TORO. Count on it.

EVOLUTION® Series Controller
User's Guide

WaterSense
Meets EPA Criteria
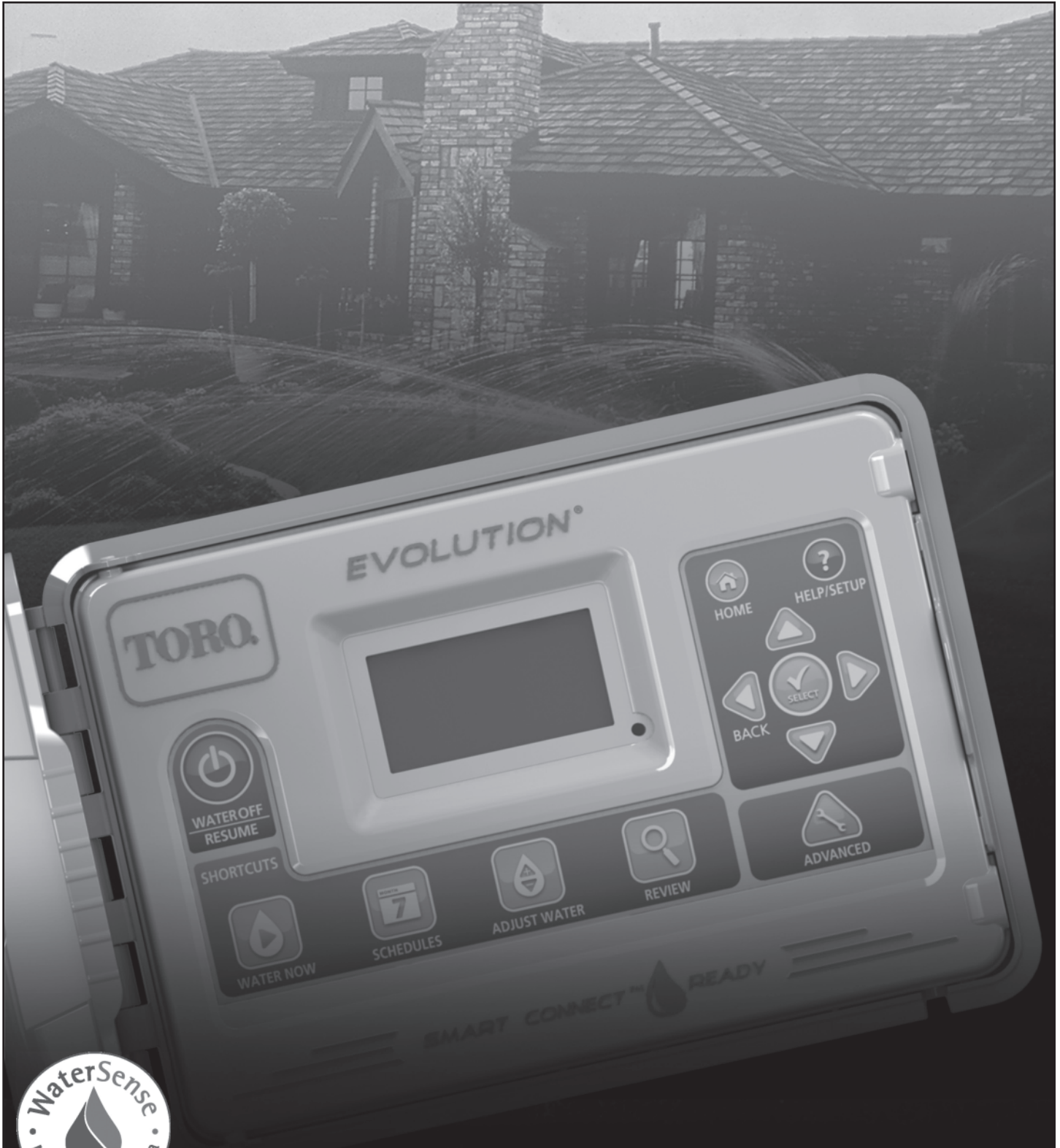
Certified by
ICC-ES

EPA WaterSense® Certified
when used with Smart Connect®

For Videos and Information,
Visit Toro.com/Evolution

Table of Contents

Thank you for purchasing Toro's new award-winning EVOLUTION® Series irrigation controller, delivering unprecedented control and ease-of-use of your irrigation system! Based on years of customer research, the EVOLUTION® Series irrigation has the perfect balance of simplicity and sophistication. The modern-day programming, unique USB functionality, and smart capability make it an ideal choice for users seeking an advanced irrigation controller without the complexity. With the addition of Smart Connect®, there are multiple options available to upgrade the controller to automatically adjust watering, or control other devices such as lighting or water features. Using the Smart Connect® Weather Sensor, the EVOLUTION® controller meets the requirements of the EPA WaterSense® Program. You can even set your programs using a computer by utilizing the simple-to-use EVOLUTION® Scheduling Advisor.

If you have any questions about the controller, please call us toll-free at 1-877-345-8676 and we will be happy to help. From locations outside North America, please send your questions to the evolution@toro.com e-mail address.

Controller Introduction

Timing Mechanism

Figure 1
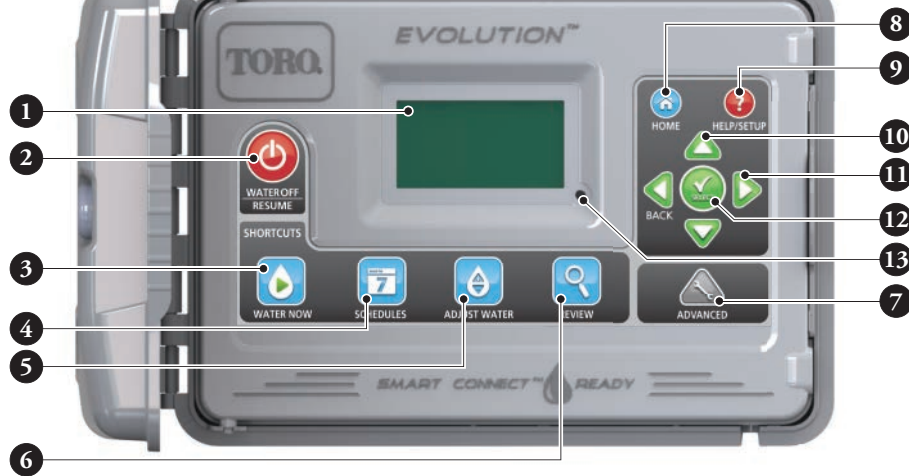
1 – LCD Screen

2 – Water Off Button. Use to turn off scheduled and manually activated watering. For extended watering off periods, you can select 1-14 days or Remains Off.

3 – Water Now Button. Use to manually activate a schedule, specific zone(s) or All Zones Test.

4 – Schedules Button. Use to set your active watering day(s), schedule start(s) and zone runtime(s).

5 – Adjust Water Button. Adjust your watering percentage per schedule or zone runtimes.

6 – Review Button. Use to review your schedule parameters.

7 – Advanced Button. Use to access the controller's advanced features, from zone and schedule details to sensor setup and controller diagnostics.

8 – Home Button. Use to display the controller's activity and alert messages.

9 – Help/Setup Button. Use to access and clear alerts, set the controller's time and date, locate Toro contact information and local service information, as well as modify controller preferences such as the display language and time and date format. Use Setup also to save or load a schedule to or from your USB thumb drive.

10 – Up and Down Arrow Buttons. Use to navigate up or down through the menu items. They are also used to modify parameters.

11 – Left and Right Arrow Buttons. Use to navigate between menu parameters. The button is also used to revert back to previous menu selections.

12 – Select Button. Use to select a menu item or enter and save parameters.

13 – LED Indicator. Indicates that Water Off is active (constantly lit) or an Alert condition is detected (flashing).

Internal Components
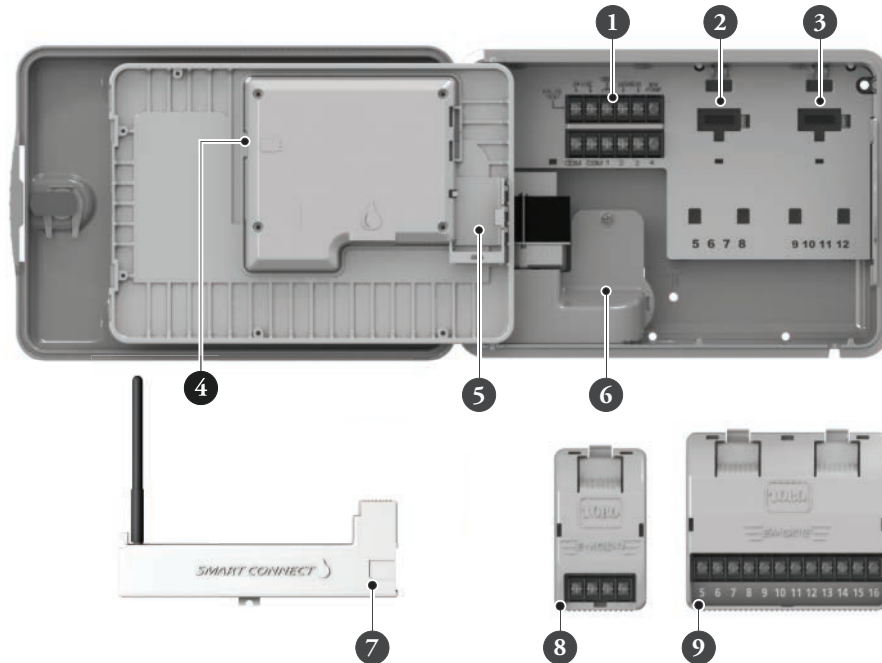
1 – Zones and Sensor Terminals
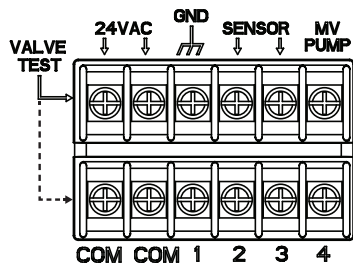
VALVE TEST – Use this terminal to test a valve for proper function.
24VAC – 24 VAC Power Source
GND – Power Source Ground
SENSOR – Sensor Terminals
MV PUMP – Master Valve Terminal
COM – Zones' and Master Valve Common Terminals
1, **2**, **3** and **4** – Zone 1, Zone 2, Zone 3, and Zone 4 Terminals

2 – Zones' 5, 6, 7 and 8 Expansion Module Socket

3 – Zones' 9, 10, 11 and 12 Expansion Module Socket

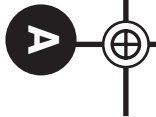**4** – Schedules USB Flash Drive Connector

5 – 9 Volt Battery Compartment

6 – Power Supply Terminal Compartment

7 – Smart Connect® Module (Available Separately)

8 – EMOD-4, Four-Zone Expansion Module (Available Separately)

**9** – EMOD-12, Twelve-Zone Expansion Module (Available Separately)

Cabinet Installation

Use this page as a template to mark the screw location of the EVOLUTION™ cabinet. There are two mounting options for the EVOLUTION™. The first option allows you to mount the cabinet with three screws and the second option allows you to mount the cabinet with two screws. For safe and reliable operation, select an installation site that can provide the following conditions:

• **For Indoor model controllers** - Inside a garage or other structure that will provide protection from the weather.

• **For Outdoor model controllers** - Protection from irrigation spray, wind and snow. A shaded location is recommended.

• Access to a grounded AC power source (within 4' [1.2 m] for indoor models) that is not controlled by a switch or utilized by a high current load appliance such as a refrigerator or air conditioner.

• Access to the sprinkler control valve wiring and optional accessory wiring.
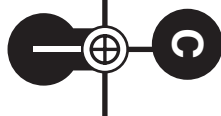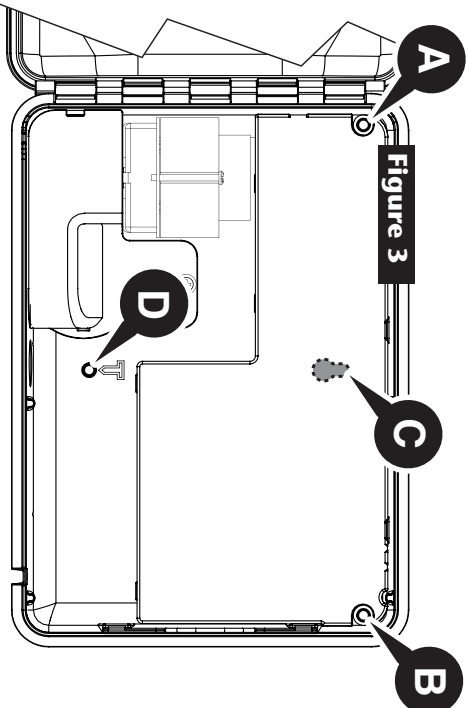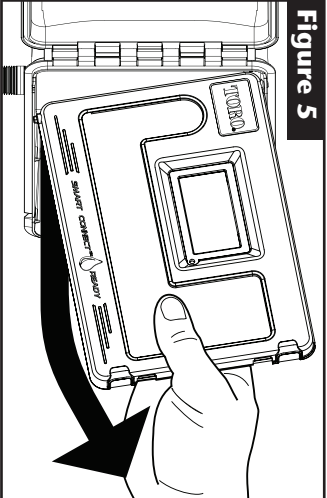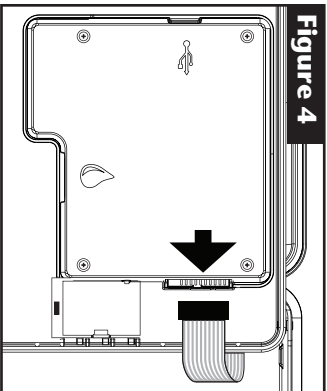
Figure 3

Option 1

Figure 4

Step 1 – Unplug the controller panel ribbon cable. Open the front panel about 90° and detach it from the cabinet by pulling the bottom portion upwards. Removing it from the cabinet allows you to access the mounting location.

Step 2 – Mark the mounting screw location Ⓐ, Ⓑ and Ⓓ.

Step 3 – Drill 1/8" (3mm) pilot holes at the marked locations.

Step 4 – Secure the cabinet with screws.

Option 2

Step 1 – Unplug the controller panel ribbon cable. Open the front panel about 90° and detach it from the cabinet by pulling the bottom portion upwards. Removing it from the cabinet allows you to access the mounting location.

Step 2 – Mark the mounting screw location Ⓒ and Ⓓ.

Step 3 – Drill 1/8" (3mm) pilot holes at the marked locations.

Step 4 – Secure the cabinet with screws.

Figure 5

3

Power Supply Installation

⚠️ **WARNING:** AC power wiring must be installed and connected by qualified personnel only. All electrical components and installation procedures must comply with all applicable local and national electrical codes. Some codes may require a means of disconnecting from the AC power source installed in the fixed wiring and having a contact separation of at least 0.120" (3mm) in the line and neutral poles. Make sure the power source is OFF prior to connecting the controller. If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or a similarly qualified person in order to avoid a hazard.

⚠️ **WARNING:** This appliance is not intended for use by persons (including children) with reduced physical sensory, or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.

Indoor and 240 VAC Outdoor Models
Indoor models and the 240 VAC Outdoor model will be pre-wired with a power cord ready to be plugged into a wall power socket.
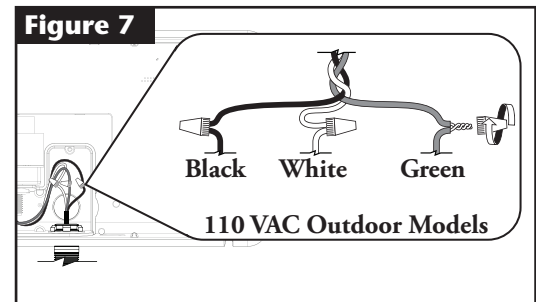

Figure 6
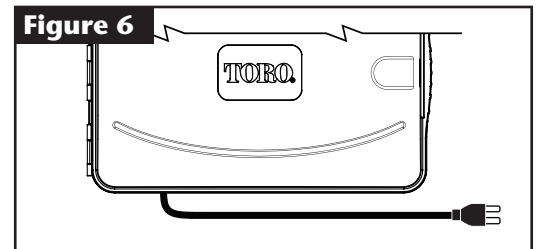
110 VAC Outdoor Models (US and Canada)

Step 1 – Route power and ground wires from a power source through a conduit and into the EVOLUTION® cabinet.

Step 2 – Open the EVOLUTION® controller and access the internal components.

Step 3 – Remove the power compartment cover to access the transformer wiring. Remove 1/2" (12.7mm) of insulation from the wire ends.

Step 4 – Using the provided wire nuts, secure the transformer Line (black) wire to the black power source wire, Neutral (white) to the white power source wire and Equipment Ground wire (green) to the green power source wire.

> 📝 **Note:** Earlier EVOLUTION® model is equipped with two Equipment Ground wires (green). Connect both wires to the green power source wire.

Step 5 – Install and secure the power compartment cover.

Step 6 – Apply power to the controller.

Figure 7
Black   White   Green
110 VAC Outdoor Models

220 VAC Outdoor Models (Outside US and Canada)

Step 1 – Route power and ground wires from a power source through a conduit and into the EVOLUTION® cabinet.

Step 2 – Open the EVOLUTION® controller and access the internal components.

Step 3 – Remove the power compartment cover to access the transformer terminals.

Step 4 – Remove 1/2" (12.7mm) of insulation from the power source wire ends and install the brown wire into the Line (**L**)terminal. Install the green wire into the Ground (⏚) terminal and the blue wire into the Neutral (**N**) terminal.

Step 5 – Install and secure the power compartment cover.

Step 6 – Apply power to the controller.

Figure 8
(L)   (⏚)   (N)
Brown   Green/Yellow   Blue
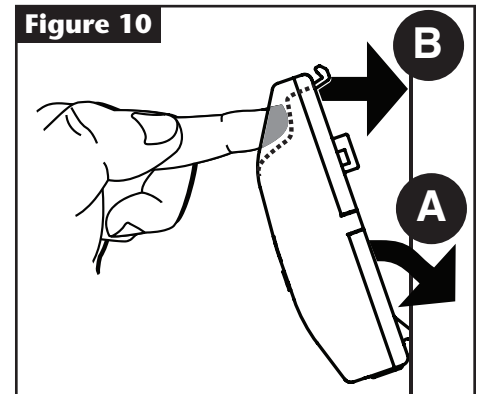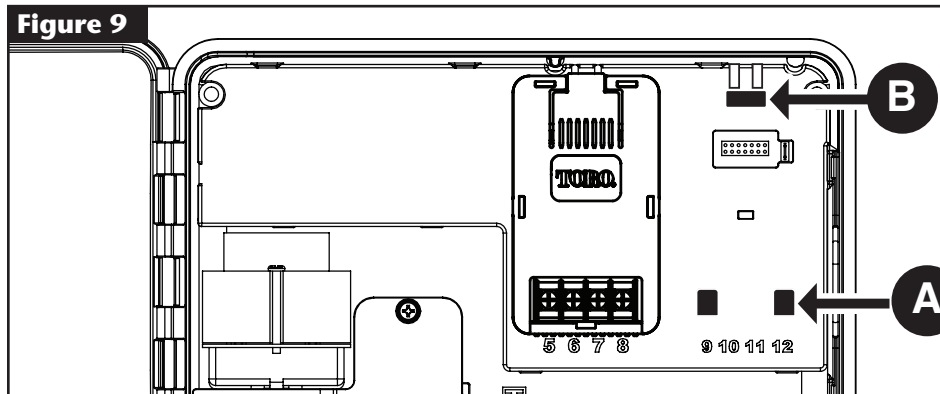**220 VAC Outdoor Models**
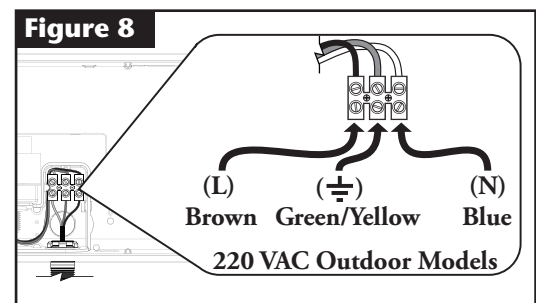
Zone Expansion Module Installation

The EVOLUTION® controller can be expanded using the optional 4-zone (EMOD-4) or 12-zone (EMOD-12) modules to add more zones to the system.

Module Installation

Figure 9

Figure 10

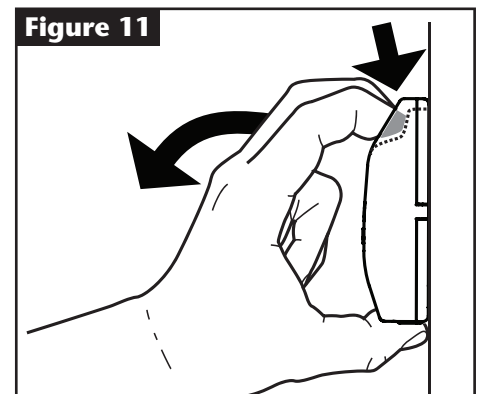**Step 1** – Open the EVOLUTION® controller door and control panel to access the internal components.

Step 2 – Locate the module slot **A** and **B**. Install the module by placing the bottom hooked standoffs into slot **A** and push the module tab towards the cabinet until a positive click is achieved. The click indicates that the module's retaining tab is fully engaged. Once installed, the EVOLUTION® controller will be able to read the additional zones and will make them available for scheduling.

Note: If installing only one four-station module (EMOD-4), it must be installed in the zone 5-8 module slot.

Module Removal

Step 1 – Open the EVOLUTION® controller door and control panel to access the internal components.

Step 2 – Hold the module as shown in **Figure 11**. Press the retaining tab while pulling the top of the module away from the cabinet, then lift the module out of the controller.


Figure 11

Battery Installation

The EVOLUTION® controller uses a 9-VDC battery for arm-chair programming.

Step 1 – Open the EVOLUTION® controller door and control panel to access the internal components.
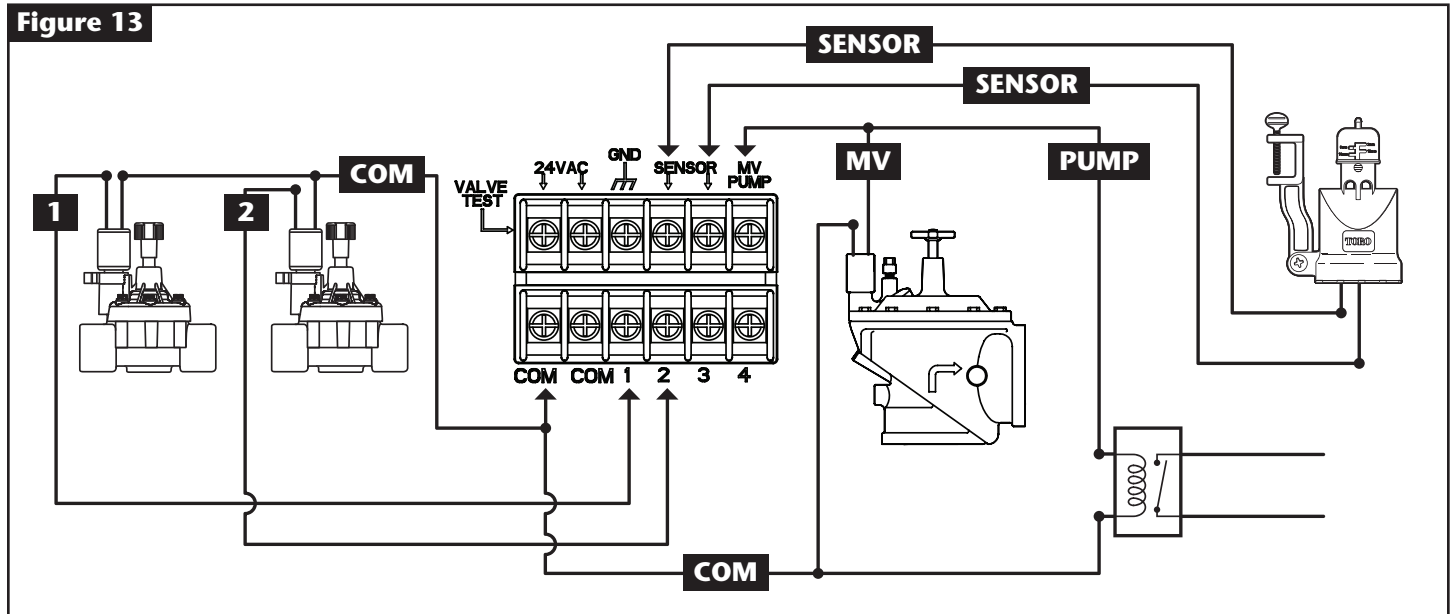
Step 2 – Locate the battery compartment at the back of the control panel.

Step 3 – Align the polarity (– and +) of the battery then slide it into the battery compartment as shown in **Figure 12**.

Note: You may need to pull the battery tab forward to align the battery properly.

Figure 12
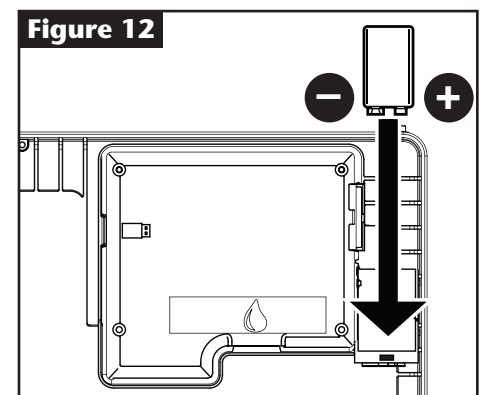
Valve, Pump Relay and Sensor Installation

Figure 13

Step 1 – Route valve wires from the valves, master valves, pump relay and/or sensor into the controller cabinet.

📝 **Note:** 18 AWG (1.0 mm²) multi-wire sprinkler valve connection cable can be used. This cable is insulated for direct burial and is color-coded to simplify installation. It can be routed directly into the controller through the access hole provided for valve wire conduit (if conduit is not used).

Step 2 – **Connect valves, master valves and pump start relay to the valve wires** - Connect the white color-coded wire from the cable to one wire from each valve solenoid and/or pump relay. (Either of the two wires from the solenoid or pump relay can be used for this connection.) This connection will be designated as the valve common wire.
Connect a separate cable wire to the remaining wire from each valve solenoid. Note the wire color-code used for each valve and the zone it controls. You will need this information when connecting the valve wires to the controller.

Step 3 – Secure all wire splices using wire nut connectors. To prevent corrosion and possible short circuits, always use an insulated wire nut, grease cap or similar waterproofing method.

Step 4 – **Connect valves wires to the controller** - Secure the valve common wire (white) to either of the two terminals labeled **COM**. Secure the individual valve wires to the appropriate zones they control, Zone 1 valve to terminal **1**, Zone 2 valve to terminal **2**, etc.

Step 5 – **Connect master valve/pump relay wires to the controller** - Secure the valve common wire (white) to either of the two terminals labeled **COM**. Secure the Master Valve or Pump Relay wire to the terminal labeled **MV/PUMP**.
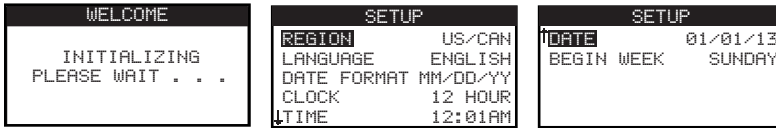
⚠ **Caution:** To prevent controller damage, do not connect the pump motor starter directly to the controller.

Step 6 – **Connect sensor wires to the controller** - Remove the jumper wire from the **SENSORS** terminals. Secure the two sensor wires to the sensor terminals. Refer to the provided sensor instructions for further installation instructions.
EVOLUTION® is designed to operate with "normally closed" NC sensors.

📝 **Note:** For sensors with "normally open" (NO) and "normally closed" (NC) options, select the NC option.

Step 7 – Test for proper operation.

Setup Screen

```
┌─────────────────┐  ┌─────────────────┐  ┌─────────────────┐
│     WELCOME     │  │     SETUP       │  │     SETUP       │
├─────────────────┤  ├─────────────────┤  ├─────────────────┤
│                 │  │ REGION   US/CAN │  │ DATE    01/01/13│
│   INITIALIZING  │  │ LANGUAGE ENGLISH│  │ BEGIN WEEK SUNDAY│
│  PLEASE WAIT . .│  │ DATE FORMAT MM/DD/YY│ │                │
│                 │  │ CLOCK    12 HOUR│  │                 │
│                 │  │↓TIME    12:01AM │  │                 │
└─────────────────┘  └─────────────────┘  └─────────────────┘
```

Upon power up, the initialization screen will display briefly. On initial power up, the EVOLUTION® will display the SETUP screen. This SETUP screen is only accessed during initial power up or after a factory reset is performed. Once Setup is completed, press the 🏠 HOME button at any time to return to the main screen.

Set Region (For Firmware 2.13 and Newer)

Select your location Region. Select from US/CAN, Australia or Europe.

Step 1 – While REGION is selected, press the Right ▷ arrow or SELECT ✓.

Step 2 – Use the Up △ or Down ▽ arrows to select from US/CAN (default), Australia or Europe. Press SELECT ✓.

Set Language

Select the preferred display language. Select from English, Spanish, French, German, Italian or Portuguese.

Step 1 – While LANGUAGE is selected, press the Right ▷ arrow or SELECT ✓.

Step 2 – Use the Up △ or Down ▽ arrows to select from English (default), Spanish, French, German, Italian or Portuguese. Press SELECT ✓.

Set Date Format

Step 1 – Use the Down ▽ arrow to select DATE FORMAT. Press the Right ▷ arrow or SELECT ✓.

Step 2 – Use the Up △ or Down ▽ arrows to select MM/DD/YY (Month/Day/Year) (default) or DD/MM/YY (Day/Month/Year). Press SELECT ✓.

Set Clock Format

Step 1 – Use the Down ▽ arrow to select CLOCK. Press the Right ▷ arrow or SELECT ✓.

Step 2 – Use the Up △ or Down ▽ arrows to select 12 HOUR (default) or 24 HOUR. Press SELECT ✓.

Set the Current Time

Step 1 – Use the Down ▽ arrow to select TIME. Press the Right ▷ arrow or SELECT ✓.

Step 2 – Use the Left ◁ or Right ▷ arrows to navigate between the Hour and Minute positions. Use the Up △ or Down ▽ arrows to set the correct values. Press SELECT ✓ when finished.

Set the Current Date

Step 1 – Use the Down ▽ arrow to select DATE. Press the Right ▷ arrow or SELECT ✓.

Step 2 – Use the Left ◁ or Right ▷ arrows to navigate between the Month, Day and Year positions. Use the Up △ or Down ▽ arrows to set the correct values. Press SELECT ✓ when finished.

Set the Beginning of the Week

Step 1 – Use the Down ▽ arrow to select BEGIN WEEK. Press the Right ▷ arrow or SELECT ✓.

Step 2 – Use the Up △ or Down ▽ arrows to select SUNDAY (default) or MONDAY as the beginning of the weekly schedule. Press SELECT ✓ when finished.

📝 **Note:** For additional Setup options, refer to the Help/Setup section.

# Basic Schedule Setup

Water Day Selection

The EVOLUTION® controller allows for flexible watering by giving you four schedule options: 7-day, Even days, Odd days or Interval days. By default, the 7-day schedule is set for the schedule. To set watering days to Odd, Even or Interval, see the **Advanced Functions** section.

📝 **Note:** At any point, you can return to the previous menu by pressing the Left ◀ button or return to the main screen by pressing the 🏠 HOME button.

Step 1 – Press the 📅 SCHEDULES button.

Step 2 – Use the Up ▲ or Down ▼ arrows to select the schedule you want to se, then press SELECT ✓.

Step 3 – Use the Up ▲ or Down ▼ arrows to select WATER DAYS, then press SELECT ✓.

Step 4 – Use the Up ▲ or Down ▼ arrows to select WEEKDAY, ODD, EVEN or INTERVAL, then press SELECT ✓.

Step 5 – (**For WEEKDAY selection**) The WEEKDAY schedule allows you to activate or turn off any of the days in the week. By default, all days are active. Use the Left ◀ or Right ▶ arrows to navigate within the days of the week. Use the Up ▲ or Down ▼ arrows to activate 💧 or turn off ▬ the day for watering. Repeat for all days of the week. Press SELECT ✓ when finished.

```
        WEEKDAY
 S   M   T   W   T   F   S
 ◪  💧  ▬  💧  💧  ▬  💧

 TODAY IS TUESDAY
```
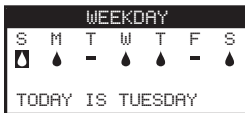
(**For ODD selection**) Selecting ODD schedule will set the odd numbered days of the calendar as the watering days.

```
       SCHEDULE A
 WATERS ON ODD
 CALENDAR DAYS
```
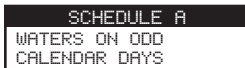
(**For EVEN selection**) Selecting EVEN schedule will set the even numbered days of the calendar as the watering days.

```
       SCHEDULE A
 WATERS ON EVEN
 CALENDAR DAYS
```

(**For INTERVAL selection**) Selecting INTERVAL allows you to set the interval days between watering cycles.

Use the Left ◀ or Right ▶ arrow to navigate to the WATER EVERY parameter. Use the Up ▲ or Down ▼ arrow to set the desired day interval between watering cycles, then press SELECT ✓.

While in the CURRENT DAY selection, press the Right ▶ arrow to navigate to the CURRENT DAY parameter.

Use the Up ▲ or Down ▼ arrow to set the current day designation, then press SELECT ✓.

```
        INTERVAL
 WATERS EVERY 03 DAYS
 CURRENT DAY  01

   WATERS ON LAST DAY
       OF INTERVAL
```
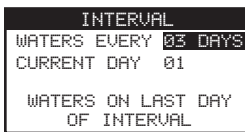
Step 6 – Press the Back ◀ to return to the SCHEDULES menu.

Schedule Start Setup

By default, the EVOLUTION® controller is set with 1 start time set to OFF. Additional Starts can be added with a maximum of four starts per schedule. Once a start is activated, the schedule will activate the first zone (lowest number). Once it is complete, the second zone will water. The schedule will continue until all zones with runtimes have been activated.

Step 1 – Press the 🔲 SCHEDULES button.

Step 2 – Use the Up △ or Down ▽ arrows to navigate to SCHEDULE STARTS. Press SELECT ✅.

```
       SCHEDULE
START          11:00AM
ADD START            ▶

  EACH START RUNS ALL
    SCHEDULED ZONES
```

Step 3 – Use the Left ◁ or Right ▷ arrows to navigate to the start time's Hours, Minutes and AM/PM. Use the Up △ or Down ▽ arrows to set your desired start time. Press SELECT ✅ to save.

Step 4 – Navigate to ADD START to add another start time. Press SELECT ✅. Modify the new start time as indicated in **Step 3**.

Step 5 – To delete a start time, set the time to OFF. The OFF selection is located between the full hour of 11:00 AM/PM and the full hour of 12:00 AM/PM (23:00 and 00:00).

Zone Runtimes Setup

The Zone Runtimes is where you select all the zones that will run in the schedule. By default, all zones are set to OFF. Modify the runtime for each zone as necessary. Deactivate a zone by setting the runtime to OFF.

Step 1 – Press the 🔲 SCHEDULES button.

Step 2 – Use the Up △ or Down ▽ arrows to navigate to ZONE RUNTIMES. Press SELECT ✅.

Step 3 – Use the Up △ or Down ▽ arrows to navigate to the ZONE you want to set or edit. Press the Right ▷ arrow or SELECT ✅.

```
       SCHEDULE
ZONE 1          00:15
ZONE 2          00:05
3:FRONT YARD    00:15
4:BACK YARD     00:20
ZONE 5            OFF
```

Step 4 – Use the Up △ or Down ▽ arrows to set the desired runtime for that particular zone. Press SELECT ✅ to save.

Step 5 – Repeat Steps 4 and 5 for the remaining Zones. Set the Zone to OFF to disable.

Controllers with More Than One Active Schedule

The EVOLUTION® Controller has the ability to run up to three watering schedules. By default, only one schedule is active. Additional schedules can be activated, see **Advanced Functions** section. Once activated, the additional schedules will appear under the 🔲 Schedules Menu.

To edit a particular Schedule:

Step 1 – Press the 🔲 SCHEDULES button.

Step 2 – Use the Up △ or Down ▽ arrows to select the schedule you want to edit. Press SELECT ✅.

Step 3 – Proceed with Basic Schedule editing.

📝 **Note:** The Schedule and Zone names can be customized using the Scheduling Advisor Software. Visit www.toro.com/evolution.

Water Now

Water Now is used to manually activate a schedule, zone(s), or to test all zones.

📝 **Note:** At any point, you can return to the previous menu by pressing the Left ◀ button or return to the main screen by pressing the 🏠 HOME button.
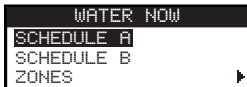
Manually Activate a Schedule

Step 1 – Press the ▶ WATER NOW button.

Step 2 – Use the Up △ or Down ▽ arrows to navigate to SCHEDULE. Press SELECT ✓. Watering will begin.

The selected schedule will run and activate all assigned zones.

(For controllers with multiple active schedules only.)

Use the Up △ or Down ▽ arrows to select the Schedule you want to activate. Press SELECT ✓.

```
      WATER NOW
SCHEDULE A
SCHEDULE B
ZONES                ▶
```

📝 **Note:** The Schedule name can be customized using the EVOLUTION® Software which can be accessed at www.toro.com/evolution.

Step 3 – From the Home Screen, the schedule can be advance by pressing the Right ▷ arrow.

```
        HOME
06:02AM      MON
             09/08
      SCHEDULE A
↓ZONE 1      ●00:02▶
  ALERT: PRESS HELP
```

This Example shows Zone 1 of Schedule A is active with 2 minutes of runtime remaining.

Manually Activate a Specific Zone(s)

Step 1 – Press the ▶ WATER NOW button.

Step 2 – Use the Up △ or Down ▽ arrows to navigate to ZONES. Press SELECT ✓.

📝 **Note:** The Zone name can be customized using the EVOLUTION® Software which can be accessed at www.toro.com/evolution.

Step 3 – Use the Up △ or Down ▽ arrows to select the specific zone to activate. Press the Right ▷ arrow or SELECT ✓.

```
      WATER NOW
ZONE 1          OFF
ZONE 2        --:10
ZONE 3          OFF
```
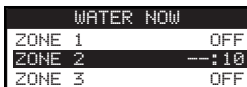
Step 4 – Use the Up △ or Down ▽ arrows to assign the zone a runtime. Press SELECT ✓.

The zone will activate until the specified runtime expires. A water drop icon is displayed to indicate that the zone is actively watering.

Step 5 – Repeat Steps 3 and 4 to activate additional zones. Watering will occur in the order that the zones are entered.

Manually Activate All Zone Test

Step 1 – Press the ▶ WATER NOW button.

Step 2 – Use the Up △ or Down ▽ arrows to navigate to ALL ZONE TEST. Press the Right ▷ arrow or SELECT ✓.

```
      WATER NOW
SCHEDULE
ZONES                ▶
ALL ZONE TEST  02:00
```
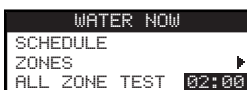
Step 3 – Use the Up △ or Down ▽ arrows to assign a runtime. Press SELECT ✓.

📝 **Note:** The EVOLUTION® controller will sequentially water all active zones (zones with runtimes) starting with Zone 1. All active zones will run the specified runtime duration.

📝 **Note:** All Zone Test will not affect the AUX schedule. AUX Schedule is normally used for lighting.
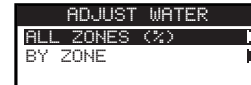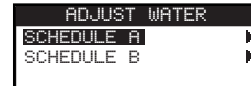
Adjust Watering

Adjust Watering is used to increase or decrease the amount of time a zone(s) will water.

Step 1 – Press the ⏵ WATER NOW button.

Step 2 – Use the Up △ or Down ▽ arrows to select the schedule you want to adjust.

Step 3 – Press the Right ▷ arrow to navigate to the next screen. Choose from the two options.

```
     ADJUST WATER
SCHEDULE A          ▸
SCHEDULE B          ▸
```

```
     ADJUST WATER
ALL ZONES (%)       ▸
BY ZONE             ▸
```

Option 1

"All Zones (%)" – Runtimes for <u>All</u> zones on the selected schedule will increase/decrease by the selected percentage. Adjust the watering percentage from 150% to -95% or OFF.

– Press the Right ▷ arrow to select this option.

```
     ADJUST WATER
ALL ZONES (%)    ---
```

– Use the Up △ or Down ▽ arrows to increase or decrease the runtime percentage (%).

– Press SELECT ✓.

All runtimes for selected schedule will now reflect the percent adjustment.

Example: Original runtime = 10 minutes

                         Adjustment of +50% = 15 minutes
                         Adjustment of -50% = 5 minutes

Option 2

"By Zone" – Runtimes may be adjusted in minutes for individual zones.

– Use the Up △ or Down ▽ arrows to select BY ZONE.

```
     ADJUST WATER
ZONE 1          00:05
ZONE 2          00:05
ZONE 3          00:10
```

– Press SELECT ✓ to activate.

– Use the Up △ or Down ▽ arrows to select the zone you want to adjust.

– Press SELECT ✓ to access the runtime.

– Use the Up △ or Down ▽ arrows to increase or decrease the amount of runtime. Adjustment can be made from OFF to 12 hours in 1-minute increments.

Review

The Review function allows you to view programming for all active irrigation scheduler and sensors. This is a view only screen, no adjustment can be made in these screens.

Step 1 – Press the 🔍 REVIEW button.

```
        REVIEW
SCHEDULE A          ▸
SCHEDULE B          ▸
RAIN SENSOR         ▸
```

Step 2 – Press the Up △ or Down ▽ arrows to select the schedule you want to view. Press SELECT ✓ to access.

```
        REVIEW
      SCHEDULE A
S  M  T  W  T  F  S
-  ▲  ▲  ▲  ▲  ▲  -
TOTAL RUNTIME  02:10
↓STARTS 6:00AM
```
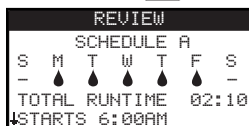
In this example, Schedule A is set to water every day ▲, except Saturday and Sunday (indicated by –). The total runtime for this schedule is 2 hours and 10 minutes. It is the total runtime accumulated by all the zones' runtime for a single schedule run.
The Total Runtime is the duration in which the zone will run during a watering day taking into account the number of starts as well as any watering adjustments.

Step 3 – To review individual zone runtimes, the Right ▷ arrow.

Step 4 – Press the 🏠 HOME button to return to the main screen.

Water Off

Turn Off Current Operation

Step 1 – Press the ⏻ WATER OFF button.

```
    WATER OFF
  RESUME WATERING
NEXT SCHEDULED START
```
Version 2.0 and later
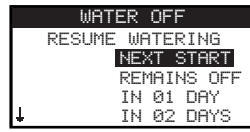
```
    WATER OFF
  RESUME WATERING
    NEXT START
   REMAINS OFF
    IN 01 DAY
    IN 02 DAYS
```
Version 2.13 and Newer

All currently active automatic schedule(s) and manually activated schedules and zones will turn off. Once the ⏻ WATER OFF button is pressed, all watering and Auxiliary operation will stop.

Step 2 – Press the ⌂ HOME button. Irrigation will resume at the next automatic scheduled start time.

Water Off

The EVOLUTION® controller will not run any watering schedules while the WATER OFF screen is displayed.

Step 1 – Press the ⏻ WATER OFF button.

All currently active automatic schedule(s) and manually activated schedules and zones will turn off. The EVOLUTION® controller will not run any schedules while the WATER OFF screen is displayed. The auxiliary schedules will continue to operate as planned.

Step 2 – Use the Up △ or Down ▽ arrows to assign the number of days until watering resumes. Select a delay of 1–14 days, NEXT START or REMAINS OFF. Press SELECT ✓ to enter or ⌂ HOME to cancel. Pressing SELECT will save your selection and take you back to the HOME screen.

```
    WATER OFF
  RESUME WATERING
    IN 05 DAYS
```
Prior to Version 2.13
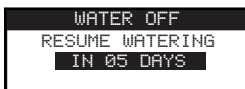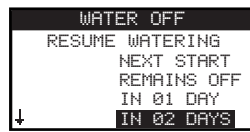
```
    WATER OFF
  RESUME WATERING
    NEXT START
   REMAINS OFF
    IN 01 DAY
    IN 02 DAYS
```
Version 2.13 and Newer

In the Water Off screen, there are three options that can be selected. Use the Up △ or Down ▽ arrows to make a selection.

DAY SELECTION (Example: IN 05 DAYS) – This option will keep all watering schedules from operating for the number of days selected. Watering will resume automatically after the delay ends. Press SELECT ✓ to activate this option.

NEXT START – This option will allow watering to resume at the next scheduled start time.

REMAINS OFF – This option will keep all watering schedules from operating. The watering will remain off until the user changes the value to NEXT START. Press SELECT ✓ to activate this option.

📝 **Note:** The red light will illuminate to indicate that the watering has been turned off.

Advanced Schedules and Functions

You can access the EVOLUTION® controller's advanced functions by pressing the ⬥ ADVANCED button and then pressing ✅ SELECT button to confirm. In the Advanced Functions, you can activate additional schedules, check and set runtimes and start times to all schedules in one screen, set schedule and zone details, assign   sensors to the schedules, perform diagnostics test, check firmware version and reset the controller to factory defaults.

📝 **Note:** At any point, you can return to the previous menu by pressing the Left ◀ button or return to the main screen by pressing the 🏠 HOME button.

Zone Runtimes

The Zone Runtimes function is where you can set any of the zones to any of the three schedules (A, B and C). You can then set any zone to a schedule by entering a runtime to its corresponding schedule column.

Step 1 – While in the ADVANCED menu, use the Up △ or Down ▽ arrows to select the ZONE RUNTIMES. Press SELECT ✅ to access.

Step 2 – Use the Up △ or Down ▽ arrows to select the zone you want to edit.

```
      ZONE RUNTIMES
        A♦     B♦    C
  01   00:05  OFF   OFF
  02   00:10  OFF   OFF
  03   00:05  OFF   OFF
```

Step 3 – Use the Left ◀ or Right ▷ arrows to navigate to the runtime you want to edit. Enter runtime using the Up △ or Down ▽ arrows. Moving to another parameter will save the changes as well as pressing the SELECT ✅ button.

Repeat Step 3 as necessary to assign runtimes to other schedules.

📝 **Note:** The maximum runtime that you can assign to a zone is 12 hours. Water Adjustment will not increase the runtime beyond 12 hours.

Step 4 – Repeat Steps 2 and 3 for the remaining zones and schedules as necessary.

Step 5 – To remove a zone from a schedule, set the runtime to OFF.

📝 **Note:** A schedule will also need a Start Time for the zone to be activated.

Zone Details

Step 1 – While in the ADVANCED menu, use the Up △ or Down ▽ arrows to select the ZONE DETAILS. Press SELECT ✅ to access.

Step 2 – Use the Up △ or Down ▽ arrows to select the zone you want edit. Press SELECT ✅.

Step 3 – Use the Up △ or Down ▽ arrows to select the ZONE DETAILS you want to edit.

```
        ZONE 01
  MV PUMP          ON
  CYCLE           OFF
  SOAK            OFF
```

Step 4 – Use the Right ▷ arrow to navigate to the parameter. Use the Up △ or Down ▽ arrows to modify its values. Press SELECT ✅ to save and select the next zone detail.

MV/PUMP – Set to ON if a master valve is used in conjunction with this zone. Connect the master valve relay or Pump Relay to MV PUMP terminals. If no master valve is used in conjunction with this zone, set to OFF (Default setting is ON).

CYCLE and **SOAK** – This function is used to break the zone's runtime into shorter cycles to allow the water to penetrate the soil and avoid runoff or wasted water.

The cycle time is the length of time the zone will run before entering a soak time.

The soak time is set as a delay between zone cycles.

The cycle and soak will repeat in sequential order until the total runtime for the zone has been met.

Schedule Starts

The Schedule Starts function allows you to view the three schedules with all four possible start times.

Step 1 – While in the ADVANCED menu, use the Up △ or Down ▽ arrows to select the SCHEDULE STARTS. Press SELECT ✓.

Step 2 – Use the Up △ or Down ▽ arrows to navigate to the row that the start time is in.

```
    ZONE RUNTIMES
    A●     B●     C
▶04:30A  07:45A  OFF
  08:00P   OFF    OFF
   OFF     OFF    OFF
```

Step 3 – Use the Left ◁ or Right ▷ arrows to navigate to start time you want to edit. You can also press SELECT ✓ until the desired start time is selected.

```
    ZONE RUNTIMES
    A●     B●     C
  04:30A  07:45A  OFF
  08:00P   OFF    OFF
   OFF     OFF    OFF
```

Step 4 – Use the Up △ or Down ▽ arrows to enter the desired start time. Moving to another parameter will save the changes as well as pressing the SELECT ✓ button.

Step 5 – Repeat Steps 2 and 3 to edit or add another start time.

Step 6 – Place the start time to OFF to remove.

📝 **Note:** The ● symbol indicates that the schedule is enabled. See **Set Schedule Starts**.

Schedule Details

The EVOLUTION® controller has three available watering schedules (A, B and C) and one Auxiliary schedule. Two additional Auxiliary Schedules can be added using the Smart Connect® Accessories.

Set Maximum Schedules

The maximum number of concurrently running schedules is set in Schedule Details. The default setting is set at 1 schedule. The auxiliary schedule is not included in the set maximum. You can set a maximum of 1–3 watering schedules to activate at the same time.

Step 1 – While in the ADVANCED/SCHEDULE DETAILS menu, use the Up △ or Down ▽ arrows to select MAX SCHEDULES. Press the Right ▷ arrow or SELECT ✓.

```
    SCHEDULE DETAILS
MAX SCHEDULES        1
SCHEDULE A           ▶
SCHEDULE B           ▶
SCHEDULE C           ▶
AUX 1                ▶
```

Step 2 – Use the Up △ or Down ▽ arrows to set the maximum schedules to activate concurrently. Press SELECT ✓ to save.

Review/Edit Schedule Details

Step 1 – While in the ADVANCED menu, use the Up △ or Down ▽ arrows to select SCHEDULE DETAILS. Press SELECT ✓.

```
    SCHEDULE DETAILS
MAX SCHEDULES        1
SCHEDULE A           ▶
SCHEDULE B           ▶
SCHEDULE C           ▶
AUX 1                ▶
```

Step 2 – Use the Up △ or Down ▽ arrows to select the schedule you want to edit. Press SELECT ✓.

Step 3 – Use the Up △ or Down ▽ arrows to select through the menu items you want to edit. Press SELECT ✓.

Step 4 – Use the Left ◁ or Right ▷ arrows to navigate to the parameter and use the Up △ or Down ▽ arrows to modify the values. Press SELECT ✓ to save.

Set Schedule Status – Select the schedule's mode. Place it in ENABLED (Active) or DISABLED (OFF).

Step 1 – Use the Up △ or Down ▽ arrows to navigate to the STATUS, then press the Right ▷ arrow or SELECT ✓.

Step 2 – Use the Up △ or Down ▽ arrows to ENABLE (turn on) or DISABLE (turn off) the schedule. Press SELECT ✓ to save.

Set Schedule Type

Choose Weekday, Odd, Even or Interval watering days.

Weekday Scheduling

Selecting Weekday scheduling will activate all 7 days of the week. You can disable any of the 7 days as a non-watering day.

Step 1 – While in the ADVANCED/SCHEDULE DETAILS menu, use the Up ▲ or Down ▼ arrows to select the Schedule you want to edit. Press SELECT ✓.

Step 2 – Use the Up ▲ or Down ▼ arrows to navigate to TYPE. Press the Right ▷ arrow or SELECT ✓.

```
     SCHEDULE A
STATUS      ENABLED
TYPE        WEEKDAY▶
RESTRICTIONS        ▶
MONTHLY ADJUST      ▶
```
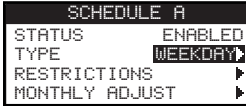
Step 3 – Use the Up ▲ or Down ▼ arrows to select WEEKDAY. Press the Right ▷ arrow or SELECT ✓.

```
        WEEKDAY
 S   M   T   W   T   F   S
 ▮   ●   ▬   ●   ●   ▬   ●
```

Step 4 – Use the Left ◁ or Right ▷ arrows to navigate within the days of the week. Use the Up ▲ or Down ▼ arrows to activate ● or turn off ▬ the day for watering. Repeat for all days of the week.
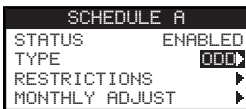
Odd Day Scheduling

Selecting Odd scheduling will activate all odd-numbered days in the calendar as a watering day. The 31st day of the month is not a watering day.

Step 1 – While in the ADVANCED/SCHEDULE DETAILS menu, use the Up ▲ or Down ▼ arrows to select the Schedule you want to edit. Press SELECT ✓.

Step 2 – Use the Up ▲ or Down ▼ arrows to navigate to TYPE. Press the Right ▷ arrow or SELECT ✓.

Step 3 – Use the Up ▲ or Down ▼ arrows to select ODD. Press SELECT ✓.

```
     SCHEDULE A
STATUS      ENABLED
TYPE        ODD▶
RESTRICTIONS        ▶
MONTHLY ADJUST      ▶
```
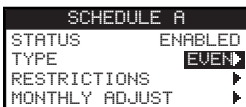
Even Day Scheduling

Selecting Even will activate all even-numbered days in the calendar as a watering day.

Step 1 – While in the ADVANCED/SCHEDULE DETAILS menu, use the Up ▲ or Down ▼ arrows to select the Schedule you want to edit. Press SELECT ✓.

Step 2 – Use the Up ▲ or Down ▼ arrows to navigate to TYPE. Press SELECT ✓.

Step 3 – Use the Up ▲ or Down ▼ arrows to select EVEN. Press the Right ▷ arrow or SELECT ✓.

```
     SCHEDULE A
STATUS      ENABLED
TYPE        EVEN▶
RESTRICTIONS        ▶
MONTHLY ADJUST      ▶
```

Interval Day Scheduling

Selecting Interval watering allows you to specify the number of days between watering. For example, selecting an interval of 3 will prompt the controller to water every 3rd day. Select interval from 1–31 days.

Step 1 – While in the ADVANCED/SCHEDULE DETAILS menu, use the Up ▲ or Down ▼ arrows to select the Schedule you want to edit. Press SELECT ✓.

Step 2 – Use the Up ▲ or Down ▼ arrows to navigate to TYPE. Press SELECT ✓.

Step 3 – Use the Up ▲ or Down ▼ arrows to select INTERVAL. Press SELECT ✓.

Step 4 – Use the Right ▷ arrow to navigate to WATERS EVERY designation. Modify using the Up ▲ or Down ▼ arrows. Press SELECT ✓ to save and advance to the next parameter.

```
       INTERVAL
WATERS EVERY 03 DAYS
CURRENT DAY   01

  WATERS ON LAST DAY
     OF INTERVAL
```

Step 5 – The CURRENT DAY designation represents the present day within the interval schedule. Enter 1 for first day, 2 for second day, 3 for third day, etc. Press SELECT ✓ to save. For example, if you want to water every 3 days, set the WATERS EVERY designation to 3. If you want the watering to occur tomorrow (the next day), set the current day to "2".

```
       INTERVAL
WATERS EVERY 03 DAYS
CURRENT DAY   02

  WATERS ON LAST DAY
     OF INTERVAL
```

Set Watering Restrictions

Restrictions function allows you to select the day and time frame you do not want any scheduled watering activity.

📝 **Note:** There is only one time frame that can be set and it will apply to all the restricted days for each schedule.

Restriction Days

Step 1 – While in the ADVANCED/SCHEDULE DETAILS menu, use the Up ▲ or Down ▼ arrows to select the Schedule you want to edit. Press SELECT ✓.

Step 2 – Use the Up ▲ or Down ▼ arrows to navigate to RESTRICTIONS. Press SELECT ✓.

Step 3 – Use the Up ▲ or Down ▼ arrows to navigate to RESTRICTION DAYS. Press SELECT ✓.

Step 4 – Use the Left ◁ or Right ▷ arrows to navigate through the days of the week. Use the Up ▲ or Down ▼ arrows to restrict watering ⬛. To activate watering, select ▬ for that day. Press SELECT ✓ to save.

```
   RESTRICTION DAYS
 S  M  T  W  T  F  S
 ☑  ▬  ✓  ▬  ▬  ▬  ▬

   TODAY IS THURSDAY
```

Restriction Time

Step 1 – While in the ADVANCED/SCHEDULE DETAILS menu, use the Up ▲ or Down ▼ arrows to select the Schedule you want to edit. Press SELECT ✓.

Step 2 – Use the Up ▲ or Down ▼ arrows to navigate to RESTRICTIONS. Press SELECT ✓.

Step 3 – Use the Up ▲ or Down ▼ arrows to navigate to RESTRICTION TIME. Press SELECT ✓.

Step 4 – Use the Up ▲ or Down ▼ arrows to select START or STOP. Press SELECT ✓. Use the Left ◁ or Right ▷ arrows to navigate between the hours, minutes, AM/PM. Use the Up ▲ or Down ▼ arrows to adjust the time. Press SELECT ✓ to save. The EVOLUTION® controller will not allow any schedules to activate between the start time and the stop time during restricted days.

```
   RESTRICTION TIME
START       10:00AM
STOP        03:00PM
```

📝 **Note:** Scheduled watering that continues into a restricted day will stop at the time the restriction starts and will not resume after the stop time.

Set Monthly Adjust

Use the monthly adjust function to allow EVOLUTION® to automatically increase or decrease your watering with respect to the seasons for all zones assigned to the schedule. During the winter and spring months, it may be necessary to decrease watering. In the summer months, it might be necessary to increase watering.

Step 1 – While in the ADVANCED/SCHEDULE DETAILS menu, use the Up △ or Down ▽ arrows to select the Schedule you want to edit. Press SELECT ✓.

Step 2 – Use the Up △ or Down ▽ arrows to navigate to MONTHLY ADJUST. Press SELECT ✓.

Step 3 – Use the Up △ or Down ▽ arrows to select the month you want to edit. Press SELECT ✓. Use the Up △ or Down ▽ arrows to enter the percentage you want your watering duration to increase or decrease. Press SELECT ✓ to save.

Repeat **Step 3** for the remaining months as necessary.

```
    MONTHLY ADJUST
  JANUARY        -50%
  FEBRUARY        ---
  MARCH           ---
  APRIL           ---
↓ MAY             ---
```

As an example, a runtime of 10 minutes with an adjustment of +50% will increase the actual runtime to 15 minutes. Similarly, an adjustment of -50% will decrease the runtime to 5 minutes.

📝 **Note:** Adjustment can be made from +150 to -95%, or OFF. "– – –" indicates no adjustment to the watering schedule.

Set Schedule as Grow In

Use the Grow In function to set the schedule to cycle watering for an extended period of time. This aids in the establishment of new landscape.

Step 4 – Use the Up △ or Down ▽ arrows to select the proper value. Press SELECT ✓ to save.

START – Enter the start time of the schedule.

END – Enter the end time of the schedule.

RUNTIME – Enter the duration each zone will run in a cycle. Set runtime in hours and minutes (HH:MM).

DELAY – Enter the duration between each cycle. Set delay in hours and minutes (HH:MM).

END AFTER – Enter the number of days the Grow In schedule will be active. Select from 1-90 days.

```
       GROW IN
  START        07:00AM
  END          05:00PM
  RUNTIME        00:05
  DELAY          00:20
  END AFTER    10 DAYS
```

For example, this Grow In schedule starts at 7:00am. Each zone in the schedule will run for 5 minutes. There will be a delay of 20 minutes before each zone will run for another 5 minutes. This cycle will continue until 5:00pm. The Grow In schedule will end and revert to the regular schedule in 10 days.

📝 **Note:** Restricted days will not affect the Grow In schedule. An activated rain sensor will keep the Grow In schedule from running. The rain delay feature will be ignored while the Grow In schedule is active.

Erase Schedule

Use the erase schedule function to reset the selected schedule. The schedule's status will be set to DISABLED (except for schedule A, it remains ENABLED) and the schedule TYPE set to WEEKDAYS. All other settings within the schedule will be set to OFF.

Step 1 – While in the ADVANCED/SCHEDULE DETAILS menu, use the Up △ or Down ▽ arrows to select the Schedule you want to edit. Press SELECT ✓.

Step 2 – Use the Up △ or Down ▽ arrows to navigate to ERASE SCHEDULE. Press SELECT ✓.

Step 3 – Use the Up △ or Down ▽ arrows to **Yes** to proceed to erase the schedule or **No** to cancel. Press SELECT ✓.

```
    ERASE SCHEDULE
  ARE YOU SURE?      NO
```

Set MV/Pump Delay

Use the MV/Pump Delay function to set a wait time between activating the master valve or pump, and activating the first zone in the schedule. This delay is usually used to allow the system enough time to build pressure for proper operation, or to fill the irrigation piping system with water.

Step 1 – While in the ADVANCED/SCHEDULE DETAILS menu, use the Up △ or Down ▽ arrows to select the Schedule you want to edit. Press SELECT ✓.

Step 2 – Use the Up △ or Down ▽ arrows to navigate to MV/PUMP DELAY. Press SELECT ✓.

Step 3 – Use the Up △ or Down ▽ arrows to adjust the delay time as necessary. Press SELECT ✓.

```
        SCHEDULE A
ERASE SCHEDULE        ▶
MV/PUMP DELAY     00:10
ZONE DELAY          OFF
```

Set Zone Delay

Use the Zone Delay function to set a wait time after a zone ends watering and before another zone is activated. This delay is usually used when the system is being fed by a well. The delay is used to allow the well enough time to recharge.

Step 1 – While in the ADVANCED/SCHEDULE DETAILS menu, use the Up △ or Down ▽ arrows to select the Schedule you want to edit. Press SELECT ✓.

Step 2 – Use the Up △ or Down ▽ arrows to navigate to ZONE DELAY. Press SELECT ✓.

Step 3 – Use the Up △ or Down ▽ arrows to adjust the delay time as necessary. The delay can be set between 10 seconds to 30 minutes in 10-second increments. Press SELECT ✓.

```
        SCHEDULE A
MV/PUMP DELAY       OFF
ZONE DELAY        00:10
MV/PUMP IN DELAY OFF
```

Set MV/Pump In Delay

Use the MV/Pump In Delay to set whether the master valve or pump is active during zone delays. The default is set to OFF.

Step 1 – While in the ADVANCED/SCHEDULE DETAILS menu, use the Up △ or Down ▽ arrows to select the Schedule you want to edit. Press SELECT ✓.

Step 2 – Use the Up △ or Down ▽ arrows to navigate to MV/PUMP IN DELAY. Press SELECT ✓.

Step 3 – Use the Up △ or Down ▽ arrows to set the MV/Pump In Delay to ON or OFF during zone delays. Press SELECT ✓.

```
        SCHEDULE A
MV/PUMP DELAY       OFF
ZONE DELAY          OFF
MV/PUMP IN DELAY  ON
```

Auxiliary Schedule

Set Status

Step 1 – Use the Up △ or Down ▽ arrows to select the Auxiliary Schedule you want to edit, then press SELECT ✓.

Step 2 – Use the Up △ or Down ▽ arrows to navigate to the STATUS, then press the Right ▷ arrow or SELECT ✓.

Step 3 – Use the Up △ or Down ▽ arrows to ENABLE (turn on) or DISABLE (turn off) the schedule. Press SELECT ✓ to save.

```
          AUX 1
STATUS          ENABLED
ACTIVE DAYS           ▶
START               OFF
RUNTIME             OFF
```

Set Active Days

Step 1 – Use the Up ▲ or Down ▼ arrows to select the Auxiliary Schedule you want to edit, then press SELECT ✓.

Step 2 – Use the Up ▲ or Down ▼ arrows to navigate to the ACTIVE DAYS, then press the Right ▷ arrow or SELECT ✓.

```
ACTIVE DAYS
 S  M  T  W  T  F  S
 ▨  ✓  ✓  ✓  ✓  ✓  ✓
```

Step 3 – Use the Left ◁ or Right ▷ arrows to navigate within the days of the week. Use the Up ▲ or Down ▼ arrows to activate ✓ or turn off ▬ the day for watering. Repeat for all days of the week.

```
ACTIVE DAYS
 S  M  T  W  T  F  S
 ▨  ✓  ▬  ✓  ✓  ▬  ✓
```

Step 4 – Press SELECT ✓ when finished.

Set Start Time

Step 1 – Use the Up ▲ or Down ▼ arrows to select the Auxiliary Schedule you want to edit, then press SELECT ✓.

Step 2 – Use the Up ▲ or Down ▼ arrows to navigate to START, then press the Right ▷ arrow or SELECT ✓.

Step 3 – Use the Up ▲ or Down ▼ arrows to enter the desired start time while using the Left ◁ or Right ▷ arrows navigate between hours and minutes.

Step 4 – Press SELECT ✓ when finished.

Set Runtime

Step 1 – Use the Up ▲ or Down ▼ arrows to select the Auxiliary Schedule you want to edit, then press SELECT ✓.

Step 2 – Use the Up ▲ or Down ▼ arrows to navigate to RUNTIME, then press the Right ▷ arrow or SELECT ✓.

Step 3 – Use the Up ▲ or Down ▼ arrows to enter the desired runtime. You can enter a maximum of 12 hours in 1-minute increments.

Step 4 – Press SELECT ✓ when finished.

Select the Zone for Auxiliary

Step 1 – Use the Up ▲ or Down ▼ arrows to select the Auxiliary Schedule you want to edit, then press SELECT ✓.

Step 2 – Use the Up ▲ or Down ▼ arrows to navigate to ZONE, then press the Right ▷ arrow or SELECT ✓.

Step 3 – Use the Up ▲ or Down ▼ arrows to select the Zone you want to use as the auxiliary terminal.

Step 4 – Press SELECT ✓ when finished.

Erase the Auxiliary Schedule

Step 1 – Use the Up ▲ or Down ▼ arrows to select the Auxiliary Schedule you want to edit, then press SELECT ✓.

Step 2 – Use the Up ▲ or Down ▼ arrows to navigate to ERASE SCHEDULE, then press the Right ▷ arrow or SELECT ✓.

Step 3 – Use the Up ▲ or Down ▼ arrows to select NO or YES at the confirmation prompt.

Step 4 – Press SELECT ✓ when finished.

Sensors

The Sensors function allows you to assign a rain sensor to each of the schedules. Schedules with a rain sensor assigned will not water when the sensor is activated.

Step 1 – While in the ADVANCED menu, use the Up △ or Down ▽ arrows to select the SENSORS. Press SELECT ✔.

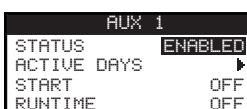**Step 2** – Use the Up △ or Down ▽ arrows to select the sensor you want to set.

Step 3 – Use the Left ◁ or Right ▷ arrows to select the schedule.

Step 4 – Use the Up △ or Down ▽ arrows to place a check mark under the desired schedules to assign the rain sensor. When the rain sensor is activated, EVOLUTION® will prevent schedules from operating. Replace the check mark with a dash to disable the sensor for that schedule.

```
        SENSORS
            A  B  C
RAIN        ☑  -  ✔▶
```

Use the Right ▷ arrows to access the sensor setup screen.

```
      RAIN SENSOR
DRYOUT DAYS      OFF

CURRENT STATE IS DRY
```
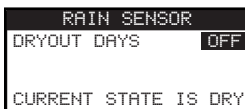
Step 5 – Select Rain Delay. Press SELECT ✔ or Right ▷ arrows to navigate to the parameter.

Step 6 – Use the Up △ or Down ▽ arrows to set a delay of 1-14 days or OFF. The rain delay is the waiting period after the rain sensor is detected to be dry.

Diagnostics

The EVOLUTION® controller provides a diagnostic function to check whether the system's zones are properly functioning. When activated, the controller will test each available zone. For Firmware versions prior to 1.14, EVOLUTION® will display dashes (--) for zones that are being tested and have not been tested, OK for zones working within the current draw range, OVERCRNT for zones drawing above the recommended current draw, or SHORT for zones that have a grounded circuitry.

```
    DIAGNOSTICS
ZONE TEST            ▶
```

```
   ZONE CURRENT TEST
MASTER VALUE       OK
ZONE 1       OVERCRNT
ZONE 2          SHORT
ZONE 3             --
```
Prior to Version 1.14

```
   ZONE CURRENT TEST
MASTER VALUE    0.178
ZONE 1          0.180
ZONE 2           OPEN
ZONE 3           OPEN
```
Starting Version 1.14
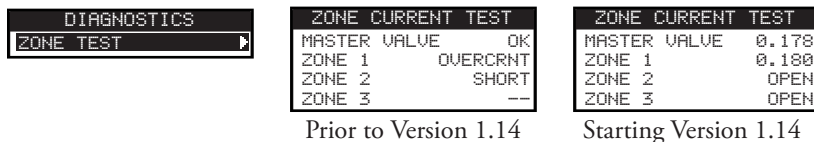
For Firmware versions 1.14 and greater, EVOLUTION® will display dashes (– –) for zones that have not been tested. It will display the current level in amps. OVERCRNT will be displayed for zones drawing above the recommended range, SHORT for zones that have a grounded circuitry, or OPEN if no current is measured.

Firmware Update

The EVOLUTION controller can be updated by downloading the latest controller firmware from Toro's website, loading the firmware onto a USB drive, and inserting it into the controller's USB port. There are two different methods to load the firmware depending on the version currently running on your EVOLUTION controller. To find your current version, at the controller navigate to and select FIRMWARE in the ADVANCED menu.

Check Firmware Version of Controller

The EVOLUTION® controller has the ability to be updated when new features and capabilities are made available. The updates are made with newer Firmware versions.

To check the controller's Firmware version:

Step 1 – While in the ADVANCED menu, use the Up △ or Down ▽ arrows to select FIRMWARE.

– Press SELECT ✔.
```
       FIRMWARE
CONTROLLER     01.09
```

– For Firmware version 2.13 or greater, you must use the Up △ or Down ▽ arrows to select the VERSION menu and then Press SELECT ✔.
```
       FIRMWARE
VERSION
UPDATE
```

Load New Firmware Version on USB Drive

The EVOLUTION® controller's firmware can easily be updated by downloading the latest software from www.toro.com/evolution/. A USB flash drive is needed for this procedure.

📝 Note: Although many USB flash drives may function well with the EVOLUTION® controller, the following USB specifications are recommended:

• USB Version 2.0 Compliant
• 1–8 GB Memory Size (Smaller memory size will perform faster.)
• FAT32 File System with 1 Logical Partition

Step 1 – Create a folder inside your USB flash drive with the name Evolution (/Evolution/).

Step 2 – Create a folder inside the Evolution folder with the name Firmware (/Evolution/Firmware/).

Step 3 – Go to the EVOLUTION® website, www.toro.com/evolution/, and download the most current firmware version. Unzip and save the firmware inside the Firmware folder in your USB flash drive.

Update Controller Firmware

Updating from prior to version 3.10

Step 1 – Turn Off the power to the controller.

Step 2 – Connect your USB flash drive into the EVOLUTION® USB port.

Step 3 – Press the Down ▽ arrow and turn On the power to the controller.
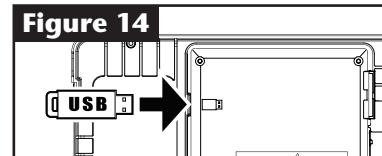
```
BOOT LOAD MODE V1.02
USB DRIVE ATTACHED
APP IMAGE FOUND
ERASE COMPLETE
WRITE COMPLETE
CYCLE POWER PLEASE
```

Figure 14

Step 4 – Wait until the "CYCLE POWER PLEASE" message is displayed.

Step 5 – Turn off the power to the controller momentarily before turning it back on.

The controller will then go through another update process that will take approximately 2 minutes to complete. Once update is completed, the controller resets and the process is complete.

```
SOFT BOOT MODE V1.00
USB DRIVE ATTACHED
WRITE:   33%
```

```
         SETUP
REGION          US/CAN
LANGUAGE       ENGLISH
DATE FORMAT MM/DD/YY
CLOCK          12 HOUR
TIME           12:01AM
DATE          01/01/13
```

Step 6 – Refer to "**Check Firmware Version of Controller**" section to verify the firmware version.

Updating from Version 3.10 and Later

Step 1 – Connect USB to the controller. See **Figure 14**.

Step 2 – Click the △ ADVANCED button. Use the Up △ or Down ▽ arrows to select FIRMWARE.

Step 3 – Select UPDATE and Press SELECT ✓. Select another UPDATE menu to start the process.

```
       ADVANCED
SCHEDULE DETAILS    ▶
SENSORS             ▶
ADD/REMOVE DEVICE   ▶
DIAGNOSTICS         ▶
FIRMWARE            ▶
```

```
       FIRMWARE
VERSION             ▶
UPDATE              ▶
```

```
       FIRMWARE
CONTROLLER   UPDATE ▶
```

```
       FIRMWARE

VERIFYING UPDATE
  33%
```

Step 4 – Controller displays the firmware version in the controller (current) and the version on the USB drive (update). If the update version is more up-to-date than the current version, press SELECT on YES. Firmware file is updated and a status bar will indicate the progress. Once finished, the controller does a soft reboot and the update process is complete.

```
       ADVANCED
UPDATE VERIFIED
CUR. VERSION 02.10
UPDATE VERSION 02.20

CONTINUE UPDATE   YES
```

```
SOFT BOOT MODE V2.20
USB DRIVE ATTACHED
WRITE: 33%
```

```
         SETUP
REGION          US/CAN
LANGUAGE       ENGLISH
DATE FORMAT MM/DD/YY
CLOCK          12 HOUR
TIME           12:01AM
DATE          01/01/13
```

Step 5 – Refer to "**Check Firmware Version of Controller**" section to verify the firmware version.

Factory Reset

Select this function to reset the controller to the factory default parameters. Schedule B, C and Auxiliary will be disabled and all of their parameters will be cleared or set to OFF. Schedule A will be set with a WEEKDAY schedule with all 7 days active. It will have one start time set to OFF and all zone runtimes set to OFF.

```
    FACTORY RESET
RESET TO FACTORY
DEFAULTS?        YES
```
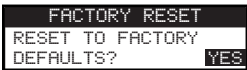
Help/Setup

Alerts

The EVOLUTION® controller always checks the system for proper function and it will provide feedback if it detects any system abnormality. The Alerts menu allows you to view and clear detected system faults. The date and time of the alert is noted.

Alert Listings

Freeze Hold - EVOLUTION® detected temperatures below the set FREEZE OFF temperature when the controller tried to irrigate. (Only available if Rain/Freeze or Weather sensor is connected).
Short - EVOLUTION® detected a short in the zone.
Overcurrent - EVOLUTION® detected an over current in the zone. Over current occurs when a terminal or combinations of terminals exceeded the recommended current draw rating.
Low Battery - EVOLUTION® detected no battery installed or the battery's power is low. Once the Low Battery alert is cleared, it will not display again unless a Factory Reset is performed or the newly installed battery runs low again.
Low A/C Power - EVOLUTION® detected low or no A/C power.
Communication Error - EVOLUTION® encountered a communication error with the output zones.

Clearing an Alert

You can clear an Alert individually or use the CLEAR ALL command to erase them all.

Step 1 – Press 🔴 HELP/SETUP.

Step 2 – Use the Up 🔺 or Down 🔻 arrows to select the Alerts. Press SELECT ✅.

Step 3 – Use the Up 🔺 or Down 🔻 arrows to select individual alerts or CLEAR ALL. Press SELECT ✅.

```
         ALERTS
CLEAR ALL            ▶
LOW BATTERY          ▶
```

Step 4 – Use the Up 🔺 or Down 🔻 arrows to confirm (Yes) or cancel (No). Press SELECT ✅.

Local Contact

This option is available only when your local irrigation service provider or dealer has programmed the local contact information in the controller using the Evolution Scheduling Advisor™ software (visit toro.com/Evolution).

Toro Contact
Access Contact Toro to get the latest contact information.

Step 1 – Press 🔴 HELP/SETUP.

Step 2 – Use the Up 🔺 or Down 🔻 arrows to select the Alerts. Press SELECT ✅.

```
       TORO CONTACT
US +1(800)367-8676
TORO.COM/EVOLUTION
FOR GLOBAL SUPPORT
SEND EMAIL TO
EVOLUTION@TORO.COM
```

Set Time/Date

Step 1 – Press the (?) HELP/SETUP button.

Step 2 – Use the Up △ or Down ▽ arrows to navigate to SET TIME/DATE. Press SELECT ✓.

Step 3 – Use the Up △ or Down ▽ arrows to select TIME or DATE. Navigate to the TIME or DATE parameters using the Right ▷ arrow or SELECT ✓.

Step 4 – Use the Up △ or Down ▽ arrows to modify the TIME's Hour and Minutes or the DATE's Month, Day and Year (Day, Month and Year for International Format).

```
     SET TIME/DATE
TIME          11:25AM
DATE          05/01/13
```

Step 5 – Press SELECT ✓ to save the changes.

Load From USB

Load from USB function is used to retrieve schedules saved in a USB Flash drive.

📝 **Note:** Although many USB flash drives may function well with the EVOLUTION® controller, the following USB specifications are recommended:

- USB Version 2.0 Compliant
- 1–8 GB Memory Size (Smaller memory size will perform faster.)
- FAT32 File System with 1 Logical Partition

Step 1 – Plug your USB Flash drive into the EVOLUTION® USB port located at the back of the control panel. See **Figure 2** on page 2.

Step 2 – Press the (?) HELP/SETUP button.

Step 3 – Use the Up △ or Down ▽ arrows to navigate to LOAD FROM USB. Press SELECT ✓. The EVOLUTION® controller will list all available schedule files. Use the Up △ or Down ▽ arrows to navigate to the desired schedule. Use the Right ▷ arrow or SELECT ✓ to load the schedule.

Step 4 – Use the Up △ or Down ▽ arrow to select YES from the confirmation window.

```
        HELP/SETUP
ALERTS               ▶
CONTACT TORO         ▶
SET TIME/DATE        ▶
LOAD FROM USB        ▶
SAVE TO USB          ▶
```

```
      LOAD FROM USB
ARE YOU SURE?      YES
```
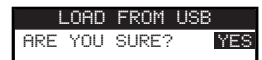
Save to USB

Save to USB is used to save all the schedules that are programmed in the controller so it can be reloaded if accidentally erased. The Save to USB function is also helpful when loading multiple controllers with the same schedule programs.

📝 **Note:** Although many USB flash drives may function well with the EVOLUTION® controller, the following USB specifications are recommended:

- USB Version 2.0 Compliant
- 1–8 GB Memory Size (Smaller memory size will perform faster.)
- FAT32 File System with 1 Logical Partition

Step 1 – Plug your USB Flash drive into the EVOLUTION® USB port located at the back of the control panel. See **Figure 2** on page 2.

Step 2 – Press the (?) HELP/SETUP button.

Step 3 – Use the Up △ or Down ▽ arrows to navigate to SAVE TO USB. Press SELECT ✓.

```
        HELP/SETUP
ALERTS               ▶
CONTACT TORO         ▶
SET TIME/DATE        ▶
LOAD FROM USB        ▶
SAVE TO USB          ▶
```

Step 4 – Use the Up △ or Down ▽ arrow to select YES from the confirmation window.

```
       SAVE TO USB
ARE YOU SURE?      YES
```

The EVOLUTION® controller will automatically save the schedules in the USB drive under the name format "EVOLUTIONMMDDHHMM.evo" (MM = Month, DD = Day, HH = Hour and MM = Minute).

Preferences

Accessing the Preferences Menu

Step 1 – Press the ? HELP/SETUP button.

Step 2 – Use the Up △ or Down ▽ arrows to navigate to PREFERENCES. Press SELECT ✓.

```
       PREFERENCES
LANGUAGE      ENGLISH
CONTRAST           00
CLOCK         12 HOUR
DATE FORMAT MM/DD/YY
BEGIN WEEK     SUNDAY
```

Set Language

You can set the user interface to display in English (default), Spanish, French, German, Italian or Portuguese.

Step 1 – While in the PREFERENCES menu, use the Up △ or Down ▽ arrows to navigate to LANGUAGE. Press SELECT ✓.

Step 2 – Use the Up △ or Down ▽ arrows to navigate to your preferred language. Press SELECT ✓.

Set Display Contrast

Step 1 – While in the PREFERENCES menu, use the Up △ or Down ▽ arrows to navigate to CONTRAST. Press SELECT ✓.

Step 2 – Use the Up △ or Down ▽ arrows to your preferred display contrast. Positive (+) setting will increase the contrast and negative (–) setting will decrease the contrast. Once you find the desired contrast, press SELECT ✓.

Set Clock Format (12-Hour/24-Hour)

Step 1 – While in the PREFERENCES menu, use the Up △ or Down ▽ arrows to navigate to CLOCK. Press SELECT ✓.

Step 2 – Use the Up △ or Down ▽ arrows to select 12-Hour (default) or 24-Hour format. Press SELECT ✓.

Set Date Format

Step 1 – While in the PREFERENCES menu, use the Up △ or Down ▽ arrows to navigate to DATE FORMAT. Press SELECT ✓.

Step 2 – Use the Up △ or Down ▽ arrows to select Month/Day/Year (MM/DD/YY) (default) or Day/Month/Year (DD/MM/YY) format. Press SELECT ✓.

Set the Beginning of the Week

Step 1 – While in the PREFERENCES menu, use the Up △ or Down ▽ arrows to navigate to BEGIN WEEK. Press SELECT ✓.

Step 2 – Use the Up △ or Down ▽ arrows to select SUNDAY (default) or MONDAY as your starting point of the week. Press SELECT ✓.

Set Temperature Format (Starting Version 2.13)

Step 1 – While in the PREFERENCES menu, use the Up △ or Down ▽ arrows to navigate to TEMPERATURE. Press SELECT ✓.

Step 2 – Use the Up △ or Down ▽ arrows to select °F (Fahrenheit) or °C (Celsius) format. Press SELECT ✓.

Set Sound Option (Starting Version 2.13)

Step 1 – While in the PREFERENCES menu, use the Up △ or Down ▽ arrows to navigate to SOUND. Press SELECT ✓.

Step 2 – Use the Up △ or Down ▽ arrows to turn OFF or ON the sound during key press. Press SELECT ✓.

Set Length Unit (Starting Version 2.13)

Step 1 – While in the PREFERENCES menu, use the Up △ or Down ▽ arrows to navigate to LENGTH UNIT. Press SELECT ✓.

Step 2 – Use the Up ▲ or Down ▼ arrows to select INCHES or METERS. Press SELECT ✓.

Set Volume Unit (Starting Version 2.13)

Step 1 – While in the PREFERENCES menu, use the Up ▲ or Down ▼ arrows to navigate to VOLUME UNIT.
Press SELECT ✓.

Step 2 – Use the Up ▲ or Down ▼ arrows to select GPM (Gallons/Minute) or LPM (Liters/Minute). Press SELECT ✓.

Home Screen Messages

A Title Bar

| 🔋 HOME |

The battery icon indicates that the controller's VAC power is off and the timer is running under battery power.

📝 **Note:** The 9-VDC battery is used to allow programming, but will not activate any zones when the VAC power supply is off.

```
🔋        HOME
01:09PM       WED
              01/08
↓NEXT START   06:00AM
  ALERT: PRESS HELP
```
A
B
C

B Main Display

01:09PM TUES 01/08	Displays the current time, day of the week and date.
SCHEDULE A/B/C OR AUX	Indicates which schedule (A, B or C) or auxiliary is associated with the displayed status. If only Schedule A is active, EVOLUTION® will not display the Schedule "A", "B" and "C" or AUX. If an ↓ is displayed to the left of the schedule name, then additional schedules are active and can be viewed by pressing the Down ▼ arrow.
↓NEXT START 06:00AM	📝 **Note:** The scroll down arrow ↓ indicates that additional information are available. Use the Down ▼ arrow to reveal the additional message(s).
SCHEDULE A GROW IN	Indicates the displayed schedule is set as Grow In. The Grow In option is set in the Schedule Details under the Advanced menu.
NOT WATERING TODAY	Indicates that the displayed schedule will not water that day.
NOT ACTIVE TODAY	The displayed auxiliary schedule (Aux) will not activate that day.
ZONE 1 ▲00:05▶	Indicates that Zone 1 is active with a 5 minute remaining runtime. Pressing the Right ▶ arrow will deactivate the running zone and activate the next zone (if additional zones are scheduled) in the schedule regardless of the remaining runtime.
WATERING COMPLETE	The displayed schedule completed its watering cycle.
SCHEDULE COMPLETE	The displayed auxiliary schedule (Aux) completed its cycle.
NEXT START 06:00AM	Indicates the next start time of the displayed watering or auxiliary (Aux) schedule.
DELAY 00:05▶	Indicates that the controller is performing a zone delay before the next zone in the schedule is activated. The zone delay is set in the Schedule Details under the Advanced menu.
SOAK 00:05▶	Indicates that the active zone is performing a soak delay before continuing operation. The soak delay is set in the Zone Details under the Advanced menu.
RAIN DELAY	Indicates that the rain sensor is activated and the schedule is delayed until the rain sensor dries up.
RAIN DELAY 02 DAYS▶	If Dryout Days is set, the controller will indicate Rain Delay until the number of Dryout Days are completed. Pressing the Right ▶ arrow will deactivate the Dryout Days, and the Schedule(s) will continue normal operation.
FREEZE HOLD	Indicates that the measured temperature from the rain/freeze sensor or weather station is the same of less than the set value in the FREEZE OFF menu parameter.
ET HOLD	Indicates that all scheduled watering are placed on hold due to weather condition measured by the weather station. Scheduled watering will resume once the weather condition returns to conditions that permits watering.

C Message Bar

ALERT: PRESS HELP	Indicates that the controller detected a condition that needs user attention. Check the alert messages in the Alerts menu under the Help/Setup function. For a list of the Alert messages and description, please refer to the **Alerts** section.
WATER OFF 04 DAYS	Indicates that scheduled watering has been suspended for the indicated days. Watering can be turned off from 1–14 days, Remains Off or will operate at the next scheduled start.
SYSTEM OK	Indicates that the system is functioning as expected.

Specifications

Cabinet Dimensions:
• 11.25" W x 7.75" H x 4.5" D (286 x 197 x 114 mm)

Power Specifications:
• US and Canada

  Internal Transformer, Class 2, UL Listed, CSA Certified (or equivalent)

  Input: 120 VAC, 60 Hz

  Output: 24 VAC, 60 Hz, 1.25A

• Outside US and Canada

  Internal Transformer, Meets TUV, VDE and SAA Requirements

  Input: 220–240 VAC, 50/60 Hz

  Output: 24 VAC, 50/60 Hz, 30 VA

• Total Maximum Load:
  1.0A @ 24 VAC

Surge Protection

  1.5 KV common mode; 1.0 KV normal mode

Battery Type:
• 9V Alkaline (not included)

EPA Water Sense Qualification Criteria

EVOLUTION® controller settings and accessories for EPA WaterSense® program qualification test:

Program 1	**Program 2**	**Program 3**
Zone #1 = 6 Min	Zone #3 = 9 Min	Zone #5 = 21 Min
Zone #2 = 6 Min	Zone #4 = 6 Min	Zone #6 = 17 Min
Start Times = 1:00am, 2:00am	Start Time = 3:00am	Start Times = 4:00am, 6:00am, 8:00am
Skip Days = 0 (Water Every Day)	Skip Days = 0 (Water Every Day)	Skip Days = 0 (Water Every Day)

Accessories:
• Smart Connect™ (Model No. EVO-SC)
• Smart Connect™ Weather Sensor (Model No. EVO-WS)

Certified by
ICC-ES
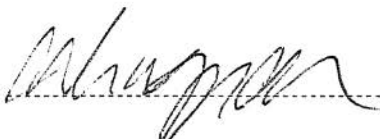
**EPA WaterSense® Certified
when used with Smart Connect™**

UK	EC Declaration of Conformity to:	Directives		Standards	EN55022:2010 (B)
FR	Déclaration de conformité CE à :	La directive		Normes	EN55024:2010 (B) EN61000-3-2 (2006) +A1 +A2
GR	EG - Konformitätserklärung an:	Richtlinien	2004/108/EEC	Standards	EN61000-3-3 (2008)
PO	Declaração de conformidade CE a:	A diretiva		Normas	
					EN60730-1:2011 4th Ed
FI	EU – yhdenmukaisuusilmoitus	Direktiiveille		Standardeille	
DU	EG - konformiteitsverklaring met:	Richtlijn	2006/95/EEC	Normen	
NO	EF - erklæring vedrørende samsvar med:	Retningslinjer		Standarder	
SW	EU - deklaration om överensstämmelse	Direktiv		Standarder	EN 50581:2012
SP	Declaración de conformidad de la CE a:	La directiva		Normas	
IT	Dichiarazione CE di conformità a:	Direttive	2011/65/EU	Standard	
DA	EU - konfomitetserklæring med:	Direktiver		Standarder	

Manufacturer Fabricant Hersteller Fabricante Valmistaja Fabrikant Fabrikant Tillverkare Fabricante Produttore Fabrikant	**The Toro Company Irrigation Division 5825 Jasmine Street Riverside, CA 92504 USA (951) 688-9221**	Model Number Numéro du modèle Modellnummer Número de modelo Mallinumero Modelnummer Modellnummer Modellnummer Número de modelo Numero di modello Modelnummer	**EVO-xy-EU Where x = 4, 8, 12. or 16 y = OD (outdoor), or ID (Indoor)**
Product Name Nom du produit Produktname Nome do produto Tuotenimi Produktnaam Produktnavn Produktnamn Nombre del producto Nome prodotto Produktnavn	**EVOLUTION Electronic Controller series**	Supplementary Information Information additionnelle Ergänzende Angaben Informação adicional Lisätietoja Aanvullende informatie Tilleggsopplysninger Tilläggsinformation Información adicional Informazioni supplementari Supplerende oplysninger	

Signature, Title, Date Signature, Titre, Date Unterschrift, Titel, Datum Assinatura, Título, Data Allekirjoitus, Arvo, Päiväys Handtekening, Titel, Datum Handtekening, Titel, Datum Signatur, Tittel, Dato Underskrift, Titel, Datum Firma, Título, Fecha Firma, Qualifica, Data	*[signature]*	*Compliance Manager,* Title	July 30, 2013 Date

Electronic Compatibility

US and Canada: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Subpart J of 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 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:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio/TV technician for help.

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 # 004-000-00345-4.

Outside US and Canada: This is a CISPR 22 Class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures. Each stations can activate up to two solenoids.

This product, utilizing a Class 2 transformer tested to UL1585, satisfies the requirements of a Class 2 Power Source as defined in the NFPA 70 (NEC), Article 725.121(A)(3).

Australian Consumer Warranty Statement

This product comes with a manufacturer's guarantee against defects in material and workmanship when used for its intended purpose. Our obligation under this guarantee is limited to the repair or replacement of the product at our discretion for the period stated. In the event of a claim, you must immediately cease using the product and return the product, together with your proof of purchase and an explanation of the fault to the store you purchased it from. All costs associated with the return of the product are the purchasers' responsibility. To process the warranty, the retailer must contact Toro Australia via their representative or the phone number listed below. Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure. Toro Australia Pty Ltd, 53 Howards Road, Beverley SA 5009 1300 130 898, info.au@toro.com

Toro Contact Information

For support in the United States or Canada, call 1-800-367-8676 or visit www.toro.com/evolution.
For global support, send e-mail to evolution@toro.com or visit www.toroevolution.com.