



HAYWARD®

Technical Updates for Pool Professionals

See below for this month's updates.

And visit our Support Center on Hayward.com for immediate access to Troubleshooting Guides, Quick Reference Guides, Manuals, Parts Diagrams, and Instructional Videos.

<https://www.hayward-pool.com/shop/en/pools/support-center>

Product Info

August/2021

- 1. Gas Heaters: ASME**
Change in color
- 2. Heat Pumps: Square Platform**
A change in the control for all Heat only square heat pumps
- 3. Gas Heaters: HDF400**
No special vent kit required
- 4. Controls: OmniLogic**
Home Automation compatibility
- 5. Heat Pumps: HP50HA2**
Setting control to 104 maximum temperature
- 6. Lights: ColorLogic**
Transformer compatibility
- 7. Controls: OmniLogic**
Firmware 4.1.0 information
- 8. Pumps: XE Line of DOE Compliant VS Pumps**
New pump line info
- 9. Lights: ColorLogic**
Network lights information
- 10. Controls: OmniLogic**
Updating firmware OTA
- 11. Controls: OmniLogic**
Terminal Blocks set up as spare parts

Color Change on ASME Heaters

Due to sheet metal shortages ASME heaters beginning with serial # 21132102106998001 will be the same taupe color as the residential heaters.

This change is forecast to continue through the 2021 season.



Change in control board for Square Platform Heat Pumps

The long anticipated change to the control board for the square platform (heat only) heat pumps has been implemented.

Changes include the following:

1. **No more on/off switch**
2. New method of turning the heat pump on and off
3. New method of switching from pool to spa
4. A new way to connect to controls that mimics the gas heaters
5. New error codes

The new control board will retain the existing part number and is backward compatible.



New faceplate without on/off switch

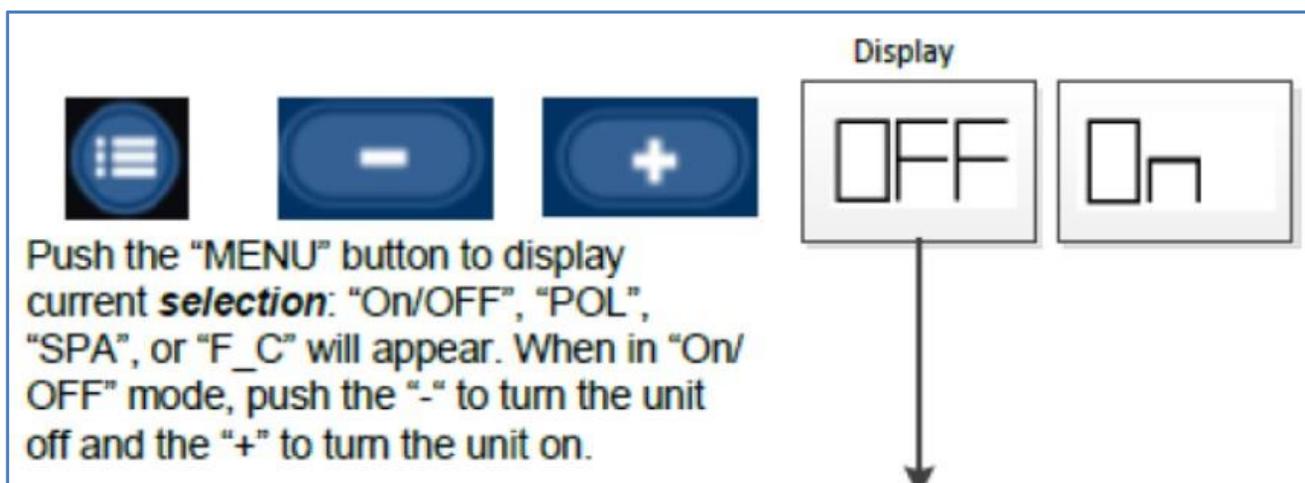
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Turning the heat pump on/off

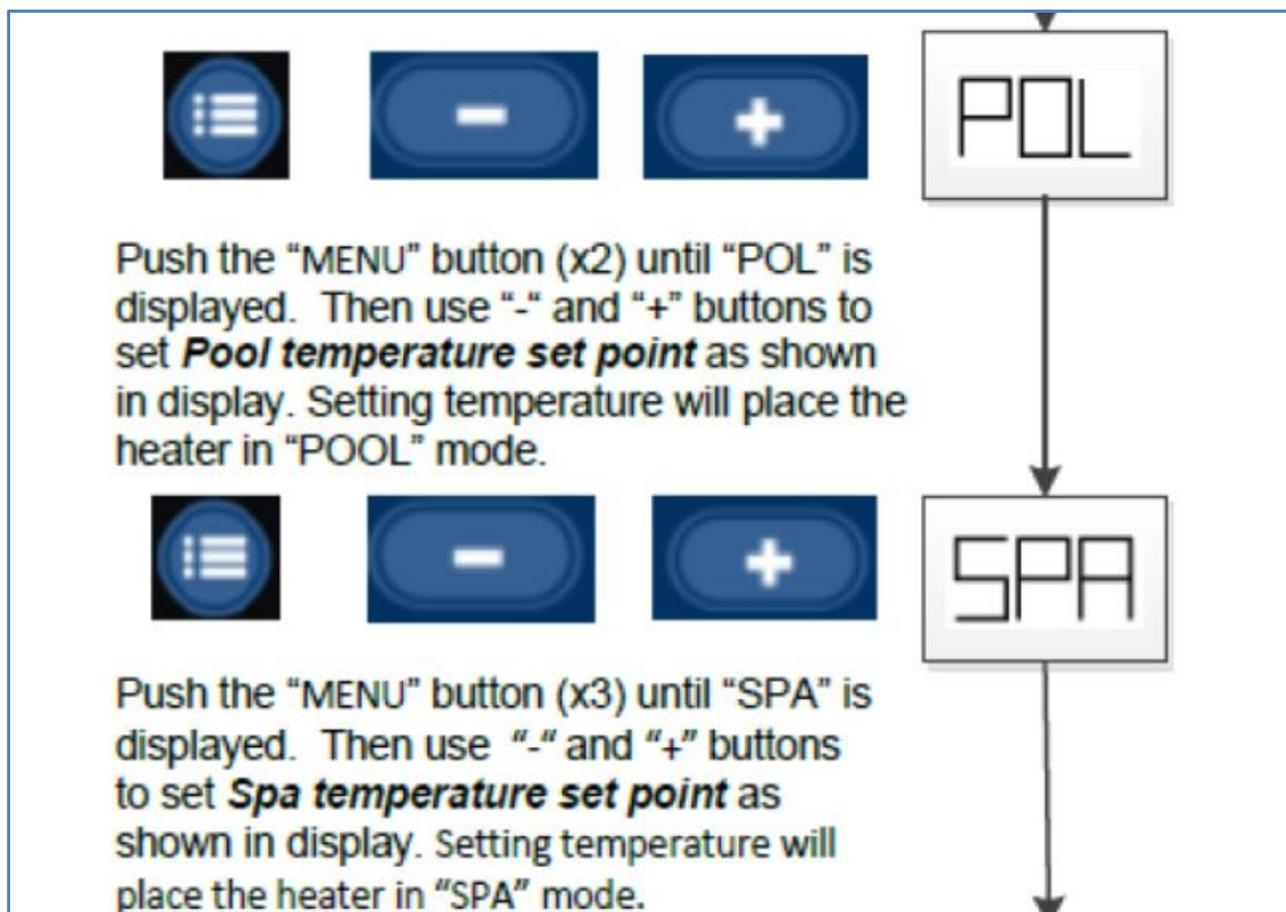
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Switching the heat pump between pool and spa

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REMOTE CONTROL CONNECTION: The heater is equipped for remote control via an independent 2-wire connection. (See Figure 12 for remote on/off connection).

1 Connect the remote relay to the J7 connections on the control board.

2 Press and hold both the "MENU" and the "+" buttons until "bo" appears. This enables the bypass operation.

3 In bypass operation, when the relay is open the heater will be off. When the relay is closed, the heater will be on. The temperature control is done remotely through the remote relay.

4 The heater will shut off when the relay is open or the inlet temperature exceeds 104°F.

Note: In bypass operation "bo" mode, the heater will only respond to the remote relay closure. To return to local setpoint control at the heater, press and hold both the "MENU" and the "+" buttons until "n" appears. This enables the normal operation mode and the heater will respond to the local setpoint.

Note: All remote wiring must be run in a conduit separate from incoming power. Use 22 AWG wire for runs less than 30 feet. Use 20 AWG wire for runs over 30 feet. The maximum allowable run is 200 feet.

Connecting the heat pump to external controls

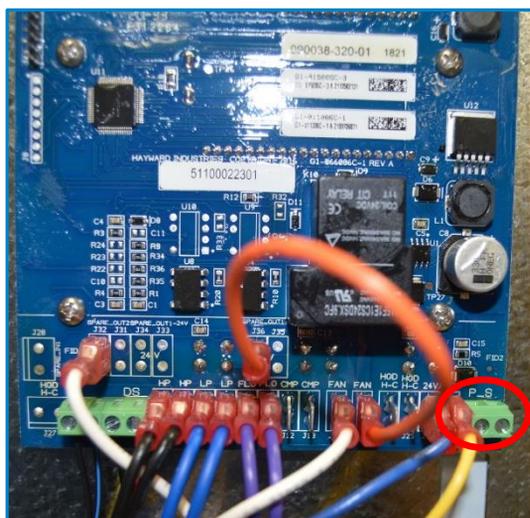
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**J7 terminal location
Back of control board**



**Press “menu” and “+” buttons until
bo appears on display**

Note: Heat Pump must be “ON” for remote operation

Connecting the heat pump to external controls

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5. New error codes

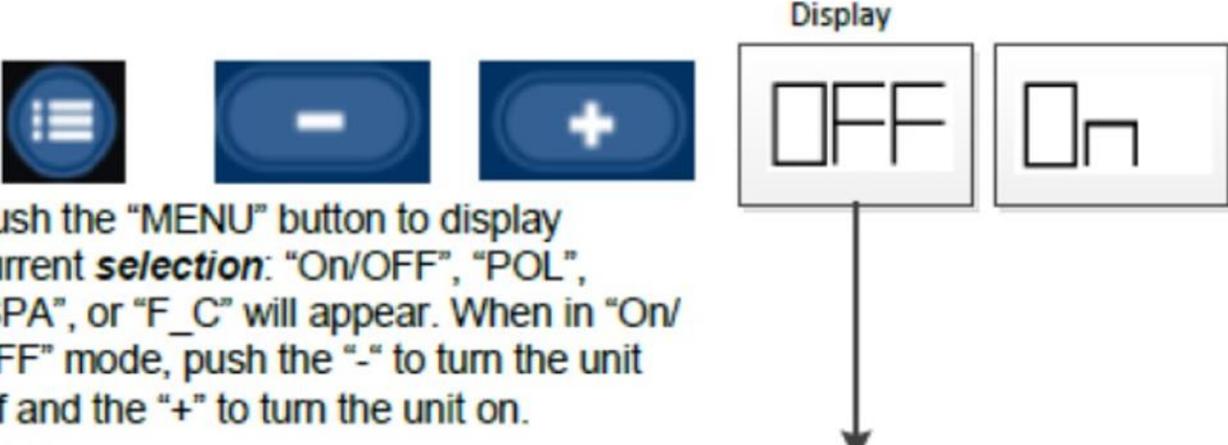
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2021 Square Heat Pump Error Codes	
Error Code	Meaning
HP	Insufficient water flow (pressure switch closed - normally an open bypass valve), overcharge of refrigerant, bad TXV, bad switch
LP	Insufficient refrigerant charge, fan not running when compressor is running, bad switch
FS	Defrost Mode. If ambient temperature is low this is a normal mode. If ambient temperature is normal this is most likely an indication of a defective defrost sensor
dSS	Evaporator coil temperature sensor is shorted
dSo	Evaporator coil temperature sensor is open
Flo	Insufficient water flow, defective switch
SS	Water temperature sensor is shorted
So	Water temperature sensor is open

New Error Codes

Additional Information on the new Square Heat Pump Control 2

In addition to being set for remote operation the Heat Pump must be turned on to work in remote mode



Push the "MENU" button to display current **selection**: "On/OFF", "POL", "SPA", or "F_C" will appear. When in "On/OFF" mode, push the "-" to turn the unit off and the "+" to turn the unit on.

HDF400
No Special Vent Kit Required for Indoor
Installation

The new small footprint HDF400 does not require an indoor vent kit for installation indoors whether using negative (type I) or positive (type III) venting.

Negative Pressure (Type I) Vent pipe must be 8" and should be adapted from the 4" exhaust outlet at the heater.

- The 4" to 8" increaser necessary for this transition is available from any supplier of Type I "B" vent.
- With some manufacturers it may require more than one step (Example: 4" to 7" then 7" to 8" for Hart Cooley).

Positive Pressure (Type III) Vent Pipe is 4" and must be HeatFab Saf-T Vent EZ Seal.

- An adapter is required. HeatFab part # 9401ICP
- The adapter is an off the shelf part that can be purchased where the vent pipe is purchased.

Instructions for indoor venting are listed on pages 18-21 of the I/O manual.

Omni/Home Automation Compatibility List

The Omni Platform is compatible with the following Home Automation systems:

CrestronControl4

Elan (manufacturer and Intrinsic driver)

Savant - Intrinsic driver n Beta

RTI

Vantage

URC - In Development

Home Assistant - Community Driver

Nest

Amazon Alexa

Google Home

Setting The HP50HA2 control to Max Temperature of 104

As you may remember the first shipments of the HP50HA2 had a controller that would not allow the user to set the thermostat above 89° F.

- The solution to the issue is to replace the user interface (UI) with a new one - part # HPX72200268
- These new UI's were to be set to allow 104°F
- Unfortunately we have found that some of the UI's sent as replacements are set to 89° F, but these replacement UI's can be **RESET** to 104°F
- Follow these steps to reset the UI

1. Turn the heat pump off by pressing the **power button** for .5 seconds



2. Press and hold the **up AND down** arrows until 000 appears on the display



Setting The HP50HA2 control to Max Temperature of 104

3. Press the **up arrow** to go to 22.



4. Wait approx. 5 seconds and h03 will appear on display



5. Press the **up arrow** until r11 appears on the display



6. Press and hold the **up AND down** arrows until 89 appears on the display



7. Press the **up arrow** until 104 appears on the display, then press the power button to confirm



Hayward ColorLogic Transformer Chart

Hayward Transformer Chart For LED Lights**

On Transformer wire all low voltage lights to 14V TAP

Product Family	SIZE	Part Number	Watts	Amps	Maximum Lights Per Transformer			Lumens (Cloud White)	CCT (Kelvin)	TYPE	Mode			
					300W 14V	140W 14V	70W 14V				Network	Omni Direct		
References: LTRUY11300 LTRUY11414 See Reverse Page as of 2/08/21														
Universal ColorLogic COLOR	POOL	LPCUS11030	55	3.8	3	2	1	2,741	Cloud White	6500K	STANDARD	NO	YES	
		LPCUS11050							Pure White	5500K				
		LPCUS11100							Crisp White	12000K				
		LPCUS11150							Warm White	3000K				
		LPCUN11030							Cloud White	6500K				
		LPCUN11050							Pure White	5500K				
	SPA	LPCUN11100	32	2.5	6	4	2	777	Crisp White	12000K	NETWORK	YES	NO	
		LPCUN11150							Warm White	3000K				
		LSCUS11030							Cloud White	6500K				
		LSCUS11050							Pure White	5500K				
		LSCUS11100							Crisp White	12000K				
		LSCUN11030							Cloud White	6500K				
	ColorLogic 1 1/2" COLOR	320	LACUS11030	23	1.6	9	5	3	576	Cloud White	6500K	STANDARD	NO	YES
			LACUS11050							Pure White	5500K			
LACUS11100			Crisp White							12000K				
LACUS11150			Warm White							3000K				
LACUN11030			Cloud White							6500K				
LACUN11050			Pure White							5500K				
160		LACUN11100	13	0.9	15	5	3	325	Crisp White	12000K	NETWORK	YES	NO	
		LACUN11150							Warm White	3000K				
		LYCUS11030							Cloud White	6500K				
		LYCUS11050							Pure White	5500K				
		LYCUS11100							Crisp White	12000K				
		LYCUN11030							Cloud White	6500K				
Universal CrystaLogic WHITE		POOL 300W	LPLUS11030	55	3.8	4	0	0	3,740	Cool White	6500K	STANDARD	NO	NO
			LPLUS11050							Cool White	6500K			
	LPLUS11100		Cool White							6500K				
	LPLUS11150		Cool White							6500K				
	500W	LPWUS11030	80	5.7	3	0	0	5,168	Cool White	6500K	STANDARD	NO	NO	
		LPWUS11050							Cool White	6500K				
		LPWUS11100							Cool White	6500K				
		LPWUS11150							Cool White	6500K				
	SPA 100W	LPLUS11030	35	2.5	6	4	2	1,118	Cool White	6500K	STANDARD	NO	NO	
		LPLUS11050							Cool White	6500K				
		LPLUS11100							Cool White	6500K				
		LPLUS11150							Cool White	6500K				
	ColorLogic 1 1/2" WHITE	320	LAWUS11030	20	1.9	8	5	3	1,100	Cool White	4000K	STANDARD	NO	NO
			LAWUS11050							Cool White	4000K			
LAWUS11100			Cool White							4000K				
LAWUS11150			Cool White							4000K				
160		LYWUS11030	15	1.1	15	5	3	600	Cool White	4000K	STANDARD	NO	NO	
		LYWUS11050							Cool White	4000K				
		LYWUS11100							Cool White	4000K				
		LYWUS11150							Cool White	4000K				

Hayward Transformer Chart For LED Lights**

On Transformer wire all low voltage lights to 14V TAP

* Note: Values are estimated and will vary based on Several conditions.
(Ex: runlength, number of lights per transformer, number of junction points...etc.)

Omni Firmware (R4.1.0) Information

Omni Firmware version R4.1.0 has been released. Below are some of the features and enhancements of the new release.

Omni now has the ability to configure heaters that support both heat and cool. For this version, the heater can be placed in Heat mode or Cool mode. For future versions, it will be allowed to do both automatically. Solar heater can now run in cool mode when the cool mode is selected.

- Heat Mode switched **ON**
 - The body of water is heated as long as the filter pump is running, the set point has not been met and the water is below the set point by at least 2°F.
- Cool Mode switched **ON**
 - The body of water is cooled as long as the filter pump is running, the set point has not been met and the water is above the set point by at least 2°F.
- Both Heat Mode and Cool Mode switched **OFF**
 - All heaters/coolers are turned off and will not run even if the heater is enabled and switched ON.
- The **Solar Set Point** is a separate set point that applies only to solar devices.
- **In Heat Mode**, the solar set point must be greater than or equal to the main heater set point. Therefore the solar set point will move automatically 1°F above the main set point to support heat mode.
- **In Cool Mode**, the solar set point must be less than or equal to the heater main set point. Therefore, the solar set point will move automatically 1°F below the main set point to support cool mode.
- **Solar priority** will allow the solar heater or cooler to run alone to maximize the low cost of solar heat/cool.
- **Solar temperature** is displayed as “**roof**” on the heater screen.
- The “**heater**” feature in the BOW screen is now named “**heat/cool**”.
- Types of devices that support **heating and cooling**:
 - Heat Pumps
 - Geothermal
 - Solar

Continues on the next page

Omni Firmware (R4.1.0) Information

- Types of devices that support **heating only**:
 - Gas heaters
- Controlling Heat/cool via the **OmniLogic app** requires upgrading to the **latest** version of the app (**4.4.0**)
- Support for the new **ENS610EXT** Engenius HWLAN bridge. NOTE: To use WPS, hold the Engenius reset button for 2-4 seconds and upon releasing the orange LAN and WAN led lights will flash. They will continue the flash pattern until it associates with the router.

XE Pump Info

1. Spare motors for pumps that have been obsoleted by the new DOE regulations will still be available after July 19, 2021.
 - a. They are not covered in the rules governing whole pumps.
 - b. That being said, there is a push to have them added since the motor manufacturers will have a distinct advantage in the aftermarket in this scenario.
 - c. Expect motor replacements to be available for at least one year.
2. When the XE pump loses power it takes between 30 and 50 seconds for the capacitors in the drive to discharge all power.
 - a. If power is restored AFTER the capacitors have discharged, the pump will restart and reset the applied program to the start of first interval. Example: If power is lost during the second interval (8 hour duration) and the power is off long enough for the capacitors to fully discharge, the pump will begin at the start of interval one when power is reapplied.
 - b. **If power is reapplied BEFORE the capacitors have fully discharged, the pump will be off on a low voltage fault for 6 minutes** and then will restart at the point where it lost power in the program. Example: If the pump loses power in the second hour of the third interval (12 hour duration) and power is restored before the capacitors completely discharge, the pump will not restart for 6 minutes and then will restart the program at the point where power was lost (second hour of the third interval).

ColorLogic Network Lights Information

Network Lights – Pool, Spa, Accent 320/160

- Network Lights are **not** capable of OmniDirect mode
- Network Lights can operate in switched mode
- When in switched mode, network lights can display 10 fixed colors and 7 color-changing shows
- 101 colors and 11 color-changing shows are available in Network mode when used with a ProLogic

Switched Mode Colors and Shows:

Fixed Colors

- Deep Blue Sea
- Royal Blue
- Afternoon Skies
- Aqua Green
- Emerald
- Cloud White
- Warm Red
- Flamingo
- Vivid Violet
- Sangria

Color-Changing Shows

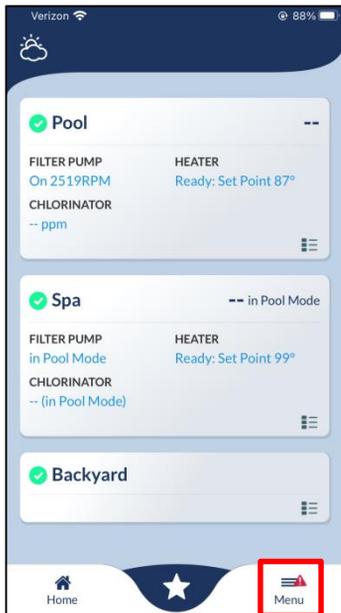
- Twilight
- Tranquility
- Gemstone
- USA
- Mardi Gras
- Cool Cabaret
- Voodoo Lounge

Upgrading the Omni firmware OTA

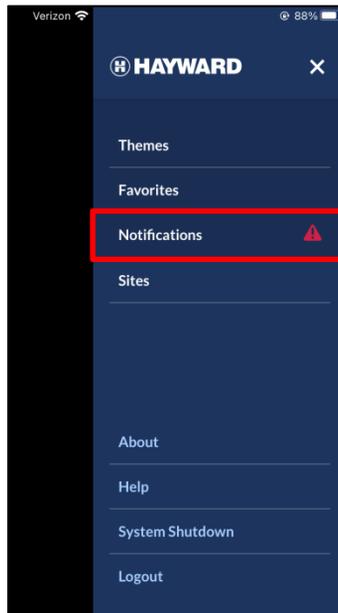
Omni firmware **R4.0.0** has added the ability to process firmware updates over the air(OTA) via an internet connection.

- When a new firmware update is available, users will receive an alert in the Omni App.
- Users will also see an alarm on the Omni's display.

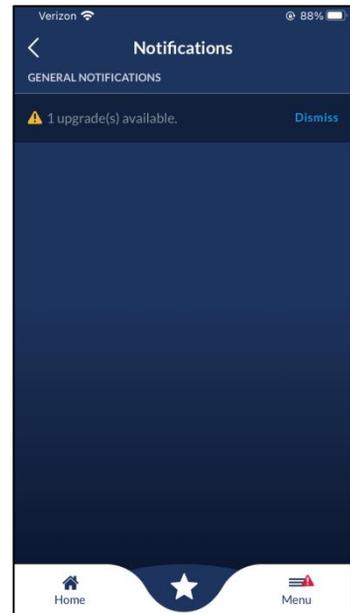
How to view if an OTA upgrade is available: From the Omni App



Press "Menu"



Press
"Notifications"



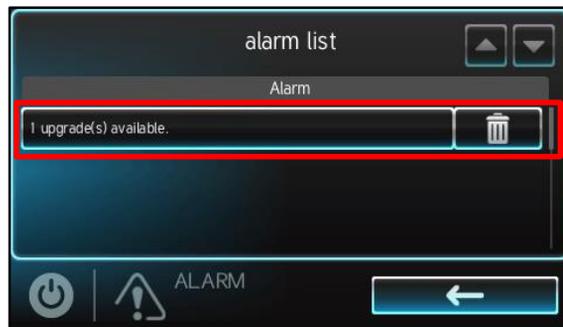
Important: The app only allows users to view if an upgrade is available. To process the upgrade requires being at the Omni Controller's display.

Upgrading the Omni firmware OTA

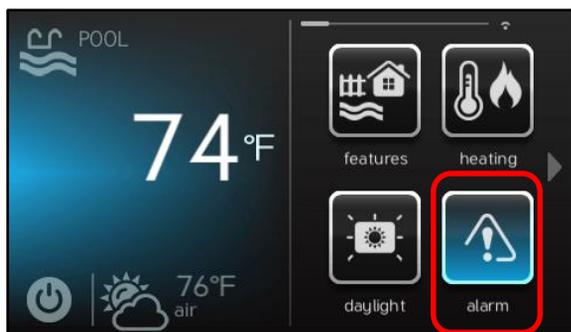
How to view if an OTA upgrade is available: From the Omni Controller's Display



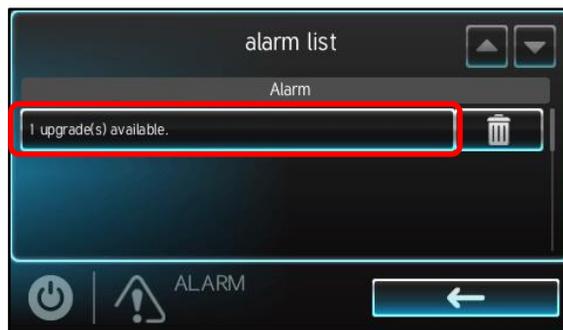
Press the "alarm" button



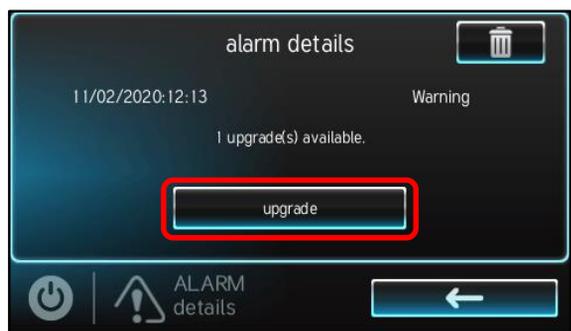
How to process an OTA upgrade with an alarm notification



1. Press the "alarm" button.



2. Select the upgrade available button.



3. Press the "upgrade" button.



4. Press the checkmark to enter service mode and continue.

Upgrading the Omni firmware OTA



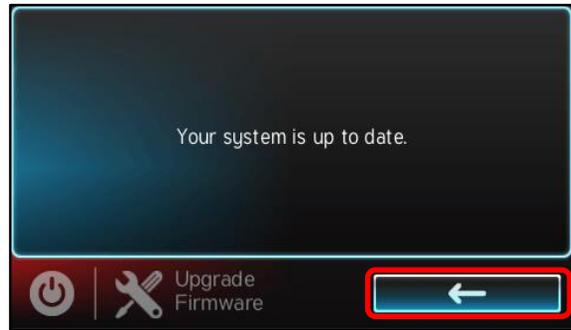
5. Press "Upgrade All".



6. Press the checkmark to start the upgrade.



7. Press the checkmark to complete.



8. Press the back arrow to exit.



9. Press the checkmark to reboot the system and return to standard operating mode.

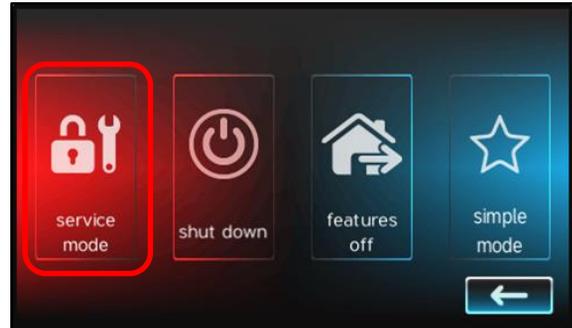
Upgrading the Omni firmware OTA

How to process an OTA upgrade without an alarm notification

If a user has not receive an upgrade alarm notification, they can manually check if there is an upgrade available by following the instructions below.



1. Press the power button icon.



2. Press "service mode".



3. Press "Yes".



4. Press "upgrade"



5. Press "Upgrade from Internet"



6. Press "check now".

If an upgrade is available, it will take you to the upgrade screen which will show the current and new available firmware, otherwise it will indicate that your system is up to date.

New Parts SKU for Replacement Terminal Blocks

- A new parts SKU for replacement terminal blocks is now available.
- The SKU/Kit includes multiple terminal blocks.
- The part number for the Kit is **HLXCONNKIT**.

Included in the KIT are the following terminal blocks

- 2 Pos – Qty 2
- 4 Pos – Qty 2
- 5 Pos – Qty 1
- 6 Pos – Qty 1
- 8 Pos – Qty 1
- 10 Pos – Qty 1

