



# 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**™



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The XS-2000 / 3000 / 4000 Series spa controls feature self diagnostics and scrolling error messages to quickly troubleshoot possible problems. Experiencing an error condition does not mean that your product is faulty. In fact most of the error conditions exist as a safety measure and to keep the spa control within its operating specifications. If an error is experienced it is most commonly a result of incorrect configuration of controller settings, or a simple misunderstanding of correct controller operating procedures. Most errors are resolved through simple user adjustment or user awareness of requirements for correct controller operation.

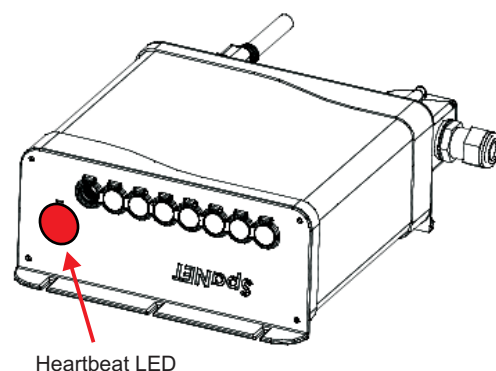
This troubleshooting guide provides detailed information as to the cause and exact nature of any error that may be experienced. It refers to all possible error codes and also offers advice and comprehensive step-by-step solutions to these errors.

Should your spa control encounter a problem, all spa functions are shut down, the alarm will beep and the error code / message will scroll across the LCD until the problem is resolved. The beeper will continue to sound for a period of 5 minutes. **To silence the alarm press any key on the touch pad and the beeper will be disabled.**

If an error condition is experienced the spa should not be used until the error condition has been resolved. Refer to and follow the step-by-step solutions detailed within this guide and if the problem can not be resolved please contact your local spa reseller (ideally the principal place of purchase). Please note that for all error codes except ER-3 (water prime), mains power to the spa control must be turned OFF and then back ON before the error condition will be cleared.

## 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 aside.



## ERROR CODES

If an error condition is experienced the spa control will shut all functions down, the alarm will sound and the following error codes / messages will be constantly scrolled across the LCD screen of the touchpad. The heartbeat LED will also constantly flash in sequence with the error number being experienced (refer above). To better assist you we have provided a description of each error, the cause, and possible solutions to help remedy the error. Please carry out ALL suggested solutions exactly as described within this guide BEFORE you seek further assistance. Most problems can be quickly rectified by simple user adjustment. If problems persist please contact your local spa reseller.

### ER-1 NOT USED

Reserved for heartbeat LED (single flash) - indicates spa control is operating correctly.

## ER-2 HEATER PLUG

- Problem:** The spa control cannot detect the presence of the heater sensor (water & temperature)
- Cause:** The heater sensor lead is disconnected from the spa control OR heater sensor is faulty
- Solution:**
- 1) Turn mains power OFF => Check to ensure heater sensor lead is firmly plugged into the spa control where labelled "HEATER" => If heater sensor lead is not connected correctly - push lead firmly into side of spa control and then turn mains power back ON and see if error disappears
  - 3) If error persists - turn mains power OFF => unplug heater sensor lead => inspect lead connector for bent or damaged pins and if OK re-connect to the spa control => turn mains power back ON
  - 4) If error still persists or lead connector damaged - contact your local spa reseller OR any SpaNET Authorised Service Agent.

## ER-3 WATER PRIME

- Problem:** Water prime failed - the spa control cannot detect the presence of water in the heater tube
- Cause:** An air lock is present in the pipework and the heater tube is not completely filled with water - for safety reasons the element cannot be activated until the heater tube is completely filled with water
- Solutions:**
- 1) Press Pump A button to retry water prime => the pump will run for an additional 5 secs to attempt water prime. If successful the spa control will continue to operate in AUTO mode. If unsuccessful the spa control will return to the ER-3 WATER PRIME error condition
  - 2) Check pool water level (refill if necessary) => press Pump A button to retry water prime.
  - 3) Turn mains power OFF => remove filter cartridges from spa completely => then turn mains power back ON to retry water prime
    - If the spa has just been filled/refilled with water and this resolves the error, the problem was a result of an air lock trapped in the pipework which was freed by removing the cartridges. Turn mains power back OFF => re-install filter cartridges => then turn mains power back ON
    - If the spa has been running OK for several weeks and the problem is resolved by removing the filter cartridges, the cartridges MUST be cleaned thoroughly by SOAKING them in a filter cartridge cleaner and degreaser product before returning them to the spa. Such a product can be purchased from your local pool or spa shop. **Hosing the cartridges alone is NOT sufficient to clean the cartridges. The body fats and oils that get clogged in the filter cartridge filaments will ONLY be removed by soaking the cartridges for a few hours in a mix of hot water and a proper cartridge cleaning solution.** Once the cartridges have been cleaned by soaking turns mains power OFF => reinstall cartridges => turn power back ON
  - 3) If error persists - the airlock must be manually expelled from the pipework => the easiest way to do this is to turn mains power OFF => remove filter cartridges from spa completely and run water from a garden hose down the pipework through the filter cartridge holes until any air bubbles are expelled through the jets in the spa => then turn mains power back ON to retry water prime.
  - 4) If error still persists - contact your local spa reseller or any SpaNET Authorised Service Agent.

**ER-4 THERMAL TRIP**

**Problem:** Heater thermal cut-out (trip) has operated

**Cause:** Heater element has exceeded safe working temperatures - a thermal cut-out has tripped to ensure spa control stays within safety and operating specifications. **Usually caused from low water flow through heater tube or an air lock in the pipework.**

**Solution:** 1) Turn mains power OFF => wait approximately 20-30 minutes => turn mains power back ON

- Check:
- water level => refill if necessary
  - clogged filter => clean or replace filter cartridges\*\*
  - all pipework shut-off valves are fully opened
  - filtration pump running

2) If problems persist - contact your local spa reseller or any SpaNET Authorised Service Agent.

**\*\* Note:** The most common cause of ER-4 is the result of dirty/clogged filter cartridges. Regular cleaning maintenance of the filter cartridges is required to ensure the filtration pump has sufficient water flow to prevent ER-4 conditions. Ideally the cartridges should be hosed weekly or fortnightly. In addition the cartridges MUST be cleaned thoroughly by SOAKING them in a filter cartridge cleaner and degreaser product every 6-8 weeks depending on usage. Such a product can be purchased from your local pool or spa shop. **Hosing the cartridges alone is NOT sufficient to clean the cartridges properly. The body fats and oils that come out of our skin due to the high water temperatures of spas get clogged in the filter cartridge filaments and will ONLY be removed by soaking the cartridges for a few hours in a mix of hot water and a proper filter cartridge cleaning solution.**

**ER-5 POOL TOO HOT**

**Problem:** Temperature Sensor reading  $\geq$  45°C. (The spa pool has gone over temperature)

**Cause:** The pool water temperature is equal to or greater than 45°C resulting from the daily filtration time set too long OR high daily ambient temperatures are being experienced and the spa is unable to dissipate enough heat

**Solution:** 1) Turn mains power OFF => remove spa cover and allow water to cool => turn mains power ON

2) Refer to XS-2000/3000 User Manual - Section: "My Spa is Too Hot in Summer"

3) Reduce Daily Filtration Time (**FILT**) setting from the advanced setup menu

- a. Press and hold **UP** and **DOWN** buttons for **3** seconds until D.DIS is displayed
- b. Press the **UP** button to toggle the advanced setup menu to the **FILT** setting
- c. Press the **OK** button to enter Daily Filtration Time (**FILT**) setting adjustment
- d. Press the **DOWN** button to reduce total daily filtration hours
- e. Once the new desired daily filtration time has been selected press **OK** to save adjustment and return to the default display mode or wait for the 10 second idle menu time-out

4) If error persists - remove spa cover at night to allow excess heat to dissipate whilst ambient temperatures are lower.

5) If error still persists - contact your local spa reseller or any SpaNET Authorised Service Agent.

## ER-6 HEATER SENSOR

**Problem:** The heater sensor (water & temperature) is returning a faulty signal to the spa control

**Cause:** The heater sensor is not working OR is faulty

- Solution:**
- 1) Turn mains power OFF => wait 10 seconds => turn mains power ON
  - 2) Turn mains power OFF => Check to ensure heater sensor lead is firmly plugged into the spa control where labelled "HEATER" => If heater sensor lead is not connected correctly - push lead firmly into side of spa control and then turn mains power back ON and see if error disappears
  - 3) If error persists - turn mains power OFF => unplug heater sensor lead => inspect lead connector for bent or damaged pins and if OK re-connect to the spa control => turn mains power back ON
  - 5) If error persists - contact your local spa reseller OR any SpaNET Authorised Service Agent.

## ER-7 POOL SENSOR

**Problem:** The spa control cannot detect the presence of the in-pool temperature sensor

**Cause:** The in-pool temperature sensor (IPTS) lead is disconnected from the spa control OR sensor is faulty

- Solution:**
- 1) Turn mains power OFF => Check to ensure IPTS lead is firmly plugged into the spa control where labelled "IN-POOL SENSOR" => If IPTS lead is not connected correctly - push lead firmly into side of spa control and then turn mains power back ON and see if error disappears
  - 2) If error persists - turn mains power OFF => unplug IPTS lead => inspect lead connector for bent or damaged pins and if OK re-connect to the spa control => turn mains power back ON
  - 4) If error still persists or lead connector damaged => unplug IPTS lead and leave disconnected from side of spa control => then turn mains power back ON (the spa control will continue to work without an IPTS connected. The spa control will work off the redundant temperature sensor located inside the element) => contact your local spa reseller OR any SpaNET Authorised Service Agent and inform them of the problem.

## ER-8 CONTROLLER

**Problem:** Internal controller fault detected

**Cause:** Hardware or software failure

- Solution:**
- 1) Turn mains power OFF => wait 10 seconds => turn mains power ON
  - 2) If error persists - contact your local spa reseller OR any SpaNET Authorised Service Agent.



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