dontek
ELECTRONIC MANUFACTURING

Manufacturers of Electronic Equipment
Design » Prototype » Production

TROUBLE SHOOTING THE AQUASUN

NO POWER TO THE DISPLAY:

Power point is faulty; test power point with known working appliance, if the power point is operational, check the controller with another power point and if there is still no display then send the controller for repair.

PIPE/ROOF SENSOR FAULTS:

The following are error messages caused by pool or roof sensor faults;

SENSOR DISCONNECTED OR OPEN CIRCUIT
Sensor cable unplugged from controller, cable damaged, bad cable join.

SENSOR SHORT CIRCUIT OR REVERSED
Sensor cable or cable join polarity is incorrect, the cable has a red wire (or white stripe) to indicate the positive side; the positive side of the wire should be wired to the right hand side when viewing the screws with the figure 8 cable entry at the bottom of the plug. If the cable has been joined ensure no polarity reversal occurs.

SENSOR READ ERROR (INTERFERENCE)
Electrical/magnetic interference from other equipment is causing errors when trying to read temperature values. Ensure sensor wires are located away from mains wiring, never cable tie sensors to mains cables.
Attempt to locate the source of the interference and relocate if possible.

SENSOR WRITE ERROR (CABLE DAMAGED)
Damaged or kinked cable, the sensor at the end of the cable cannot get the power required to perform a temperature reading. Replace cable and or sensor.

ISOLATING SENSOR FAULTS:

Swap the sensor locations; simply put the pipe sensor in the roof socket and the roof sensor in the pipe socket.
If the fault moves from pipe to roof or vice versa then you can be certain that there is a sensor fault. If the fault remains the same then the controller will need repairs.
For sensor open circuit or write error faults, check for damage to the cable and repair if required. If no damage can be found replace the sensor. If the cable runs underground or inspection is not possible then cut the sensor from near the end of the cable and strip back the wires and join them, if the controller reports a short circuit then the cable is fine, and you may replace the sensor end if re-routing a new cable is not possible.
For sensor short circuits, if the controller reports an open circuit when the cable is unplugged then attempt reversing the cable polarity, replace the sensor if reversal is unsuccessful then the controller requires repair, if the controller reports a short circuit while the cable is unplugged then the controller requires repair.

PUMP FAULTS: Ensure the controller has working sensors; otherwise the pump will not operate.
PUMP WILL NOT START: The pump will only ever run for the purpose of automatic heating if the pool is below the temperature limit and solar conditions can provide heating. The pump may also run for a flush in winter-mode or for manual mode operation. If the controller reports that the pump is off then press select to enable manual mode, the relay inside should click and the pump should operate. If the pump does not operate then plug the pump into a power point and test operation, if the pump is OK then the controller requires repair.
PUMP WILL NOT STOP: Turn off power to the controller, ensure the pump stops, if the pump continues to operate then unplug it from the power point and connect it to the 240Vac socket marked PUMP at the bottom of the controller. Apply power to the controller and if the pump starts instantaneously before temperatures are displayed then the may be a fault with the controller, since the controller shouldn't run when there is a sensor fault, disconnect the roof sensor and wait for approximately 30 seconds, if the pump continues to run then the controller requires repair.
POOL NOT HEATING: If the controller has stopped pumping and is displaying a higher temperature than expected it may be caused by a pump which is failing to prime, check the pump and if necessary prime the pump as per the pump manufacturers' instructions then reset the controller by turning it off/on.

RTC-FAIL – This can occur if the unit has been turned off for a prolonged period of time, leave the unit on for ~30 seconds, this will allow charging of the supercapacitor, then turn it off for ~30 seconds before turning it back on.

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