

BALBOA SPA & CONTROLLER DETAILS

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EXISTING CONTROL PANEL:

1. Balboa ST-MAS300-DCAH (-9) circa ~1999. Believe the part number is an X300700.
2. The electrical service to the panel is 240VAC @ 50A G.F.C.I.

EXTERNAL SPA CONTROLLER EQUIPMENT:

1. Pump 1 is 240VAC 2-Speed
2. Pump 2 is 240VAC 2-Speed
3. Circulation Pump is 120VAC 1-Speed (Iron Might Pump)
NOTE: Was previously a Tiny Might Pump, the feed and discharge lines are 1" Flex-PVC. Prior communications with you folks verified my concerns with the flow rate of less than 23 GPM specified by Balboa for their M7 technology. It was suggested to change the heater to a 4kW.
4. Ozone Generator is 120VAC (Prozone PX3-X) and measures approximately 14" x 2 1/2" diameter.
5. Blower is 120VAC and appears to be multi-speed.
6. Spa Light is 120VAC

NOTES:

1. Cable connections for all the above are terminated into keyed Molex connectors that appear to be wired for direct connection to the Balboa EL2001M3 circuit board.
2. Other cables exiting the current control panel are 2-conductor cables terminated with small Molex connectors that plug directly into the circuit board. The circuit board pins are labeled as follows:
 - a. Temperature Sensor
 - b. Hi-Limit / Freeze Sensor
 - c. Flow (Pressure) Switch
 - d. Ozone Enable

TOP SIDE CONTROL:

1. The top side control has 7-buttons (Jet 1, Jet 2, Blower, Light, Mode, Warmer & Cooler).
2. The main top side control measures 7 1/4" x 3 1/4" and is terminated with an 8-conductor RJ45 connector that plugs into the main controller circuit board.
3. Also included on the spa are two round (~1 1/2" dia.) controls to turn the corresponding jets on or off. These are terminated on a 4-conductor RJ45 connector that plugs into the main controller circuit board.

PLUMBING & DIMENSIONS:

1. The current Balboa spa controller measures 11 1/4" H x 12 3/4" W with the heater manifold mounted on the bottom.
2. The bottom mount for the controller puts the center of the heater manifold approximately 3" above the mounting base.
3. The mounting cavity the controller is mounting in measures approximately 20"W x 15 1/2"H x 8"D.
4. The PVC lines feeding the split unions on the ends of the heater manifold are about 1 3/4" O.D. with the split nuts measuring approximately 4" O.D. I would assume these are standard for this application.
5. When mounted, the distance for the outside of the heater manifold split nuts are about 16 3/4" and the inside distance measures about 14 1/8".

CURRENT CONTROL PANEL ISSUES:

1. All functions appear to operate correctly, but the heater element continues to open up after approximately a 2 to 4 weeks period of time. Inspection of the defective elements show no sign of dry firing or other defects at all.
2. I have removed all the air locks when changing the elements and have even left it disconnected until the flow was verified.