# 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

*May/2020*

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   Important information on the pump converter board

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5. **Controls:** OmniLogic

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6. **Controls:** OmniLogic

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8. **Heat Pumps:** Square Platform models

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# Omni Pump Converter Board
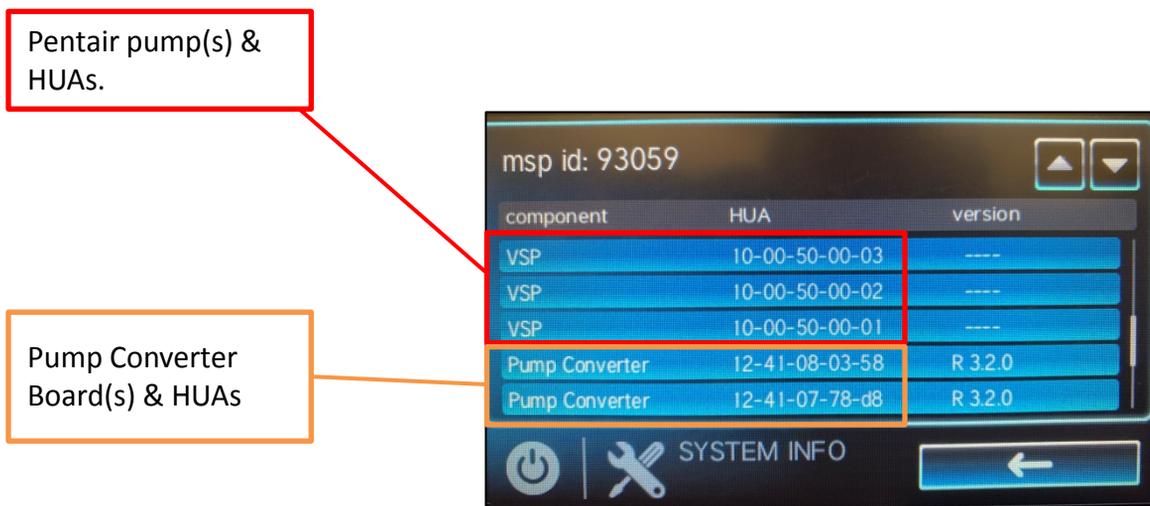## Important Information

**Important: Before installing the Pump Converter Board:**

- At the Pentair pump's display reset any changes that have been previously made to the pump's default speeds.(This is only necessary if the default speeds have been changed from original factory settings) Refer to the Pentair pump's manual for instructions on how to reset this setting.
- If necessary, changes to the pump's default speeds should be performed on the Omni Controller.
- If using multiple Pentair pumps, you will have to change the address for pumps 2-16. This is can be performed on the pump's display.
- Ensure that the Omni Controller is running firmware R3.2.0 or higher.

**How to verify that communication is successful**

After connecting the Pentair pump(s) to the Omni controller, go to the system info screen to verify that the pump(s) are communicating with Omni controller. When communicating with the Omni controller, the "system info" screen will display the HUA's for the Pump Converter Board and Pentair pump(s). See photo below.

- To get to the "system info" screen from the Omni controller press "config" then press "system info".

Pentair pump(s) & HUAs.

Pump Converter Board(s) & HUAs



| msp id: 93059 | | |
| --- | --- | --- |
| component | HUA | version |
| VSP | 10-00-50-00-03 | ---- |
| VSP | 10-00-50-00-02 | ---- |
| VSP | 10-00-50-00-01 | ---- |
| Pump Converter | 12-41-08-03-58 | R 3.2.0 |
| Pump Converter | 12-41-07-78-d8 | R 3.2.0 |

SYSTEM INFO

# Omni Pump Converter Board
## Changing the Pump address

**Changing Pump Address**
If wiring multiple Pentair Pumps to the Pump Converter board (PCB) you will first have to go into the pump's menu to set an address(see instructions below). This should done before wiring the Pentair pump to the PCB .

**How to change the Pump Address**
The default pump address is #1 and only needs to be changed when there is more than one pump on an automation system. Change the address to allow the Omni controller to send a command to the correct pump.(The instructions below may not be the same for all Pentair models. Refer to the pump's manual if necessary.)
The pump address can be set from 1-16.

1. Be sure the green power LED is on and the pump is stopped.
2. Press **Menu.**
3. Press **Select** to select "Settings".
4. Use the **Up** or **Down** arrows to scroll to "Device". Press **Select**.
5. Use the **Up** or **Down** arrows to scroll to "Pump Address". Press **Select**.
6. Press **Up** or **Down** arrows to change the address number from 1-16.
7. Press **Save** to save. To cancel any changes, press **Back** to exit without saving.
8. Press **Back** to exit.

Once you save the desired pump address and wire the pump to the converter board and Omni controller, the pump should discover and the pump display should show that it is no longer active(see below right). The HUA of the pump will also be shown in the system info screen as 10-00-50-00-XX, where XX is the selected pump address in hexadecimal(see below left).

Pump addresses 1-16

| | |
|---|---|
| 1: 01 | 9: 09 |
| 2: 02 | 10: 0A |
| 3: 03 | 11: 0B |
| 4: 04 | 12: 0C |
| 5: 05 | 13: 0D |
| 6: 06 | 14: 0E |
| 7: 07 | 15: 0F |
| 8: 08 | 16: 10 |

Pump inactive message

DISPLAY
Not Active!

# Omni Pump Converter Board
## Important Information Updated

**Important: Before installing the Pump Converter Board:**

- At the Pentair pump's display reset any changes that have been previously made to the pump's default speeds.(This is only necessary if the default speeds have been changed from original factory settings) Refer to the Pentair pump's manual for instructions on how to reset this setting or perform a *complete factory reset of Pentair pump to return it factory default. If necessary, changes to the pump's default speeds should be performed on the Omni Controller.

- Priming must be disabled when using a Pentair pump with an Omni Controller. Refer to your model's manual for instructions on how to disable priming. If priming is desired, it can be configured on the Omni controller.

- Ensure that the Omni Controller is running firmware R3.2.0 or higher.

- **Instructions on how to factory reset a Pentair IntelliFlo pump**. These instruction may not work for all IntelliFlo Models. If these instructions do not work, refer to the Pentair pump's manual for complete instructions on how to perform a factory reset.

1. If already connected to the Pump Converter Board, disconnect the black comm wire from the IntelliFlo. This is will enable control from the pump's display.
2. Press once and release at the same time the 1,2,3,4 buttons, then the display will read back door menu with all numbers 0,0,0,0 with the last zero highlighted.
3. Use the down arrow or up arrow and change that last zero to a 1 and press save or select depending on the age of the drive the verbiage on the pump buttons may differ, push save/ or enter.
4. Turn off breaker associated to pump and wait until drive display goes black and the red power light stops blinking. Then turn breaker back ON for the pump.
5. Once pump is on and display is lite back up, scroll down to prime settings and press select/enter. The display is defaulted to prime enabled and it will be highlighted you can then hit the down arrow or up arrow to change to disable then press save/or enter.
6. Reconnect the black comm wire back to pump. The display should read "Display inactive".

# OmniPL Parts List

**Current list of parts for the OmniPL:**

| Part Number | Description |
|---|---|
| HLXPLCONTROL | Local Display |
| HLRELAY | OmniLogic Relay |
| HLX-PCB-MAIN | Main Control Board |
| HLX-PCB-TCELL | T-CELL PCB Board |
| HLX-PSUPPLY | Power Supply Assembly |
| HLX-TRNSFMR | OmniLogic Transformer |
| GLX-PC-12-KIT | Temperature Sensor with 15' Lead |
| GLX-F4A-PAK10 | Fuse Kit, 4A/Pink (10 Pack ) |
| GLX-F5A-PAK10 | Fuse Kit, 5A/Brown (10 Pack ) |
| GLX-F20A-10PK | Fuse Kit, 20A/Yellow ( 10 Pack ) |
|  |  |
| Optional Parts | |
| HLX485RELAY | Smart Relay |
| HLXSTYLUS5PK | Omni Stylus (5 Pack) |
| HLXUSB5PK | Omni USB Drives (5 Pack) |

# A change to low voltage wiring on UHS heaters

Beginning with serial number 21132002103051001 the low voltage terminal block was removed from all UHS heaters.
- All connections to controls will remain the same
- Instead of placing the wire under the screw in the terminal block you will now place it in the wire nut with the appropriate colored wires.
- For 2 wire remote connections remove the wire nut from the white and orange wires and attach one of your low voltage wires to each of them with the wire nut.
- For 3 wire remote connections remove all three wire nuts and attach your low voltage wires per the label in the wiring compartment.
- NOTE: On side where there are two wires under each wire nut (pictured below) make sure you capture both wires along with your low voltage wire under the wire nut.

# A change to low voltage wiring on UHS heaters

Beginning with serial number 21132002103051001 the low voltage terminal block was removed from all UHS heaters.

- **It has come to our attention that the wires are not stripped and connected under the wire nuts on the side where there are two of each color.**
- This means there is no connection to the control board if the installer connects their low voltage wires on the opposite side.
- Nashville has made changes to the wiring harness and they are now shipping with the wires stripped and connected.
- If you encounter a heater that will not work in remote mode make certain the wires are stripped and connected properly.

Right side with 2 of each color wire Installer must remove wire nuts, strip wires , and reconnect wire nuts when connecting heater to control.

Left side with one of each color wire. Installer must remove wire nuts and strip wire to connect low voltage control wire. Then must go to right side and strip and connect wires there as well

# Temp Sensor should be fully seated in bulbwell on square platform heat pumps.

We have had some recent reports of the temp sensor not being completely seated into the bulbwell of square platform heat pumps.

**Symptom:**
- The heat pump is overshooting the temperature set point.
- The display on the heat pump will show a temperature lower than the set point even though the actual pool water temperature is well above the set point.
- Once the heat pump cuts off the displayed temperature will sometimes creep up to eventually show an accurate temperature.

**Solution:**
- The temperature sensor should be inserted approx. 3 inches into the bulbwell.
- The temperature displayed should catch up to the actual within a few minutes, but it won't be immediate.

Sensor Installed in bulb well     Correct wire length     Incorrect wire length

# HL-Base LCD Change

A change has been made to the OmniLogic's (HL-Base) LCD. We have switched to a new manufacture for the LCD in the MSP. The part number for the new LCD is **HLX-LCD0520.**

- If the HL-Base was manufactured prior to May 14, 2020 continue to use **HLX-LCD** for a replacement LCD screen.

- HL-Base manufactured after May 14, 2020 will use the new LCD screen with the part number **HLX-LCD0520**. If a replacement LCD is needed, use only **HLX-LCD0520.**

- HLX-LCD0520 is not backwards compatible with units manufactured prior to May 14, 2020.

- HLX-LCD cannot be used in units manufactured after May 14, 2020.

# Omni Wi-Fi configuration

During the initial Omni setup when you are asked to configuration an internet connection, if you choose the option "Not Now" you must remember to go back into the configuration wizard to choose a connection type( "external antenna", "wired", or "wireless" ).

If you do not go back into the configuration wizard and change the setting to "external antenna", "wired", or "wireless", the Omni will appear as if it is setup for external antenna in the network screen, but will be unable to find any Wi-Fi SSIDs when you perform a scan. To correct this you must choose a network connection.

To choose or change your network connection go to the Omni controller display and press
- "config"
- "config wizard"
- Select "Edit Current Configuration"
- Select "System Options"
- Select "Modify Network Setup"
- Choose your connection type ( external antenna, wired, or wireless ).
- Save the configuration change.
- After the Omni reboots go to "config" then "network" to connect to a network.

# A Change in Installation Clearances for Hayward Heat Pumps

Recent testing has shown that our heat pumps can be installed as close as 12" from an obstruction such as a wall or fence.
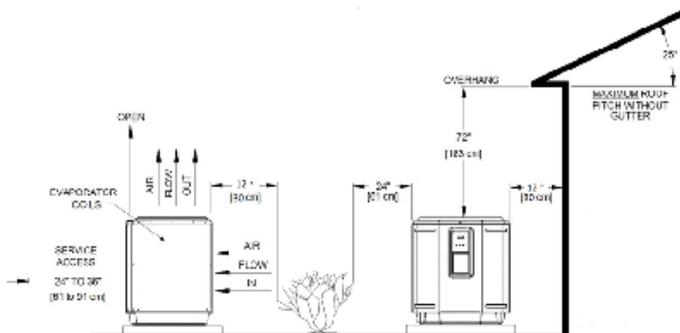
The letter shown here is available on the Totally Hayward website, and can be shared with builders and inspectors as needed.

# A change in Automation Connections for Square Heat Pumps

Nashville built square heat pumps will have a different method for connecting to automation beginning with serial **#21132005103622001.**

• The terminal block that was mounted on the right exterior of the electrical panel has been replaced by a short pink jumper wire.

• To connect the heat pump to automation the jumper wire will be removed and the wires to the automation will attach where the jumper was removed

• An insert will be included in the manual outlining this change until the next manual update is done.

• The insert is seen on the following pages



Jumper replacing terminal block.

# A change in Automation Connections
# for Square Heat Pumps

**Wiring Connection Diagram**

⚠ **WARNING** – **Risk of Electric Shock** Before working on any electrical equipment, turn off power supply to the equipment.

⚠ **WARNING** – **Risk of Electric Shock.** All electrical wiring MUST conform to applicable local codes, regulations, and the National Electric Code (NEC). Hazardous voltage can cause death, shock, burn, and/or serious property damage. To reduce the risk of electric shock, do NOT use an extension cord to connect unit to electric supply. Provide a properly located electrical receptacle. To reduce the risk of electric shock replace damaged wiring immediately. Locate conduit to prevent abuse from lawn mowers, hedge trimmers and other equipment. Do NOT ground to a gas supply line.
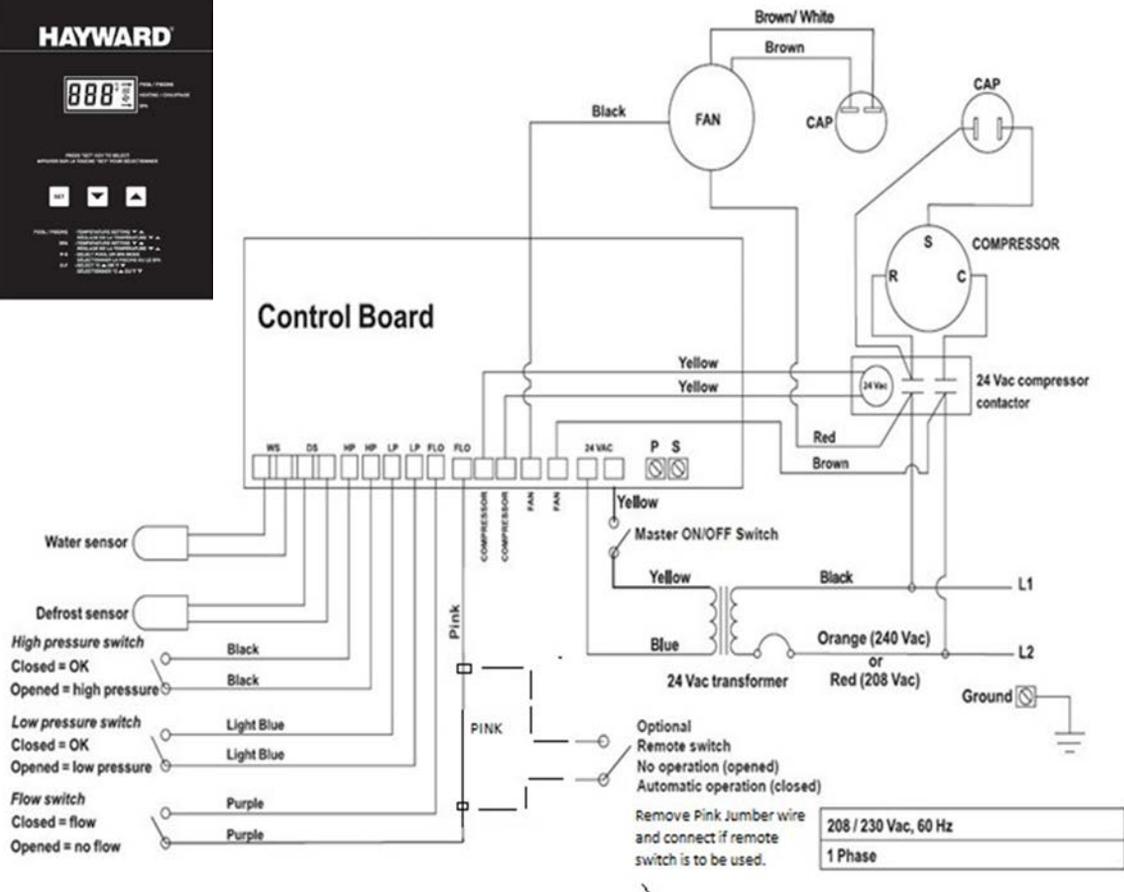


**Figure2 Wiring Diagram**

**Note change to the remote connection. Leave this diagram with this unit.**

# A change in Automation Connections
# for Square Heat Pumps

**ELECTRICAL CONNECTIONS**: Turn OFF source power to the heat pump before working on electrical connections.
**REMOTE CONTROL SETTING**:

1 To use the remote on/off connection, set Pool thermostat to off, set Spa thermostat to 104°F, set heat pump to Spa mode. Remove the pink jumper in the water flow switch circuit to the control board and connect the remote relay as shown in figure 12a. The code "FLO" will be displayed while remote circuit is open. The unit will wait for the remote contact to be closed to initiate the call for heat.

**Figure12a: Remote On/Off Control**