

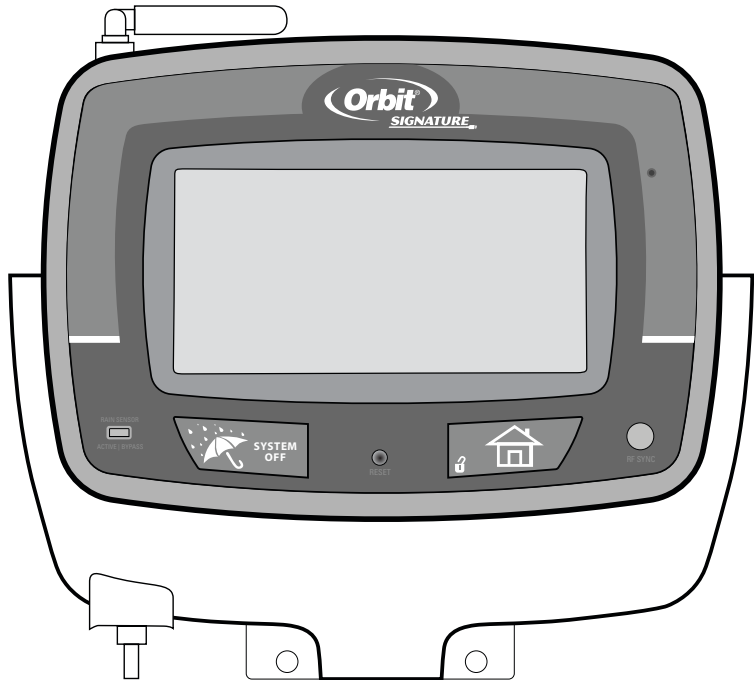
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FLUID



TOUCH-SCREEN TIMER MANUAL



MODELS:

57932, 57936, 57942, 57946,
91832, 91836, 91842, 91846,
94832, 94836, 94842, 94846

PN 57932-24 Rev F

08WTM006468 57932-24 rF.indd 1

3/5/08 2:44:59 PM



PROOF NO: 1

DATE: 03.04.08

DES: MZ SPCK: MZ

JOB NO: 08WTM006468

CLIENT: ORBIT

SKU: 57932

UPC: NA

FILE NAME: 08WTM006468

57932-24 rF.indd

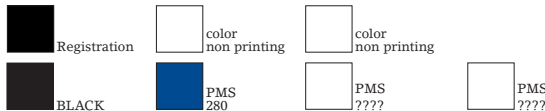
SOFTWARE: InDesign CS2

DIMENSIONS:

FLAT: W: 13.76" H: 5.7"

FINISHED: W 6.88" D: NA H 5.7"

COLORS



ADDITIONAL INSTRUCTIONS:

Printers are responsible for meeting print production requirements. Any changes must be approved by the client and Fluid Studio. Printed piece **MUST MEET DESIGNATED SPECIFICATIONS ON THIS FORM.**

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Bountiful, Utah 84010

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Section 1: Introduction

Thank you for selecting the Orbit® Touch-Screen Timer. Our designers have combined the simplicity of touch-screen programming with the flexibility and accuracy of digital electronics to give you a timer that is easy to program and extremely versatile. This convenient timer lets you run automatic or manual watering programs with a wide spectrum of features, including remote control operations.

Please read this manual completely before you begin programming and using the timer.

Important Features and Capabilities

Dual Programs

The timer offers two programs – Program A and Program B – for watering flexibility. Any of the watering stations can be assigned to either program. For example, stations that water your garden and flower beds could be assigned to Program A and watered daily starting at 8 a.m., while stations that water your lawn could be assigned to Program B and watered every third day starting at 5 a.m.

“Stacking” Feature

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.

Docking Port

This timer has been designed for convenience and “armchair” programming. The timer’s docking port is mounted on a wall and all wires are connected to it. The main timer unit can be

easily and quickly slid on and off the docking port, allowing you to take the timer virtually anywhere to create or change watering programs.

Remote Control Capabilities (Not included on all models)

This timer can be controlled by the included remote control device via a radio frequency (RF) receiver and antennae, both of which are built into the timer. The remote control device allows you to turn stations on and off on the spot and to perform programming tasks from anywhere within range. The 433 megahertz remote frequency is approved for use in the United States, Canada, Europe and Australia, and permits an effective line-of-sight range of 300 feet (reduced to 200 feet with obstructions).

Programming Information Stored Safely in Non-Volatile Memory

All programming information for Program A and Program B is stored indefinitely in the timer's non-volatile memory (EEPROM) and internal memory. This high-end feature means your programming won't be lost or erased if the power and batteries go out.

Convenient, Easy-to-Read Touch-Screen LCD Display

The timer's back-lit, touch-screen LCD display screen is conveniently programmed and easy to read under any lighting conditions. You may use either your finger or the built-in stylus on the touch screen.

(See Figure 1)

Choice of Five Languages

You can easily set the LCD display to read in any of five languages: English, Spanish, French, German or Italian.

Water Budgeting

This convenient feature provides a quick, easy way to increase or decrease the watering durations of all stations in both programs to match seasonal watering needs. You won't have to adjust each station's watering time individually.

Rain Sensor (Optional)

An optional rain sensor can be purchased separately to prevent programmed watering for a period of time after rain falls (determined by the amount of rain and how quickly the sensors dry out). If your unit is RF capable then you can use a wireless sensor. Otherwise a hard-wired sensor can be used.

Push Buttons

These push buttons on the timer are used for programming and other operations:

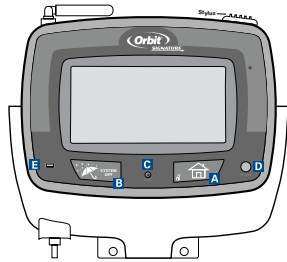


Figure 1: Front view of touch-screen timer

A Home/Lock

Used to exit settings; to go into AUTO MODE, or to lock the touch screen.

B System Off A single push will open the Rain Delay screen. A second push of the button will place the entire system in OFF mode.

C Reset (pin hole)

Resets the timer to its factory settings.

D RF Sync (only on remote control model)

Allows the timer to synchronize with a new remote or wireless sensor.

E Rain Sensor

In Active position the controller will monitor the rain sensor, in Bypass position the controller will ignore the rain sensor. (This switch is for hard wired sensors only and does not effect wireless rain sensors).

Section 2: Getting Started

Set Language

- Press the [RESET](#) button. The controller will now take you through a step by step programming process.
- Press [▲](#) or [▼](#) on the touch screen to set the language of your choice (English, Spanish, French, German or Italian).
- Press [ENTER](#).

Set Current Time and Date

- Press [▲](#) or [▼](#) to set the current time. Press [ENTER](#).
- Press [▲](#) or [▼](#) to set the current year. Press [ENTER](#).
- Press [▲](#) or [▼](#) to set the current month. Press [ENTER](#).
- Press [▲](#) or [▼](#) to set the current day of the month. Press [ENTER](#).

Determine a Watering Plan

See page 14 for instructions.

Section 3: Programming Your Timer

Walk through programming is available after hitting the [RESET](#) button.

Program Toggle Feature

The Program Toggle Feature allows you to switch back and forth between Program A and Program B. Press [PROG. A](#) or [PROG. B](#) on the touch screen to select Program A (“A” is larger than “B”) or Press [PROG. A](#) or [PROG. B](#) on the touch screen to select Program B (“B” is larger than “A”). You can change the watering start times, watering days, and watering durations for each program.



Figure 2: Program Toggle Feature

Set Start Times

- Press [▲](#) or [▼](#) to set the start time for the selected program. Press [ENTER](#).

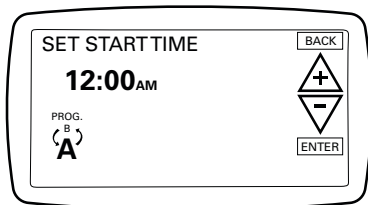


Figure 3: Set Start Times

Set Watering Days

- Press [ODD](#), [EVEN](#), [INTERVAL](#) (1-32 days using [▲](#) or [▼](#)) or the specific days of the week ([Su](#), [Mo](#), [Tu](#), [We](#), [Th](#), [Fr](#), [Sa](#)) you want the selected program to water. Press [ENTER](#).

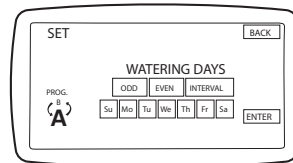


Figure 4: Set Watering Days

Set Station Watering Durations

- Select the first station to be watered by pressing the station number on the bottom of the touch screen or press [ENTER](#) to advance to the desired station. *Note: The active station, being programmed, will Flash.*
- Set the watering duration for each station by either:
 - Selecting one of the preset watering duration minutes ([0](#), [5](#), [10](#), [15](#), [20](#), [30](#) or [45](#)) on the bottom of the LCD.
 - Using the [▲](#) or [▼](#) to enter the desired minutes.

Note: a watering duration must be entered for each watering station.

- Follow the same procedure to set the watering durations for all other stations.
- Press [EXIT](#).

At this point you will see the [PROGRAMMING COMPLETE](#) screen. If you wish to go back and change any of the settings, press [BACK](#). If not, press [ENTER](#). This will accept the programming and take you to the [HOME/AUTO](#) screen.

To Set Watering Cycles:

Multiple watering cycles is simply the where the sprinkler timer will cycle.

Using multiple watering cycles is ideal for reducing runoff and standing water. This sprinkler timer allows program A or B (or both) to be repeated on the days programmed.

When extra watering is needed, Program A or B (or both) can be set to repeat the set watering durations up to 10 times a day. In order to maximize absorption and prevent runoff, you may set a specific number of minutes or hours between the start of one cycle and the start of the following cycle. This is called the “cycle delay” and can be set from 0 minutes to 90 minutes in 10-minute increments, and from 2 hours to 23 hours in one-hour increments.

- From the HOME/AUTO screen, press [PROG. A/B](#) to enter the program review screen. Toggle to desired program.
- Press [CYCLES](#).
- Press [▲](#) or [▼](#) to select the desired number of watering cycles. Press [ENTER](#).
- Press [▲](#) or [▼](#) to select the desired number of minutes or hours (from 0 minutes to 23 hours) between the start time of one cycle and the start time of the following cycle. Press [ENTER](#).
- Repeat this procedure for the other program, if desired.

To Change Settings From the HOME/AUTO Screen:

Orbit® has simplified the way to make modifications to your timer. Just tap the setting you want changed in the HOME/AUTO screen.

- Tap the date to change the current date
- Tap the time to change the time of day
- Tap the [NEXT START](#) to change the time of day you want to water
- Tap the station number to modify the watering durations
- Tap [PROG](#) to modify the Watering Days
- Tap [CYCLES](#) to modify the number of watering cycles
- Press the [HOME/LOCK](#) button at any time to return to the HOME/AUTO screen.

To Water in Manual Mode:

- To manually water one, some or all stations, press [MANUAL](#) at the top right of the HOME/AUTO screen.
- The first screen MANUAL - ALL will allow you to water all stations with the same duration (1 to 240 minutes). Select the desired duration, then press [ENTER](#).
- Or, press [NEXT](#) for MANUAL - SELECT watering. This screen allows you to select any single station or a group of stations each with individual durations (1 to 240 minutes) using [▲](#) or [▼](#) the Quick Touch buttons. Select the desired stations and durations then press [ENTER](#).
- Or, press [NEXT](#) again for MANUAL - PROG A watering. This

will allow you to water the stations in Program A for their pre-set durations. Press **ENTER** to begin watering.

- Or, press **NEXT** again for MANUAL - PROG B watering. This will allow you to water the stations in Program B for their pre-set durations. Press **ENTER** to begin watering.

To advance to the next station in manual mode, press **NEXT**.

Press **CANCEL** to stop the manual watering cycle.

To Set Water Budgeting:

Water Budgeting is a quick way to adjust your set durations (10 to 200%) based on seasonal requirements.

- Press **BUDGET**.
- Press **▲** or **▼** to select the desired budget percentage. Press **ENTER**.

Note: If your set duration is 10 minutes and you set the water budget to 150% the duration will be 15 minutes. If you set it to 50% the duration will be 5 minutes.

WIRELESS SENSOR STATE

[OPTIONAL FOR RF MODEL ONLY]:

This timer can communicate with Orbit wireless sensors.

To change the communication status between the timer and the wireless sensor do the following:

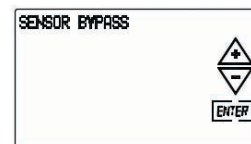
- Press the **BUDGET** button on the Home/Auto Screen.

- Press the **SENSOR** button on the top right of the screen.
- Use the **▲** or **▼** to toggle the sensor communication status.


Sensor Active - timer will allow sensor to block watering.

Sensor Bypass - timer will ignore the sensor and will not allow watering to be blocked.

- Press **ENTER** when desired status is selected.



To Lock Programming Keys:

- Push the **HOME/LOCK** button once from the Home screen. The lock icon, , will show on the screen. To unlock the touch screen press the **HOME** button again.

To Prevent Watering:

- To stop watering for a set period (1 to 99 days) press **RAIN DELAY** once and select the desired delay using **▲** or **▼** and then press **START**. To cancel the RAIN DELAY and return to AUTO mode press **CANCEL**.
- To stop all watering indefinitely, push the **RAIN DELAY/SYSTEM OFF** button twice. The controller will be placed in OFF mode. To return to AUTO mode press the **HOME/LOCK** button.

Section 4: Remote Control Device

NOTE: This feature is optional and may not be included on your model.

The Orbit® Touch-Screen Timer can be controlled using the included remote control device for your convenience. Commands from the remote control device override any programmed or manual water functions already set in place. When remote control watering is finished, any current programmed and manual commands again become active and resume operating as scheduled at that particular day and time. (In other words, any overridden watering tasks are not “made up” at the conclusion of the remote control watering.)

Important note: The remote control device will work in the following modes: *AUTO*, *MANUAL*, and *OFF*

To Synchronize the Remote Control Device with the Timer:

The remote device provided with your timer is already synchronized to your timer. If the remote is not functioning properly or if you are adding a new remote or RF sensor to your system do the following:

- With the remote device in your hand press the “RF Sync” button on the timer (this will activate a red light on the timer).
- Press the OFF button on the remote or depress the stem of the RF sensor (the red light should start blinking).
- If the red light blinks you have successfully synchronized the

devices. If the light does not blink check that the remote has a fresh 9V battery or that the RF sensor switch is not OFF and try the steps again.

To Water All Stations:

- Press and release the **ALL** button on the remote control device to select all stations for watering.
- Press and release the **ON “X” MIN** button to command the timer to water all the stations sequentially for the desired (“X”) number of minutes.
- If you wish to advance to the next station before a station's watering duration is complete, press **NEXT**.

To Water One Station:

- Press the number of the station you wish to water.
- Press **ON “X” MIN** to water the station for the desired (“X”) number of minutes.

To Water More Than One Specific Station:

- Press the numbers of the stations you wish to water. (Example: 3, 7, 10, and 6. The timer will water in sequence from lowest to the highest. 3, 6, 7, 10.) (No matter which order you press the keys, the timer will water them sequentially from the lowest to the highest number.)
- Press **ON “X” MIN** to water those stations for the desired (“X”) number of minutes.

- If you wish to advance to the next selected station before a station's watering duration is complete, press **NEXT**.

Section 5: Installing the Orbit® Touch-Screen Timer and Remote Control Device Sleeve

NOTE: Before installation, please have the following tools on hand:

- Phillips screwdriver
- Wire strippers

Installing the Sprinkler Timer in Five Easy Steps

Your new timer has been designed for easy, convenient installation. Simply slide the timer off the docking port, screw the docking port onto a wall in an appropriate location, insert the various connections into the sockets at the bottom of the docking port, and slide the timer back on. Finally, install the sleeve for the remote control device.

Follow these easy steps:

1. Select a Location

Select a location with the following criteria:

- Near an electrical outlet. (Avoid using an outlet controlled by a switch.)
- In a dry, indoor location, where operating temperatures are not below 32° or above 122° Fahrenheit (below 0 degrees or above 50 degrees Celsius).

- Not in direct sunlight.
- Accessible to sprinkler wires from valves.

2. Mount the Docking Port

- Slide the timer off the docking port. (See Figure 5)
- Using the mounting template (included), mark the two screw locations on the wall, then drill holes at the marks for No. 8 screws. Use the expanding anchors in plaster or masonry if necessary.
- Place the docking port against the wall, aligning the two holes in the docking port with the two drilled holes.
- Secure the docking port to the wall by screwing a No. 8 screw (included) through each of the two holes.
- Do not slide the timer back onto the docking port yet.

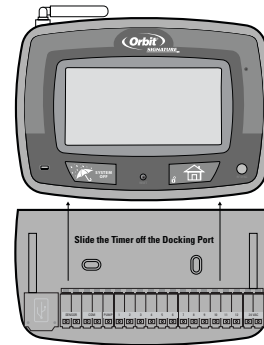


Figure 5: Mounting the Docking Port

3. Connect the Transformer

- Find the two sockets at the bottom of the docking port labeled “24VAC.” (See Figure 6)
- Insuring the transformer is not plugged in; insert one of the two power leads from the transformer into each terminal socket using the phillips screwdriver to depress the terminal button (this allows for wire insertion or removal).
- Plug in the transformer.

WARNING: Do not link two or more sprinkler timers together with one transformer.

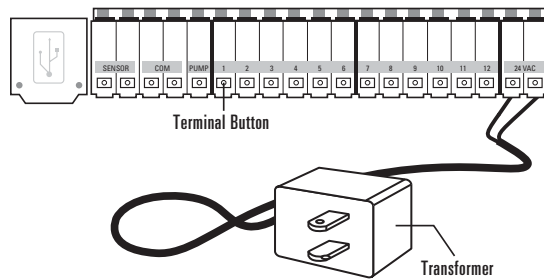


Figure 6: Connecting the Transformer

4. Connect Valve Wires to Timer, Pump Start and Master Valve Terminals

A. Wire the Electric Valves

NOTE: If the distance between the sprinkler timer and valves is under 700' (210 m), use Orbit® sprinkler wire or 20 gauge (AWG) plastic jacketed thermostat wire to connect the sprinkler timer to the valves. If the distance is over 700' (210 m), use 16 gauge (AWG) wire.

- Taking the sprinkler wire, strip 1/2" (12 mm) of the plastic insulation off the end of each individual wire.
- Connect one wire from each valve (it doesn't matter which wire) to a single “common” sprinkler wire. This is usually white.

IMPORTANT: All wires should be joined together using wire nuts, solder and/or vinyl tape. For additional protection to waterproof connections, an Orbit® grease cap can be used.

- Next, connect the remaining wire from each valve to a separate colored sprinkler wire.
- To avoid electrical hazards, only one valve should be connected to each station.

IMPORTANT: The wire can be buried in the ground. However, for greater protection, wires can be pulled through PVC pipe and buried underground. Be careful to avoid burying the wires in locations where they could be damaged by future digging or trenching. (See Figure 7)

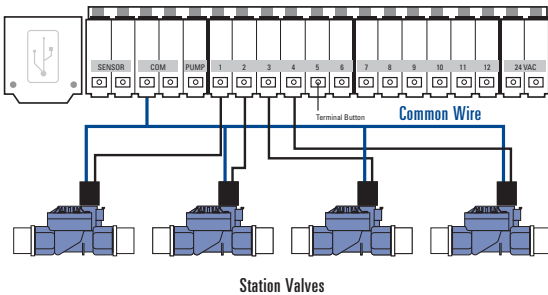


Figure 7: Connecting Sprinkler Wire

B. Connect Valve Wires to the Sprinkler Timer

- Strip 1/4" (6 mm) of the plastic insulation off the end of each wire.
- Determine which valve you want to connect to which station. Using a phillips screwdriver to depress the terminal button insert each sprinkler wire, excluding the "common" wire, into a separate station terminal (grey in color) by inserting the bare wire fully into the terminal under each number. (See Figure 7)
- Connect the common wire to one of the two terminals (white in color) labeled "COM."

NOTE: Insert only one wire into each "COM" socket. If more than two common wires are required, splice several together so only one wire runs into each of the two "COM" terminals. Protect the splice connection with a wire nut.

C. Connect Pump Start and Master Valve

This timer allows a master valve or pump start relay to operate whenever a station is on.

NOTE: If you are activating a pump from this timer, you must purchase a Pump Start Relay.

From the pump start relay (or master valve); connect one wire to the "PUMP" terminal and the other wire to the "COM" terminal.

Once all connections to the docking port are made, you may slide the timer back onto the docking port.

5. Mount the Sleeve for the Remote Control Device

- Using the mounting template (included) mark the two screw locations on the wall, then drill holes at the marks for No. 8 screws. Use the expanding anchors in plaster or masonry if necessary. (The sleeve can be mounted anywhere and does not need to be next to the timer.)
- Place the remote control device sleeve against the wall, aligning the two holes in the sleeve with the two drilled holes.
- Secure the sleeve to the wall by screwing a No. 8 screw (included) through each of the two holes.
- Slide the remote control device into the sleeve.

Section 6: Diagnostics Circuit Breaker

Smart-Scan® Diagnostic Fault Sensing

A diagnostic fault sensor will automatically scan for the presence of a faulty solenoid or wiring short in a valve during each watering sequence. If a faulty station is detected, the sprinkler timer will move to the next working station. Smart-Scan® also detects faulty wiring for the Pump or Master Valve. Upon detection watering of faulty station is discontinued.

Fault Notification

- Faulty Station: “FAULT” and “Station XX” is displayed. When multiple faulty stations are detected, only the last faulty station will be displayed.
- Faulty wiring for pump/master valve: “PUMP FAULT” is displayed.

Correcting the Fault

1. First, repair the short in the wiring or replace the faulty solenoid.
2. Test the station by operating a manual watering sequence.
3. If the short is not detected after a few seconds, the fault notification message will be terminated.
4. If the message continues, a short in the wiring still exists.

Internal Auto-Resetting Electronic Circuit Breaker

The sprinkler timer is equipped with an internal electronic self-resetting circuit breaker.

Possible causes of a circuit breaker tripping:

1. If lightning strikes nearby.
2. When the power supply has an electric spike.
3. If a station has a wiring short.

Whenever one of these conditions occurs, the electronic circuit breaker may trip, causing the station output from the sprinkler timer to be halted momentarily. The batteries will continue to activate the LCD. After a few moments, the sprinkler timer will automatically retest the circuit to see if the condition has stopped. If so, the circuit breaker will reset itself.

Section 7: Glossary of Terms

TERM	DEFINITION
Budgeting	A feature used to increase or decrease all set durations according to seasonal demands
Manual Watering	An unscheduled watering cycle activated manually but controlled by the timer
Master Valve	A valve that prohibits water from reaching "Station Valves"
Program (A or B)	A schedule for a group of stations that determines the date and time for watering.
Rain Delay	A feature that prevents the sprinkler timer from running it's scheduled watering program for a specific duration
Repeat Cycles	A feature that allows a program to be operated multiple times on the same day
Solenoid	The electrical part on a sprinkler (irrigation) valve that opens and closes the valve
Sprinkler Timer	A device that is responsible for turning an automatic irrigation system on and off
Start Time	The time the program begins watering the first station
Station (Watering Station)	An area where the watering (irrigation) is all controlled by a single control valve
Terminal	The connection point on the docking port where a wire is inserted
Watering Program	See "Program (A or B)"
Watering Valve (Irrigation Valve)	Used in conjunction with sprinkler timers – a device used to control the delivery of water to lawns, plants and gardens
Zones	See "Station (Watering Station)"

Section 8: Trouble Shooting

Symptom	Cause
One or more stations do not turn on	1. Faulty Solenoid
	2. Wire broken or not connected
	3. Flow control stem screwed down, shutting valve off
	4. Programming is incorrect
Stations turn on when they are not supposed to	1. Water pressure is too high
	2. More than one cycle is programmed
	3. Stations are set to water with both programs
One station is stuck on and will not shut off	1. Faulty valve
	2. Particles of dirt or debris stuck in valve
	3. Valve diaphragm faulty
All stations do not turn on	1. Transformer is defective or is not connected correctly
	2. Programming is incorrect
	3. Timer is in OFF mode
Timer will not power up	1. Transformer is defective or is not connected correctly
	2. Transformer not plugged into an operational AC outlet
	3. Timer is not all the way down on the docking port.
Stations continue to turn on and off when they are not programmed to	1. Multiple cycles are programmed.
	2. Excessive pressure
	3. Stations are set to water with both programs.
	4. Water Budgeting is set to more than 100%
Persistent Fault	1. Short in wiring or solenoids

Help

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

Listings

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation. Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. This Class B digital apparatus complies with Canadian ICES-003. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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

for help.
Models 57932, 57936, 57942, 57946, 91832, 91836, 91842, 91846, 94832, 94836, 94842, 94846.

Orbit® Irrigation Limited Six-Year Warranty

Orbit® Irrigation Products, Inc. warrants to its customers that its products will be free from defects in materials and workmanship for a period of six years from the date of purchase.

We will replace, free of charge, the defective part or parts found to be defective under normal use and service for a period of up to six years after purchase (proof of purchase required).

We reserve the right to inspect the defective part prior to replacement. Orbit® Irrigation Products, Inc. will not be responsible for consequential or incidental cost or damage caused by the product failure. Orbit® liability under this warranty is limited solely to the replacement or repair of defective parts.

To exercise your warranty, return the unit to your dealer with a copy of the sales receipt.

SAFETY OF CHILDREN: *The controller is not intended for use by young children or infirm person without supervision. Young children should be supervised to ensure they do not play with controller.*

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