



# Quick Reference Card

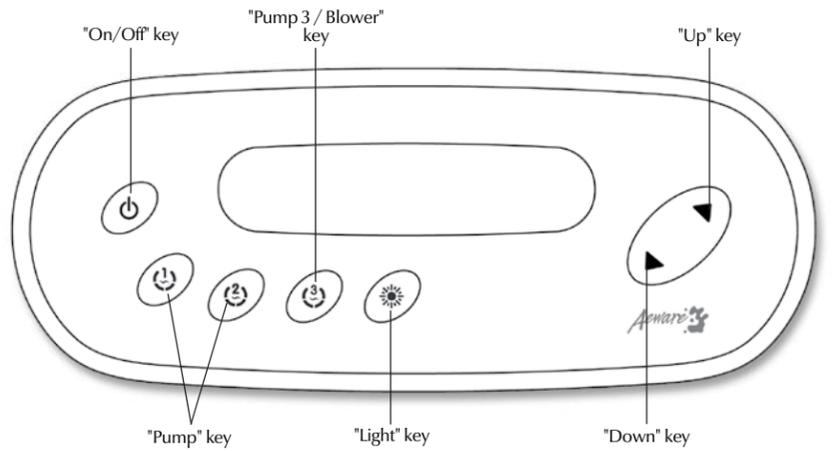
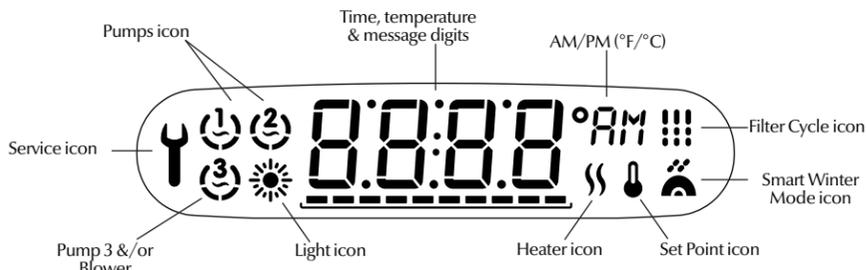
## in.k450 keypads for in.xm spa systems



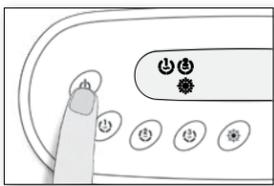
### in.k450™

Compact full-function keypads for in.xm spa systems

The Quick Reference Card provides a quick overview of your spa's main functions and the operations accessible with your digital control pad. This QRC depicts a generic overlay, custom versions may vary.



Spa Functions



#### On/Off key

Depending on the manufacturer, this button can have the following functions: Stop or Pause mode and/or Economy mode.

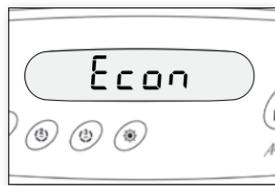
**Stop mode:** This mode allows you to stop all outputs (excluding heat requests) and the filtration cycle. To activate Stop mode, quickly press and release the On/Off button.

**Pause mode:** This mode allows you all outputs and automatic functions (excluding heat requests) for 30 minutes. To use



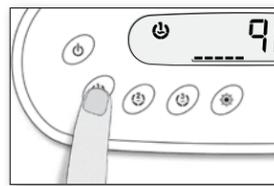
Pause mode, quickly press and release the On/Off button. The screen will alternate between a "Stby" message and the water temperature. Press the On/Off button again to restart the system before the end of the preprogrammed delay. The spa light will flash for a couple of seconds before the end of the delay to alert you that the system will be resuming normal operations.

**Manual economy mode\*:** This mode allows you to save energy by setting the temperature to 20°F



(11°C) below the current set temperature. To use Economy mode, press the On/Off button for 5 seconds. The screen will alternate between an "Econ" message and the current water temperature. Hold the On/Off button for another 5 seconds to exit Economy mode.

*\*Only available on select models.*

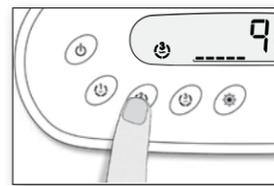


#### Pumps 1 to 3

Press one of the pump buttons to start the corresponding pump at low speed. Press the button a second time to start that pump at high speed (for dual speed pumps\*). Press a third time to shut off the pump. A built-in timer will automatically shut off the pump if it is not manually shut off before the preprogrammed time.

The pump icon will be animated when the pump is active. For dual speed pumps, the icon will be slower at low speed and faster at high speed.

*\*For single speed pumps press once to activate the pump, and a second time to shut it off.*

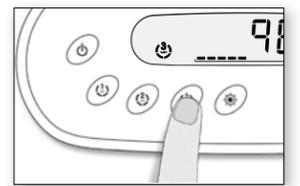


#### Blower or

Depending on the configuration of the spa and/or keypad, the blower will be activated by either the pump 2 or pump 3 button. The button associated with the blower can have one of the two following functions: Blower only, or pump and blower.

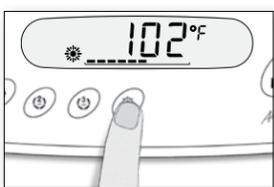
**Blower only:** Press the associated pump button to start the blower. Press it a second time to shut off the blower.

**Pump and blower:** Successive presses on the pump/blower button will activate accessories in the following order: Pump only - Pump and blower - Blower only - Deactivate



A built-in timer will automatically shut off the blower if it is not manually shut off before the preprogrammed time.

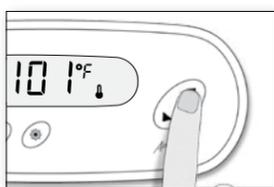
The associated pump icon will be animated when the blower is active.



#### Light key

Press **Light** key to turn light on. A second press turns light off. A built-in timer automatically turns light off after 2 hours, unless it has been manually deactivated first.

The "Light" indicator lights up when light is on..



#### Up/Down keys

Use **Up** or **Down** key to set desired water temperature. The temperature setting will be displayed for 5 seconds to confirm your new selection.

The "Set Point" icon indicates that the display shows the desired temperature, NOT the current water temperature!

### Programming Steps

#### Programming the filter/purge cycles

Depending on system configuration your spa will perform either a filter or a purge cycle. The filter cycle menu consists of the following parameters: the start time (FS), the duration (Fd) and the frequency (FF). The purge cycle menu consists of the following parameters: the start time (PS) and the frequency (PF).

A filter cycle consists of starting all the pumps and blower in high speed for 1 minute (purge step) then, the pump associated with the filter will run in low speed for the remaining duration of the filter cycle (clean step).

A purge cycle is used when the spa is equipped with a 24 hour circulation pump which provides a continuous clean step. It consists of starting all the pumps and blower in high speed for 1 minute.



#### Program menu

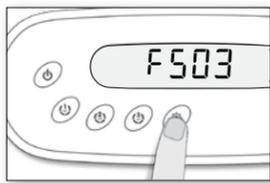
Depending on the keypad configuration, the program menu will be accessible via either the Program key (check mark) or the Light key. A long press of 5 seconds will allow you to enter the program menu. In the program menu, the following parameters can be set: the clock, the filter cycles or the purge cycles, the economy mode and the temperature units. While you are in the program menu, use the **Up** or **Down** keys to adjust the parameters and use the **Program** or **Light** key to jump to the next parameter. The changes will be saved after the confirmation of the last parameter only. If there is no key press for 10 seconds, the system will exit the program menu without saving the changes.



#### Setting the clock

Enter the program menu by holding down the **Program** or **Light** key for 5 seconds. The display will show the current clock setting, the minutes will be on solid and the hours will flash.

Depending on factory settings your system may be set to a 24-hour military notation or a regular 12-hour notation.

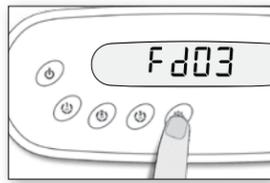


### Setting filter cycle start time

**Setting the hour:** Use the Up or Down keys to adjust the hours (AM/PM). Press the Program or Light key to jump to the next parameter, the minutes.

**Setting the minutes:** Use the Up or Down keys to adjust the minutes. Press the Program or Light key to jump to the next parameter, the filter start time (FS) or the purge start time (PS).

The display will show FSxx, "xx" representing the starting hour of the filter. Use the Up or Down key to adjust the hours. Use the Program or Light key to jump to the next parameter, filter duration (Fd).

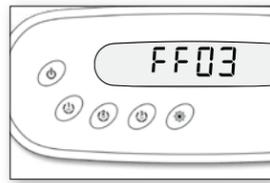


### Setting filter cycle duration

The display will show Fdxx, "xx" representing the duration in hour of the filter cycle. Use the Up or Down key to adjust the duration. Use the Program or Light key to jump to the next parameter, filter frequency (FF).

0 = no filtration  
24 = continuous filtration

*It's not recommended to set this to "0".*



### Setting filter cycle frequency

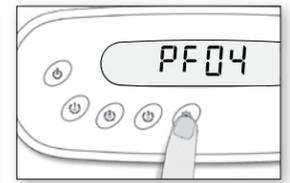
The display will show FFxx, "xx" representing the number of filter cycles per day. Use the Up or Down key to adjust the frequency. Use the Program or Light key to jump to the next parameter, economy mode (EP).

!!! The "Filter cycle" indicator lights up when filter is on. Flash when suspended.



### Setting the purge cycle start time

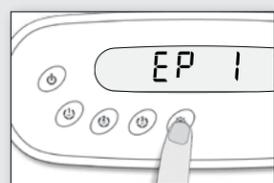
The display will show PSxx, "xx" representing the starting hour of the purge cycle. Use the Up or Down key to adjust the hours. Use the Program or Light key to jump to the next parameter, purge frequency (PF).



### Setting purge cycle frequency

The display will show PFxx, "xx" representing the number of purge cycles per day. Use the Up or Down key to adjust the frequency. Use the Program or Light key to jump to the next parameter, economy mode (EP).

!!! The "Purge cycle" indicator lights up when purge is on. Flash when suspended.

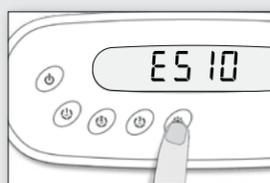


### Setting economy mode\*

This mode allows you to lower the temperature set point of the spa by 20 °F (11 °C) during a certain period of the day.

The display will show EPx, "x" representing the state of the programmed economy (0 = disable, 1 = enable). Use the Up or Down key to set the program economy to enable or disable.

Use the Program or Light key to jump to the next parameter, economy start time (ES).



### Setting economy start time\*

The display will show ESxx, "xx" representing the hour at which the economy mode will become active. Use the Up or Down key to adjust the hour. Use the Program or Light key to jump to the next parameter, economy end time (EE).

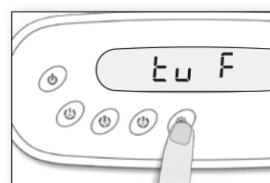
When the Economy mode is ON, the display will toggle between the "Econ" message and the water temperature.



### Setting economy end time\*

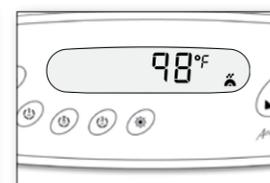
The display will show EExx, "xx" representing the hour at which the system will resume its normal operation. Use the Up or Down key to adjust the hour.

Use the Program or Light key to jump to the next parameter, temperature unit (tu).



### Setting temperature unit

Water temperature can be displayed in either Fahrenheit (°F) or Celsius (°C). The display will show tu x, "x" representing the temperature unit F or C. Use the Up or Down key to change the setting. Use the Program or Light key to save all the parameters.



### Smart Winter Mode

Our Smart Winter Mode protects your system from the cold by turning pumps on several times a day to prevent water from freezing in pipes.

!!! The "SWM" indicator lights up when a freeze condition is detected and flashes when the purge is active.

### Cooldown

After heating the spa water to the desired Set Point, the heater is turned off, but its associated pump (Pump 1 Low-speed or CP) remains on for a predetermined period of time to ensure adequate cooling of the heating element, this prolongs its useful life. The heater icon flashes during this time.

\* Note that the parameters for the economy mode settings are associated to specific low level configuration of the system that are not present in all software revisions.

### Water temperature regulation

In a regulation cycle, the system first generates water flow through the heater housing and the plumbing, in order to ensure accurate water temperature readings as well as avoiding heater activation in dry conditions. After verifying pump activation and taking a water temperature reading if required, the system automatically turns the heater on to reach and maintain water temperature at Set Point.

The "heater" indicator lights up when the heater is on. Flash when taking water temperature reading.

## Icons Description



**Light icon:** The "Light" icon lights up when the light is on. The icon's number of rays is proportional to the light's intensity.



**Pumps icon:** The "Pump" indicator numbers light up and their icons become fast animated when pump or blower are in high speed, slower animated icon when pump or blower are in low speed.



**Smart Winter Mode icon:** The "SWM" icon automatically turns on when freeze protection is active. It flashes while system purges the spa plumbing.



**Filter Cycle icon:** The "Filter Cycle" icon lights up when filter cycle is on.



**Service icon:** A problem has been detected. Do not enter the water! Spa service is required.



**Heater icon:** The "Heater" icon lights up when the heater is on. It flashes when:  
1- there is a call for heat and heater has not started yet,  
2- heater has just turned off and element is cooling down or  
3- not enough current available to start heater.



**Progress bar:** A visual indication of the time remaining before an equipment is turned off or before the end of the standby mode



**Set Point icon:** The "Set Point" icon automatically turns on when set point setting menu is activated. (SP message on display).

