HAYWARD®

OnCommand
Automation

Operation Manual

Contents

ONCOM
ONCOM-ACT
ONCOM-RC
ONCOM-ACT-RC
ONCOM-POD2
ONCOM-ACT-POD2

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WARRANTY

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IMPORTANT SAFETY INSTRUCTIONS

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

•   READ AND FOLLOW ALL INSTRUCTIONS

•   WARNING: Disconnect all AC power during installation.

•   WARNING: Water in excess of 100 degrees Fahrenheit may be hazardous to your health.

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

•   A green colored terminal marked "Earth Ground" is located inside the wiring compartment. To reduce the risk of electric shock, this terminal must be connected to the grounding means provided in the electric supply service panel with a continuous copper wire equivalent in size to the circuit conductors supplying the equipment.

•   A wire connector is provided on this unit to connect a minimum 8 AWG (8.4 mm) solid copper conductor between this unit and any metal equipment, metal enclosures of electrical equipment, metal water pipe, or conduit within 5 feet (1.5m) of the unit, to connect the equipment assembly or spa to a circuit protected by a ground-fault circuit-interrupter.
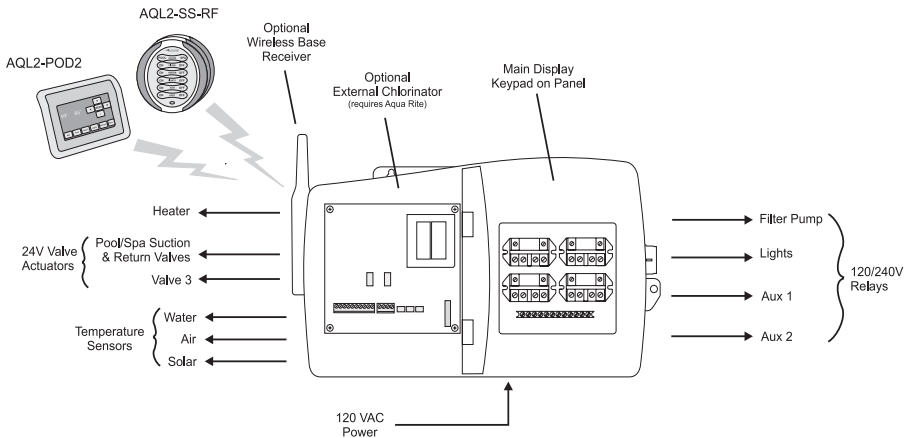
SAVE THESE INSTRUCTIONS

1

Introduction

The OnCommand is a multifunction pool controller used to fully manage your pool/spa system. The OnCommand can control pumps, valves, lighting, heaters, and chlorination. Although the OnCommand is easy to use, it is important to completely read through this operating manual before attempting to operate the control.

NOTE: This manual assumes that the OnCommand has been wired and configured according to the Installation Manual. Aspects of the OnCommand that pertain to system setup are not covered in this manual.

Automation

The OnCommand can control up to 4 high voltage (120/240V) pieces of equipment, up to 3 automatic valve actuators, and a conventional and solar heater. Both manual and automatic (programmed) operation are available. All of the control functions are programmed at the unit's display/keypad. Although the OnCommand has no built-in chlorinator feature, it can control an external Hayward Aqua Rite or Hayward chlorinator.
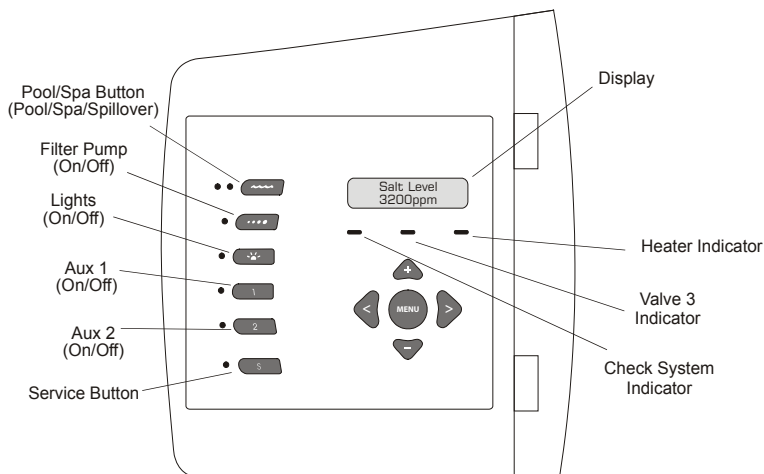
2

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Operation

Manual System

Turn the power on at the main panel and turn the OnCommand control power circuit breaker on. The keypad will show the default display. The default display alternates between the day/time, air and pool (or spa) temperature. Under certain circumstances, additional displays may be added to the default menu to inform you about system operation. Refer to the Programming Menu Flow-chart on page 5 to view all possible displays. The OnCommand will automatically scroll through all of the available default menu displays or you can press "<" or ">" to manually scroll.

While the main objective of the OnCommand is to automate the operation of your pool/spa system, there may be certain times when you want to override the automatic operation and control the equipment manually. To operate the pool equipment manually while keeping the automation active, perform the following procedures. Note that if you turn a relay on manually, it will remain on until either you turn it off manually, or the next time the programmed automatic operation would normally turn that relay off. Example: the filter pump is programmed to run from 9:00A to 5:00P daily. If you turn the filter pump on manually at 8:00PM, it will run continuously until the next day at 5:00PM at which time it will turn off and follow the normal program from then on. Manually turning off a relay works in a similar fashion.

Pool/Spa Button
(Pool/Spa/Spillover)

Filter Pump
(On/Off)

Lights
(On/Off)

Aux 1
(On/Off)

Aux 2
(On/Off)

Service Button

Display

Salt Level
3200ppm

Heater Indicator

Valve 3
Indicator

Check System
Indicator

Filter Pump

Single Speed Filter Pump: If the pump is currently off, press the FILTER button to turn on the pump. Pressing the FILTER button again will turn off the pump. However, if there is a heater in the system, and it is operating, and the "Heater Cooldown" feature is enabled (Configuration Menu) then: when you press the FILTER button to turn off the filter, only the heater will turn off, the Filter LED will flash and the display will indicate "Heater Cooldown". At this point the filter pump will automatically turn off after 5 minutes of heater cooldown operation. If you want to override the heater cooldown, simply press the FILTER button again to turn off the filter pump.

3

Two Speed or Variable Speed Filter Pump: If the pump is currently off, simply press the "FILTER" button to turn on high speed operation of the filter pump. The "Filter" LED will illuminate continuously. Pressing the "FILTER" button again will switch to low speed operation and the "FILTER" LED will flash. Note that if the pump has been off for more than 30 seconds, it will run at high(est) speed for 3 minutes regardless of selection. This high speed operation helps allow the pump to prime and establish normal water flow.

Freeze Protection: This function protects the pool, plumbing, and equipment against freeze damage. If Freeze Protection is enabled and the AIR temperature falls below the preset freeze protection temperature (see Filter Configuration), the OnCommand will turn on the filter pump to circulate the water.

Lights, Aux1 and Aux2 Outputs

Standard Relay: Manual operation of all 3 relays is identical. Assuming that the relay is currently off, simply press the appropriate button to turn on the relay. If the relay does not turn on, it probably is due to the "interlock" feature (which was set up in the Configuration Menu) being activated that requires the filter pump to be running and the valves to be in the pool-only position. This protects pumps and other equipment from possible damage. If the controlled output is on, pressing the appropriate button again will turn off the relay. Manual turn off is disabled if the "Freeze Protection" feature is enabled and the air temperature is less than the selected freeze temperature threshold.

Dimmer Relay: If Lights or an Aux output is configured as a dimmer, pressing the corresponding button will generate a temporary display which shows the dimmer output level (Off - On 100%). Pushing the "+" or "-" button changes the level in increments of 20%. When the desired output level is displayed, press the corresponding button again to turn off the display and return to normal operation. When the Lights or Aux output comes on again (either manually or automatically), the dimmer output level will be the same as the last time that it was set.

Pool/Spa Valves

Pool-only or spa-only systems: The POOL/SPA button has no function.

Pool and Spa systems without spa spillover: In pool-only mode, the left LED next to the POOL/SPA button is illuminated. Pressing the POOL/SPA button will switch the OnCommand to spa-only operation (right LED illuminated). Pressing the POOL/SPA button again will switch back to pool-only. Note that the filter pump will turn off while the pool/spa valves are turning.

Pool and Spa systems with spa spillover: In pool-only mode, the left LED next to the POOL/SPA button is illuminated. Pressing the POOL/SPA button will switch the OnCommand to spa-only operation (right LED illuminated). Pressing the POOL/SPA button again will switch to spa spillover operation (both LED's illuminated). Pressing the POOL/SPA button again will switch back to pool-only. Note that the filter pump will turn off while the pool/spa valves are turning.

Service

The main unit keypad has a SERVICE key. This button is used primarily during servicing of the pool equipment. If you want to completely disable the automatic operation and operate the system manually, you can put the system into Service or Service-Timed mode by pressing the SERVICE button. Pressing the SERVICE button once will switch the system into service mode which means

4

that all automatic functions are disabled, and the remote display/keypads are disabled (except for manual turn off for emergencies). The red SERVICE LED will be illuminated and the OnCommand will remain in this mode of operation until manually taken out of service mode.

Pressing the SERVICE button again will cause the OnCommand to switch to service-timed mode which is very similar to service mode, except that the OnCommand will automatically return to normal operation after 3 hours. During service timed operation, the "Service" LED will flash and the time remaining will be displayed on the remote display/keypad(s).

Pressing the SERVICE button again will return the OnCommand to normal (automatic) operation. See Troubleshooting/Diagnostic Information (page 25) for more information about the service modes.
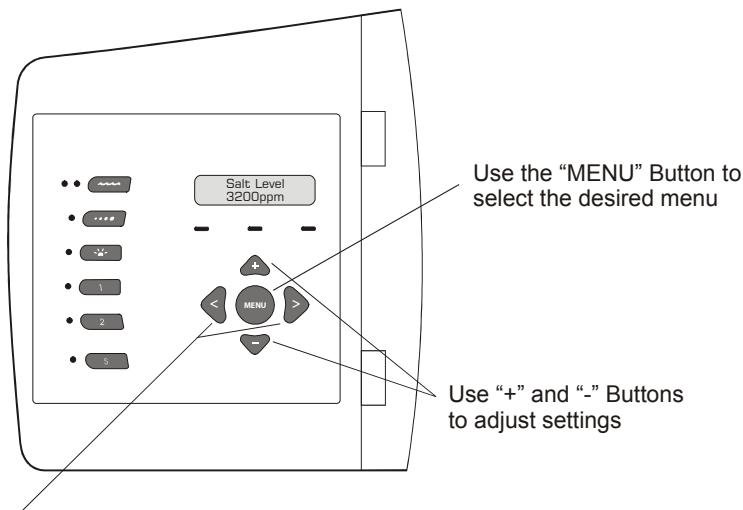
Automatic System
The OnCommand controls most of your pool equipment automatically in order to minimize the time spent working on your pool. Most of the pool equipment can be programmed to operate on a timeclock basis. In addition, the desired pool and spa temperatures can be programmed. This section will guide you on how to program the automatic operation for each function.

The programming of automatic functions can be performed at either the main display/keypad located at the pool equipment pad or the in-home remote display/keypad.

Using the programming buttons
There are 5 buttons on each keypad that are used for programming (refer to diagram).

Use the "MENU" Button to select the desired menu

Use "+" and "-" Buttons to adjust settings

Use "<" and ">" Buttons to select items from a menu

5

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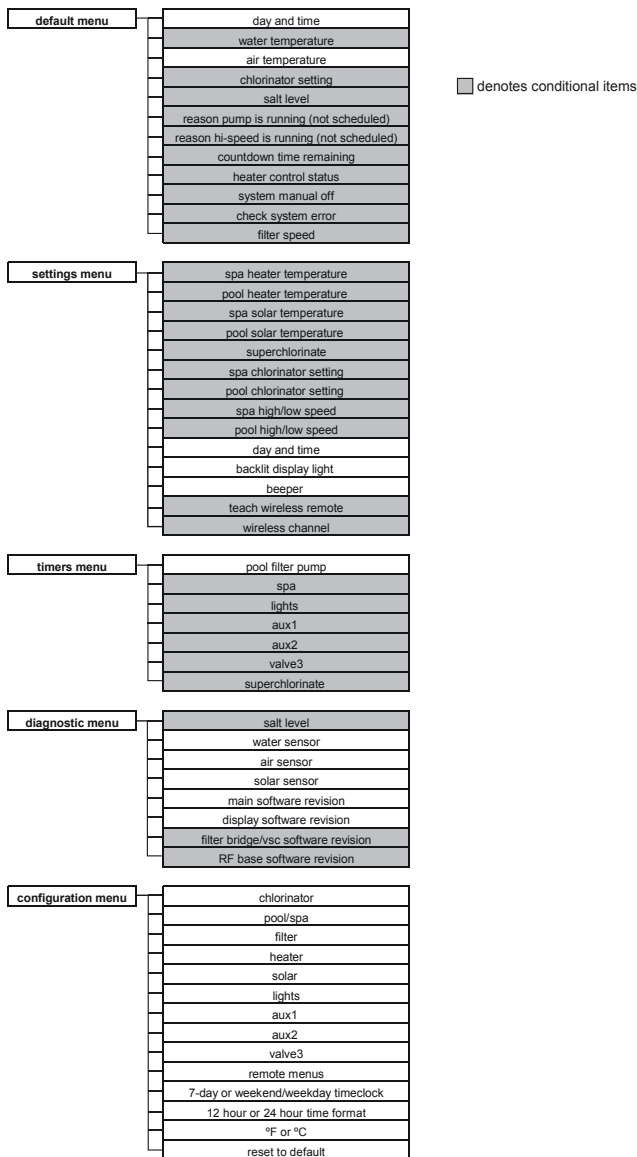
There are 4 steps to programming any function:

1. **MENU** Press the "MENU" button to get to the desired menu. Multiple pushes of the button will rotate through all 6 menus and return to the starting point.

2. **< >** Press either key to scroll through the various items in the selected menu. Multiple pushes of the button will rotate through all menu items and return to the starting point. Only menu items that are applicable to your pool will appear. (Example: if you don't have a spa, then no spa related menu items will appear).

3. **+ −** Once a menu item has been selected above, the current setting/selection will appear (flashing) on the display. Use the "+" and/or "-" keys to change this selection. Sometimes "+" and "-" will adjust a value up or down (example: heater temperature setting or timeclock on/off time). In this case, pushing the "+" or "-" will change the value by one increment and holding the "+" or "-" button in for more than one second will make the values auto scroll. In other cases, the "+" and "-" may toggle between 2 options (example: turning superchlorination ON or OFF).

4. **< > MENU** After you have adjusted the item to the desired value, simply move on to the next menu item to "lock in" your new setting. The OnCommand memory will maintain the setting, even if power is removed for an extended period.

6

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Programming Menu Flowchart

The OnCommand's five menus have many items that allow you to customize the operation of your pool/spa equipment. The chart below shows the OnCommand's menus as well as each menu's specific settings.

default menu	
	day and time
	water temperature
	air temperature
	chlorinator setting
	salt level
	reason pump is running (not scheduled)
	reason hi-speed is running (not scheduled)
	countdown time remaining
	heater control status
	system manual off
	check system error
	filter speed

☐ denotes conditional items

settings menu	
	spa heater temperature
	pool heater temperature
	spa solar temperature
	pool solar temperature
	superchlorinate
	spa chlorinator setting
	pool chlorinator setting
	spa high/low speed
	pool high/low speed
	day and time
	backlit display light
	beeper
	teach wireless remote
	wireless channel

timers menu	
	pool filter pump
	spa
	lights
	aux1
	aux2
	valve3
	superchlorinate

diagnostic menu	
	salt level
	water sensor
	air sensor
	solar sensor
	main software revision
	display software revision
	filter bridge/vsc software revision
	RF base software revision

configuration menu	
	chlorinator
	pool/spa
	filter
	heater
	solar
	lights
	aux1
	aux2
	valve3
	remote menus
	7-day or weekend/weekday timeclock
	12 hour or 24 hour time format
	°F or °C
	reset to default

7

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The Default Menu is a series of informative displays with nothing to set. The OnCommand will automatically switch to the default menu when no keys have been pressed for 2 minutes and will then scroll through each display.

The Settings Menu and the Timers Menu are the menus you will be using most often to adjust the operation of your pool. The Configuration Menu is used when the system is installed and defines what equipment is connected to each output and the operational logic that will control the equipment. This menu is normally "locked" and should only be used by a pool professional. Details regarding the Configuration menu are included in both the Operation and the Installation Manual.

The "Diagnostic Menu" is primarily intended for the service technician and contains information and details about the system operation that are helpful in troubleshooting, if problems occur.

Settings Menu

The Settings Menu allows you to set all system operating parameters except the timeclock and countdown timers which are part of the Timers Menu.

> Spa Heater
> Off

+ − Adjust the desired spa temperature (Off, 65°F, 66°F, ...103°F, 104°F, Off)
< > Move to previous/next menu item

The spa heater setting will only appear if the system has been set up for "spa only" or "pool and spa" operation and the heater control is enabled. The heater will turn on whenever the pool/spa valves are in the "spa only" position and the filter pump is running and the spa water temperature is less than the desired temperature setting. If you have both solar heat and a conventional heater and the solar priority option is selected (Configuration Menu), then the conventional heater will only operate when solar heat is NOT available.

> Pool Heater
> Off

+ − Adjust the desired pool temperature (Off, 65°F, 66°F, ...103°F, 104°F, Off)
< > Move to previous/next menu item

The pool heater setting will only appear if the system has been set up for "pool only" or "pool and spa" operation and the heater control is enabled. The heater will turn on whenever the pool/spa valves are in the "pool only" or "spa spillover" position and the filter pump is running and the pool water temperature is less than the desired temperature setting. If you have both solar heat and a conventional heater and the solar priority option is selected (Configuration Menu), then the conventional heater will only operate when solar heat is NOT available.

> Spa Solar
> 102°F

+ − Adjust the desired spa temperature (Off, 65°F, 66°F, ...103°F, 104°F, Off)
< > Move to previous/next menu item

The spa solar setting will only appear if the system has been set up for "spa only" or "pool and spa" operation and the solar control is enabled. The solar system will turn on whenever the pool/spa valves are in the "spa only" position and the filter pump is running and the spa water temperature is less than the desired temperature setting and solar heat is available.

Pool Solar
88°F

+− Adjust the desired pool temperature (Off, 65°F, 66°F, ...103°F, 104°F, Off)
< > Move to previous/next menu item

The pool solar setting will only appear if the system has been set up for "pool only" or "pool and spa" operation and the solar control is enabled. The solar system will turn on whenever the pool/spa valves are in the "pool only" or "spa spillover" position and the filter pump is running and the pool water temperature is less than the desired temperature setting and solar heat is available.

Super Chlorinate
Off

+− Turn super chlorinate on or off
< > Move to previous/next menu item

This display only appears if the external chlorinator is enabled.

When you have an unusually high bather load, a large amount of rain, a cloudy water condition, or any other condition that requires a large amount of chlorine to be introduced to the pool, activate the OnCommand Super Chlorinate function. The OnCommand will turn on the filter pump, set the pool/spa valves to the correct position, and set the external chlorine generator to maximum output. The super chlorinate function will continue for the programmed number of hours (see Timers/Super Chlorinate Hours below) overriding the normal filter pump timeclock settings. At the end of the super chlorinate period, the pool will return to normal operation.

If you manually turn off the filter pump (using the FILTER button on any display/keypad), the super chlorinate function terminates. When you turn the filter pump back on, super chlorinate will resume for the balance of the programmed number of hours.

Spa Chlorinator
3%

+− Adjust the desired chlorinator output for spa (0,1,2,3...9,10,15,20...95,100%)
< > Move to previous/next menu item

This setting will appear only if the system has been set up for external chlorinator and "spa only" or "pool and spa". It will determine the external chlorinator output when the system is operating in spa-only mode. The actual amount of chlorine introduced into the spa is determined by this setting, the amount of time the pool operates in spa-only mode, the water temperature, and the amount of salt in the water. If the filter pump is running due to the freeze protection feature, then the chlorinator will not operate during this time.

Pool Chlorinator
60%

+− Adjust the desired chlorinator output for pool (0,1,2,3...9,10,15,20...95,100%)
< > Move to previous/next menu item

This setting will appear only if the system has been set up for external chlorinator and "pool only" or "pool and spa". It will determine the chlorinator output when the system is operating in pool only or spa spillover modes. The actual amount of chlorine introduced into the pool is determined by this setting, the amount of time the filter pump is running, the water temperature, and the amount of salt in the water. If the filter pump is running due to the freeze protection feature, then the chlorinator will not operate during this time.

Spa High Speed
100%

+− Adjust the desired high speed for variable speed operation
< > Move to previous/next menu item

This setting will appear if "pool only" is not selected and variable speed filter pump is enabled. This setting determines the speed of the pump during high speed spa operation. This value can be set from 20% to "Highest Speed" in 5% increments. "Highest Speed" is default.

9

| Spa Low Speed
50% | **+ −** Adjust the desired low speed for variable speed operation
< > Move to previous/next menu item |

This setting will appear if "pool only" is not selected and variable speed filter pump is enabled. This setting determines the speed of the pump during low speed spa operation. This value can be set from "Lowest Speed" to 50% in 5% increments. 50% is default.

| Pool High Speed
100% | **+ −** Adjust the desired high speed for variable speed operation
< > Move to previous/next menu item |

This setting will appear if "spa only" is not selected and variable speed filter pump is enabled. This setting determines the speed of the pump during high speed pool or spillover operation. This value can be set from 20% to "Highest Speed" in 5% increments. "Highest Speed" is default.

| Pool Low Speed
50% | **+ −** Adjust the desired low speed for variable speed operation
< > Move to previous/next menu item |

This setting will appear if "spa only" is not selected and variable speed filter pump is enabled. This setting determines the speed of the pump during low speed pool or spillover operation. This value can be set from "Lowest Speed" to 50% in 5% increments. 50% is default.

| Set Day and Time
Wednesday 10:37P | **+ −** Adjust the current day of the week
< > Move to hours setting |

| Set Day and Time
Wednesday **10:37P** | **+ −** Adjust the current hour (including AM/PM if applicable)
< > Move to minutes setting |

| Set Day and Time
Wednesday 10:**37**P | **+ −** Adjust the current minute
< > Move to previous/next menu item |

Use this function to set the current day of the week and time. These values are used for all the automatic timeclock functions of the OnCommand and are also displayed as part of the default menu.

The OnCommand is designed to keep the clock running during power outages lasting less than 7 days. If power has been off for longer than 7 days, then the time may have to be reset.

| Display Light
On for 60 sec | **+ −** Toggle between Always On and On for 60 sec.
< > Move to previous/next menu item |

This function controls the backlight on the display. If the "60 seconds" option is selected, then the backlight will automatically turn off 60 seconds after the last key is pressed and will stay off until next time a key is pressed.

Note that the Display Light selection only applies to the display keypad that you are currently using. Other display/keypads will not be affected. In other words, you need to individually set this option for each display/keypad in the system.

10

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| Beeper
Enabled | **+ −** Toggle between Enabled (default) and Disabled Beeper
< > Move to next menu item |

When "Enabled", the keypad will beep every time a key is pressed. If this audible indication is not desired, select "Disabled".
This function only applies to the display/keypad that you are currently using. You need to set this option for each display/keypad in your system.

NOTE: This function is not supported on all display/keypads. If the "Enabled" selection is not blinking, then the current software revision of that particular keypad/display does not support the option and it will default to Beeper Enabled.

Teach Wireless + to start	**+** Push to start process **< >** Move to previous/next menu item
Press and hold wireless button	Press any button on wireless remote **< >** Move to previous/next menu item
Teach Wireless Successful	**< >** Move to previous/next menu item
Teach Wireless NOT Successful	**< >** Move to previous/next menu item
Teach Wireless Base NOT Found	**< >** Move to previous/next menu item

This menu will only appear if a wireless base station is connected to the OnCommand. Perform this procedure each time a wireless remote control is added to the OnCommand system. During this procedure the wireless remote "learns" and remembers the ID code for the wireless base station connected to this particular OnCommand unit and will reject messages with any other ID codes. If "Base NOT found" is displayed, then the OnCommand can not communicate with the transmitter/receiver base station attached to the main unit. If "NOT Successful" is displayed, then the base station did not receive a signal from the remote control. This may be due to the distance between the Base Receiver and the remote device being too great or may be due to interference caused by other RF equipment operating in the neighborhood. Try changing the channel and then repeat the "Teach Wireless" command.

Wireless Channel: 1	**+ −** Change the desired wireless channel (1 - 5) **< >** If channel is changed, move to confirmation menu If channel is not changed, move to previous/next menu item
Confirm Change: + to proceed	**+** Push to confirm the channel change **< >** Move to previous/next menu item
Reteach all wireless units	**< >** Move to previous (Teach Wireless) menu

This setting changes the channel to be used by the wireless base station and remote(s). If the channel is changed and confirmed, all of the wireless remotes will have to be retaught. This menu will only appear if a wireless base station is connected to the OnCommand.
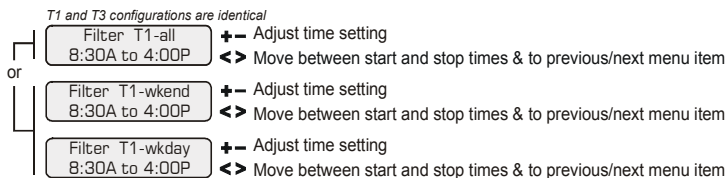
11

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Timers Menu

The Timers Menu allows you to set all timeclock and countdown timers which control the automatic operation of your pool/spa system.

The OnCommand has 4 timeclocks available for each function. Each timeclock has a single on/off program per day. All of the timeclocks are programmed in the Configuration Menu either as "all days" or "weekends/weekdays". If "weekends/weekdays" are selected, the start and stop times will need to be programmed separately for both weekdays and weekends, even if the same times will be used. All times are adjusted in 15 minute increments (9:00A, 9:15A, 9:30A, etc.). If you program the start time equal to the stop time (ex. "10:00A to 10:00A"), the function will be disabled and the display will show "Off". If, at a later time, you wish to re-activate the timeclock, simply press either the "+" or "-" buttons to go back to a normal timeclock programming display.

Two speed or variable speed pumps: Two timeclocks are required to program the run time for dual or variable speed pumps. One timer is used for high speed, the other timer for low speed.

The Countdown timer is programmed in increments of 5 minutes from "Manual On/Off" (0 minutes) to a maximum of "21:00" (21 hours). When "Manual On/Off" is displayed, the countdown timer is disabled and the output will be manually controlled. When a countdown timer is equal or greater than "0:05", pressing the appropriate output button will turn the output on and start the timer. Pressing the button again will turn the output off or, when the programmed time has elapsed, the output will automatically turn off.

T1 and T3 configurations are identical

| Filter T1-all | + − Adjust time setting |
| 8:30A to 4:00P | < > Move between start and stop times & to previous/next menu item |

or

| Filter T1-wkend | + − Adjust time setting |
| 8:30A to 4:00P | < > Move between start and stop times & to previous/next menu item |

| Filter T1-wkday | + − Adjust time setting |
| 8:30A to 4:00P | < > Move between start and stop times & to previous/next menu item |

For one speed pumps, this is the first filter timeclock and will determine the normal hours of filtration for the pool. For pool/spa combination systems with spillover enabled, the valves will automatically switch to spillover mode at the start of the filtration period. For all other systems, the valves will switch to the pool-only position. Refer to the text above for general notes regarding timeclock programming.

For two speed or variable speed pumps, this setting will be the period of time when the pump runs at high speed (the word "Filter T1" in the display will be replaced with "Hi T1", and "Filter T3" will be replaced with "Hi T3"). There is a separate timeclock for the low speed operation (see "Filter T2" below). If the high speed and low speed periods overlap, then the pump will operate in low speed during the overlap period.

There are several reasons the filter pump may be running at times other than the timeclock period set above. These include super-chlorination, spa operation, manual operation, heater cooldown, freeze protection and "solar-extend".

12

T2 and T4 configurations are identical

| Filter T2-all | + − Adjust time setting |
| 8:30A to 4:00P | < > Move between start and stop times & to previous/next menu item |

or

| Filter T2-wkend | + − Adjust time setting |
| 8:30A to 4:00P | < > Move between start and stop times & to previous/next menu item |

| Filter T2-wkday | + − Adjust time setting |
| 8:30A to 4:00P | < > Move between start and stop times & to previous/next menu item |

For one speed pumps, this is the second filter timeclock.

For two speed or variable speed pumps, this timeclock will set the normal time period for filter pump low speed operation (the word "Filter T2" in the display will be replaced with "Lo T1", and "Filter T4" will be replaced with "Lo T4"). If the filter pump was off prior to the start of this time period, the filter pump will first turn on at high speed for 3 minutes to prime and establish water flow. Afterwards, it will drop down to low speed for the remainder of the programmed low speed time period. While this time clock will override the high speed timeclock (see above), there are several reasons why the pump will automatically switch to high speed operation during this programmed time period. These include manual operation, spa operation, or heating operation. Refer to page 9 for general notes regarding timeclock programming.

| Spa-all | + − Adjust time setting |
| 6:00P to 9:00P | < > Move between start and stop times & to previous/next menu item |

or

| Spa-wkend | + − Adjust time setting |
| 6:00P to 9:00P | < > Move between start and stop times & to previous/next menu item |

| Spa-wkday | + − Adjust time setting |
| 6:00P to 9:00P | < > Move between start and stop times & to previous/next menu item |

This menu is only available if the system has been set up for "pool and spa". Only one timeclock is available for Spa operation. During the programmed spa time, the OnCommand will turn on the filter pump and move the pool/spa valves into the "spa-only" position. The heater will automatically heat the spa up to the programmed spa temperature (page 6). This programmed spa operation will take precedence over all other automatic functions and only manual operation of the filter button or pool/spa valve button will override this function.

If your pool has a separate jet pump or blower controlled by Aux1 and/or Aux2 , you will have to program those separately (see page 11).

| Lights-all | + − Adjust time setting |
| 8:00P to 11:00P | < > Move between start and stop times & to previous/next menu item |

or

| Lights-wkend | + − Adjust time setting |
| 8:00P to 11:00P | < > Move between start and stop times & to previous/next menu item |

| Lights-wkday | + − Adjust time setting |
| 8:00P to 11:00P | < > Move between start and stop times & to previous/next menu item |

This menu will appear only if the Lights are configured for timeclock. The lights will turn on and off at the designated times. The only override on this function is manual on/off control by the "Lights" button.

or

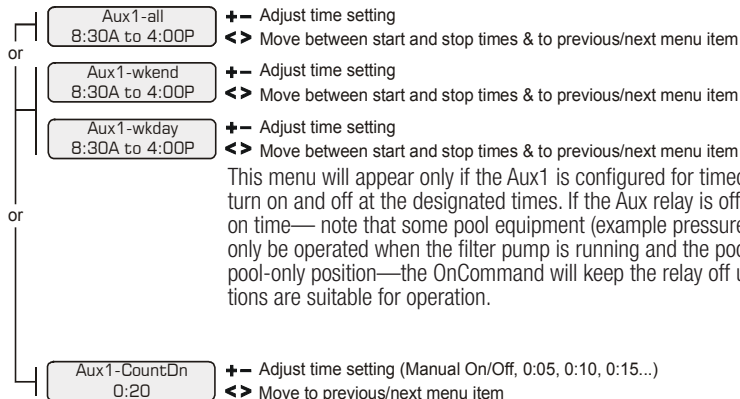| Lights-CountDn | + − Adjust time setting (Manual On/Off, 0:05, 0:10, 0:015...) |
| 0:20 | < > Move to previous/next menu item |

This menu will appear only if the Lights are configured for countdown timer. This set-
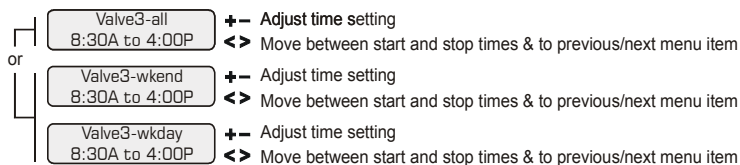
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ting is the time after you manually turn on the lights until the OnCommand automatically turns off the lights. You can also manually turn off the lights at an earlier time by pressing the LIGHTS button. If the Lights relay is on during the programmed off time, it may be because of freeze protection.
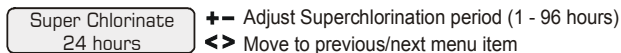
Aux1 and Aux2 configurations are identical.

or

| Aux1-all |
| 8:30A to 4:00P |

+− Adjust time setting
< > Move between start and stop times & to previous/next menu item

| Aux1-wkend |
| 8:30A to 4:00P |

+− Adjust time setting
< > Move between start and stop times & to previous/next menu item

or

| Aux1-wkday |
| 8:30A to 4:00P |

+− Adjust time setting
< > Move between start and stop times & to previous/next menu item

This menu will appear only if the Aux1 is configured for timeclock. The Aux output will turn on and off at the designated times. If the Aux relay is off during the programmed on time— note that some pool equipment (example pressure side pool cleaner) can only be operated when the filter pump is running and the pool/spa valves are in the pool-only position—the OnCommand will keep the relay off until these other conditions are suitable for operation.

| Aux1-CountDn |
| 0:20 |

+− Adjust time setting (Manual On/Off, 0:05, 0:10, 0:15...)
< > Move to previous/next menu item

If the Aux relay is on during the programmed off time, it may be because of freeze protection. Also, manual operation overrides the timeclock.

This menu will appear only if the Aux1 is configured for countdown timer. This setting is the time after you manually turn on the Aux relay until the OnCommand automatically turns off the relay. You can also manually turn off the relay at an earlier time by pressing the AUX1 button.

or

| Valve3-all |
| 8:30A to 4:00P |

+− Adjust time setting
< > Move between start and stop times & to previous/next menu item

| Valve3-wkend |
| 8:30A to 4:00P |

+− Adjust time setting
< > Move between start and stop times & to previous/next menu item

| Valve3-wkday |
| 8:30A to 4:00P |

+− Adjust time setting
< > Move between start and stop times & to previous/next menu item

This menu will appear only if Valve3 is configured for timeclock. The valve will rotate on and off at the designated times. There is no manual override. If the Valve3 relay is on during the programmed off time, it may be because of freeze protection.

| Super Chlorinate |
| 24 hours |

+− Adjust Superchlorination period (1 - 96 hours)
< > Move to previous/next menu item

If external chlorination is enabled. For larger pools or when you have an unusually high bather load, a large amount of rain, a cloudy water condition, or any other condition that requires a large amount of chlorine to be introduced to the pool, adjust the Superchlorination period to provide adequate chlorination. Smaller pools require less hours of Superchlorination.

14

HAYWARD®

Group Function

The OnCommand offers the ability to assign one Group function to a particular button. Instead of the button controlling one particular function, the button can be programmed to initiate a sequence of commands that are programmed in the Configuration Menu. For example, instead of the Lights button turning on and off the pool light only, the button can be programmed to turn on the pool light, turn on the bug light, turn off the pool cleaner, and turn on the music all at the same time. This convenient feature can be assigned to either one of the Aux buttons, the Lights button or the Valve 3 automated function.

Before assigning and configuring all the desired functions and their control parameters within the group, the group itself must be configured. The options for controlling groups are Manual On/Off, Countdown Timer, and Timeclock. The group will turn on and off based on this selection.

When setting up a Group function in the Configuration Menu, the first menu allows you to select the control parameter (how the group is activated and de-activated) and the second menu allows you to select which functions are to be controlled in the group.

A table of functions and their corresponding control parameters are listed below.

Function	Control Parameter
Pool/Spa	Unaffected, Pool only, Spa only, or Spillover
Pool Filter	Unaffected, Off, On, High speed, or Low speed
Lights (standard relay)	Unaffected, Off, or On
Lights (dimmer relay)	Unaffected, Off, On, 100%, 80%, 60%, 40%, or 20%
Aux1&2 (standard relay)	Unaffected, Off, or On
Aux1&2 (dimmer relay)	Unaffected, Off, On, 100%, 80%, 60%, 40%, or 20%
Valve3	Unaffected, Off, or On
Spa Htr Set	Unaffected, Off, 65º-104ºF
Pool Htr Set	Unaffected, Off, 65º-104ºF
Spa Solar Set	Unaffected, Off, 65º-104ºF
Pool Solar Set	Unaffected, Off, 65º-104ºF
SuperChlr	Unaffected, Off, On
Spa High	Unaffected, 20% to Highest speed
Spa Low	Unaffected, Lowest speed to 50%
Pool High	Unaffected, 20% to Highest speed
Pool Low	Unaffected, Lowest speed to 50%

Note that all functions in the table may not be offered. The available functions are dependent on how the OnCommand is configured. Also, under some circumstances, functions will be displayed but can't be changed. Note that the function whose menu you are in, will not be displayed as an option and will automatically turn on when the group is activated. For example, if programming a Group function under the Lights menu, the Lights function will not be offered as an option and the Lights function will automatically turn on with the group.

The available control parameters vary with each function. All functions offer "Unaffected", which

15

should be selected if you do not wish to control that particular function within the group. All other parameters will depend on the particular function selected.

Heater Setpoints in Groups
The OnCommand can be programmed to use alternate heater setpoints (conventional and/or solar) while running a group command. This allows the heater to be set to a higher or lower temperature than normal, while the group is activated. When the group stops, the setpoint will return to its normal setting.

Changing the setpoint while the group is running will make the group release the alternate setpoint control and revert back to the normal heater setting. Any changes that are made at that point will affect the normal heater setting. The next time the group is activated, the temperature will return to the group setpoint that was originally programmed in the Configuration Menu. To change the setpoint while the group is running, go to the Settings menu and press the +/- button while "Group Control" is displayed. The setpoint will change and be retained as the new normal heater setpoint.

Super Chlorinate (requires external chlorinator)
If a Hayward Swimpure or Aqua Rite chlorinator is used, the OnCommand can be programmed to Super Chlorinate the pool or spa while running a group command. When the group starts, the Super Chlorinate cycle will begin. Super Chlorinate will continue until the preset time expires (see Timers Menu/Super Chlorinate Hours) or until the group turns off. Changing the Super Chlorinate state using the Settings Menu, the Aqua Pod Super Chlorinate button, or a Super Chlorinate assigned Aux/Lights/Valve button will temporarily cancel the group's control of Super Chlorinate until the next time the group is activated.

Variable Speed in Groups
The OnCommand can be programmed to use alternate pump speeds while running a group command. This allows the pump(s) to be set to a higher or lower speed than normal, while the group is activated. When the group stops, the speed will return to its normal setting.

Changing the speed setting while the group is running will make the group release the alternate speed setting and revert back to the normal speed setting. Any changes that are made at that point will affect the normal speed setting. The next time the group is activated, the speed will return to the group speed setting that was originally programmed in the Configuration Menu. To change the speed setting while the group is running, go to the Settings menu and press the +/- button while "Group Control" is displayed. The speed setting will change to the normal speed setting.

Configuration Menu Items
Each item needs to be programmed and may contain additional sub-menu items. Refer to the following pages for information on programming.

Chlor. Config. + to view/change	**+** Push to access Chlorinator option **< >** Move to next configuration menu
Ext. Chlorinator Enabled	**+ −** Toggle between External Chlorinator Enabled and Disabled (default) **< >** Move to next menu item
Display Salt	**+ −** Toggle between Display Salt (default) and Minerals **< >** Move to previous/next configuration menu

16

Chlorinator

If the optional external chlorinator is enabled (requires the use of a Aqua Rite or Swimpure chlorinator), the OnCommand will automatically chlorinate both the pool and spa according to the desired output setting (see Settings Menu in the Operation manual). If disabled (default), all displays relating to the chlorinator will be suppressed.

When the chlorinator is enabled, the OnCommand will automatically detect and control any Aqua Rite/Swimpure(s) that is installed in the system.

Display

Allows for the display of salt (default) or mineral values.

Pool/Spa Config. + to view/change	**+** Push to access Pool/Spa options **<>** Move to previous/next configuration menu
Pool/Spa Setup Pool and Spa	**+−** Rotates between Pool Only (default), Spa Only and Pool and Spa **<>** Move to next menu item

if "Pool and Spa" is selected

Spa - CountDn 00:30	**+−** Adjust time setting (Manual On/Off, 0:05, 0:10, 0:15..., (default is 4:00)) **<>** Move to next menu item

if "Pool and Spa" is selected

Spa Spillover Enabled	**+−** Toggle between Enabled and Disabled (default) Spa Spillover **<>** Move to next menu item or previous/next configuration menu

if "Pool and Spa" is selected and
if "Spa Spillover" is enabled

Filter Operation Spa Spillover	**+−** Toggle between Pool Only (default) and Spa Spillover options **<>** Move to previous/next configuration menu

if "Pool Only" or "Spa Only" is selected

V1=Aux1, V2=Aux2 Disabled	**+−** Toggle between Enabled and Disabled (default) **<>** Move to previous/next configuration menu

if "Pool and Spa" is selected

Filter Off Valve Change: Enabled	**+−** Toggle between Enabled (default) and Disabled **<>** Move to previous/next configuration menu

Pool/Spa Setup

If "Pool Only" or "Spa Only" are selected, then the pool/spa valves are not needed and pushing the POOL/SPA button on the display/keypad will have no effect. If "Pool and Spa" is selected, then the pool/spa suction and return valve actuators should be connected to the OnCommand. Pressing the POOL/SPA button on the display/keypad will allow the homeowner to alternate between pool and spa operation.

Spa CountDn

This menu will appear only if Pool/Spa Setup is set to "Pool and Spa". This setting is the time, after you manually switch the Pool/Spa valves to "Spa Only", until the OnCommand automatically returns the valves to their previous positions. It is programmed in increments of 5 minutes, from "Manual On/Off" (0 minutes) to "21:00" (21 hours). The filter is forced on during this time period.

Spa Spillover

When spa spillover is "Enabled" and the Pool/Spa Setup is set to "Pool and Spa", the homeowner will be able to rotate through "Pool Only" (both suction and return valves switched to pool), "Spa Only" (both suction and return valves switched to spa) and "Spillover" (suction valve switched to pool and return valve switched to spa) by successive presses of the "Pool/Spa" button.

17

Filter Operation

If "Spa Spillover" is selected, the OnCommand will automatically switch the pool/spa suction and return valves to "spillover" at the start of the programmed pool filtering time period or when the super-chlorinate function is turned on. The valves will remain in this position for the remainder of the super-chlorinate period. This option is usually preferable because both the pool and spa water will be filtered and sanitized.

If "Pool Only" is selected, then the OnCommand will switch the pool/spa valves to the "pool only" position at the start of the programmed pool filtering time period or when the super-chlorinate function is turned on. This may be desirable on some systems with in-floor cleaners because it allows the cleaner to operate the entire time the pool is being filtered and/or the super chlorinate is running.

V1=Aux1, V2=Aux2

This menu appears only if the Pool/Spa Setup is "Pool Only" or "Spa Only". When enabled, Valve 1 (return) will follow the Aux1 output and Valve 2 (suction) will follow the Aux2 output. When disabled (default), the return and suction pool/spa valves function normally.

Filter Off Valve Change

This menu appears only if Pool/Spa setup is set to "Pool and Spa - Std". When enabled (default), the filter pump will shut off for 35 seconds whenever the Pool/Spa valves are turning. The pump will NOT shut off when a heater is in Heater Cooldown mode.

Filter Config. + to view/change	**+** Push to access pump options **< >** Move to previous/next configuration menu
Filter Pump 1 Speed	**+ −** Rotates between 1-speed (default), 2-speed and variable speed options **< >** Move to next menu item

if "Variable Speed" is selected

Lowest Speed 10%	**+ −** Adjust the lowest speed desired for variable speed operation **< >** Move to next menu item

if "Variable Speed" is selected

Highest Speed 100%	**+ −** Adjust the highest speed desired for variable speed operation **< >** Move to next menu item

Freeze Protect Enabled	**+ −** Toggle between Enabled (default) and Disabled Freeze Protection **< >** Move to next menu item or previous/next configuration menu

if "Freeze Protect" is enabled
and "1-speed Filter" is not selected

Freeze Protect High Speed	**+ −** Toggle between high speed (default) and low speed **< >** Move to next menu item

if "Freeze Protect" is enabled

Freeze Temp 38ºF	**+ −** Adjust the desired freeze protection temperature (33ºF - 42ºF) **< >** Move to previous/next configuration menu

Filter Pump

For 2-speed pumps: When a 2-speed pump is configured, one of the AUX relays must also be configured to control the low speed motor winding on the pump. Refer to the appropriate sections in the Installation manual for specific information regarding the control logic for 2-speed and variable speed pump operation.

For the Hayward Tristar variable speed pump: The Filter relay is used to supply input power to the VSC pump control. The relay will be on when the filter pump output is on. When the filter pump output is off, the relay will be off. On, off and speed are controlled by commands sent to the pump.

18

Lowest Speed
This is the lowest speed that the variable speed pump is allowed to run at. It is used as the lower limit in the Low Speed Settings Menu. Set lowest speed from 10% (default) to 50%.

Highest Speed
This is the highest speed that the variable speed pump is allowed to run at. It is used as the upper limit in the High Speed Settings Menu. Also, this is the speed that the pump will run at during the first 3 minutes of operation anytime the pump has been off for more than 30 seconds. Set highest speed from 20% to 100% (default).

Freeze Protection
Freeze protection is used to protect the pool and plumbed equipment against freeze damage. If freeze protection is enabled and the AIR temperature falls below the freeze threshold (see below), the OnCommand will turn on the filter pump to circulate the water. If "Pool and Spa" is selected in the Pool/Spa sub-menu, the valves will also alternate between the pool and spa every 30 minutes and the filter pump will turn off while the valves are turning. The chlorinator will not operate if freeze protection is the only reason the pump is running.

Freeze Protection Speed
This menu only appears if freeze protection is enabled and the pump is configured for 2-speed or variable speed pump operation. This is the speed that the pump will run at during freeze protection operation. Select high (default) or low speed operation.

Freeze Protection Temperature
Select the temperature to be used for freeze protection. Temperature is adjustable from 33ºF - 42ºF (1ºC - 6ºC). 38ºF (3ºC) is default. This threshold will be used for all outputs that have freeze protection enabled.

Heater Config. + to view/change	**+** Push to access heater options **< >** Move to previous/next configuration menu
Heater Disable	**+ −** Toggle between Enabled and Disabled (default) Heater **< >** Move to next menu item or previous/next configuration menu
if "Heater1" is enabled Heater Cooldown Disabled	**+ −** Toggle between Enabled and Disabled (default) Heater Cooldown **< >** Move to next menu item
if "Heater1" is enabled Heater Extend Disabled	**+ −** Toggle between Enabled and Disabled (default) Heater Extend **< >** Move to previous/next configuration menu
if "Heater1" is enabled and *1-speed filter pump is not selected* Allow Low Speed Disabled	**+ −** Toggle between Enabled and Disabled (default) **< >** Move to next menu item or previous/next configuration menu

Heater
If the heater is "Enabled", the heater relay will turn on when the water temperature is less than the desired temperature setting and the filter pump is running. The desired temperature is in the "Settings Menu". If applicable, the homeowner will be prompted to enter separate "pool" and "spa" settings. Depending on the position of the pool/spa suction valve, the proper temperature setting will be used.

Heater Cooldown
This feature ensures that the heater cools down before water circulation is stopped. When enabled, the OnCommand will continue to run the filter pump for 5 minutes

19

after the heater turns off. During this period the filter pump LED will flash and also a "Heater Cooldown, X:XX remaining" message will scroll on the display. When the filter pump is running and the heater is on: Pressing the "Filter" button once will cause the heater to turn off, but the filter pump will continue to run for heater cooldown (filter LED flashing and message on display). Pushing the filter button a second time will override the heater cooldown operation and turn the filter pump off.

Heater Extend
If "Enabled", the filter extend logic keeps the filter pump running beyond the normal turn-off time until the pool (or spa) is heated up to the desired temperature setting (see Settings Menu).   Heater extend will NOT cause the filter pump to turn on, it will only delay the turn off time when the heater is operating.

Allow Low Speed
This menu only appears if the filter is configured for 2-speed or variable speed operation. During default operation, high speed mode is used whenever the heater is on. If Allow Low Speed is enabled, low speed will be allowed even if the heater is on.

| Solar Config.
+ to view/change | **+** Push to access solar options
< > Move to previous/next configuration menu |

| Solar
Disabled | **+ −** Toggle between Enabled and Disabled (default) Solar
< > Move to next menu item or previous/next configuration menu |

if "Solar" is enabled

| Solar-Extend
Disabled | **+ −** Toggle between Enabled and Disabled (default) Solar Extend
< > Move to next menu item |

if "Solar" is enabled

| Solar Priority
Disabled | **+ −** Toggle between Enabled and Disabled (default) Solar Priority
< > Move to next menu item |

if "Solar" is enabled and
"1-speed Filter" is not selected

| Allow Low Speed
Disabled | **+ −** Toggle between Enabled and Disabled (default)
< > Move to next menu item or previous/next configuration menu |

Solar
If the solar control logic is "Enabled", several additional steps must be taken to ensure proper operation of the solar system. If the solar is operated by a valve, then the Valve3 output must be set up for solar logic. If the solar is operated by a pump, then one of the AUX relays must be set up for solar logic. Also, the "solar" temperature sensor must be installed. This sensor is typically mounted near the collector array and is used to sense whether sufficient solar heat is available.

If solar is "Enabled", the valve or solar pump relay will turn on when the water temperature is less than the desired temperature setting AND the solar temperature is 8º hotter than the water. The desired temperature is in the "Settings Menu". If applicable, the homeowner will be prompted to enter separate pool and spa desired temperature settings. Depending on the position of the pool/spa suction valve, the proper temperature setting will be used.

Solar Extend
If "Enabled", the filter extend logic keeps the filter pump running beyond the normal turn-off time if solar heat is still available. When solar heat is no longer available, both the solar valve/pump and filter pump will turn off simultaneously. Solar extend will NOT cause the filter pump to turn on, it will only delay the turn off time when solar is operating.

20

Solar Priority
If both "Solar Control" and "Heater Control" are enabled, the Solar Priority feature will keep the conventional heater off whenever solar heat is available. This provides the most cost effective way of heating the pool. When solar heat is not available, the conventional heater will operate normally.

Allow Low Speed
This menu only appears if the pool filter is configured for 2-speed or variable speed operation. During default operation, high speed mode is used whenever the solar heater is on. If Allow Low Speed is enabled, low speed pump operation will be allowed during solar heating except for the first 3 minutes after solar heat turns on.

Lights Config. + to view/change	**+** **< >**	Push to access Lights options Move to previous/next configuration menu
Lights Function Manual On/Off	**+ −** **< >**	Rotates between Manual On/Off (default), Countdown Timer, Low Speed- Filter, Timeclock, Solar, and Super Chlorinate Move to next menu item

for manual on/off, countdown timer and timeclock functions

Lights Relay Standard	**+ −** **< >**	Toggle between Standard (default) and Dimmer Move to next menu item or previous/next configuration menu

for all functions except dimmer relay, solar super chlorinate, low speed, and group

Lights Interlock Disable	**+ −** **< >**	Toggle between Enabled and Disabled (default) Lights Interlock Move to next menu item

for group function only

Lights Group Timer: None(Manual)	**+ −** **< >**	Rotates between Manual On/Off (default),Countdown Timer and Timeclock Move to next menu item

for group function only

Lights Group Filter: Unaffected	**+ −** **< >**	Options available depend on the function that is selected Move to previous/next menu item or next configuration menu

for all functions except dimmer relay, super chlorinate, low speed, and group

Lights Freeze Disable	**+ −** **< >**	Toggle between Enabled and Disabled (default) Lights Freeze Move to next menu item or previous/next configuration menu

only if filter pump is set to variable and relay type is set to standard

Lights Pump Spd Settings Menu	**+ −** **< >**	Select between Settings Menu (default) and the desired pump speed Move to previous/next configuration menu

Lights Function
Although designated as the "Lights" output, the function of the lights relay is similar to the aux1 and aux2 relays. If pool lights are wired to the lights relay, some options including Solar function, Low Speed of a 2-Speed Filter Pump, Lights Interlock and Lights Freeze Protection will not be necessary and should be disabled. If no pool lights are used, the lights relay can be used to control other pool devices that may require these options. The function of each option is shown below.

Manual On/Off (default)—the lights relay will alternate between turning on and off when the LIGHTS button is pressed. There is no automatic control logic.

Countdown Timer—the lights relay will turn on when the LIGHTS button is pressed. The lights relay will turn off automatically after a programmed time (see Timers Menu in Operation Manual). The LIGHTS button can also be used to turn the output off.

Low Speed of a 2-speed Filter Pump – the OnCommand will turn on the lights relay whenever the low speed operation of the filter pump is required. It is very important that the "2-speed" filter pump option be selected under the "Filter Config." Menu for proper operation.

Timeclock – the lights relay will turn-on and turn-off at the times set for the lights timeclock in the Timers Menu (see Timers Menu in Operation Manual). The LIGHTS button can also be used to turn the output on and off.

Solar – the lights relay can operate a solar booster pump which will turn on when the filter pump is running and solar heat is available and the water is less than the desired temperature setting. It is important to note that "Solar Control" must be enabled in the "Solar Config." menu for proper operation to occur.

Group – the lights relay operates when the Group function is initiated and shuts off when the Group function is terminated. See Lights Group section for operation information for the Group function.

Super Chlorinate – if "Chlorinator" is enabled, this option allows the user to start a Super Chlorinate cycle when the Lights button is pressed, rather than using the Settings Menu. Note that only one button can be assigned to this function.

Lights Relay
This feature allows the user to select either "Standard" (default) or "Dimmer" type relay for the Lights output. The optional AQL-DIM dimmer kit must be installed if "Dimmer" is desired. When "Dimmer" is selected, and the Lights output is manually turned on, the "+" and "-" buttons adjust the level from 20% to 100% (default). The level is saved for the next time the lights are turned from off to on.

Lights Interlock
If enabled, this feature will override the function (Manual On/Off, Countdown Timer, Timeclock) selected above and turn the lights relay off when: filter pump is off, first 3 minutes of filter pump operation (allows the pump to prime and get water flowing), when the pool/spa suction return valves are in any position other than "pool only", or for the first 3 minutes after solar turns on (allows air in the solar panels to be purged). Interlock is not available for solar, low speed filter pump, super chlorinate, dimmer or group.

Lights Group
The Lights Group function allows the user to perform multiple tasks with a single push of the "Lights" button. When setting up a Group function, refer to page 12 for specific programming information. There are two Group menus; the first menu determines how the group command will be initiated (Manual On/Off, Countdown Timer, or Timeclock) and the second menu selects the desired functions and their respective control parameters.

Lights Freeze Protection
This function helps protect equipment that is wired to the lights relay against freeze damage. If Freeze Protection is enabled and the AIR temperature falls below the selected freeze temperature threshold, the OnCommand will energize the lights relay. IMPORTANT: this only enables operation of the lights relay during freeze--see the "Filter Pump Config." menu to enable freeze protection for the main circulation system.

Lights Pump Speed

This is the speed of the pump when the Lights output is on. The choices are the Settings Menu speed and a speed that is unique to the Lights output only. The default selection is "Settings Menu". This is the speed of the pump that has been selected in the Settings Menu for normal filter operation. If an alternate speed is desired when the Lights output is on, push "+" or "-" and select from "Lowest" to "Highest" in 5% increments.

NOTE: The configuration parameters for the Aux2 output are the same as shown below for Aux1.

Aux1 Config. + to view/change	**+** Push to access Aux options **< >** Move to previous/next configuration menu
Aux1 Function Manual On/Off	**+ −** Rotates between Manual On/Off (default), Countdown Timer, Low Speed- Filter, Timeclock, Solar, and Super Chlorinate **< >** Move to next menu item

for manual on/off, countdown timer and timeclock functions

Aux1 Relay Standard	**+ −** Toggle between Standard (default) and Dimmer **< >** Move to next menu item or previous/next configuration menu

for all functions except dimmer relay, solar super chlorinate, and low speed

Aux1 Interlock Disable	**+ −** Toggle between Enabled and Disabled (default) Aux1 Interlock **< >** Move to next menu item

for group function only

Aux1 Group Timer: None(Manual)	**+ −** Rotates between Manual On/Off (default),Countdown Timer and Timeclock **< >** Move to next menu item

for group function only

Aux1 Group Filter: Unaffected	**+ −** Options available depend on the function that is selected **< >** Move to previous/next menu item or next configuration menu

for all functions except dimmer relay, super chlorinate, and low speed

Aux1 Freeze Disable	**+ −** Toggle between Enabled (default) and Disabled Aux1 Freeze **< >** Move to previous/next configuration menu

only if filter pump is set to variable and relay type is set to standard

Aux1 Pump Spd Settings Menu	**+ −** Select between Settings Menu (default) and the desired pump speed **< >** Move to previous/next configuration menu

WARNING: Do not use the OnCommand to control an automatic pool cover. Swimmers may become entrapped underneath the cover.

Aux1 Function

Manual On/Off (default)—the aux relay will alternate between turning on and off when the aux button is pressed. There is no automatic control logic.

Countdown Timer – the aux relay will turn on when the AUX button is pressed and then will turn off automatically after a programmed time (see Timers Menu, Operation Manual). The AUX button can also be used to turn the output off.

Low Speed of a 2-speed Filter Pump – the OnCommand will operate the aux relay whenever the low speed operation of the filter pump is required. It is very important that the "2-speed" filter pump option be selected under the "Filter Config." Menu for proper operation.

Timeclock – the aux relay will turn-on and turn-off at the times set for the aux1 timeclock in the Timers Menu. The AUX button can also be used to turn the output on and off.

Solar – the aux relay operates a solar booster pump which will turn on when the filter pump is running and solar heat is available and the water is less than the desired temperature setting. It is important to note that "Solar Control" must be enabled in the "Solar Config." menu for proper operation to occur.

Group – the aux relay operates when the Group function is initiated and shuts off when the Group function is terminated. See Aux1 Group section for operation information for the Group function.

Super Chlorinate – if "Chlorinator" is enabled, this option allows the user to start a Super Chlorinate cycle when the Aux button is pressed, rather than using the Settings Menu. Note that only one button can be assigned to this function.

Aux1 Relay
This feature allows the user to select either "Standard" (default) or "Dimmer" type relay for the Aux1 output. The optional AQL-DIM dimmer kit must be installed if "Dimmer" is desired. When "Dimmer" is selected, and the Aux1 output is manually turned on, the "+" and "-" buttons adjust the level from 20% to 100% (default). The level is saved for the next time the aux1 output is turned from off to on.

Aux1 Interlock
If "Enabled", this feature will override the function (Manual On/Off, Countdown Timer, Timeclock), selected above and turn the aux1 off when: filter pump is off, first 3 minutes of filter pump operation (allows the pump to prime and get water flowing), when the pool/spa suction return valves are in any position other than "pool only", or for the first 3 minutes after solar turns on (allows air in the solar panels to be purged). Interlock is not available for solar, low speed filter pump, super chlorinate, dimmer or group.

Aux1 Group
The Aux1 Group function allows the user to perform multiple tasks with a single push of the "Aux1" button. When setting up a Group function, refer to page 12 for specific programming information. There are two Group menus; the first menu determines how the group command will be initiated (Manual On/Off, Countdown Timer, or Timeclock) and the second menu selects the desired functions and their respective control parameters.

Aux1 Freeze Protection
This function protects the pool, plumbing, and equipment against freeze damage. If Freeze Protection is enabled and the AIR temperature falls below the selected freeze temperature threshold, the OnCommand will turn on the aux relay to circulate the water. IMPORTANT: this only enables operation of the AUX output during freeze--see the "Filter Pump Config." menu to enable freeze protection for the main circulation system.

Aux1 Pump Speed
This is the speed of the pump when the Aux1 output is on. The choices are the Settings Menu speed and a speed that is unique to the Aux1 output only. The default selection is "Settings Menu". This is the speed of the pump that has been selected in the Settings Menu for normal filter operation. If an alternate speed is desired when the Aux1 output is on, push "+" or "-" and select from "Lowest" to "Highest" in 5% increments.

24

Valve3 Config.
+ to view/change

+ Push to access Valve3 options
< > Move to previous/next configuration menu

Valve3 Function
Solar

+ – Rotates between Timeclock (default), Solar, In-floor Cleaner,
Filter, Lights, Aux1 and Aux2
< > Move to next menu item

for all functions except solar and super chlorinate

Valve3 Interlock
Disabled

+ – Toggle between Enabled and Disabled (default) Valve3 Interlock
< > Move to next menu item

for all functions except super chlorinate

Valve3 Freeze
Disabled

+ – Toggle between Enabled and Disabled (default) Valve3 Freeze
< > Move to previous/next configuration menu

*only if filter pump is set to variable
and relay type is set to standard*

Valve3 Pump Spd
Settings Menu

+ – Select between Settings Menu (default) and the desired pump speed
< > Move to previous/next configuration menu

Valve3 Function
Timeclock (default) – the valve turns on/off at the times set for the valve3 timeclock in the Timers Menu (see Operations Manual).

Solar – the valve operates when the filter pump is running and solar heat is available and the water is less than the desired temperature setting. Solar heating must be enabled in the "Solar Config. menu for proper operation to occur.

In-Floor Cleaner – the valve switches the water returning to the pool between the in-floor cleaner and the normal return jets which facilitate efficient surface skimming. The valve will operate the in-floor cleaner for the first half of each clock hour and then switch to the jets/skimming for the last half of the hour.

Group – the valve operates when the Group function is initiated and shuts off when the Group function is terminated. See Valve3 Group section for operation information for the Group function.

Valve3=Filter – the valve operates whenever the Filter relay is on.

Valve3=Lights – the valve operates whenever the Lights relay is on.

Valve3=Aux1 – the valve operates whenever the Aux1 relay is on.

Valve3=Aux2 – the valve operates whenever the Aux2 relay is on.

Valve3 Interlock
If "Enabled", this feature will override the function (timeclock or in-floor cleaner) selected above and turn the valve off when: the filter pump is off, first 3 minutes of filter pump operation (allows the pump to prime and get water flowing), or for the first 3 minutes after solar turns on (allows air in the solar panels to be purged). Interlock is not available for solar or super chlorinate.

Valve3 Group
The valve3 Group function allows the user to perform multiple tasks when the automated valve3 function is initiated. When setting up a Group function, refer to page 12 for specific programming information. There are two Group menus; the first menu determines how the group command will be initiated (Manual On/Off, Countdown Timer, or Timeclock) and the second menu selects the desired functions and their respective control parameters.

25

Valve3 Freeze Protection

This function protects the pool and plumbed equipment against freeze damage. If Freeze Protection is enabled and the AIR temperature falls below the selected freeze temperature threshold, the OnCommand will turn on the valve to allow circulation of the water. IMPORTANT: this only enables operation of the valve3 output during freeze protection. See the "Filter Pump Config." menu to enable freeze protection for the main circulation system.

Valve3 Pump Speed

This is the speed of the pump when the Valve3 output is on. The choices are the Settings Menu speed and a speed that is unique to the Valve3 output only. The default selection is "Settings Menu". This is the speed of the pump that has been selected in the Settings Menu for normal filter operation. If an alternate speed is desired when the Valve3 output is on, push "+" or "-" and select from "Lowest" to "Highest" in 5% increments.

Remote Menus Enabled

+ — Toggle between Enabled (default) and Disabled Remote Menus
< > Move to previous/next configuration menu

This feature will prevent unauthorized access to the Settings, Timers, and Configuration menus from any of the OnCommand's remote display/keypads. When disabled, the remote display/keypads will only show the default menu and allow on/off control via the pushbuttons. Note that the function of the OnCommand's built-in display/keypad is unchanged by this selection. Once disabled, the only way to enable "Remote Menus" is to use the local display/keypad.

All Timeclocks 7-day

+ — Toggle between 7-day (default) and Weekend/Weekday time options
< > Move to previous/next configuration menu

This selection affects ALL of the timeclock logic in the OnCommand. If "7-day" is selected, each timeclock will have one set of turn-on/turn-off settings that operate every day of the week. If "Weekend/Weekdays" option is selected then the user can enter one set of turn-on/turn-off times for the weekend (fixed as Saturday/Sunday) and another set of turn-on/turn-off times for weekdays (Monday through Friday).

Time Format 12 hour AM/PM

+ — Toggle between 12 hour AM/PM (default) and 24 hour time format options
< > Move to previous/next configuration menu

Units ºF and PPM

+ — Toggle between ºF and PPM (default) and ºC and g/L (Metric) options
< > Move to previous/next configuration menu

Reset Config. to Default   Press +

+ Initiate reset of all configuration parameters
< > Move to previous/next configuration menu (config. not reset)

Are you sure? + to proceed

+ Reset all configuration parameters
< > Move to previous/next menu (config. not reset)

Config. reset Confirmed

< > Move to previous/next configuration menu

Use this function to erase all previous system configuration and reset all configuration parameters back to the factory default values. This function is NOT reversible--be careful.

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Quick "How To" Guide

Operate the Spa—Manually
1. Press the "Pool/Spa" button to go to "spa-only" operation (right LED illuminated). In some cases, this may take more than one press of the button.
2. If the filter pump is not already on, press the "FILTER" button to turn it on.
3. If the spa is below the desired temperature, the heater will turn on automatically when the filter pump is on and the valves are in the spa-only position. If you have not already set the desired temperature for the spa, see "Set Heater Temperature" below.
4. If the spa has a separate jet pump and/or blower, determine if the jet pump/blower is controlled by Aux1 or Aux2 (it should be marked on the label inside the door). Then press the appropriate button to turn on the jets/blower.

Operate the Spa—Automatically
1. Press the "MENU" button repeatedly until "Timers Menu" is displayed.
2. Press the ">" button repeatedly until the "Spa—all" or "Spa—wkend" is displayed.
3. Use the "+" and "-" buttons to set the desired start time, then press ">" to switch to the off time. Use the "+" and "-" buttons to adjust the off time. If you are setting the "weekend" timeclock, press ">" to go to the "weekday" settings.

Note: During the programmed spa time, the valves will automatically switch to the "spa-only" position, the filter pump will turn on, and, if the spa is not up to the desired temperature, the heater will start. This operation is the highest priority and will take precedence over other automatically programmed operations. At the end of the spa period, the OnCommand will return to its normally programmed operation state.

Set the Heater Temperature (or turn heater permanently off)
1. Press the "MENU" button repeatedly until "Settings Menu" is displayed.
2. Press the ">" button repeatedly until the "Spa Heater" or "Pool Heater" is displayed.
3. Press the "+" or "-" buttons repeatedly to adjust the temperature. If you adjust the temperature below 65ºF or above 104°F the display will indicate "off" and the heater will not operate regardless of temperature.

Note: Separate temperatures for the pool and spa must be set. If the valves are in the pool-only or spa spillover positions, then the heater will use the pool setting. If the valves are in the spa-only position then the heater will operate according to the spa setting.

Set the Chlorinator Output (for external chlorinator)
1. Press the "MENU" button repeatedly until "Settings Menu" is displayed.
2. Press the ">" button repeatedly until the "Spa Chlorinator" or "Pool Chlorinator" is displayed.
3. Press the "+" or "-" buttons repeatedly to adjust the setting. If you adjust the setting to 0% the chlorinator will be off all the time.

27

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Note: Separate chlorinator output levels for the pool and spa must be set. If the valves are in the pool-only or spa spillover positions, then the chlorinator will operate according the pool setting. If the valves are in the spa-only position then the chlorinator will operate according to the spa setting. The actual amount of chlorine introduced into the pool/spa is determined by: this output setting, the amount of time the filter pump is running, the water temperature, and the amount of salt in the water. Also see Start/Stop Superchlorination below.

Start/Stop Superchlorination (for external chlorinator)
1. Press the "MENU" button repeatedly until "Settings Menu" is displayed.
2. Press the ">" button repeatedly until "Super Chlorinate" is displayed.
3. The display will show whether superchlorination is "on" or "off".
4. Press "+" or "-" to toggle between "on" and "off".

Note: Once started, superchlorination will run for the programmed number of hours (Timers Menu/Super Chlorinate Hours) or until you manually turn it off. Superchlorination may be temporarily interrupted for a programmed spa operation.

Program a Timeclock
1. Press the "MENU" button repeatedly until "Timers Menu" is displayed.
2. Press the ">" button repeatedly until "xxx—all" or "xxx—wkend" (where xxx is the parameter that you want to program) is displayed.
3. Use the "+" and "-" buttons to set the desired start time, then press ">" to switch to the off time. Use the "+" and "-" buttons to adjust the off time. If you are setting the "weekend" timeclock, press ">" to go to the "weekday" settings.

Note: During the programmed time, there may be other automatic or manual operations that prevent the relay/valve from operating—see a more detailed discussion under Automatic System Operation/Timers Menu/Aux Timeclock or in Troubleshooting/Diagnostic Information.

Program a Countdown Timer
1. Press the "MENU" button repeatedly until "Timers Menu" is displayed.
2. Press the ">" button repeatedly until "xxx—Timer" (where xxx is the parameter that you want to program) is displayed.
3. Use the "+" and "-" buttons to set the desired timer period.

Note: A setting of 0:00 will display as "manual on/off". The countdown automatic turn off function is disabled but manual operation is still permitted. There may be other automatic or manual operations that prevent the relay/valve from operating—see a more detailed discussion under Automatic System Operation/Timers Menu/Aux Timeclock or in Troubleshooting/Diagnostic Information.

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Enter/Exit Service (or Service—Timed) Mode
1. Go to OnCommand main unit (normally mounted near the pool equipment).
2. Pressing the "Service" button rotates through normal operation (red LED off), service mode (red LED on continuously) and service-timed mode (red LED flashing).

Note: This operation can only be performed at the main OnCommand unit. Both "Service" and "Service-Timed" disable all automatic programmed operations and allow manual operation from the main unit only. The buttons on the remote display/keypads will still be able to turn equipment off in case of an emergency, but will not turn any equipment on. If the system is in "Serviced-Timed" it will automatically switch back to normal operation at the end of the 3 hour time period.

Troubleshooting and Diagnostic Information

The OnCommand provides 2 different tools to aid in troubleshooting any problems that may occur in your pool and/or spa system. The Service mode will allow you to disable automatic operation and manually control most of the equipment (the heater and general purpose Valve3 output are the exceptions). The Diagnostic Menu will provide some detailed information regarding system operation.

While both of the features are primarily intended for the use of the professional service technician, their function is fully explained below.

Service Mode
The main unit keypad has a SERVICE button that is used primarily during servicing of the pool equipment.

If you want to completely disable the automatic operation and operate the system manually, you can put the system into Service or Service-Timed mode by pressing the "Service" button. Pressing the "SERVICE" button once will switch the system into service mode which means that all automatic functions are disabled, the optional remote display/keypads are disabled (except for manual turn off for emergencies). The outputs can be manually controlled by pressing the buttons on the local display/keypad. The red "SERVICE" LED will be illuminated and the OnCommand will remain in this mode of operation until manually taken out of service mode.

Pressing the "SERVICE" button again will cause the OnCommand to switch to service-timed mode which is very similar to service mode, except that the OnCommand will automatically return to normal operation after 3 hours. During service timed operation, the "SERVICE" LED will flash and the time remaining will be displayed on the remote display/keypad(s).

Pressing the "SERVICE" button again, will return the OnCommand to normal (automatic) operation.

Check System Indicator
The "CHECK SYSTEM" LED will alert you when the OnCommand detects any of the following conditions that are abnormal and require attention for optimal operation of your pool. Press "<" or ">" to view all of the existing "Check System" conditions.

29

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- Water Sensor -- If the water sensor is either an open or short circuit.

- Air sensor -- If the freeze protection feature is enabled (Configuration Menu/ Filter Config.) and the air sensor is either an open or short circuit.

- Solar Sensor -- If the solar sensor is either an open or short circuit.

- External Chlorinator Comm Error -- If the external chlorinator is enabled and the Aqua Rite or Swimpure is not responding.

- Pool Bridge Comm -- If variable speed is selected for the Pool Filter and the VSC interface is not responding.

- Pool VSC Comm -- If variable speed is selected for the Pool Filter and the Hayward VSC is not responding.

- Pool VSC Err: x -- If variable speed is selected for the Pool Filter and the Hayward VSC is indicating and error. x is the same decimal error displayed by the VSC itself.

For helpful troubleshooting information on any of these issues, go to the Diagnostic Menu and then scroll through the various items until you see the cause for the "CHECK SYSTEM" LED being illuminated.

Diagnostic Menu
To enter the Diagnostic Menu, press the "Menu" button repeatedly until the display shows "Diagnostic Menu". At this point, you can use either the "<" or ">" buttons to scroll through the various menu items which are described below:

If external chlorination is used

```
Salt Level
3200PPM
```
+ − No function
< > Move to previous/next menu item

Salt level of the pool is 3200 ppm. This is measured by the Aqua Rite or Swimpure when external chlorination is used.

This display will be shown only if external chlorination is used and requires an Aqua Rite or Swimpure chlorine generator. For the chlorinator to be operating, several other things must be happening: the filter pump must be running, the flow switch must be detecting flow, the chlorinator setting must be set greater than 0%, the water temperature at the cell must be between 50ºF and 140ºF, and the salt level must be within the operating range. If any of these conditions are not met, the chlorinator diagnostic display will tell you the reason. It's possible to have more than one reason, in which case after you rectify what was displayed the first time, a second display will appear.

Possible error messages are:
- PCB Error
- Low Salt/Amps/Minerals
- High Salt/Amps/Minerals
- Test Salt Level (Test Minerals)

Refer to the Aqua Rite or Swimpure manual to correct error.

30

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Water Sensor	✚ ━	No function
Open circuit	‹ ›	Move to previous/next menu item

Air Sensor	✚ ━	No function
94ºF	‹ ›	Move to previous/next menu item

Solar Sensor	✚ ━	No function
Short circuit	‹ ›	Move to previous/next menu item

If the sensor appears to operating properly, then the temperature will be displayed. If this temperature is not correct then check the placement of the sensor. If the problem is not placement related, then the sensor will, most likely, require replacement. If the display is "Open Circuit" or "Short Circuit" then check the wiring to the sensor and make sure that the wires are secure in the terminal block in the OnCommand main unit.

Main Software	✚ ━	No function
Revision 1.00	‹ ›	Move to previous/next menu item

Display Software	✚ ━	No function
Revision 3.12	‹ ›	Move to previous/next menu item

Filter Bridge	✚ ━	No function
Software r1.00	‹ ›	Move to previous/next menu item

Filter VSC	✚ ━	No function
Software r1.00	‹ ›	Move to previous/next menu item

RF Base Software	✚ ━	No function
r1.20 ID:1234	‹ ›	Move to previous/next menu item

Available displays depend on configuration. If you call the Hayward Technical Service Dept. for assistance, they may ask for the software revisions of both the main unit and each of the display/keypads or other devices that are attached to the system. Note that it is possible that different display/keypads have different software revision levels. For this reason, it is advisable to check this diagnostic menu item on every display.
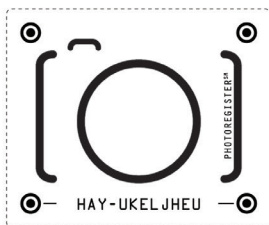
31

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90 DAY EXTENDED WARRANTY*
REGISTER WITH YOUR SMARTPHONE

—— **PROTECT YOUR INVESTMENT IN 2 EASY STEPS** ——

1. TAKE A PHOTO
Take a photo of the camera icon

PHOTOREGISTER™

HAY-UKELJHEU

2. SEND IT IN
Send it in using **one** of the methods below

SMARTPHONE
Text a photo of the camera icon to **71403**

—— OR ——

ONLINE
Visit **Hayward.com/Warranty**

—— OR ——

MESSENGER
Send photo to **photoregister**

*Extended warranty is in addition to applicable product warranty and is for parts only, labor not included.
Need help? Visit photoregister.com/help or text HELP to 71403.

For further information or consumer
technical support, visit our website at
www.hayward.com

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