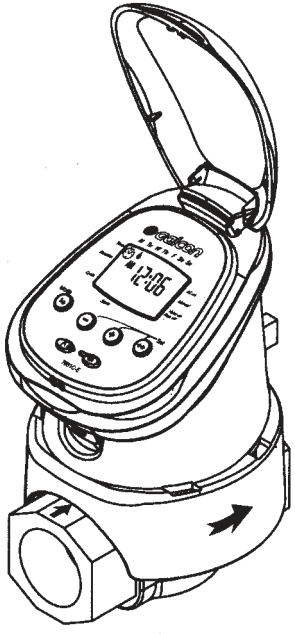
Galcon 7001D

Computerized Irrigation Controller
Installation and Operating Instructions



Galcon
IRRIGATION CONTROL EQUIPMENT

1. Parts Identification

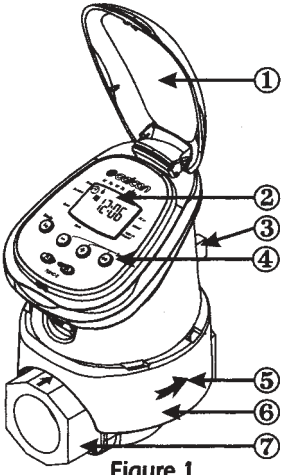


Figure 1

1. Top cover
2. Controller display
3. Mechanical operating handle
4. Programming & operating buttons
5. Water flow direction arrow
6. Skirt
7. Hydraulic valve

2. Setting Up the Irrigation Controller

Note: before assembling controller flush the irrigation system

2.1 Installing the Controller in the Irrigation System

When installing the controller (4) in the irrigation system, a filter (2) (not included) must also be installed between the main irrigation system valve (1) and the controller. Screw the swivel fitting (3) (not included) of the hydraulic valve onto the filter and use the nipple fitting (5) to connect the other end to the irrigation system.

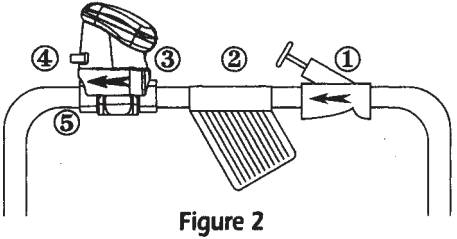
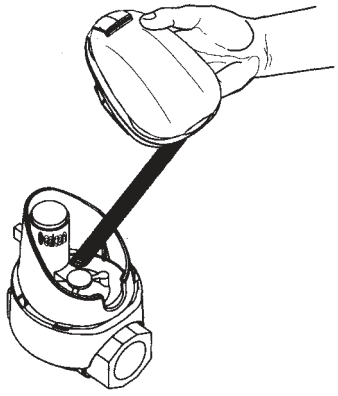


Figure 2

2.2 Battery Installation

1. Holding the upper section of the controller above the mechanical handle, use a firm upward twist to release the controller from the skirt.



2. Invert the controller and use firm pressure to lift the battery compartment cover (1).
3. Insert the lower end of the battery (2) first, then press on the top end (3) to ensure the battery is firmly in place.

- **Use alkaline batteries only.**
- **Note: battery polarity is marked in the battery compartment**

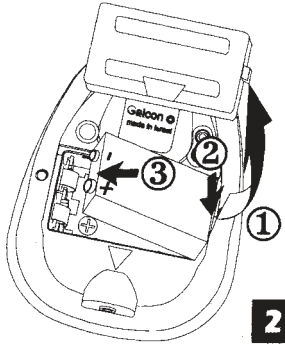


Figure 3

4. Return battery compartment cover to its proper place, ensuring a triangle is formed on the underside of the controller.

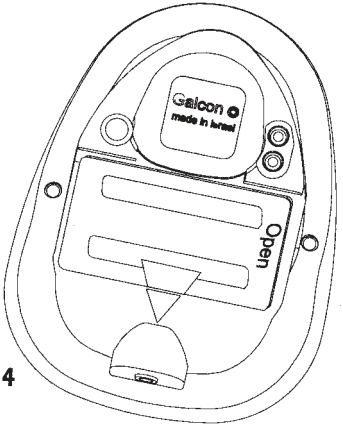


Figure 4

Battery Removal (for replacement):

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

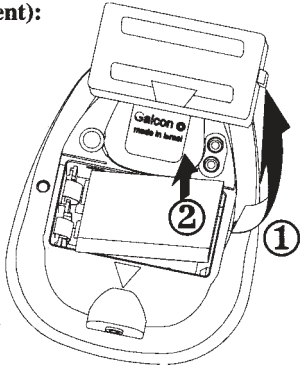


Figure 5

☛ **Removing batteries from the top end may damage the connectors.**

3. Irrigation Programming

This section contains examples of weekly and cyclical irrigation programs. Simply alter data in the examples to adapt the program to meet your irrigation requirements.

3. 1 Programming Method

The Computerized Irrigation Controller is programmed with the aid of 4 buttons:

Programming step – used to select the appropriate programming mode (e. g. clock setting mode).

Parameter selection – used to select the parameter to be changed (e. g. hour, minute, etc).
To implement the change, the selected parameter must be blinking.

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

Data decrement (decrease) – lowers the value of the selected parameter (e. g. deducts an hour).
* If no changes are implemented, the controller display will always revert to the main screen (clock).

* **Emergency Irrigation:** If no buttons are pressed, the clock will blink continuously. After 10 minutes, the controller will implement 5- minute irrigation on a 24- hour cycle.

3.2 Setting Current Time & Day of the Week

To enable the irrigation controller 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 (↔). The hour digits blink. Set the current hour with the aid of (+) and (−). (Note: AM and PM designations appear.)

3. Press (↔). The minute digits blink. Set the current minute with the aid of (+) and (−).
For a military clock display, press concurrently on (+) and (−) buttons once the hour digits stop blinking. Pressing these buttons again will revert the display back to AM/ PM.

Setting the Day of the Week:

1. Press (↔) until a blinking drop appears at the top of the display.

2. Set the drop on the current day of the week by pressing on (+) and (−).

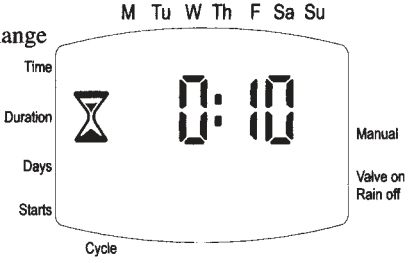
* Display digits will stop blinking after 10 seconds. If the last parameter stops blinking before you have completed your programming, press (↔) to continue the process.

3.3 Programming a Weekly Irrigation Schedule (Set Days of the Week)

Let's assume that we want to program the irrigation controller to water three times a day, at 8: 00 a. m., 1: 00 p. m. and 7: 00 p. m., for 10 minutes each time, on Tuesday and Friday.

Programming Duration of Irrigation:

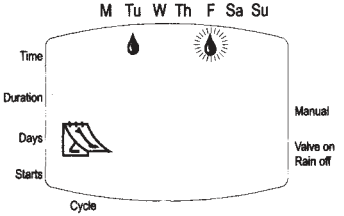
1. Press ↳ until ⧗ appears opposite "Duration". The hour digits blink (0)
2. Press on ⊕ or ⊖ to change the watering duration as in the example.
3. Press ↔. The minute digits will blink. Press ⊕ on ⊖ or until the minute digits reach 10.



Programming Irrigation Days:

1. Press ↳. 🚶 will appear opposite the word 'Days'. If you are programming the controller for the first time, the word **OFF** will blink on the display.

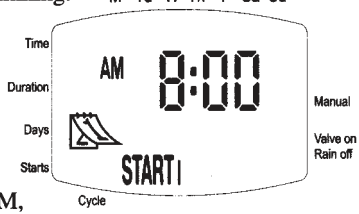
2. Press ↔ . A blinking 💧 will appear under Monday in the upper section of the display.



Using ↔, position the blinking marker under Tuesday, and press ⊕. The marker under Tuesday will stop blinking and another marker will start blinking under Wednesday. Press ↔ twice more until the blinking marker reaches Friday. Press ⊕ again.

Setting Irrigation Start Time/ Date:

1. Press (▶). **START I** will appear on the display. If you are programming the controller for the first time, the word **OFF** will blink on the display. Press (−) or (+). The hour display will start blinking.



2. Using (−) or (+), set the start time at 8: 00 AM (note the AM and PM indicators). Repeat this operation for the second irrigation period (**START II**) at 1: 00 PM, and for the third irrigation period (**START III**) at 7: 00 PM.

3. Press (▶). **START IV** will appear on the display. Press (↔). The hour digits will blink.

4. Press (−) or (+) until the word **OFF** appears on the display. The fourth irrigation start is canceled.

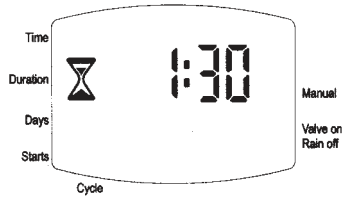
3.4 Setting a Cyclical Irrigation Program

Let's assume that we want to program the irrigation controller to open the valve at 10: 45 a. m., for a period of 1.5 hours, once every three days, starting on Tuesday. Before setting a cyclical irrigation program you must clear irrigation days until the word **OFF** appears.

Setting Irrigation Duration:

1. Press (▶) until ⧗ appears near 'Duration'. The hour digits blink.

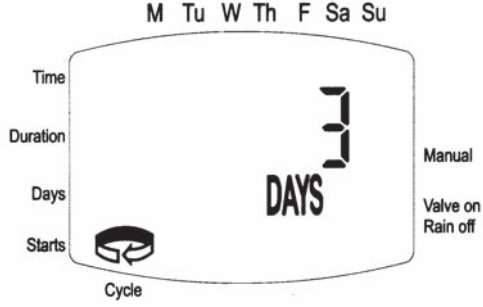
2. Press (+) or (−) until the hour digit changes to 1. Press (↔). The minute digits blink. Press (+) or (−) until the minute digits change to 30.



Setting Irrigation Cycle:

1. Press ↳ until ⟲ appears, and the word OFF blinks on the display.

2. Press + until 3 DAYS appears on the display and the digit 3 is blinking.



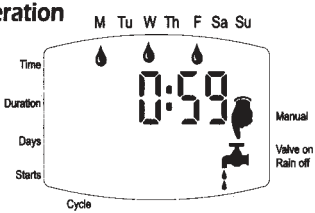
Setting Irrigation Start Time/ Date:

1. Press ↳. **START** will appear and the start time will blink.
2. Press + or − until the hour displayed reads 10 AM.
3. Press ↔ once. The minute display will blink.
4. Press + or − until the minutes displayed reach 45.
5. Press ↔ once. The marker under Monday will blink.
6. Press + once. The blinking marker will indicate Tuesday.



Note: in a cyclical program, the irrigation days are liable to vary from week to week because of cycle length.
If you wish to change the irrigation program to a weekly program you must set the cycle on **OFF** mode.

3.5 Computerized Manual Operation



This option operates the valve for the defined irrigation period. The valve will close automatically at the end of the irrigation period.
Note that the originally programmed irrigation schedule will continue to function at the set times. This setting cannot be implemented when the display is blinking.

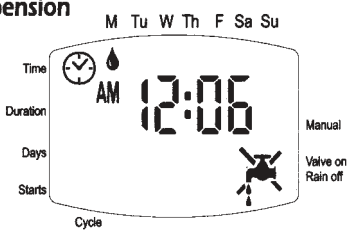
Operation: Press (MANUAL). will appear next to the word 'Manual', and will appear underneath it.

The days of the week and the irrigation duration set in the program will appear on the display. A reverse 'countdown' of the irrigation duration will appear on the display while the program is implemented.(This display will appear also during automatic irrgation).

Canceling Operation: Press (MANUAL) again. The tap and hand symbols will disappear from the display.
* If the irrigation duration is set at zero (0: 00), irrigation will not occur.
* Manual irrigation cannot be performed when the controller is set for programming (display is blinking).

3. 6 Irrigation Controller Suspension

This option is used to temporarily suspend irrigation controller operation, for example, while it is raining. The irrigation operation schedule remains in the controller memory but is not implemented until the suspension is canceled.



Suspension: Press (RAIN OFF) for 3 consecutive seconds until the symbol appears.

Cancel Suspension: Press (RAIN OFF) for 3 consecutive seconds to return irrigation system control to the irrigation controller. The symbol will disappear.

* During suspension, the (MANUAL) button will not function.

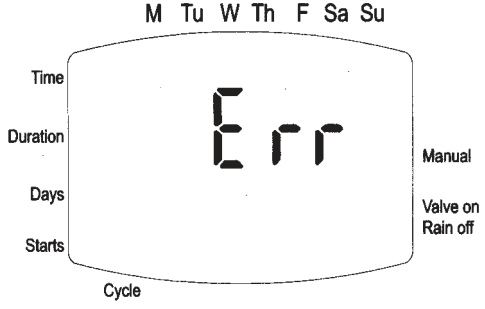
4. Additional Displays

4. 1 Blinking Low Battery Warning

A blinking 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 controller will continue to open the valve 8 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.

4. 2 Programming Error

In the cyclical program (see section 3. 4) if the irrigation duration programmed is equal to or longer than the irrigation cycle, the word **Err** will appear.
To cancel the error, press (+) to increase the irrigation cycle.



5. Manual Mechanical Operation

The irrigation valve can be opened and closed independent of controller operation. Manual operation is useful when irrigation is required immediately but there is inadequate time and/ or knowledge for programming or the battery is unavailable. The manual operating handle is located in the back, lower section of the skirt. It has two **settings:** open (1) and automatic (2).

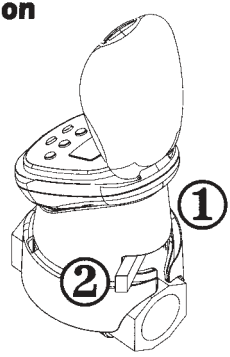


Figure 6

* **Note:** the manual operating handle can only open the valve. It cannot close the valve if the irrigation controller program opened it.

* **Remember:** the manual operating handle must be on automatic (AUTO) for controller operated irrigation.

6. Maintenance

* Remove batteries if the irrigation controller will not be used for a prolonged period.

* Installation of a filter upstream to the irrigation controller valve is essential. Clean the filter once every few months. Operating the controller without a filter is liable to cause malfunctions in the system.

* Under normal usage, the battery (alkaline) should last for at least one year.

* Recommended water pressure: 1 – 8 ATM (bar). If a pressure regulator is required, it should be installed upstream to the irrigation controller.



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