

Self-Diagnostic Error Codes

The Spa Power 600 controller has extensive self diagnostic capabilities. In the event of a problem it will indicate an error number according to the nature of the problem. The error numbers and their meanings are listed below.

Error 1 (H2O) - Prime Failed

Prime failed is a special case. This is not necessarily a problem with the SP600 itself, but indicates that no water is being detected in the heater housing. On the push of the pump button the pump will run for 10 seconds to try to get water to the heater. If successful normal operation will resume. If unsuccessful, Error 1 (H2O) will be indicated on the display again.

Error 2 - Not Used. With any Error 3-8, spa operation will stop and not continue until the controller is reset. (Switched off and on again at the main power supply)

Error 3 - Stuck Button

This error indicates that one of the buttons in the touchpad is stuck or has been held down for more than one minute. This may be caused by water getting into the touchpad or by damage to the touchpad or its cable. Try reset spa. If still a problem contact your spa pool reseller.

Error 4 - No Water Sensor

This error indicates a problem with the optical water sensor in the heater. The problem may be caused by the sensor being disconnected or by damage to the sensor. Try reset spa. If still a problem contact your spa pool reseller.

Error 5 - Overtemperature

This error indicates that the digital temperature sensor in the heater or pool has detected a temperature of over 45°C or more. This may not be a problem with the SP600, it may be caused by excessive pump use in hot weather, or pump failure. Check pool temperature with manual thermometer to see if temperature sensor is working correctly. Turn off spa and allow time for water to cool. If still a problem contact your spa pool reseller.

Error 6 - Thermal Cut Out Tripped

This error indicates that the safety electromechanical over temperature cut out on the heater has operated. This is not necessarily a problem with the SP600. It may have occurred from an air lock around the element, high temperatures during shipping, or failure of the pump. This automatic cut out will only resume once the element has cooled below about 38°C. The unit must be reset before it will resume operation. (Switch off and on at the mains power supply)

Error 7 - Stuck Relay

This error indicates a problem with the heater control circuitry inside the unit. Contact your spa pool reseller.

Error 8 - No Temperature Data

This error indicates a problem with the digital temperature sensor in the heater or pool wall. The sensor may have become disconnected or damaged. Contact your spa pool reseller.

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SPA-QUIP

SPA POWER 600 User Guide



Congratulations on purchasing the latest Spa Power 600 control system. This controller utilises the latest technology and innovative optical and digital sensor design. The greater variety of optional accessories, user-friendly touchpad and reliable components provide you with the most sophisticated and superior controller in its class.

Temperature Control

The SP600 automatically controls the pump and heater to maintain the water at the desired temperature as set by the user. The user can leave the system to look after the spa and know it will be at the correct temperature whenever he or she wants to use it.

In-Heater Temp Sensor

Units with the standard in-heater temperature sensor will display the **SET TEMPERATURE** on the LED readout as default. The non-default actual sensed water temperature value is displayed by simultaneously pressing the Up & Down buttons on the touchpad. (see below)

Optional In-Pool Temp Sensor (if fitted)

Units fitted with the optional in-pool temperature sensor will display the **SENSED TEMPERATURE** on the LED readout as default. The non-default set temperature value is displayed by simultaneously pressing the Up & Down buttons on the touchpad. (see below)

Adjusting Set Temperature

37.0

The set temperature can easily be adjusted by holding down the Up or Down buttons on the touchpad. When adjusting the set temp ensure you hold the button down, as there is a slight delay before the buttons operate to reduce the risk of accidental adjustment. The pool temperature will be maintained very close to the set temperature.



UP Increase the set temperature by 0.5°C per beep (Max = 40.5°C)

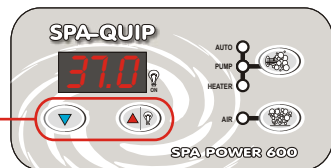


DOWN Decrease the set temperature by 0.5°C per beep (Min = 20.0°C)


Non-Default Display Value

The SP600 display can alternatively show the user the non-default display value. (either sensed water temperature or temperature set point). This value can be checked if necessary by pressing the Up & Down buttons simultaneously.

Press both buttons simultaneously



Pump Operation

The Pump Button  is used to turn the pump on and off, or select speeds if a two-speed pump has been fitted. The default state is in the Auto Mode in which the pump and heater are controlled automatically to maintain the desired set water temperature. Three or four pushes on the pump button cycle the system as follows:

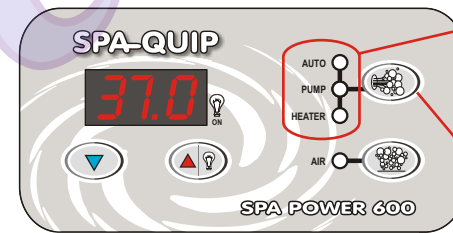
Single Speed Pump

- Push 1 - Pump ON (Heater automatic)
- Push 2 - Pump OFF (Heater OFF)
- Push 3 - Auto Mode (Pump & Heater automatic)

Two Speed Pump

- Push 1 - Pump LOW (Heater automatic)
- Push 2 - Pump HIGH (Heater automatic)
- Push 3 - Pump OFF (Heater OFF)
- Push 4 - Auto Mode (Pump & Heater automatic)

Note: If the user does not adjust the system back into Auto mode, the system reverts to automatic operation by itself, 90 minutes after the last push of the pump button.



Indicator Lights

- AUTO Flashing = No Water
- PUMP Flashing = Sleep Mode
- HEATER Flashing = Error

Pump Button

Auto Light

The yellow Auto indicator light will appear on the touch pad whenever the system is in full automatic control mode. In this mode the system automatically activates the pump and heater to maintain set water temperature. If this light is flashing, the water sensor is not detecting any water.


Pump Light

The green Pump indicator light will appear on the touch pad whenever the pump is running, in both auto and manual use mode. If this light is flashing, the spa is in Sleep Mode.

Heater Light

The red Heater indicator light will appear on the touchpad whenever the heater element is on, in both auto and manual use mode. Whilst using the spa in manual mode, if needed the element will engage and heat the water to maintain set water temp. However if the user activates the air blower whilst the pump is running and element engaged, the system will loadshed and turn off the element until the air blower has been turned off. This is to keep the total power load to a safe level. If this light is flashing the system has an error. (See back page)

Air Blower Operation

The Air Button  controls an auxiliary air blower. It is used to turn the blower on and off, and select different operating modes if a Spa Power Variable-Speed Blower (SPVSB) has been fitted. Two or four pushes of the air button cycles the blower as follows:

Standard Air Blower

Push 1 - Blower ON

Push 2 - Blower OFF

Spa Power Variable-Speed Blower (SPVSB)

Push 1 - Blower ON (Full Speed)



Push 2 - Blower ADJUSTABLE (Adjustable Speed)



Push 3 - Blower OSCILLATING (Oscillating Speed)



Push 4 - Blower OFF (Default State)



Note: If left on, this accessory will automatically switch off after 20 minutes. If the heater element is on, switching on this accessory will cause the heater to loadshed and switch off. This is to keep the total power load to a safe level.

Adjustable Speed Mode

If a Spa Power Variable-Speed Blower is fitted, the spa user has the ability to adjust the blower speed to any desired speed setting. The speed of the blower is adjusted by the up and down arrows on the touch pad. Note: The blower speed can be adjusted in both Adjustable Speed & Oscillating Speed Mode.

Step 1) Press Air Button **twice** to set in Adjustable Speed Mode




Step 2) Press Up  to **increase** speed of blower

Step 3) Press Down  to **decrease** speed of blower

** The same procedure applies in Oscillating Mode. Use the up and down buttons to adjust blower speed.

Light Operation

The multi-function Light Button  is used to turn the light on and off, and select different operating modes if a Spa Power Variable Colour Light has been fitted. Five short presses of the button will cycle the light as follows:

(Note: This is a multi-function button. Short presses of the button activate the light functions. If the button is held down it will begin to increase the set temperature of the spa. If the button is pressed when a Spa Power Variable Speed Blower is set to adjustable mode it will increase the speed of the blower)

Light Button

Push 1 - Light ON (Colour - White)


Push 2 - Light ADJUST (Adjustable Colour Mode)

Push 3 - Light CYCLE SLOW (Cycle through colours - slow)

Push 4 - Light CYCLE FAST (Cycle through colours - fast)

Push 5 - Light OFF (Default State)

Adjustable Colour Mode

When set to this mode pressing the Down button  will sequentially select through all the available light colours. The last colour set in this mode will be remembered, and will display first the next time the user sets the light to adjustable colour mode.

If the light is on, pressing the Down button in any of the light modes will automatically switch the light to Adjustable Colour Mode.



When the light is on, a small red dot will appear beside the Light On Icon at the bottom corner of the LCD readout. If left on the light will automatically switch off after 30 minutes.



Auto Sanitising (Filtration)

The Spa Power 600 automatically maintains the filtration/sanitising of the spa pool water. The minimum amount of filtration time is programmable by the user, and can be adjusted between 0 and 15 minutes per hour (0 to 6 hours per day).



In order to maintain correct filtration of the pool water, the SP600 monitors the time for which the pump runs when maintaining water temperature. If the pump has only run for a short time, the system will automatically run the pump for an additional period every hour to reach the minimum filtration time as set by the user.

Each day of the year experiences different ambient temperatures. Because of this the spa pump will run for different periods at different times every day, depending on how often the spa comes on to heat the water.


Adjusting Minimum Filtration Time

To display the adjustable minimum filtration time setting, the user must press the Air Button  and Down Button  simultaneously.



The minutes of filtration time per hour will now display on the digital LCD readout. Holding down the Up Button  or Down Button  will adjust the filtration time setting between 0 and 15 minutes per hour. (0 to 6 hours per day) The default setting is 10 minutes per hour.

Clean Up Cycle

If desired, a clean up cycle can be initiated to filter the water after the spa pool has been used. This is done by simply pushing the Pump Button . This switches the spa from auto mode to manual and starts up the pump. The pump will run for 90 minutes circulation the water through the filter. After 90 minutes the system will then revert to auto mode and maintain the temperature ready for the next time the spa pool is used.

Sleep Time (Optional Timeclock)

If the optional time clock has been fitted, sleep mode is used to disable automatic temperature maintenance in order to silence the spa pool during your hours of sleep. The sleep time setting is done using the digital time clock on the front of the control box. (See below for setting instructions) The spa can still be used manually within sleep mode times as per normal.

To Set Current Time and Day

1. Press the **RESET** button before use.
2. Hold down **CLOCK** button and press **DAY** button until current day is selected. Release both buttons.
3. Hold down **CLOCK** button and press **HOUR** button until correct hour is set. Release both buttons.
4. Hold down **CLOCK** button and press **MIN** button until correct minute is set. Release both buttons.
5. After setting the weekday and time, the seconds will reset automatically and clock will begin keeping time.

To Set Programs

1. Press the **TIMER** button. "1ON" will appear at the left side of the display. This is the first program that you require the spa to turn on.
2. Press **DAY** button to select the program period. There are 15 settings for choice.
(1) Mon to Sun (2) Mon (3) Tue (4) Wed (5) Thu (6) Fri (7) Sat (8) Sun (9) Mon + Tue + Wed + Thu + Fri
(10) Sat + Sun (11) Mon + Tue + Wed + Thu + Fri + Sat (12) Mon + Wed + Fri (13) Tues + Thu + Sat
(14) Mon + Tue + Wed (15) Thu + Fri + Sat
3. Press **HOUR** button to set hour to turn on.
4. Press **MIN** button to set minutes.
5. Now the start time has been set, press **TIMER** button again. "1OFF" will appear on the display. This is the time you which the device to switch off
6. Repeat the same procedure until "1OFF" program is set.
7. Your timer gives you up to 8 different programmable periods. You can use all 8 settings, or as few as you like.
8. To Review your set programs press the **TIMER** button and keep pressing to advance through each setting.

Safety Notes

Before using ensure that the spa pool has been connected to a suitable weather protected outlet socket, equipped with a double poll isolating switch, which is of the correct rating and complies with the local wiring regulations.

When installing refer to your local wiring code. In particular refer to ECP 2 & ECP 25 (AS / NZ) and EN 60364-4-1 & EN 60364-7-1 (EU). The system must be installed in such a way that live parts are not accessible by a person in the pool. If a supply cord is not fitted the system must be permanently connected to fixed wiring through a 30mA or less RCD.

This appliance is not intended for use by young children or infirm persons without supervision. Young children should be supervised to ensure they do not play with the appliance.