the SST to your valve:

1. Turn water off to the valve.
2. Unscrew the existing solenoid and discard.
3. Screw in the included adapter (if necessary) (Figure 1).
4. Screw the Toro solenoid onto the adapter (Figure 1).
5. Mount the SST onto the solenoid (Figure 2).
6. Turn water back on.

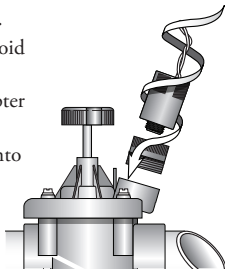


Figure 1

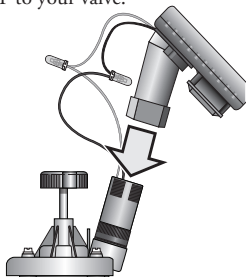


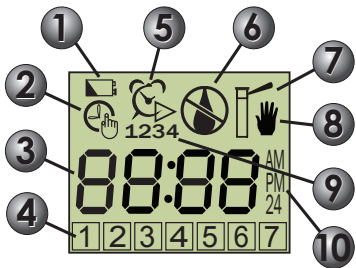
Figure 2

*The included DC-latching solenoid is not compatible with Hunter® brand valves. Use of the SST with Hunter valves requires a Hunter DC-latching solenoid (sold separately).

Hunter is a trademark of Hunter Industries.

LCD Overview

1. Low battery indicator. If the icon is flashing, the battery is low and should be changed. If the icon is solid, the controller will not operate. Replace the battery.
2. Set current time indicator
3. Digital display. Shows the current time or run-time during programming.
4. Day of week indicator
5. Start time of the program indicated
6. Indicates if the controller is OFF (solid) or rain sensor delay is active (flashing)
7. Active irrigation icon
8. Manual program indicator
9. Active start time (There are four available start times.)
10. Clock format (12 or 24 hour)



Programming the SST

Every programming operation begins by pressing the MODE button. A long press (>2 seconds) turns the controller off. A short press (<2 seconds) advances the controller through the different programming functions in the order that follows.








The Mode Button















Programming the Controller during active irrigation is not possible. Stop the irrigation cycle first (page 10).

When in Programming mode, the controller will revert to the Home screen after 15 seconds of inactivity.




AM/PM or 24-Hour

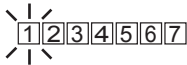
1. Press the Mode button  for <2 seconds until the **AM / PM / 24** and  icon shows.
2. Press the  or  buttons to select AM/PM or 24-hour mode.
3. Press the  button once to set and advance to the next programming option.

Set Clock








1. The  icon shows. The hour number ( or  depending on mode chosen above) will flash. Press  or  to cycle to the correct hour.
 If in AM/PM mode, AM or PM will be set in Step 5.
2. Press  to enter selection.
3. The minute number () will flash. Press  or  to cycle to the correct minute.
4. **24-hour mode:** Press  once to set and advance to the next programming option.
5. **AM/PM mode:** Press  or  to select AM or PM. Press  once to set and advance to the next programming option.

Set Current Day

1. A day number will flash. Press  or  to cycle to the correct day. Monday is day #1, Tuesday is day #2, etc.
2. Press  once to set and advance to the next programming option.










Set Run Time

1. The  icon shows. The default run time per program is 10 minutes.
2. Press  or  to adjust the hours. Press .
3. Press  or  to adjust the minutes.
4. Press  once to set and advance to the next programming option.

Set Start Time

This setting has 4 possible start times to allow watering up to four times a day.

1. The  icon shows and “1” flashes.
Press  to select desired start time (**1234**).
2. If the Start Time is not set, --:-- will flash. Press  or  to activate start time.
Press  to set.
3. The hour number  or  depending on mode chosen above) will flash.

- Press **+** or **-** to cycle to the correct start time hour. Press **✓** to set.
- The minute number (**00:00**) will flash. Press **+** or **-** to advance to the correct start time minute. Press **✓** to set.
 - If in AM/PM mode, press **+** or **-** to select AM or PM. Press **✓** to set.
 - Repeat steps 2 through 5 to set additional start times, or press **✓** to advance through the remaining start times.

Set Watering Days

- The day numbers show. "1" is flashing.
- Press **+** to activate irrigation for the day or **-** to make it a non-watering day.
- Press **✓** to move to the next day.
- Repeat steps 2 and 3 to program the entire week.
- Press **✓** to set. The controller display will return to the Home screen.

1 2 **3** 4 5 **6** 7

A boxed number is a watering day. A number without a box is a non-watering day.





If irrigation starts on a watering day and runtime carries over into a non-watering

day, irrigation will run past midnight.


Off Mode

OFF mode turns off the watering program. Active Day boxes disappear. The time display and “OFF” toggle back and forth on the display. The current day flashes.





1. Press  for >2 seconds to activate OFF mode.
2. Press  again to cancel the OFF mode and return to active watering.

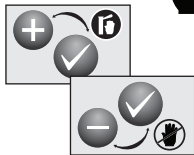
Sleep Mode

The Display goes to sleep after 5 minutes of inactivity. This is to save battery life.

Nothing is shown in the display, but the controller will still irrigate on schedule. If  is pushed, the display will come on.



Manual Operation

1. To turn on the valve manually, press  and  together.
2. The valve will run for the programmed run-time (page 8).
3. To prematurely STOP a manual operation, press  and  together.



Stopping the Current Irrigation Cycle

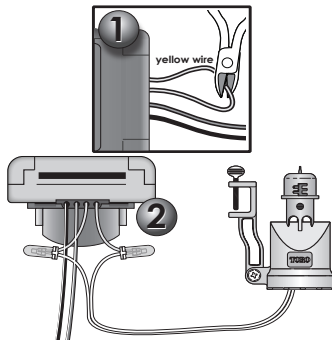
It is possible to stop the current irrigation cycle. This might be done due to rainfall, a broken valve, or any number of reasons.

1. Press  for >2 seconds to stop the current irrigation cycle.
2. Press  again for >2 seconds to return to normal operation.

Installing a Rain Sensor

It is possible to connect a wired Toro® RainSensor™ to the SST. Other normally closed sensors can be installed as well. Wired polarity is not observed for the sensor.

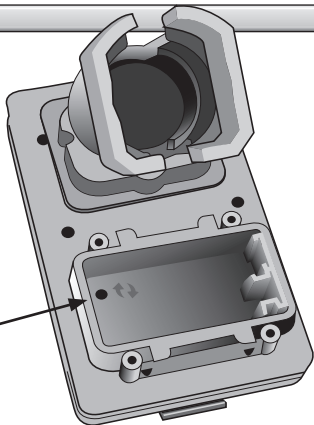
1. Cut the wire loop (yellow) from the SST.
(See Figure 1.)
2. Strip 1/2" (1.25 cm) of insulation from the wires. Connect the SST wires to the rain sensor wires using water-sealed / proof wire connectors (not included).
(See Figure 2.)



The Reset Button

The Reset button resets the controller to erase all watering programs.

1. Remove the battery compartment lid and battery.
2. In the upper left corner, you will see a black button with a refresh symbol. Using a screwdriver, press that button.
3. Reinstall the battery.
4. Reattach the lid and screws, ensuring black rubber sealing gasket is in place.



The Reset button

Troubleshooting Guide

Problem	Possible Cause	Solution
Controller does not display anything.	<ol style="list-style-type: none">1. The battery is dead.2. Controller is in Sleep mode.	<ol style="list-style-type: none">1. Install a new 9V battery.2. Press MODE to activate screen.
Water does not turn ON.	<ol style="list-style-type: none">1. Faulty control valve wire connections.2. Faulty solenoid.3. Program run time is set to 0.4. Low battery	<ol style="list-style-type: none">1. Check all wire connections.2. Replace solenoid.3. Increase program run time. (p.8)4. Install a new 9V battery.
Water does not turn OFF.	<ol style="list-style-type: none">1. Valve is blocked by dirt or debris.	<ol style="list-style-type: none">1. Inspect, clean, and/or replace the valve.
Controller does not irrigate as scheduled.	<ol style="list-style-type: none">1. Water at main water supply is shut off.2. Controller is set to OFF.3. Overlapping run times on the programs.	<ol style="list-style-type: none">1. Check the main supply valve.2. Turn controller on. (Press Mode.)3. Check program and clock settings.
Controller displays "Err"	<ol style="list-style-type: none">1. Shorted solenoid or valve wire.	<ol style="list-style-type: none">1. Test solenoid and connections. Correct any shorted condition. Press MODE >2 seconds until error message clears.

Warranty Statement

The Toro Company and its affiliate, Toro Warranty Company, pursuant to an agreement between them, jointly warrants, to the owner, against defects in material and workmanship for a period of two years from the date of purchase. Neither The Toro Company nor Toro Warranty Company is liable for failure of products not manufactured by them even though such products may be sold or used in conjunction with Toro products. During such warranty period, we will repair or replace, at our option, any part found to be defective. Return the defective part to the place of purchase. Our liability is limited solely to the replacement or repair of defective parts. There are no other express warranties. This warranty does not apply where equipment is used, or installation is performed, in any manner contrary to Toro's specifications and instructions, nor where equipment is altered or modified. Neither The Toro Company nor Toro Warranty Company is liable for indirect, incidental or consequential damages in connection with the use of equipment, including but not limited to: vegetation loss, the cost of substitute equipment or services required during periods of malfunction or resulting non-use, property damage or personal injury resulting from installer's negligence. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. All implied warranties, including those of merchantability and fitness for use, are limited to the duration of this express warranty. Some states do not allow limitations of how long an implied warranty lasts, so the above limitation may not apply to you. This warranty gives you specific legal rights and you may have other rights which vary from state to state. Toro is committed to developing and producing the highest quality, best performing, most dependable products on the market. Because your satisfaction is our first priority, we have provided the Toro Helpline. Please call toll-free 1-800-367-8676 or e-mail support@toro.com if you have any questions or problems.

FEDERAL COMMUNICATIONS COMMISSION STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful 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 or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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