MS501X Tech Sheet

Customer: **Master Spas**

Part Number: 56666-01 800 Incoloy 4kW



Custom Box Overlay	☐
Box Overlay Part Number	N/A
UL System Model:	BP501-MS501X-BS
Software Version ID:	M100_201 V23.0
Software Version:	23.0
File Name:	BP501_23.0_MS501X_26.hex
Configuration Signature:	D7434F9B
Eng. Project Number:	4442
Base PCBA:	56667-01

Control Panels (See later pages for more information):

MP800/TP800	Version 3.1 and later (Version 3.13 or later required for bba™)
TP600	Version 2.7 and later (TP600CE may be used)
TP400T	Version 2.7 and later

Manufactured under one or more of these patents. U.S. Patents: 5332944, 5361215, 5550753, 5559720, 5,883,459, 6253227, 6282370, 6590188, 6976052, 6965815, 7030343, 7,417,834 b2, Canadian Patent: 2342614, Australian patent: 2373248 other patents both foreign and domestic applied for and pending.
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System Revision History

Part #	EPN	Date	Originator	Changes Made
ZT000104	4324	07-08-14	Customer	Custom BP501 system with expander board.
56666	4324	10-01-14	Customer	Release to production.
56666-01	4442	01-06-15	Customer	Add 2 more Setups.

bba™ (Balboa Bluetooth Amp) connection is documented seperately.

bba™ is only integrated into graphic display panels (TP800, TP900 and spaTouch™). With TP600 the Aux button operation of bba™ must be used.

Manufactured under one or more of these patents. U.S. Patents: 5332944, 5361215, 5550753, 5559720, 5,883,459, 6253227, 6282370, 6590188, 6976052, 6965815, 7030343, 7,417,834 b2, Canadian Patent: 2342614, Australian patent: 2373248 other patents both foreign and domestic applied for and pending.
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Basic Functions Setup 1 - 26

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 7, 8, 17, 18, 25 & 26 ONLY,
3 or 4 wires [hot, hot (optional), neutral, ground].

*BP systems automatically detect 50Hz vs 60Hz.

System Ouputs:

Pump 1	240VAC*	2-Speed	12A max	15-minute timer (120-minute timer for low speed in Non-Circ Setups only) This is the heater pump in Setups 2, 4, 6, 8, 12, 14, 16, 18, 22 & 24 Must deliver 20 GPM through heater 1-Speed in Setups 9, 10, 19, 20, 25 & 26
Pump 2	240VAC	2-Speed	12A max	15-minute timer 1-Speed in Setups 3 - 6, 9, 10, 13 - 16, 19 & 20 Unused in Setups 7, 8, 17, 18, 21 - 26
Pump 3	240VAC	1-Speed	6A max	15-minute timer Used in Setups 3, 4, 9, 13, 14 & 19 only
Circ Pump	240VAC*	1-Speed	2A max	24-hour with 3˚F shutoff (outside of filter cycles) This is the heater pump in Setups 1, 3, 5, 7, 9, 10, 11, 13, 15, 17, 19, 20, 21, 23, 25 & 26 Must deliver 20 GPM through heater
Ozone	240VAC*		1A max	Independent in Non-Circ Setups and Slaved to Circ Pump in Circ Setups
Spa Light	10VAC	On/Off	1A max	60-minute timer. Unused in Setups 21 - 24
A/V (Stereo)	120VAC	Hot	5A max	Always on
Heater	4.0kW @ 240VAC max			

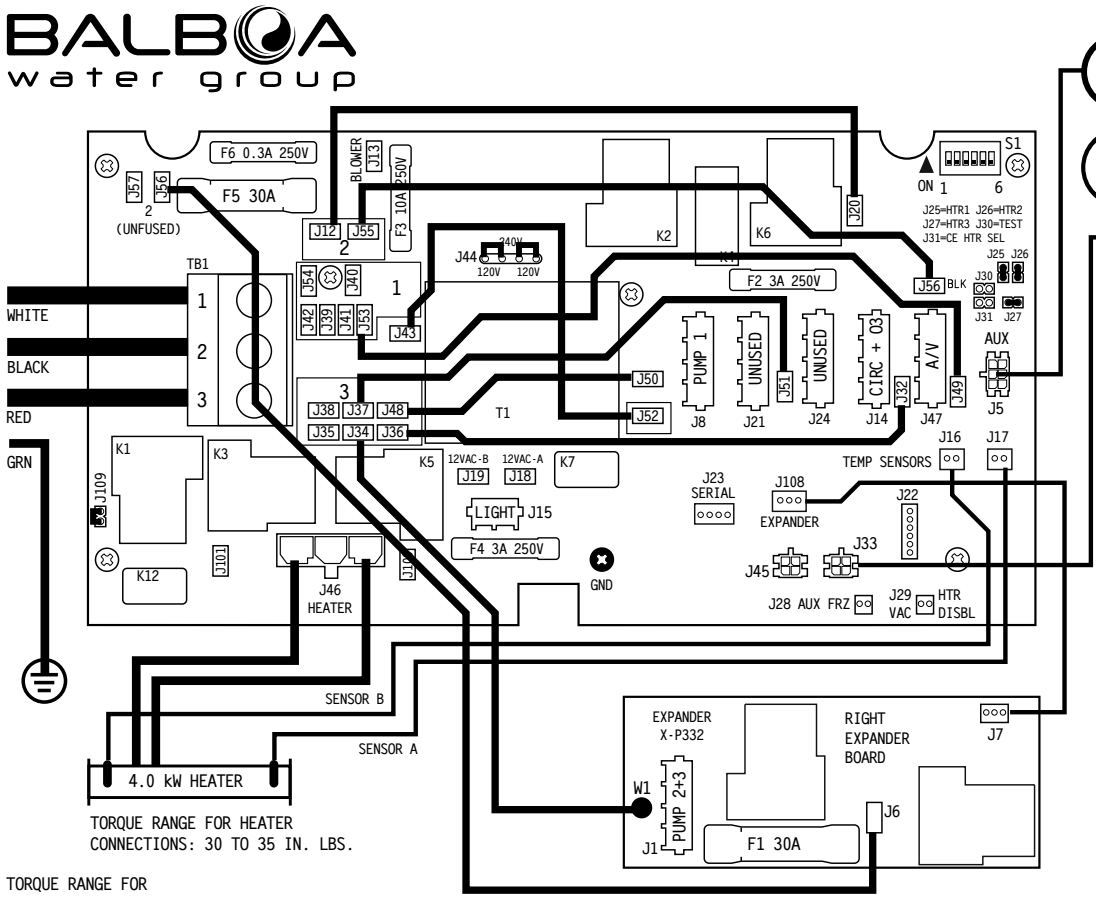
*Circ Pump and Ozone must be the same voltage.

With 120VAC power input (for Setups 7, 8, 17, 18, 25 & 26 only), Pump 1, Circ Pump, and Ozone must be set to 120VAC by moving wires attached to J50 and J32 to area 1 (Neutral).

Manufactured under one or more of these patents. U.S. Patents: 5332944, 5361215, 5550753, 5559720, 5,883,459, 6253227, 6282370, 6590188, 6976052, 6965815, 7030343, 7,417,834 b2,
Canadian Patent: 2342614, Australian patent: 2373248 other patents both foreign and domestic applied for and pending. © Copyright 2014 Balboa Water Group.

Hardware Setup

Wiring Diagram



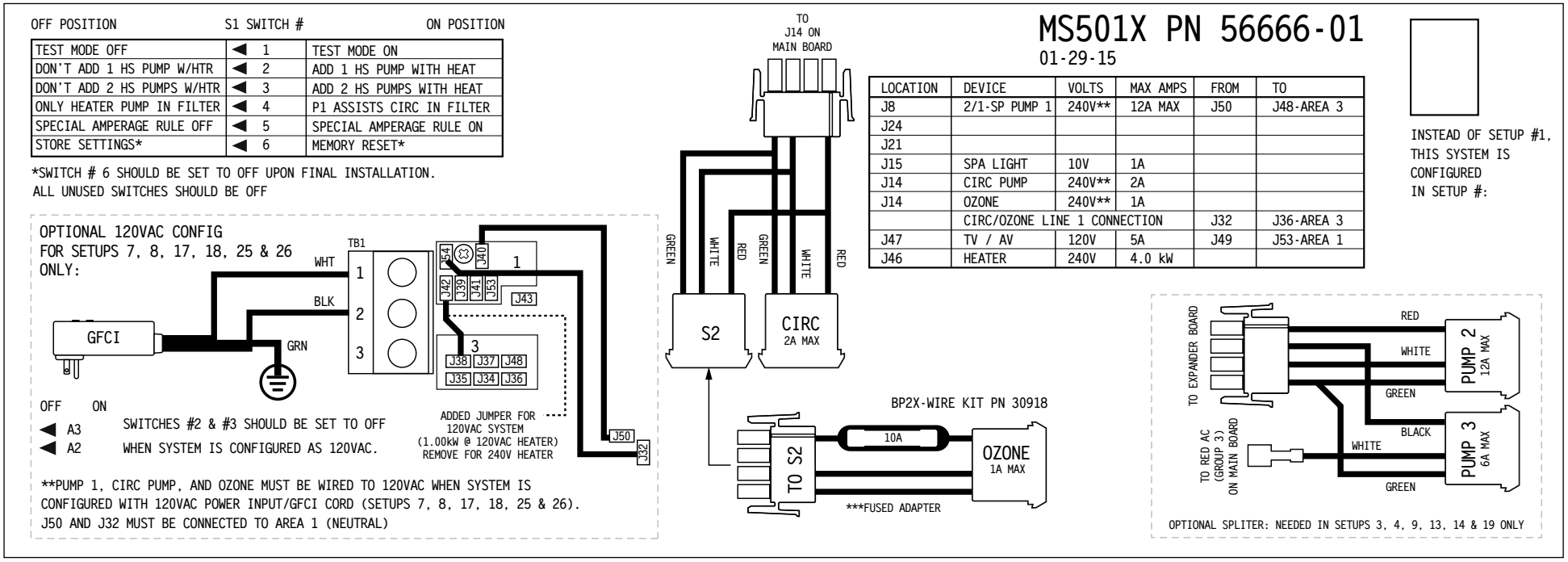
LOCATION	DEVICE	VOLTS	AMPS	FROM	TO	FROM	TO
J1 ON RT EXPANDER	2/1 SPD PUMP 2 + 1 SPD PUMP 3	240V	12A MAX 6A	W1 ON EXPANDER	GROUP 3 J34	J6 ON EXPANDER	J56

SETUP #	CIRC PUMP	PUMP 1	PUMP 2	PUMP 3	LIGHT	MENU TYPE	TEMP SCALE
1	24HR/3F	2-SPEED	2-SPEED	NONE	1-SPEED	STANDARD	°F
2	NONE	2-SPEED	2-SPEED	NONE	1-SPEED	STANDARD	°F
3	24HR/3F	2-SPEED	1-SPEED	1-SPEED	1-SPEED	STANDARD	°F
4	NONE	2-SPEED	1-SPEED	1-SPEED	1-SPEED	STANDARD	°F
5	24HR/3F	2-SPEED	1-SPEED	NONE	1-SPEED	STANDARD	°F
6	NONE	2-SPEED	1-SPEED	NONE	1-SPEED	STANDARD	°F
7	24HR/3F	2-SPEED	NONE	NONE	1-SPEED	STANDARD	°F
8	NONE	2-SPEED	NONE	NONE	1-SPEED	STANDARD	°F
9	24HR/3F	1-SPEED	1-SPEED	1-SPEED	1-SPEED	STANDARD	°F
10	24HR/3F	1-SPEED	1-SPEED	NONE	1-SPEED	STANDARD	°F
11	24HR/3F	2-SPEED	2-SPEED	NONE	1-SPEED	SIMPLE	°F
12	NONE	2-SPEED	2-SPEED	NONE	1-SPEED	SIMPLE	°F
13	24HR/3F	2-SPEED	1-SPEED	1-SPEED	1-SPEED	SIMPLE	°F
14	NONE	2-SPEED	1-SPEED	1-SPEED	1-SPEED	SIMPLE	°F
15	24HR/3F	2-SPEED	1-SPEED	NONE	1-SPEED	SIMPLE	°F
16	NONE	2-SPEED	1-SPEED	NONE	1-SPEED	SIMPLE	°F
17	24HR/3F	2-SPEED	NONE	NONE	1-SPEED	SIMPLE	°F
18	NONE	2-SPEED	NONE	NONE	1-SPEED	SIMPLE	°F
19	24HR/3F	1-SPEED	1-SPEED	1-SPEED	1-SPEED	SIMPLE	°F
20	24HR/3F	1-SPEED	1-SPEED	NONE	1-SPEED	SIMPLE	°F
21	24HR/3F	2-SPEED	NONE	NONE	NONE	STANDARD	°F
22	NONE	2-SPEED	NONE	NONE	NONE	STANDARD	°F
23	24HR/3F	2-SPEED	NONE	NONE	NONE	SIMPLE	°F
24	NONE	2-SPEED	NONE	NONE	NONE	SIMPLE	°F
25	24HR/3F	1-SPEED	NONE	NONE	1-SPEED	STANDARD	°F
26	24HR/3F	1-SPEED	NONE	NONE	1-SPEED	SIMPLE	°F

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Hardware Setup

As shown on additional wiring diagram section:



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Setup Reference Table

Setup #	Circ Pump	Pump 1	Pump 2	Pump 3	Lights	Menu Type	Temp Scale
1	24hr/3°F	2-Speed	2-Speed	None	1-Speed	Standard	°F
2	None	2-Speed	2-Speed	None	1-Speed	Standard	°F
3	24hr/3°F	2-Speed	1-Speed	1-Speed	1-Speed	Standard	°F
4	None	2-Speed	1-Speed	1-Speed	1-Speed	Standard	°F
5	24hr/3°F	2-Speed	1-Speed	None	1-Speed	Standard	°F
6	None	2-Speed	1-Speed	None	1-Speed	Standard	°F
7	24hr/3°F	2-Speed	None	None	1-Speed	Standard	°F
8	None	2-Speed	None	None	1-Speed	Standard	°F
9	24hr/3°F	1-Speed	1-Speed	1-Speed	1-Speed	Standard	°F
10	24hr/3°F	1-Speed	1-Speed	None	1-Speed	Standard	°F
11	24hr/3°F	2-Speed	2-Speed	None	1-Speed	Simple	°F
12	None	2-Speed	2-Speed	None	1-Speed	Simple	°F
13	24hr/3°F	2-Speed	1-Speed	1-Speed	1-Speed	Simple	°F
14	None	2-Speed	1-Speed	1-Speed	1-Speed	Simple	°F
15	24hr/3°F	2-Speed	1-Speed	None	1-Speed	Simple	°F
16	None	2-Speed	1-Speed	None	1-Speed	Simple	°F
17	24hr/3°F	2-Speed	None	None	1-Speed	Simple	°F
18	None	2-Speed	None	None	1-Speed	Simple	°F
19	24hr/3°F	1-Speed	1-Speed	1-Speed	1-Speed	Simple	°F
20	24hr/3°F	1-Speed	1-Speed	None	1-Speed	Simple	°F
21	24hr/3°F	2-Speed	None	None	None	Standard	°F
22	None	2-Speed	None	None	None	Standard	°F
23	24hr/3°F	2-Speed	None	None	None	Simple	°F
24	None	2-Speed	None	None	None	Simple	°F
25	24hr/3°F	1-Speed	None	None	1-Speed	Standard	°F
26	24hr/3°F	1-Speed	None	None	1-Speed	Simple	°F

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

Manufactured under one or more of these patents. U.S. Patents: 5332944, 5361215, 5550753, 5559720, 5,883,459, 6253227, 6282370, 6590188, 6976052, 6965815, 7030343, 7,417,834 b2, Canadian Patent: 2342614, Australian patent: 2373248 other patents both foreign and domestic applied for and pending. © Copyright 2014 Balboa Water Group.

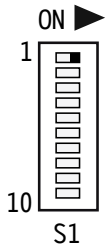
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Changing Software Setups with TP800 / TP900 / spaTouch™ Menued Panel

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

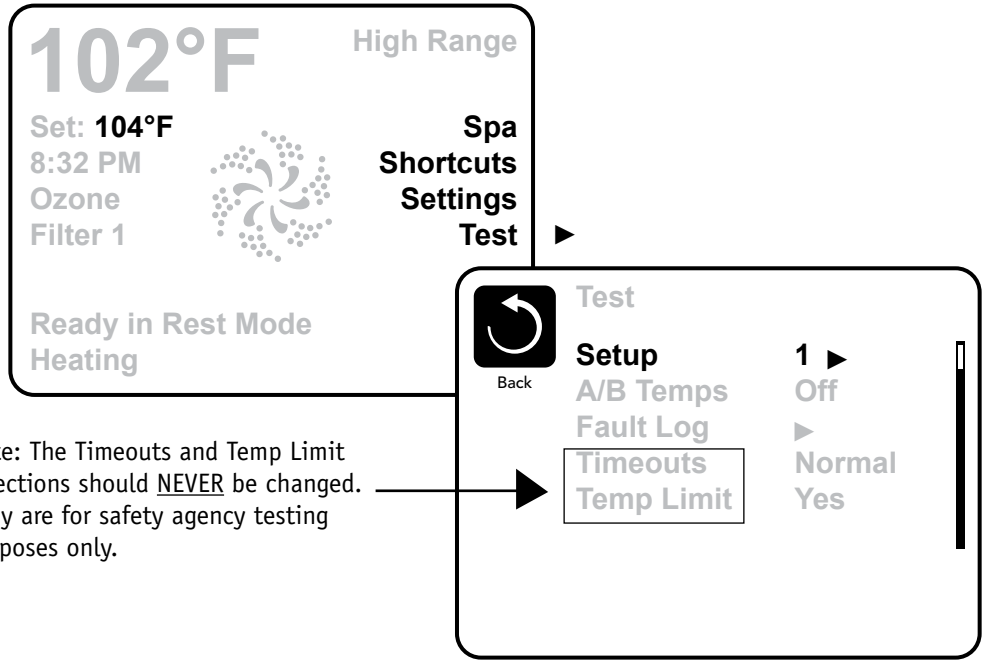
DANGER! HIGH VOLTAGE WILL BE ACCESSIBLE! SERVICE TECHNICIAN ONLY!

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.



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

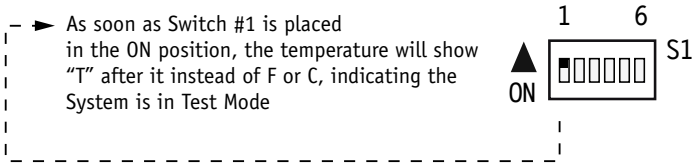
Manufactured under one or more of these patents. U.S. Patents: 5332944, 5361215, 5550753, 5559720, 5,883,459, 6253227, 6282370, 6590188, 6976052, 6965815, 7030343, 7,417,834 b2, Canadian Patent: 2342614, Australian patent: 2373248 other patents both foreign and domestic applied for and pending.
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Changing Software Setups with TP600/400

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.



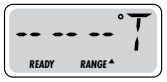
Software Setups

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.

Manufactured under one or more of these patents. U.S. Patents: 5332944, 5361215, 5550753, 5559720, 5,883,459, 6253227, 6282370, 6590188, 6976052, 6965815, 7030343, 7,417,834 b2, Canadian Patent: 2342614, Australian patent: 2373248 other patents both foreign and domestic applied for and pending.
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Changing Software Setups with TP600/400 Continued

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

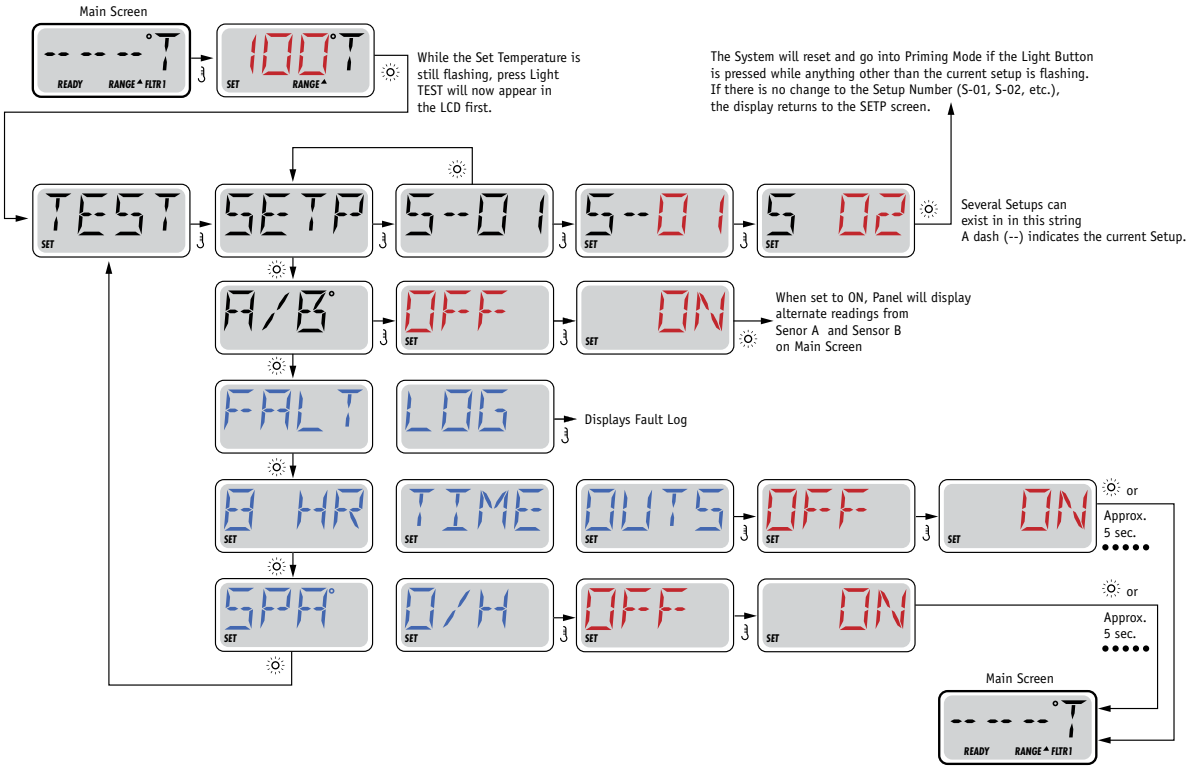
Immediately after exiting Priming Mode, press this sequence of buttons: Warm*, Light, Warm, Warm, Warm, Warm. Continue to press Warm until the diplay shows the Setup Number (S-01, S-02, etc.) you want to switch to. When the correct setup number is showing, press Light once, and the system will reset,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

*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.)

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Equipment Expansion

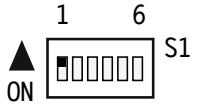
Expansion Features

Control Connection	Default	Fuse
Relay 1/2 (J108)	2/1-Speed Pump 2 + 1-Speed Pump 3	30A

Manufactured under one or more of these patents. U.S. Patents: 5332944, 5361215, 5550753, 5559720, 5,883,459, 6253227, 6282370, 6590188, 6976052, 6965815, 7030343, 7,417,834 b2, Canadian Patent: 2342614, Australian patent: 2373248 other patents both foreign and domestic applied for and pending. © Copyright 2014 Balboa Water Group.

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.*

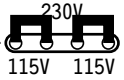
Assignable DIP Switches

A4	In “ON” position, Pump 1 (at lowest speed) assists Circ Pump in Filter Cycles (on Circs Setups only). In “OFF” position, only the heater pump runs during Filter Cycles.

Undesignated switches are not assigned a function.

Manufactured under one or more of these patents. U.S. Patents: 5332944, 5361215, 5550753, 5559720, 5,883,459, 6253227, 6282370, 6590188, 6976052, 6965815, 7030343, 7,417,834 b2, Canadian Patent: 2342614, Australian patent: 2373248 other patents both foreign and domestic applied for and pending. © Copyright 2014 Balboa Water Group.

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.	J44 

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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BP501 Configuration Options

General Features

Feature	Default	
Pump 1 in Filter Cycle (Circ Only)	No	
Pump 1 Low Timer	*120 Minutes*	Applies in non-circ Setups (configurations) only
General Pump Timer	15 Minutes	Applies to all pumps, except Pump 1 low in Non-Circ Setups
Blower Timer	15 Minutes	
Mister Timer	15 Minutes	
Light Timer	*60 Minutes*	
Circ (when enabled)	*24 hr with 3˚F shutoff (outside of filter cycles)*	
Cleanup Cycle	*60 Minutes*	
Cleaup as Preference setting	*Yes*	
Ozone	With Heater Pump*	
Ozone Suppression	*60 Minutes*	Applies in non-circ Setups (configurations) only
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.

Blue Indicates New Custom Configuration Default (Setup 1)

Manufactured under one or more of these patents. U.S. Patents: 5332944, 5361215, 5550753, 5559720, 5,883,459, 6253227, 6282370, 6590188, 6976052, 6965815, 7030343, 7,417,834 b2, Canadian Patent: 2342614, Australian patent: 2373248 other patents both foreign and domestic applied for and pending. © Copyright 2014 Balboa Water Group.

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)*

Blue Indicates New Custom Configuration Default (Setup 1)

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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*	*4 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)*

Blue Indicates New Custom Configuration Default (Setup 1)

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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	*OFF*
Drain Water	*180 Days*
Change Cartridge	OFF
Clean Cover	*OFF*
Treat Wood	*OFF*
Change Filter	*180 Days*

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

Blue Indicates New Custom Configuration Default (Setup 1)

Manufactured under one or more of these patents. U.S. Patents: 5332944, 5361215, 5550753, 5559720, 5,883,459, 6253227, 6282370, 6590188, 6976052, 6965815, 7030343, 7,417,834 b2, Canadian Patent: 2342614, Australian patent: 2373248 other patents both foreign and domestic applied for and pending. © Copyright 2014 Balboa Water Group.

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 in Circ Setups* No in Non-Circ Setups
Dual Voltage Heater	Always Input Voltage
Safety Suction	Disabled

Manufactured under one or more of these patents. U.S. Patents: 5332944, 5361215, 5550753, 5559720, 5,883,459, 6253227, 6282370, 6590188, 6976052, 6965815, 7030343, 7,417,834 b2, Canadian Patent: 2342614, Australian patent: 2373248 other patents both foreign and domestic applied for and pending. © Copyright 2014 Balboa Water Group.

TP800 Panel Configuration

Button Layout Table

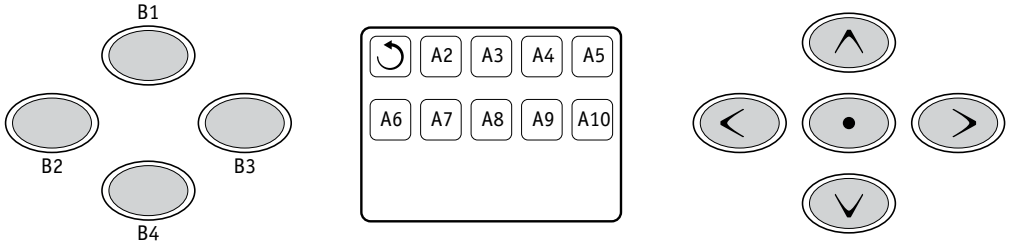
Feature #	Setup 4	Setups 2 & 6	Setups 3 & 9	Setups 1, 5 & 10	Setups 7 & 25	Setup 8	Setup 21	Setup 22
A1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
A2	Jets 1	Jets 1	Jets 1	Jets 1	Jets 1	Jets 1	Jets 1	Jets 1
A3	Jets 2	Jets 2	Jets 2	Jets 2	Light 1	Light 1	Invert	Invert
A4	Jets 3	Light 1	Jets 3	Light 1	Invert	Invert	(Circ Icon)	Undefined
A5	Light 1	Invert	Light 1	Invert	(Circ Icon)	Undefined	Undefined	Undefined
A6	Invert	Undefined	Invert	(Circ Icon)	Undefined	Undefined	Undefined	Undefined
A7	Undefined	Undefined	(Circ Icon)	Undefined	Undefined	Undefined	Undefined	Undefined
A8	Undefined	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	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined
A14	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined
A15	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined
A16	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined	Undefined
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	Undefined	Undefined	Undefined	Undefined
B3	Jets 3	Undefined	Jets 3	Undefined	Undefined	Undefined	Undefined	Undefined
B4	Light 1	Light 1	Light 1	Light 1	Light 1	Light 1	Undefined	Undefined

TP800 not supported in Setups 11 - 20, 23, 24 & 26.

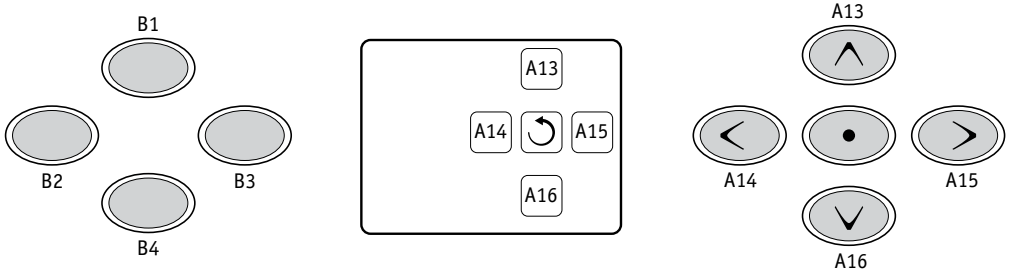
Manufactured under one or more of these patents. U.S. Patents: 5332944, 5361215, 5550753, 5559720, 5,883,459, 6253227, 6282370, 6590188, 6976052, 6965815, 7030343, 7,417,834 b2, Canadian Patent: 2342614, Australian patent: 2373248 other patents both foreign and domestic applied for and pending. © Copyright 2014 Balboa Water Group.

TP800 Panel Configuration

Spa Screen



Shortcuts Screen



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

Button 1 is fixed.

Panel Part Number	**50204-XX**
Overlay Part Number	N/A

Manufactured under one or more of these patents. U.S. Patents: 5332944, 5361215, 5550753, 5559720, 5,883,459, 6253227, 6282370, 6590188, 6976052, 6965815, 7030343, 7,417,834 b2, Canadian Patent: 2342614, Australian patent: 2373248 other patents both foreign and domestic applied for and pending. © Copyright 2014 Balboa Water Group.

TP600 Panel Configuration

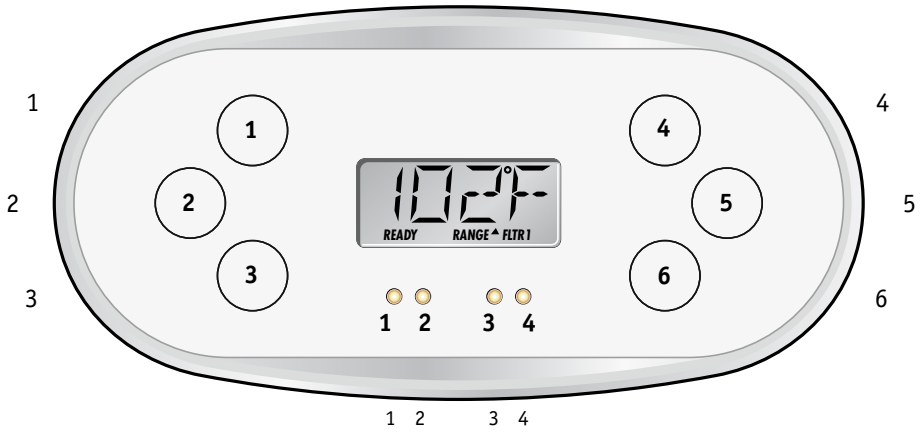
Button Layout Table

Button #	Setups 11, 12, 15, 16 & 20	Setups 17, 18, 23, 24 & 26	Setups 13,14 & 19
1	Jets 1	Jets 1	Jets 1
2	Jets 2	Undefined	Jets 2
3	Invert	Invert	Jets 3
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	Undefined	Jets 2
LED 3	Light 1	Light 1	Light 1
LED 4	Heat On	Heat On	Heat On

TP600 not supported in Setups 1 - 10, 21, 22 & 25.

In Setups 23 & 24, which have no Light output, the only functions of button 5 are:

- Activates Circ Pump during Priming Mode.
- Acts as navigation button for menus.



TP600

55676-XX

No Overaly

Manufactured under one or more of these patents. U.S. Patents: 5332944, 5361215, 5550753, 5559720, 5,883,459, 6253227, 6282370, 6590188, 6976052, 6965815, 7030343, 7,417,834 b2, Canadian Patent: 2342614, Australian patent: 2373248 other patents both foreign and domestic applied for and pending.
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TP400 Panel Configuration

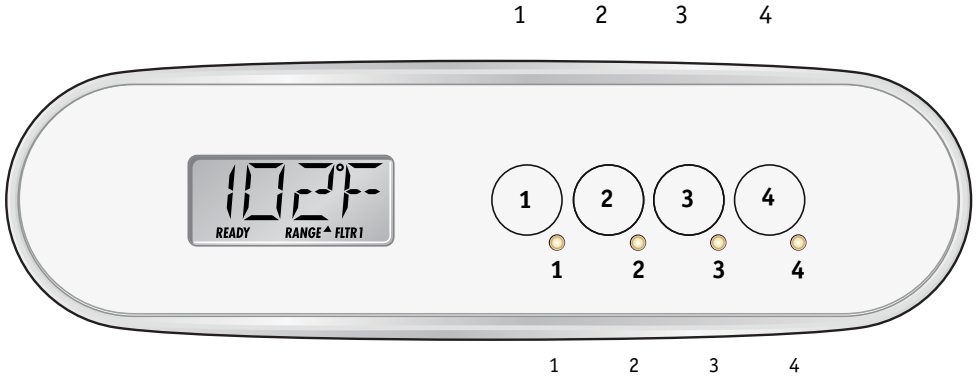
Button Layout Table for TP400T

Button #	Setups 11, 12, 15, 16 & 20	Setups 17, 18, 23, 24 & 26
1	Temperature	Temperature
2	Jets 1	Jets 1
3	Light 1	Light 1
4	Jets 2	Undefined
LED 1	Heater ON	Heater ON
LED 2	Jets 1 ON	Jets 1 ON
LED 3	Light ON	Light ON
LED 4	Jets 2 ON	Undefined

TP400T not supported in Setups 1-10, 13, 14, 19, 21, 22 & 25.

In Setups 23 & 24, which have no Light output, the only functions of button 3 are:

- Activates Circ Pump during Priming Mode.
- Acts as navigation button for menus.



TP400T

50260-XX

Includes overlay PN 12511.

Manufactured under one or more of these patents. U.S. Patents: 5332944, 5361215, 5550753, 5559720, 5,883,459, 6253227, 6282370, 6590188, 6976052, 6965815, 7030343, 7,417,834 b2, Canadian Patent: 2342614, Australian patent: 2373248 other patents both foreign and domestic applied for and pending.
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BP501 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

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

Aux Connection Splitter PN25257 may be required.

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

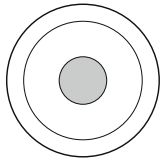
Manufactured under one or more of these patents. U.S. Patents: 5332944, 5361215, 5550753, 5559720, 5,883,459, 6253227, 6282370, 6590188, 6976052, 6965815, 7030343, 7,417,834 b2, Canadian Patent: 2342614, Australian patent: 2373248 other patents both foreign and domestic applied for and pending. © Copyright 2014 Balboa Water Group.

BP501 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	52805 ▶
A4, AX10A4	No O/L	52806



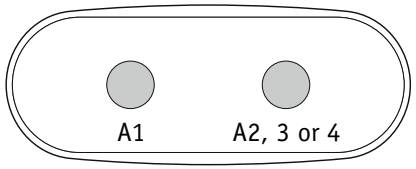
Call Customer Service for additional information about Auxiliary Panels.

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

Aux Connection Splitter PN25257 may be required.

AX20

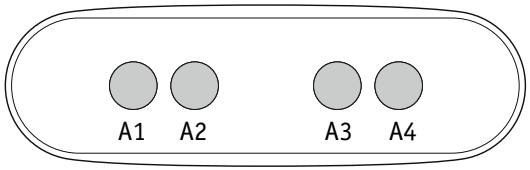
AX20 A1A2	No O/L	52800
AX20 A1A3	No O/L	52801
AX20 A1A4	No O/L	52802



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

AX40

AX40	No O/L	52799



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

Manufactured under one or more of these patents. U.S. Patents: 5332944, 5361215, 5550753, 5559720, 5,883,459, 6253227, 6282370, 6590188, 6976052, 6965815, 7030343, 7,417,834 b2, Canadian Patent: 2342614, Australian patent: 2373248 other patents both foreign and domestic applied for and pending.
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