

WATER PRO PRODUCTS

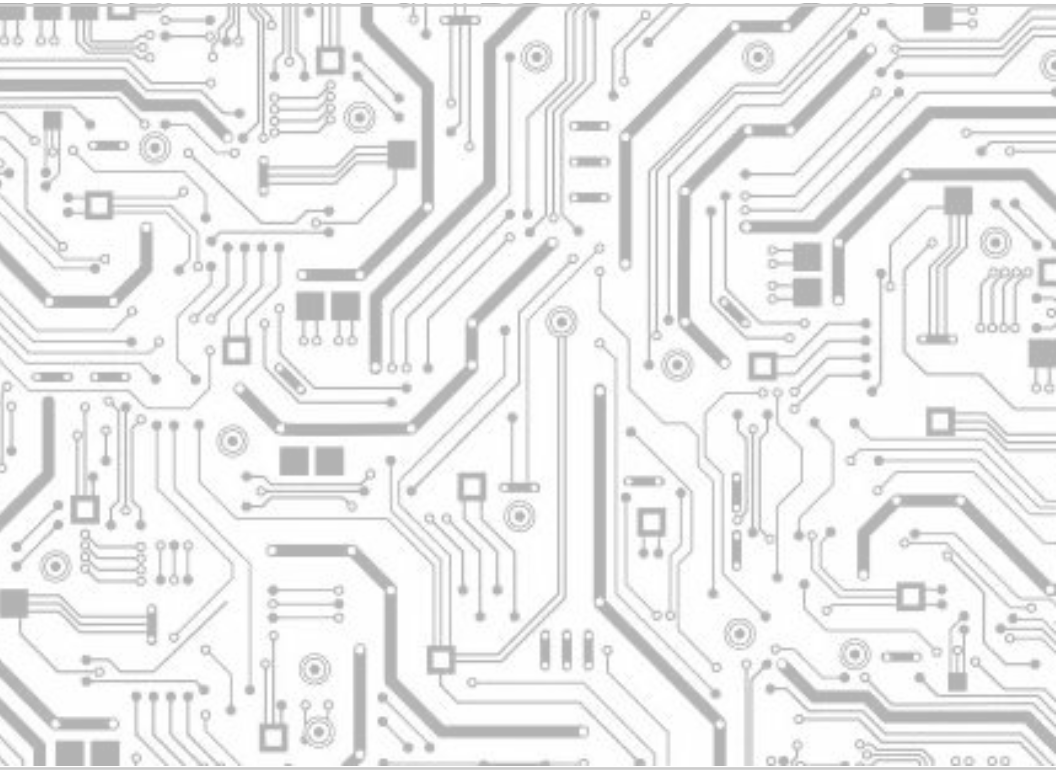
by **HYDROQUIP**[™]

PRINTED CIRCUIT BOARD REPLACEMENT INSTRUCTIONS

Tools Needed:

Screwdriver - Slotted
Screwdriver - Phillips
Multi-Meter/Voltmeter
Large Channel Locks

Needle Nose Pliers
Wire Cutters
Digital Camera/Phone
Patience(required)



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Portable Spa Printed Circuit Board Replacement

Thank you for purchasing your circuit board from Hydro-Quip. Explore our full range of spa and hot tub replacement parts and accessories at www.hydroquip.com.

Follow these step-by-step instructions to install your new circuit board.

This Instruction sheet pertains to all makes and models of Printed Circuit Boards (PCB's) used in Portable Spas.

Included with your PCB you will find all the support material specific to your make and model with further details for the replacement as well as the specifics to properly configure and/or program your specific model.

Important Safety Notice: If you are not comfortable using hand tools and a multi-meter, STOP and engage a qualified spa service technician to perform this installation.

 **NEVER WORK ON A LIVE CIRCUIT – ENSURE ALL POWER TO THE SPA/HOT TUB IS DISCONNECTED** 

You will need the following before you begin:

Digital camera or cell phone to document wire, jumper, plug and terminal placement

Multi-Meter/Voltmeter to perform basic voltage measurements

Large channel locks or medium sized pipe wrench to loosen heater union nuts for control removal

Medium Philips screwdriver for PCB mounting screws (see illustration)

Medium and large straight blade screwdriver to disconnect incoming power (see illustration)

Needle nose pliers for removal of wire terminals

Tape and pen to label each wire before removal

NOTE: While the replacement of the PCB can be accomplished with the control box under the spa/hot tub, the replacement is most easily performed with the control box removed and serviced on a flat working surface with good light.

Disconnect Power

1. Turn off all supply breakers and/or the GFCI disconnect
2. All lights, panels and displays should be off
3. Verify Power is Off
4. Use a Multi-meter to confirm zero voltage at the terminal block inside the spa control box
5. Remove the front cover of the control box to expose the circuit board
6. It is a good idea to label each wire or plug that you disconnect BEFORE you unplug any components.
7. Once you have the wires labeled, using a digital camera or cell phone, take photos from multiple angles before you unplug any wires or components.

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Removal the Original PCB

1. With power OFF, first disconnect the power wires from the input Terminal Block
2. Unplug all other components:
 - Topside control
 - Pumps
 - Blower & ozone (if installed)
 - Sensors
 - Any other auxiliary equipment

DO NOT remove any jumpers or change the position of any of the Dip Switches on the PCB

Heater connections (**DO NOT** Disconnect terminals on the heating element, special tools are required)

Refer to the “Terminal and Mounting Screw Identification Sheet” included with your PCB and remove each mounting screw noting the location of each screw lengths

Once all the screws, wires and plugs have been disconnected or removed, carefully remove the board from the control box.

Note: The PCB will remove easily, if it offers resistance, STOP and locate the screw you missed.

Jumpers & Dip Switches: While you have both the old and new PCB's in front of you, now is the best time to assure that the dip switches on the new board are the same as the old PCB. *If dip switch changes are made with power on, the power would have to be reset to accept changes made.*

Install the New Board by reversing the above steps

Refer to your photos and/or tagged wires to confirm correct placement

Ensure wiring matches the original setup

Configuration and Programming Details are located in the “PCB Setup number Programming Guide”

