D R A F T

Customer:	**Balboa Water Group**
Part Number:	55976-02 Incoloy, 55977-02 Titanium
Custom Box Overlay	☐
Box Overlay Part Number	N/A

CE System Model:	BP26-BP26P3BC-RCA3.0K
Software Version (SSID):	M100_215 V4
File Name:	BP2600_4.0_BP26P3BC_3.hex
Configuration Signature:	8EE27BA5

Eng. Project Number:	3479

Base PCBA:	56088-02
Bare Board:	22614_A

Control Panels:

TP901	55995
Software Version	1.2 and later

Auxiliary Panels

See Page 19

BALB**O**A
w a t e r g r o u p

DRAFT

Part #	EPN	Date	Originator	Changes Made
55976	3343	06-30-10	BWG	Initial Release Generic BP2600
55976-01	3458	08-17-10	BWG	Hex file change to fix panel maps
55976-01	3458	08-31-10	BWG	Fix typos
55976-02	3479	10-11-10	BWG	RMA Tester and eFAST compatibility added. Light output changed to 1A.

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Basic Functions Setup 1

Power Requirements:

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

Dual Service N/A

3-Service [5 wires (line 1, line 2, line 3, neutral, ground)]
400VAC, 50Hz, 3Nþ, 16A, (Circuit Breaker rating = 20A max each phase line.)

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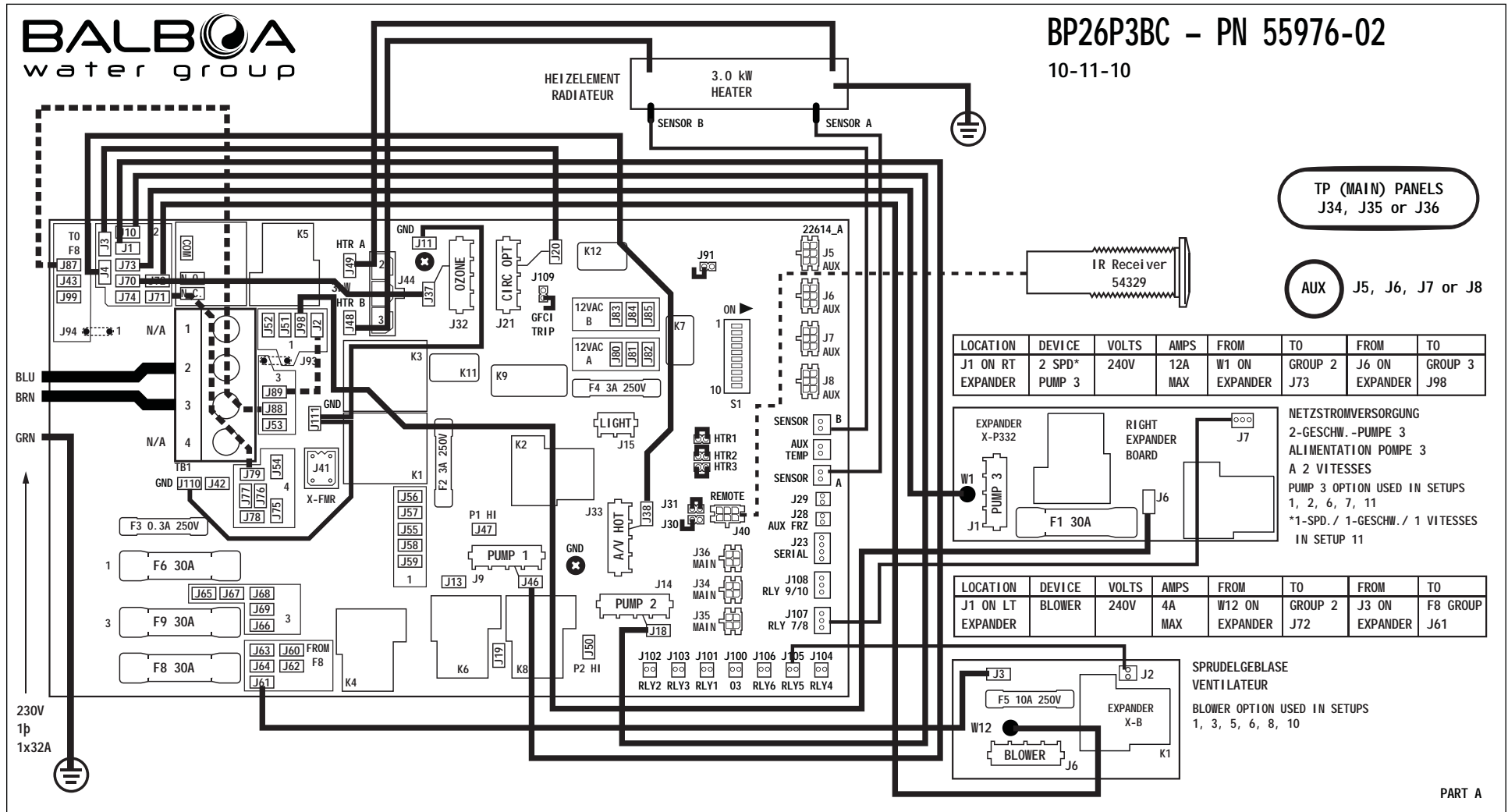
System Ouputs:

Pump 1	230VAC	2-Speed	10A max*	15-minute timer for High Speed, 15-Minute timer for Low Speed
Pump 2	230VAC	2-Speed	10A max*	15-minute timer
Pump 3	230VAC	2-Speed	10A max*	15-minute timer
Blower	230VAC	1-Speed	8A max	15-minute timer
Circ Pump	230VAC	1-Speed	2A max	Programmable Filtration Cycles + Polling
	This is the heater pump			
	Must deliver 20 GPM through heater			
Ozone	230VAC		.5A max	Separate Relay
Spa Light	10VAC	On/Off	1A max	240-minute timer.
A/V (Stereo)	230VAC	Hot	5A max	Always on
Heater	3.0kW @ 240VAC max			

*Pumps using more than 10A may require special configuration. Contact Balboa Water Group for more information.

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Hardware Setup

Wiring Diagram

BALBOA water group

BP26P3BC – PN 55976-02

10-11-10

HEIZELEMENT RADIATEUR
3.0 kW HEATER
SENSOR B   SENSOR A

TP (MAIN) PANELS J34, J35 or J36

IR Receiver 54329

AUX   J5, J6, J7 or J8

TO F8
F8
J87
J43
J99
J94
N/A

J3 J1 J10 2
4 J73
J70
J74 J71
N.O.
N.C.
COM

K5

HTR A
J49
J44 2
J37
3W
HTR B
J48 3

GND
J11
OZONE
J32

CIRC OPT
J109
J21
GFCI TRIP

J20

K12

12VAC B J83 J84 J85
12VAC A J80 J81 J82
K7
K9
F4 3A 250V

J91

22614_A
J5 AUX
J6 AUX
J7 AUX
J8 AUX

ON ►
1
10
S1

BLU
BRN
GRN

N/A

TB1
1 2 3 4
GND J110 J42
X-FMR
J79
J77 J76
J78 J75
J54
J41

J52 J51 J98 J2
J93
J89
J88
J53
J111 GND

K3
K11
K1

LIGHT
J15

SENSOR   B
AUX TEMP
SENSOR   A

HTR1
HTR2
HTR3

F3 0.3A 250V
1 F6 30A
3 F9 30A
F8 30A

J65 J67 J68
J69
J66
J63 J60 FROM
J64 J62 F8
J61

K4

P1 HI
J47
PUMP 1
J13 J9 J46
PUMP 2
J18
J19

GND
F2 3A 250V
K2
J33
A/V HOT
J14
K6 K8
P2 HI
J50

J31
J38 J30
REMOTE
J40
J36 MAIN
J34 MAIN
J35 MAIN

J29
J28 AUX FRZ
J23 SERIAL
J108 RLY 9/10
J107 RLY 7/8

J102 J103 J101 J100 J106 J105 J104
RLY2 RLY3 RLY1 O3 RLY6 RLY5 RLY4

EXPANDER X-P332
W1 PUMP 3 J1
RIGHT EXPANDER BOARD
F1 30A
J7
J6

NETZSTROMVERSORGUNG
2-GESCHW.-PUMPE 3
ALIMENTATION POMPE 3
A 2 VITESSES
PUMP 3 OPTION USED IN SETUPS
1, 2, 6, 7, 11
*1-SPD./ 1-GESCHW./ 1 VITESSES
IN SETUP 11

LOCATION	DEVICE	VOLTS	AMPS	FROM	TO	FROM	TO
J1 ON RT EXPANDER	2 SPD* PUMP 3	240V	12A MAX	W1 ON EXPANDER	GROUP 2 J73	J6 ON EXPANDER	GROUP 3 J98

LOCATION	DEVICE	VOLTS	AMPS	FROM	TO	FROM	TO
J1 ON LT EXPANDER	BLOWER	240V	4A MAX	W12 ON EXPANDER	GROUP 2 J72	J3 ON EXPANDER	F8 GROUP J61

SPRUDELGEBLASE VENTILATEUR
BLOWER OPTION USED IN SETUPS
1, 3, 5, 6, 8, 10

J3   J2
F5 10A 250V
EXPANDER X-B
W12 BLOWER J6   K1

230V 1φ 1x32A

PART A

BALBOA water group

Hardware Setup

Settings

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

LOCATION	DEVICE
J9	NETZSTROMVERSORGUNG 2-GESCHW.-PUMPE 1 ALIMENTATION POMPE 1 A 2 VITESSES 2-SPEED PUMP 1
J14	NETZSTROMVERSORGUNG 2-GESCHW.-PUMPE 2 ALIMENTATION POMPE 2 A 2 VITESSES 2-SPEED PUMP 2
J15	10V BELEUCHTUNG ECLAIRAGE BAIN HYDRO SPA LIGHT
J21	KREISLAUF PUMPE POMPE DE CIRCULATION CIRC PUMP
J32	OZONGENERATOR GENERATOROZONE OZONE GENERATOR
J33	TV / AV
J40	IR RECIEVER
J41	TRANSFORMATOR TRANSFORMATEUR TRANSFORMER
J5 J6 J7, J8	AUX PANEL(S) - AX10, AX20, AX30, AX40

230V 1φ
1x32A

1-SPD. / 1-GESCHW. / 1 VITESSES
IN SETUP 11

CIRC PUMP OPTION
PROGRAMMABLE FILTRATION CYCLES +
POLLING
USED IN SETUPS
1, 2, 3, 4, 5, 11

PUMP 1 LOW TIMEOUT IS 15 MINUTES FOR CIRC SYSTEMS. PUMP 1 LOW TIMEOUT IS 120 MINUTES FOR NON-CIRC SYSTEMS.

SETUP #	CIRC PUMP	PUMP 1	PUMP 2	PUMP 3	BLOWER
1	PROGRAMMABLE FILTRATION + POLLING	2-SPEED	2-SPEED	2-SPEED	1-SPEED
2	PROGRAMMABLE FILTRATION + POLLING	2-SPEED	2-SPEED	2-SPEED	
3	PROGRAMMABLE FILTRATION + POLLING	2-SPEED	2-SPEED		1-SPEED
4	PROGRAMMABLE FILTRATION + POLLING	2-SPEED	2-SPEED		
5	PROGRAMMABLE FILTRATION + POLLING	2-SPEED	1-SPEED		1-SPEED
6		2-SPEED	2-SPEED	2-SPEED	1-SPEED
7		2-SPEED	2-SPEED	2-SPEED	
8		2-SPEED	2-SPEED		1-SPEED
9		2-SPEED	2-SPEED		
10		2-SPEED	1-SPEED		1-SPEED
11	PROGRAMMABLE FILTRATION + POLLING	1-SPEED	1-SPEED	1-SPEED	

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

SYSTEM WILL BE IN SETUP #1
UNLESS MARKED OTHERWISE

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)

230V 3φ / 3x16A   →   230V 3φ
3x16A

T0 F8 J87 J43 J99 J3 J4 J10 J1 J73 J70 J72 J74 J71 COM 2 K5 N.O. N.C.

J94 1

1 BRN
BLU
2 BRN
3 BRN
GRN

J52 J51 J98 J2 1 J93

1 2 3 4

J89
J88
J53

J79 J54 4
J77 J76
J78 J75

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**
NOT ASSIGNED	◄ A7	NOT ASSIGNED
NOT ASSIGNED	◄ A8	NOT ASSIGNED
NOT ASSIGNED	◄ A9	NOT ASSIGNED
NOT ASSIGNED	◄ A10	NOT ASSIGNED

*SWITCH # 5 HAS NO EFFECT IN SETUP 11.
**SWITCH # 6 SHOULD BE SET TO OFF UPON FINAL INSTALLATION.

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**
NOT ASSIGNED	◄ A7	NOT ASSIGNED
NOT ASSIGNED	◄ A8	NOT ASSIGNED
NOT ASSIGNED	◄ A9	NOT ASSIGNED
NOT ASSIGNED	◄ A10	NOT ASSIGNED

*SWITCH # 5 HAS NO EFFECT IN SETUP 11.
**SWITCH # 6 SHOULD BE SET TO OFF UPON FINAL INSTALLATION.

Balboa water group

BP26P3BC – PN 55976-02
10-11-10

PART B

Balboa water group

Setup Reference Table

Setup #	Circ Pump	Pump 1	Pump 2	Pump 3	Blower	Temp Scale
1	Programmable Filtration + Polling	2-Speed	2-Speed	2-Speed	1-Speed	°C
2	Programmable Filtration + Polling	2-Speed	2-Speed	2-Speed		°C
3	Programmable Filtration + Polling	2-Speed	2-Speed		1-Speed	°C
4	Programmable Filtration + Polling	2-Speed	2-Speed			°C
5	Programmable Filtration + Polling	2-Speed	1-Speed		1-Speed	°C
6		2-Speed	2-Speed	2-Speed	1-Speed	°C
7		2-Speed	2-Speed	2-Speed		°C
8		2-Speed	2-Speed		1-Speed	°C
9		2-Speed	2-Speed			°C
10		2-Speed	1-Speed		1-Speed	°C
11	Programmable Filtration + Polling	1-Speed	1-Speed	1-Speed		°C

System is shipped in Setup 1

Pump 1 Low timeout is 15 minutes for Circ systems.

Pump 1 Low timeout is 120 minutes for Non-Circ systems.

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Changing Software Setups

DRAFT

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.

ON ▶
1
10
S1
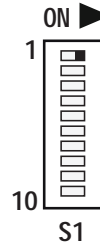
Software Setups

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.

102°F   High Range

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

Ready in Rest Mode
Heating

Test

Back

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

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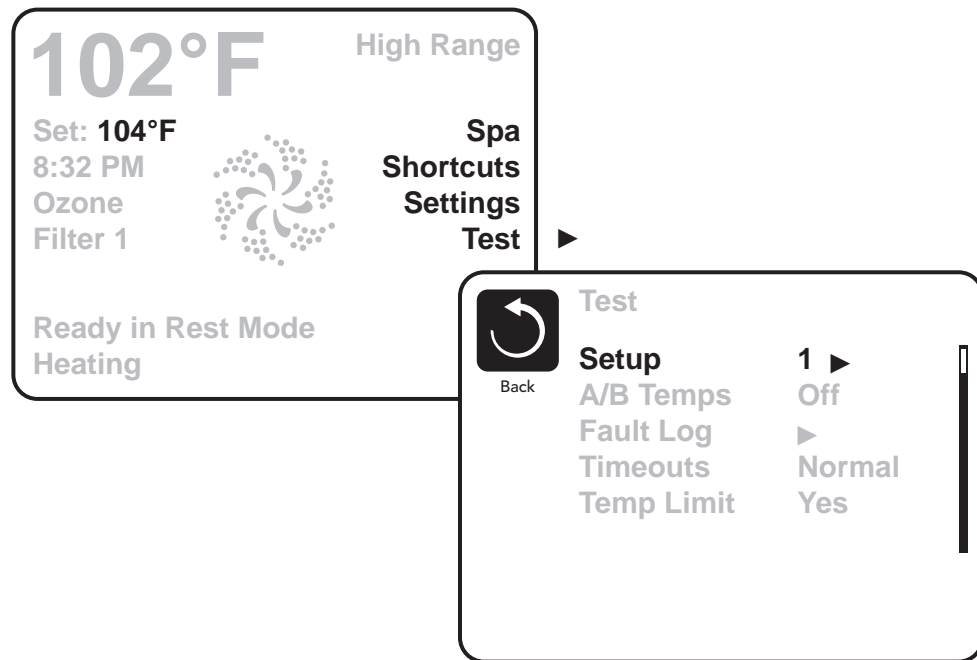
Equipment Expansion

Expansion Features

Control Connection	Default	Fuse
Relay 1 (J101)	Undefined	None
Relay 2 (J102)	Undefined	None
Relay 3 (J103)	Undefined	None
Relay 4 (J104)	Undefined	None
Relay 5 (J105)	Blower	10A
Relay 6 (J106)	Undefined	None
Relay 7/8 (J107)	Pump 3	30A
Relay 9/10 (J108)	Undefined	None

BALBOA water group

DIP Switch Functions

D R A F T

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).

ON ▶

1

10

S1
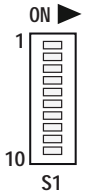
A2, A3, and A4 work in combination to determine the number of high-speed devices and blowers that can run before the heat is disabled. i.e. A2 and A3 in the ON position and A4 in the OFF position will allow the heater to operate with up to 3 high-speed pumps (or two HS Pumps and Blower) running at the 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.*

Undesignated switches are not assigned a function.

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Jumper Definitions

J93 J94	Must be soldered in place for UL and cUL	J94
	Note: *Single service, 50A or 60A.*	J93
J109	GFCI Test/Trip Enable	J109
	Note: *This feature must be enabled in software as well.*	
J91	Real Time Clock Enable/Disable	J91
	Note: *This Jumper should NOT be shorted when the Control Panel can display time of day.*	
J30	Do Not Use	
J31	Jumper on 1 pin with a 2.0kW or smaller heater	J31
	Jumper on 2 pins with a 3.0kW or higher heater	
J29	Do Not Use	J29
HTR 1, 2, 3	Heater Type Settings.	
	Note: *Factory Configured.*	

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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BP2500/2600 Configuration Options

General Features

Feature	Default
Pump 1 in Filter Cycle (Circ Only)	No
Pump 1 Low Timer	*15 Minutes with Circ*
	120 Minutes Non-Circ
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*
Cleaup as Preference setting	*Yes*
Ozone	Always
Ozone Suppression	OFF
Pump Purge	60 Seconds
Blower Purge	30 Seconds
Mister Purge	5 Seconds

Blue Indicates New Custom Configuration Default (Setup 1)

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Temperature Features

Feature	Default
Temperature Display	*°C in Setups 1-10*

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
Temp Lock Type	Temp + Settings

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

Blue Indicates New Custom Configuration Default (Setup 1)

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BP2500/2600 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

May be changed by end-user (if enabled)

Blue Indicates New Custom Configuration Default (Setup 1)

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BP2500/2600 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)

Blue Indicates New Custom Configuration Default (Setup 1)

BALBOA water group

Special Features

Feature	Default
Special Amperage Rule A	No Limitation
Special Amperage Rule B	*2 HS Pumps Max in Setups 1-10*
	No limitation in Setup 11
Drain Mode	Disabled
Demo Mode	Disabled
Automatic GFCI Test	Disabled
Ozone Slaved to Heater Pump	No
Dual Voltage Heater	Always Input Voltage
Safety Suction	Disabled

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BP2500/2600 Configuration Options

DRAFT

TP600 Panel Features

Feature	Default
Button 1	Jets 1
Button 2	Jets 2
Button 3	Blower
Button 4	Up
Button 5	Light 1
Button 6	Down
LED 1	Jets 1
LED 2	Jets 2
LED 3	Light
LED 4	Heat

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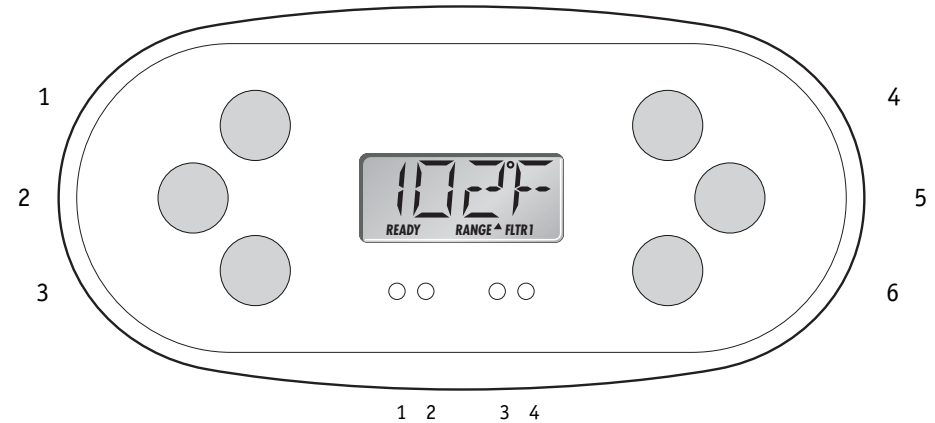
TP900 Panel Configuration

Button Layout Table

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

Spa Screen
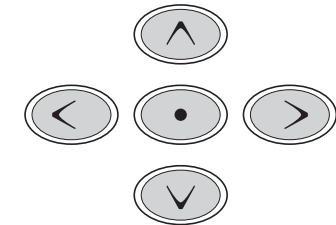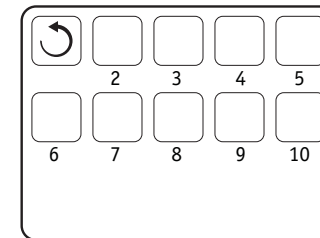
Shortcuts Screen
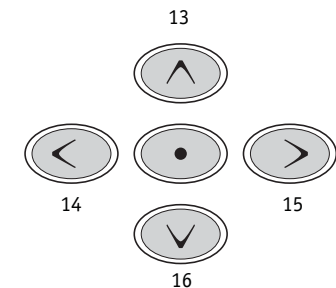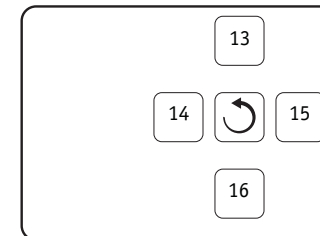
A Circ Icon will appear when a Circ Pump is configured using Setups 1, 2, 3, 4, 5, 11

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BP2500/2600 Configuration Options

Auxilliary Panel Features on Bank 1*

Feature	Default
Aux Button A1	Jets 1
Aux Button A2	Jets 2
Aux Button A3	Jets 3
Aux Button A4	Light

Auxilliary Panel Features on Bank 2*

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

*Bank 1 consists on J5 and J6 on the Main Circuit Board.

Bank 2 consists on J7 and J8 on the Main Circuit Board.

Aux Connection Splitter PN4XXXX may be required.

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BP2500/2600 Configuration Options

Auxilliary Panel Features

AX10 Panels on Bank 1*

A1, AX10A1   No O/L   52803
A2, AX10A2   No O/L   52804
A3, AX10A3   No O/L   55805 ▶
A4, AX10A4   No O/L   52806

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

AX20

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

A1   A2, 3 or 4

AX40

AX40   No O/L   52799

A1   A2   A3   A4
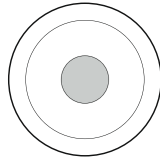
Call Customer Service for additional information about Auxiliary Panels.

Auxiliary Panel Part Number   _____

Overlay Part Number   _____

*Bank 1 consists on J5 and J6 on the Main Circuit Board.
 Bank 2 consists on J7 and J8 on the Main Circuit Board.
 Aux Connection Splitter PN4XXXX may be required.
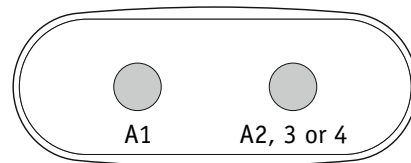
AX20 Auxiliary Panel plugged into Bank 1 will operate A1 + A2, A3 or A4.

AX20 Auxiliary Panel plugged into Bank 2 will operate A5 + A6, A7 or A8.
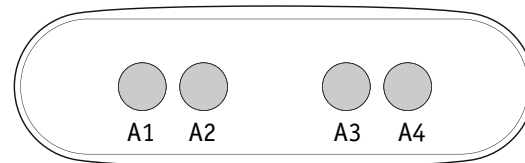
AX40 Auxiliary Panel plugged into Bank 1 will operate A1 + A2, A3 and A4.

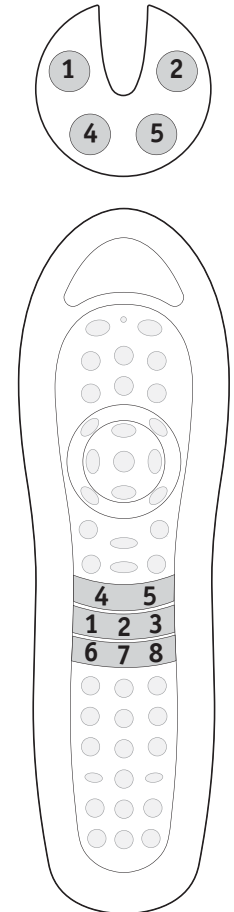**AX40 Auxiliary Panel plugged into Bank 2 will operate A5 + A6, A7 and A8.**

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BP2500/2600 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

Remote Panel Part Number _____

Overlay Part Number _____

BAL**B**OA
water group