

INSTALLATION INSTRUCTIONS

5006-IP SIX STATION AC PROPAGATION AND IRRIGATION CONTROLLER

INTRODUCTION

THANK YOU for purchasing a DIG Controller. Please take the time to read through the enclosed instructions and follow them step by step. If you have any questions, please call our customer service line 1-800-344-6641.

CONTROLLER MAIN FEATURES

- Operates up to 6 valves and master valve (or booster pump)
- Simultaneously operates up to two valves
- Independent program for each valve
- Operates 24 VAC valves
- Up to four start times per day per each valve in calendar mode
- Simple, four button programming
- Optional manual operation
- Identifies short circuits, disconnects shorted valve, and gives visible alarm
- Operates off 120 VAC transformer
- Program backup with 9V battery
- Can be programmed under backup battery power, without AC power connection
- Up to 30 days rain delay



SPECIFICATIONS

OPERATING SPECIFICATIONS

- Programs: Independent program for each valve
- Station run time: In 1-second increments up to 24 hours
- Watering Schedule: In 1-minute increments up to 5 minutes  
In 5-minute increments up to 15 minutes  
In 15-minute increments up to 45 minutes  
In 1-hour increments up to 23 hours  
In 1-day increments up to 30 days  
7 days calendar
- Start time in irrigation mode: up to 4 start times per day
- Start time in propagation mode: one start time every minute
- Sensor: on and off

PROGRAMMING THE CONTROLLER

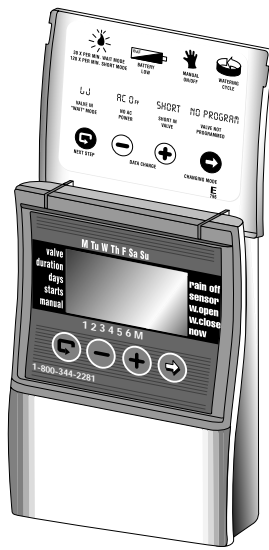
DIG controllers are programmed with the aid of four buttons:

Programming step selector – used to select the desired programming mode (includes clock setting mode)

Next step button – used to select the parameter to be changed (hour, minute, etc.). Only a blinking parameter can be changed.

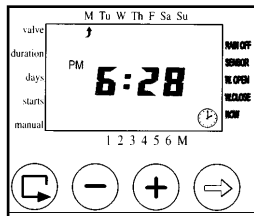
Data increment button (Increase) – Raises the value of the selected parameter (e.g., when time selected from 06:00 to 07:00).

Data increment button (Decrease) – Lowers the value of the selected parameter (e.g., when time selected from 06:00 to 05:00).



PROGRAMMING CURRENT TIME AND DATE

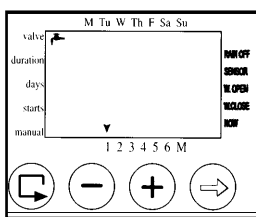
Press a number of times until icon appears. Press . The hour digit will flash. Use the or buttons, to set the current time (note: use of AM and PM). A further press of will make the minutes digit flash. Use the or to set the current time. Press . A flashing arrow will appear in the upper portion of the display. Use the or to set the current day. Press to move to the next step.



If the last data entered stops flashing, press the again to resume programming.

VALVE SELECTION

Press until icon appears. Press . A flashing arrow appears. Use the or to position the arrow opposite the valve number that you wish to program.



- Irrigation window allows for propagation at a defined part of the day
- Open window: AM or PM
- Close window: AM or PM

ELECTRICAL SPECIFICATIONS

- Transformer input: 120 VAC, 60 Hz
- Station output: 24 VAC, 0.27 amps per station
- Maximum output: 24 VAC, 0.83 amps
- Battery backup: 9 volt alkaline battery (not included)

DIMENSIONS

- Height: 6" (15 cm)
- Width: 4" (10 cm)
- Depth: 2" (5 cm)

MOUNTING CONTROLLER TO WALL

- Select an indoor location near a 120 VAC outlet. The location should be protected from moisture and sunlight
- Remove the mounting bracket from the back of the controller
- Place the mounting bracket slightly below eye level. Secure the bracket with #5 or #6 1" screws (Note: If installing on drywall, install screw anchors).
- Align controller housing with mounting bracket. Slide the controller down into position on the bracket.



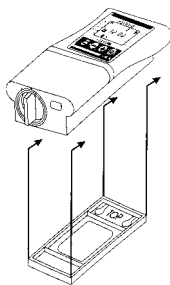
**DO NOT PLUG TRANSFORMER INTO POWER SOURCE UNTIL THE CONTROLLER IS MOUNTED AND ALL VALVES HAVE BEEN CONNECTED.**

BACK-UP BATTERY INSTALLATION

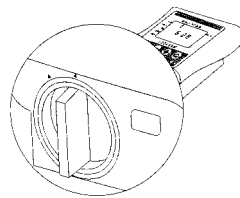
Rotate the battery compartment cover handle to the 11 o'clock position to remove the cover (see drawing). Insert battery. All controller display elements will briefly appear on the display, followed by the blinking time "12" – the controller is now ready to be programmed.

**IMPORTANT: To replace the battery compartment cover, insert it with the handle in the "11" o'clock position to avoid possible cover guide pin breakage.**

The battery is intended for irrigation program backup only. During electrical outages the program will not be erased, however, valves will not operate.



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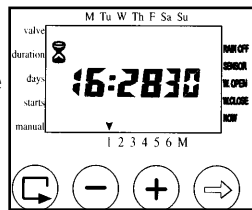


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Press to move to the next step.

PROGRAMMING WATERING TIME: HOURS, MINUTES AND SECONDS

Press until icon appears. Use and or to set the desired watering time.



Press to move to the next step.

PROGRAMMING WATERING SCHEDULE

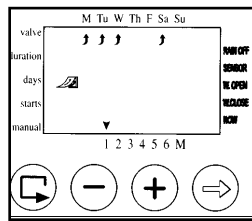
Press until icon appears. At this stage you can select one of two program options:

- A) Watering schedule according to the days of the week.
- B) Cyclical schedule watering – once, minutes, hours and days.

A. Watering schedule according to the days of the week.

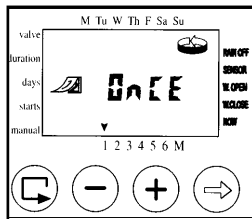
Press , a flashing arrow appears opposite the days of the week. Use the or buttons for the desired day. A non-flashing arrow shows the Watering Day selected. In this way, move along the days of the week and set any day of the week required.

To cancel a Watering Schedule: Press when the arrow is flashing beside that day.



B. Cyclical, , minutes, hours and days watering

For operating the watering schedule cyclically or press the a number of times (pass over every day of the week) until the word appears. for single watering if required.



Cyclical schedule watering – press and the word will flash. Use or to set the desired watering cycle, up to 45 minutes, up to 23 hours and up to 30 days. When you leave the icon on, program will operate one time only, and the controller needs to be programmed again.

CONNECTING VALVES AND TRANSFORMER

- Install control wire between valve location and controller
- At the valve, connect a common wire to either solenoid wire of all valves. Connect a separate wire to remaining wire of each valve. Waterproof all wire splice connections.
- Remove cover from controller to access the terminal strip area.
- Connect valves common wire to "C" (common) and individual valve wire to appropriate valve # on the controller terminal (see Figure 1).
- Insert transformer wire through the hole in the bottom of the controller and connect the wire to the two screws marked "AC". (Polarity does not matter.)

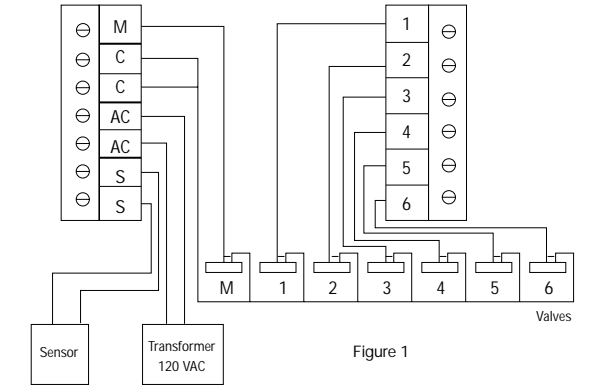


Figure 1

**Do not plug transformer into power source until the controller is mounted.**

Model 5006-IP – 6 station controller

M = Master valve or pump controller

CONNECTING A MASTER VALVE OR PUMP START RELAY

The controller must be mounted 10 to 15 feet away from pump start relay and the pump. When a controller is used to operate a pump, a pump start relay must be used.

Connect either wire from pump start relay to controller terminal "M", connect other wire to the "C" (common) terminal.

**Do not connect controller directly to pump start, it can damage the controller.**

**Connecting the controller to a pump is to be performed by a qualified electrician only.**

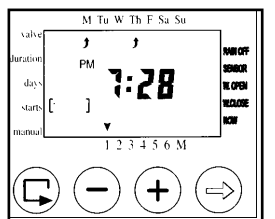
CONNECTING A RAIN SENSOR

An interrupt type rain sensor can be connected to the controller. The sensor connects directly to the controller sensor connection. Connect either wire from sensor to the two sensor terminals on the controller (see figure 1).

Press to move to the next step.

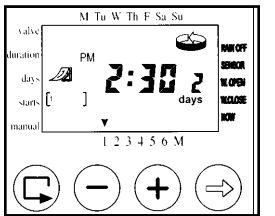
PROGRAMMING A WEEKLY START TIME

(For watering according to the days of the week.) Programming the controller by day of the week allows 4 start times per day. Press for start no. 1. The word will appear (or the last start time entered). Press the word flashes. Use the or to set the desired start time (note AM and PM). Press to program start no. 2 and repeat the same steps for starts no. 3 and 4. To cancel one of the start times, press . The hour digit flashes. Use the or to display .



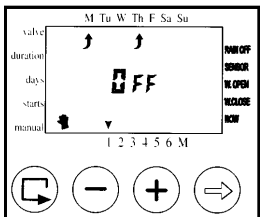
PROGRAMMING A CYCLICAL OR START TIME WITH START TIME DELAY

Programming a start time with these programs will allow the use of an additional function defined as "number of days". You will be able to set the first start time today (day 0), tomorrow (day 1) or any number of days required (up to 30 days). Press . Use or to set the desired start time, and day. (Only one start time in this mode).

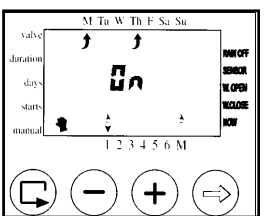


MANUAL OPERATION

Press the . The icon appears. Use and to open or close the valves.

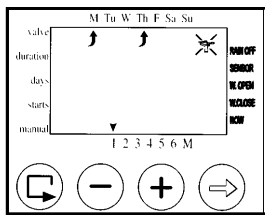


- In this position, it is not possible to change the valve number. (In order to change the valve, you must return to the "valve" position.)
- If the controller is not connected to the main power supply, the word "AC OFF" will appear and the valve may not be opened.
- In manual operation, the valve will close automatically after the programmed watering time.



### "RAIN OFF" (SHUTDOWN)

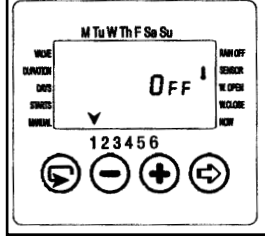
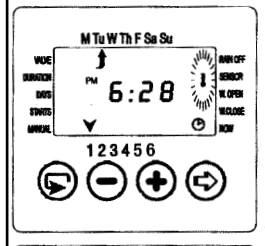
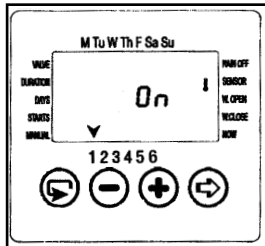
Press . The icon appears. Press and icon will appear. The controller is shut down. Press to return to the original programming. (The icon will disappear.)



The shutdown mode causes all of the valves controlled by the computer to be suspended. The programming, however, is preserved.

### SENSOR OPERATION

1. Select the valve to which the sensor is to be associated.
2. Press until appears next to SENSOR.
3. Press to activate the sensor in the irrigation program for the selected valve.



\* With the sensor circuit closed (i.e., the sensor detects the existence of a defined program lockout condition) the symbol blinks on the display. In this situation, irrigation will not take place through valves associated with the sensor.

4. Press to disable the sensor. The word "OFF" appears on the display.

### IRRIGATION WINDOW IN THE CYCLICAL PROGRAM MODE

The irrigation window is an advanced feature which enables cyclical irrigation program operations (see Section B) to take place only during a defined part of the day (window). The irrigation window is defined as a part of a day (up to 23 hours), in the cyclical irrigation mode only.

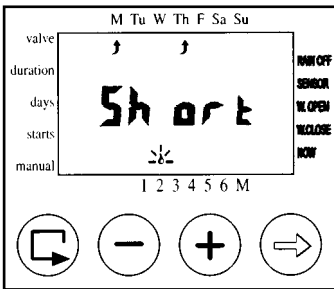
This function is useful when irrigation is only required during the hot hours of the day. For example, open window 9 am, closed window 4 pm.

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### VALVE IN Short MODE

(A short-circuit in the solenoid or wiring.)

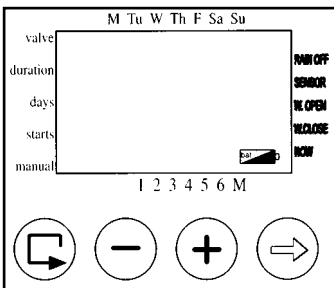
To check if the valve is short-circuited, select the flashing valve and move to the manual position. If **Short** appears, then the valve is short-circuited. Check the wiring and the solenoid.



### WEAK BACKUP BATTERY

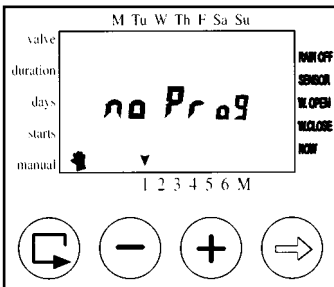
When the backup battery is weak, a flashing icon will appear on the display.

The battery should be replaced. The programming will not be deleted if the fresh battery is inserted within 30 seconds of removing the weak battery.



### NO PROGRAM

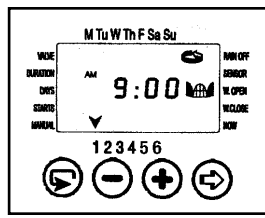
During "manual" irrigation system operation via the irrigation controller, "no prog" appears on the display, meaning that no irrigation period has been set for the current valve. In this case, the irrigation controller "does not know" when to close the valve.



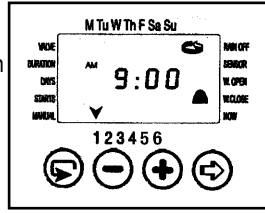
In this situation valve opening is disabled.

Make sure that appears on the display

1. Press until appears on the display next to W.OPEN, with the word OFF or last OPEN WINDOW time setting displayed.
2. Press . The word OFF blinks on the display.
3. Press and to set the desired OPEN WINDOW time (pay attention to the AM/PM designation).

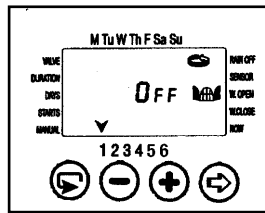


4. Press until appears on the display next to W.CLOSE, with the 12 am or the last close window time setting displayed.
5. Press . The 12 am blinks on the display.
6. Press and to set the desired CLOSE WINDOW time (pay attention to the AM/PM designation).



### To disable the irrigation window function

1. Press until appears next to OPEN WINDOW, with the last OPEN WINDOW time setting displayed.
2. Press . The irrigation window open time blinks on the display.
3. Press until OFF appears next to .



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### MAINTENANCE AND TROUBLESHOOTING

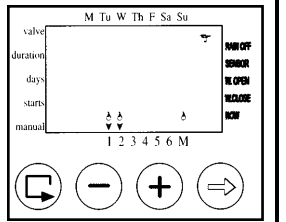
Check the wiring on the controller's terminal strip and on the valves, at the beginning of a new season.

- PROBLEM:** Valve does not open  
**CAUSE:** One of the following not entered: Watering time, watering days, start time  
**SOLUTION:** Check and program as required
- CAUSE:** Selector on "RAIN OFF" position  
**SOLUTION:** Cancel RAIN OFF
- CAUSE:** No main electric power  
**SOLUTION:** Check transformer and socket
- CAUSE:** Valve or connection faulty  
**SOLUTION:** Check the valve or replace it
- PROBLEM:** Valve does not close  
**CAUSE:** Dirt or stones in the valve.  
**SOLUTION:** Clean the valve
- CAUSE:** Valve was opened manually  
**SOLUTION:** Move to automatic position
- CAUSE:** Valve faulty (torn diaphragm)  
**SOLUTION:** Replace valve or part
- PROBLEM:** Display "disappears"  
**CAUSE:** Backup batteries are dead and there is no power from the transformer  
**SOLUTION:** Check the batteries and the transformer.

### VALVE IN OPERATION

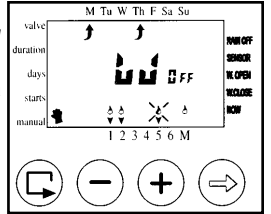
A icon will appear over the valve. If the flashes, the valve has not opened, the possibilities are:

- The valve is in standby mode (WAIT). icon will flash once every two seconds (30 times every minute).
- Valve is in "short mode". The icon will flash once every 1/2 second (120 times every minute).



### VALVE IS IN STANDBY MODE (WAIT)

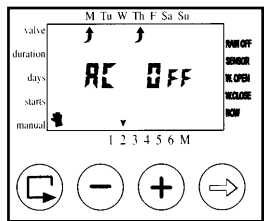
When two valves are currently open, and a third valve is scheduled to open, the third valve will enter into a wait mode. A blinking O will appear above the number of the valve which is on wait.



To check that the valve is in (WAIT) mode, select the flashing valve and return to the manual position. If the appears, then the valve is in (WAIT) mode.

### NO POWER

"AC Off" appears on the display during controller irrigation program execution, or during "manual" irrigation system operation via the irrigation controller when no power is delivered.



In this situation, the controller can be programmed, but cannot operate the valve.

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### DIG CORPORATION 3 YEAR WARRANTY

DIG CORPORATION warrants these products to be free from defects in material and workmanship for a period of three years from date of purchase. This warranty does not cover damage resulting from accident, misuse, neglect, modification, improper installation or subjection to line pressure in excess of 150 lbs. per square inch. This warranty shall extend only to the original purchaser of the product for use by the purchaser. This warranty shall not cover batteries or any malfunction of the product due to battery failure. The obligation of DIG CORPORATION under this warranty is limited to repairing or replacing at its factory this product which shall be returned to the factory within one year after the original purchase and which on examination is found to contain defects in material and workmanship.

DIG CORPORATION SHALL IN NO EVENT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND; THE SOLE OBLIGATION OF DIG BEING LIMITED TO REPAIR OR REPLACEMENT OF DEFECTIVE PRODUCTS. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

Unattended use for prolonged periods without inspection to verify proper operation is beyond the intended use of this product, and any damage resulting from such use shall not be the responsibility of DIG CORPORATION. There are no warranties which extend beyond the description on the face hereof. In the case of purchase of the product for use other than, for irrigation purposes, DIG CORPORATION hereby disclaims any implied warranties including any warranties of merchantability and fitness for a particular purpose. In the case of the purchase of the product for personal, family or household purposes, DIG CORPORATION disclaims any such warranties to the extent permitted by law. To the extent that any such disclaimer or implied warranties shall be ineffectual, then any implied warranties shall be limited in duration to a period of one year from the date of the original purchase for use by the purchaser. Some states do not allow limitation on how long an implied warranty lasts, so the above limitation may not apply to you.

In order to obtain performance under this warranty, the unit must be returned to the factory, along with proof of purchase indicating original date of purchase, shipping prepaid, addressed as follows:

DIG CORPORATION, 130 Bosstick Blvd., San Marcos, CA 92069. Repaired or replaced units will be shipped prepaid to the name and address supplied with the unit returned under warranty. Allow four weeks for repairs and shipping time. Repair of damaged units not otherwise within warranty may be refused or done at a reasonable cost or charge at the option of DIG CORPORATION.

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

### TO ORDER PARTS:

1-800-322-9146 FAX: 760-727-0282



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