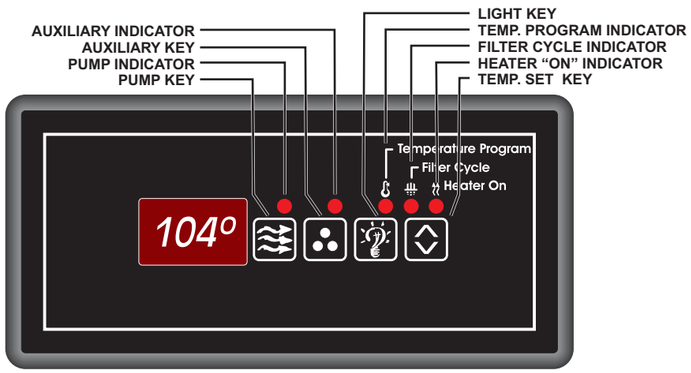
9200/6200 - BASIC OPERATION



Pump Key: *Press this key once to turn Pump on. A second press will turn it off. For dual speed pump operation; Press this key once to turn Pump onto Low speed, press this key a second time to turn Pump 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 indicator will illuminate while the pump is running in High speed and flash while it is in Low speed. If the Filter Cycle indicator is illuminated , a filtration cycle has begun and you will not be able to turn the pump off.*

Accessory Key: *Press this key once to turn Accessory on, a second press will turn Accessory off. A built-in timer will shut the accessory off after 20 minutes of operation unless done so manually. The Accessory indicator will illuminate while the accessory is running on.*

Light/Enter Key: *Press this key to turn the light on, a second press will turn the light off. If equipped with Fiber Optic: Press this key once to show "L1". Use the Up/Down Arrow key to turn the light onto High, Low and Off. Press the light key a second time, "F1" will appear. Use the Up/Down Arrow key to turn the Fiber Optic wheel and light on, Fiber Optic wheel off with light on and both Off. The light will automatically shut off after 2 hours.*

Temperature Set Key: *Press the Up/Down Arrow key to increase the desired temperature, release and press again to decrease the desired temperature. The temperature can be adjusted in 1°F increments from 59°F to 104°F (5°C to 40°C). The new setting will remain on the display for 5 seconds as a confirmation. During this time the Temperature Program indicator will be illuminated 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 1°F below the set temperature, the heater will be turned on until the temperature is 1°F above the set temperature. The Heater "On" indicator will illuminate while the heater is on and flash when there is a call for heat and the heater has not yet been activated.*

Power Loss: *Any interruption of power will cause the unit to reset and revert to the default programming of 100°F set point temperature and 2, 2-hour filtration cycles.*

Note: Your system may be equipped with "memory". If so, upon power loss, all programmed

9200/6200 - ERROR MESSAGES

To assist the user in identifying problems with the spa, the system will display an error message. These messages will be helpful when communicating with your local dealer or qualified technician if a problem should arise.

fLC — **PRESSURE or FLOW SWITCH <u>ACTIVATED</u> -** 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 <u>NOT ACTIVATED</u> -** 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 35°F.

Contact your local spa dealer

OH — **OVERHEAT or HIGH-LIMIT PROTECTION -** There are three(3) stages of over-temperture:

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.*

HI

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 "Programing 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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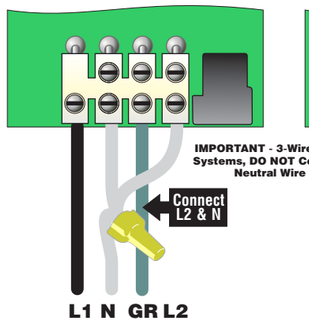
4200/6200/9200 VOLTAGE CONNECTION

OPTION 1

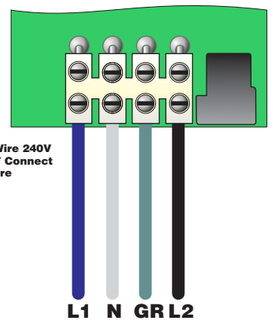


120-VOLT ELECTRICAL SERVICE REQUIREMENTS:

Line 1, Neutral and Ground.

Note: For 120V operation Neutral & Line 2 MUST be connected for system to operate properly.

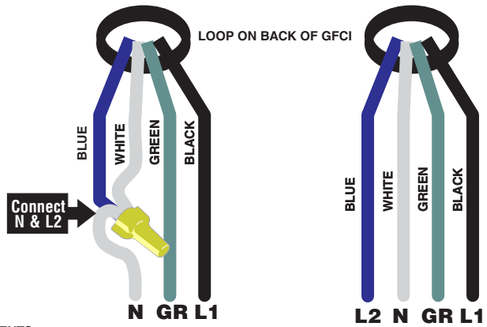
OPTION 2



240-VOLT ELECTRICAL SERVICE REQUIREMENTS:

Line 1, Line 2, Neutral and Ground.

HIGH CURRENT GFCI INSTALLED



120 & 240-VOLT ELECTRICAL SERVICE REQUIREMENTS:

240V: Line 1, Line 2, Neutral and Ground.
120V: Line 1, Neutral and Ground

Note: For 120V operation Neutral & Line 2 MUST be connected for system to operate properly.

4200/6200/9200 JUMPER SETTINGS

CS6200, CS6230, CS6330 Series ONLY

JUMPER 1 = Current Limiting:

Position 1 - *(High Current 240vac): There is no current restriction. This allows the heater to operate with the pump in high speed.*

****Position 2 -** *(Low Current 120vac): The system will not turn the heater on when the pump is in high speed. The heater indicator will flash on the spaside to tell the user that there is a call for heat but the heater is not allowed to start.*

JUMPER 2 = Temperature Display:

****Position 1 -** *Fahrenheit Degrees*

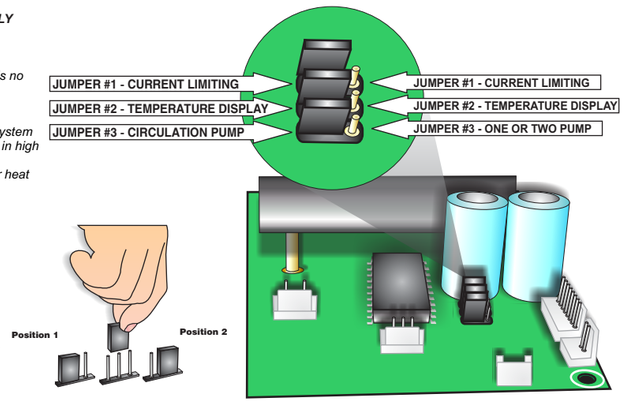
Position 2 - *Celsius Degrees*

JUMPER 3 = Circulation Pump

****Position 1 -** No Circulation Pump Present

Position 2 - Circulation Pump Present

** = DEFAULT POSITION



CS6220 Series ONLY

JUMPER 1 = Current Limiting:

Position 1 - *(High Current 240vac): There is no current restriction. This allows the heater to operate with the pump in high speed.*

****Position 2 -** *(Low Current 120vac): The system will not turn the heater on when the pump is in high speed. The heater indicator will flash on the spaside to tell the user that there is a call for heat but the heater is not allowed to start.*

JUMPER 2 = Temperature Display:

****Position 1 -** *Fahrenheit Degrees*

Position 2 - *Celsius Degrees*

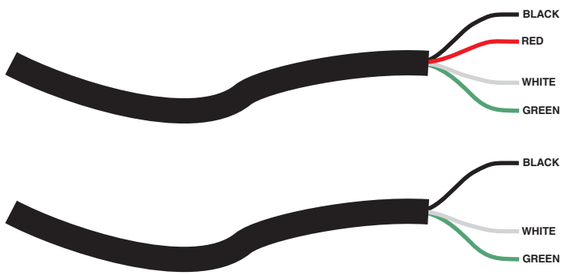
JUMPER 3 = Operation 1 or 2 Pump:

Position 1 - *Operate as ECO-1 (1 Pump)*

****Position 2 -** *Standard Two Pump Operation*

** = DEFAULT POSITION*

PUMP & ACCESSORY CORD CONFIGURATION



HYDRO-QUIP 2-SPEED PUMP CORD CONFIGURATION

Hydroquip utilizes the following wiring configuration for our Two-Speed pump circuits:

Black = High Speed
Red = Low Speed
White = Common/Neutral
Green = Ground/Earth

HYDRO-QUIP ACCESSORY CORD CONFIGURATION

Hydroquip utilizes the following wiring configuration for our accessory and single speed pump circuits:

Black = Hot/Line
White = Common/Neutral
Green = Ground/Earth

4200/6200/9200 FILTRATION PROGRAMMING

PROGRAMMING FILTER CYCLE: Filtration cycles may be programmed to run one, twice or three times per day to keep the water clean & sanitary. Press and hold the PUMP KEY until the current setting is displayed (1, 2 or 3). Use the TEMPERATURE SET KEY to increase or decrease the setting. It is recommended to schedule the filtration cycles so they do not interfere with sleeping hours.

PROGRAMMING FILTER CYCLE DURATION: The duration of each cycle can be set to 60 (1 hour), 120 (2 hours), 180 (3 hours) or 480 (8 hours). Press and hold the LIGHT KEY until the current setting is displayed. Use the TEMPERATURE SET KEY to increase or decrease the setting. Filtration cycles will take effect at the time these settings are changed. If filtration setup is accomplished at 12:00pm and the cycles are set to two (2) per day, the cycles will activate at 12:00pm & 12:00am.

Note: If a key is not pressed within 5 seconds during programming, the system will revert back to the monitoring mode. If the Pump and/or light were turned on during the programming process, turn them off.

***Note: When filter cycle starts the blower (or pump 2, if equipped) will activate for 1-minute then turn off. Pump 1 will continue to run for the remainder of the filter cycle.**

*** If the spa is being used during the filter cycle, the cycle will be suspended for a period of 40-minutes or until the spa is no longer in use.**

4200/6200/9200 COMPONENT CONVERSION

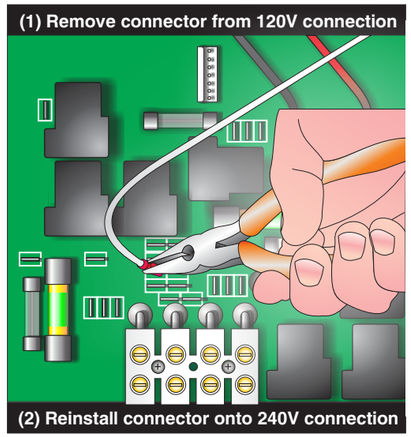
The control circuits have been configured for 120V components at the factory. This is to prevent accidental damage to equipment. A 240V component connected momentarily to a 120V power supply will not be damaged. A 120V component connected to a 240V power supply can be damaged immediately. For this reason Hydro-Quip cannot be held responsible for damage caused due to mis-wire.

!! IMPORTANT !! All Systems are Universal

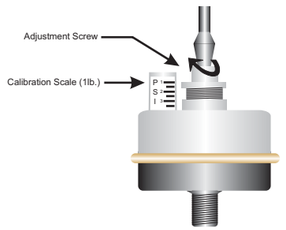
Below are illustrations and instructions for converting the universal circuits of your control. Colored connectors are utilized to help identify each circuit. Simply locate the colored connector on the Neutral (white) wire from each components receptacle. Using the wiring diagram provided with each control (located inside the hinged cover), remove the Neutral connector from its 120V / Neutral position and reconnect to the 240V / Line 2 connection (shown in parenthesis on the wiring diagram). Once accomplished the conversion is complete. Repeat these steps as required for each 240V component.

CIRCUIT	COLOR
PUMP 1	RED
PUMP 2	VIOLET
BLOWER	BLUE

CIRCUIT	COLOR
OZONE	YELLOW
CIRC. PUMP	BROWN



PRESSURE SWITCH ADJUSTMENT



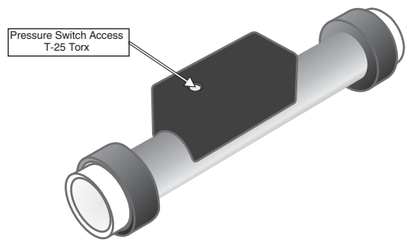
***1)** With power to system turned OFF, place an Ohmmeter across the pressure switch terminals to verify an OPEN circuit. If the switch is closed at this point rotate the adjustment screw clock-wise until the switch reads OPEN.*

***2)** Turn power to the system ON and activate the low-speed pump.*

***3)** Place an Ohmmeter across the pressure switch terminals to verify an CLOSED circuit.*

***4)** If switch is not closed rotate the pressure switch adjustment screw counter-clockwise until the Ohmmeter indicates a CLOSED circuit.*

5) Turn the power back ON to the system and test for proper operation with the pump running and with it off.



IMPORTANT: After any pressure switch adjustment, it is important to test the control by turning on the pump low speed and heater. While operating, unplug the pump, the heater must turn off. If the heater stays on, plug the pump back in and readjust the pressure switch to achieve proper operation.