

VS Power System Control Panel

System Model:
Panel Model: 500Z-Series

Warning! Shock Hazard! No User Serviceable Parts

Do not attempt service of this control system. Contact your dealer for assistance. Installation must be performed by a licensed electrician and all grounding connections must be properly installed. Follow all owner's manual power connection instructions.



Initial Start-up

Once your spa is powered on it will enter Priming Mode (**PR**). During Priming Mode, press "Jets" button(s) repeatedly and be sure all pumps are free of air. Priming Mode lasts less than 5 minutes. Press "Temp" button to exit. After Priming Mode, the spa will run in Standard Mode (see Mode section).

The pump responsible for heating and filtration (pump 1 low-speed on non-circ system, or the circ pump on circ system) will be referred to simply as the pump. In multi-button sequences, if the buttons are pressed too quickly in sequence, they may not register.

Temp Control

(80°F - 104°F / 26°C - 40°C)

The last measured water temperature is constantly displayed, the displayed temperature is only current when the pump has been running for at least 2 minutes.

On panels with a single "Temp" or "Set" button, press the "Temp" button to set the temperature. Press "Temp" a second time before the display stops flashing to set the temperature. Each press of "Temp" will continue to either raise or lower the set temperature. If the opposite direction is desired, allow the display to revert to the current water temperature. Press "Temp" to display the temperature, and again to make the temperature change in the desired direction. After 3 seconds, the display will stop flashing and begin to display the current spa temperature.

Jets 1

Press "Jets 1" to turn pump 1 on or off and to shift between low and high speeds. The low-speed will turn off after 4 hours. High-speed will turn off after 15 minutes. Low-speed may run automatically at times, during which it cannot be deactivated from the panel, but high-speed may be operated.

Jets 2

Press the corresponding button once to turn the device on or off. The device will turn off after 15 minutes. Pump 2 may be two-speed on some systems. Some systems use this one button to control two devices. The first button press will activate one device. Press again to have both devices active. Press again to turn off the first device only. Press one more time to turn both devices off.

Light

Press "Light" to operate the spa light. Turns off after 4 hours.

Mode

Mode is changed by pressing "Temp" then "Light". **Standard Mode** maintains set temperature. **ST** will be displayed momentarily when you switch into this mode.

Economy Mode heats the spa to the set temperature only during filter cycles. **EC** will display when the water temperature is not current and will alternate with water temperature when the pump is running.

Sleep Mode heats the spa to within 20°F/10°C of the set temperature only during filter cycles. **SL** will display when the water temperature is not current and will alternate with the water temperature when the pump is running.

Preset Filter Cycles

The first preset filter cycle begins 6 minutes after the spa is powered on. The second preset filter cycle begins 12 hours later. Filter duration is programmable for 2,4,6, or 8 hours or for continuous filtration (indicated by **FC**).

The default filter time is 2 hours for non-circ systems and 4 hours for circ systems.

To program, press "Temp" then "Jets 1". Press "Temp" to adjust. Press "Jets 1" to exit programming.

For non-circ systems, low-speed pump 1 and the ozone generator (if installed) run during filtration.

For 24 hour circulation systems, the circ pump and the ozone generator (if installed) run 24 hours. In hot environments, the circ pump may turn off for 30 minute periods, except during filter cycles.

For non-24 hour circulation systems, the circ pump and ozone generator (if installed) run during filtration (and may also run automatically at other times).

At the beginning of each filter cycle all other equipment will run briefly to purge the plumbing.

Automatic polling (Standard Mode only)

The pump will activate for 1 to 2 minute to check the temperature every 30 minutes, whenever the set temperature is raised or whenever any other pump/blower is turned on.

Diagnostic Messages

Message	Meaning	Action Required
--	No message on display. Power has been cut off to the spa.	The control panel will be disabled until the power returns. Spa settings will be preserved until next power up.
--	Temperature unknown.	After the pump has been running for 2 minutes, the current water temperature will be displayed.
OH	"Overheat" - The spa has shut down.* One of the sensors has detected 118°F/47.8°C at the heater.	DO NOT ENTER THE WATER. Remove the spa cover and allow water to cool. Once the heater has cooled, reset by pushing any button. If spa does not reset, shut off power to the spa and call your dealer.
HH	"Overheat" - The spa has shut down.* One of the sensors has detected that the spa water is 110°F/43.5°C.	DO NOT ENTER THE WATER. Remove the spa cover and allow water to cool. At 107°F/41.7°C, the spa should automatically reset. If spa does not reset. Shut off the power to the spa and call your dealer.
SA	Spa is shut down.* The sensor that is plugged into the Sensor "A" jack is not working.	If the problem persists, contact your dealer. (May appear temporarily in an overheat condition).
Sb	Spa is shut down.* The sensor that is plugged into the Sensor "B" jack is not working.	If the problem persists, contact your dealer. (May appear temporarily in an overheat condition).
Sn	Sensors are out of balance. If alternating with spa temperature, it may just be a temporary condition. If flashing by itself, spa is shut down.*	If the problem persists, contact your dealer.
HL	A significant difference between temperature sensors has been detected. This could indicate a flow problem.	If the water level is normal, make sure all pumps have been primed. If problem persists, contact your dealer.
LF	Persistent low flow problems. (Displays on the fifth occurrence of messages within 24 hours.) Spa is shut down*	Follow action required for message. Heating capability of the spa will not rest automatically; you may press any button to reset.
dr	Possible inadequate water, poor flow, or air bubbles detected in the heater. Spa is shut down for 15 minutes.	If water level is normal, make sure all pumps have been primed. Press any button to rest. This message will reset within 15 minutes. If problem persists, contact your dealer.
dy	Inadequate water detected in heater. (Displays on third occurrence of message.) Spa is shut down.*	Follow action required for message. Spa will not automatically reset. Press any button to reset manually.
IC	"Ice" - Potential freeze condition detected.	No action required. All equipment will automatically activate regardless of spa status. The equipment stays on 4 minutes after the sensors detect that spa temperature has risen to 45°F/7.2°C or higher. An optional freeze sensor may be added to protect against extraordinary freeze conditions. Auxiliary freeze sensor protection is advisable in colder climates. See your dealer for details.

* - Even when spa is shut down, some equipment will turn on if freeze protection is needed.