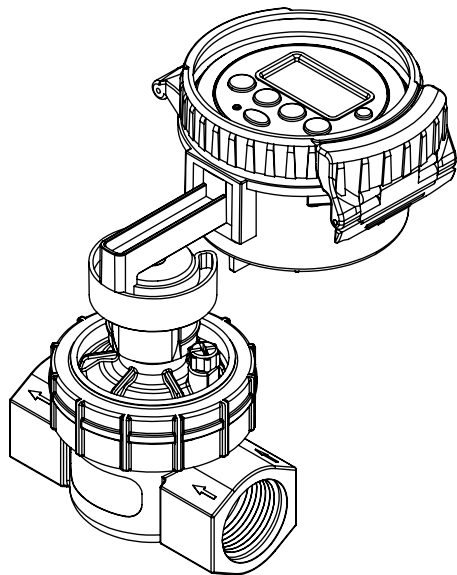


Battery Operated **SPRINKLER TIMER**

with Inline Valve

- No external power source needed
- Ideal for remote locations and drip irrigation
- Full waterproof construction
- Easy-Set Logic™ Programming

MODEL 96840
PN 96840-24 rC



Orbit® Irrigation Products, Inc.
North Salt Lake, UT 84054
www.orbitonline.com
1-800-488-6156
1-801-299-5555

Help: Before returning this sprinkler timer to the store, contact Orbit® Technical Service at: 1-800-488-6156 or 1-801-299-5555.

Listings: The sprinkler timer complies with UL-1951. Appropriate international models are CE® approved.

Notice: The information in this manual is primarily intended for the user who will establish a watering schedule and enter that schedule into the sprinkler timer. This product is intended to be used as an automatic sprinkler timer to be used near the valves, typically underground in a valve box, as described in this manual.

TABLE OF CONTENTS

Buttons, Dial and Display	2
Install Batteries	4
Programming your Timer	5
Additional Features.....	6
Installing the Valve.....	8
Connecting the Timer	10
Glossary of Terms	11
Troubleshooting	12

BUTTONS, DIAL AND DISPLAY



Buttons

- A** Toggle between Programs A and B
- B** Clear settings or cancel events
- C** Decrease value
- D** Select or increase value, or access RAIN DELAY mode
- E** Move cursor or toggle
- F** Access MANUAL WATERING mode
- G** Reset all timer settings

Dial

OFF

All timer functions are OFF

AUTO

Timer is set for automatic operation and will only water in this dial position

SET TIME

Set the time of day

SET DATE

Set the year, month and day

START TIMES

Set start times for Programs A and B

HOW OFTEN

Set the days or interval you want to water

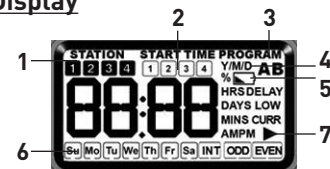
HOW LONG

Set station run times (0 to 240 minutes)

WATER BUDGET

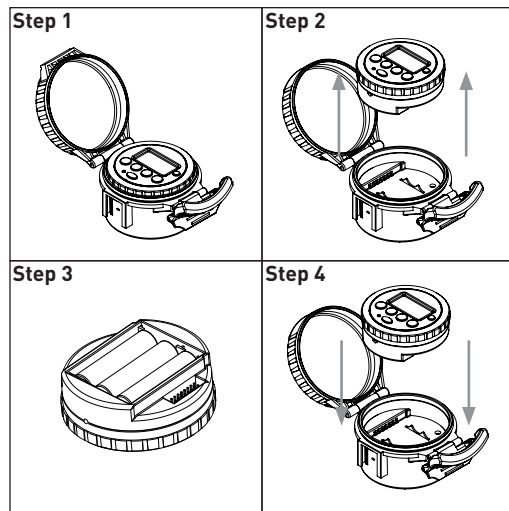
Seasonal Adjustment - change station run times all at once - 10% to 200%

Display



- 1** Shows current station while programming or watering
- 2** Shows current start time while programming
- 3** Displays active program(s) while programming or watering
- 4** Y=Year, M=Month, D=Day for setting date
- 5** Indicates low batteries (replace batteries if showing)
- 6** Indicates day of week and watering days selection
- 7** Indicates that more options are available for that dial position by pressing the ► button

INSTALL BATTERIES



Step 1

Open cap

Step 2

Separate program pod from base

Step 3

Insert 3 AA batteries as indicated in the battery compartment

Step 4

Return program pod to base

Note: During battery changes, programming will be preserved for 30 seconds.

PROGRAMMING YOUR TIMER

Step 1

Press reset button.

Step 2–Set Time

Turn the dial to **SET TIME**.

Press **+** or **-** to set the current time.

To quickly switch between AM or PM press **▶**.

Step 3–Set Date

Turn the dial to **SET DATE**.

Press **+** or **-** to set the current year then press **▶**.

Press **+** or **-** to set the current month then press **▶**.

Press **+** or **-** to set the current day.

Step 4–Start Times

Turn the dial to **START TIMES**.

Press **A/B** to select the desired program.

NOTE: Use program B only if you want to schedule watering independent of Program A.

Press **+** or **-** to set the desired start time.

If more cycles are desired then press **▶** and set another start time (up to 4).

To delete a start time press **X**.

NOTE: If start times overlap then the second start time will water after the first is finished.

Step 5–How Often

Turn the dial to **HOW OFTEN**.

Press **A/B** to select the desired program.

PROGRAMMING YOUR TIMER

Press to move to the desired days to water: select either days of the week, interval (every 1 to 32 days), or odd/even days.

Press to select your option(s).

If INT is chosen press or to change interval.

Press or to deselect an option.

Step 6–How Long

Turn the dial to **HOW LONG**.

Press to select the desired program.

Press to select the desired station.

Press or to set the run time (0 to 240).

Repeat for other stations if needed.

Step 7–Auto

Turn the dial to **AUTO**.

The set program(s) will run automatically.

Manual Watering

Press to select only A or B program.

Press while dial is in the **AUTO** position.

Press or to set the run time (0 to 240).

Press to set individual watering times for stations.

NOTE: Manual watering of a set program (A or B) will only work after programming has been set up.

Press to cancel watering.

Off

Turn dial to **OFF**.

No watering may occur while in the **OFF** position.

Water Budget

Turn dial to **WATER BUDGET**.

NOTE: This feature allows for seasonal adjustments.

Set the value to 100% to water exactly as programmed.

For a 10 minute run time, 50% will reduce it to be 5 minutes and 200% will increase it to 20 minutes.

Press to select the desired program.

Press or to set the budget value (10% - 200%).

ADDITIONAL FEATURES

Press to reset the value to 100%.

NOTE: The % symbol will show on the screen when the value for A or B is anything other than 100%.

Rain Delay

NOTE: Rain Delay will cancel all scheduled watering for a 24hr, 48hr, or 72hr period.

Press while dial is in the **AUTO** position.

Press until the desired delay is displayed.

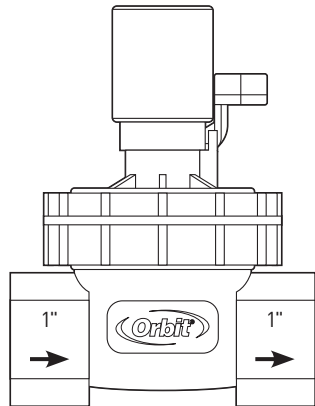
Do not press any buttons for 3 seconds to start the delay.

Press to stop Rain Delay and return to scheduled watering.

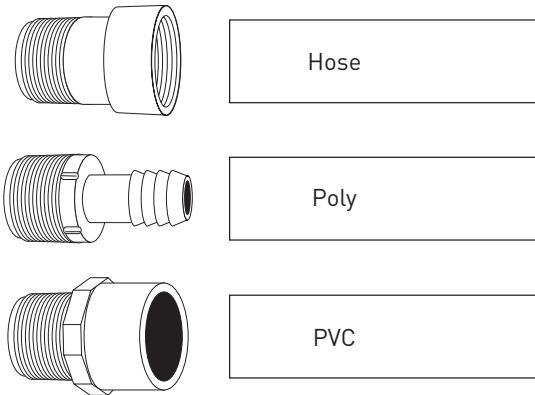
INSTALLING THE VALVE

Installing the Valve

After flushing line, install the valve using appropriate fittings (not included) for your system (see figure below). DO NOT OVERTIGHTEN. Do not use pipe joining compound. Use thread seal tape only. Note arrow on valve for water flow direction.



Valves have tapered fittings and therefore require seven to eight turns of thread seal tape to prevent leaking and to guard against the connections bottoming out. To prevent possible leaking, make sure that the valve, fittings and pipe are properly aligned.



INSTALLING THE VALVE

Test the System

After all pipe and fittings have been installed, turn the water supply on and check for leaks with the valve closed.

The system is now ready to be controlled electrically from the timer or manually by opening the manual lever/screw.

Draining

In freezing areas, the valves and lines will need to be drained. Refer to the Orbit® Layout Guide or local dealer to recommend proper drain points. To insure the electric valve is completely drained in the fall, turn off the main sprinkler shut-off valve and electrically run each valve dry for a few minutes. Turn timer to the **OFF** position.

Cautions

- Check local codes for valve types and permit information.
- If static water pressure exceeds 80 psi, a pressure regulator should be used.
- For outdoor use with cold water only. Not for indoor use. Place valves so they drain away from the house.

Notes

- Where possible, always protect valves with an Orbit® Valve Box and place gravel in the bottom.
- Test all lines and fittings before burying the system.
- Use a filter if you will not be using culinary water in your system.

CONNECTING THE TIMER

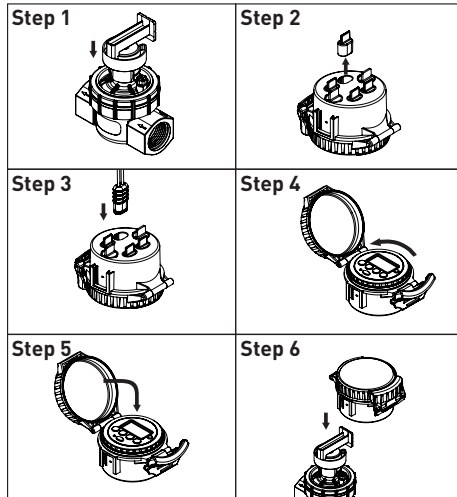
Connect the timer to the valve after you have programmed it. This timer will only operate with DC solenoids that have been included in the package. Replace any original solenoids on valves connected to the timer with these DC solenoids.

NOTE: Make sure the main timer unit is fully inserted into the docking bay.

Connecting Timer to Valve

1. Attach timer clip to valve solenoid.
2. Remove plug from the receptacle marked "1" on the bottom of the timer.
3. Insert wire connector into the receptacle marked "1" on the bottom of the timer. Ensure that the connector fully seats into the receptacle.
4. Rotate dial to **OFF**. Wait 60 seconds to allow the timer to close all valves.

5. Rotate dial to **AUTO** and clamp lid closed.
6. Attach timer to timer clip.



GLOSSARY OF TERMS

Timer- A device that is responsible for turning an automatic watering system on and off.

Cycle Start Time- The time the program begins watering the first station.

Multiple Start Times- A feature that allows a program to be operated multiple times on the same day.

Program (A or B)- One or more watering stations that share a common programmed watering schedule.

Rain Delay- A feature that prevents the sprinkler timer from running its scheduled watering program for a specific duration.

Solenoid- The electrical part on a sprinkler (irrigation) valve that opens and closes the valve.

Stacking- When a start time is set before the previous program has completed, that

start time will be "stacked" or delayed, and will start upon completion of the previous program.

Station (Watering Station)- An area where the watering (irrigation) is all controlled by a single control valve.

Valve (Watering or Irrigation Valve)- Used in conjunction with sprinkler timers – a convenient way to deliver water to lawns, plants and gardens.

Watering Program- See Program (A or B).

Zones- See "Station (Watering Station)."

TROUBLESHOOTING

One or more stations do not turn on:

1. Make sure programming is correct.
2. Make sure programming is not in **OFF** or Rain Delay mode.
3. Remove jack, clean debris, re-plug jack.
4. Clean debris from solenoid.
5. Replace batteries.
6. Replace solenoid.

Stations turn on when they are not supposed to:

1. Turn down water pressure.
2. Check programming to make sure start times are correct. Check A and B programs and start times 1-4.

One station is stuck on and will not shut off:

1. Make sure jack is plugged in.
2. Replace valve.
3. Clean any particles of dirt or debris

- stuck in valve or solenoid.
4. Replace valve diaphragm.
 5. Replace solenoid.

All stations do not turn on:

1. Make sure programming is not in **OFF** or Rain Delay mode.
2. Lack of power due to depleted batteries or faulty solar panel (optional).
3. Programming is incorrect.

Timer will not power up:

1. Make sure batteries are installed correctly.
2. Replace batteries.

Stations continue to turn on and off when they are not programmed to:

1. Make sure one start time is programmed with no overlapping schedules.

2. Turn down water pressure.
3. Check A and B programs and start times 1-4.

