

Spa Control Troubleshooting Guide

Model: RS101



Major System Components

TOPSIDE PANEL



SYSTEM PACK

GROUND FAULT CIRCUIT INTERRUPTER (GFCI) CORD



HEATER



PUMP

*Pump models vary in size and style.
Your pump may look different.*



OZONE GENERATOR

*This is an optional component.
Your system may not have it.*



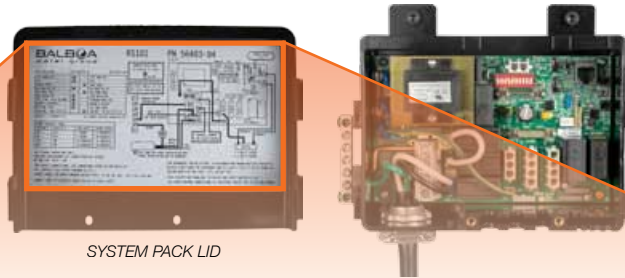
LIGHT

*Light models vary in size and style.
Your lights may look different.*



Wire Diagram

The system's wire diagram is on the inside of the system pack lid.



SYSTEM PACK LID

BALBOA
water group

RS101 PN 56403-03

05-02-14

OFF POSITION	DIP SWITCH #	ON POSITION
TEST MODE OFF*	1	TEST MODE ON*
N/A	2	N/A
DUPLEX PANEL	3	MINI PANEL
N/A MUST BE OFF	4	N/A MUST BE OFF
SEE PUMP TABLE	5	SEE PUMP TABLE
60HZ OPERATION	6	50HZ OPERATION
STD. ECON. SLEEP ALLOWED	7	STANDARD MODE ONLY
DEGREES FAHRENHEIT	8	DEGREES CELSIUS
SEE PUMP TABLE	9	SEE PUMP TABLE
HIGH AMP - HEAT W/P1 HI	10	LOW AMP - NO HEAT W/P1 HI

*SWITCH 1 IS NORMALLY OFF ALL UNUSED SWITCHES SHOULD BE OFF

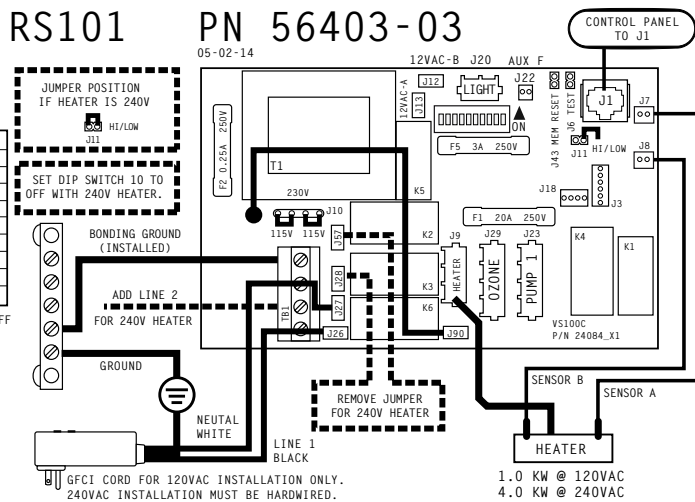
SWITCH 5	SWITCH 9	LOW SPEED	HIGH SPEED
OFF	OFF	2 HOURS	15 MINUTES
ON	OFF	2 HOURS	30 MINUTES
OFF	ON	15 MINUTES	15 MINUTES
ON	ON	30 MINUTES	30 MINUTES

USE COPPER CONDUCTORS ONLY.
EMPLOYER UNIQUEMENT DES CONDUCTEURS DE CUIVRE.
#6 AWG MIN. WIRE = 90°

FOR SUPPLY CONNECTIONS, USE CONDUCTORS SIZED ON THE BASIS OF 60°C AMPACITY BUT RATED MINIMUM OF 90°C.

TORQUE RANGE FOR MAIN TERMINAL BLOCK (TB1): 27-30 IN. LBS. (31.1-34.5 kg cm)

CONNECT ONLY TO CIRCUITS PROTECTED BY A CLASS A GFCI.



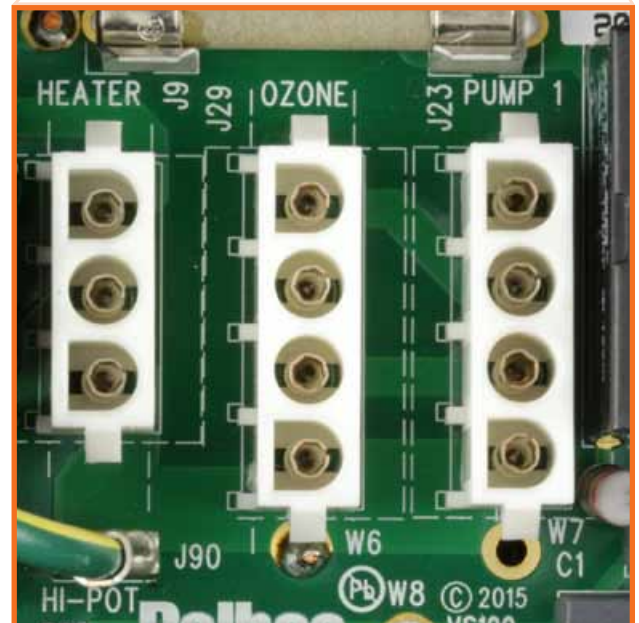
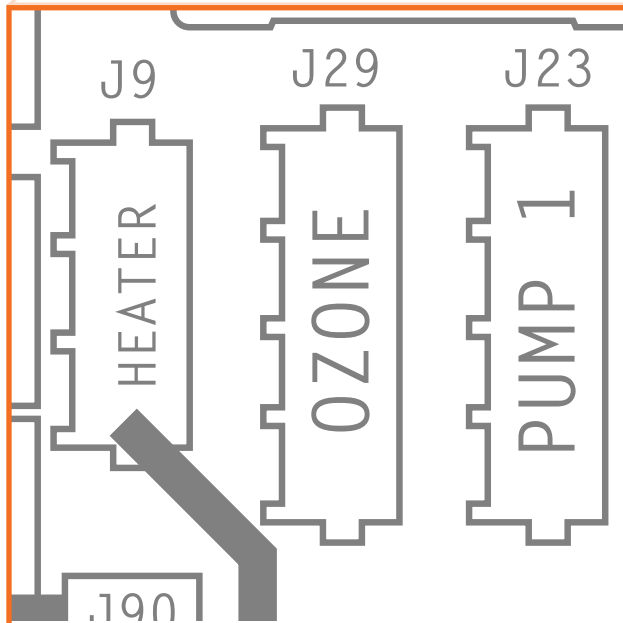
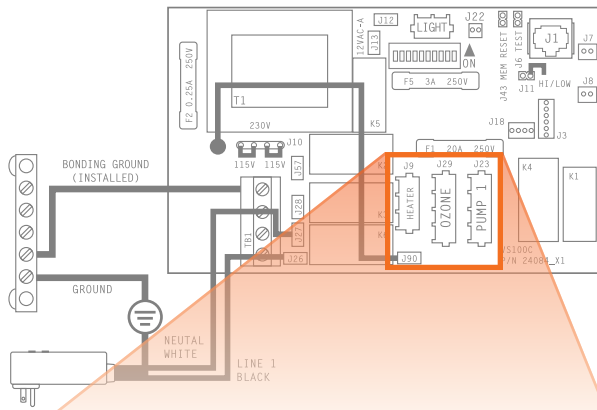
FOR HARDWIRED INSTALLATIONS, A DISCONNECTING MEANS MUST BE INSTALLED WITHIN SIGHT FROM THE EQUIPMENT AND AT LEAST 5 FEET (1.52 M) FROM THE INSIDE WALLS OF THE POOL, SPA, OR HOT TUB.

TOTAL OUTPUT AMP DRAW NOT TO EXCEED MAX INPUT RATING OF SPA. USE EARTH GROUND CONNECTIONS AS INDICATED INSIDE THE SYSTEM ENCLOSURE.

The wire diagram contains important information for troubleshooting. The following pages explain how to read the diagram.

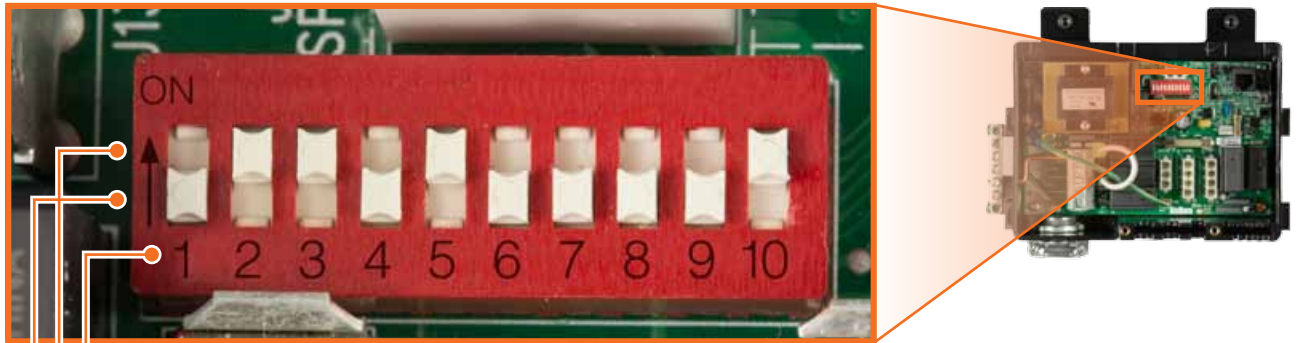
Circuit Board - Component Connections

Each major circuit board connector is named and labeled on the circuit board and on the wire diagram. For example, the HEATER connector is labeled J9. The OZONE connector is labeled J29. The PUMP connector is labeled J23.



Circuit Board - Dip Switch Bank

This page shows how the dip switch bank on the circuit board corresponds with the dip switch chart on the wire diagram.



	OFF POSITION	DIP SWITCH #	ON POSITION
TEST MODE OFF*	◀	1	TEST MODE ON*
N/A	◀	2 ▶	N/A
DUPLEX PANEL		3 ▶	MINI PANEL
N/A MUST BE OFF	◀	4	N/A MUST BE OFF
SEE PUMP TABLE		5 ▶	SEE PUMP TABLE
60HZ OPERATION	◀	6	50HZ OPERATION
STD, ECON, SLEEP ALLOWED	◀	7	STANDARD MODE ONLY
DEGREES FAHRENHEIT	◀	8	DEGREES CELSIUS
SEE PUMP TABLE	◀	9	SEE PUMP TABLE
HIGH AMP - HEAT W/P1 HI		10 ▶	LOW AMP - NO HEAT W/P1 HI

*SWITCH 1 IS NORMALLY OFF ALL UNUSED SWITCHES SHOULD BE OFF

PUMP TIMEOUTS TABLE			
SWITCH 5	SWITCH 9	LOW SPEED	HIGH SPEED
OFF	OFF	2 HOURS	15 MINUTES
ON	OFF	2 HOURS	30 MINUTES
OFF	ON	15 MINUTES	15 MINUTES
ON	ON	30 MINUTES	30 MINUTES

IMPORTANT TROUBLESHOOTING CONCEPTS

1 - The wiring diagram shows factory default dip switch settings. Make sure the dip switches on the circuit board match the factory default settings, before you start troubleshooting.

2 - DO NOT change dip switch settings when the system is powered ON. The only exception is dip switch #1.