BP21G1WL Tech Sheet

Customer: **Balboa Water Group**

Part Number:	56786-04	825 Incoloy 3.0kW
	56787-04	Titanium 3.0kW
Custom Box Overlay	☐	
Box Overlay Part Number	N/A	

CE System Model:	BP21-BP21G1WL-RCA3.0K
Software Version ID:	M100_225 V65.0
Software Version:	65.0
File Name:	BP2100_65.0_BP21G1WL.hex
Configuration Signature:	2D48E12E
Eng. Project Number:	5663

Control Panels:

spaTouch™3	Any version (version 3.2 or later required for Clim8zone™ heat pump support)
spaTouch™2	Any version (version 2.19 or later required for CHROMAZONƎ™ support; version 2.36 or later required for Clim8zone™ heat pump support)
Icon spaTouch™	Any version (version 3.36 or later required for bba™2 fully integrated functionality)
Menued spaTouch™	Any version (version 2.8 or later required for bba™2 integrated functionality)
TP900	Version 3.8 and later (Version 3.13 or later required for bba™)
TP800	Version 3.8 and later (Version 3.13 or later required for bba™; version 4.11 or later required for bba™2 integrated functionality)
TP700	Any version
TP600	Version 2.9 and later

System Revision History

Part #	EPN	Date	Originator	Changes Made
ZT000149	4472	02-23-15	BWG	Special version of BP2100G1 with water level sensor.
56785 56786 56787 56789	4472	10-01-15	BWG	Release to production.
56785-01 56786-01 56787-01 56789-01	4674	02-02-16	BWG	Update software version to improve manufacturability.
56785-02 56786-02 56787-02 56789-02	4776	12-07-16	BWG	Updated to latest software version, adding topside-intergrated bba™2 support. Released to production.
56786-03 56787-03	5098	04-22-21	BWG	Redesigned BP2100 board + updated software to support CHROMAZON∃™ & M8. Discontinue 800 Incoloy system versions (56785-XX and 56789-XX).
56786-03 56787-03	5663	02-08-23	BWG	Update to support Clim8zone™ heat pump. Update board over-voltage protection.

bba™2 / bba™3 (Balboa Bluetooth Amp) connection is documented separately.

bba™2 / bba™3 is integrated into graphic display panels (TP700, TP800, TP900 and spaTouch™).
With TP600, use the “BT” entry on the menu to toggle bba™2 / bba™3 power On/Off.

Basic Functions Setup 1-18

Power Requirements:

Single Service [3 wires (line, neutral, ground)]
230VAC, 50/60Hz*, 1þ, 32A, (Circuit Breaker rating = 40A max.)

Dual Service N/A

3-Service [5 wires (line 1, line 2, line 3, neutral, ground)]
230VAC line-to-neutral**, 50/60Hz*, 3þ, 16A, (Circuit Breaker rating = 20A max each phase line.)

HiPot Testing Note:
Disconnect slip terminal with green wires from J6 prior to performing HiPot test. Failure to disconnect may cause a false failure of the test. Reconnect terminal to J6 after successful completion of HiPot test.

* BP systems automatically detect 50Hz vs 60Hz. However, power frequency (50Hz vs 60Hz) is just one of many differences between North American (UL) and CE power, and it is because of these other differences that different BP systems must be used for UL vs CE territories. Also, there are a few countries that use CE power but 60 Hz (such as South Korea) which need CE systems, and a few countries that use UL power but 50 Hz which need UL systems.

** 3-phase service measured line-to-line will read about 400V, but BP systems do not use it line-to-line.

IMPORTANT - Service must include a neutral wire, with a line to neutral voltage of 230VAC.

Basic Functions Setup 1-18

System Ouputs:

Pump 1	230VAC	2-Speed	12A max†	15-minute timer for High Speed, 15-Minute timer for Low Speed 1-Speed in Setups 12, 14, 17 This is the heater pump in Setups 1–6, 15, 18 Must deliver 20 GPM through heater
Pump 2	230VAC	2-Speed	12A** max†	15-minute timer 1-Speed in Setups 5, 6, 11–14, 17, 18
Pump 3	230VAC	2-Speed	12A** max†	15-minute timer 2-Speed in Setups 1, 7 1-Speed in Setups 2, 5, 6, 8, 11–16 Unused in Setups 3, 4, 9, 10, 17, 18
Blower	230VAC	1 Speed	4A max	15-minute timer Unused in Setups 1, 2, 4, 6–8, 10, 13, 14
Circ Pump	230VAC	1-Speed	2A max	Programmable Filtration Cycles + Polling This is the heater pump in Setups 7–14, 16, 17 Must deliver 20 GPM through heater
Ozone	230VAC		.5A max	Slaved to Circ Pump in Setups 7-14, 16, 17 Independent in Setups 1-6, 15, 18
Spa Light	10VAC	On/Off	2A* max	240-minute timer.
AV + C8Z***	230VAC	Hot	2A + 8A max	Always on
Heater	3.0kW @ 240VAC max			

* 2A max limit is shared by On/Off Spa Light and CHROMAZON∃™.

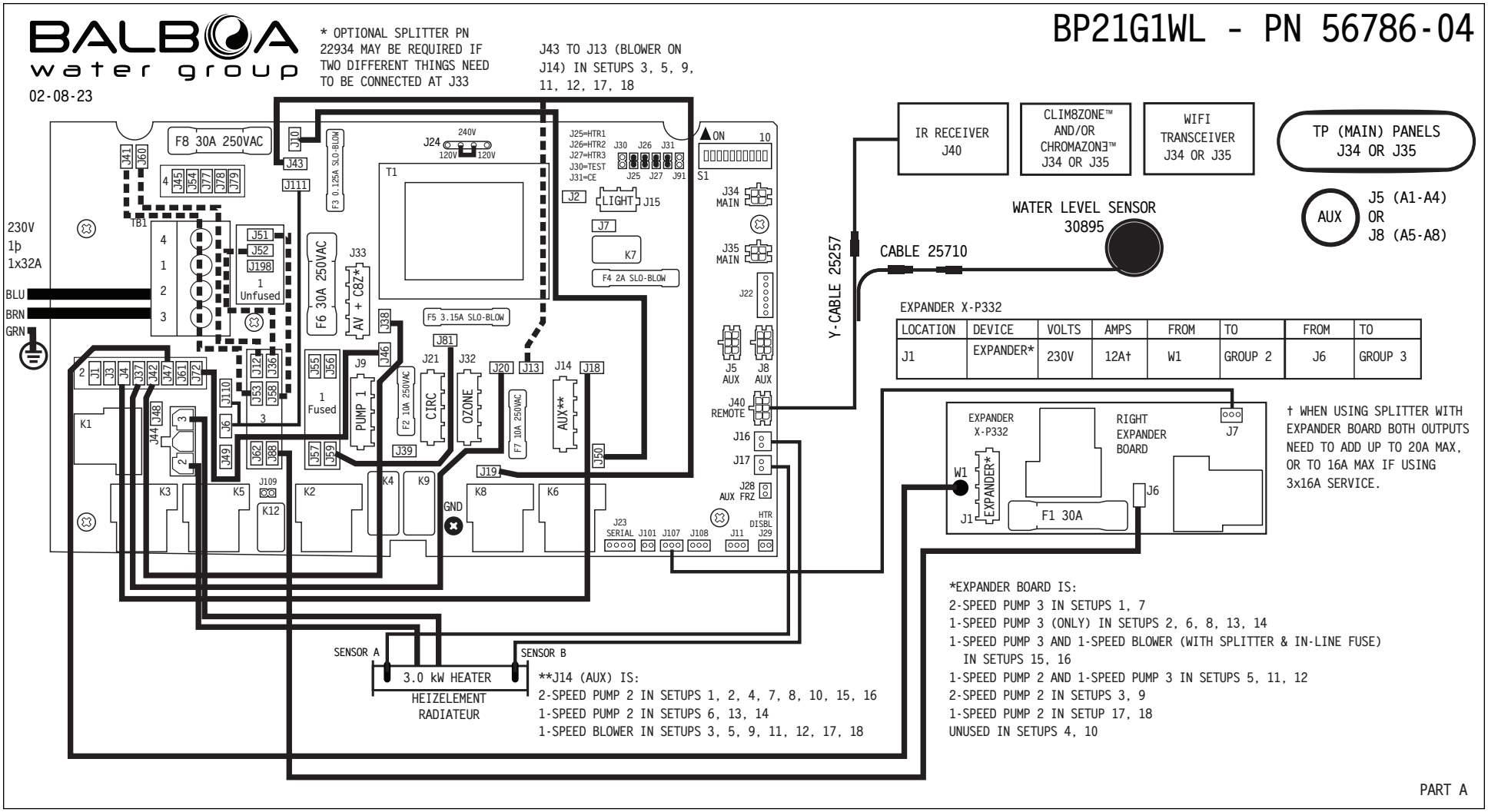
** In Setups 5, 11 & 12, Pumps 2 & 3 must add up to no more than 20A max, or to no more than 16A max if using 3x16A service.

†These are individual maximums, but they may need to be reduced based on available service rating and on how much equipment is used.

*** Optional splitter PN 22934 can be used to connect two things, such as an audio device and Clim8zone™(C8Z), to J33.

Hardware Setup

Wiring Diagram



Hardware Setup

Settings

SINGLE SERVICE 230V 1þ / 1x32A, THREE-SERVICE 230V 3þ / 3x16A

LOCATION	DEVICE	MAX AMPS
J9	NETZSTROMVERSORGUNG 2-GESCHW.-PUMPE 1 ALIMENTATION POMPE 1 A 2 VITESSES 2-SPD PUMP 1	12A††
J14	2/1-SPD PUMP 2 / BLOWER NETZSTROMVERSORGUNG 2/1-GESCHW.-PUMPE 2 / SPRUDELGEBLASE ALIMENTATION POMPE 2 A 2/1 VITESSES / VENTILATEUR	12A††
J15	10V BELEUCHTUNG ECLAIRAGE BAIN HYDRO SPA LIGHT	2A* (@10V)
J21	KREISLAUF PUMPE POMPE DE CIRCULATION CIRC PUMP	2A
J32	OZONGENERATOR GENERATOROZONE OZONE GENERATOR	0.5A
J33	AV + CLIM8ZONE™ (C8Z)	2A + 8A
J44	HEATER	3.0kW

* 2A LIMIT IS SHARED BY J15 SPA LIGHT AND CHROMAZONE™

†† THESE ARE INDIVIDUAL MAXIMUMS, BUT THEY MAY NEED TO BE REDUCED BASED ON AVAILABE SERVICE RATING AND ON HOW MUCH EQUIPMENT IS USED.

230V 1þ 1x32A

SWITCHBANK S1 OFF / SWITCHBANK S1 ON

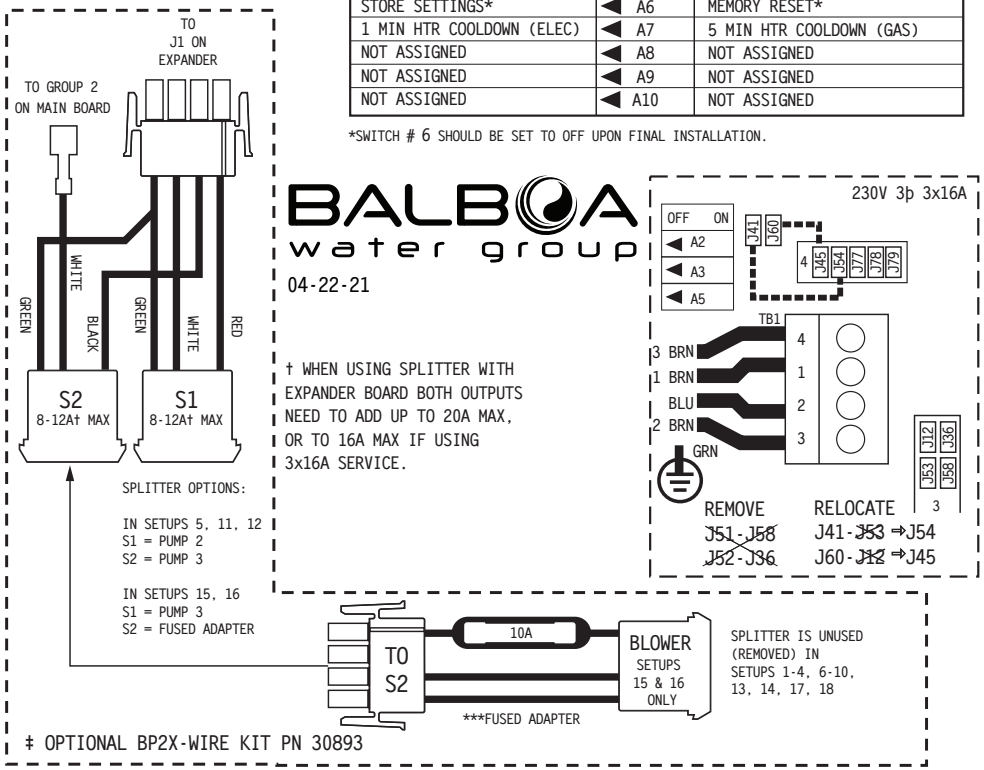
SWITCHBANK S1 OFF		SWITCHBANK S1 ON
TEST MODE OFF	◀ A1	TEST MODE ON
DON'T ADD 1 HS PUMP W/HTR	◀ A2	ADD 1 HS PUMP WITH HEAT
DON'T ADD 2 HS PUMPS W/HTR	◀ A3	ADD 2 HS PUMPS WITH HEAT
DON'T ADD 4 HS PUMPS W/HTR	◀ A4	ADD 4 HS PUMPS WITH HEAT
SPECIAL AMPERAGE RULE A	A5 ▶	SPECIAL AMPERAGE RULE B
STORE SETTINGS*	◀ A6	MEMORY RESET*
1 MIN HTR COOLDOWN (ELEC)	◀ A7	5 MIN HTR COOLDOWN (GAS)
NOT ASSIGNED	◀ A8	NOT ASSIGNED
NOT ASSIGNED	◀ A9	NOT ASSIGNED
NOT ASSIGNED	◀ A10	NOT ASSIGNED

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

SETUP #	CIRC PUMP	PUMP 1	PUMP 2	PUMP 3	BLOWER	TEMP SCALE
1	NONE	2-SPEED	2-SPEED	2-SPEED	NONE	°C
2	NONE	2-SPEED	2-SPEED	1-SPEED	NONE	°C
3	NONE	2-SPEED	2-SPEED	NONE	1-SPEED	°C
4	NONE	2-SPEED	2-SPEED	NONE	NONE	°C
5‡	NONE	2-SPEED	1-SPEED	1-SPEED	1-SPEED	°C
6	NONE	2-SPEED	1-SPEED	1-SPEED	NONE	°C
7	PROGRAMMABLE FILTRATION + POLLING	2-SPEED	2-SPEED	2-SPEED	NONE	°C
8	PROGRAMMABLE FILTRATION + POLLING	2-SPEED	2-SPEED	1-SPEED	NONE	°C
9	PROGRAMMABLE FILTRATION + POLLING	2-SPEED	2-SPEED	NONE	1-SPEED	°C
10	PROGRAMMABLE FILTRATION + POLLING	2-SPEED	2-SPEED	NONE	NONE	°C
11‡	PROGRAMMABLE FILTRATION + POLLING	2-SPEED	1-SPEED	1-SPEED	1-SPEED	°C
12‡	PROGRAMMABLE FILTRATION + POLLING	1-SPEED	1-SPEED	1-SPEED	1-SPEED	°C
13	PROGRAMMABLE FILTRATION + POLLING	2-SPEED	1-SPEED	1-SPEED	NONE	°C
14	PROGRAMMABLE FILTRATION + POLLING	1-SPEED	1-SPEED	1-SPEED	NONE	°C
15‡***	NONE	2-SPEED	2-SPEED	1-SPEED	1-SPEED	°C
16‡***	PROGRAMMABLE FILTRATION + POLLING	2-SPEED	2-SPEED	1-SPEED	1-SPEED	°C
17	PROGRAMMABLE FILTRATION + POLLING	1-SPEED	1-SPEED	NONE	1-SPEED	°C
18	NONE	2-SPEED	1-SPEED	NONE	1-SPEED	°C

PUMP 1 LOW TIMEOUT IS 15 MINUTES.
‡SETUPS 5, 11, 12, 15 AND 16 REQUIRE BP2X-WIRE KIT PN30893
***SETUPS 15 AND 16 REQUIRE ADDITIONAL FUSED ADAPTER FOR BLOWER OUTPUT

INSTEAD OF SETUP #1, THIS SYSTEM IS CONFIGURED IN SETUP #:



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

USE COPPER CONDUCTORS ONLY. EMPLOYER UNIQUEMENT DES CONDUCTEURS DE CUIVRE.

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

BP21G1WL - PN 56786-04
02-08-23
PART B

Setup Reference Table

Setup #	Circ Pump	Pump 1	Pump 2	Pump 3	Blower	Temp Scale
1	None	2-Speed	2-Speed	2-Speed	None	°C
2	None	2-Speed	2-Speed	1-Speed	None	°C
3	None	2-Speed	2-Speed	None	1-Speed	°C
4	None	2-Speed	2-Speed	None	None	°C
5	None	2-Speed	1-Speed	1-Speed	1-Speed	°C
6	None	2-Speed	1-Speed	1-Speed	None	°C
7	Programmable Filtration + Polling	2-Speed	2-Speed	2-Speed	None	°C
8	Programmable Filtration + Polling	2-Speed	2-Speed	1-Speed	None	°C
9	Programmable Filtration + Polling	2-Speed	2-Speed	None	1-Speed	°C
10	Programmable Filtration + Polling	2-Speed	2-Speed	None	None	°C
11	Programmable Filtration + Polling	2-Speed	1-Speed	1-Speed	1-Speed	°C
12	Programmable Filtration + Polling	1-Speed	1-Speed	1-Speed	1-Speed	°C
13	Programmable Filtration + Polling	2-Speed	1-Speed	1-Speed	None	°C
14	Programmable Filtration + Polling	1-Speed	1-Speed	1-Speed	None	°C
15	None	2-Speed	2-Speed	1-Speed	1-Speed	°C
16	Programmable Filtration + Polling	2-Speed	2-Speed	1-Speed	1-Speed	°C
17	Programmable Filtration + Polling	1-Speed	1-Speed	None	1-Speed	°C
18	None	2-Speed	1-Speed	None	1-Speed	°C

System (and any replacement board)
is shipped in Setup 1

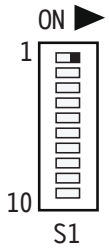
Color Key	Output
	XP332
	XP332 and Splitter
	XP332 and Splitter and in-line Blower fuse
	J14 (Aux) on Main Board

Changing Software Setups with TP800 / TP900 / spaTouch™ Menued Panel

Test Menu Access (S1, Switch 1 ON) *Service Technician ONLY.*

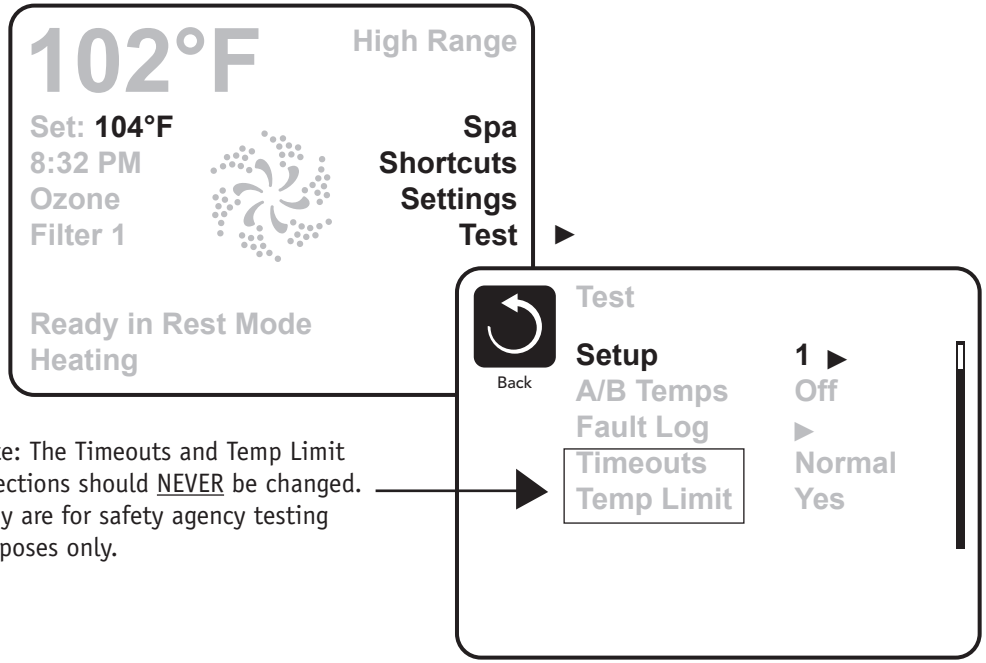
DANGER! HIGH VOLTAGE WILL BE ACCESSIBLE! SERVICE TECHNICIAN ONLY!

While the system is running, move DIP Switch 1 (on S1 on the Main circuit board) to ON. The system will enter Test Mode.
Moving DIP Switch 1 to OFF will exit Test Mode.



Software Setups

Under the TEST Menu, the Setup screen will allow changing the Setup from 1 to any number established by the Manufacturer. Changing the Setup may require wiring changes as well.



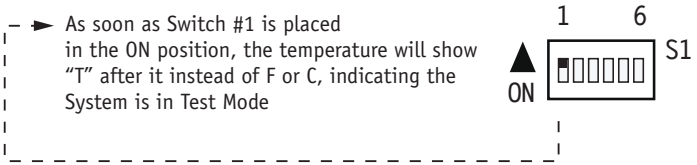
Note: The Timeouts and Temp Limit selections should NEVER be changed. They are for safety agency testing purposes only.

Changing Software Setups with TP600 / TP400

Test Menu Access (S1, Switch 1 ON) *Service Technician ONLY.*

DANGER! HIGH VOLTAGE WILL BE ACCESSIBLE! SERVICE TECHNICIAN ONLY!

While the system is running, move DIP Switch 1 (on S1 on the Main circuit board) to ON.
The system will enter Test Mode.
Moving DIP Switch 1 to OFF will exit Test Mode.

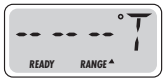


Software Setups

Under the TEST Menu, the Setup screen will allow changing the Setup from 1 to any number established by the Manufacturer. Changing the Setup may require wiring changes as well.

You will have 1 minute to complete the setup change after you manually exit Priming Mode. (Once familiar with the process, the Setup change should take less than 15 seconds.)

When the panel displays RUN PMPS PURG AIR, press any Temperature button ONCE to exit Priming Mode.
You should see "---T" where the T indicates the system is in Test Mode.



Continued on Next Page.

Changing Software Setups with TP600 / TP400 Continued

Again, **You will have 1 minute** to complete the setup change after you manually exit Priming Mode.

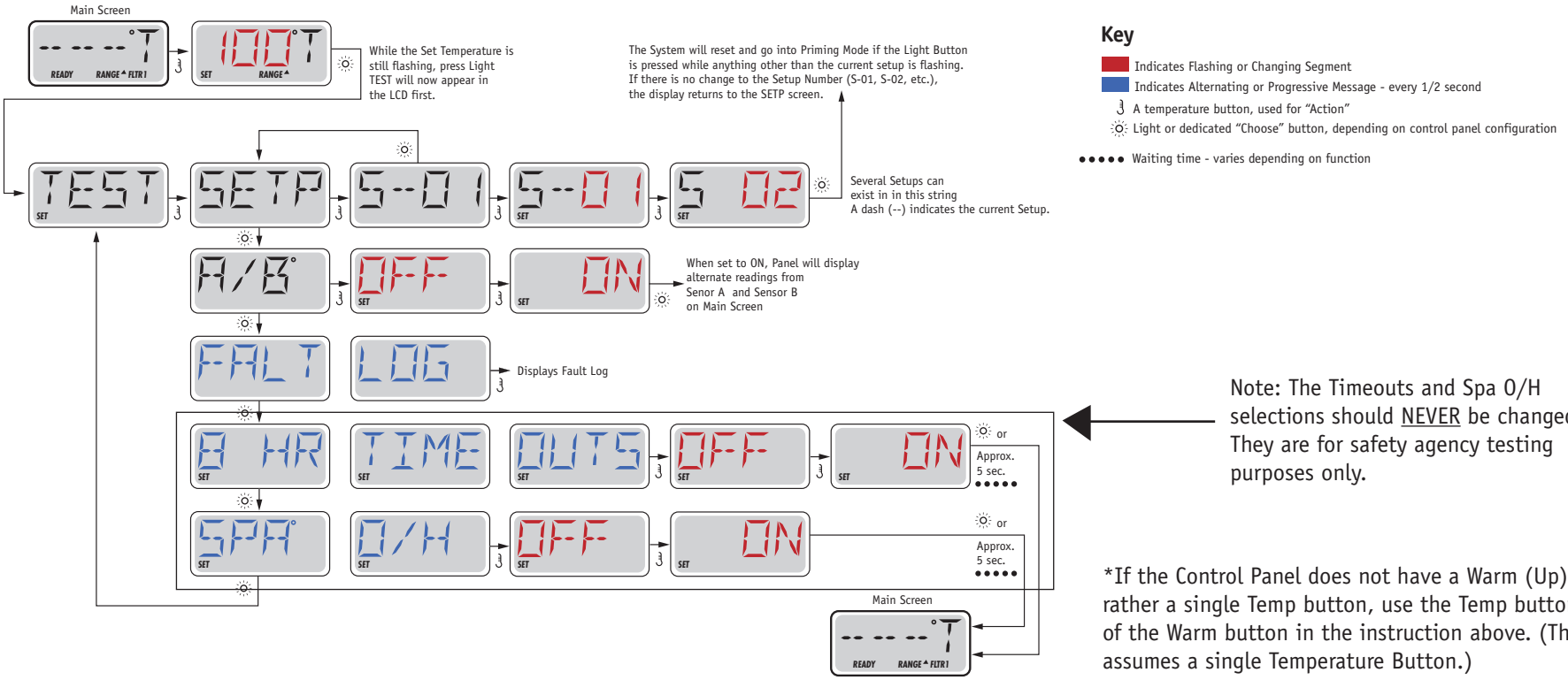
Immediately after exiting Priming Mode, press this sequence of buttons: Warm*, Light, Warm, Warm, Warm, Warm. Continue to press Warm until the diplay shows the Setup Number (S-01, S-02, etc.) you want to switch to. When the correct setup number is showing, press Light once, and the system will reset, using the newly-selected Setup from that point on.

Move DIP Switch 1 to the OFF position to take the spa out of Test Mode. °F or °C will replace °T.

Using a permanent marker, write the Setup number on the Setup label mounted inside the system lid (right). This is very important to any service person in the future who may need to replace a circuit board or system and needs to change the Setup on a replacement part while in the field.

NOTE: Changing the Setup may require wiring changes as well - refer to the wiring diagram or wiring diagram addendum.

THIS SYSTEM IS CONFIGURED AS SETUP #



Key

- Indicates Flashing or Changing Segment
- Indicates Alternating or Progressive Message - every 1/2 second
- A temperature button, used for "Action"
- Light or dedicated "Choose" button, depending on control panel configuration
- ●●●●● Waiting time - varies depending on function

Note: The Timeouts and Spa O/H selections should NEVER be changed. They are for safety agency testing purposes only.

*If the Control Panel does not have a Warm (Up) button, but rather a single Temp button, use the Temp button in place of the Warm button in the instruction above. (The flow chart assumes a single Temperature Button.)

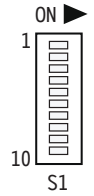
Equipment Expansion

Expansion Features

Control Connection	Default	Fuse
Relay 1 (J101)	Undefined	None
Relay 7/8 (J107)	See Below	30A
	2-Speed Pump 3 In Setups 1, 7 1-Speed Pump 3 (only) In Setups 2, 6, 8, 13, 14 1-Speed Pump 3 And 1-Speed Blower (With Splitter & In-Line Fuse) In Setups 15, 16 1-Speed Pump 2 And 1-Speed Pump 3 In Setups 5, 11, 12 2-Speed Pump 2 In Setups 3, 9 1-Speed Pump 2 In Setup 17, 18 Unused In Setups 4, 10	
Relay 9/10 (J108)	Undefined	None

DIP Switch Functions

Fixed-fuction DIP Switches



A1	Test Mode (normally Off).
A2	In “ON” position, add one high-speed pump (or blower) with Heater.
A3	In “ON” position, add two high-speed pumps (or 1 HS Pump and Blower) with Heater.
A4	In “ON” position, add four high-speed pumps (or 3 HS Pumps and Blower) with Heater.
A5	In “ON” position, enables Special Amperage Rule B. See Special Features section under Configuration Options for functionality with your system. In “OFF” position, enables Special Amperage Rule A.
A6	Persistent memory reset (Used when the spa is powering up to restore factory settings as determined by software configuration).

A2, A3, and A4 work in combination to determine the number of high-speed devices and blowers that can run before the heat is disabled. i.e. A2 and A3 in the ON position and A4 in the OFF position will allow the heater to operate with up to 3 high-speed pumps (or two HS Pumps and Blower) running at the same time. Heat is disabled when the fourth high-speed pump or blower is turned on.

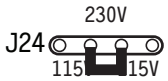
Note: *A2/A3/A4 all off = No heat with any high-speed pump or blower.*

Assignable DIP Switches

A7	In “ON” position, enables a 5-minute cool down for some gas heaters (Cooling Time B). In “OFF” position, enables a 1-minute cool down for electric heaters (Cooling Time A).

Undesignated switches are not assigned a function.

Jumper Definitions

J109	Non Applicable on CE models	J109 
J91	Real Time Clock Enable/Disable ***Note:*** *This Jumper should NOT be shorted when the Control Panel can display time of day.*	J91 
J30	Do Not Use	
J31	Jumper on 1 pin with 2.0kW or smaller heater Jumper on 2 pins with a 3.0kW or higher heater	J31 
J29	Heater Disable Switch Connection. If J29 is shorted by any means, the heater will not run until J29 is no longer shorted. If J29 is shorted during power-up "J29" will appear on the panel. The message can be dismissed with a button press, and is the only control panel notification of J29 being shorted. No message is displayed if J29 is shorted after power-up, but the heater will not run until J29 is no longer shorted. J29 expects a switch closure (not a voltage) as the command signal. In some areas, a local power company may offer discounts based on voluntary "power shedding" devices that may be installed in conjunction with the spa.	J29 
J25, J26, J27	Heater Type Settings. ***Note:*** *Factory Configured do not change.*	J27  J25   J26
J24	Jumper on center two pins (230V) when heater is running at 240V. Two Jumpers installed; one on left 2 pins and one on right 2 pins (115V) when heater is running at 120V.	

Warning!

Setting DIP switches or jumpers incorrectly may cause abnormal system behavior and/or damage to system components.
Refer to Switchbank illustration on Wiring Configuration page for correct settings for this system.
Contact Balboa if you require additional configuration pages added to this tech sheet.

BALBOA water group

Replacement Parts

PCBA:

Main PCBA:	59542-01
Expander PCBA:	59097

HEATER(s):

Plug + Click Heater Kit:	58107R16 3.0kW 825Inc 55626R16 3.0kW Ti
Temp Sensor Kit:	53605

CABLES:

30893 Optional BP2X-Wire Kit
25257 Y-Cable
25710 Adapter Cable
30895 Water level sensor

FUSES:

Part Number	Amperage*	Location
30136	30A	F6, F8, F1 (Expander)
26307	2A	F4
24825	0.125A	F3
26904	10A	F2, F7
26976	3.15A	F5

* The amperages shown above are only intended for identifying fuses on our boards. They are not complete descriptions of those fuses. Please use the part numbers at the left to order fuses directly from Balboa.

BP2100 Configuration Options

General Features

Feature	Default
Pump 1 in Filter Cycle (Circ Only)	No
Pump 1 Low Timer	*15 Minutes*
General Pump Timer	15 Minutes
Blower Timer	15 Minutes
Mister Timer	15 Minutes
Light Timer	240 Minutes
Circ (when enabled)	Programmable + Polling
Cleanup Cycle	*30 Minutes*
Cleanup as Preference setting	*Yes*
Ozone	With Heater Pump*
Ozone Suppression	OFF
Pump Purge	60 Seconds
Blower Purge	30 Seconds
Mister Purge	5 Seconds
Purge Type	Serial - Pumps at lowest speed

* The heater Pump can be either a Circ Pump or Pump 1 Low.

BP2100 Configuration Options

Temperature Features

Feature	Default
Temperature Display	°C

All temperatures must be specified in °F. The system converts °F to °C dynamically. If Celsius is required for default settings, choose a desired °C value that (after rounding) corresponds to a Fahrenheit value.

°C	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
°F	39	41	43	45	46	48	50	52	54	55	57	59	61	63	64	66	68	70	72

°C	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
°F	73	75	77	79	81	82	84	86	88	90	91	93	95	97	99	100	102	104

Hi-Range Min. Set Temp	80°F
Hi-Range Max. Set Temp	104°F
Hi-Range Default Temp*	100°F
Lo-Range Min. Set Temp	50°F
Lo-Range Max. Set Temp	99°F
Lo-Range Default Temp*	70°F
Freeze Threshold	44°F
Freeze Type	Rotating - Pumps at Lowest Speed
Temp Lock Type	Temp + Settings

**May be changed by end-user (if enabled)*

BP2100 Configuration Options

Time Features

Feature	Default
Time Format*	24 Hour
Filter 1 Start Hour*	20:00 (8:00 PM)
Filter 1 Duration*	2 Hours
Filter Cycle 2 Default*	OFF
Filter 2 Start Hour*	08:00 (8:00 AM)
Filter 2 Duration*	15 Minutes
Light Cycle	Disabled
Light Cycle Default*	OFF
Light Cycle Start Hour*	21:00 (9:00 PM)
Light Cycle Duration*	15 Minutes
Cooling Time A	1 Minute
Cooling Time B	5 Minutes

**May be changed by end-user (if enabled)*

BALBOA water group

BP2100 Configuration Options

Reminder Features

Feature	Default
Reminders Shown*	*Yes*
Check pH	*OFF*
Check Sanitizer	*OFF*
Clean Filter	30 Days
Test GFCI	*65 Days*
Drain Water	*100 Days*
Change Cartridge	OFF
Clean Cover	*OFF*
Treat Wood	*OFF*
Change Filter	365 Days

**May be changed by end-user (if enabled)*

BP2100 Configuration Options

Special Features

Feature	Default
Special Amperage Rule A	No Limitation
Special Amperage Rule B	2 high-speed pumps max. Blower turns off with 2 high speed pumps - in Setups 1-4, 6-10, 13, 15, 16, 18 No Limitation - in Setups 5, 11, 12, 14, 17
Drain Mode	Disabled
Demo Mode	Disabled
GFCI Trip	Not Applicable for CE Models
Ozone Slaved to Heater Pump	*Yes in circ setups* *No in non-circ setups*
Dual Voltage Heater	Always Input Voltage
Safety Suction	Disabled
Water Level Sensor	*Required*

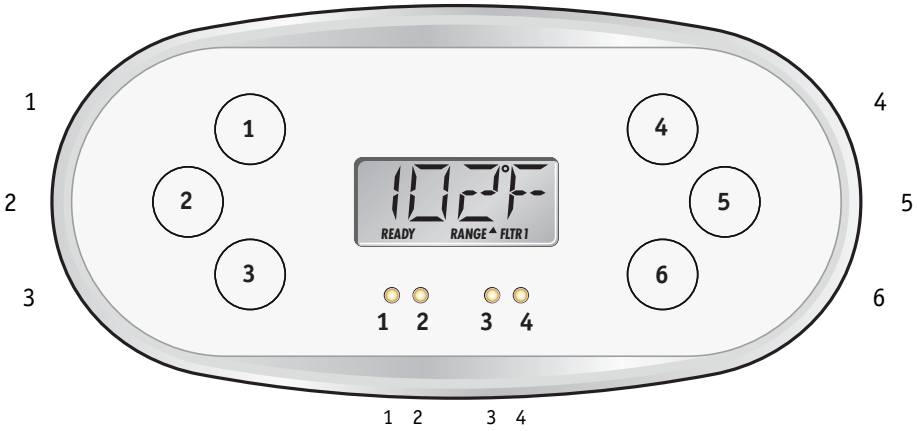
TP600 Panel Configuration

Button Layout Table

Button #	Pump 3 or Pump 3 + Blower* Setups 1, 2, 5, 6, 7, 8, 11, 12, 13, 14, 15, 16	No Pump 3, Blower Setup 3, 9, 17, 18	No Pump 3, No Blower Setup 4, 10
1	Jets 1	Jets 1	Jets 1
2	Jets 2	Jets 2	Jets 2
3	Jets 3	Blower	Unused
4	Up	Up	Up
5	Light 1	Light 1	Light 1
6	Down	Down	Down
LED 1	Jets 1	Jets 1	Jets 1
LED 2	Jets 2	Jets 2	Jets 2
LED 3	Light 1	Light 1	Light 1
LED 4	Heat On	Heat On	Heat On

** When using setups in column 1, which operate both a Pump 3 AND a Blower, Pump 3 is on the main panel (Button3) and Blower must be operated with an Auxilliary Panel - AX10A3 on Bank 1 (J5).*

See Page 21.



TP600

55676-XX - No Overlay

50335-XX - Includes Overlay PN 12762

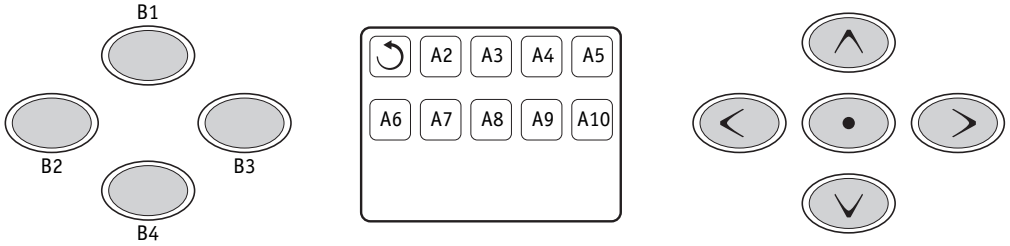
TP800 Panel Configuration

Button Layout Table

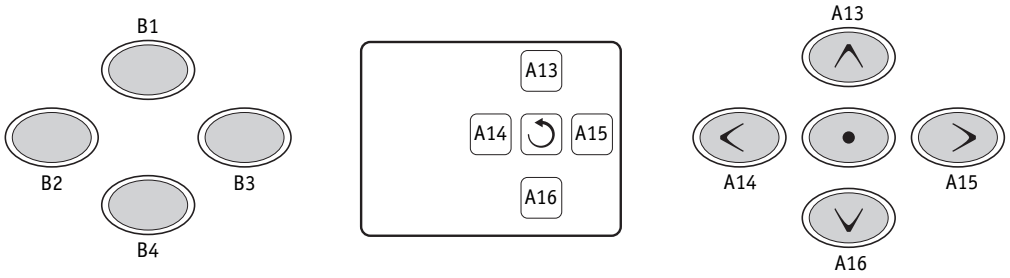
Feature #	Pump 3, Blower & Circ Setups 11, 12, 16	NO Pump 3, Blower & Circ Setups 9, 17	Pump 3, NO Blower & Circ Setups 7, 8, 13, 14	NO Pump 3, NO Blower & Circ Setup 10	Pump 3, Blower & NO Circ Setups 5, 15	NO Pump 3, Blower & NO Circ Setup 3	Pump 3, NO Bl & NO Circ Setups 1, 2, 6	NO Pump 3, NO Bl & NO Circ Setup 4
A1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
A2	Jets 1	Jets 1	Jets 1	Jets 1	Jets 1	Jets 1	Jets 1	Jets 1
A3	Jets 2	Jets 2	Jets 2	Jets 2	Jets 2	Jets 2	Jets 2	Jets 2
A4	Jets 3	Blower	Jets 3	Light 1	Jets 3	Blower	Jets 3	Light 1
A5	Blower	Light 1	Light 1	Invert	Blower	Light 1	Light 1	Invert
A6	Light 1	Invert	Invert	(Circ Icon)	Light 1	Invert	Invert	Undefined
A7	Invert	(Circ Icon)	(Circ Icon)	Undefined	Invert	Undefined	Undefined	Undefined
A8	(Circ Icon)	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined
A9	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined
A10	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined
A11	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
A12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
A13	Jets 1	Jets 1	Jets 1	Jets 1	Jets 1	Jets 1	Jets 1	Jets 1
A14	Jets 2	Jets 2	Jets 2	Jets 2	Jets 2	Jets 2	Jets 2	Jets 2
A15	Blower	Blower	Jets 3	Light	Blower	Blower	Jets 3	Light
A16	Light	Light	Light	Invert	Light	Light	Light	Invert
B1	Jets 1	Jets 1	Jets 1	Jets 1	Jets 1	Jets 1	Jets 1	Jets 1
B2	Jets 2	Jets 2	Jets 2	Jets 2	Jets 2	Jets 2	Jets 2	Jets 2
B3	Jets 3	Blower	Jets 3	Undefined	Jets 3	Blower	Jets 3	Undefined
B4	Light 1	Light 1	Light 1	Light 1	Light 1	Light 1	Light 1	Light 1

TP800 Panel Configuration

Spa Screen



Shortcuts Screen



Note: *Buttons 11 and 12 are not used in this configuration.*

Button 1 is fixed.

A Circ Icon will appear when a Circ Pump is configured.

TP900 Panel Configuration

Button Layout Table

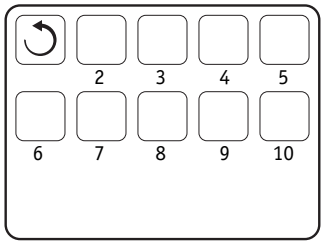
Button #	Pump 3, Blower & Circ Setups 11, 12, 16	NO Pump 3, Blower & Circ Setups 9, 17	Pump 3, NO Blower & Circ Setups 7, 8, 13, 14	NO Pump 3, NO Blower & Circ Setup 10	Pump 3, Blower & NO Circ Setups 5, 15	NO Pump 3, Blower & NO Circ Setup 3	Pump 3, NO Bl & NO Circ Setups 1, 2, 6	NO Pump 3, NO Bl & NO Circ Setup 4
1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	Jets 1	Jets 1	Jets 1	Jets 1	Jets 1	Jets 1	Jets 1	Jets 1
3	Jets 2	Jets 2	Jets 2	Jets 2	Jets 2	Jets 2	Jets 2	Jets 2
4	Jets 3	Blower	Jets 3	Light 1	Jets 3	Blower	Jets 3	Light 1
5	Blower	Light 1	Light 1	Invert	Blower	Light 1	Light 1	Invert
6	Light 1	Invert	Invert	(Circ Icon)	Light 1	Invert	Invert	Undefined
7	Invert	(Circ Icon)	(Circ Icon)	Undefined	Invert	Undefined	Undefined	Undefined
8	(Circ Icon)	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined
9	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined
10	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined
11	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
13	Jets 1	Jets 1	Jets 1	Jets 1	Jets 1	Jets 1	Jets 1	Jets 1
14	Jets 2	Jets 2	Jets 2	Jets 2	Jets 2	Jets 2	Jets 2	Jets 2
15	Jets 3	Blower	Jets 3	Light	Jets 3	Blower	Jets 3	Light
16	Light	Light	Light	Invert	Light	Light	Light	Invert

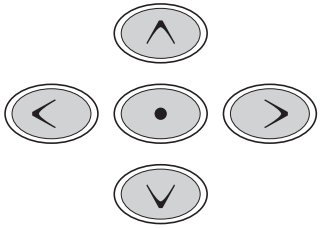
A Circ Icon will appear when a Circ Pump is configured.

TP900 Panel Configuration

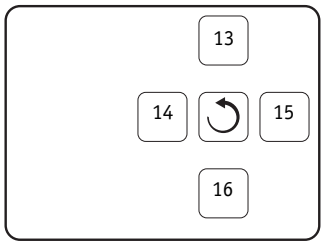
Button #
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16

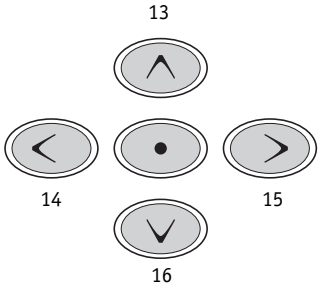
Spa Screen





Shortcuts Screen





BP2100 Configuration Options

Auxiliary Panel Features on Bank 1*

Feature	Default
Aux Button A1	Jets 1
Aux Button A2	Jets 2
Aux Button A3	Blower
Aux Button A4	Light

Auxiliary Panel Features on Bank 2*

Feature	Default
Aux Button A5	Jets 1
Aux Button A6	Jets 2
Aux Button A7	Jets 3
Aux Button A8	Light

Buttons that are assigned to equipment that is not defined in a Setup will not do anything in that Setup.

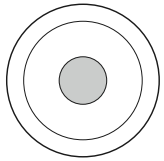
*Bank 1 consists of J5 on the Main Circuit Board.
Bank 2 consists of J8 on the Main Circuit Board.
Aux Connection Splitter PN 25257 may be required.

BP2100 Configuration Options

Auxiliary Panel Features

AX10 Panels on Bank 1*

A1, AX10A1	No O/L	52803
A2, AX10A2	No O/L	52804
A3, AX10A3	No O/L	52805 ▶
A4, AX10A4	No O/L	52806



Call Customer Service for additional information about Auxiliary Panels.

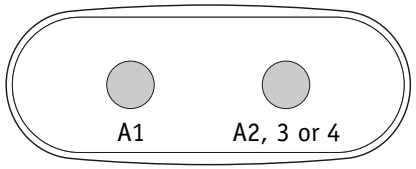
AX10 Panels on Bank 2*

A5, AX10A1	No O/L	52803
A6, AX10A2	No O/L	52804
A7, AX10A3	No O/L	52805
A8, AX10A4	No O/L	52806

*Bank 1 consists of J5 on the Main Circuit Board.
Bank 2 consists of J8 on the Main Circuit Board.
Aux Connection Splitter PN 25257 may be required.

AX20

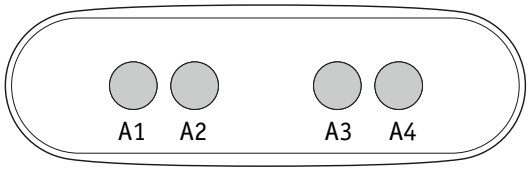
AX20 A1A2	No O/L	52800
AX20 A1A3	No O/L	52801
AX20 A1A4	No O/L	52802



AX20 Auxiliary Panel plugged into Bank 1 will operate A1 + A2, A3 or A4.
AX20 Auxiliary Panel plugged into Bank 2 will operate A5 + A6, A7 or A8.

AX40

AX40	No O/L	52799

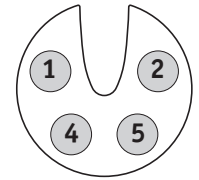


AX40 Auxiliary Panel plugged into Bank 1 will operate A1 + A2, A3 and A4.
AX40 Auxiliary Panel plugged into Bank 2 will operate A5 + A6, A7 and A8.

BP2100 Configuration Options

Remote Panel Features

Feature	Default
Remote Button A1	Jets 1
Remote Button A2	Jets 2
Remote Button A3	Jets 3
Remote Button A4	Blower
Remote Button A5	Light
Remote Button A6	Undefined
Remote Button A7	Undefined
Remote Button A8	Undefined



Buttons that are assigned to equipment that is not defined in a Setup will not do anything in that Setup.

Remote Panel Part Number _____

Overlay Part Number _____