

GS501SZ Hot Sheet

Balboa Instruments System PN 54515

System Model # GS5-GS501SZ-RCA-3.0k

Software Version # 36

EPN # 1843

Base PCBA - PN 54516

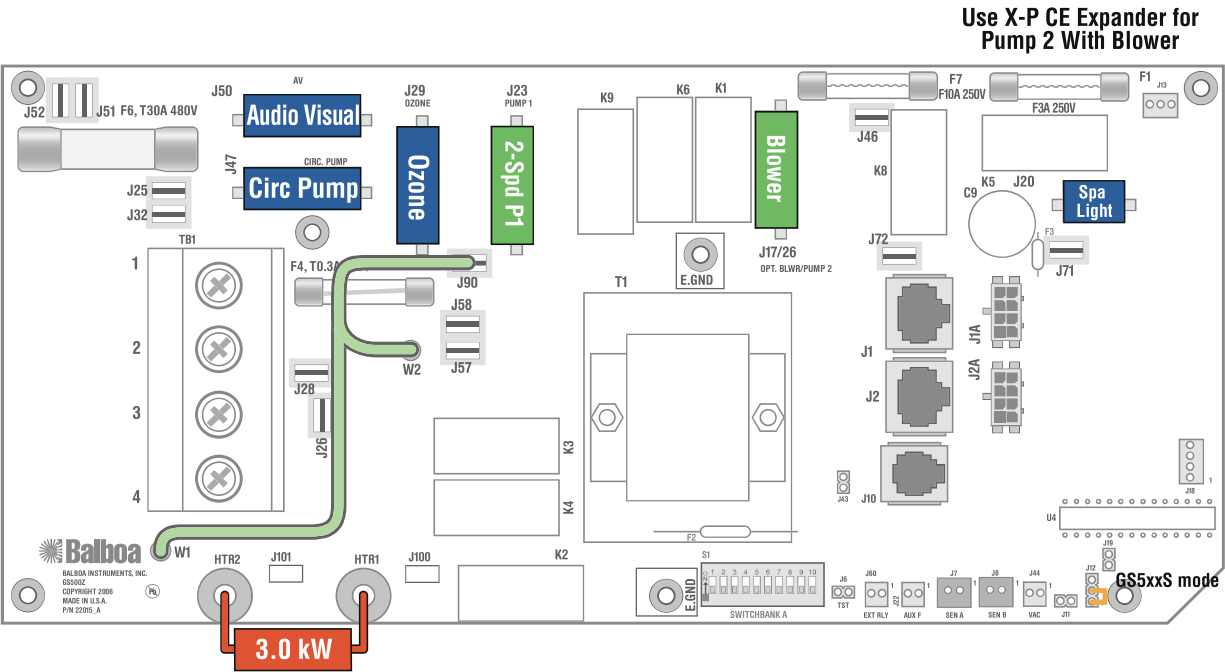
PCB GS500Z - PN 22015 Rev A

Base Panels

Serial Standard – PN 51057



Wiring Configuration



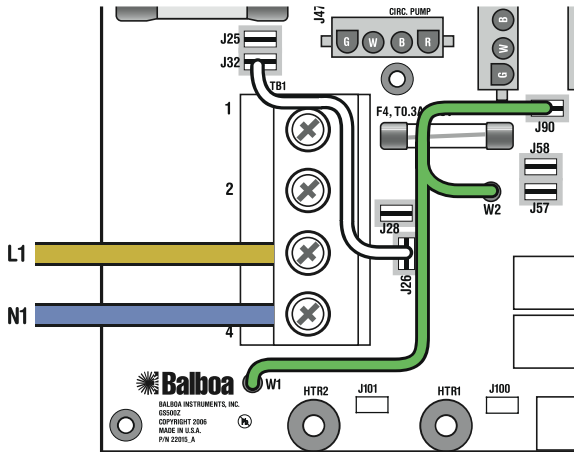
HiPot Testing Note:

Disconnect slip terminal with green wires from J90 prior to performing HiPot test. Failure to disconnect will cause a false failure of the test.

Reconnect terminal to J90 after successful completion of HiPot test.

PCB Revision	History
A	Production Release

Electrical Service Configuration Options



Single Service (1 x 16 Amp or 1 x 32 Amp)

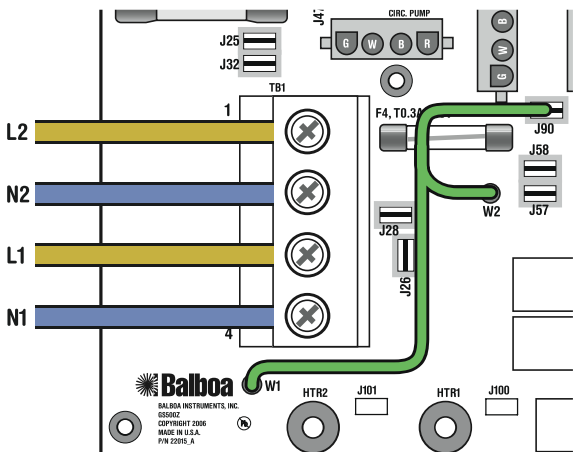
This option is configured and shipped as the default.

For 1 x 32 Amp Service:

DIP Switch A10 can be ON

For 1 x 16 Amp Service:

DIP Switch A10 must be OFF



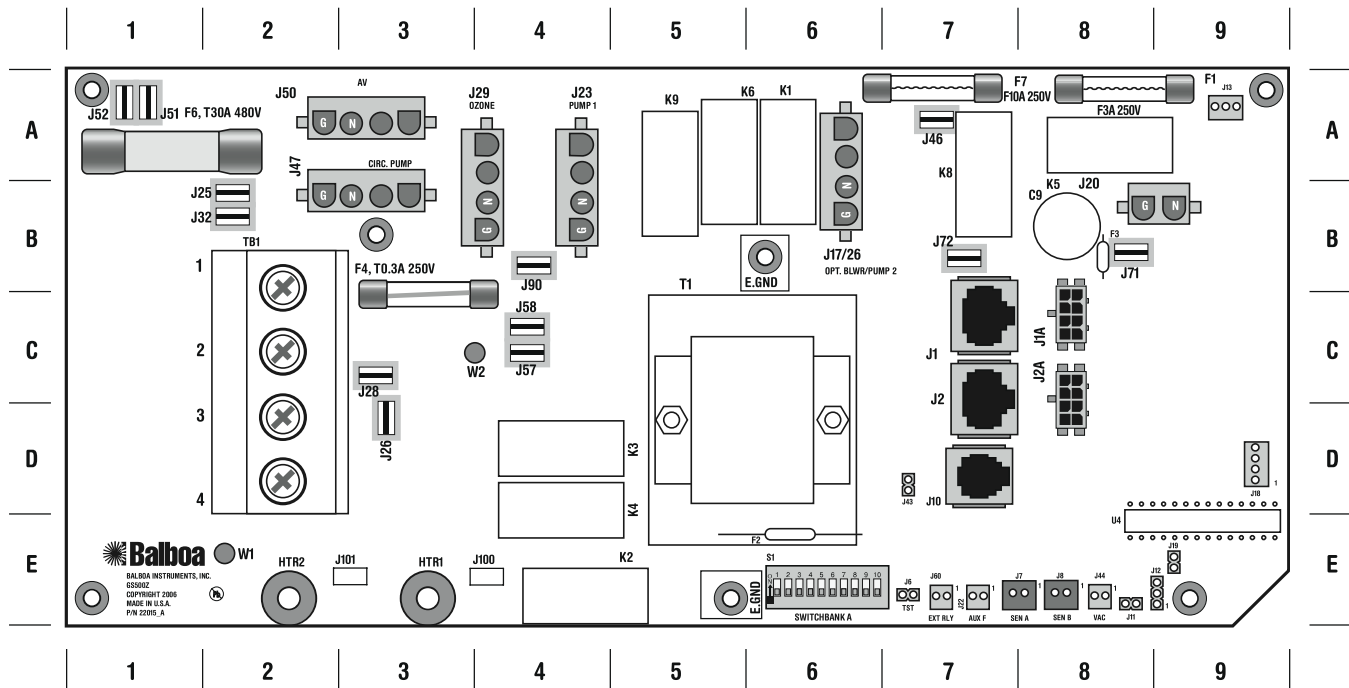
Dual Service Option (2 x 16 Amp)

Completely remove the white wire from J26 and J32.

Note: J32 and J25 are electrically identical. The white wire may be attached to either terminal before removal.

DIP Switch A10 must be ON

Configuration Options



Output Features

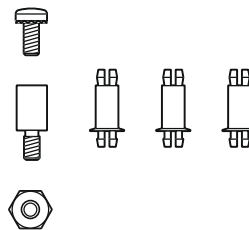
J50	Audio Visual (always hot - no relay)
J47	Circ Pump
J29	Ozone

Note: If a circ pump and ozone need a separate relay
Use the X-03 CE Expander board

J23	2-Speed Pump 1
J20	Spa Light

Quadrant

3-A
3-A
4-A
4-A
4-A
8-B



X-Mount P

PN 53933

Used for mounting any Expander Board
in a plastic enclosure.
Standoffs attach to heater mounting bracket.

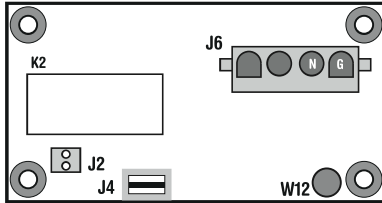
System can be factory configured for either a Duplex Topside Panel,
a Serial Standard Panel, or a Digital Deluxe Panel.
Note: Some panels styles are not available depending on system
configuration. Consult your Balboa product representative for details.

NOTE Regarding J12 (Quadrant 9-E):

When J12 on the Main Board is jumpered on
pins 2 & 3, the system is in GS50xZ compatibility
mode.

If J12 on the Main Board is jumpered on pins 1 & 2,
the system is in GS51xZ/GS5xxSZ/GS5xxDZ
compatibility mode.

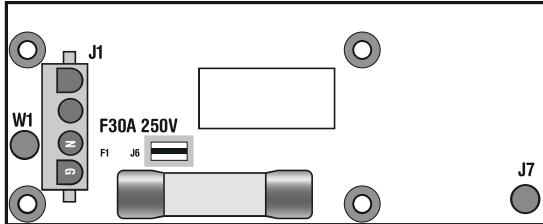
Expander Options



X-P CE PN 53547

Used for a 1-speed Pump output.

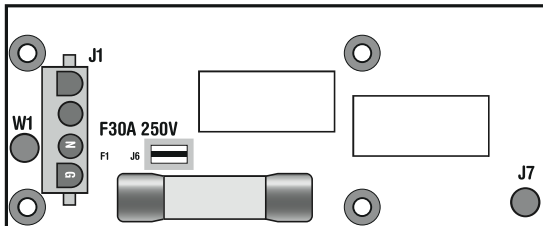
- J4 on X-P CE connects directly to Line AC using J52 or J51 on the main GS500Z PCBA.
- J2 on X-P CE connects to J60 on the main board.
- W12 on X-P CE connects directly to Neutral AC using J57 or J58 on the main GS500Z PCBA.



X-P231 CE PN 55025

Can replace the X-P CE in cases where branch circuit protection is needed for high amperage devices that would over-burden power input fuse F6 (1-A) on the main PCBA.

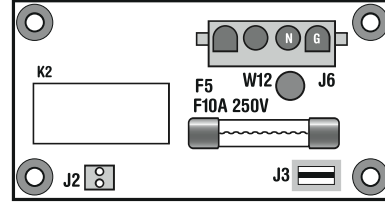
- J6 on X-P231 CE connects directly to Line AC using J25 or J32 on the main GS500Z PCBA, depending on AC Service Configuration.
- J7 on X-P231 CE connects to J60 on the main board.
- W1 on X-P231 CE connects directly to Neutral AC using J57 or J58 on the main GS500Z PCBA.



X-P332 CE PN 55138

Can replace the X-P CE in cases where branch circuit protection is needed for high amperage devices that would over-burden power input fuse F6 (1-A) on the main PCBA.

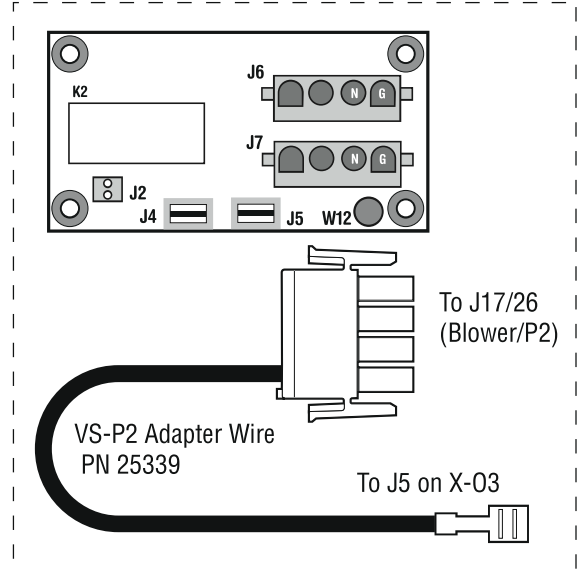
- J6 on X-P332 CE connects directly to Line AC using J25 or J32 on the main GS500Z PCBA, depending on AC Service Configuration.
- J7 on X-P332 CE connects to J13 on the main board.
- W1 on X-P332 CE connects directly to Neutral AC using J57 or J58 on the main GS500Z PCBA.



X-B CE PN 53311

Used for a Blower output ONLY.

- J3 on X-B CE connects directly to Line AC using J52 or J51 on the main GS500Z PCBA.
- J2 on X-B CE connects to J60 on the main board.
- W12 on X-B CE connects directly to Neutral AC using J57 or J58 on the main GS500Z PCBA.



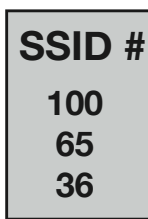
X-2SP CE Kit PN 53985

Adapter PN 25339 is used in conjunction with an X-03 CE to run a 2-speed Pump 2.

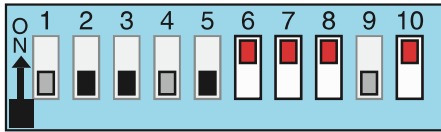
No Blower is available when this kit is used.

- J4 on X-03 CE connects directly to Line AC using J52 or J51 on the main GS500Z PCBA.
- J2 on X-P CE connects to J60 on the main board.
- W12 on X-P CE connects directly to Neutral AC using J57 or J58 on the main GS500Z PCBA.
- J5 on X-P CE connects J17/26 connector on the main GS500Z PCBA using adapter wire VS-P2.

DIP Switches and Jumpers

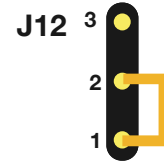


Switchbank A



- | | |
|-----------------------------|--------------------|
| A1, Test Mode OFF | A6, 50 Hz |
| A2, Generic Panel layout | A7, J17/26 Enabled |
| A3, Off-board Pump disabled | A8, Degrees C |
| A4, Aux Freeze | A9, Circ Pump OFF |
| A5, 1-speed P1 w/Circ | A10, Low Amp mode |

GS51x/GS5xxS/GS5xxD Compatible



J43



DIP Switch Key

- | | | |
|-----|-------|--|
| A1 | ..... | Test Mode (normally Off) |
| A2 | ..... | In "ON" position, Long Serial Standard panel (customer specific) |
|  | ..... | In "OFF" position, Generic Balboa Serial Standard panel layout |
| A3 | ..... | In "ON" position, off-board pump enabled (requires expander board to be installed) |
|  | ..... | In "OFF" position, off-board pump disabled |
| A4 | ..... | Aux Freeze (must be OFF) |
| A5 | ..... | In "ON" position, Two-speed pump 1 |
|  | ..... | In "OFF" position, One-speed pump 1 (A9 must be On and a circ pump installed) |
| A6 | ..... | In "ON" position, 50Hz operation |
|  | ..... | In "OFF" position, 60Hz operation |
| A7 | ..... | In "ON" position, J17/26 equipment enabled |
|  | ..... | In "OFF" position, J17/26 equipment disabled |
| A8 | ..... | In "ON" position, temperature is displayed in degrees Celsius |
|  | ..... | In "OFF" position, temperature is displayed in degrees Fahrenheit |
| A9 | ..... | In "ON" Position, 24 Hour Circ Pump with 3°F shut off |
|  | ..... | In "OFF" position, no circ pump |
| A10 | ..... | In "ON" Position, heater is disabled while any high-speed pump or blower is running (low amperage mode) |
|  | ..... | In "OFF" position, heater can run while any/all high-speed pumps or blowers are running (high amperage mode) |

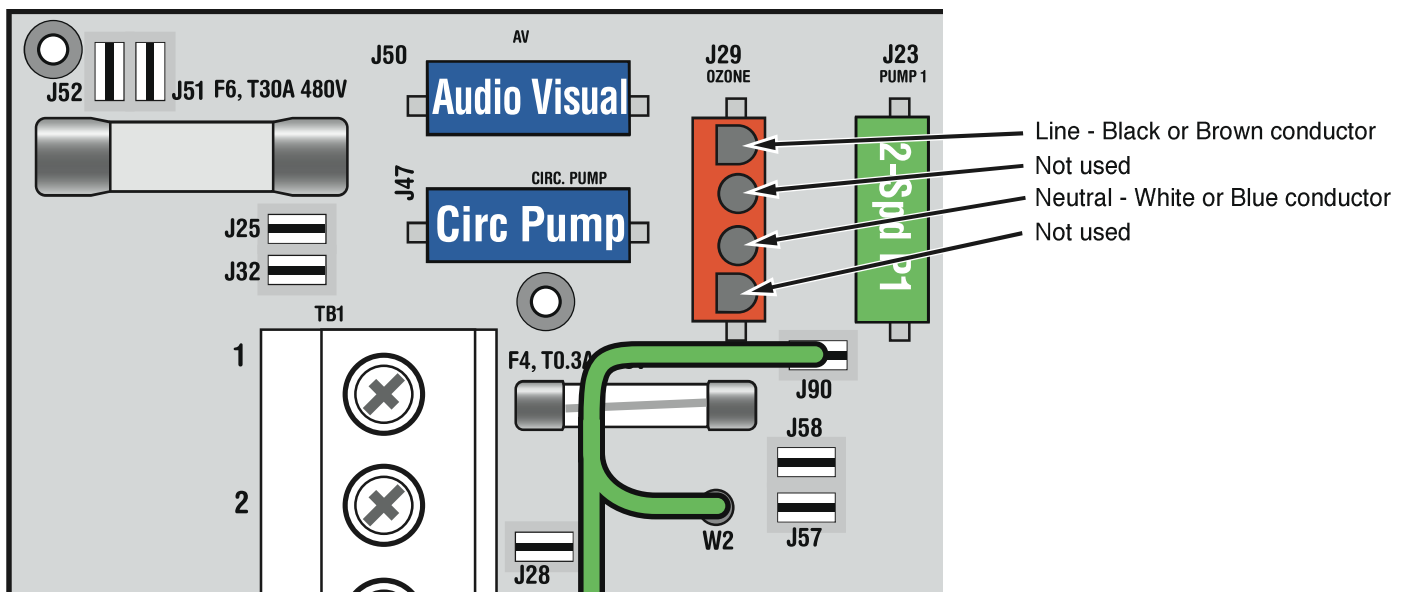
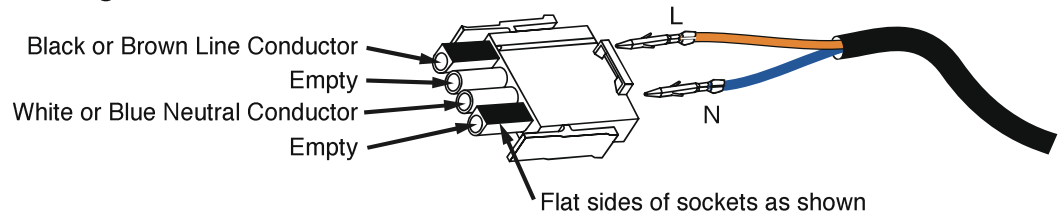
Jumper Key

- J12** Jumper on Pin 1 and 2 will enable GS51x/GS5xxS/GS5xxD compatibility mode.
Jumper on Pin 2 and 3 will enable GS50x compatibility mode (Do not use with Serial or Deluxe Panels).
- J43** When jumper is placed on 2 pins during power-up, system will reset persistent memory.
Leave on 1 pin only to enable persistent memory feature.

Ozone Connections

Note: A special tool is required to remove the pins from the connector body once they are snapped in place. Check with your Balboa Account Manager for information on purchasing a pin-removal tool.

Balboa Ozone connector configuration for 230VAC 50Hz:



Serial Panel Configurations



Serial Standard

PN 51057 with Overlay PN 10328

- Connects to Main Panel terminal J1