Control System CS 9707

Pentair
Spa & Bath Products
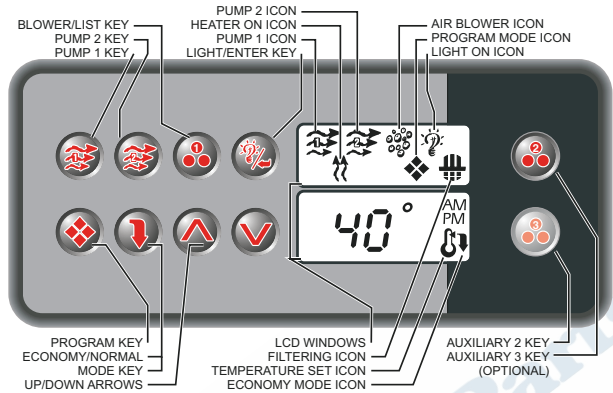
*This **Quick Reference Card** is a summary of your spa's main functions and provides a quick overview of operations accessible from your spa side keypad*

BLOWER/LIST KEY
PUMP 2 KEY
PUMP 1 KEY
PUMP 2 ICON
HEATER ON ICON
PUMP 1 ICON
LIGHT/ENTER KEY
AIR BLOWER ICON
PROGRAM MODE ICON
LIGHT ON ICON

PROGRAM KEY
ECONOMY/NORMAL MODE KEY
UP/DOWN ARROWS
LCD WINDOWS
FILTERING ICON
TEMPERATURE SET ICON
ECONOMY MODE ICON
AUXILIARY 2 KEY
AUXILIARY 3 KEY (OPTIONAL)

Starting the pumps

Pump 1 Key: Press this key once to turn Pump 1 on to Lo speed, press this key a second time to turn Pump 1 onto Hi speed, a third press will turn this pump off. A built in timer will shut the pump off after 20 minutes of running unless done so manually. The pump icon will appear on the LCD while the pump is running on Hi speed and flash while it is on Lo speed. If the filter cycle appears it means that a filtration cycle has begun, if you manually turn on any of the pumps or blower while the filtration cycle is going the controller will delay the filter cycle until 30 minutes after the last button press.

Pump 2 Key: Press this key once to turn Pump 2 on, a second press will turn the pump off. A built in timer will shut the pump off after 20 minutes of running unless done so manually. The Pump 2 icon will appear on the LCD while the pump is running.

Starting the Blower

Blower Key: Press this button once to turn the blower onto Hi speed, the blower will automatically go into a 30 second purge cycle to make sure all water is blown out of the air lines before it can be turned down to Mid or Lo. If you press the blower button while the blower is in a purge cycle it will alter what level the blower will be after the purge cycle is completed. For example, if you press the blower button once while it is in it's purge cycle it will automatically go to Mid when the purge cycle finishes, press the blower button twice while it is in it's purge cycle and it will automatically go to Lo speed when the purge cycle finishes, press it three times while in a purge cycle and it will automatically turn off after the purge cycle finishes.

Turning on the Light:

Light/Enter Key: Press the *Light/Enter* key to turn the light onto it's highest intensity, a second press will turn it onto medium, a third press will turn it onto Lo and a fourth press will turn it off. The light will automatically turn off after 2 hours. The light icon will appear when the light is on Hi and flash when it is on both Mid and Lo intensities. The second function for this key is to allow alteration of programming functions, this is further explained under programming parameters.

Optional upgrade to LED Lights: LED lights will be programmed for single press on and single press off.

Setting the water Temperature

Temperature Set Keys: Press the *Up Arrow* key to increase your desired water temperature. Press the *Down Arrow* key to decrease your desired water temperature. The temperature can be set in half-degree increments within the range (15 DEG C - 40 DEG C). The new/altered set temp will show on t-pad for 5 seconds as confirmation. During this time the set point icon will appear to let you know this is the desired and not the actual temperature. After 5 seconds the display will revert back to the current water temperature. When the temperature drops 0.5 DEG C below the set temperature the heater and pump will be turned on until the temperature reaches 0.5 DEG C above the set temperature. The heater icon will appear when the heater is on and flash when heater is on standby.

Programming Parameters:

There are 4 parameters that may be programmed. Follow these procedures to set each parameter: Press and hold the *Program* key, the program icon will appear. You may continue to press the *Program* key to access the desired parameter to be modified. Once you have reached the parameter to be modified, press the *Light/Enter* 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, Light/Enter* and *Up & Down Arrow* keys will be ignored.

Time of day: Press and hold the *Program* key for 5 seconds, the time will appear with the hour flashing. Press the *Light/Enter* key to allow alteration and then use the *Up and Down Arrows* to set to desired hour. Once set, press the *Program* key to access the minute setting. Press the *Light/Enter* key again to allow alteration and then use the *Up and Down Arrows* to set to desired minute. Press the *Program* key to confirm the new setting. The display will then go to the next parameter to be programmed.

Filtration start time: (Fon 1, Fon 2) It is possible to have your spa filter either 2 or 4 times a day. If you set both Fon 1 and Fon 2 your spa will filter 4 times a day as both filter settings have a mirror image setting. I.e. If you set Fon 1 as 6AM it will also come on at 6PM. When Fon 1 shows on the LCD press the *Light/Enter* key to allow alteration then adjust start time using the *Up and Down Arrows*, you can set it between 00 (12 o clock) and 11 (11 o clock). Press the *Program* key again to alter minutes, press the *Light/Enter* key to allow alteration, you can set between 00 and 59. Press the *Program* key again to confirm the new setting. The display will then go to the next parameter to be programmed.

Filtration Duration: (Fdu 1, Fdu 2) When Fdu 1 shows on the LCD press the *Light/Enter* key to allow alteration then adjust duration time using the *Up and Down Arrows*. Press the *Program* key again to confirm the new setting. The display will then go to the next parameter to be programmed.

Additional Features:

Economy Mode: A case where more than one economy cycle is needed is very uncommon, economy cycles are generally used by people who travel and wish to have a spa shortly after they return home. Economy mode makes it cheaper to maintain a spa at lower temperature during long periods without use.

Economy start time: (Eon 1, Eon 2, Eon 3) You can set the economy mode to start from 00-23 "24 hour clock set up". When Edu 1 shows up on the LCD press the *Light/Enter* key to allow alteration then adjust economy start time using the *Up and Down Arrow* keys.

Economy duration: (Edu 1, Edu 2, Edu 3) You can set the economy duration from OFF-24. When an economy mode is activated the spa will be maintained at a temperature 12 DEG C lower than the set temperature.

Inverted Display:

The lower display can be inverted for easy viewing inside or outside the spa. Press and hold the *Economy* key for 2 seconds to toggle between inverted and normal display modes.

Panel lock:

It is possible to partially lock your touch pad. This will lock all of the buttons except for light, Pump 1, Pump 2, Pump 3 and blower. To activate the partial lock function press and hold the *Pump 1* key for 5 seconds, "LocF" will appear indicating that partial lock is activated. To unlock simply press and hold the *Pump 1* key for 5 seconds until "Uloc" appears indicating that the touch pad has returned to normal operation.

Freeze mode:

If the actual spa water temperature drops below a preset factory setting the pump and heater will be turned on until the spa water has been sufficiently heated to prevent freezing. All functions (except the alarms) will be disabled while the freeze protection is active.

Smart Winter Mode:

If the system detects ambient conditions below a preset factory setting, the system will automatically activate the Smart Winter Mode for a period of 24 hours. In this mode, if a pump has not been powered in the last 2 hours the system will turn it on for 1 minute to prevent freezing. The Filter Mode Light indicator will flash while the pump is running in this mode.

Note: If you notice the pump coming on every 2 Hours, this is the most likely cause. This will continue for a 24 hour period. This is normal and is the systems protection against freezing.

Over Temperature Protection:

If the water temperature exceeds 44.4C at the temperature sensor, 3 flashing dots will appear below the temperature display and the heater as well as all other outputs will shut off. After the water has cooled down power to the spa must be cycled off then on to reset the system. If the spa water temperature does not seem to be elevated the error indication may have been caused by poor water flow or electrical line interference (thunder storms, voltage surges etc). Simply reset and monitor the system.

Power-Up detection:

Upon first powering the system or if a power outage occurs, the display will flash until a key is pressed. This feature also lets the user know there has been a power failure.