

PROGRAMMING FUNDAMENTALS.....

A watering program can be created to operate valves in numerical sequence one at a time. To create a watering program:

1. Select a program (**A, B, or C**) by pressing the **PRO-C** button on the controller (it is recommended to start with **Program A**).
2. Set a program start time (only one program start time is required to activate a watering program).
3. Set the run time for each valve assigned to the program, and
4. Set the days that you would like the watering program to run.

We have included an example that will better illustrate the operation of a program:

Let's say you have a program start time set for 6:00 a.m. Stations 1 and 2 are going to have a run time of 15 minutes and station 3 is set for 20 minutes. Please note that stations 4, 5, etc. have not been included in this program, we will water them on separate programs.

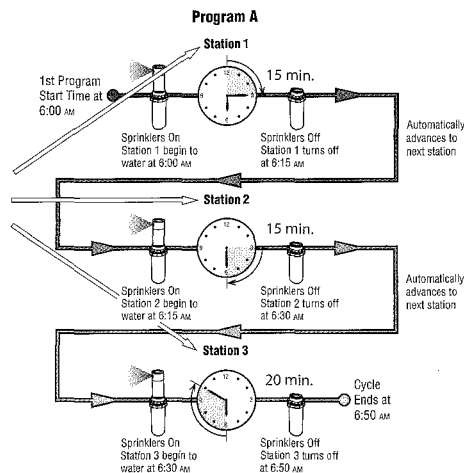
At 6:00 a.m. the controller will activate the watering cycle. The sprinklers on station 1 will run for 15 minutes and then shut off. The controller will automatically advance to station 2 sprinklers. These sprinklers will also run for 15 minutes and then shut off. Then, watering on station 3 will begin. The sprinklers will turn on for 20 minutes and shut off. Since no times were programmed for stations 4, 5, etc. the controller skips them. This will conclude the program and end the water cycle at 6:50 a.m.

As shown in the above example, only **one** program start time was required to run the three different stations. The controller automatically moves to the next station without the need for additional start times.

We realize that many consumers will have variations in their plant watering needs, so at Hunter we equipped the Pro-C with three different programs A, B, and C. These programs are independent of each other. However, no two programs can run at the same time. The Pro-C will automatically stack any programs that overlap.

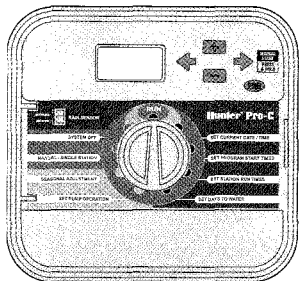
PROGRAMMING FUNDAMENTALS EXAMPLE

HUNTER PRO-C		PROGRAM A						
DAY OF THE WEEK		M	T	W	T	F	S	S
ODD/ EVEN or INTERVAL								
PROGRAM START TIMES	1							
	2							
	3							
	4							
STATION	LOCATION	STATION RUN TIME						
1	Front Lawn	15 minutes						
2	Shrub	15 minutes						
3	Side Yard	20 minutes						
4								
5								
6								
7								
8								
9								
10								
11								
12								
NOTES:								
Total Cycle of Program A = 50 minutes								



PROGRAMMING THE CONTROLLER

The display changes when the dial is rotated to indicate the specific programming information to enter. When programming, the flashing portion of the display can be changed by pressing the **+** or **-** buttons. To change something that is not flashing, press **←** or **→** until desired field is flashing.



To activate a program in your controller, you must enter the following information:

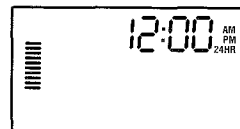
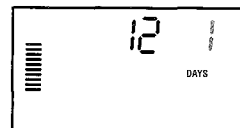
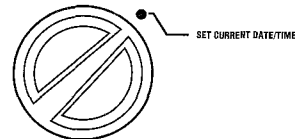
1. Set current day and time – turn dial to **SET CURRENT DATE/TIME**.
2. Set what time of day you would like the program to start – turn dial to **SET PROGRAM START TIMES**.
3. Set how long each valve will water – turn dial to **SET STATION RUN TIMES**.
4. Set the day(s) you would like the program to water – turn dial to **SET DAYS TO WATER**.



NOTE: All stations operate in numerical order. Only one program start time is required to activate a watering program.

Setting the Current Date and Time

1. Turn the dial to the **SET CURRENT DATE/TIME** position.
2. The current year will be flashing in the display. Use the **+** and **-** buttons to change the year. Push the **→** button to proceed to setting the month.
3. The month will be flashing. Use the **+** and **-** buttons to change the month. Press the **→** button to proceed to setting the day.
4. The day will be flashing. Use the **+** and **-** buttons to change the day of the month. Press the **→** button to proceed to setting the time.
5. The time will be displayed: Use the **+** and **-** buttons to select AM, PM, or 24 hr. Press the **→** button to move to hours. Use the **+** and **-** buttons to change the hour shown on the display. Press the **→** button to move onto the minutes. Use the **+** and **-** buttons to change the minutes shown in the display.

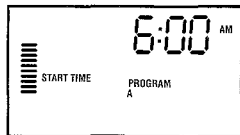
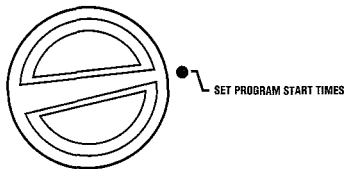


The date, day, and time have now been set.

PROGRAMMING THE CONTROLLER (continued)

Setting Program Start Times

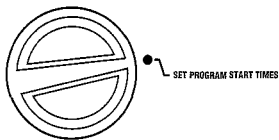
1. Turn the dial to the **SET PROGRAM START TIMES** position.
2. The factory preset is set on program **A**. If necessary you can select program **B** or **C** by pressing the **PRG** button.
3. Use the **+** and **-** buttons to change the start time. (Advances in 15-minute increments.) **One start time will activate all stations sequentially in that program.** This eliminates the need to enter a start time for each station.
4. Press the **▶** button to add an additional start time, or **PRG** button for the next program.



NOTE: Regardless of the order in which the start times are entered, the Pro-C will always arrange the start times in chronological order when the dial is moved off the **SET PROGRAM START TIMES** position.

Eliminating a Program Start Time

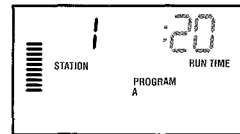
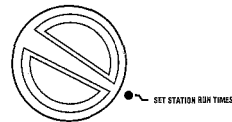
With the dial set to the **SET PROGRAM START TIMES** position, push the **+** and **-** buttons until you reach 12:00 AM (Midnight). From this position push the **▶** button once to reach the **OFF** position.



NOTE: If a program has all four start times turned off, then that program is off (all other program details are retained). Because there are no start times, there will be no watering with that program.

Setting Station Run Times

1. Turn the dial to the **SET STATION RUN TIMES** position.
2. The display will show the last program selected (**A, B, or C**) the station number selected, and the run time for that station will be flashing. You can switch to another program by pressing the **PRG** button.
3. Use the **+** and **-** buttons to change the station run time on the display. You may set station run times from 1 minute to 6 hours.
4. Press the **▶** button to advance to the next station.
5. Repeat steps 2 and 3 for each station.







Setting Days to Water

1. Turn the dial to the **SET DAYS TO WATER** position.
2. The display will show the last program selected (**A, B, or C**). You can switch to another program by pressing the **PRG** button.
3. The controller displays currently programmed active day schedule information. You can choose to water on specific days of the week, or you can choose interval watering, or choose to water on odd days or even days. Each program can only operate using one type of water day option.



PROGRAMMING THE CONTROLLER (continued)








Selecting Specific Days of the Week to Water

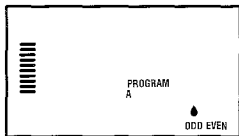
1. Press the  button to activate a particular day of the week to water (the display always starts with Monday). Press the  button to cancel watering for that day. After pressing a button the display automatically advances to the next day. A  icon indicates a water day. A  icon indicates a no water day.

After programming, set dial to **RUN** to enable automatic execution of all selected programs and start times.

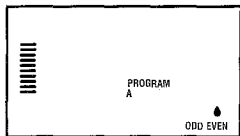
Selecting Odd or Even Days to Water

This feature uses numbered day(s) of the month for watering instead of specific days of the week (odd days: 1st, 3rd, 5th, etc.; even days: 2nd, 4th, 6th, etc.)

1. With the  cursor on SU press the  button once. The  icon will flash over **ODD**.
2. If is desired, turn the dial back to the run position.
3. If even day watering is desired, press the  button once. The  icon will flash over **EVEN**. You can move back and forth from **ODD** to **EVEN** by pressing the  and  buttons.








Odd Day Watering

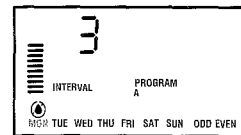
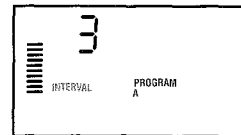
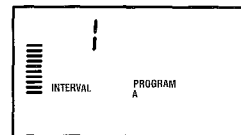



Even Day Watering

Selecting Interval Watering

This feature is convenient if you want to have a more consistent watering schedule without having to worry about the day of the week or the date. The interval you select is the amount of days between watering including the watering day.

1. Turn the dial to **SET DAYS TO WATER**. The water drop above Monday should be flashing.
2. Press the  button until the drop over **EVEN** is flashing, then press the  button one more time. The display will change to the interval mode and the Interval Day number will be flashing.
3. Press the  or  button to select the Interval Day(s) you desire.
4. Push the  button once to advance to NO WATER DAYS to select any days you do not want the Pro-C to water (see page 20).



NOTE: If any days are selected as non-water days  at the bottom of the display, the Interval Day watering will exclude those days. For example, if the Interval Days are set at 5 and Monday is a non-water day, the controller will water every 5th day, but never on a Monday. If the interval water day falls on a Monday and Monday is a non-water day. The program would not water for 5 more days resulting in no irrigation for 10 days total.

PROGRAMMING THE CONTROLLER (continued)




Run

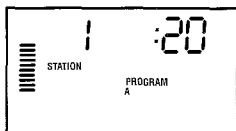
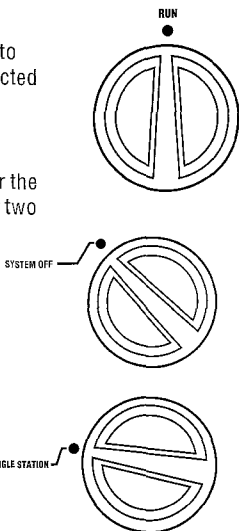
After programming is complete, turn the dial to **RUN** to enable automatic execution of all selected programs and start times.

System Off

Valves currently watering will be shut off after the dial is turned to the **SYSTEM OFF** position for two seconds. All active programs are discontinued and watering is stopped. To return controller to normal automatic operation, simply return dial to **RUN** position.

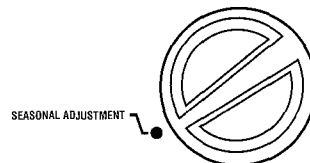
Manually Run a Single Station



1. Turn the dial to the **MANUAL-SINGLE STATION** position.
2. Station run time will flash in the display. Use the  button to move to the desired station. You may then use the  and  buttons to select the amount of time for a station to water.
3. Turn the dial to the **RUN** position to run the station (only the designated station will water, then controller will return to automatic mode with no change in the previously set program).



Seasonal Adjustment

Seasonal Adjust is used to make global run time changes without re-programming the entire controller. This feature is perfect for making small changes that are necessary as the weather changes. For instance, hotter times of the year may require a bit more water. Seasonal adjust can be increased so that the stations will run longer than the programmed time. Conversely, as Fall approaches, the seasonal adjust can be reduced to allow for short watering durations.



1. Turn the dial to the **SEASONAL ADJUSTMENT** position.
2. Press the  or  buttons to set the percentage desired from 5% to 300%

To view the new adjusted run time, turn the dial to set run time's position. The displayed run times will be updated accordingly as the seasonal adjustment is made.



NOTE: The controller should always be initially programmed in the 100% position.



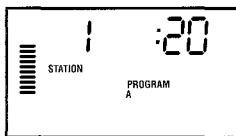
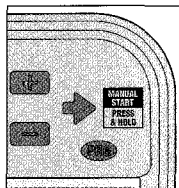
NOTE: The manual single station function will override the sensor.

PROGRAMMING THE CONTROLLER (continued)

One Touch Manual Start and Advance

You can also activate a program to water without using the dial.

1. Hold down the **▶** button for 2 seconds.
2. This feature automatically defaults to program **A**. You can select program **B**, or **C** by pressing the **PRG** program.
3. The station number will be flashing. Press the **◀** or **▶** button to scroll through the stations and use the **+** and **-** buttons to adjust the station run times. (If no buttons are pressed during step 2 or 3, the controller will automatically begin program **A**.)
4. Press the **▶** button to scroll to the station you wish to begin with. After a 2 second pause, the program will begin.



This feature is great for a quick cycle when extra watering is needed or if you would like to scroll through the stations to inspect your system.

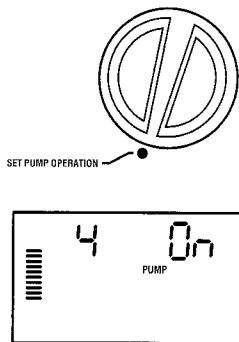
ADVANCED FEATURES

Set Pump/Master Valve Operation

The default is for all stations to have the master valve/pump start circuit **ON**. The master valve/pump start can be set **ON** or **OFF** by station, regardless of which program the station is assigned.

To program pump operation:

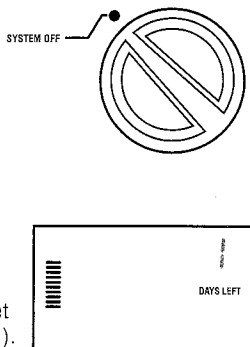
1. Turn the dial to **SET PUMP OPERATION** position.
2. Press the **+** or **-** buttons to toggle the master valve/pump start **ON** or **OFF** for the specific station.
3. Press the **➡** button to advance to the next station.
4. Repeat steps 2 and 3 for all necessary stations.



Programmable Rain Off

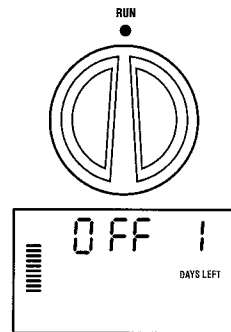
This feature permits the user to stop all programmed waterings for a designated period from 1 to 31 days. At the end of the programmable rain off period, the controller will resume normal automatic operation.

1. Turn the dial to the **SYSTEM OFF** position.
2. Press the **+** button and a 1 will be displayed and the **DAYS LEFT** icon will illuminate.
3. Press **+** as many times as needed to set the number of days off desired (up to 31).



4. Turn the dial back to the **RUN** position at which time, **OFF**, a number and the **DAYS** icon all remain on.

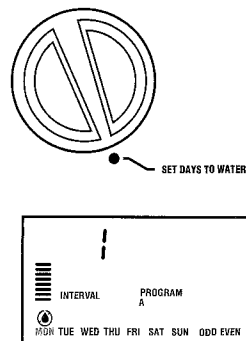
5. Leave the dial in the **RUN** position.
- The days off remaining will decrease at midnight of each day. When it goes to zero, the display will show the normal time of day and normal irrigation will resume at the next scheduled start time.



Setting Specific Day(s) Off

Programming a No Water Day(s) is useful to inhibit watering on mowing days, etc. For instance, if you always mow the lawn on Saturdays you would designate Saturday as a **No Water Day** so you are not mowing wet grass.

1. Turn the dial to the **DAYS TO WATER** position.
2. Enter an interval watering schedule as described on page 21.
3. Press the **➡** button once. **MON** will be flashing.
4. Use the **➡** button until the cursor is at the day of the week you wish to set as a **No Water Day**.
5. Press the **-** button to set this day as a no water day. The **☉** will illuminate over this day.
6. Repeat steps 4 and 5 until all desired event day(s) are off.







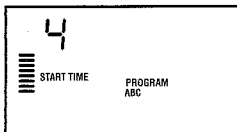
HIDDEN FEATURES

Program Customization

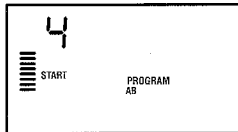
The Pro-C comes factory configured with 3 independent programs (A, B, C with four start times each) for different plant type requirements. The Pro-C can be customized to display only the required programs. You can hide those programs that are not required to ease programming.

To customize Pro-C programs:

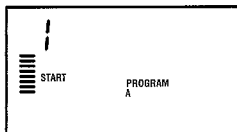
1. Press and hold the  button. Turn the dial to set days to water.
2. Release the  buttons.
3. Use the  and  button to change program modes.



Advanced Mode
(3 programs / 4 start times)



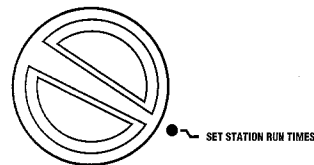
Normal Mode
(2 programs / 4 start times)







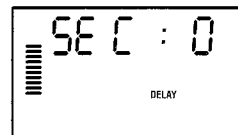
Limited Mode
(1 program / 1 start time)

Programmable Delay Between Stations

This feature allows the user to insert a delay between when one station turns off and the next station turns on. This is very helpful on systems with slow closing valves or on pump systems that are operating near maximum flow or have slow well recovery.



1. Start with the dial in the **RUN** position.
2. Press and hold the  button down while turning the dial to the **SET STATION RUN TIMES** position.
3. Release the  button. The display will show a delay time for all stations in seconds. The **DELAY** icon shall also be lit at this time.
4. Press the  and  buttons to increase or decrease the delay time between 0 and 59 seconds in 1 second increments and then in one minute increments up to four hours. **Hr** will be displayed when the delay changes from seconds to minutes and hours. Maximum delay is 4 hours.
5. Return the dial to the **RUN** position.










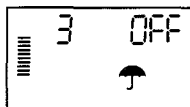
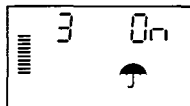
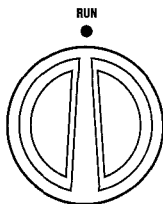
NOTE: The Master Valve/Pump Start circuit will operate during the first 15 seconds of any programmed delay to aid in the closing of the valve and to avoid unnecessary cycling of the pump.

HIDDEN FEATURES (continued)



Programmable Sensor Override

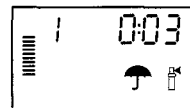
The Pro-C allows the user to program the controller so that the sensor disables watering on only desired stations. For example, patio gardens that have pots under overhangs and roofs may not receive water when it rains and will continue to need to be watered during periods of rain. To program sensor override:

1. Turn the dial to the **RUN** position.
2. Press and hold the  button down while turning the dial to **START TIMES** position.
3. Release the  button. The display will show the station number, ON, and the  icon, will be flashing.
4. Press the  or  button to enable or disable the sensor for the station shown.
ON = Sensor enabled (will suspend irrigation)
OFF = Sensor disabled (will allow watering)
5. Use the  or  buttons to scroll to the next station that you would like to program the sensor override.






NOTE: The controller default is for the sensor to disable watering on all zones when rain occurs.

When the Pro-C receives an input from the sensor to disable watering, the display will indicate those stations that have been programmed to override the sensor. A station that is running in the sensor override mode will flash  and  alternately.



Total Run Time Calculator






The Pro-C keeps a running total of each program's station run times. This feature provides a quick way to determine how long each program will water.

1. While in the Set Station **Run** Time mode use the  button to advance to the highest station position.
2. Press the  button once to review the total of all run times programmed.
3. Use the  button to review additional programs.

Test Program

The Pro-C allows the user a simplified method for running a test program. This feature operates each station in numerical sequence, from the lowest to the highest. You can start with any station. This is a great feature to check the operation of your irrigation system.

To initiate the test program:

1. Press and hold the  button. The station number will be flashing.
2. Press the  or  button to scroll to the station you would like the test program to start with. Use the  and  button to set a run time of up to 15 minutes. The run time needs to be entered only once.
3. After a 2 second pause, the test program will begin.

HIDDEN FEATURES (continued)

Easy Retrive™ Program Memory

The Pro-C is capable of saving the preferred watering program into memory for retrieval at a later time. This feature allows for a quick way of resetting the controller to the original programmed watering schedule.

To save the program into memory.

1. With the dial in the **RUN** position, press and hold the **+** and **PRO** buttons for 5 seconds. The display will scroll **≡** from left to right across the display indicating the program is being saved into memory.
2. Release the **+** and **PRO** buttons.

To retrieve a program that was previously saved into memory.

1. With the dial in the **RUN** position, press and hold the **-** and **PRO** buttons for 5 seconds. The display will scroll **≡** from right to left across the display indicating the program is being saved into memory.
2. Release the **-** and **PRO** buttons

Hunter Quick Check™

This circuit diagnostic procedure is can quickly identify “shorts” commonly caused by faulty solenoids or when a bare common wire touches a bare station control wire.

To initiate the Hunter Quick Check test procedure:

1. Press the **+**, **-**, **←** and **→** buttons simultaneously. In the standby mode, the LCD will display all segments (helpful when troubleshooting display problems).
2. Press the **+** button to begin the Quick Check test procedure. The system will search all stations to detect a high current path through the station terminals. When a field wiring short is detected, an ERR symbol preceded by the station number will momentarily flash on the controller LCD display. After the Hunter Quick Check completes running this circuit diagnostic procedure, the controller returns to the automatic watering mode.

Clearing Controller's Memory/Resetting Controller

If you feel that you have misprogrammed the controller, there is a process that will reset the memory to factory defaults and erase all programs and data that have been entered into the controller. Press and hold the **PRO** button. Press and release the **RESET** button on the back of the front panel. Wait until the display shows 12:00am. Release the **PRO** button. All the memory has been cleared and the controller may now be reprogrammed.

WINTERIZING YOUR SYSTEM

In regions within the country where the frost level falls below the depth of the installed piping, it is common for these systems to be “winterized”. Several methods can be used to drain the water from the system. If the blow out method is used it is recommended that a qualified licensed contract perform this type of winterization.

WARNING! WEAR ANSI APPROVED SAFETY EYE PROTECTION!

Extreme care must always be taken when blowing out the system with compressed air. Compressed air can cause serious injury, including serious eye injury from flying debris. Always wear ANSI approved safety eye protection and do not stand over any irrigation components (pipes, sprinklers, and valves) during blow out. **SERIOUS PERSONAL INJURY MAY RESULT IF YOU DO NOT PROCEED AS RECOMMENDED.**