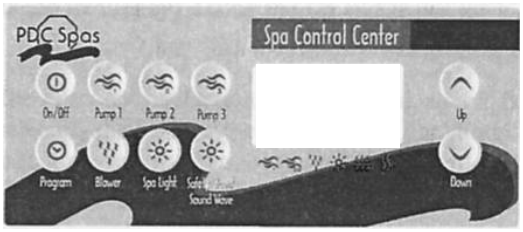
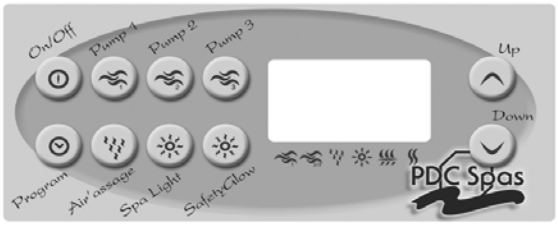
# Gecko GE Deluxe Control Operation Guide




## System On/Off Switch

This key is used to turn the entire system On/Off the entire system. When power is applied to the unit, it is "On" by default. The unit will regulate the spa temperature to the desired set point and the display will show the current temperature.

When the system is "Off", all outputs are turned off for 30 minutes and the display shows "Off" for at least 10 seconds. The filter cycle, the smart winter mode and the heater cannot start during this time. All keys are disabled except the On/Off key to restart the system before the 30 minutes ends.

Note: The filter cycle is cancelled when the system is turned off.

## Pump #1 Switch

This key is used to turn the pump #1 in the sequence on to low, high, and then off. A built-in 20 minute timer will shut the pump off unless the user does so manually.

The arrow above the pump #1 logo on the display will be on when the pump is running, or it will blink if the pump is on low speed.

When there is a heat demand, a cool down period, or a filter cycle (last phase), the controller will run pump #1 in low speed. Then if the user presses the pump #1 key the pump will go directly to high speed. This has been added to give the user feedback.

## Pump #2 Switch

This key is used to turn on the pump #2 in the sequence on and then off. A built-in 20 minute timer will shut the pump off unless the user does so manually.

The arrow above the pump #2 logo on the display will be on when the pump is running.

## Pump #3 Switch

This key is used to turn the pump #3 in the sequence of on and then off. A built-in 20 minute timer will shut the pump off unless the user does so manually.

The arrow above the pump #2 and #3 logo on the display will be on when the pump is running.

## Blower Switch

This key is used to turn the blower in the sequence of low, high, and then off. A built-in 20 minute timer will shut the blower off unless the user does so manually.

The arrow above the blower logo on the display will be on when the blower is running. It will blink if the blower is on low speed.

## Program Switch

**Filter Cycle Definition:** A filter cycle consists of starting pump #2, pump #3, and the blower for 1 minute to purge their plumbing; then pump #1 starts on low speed for the duration of the cycle.



The filter cycle icon is displayed when there is an active filter cycle.

## Filter Cycle Duration and Frequency Adjustment

The filter cycle duration is user programmable. By pressing the program key the control display shows the current duration value "Fdxx", where "xx" is from 0-12. Using the up and down keys this value can be adjusted as desired.

The filter cycle frequency (per day) adjustment is user programmable by pressing a second time on the program key. The display will show the current frequency value in the form of "FFxx", where "xx" is the frequency. Using the up and down keys the value can be adjusted from 1-4.

If duration 0 is selected the filter cycle never comes on and the frequency selection is not offered. If any of the following combinations is selected the filter cycle is constantly on: "Fd06" with "FF04", "Fd08" with "FF03", or "Fd12" with "FF02". In these cases the initial 1 minute purge will still occur at every start of a cycle.

The default frequency is two times per day and the default number of hours per cycle is two.

During the duration adjustment of the frequency per day the system stores the new duration and the new frequency. These will take effect only at the next filter cycle. Note: this is only possible if no keys are used for 5 seconds after setting desired adjustment. If the user exits the duration of frequency adjustments by pressing the program key again the new filter cycle is started immediately and a new 12 hour cycle will begin.

## Safety Glow Light

This key is used to turn the safety glow light on and off. A built-in 4 hour timer will shut the safety light off unless the user does so manually.

## Up and Down Keys

These keys are used to set the temperature of the water and program other system functions. As soon as the user presses one of those keys the display will show the current set point and will keep showing it for 5 seconds after releasing the key. Pressing the keys will either increase or decrease the current set point. The set point logo on the display tells the user if the display is showing the current set point or the actual temperature of the water.

The water temperature can be adjusted in 1 degree increments from 59˚ to 104˚F (15˚ to 40˚C). After a power down the default set point is 95˚F.

When the water temperature is 1˚F (0.5˚C) lower then the set point the heater will come on until the water temperature reaches the set point plus 1˚F (0.5˚C). The heater logo on the display will blink when the system calls for heat and will come on when the heater is turned on.

## Panel Lock

It is possible to lock out all the keys. This feature is helpful when young children could have access to the keypad. To lock/unlock the keypad simply press the pump #1 key for at least 5 seconds. There are 2 keypad lock modes: the partial lock and the full lock. The partial lock locks only the programming functions: the pump, the blower, and the light keys remain functional. The Full lock locks all keypad functions.

To Lock, press on the pump #1 key for 5 seconds: at this point "LocP" will be displayed. If the key is released at this time the keypad will be in partial lock. If the pump #1 key is pressed for another 5 seconds "LocF" will be displayed and the keypad will be fully locked.

When the keypad is locked all automatic functions of the system will run as usual. When a locked key is pressed a "LocP" or "LocF" will be displayed for 1 second.

To unlock a locked system press the pump #1 key until the "Uloc" sign appears in the display screen. The pump #1 key must be held for at least 5 seconds.

## Secondary Electronic Control

This keypad has 4 keys that have exactly the same functionality as the pump #1, pump #2/3, the blower, and the light keys as the main keypad.

This keypad is usually installed in large spas. It allows the users to be able to operate these functions from another location in the spa. The user cannot toggle the temperature from the secondary electronic control.

## Overtemp Error

If the water temperature reaches 112˚F on the regulation probe the display will start blinking and will stop all the pumps and accessories, the filter cycle and user demand will be cancelled.

The only things that will still work during an overtemp error will be the smart winter mode and all the keys that do not start the accessories.

The system will return in the normal mode when the temperature returns to 109˚F.

## High-Limit

The high-limit circuit will shut the heater off if the temperature of the water at the high-limit sensor reaches 119˚F. Should this occur the display will show "....." and a LED will light up on the PCB, but all of the accessories will still function.

The Heater will remain off until a complete shut down of the circuit occurs.

## Overtemp During Filter Cycle

In order to prevent excessive water temperatures due to long filter cycles during warm weather the system has a special safeguard.

If the water temperature exceeds the set point by more than 2˚F for more than 3 hours the system will cancel the filter cycle and the filter cycle will blink for the remainder of the filter cycle. The filter cycle icon blink pattern will be: ON for 1/2 second, OFF for 1/2 second, ON for 1/2 second, and then finally OFF for a longer 1 1/2 second period.

## Ozone Output

During the filter cycle the ozone output is turned on

## Temperature Display in Fahrenheit or Celsius

The temperature can be displayed in Fahrenheit or Celsius. To toggle between those choices, press on the light key for 5 seconds.

## Motion Glow Lighting (Spectra Lighting)

All Ultra and Platinum series spas are equipped with motion glow lighting. This in an LED bulb that has nine different programs. Repeated pressing of the light button will switch the light between programs.

## Power-Up Detection

After a power-up the display will blink until somebody presses a key. This feature is to let the user know that a power failure has occurred.

## Smart Winter Mode

This system prevents the water from freezing in the pump plumbing. An onboard sensor continuously checks the ambient air temperature in the pack. If at any time the temperature goes below 68˚F the system activates the winter mode for the next 24 hours, even if the temperature returns above 68˚F . In this mode, if a pump has not been turned on since a determinate time (see table below) depending on the temperature, the system will start all pumps for 1 or 2 minutes to circulate warmer water in the plumbing depending if pump #3 is configured. When the pumps are running, because of this protective feature, the filter cycle icon on the display will blink.

When the smart winter mode is starting the pumps do not start all at the same time. The sequence follows:

First 2 seconds: Pump #1 low and circulation pump is starting
After 2 seconds: Pump #1 is changing speed and goes to high speed
After 4 seconds: Pump #2 is starting at low speed
After 6 seconds: Pump #2 is changing speed and goes to high speed
After 1 minute: All other pumps are stopping and pump #3 is starting.

Note: If a key is pressed during a 1 minute cycle the cycle will be cancelled

## Temperature Sensor Failure

If the value returned by the temperature sensor does not seem to be in the normal range (between 32˚ and 122˚F) the display will show the wrong temperature, the heater will not be allowed to turn on, and the heating demand will be cleared. This error will also clear the filtration cycle, but the smart winter mode will remain operational. The pumps will be allowed to work manually, if the error is detected in the low limit (34˚F).

If the error is not present anymore it can be cleared by pressing a key.

## Inverted Display

It is possible to invert the display so that it is readable from either inside or outside the spa. To do this just press on the program key for 5 seconds to toggle between the inverted mode or regular mode.

At power-up the display defaults to the non-inverted mode. Also, in the inverted mode, some icons (i.e. F and C) are not displayed.

PDC spas

**All service must be performed by a qualified licensed electrician.**
**Test the GFCI routinely; at least monthly.**