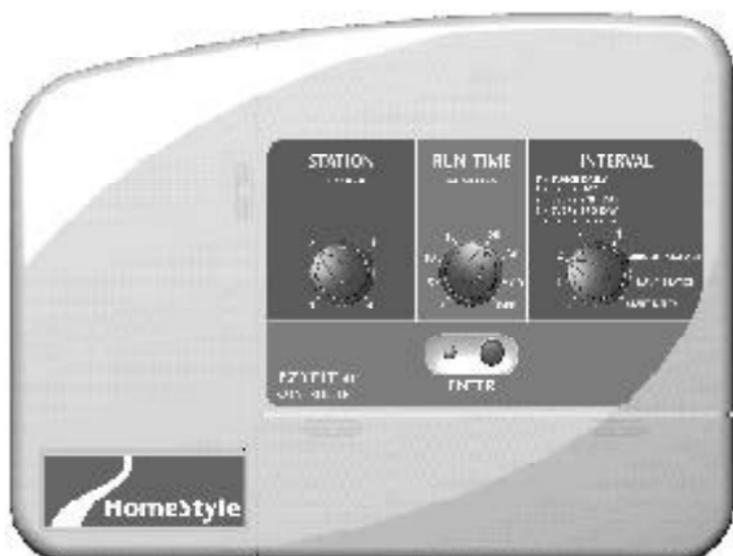


Ezyfit AC Controller

INSTRUCTION BOOK



2&4 STATION UNITS

Features

This unit is available in two and four station configurations. Designed for residential applications, this controller has an individual schedule for each station to allow for efficient watering of different garden areas. Examples of different garden areas are lawns, flower beds, vegetables and hanging baskets.

These different garden areas use different types of sprinklers and often require a separate watering schedule to allow for efficient watering.

Setting the individual schedule for each station is easy. Simply select a position on each of the three dials and then press the Enter button.

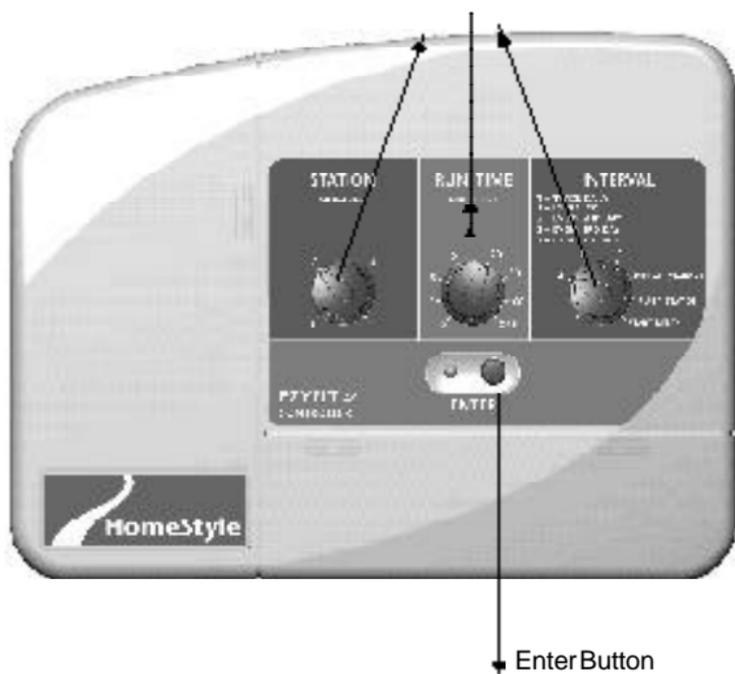
Watering is sequential and the watering duration for a station can be set from a minimum of two minutes up to a maximum of 60 minutes. Watering intervals can be selected from a maximum of twice a day to a minimum of every fourth day.

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Glossary

Programming Selection Knobs



Programming Instructions

Introduction

This controller has been designed to allow each station to have an individual schedule according to the different garden area which requires to be watered.

To set an automatic watering schedule, follow these steps:

- Plan your watering schedules for each station and write the information on the planner supplied on page 13.
- Using the three knobs, select a *Station* followed by a *Run-Time* and an *Interval*, and then press *Enter*. This procedure must be followed for each individual station which you require to be watered automatically.

Other Functions

This controller can also manually run a single station or all stations can be run once according to the duration's which have been set for the automatic schedules.

Programming Example

A typical example of a 4 station system is included as a guide to assist you when planning your automatic watering schedule. In this example, the lawn areas are using pop-ups and require less frequent watering. The flower beds are using micro sprays and the hanging baskets are using drippers.

EXAMPLE OF PLANNER

STATION	1	2	3	4
LOCATION	LAWN	LAWN	FLOWERS	BASKETS
RUNTIME	15MINS	15MINS	10MINS	2MINS
INTERVAL	EVERY 3DAYS	EVERY 3DAYS	EVERYDAY	2ADAY
STARTTIME	8.00AM	8.00AM	8.00AM	8.00AM

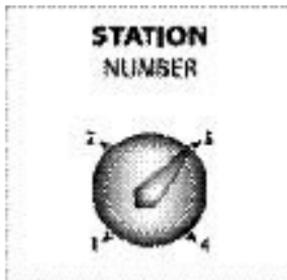
Note: The stations will commence watering in sequential order at 8.00am from the lowest number onwards, on the days that they are scheduled to water.

Each station can have its own individual schedule and should be programmed according to the type of garden area you are watering. Fill out one of the blank spare planners provided before commencing.

Setting Automatic Schedules

To set an automatic schedule for a particular station, follow these steps:-

Step 1. Station



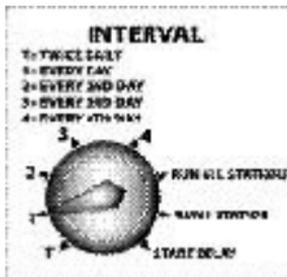
Select a Station number

Step 2. Run Time



This is set in minutes. Select from one of the seven preset watering run times.

Step 3. Interval



This determines the frequency of watering. Select from one of the five positions:

T: Twice a day (every 12 hours)

1: Once a day

2: Every second day

3: Every third day

4: Every fourth day

Watering will commence in 24 hours time from the time the controller is programmed and should you set more than one station on an automatic schedule, the controller will water in sequential order from the lowest station number.

Setting Automatic Schedules

Step 4. Press Enter

Press the Button to complete the setting of the automatic schedule for the selected station and the LED light will flash once to confirm the entry.

Regardless of which watering interval is set, the first watering will take place in 24 hours and thereafter the watering interval will continue with what has been selected i.e. If every 3rd day has been selected, then the controller will water every third day after the first watering has occurred in 24 hours.

Tip: Ensure the LED light flashes once to confirm the entry.

Changing Start Times

Note: Should you wish to change the start time for a particular station, set the Interval knob to *Start Delay* and read the note marked "Examples" before proceeding.

Examples: If the *Enter* button is pressed once, the automatic watering schedule will commence in one hour. If the *Enter* button is pressed ten times, the automatic watering schedule will start in ten hours. In this way, the start time for this particular station can be altered. The maximum delay is 24 hours and the minimum delay is 1 hour.

Tip: The start time will only be changed for the nominated station which has just been programmed and can only be set immediately after following the four steps for setting the automatic program.

Proceed to set the automatic schedule for the next station by following the same four steps. Each station must be set in the same way and can have its own individual schedule and start time.

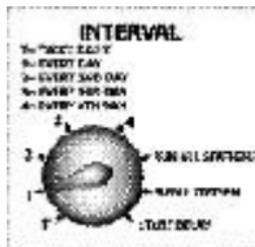
Manual Operations

Run All Stations Once

To manually run all stations once for the run times as set in the automatic schedule, turn the *Interval* dial to the *Run All Stations* position and press the *Enter* button.

Run A Single Station

To manually run a single station once for a selected time, select a *Station* number followed by one of the preset *Run Times*, turn the *Interval* dial to *Run 1 Station* and press the *Enter* button.



Stop

To stop an automatic or manual operation, turn the *Run Time* dial to the *Off* position and press the *Enter* button.



Note: To continue the automatic watering schedules, move the *Run Time* dial into one of the preset *Run Time* positions.

Rain Off Mode

To stop the automatic watering schedules during winter, turn the *Run Time* dial to the *Off* position.

Note: In this mode, the automatic watering schedules will not come on but the programmed information will be retained in the memory. To reactivate the automatic watering schedules, move the *Run Time* dial to any of the 7 preset *Run Time* positions.

Other Features

Battery Back-Up

To hold the automatic watering schedules during power failures, fit a standard 9 volt block Alkaline Battery to the battery snap supplied under the side cover. This will hold the automatic schedules for up to one week.

Note: To verify that there is an automatic watering schedule set in the controllers memory, the LED Light will flash every 20 seconds.

Stacking Start Times

When setting the automatic schedules, the controller will stack the station start times in numerical order and watering will be sequential from the lowest station number.

Fault Finding Guide

Symptom	Possible Cause	Suggestion
LED does not flash.	Faulty transformer. Fuse blown.	Check fuse. Check field wiring. Check transformer.
Single Station not working.	Faulty solenoid coil.	Swap faulty station wire on controller terminal block with known working station wire. If the faulty valve still does not work on the known working connection then the solenoid coil is faulty. The panel may need to be repaired.
Fuseblows.	Incorrect wiring or bad wiring joint.	Check wiring and joints.
No automatic start.	Incorrect programming or blown fuse.	If unit works manually check programming. Check fuse and field wiring.
More than 1 station coming on at once.	Damaged main output driver chip.	Check wiring and swap faulty station wire(s) on controller terminal block with known working station wire. If the same outputs are still locked on, return panel to supplier or manufacturer.
Pump start chattering (4 station unit only)	Faulty relay or pump contactor.	Electrician to check voltage on pump relay or contactor.

Installation Instructions

Mounting The Controller

- 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 key slot 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.

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 mains power supply before maintenance work to controller or valves and when connecting and disconnecting field wiring and pump and master valve hook-ups.

Field Wiring Connections

PREPARATION

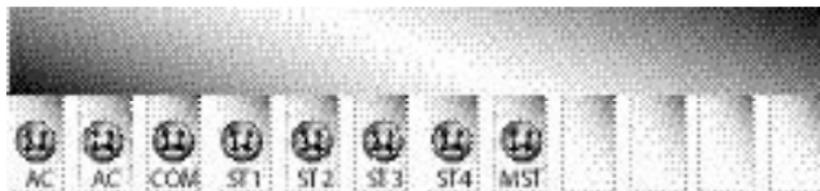
- 1 Prepare wires for hook-up by cutting the wires to the correct length and stripping approximately 6.0mm (¼ inch) of insulation from end to be connected to the controller.
- 2 Ensure terminal block screws are loosened sufficiently to permit easy access for wire ends. Insert stripped wire ends into the clamp aperture and tighten screws. Do not over tighten as this may damage the terminal block.
- 3 A maximum of 0.75 Amps may be supplied by any output. Check the inrush current of your solenoid coils before connecting more than two valves, or coils to any one station.

Installation Instructions

Terminal Block Layout

The terminal block is laid out as follows:

EXAMPLE: 4STATIONUNIT



GLOSSARY

AC	Connect wires from 24VAC plug pack
COM	Common valve wire input
MST	Master valve or pump start active wire (4 station model only)
ST1 to ST4	Station (Valve) active wire connection

Power Supply Connections

The controller itself can run off a 240V (50Hz) or 110V (60Hz) to 24VAC Plugpack. It is recommended that the transformer be connected to a 240VAC or 110VAC 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.

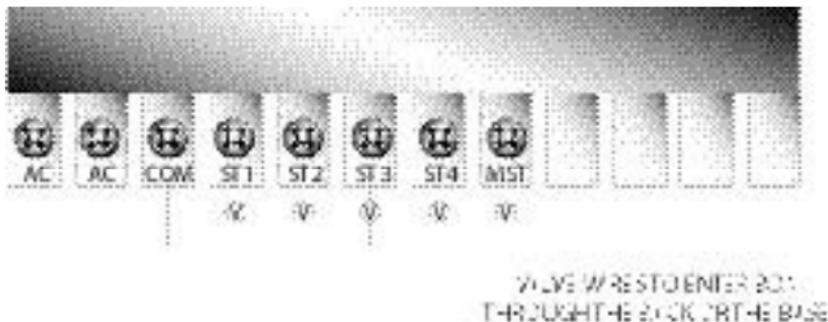
Connections to the unit are as follows:



Installation Instructions

Connection Of Valves

Only one 24VAC Solenoid Valve can be connected to each station output and wired back to the common (C) thus:

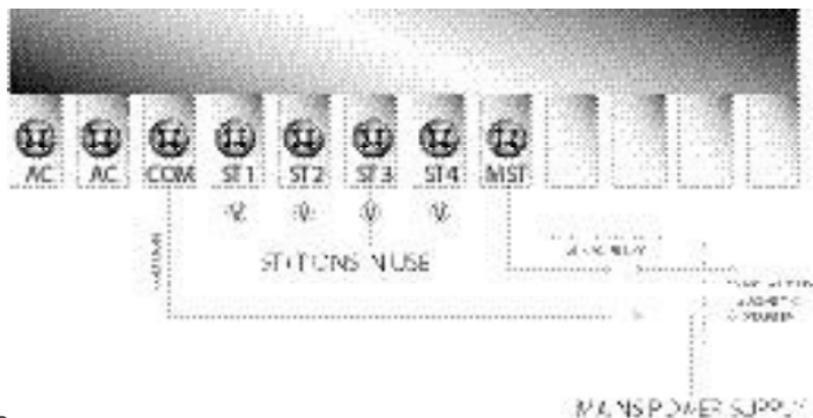


Pump Hook-Up Connections

ONLY ON 4 STATION MODEL

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 a 4-Station Controller.



Electrical Characteristics

Power Supply

MAINS SUPPLY - The unit can run off either a 50Hz or 60Hz Plugpack Transformer with an output of 24V AC 50Hz or 60Hz @ 1 Amp.

Plug Pack Model

The correct wiring installation for the 24 VAC Plug Pack is shown on page 9. The Plug Pack Model is only suitable for indoor installation.

Electrical Outputs

Electrical Power Supply

- Input: 24Volts AC 50Hz or 60Hz.
- Electrical Outputs:
Maximum of 1.0 AMP
To Solenoid Valves - 24 VAC 50/60 Hz 0.5 AMPs max.
To the Master Valve/Pump Start - 24 VAC 0.25 AMPs max (4 Station Model only.)

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.

Servicing The Controller

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

Follow these steps:

- 1 Turn Mains 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 4). 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 Carefully wrap the panel in protective wrapping and pack in a suitable box. Return to your service agent or the manufacturer.
- 6 Replace your panel by reversing this procedure.

Spare Watering Planners

STATION	1	2	3	4
LOCATION				
RUNTIME				
INTERVAL				
START-TIME				

STATION	1	2	3	4
LOCATION				
RUNTIME				
INTERVAL				
START-TIME				

STATION	1	2	3	4
LOCATION				
RUNTIME				
INTERVAL				
START-TIME				

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 one year 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 from 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.

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