## Troubleshooting

**Hr**

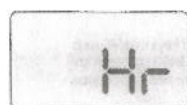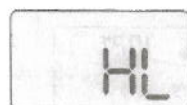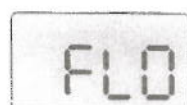**Hr**
An internal hardware error has been detected in in.xe.
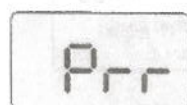Contact dealer or service supplier.

**HL**

**HL**
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.
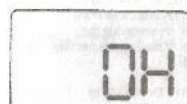
**AOH**

**AOH**
Temperature inside the spa skirt is too high, causing the internal temperature in the in.xe to increase above normal limits.
Open skirt and wait until error clears.

**FLO**

**FLO**
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.

**Prr**

**Prr**
A problem is detected with the temperature probe.
Call your dealer or service supplier.

**OH**

**OH**
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. Call your dealer or service supplier if problem persists.

**rLy**

**rLy**
The system has detected a stock relay error in in.xe.
Call your dealer or service supplier.

**UPL**

**UPL**
No low level configuration software has been installed into the system.
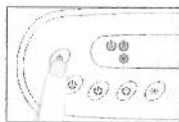Call your dealer or service supplier.

# Quick Reference Card
## in.k450 keypads for in.xm & in.xe spa systems

## in.k450
### Compact full-function keypads for in.xm & in.xe spa systems

Aeware's new series of keypads features a large LCD display and raised keys that let users control all in.xm functions and programming directly from spa side. In.k450 comes in an easy to install waterproof plastic enclosure and is designed to maximize user experience.
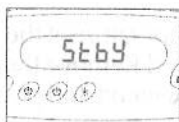
## Spa Functions

### On/Off key ⏻

Depending on the spa manufacturer, this key may have different functions: On/Off, Standby mode or quick enable of the Economy mode.

Standby Mode* : Use On/Off key to pause all pumps.** Progress bar will display the remaining time before the system automatically exits Standby mode (user can also exit Standby mode at any time by pressing again on On/Off key).
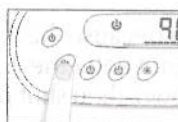
In order to warn the user, the spa light will flash for a few seconds before the exit of Standby mode and restart the pumps. The "Stby" message is also displayed during Standby mode.
* With in.xe Spa Packs: Press and hold Pump1 key for 5 secs. to activate Standby mode.
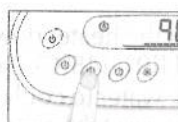** Pump will stay turned on if there is a request for more heat.

### Pump 1 key (1)

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.

### Pump 2 key (2)

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.

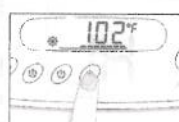† If single speed pump: press Pump key to turn pump on. Press Pump key again to turn pump off.

### Pump 3 / Blower key (3)

Press Pump 3/Blower key to turn Pump 3 /Blower on. Press a second time to turn pump or blower off.

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

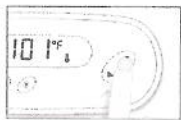Note: Pump 3 option available with in.xm model only.

### Light key ☀

Press Light key to turn light on at high intensity. Subsequent presses change light intensity. A last press turns light off.

A built-in timer automatically turns light off after 2 hours, unless it has been manually deactivated first.

## Programming Steps

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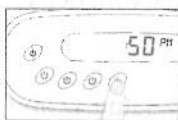
The "Set Point" icon indicates that the display shows the desired temperature, NOT the current water temperature!

### Program key ☀

Use Program key to display time or enter Programming menu by pressing and holding key. In Programming mode, the following parameters can be set: time, filter cycle start time, filter cycle duration, filter cycle frequency, and temperature unit.

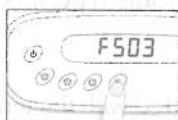Note: Light key is used as Program key if this key is not present.

### Setting the time¹

Enter Programming mode by holding Prog. key pressed down for 3 sec. The display will show the current time setting.

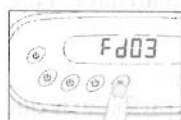Setting the hour: Use Up or Down arrows to change hour setting (AM/PM).

Setting the minutes: Press Prog. key a second time.

Use Up or Down key to change hour setting.

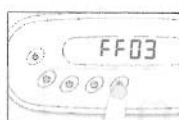### Setting filter cycle start time¹

To program the filter cycle, you must enter these parameters: the start time, duration and frequency. During a filter cycle, pumps run for one minute to purge the plumbing, then Pump 1 runs for the programmed number of hours.
Press Prog. key a third time. The display will show FSxx, with "xx" representing the starting hour. Use Up or Down key to change setting.

### Setting filter cycle duration

Press Prog. key a fourth time. The display will show Fdxx, with "xx" representing the duration in hours.
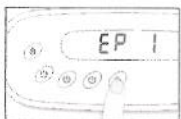
Use Up or Down key to change setting.

### Filter cycle frequency

Press Prog. key a fifth time. The display will show FFxx, with "xx" representing the number of filter cycles per day (up to 4).

Use Up or Down key to change setting.

¹ accessible only if clock feature is available.

### 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.

Press Prog. key a sixth time. Use Up key to enable the economy mode, the display will show EP 1 or use Down key to disable economy mode, the display will show EP 0.
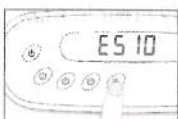
### Setting economy duration²

Press and hold Light key until the display shows Edxx, with "xx" representing the duration in hours. (Default: 2 hours).

Use Up or Down key to change setting.
0 = no filtration³
24 = continuous filtration

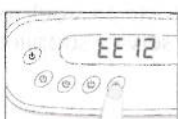² Feature is available in in.xe Spa Packs only.

³ It's not recommended to set this to "0".

### 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.

### Setting economy start time¹

Press Prog. key a seventh time. The display will show ESxx, with "xx" representing the starting hour.
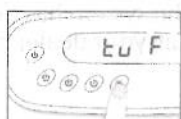
Use Up or Down key to change setting.

### Setting economy end time⁴

Press Prog. key a eighth time. The display will show EExx, with "xx" representing the ending time in hour.

Use Up or Down key to change setting.

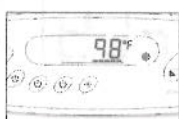⁴ Feature is available in in.xm Spa Packs only.

### Setting temperature unit

Water temperature can be displayed in either Fahrenheit (°F) or Celsius (°C). Press Prog. key a ninth time. The display will show either °F or °C.

Use Up or Down key to change setting.

Press Prog. key once more to go back to normal mode.

Note: "F" will be displayed in in.xe Spa Packs.

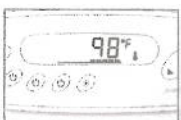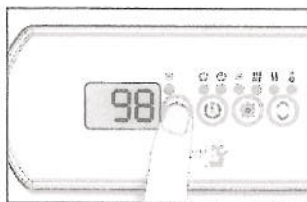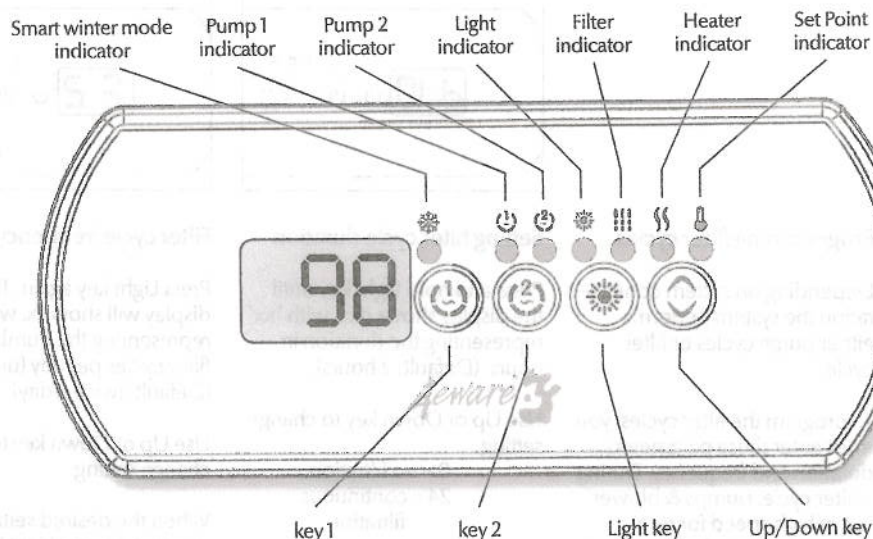Note: Animated icons & progress bar features available with in.xm Spa Packs only.

### 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.

### 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.

Smart winter mode indicator    Pump 1 indicator    Pump 2 indicator    Light indicator    Filter indicator    Heater indicator    Set Point indicator

98

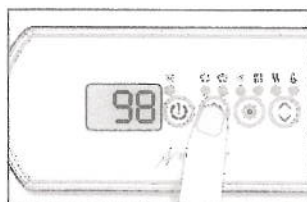key 1    key 2    Light key    Up/Down key

## Key 1 ⏻

Press Key 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" indicator lights up when Pump 1 is on. With dual-speed pump, indicator will flash when Pump 1 is on at low speed.
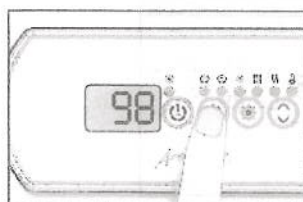
## Key 2 ②
**2 Pump (or single pump/blower)**

Press Key 2 key to turn Pump 2 or Blower on. Press a second time to turn pump or Blower off.

A built-in timer automatically turns pump off after 20 minutes, unless pump or blower has been manually deactivated first.
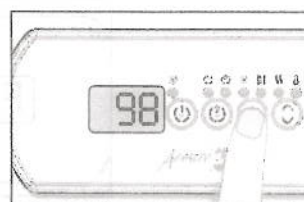
The "Pump 2" indicator lights up when Pump 2 or blower is on.

## Key 2 ② (2 Pump/Blower)

Press Key 2 to turn Pump 2 on at high speed. Pressing a second time turns blower on. A third press turns Pump 2 off but leaves blower on. A final press turns blower off. A built-in timer automatically turns Pump 2/blower off after 20 minutes, unless Pump 2/blower has been manually deactivated first.

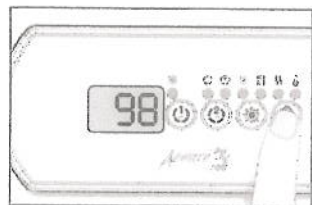The "Pump 2" indicator lights up when Pump 2/blower is on.

## Light key ✺

Press Light key to turn light on. Press Light key a second time to turn light off.

A built-in timer automatically turns light off after 2 hours, unless it has been manually deactivated first.

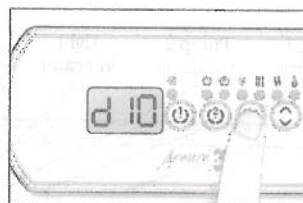The "Light" indicator lights up when light is on.

## Up/Down key ◎

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 filter cycles

Depending on system configuration the system performs either purge cycles or filter cycles.

To program the filter cycles, you must enter these parameters: duration and frequency. During a filter cycle, pumps & blower run at high speed for one minute to purge the plumbing. Pump 1 or CP then runs at low speed for the remaining of the cycle.
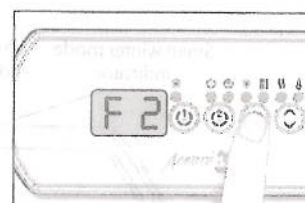
## Setting filter cycle duration

Press and hold Light key until the display shows dxx, with "xx" representing the duration in hours. (Default: 2 hours).

Use Up or Down key to change setting.

    0 = no filtration
    24 = continuous filtration
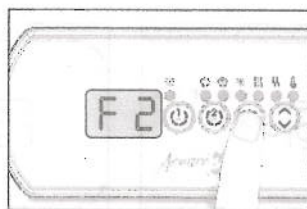
Note: it's not recommended to set this to "0".

## Filter cycle frequency

Press Light key again. The display will show Fx, with "x" representing the number of filter cycles per day (up to 4). (Default: twice a day).

Use Up or Down key to change setting.

When the desired setting is displayed, press Light key to confirm. A filter cycle will start immediately.

The "Filter" indicator lights up when a filter cycle is on.

## Programming purge cycles

To program the purge cycles, you must select the frequency. During a purge cycle, all pumps and the blower run for one minute.

## Purge cycle frequency

Press and hold Light key until the display shows Fx, with "x" representing the number of purge cycles per day (up to 4).

Use Up or Down key to change setting.

When the desired setting is displayed, press Light key to confirm. A purge cycle will start immediately.

The "Filter" indicator lights up when a purge cycle is on.

## 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. It flashes when there is a request for more heat but the heater has not yet started.

## 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 "Smart Winter Mode" indicator lights up when the Smart Winter Mode is on.

## 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 certain amount of time to ensure adequate cooling of the heating element, this prolongs its useful life. The heater icon flashes during this time.