

CIRCUIT BOARD REPLACEMENT GUIDELINES

Please find enclosed your new HQBP5 Series Circuit Board to replace the BP501 Series Circuit board (#56488, #56944, #56585, #56961, #56483 , #56965)

Please refer to the included Diagram for wiring to assist you in a successful installation.

Identify your system original configuration in the following chart to match the set -up number for the new circuit board

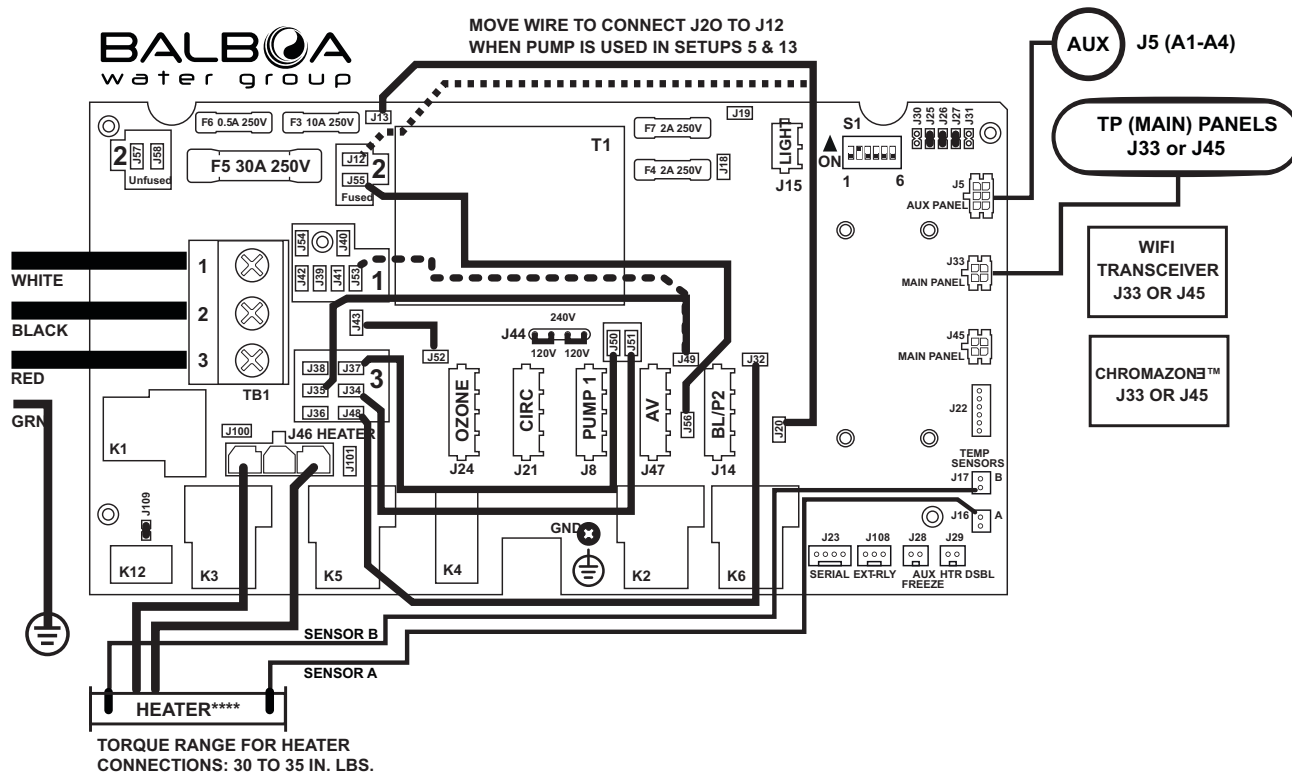
| BP501-G1 Replacing Original PCB #56488 or #56944 | Installing New PCB #59375 | See Page 2 |
|-----------------------------------------------------|---------------------------|------------|
| Set-Up # | Corresponding Set-Up # | |
| 1 | 13 | |
| 2 | 5 | |
| 3 | 13 | |
| 4 | 5 | |
| 5 | 15 | |
| 6 | 7 | |

| BP501-G2 Replacing Original PCB #56483 , #56965 | Installing New PCB #59375 | See Page 3 |
|----------------------------------------------------|---------------------------|------------|
| Set-Up # | Corresponding Set-Up # | |
| 1 | 19 | |
| 2 | 18 | |
| 3 | 20 | |

| BP501-G3 Replacing Original PCB #56585 or #56961 | Installing New PCB #59375 | See Page 4 |
|-----------------------------------------------------|---------------------------|------------|
| Set-Up # | Corresponding Set-Up # | |
| 1 | 9 | |
| 2 | 8 | |
| 3 | 11 | |
| 4 | 10 | |
| 5 | 12 | |
| 6 | 13 | |
| 7 | 14 | |
| 8 | 15 | |

Universal PCB 59375

Wiring Diagram for Setups 5, 7, 13 & 15



**** HEATER MAY
BE EITHER 4.0kW
OR 5.5kW. CHECK
HEATER LABEL FOR
ACTUAL VALUE.

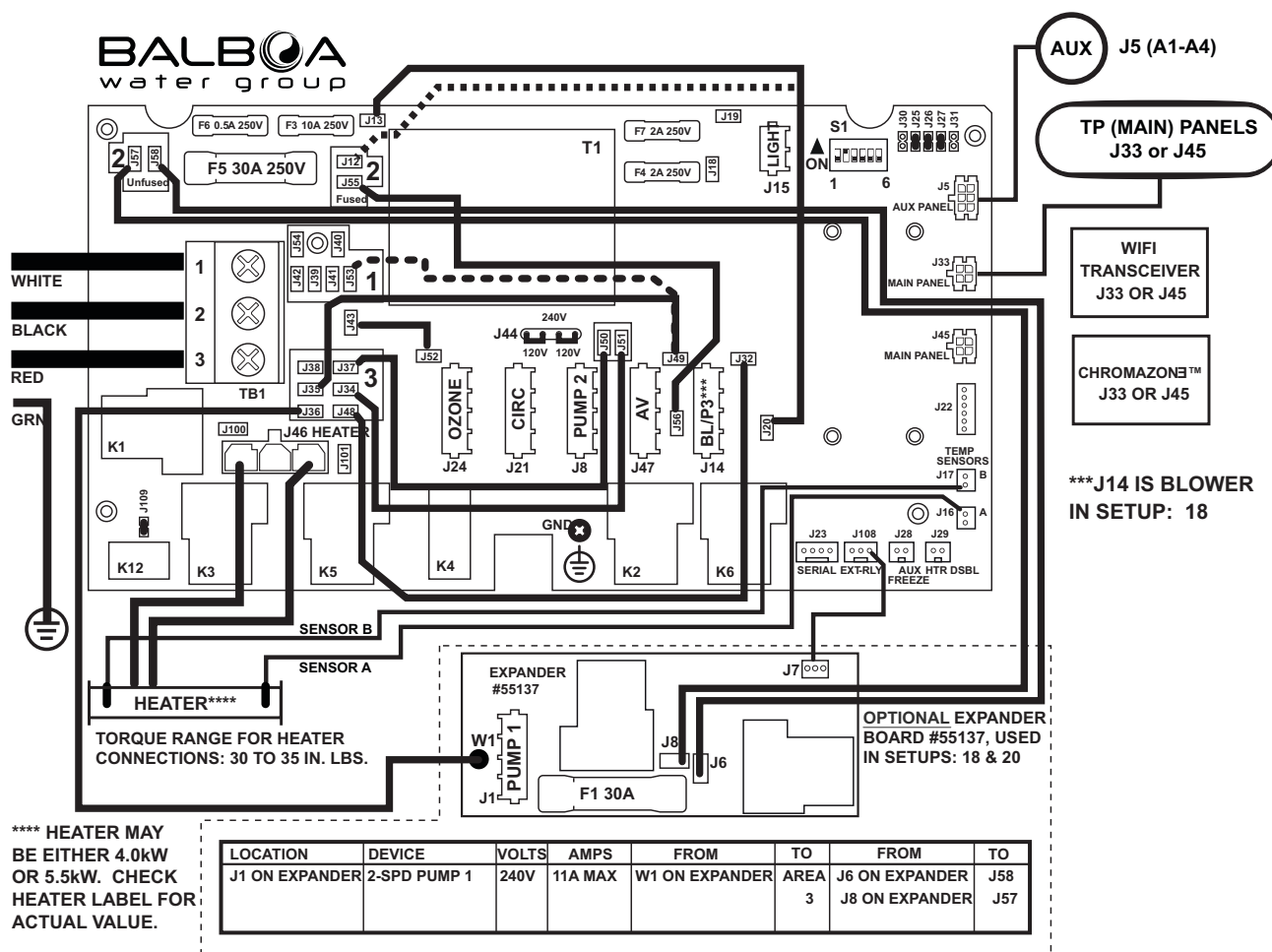
| SETUP # | CIRC PUMP | PUMP 1 | P2/BLO | TEMP SCALE |
|---------|-----------------------------------|---------|---------|------------|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | PROGRAMMABLE FILTRATION + POLLING | 1-SPEED | 1-SPEED | °F |
| 6 | | | | |
| 7 | PROGRAMMABLE FILTRATION + POLLING | 1-SPEED | | °F |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| 12 | | | | |
| 13 | NONE | 2-SPEED | 1-SPEED | °F |
| 14 | | | | |
| 15 | NONE | 2-SPEED | | °F |

| LOCATION | DEVICE | VOLT | MAX AMPS | FROM | TO |
|----------|---------------------------------|---------|-------------------|---------|--------|
| J8 | 2/1-SP PUMP 1 | 240V** | 11A MAX | | |
| J14 | BLOWER | 240V | 4A MAX | J32 | AREA 3 |
| J14 | 1-SP P3/P4 OPT | 240V | 11A MAX | J32 | AREA 3 |
| J15 | SPA LIGHT | 10V | 2A | | |
| J21 | CIRC | 240V** | 2A MAX | | |
| J24 | OZONE | 240V** | 0.5A | | |
| | P1/CIRC/OZONE LINE 1 CONNECTION | | | J50/J51 | AREA 3 |
| J47 | AV | 240V*** | 2A | J49 | AREA 3 |
| J46 | HEATER | 240V | 4.0 OR 5.5 kW**** | | |

**PUMP 1, CIRC AND OZONE ALL MUST BE THE SAME VOLTAGE.
* 2A LIMIT IS SHARED BY J15 SPA LIGHT AND CHROMAZONE™
*** AV CAN BE CHANGED TO 120V BY MOVING J49 TO AREA 1, BUT IN THAT CASE, IT MAY NEED MORE THAN 2A.

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Wiring Diagram for Setups 18 - 20



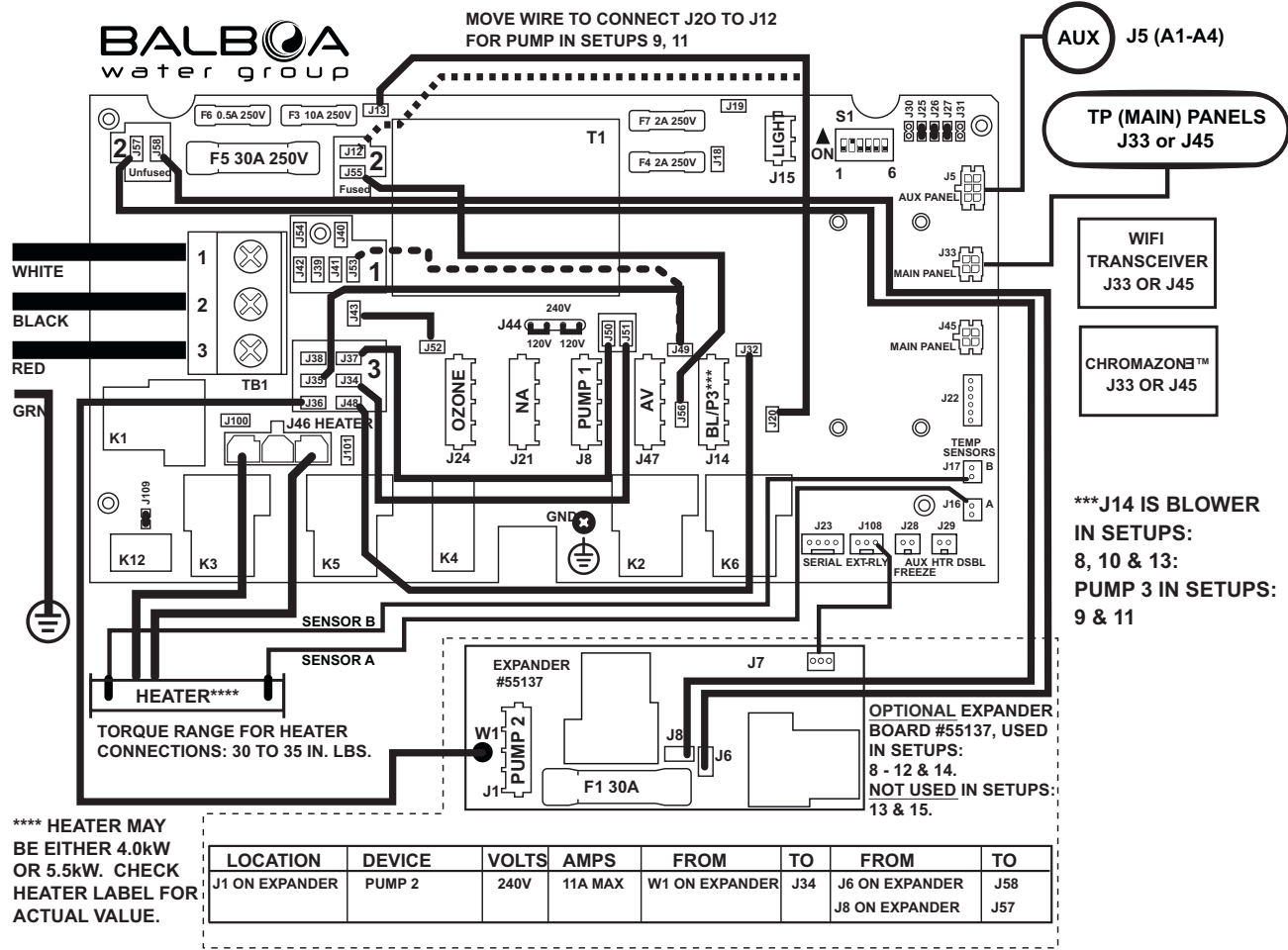
| SETUP # | CIRC PUMP | PUMP 1 | PUMP 2 | PUMP 3 | PUMP 4 | BLOWER | TEMP SCALE |
|---------|-----------------------------------|---------|---------|--------|--------|---------|------------|
| 16 | | | | | | | |
| 17 | | | | | | | |
| 18 | PROGRAMMABLE FILTRATION + POLLING | 2-SPEED | NONE | NONE | NONE | 1-SPEED | °F |
| 19 | PROGRAMMABLE FILTRATION + POLLING | 2-SPEED | 1-SPEED | NONE | NONE | NONE | °F |
| 20 | PROGRAMMABLE FILTRATION + POLLING | 2-SPEED | NONE | NONE | NONE | NONE | °F |

| LOCATION | DEVICE | VOLTS | MAX AMPS | FROM | TO |
|----------|---------------------------------|---------|-------------------|---------|--------|
| J8 | 1-SP PUMP 2 | 240V** | 11A MAX | | |
| J14 | BLOWER | 240V | 4A MA | J32 | AREA 3 |
| J14 | 1-SP P3 OPT | 240V | 11A MAX | J32 | AREA 3 |
| J15 | SPA LIGHT | 10V | 2A | | |
| J21 | CIRC | 240V** | 2A MAX | | |
| J24 | OZONE | 240V** | 0.5A | | |
| | P1/CIRC/OZONE LINE 1 CONNECTION | | | J50/J51 | AREA 3 |
| J47 | AV | 240V*** | 2A | J49 | AREA 3 |
| J46 | HEATER | 240V | 4.0 OR 5.5 kW**** | | |

**PUMP 2 (WHEN USED), CIRC AND OZONE ALL MUST BE THE SAME VOLTAGE.
 * 2A LIMIT IS SHARED BY J15 SPA LIGHT AND CHROMAZONE™
 *** AV CAN BE CHANGED TO 120V BY MOVING J49 TO AREA 1, BUT IN THATCASE, IT MAY NEED MORE THAN 2A.

Universal PCB 59375

Wiring Diagram for Setups 8 - 15



| SETUP # | CIRC PUMP | PUMP 1 | PUMP 2 | PUMP 3 | PUMP 4 | BLOWER | TEMP SCALE |
|---------|-----------|---------|---------|---------|--------|---------|------------|
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | NONE | 2-SPEED | 2-SPEED | NONE | NONE | 1-SPEED | °F |
| 9 | NONE | 2-SPEED | 2-SPEED | 1-SPEED | NONE | NONE | °F |
| 10 | NONE | 2-SPEED | 1-SPEED | NONE | NONE | 1-SPEED | °F |
| 11 | NONE | 2-SPEED | 1-SPEED | 1-SPEED | NONE | NONE | °F |
| 12 | NONE | 2-SPEED | 2-SPEED | NONE | NONE | NONE | °F |
| 13 | NONE | 2-SPEED | NONE | NONE | NONE | 1-SPEED | °F |
| 14 | NONE | 2-SPEED | 1-SPEED | NONE | NONE | NONE | °F |
| 15 | NONE | 2-SPEED | NONE | NONE | NONE | NONE | °F |

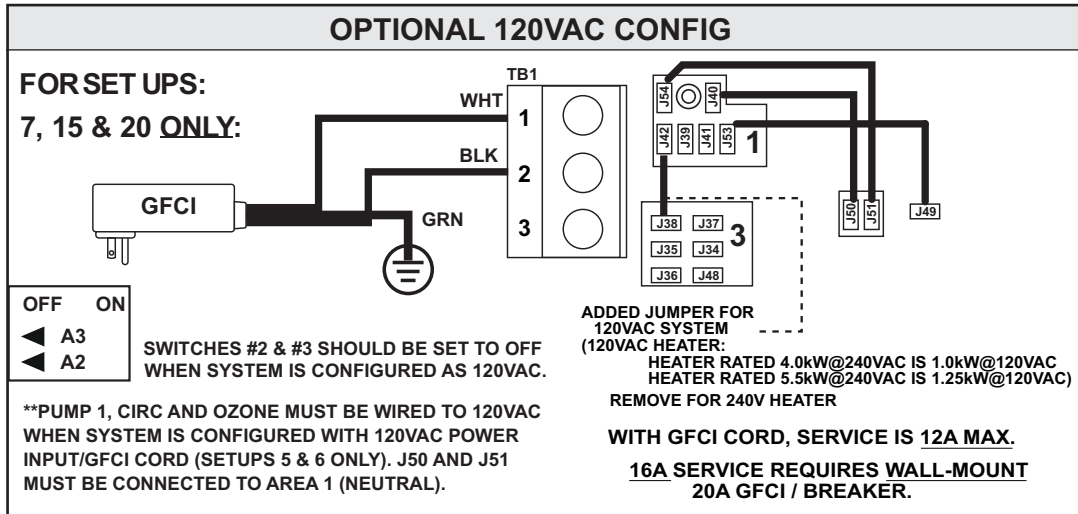
| LOCATION | DEVICE | VOLT | MAX AMPS | FROM | TO |
|----------|---------------------------------|---------|-------------------|---------|--------|
| J8 | 2/1-SP PUMP 1 | 240V** | 11A MAX | | |
| J14 | BLOWER | 240V | 4A MAX | J32 | AREA 3 |
| J14 | 1-SP P3/P4 OPT | 240V | 11A MAX | J32 | AREA 3 |
| J15 | SPA LIGHT | 10V | 2A | | |
| J21 | CIRC | 240V** | 2A MAX | | |
| J24 | OZONE | 240V** | 0.5A | | |
| | P1/CIRC/OZONE LINE 1 CONNECTION | | | J50/J51 | AREA 3 |
| J47 | AV | 240V*** | 2A | J49 | AREA 3 |
| J46 | HEATER | 240V | 4.0 OR 5.5 kW**** | | |

**PUMP 1, CIRC AND OZONE ALL MUST BE THE SAME VOLTAGE.
 * 2A LIMIT IS SHARED BY J15 SPA LIGHT AND CHROMAZONE™
 *** AV CAN BE CHANGED TO 120V BY MOVING J49 TO AREA 1, BUT IN THAT CASE, IT MAY NEED MORE THAN 2A.

SYSTEM SETUP & WIRE CONNECTION CHART

| Setup # | Circ Pump | Ozone | Pump 1 | Pump 2 | Pump 3 | Pump 4 | Blower | Temp |
|---------|-----------|-------|------------|------------|-------------|--------|--------|------|
| 1 | | | | | | | | |
| 2 | | | | | | | | |
| 3 | | | | | | | | |
| 4 | | | | | | | | |
| 5* | Yes (J21) | J24 | J8 (1-Spd) | None | None | None | J14 | °F |
| 6 | | | | | | | | |
| 7 | Yes (J21) | J24 | J8 (1-Spd) | None | None | None | None | °F |
| 8 | None | J24 | J8 (2-Spd) | J1 (2-Spd) | None | None | J14 | °F |
| 9* | None | J24 | J8 (2-Spd) | J1 (2-Spd) | J14 (1-Spd) | None | None | °F |
| 10 | None | J24 | J8 (2-Spd) | J1 (1-Spd) | None | None | J14 | °F |
| 11* | None | J24 | J8 (2-Spd) | J1 (1-Spd) | J14 (1-Spd) | None | None | °F |
| 12 | None | J24 | J8 (2-Spd) | J1 (2-Spd) | None | None | None | °F |
| 13* | None | J24 | J8 (2-Spd) | None | None | None | J14 | °F |
| 14 | None | J24 | J8 (2-Spd) | J1 (1-Spd) | None | None | None | °F |
| 15 | None | J24 | J8 (2-Spd) | None | None | None | None | °F |
| 16 | | | | | | | | |
| 17 | | | | | | | | |
| 18 | Yes (J21) | J24 | J1 (2-Spd) | None | None | None | J14 | °F |
| 19 | Yes (J21) | J24 | J1 (2-Spd) | J8 (1-Spd) | None | None | None | °F |
| 20 | Yes (J21) | J24 | J1 (2-Spd) | None | None | None | None | °F |

NOTE: * Wiring change required - Move Black J20 wire from J13 to J12 (Setups: 5, 9, 11, & 13 only)



S1 DIP SWITCH SETTINGS

| OFF POSITION | S1 SWITCH # | ON POSITION |
|----------------------------|-------------|--------------------------|
| TEST MODE OFF | ◀ 1 | TEST MODE ON |
| DON'T ADD 1 HS PUMP W/HTR | 2 ▶ | ADD 1 HS PUMP WITH HEAT |
| DON'T ADD 2 HS PUMPS W/HTR | ◀ 3 | ADD 2 HS PUMPS WITH HEAT |
| 1 MIN HTR COOLDOWN (ELEC) | ◀ 4 | 5 MIN HTR COOLDOWN (GAS) |
| SPECIAL AMPERAGE RULE OFF | ◀ 5 | SPECIAL AMPERAGE RULE ON |
| STORE SETTINGS* | ◀ 6 | MEMORY RESET* |

***SWITCH # 6 SHOULD BE SET TO OFF UPON FINAL INSTALLATION.
 ALL UNUSED SWITCHES SHOULD BE OFF**

LEFT BLANK

LEFT BLANK



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