BP501G1 Tech Sheet

Customer: **Balboa Water Group**

Part Number:		
56485-07	5.5kW 800 Incoloy
56486-07	5.5kW 825 Incoloy
56487-07	5.5kW Titanium
56567-06	4.0kW 800 Incoloy

Custom Box Overlay   ☐
Box Overlay Part Number   N/A

UL System Model For 5.5kW:	BP501-BP501G1-BU
UL System Model For 4.0kW:	BP501-BP501G1-BS
Software Version ID:	M100_201 V65.0
Software Version:	65.0
File Name:	BP501_65.0_BP501G1_TP9.hex
Configuration Signature:	E807947A

Eng. Project Number: 5663

Control Panels (See later pages for more information):

spaTouch™ Mini	Any version (version 1.0 or later required for Clim8zone™ heat pump support)
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 CHROMAZON∃™ 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 3.1 and later (Version 3.13 or later required for bba™)
TP800	Version 3.1 and later (Version 3.13 or later required for bba™; version 4.11 or later required for bba™2 integrated functionality)
TP700/TP740	Any version (version 1.27 or later required for Clim8zone™ heat pump support)
TP600	Version 2.7 and later (Version 2.12 or later required for bba™/bba™2 On/Off control via menu)
TP500	Any version
TP400T US	Version 2.7 and later (TP400T CE may be used) (Version 2.12 or later required for bba™/bba™2 On/Off control via menu)
TP400W US	Version 2.7 and later (TP400W CE may be used) (Version 2.12 or later required for bba™/bba™2 On/Off control via menu)
TP200T	Any version
TP200W	Any version

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System Revision History

Part #	EPN	Date	Originator	Changes Made
56485 56486	3899	06-04-13	BWG	BP501G1 initial draft
56487	N/A	06-12-13	BWG	Corrections to Tech Sheet
56485-01 56486-01 56487-01	4127	08-28-13	BWG	Issue found with Serialized Purge on one-pump-only Setups.
56485-02 56486-02	4132	09-10-13	BWG	Updated to latest software version. Adds GFCI Trip (but not GFCI Automatic Test).
56487-02 56567-01		03-12-14	BWG	Updated to latest software version, adding topside-intergrated bba™ support. Released to production.
56485-03 56486-03	4503	05-14-15	BWG	Add TP900 support.
56487-03 56567-02	4576	08-12-15	BWG	Clarify that all pumps can be 12A max.
56485-04 56486-04 56487-04 56567-03	4776	10-07-16	BWG	Updated to latest software version, adding topside-intergrated bba™2 support. Released to production.
56485-05 56486-05 56487-05 56567-03	5007	02-07-18	BWG	Redesigned BP501 board.
56485-06 56486-06 56487-06 56567-05	5264	08-14-19	BWG	Updated software to support CHROMAZON3™ & M8.
56485-07 56486-07 56487-07 56567-06	5663	01-11-24	BWG	Update to support Clim8zone™ heat pump. Convert AV from 120V to 240V.

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 TP600/500/400/200, use the "BT" entry on the menu to toggle bba™2 / bba™3 power On/Off.

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Basic Functions Setup 1 - 6

Power Requirements:

240VAC, 50/60Hz*, 48A, Class A GFCI-protected service (Circuit Breaker = 60A max.),
4 wires [hot, hot, neutral, ground]

120/240VAC, 50/60Hz**, 16/40A, Class A GFCI-protected service (Circuit Breaker = 20/50A max.) - Setups 5 & 6 ONLY,
3 or 4 wires [hot, hot (optional), neutral, ground].

**NOTE:
The above 120V spec is only when using a wall-mount GFCI / breaker.
If using a GFCI cord, the bearker is 15A and so the service is limited to 12A.

*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.

HiPot Testing Note:
Disconnect slip terminal with green wires from J52 prior to performing HiPot test. Failure to disconnect may cause a false failure of the test. Reconnect terminal to J52 after successful completion of HiPot test.

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Basic Functions Setup 1 - 6

System Ouputs:

Pump 1   240VAC*   2-Speed   12A max   15-minute timer (30-minute timer for P1 Low in non-circ setups only)
in Setups 1, 3, 5, this is the heater pump.
Must deliver 20 GPM through heater
NOTE: A circ pump cannot be used with a 2-speed pump in this system. See the BP501G2.

1 Speed in Setups in Setups 2, 4, 6

Pump 2   240VAC   1-Speed   12A max   15-minute timer
Used in Setups 1 & 2

Blower   240VAC   1-Speed   4A max   15-minute timer
Used in Setups 3 & 4

Circ Pump   240VAC*   1-Speed   2A max   Programmable Filtration Cycles + Polling
This is the heater pump in Setups 2, 4, 6.
Must deliver 20 GPM through heater

Ozone   240VAC*   .5A max   Slaved to Circ Pump in Circ Setups and to Pump 1 Low in Non-Circ Setups

Spa Light   10VAC   On/Off   2A** max   240-minute timer.

AV + C8Z***   240VAC   Hot   2A + 8A max   Always on

Heater   5.5kW @ 240VAC max

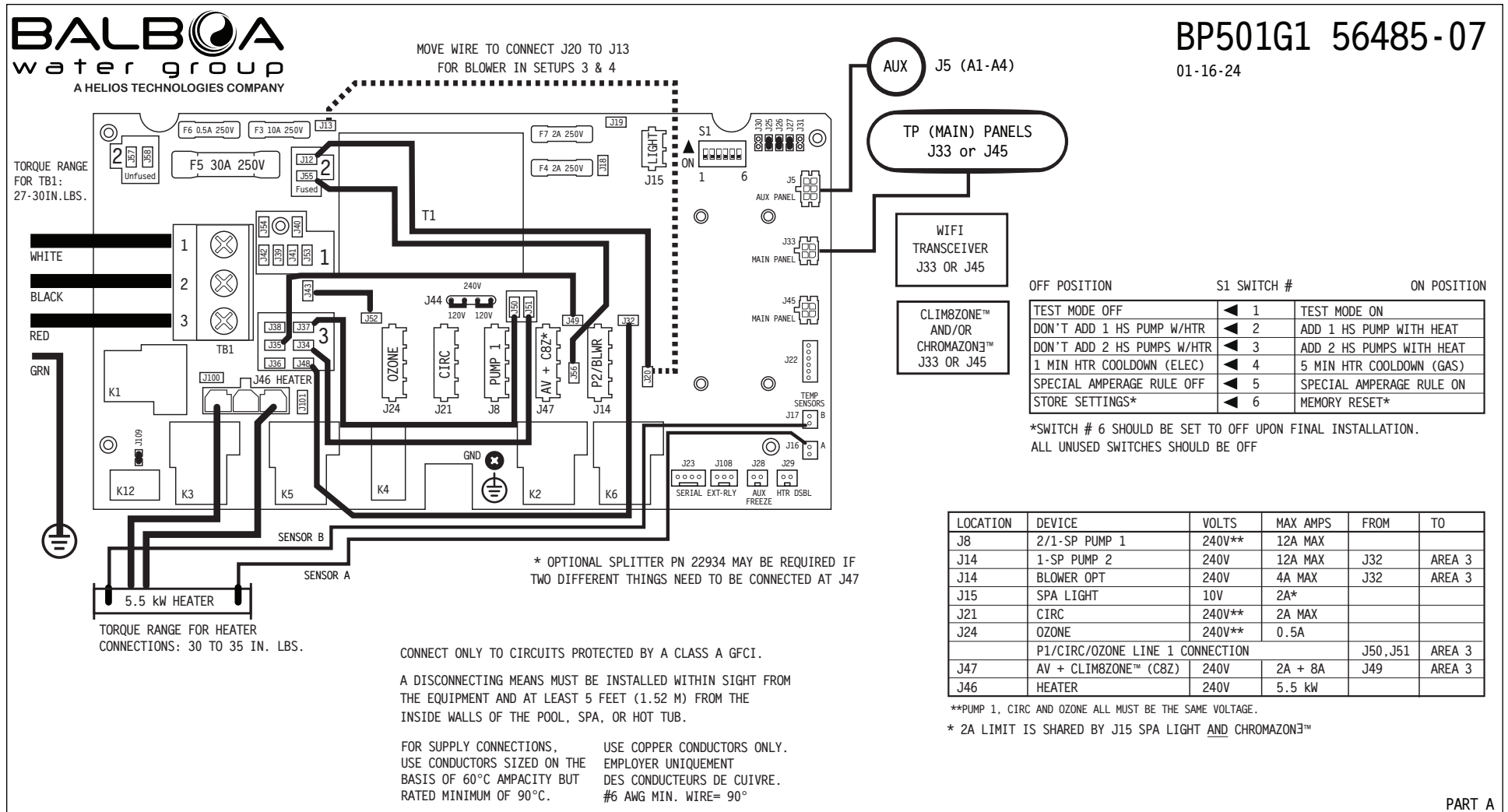*Pump 1, Circ Pump and Ozone must be the same voltage.

With 120VAC power input (for Setups 5 & 6 only), Pump 1, Circ pump and Ozone must be set to 120VAC by moving wires attached to J50 and J51 to area 1 (Neutral).

** 2A max limit is shared by On/Off Spa Light <u>and</u> CHROMAZON3™.

*** Optional splitter PN 22934 can be used to connect two things, such as an audio device and Clim8zone™(C8Z), to J47.

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Hardware Setup

Wiring Diagram

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MOVE WIRE TO CONNECT J20 TO J13
FOR BLOWER IN SETUPS 3 & 4

AUX J5 (A1-A4)

TP (MAIN) PANELS
J33 or J45

BP501G1 56485-07
01-16-24

WIFI TRANSCEIVER
J33 OR J45

CLIM8ZONE™ AND/OR CHROMAZONE™
J33 OR J45

TORQUE RANGE FOR TB1:
27-30IN.LBS.

F6 0.5A 250V F3 10A 250V
F5 30A 250V
F7 2A 250V
F4 2A 250V

WHITE
BLACK
RED
GRN

240V 120V 120V

5.5 kW HEATER

TORQUE RANGE FOR HEATER
CONNECTIONS: 30 TO 35 IN. LBS.

SENSOR B
SENSOR A

OZONE CIRC PUMP 1 AV + C8Z* P2/BLWR

TEMP SENSORS

SERIAL EXT-RLY AUX FREEZE HTR DSBL

* OPTIONAL SPLITTER PN 22934 MAY BE REQUIRED IF
TWO DIFFERENT THINGS NEED TO BE CONNECTED AT J47

CONNECT ONLY TO CIRCUITS PROTECTED BY A CLASS A GFCI.

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.

FOR SUPPLY CONNECTIONS,   USE COPPER CONDUCTORS ONLY.
USE CONDUCTORS SIZED ON THE EMPLOYER UNIQUEMENT
BASIS OF 60°C AMPACITY BUT   DES CONDUCTEURS DE CUIVRE.
RATED MINIMUM OF 90°C.   #6 AWG MIN. WIRE= 90°

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

LOCATION	DEVICE	VOLTS	MAX AMPS	FROM	TO
J8	2/1-SP PUMP 1	240V**	12A MAX		
J14	1-SP PUMP 2	240V	12A MAX	J32	AREA 3
J14	BLOWER OPT	240V	4A 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 + CLIM8ZONE™ (C8Z)	240V	2A + 8A	J49	AREA 3
J46	HEATER	240V	5.5 kW		

**PUMP 1, CIRC AND OZONE ALL MUST BE THE SAME VOLTAGE.
* 2A LIMIT IS SHARED BY J15 SPA LIGHT AND CHROMAZONE™

PART A

BALBOA water group

Setup Reference Table

Setup #	Circ Pump	Pump 1	Pump 2	Pump 3	Blower	Temp Scale
1	None	2-Speed	1-Speed	None	None	°F
2	Programmable Filtration + Polling	1-Speed	1-Speed	None	None	°F
3	None	2-Speed	None	None	1-Speed	°F
4	Programmable Filtration + Polling	1-Speed	None	None	1-Speed	°F
5	None	2-Speed	None	None	None	°F
6	Programmable Filtration + Polling	1-Speed	None	None	None	°F

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

As shown on additional wiring diagram section:

OPTIONAL 120VAC CONFIG FOR SETUPS 5 & 6 ONLY:

WHT
BLK
GRN
GFCI
TB1

OFF   ON
◄ A3
◄ A2

SWITCHES #2 & #3 SHOULD BE SET TO OFF WHEN SYSTEM IS CONFIGURED AS 120VAC.

**PUMP 1, CIRC AND OZONE MUST BE WIRED TO 120VAC WHEN SYSTEM IS CONFIGURED WITH 120VAC POWER INPUT/GFCI CORD (SETUPS 5 & 6 ONLY). J50 AND J51 MUST BE CONNECTED TO AREA 1 (NEUTRAL).

ADDED JUMPER FOR 120VAC SYSTEM (1.25kW @ 120VAC HEATER) REMOVE FOR 240V HEATER

WITH GFCI CORD, SERVICE IS 12A MAX.

16A SERVICE REQUIRES WALL-MOUNT 20A GFCI / BREAKER.

IMPORTANT NOTE:

CLIM8ZONE™ (C8Z) CANNOT BE USED IN THE 120VAC CONFIG.

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

SETUP #	CIRC PUMP	PUMP 1	PUMP 2	PUMP 3	BLOWER	TEMP SCALE
1	NONE	2-SPEED	1-SPEED	NONE	NONE	°F
2	FILTERS + POLLING	1-SPEED	1-SPEED	NONE	NONE	°F
3	NONE	2-SPEED	NONE	NONE	1-SPEED	°F
4	FILTERS + POLLING	1-SPEED	NONE	NONE	1-SPEED	°F
5	NONE	2-SPEED	NONE	NONE	NONE	°F
6	FILTERS + POLLING	1-SPEED	NONE	NONE	NONE	°F

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BP501G1 56485-07
01-16-24   PART B

Balboa water group

Changing Software Setups with spaTouch™ Icon-Driven Panels

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.

To Change Software Setups:

While in Test Mode, press the indicated icons to move from screen to screen.
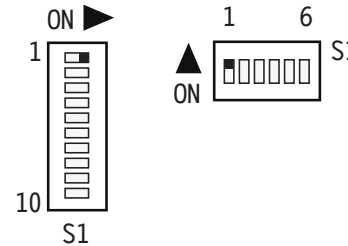
The example screens shown here are from the spaTouch 1 Icon-Driven Panel, but the screens on the spaTouch 2 Panel are similar. The main difference is that the spaTouch 2 display is wider.
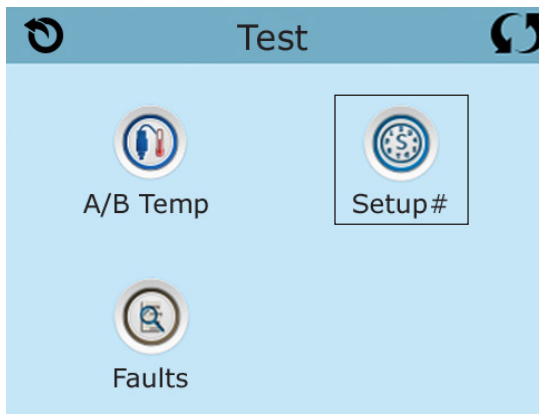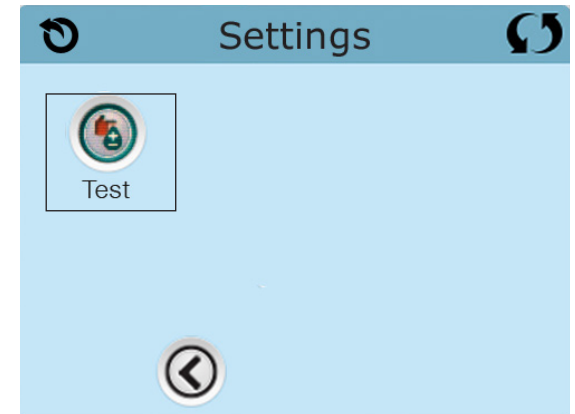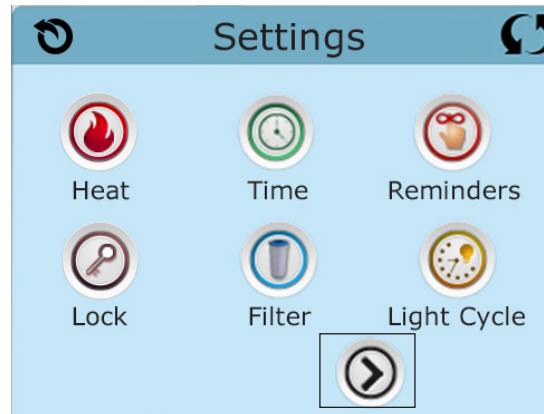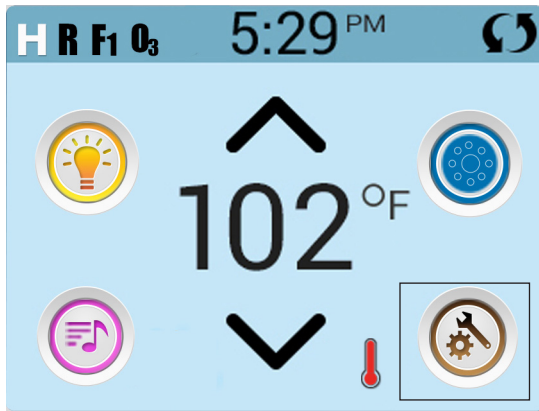
Once on the Setup Selection screen, press the Up or Down icon to select the desired Setup Number, then press the Check Mark icon to confirm and to have the spa restart.

After the system restarts, you may see a message that "The settings have been reset"; this is normal after changing Setups with DIP Switch 6 in the OFF position. Press "Clear" to dismiss this message.
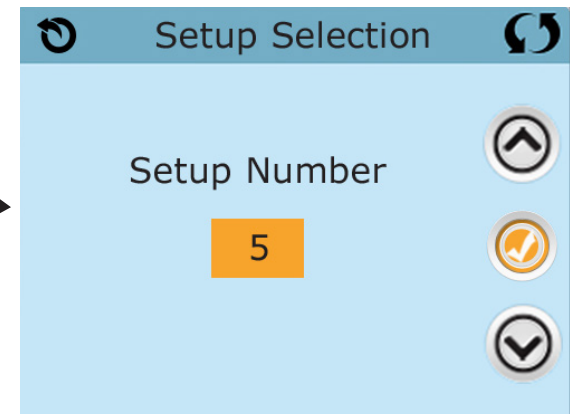
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Changing Software Setups with TP800 / TP900 / spaTouch™ Menued Panel

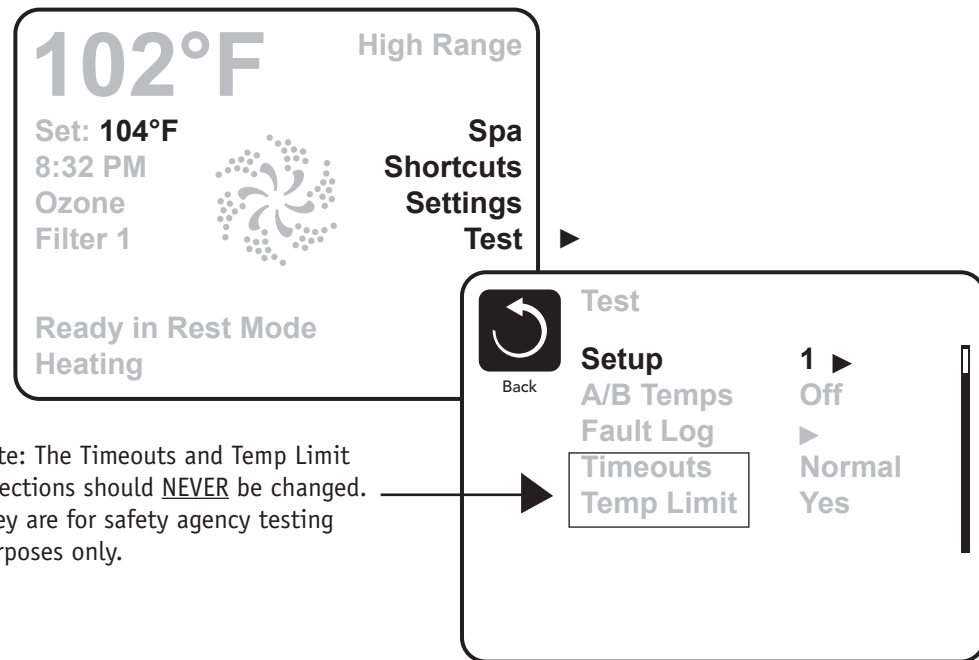## Test Menu Access (S1, Switch 1 ON) *Service Technician ONLY.*

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.

ON ▶
1
10
S1

102°F   High Range

Set: **104°F**   **Spa**
8:32 PM   **Shortcuts**
Ozone   **Settings**
Filter 1   **Test**   ▶

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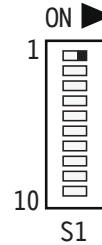
Note: The Timeouts and Temp Limit
selections should NEVER be changed.
They are for safety agency testing
purposes only.

Back

Test
Setup   **1** ▶
A/B Temps   Off
Fault Log   ▶
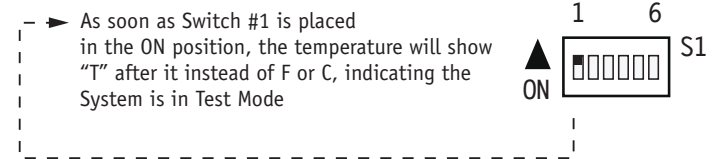Timeouts   Normal
Temp Limit   Yes

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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.

— ► As soon as Switch #1 is placed
in the ON position, the temperature will show
"T" after it instead of F or C, indicating the
System is in 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.
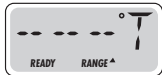
Continued on Next Page.

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Changing Software Setups with TP600 / TP400 Continued

Again, **You will have 1 minute** to complete the setup change after you manually exit Priming Mode.
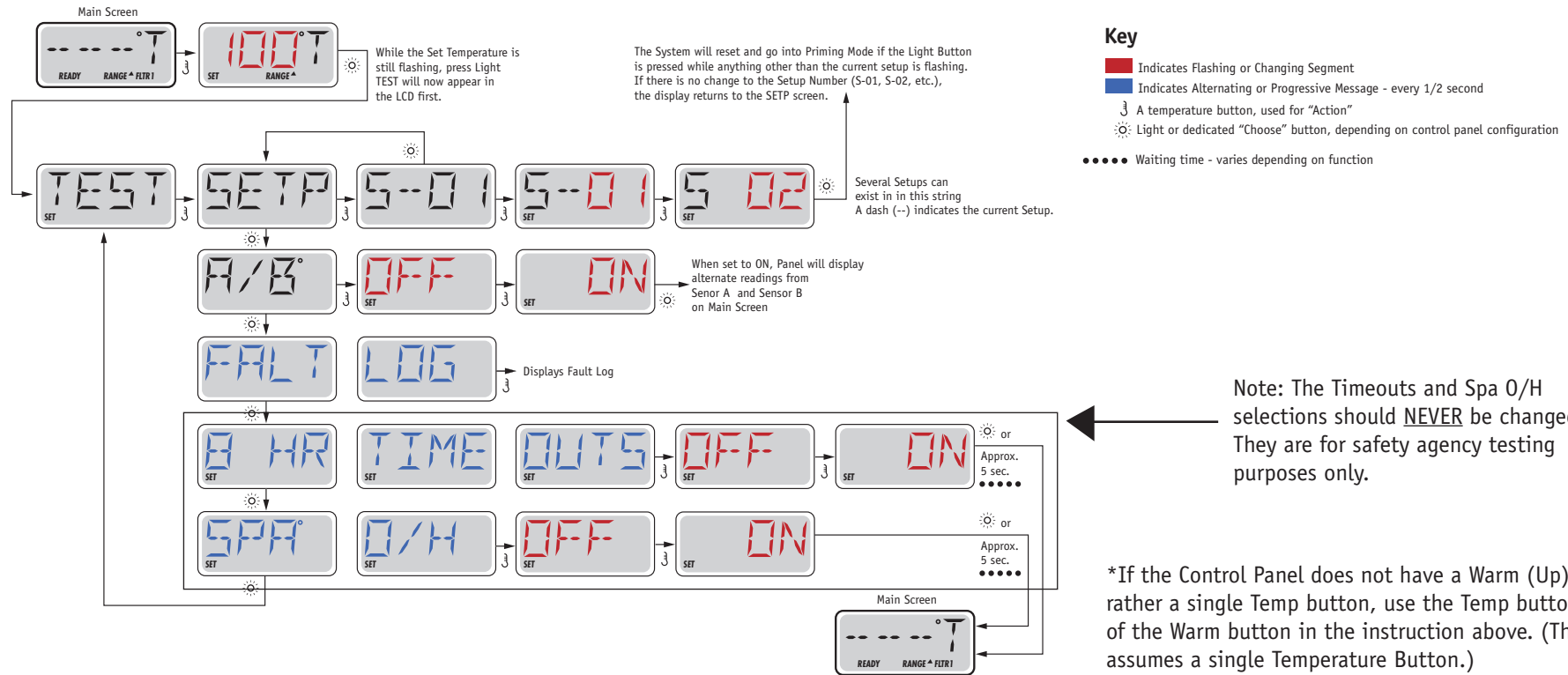
Immediately after exiting Priming Mode, press this sequence of buttons: Warm*, Light, Warm, Warm, Warm, Warm. Continue to press Warm until the diplay shows the Setup Number (S-01, S-02, etc.) you want to switch to. When the correct setup number is showing, press Light once, and the system will reset, 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 #

Main Screen

While the Set Temperature is still flashing, press Light TEST will now appear in the LCD first.

The System will reset and go into Priming Mode if the Light Button is pressed while anything other than the current setup is flashing. If there is no change to the Setup Number (S-01, S-02, etc.), the display returns to the SETP screen.

Several Setups can exist in in this string A dash (--) indicates the current Setup.

When set to ON, Panel will display alternate readings from Senor A and Sensor B on Main Screen

Displays Fault Log

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

or
Approx. 5 sec.

or
Approx. 5 sec.

Main Screen

*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.)

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

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Equipment Expansion

Expansion Features

| Control Connection	Default	Fuse
Relay 1/2 (J108)	None	N/A

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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.

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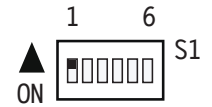
A2 and A3 work in combination to determine the number of high-speed devices and blowers that can run before the heat is disabled. i.e. A2 and A3 in the ON position will allow the heater to operate with up to 3 high-speed pumps (or two HS Pumps and Blower) running at the same time. Heat is disabled when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

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

Assignable DIP Switches

A4   In "ON" position, enables a 5-minute cooldown for some gas heaters (Cooling Time B).
In "OFF" position, enables a 1-minute cooldown for electric heaters (Cooling Time A).

Undesignated switches are not assigned a function.

Jumper Definitions

J109	GFCI Test/Trip Enable/Disable ***Note:*** *This feature must be enabled in software as well.*	J109
J30	Do Not Use	
J31	Non Applicable on UL models *(Used on CE models only)*	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
J44	Jumper on center two pins (230V) when no neutral wire is used (240V-dedicated). Two Jumpers installed; one on left 2 pins and one on right 2 pins (115V) when neutral wire is used.	230V J44 115V 115V

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.

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Replacement Parts

PCBA:

Main PCBA: 56944-02
Expander PCBA: N/A

HEATER(s):

Plug + Click Heater Kit: 58083R16 5.5kW 800Inc
                                    58089R16 5.5kW 825Inc
                                    55624R16 5.5kW Titanium
                                    58104R16 4.0kW 800Inc
Temp Sensor Kit: 53605

CABLES: 21302 Jumper 120V Heater

FUSES:

Part Number	Amperage*	Location
30136	30A	F5
26307	2A	F4, F7
26905	0.5A	F6
26904	10A	F3

* 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.

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BP501 Configuration Options

General Features

Feature	Default	
Pump 1 in Filter Cycle (Circ Only)	No	
Pump 1 Low Timer	*30 Minutes*	Applies in non-circ Setups (configurations) only
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.

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BP501 Configuration Options

Temperature Features

Feature	Default
Temperature Display	°F

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)

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BP501 Configuration Options

Time Features

Feature	Default
Time Format*	12 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)

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BP501 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)

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BP501 Configuration Options

Special Features

| Feature	Default
Special Amperage Rule A	No Limitation
Special Amperage Rule B	No Limitation
Drain Mode	Disabled
Demo Mode	Disabled
GFCI Trip	Enabled
Automatic GFCI Test	Disabled
Ozone Slaved to Heater Pump	*Yes*
Dual Voltage Heater	Always Input Voltage
Safety Suction	Disabled

TP900 Panel Configuration

Button Layout Table

Feature #	Setup 1	Setup 2	Setup 3	Setup 4	Setup 5	Setup 6
A1	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
A3	Jets 2	Jets 2	Blower	Blower	Light 1	Light 1
A4	Light 1	Light 1	Light 1	Light 1	Invert	Invert
A5	Invert	Invert	Invert	Invert	Undefined	(Circ Icon)
A6	Undefined	(Circ Icon)	Undefined	(Circ Icon)	Undefined	Undefined
A7	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined
A8	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined
A9	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined
A10	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined
A11	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
A13	Jets 1	Jets 1	Jets 1	Jets 1	Jets 1	Jets 1
A14	Jets 2	Jets 2	Blower	Blower	Undefined	Undefined
A15	Light 1	Light 1	Light 1	Light 1	Light 1	Light 1
A16	Invert	Invert	Invert	Invert	Invert	Invert

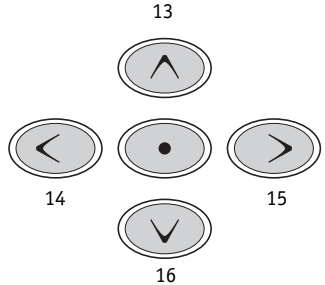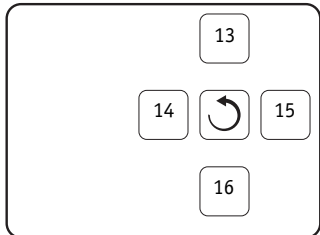*A Circ Icon will appear when a Circ Pump is configured.*

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TP900 Panel Configuration

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

Spa Screen
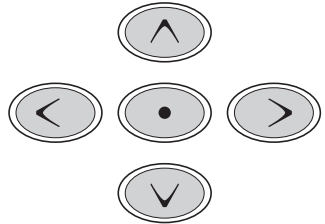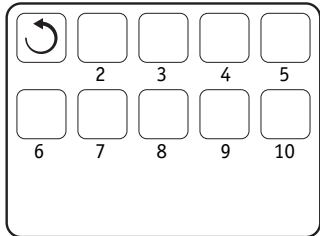
Shortcuts Screen

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TP800 Panel Configuration + TP700/740 Notes

Button Layout Table

Feature #	Setup 1	Setup 2	Setup 3	Setup 4	Setup 5	Setup 6
A1	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
A3	Jets 2	Jets 2	Blower	Blower	Light 1	Light 1
A4	Light 1	Light 1	Light 1	Light 1	Invert	Invert
A5	Invert	Invert	Invert	Invert	Undefined	(Circ Icon)
A6	Undefined	(Circ Icon)	Undefined	(Circ Icon)	Undefined	Undefined
A7	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined
A8	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined
A9	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined
A10	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined
A11	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
A13	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined
A14	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined
A15	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined
A16	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined
B1	Jets 1	Jets 1	Jets 1	Jets 1	Jets 1	Jets 1
B2	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined
B3	Jets 2	Jets 2	Blower	Blower	Undefined	Undefined
B4	Light 1	Light 1	Light 1	Light 1	Light 1	Light 1

The TP740 works in all of these Setups, but it needs a different overlay than the most common one, because this system puts the unused button in the second button position, rather than in the third button position.

The TP700 requires a different overlay depending on the number of Jets pumps in the chosen Setup.
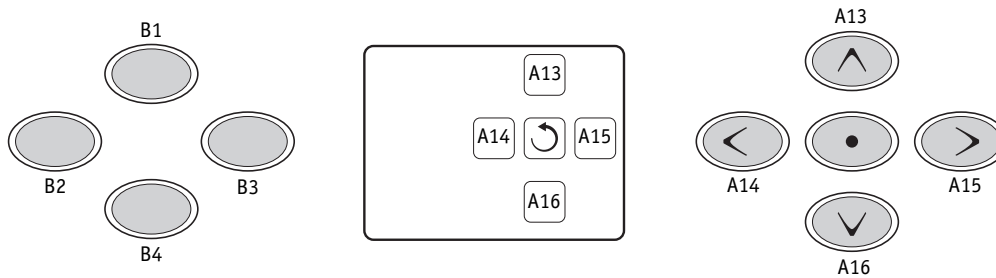
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TP800 Panel Configuration

Spa Screen

B1

B2   B3

B4

| ↺ | A2 | A3 | A4 | A5 |
| A6 | A7 | A8 | A9 | A10 |

∧

< • >

∨
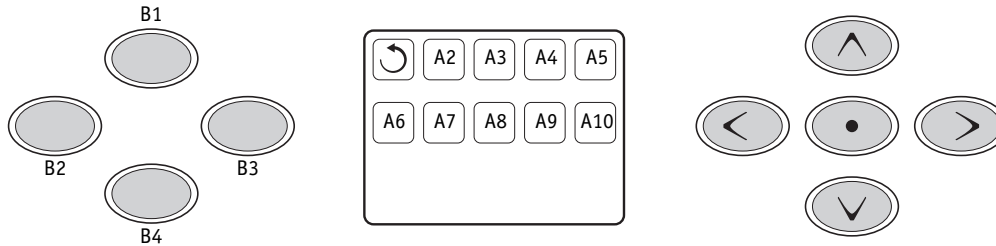
Note: *Button B2 is ALWAYS unused on TP800 when used with this sytsem. A custom overlay will be required.*

Shortcuts Screen

B1

B2   B3

B4

A13

A14 ↺ A15

A16

A13

∧

A14 < • > A15

∨

A16

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

Button 1 is fixed.

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TP600 Panel Configuration

Button Layout Table

Button #	Setup 1 & 2	Setup 3 & 4	Setup 5 & 6
1	Jets 1	Jets 1	Jets 1
2	Jets 2	Blower	Undefined
3	Invert	Invert	Invert
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	Blower	Undefined
LED 3	Light 1	Light 1	Light 1
LED 4	Heat On	Heat On	Heat On
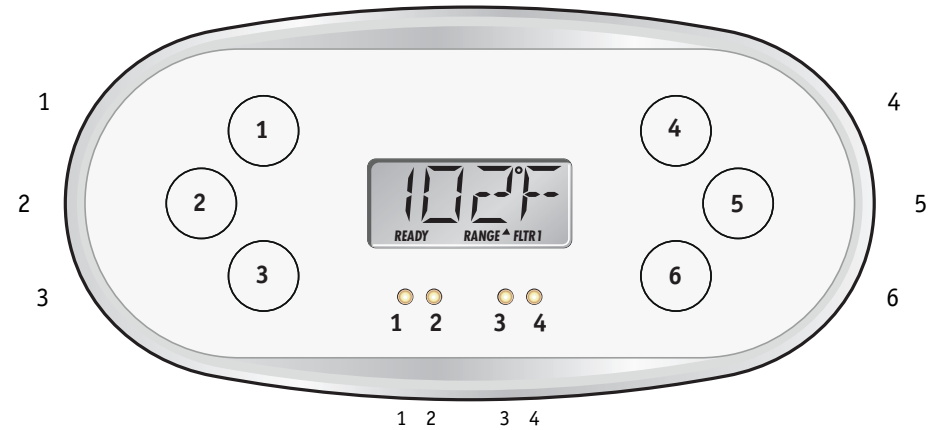
TP600

55676-XX

No Overlay

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TP400/TP200 Panel Configuration

Button Layout Table for TP400T/TP200T

Button #	Setup 1 & 2	Setup 3 & 4	Setup 5 & 6
1	Temperature	Temperature	Temperature
2	Jets 1	Jets 1	Jets 1
3	Light 1	Light 1	Light 1
4	Jets 2	Blower	Undefined
LED 1	Heater ON	Heater ON	Heater ON
LED 2	Jets 1 ON	Jets 1 ON	Jets 1 ON
LED 3	Light ON	Light ON	Light ON
LED 4	Jets 2 ON	Blower ON	Undefined
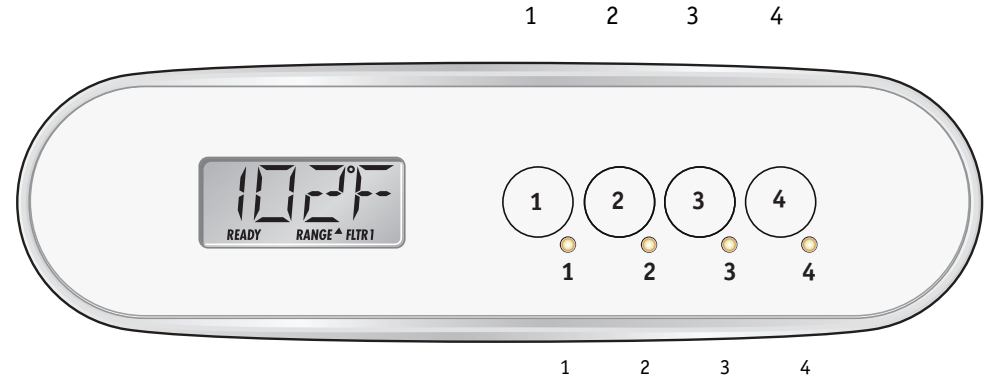
TP400T US

50380-XX includes overlay PN 12511

Button Layout Table for TP400W/TP200W

Button #	All Setups
1	Up
2	Down
3	Light 1
4	Jets 1
LED 1	Heater ON
LED 2	Undefined
LED 3	Light ON
LED 4	Jets 1 ON

Use the TP400W/TP200W for setups that only have one pump (No Blower or Pump 2).

TP400W US

50384-XX includes overlay PN 12510

TP200W

57290-XX with no overlay

57283-XX includes overlay PN 17374

TP200T

57281-XX with no overlay

57282-XX includes overlay PN 17325

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BP501 Configuration Options

Auxiliary Panel Features on Bank 1*

Feature	Default
Aux Button A1	Jets 1
Aux Button A2	Jets 2 in Setups 1 & 2 Blower in Setups 3 & 4 Undefined in Setups 5 & 6
Aux Button A3	Undefined
Aux Button A4	Light

*Bank 1 consists of J5 on the Main Circuit Board.

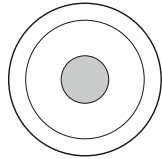**Aux Connection Splitter PN 25257 may be required.**

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

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BP501 Configuration Options

Auxiliary Panel Features

AX10 Panels on Bank 1*

A1, AX10A1   No O/L   52803

A2, AX10A2   No O/L   52804

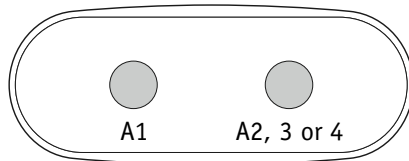A3, AX10A3   No O/L   52805 ▶

A4, AX10A4   No O/L   52806

Call Customer Service for additional information about Auxiliary Panels.

*Bank 1 consists of J5 on the Main Circuit Board.

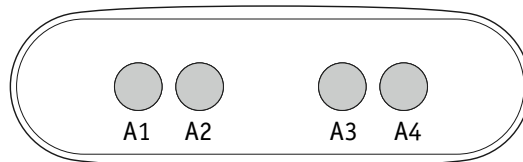**Aux Connection Splitter PN 25257 may be required.**

AX20

AX20 A1A2   No O/L   52800

AX20 A1A3   No O/L   52801

AX20 A1A4   No O/L   52802

A1   A2, 3 or 4

AX20 Auxiliary Panel plugged into Bank 1 will operate A1 + A2, A3 or A4.

AX40

AX40   No O/L   52799

A1   A2   A3   A4

AX40 Auxiliary Panel plugged into Bank 1 will operate A1 + A2, A3 and A4.

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