

8600 SERIES - ERROR MESSAGES

FLC

PRESSURE or FLOW SWITCH ACTIVATED - This error will be displayed only when the pump is not activated. Cycle the pump through Low & High speeds then off. If the error does not clear this is an indication that the pressure or flow switch is activated with no water flow.

Contact your local spa dealer

fLo

PRESSURE or FLOW SWITCH NOT ACTIVATED - This error will be displayed while the is pump running. Cycle the pump through Low & High speeds. If the error does not clear this is an indication that the pressure or flow switch has not activated although there is water flow.

Contact your local spa dealer

Prr

TEMPERATURE SENSOR MALFUNCTION - This error will occur when a problem with the temperature sensor exists. This error may also occur if the system is activated while the water temperature is below 35BF.

Contact your local spa dealer

OH

OVERHEAT or HIGH-LIMIT PROTECTION - There are three(3) stages of over-temperature:

1 - The spa water has exceeded 112°F. The heater, pump and accessory will be deactivated until the water cools to 109°F. *Be sure to check the actual water temperature with an accurate thermometer.*

2 - The spa water has exceeded 119°F. The heater will deactivate while the pump and accessory will still operate. *The blower (if equipped) can be activated to help cool the water.* **WATER MUST BE BELOW 119°F AND POWER MUST BE RESET TO CLEAR THE "HL" ERROR**

A dirty spa filter can also cause a restricted flow of water, be sure the filter is cleaned regularly and ensure all water shutoff valves are open.

If the system has been operating normally until now, the pump may be overheating the spa. Refer to "Programming Filtration" on page X and reduce the duration and/or number of cycles per day.

3 - If you've eliminated items 1 & 2 as problems, the high-limit sensor may have malfunctioned.

Contact your local spa dealer

free

FREEZE PROTECTION - There are two(2) levels of freeze protection integrated into the system.

1 - SMART WINTER MODE, this mode will activate any time the temperature falls below 59°F. This mode will be active for a period of 24-hours. In this mode, if a pump has not been activated in the last 2 hours, the system will automatically turn it on for 1-minute to prevent freezing. The "Filter Cycle" indicator will illuminate while this mode is active.

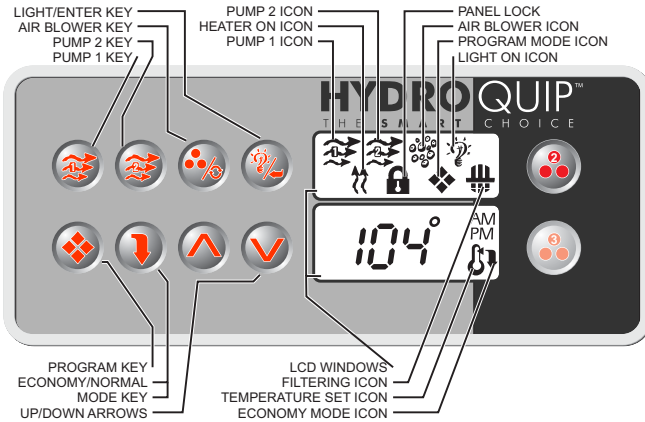
2 - If the spa water temperature drops below 49°F, the heater & pump will be activated until the water temperature reaches 50°F. **While freeze protection is active no other functions will be possible.**



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8600 SERIES - BASIC OPERATION



Pump 1 Key: Press this key once to turn Pump 1 on. A second press will turn it off. For dual speed pump operation; Press this key once to turn Pump 1 onto Low speed, press this key a second time to turn Pump 1 onto High speed, a third press will turn the pump off. A built-in timer will shut the pump off after 20 minutes of operation unless done so manually. The Pump 1 Icon will appear on the LCD while the pump is running in High speed and flash while it is in Low speed. If the filter icon appears, a filtration cycle has begun and you will not be able to turn the pump off.



Pump 2 Key: Press this key once to turn Pump 2 on. A second press will turn it off. For dual speed pump operation; Press this key once to turn Pump 2 onto Low speed, press this key a second time to turn Pump 2 onto High speed, a third press will turn the pump off. A built-in timer will shut the pump off after 20 minutes of operation unless done so manually. The Pump 2 Icon will appear while the pump is running in High speed and flash while it is in Low speed.



Air Blower Key: Press this key once to turn blower onto High speed, a second press will turn the blower onto Low speed and a third press will turn the blower off. A built-in timer will shut the pump off after 20 minutes of operation unless done so manually. The Accessory Icon will appear while the blower is running in High speed and flash while it is in Low speed.



Light Key: Press this key to turn the light onto its highest intensity, a second press will turn the light onto low and a third press will turn it off. The light will automatically shut off after 2 hours. The Light Icon will appear while the light is on.



Temperature Set Keys: Press the Up arrow key to increase the desired temperature. Press the Down arrow key to decrease the temperature. The temperature can be adjusted in 1F increments from 59F to 104F (5C to 40C). The new setting will remain on the display for 5 seconds as a confirmation. During this time the Set Point icon will be appear to let you know this is the desired and not the actual temperature. After 5 seconds the display will return to the current temperature reading. When the temperature drops to 1F below the set temperature, the heater will be turned on until the temperature is 1F above the set temperature. The heater icon will appear while the heater is on and flash when there is a call for heat and the heater has not yet been activated.



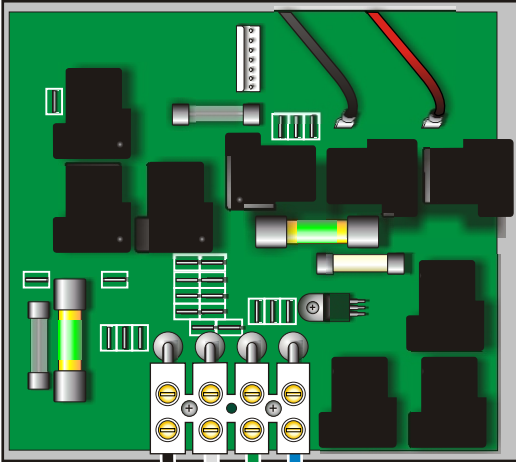
Programming Parameters: There are several Filtration parameters that may be programmed. Follow these procedures to set each parameter: Press and hold the Program Key for 5-seconds, the Program icon (♦) will appear. You may continue to press the Program key to access the desired Filtration parameter to be modified. Once you have reached the parameter to be modified, press the Enter (Light) key. Use the Up & Down Arrow keys to adjust the value. If no key has been pressed for 15-seconds the programming mode is exited. During programming all keys other than the Program, Enter (Light) and Up & Down Arrow keys will be ignored. Refer to the owners manual for specific filtration and economy programming details.

8600 SERIES - INCOMING POWER WIRING

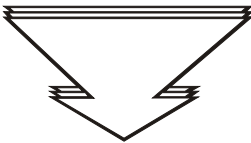
For high current models an additional terminal block has been provided. 4-Wire 240V service must be provided to the circuit board terminal block as well as 3-Wire 240V service provided for the High-Current terminal block. Refer to illustrations below:

The heater connection is isolated to the “Heater Input Service” connection located on the **BACK OF THE PCB MOUNTING PLATE**. Remove the (2) upper screws on the sides of the upper box, the mounting plate will tilt forward allowing access to the connection points. This connection requires a L1, L2, and Ground connection. (See Illustration Below)

INTERNAL PLATE - FRONT



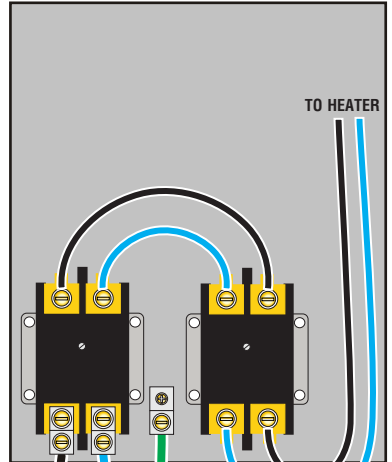
L1-N-GR-L2



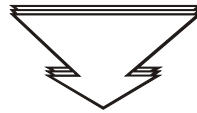
MAIN INPUT SERVICE

(CHECK PRODUCT DATA LABEL FOR AMPERAGE RATING)

INTERNAL PLATE - BACK



L1- L2- G



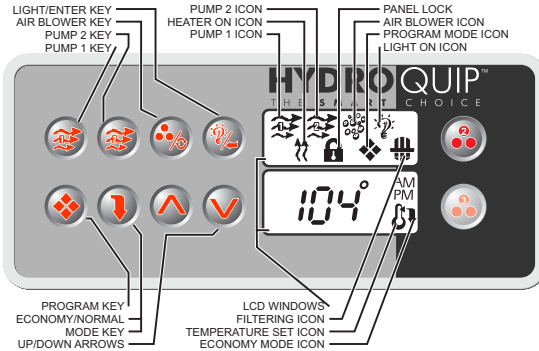
HEATER INPUT SERVICE

(CHECK PRODUCT DATA LABEL FOR AMPERAGE RATING)

IMPORTANT: Always refer to the product data label (located on top of control box) for specific electrical information.

8600 SERIES - LOW LEVEL PROGRAMMING

It is possible to change the parameters of the system from the spaside control. All circuit presets have been programmed at the factory. The only settings to be adjusted will be Current Limiting and/or Fiber Optic settings. Follow the procedures described below to adjust these settings.



- Press & Hold the Program key for approx 20 seconds. A value of P1_X will appear in the lower window and the Program icon will appear in the upper window indicating that programming mode is active. (X = 1 or 2 in this case)
- To advance to the next setting press the Program key
- To change a setting Press the Up or Down key accordingly
- After desired changes are made press the Program key repeatedly to advance through the rest of the settings, exit the programming mode, and reset the system.

PROGRAMMABLE VALUES

PUMP 1

DISPLAY: P1_X

VALUE OF X: 1 = Single Speed
2 = Two Speed

PUMP 2

DISPLAY: P2_X

VALUE OF X: 0 = Not Installed
1 = Single Speed
2 = Two Speed

PUMP 3

DISPLAY: P3_X

VALUE OF X: 0 = Not Installed
1 = Single Speed (30 minute timeout)
2 = Single Speed (5 Min timeout)

BLOWER

DISPLAY: BL_X

VALUE OF X: 0 = Not Installed
1 = Single Speed
2 = Two Speed
3 = Three Speed

CIRC PUMP

DISPLAY: CP_X

VALUE OF X: 0 = Not Installed
1 = 24hr operation (no 4 degree over)
2 = 24hr operation (with 4 degree over)
3 = 24hr operation (with 4 degree over and over temp filtration cycle)

DISPLAY: LI_X

LIGHT

VALUE OF X: 0 = Not Installed
1 = 12V Single Intensity (LED Ready)
2 = 12V Three Intensity
3 = (2) Lights - (1) 12V-3 Intensity, (1) 120V CP must be set to "0"

OZONE

DISPLAY: O3_X

VALUE OF X: 0 = Not Installed
1 = ON with Filter Cycles
2 = Always ON
3 = Controlled by Filtration Timer

AUX/FO

DISPLAY: AU_X (5A Max. Load)

VALUE OF X: 0 = Not installed
1 = (1) Component
2 = Fiber Optic Box
3 = (2) Components (Toggled)

HCL/C

DISPLAY: Cu_X

VALUE OF X: 0 = Low Current Mode
1 = High Current Mode

CLOCK

DISPLAY: Ti_X

VALUE OF X: 12 = 12/12hr Time Format
24 = 24 hr Time Format

KEYPAD

DISPLAY: Ts_X

VALUE OF X: 0 = 8 Button
1 = 10 Button