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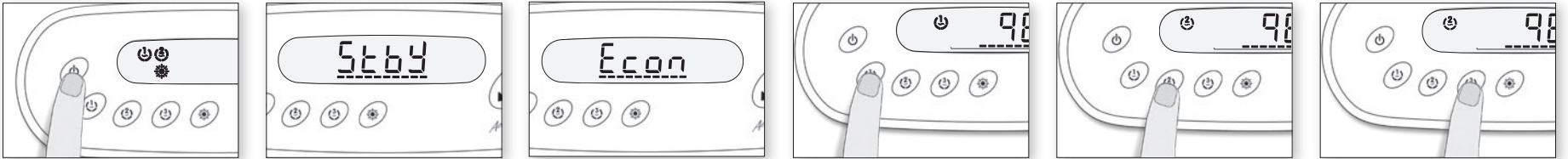## in.k450 keypads for in.xm spa systems

in.k450
Compact full-function keypads for in.xm 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.

*   Pump will stay turned on if there is a request for more heat.

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 and hold the **On/Off** key for 10 secs to enable the Economy mode. Repeat operation to disable it.

While the Economy mode is enabled the display will toggle between "Econ" and the water temperature. Once the system goes back to nomal mode, the display will show "noE" for 3 secs.

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 a predetermined period of time, unless pump has been manually deactivated first.

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 a predetermined period of time, 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

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 a predetermined period of time, unless pump has been manually deactivated first.

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 a predetermined period of time, unless it has been manually deactivated first.

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

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 time

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** key 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 time

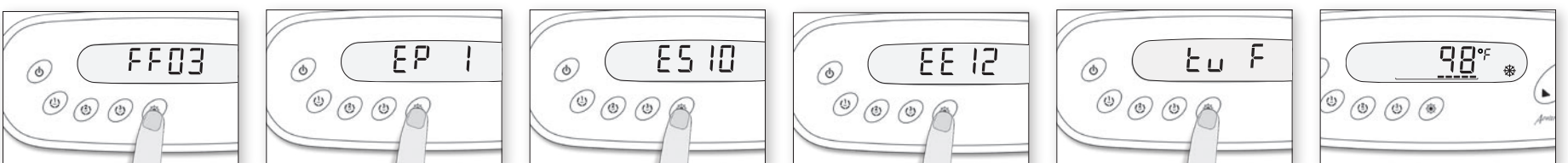To program the filter cycle, you must enter these parameters: the start time, duration and frequency. During a filter cycle, pumps run for one minute to purge the plumbing, then Pump 1 runs for the programmed number of hours. Press **Prog.** key a third time. The display will show **FSxx**, with "xx" 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.
0 = no filtration[1]
24 = continuous filtration

[1] It's not recommended to set this to "0".

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.

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 start time

Press **Prog.** key an seventh time. The display will show **ESxx**, with "xx" representing the starting hour.

Use **Up** or **Down** key to change setting.

Setting economy end time

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

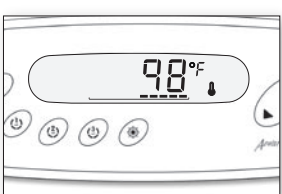Use **Up** or **Down** key to change setting.

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.

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.

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.

Troubleshooting section

in.xm error codes	Description

SP

- **br** — The chosen input current rating is lower than the sum of current for all pumps.
  Call your electrician for tech support.

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

- **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. If problem persists, Note the error message and contact dealer or service supplier for Tech Support.

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

rH

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

- **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. If problem persists, note the error message and contact dealer or service supplier for Tech Support.

- **nF** — 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.

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

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

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

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

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

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

O3 → XX — An Ozonator problem has been detected
Note the error message and contact dealer or service supplier for Tech Support.

in.xm error codes

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