

OWNER'S MANUAL



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C2000/C2100 ORP/pH Controllers  
120V/240V



# IMPORTANT SAFETY INFORMATION

When installing and using this electrical equipment, basic safety precautions should always be followed including the following:

## **READ AND FOLLOW ALL INSTALLATION INSTRUCTIONS.**

Installation of this equipment should be performed by a licensed electrician and conform to all National Electric Code (NEC), state and local codes. Installations in Canada must comply to CEC requirements.

### **WARNING: To reduce the risk of electrical shock:**

- Turn off or disconnect the power source before installing, opening the door, or adjusting the internal workings of the controller.
- Install all electrical equipment at least 10 feet (3 m) from inside wall of pool or spa.
- Connect this device only to a grounding-type receptacle protected by a ground-fault circuit interrupter (GFCI).
- Do not use an extension cord, connect the controller directly into the outlet. Do not bury the cord.

**WARNING:** To reduce risk of injury, do not permit children to use this product unless they are closely supervised at all times.

For proper operation, it is imperative that the system has proper flow past the sensors when the pool filtration system is running.

When automating a body of water, size the feeders so desired levels can be attained in short operating cycles. If feeders are unable to keep up with demand within a short time frame, automation becomes ineffective.

While the system is feeding, inaccurate sanitizer/pH levels may be displayed because the system is still circulating the chemical.



Observe precautions for electrostatic sensitive devices.

**SAVE THESE INSTRUCTIONS.**



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# Specifications

pH Control Range: 7.0 to 8.0

ORP Control Range: 200 to 900

Input Power:

- 120 VAC 50/60 Hz auto-switching when supplied with 3-wire grounded power cord; GFCI source required.
- 240 VAC 50/60 Hz capable.

Controller Power: 1 amp, internally fused.

Output Power:

- 120 VAC 50/60 Hz auto-switching when supplied with 3-wire grounded power cord; GFCI source required.
- 240 VAC 50/60 Hz capable.
- 8A fuse for 120V, 4A fuse for 240V.
- 3 HP (High power - line voltage) and 2 LP (Low power - 24V) built-in relays

Display: Graphic, LCD, menu-driven

Operating Temp: 40 - 120° F

Sensors: pH: glass combination with 10' cable  
ORP: platinum combination w/ 10' cable

Inputs:

- Polaris CPC cable with 9-pin connector
- ORP & pH sensors: BNC connector
- Level detection: allows feeding, normally closed. Flow detection; allows feeding, normally closed

Outputs:

- ORP Feeder - High Voltage  
120 VAC 50/60 Hz (with 120V input)  
240 VAC 50/60 Hz; (with 240V input)  
8A on-board fuse for 120, 4A fuse for 240, normally OFF.
- ORP Feeder – Low Voltage, 24V
- pH Feeder – High Voltage,  
120 VAC 50/60 Hz (with 120V input)  
240 VAC 50/60 Hz; (with 240V input)  
8A on-board fuse for 120, 4A fuse for 240, normally OFF.
- pH Feeder – Low Voltage, 24V
- RS232 for data

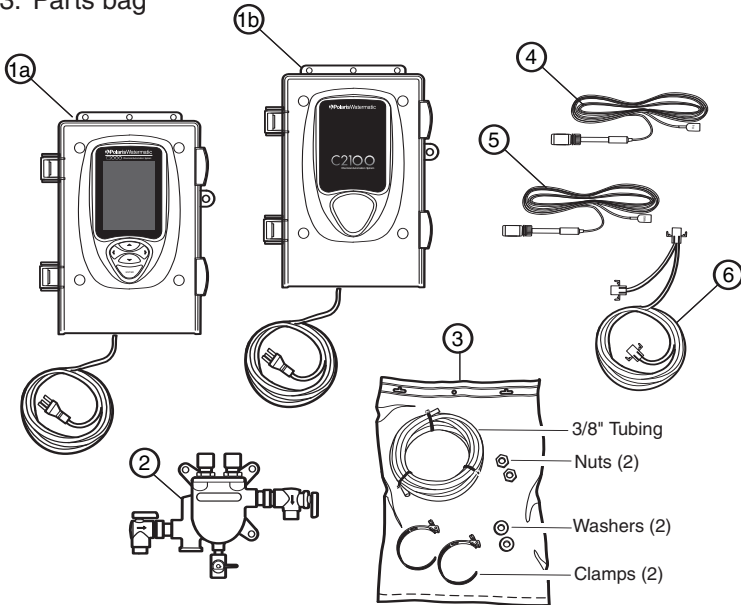
# Introduction

Congratulations on the purchase of your new Polaris Watermatic C2000 or C2100 Controller, and thank you for choosing Polaris. This controller automatically monitors and maintains both the sanitizer level and the pH balance in swimming pools, spas, or any circulating water system that requires water chemistry management. Designed for easy installation and operation, it can be used with liquid feed pumps, granular and tablet erosion feeders, ozone generators, and salt chlorinators. It is not warranted or recommended for use with chlorine gas systems.

During the filtration cycle, the controller maintains sanitizer levels and pH balance by constantly measuring the Oxidation-Reduction-Potential (ORP) and pH balance of the water. If the sanitizer level (ORP) or pH falls below a predetermined set point, the controller activates the chemical feeder.

## Watermatic C2000/C2100 Components

- 1a. C2000 ORP/pH Controller
- 1b. C2100 ORP/pH Controller
- 2. Flow Cell with Flow Switch
- 3. Parts bag
- 4. ORP Sensor
- 5. pH Sensor
- 6. POLARIS CPC cable (C2100 only)



### C2000



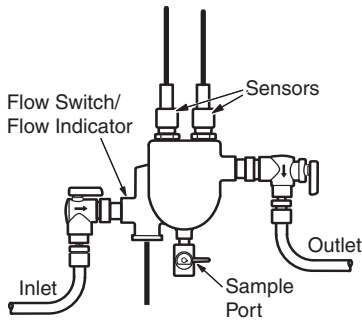
The C2000 controller is designed to operate independently as a stand-alone unit.

The C2100 is used with the Polaris Eos Automated Control System.

### C2100



Both controllers are preset to be used in single applications (one controller for one body of water). An additional C2100 controller can be added to automate a second body of water.



The flow cell assembly houses the sensors and provides a sample port for manual testing. It also contains an integrated flow switch/flow indicator that prevents the feeder(s) from feeding if there is insufficient flow. If flow is insufficient, a warning message will flash at the bottom of the screen.

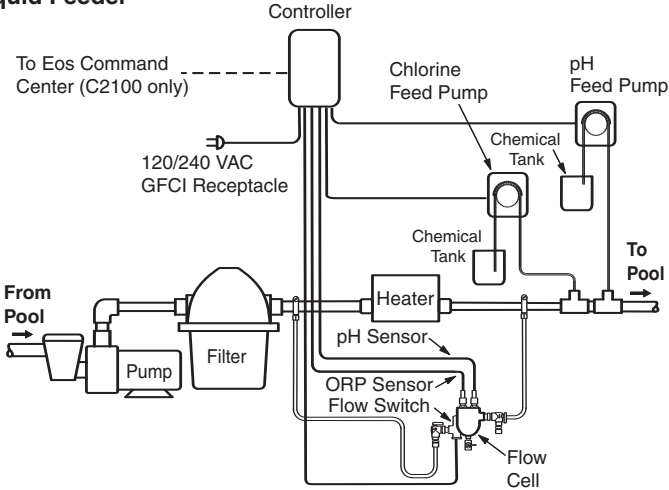


# Installation

## Feed System Installation

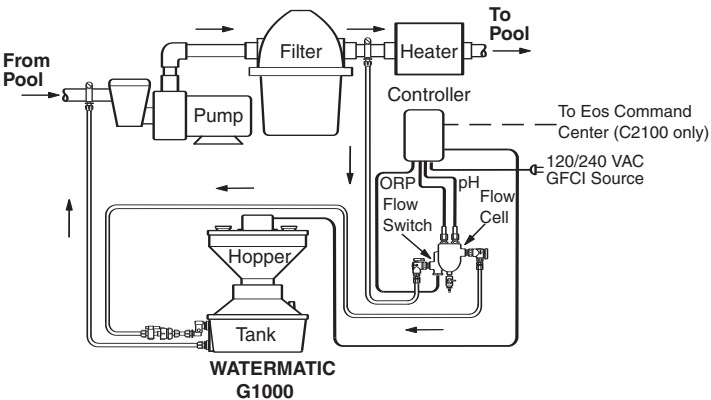
Install the chemical pump and erosion feed systems as shown. If the model differs from these systems, refer to the installation manual provided with it for the appropriate installation method.

### Liquid Feeder



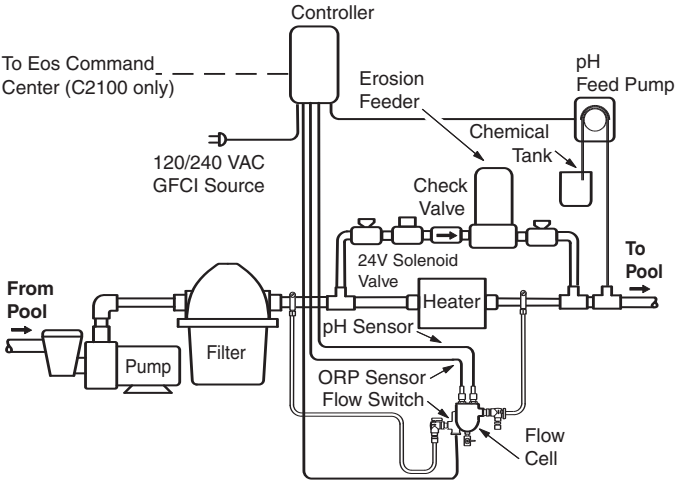
Do not install granular feeders below water level.

### Granular Feeder

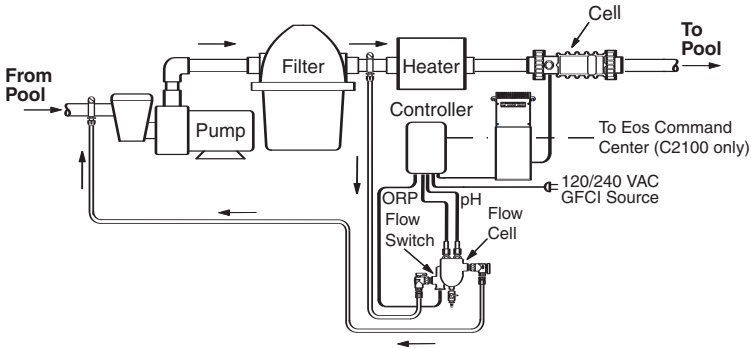


If using an acid feed system, the insertion point must be down stream of all equipment.

### Erosion Feeder



### Salt Chlorinator



## Controller Installation

The controller should be mounted on a wall or other vertical surface within eight feet of the feeder, at least ten feet away from the edge of the water and within six feet of the GFCI power source. Use mounting screws or anchors to mount the controller.

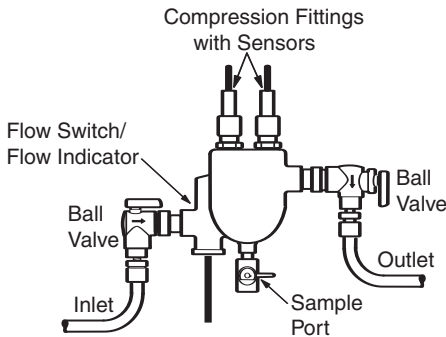
If installing a C2100, mount the controller within 12 feet of the Eos Command Center to facilitate the CPC cable connection.

If two separate bodies of water are to be maintained, add a second C2100 controller. Mount this controller within 12 feet of the C2000 or Eos Command Center, and 6 feet of the GFCI power source.

## Flow Cell Assembly Installation

Mount the flow cell on a vertical surface within eight feet of the controller.

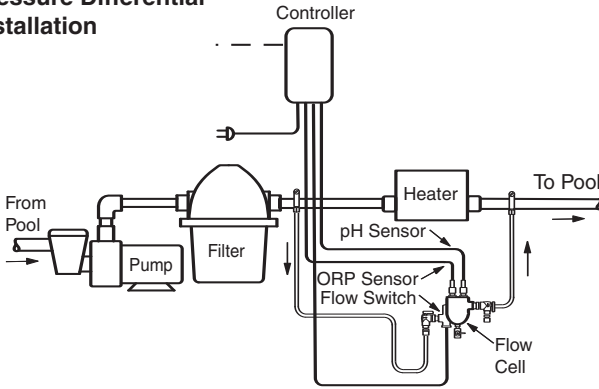
Plumb it so the pressure difference between the inlet (flow switch side) and the outlet is sufficient to ensure flow through the flow cell. If the 3/8" tubing provided is being used, a minimum pressure differential of 3 PSI and 0.3 GPM is required to activate the flow switch. It is also desirable to have filtered water pass over the sensors to minimize cleaning.



There are four suggested plumbing installations for the flow cell.

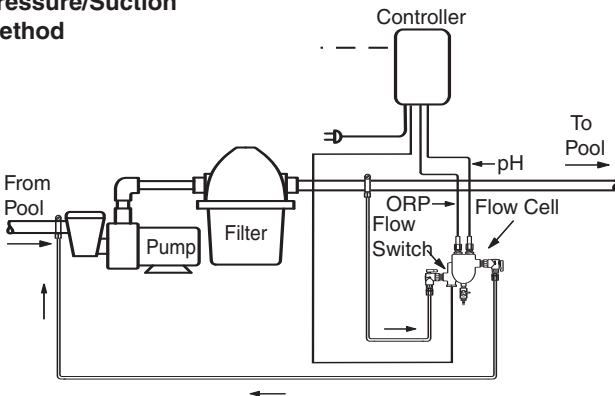
1. Plumb the inlet after the filter and the outlet after the heater.

### Pressure Differential Installation



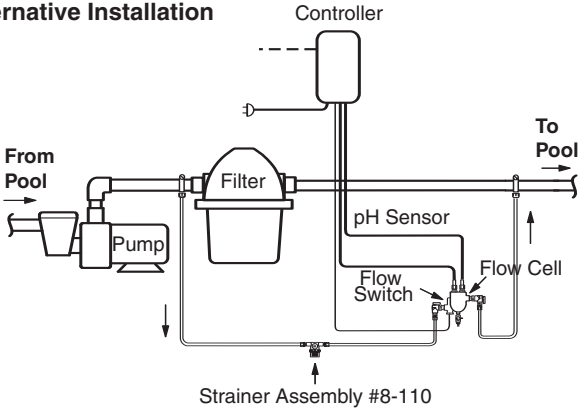
2. Plumb the inlet after the filter and the outlet before the pump. This ensures excellent flow but the flow must be adjusted so the sensors are not subjected to a suction environment. Open the sample port to verify that water is flowing freely from it.

### Pressure/Suction Method

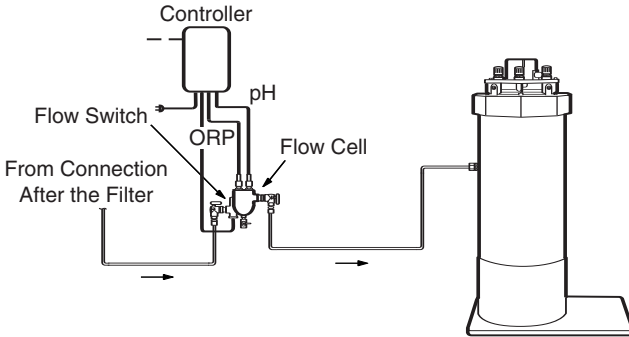


- Plumb the inlet before the filter and the outlet after the filter, using an inline filter to minimize the possibility of debris coming into contact with the sensors. Use this method for systems with no heater.

**Pressure Differential  
Alternative Installation**



- For installation with a G7500 Cal Hypo feeder, refer to the diagram below.



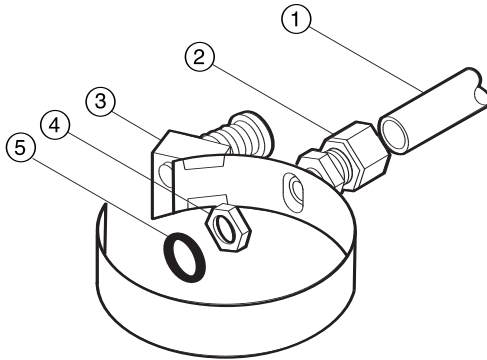
Be aware that solar systems and other factors can alter pressure differentials in a system, adversely impacting flow through the flow cell.

The flow cell comes fully assembled, ready to install with the 3/8" tubing provided. Other sized tubing or 1/2" hard plumbing can be used.

To use an alternative tubing, remove the 90 degree on/off valves and plumb according to the application.

1. **If using a saddle clamp**, drill a 7/16" hole in the pipe. Insert the 1/8" compression fitting (#2) through the clamp (#3) and place the nylon jam nut (#4) onto the compression fitting. Slide the pipe seal washer (#5) onto the end of the hole in the pipe and tighten the clamp. Test for leaks.

If the pipe is larger than 2" in diameter, two clamps joined together will be required per each hole.



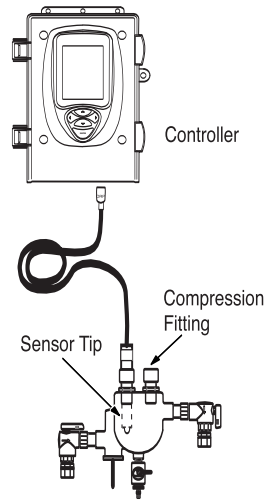
**If using a pipe tap**, drill a 7/16" hole and tap a 1/4" NPT hole. Be careful not to over tap the hole. Apply Teflon tape to the threads on the compression fitting and screw securely into the pipe. Test for leaks.

2. Cut the tubing (#1) to the appropriate length. Slightly loosen the compression fitting in the pipe and insert the tubing. Take the free end of the tubing and insert it into the compression fitting on the flow cell.

## Sensor Installation

Unpack the sensors and remove the protective bottle and o-ring. Set aside the o-rings. Save the bottles for winterizing or reshipping.

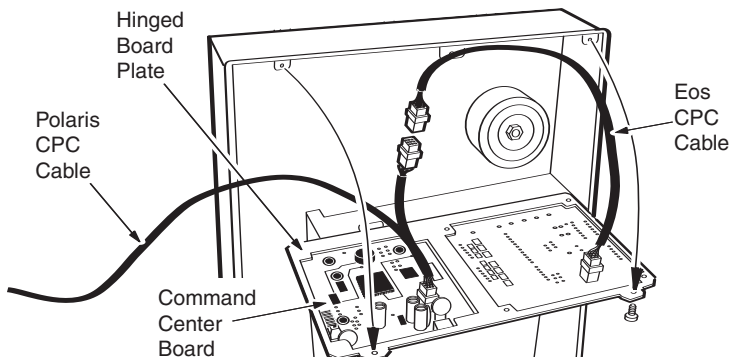
Remove the compression fitting nut from the flow cell and slide it up onto the sensor. Slide the o-ring from the bottle onto the sensor. Insert the sensor into the compression fitting on the flow cell assembly. The sensor tips should extend below the water line in the flow cell. Hand-tighten the nut of the fitting, do not use a wrench. Coil any extra sensor cable externally, not in the controller box.



## Electrical Connections

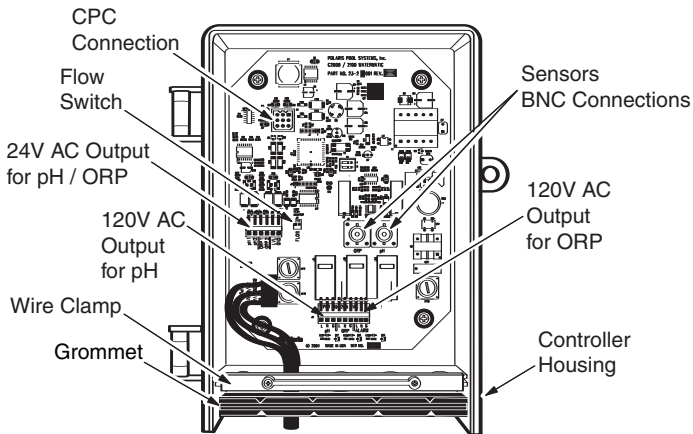
To complete electrical connects:

1. Verify that power is not connected.
2. **For C2100 with Eos install only:** Open the Eos Command Center door and remove the deadfront. Unscrew and swing down the hinged board plate to access the command center circuit board. Unplug the Eos CPC connector from the command center board. Plug one end of the Polaris CPC Cable into the command center board and the other end into the CPC cable connected to the Eos activator board.



Swing up and secure the hinged board plate. Feed the CPC cable down through the low voltage compartment and out through the bottom of the command center. Reinstall the deadfront and close the door. Route the CPC cable to the C2100 controller.

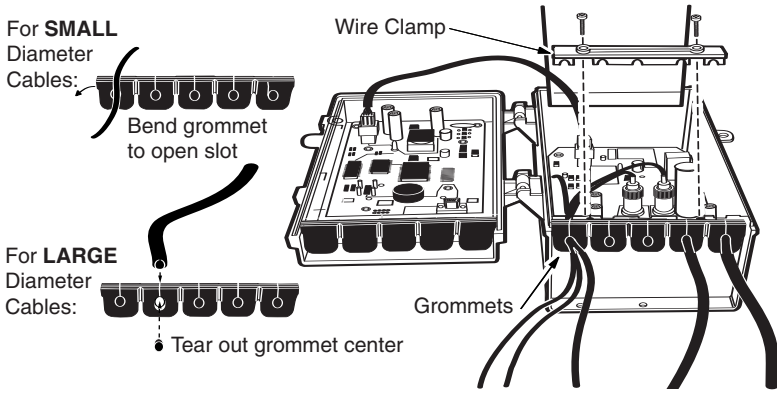
3. Open the door to the controller.



4. Unscrew and remove the wire clamp.
5. Strip lead wires (maximum of 3/8") from ORP and pH feeders. To facilitate wire hook-up, remove output terminal block from circuit board. Attach feeder output leads to the terminal block. Note the orientation of the leads (ground, line and neutral). Reinstall terminal block.
6. Attach leads from Flow Switch to the Flow terminal block.
7. Attach the pH and ORP sensor BNC connectors to the controller.
8. **For C2100 with Eos install only:** Connect the Polaris CPC cable from the Eos system to the CPC connector on the controller board.



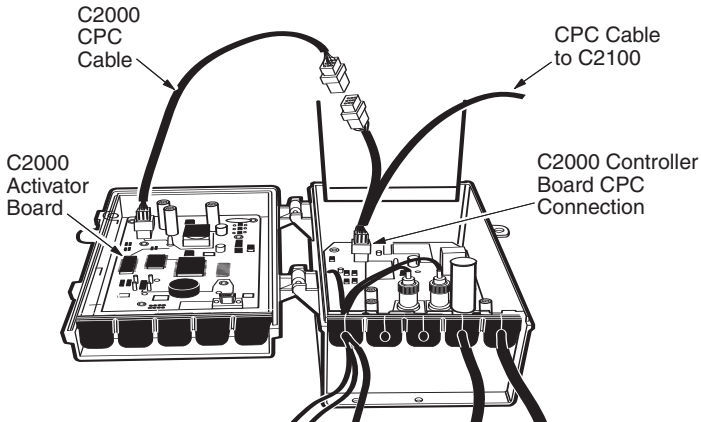
8. Route connections through housing grommets using the appropriate grommet for the wire size.



9. Re-mount the wire clamp. Close door and plug the controller power cord into the GFCI receptacle.

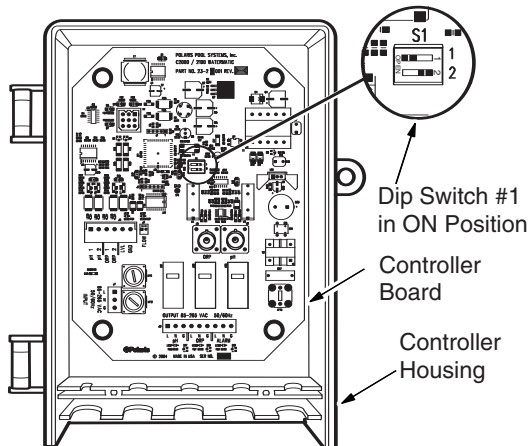
## Adding A Second Controller

1. If a C2100 is being installed with the C2000, disconnect the CPC cable at the C2000 controller board. Plug one end of the Polaris CPC cable into the controller board and the other end into the CPC cable connected to the controller's activator board.



If the second C2100 is being used with Eos, daisy chain the CPC connection either at the Eos or the first C2100.

2. Set DIP switch #1 on the second C2100 controller to the ON position. This identifies the second controller as Watermatic #2 (WM 2) and allows simultaneous use of the controllers.



# System Setup

Do not add chemicals to the feeders until completing the following start-up operations.

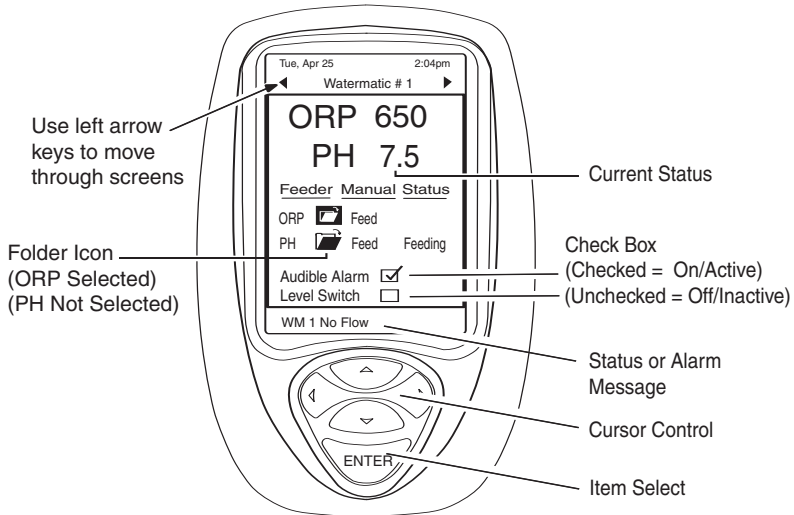
1. Use a DPD test kit to test the water, then manually adjust and balance the pool to acceptable ranges. It may take several hours for the levels to stabilize.
2. With the controller power OFF, turn on the filter pump and check for leaks in the system and flow through the flow cell.
3. Plug in or supply power to the controller. The C2000 display will illuminate showing the Setup screen or, if a C2100 is installed with an Eos system, the Watermatic Control screen will become available on the Eos display.

To adjust the brightness or contrast of the display, press the left and right arrow keys simultaneously to open the Command Center Setup screen. Review the Controller Display Overview section and adjust settings as necessary.


4. To set up the system:
  - Get familiar with the screen displays and navigating the system.
  - Complete controller configuration


# Controller Display Overview


Measurements and setting options are shown on the display screen. Adjustments to settings are made with the key pad. Use the curser control (arrow) keys to move through the screens and the menu options. Use the enter key to select a particular option.




## Display Symbols

 Folders indicate that additional screens, menus or setup options are available for an item.

 Check Boxes are used to turn functions or devices on or off. Checked = On.

 The Up/Down Arrows indicate adjustment options are available for the field next to it, and the up or down arrow keys are used to select or enter the setting.


 **Aug** An item in reverse (white text on black box) indicates cursor is over item or field. Press the Enter key to select the item.

\_\_\_\_\_ A line in this document (a blank area on the actual screen) with the Up/Down Arrow symbol next to it indicates a text field that can be named.

## Navigating the System

Use the cursor control (arrow) keys to move from screen to screen and through the menu options.

To open the new screen represented by a folder icon:

1. Use keypad arrow keys to move the cursor over the folder. The folder will appear in reverse. (Ex: )
2. Press <Enter> to select the folder and open the new screen.
3. Use the left arrow key to exit the new screen.

To select and adjust an item:

1. Use keypad arrow keys to move the cursor over the item to be adjusted. (Ex: **Adjust** )
2. Press <Enter> to select the item. The item will flash.
3. Use the up/down keys to choose or enter the setting.
4. Press <Enter> to activate the setting.

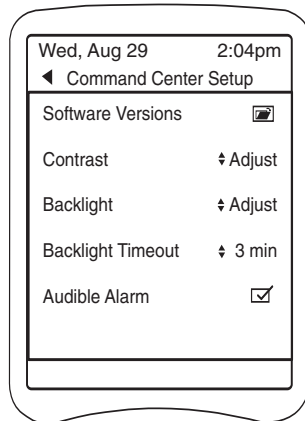
To check or uncheck a check box:

1. Use keypad arrow keys to move the cursor over the check box.
2. Press <Enter> to enable (Ex: ) or disable (Ex: ) it.

If the screen contrast or brightness needs to be adjusted, press the left and right arrow keys simultaneously to open the Command Center Setup screen.

**Contrast** controls the readability of the test, light or dark, on the screen.

**Backlight** controls illumination or brightness of the screen.



## Setup Screen

If a C2100 is installed with an Eos system, all initial setup information is entered via the Eos Command Center. Refer to the Eos Installation and Operations Guide.

For the C2000, the Setup screen will display at start up.

### Reset System

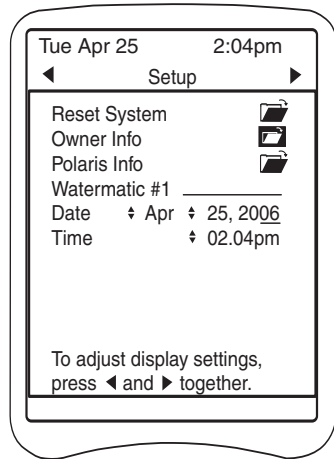
Selecting this folder icon opens a separate screen which allows the user to clear all device settings.

### Owner Info

Select this folder to open a screen where owner name, address, etc., can be defined.

### Polaris Info

Select to enter product serial number, service center information, etc.



To name the controller:

1. Move the cursor to the blank (line in diagram) area next to **Watermatic #1** and press <Enter> to select the field.
2. A line will appear and the first character position of the field will flash. (Ex: █ )
3. Use the up/down arrow keys to move through the alpha-numeric text options and the left/right keys to move within the field.
4. Press <Enter> when the entry is complete.

Set the **Date** (month, day and year) and the **Time** (hour with am or pm and minutes).

When all entries are complete, use the left arrow to move to the main Watermatic #1 control screen.

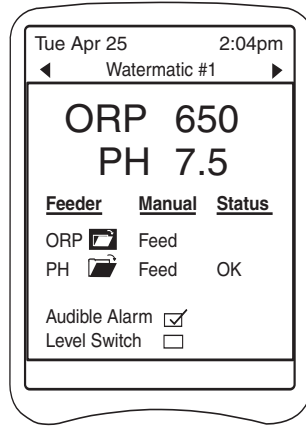
# Watermatic #1 Screen

The current ORP and pH levels are displayed at the top of the screen.

## Feeder

To set or adjust the ORP Feeder configuration, move the cursor over the folder icon next to ORP and press <Enter>. The **ORP Setup** screen will open.

To set or adjust the pH Feeder configuration, select the folder next to PH to open the **PH Setup** screen.



## Manual Feed

The ORP and pH feeders can be manually activated by moving the cursor over "Feed" under the Manual heading and pressing <Enter> on the key pad. A confirmation screen displays to confirm the action before the feeder is activated.

Feed time intervals are specified on the ORP and pH Setup screens. If the feeder is in delay mode, Manual Feed will override and cancel the delay cycle. Manual Feed is disabled by an overfeed or high/low alert, or if the feeder is already feeding.

## Status

Reflects the activity or status of the respective feeder. This field displays "Feeding" when chemical is being dispensed, "OK" when the sensor readings match the desired levels, is blank during feed delay cycles and provides specific alert messages if an alert condition exists. (See Appendix for Alerts and Alarms.) Alert messages also flash at the bottom of the screen.

## Audible Alarm

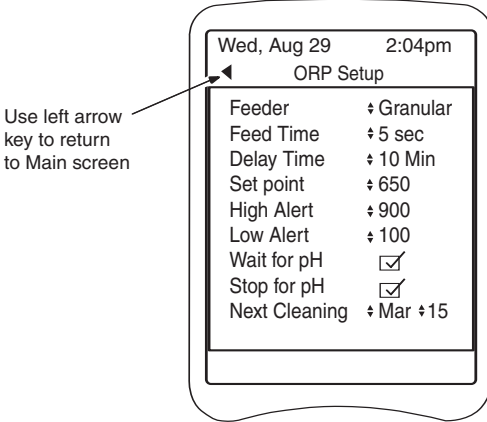
Activates an optional, external alarm to signal an out-of-range or other alert status. Move cursor to check box, press <Enter> to activate. **An internal (at the board) audible alarm is also available via the Command Center Setup screen.**

## Level Switch

Activates system recognition of an optional feeder tank chemical level sensor.

# ORP Setup Screen

Move the cursor over the ORP folder icon and press <Enter> to open the ORP feeder setup screen. Here the ORP set point, feed times, high/low ranges, and other specifications are set.



To set or adjust an item:

1. Move the cursor to the adjustable field next to the ◊ symbol.
2. Press <Enter> to select the item. The item will flash.
3. Use the up/down arrow keys to choose the setting.
4. Press <Enter> to activate the setting.

## Feeder

Specifies feeder type. When a feeder is selected, Feed Time and Feed Delay settings will change to the factory-set, feeder specific defaults outlined in the Appendix. These defaults can be adjusted.

Feeder options:

- Granular
- Liquid (Use for Ozone Generators)
- Salt
- Erosion LP (24V) solenoid
- Erosion HP (line voltage) solenoid

## Feed Time

Designates the amount of time the feeder adds sanitizer.

## Delay Time

Designates a minimum time between feeding. This option is not shown if “Continuous” feed is selected.



**Overfeed**

Sets a maximum time for the ORP to reach the set point. If the set point is not reached, the feeder shuts-down and an alert is signaled. Used only when Feed Time = Continuous, it replaces the Delay Time option on the display.

**Setpoint**

Sets the desired level of ORP. Set between 200 and 900 in increments of 10. The default is 650.

The controller displays direct ORP readings and the control is based on this, not the parts per million (ppm). While ORP indicates the effectiveness of the sanitizer, it does not directly correlate to a ppm reading. Use a DPD test kit to measure the free chlorine. If more or less sanitizer is needed, adjust the set point up or down accordingly. Also note the ORP reading is not linear. An adjustment from 700 to 750 could increase the sanitizer level by several ppm. The World Health Organization recommends an ORP at or above 650.

**High Alert**

Specifies the high end of the acceptable ORP range. Set between 650 and 950, in increments of 10, at least 100 greater than the set point (if set point 850, High Alert = 950). The default of 900 should be appropriate for most applications.

**Low Alert**

Specifies the low end of the acceptable ORP range. Set between 100 and 640, in increments of 10, at least 100 below the set point. The default of 100 is usually appropriate.

**Wait for pH**

Yes = ORP will not feed at the same time as the pH. The pH will always feed first. Preventing simultaneous feeding effectively reduces current draw on the GFCI circuit. No = ORP can feed at same time as pH. Default = Yes.

**Stop for pH**

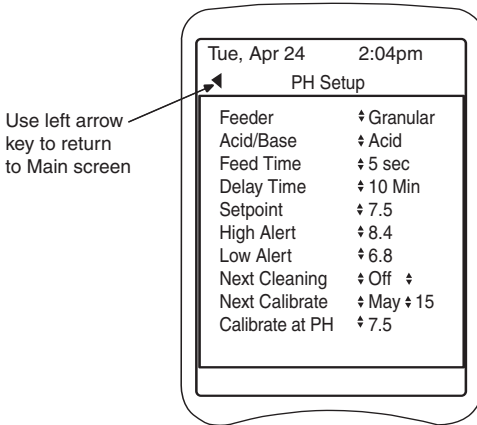
Yes = ORP will not feed if the pH is out of range. If the pH goes back in range, the alert clears itself and ORP can feed. No = ORP is allowed to feed regardless of pH. Default = Yes.

**Next Cleaning**

Sets a date (month and day) for the next sensor cleaning. Simply a reminder display. Default = OFF.

## PH Setup Screen

Move the cursor over the pH folder icon and press <Enter> to open the pH feeder setup screen. Here the pH set point, feed type, feed times and and other specifications are set.



To set or adjust an item:

1. Move the cursor to the adjustable field next to the † symbol.
2. Press <Enter> to select the item. The item will flash.
3. Use the up/down arrow keys to choose the setting.
4. Press <Enter> to activate the setting.

### Feeder

This specifies feeder type. When the feeder is assigned, Feed Time and Feed Delay settings will change to the factory-set, defaults outlined in the Appendix. Defaults can be adjusted.

Feeder options:

- Granular
- Liquid
- Erosion LP (24V) solenoid
- Erosion HP (line voltage) solenoid

### Acid/Base

Designates whether the controller maintains the pH below the set point (acid) or above the set point (base).

**Feed Time**

Designates how long the feeder is activated.

**Delay Time**

Sets the amount time between feeding. Not shown when “Continuous” feed is selected.

**Overfeed**

Used only with “Continuous” feed. If the pH does not reach the set point within the specified time, the feeder shuts-down and an alert is signaled.

**Setpoint**

Set between 7.0 and 8.2 in increments of 0.1 pH. Default is 7.5.

**High Alert**

Specifies the high end of the acceptable pH range.

Set between 7.5 and 8.4 pH, in increments of 0.1 pH, at least 0.4 greater than the set point (if Setpoint 8.0, High Alert = 8.4). The default of 8.4 will be appropriate for most applications.

**Low Alert**

Specifies the low end of the acceptable pH range.

Set between 6.8 and 7.4 pH, in increments 0.1 pH, at least 0.4 less than the set point (if Setpoint 7.2, Low Alert = 6.8). The default of 6.8 will usually be appropriate.

**Next Cleaning**

Sets a date (month and day) for next sensor cleaning. Simply a reminder display, the factory default setting is OFF.

**Next Calibration**

Sets a date (month and day) for next sensor calibration. Simply a reminder display, the factory default setting is OFF.

**Calibration**

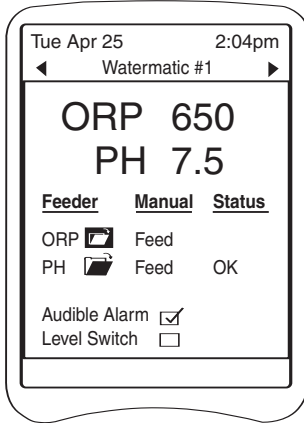
Allows user to adjust the pH sensor reading to match the actual pH of the water.

Always use water from the sample port of the flow cell to obtain the pH reading for calibration.

Since the pH sensor can drift slightly over time and the calibration will offset this drift, calibrate the sensor at least once a month.

# Operation

There is a **2-minute delay at startup** to allow the circulation system to stabilize. After the delay, the display will show actual ORP and pH readings from the sensors and the feeders will activate as necessary.



**ORP and pH feed messages** (Feeding, OK or blank) will display under Status to indicate current feed cycles.

If the system has insufficient flow or pressure, "**No Flow**" will be indicated under Status and the controller will not feed. The alert message will also flash at the bottom of the screen.

**High and low alerts** display if the ORP or pH has been out-of-range for ten consecutive minutes or more. During an alert, the controller stops activating the feeder. When the out-of-range condition is corrected, the controller automatically clears the alert and, after a one-minute delay, activates the feeder as needed.

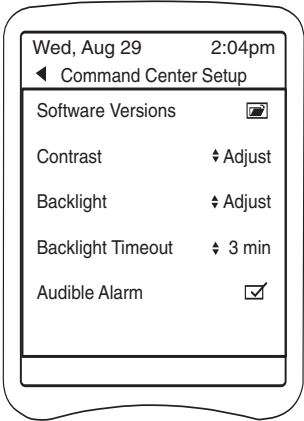
Allow the system to operate for a few days. With the filtration system running, retest the levels and adjust the set points if necessary.

To put the controller in **Standby Mode** (disables feeder control but power is still on) press and hold the <Enter> key for five seconds. Press any key to reactivate the feeder.

To service the controller, unplug it or disconnect the power.

# Command Center Setup Screen

The system offers a **Backlight Timeout** feature which sets a time limit for inactivity after which the light on the display turns off. To access this feature, press the left and right arrow keys simultaneously to open the Command Center Setup screen.



This screen also provides access to information on the current **Software Version** running the controller, the display **Contrast** and **Backlight** controls, and the on/off control of the internal (at the board) **Audible Alarm**.

# Maintenance

## Cleaning the Sensor Tips

Clean sensors once a month to ensure accurate readings. When dirty, the sensors can read a lower than actual sanitizer/pH level and can cause too much sanitizer/pH to be dispensed.

Note: A sensor tip coated with calcium scale will not look dirty.

To clean the sensor tip.

1. Turn off the controller. Turn off the filtration system or close the valves to isolate the flow cell.
2. Loosen the compression-fitting nut and remove the sensor from the flow cell assembly.
3. Swirl the tip for five seconds in muriatic acid (diluted 5 to 1) or white vinegar, and rinse it in water. Do not touch, wipe or brush the end of the sensor. For commercial pools and spas, every third cleaning, swirl the sensor tip in a solution of liquid soap and water. Rinse with water.
4. Reposition the sensor in the flow cell assembly and turn on the controller.
5. Allow the controller to operate for a few minutes to get an accurate reading. Adjust the setting if necessary.

## Checking the ORP Sensor

The ORP sensor should be checked every six months or anytime the feeder oversanitizes the water.

1. Clean the sensor tip.
2. Put the sensor in a clean glass of tap water. This should give a reading of between 200 and 400. Adding a pinch of Dichlor or Trichlor should cause the ORP level to jump to between 750 and 800. If Dichlor or Trichlor are not available and a sanitizer with a high pH such as calcium hypochlorite or liquid chlorine (sodium hypochlorite) is used, the ORP level may only rise to between 650 and 750.
3. If the sensor does not respond as indicated, the sensor should be replaced.

## Checking the pH Sensor

The pH sensor should be checked every six months or anytime the pH goes out of range.

1. Clean the sensor.
2. Place the sensor in a clean glass of tap water. Add a small amount of acid to the glass. The pH reading should drop. Place the sensor in any solution with a pH above 7.5. The pH reading should rise.
3. If the sensor does not respond as indicated, the sensor should be replaced.

## Winterizing

If the system is located in colder climates, it is important to winterize the system.

1. Turn off the main power to the controller.
2. Gently remove the sensors from the flow cell assembly and store them in a protective cap or bottle filled with a liquid solution of one teaspoon salt and three teaspoons water. Mix the solution thoroughly and make sure it completely covers the tip of the sensors. Store the sensors in a warm place. Do not expose sensors to freezing temperatures.
3. Drain the water from the flow cell/flow switch assembly.

# Warranty

## **Polaris Watermatic C2000/C2100 ORP/pH Controller**

This limited warranty is extended to the original consumer purchaser of this Polaris Watermatic Controller manufactured by Polaris Pool Systems, Inc. ("Polaris"), 2620 Commerce Way, Vista, CA 92081-8438, USA.

Polaris warrants the Watermatic Controller, including all parts and components thereof, to be free of defects in material and workmanship. For questions regarding your Polaris Watermatic Controller, please call or write us. Be sure to provide the serial number of your unit.

The warranty commences on the date of installation of the controller and shall remain in effect for a period of one (1) year from the date of purchase as established by proof of purchase or two (2) years from the date of manufacture of the controller as established by the serial number, whichever is earlier.

This limited warranty does not apply if the failure is caused or contributed by any of the following: improper handling, improper storage, abuse, unsuitable application of the unit, lack of reasonable and necessary maintenance, winter freezing or repairs made or attempted by other than Polaris or one of its Authorized Service Centers. Polaris will repair or replace, at its option, a unit, part or component proved to be defective within the warranty period and under the conditions of the warranty.

Unless local repair is authorized, the consumer must deliver or ship the unit or the warranted parts or components, freight prepaid to the nearest Polaris Authorized Service Center or return it freight prepaid (after proper authorization) to the plant of manufacture. Authorization to return a unit to the plant of manufacture must be obtained from the Polaris Customer Service Department. For your convenience, please check with your dealer for the local procedure before exercising this warranty. If further directions or instructions should be required, contact the Customer Service Department at 1-800-822-7933 (USA and Canada only) or 760-599-9600. Be sure to insure shipments against loss or damage during transit.



Polaris is not responsible for the cost of removal of the unit, damages occurring during removal or due to removal, any other expenses incurred in shipping the unit or parts to or from the factory or its Authorized Service Centers, or the installation of the repaired or replacement unit. The consumer must bear these expenses. This warranty does not cover repair of a unit except at our factory or a Polaris Authorized Service Center.

REPAIR OR REPLACEMENT AS PROVIDED UNDER THIS LIMITED WARRANTY IS THE EXCLUSIVE REMEDY OF THE CONSUMER. THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND ALL SUCH OTHER WARRANTIES ARE DISCLAIMED EXCEPT TO THE EXTENT ANY IMPLIED WARRANTY MAY BE IMPOSED BY STATE CONSUMER LAW. ANY SUCH IMPLIED WARRANTY IMPOSED BY STATE CONSUMER LAW IS LIMITED IN DURATION TO ONE (1) YEAR FROM DATE OF PURCHASE. IN NO EVENT SHALL POLARIS BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY NATURE OR KIND OR FOR DAMAGES TO PERSONS OR PROPERTY, INCLUDING ANY DAMAGE RESULTING FROM THE USE OF THE POLARIS WATERMATIC CONTROLLER. THE ONLY REMEDY PROVIDED TO YOU UNDER AN APPLICABLE IMPLIED WARRANTY AND THE LIMITED WARRANTY SET FORTH ABOVE SHALL BE THE REMEDIES EXPRESSLY PROVIDED FOR UNDER THIS LIMITED WARRANTY.

This limited warranty gives you specific legal rights. You may also have other rights that may vary from state to state. Some states do not allow limitations on how long an implied warranty lasts, or the exclusion or limitation of incidental or consequential damages, so the above limitations may not apply to you.

This limited warranty is valid only in the United States of America and Canada, and it does not apply to Polaris Watermatic Controllers sold or installed in any other country.

# Appendix

## Feed Times and Delay Times

The default feeding mode for the controller is continuous feed. However, when the ORP or pH feeder type is specified during setup, the Feed Time and Delay Time defaults change to the feeder specific defaults listed below. The listed options are also available and the ORP and pH sides of the controller can be modified independently.

After allowing the system to run for a few days, adjust the ORP and/or pH settings as needed. Lengthen the feed cycle if the water is undersanitized or shorten it if the water is oversanitized. Shorten the delay time if the feeder cannot keep up with demand.

### Granular Feeder

	<b>Feed Time</b>	<b>Delay Time (Min.)</b>	<b>Overfeed (Min.)</b>
Options	0.5, 1, 2, 3, 4, 5 Sec.	1 – 99	Off
Defaults	5 Sec.	10 min	Off

### Liquid Feeder (Use for Ozone Generators)

	<b>Feed Time</b>	<b>Delay Time (Min.)</b>	<b>Overfeed (Min.)</b>
Options	Continuous	Off	1 - 99
	5, 10, 15, 20, 30 Sec. 1, 2, 3, 4, 5, 10, 15 Min.	1 - 99	Off
Defaults	10 Min.	10 min	Off

### Erosion Feeder

	<b>Feed Time</b>	<b>Delay Time (Min.)</b>	<b>Overfeed (Min.)</b>
Options:	Continuous	Off	1 - 99
	5, 10, 15, 20, 30 Sec. 1, 2, 3, 4, 5, 10, 15 Min.	1 - 99	Off
Default	10 Min.	10 min	Off

Erosion LP = Low power (24V) solenoid

Erosion HP = High power (line voltage) solenoid

## Salt Chlorinator

	<b>Feed Time</b>	<b>Delay Time (Min.)</b>	<b>Overfeed (Hrs.)</b>
Options	Continuous	Off	Off, 4, 8, 12, 24 hrs
Defaults	Continuous	Off	12 hrs

## Alerts and Alarms

The following alert conditions **will** sound the audible alarm:

- WM 1 High PH Alert
- WM 1 Low PH Alert
- WM 1 High ORP Alert
- WM 1 Low ORP Alert
- WM 1 PH Overfeed
- WM 1 ORP Overfeed
- WM 1 Feeder Empty (if Level Switch is selected.)

Each of these alerts are also present on the second controller (Watermatic #2 or WM 2) if one is added to the system.

The following alert conditions **will not** sound the Alarm:

- WM 1 No Flow
- WM 1 2-Minute Flow Delay
- WM 1 Clean PH Sensor
- WM 1 Cal PH Sensor
- WM 1 Clean ORP Sensor

Again, these alerts are present on the additional controller (Watermatic #2 or WM 2) if it is added to the system



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