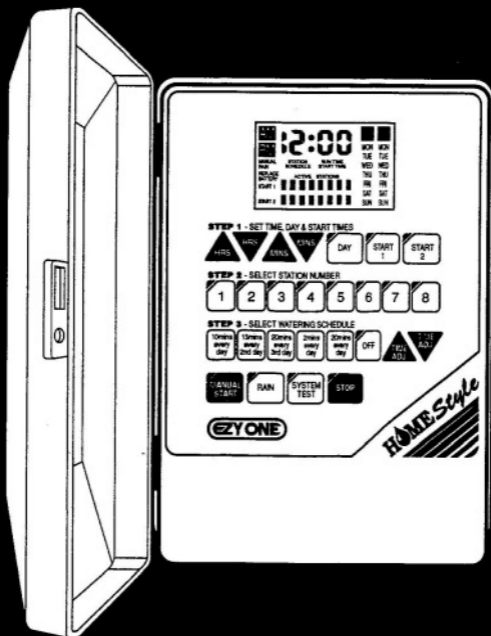


EZY ONE

# IRRIGATION CONTROLLER

4, 6 & 8 STATION UNITS



INSTRUCTION BOOK

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## **INTRODUCTION**

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The Irrigation Controller comes in 3 configurations

- 1) 4 stations
- 2) 6 stations
- 3) 8 stations

The controller features a large liquid crystal display (LCD) which shows a maximum amount of information to make the use of the controller as easy as possible.

The controller has 2 starts per day. Each station can be allocated to either or both start times and can be set on a different watering schedule on each start time. Once set, stations will run sequentially on either Start No.

The controller is simple to set. The LCD display clearly shows the time of day (am & pm), day of fortnight and the stations that are allocated to each start time.

Designed, built and serviced in Australia, the controller is constructed from high quality components that will withstand rugged use in Australian conditions. The controller is fully supported by a 12 month guarantee. (see back page).

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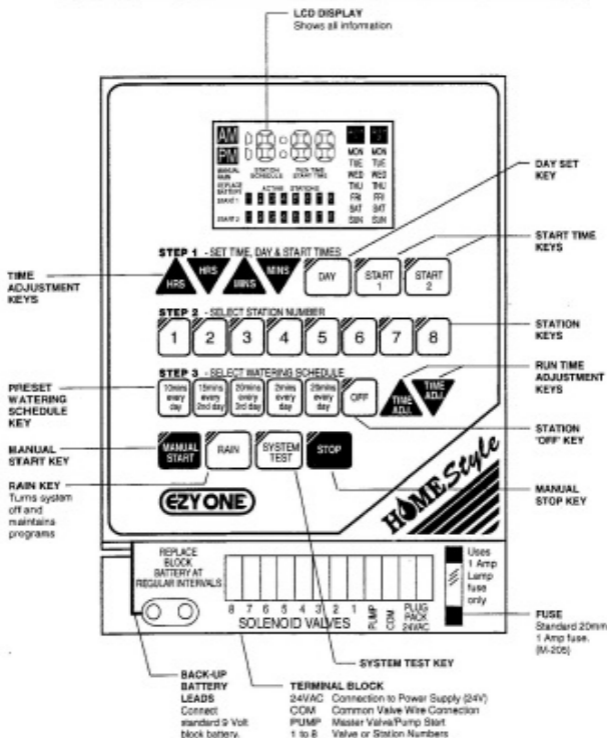
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**'EZY ONE'**  
4, 6 & 8 STATION UNITS

**1. GLOSSARY**



## **2. PROGRAMMING INSTRUCTIONS**

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### **2.1 INTRODUCTION**

The Ezy One controller is specifically designed to make programming simple. The LCD display is large and easy to read. It is designed to display the maximum amount of information so you can see what is programmed.

Before you start to program, take a few minutes to fill in your watering planner. Extra copies are included if you want to plan different schedules for different seasons.

Programming your Controller involves allocating the stations to 1 or 2 or both start times. Once set, the stations will run sequentially on either Start No.

Setting your controller is essentially a step process:

- Step 1 Set current time of day and day of fortnight.
- Step 2 Set your start times.
- Step 3 Allocate your stations to each start time and select a watering schedule for each station.

Your controller also has other special function keys:

The 'MANUAL START' key allows you to start the controller at any time.

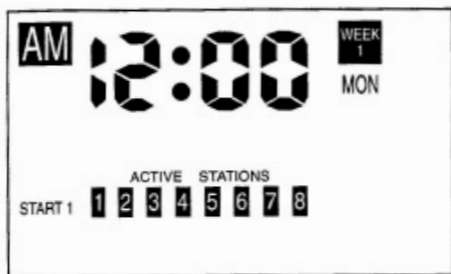
The 'STOP' key allows you to stop the controller at any time.

The 'RAIN' key turns the controller off so it wont water. All programmed information is retained.





The 'System Test' key allows all stations to be run very easily.

## 2.2 POWER UP

Once the controller has power (either by battery or mains power) the LCD will show the basic information:




### 2.2.2 SET CURRENT TIME

To set current time simply use     keys.

Remember to set the AM/PM indicators correctly.

## 2.3 SET CURRENT DAY

Simply push  key until the desired day is displayed

### HINT

It is important to plan how you want your irrigation system to water. The enclosed planner (see page 16) is designed to help you plan this. Please take 5 minutes to fill in the enclosed planning sheet. You will understand the programming process better if you do.





## 2.4 SET START TIMES

Push  key.

The display will change.



This display shows the factory set program. Start time 2.00 am. START 1 - has all Stations programmed on it.


To change this time simply use     keys until the desired time is set. Again remember to set AM/PM correctly.

### HINT:

If you don't use any other keys within approximately 8 seconds the display will revert to the basic display. If this happens and you want to

continue to program simply press  again.

(This feature is designed to get you back to the start if you have trouble.)

To turn a start OFF simply push  key.


Both start times are set in this way.


## 2.5 SET STATION RUN TIMES AND PRE-SET WATERING SCHEDULE

To offer you the most flexible watering and to make this process easy we have used a series of keys to give you the most commonly used programming information.

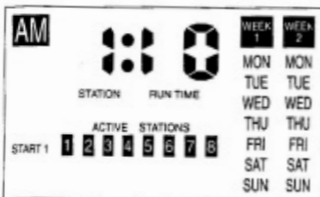
The programming process is as follows:

a) Plan your requirements for each station (in the Watering Planner)

b) Press the desired . The start time set as per 2.5 will show.

c) Press or select the station key you want to program, e.g. 

d) Press the key that most closely selects your desired watering schedule (i.e. frequency of watering).



This display shows Station 1 will run for 10 minutes on Start 1. It is programmed to run on ALL days of the fortnight.

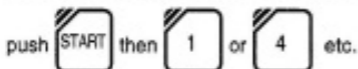
e) To program all stations simply repeat steps (c) and (d) until all stations on a particular Start No are dealt with. (Remember to turn stations OFF, if they are not required on this Start Time, or if you have vacant stations).

**HINT**

If you leave pressing buttons for more than 8 seconds, the display will return to the standard display. To resume programming, simply push



To review what particular stations are set at, simply





You DON'T have to push  each time you want to review or set a station. Once 'in a start', you can push the station keys repeatedly. You can push any station key and the display will show you all information pertaining to the station you select.

**2.6 VARIATIONS TO THE PRESET SCHEDULES**

**2.6.1. TO CHANGE THE RUN TIME**

After pressing the key that most closely selects your desired watering

schedule, use   buttons until your desired run time is shown.

**2.6.2 TO TURN A STATION OFF**




Simply push 

This station will now disappear from the display against the Start No.






### 2.6.3 TO SET AN INDIVIDUAL WATERING SCHEDULE

You can program individual day watering schedule to any or all stations as follows:

- i) Select Start No. and push  key
- ii) Select Station No and push  key
- iii) Turn all watering days OFF by pushing  key.

All watering days will disappear from the display.

- iv) Then push the  key and the days will re-appear one at a time. To turn a day OFF push  . The last day showing on the display will disappear and the next subsequent day will automatically appear. If you hold  down, the days will proceed to be erased.

### **2.7 FACTORY PRESET PROGRAM**

A factory preset program is installed into the controller as follows:

START 1 - 2.00 am    START 2 - OFF.

STATIONS-ALL ON.

RUN TIME - 10 minutes each.

FREQUENCY - EVERY DAY all stations.

This program ensures that watering will occur on all stations, everyday, regardless of power failures or failure of the back up battery.

### **3. OPERATING INSTRUCTIONS**

#### **3.1 INTRODUCTION**

The controller is a mini-computer. You tell it what time you want to water, what stations you want set for a preset run time and what days of the fortnight you want each station to water.


Once set the controller then does its job.

Each day it waters the stations you have told it to water, for the time you have set. It will do this week in, week out.

This is called 'AUTOMATIC' operation.

However, your controller has other 'manual operation' features:

#### **3.2 MANUAL STOP**



To STOP watering at any time simply push the  button. All watering will stop.

#### **3.3 MANUAL START**




You can manually use your controller in 3 different ways:

- i) Run a Start #
- ii) Run a Single Station
- iii) Run the System Test.

##### **3.3.1 RUN A START #**



Simply push  key followed by the  key. All stations allocated to that start will water for the programmed run time for each station allocated to that Start No.

### 3.3.2 RUN A SINGLE STATION

Push  key followed by the desired station #. That station will run for a preset 10 minutes for any station. You can change this run time by using the   buttons. (Even while the station is running).



This will not change the set run time for the next automatic start.

### 3.3.3 RUN THE 'SYSTEM TEST'

Push  key followed by . This key has an automatic 2 minutes per station programmed.

The controller will run ALL stations on the controller for 2 minutes, regardless of what Start No they are allocated, or if they are turned OFF.

### HINT

The 2 minutes preset time can be varied by using the   buttons, even during watering.

### 3.4 RAIN

This button will turn the controller OFF without removing any programmed information.

When operational the 'RAIN' symbol on the display will flash.

To cancel RAIN, simply push the rain key again and the flashing RAIN will disappear.

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## **INSTALLATION INSTRUCTIONS**

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### **4.1 MOUNTING THE CONTROLLER**

- If required knock out plastic press-outs on the bottom of the controller box and clean with a sharp knife.
- Install the controller near a 240V AC mains outlet, preferably located in a house, garage or other covered area. For ease of operation, eye level placement is recommended. Drive a #8 screw into the wall, leaving about 4mm of the screw exposed. If necessary, use a toggle bolt or masonry shield.
- Hang the controller from the keyslot located in the back of the case. Make sure the head is properly seated inside the controller case. Additional screws may be inserted through the holes in the lower corners of the controller case.

### **4.2 ELECTRICAL HOOK-UP**

#### **WARNING**

- 1 All electrical work must be carried out in accordance with these instructions following all applicable local, State and Federal codes, or warranty will be void.
- 2 Disconnect main power supply before maintenance work to controller or valves and when connecting and disconnecting field wiring and pump and master valve hook-ups.

### **4.3 FIELD WIRING CONNECTIONS**

#### **PREPARATION**

- 1 Prepare wires for hook-up by cutting the wires to the correct length and stripping approximately 6.0mm (1/4 inch) of insulation from end to be connected to the controller.
- 2 The controller is fitted with easy to use lever action terminals. Simply lift lever forward and the cable can be inserted into the aperture. Push lever back and the cable is retained. Ensure the cable is clamped and not the insulation.
- 3 A maximum of 1 Amp may be supplied by any output. Check the inrush current of your solenoid coils before connecting more than 2 valves or coils to any 1 station.

#### 4.4 TERMINAL BLOCK LAYOUT

The terminal block is laid out as follows:



#### GLOSSARY

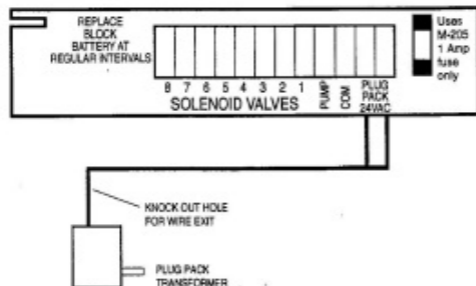
- 24VAC Power Supply (24 Volts)  
Plug Pack  
COM Common Valve wire  
PUMP Master Valve/Pump Start active wire  
1 to 8 Station (Valve) active wire connections

#### 4.5 POWER SUPPLY CONNECTIONS

The Controller itself can run off either a 240VAC to 24VAC plugpack or an inbuilt transformer delivering 24VAC at 30VA.

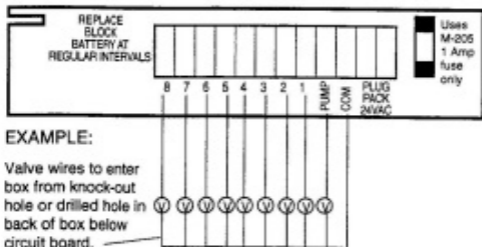
It is recommended that the transformer be connected to a 240V AC supply which is not also servicing or supplying motors (i.e. air conditioners, pool pumps, refrigerators, etc). Lighting circuits are suitable as a power source.

Connection to the unit is as follows:-



#### 4.6 CONNECTION OF VALVES

Up to two 24V AC Solenoid Valves can be connected to each station output and wired back to the common (C) thus:

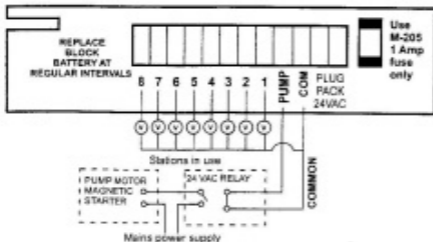


#### 4.7 PUMP HOOK-UP CONNECTIONS

DO NOT attempt to drive a pump starter directly from the controller. Pump start is provided by connecting one side of the coil of a suitable relay to the MASTER VALVE/PUMP START output of the Controller and the other side to the Controller COMMON.

For systems supplied with water from a PUMP, unused stations must be connected back to the last used station to eliminate the possibility of the pump running against a closed head. Failure to do so could lead to pump damage.

The diagram shows an 8 station controller.



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## **5. ELECTRICAL CHARACTERISTICS**

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### **POWER SUPPLY**

#### **MAIN SUPPLY**

The 'Ezy One' has the option to run off either a 50Hz Plugpack Transformer with an output of 24V AC 50Hz @ 1 Amp or 220-240 VAC (50 Hz) delivering 24 VAC through a 30 VA rated transformer.

### **ELECTRICAL OUTPUTS**

#### **Electrical Power Supply**

- Input 24Volts AC 50Hz
- Outputs Stations 24Volts AC 50Hz, 1 Amp max.  
Master Valve/Pump Start 24Volts AC  
50Hz, 1 Amp max.

**NOTE:** Transformer and fuse capacity must be compatible with output requirements.

- Overload protection:- Standard 20mm 1 Amp fuse.
- Power failure:- 9 Volt block type battery retains programmed information.
- The output circuits should be installed and protected in accordance with wiring rules.

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## **6. SERVICING THE CONTROLLER**

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The Controller should always be serviced by an authorized agent. The Controller is designed to be easily dismantled for service.

Follow the following steps:-

1. Turn power off to the Controller.
2. Disconnect 24 Volt power leads to the "PLUG PACK 24 VAC" terminals.
3. Clearly mark or identify all valve wires according to the terminals, they are connected to (1 to 8). This allows you to easily wire them back to the Controller, maintaining your valve watering sequence.
4. Disconnect valve wires from the terminal block.
5. Remove the 2 screws underneath the terminal block.
6. Slide the panel out of the box. Leave the fascia connected to the circuit board.
7. Carefully wrap the panel in protective wrapping and pack in a suitable box. Return to your service agent or the manufacturer
8. Replace your panel by reversing this procedure.

# WATERING PLANNER (EXAMPLE)

| STATION                  |           | 1              | 2             | 3     | 4                   | 5            | 6   | 7            | 8                  |
|--------------------------|-----------|----------------|---------------|-------|---------------------|--------------|-----|--------------|--------------------|
| <b>START</b><br><b>1</b> | Location  | FRONT<br>VERGE | FRONT<br>LAWN | ROSES | FRONT<br>GDN<br>BED | BACK<br>LAWN | GDN | VEG<br>PATCH | HANGING<br>BASKETS |
| <b>TIME</b><br>6.00am    | Run Time  | 20             | 15            | 10    | 10                  | 15           | 10  | 8            | 2                  |
|                          | Frequency | ETD            | ESD           | ED    | ED                  | ESD          | ED  | ED           | ED                 |
| <b>START</b><br><b>2</b> | Location  |                |               |       |                     |              |     | VEG<br>PATCH | HANGING<br>BASKETS |
| <b>TIME</b><br>3.00pm    | Run Time  |                |               |       |                     |              |     | 6            | 2                  |
|                          | Frequency |                |               |       |                     |              |     | ED           | ED                 |

ED = Every Day Watering

ESD = Every 2nd Day Watering

ETD = Every 3rd Day Watering





# YOUR GUARANTEE

*The manufacturer Guarantee to the original purchaser that any product supplied by the manufacturer will be free from defects in materials and workmanship for a period of 12 months from the date of purchase. Any product found to have defects in material or workmanship within the period of this Guarantee shall be repaired or replaced by the manufacturer FREE OF CHARGE.*

*The guarantor does not guarantee the fitness for a particular purpose of its products and does not make any guarantee, expressed or implied, other than the guarantee contained herein. The guarantor shall not be liable for any loss of use of the product or incidental or consequential damages including damages to other parts of any installation of which this product is part.*

*The guarantee shall not apply to any equipment which is found to have been improperly installed, set up or used in any way not in accordance with the instructions supplied with this equipment, or to have been modified, repaired or altered in any way without the express written consent of the company. This guarantee shall not apply to any batteries or accessories used in the equipment covered under this guarantee or to any damage which may be caused by such batteries.*

*If the Controller develops a fault, the product or panel must be returned in adequate packing with:*

- 1. A copy of your original invoice.*
- 2. A description of any fault.*

*It is the purchasers responsibility to return the Controller to the manufacturer or their agent by pre-paid freight.*

## **HOLMAN INDUSTRIES**

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