



# Lawn Genie.

Multiple Program Electronic  
Controller

Installation and Operation Guide

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► For Model L80306P

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► Please read instructions completely before  
attempting to install or operate controller:

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*This manual explains how to install your Lawn Genie sprinkler controller and program it for the watering schedule that's right for your garden. The following sections are arranged to match the most efficient installation sequence. Refer to them in the order presented for best results.*

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Your Lawn Genie sprinkler controller is the heart of your automated watering system. It lets you supply different parts of your lawn and garden with precisely the water they require, exactly when they require it. All without any effort on your part once you've programmed your system.

The Lawn Genie L80306P controller gives you four ways to control how you distribute water to various parts of your yard. Here's how they work:

#### **Zone control**

Lawns, shrubs, flower beds and other foliage all need different amounts of water. You can tailor the water delivered to different parts of your yard by assigning a different day schedule and run

time to one or more sprinkler heads controlled by a single valve. Each valve and the sprinklers it controls are called a Zone. The L80306P lets you divide your yard into as many as six Zones.

#### **Programming options**

Certain parts of your yard may need water every other day. Other parts may need water twice a week. Multiple programming lets you assign each of your Zones a separate watering day schedule. You can program a combination of specific days of the week or day intervals- whichever best suits your needs. For example, Zone 1 may water Mondays only, Zone 3 may water Tuesdays and Thursdays only, Zones 4 and 5 may water every

other day, and Zones 2 and 6 may water daily. For details, see "Setting the days to water" on page 11.

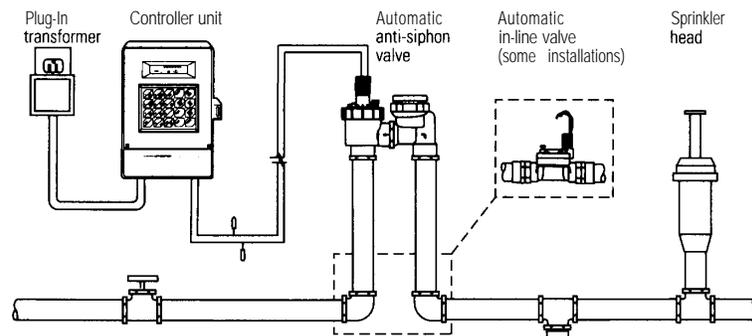
#### **Start times**

You can specify up to four different times per day for your system to start watering. Each start time you set will water in sequence all Zones programmed for that day, beginning with the lowest numbered Zone. Zones set to water on other days will start at these same times on the days for which they're programmed.

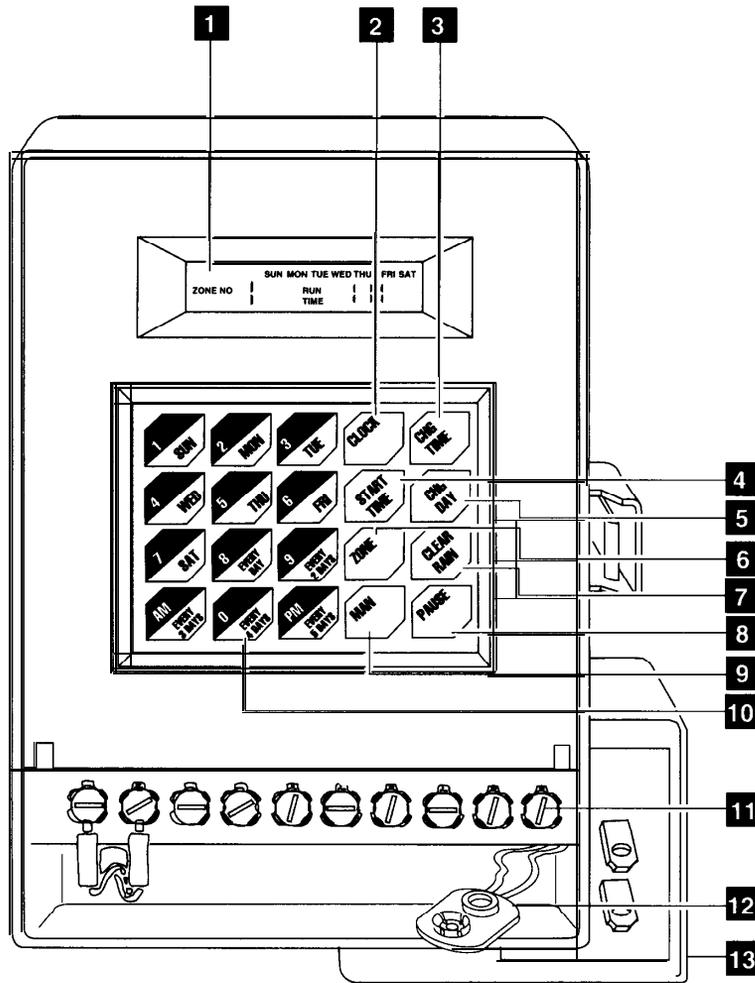
#### **Watering run time**

To deliver the correct amount of water to the foliage within each Zone, you can set each Zone to shut off after a specified period of time- from 0 to 12 hours, 59 minutes.

### **Here's how the controller connects to your system**



# Features



- 1 Controller display**  
Shows time of day, day of the week, Zone being watered and watering run time. Also alerts you to programming errors and short circuits.
- 2 Clock key**  
For preparing clock to accept the current time and day.
- 3 CHG Time key**  
For setting current time of day, as well as start and run times for each Zone.
- 4 Start Time key**  
For setting up to four start times per day.
- 5 CHG Day key**  
For setting current day and watering days for each Zone.
- 6 Zone key**  
For displaying the six Zone settings to allow for programming and reviewing schedules.
- 7 Clear/Rain key**  
For stopping automatic watering in progress, preventing automatic watering from starting, or clearing entry errors.
- 8 Pause key**  
For temporarily interrupting a watering cycle in progress.
- 9 Manual key**  
For watering all Zones or a selected Zone manually.
- 10 Day/Numbers keys**  
For setting clock time, watering days and watering run times.
- 11 Terminal screws**  
For connecting transformer, valve wires and optional pump relay to controller.
- 12 Battery connector**  
For installing 9-volt battery for built-in, fail-safe program.
- 13 Plug-in transformer**  
For converting 120-volt household current into safe, low-voltage power. (250-volt source on 50 Hz units.)

## Installing the controller

### Select the location

A. Choose an indoor location near a standard 120-volt dual electrical outlet. (250-volt outlet for 50 Hz international units.)

**A** **CAUTION:** DO NOT place the controller where temperatures may exceed 130° Fahrenheit (55° Centigrade), on a circuit controlled by a switch, or on the same circuit as a high power user (refrigerator, air conditioner, garage door opener, etc.). Malfunctions may result.

### Mount the controller

A. Install a No. 8 screw at eye level in the wall, leaving 1/8" of screw head projecting.

B. Slip the keyhole opening on the back of the controller over the screw head.

C. Open the controller case and install two screws through the holes in the wiring compartment at the bottom of the controller.

 **NOTE:** To install the controller on a plaster or masonry wall, use plastic or lead anchors to secure screws.

## Connecting the valves

### Wire the valves

A. Run valve wiring underground wherever possible. For line runs less than 800 feet long, use 18-gauge, plastic jacketed thermostat control wire; over 800 feet, use 14-gauge wire. Your dealer can provide this wire in 2, 3, 4, 5, 6, 7 and 8-wire color-coded strands.

B. Connect a single common wire to one of the wires from each valve. **NOTE:** It doesn't matter which of the two valve wires you use.

C. Solder or join all splices with wire nuts; then seal with vinyl or waterproof cement to assure a water-resistant connection.

**IMPORTANT:** The power transformer is protected by an electronic circuit breaker. Do not connect a combination of valves requiring an inrush current of more than 1 amp at 24 VAC.

### Connect the valve wires to controller

A. Run all valve wires up through the insulated hole in bottom of controller.

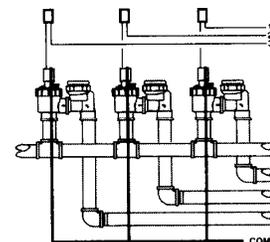
B. Connect the wire from valve number 1 to the terminal screw marked 1 on the controller; the wire from valve number 2, to the terminal 2, and so on. This allows your controller to selectively water the Zone controlled by each valve.

 **NOTE:** On the L80306P terminal designations are marked on the inside of the wiring compartment cover.

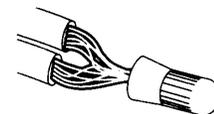
C. Connect the common wire to the terminal marked COMM.

D. If using a water pump or master valve, refer to page 15 for installation details.

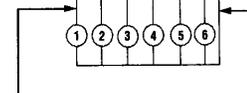
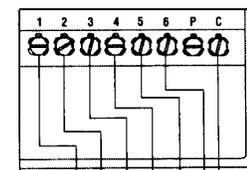
Wires to individual controller terminals



One wire from each valve connects to a single common wire running to controller



CONTROLLER



Individual wires connect valves to separate terminals

Single common wire connects all valves to COMM terminal

## Connecting the battery

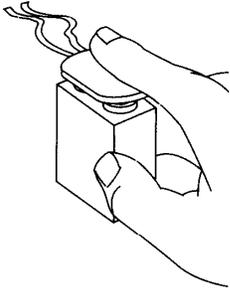
### Connect the battery

A battery back-up system is built into your Lawn Genie controller to maintain your programmed watering schedule in memory in case of temporary power failure.

- Connect a 9-volt alkaline battery (not supplied) to the battery connector in the wiring compartment of the controller case.
- Place the battery in the wiring compartment,
- Replace the wiring compartment cover.
- Replace the battery at least once a year. More often if frequent power failures occur.

**!** **CAUTION:** DO NOT allow the battery connector to touch the controller's terminal strip (directly above the wiring compartment). Also, do not connect or disconnect valve wires while any Zones are in operation.

 **NOTE:** Check local codes to ensure that wiring and installation meet all requirements.



## Setting the current time and day

In the controllers display, 12P represents noon, and 12A represents midnight. When the power is first turned on, the controller always displays SUN for Sunday, and a time of 4:00P (4:00 PM).



### Set the current time and day:

Setting the current time is easy. Here's how you'd do it if the time were now 10:03 AM.



- Press . The display's clock digits will flash.
- Press the numbered keys to enter current time of day, then  or . Be sure to set both hours and minutes (e.g. 10:03 must be entered as 1-0-0-3).
- Press . SUN will begin flashing on the display.
- Press the day key corresponding to today. The new day will flash in the display.
- Press . The correct time and day are now set, and the clock is running.



 **NOTE:** Once you've pressed ,  or CHG/DAY, you must make a controller entry within 30 seconds or the display will automatically return to its original setting.

# Setting the run times & daily schedule

## How long and how often to water

To accommodate the special watering needs of different parts of your yard, you can assign each Zone its own separate watering day schedule. You can set each Zone to water either on specific days of the week or at specific intervals between watering days (for example, every second day).

In addition, your controller gives you a wide range of run times to provide precisely the right amount of water to each Zone. Settings may vary from OFF to 12 hours, 59 minutes.

## To program a Zone to water on specific days of the week:

- Press . ZONE 1 is displayed with a run time of :05.
- Press . The run time begins to flash.
- Press the appropriate numbered keys to set any watering run time up to 12 hours, 59 minutes.
- Press . All the Zone's options are displayed, with **SUN** through **SAT** flashing.
- Press the appropriate day keys to set one or more days you wish to water that Zone every week.
- Press . The schedule for Zone 1 is now entered into the controller's memory, and ZONE 2 is displayed, ready for programming.
- Repeat steps B through F for each Zone

**IMPORTANT** You must set all Zones that are not connected or that you do not wish to water to OFF: Do this by pressing until each Zone to be set appears, then press , then Clear/Rain & . Otherwise controller will automatically shut down your entire system until properly programmed.

## To program a Zone to water at specific day intervals:

- Press . ZONE 1 is displayed with a run time of :05.
- Press . The run time begins to flash.
- Press the appropriate numbered keys to set any watering run time up to 12 hours, 59 minutes.
- Press **CHG/Day**. All the Zone's options are displayed, with **SUN** through **SAT** flashing.
- Press the appropriate interval keys in any combination to set the desired schedule: , , , , .
- Press . The schedule for Zone 1 is now entered into the controllers memory, and ZONE 2 is displayed, ready for programming.
- Repeat steps B through F for each Zone.



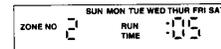
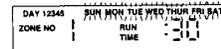
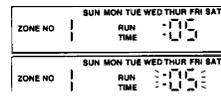
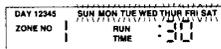
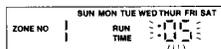
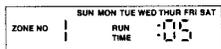
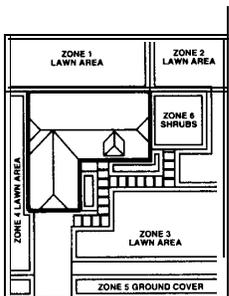
**NOTE:** The day you program an interval schedule becomes Day 1 of that schedule. For example, if you press on Monday, that Zone will water next on Wednesday.

**IMPORTANT** You must set all Zones that are not connected or you do not wish to water to OFF: Do this by pressing until desired Zone number appears in the display, then press , followed by and . Otherwise controller will automatically shut down your entire system until properly programmed.

As each Zone waters, **RUN TIME** will flash on the display, accompanied by a minute-by-minute countdown of watering time remaining. Upon reaching zero, the display will begin counting down the next Zone to be watered.



**NOTE:** The L80306P controller has a preset factory program which will keep your system operating in the event of a power failure, and an inactive battery. This preset program will start a watering cycle every day beginning at 2:00 AM and will water each Zone for 5 minutes.



You can set your controller to water up to four times a day. Each start time you set will activate a watering cycle which will begin at that time in the lowest numbered Zone and progress sequentially across all other scheduled Zones.

To water once a day, use START NO.1 only. Add other start times (up to three) to increase daily watering frequency.

*For example, suppose you schedule Zones 1,2 and 3 to water every day, and schedule Zones 4,5 and 6 to water Wednesday and Friday only. If you set two start times of 8:00 AM and 7:00 PM, Zones 1,2 and 3 will begin watering at those times every day, and Zones 4,5 and 6 will begin watering at those times on Wednesday and Friday only.*

To simplify programming, write down your watering schedule first, using the reference chart on page 24.

### Set the start times:



A. Press . START NO. 1 is displayed with a time of 2:00 AM.

B. Press CHG/Time. The time digits begin to flash.

C. Press the appropriate numbered keys to set hours, minutes, and or for START NO. 1.

D. Press again. START NO.1 is now entered, and START NO. 2 is indicated with OFF displayed.

E. Repeat steps B, C and D to set additional start times.

*IMPORTANT- Program any unused start times to OFF. For each, press , followed by , and .*



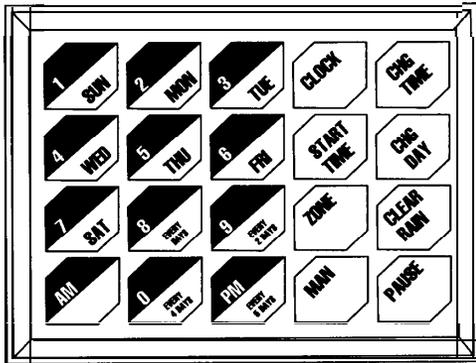
Since all Zones on a Program water in sequence, beginning with the lowest numbered Zone, make sure all Program start times are far enough apart to prevent watering cycles from overlapping. If overlap occurs, the controller will automatically delay the next Program start time to allow completion of the current watering cycle. A watering cycle that runs past midnight will cancel any overlapping start times before midnight.

Enter start times in any order. Start times are activated in chronological order, regardless of programming sequence. For example, START NO.1 may actually be the last watering time of the day.

### Watering considerations

If possible, schedule watering cycles in the early morning, when water pressure is at its highest. This allows ample time for water to soak in while evaporation and wind drift are low. Evening watering can leave foliage damp for too long, leading to mildew under some circumstances.

Ask your local nursery or garden center for a schedule suited to the special weather and soil conditions in your area.



Here's an example of how you might use the L80306P to program a watering schedule for a typical lawn and garden. Please refer to the instructions on the preceding pages for details on specific keystroke sequences.

To set Zones 1,2 and 3 to water on Mondays and Wednesdays, press: , , , .

To set Zones 4 and 5 to water every fourth day, press: , , .

To set Zone 6 to OFF, press: , , , .

To set all Zones to run for 15 minutes each, press: , , , .

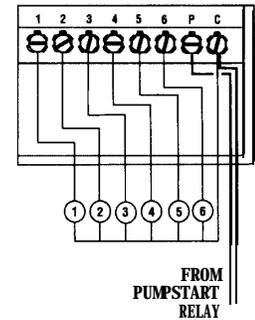
To set a watering cycle to start at 6:00 AM, press: , , , , .

To set a second start time at 8:00 PM for watering twice a day, press: , , , , .

To connect your controller to a well pump or master valve:

If your water **doesn't** come from the pipes of a standard public water supply, you may be using an electrically operated master valve, or a pump to draw directly from a well, pond, or similar source. In these cases, you'll need to make the following wiring connections so your sprinkler controller can activate the valve or pump.

- A. Bring two wires up through the same hole in the controller cabinet used for the valve wiring.
- B. Connect one wire to the terminal marked PUMP
- C. Connect the second wire to the terminal marked COMM.
- D. For master valve installations, connect both wires to a master valve rated at 24 VAC and a current no greater than 9 VA.
- E. For pump start relay installations, connect the two wires to an auxiliary relay with a coil rated at 24 VAC and a current no greater than 9 VA. Then wire the relay's contact to supply voltage to the pump's contactor. A qualified electrician can make these connections for you. For best results, use Lawn Genie's L30000W Pump Starter to control a pump up to 2 HP at 240 volts.



**NOTE:** The controller's pump output will turn on only when a Zone is watering manually or automatically

**IMPORTANT:** The power transformer is protected by an electronic circuit breaker. Do not connect a combination of pump relay and valves requiring an inrush current of more than 1 amp at 24 VAC.

### Clearing Errors

**You** can correct a mistake while setting hours, minutes or watering days, press Clear/Rain to return to the original setting, then enter in the correct information.

The controller will not accept a run time greater than 12 hours, 59 minutes. Instead, it will respond by flashing **ERROR** on the display for 30 seconds. During this time you must press **CLEAR** and enter the correct run time, or the controller will revert to the previous run time settings.

### Reviewing your programmed schedule

**You** can review any start time or Zone data-even while watering. Cycle through the settings for either function by repeatedly pressing either **START** or **ZONE**. If no key is pressed for 30 seconds, the display returns to the controllers current operating mode.

### Manual watering

**You** can manually water all Zones or a selected Zone at any time-except when an automatic watering cycle is already in progress.

**To water all Zones** (except Zones set to OFF), press **MAN** twice. Each Zone will water in numerical sequence for its programmed run time.

**To water a selected Zone**, press MAN once. Then press **ZONE** repeatedly to display the desired Zone. Press **MAN** again to start watering the Zone displayed.

**To water a selected Zone for a specific amount of time**, press MAN once. Then **ZONE** repeatedly to display the desired Zone. Next, press **TIME** and enter the new run time using the numbered keys. Finally, press **MAN** once more to start watering this Zone. Changing run times in manual mode won't alter your original program settings.

### Interrupting the watering cycle

You can stop a watering cycle already in progress by pressing **PAUSE** once (PAUSE and RUN TIME messages will flash). Press **PAUSE** again to resume watering. If left in pause mode until midnight, controller will automatically reset to begin watering at the first programmed start time of the new day.

### Turning off the system/rain shut-off

You can prevent automatic watering from starting by pressing **RAIN** when no watering is taking place. **RAIN** will flash on the display. Press **RAIN** again to resume watering.

Pushing **RAIN** when automatic watering is already in progress will terminate the watering then taking place, but resume automatic watering at the next start time. You may still activate manual watering when controller is in rain mode.

### Changing programmed settings

**You** can enter new program settings for time and day, start times, and Zones at any time-even while watering is taking place. However if you alter run time or watering days on a Zone that is currently operating, the change will not effect the watering then in progress; all changes take effect with the next watering cycle. Likewise, changing start time, clock time, or clock day will not effect watering already in progress.

### Electronic circuit breaker operation

If the controller detects a short circuit, it will automatically turn off power to the shorted Zone's automatic valve. The display will alternately flash **FUS** and **ERROR**, while showing the shorted Zone's number. The controller will continue to automatically water all other Zones under the programmed watering cycles, while the display continues flashing the Zone number with the short circuit.

To return the controller and display to normal operating mode after repairing the short, press CLEAR/RAIN.

### Battery back-up

In the event of a power failure, a battery back-up system will maintain your programmed watering schedule in memory for up to 24 hours. It will not operate the clock to keep the correct time of day.

### Voltage Specifications

<i>Input</i>	<i>output</i>
120 VAC	24 VAC
60 HERTZ	1 AMP
15 WATTS	

#### *International Units*

250 VAC  
50 HERTZ  
15 WATTS

*Malfunctions aren't common, but when they occur, they're often due to one of these frequently overlooked causes.*

### Problem

### Possible Cause

*One or more valves do not water*

1. Faulty solenoid
2. Poor wire connection/common
3. Possible break in wire
4. Valve flow stem screwed down too far

*FUS and a Zone number are alternately flashing on display*

1. Faulty solenoid
2. Poor or shorted wire connection
3. All unconnected Zones are not programmed to OFF mode.

*Clock won't keep correct time and/or controller won't retain programming*

1. No battery
2. Weak or bad battery
3. Controller on circuit controlled by a switch
4. Controller on same circuit as high power user (refrigerator, air conditioner, garage door opener, etc.)

*Zones turn on when they're NOT programmed to start*

1. Total combined run times have overlapped with another start time

*Clock has correct time but no valves will turn on*

1. Controller is in RAIN mode
2. The common wire is not connected
3. Valve flow stem is screwed down too far

*One Zone won't shut off electrically*

1. Faulty valve
2. Particles of dirt or debris are stuck in valve

*All Zones programmed for a certain day water more than once that day*

1. More than one start time is programmed

**WARNING:** *Do not link two or more controllers using a common transformer or common wire.*

**For additional assistance call our Customer Service Hot-line (800) 231-5117.**

## 2-Year Limited Warranty

### LIMITED WARRANTY

Lawn Genie warrants to the purchaser of its products for a period of two (2) years from the date of original purchase that any defective product proved to be caused by faulty workmanship or faulty materials, when installed per instructions and used in a normal manner, will be repaired or replaced at Lawn Genie's option at no charge, providing the product is received at the Lawn Genie factory, or authorized factory service center, with all transportation charges prepaid within two years of the date of original purchase. This warranty does not apply to damages or malfunctions resulting from accidents, misuse or neglect. Lawn Genie will not pay labor or other costs of removal or reinstallation of any so-called defective products.

NO IMPLIED WARRANTIES (INCLUDING BUT NOT LIMITED TO) FITNESS FOR A PARTICULAR PURPOSE, WHERE APPLICABLE, AND MERCHANTABILITY SHALL EXTEND BEYOND THE PERIOD OF THE EXPRESS WARRANTY DESCRIBED ABOVE. IN NO EVENT SHALL LAWN GENIE BE RESPONSIBLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES TO PROPERTY WHICH MAY ARISE FROM OR RELATE TO THE PURCHASE OF ANY LAWN GENIE PRODUCT.

Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so one or both of the above limitations may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

To exercise your warranty, send unit, with photocopy of dated receipt, postage prepaid to\*:

9455 Railroad Drive  
El Paso, TX 79924  
(915) 757-2586  
(800) 231-5117

# Your watering schedule

Zone	Watering Days	Run Time	location
1			
2			
3			
4			
5			
6			

## Start Times

1-A	
1-B	
2-A	
2-B	



**Hardie Irrigation**

A James Hardie Company