

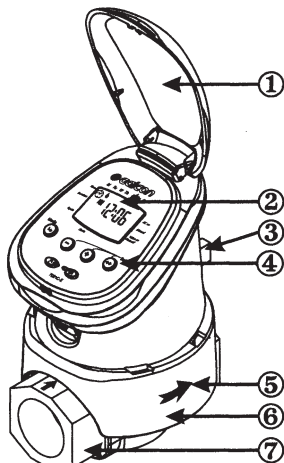
# Galcon 7101

Ideal for underground  
installation in valve boxes



**Computerized Control Systems**

# 1. Parts Identification



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

Figure 1

## 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.

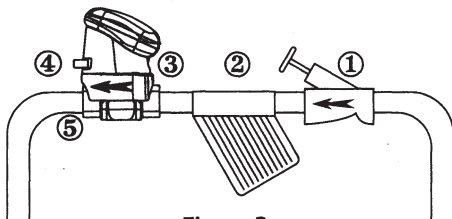
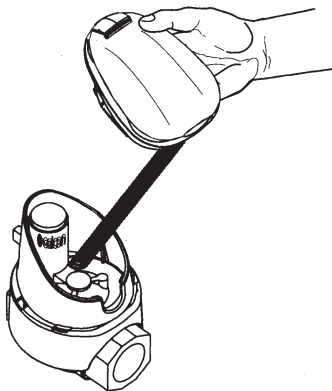


Figure 2

## 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**

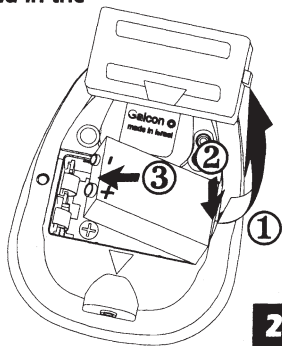


Figure 3

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

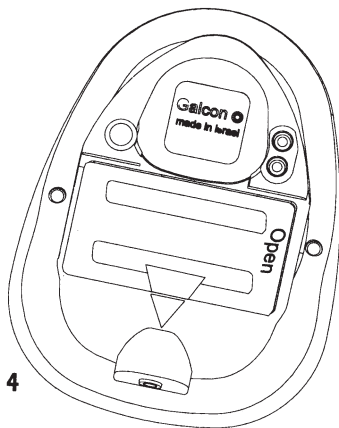


Figure 4

**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.

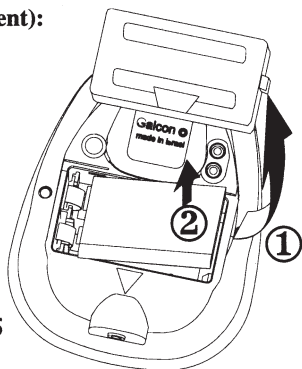


Figure 5





☞ 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.

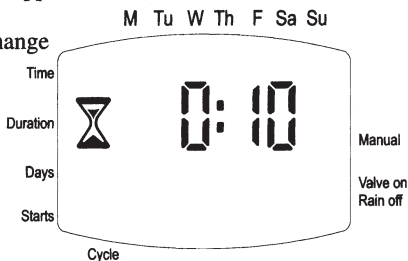
#### Programming Duration of Irrigation:

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.

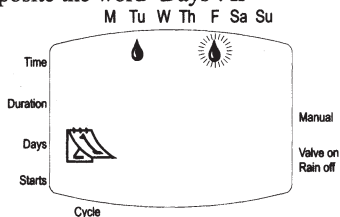


#### Programming Irrigation Days:

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 . **STARTI** 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. M Tu W Th F Sa Su

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 (**STARTII**) at 1: 00 PM, and for the third irrigation period (**STARTIII**) at 7: 00 PM.



3. Press . **STARTIV** 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.

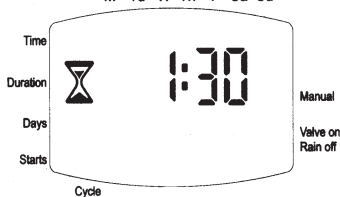
## 3.4 Setting a Cyclical Irrigation Program

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.

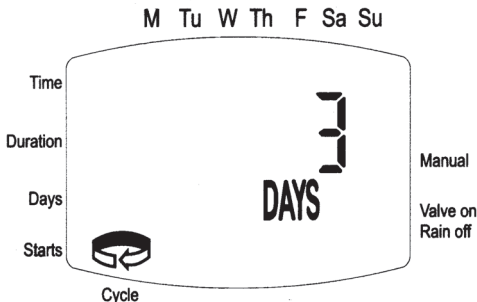
2. Press or until the hour digit changes to 1. Press . The minute digits blink. Press or until the minute digits change to 30. M Tu W Th F Sa Su













## 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.

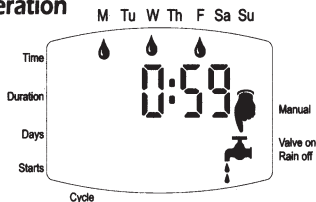


**Note:** in a cyclical program, the irrigation days are liable to vary from week to week because of cycle length.  
If you wish to change the irrigation program to a weekly program you must set the cycle on **OFF** mode.

### 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 .  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 irrigation).

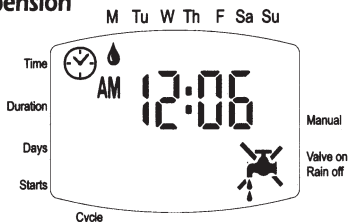
**Canceling Operation:** Press  again. The tap and hand symbols will disappear from the display.


\* 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.

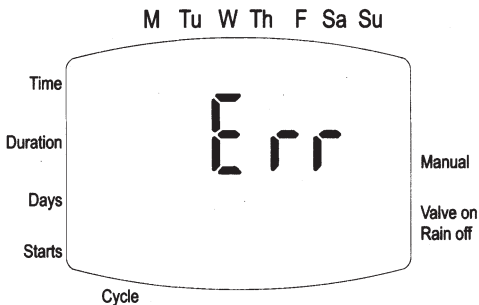
If the battery is not replaced, the irrigation controller will continue to open the valve 8 times according to the program. It will then suspend the program and OFF will appear on the screen.

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

### 4. 2 Programming Error

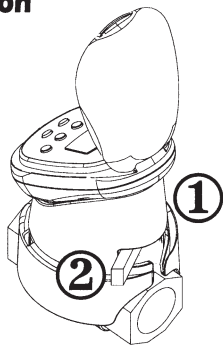
In the cyclical program (see section 3. 4) if the irrigation duration programmed is equal to or longer than the irrigation cycle, the word **Err** will appear.

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.



## LIMITED WARRANTY CERTIFICATE

1. Galcon shall, for a limited period of 36 months from the retail purchase date of the original (first) purchaser ("the Warranty Period"), provide limited warranty for the Products, as provided for and subject to the provisions and limitations of this Limited Warranty Certificate.
2. Galcon's Warranty for the Product only extends to the original purchaser of the Product ("the Customer") who, upon requesting warranty service, must present Galcon with a valid purchase receipt. Failure to produce the said documentation will result in the request for warranty being null and void.
3. GALCON warrants to the Customer that the Product shall materially conform to the description in Galcon's documentation and shall be free from defects in material and workmanship. Accordingly, Customer's sole and exclusive remedy under this warranty is the repair or – to Galcon's sole discretion – the replacement of the Product or any part/s according to the terms of this Warranty, and no other remedy shall be available. Therefore, if - within the Warranty Period - the Product is proven to be defective by reason of faulty workmanship or materials by Galcon, Galcon undertakes, with reasonable promptness, to have the defective Product (or any part/s thereof) repaired, or at Galcon's discretion, replaced; All subject to the terms and conditions of this Limited Warranty Certificate.
4. Galcon's warranty for the Product or otherwise shall not apply to any of the following: (i) any conduct (by act or omission) not by Galcon, including any misuse/abuse of any Product (or part/s thereof), and/or any failure to install and/or use any Product in full compliance with Galcon's instructions; (ii) other systems/components/devices/technologies and/or the integration/interface thereof with any Product; (iii) any part/component which has been included/installed in any Product not at Galcon's approval and/or other than by Galcon; (iv) any actual or attempted change/repair/interference of/with any Product (including any use/handling of, and/or interference/dealing with, any code of any software included/used in the Product) other than by Galcon; (v) any data/information/content which has been inserted/included in a Product; (vi) malfunction or damage resulting from accidents, which occur during transit and/or handling, and/or malfunction or damage due to fire, earthquake, flood, lightning and/



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5. In addition and without derogating from the provisions of this Warranty, Galcon's warranty is conditioned upon the all of the following taking place: (i) Customer's operating and maintaining the Product in accordance with Galcon's instructions; (ii) Customer's not being in default of any payment obligation to the Galcon (or its authorized dealer, as relevant).
6. Galcon does not give any warranty or guarantee whatsoever in respect of any Product (or any part/s thereof) which has not been manufactured and distributed by the Galcon and which has not been purchased from the Galcon or any of its authorized dealers, whether such products are branded with any trademarks similar to any trademark belonging to or used by Galcon.
7. After replacement or repair of the Product, the Warranty for the new or repaired Product shall be valid only for the non-expired period of the original Warranty Period. Any defective Products or part/s, which has been replaced, shall become Galcon's property.
8. Galcon reserves the right to charge the Customer if any warranty service is requested and carried out but no fault is found in the Product or if such defect/fault is not under Galcon's Warranty.
9. Notwithstanding anything to the contrary, Galcon shall not be responsible and/or liable, under any circumstances and in any way, for any loss, damage, costs, expenses, expenditures, responsibility and/or liability (including of Customer and/or any third party) – including (without limitation) direct and/or indirect (including incidental and/or special and/or consequential), however arising, including in respect of damages to or loss of property and/or equipment, loss of profit, loss of use, loss of revenue or damages to business or reputation, whether or not based on breach of contract, tort (including negligence), product liability or otherwise - arising from the performance or non-performance of any aspect of the Product or any part thereof; All of the above, whether or not Galcon and/or the Customer shall have been made aware of the possibility of such loss.

10. In any event, any liability which Galcon may have in connection with the Product and/or this Warranty, including (without limitation) in connection with and/or resulting from the Product (or any part thereof) and the use thereof, shall be limited to a total amount (for all damages, claims and causes of action in the aggregate) equal to the consideration actually received by Galcon from the Customer for the Product. The limitations shall apply whether the liability is based on contract, tort, strict liability or any other theory.
11. This Warranty and the remedies set forth herein are exclusive and in lieu of all other warranties, remedies and conditions, whether oral, written, statutory, express or implied. Galcon specifically disclaims any and all statutory or implied warranties, including, without limitation, warranties of merchantability and fitness for a particular purpose and warranties against hidden or latent defects.
12. The Customer shall be solely responsible for the selection, use, efficiency and suitability of the Product(s).
13. The provisions of this Limited Warranty Certificate shall be interpreted and governed, solely and exclusively, pursuant to the laws of the State of Israel, and no other law shall apply. Any and all legal actions shall be litigated within the jurisdiction of the courts of Israel, and no other jurisdiction shall apply.





**Computerized Control Systems**

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This device has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in residential installations. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio and television reception.

However, there is no guarantee that interference will not occur in a particular installation. If this device does cause such interference, which can be verified by turning the device off and on, the user is encouraged to eliminate the interference by one or more of the following measures:

- Re-orient or re-locate the receiving antenna.
- Increase the distance between the device and the receiver.
- Connect the device to an outlet on a circuit different from the one that supplies power to the receiver.
- Consult the dealer or an experienced radio/TV technician.

***WARNING!*** Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with FCC Rules Part 15: Operation is subject to two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference that may be received or that may cause undesired operation.

To comply with FCC Section 1.310 for human exposure to radio frequency electromagnetic fields, implement the following instruction:

A distance of at least 20 cm between the equipment and all persons should be maintained during the operation of the equipment.

