



Quick Reference Card

in.k450 keypads for in.xm spa systems

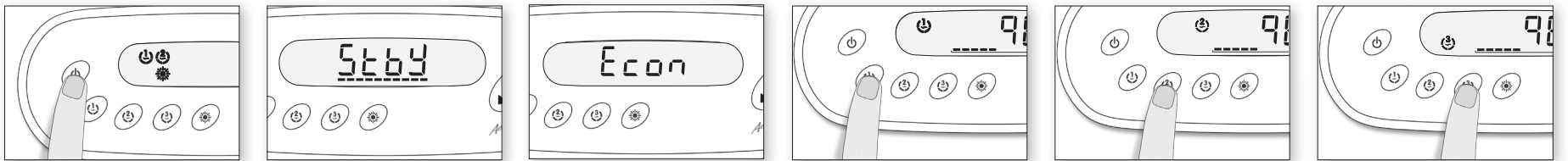


in.k450

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 spa manufacturer, this key may have one of the two following functions: On/Off or Standby mode and/or Economy mode.

On/Off mode: This mode allows you to stop all outputs including all automatic functions such as filter cycle, heat request and smart winter mode purge for 30 minutes to perform quick spa maintenance. To enter the On/Off mode, just press and release the On/Off key. The display will toggle between the "Stby" message and the water temperature. Press the On/Off key again to restart the system before the expiration of the 30 minutes

delay. The spa light will flash a few seconds before the end of the 30 minutes to warn you the system is about to resume its normal operation.

Standby Mode: This mode allows you to stop all outputs with the exception of the heat request for 30 minutes. To enter the standby mode, just press and release the On/Off key. The display will toggle between the "Stby" message and the water temperature. Press the On/Off key again to restart the system before the expiration of the 30 minutes delay. The spa light will flash a few seconds

before the end of the 30 minutes to warn you the system is about to resume its normal operation.

Manual Economy Mode*: This mode allows you to save some energy by regulating the water temperature 20°F (11°C) below the actual set point. To enter the manual economy mode, make a long press of 5 seconds on the On/Off key. The display will toggle between the "Econ" message and the water temperature. Make a 5 seconds long press again on the On/Off key to exit the manual economy mode.

**Available on certain models only.*

Pump 1 key

Press **Pump 1** key to turn Pump 1 on at low speed. Press a second time to turn pump to high speed (with a dual-speed pump*). A third time turns pump off. A built-in timer automatically turns pump off after 20 minutes, unless pump has been manually deactivated first.

The "Pump 1" icon is animated when Pump 1 is ON. With a dual-speed pump, the animation will be slower when the pump is in Low Speed and faster when in High Speed.

Pump 2 key

Press **Pump 2** key to turn Pump 2 on at low speed. Press a second time to turn pump to high speed (with a dual-speed pump*). A third time turns pump off. A built-in timer automatically turns pump off after 20 minutes, unless pump has been manually deactivated first.

The "Pump 2" icon is animated when Pump 2 is ON. With a dual-speed pump, the animation will be slower when the pump is in Low Speed and faster when in High Speed.

Pump 3 / Blower key

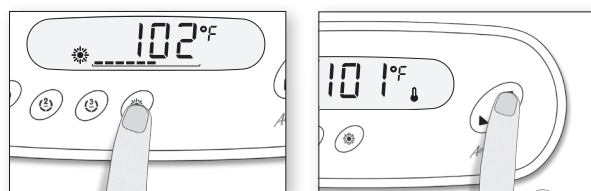
Depending on the spa configuration, this key may have one of the following functions: Pump 3 or Blower or (Pump 3 and Blower)

Pump 3 or Blower: Press Pump 3 / Blower key to turn Pump 3 / Blower ON. Press a second time to turn Pump 3 / Blower OFF.

Pump 3 and Blower: Successive press of the Pump 3 / Blower key will activate the accessories in the following order: Pump 3 only - Pump 3 and Blower - Blower Only - Off.

A built-in timer automatically turns pump 3 / Blower off after 20 minutes, unless it has been manually deactivated first.

The "Pump 3 / Blower" icon is animated when Pump 3 / Blower is ON.



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!

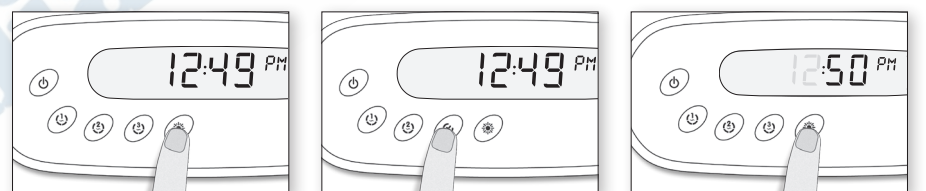
Programming Steps

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.



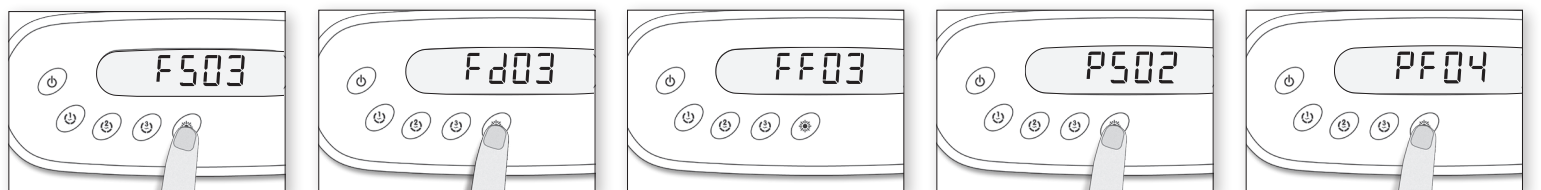
Program menu

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.

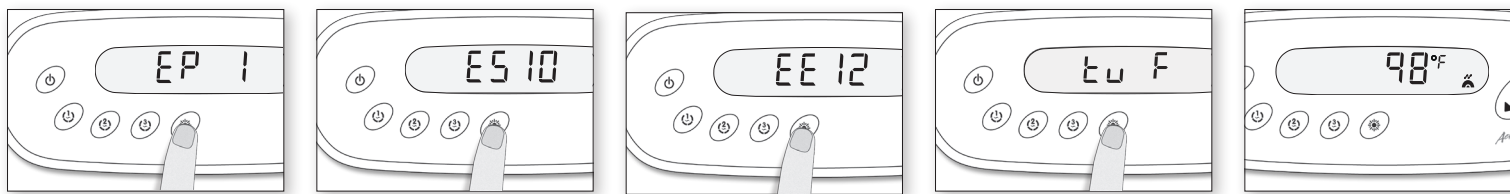
Setting the purge cycle start time

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 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.

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.

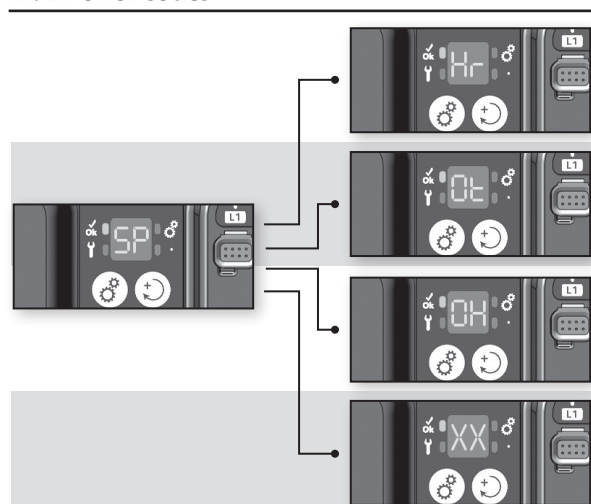
After verifying pump activation and taking a water temperature reading if required, the system automatically turns the heater on to reach and maintain water temperature at Set Point.

The "heater" indicator lights up when the heater is on.

Flash when taking water temperature reading.

Troubleshooting section

in.xm error codes



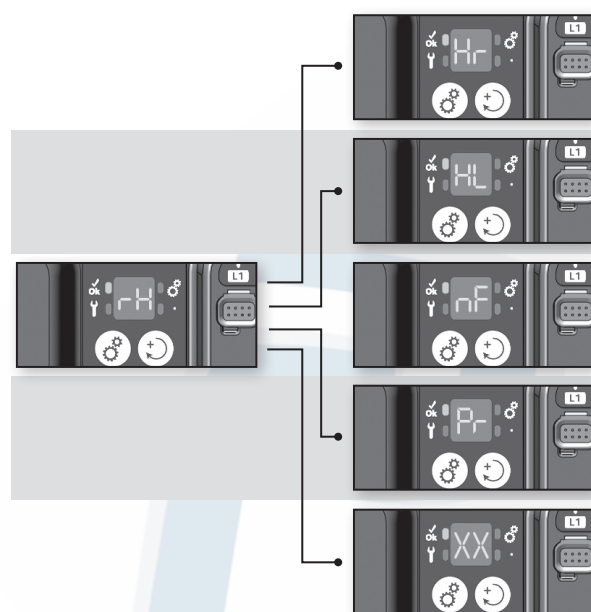
Description

An internal hardware error has been detected.
Note the error message and contact dealer or service supplier for Tech Support.

Temperature inside the spa skirt is too high, causing the internal temperature in the in.xm to increase above normal limits.
Open skirt and wait until error clears. If error persists, note the error message and contact dealer or service supplier for Tech Support.

The water temperature in the spa has reached 108°F (42°C). Do not enter the water!
Remove the spa cover and allow the water to cool down to a lower temperature. If problem persists, Note the error message and contact dealer or service supplier for Tech Support.

Any other SP error code.
Note the error message and contact dealer or service supplier for Tech Support.



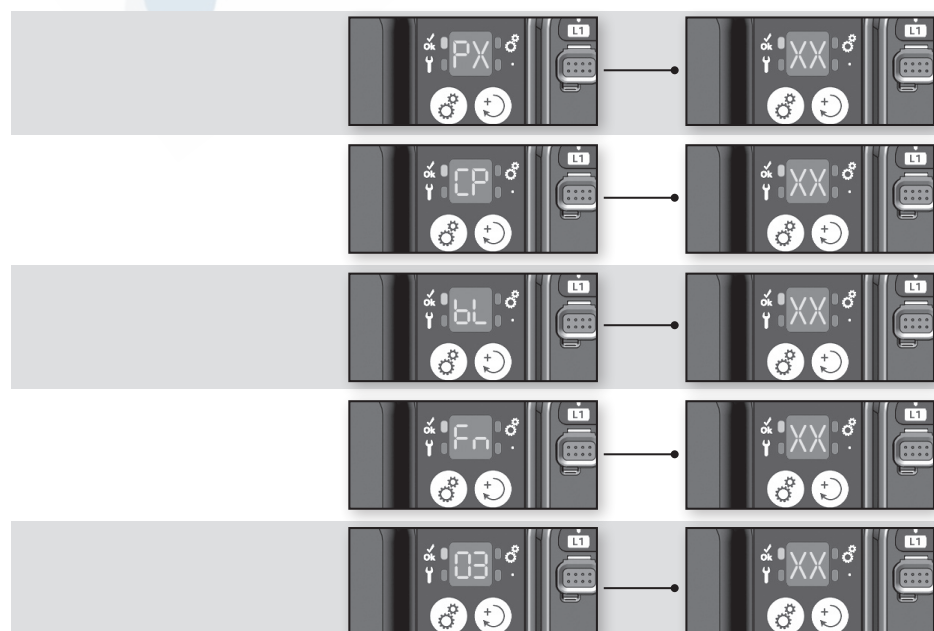
An internal hardware error has been detected.
Note the error message and contact dealer or service supplier for Tech Support.

The system has shut the heater down because the temperature at the heater has reached 119°F (48°C). Do not enter the water!
Remove the spa cover and allow the water to cool down, then shut power off and power your spa up again to reset the system. If problem persists, note the error message and contact dealer or service supplier for Tech Support.

The system does not detect any water flow while the primary pump is running.
Check and open water valves. Check for water level. Clean filter. If the problem persists, call your dealer or service supplier.

A problem is detected with the temperature probe.
Note the error message and contact dealer or service supplier for Tech Support.

Any other RH error code.
Note the error message and contact dealer or service supplier for Tech Support.



A Pump problem has been detected.
Note the error message and contact dealer or service supplier for Tech Support.

A Circ. Pump problem has been detected.
Note the error message and contact dealer or service supplier for Tech Support.

A Blower problem has been detected.
Note the error message and contact dealer or service supplier for Tech Support.

A Fan problem has been detected.
Note the error message and contact dealer or service supplier for Tech Support.

An Ozonator problem has been detected.
Note the error message and contact dealer or service supplier for Tech Support.