INSTRUCTION MANUAL

Model 2008 I
Battery Operated Irrigation Timer with 3/4 in. Anti-Siphon Valve

Features

- Weekly or cyclical programming
- 4 start times per day in weekly program
- Irrigation duration – from 1 minute to 11 hours and 59 minutes in 1 minute increments
- Irrigation frequency
  - ° Weekly program: 4 start times per day
  - ° Cyclical program: from 8 times per day (every 3 hours) to just once per month
- Simple, four-button programming
- Perform manual runs via the timer
- Powered by 1, 9-volt alkaline battery
- Low battery indicator
- Weather resistant

DIG® CORPORATION

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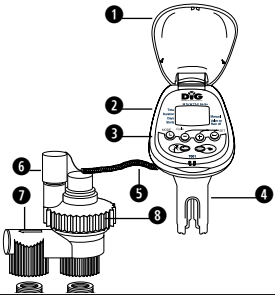
INTRODUCTION

Thank you for purchasing a DIG Irrigation Timer.

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 1-800-322-9146.

1. PARTS IDENTIFICATION

1) Top cover
2) Timer display
3) Programming & operating buttons
4) Collar assembly
5) 24” extension wire
6) Solenoid assembly
7) 3/4” anti-siphon valve
8) Valve bonnet



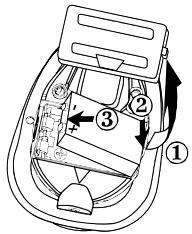
2. SPECIFICATIONS

- Recommended operating water pressure range: 15-70 PSI
- Recommended flow rates: up to 10 GPM

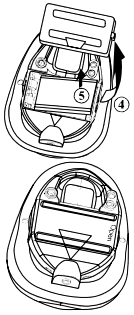
3. BATTERY INSTALLATION AND REMOVAL

3.1 BATTERY INSTALLATION

1. Holding the upper section of the timer, use a firm upward twist to release the timer from the collar.
2. Invert the timer and use firm pressure to lift the battery compartment cover (1).
3. Insert the bottom end of the 9-volt alkaline battery (2) first, then press on the top end (3) to ensure the battery is firmly in place.



3.2 BATTERY REMOVAL



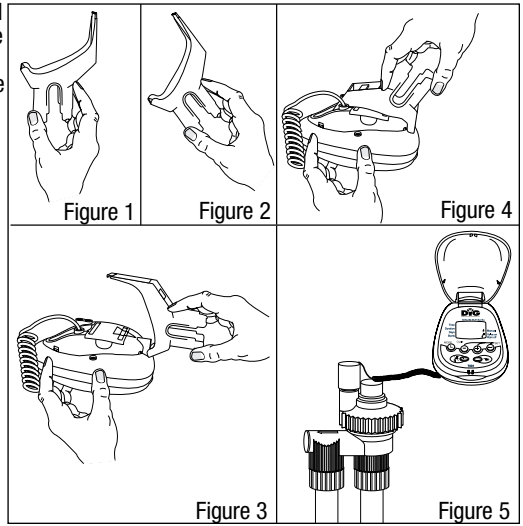
1. Remove the battery compartment cover (4).
2. Lift the lower end of the battery (5) first. If necessary, use the flat end of a small screwdriver.

- ***Removing the batteries from the top end may damage the connections.***
- ***Use alkaline batteries only.***
- ***Battery polarity is marked in the battery compartment.***

Replace battery compartment cover in its proper place, ensuring a triangle is formed on the underside of the timer.

4. COLLAR ASSEMBLY

1. Hold the collar by the round shaped sides (see Figures 1 and 2).
2. Invert the timer and use firm pressure to insert the lower side of the collar to the timer center nub (see Figure 3).
3. Lower the collar and snap it to the groove at the lower part of the timer (see Figure 4).
4. Insert the timer with the collar on the top of the solenoid and make sure the wire fits through the larger slot (see Figure 5).



5. INSTALLATION

The 2008 I timer can be installed directly to PVC pipe. (Inlet 3/4" FNPT, outlet 3/4" FNPT.)

NOTE: Wrap all fittings with teflon tape. Do not use pipe cement on the valve as this will damage the valve and void the warranty.

Make sure when wrapping fittings with teflon tape that no excess gets into the internal assembly. Tighten fittings with wrench, but do not over tighten.

NOTE: The timer with the anti-siphon valve must be installed at least 6" higher than the highest sprinkler head or back-drainage may occur. Consult local codes for specific details.

1. Flush mainline until water runs clear before installation.
2. Shut off main water supply.
3. Install the anti-siphon valve directly to PVC pipe using 3/4" PVC male adapter or use Schedule 80 nipple. Arrow on valve body cross member indicates direction of water flow (see Figure 6).
4. Program the timer. When finished programming, make sure the current time of day is displayed.
5. Turn the main water supply on and pressurize the system.
6. Press the manual button to test the timer. A click will be heard that indicates the valve is open. An icon of a faucet with a hand will appear on the lower right side (see Figure 7).
7. Make sure that the sprinklers or drip system is working correctly.
8. Press the manual button again to close the valve. A second click will be heard indicating that the valve is closed. The faucet with the hand icons will disappear from the display, and the display will revert to the time of day.
9. Insert the timer with the collar back on the top of the solenoid (see Figure 8).

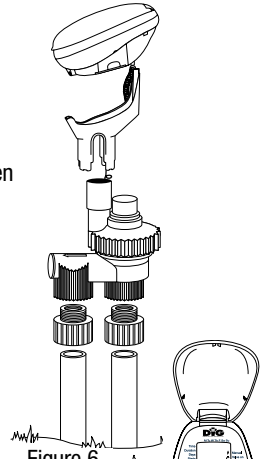


Figure 6

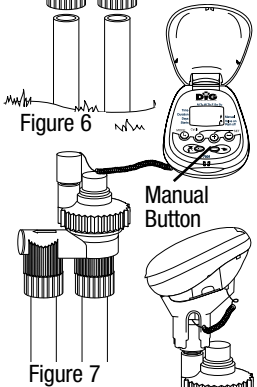


Figure 7

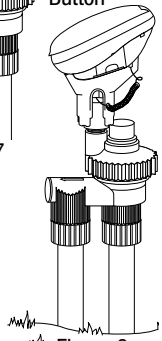


Figure 8

6. IRRIGATION PROGRAMMING

6.1 PROGRAMMING METHOD

Mode Button – used to select the appropriate programming screen (e.g.) clock setting mode.

Data decrement (decrease) – lowers the value of the selected parameter (e.g. deducts an hour).

Data increment (increase) – raises the value of the selected parameter (e.g. adds on an hour).

Flash button – used to select the parameter to be changed (e.g. hour, minute, etc.) To implement the change, the selected parameter must be flashing.

If no changes are implemented, the timer display will always revert to the main screen (clock).

NOTE: If the timer is not programmed the clock will flash continuously. After 10 minutes the timer will implement 5-minute irrigation duration on a 24-hour cycle (default mode).

6.2 SETTING CURRENT TIME & DAY OF THE WEEK

To enable the irrigation timer to operate the irrigation system at the required times, the current time and day of the week must be set as shown below:

Setting the Clock:

1. Press ↳ several times until 🕐 appears.
2. Press ↔ and the hour digits flash. Set the current hour with the aid of ⊕ and ⊖. (Note: AM and PM designations appear.) To change the display between the American and European clocks, press concurrently on ⊕ and ⊖ buttons. The hour digits must not be flashing for this to work.
3. Press ↔ and the minute digits flash. Set the current minute with the aid of ⊕ and ⊖.

Setting the Current Day of the Week

1. Press ↔ and a flashing drop will appear at the top of the display. Set the flashing drop under the current day of the week by pressing ⊕ and ⊖.

NOTE: Display digits will stop flashing after 10 seconds. If the last parameter stops flashing before programming is complete press ↔ to continue the process.

6.3 PROGRAMMING A WEEKLY IRRIGATION SCHEDULE (Specific days of the week)

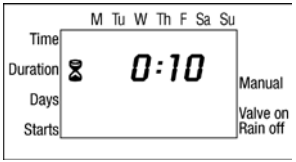
There are two options for setting irrigation frequency: Cyclical Mode (see 6.4), where watering occurs at a pre-set interval (one start time per day in this mode). Weekly Schedule Mode (see 6.3) where watering occurs on specific days of the week (up to four start times per day in this mode). You must select one mode or the other, not both.

NOTE: After programming the timer, test the timer via the manual button (see section 8.5).

This section illustrates an example of weekly irrigation programming. Alter the data in the example to meet the requirements of the project being installed. Let's assume that we want to program the irrigation timer to water three times a day (7:00 am, 1 pm and 7 pm) for 10 minutes each time, on Tuesdays and Fridays.

Programming Duration of Irrigation

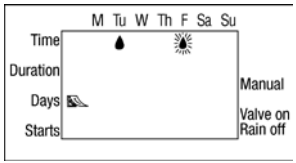
1. Press ↳ until ⌛ appears opposite "Duration".
2. First the hour digit is flashing (0). We do not want to irrigate for hours, so skip to next step.
3. Press ↔ and the minute digits will flash. Press ⊕ or ⊖ until the minute digits reach 10.



Programming Irrigation Days

1. Press ↳ and the ◣ will appear opposite the word "Days". If programming the timer for the first time, the word "OFF" will flash on the display.

NOTE: Pressing ⊕ will add in the desired irrigation day that the drip is flashing under. Pressing ⊖ will remove the desired irrigation day that the drip is flashing under.



2. Press ↔ and a flashing 💧 will appear under Monday in the upper section of the display. Using ↔ to position the flashing marker under Tuesday. Press ⊕ and the marker under Tuesday will stop flashing, become solid, and a new flashing 💧 will move to the right positioning itself under Wednesday. Press ↔ twice more until the flashing marker reaches Friday. Press ⊕ again to select. Droplets will be present and not flashing on the days selected to irrigate.

Setting Irrigation Start Time/Date:

1. Press ↳ and the words START I appear and "OFF" will be flashing on the display.
2. Use ⊕ or ⊖ to change the "OFF" status to the first consecutive Example Start Time of 7:00 AM. (note the AM and PM indicators). Press ↔ to move to the minute digits and use ⊕ or ⊖ to set to 30 minutes. Press ↳ and repeat this operation for the second consecutive start time (START II) of 1:00 PM, and for the third (START III) of 7:00 PM.
3. To cancel one of the start times, select the start time by pressing ↳ until the desired start time is reached. The hour digit flashes automatically. Press ⊕ or ⊖ until the word "OFF" appears, which is between 11:00 PM and 12:00 AM. Press ↳ to move to the next mode. **NOTE:** Start times must be set consecutively.

6.4 SETTING A CYCLICAL IRRIGATION PROGRAM

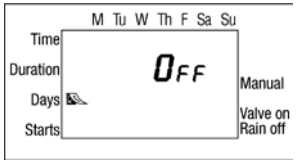
This section illustrates an example of cyclical irrigation programming. Alter the data in the example to meet the requirements of the project being installed. Let's assume that we want to program the irrigation timer to open the valve at 10:45 am for a duration of 1.5 hours, once every three days, starting on Monday.

Setting Irrigation Duration

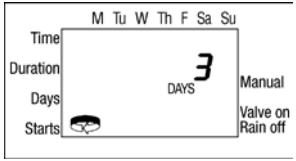
1. Press ↳ until ⏳ appears near "Duration".
2. Press ↔ and the hour digits flash. Press ⊕ or ⊖ until the hour digit changes to 1.

Press ↔ until the minute digits flash. Press ⊕ or ⊖ until the minute digits changes to 30.

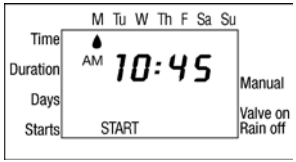
Setting Irrigation Cycle



1. Press ↳ until ◺ appears.
2. Press ↔ a number of times (go through all the days of the week) until the word "OFF" flashes on the display.
3. Press ↳ as long as the display is flashing. 🌧 will appear on the display and the word "OFF" will flash.
4. Press ⊕ until the word DAYS appears on the display and the digit 3 is flashing.



Setting Irrigation Start Time and Start Day:



1. Press ↳ and START will appear and the start time will flash.
2. Press ⊕ or ⊖ until the hour displayed reads 10 AM.
3. Press ↔ once and the minute display will flash.
4. Press ⊕ or ⊖ until the minutes displayed reach 45.
5. Press ↔ once. The marker under Monday will flash. That will be your starting day. Press ⊕ or ⊖ to move the blinking 💧 to the desired start day.

NOTE: In a cyclical program, the irrigation days will vary from week to week because of cycle length.

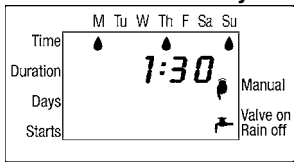
NOTE: To get out of cyclical mode, press ↳ button until 🌧 appears next to "Starts". Press ⊖ button until "OFF" appears on the display. Press ↳ button again to return to current time screen.

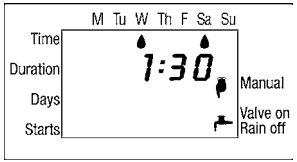
Example:

If the cyclical irrigation program in section 6.4 begins on Monday and operates every 3 days:

This would be the order of the cycle in two weeks.

Week 1

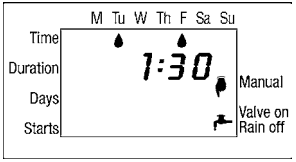


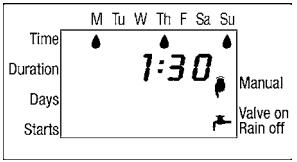


Week 2

But if the program starts on Tuesday:

Week 1





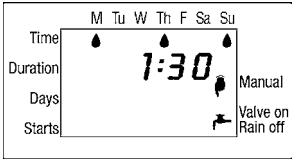
Week 2

6.5 MANUAL RUN

Manual runs temporarily turn on the system. The valve will close automatically at the end of the irrigation period.

NOTE: The originally programmed irrigation schedule will continue to function at the set times. This setting cannot be implemented when the display is flashing.

Manual Operation Via the Timer:



Press ↳ until current time is displayed. Press (MANUAL) and the 💧 will appear next to the word "Manual". The 🚿 symbol will appear underneath it and the valve will open.

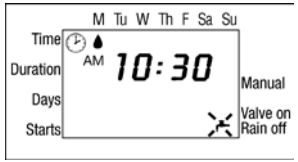
The days of the week and the irrigation duration that was set in the program will appear on the display.

Canceling Operation: Press (MANUAL) again and the 🚿 and 💧 symbols will disappear from the display.

NOTE: If the irrigation duration is set at zero (0:00) in automatic mode, irrigation will not occur and noPr will appear on the display.

6.6 SUSPEND IRRIGATION (Rain Off)

This option is used to temporarily suspend irrigation timer operation, for example, while it is raining. Programmed schedules remain in the timer memory but are not implemented until the suspension is cancelled.



Suspension: Press ↳ until current time is displayed. Press (RAIN OFF) and hold down for 5 consecutive seconds until the ☔ appears.

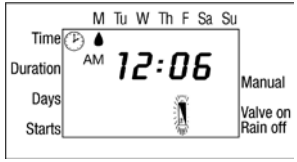
Cancel Suspension: Press ↳ until current time is displayed. Press (RAIN OFF) and hold down for 5 consecutive seconds to restart the programs in the timer. The ☔ symbol will disappear.

NOTE: During suspension the (MANUAL) button will not function.

7. ADDITIONAL DISPLAYS

7.1 BLINKING LOW BATTERY WARNING

A flashing battery icon appears on the display when the batteries are weak. At this point, the battery still contains a limited amount of energy for valve operation. The battery should be replaced promptly.



If the battery is not replaced, the irrigation timer will continue to open the valve 8 additional times according to the program. It will then suspend the program and "OFF" will appear on the screen.

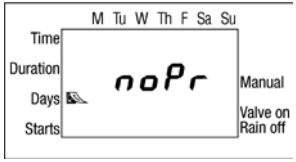
Program data will be retained for 30 seconds during battery changing.

An irrigation timer without a battery will not operate the valve.

7.2 MISSING DEFINITION IN IRRIGATION PROGRAM

noPr will appear if irrigation days have not been specified after programming (see Section 9).

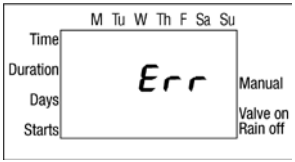
In this case, the valve cannot be opened for manual operation.



7.3 PROGRAMMING ERROR

In the cyclical program (see section 9) if the irrigation duration programmed is equal to or longer than the irrigation cycle, the word Err will appear.

To cancel the error, press ⊕ or ⊖ to increase the irrigation cycle.



8. HELPFUL HINTS AND ADDITIONAL INFORMATION

1. A manual run can be started at any time when current time is displayed by pressing the manual button once. The valve will operate one time for the length of time programmed and then proceed back to the normal programming.
2. All DIG timers can be programmed in the comfort of your home or office and installed at a later date. No water pressure is required.
3. Always make sure that the battery compartment is clean and dry. If water should get on the battery, immediately remove and wipe clean.
4. We strongly recommend brand name alkaline batteries. Rechargeable batteries are not recommended.

5 Under normal usage, batteries (alkaline) will last for a minimum of 1 year, maximum of 2 years.

6. It is good operating practice to replace old batteries with new ones at the start of the irrigation season.

9. MAINTENANCE AND SPECIFICATIONS

- Recommended operating water pressure range: 10-80 PSI
- Operating water pressure range: 10-125 PSI
- Flow rates: .5-28 GPM

If the timer is not going to be in use for an extended period of time, remove batteries and replace cover securely. After an extended period without batteries the timer will need to be reprogrammed. During battery replacement programming will be retained for up to 30 seconds.

KEEP BATTERY COMPARTMENT SECURELY CLOSED AT ALL TIMES.

Remove timer and store indoors when temperature drops below 32° for a prolonged period of time.

Be sure to shut off water supply before removal.

10. TROUBLESHOOTING AND REPAIRS

PROBLEM: Valve does not open during automatic operation or during “manual” operation via irrigation timer.

CAUSE: Solenoid is too tight.
SOLUTION: Turn solenoid counter clockwise.
CAUSE: Main line is closed.
SOLUTION: Open manual main-line service valve.

PROBLEM: No display.

CAUSE: Weak batteries.
SOLUTION: Replace batteries.

PROBLEM: Valve does not close despite clicks heard during activation.

CAUSE: Outlet flow may be too low (minimum flow 30 GPH or .5 GPM).
SOLUTION: Increase flow rate by adding drip emitters, micro sprinklers or sprinklers.

CAUSE: Valve is installed backwards.
SOLUTION: Reverse valve.

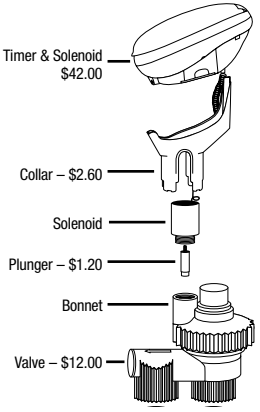
CAUSE: Solenoid port(s) are blocked.
SOLUTION: Shut off water supply. Unscrew solenoid and remove from valve (take care to not lose plunger). Open water supply and flush out valve solenoid ports. Re-install solenoid by turning clock-wise into bonnet, (make sure plunger is in place). Open water supply and push manual button twice to verify valve opens and closes.

PROBLEM: Water discharges from parts below bonnet.

CAUSE: Valve is installed too low.
SOLUTION: Raise valve so it is a minimum of 6” above highest sprinkler head.

TO ORDER PARTS VISIT www.digcorp.com/rparts

We at DIG Corporation understand that most dealers do not carry spare parts. For your convenience, if you need one of these parts, please order online at www.digcorp.com/rparts.



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 120 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 three years 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 three years 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, 1210 Activity Drive, Vista, CA 92081-8510. 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.

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