Troubleshooting Guide

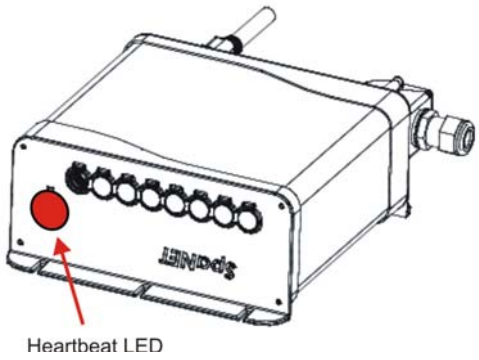
XS-2000/3000/4000 Series

A user reference guide to better help understand and overcome error conditions experienced with your spa pool.

spanet™

HEARTBEAT LED

All SpaNET spa controls feature a heartbeat LED. This heartbeat LED flashes to indicate the current health/status of the spa control. When the spa control is functioning correctly the heartbeat LED emits a single flash in a constant pulse much like a heartbeat (i.e ON, OFF, ON, OFF etc). If the spa control has encountered an error the heartbeat LED constantly flashes in sequence with the error number being experienced (i.e ER-2 =ON,ON; OFF; ON,ON; OFF etc).The heartbeat LED is located on the mini-din connector end cap of the spa control as illustrated below.



COMMON INSTALLATION PROBLEMS

NO DISPLAY ON TOPSIDE PANEL AND HEARTBEAT NOT FLASHING.

Problem: LCD blank, heartbeat on constantly (not flashing) and pump not priming

Cause: Real Time Clock (RTC) battery flat. Controller has been in storage and has not been powered ON for several weeks and RTC battery has no charge.

Solutions:
1. Leave mains power ON for 1 minute for RTC battery to get some charge
2. Turn mains power OFF for 5 seconds then turn mains power back ON

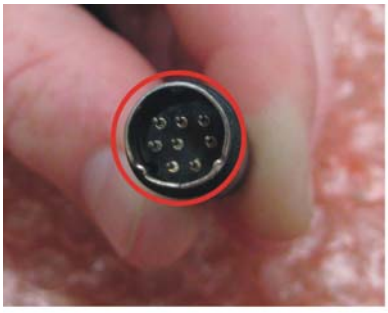
NO DISPLAY ON TOPSIDE PANEL (or display flickering)

Problem: LCD blank or flickering, and buttons not working

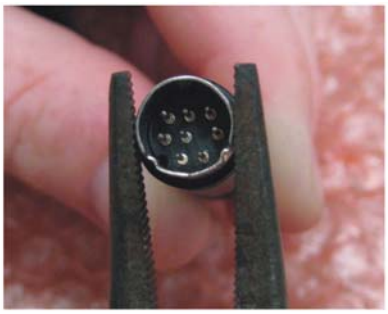
Cause: Poor connection between topside panel plug and controller socket. Topside Panel lead is not correctly connected to spa control or damaged

Solutions:
1. Check topside panel lead is firmly plugged into the spa control socket labelled “TPAD 1”
2. Unplug and re-plug topside panel lead to re-establish connection to spa controller
3. Check for damage to topside panel lead including bent or broken pins on plug

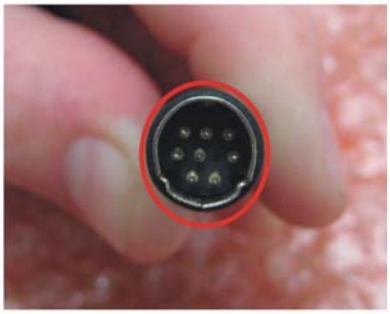
<u>NOTE:</u> The topside panel lead requires the metal of the plug to constantly touch the metal ring inside the TPAD 1 socket to form a grounded signal. In some cases the two metal surfaces do not touch properly and it will cause the display to flicker or only operate intermittently. To solve this problem unplug the topside panel lead from the controller. Use pliers to gently squeeze the plug so that it is marginally out of shape, then reconnect to spa controller (refer pictures below).



Normal Plug
Perfectly Round



Slight squeeze
with pliers



Modified Plug
Slightly Oval

DIAGNOSTICS

SpaNET™ spa controls feature self diagnostics and scrolling error messages to quickly troubleshoot possible problems. Should the spa control encounter a problem the alarm will beep and the error code / message will scroll across the topside panel screen until the problem is resolved. The beeper will continue to sound for a period of 5 mintues. To silence the alarm sooner press any button on the topside panel and the beeper will be disabled. If an error condition is experienced all spa functions are shut down and the spa should not be used until the error condition has been resolved. A list of error codes with descriptions of problems and possible solutions has been detailed below for your reference. For more detailed information refer to the Troubleshooting Guide located on the SpaNET™ product support CD.

NOTE: For most error codes mains power to the spa control must be turned OFF and then back ON before the error condition will be cleared.

IMPORTANT NOTE: BEFORE ATTEMPTING ANY TROUBLESHOOTING ALWAYS ENSURE MAINS POWER IS ISOLATED AND TURNED **OFF.**

4.1 ERROR CODES

ER-2 HEATER PLUG

Problem: Heater sensor cable fault

Cause: Heater sensor lead is not correctly connected to spa control or damaged

Solutions:
1. Check heater sensor lead is firmly plugged into the spa control socket labelled “Heater”
2. Unplug and re-plug heater sensor lead to re-establish connection to spa control
3. Check for damage to sensor lead including bent or broken pins on plug

ER-3 WATER PRIME

Problem: Water prime failed – insufficient water level detected in heater tube

Cause: Airlock in pipe work, low water level, dirty filter cartridges

Solutions:
1. Press Pump A button to retry water prime
2. Check spa water level (refill if necessary)
3. Remove filter cartridges and press Pump A button to retry water prime
4. Bleed airlock from pipe work by slightly loosening mac unions on front of filtration pump
5. Remove filter cartridges and flush water down pipe work with a garden hose

ER-4 THERMAL TRIP

Problem: Heater thermal trip activated - Heater has been active and had insufficient water flow over the element. Low or no water flow has caused the element temperature to exceed 47^{o}C and the spa control has shut down operation to prevent any damage to the heater unit.

Cause: Low water level, airlock in pipe work, closed shut-off valves, dirty filter cartridges, filtration pump operation intermittent or not running at all

Solutions:
1. Turn mains power OFF and wait approximately 20-30 minutes for element to cool and thermal cut-out device to reset. Then turn power back ON
2. Check spa water level (refill if necessary)
3. Remove filters and clean by soaking in hot water and filter degreasing solution
4. Check under spa cabinet to ensure all shut-off valves are in the OPEN position
5. Bleed airlock from pipe work by slightly loosening mac unions on front of filtration pump or by removing filters and flushing pipe work with water from a garden hose.

IMPORTANT NOTE: BEFORE ATTEMPTING ANY TROUBLESHOOTING ALWAYS ENSURE MAINS POWER IS ISOLATED AND TURNED **OFF.**

ER-5 POOL TOO HOT

Problem: Pool over temperature – temperature sensor reading = > 45^{o}C

Cause: High ambient temperatures (especially in summer months) have caused water temperature to rise above set temp point, Excessive filtration time, Jet pumps have been operating for extended periods with the spa cover still on.

Solutions:
1. Turn mains power OFF, remove spa cover, allow spa to cool then turn power back ON
2. Check daily filtration time (refer filtration section) and reduce daily filtration time if required
3. Check spa cover is not resting on topside panel buttons causing jet pumps to start when cover is on. Use key lock function to lock topside panel buttons when spa not in use.

ER-6 HEATER SENSOR

Problem: Heater temperature sensor unable to communicate with spa control

Cause: Heater sensor lead is not correctly connected to spa control or has damaged / bent pins

Solutions:
1. Check heater sensor lead is firmly plugged into the spa control socket labelled “Heater”
2. Unplug and re-plug heater sensor lead to re-establish connection to spa control
3. Check for damage to sensor lead including bent or broken pins on plug

ER-7 POOL SENSOR (PLUG / TIMEOUT / COMMS)

Problem: In-Pool temperature sensor unable to communicate with spa control

Cause: In-Pool temperature sensor lead is not correctly connected to spa control or electronic fault

Solutions:
1. Check sensor lead is firmly plugged into spa control socket labelled “In-Pool Sensor”
2. Unplug and re-plug in-pool sensor lead to re-establish connection to spa control
3. Check for damage to sensor lead including bent or broken pins on plug
4. If problem persists, completely disconnect in-pool sensor lead from spa control. The spa control will continue to operate excepting the temperature will be measured from the in-heater sensor not the in-pool sensor.

ER-8 CONTROLLER

Problem: Internal controller fault detected

Cause: Power surge, low or high voltage, water on spa control terminal block, relay problem

Solutions:
1. Turn mains power OFF and back ON again to see if spa control recovers from ER8 fault
2. Inspect under spa cabinet for evidence of water leaking onto spa control. If water present, turn mains power OFF and isolate, then resolve leak, dry up excess water, and allow spa control to dry out before restoring power.

Note on Error Codes: *If an error code persists after attempting the above listed troubleshooting techniques please contact your local spa dealer or authorised repair agent for assistance.*