



BP100 Owners Manual



Congratulations On Your New Spa



Before enjoying your new Luxury Spas hot tub, please follow these important steps

- 1- Before filling the hot tub, remove the plastic cover from the filter. The filter is located in the sanitary basket. Check to make sure there is no other debris inside the sanitary basket.
- 2- Make sure your hot tub is hooked to the correct voltage and amperage for your model hot tub. All Luxury Spas hot tubs are 240V. You can find the correct amperage for your model listed in the included User Guide.
- 3- When filling the hot tub for the first time, make sure the water level is at least 2 inches above the bottom of the sanitary basket. Use the water level sticker as a reference only making sure the water is flowing continuously over the sanitary basket.
- 4- Allow your hot tub a minimum of 8 hours to heat completely the first time.
- 5- When programming the hot tub for the first time, make sure to select your filter and heater settings. As a general rule, keep the operating temperature 6-8 degrees below your anticipated usage temperature until about 30 minutes before use. This will save energy and improve the hot tub's efficiency.
- 6- 6.) Always keep your hot tub covered when not in use.

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Important Safety Instructions and Warnings

READ AND FOLLOW ALL INSTRUCTIONS

To reduce the risk of injury, do not permit children to use this product unless they are closely supervised at all times.



Warning: Children should not use spas or hot tubs without adult supervision.

Avertissement: Ne pas laisser les enfants utiliser une cuve de relaxation sans surveillance.



Warning: Do not use spas or hot tubs unless all suction guards are installed to prevent body and hair entrapment.

Avertissement: Pour éviter que les cheveux ou une partie du corps puissent être aspirés, ne pas utiliser une cuve de relaxation si les grilles de prise d'aspiration ne sont pas posées en place.



Warning: People using medications and/or having an adverse medical history should consult a physician before using spa or hot tub.

Avertissement: Les personnes qui prennent des médicaments ou ont des problèmes de santé devraient consulter un médecin avant d'utiliser une cuve de relaxation.



Warning: People with infectious diseases should not use a spa or hot tub.

Avertissement: Les personnes atteintes de maladies infectieuses ne devraient pas utiliser une cuve de relaxation.



Warning: To avoid injury, exercise care when entering or exiting the spa or hot tub.

Avertissement: Pour éviter des blessures, user de prudence en entrant dans une cuve de relaxation en sortant.



Warning: Do not use drugs or alcohol before or during the use of a spa or hot tub, to avoid unconsciousness and possible drowning.

Avertissement: Pour éviter l'évanouissement et la noyade éventuelle, ne prendre ni drogue ni alcool avant d'utiliser une cuve de relaxation ni quand on s'y trouve.



Warning: Pregnant or possibly pregnant women should consult a physician before using a spa or hot tub.

Avertissement: Les femmes enceintes, que leur grossesse soit confirmée ou non, devraient consulter un médecin avant d'utiliser une.



Warning: Water temperature in excess of 38 C may be injurious to your health.

Avertissement: Il peut être dangereux pour la santé de se plonger dans de l'eau à plus de 38 C.



Warning: Before entering the spa or hot tub, measure the water temperature with an accurate thermometer.

Avertissement: Avant d'utiliser une cuve de relaxation mesurer la température de l'eau à l'aide d'un thermomètre précis.



Warning: Do not use a spa or hot tub immediately following strenuous exercise.

Avertissement: Ne pas utiliser une cuve de relaxation immédiatement après un exercice fatigant.

SAVE THESE INSTRUCTIONS

READ AND FOLLOW ALL INSTRUCTIONS

To reduce the risk of injury, do not permit children to use this product unless they are closely supervised at all times.



Warning: Prolonged immersion in a spa or hot tub may be injurious to your health.

Avertissement: L'utilisation prolongee d' une cuve de relaxation peut etre dangereuse pour la sante.



Warning: Do not permit or use electric appliances (such as a light, telephone, radio or television) within 1.5 meters of spa or hot tub.

Avertissement: Ne pas placer d'appareil électrique (luminaire, téléphone, radio, téléviseur, etc.) moins de 1.5 meters de cette cuve de relaxation.



Caution: Maintain water chemistry in accordance with the manufacturer's instructions.

Attention: La teneur de l'eau en mati ères dissoutes doit être conforme aux directives du fabricant.



Caution: In order to avoid a hazard due to inadvertent resetting of the thermal cut-out, this appliance must not be supplied through an external switching device, such as a timer, or connected to a circuit that is regularly switched on and off by the utility.



HYPERTHERMIA

Hyperthermia occurs when the internal temperature of the body reaches a level several degrees above the normal body temperature of 37 C. The symptoms of hyperthermia include:

- 1) Unawareness of impending hazard;
- 2) Failure to perceive heat;
- 3) Failure to recognize the need to exit the spa or hot tub;
- 4) Physical inability to exit the spa or hot tub;
- 5) Fetal damage in pregnant women; and
- 6) Unconsciousness and resulting in the danger of drowning.



Warning: The use of alcohol or drugs can greatly increase the risk of fatal hyperthermia in hot tubs or spas.

Avertissement: La consommation d' alcool ou de drogue augmente considerablement.



Warning: The appliance is not to be used by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction.

SAVE THESE INSTRUCTIONS

Preparing for your New Spa

Permitting

Most cities and county's require permits for exterior construction and electrical circuits. In addition, some communities have codes requiring residential barriers such as fencing and/or self-closing gates on property to prevent unsupervised access to the property by children. Your local inspections office can provide information on which permits may be required and how to obtain them prior to the delivery of your spa.

Prepare a Good Foundation

Damage caused by an inadequate or improper foundation is not covered by the warranty. The spa owner is responsible for providing a proper foundation. Place the spa on a solid, level foundation. If you are installing the spa indoors (not recommended), pay close attention to the flooring beneath it. Choose flooring that will not be damaged or stained. If you are installing your spa on an elevated wood deck or other structure, consult a structural engineer or a contractor to ensure the structure will support the weight of 150 pounds per square foot. An adequate drainage system has to be provided to deal with overflow water.



Plan the Best Location

SAFETY FIRST

Do not place your spa within 10 feet (3 m) of overhead power lines.

Consider Spa Use

How you intend to use your spa will help you determine where you should position it. For example, will you use your spa for recreational or therapeutic purposes? If your spa is mainly used for family recreation, be sure to leave plenty of room around it for activity. If you will use it for relaxation and therapy, you will probably want to create a specific mood around it.

Climate Privacy and View

Place the spa near a house entry if you live in a snowy or rainy environment so you have a place to comfortably change clothes. Consider seasonal changes, too. Bare trees don't provide much for privacy and don't forget to think of your neighbors' view of you, and your view of your neighbors.

Keep your Spa Clean

In planning your spa's location, consider a location where there is a clean path to and from the house. Use a mat at the spa's entrance to encourage bathers to clean their feet before entering your spa.

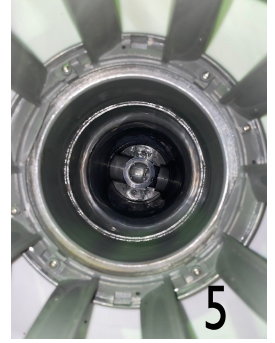
Allow for Service Access

If you are installing your spa near a wall or with any type of structure on the outside, such as a gazebo, remember to allow a minimum of 18" access for service.



Filter Removal

Upon receiving your Spa, you'll need to remove the filter and the plastic that covers it. Upon doing so, check the Sanitation basket to assure there is no remaining plastic that could have gotten lodged during shipping. To access the filter, remove top cover(1), and rotate the filter housing (2) to access the filter(4). Photo 5 shows the bottom sanitation basket, please assure this is clear of any debris.



Panel Removal



In order to remove your panel to access your controls and Bluetooth module, remove the screw covers from the center or sides of the panels. (Arrows shown for reference). Once you've removed the screws, pull outward on the panel to remove it. To reinstall simply reverse your steps making sure to align the white clips on the backside of your panel. Once aligned press the panel inward to secure and re-attach your screws.

240 Volt Electrical Installation



Warning

The electrical circuit must be installed by an electrical contractor and approved by a local building or electrical inspector.

Failure to comply with state and local codes may result in fire or personal injury and will be the sole responsibility of the spa owner.

Improper installations present hazards which can result in personal injury or property damage and void the warranty on the spa.

4-Wire System

All Luxury Spa Hot Tubs are configured with a 4-wire power connection; L1(HOT), L2(HOT), N(Neutral) and Ground. There must be a GFCI disconnect breaker panel at least 5' from the spa. Your GFCI Neutral wire will be connected to bus bar inside disconnect panel.

Do not remove or adjust dip switches. They are pre-configured for normal operation.



GFCI and Wiring Requirements

The power supplied to the spa must be on a dedicated GFCI protected circuit as required by ANSI/NFPA 70 with no other appliances or lights sharing the power.

Use copper wire with THHN insulation. Do not use aluminum wire.

When NEC requires the use of wires larger than 6 AWG, install a junction box near the spa and use 6 AWG wire between the junction box and the spa.

Wire runs over 85 feet must increase wire gauge to the next lower number.

Means for disconnection must be incorporated in the fixed wiring in accordance with the wiring rules.

All Luxury Spa Hot Tubs are configured with a 4-wire power connection; L1(HOT), L2(HOT), N(Neutral) and Ground. There must be a GFCI disconnect breaker panel at least 5' from the spa. Your GFCI Neutral wire will be connected to bus bar inside disconnect panel.

Testing the GFCI Breaker

Test the GFCI breaker prior to first use and periodically when the spa is powered. To test the GFCI breaker follow these instructions:

1. With spa operating, press the TEST button on the GFCI. The GFCI will trip and the spa will shut off.
2. Reset the GFCI breaker by switching the breaker to the full OFF position, wait a moment, then turn the breaker back on. The spa should have power again.

Point of Entry for Electric Service

Luxury Spas Hot Tubs are equipped with a designated entry port for the Spa power supply (refer to photo)



Functions and Power Requirements

System Outputs:

Pump 1	240VAC	2-Speed 1-Speed in Setups 12, 14, 17	12A max	15-minute timer for High Speed, 15-Minute timer for Low Speed
		This is the heater pump in Setups 1-6, 15, 18 Must deliver 20 GPM through heater		
Pump 2	240VAC	2-Speed 1-Speed in Setups 5, 6, 11-14, 17, 18	12A† max	15-minute timer
Pump 3	240VAC	2-Speed 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	12A† max	15-minute timer
Blower	240VAC	1 Speed Unused in Setups 1, 2, 4, 6-8, 10, 13, 14	4A max	15-minute timer
Circ Pump	120VAC**	1-Speed This is the heater pump in Setups 7-14, 16, 17 Must deliver 20 GPM through heater	2A max	Programmable Filtration Cycles + Polling
Ozone	120VAC**		.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.
A/V (Stereo)	120VAC	Hot	4A max	Always on
Heater	5.5kW @ 240VAC max			

† In Setups 5, 11, and 12, where pump 2 and pump 3 are both on the expander board, pump 2 and pump 3 must add up to no more than 20A total, and thus they cannot be both 12A max in that case.

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

Power Requirements:

240VAC, 50/60Hz*, 42A, Class A GFCI-protected service (Circuit Breaker = 50A max.),


4 wires [hot, hot, neutral, ground]

* 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.

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 2009 Balboa Water Group.

Hardware Setup

Wiring Diagram for Integral Heater Version



04-08-22

TP (MAIN) PANELS
J34 OR J35

BP100G2 PN 59267-03

LOCATION	DEVICE	VOLTS	MAX AMPS	FROM	TO
J9	2/1-SP PUMP 1	240V**	12A MAX	J46	AREA 3
J19	CIRC PUMP	240V**	2A MAX		
J21	OZONE	0.5A			
CIRC AND OZONE LINE 1 CONNECTION					
J33	TV / AV	120V*	3A	J38	AREA 1
J15	SPA LIGHT	10V	1A		
J11 & J13	HEATER	240V	5.5 kW (1.4kW @120V)		

*FOR 240V AV, MOVE J38 WIRE TO AREA 3
**PUMP 1, CIRC AND OZONE ALL MUST BE THE SAME VOLTAGE.

USE EARTH GROUND CONNECTIONS AS INDICATED INSIDE SYSTEM ENCLOSURE

TOTAL OUTPUT AMP DRAW NOT TO EXCEED MAX INPUT RATING OF SPA

INSTEAD OF SETUP #2, THIS SYSTEM IS CONFIGURED IN SETUP #:

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

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

NOTE: SWITCH A7 SHOULD BE OFF IF USING WIFI, SINCE WIFI DOESN'T SUPPORT SIMPLIFIED MENUS.

ON POSITION	S1 SWITCH #	OFF POSITION
NOT ASSIGNED	8	NOT ASSIGNED
SIMPLIFIED MENUS	7	STANDARD MENUS
MEMORY RESET*	6	STORE SETTINGS*
SPECIAL AMPERAGE RULE ON	5	SPECIAL AMPERAGE RULE OFF
5 MIN HTR COOLDOWN (GAS)	4	1 MIN HTR COOLDOWN (ELEC)
ADD 2 HS PUMPS WITH HEAT	3	DON'T ADD 2 HS PUMPS W/HTR
ADD 1 HS PUMP WITH HEAT	2	DON'T ADD 1 HS PUMP W/HTR
TEST MODE ON	1	TEST MODE OFF

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

NOTE: SWITCH A7 MUST BE OFF WHEN USING GRAPHIC PANELS (TP800, TP900, OR SPATOUCH FAMILY).

OPTIONAL 120VAC CONFIG FOR SETUPS 3 & 4 ONLY

J24 JUMPERS MUST BE IN 120V POSITIONS AS SHOWN HERE WHEN HEATER IS CONFIGURED AS 120VAC.

F3 FUSE MUST BE REPLACED BY A 0.16A SLO-BLOW FUSE (SUPPLIED WITH PACK) WHEN HEATER IS CONFIGURED AS 120VAC. SAVE THE ORIGINAL 0.1A FUSE IN CASE THE HOMEOWNER WANTS TO CONVERT BACK TO A 240VAC HEATER.

WITH GFCI CORD. SERVICE IS 12A MAX.

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

J31 JUMPER MUST BE ON 1 PIN WHEN HEATER IS CONFIGURED AS 120VAC.

WIRING SHOWN IS FOR A 120VAC-ONLY SYSTEM

FOR A 240V HEATER, MAKE THE FOLLOWING CHANGES:

- TB1 MUST BE WIRED WHT-1, BLK-2, RED-3
- MOVE J46 AND J38 WIRES FROM AREA 3 TO AREA 1
- MOVE J24 JUMPER TO THE 240V POSITION
- CHANGE F3 FUSE BACK TO 0.1A SLO-BLOW
- PUT J31 JUMPER ON 2 PINS

F3 FUSE MUST BE RESTORED TO THE 0.1A SLO-BLOW FUSE WHEN HEATER IS CONFIGURED AS 240VAC.

J24 JUMPER MUST BE IN 240V POSITION AS SHOWN HERE WHEN HEATER IS CONFIGURED AS 240VAC.

J31 JUMPER MUST BE ON 2 PINS WHEN HEATER IS CONFIGURED AS 240VAC.

PUMP 1, OZONE, AND CIRC MUST ALL BE 120V IN THIS CONFIGURATION.

EXPANDER X-P PN 59232-01

LOCATION	DEVICE	VOLTS	AMPS	FROM	TO	FROM	TO
J6	PUMP 2	240V	12A	J7	AREA 3	J4	J55

USE COPPER CONDUCTORS ONLY. EMPLOYER UNIQUEMENT DES CONDUCTEURS DE CUIVRE. #6 AWG MIN. WIRE= 90°

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.

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

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 2009 Balboa Water Group.

SPA FEATURES



1.) All electronic features of the spa except the Bluetooth are controlled by the control pad.



2) Air adjuster handles let you adjust the amount of pressure at the designated jets by turning the handle left or right.



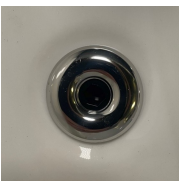
3) Water diversion handles turn the jet pressure up or down at each seating location by turning the handle left or right.



4) Hydromax rotating jets provide intense massage for deep tissue penetration.



5) Hydromax adjustable directional jets provide targeted massage to pinpoint specific areas of need.



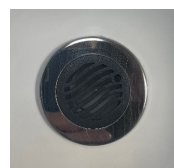
6) Hydromax power-stream jets are positioned throughout the lower back and leg areas for pinpoint massage and muscle trigger points.



7) Hydromax pulsating jets provide a soothing stream of water for a complete foot massage.



8) Air Bubble jets produce thousands of bubbles that drift around your body enhancing the sensation of float-ability while putting you in a state of relaxation.



9) Spa Drain allows you to drain the spa quickly for changing out the water.



10) Water intake grates allow water circulation through the motor and heater and out through the jets.



11) Chroma therapy lighting system provides up to 7 color changing LED mood lights for relaxation and ambiance.



12) Pillow - All models come with one or more comfortable headrests.



13) Our cores are engineered and molded (not drilled PVC) which allows for the even flow of water through the entire cartridge.



14) Bluetooth Connection- Spa models equipped with a Bluetooth speaker system require a 4-digit PIN code to connect to your smartphone. The name of the Bluetooth system on your spa is BT40. The 4-digit PIN code to access the BT40 Bluetooth is displayed on the outside of the Bluetooth module. (see photo).



15) The water level gauge shows the reference water level for your hot tub.

Water Quality and Maintenance

Testing and Adjusting Water Chemistry

- Before using your spa, it is important to test the water so that it maintains the correct chemical balance. This will ensure water quality, clarity and help keep your spa equipment in good condition.
- You will need to test and adjust the chemical balance of your spa water. Although this is not difficult, it needs to be done regularly.

There are 2 types of testing methods

- The reagent test kit is a method which provides a high level of accuracy. It is available in either liquid or tablet form.
- Test strips are a convenient testing method commonly used by spa owners.
- You can purchase the test kits and chemicals locally or from our website
www.luxuryspasusa.com

Balancing the Total Alkalinity

- Total alkalinity (TA) is the measure of the total levels of carbonates, bicarbonates, hydroxides, and other alkaline substances in the water. TA can be considered a pH buffer. It is the measure of the ability of the water to resist changes in pH level.
- **The recommended total alkalinity is 80 - 120 ppm.**
- If the TA is too low, the pH level will fluctuate widely from high to low. Low TA can be corrected by adding alkalinity increaser.

- If the TA is too high, the pH level will tend to be too high and may be difficult to bring down. High TA can be corrected by adding pH decreaser.
- When the TA is balanced, it normally remains stable, although adding water with high or low alkalinity will raise or lower the TA level.

Balancing the Calcium Hardness

- Calcium hardness (CH) is a measure of the total amount of dissolved calcium in the water. Calcium helps control the corrosive nature of the spa's water and is why soft water is not recommended. The low calcium content of soft water is very corrosive to the equipment and can cause staining of the spa shell.
- **The recommended calcium hardness is 150 - 200 ppm.**
- If the CH is too low, add liquid hardness increaser.
- If the CH is too high, dilute the spa water with soft water or, if this is not available, add stain and scale defense.
- When the CH is balanced, it normally remains stable, although adding soft water or very hard water will raise or lower the CH level.

Balancing the pH Level

- The pH level is the measure of the balance between acidity and alkalinity.
- **The recommended pH is 7.2 - 7.6.**
- If the pH is too low, it can cause corrosion of metal fixtures and the heating element.
- If the pH is too high, it can cause scaling by allowing metals or minerals to form deposits and stain spa surfaces.

Too alkaline, causes scaling	8.2	↓ Decrease the pH level.
	8.0	
	7.8	
Ideal balance	7.6	
	7.4	
	7.2	
Too acidic, causes corrosion.	7.0	↑ Increase the pH level.
	6.8	
	6.6	

Ozone

Ozone is a natural purifier. Chemically known as O₃, it is produced from simple oxygen molecules in our atmosphere. Ozone is produced in nature from lightning during electrical storms and from ultraviolet rays from the sun. It forms our protective ozone layer. Your spa's ozone generator is designed to duplicate this natural sanitizer. Ozone breaks down and oxidizes oils, suntan lotions, sweat, urea, etc. from spa water more effectively than commercial oxidizers. Ozone works with chlorine or bromine systems in your spa to destroy bacteria and viruses and will do so more effectively. Ozone only leaves simple oxygen in the water as a by-product.

If your spa is equipped with an ozone generator it will automatically produce ozone, but it cannot be used as the sole means of maintaining safe spa water. You must select and use a spa chemical sanitizer in addition to your ozone generator. The ozone generator is a wearable, non-warranty item and it needs to be replaced approximately every 2 years.

Sanitation

You will need to decide which chemical sanitizer you wish to use regardless of the presence of an ozonator. Spa owners with an ozonator still need to use a chemical sanitizer. Sanitizers kill bacteria and viruses and keep the water clean. A low sanitizer level will allow microbes to grow quickly in the spa water. Use either bromine or chlorine as your sanitizer or a non-chlorine/non-bromine sanitizer. All work well when maintained regularly. Consult your spa dealer for the right decision with regards to your lifestyle and spa usage.

NOTE: This manual will cover general chlorine sanitation only.

If Using Chlorine as a Sanitizer

- Do not use Tri-chlor tablets or liquid chlorine.
- Once a week, check the chlorine level using either a test strip or a reagent kit. Refer to product for the ideal range.
- Monitor chlorine levels of the spa water weekly. Note that chlorine dissipation rate will be faster at higher water temperatures and slower at lower temperatures.
- When you add chlorine, make sure no bathers are in the spa, open all jets and run the spa at high speed with the cover open for at least 30 minutes.

If Using Bromine as a Sanitizer

- Bromine is a very effective sanitizer that produces low chemical odors. Unlike chlorine, it can break down bacteria and other impurities to a safe level with a low burn-out rate.

Shocking the Water

- In addition to using a chemical sanitizer, you may need to shock the water. Shocking the water helps remove burned-out chemicals, bacteria, and other organic material from your spa's water and improves your sanitizer's effectiveness.
- Do not use chlorinating shock, which will damage your spa's jets and pump seals. Only use an oxidizer shock. It is an easy way to maintain chemical plans.
- For best results use the directions below.

Add oxidizer shock

- If sanitizer level temporarily reads low
- After heavy bather loads
- If water has a strong odor

Spa must be running with all of the jets on high for 30 minutes with the cover open. If necessary repeat oxidizer shock in 30 minute intervals.



The manufacturer does hereby claim no responsibility or liability for use of and quantities of the chemicals used. Read and follow all label instructions.

Filtration

Cleaning your filter regularly is the easiest and most effective single thing you can do to keep your water clear. A clogged or dirty filter will cause the heater and pump to work harder than they need to, possibly causing them to fail. The spa's heating system will only function with the proper amount of water flow through the system.

Filter Cleaning

The filter is the part of your spa that removes the debris from the water and needs to be cleaned on a regular basis to maximize your spa's filtering performance and heating efficiency.

In addition to spraying off the filter weekly to remove surface debris, your filter should be deep cleaned periodically to dissolve scale and particles that get lodged deep within the filter fibers and impede the filtration process. Even if the filter looks clean, scale and particles can clog the fibers and prevent water from flowing through the filter resulting in the most common spa problem – no heat, caused by a dirty filter.

We recommend you clean your filter once a month and replace it once every 6 months or as necessary.

- Remove the filter with the spa off.
- Place the dirty filter into a bucket of water deep enough to cover the filter. Add 8 oz of liquid filter cleaner to the bucket of water.
- Soak the filter for a minimum of 24 hours.
- Spray pleats of the filter with a water hose.
- Reinstall the filter.

Tip: Keep a spare filter to use in the spa while the dirty filter is being deep cleaned.

Ozonator Operation

Your Luxury Spas Hot Tub is equipped with an ozonator to help sanitize the water. The ozonator also helps break down body oils and other biodegradable materials to keep the water pure and clean. The ozonator works automatically when the circulation pump is on. We recommend changing the ozonator every 2-3 years. Your ozonator is located inside the hot tub panel corner.

Maintenance Schedule

Each time you refill the spa

Follow the Filling and Starting procedure.

Prior to each use

Test the spa water using either test strips or a reagent test kit. Adjust chemical levels as necessary.

Once a week

Test the spa water using either test strips or a reagent test kit. Adjust chemical levels as necessary.

Once a month

Deep clean your spa's filter.
Apply spa vinyl cleaner/protectant to vinyl spa soft cover and pillows.

Every 3-4 months

Drain and clean your spa with non-abrasive cleaner.
Polish shell with acrylic surface cleaner.
Follow the Filling and Starting procedure.

*Once a year**

Replace filter cartridge(s) if the pleats appear frayed or damaged.

*May require more frequent replacement, depending on use.

Every 2 years

Replace your ozonator.

Draining Your Spa

Your spa should be drained every 3-4 months, and refilled with fresh tap water. The following is the recommended method for draining your spa.

1. Turn off the power at the breaker.
2. Remove filter.
3. Your drain valve is located outside corner of the Service Access Side.
4. Rotate the cap and pull until you feel it give, then pull the plug two notches out.
5. Once the drain plug is external, hook up the female end of the garden hose.
6. Rotate the drain plug with hose connected while applying a pushing pressure to release the water while hose is attached.
7. Let spa drain completely, then remove garden hose.
8. Apply the cap, and rotate the drain while applying a pushing pressure to lock the flow of the drain when ready to re-fill.



Water drained from your spa is safe to dispose of in your yard, septic system or in a drain. Follow all local/municipal codes and regulations for disposal.

Cleaning Your Spa

Acrylic Spa Shell

Each time you drain your spa, before you refill it you should clean your spa shell with a low detergent, non-abrasive cleaner specifically formulated to clean the spa without damaging its acrylic finish.

1. Spray cleaner directly to the spa's finish.
2. Wipe clean with a soft cloth.
3. Repeat on heavily calcified areas.
4. Wipe spa thoroughly with a wet sponge, rinsing often in a bucket of clean water.
5. Allow the spa to dry completely.

IMPORTANT: Do not use any of these products on spas full of water. Only apply to clean, cool, dry surfaces. In-correct product usage may cause water issues.

Pillow Care and Removal

You can remove the pillows for cleaning and maintenance quickly and easily. This method works for all types of pillows.

1. Your spa pillows should be removed routinely for cleaning and maintenance to ensure they stay in good condition and do not deteriorate. If you don't plan on using your hot tub for a while we recommend removing and storing the pillows.
2. You can remove any Luxury Spas pillow by gently pulling the edges away from the hot tub. The pillow will release from the mounting clip on each side. The pillow can be re-installed by pressing the pillow back over top or side of the clips based on the pillow type.
3. Your spa pillows can be cleaned with any non-abrasive spa pillow cleanser and conditioner.



Vacation Care

You can leave your spa unattended for up to two weeks if you follow these instructions.

- ALWAYS lock your cover using the cover locks if you plan to be away from home and the spa is filled with water.
- Shock the water (add either chlorine or bromine sanitizer).
- When you return, check water chemistry and adjust accordingly.
- **If you will not be using your spa for longer than 14 days and a spa maintenance service is not available we strongly recommend you drain and winterize your spa.**

Chemical Safety

Read and follow all printed instructions listed on bottles and packages. Failure to follow chemical directions may result in serious injury, sickness, or even death.

Add chemicals to the center of the spa with the pump running. Make sure the water is heated. Never add chemicals to cold water, as this will effect chemical action. Also, never add chemicals directly into the skimmer.



WARNING!

Never add chemicals to your spa while bathers are in the spa!



Do not exceed chemical dosages as recommended on chemical bottles and packages.



Never change chemical brands or types without completely draining, flushing and thoroughly cleaning the spa and cover first.



WARNING!

Never mix chemicals together.



Do not allow chemicals to come in contact with skin, eyes or clothing. Remove and wash clothing that may have been exposed to chemical contact prior to wearing them again.



Inhaling or ingesting chemicals will cause serious injury, sickness, or even death.



Chemicals must be stored completely out of the reach of children in an area that is well vented, cool, and dry. Failure to provide a proper area for chemical storage may result in serious injury, sickness, fire explosion and even death. Do not store your chemicals inside the equipment area of your spa.

TP500S Keypad Functions

User Guide for Standard Menu

System Model: All BP series systems
 Panel Model: TP500 and TP500S Series
 Panel Software Version: All versions



TP500S



TP500

Display Icons



- | | | |
|-----------------------------|-------------------|--------------------------------------|
| A - Heat | F - Light | K - Auxiliary (Jets 3 or MICROSilk®) |
| B - Ready Mode | G - Cleanup Cycle | L - Temperature Range (High / Low) |
| C - Rest Mode | H - Jets 1 | M - Set (Programming) |
| D - bba™ 2 On | I - Jets 2 | N - Filter Cycle (1 or 2 or Both) |
| E - WiFi (Cloud Connection) | J - Blower | O - AM or PM (Time) |

MicroSilk® is a registered trademark of Jason International.

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. All material copyright of Balboa Water Group.



Main Menus

Navigation

Navigating the entire menu structure is done with 2 or 3 buttons on the control panel.



Some panels have separate **WARM** (Up) and **COOL** (Down) buttons, while others have a single **Temperature** button. In the navigation diagrams Temperature buttons are indicated by a single button icon. Panels that have two Temperature buttons (Warm and Cool) can use both of them to simplify navigation and programming where a single Temperature icon is shown.

The **MENU/SELECT** Button is used to choose the various menus and navigate each section.

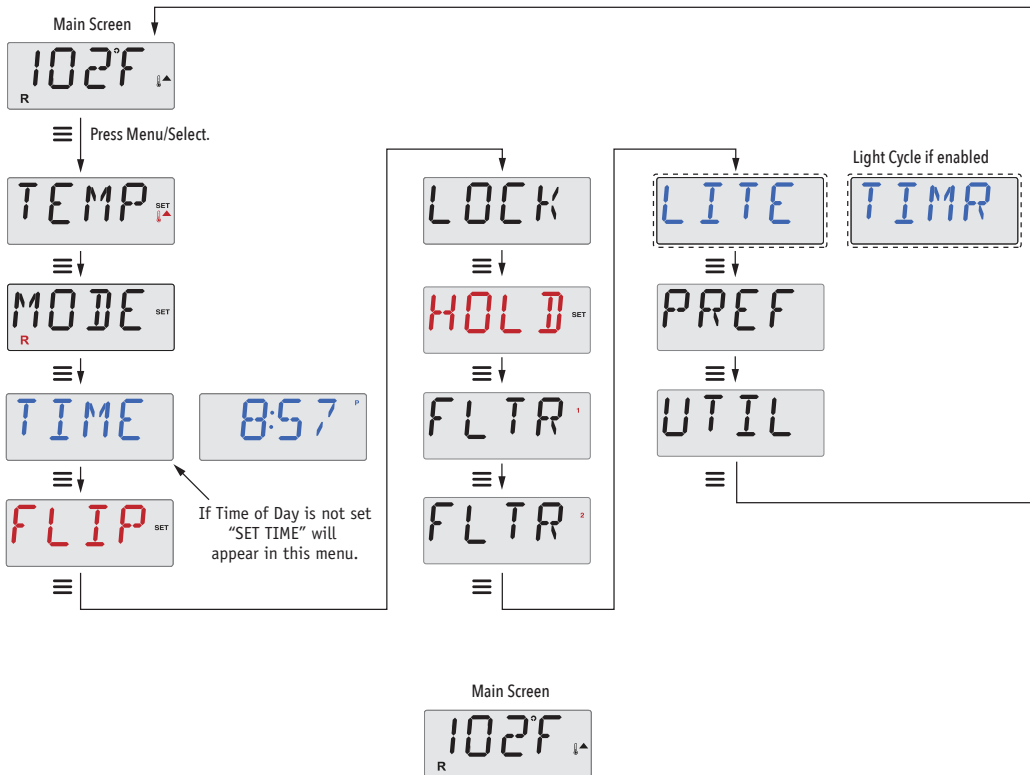
Typical use of the Temperature button(s) allows changing the Set Temperature while the numbers are flashing in the LCD. The menus can be exited with certain button presses. Simply waiting for a few seconds will return the panel operation to normal.

Power-up Screens

Each time the System powers up, a series of numbers is displayed. After the startup sequence of numbers, the system will enter Priming Mode (See Page 3).

Key

- Indicates Flashing or Changing Segment
- Indicates Alternating or Progressive Message - every 1/2 second
- ↕ A temperature button, used for "Action"
- ≡ Menu/Select button
- Waiting time that keeps the last change to a menu item.
- ***** Waiting time (depends on menu item) that reverts to original setting and ignores any change to that menu item.



Indicates a Menu Item that Depends on a Manufacturer Configuration and may or may not appear.

Waiting a few seconds in the Main Menu will allow the display to revert to the Main Screen. Most changes are not saved unless Menu/Select ≡ is pressed. Refer to key above.

Fill it up!

Preparation and Filling

Fill the spa to its correct operating level. Be sure to open all valves and jets in the plumbing system before filling to allow as much air as possible to escape from the plumbing and the control system during the filling process.

After turning the power on at the main power panel, the top-side panel display will go through specific sequences. These sequences are normal and display a variety of information regarding the configuration of the hot tub control.

Priming Mode - M019*

This mode will last for 4-5 minutes or you can manually exit the priming mode after the pump(s) have primed.



Regardless of whether the priming mode ends automatically or you manually exit the priming mode, the system will automatically start normal heating and filtering at the end of the priming mode. During the priming mode, the heater is disabled to allow the priming process to be completed without the possibility of energizing the heater under low-flow or no-flow conditions. Nothing comes on automatically, but the pump(s) can be energized by pushing the “Jets” or “Aux” buttons.

If the spa has a Circ Pump, it can be activated by pressing the “Light” button during Priming Mode.

Priming the Pumps

As soon as the above display appears on the panel, push the “Jets” button once to start Pump 1 in low-speed and then again to switch to high-speed. Also, push the “Jets 2” or “Aux” button, if you have a 2nd pump, to turn it on. The pumps will now be running in high-speed to facilitate priming. If the pumps have not primed after 2 minutes, and water is not flowing from the jets in the spa, do not allow the pumps to continue to run. Turn off the pumps and repeat the process. Note: Turning the power off and back on again will initiate a new pump priming session. Sometimes momentarily turning the pump off and on will help it to prime. Do not do this more than 5 times. If the pump(s) will not prime, shut off the power to the spa and call for service.

Important: A pump should not be allowed to run without priming for more than 2 minutes. Under NO circumstances should a pump be allowed to run without priming beyond the end of the 4-5 minute priming mode. Doing so may cause damage to the pump and cause the system to energize the heater and go into an overheat condition.

Exiting Priming Mode

You can manually exit Priming Mode by pressing the “Warm” or “Cool” button. Note that if you do not manually exit the priming mode as described above, the priming mode will be automatically terminated after 4-5 minutes. Be sure that the pump(s) have been primed by this time.

Once the system has exited Priming Mode, the top-side panel will momentarily display the set temperature but the display will not show the water temperature yet, as shown below.



This is because the system requires approximately 1 minute of water flowing through the heater to determine the water temperature and display it.

*M019 is a Message Code. See Page 18.

Spa Behavior

Pumps

Press the “Jets” button once to turn pump 1 on or off, and to shift between low and high speeds if equipped. If left running, the pump will turn off after a time-out period.

On non-circ systems, the low-speed of pump 1 runs when the blower or any other pump is on. If the spa is in Ready Mode (See page 6), Pump 1 low may also activate once in a while for at least 1 minute to detect the spa temperature (polling) and then to heat to the set temperature if needed. When the low-speed turns on automatically, it cannot be deactivated from the panel, however the high speed may be started.

Circulation Pump Modes

If the system is equipped with a circ pump, it will be configured to work in one of three different ways:

- 1, The circ pump operates continuously (24 hours) with the exception of turning off for 30 minutes at a time when the water temperature reaches 3°F (1.5°C) above the set temperature (most likely to happen in very hot climates).
- 2, The circ pump stays on continuously, regardless of water temperature.
- 3, A programmable circ pump will come on when the system is checking temperature (polling), during filter cycles, during freeze conditions, or when another pump or blower is on.

The specific Circulation Mode that is used has been determined by the Manufacturer and cannot be changed in the field.

Filtration and Ozone

On non-circ systems, Pump 1 low and the ozone generator will run during filtration. On circ systems, the ozone will run with the circ pump.

The system is factory-programmed with one filter cycle that will run in the evening (assuming the time-of-day is properly set) when energy rates are often lower. The filter time and duration are programmable. (See page 10)

A second filter cycle can be enabled as needed.

At the start of each filter cycle, all water devices (other than the primary pump) will run briefly to purge the plumbing to maintain good water quality. The term “water devices” includes the Blower.

Freeze Protection

If the temperature sensors within the heater detect a low enough temperature, then the pump(s) and the blower automatically activate to provide freeze protection. The pump(s) and blower will run either continuously or periodically depending on conditions.

In colder climates, an optional freeze sensor may be added to protect against freeze conditions that may not be sensed by the standard sensors. Auxiliary freeze sensor protection acts similarly except with the temperature thresholds determined by the switch. See your dealer for details.

Clean-up Cycle (optional)

When a pump or blower is turned on by a button press, a clean-up cycle begins 30 minutes after the pump or blower is turned off or times out. The pump and the ozone generator will run for 30 minutes or more, depending on the system. On some systems, you can change this setting. (See the Preferences section on page 12)

Temperature and Temp Range

Adjusting the Set Temperature

When using a panel with Up and Down buttons (Temperature buttons), pressing Up or Down will cause the temperature to flash. Pressing a temperature button again will adjust the set temperature in the direction indicated on the button. When the LCD stops flashing, the spa will heat to the new set temperature when required.

If the panel has a single temperature button, pressing the button will cause the temperature to flash. Pressing the button again will cause the temperature to change in one direction (e.g. UP). After allowing the display to stop flashing, pressing the Temperature Button will cause the temperature to flash and the next press will change the temperature in the opposite direction (e.g. DOWN).

Press-and-Hold

If a Temperature button is pressed and held when the temperature is flashing, the temperature will continue to change until the button is released. If only one temperature button is available and the limit of the Temperature Range is reached when the button is being held, the progression will reverse direction.

Dual Temperature Ranges

This system incorporates two temperature range settings with independent set temperatures. The High Range designated in the display by a thermometer and an “up” arrow, and the Low Range designated in the display by a thermometer and “down” arrow.

These ranges can be used for various reasons, with a common use being a “ready to use” setting vs. a “vacation” setting. The Ranges are chosen using the menu structure below. Each range maintains its own set temperature as programmed by the user. This way, when a range is chosen, the spa will heat to the set temperature associated with that range.

For example:

High Range might be set between 80°F and 104°F.

Low Range might be set between 50°F and 99°F.

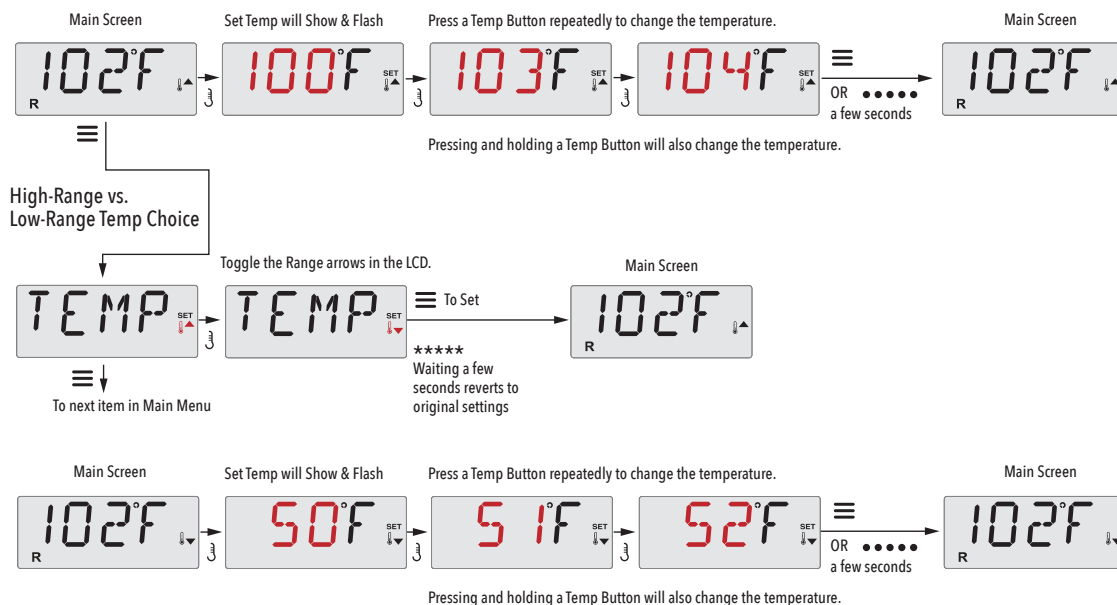
More specific Temp Ranges may be determined by the Manufacturer.

Freeze Protection is active in either range.

See Ready and Rest on Page 6 for additional heating control information.

Key

- Indicates Flashing or Changing Segment
- Indicates Alternating or Progressive Message - every 1/2 second
- ⏏ A temperature button, used for “Action”
- ☰ Menu/Select button
- Waiting time that keeps the last change to a menu item.
- * * * * * Waiting time (depends on menu item) that reverts to original setting and ignores any change to that menu item.



Mode – Ready and Rest

In order for the spa to heat, a pump needs to circulate water through the heater. The pump that performs this function is known as the “primary pump.”

The primary pump can be either a 2-Speed Pump 1 or a circulation pump.

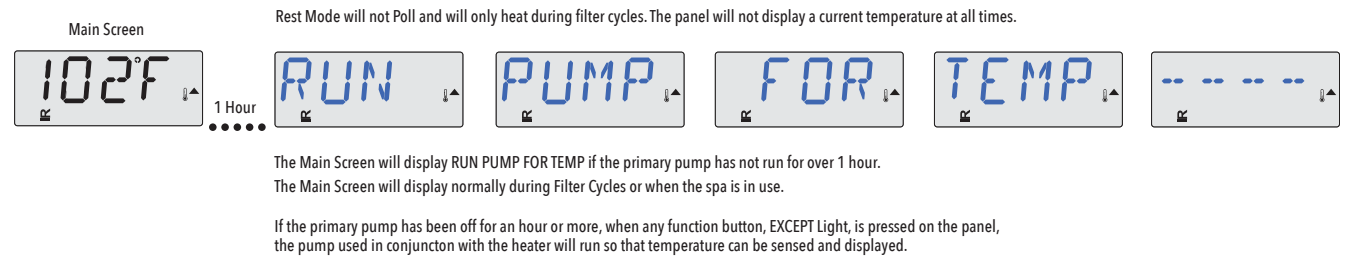
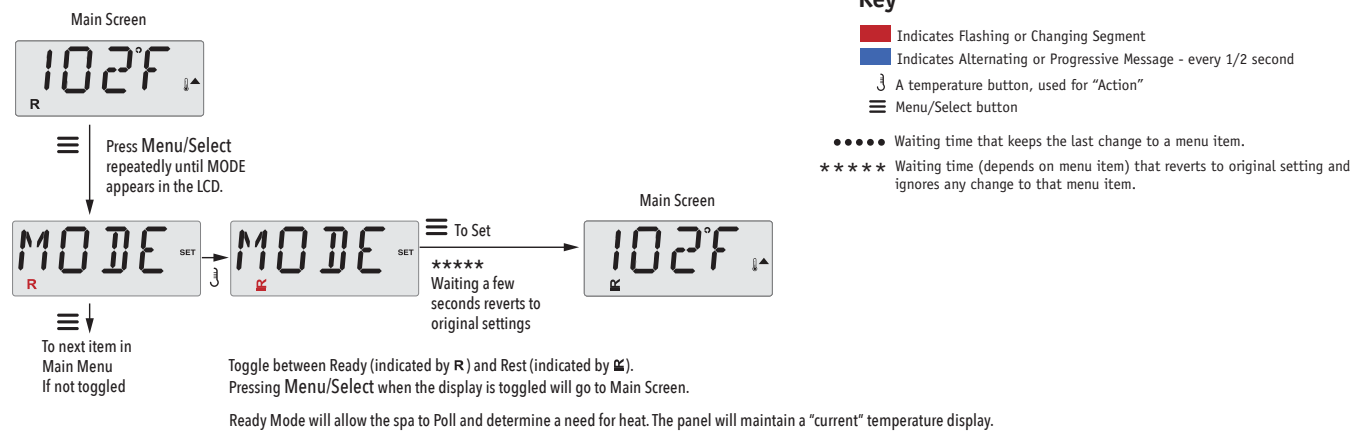
If the primary pump is a 2-Speed Pump 1, Ready Mode (indicated by **R**) will circulate water periodically, using Pump 1 Low, in order to maintain a constant water temperature, heat as needed, and refresh the temperature display. This is known as “polling.”

Rest Mode (indicated by **☒**) will only allow heating during programmed filter cycles. Since polling does not occur, the temperature display may not show a current temperature until the primary pump has been running for a minute or two.

Circulation Mode (See Page 4, under Pumps, for other circulation modes)

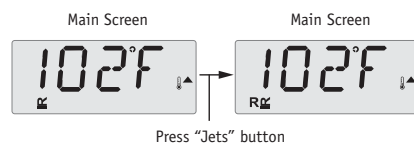
If the spa is configured for 24HR circulation, the primary pump generally runs continuously. Since the primary pump is always running, the spa will maintain set temperature and heat as needed in Ready Mode, without polling.

In Rest Mode, the spa will only heat to set temperature during programmed filter times, even though the water is being filtered constantly when in Circulation Mode.



Ready-in-Rest Mode

R☒ appears in the display if the spa is in Rest Mode and “Jets” is pressed. It is assumed that the spa is being used and will heat to set temperature. The primary pump will run until set temperature is reached, or 1 hour has passed. After 1 hour, the System will revert to Rest Mode. This mode can also be reset by entering the Mode Menu and changing the Mode.



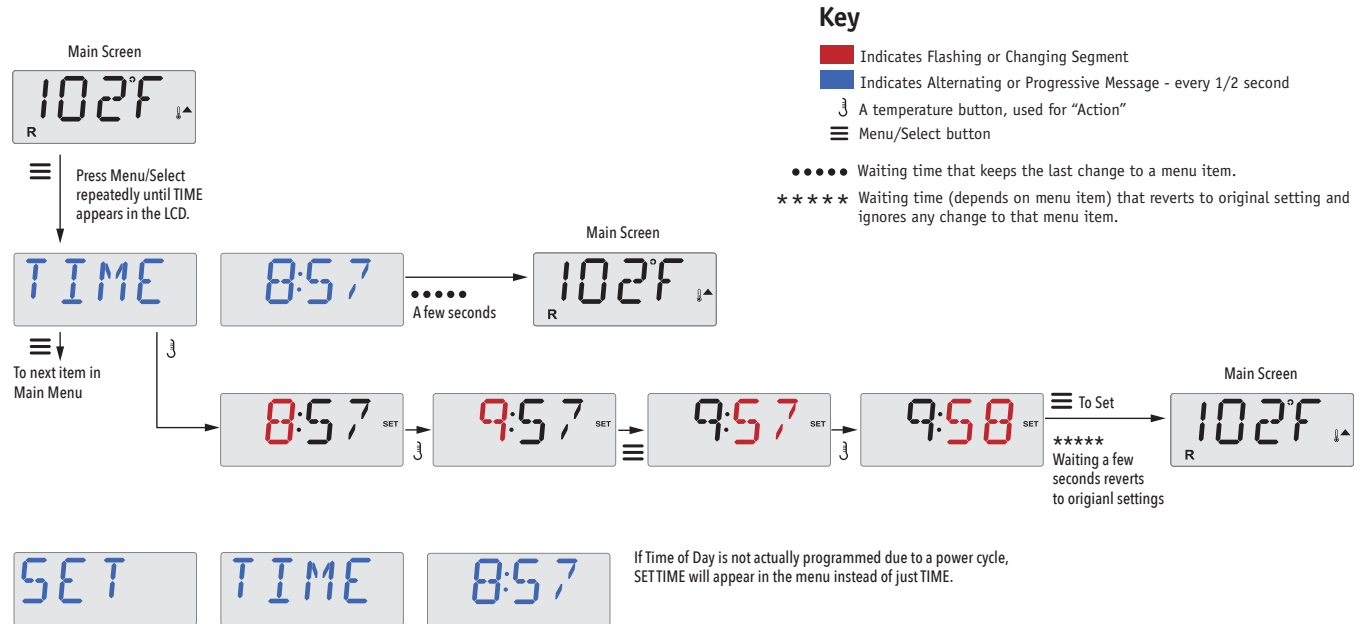
Show and Set Time-of-Day

Be sure to set the Time-of-Day

Setting the time-of-day can be important for determining filtration times and other background features.

When in the TIME menu, SET TIME will flash on the display if no time-of-day is set in the memory.

24-hour time display can be set under the PREF menu. (See Page 12)



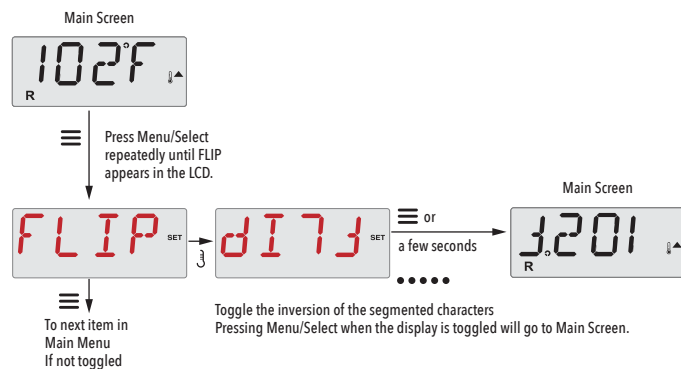
Note:

This note refers to systems that do not keep track of Time-of-Day when powered down.

If power is interrupted to such a system, Time-of-Day is not stored. The system will still operate and all other user settings will be stored. If filter cycles are required to run at a particular time of day, resetting the clock will return the filter times to the actual programmed periods.

When such a system starts up, it defaults to 12:00 Noon, so another way to get filter times back to normal is to start up the spa at noon on any given day. SET TIME will still flash in the TIME Menu until the time is actually set, but since the spa started at noon, the filter cycles will run as programmed.

Flip (Invert Display)



Restricting Operation

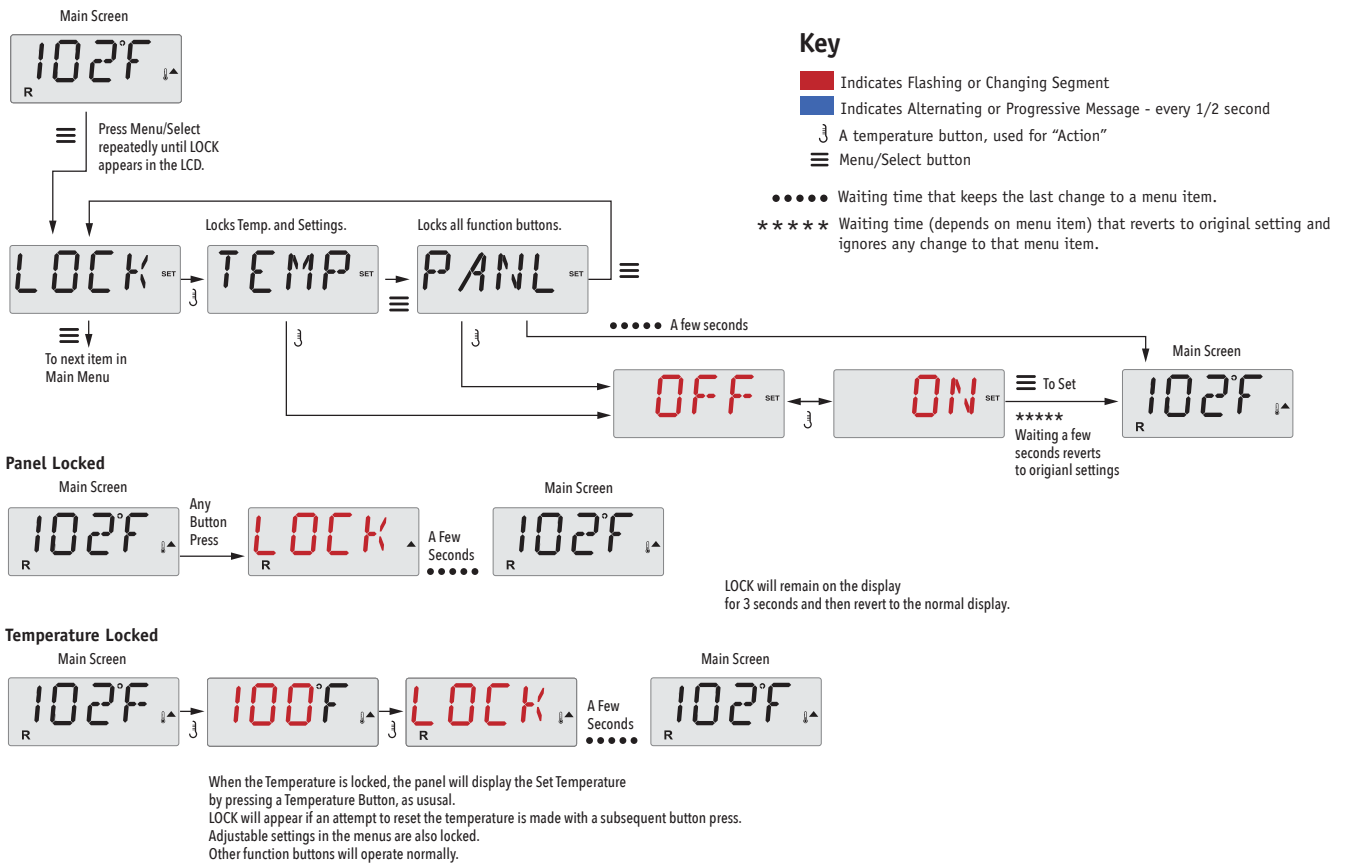
The control can be restricted to prevent unwanted use or temperature adjustments.

Locking the panel prevents the controller from being used, but all automatic functions are still active.

Locking the Temperature allows Jets and other features to be used, but the Set Temperature and other programmed settings cannot be adjusted.

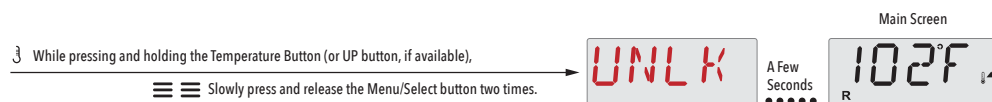
Temperature Lock allows access to a reduced selection of menu items.

These include Set Temperature, FLIP, LOCK, UTIL, INFO and FALT LOG.



Unlocking

This Unlock sequence may be used from any screen that may be displayed on a restricted panel.



NOTE: If the panel has both an UP and a Down button, the ONLY button that will work in the Unlock Sequence is the UP button.

The temperature will not Unlock if the Unlock sequence is done while the panel is displaying "LOCK".

Hold (Standby)

Hold Mode –M037*

Hold Mode is used to disable the pumps during service functions like cleaning or replacing the filter. Hold Mode will last for 1 hour unless the mode is exited manually.



Drain Mode

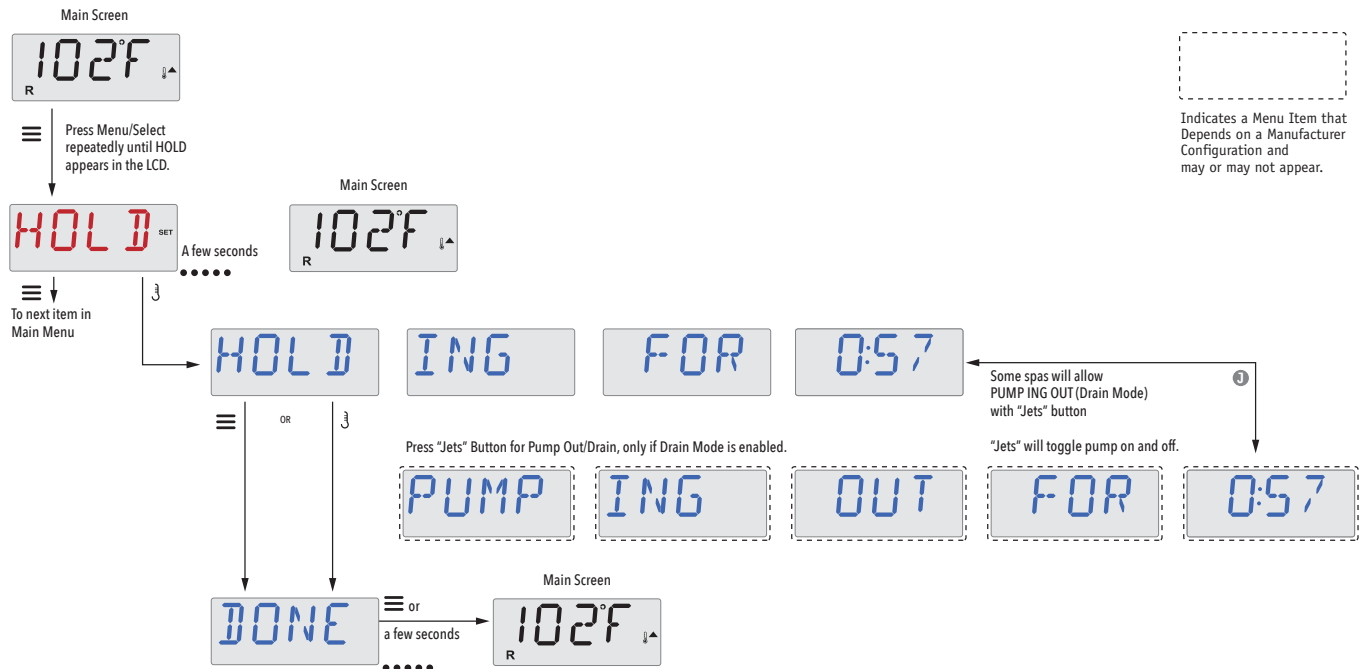
Some spas have a special feature that allows a pump to be employed when draining the water.

When available, this feature is a component of Hold Mode.

Drain Mode will time out with Hold Mode.

Key

- Indicates Flashing or Changing Segment
- Indicates Alternating or Progressive Message - every 1/2 second
-  A temperature button, used for "Action"
-  Menu/Select button
- Waiting time that keeps the last change to a menu item.
- ***** Waiting time (depends on menu item) that reverts to original setting and ignores any change to that menu item.



M037 is a Message Code. See Page 18.



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. All material copyright of Balboa Water Group.



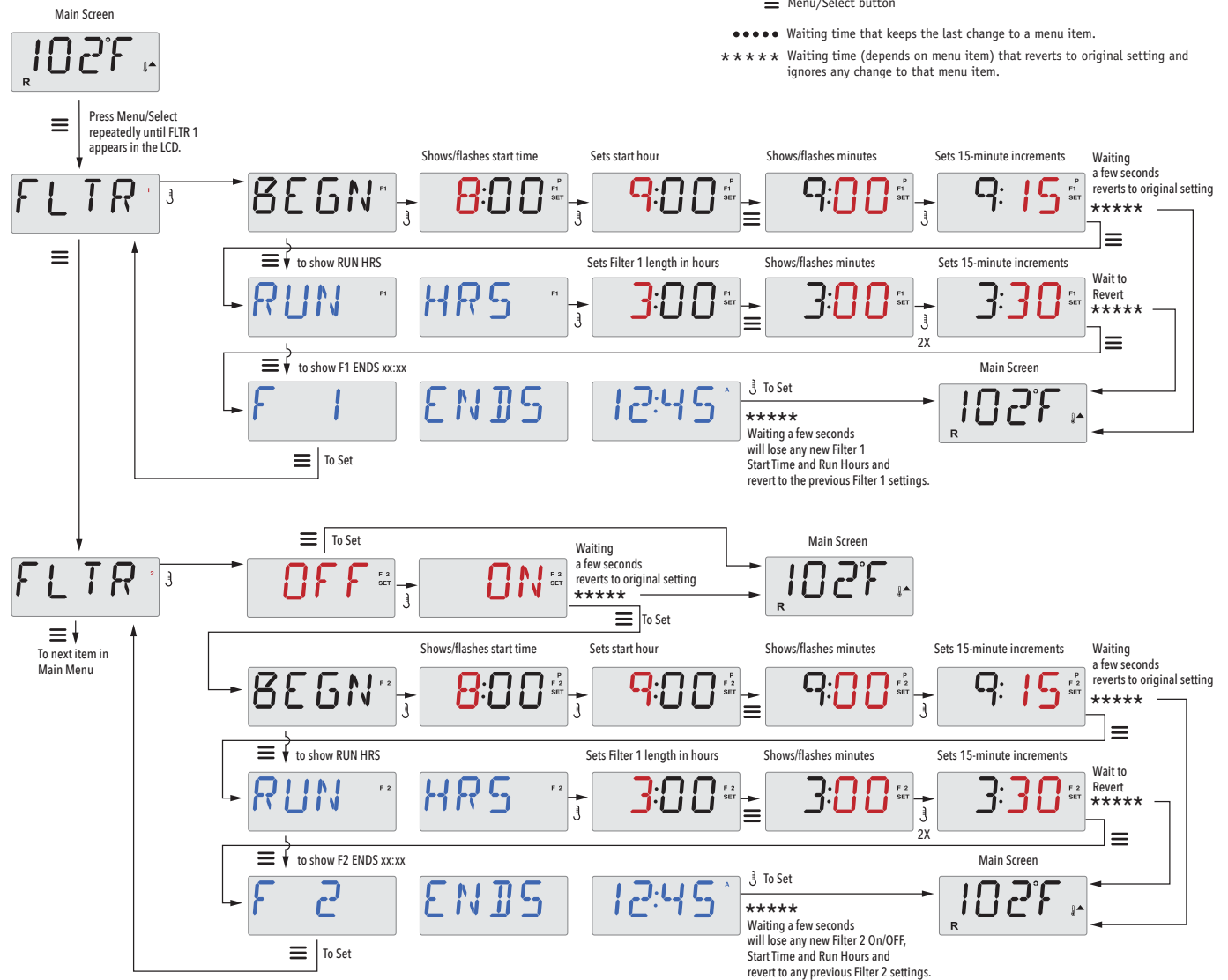
Adjusting Filtration

Main Filtration

Filter cycles are set using a start time and a duration. Start time is indicated by an "A" or "P" in the bottom right corner of the display. Duration has no "A" or "P" indication. Each setting can be adjusted in 15-minute increments. The panel calculates the end time and displays it automatically.

Key

- Indicates Flashing or Changing Segment
- Indicates Alternating or Progressive Message - every 1/2 second
- ⏏ A temperature button, used for "Action"
- ☰ Menu/Select button
- Waiting time that keeps the last change to a menu item.
- ***** Waiting time (depends on menu item) that reverts to original setting and ignores any change to that menu item.



Filter Cycle 2 - Optional Filtration

Filter Cycle 2 is OFF by default.

It is possible to overlap Filter Cycle 1 and Filter Cycle 2, which will shorten overall filtration by the overlap amount.

Purge Cycles

In order to maintain sanitary conditions, secondary Pumps and/or a Blower will purge water from their respective plumbing by running briefly at the beginning of each filter cycle.

If Filter Cycle 1 is set for 24 hours, enabling Filter Cycle 2 will initiate a purge when Filter Cycle 2 is programmed to begin.

Light Timer Programming

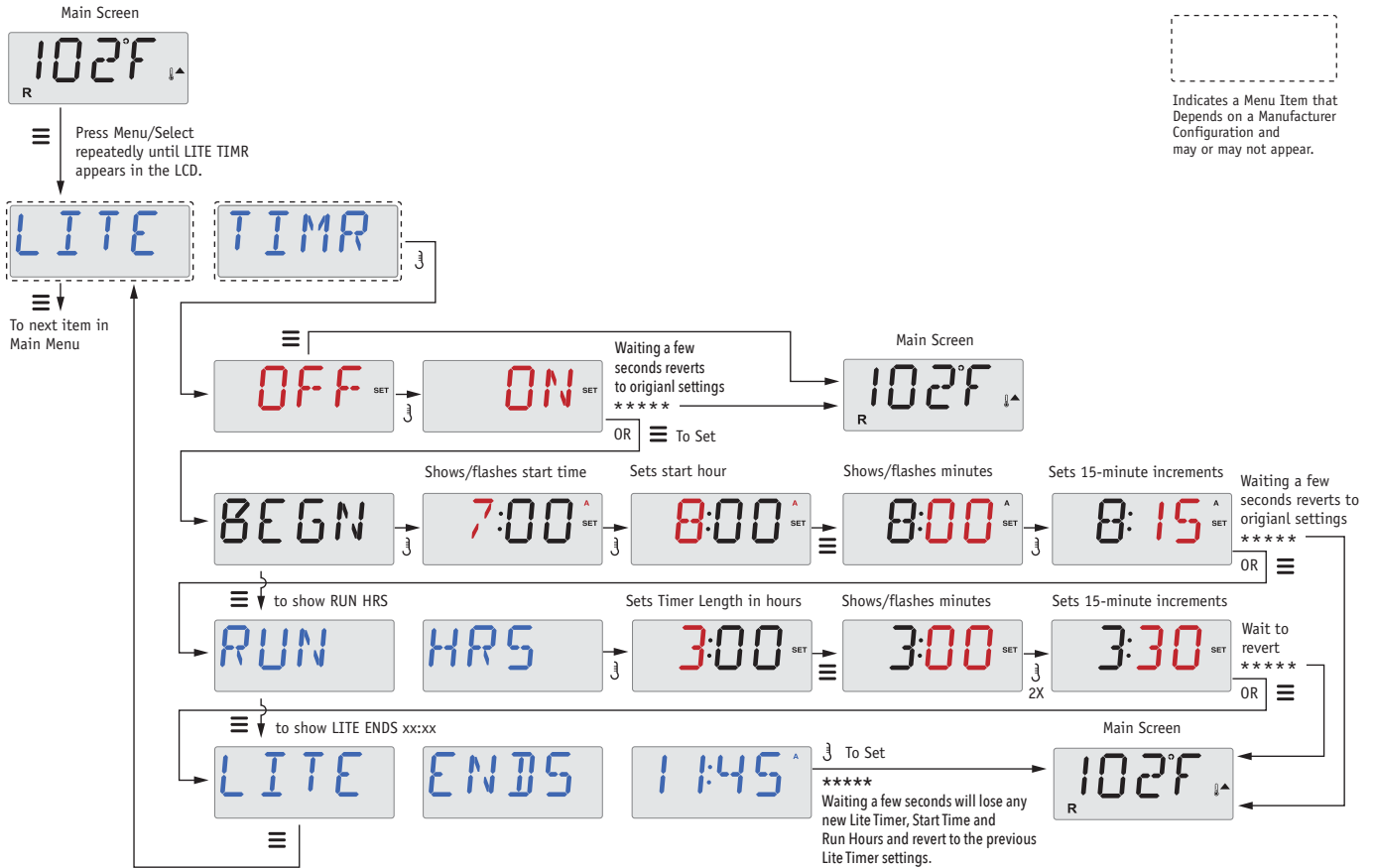
Light Timer Option

If LITE TIMR does not appear in the Main Menu, the Light Timer feature is not enabled by the manufacturer.

When available, the Light Timer is OFF by default.

Key

- Indicates Flashing or Changing Segment
- Indicates Alternating or Progressive Message - every 1/2 second
- ⏏ A temperature button, used for "Action"
- ☰ Menu/Select button
- Waiting time that keeps the last change to a menu item.
- ***** Waiting time (depends on menu item) that reverts to original setting and ignores any change to that menu item.



Preferences

F / C (Temp Display)

Change the temperature between Fahrenheit and Celsius.

12 / 24 (Time Display)

Change the clock between 12 hr and 24 hr display.

RE-MIN-DERS (Reminders)

Turn the display of reminder messages (like "Clean Filter") On or Off.

Note: Reminders continue to run in the background even when not displayed. So turning the display of Reminders On or Off does not reset any Reminder counts.

CLN-UP (Cleanup)

Cleanup Cycle Duration is not always enabled, so it may not appear. When it is available, set the length of time Pump 1 will run after each use. 0-4 hours are available.

M8

(This message may not appear on all systems.) On systems that have M8, it is enabled by default. It can be disabled (or re-enabled) here. M8 reduces polling intervals when the water temperature in the spa is steady.

DOL-PHIN-AD-DRES (Dolphin II and Dolphin III) Applies to RF Dolphin only. (This message may not appear depending on the configuration)

When set to 0, no addressing is used. Use this setting for a Dolphin Remote which is factory set for no address by default. When set between 1 and 7, the number is the address. (See the Dolphin manual for details.)

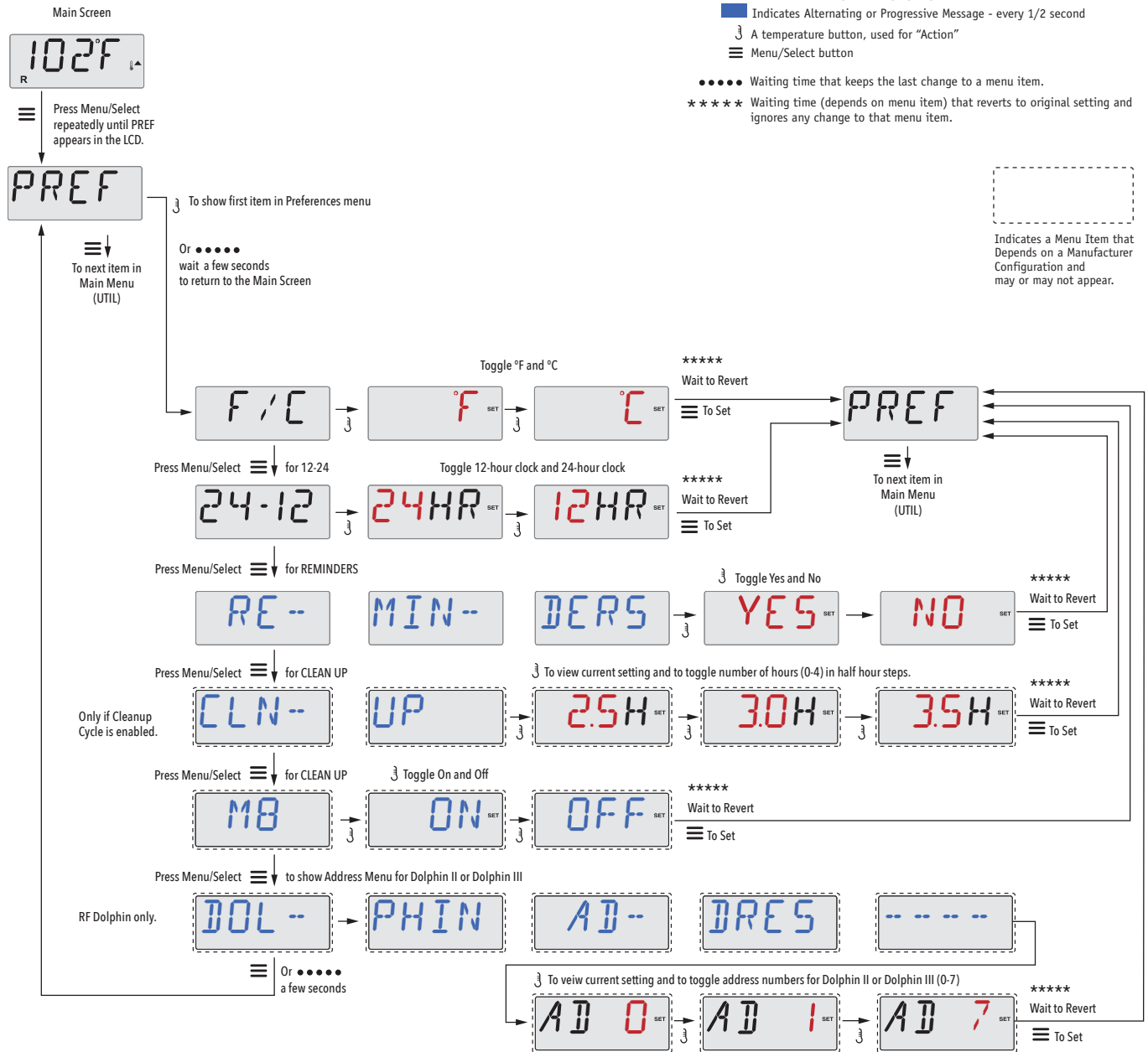
Preferences

Key

- Indicates Flashing or Changing Segment
- Indicates Alternating or Progressive Message - every 1/2 second
- ↵ A temperature button, used for "Action"
- ≡ Menu/Select button

••••• Waiting time that keeps the last change to a menu item.

***** Waiting time (depends on menu item) that reverts to original setting and ignores any change to that menu item.



General Messages



Priming Mode – M019

Each time the spa is powered up, it will enter Priming Mode. The purpose of Priming Mode is to allow the user to run each pump and manually verify that the pumps are primed (air is purged) and water is flowing. This typically requires observing the output of each pump separately, and is generally not possible in normal operation. Priming Mode lasts 4 minutes, but you can exit it earlier by pressing any Temp button. The heater is not allowed to run during Priming Mode.

NOTE: If your spa has a Circ Pump, it will turn on with “Light” in Priming Mode. The Circ Pump will run by itself when Priming Mode is exited.



Water Temperature is Unknown

After the pump has been running for 1 minute, the temperature will be displayed.



Too Cold - Freeze Protection

A potential freeze condition has been detected, or the Aux Freeze Switch has closed, and all pumps and blower are activated, either one at a time, or all at once, depending on how your system was built. All pumps and blower are ON for at least 4 minutes after the potential freeze condition has ended, or when the aux freeze switch opens.

In some cases, pumps may turn on and off and the heater may operate during Freeze Protection.

This is an operational message, not an error indication.



Water is too Hot (OHS) – M029

One of the water temp sensors has detected spa water temp 110°F (43.3°C) and spa functions are disabled. System will auto reset when the spa water temp is below 108°F (42.2°C). Check for extended pump operation or high ambient temp.



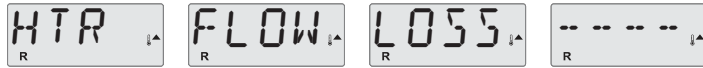
J29 Warning – M044

J29 is typically used as a Heater Disable input. As such, it should not typically be shorted at power-up. This message appears if J29 is shorted at power-up.

M0XX numbers are Message Codes. See Page 18.

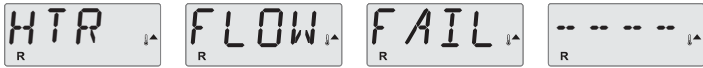
* This message can be reset from the topside panel with any button press.

Heater-Related Messages



Heater Flow is Reduced (HFL) – M016

There may not be enough water flow through the heater to carry the heat away from the heating element. Heater start up will begin again after about 1 min. See “Flow Related Checks” below.



Heater Flow is Reduced (LF)* – M017

There is not enough water flow through the heater to carry the heat away from the heating element and the heater has been disabled. See “Flow Related Checks” below. After the problem has been resolved, you must press any button to reset and begin heater start up.



Heater may be Dry (dr)* – M028

Possible dry heater, or not enough water in the heater to start it. The spa is shut down for 15 min. Press any button to reset the heater start-up. See “Flow Related Checks” below.



Heater is Dry* – M027

There is not enough water in the heater to start it. The spa is shut down. After the problem has been resolved, you must press any button to reset and restart heater start up. See “Flow Related Checks” below.



Heater is too Hot (OHH)* – M030

One of the water temp sensors has detected 118°F (47.8°C) in the heater and the spa is shut down. You must press any button to reset when water is below 108°F (42.2°C). See “Flow Related Checks” below.



A Reset Message may Appear with other Messages.

Some errors may require power to be removed and restored.

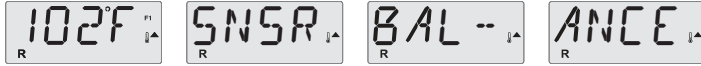
Flow-Related Checks

Check for low water level, suction flow restrictions, closed valves, trapped air, too many closed jets and pump prime.

On some systems even when spa is shut down, some equipment may occasionally turn on to continue monitoring temperature or if freeze protection is needed.

* This message can be reset from the topside panel with any button press.

Sensor-Related Messages



Sensor Balance is Poor – M015

The temperature sensors MAY be out of sync by or 3°F. Call for Service.



Sensor Balance is Poor* – M026

The temperature sensors ARE out of sync. The Sensor Balance is Poor fault has been established for at least 1 hour. Call for Service.



Sensor Failure – Sensor A: M031, Sensor B: M032

A temperature sensor or sensor circuit has failed. Call for Service.

Miscellaneous Messages



No Communications

The control panel is not receiving communication from the System. Call for Service.



Pre-Production Software

The Control System is operating with test software. Call for Service.

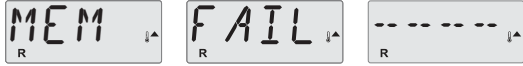


°F or °C is replaced by °T

The Control System is in Test Mode. Call for Service.

* This message can be reset from the topside panel with any button press.

System-Related Messages



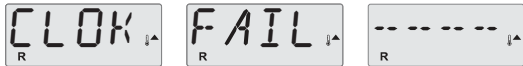
Memory Failure - Checksum Error* – M022

At Power-Up, the system has failed the Program Checksum Test. This indicates a problem with the firmware (operation program) and requires a service call.



Memory Warning - Persistent Memory Reset* – M021

Appears after any system setup change. Contact your dealer or service organization if this message appears on more than one power-up, or if it appears after the system has been running normally for a period of time.



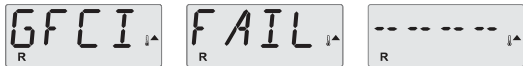
Memory Failure - Clock Error* – M020 - Not Applicable on the BP1500

Contact your dealer or service organization.



Configuration Error – Spa will not Start Up

Contact your dealer or service organization.



GFCI Failure - System Could Not Test/Trip the GFCI – M036

NORTH AMERICA ONLY. May indicate an unsafe installation. Contact your dealer or service organization.

* This message can be reset from the topside panel with any button press.

System-Related Messages



A Pump Appears to be Stuck ON – M034

Water may be overheated. POWER DOWN THE SPA. DO NOT ENTER THE WATER. Contact your dealer or service organization.



A Pump Appears to have been Stuck ON when spa was last powered - M035

POWER DOWN THE SPA. DO NOT ENTER THE WATER.
Contact your dealer or service organization.



The water level is too low

Some systems have a water level detect, and this message appears if it detects that the water level is too low.

* This message can be reset from the topside panel with any button press.

Reminder Messages

General maintenance helps.

The display of Reminder Messages can be suppressed by using the PREF Menu. See Page 12.

Reminder Messages can be chosen individually by the Manufacturer. They may be disabled entirely, or there may be a limited number of reminders on a specific model.

The frequency of each reminder (e.g. 7 days) can be specified by the Manufacturer.

Press a Temperature button to reset a displayed reminder message.



Alternates with temperature or normal display.

Appears on a regular schedule, e.g. every 7 days.

Check pH with a test kit and adjust pH with the appropriate chemicals.



Alternates with temperature or normal display.

Appears on a regular schedule, e.g. every 7 days.

Check sanitizer level and other water chemistry with a test kit and adjust with the appropriate chemicals.



Alternates with temperature or normal display.

Appears on a regular schedule, e.g. every 30 days.

Clean the filter media as instructed by the manufacturer. See HOLD on page 9.



Alternates with temperature or normal display.

Appears on a regular schedule, e.g. every 30 days.

The Ground Fault Circuit Interrupter (GFCI) or Residual Current Device (RCD) is an important safety device and must be tested on a regular basis to verify its reliability.

Every user should be trained to safely test the GFCI or RCD associated with the hot tub installation.

A GFCI or RCD will have a TEST and RESET button on it that allows a user to verify proper function.

Warning:

If freezing conditions exist, a GFCI or RCD should be reset immediately or spa damage could result. The end user should always be trained to test and reset the GFCI or RCD on a regular basis.

Reminder Messages Continued



Alternates with temperature or normal display.

Appears on a regular schedule, e.g. every 90 days.

Change the water in the spa on regular basis to maintain proper chemical balance and sanitary conditions.



Alternates with temperature or normal display.

Appears on a regular schedule, e.g. every 180 days.

Vinyl covers should be cleaned and conditioned for maximum life.



Alternates with temperature or normal display.

Appears on a regular schedule, e.g. every 180 days.

Wood skirting and furniture should be cleaned and conditioned per the manufacturers instructions for maximum life.



Alternates with temperature or normal display.

Appears on a regular schedule, e.g. every 365 days.

Filters should be replaced occasionally to maintain proper spa function and sanitary conditions.



Alternates with temperature or normal display.

As needed.

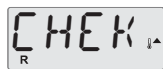
Install new mineral cartridge.



Alternates with temperature or normal display.

Appears on a regular schedule, e.g. every 365 days.

Check your ozone and/or UV generator per your spa manufacturer's instructions.



Alternates with temperature or normal display.

Appears on a regular schedule, e.g. every 365 days.

Have a service technician do a check-up on your spa per your spa manufacturer's instructions.

Warning! Qualified Technician Required for Service and Installation

Basic Installation and Configuration Guidelines

Use minimum 6AWG copper conductors only.

Torque field connections between 21 and 23 in lbs.

Readily accessible disconnecting means to be provided at time of installation.

Permanently connected.

Connect only to a circuit protected by a Class A Ground Fault Circuit Interrupter (GFCI) or Residual Current Device (RCD) mounted at least 5' (1.52M) from the inside walls of the spa/hot tub and in line of sight from the equipment compartment.

CSA enclosure: Type 2

Refer to Wiring Diagram inside the cover of the control enclosure.

Refer to Installation and Safety Instructions provided by the spa manufacturer.

Warning: People with infectious diseases should not use a spa or hot tub.

Warning: To avoid injury, exercise care when entering or exiting the spa or hot tub.

Warning: Do not use a spa or hot tub immediately following strenuous exercise

Warning: Prolonged immersion in a spa or hot tub may be injurious to your health

Warning: Maintain water chemistry in accordance with the Manufacturers instructions.

Warning: The equipment and controls shall be located not less than 1.5 meters horizontally from the spa or hot tub.

Warning! GFCI or RCD Protection.

The Owner should test and reset the GFCI or RCD on a regular basis to verify its function.

Warning! Shock Hazard! No User Serviceable Parts.

Do not attempt service of this control system. Contact your dealer or service organization for assistance. Follow all owner's manual power connection instructions. Installation must be performed by a licensed electrician and all grounding connections must be properly installed.

CSA Compliance/Conformité

Caution:

- Test the ground fault circuit interrupter or residual current device before each use of the spa.
- Read the instruction manual.
- Adequate drainage must be provided if the equipment is to be installed in a pit.
- For use only within an enclosure rated CSA Enclosure 3.
- Connect only to a circuit protected by a Class A ground fault circuit interrupter or residual current device.
- To ensure continued protection against shock hazard, use only identical replacement parts when servicing.

- Install a suitably rated suction guard to match the maximum flow rate marked.

Warning:

- Water temperature in excess of 38°C may be injurious to your health.
- Disconnect the electrical power before servicing.

Attention:

- Toujours vérifier l'efficacité du disjoncteur différentiel avant d'utiliser différentiel avant d'utiliser le bain.
- Lire la notice technique.
- Lorsque l'appareillage est installé dans une fosse, on doit assurer un drainage adéquat.
- Employer uniquement à l'intérieur d'une clôture CSA Enclosure 3.
- Connecter uniquement à un circuit protégé par un disjoncteur différentiel de Class A.
- Afin d'assurer une protection permanente contre le danger de choc électrique, lors de l'entretien employer seulement des pièces de rechange identiques.
- Les prises d'aspiration doivent être équipées de grilles convenant au débit maximal indiqué.

Avertissement:

- Des températures de l'eau supérieures à 38°C peuvent présenter un danger pour la santé.
- Déconnecter du circuit d'alimentation électrique avant l'entretien.

Warning/Advertissement:

- Disconnect the electric power before servicing. Keep access door closed.
- Déconnecter du circuit d'alimentation électrique avant l'entretien. Garder la porte fermée.

Luxury Spas USA Warranty

This warranty covers all Luxury Spas USA branded hot tubs which are purchased directly from Luxury Spas USA Ltd. This warranty certificate is non-transferable.

Shell Warranty - 10 years

Luxury Spas USA warrant the shell against water loss to the customer arising from structural failure for a period of 10 years. Luxury Spas USA warrants the acrylic shell surface against water loss arising from defects in materials, including cracks, blisters, peeling and delamination for a period of 5 years. The warranty coverage includes all parts and labor necessary for repair.

Electrical Equipment and Plumbing - 2 years

Luxury Spas USA warrant all major spa components – specifically, the pumps, the heater and the control system – against malfunction arising from defects in materials and workmanship, for a period of 2 years. The electrical equipment and plumbing warranty covers the parts only necessary for repair. Labor is not covered under the major spa component warranty. Water leaks from pump and plumbing unions are not included under the warranty coverage.

Spa Components - 2 years

Luxury Spas USA warrant all other spa components, including but not limited to LED lights, fuses, topside control unit, diverter caps, cover clips, and jet inserts against malfunction arising from defects in material and workmanship for a period of 2 years to the customer. Includes only parts necessary for repair. Labor costs are not included.

Spa Cover Warranty

Luxury Spas USA warrant the spa cover to be free from defects in material for 30 days from the date of delivery as they are open to elements and/or chemical damage.

Warranty Terms

All warranties apply to the original customer, at the original address that the spa was installed. Your limited warranty does not include the cost of shipping parts back to Luxury Spas USA, or to an authorized repair center. This warranty does not include costs incurred using non-authorized repair centers. Customers must have written consent from Luxury Spas USA before proceeding with any repair that is to be reimbursed by Luxury Spas USA. In all cases, Luxury Spas USA has sole responsibility for determining the cause and nature of a fault. Luxury Spas USA reserve the right to provide a replacement spa of equivalent value if we deem it to be necessary. In such a circumstance, the customer shall be responsible for the cost of moving and installing the new spa into position.

Performance

The Customer must report any discovered fault to Luxury Spas USA within 10 business days. A Luxury Spas technical representative will then diagnose the issue over the telephone and may suggest possible solutions for the customer to attempt. If after these suggestions fail to resolve the issue, Luxury Spas will then arrange for a repair technician to visit the site. If the repair technician

is sent out and discovers there is no issue, or the issue is not manufacturing related, then customer will be responsible for the service call. If a manufacturing related issue is discovered there is no charge for the technician visit. If the technician determines that any fault is not covered under this warranty, the customer is solely responsible for the cost of any parts and or labor charges.

Additional Warranties

The spa cover, steps, light bulbs, headrests, skirt and filter are warranted to be free of defects in workmanship or materials for thirty (30) days from the date of delivery. All other factory-installed components, including but not limited to the cabinet, frame, LED light system, stereo and related components, speakers, skimmer, and jets, are warranted against malfunction due to defects in workmanship or materials for one year from the date of purchase.

Exclusions

This Limited Warranty is void if Luxury Spas or its designated representative determines that the spa has been subjected to alteration, neglect, misuse or abuse, or freight damage caused by the common carrier; or if the failure is caused by accident, acts of God or other causes beyond the control of Luxury Spas. Neglect, misuse and abuse include any installation, operation or maintenance of the spa other than in accordance with the instructions contained in the owner's manual provided with the spa, including but not limited to the failure to maintain proper water chemistry and chemical balance and the use of abrasive or improper cleaners. This Limited Warranty does not provide coverage for any item attached to or installed on the spa after the date of sale or for gaining access to any component for repair or replacement. Spa units used in a commercial application are excluded from any coverage whatsoever.

Damage to headrest pillows reported beyond the day of delivery will not be covered under warranty. Headrest pillows are to be removed from the spa when not in use.

Warranty service will be provided only if the original invoice or sales receipt is presented with the defective product within the guarantee period. We may refuse free-of-charge guarantee service if these documents are not presented or if they are incomplete or illegible.

Disclaimers

Except as specifically provided by the law, Luxury Spas and its representatives shall not be liable for any injury, loss, cost or other damage, whether incidental or consequential, arising out of any defect covered by this Limited Warranty, including, without limitation, loss of use of the spa and cost for removal of defective product, even if Luxury Spas has been advised of the possibility of such damage. The liability of Luxury Spas under this Limited Warranty, if any, shall not exceed the original amount paid for the defective product. Coverage under this Limited Warranty shall commence as of the original date of purchase and the duration of such coverage shall not extend for any reason whatsoever beyond the stated time periods. These disclaimers shall be equally applicable to any service provided by Luxury Spas USA and its representative.