

## Troubleshooting Guide

Problem	Potential Causes	Suggested Solutions
Display is blank	Dead or missing battery	Replace Battery
Display shows watering, but sprinklers do not come on	Improper initial set-up	Remove batteries from controller when connected to pressurized valve. Reconnect batteries. Unit will reset.
	Main water supply is off	Operate valve manually to verify water pressure
	Incompatible solenoid (or added solenoid is improperly connected)	Verify that solenoid connected is a 9-volt DC latching style. 24-volt AC solenoids will not work. Double check wiring connections. The solenoid should make a "click" noise when activating and deactivating.

### Other important usage notes:

- Connect only quality 9-volt alkaline batteries. Manufacturer not responsible for leakage or corrosion caused by inferior batteries.
- Check batteries once annually. Seasonal replacement in spring is good insurance toward reliable operation.
- Seal battery compartment tightly.
- Disposed of used / discharged batteries properly.

For Technical and Specification Support, visit [www.TheSource-Online.com](http://www.TheSource-Online.com)

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Manufactured in Italy

## GETTING STARTED

### Connecting The Battery Zone To The Valve

To use Battery Zone with a standard valve, you will need to remove the 24 volt AC coil normally supplied by the manufacturer and use a 9-volt latching solenoid. In most cases, this will be as easy as threading off the solenoid on the valve and threading on the solenoid that is attached to the Battery Zone. *The battery zone only operates 9 volt dc latching solenoids, do not attempt to connect to standard 24 volt ac solenoids.*

### Solenoids & Valve Compatibility

The 9-volt DC solenoid on the Battery Zone is directly compatible with the solenoid thread pattern of popular brands of valves including Irritrol®, Lawn Genie®, Toro®, K-Rain®, Nelson®, Orbit®, and others. This allows the solenoid and controller to be added to these valves in a matter of seconds.

For installations with a Rain Bird® DV Series or ASVF Series valve, an adapter is provided to connect these units to the Battery Zone. For use with other brands of valves, you'll need to purchase a 9-volt DC latching solenoid from that brand which can then be connected to the Battery Zone controller. *The battery zone only operates 9 volt dc latching solenoids, do not attempt to connect to standard 24 volt ac solenoids.*

When removing the solenoid supplied with the Battery Zone and connecting another brand's 9-volt latching solenoid, be sure to match correctly the positive and negative wire colors for proper polarity. Latching solenoids will not work if polarity is reversed.

**Note:** *Manufacturer has verified operation with noted valves in a laboratory setting under normal working pressure. Proper operation with all models / styles and installation configurations is not guaranteed and should be verified on-site.*

### Installing the Batteries

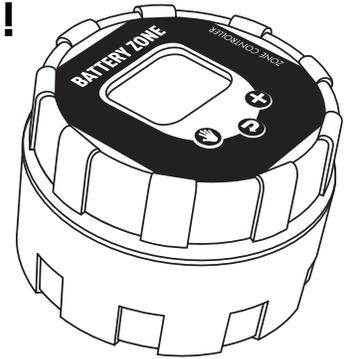
Do not install batteries until the Battery Zone has been connected to a pressurized electric valve. When batteries are installed, the unit will reset itself, establishing the correct position of the solenoid plunger for automatic control.

# BATTERY ZONE

## BZ-100 Battery Powered Irrigation Controller

### No Power? No Problem!

With the Battery-Zone, you can make a standard solenoid-operated valve "fully automatic" without need for electric power and complicated wiring.



### The Battery-Zone is perfect for:

- Adding automated watering to areas where power is not readily available
- Retrofitting manual systems to automatic operation, or working around existing bad wiring
- Converting Irritrol®, Rain Bird®, Toro®, K-Rain®, Orbit® and other brand valves to battery-powered automatic operation

To install the battery, unthread the back half of the Battery-Zone's case. Snap the battery into the receptacle. Dry any accumulated moisture inside the case. Reseal the case tightly.

The Battery Zone uses two standard 9-volt alkaline batteries (not included) to power the controller's display and to actuate automatic and manual cycles. In a typical application, the batteries will last for one or two full irrigation seasons.

**Note:** *when one battery is removed, unit will retain the current program. This allows the batteries to be changed one-at-a-time without loss of program. Please dispose of used and discharged batteries through proper waste disposal and recycling methods.*

### Mounting in the Valve Box

The Battery Zone incorporates a mounting clip that can be used if desired. A protective rubber cap is provided and is used to prevent debris from accumulating on the face and buttons.

### Connecting a Rain Sensor

A standard micro-switch-based rain sensor (with expanding discs) can be connected to the Battery Zone to prevent operation during periods of rainy weather. Be sure to mount the rain sensor outside of the area being watered by sprinklers.

To connect a sensor, cut the red wire loop on the side of the Battery Zone in the middle. Connect one wire to one lead from the sensor and the other wire to the second lead from the sensor. Secure connections with waterproof connectors. You can mount the sensor up to 100' from the Battery Zone. If you plan to bury the wire leading to the sensor, use only direct-burial approved cable. (Leave the red cable loop untouched if you do not plan to connect a sensor.)

When the connected rain sensor is active (indicating wet weather conditions) and is preventing automatic operation, a small rain cloud icon will appear on the left side of the Battery Zone's display.

# PROGRAMMING FOR AUTOMATIC WATERING

You'll need to set up four things to create an automatic watering schedule:



1. The current time and day of the week.
2. The time you would like watering to start (called the Start Time)
3. The length or duration of watering (called the Run Time)
4. The days of the week watering needs to occur (called the Day Schedule)

Three buttons are used for entry of program data:

- The **←** button allows you to navigate on the screen, move to other screens and confirm entries.
- The **+** button allows you to modify or increase the value or data.
- The **☞** button is used for setting up the watering calendar and to come back to the prior screen. The **☞** button is also used for manual operation.

## Setting the Current Time and Day of the Week

Before starting with programming, make sure the controller has connected to a pressurized valve. Then remove and replace the batteries to reset the controller. This allows the controller to properly orient itself to control the valve.

Once batteries are connected, the display will appear with the minutes position flashing. Let's assume we want to set the controller to a current local time of 9:45AM.



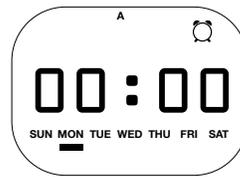
- Press the **+** button to increase the minutes to the current minutes (for the example, set to 5)
- Press the **←** button to navigate to the next setting. Press the **+** button to increase the ten minutes (for the example, set to 4.)



- Press the **←** button to navigate to the hour.
- Press the **+** button to increase the value. (for the example, set to 9.)
- Press the **←** button to navigate to the tens of hours. Use the **+** button to change, if needed. Note that this controller uses Military Time (24 hour clock), so 3PM local time is entered as 15:00.)



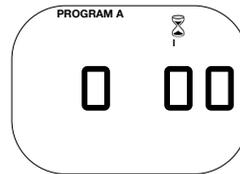
- Press the **←** button to navigate to the days of the week. A bar under the day will illuminate. Press the **+** button to navigate to the current day of the week. Press the **←** button to confirm and save and navigate to the next operation.



## Setting Watering Start Time

Once you have set the current time /day, the next screen will allow you to set the watering start time. A small alarm clock icon will illuminate in the upper right corner of the display. This indicates you are on the start time screen.

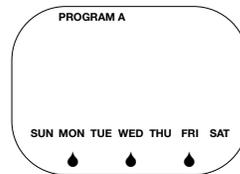
Press the **←** button and the minutes will flash, use the **+** button to set it to the correct value. Use the same basic steps to enter the hour that watering should commence. Remember that the controller uses Military Time (24-hour clock) so afternoon starts should be entered accordingly.



## Setting Run Time (Length of Watering)

When on this screen, an hourglass icon will appear in the upper right of the display. The controller defaults the run time to OFF. Pressing the **←** button will activate a

watering run time of 0:00. Use the **←** and **+** buttons to increase the run time to the desired value in hours and minutes. (Entering 1:20 will be a run time of 1 hour and 20 minutes).

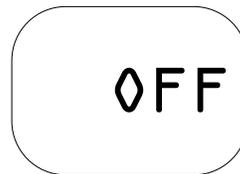


## Setting Active Watering Days

When on this screen only the day schedule will appear along the bottom of the display. To select watering active watering days during the week, press the **←** button and the bar under the day being programmed illuminates. Press the **+** button to move

the bar under the day you wish to program. Use the **☞** button to illuminate a water drop to select watering for a specific day. (Pressing the **☞** button toggles the water drop on/off) When day schedule has been set, press the **←** button to confirm settings and come back to

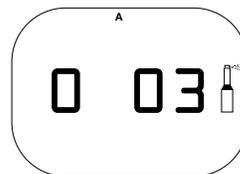
# MANUAL FUNCTIONS



## System Off

This function is used when you wish to prevent any automatic watering for an indefinite period. System off is often used during rainy weather or during the off-season when irrigation is not required.

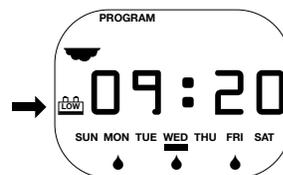
Pressing the **+** button will allow you to toggle from System Off to Automatic Operation. When controller is in System Off, the display reads OFF instead of the current time.



## Manual Operation / Manual Watering

Press the **☞** button to start a manual cycle. The display will enter manual mode. The default run time is three minutes. Press the **+** button to increase run time (if desired) and then the **←** button to confirm.

After 20 seconds, the controller will activate the entered watering time. The display will count down the watering in process and a sprinkler icon will appear indicating irrigation is active. To cancel a manual cycle, press the **☞** again.



## Battery Life Indicator

You can view the status of the batteries without removing them from the controller by viewing the indicator on the left side of the display. When indicator indicates LOW, replace batteries. Note: When batteries are low, display may still illuminate, but

controller will not have enough power to activate valve.