FISHER™ SPAS

Owner's Manual

FISHER SPAS

Congratulations on becoming a new spa owner!

You can now enjoy the full benefits of relaxation, fun and family time that a Fisher™ spa brings to your life.

To get you started, we've put together this comprehensive user manual. It contains important health and safety information you need to know when using a Fisher™ spa pool. After reading this manual, you should know how to safely use, operate, and maintain your new spa.

Please take the time to read through this Owner's Manual. In it, you will find:

- guidelines on caring for your spa
- a complete explanation of the controls
- safety instructions
- a troubleshooting section
- …and lots more

And don't worry, if there is anything you aren't sure of or need help with – please do not hesitate to contact your nearest Fisher™ dealer for support. We are here to help!

Sincerely,
Fisher™ spas team.

Important Information

Important Spa Owner Information

Your Fisher™ spa is constructed to the highest standards and is capable of providing many years of trouble-free use.

However, because heat retentive materials are used to insulate the spa for efficient operation, an uncovered spa surface and wall fittings directly exposed to sunlight and high temperatures for an extended period are subject to permanent damage or discolouration.

Damage caused by exposing the spa to this abuse is not covered under warranty. We recommend that you always keep the spa full of water when it is exposed to direct sunlight and that you keep the spa cover in place at all times when the spa is not in use.

Please be aware that we are constantly striving for continuous improvement, therefore, modifications and enhancements may be made to our spas which affect the specifications, illustrations and/or instructions contained herein.

Table of Contents

Table of Contents

Seven steps to starting your spa:

1. Install cover and cover locks - page 44
2. Check Barrell unions are tight - page 28
3. Check drain valve is closed - page 30
4. Fill the spa - page 32
5. Power up spa - page 56
6. Set Water Temperature - page 76 for SV Mini1 & SV Mini2 models, and page 113 for SpaNet™ SV2, SV3 & SV4
7. Start-up Water Care - page 38

Safety Information & Warnings

Important Safety Instructions for all Spa Owners

READ AND FOLLOW ALL INSTRUCTIONS CAREFULLY!

This spa was manufactured to meet the standards and specifications outlined in the AS 1926.3 water recirculation systems and AS 2610.2 Spa Pool - Private Spas. When installing and using this spa, basic safety precautions should always be followed, including:

1. **DANGER**: RISK OF SEVERE INJURY OR DROWNING!
   - Extreme caution must be exercised to prevent unauthorized access by children.
   - To avoid accidents, ensure that children do not use this spa unless supervised at all times. Adult supervision is a critical safety factor in preventing children from drowning.
   - Use the straps and tie downs to secure the spa cover when not in use. This will help discourage unsupervised children from entering the spa. Keep the spa cover secure in high-wind conditions.
   - There is no representation that the cover, clip tie-downs, or actual locks will prevent access to the spa.

2. **DANGER: RISK OF SEVERE INJURY OR DROWNING!**
   - Keep hair, loose articles of clothing or hanging jewelry away from suction fittings, rotating jets or other moving components to avoid entrapment that could lead to drowning or severe injury.
   - Never use the spa unless all suction guards, filter, filter lid, or skimmer assembly are installed to prevent body and/or hair entrapment.
   - Never operate or use the spa if the filter, filter lid, or skimmer assembly are broken or any part of the skimmer assembly is missing. Please contact your dealer or nearest service center for service.
   - The suction fittings and suction covers in this spa are sized to match the specific water flow created by the pump(s). If it is necessary to replace the suction fittings, suction covers or pump(s), be sure that the flow rates are compatible and are in compliance with the Australian Standard AS1926.3:2010.

Safety Information & Warnings

- Never replace a suction fitting or suction cover with one rated less than the flow rate marked on the original suction fitting. Using improper suction fittings or suction covers can create a body or hair suction entrapment hazard that may lead to drowning or severe injury.

3. **DANGER**: **RISK OF SEVERE INJURY FROM ELECTRIC SHOCK OR DEATH FROM ELECTROCUTION. PRODUCT DAMAGE OR ELECTRICAL FIRE.** (All Electrical work must be completed by a qualified Electrician as per local regulations).

- Items containing live parts, except parts supplied with safety extra-low voltage not exceeding 12v, must be inaccessible to a person in the bath.
- Never permit any electrical appliance, such as a light, telephone, radio, television, etc. within 1.25m (arms reach) of a spa unless such appliances are built-in by the manufacturer.
- Never bring any electrical appliances into or near the spa.
- Never operate any electrical appliances from inside the spa or when you are wet.
- Any spa that requires an electrical service over 15amps must be connected by an electrician if being hardwired or using a plug. No extension cords are to be used in conjunction with the operation of a spa. Supplying power to the spa, which is not in accordance with these instructions, will void both the independent testing agency listing and the manufacturer's warranty.
- The electrical supply for this product must include a suitably rated isolating switch and circuit breaker to comply with local electrical regulations. This RCD/GFCI circuit breaker must be installed at the power supply in the house electrical box.
- For Australia/ New Zealand, the spa should be supplied through a residual current device (RCD) with a rated tripping current not exceeding 30mA (IEC 60335-2-60).

Safety Information & Warnings

4. **WARNING: RISK OF SEVERE INJURY OR DEATH!**
   - Extreme caution must be exercised to prevent diving or jumping into the spa or slipping and falling, which could result in unconsciousness, drowning, or serious injury. Remember that wet surfaces can be very slippery.
   - Never stand, walk or sit on the top edge of the spa.

5. **WARNING: RISK OF HYPERTHERMIA (OVER-HEATING) CAUSING SEVERE INJURY, BURNS, WELTS OR DEATH!**
   - Water temperature in excess of 40°C (104°F) may be injurious to your health.
   - Refer to page 19 in this manual, Hyperthermia for specific causes and symptoms of this condition.
   - The water in the spa should never exceed 40°C (104°F). Water temperatures between 38°C (100°F) and 40°C (104°F) are considered safe for a healthy adult.
   - Lower water temperatures are recommended for young children (children are especially sensitive to hot water) and when spa use may exceed 10 minutes.
   - In order to avoid the possibility of hyperthermia (Heat Stress) occurring it is recommended that the average temperature of the spa-pool water should not exceed 40°C.
   - Always test the spa water temperature before entering the spa. The user should measure the water temperature with an accurate thermometer since the tolerance of water temperature-regulating devices may vary as much as +/- 2°C (5°F).

6. **WARNING: RISK OF SEVERE INJURY OR DEATH!**
   - Since excessive water temperatures have a high potential for causing fetal damage during the early months of pregnancy, if pregnant or possibly pregnant, consult your physician before using a spa.
   - Pregnant or possibly pregnant women should limit spa water temperatures to 38°C (100°F).
   - Persons suffering from obesity or a medical history of heart disease, low or high blood pressure, circulatory system problems, diabetes, infectious diseases or immune deficiency syndromes should consult a physician before using a spa.

Safety Information & Warnings

- If you experience breathing difficulties in association with using or operating your spa, discontinue use and consult your physician.
- Persons using medication should consult a physician before using a spa since some medication may induce drowsiness, while other medication may affect heart rate, blood pressure, and circulation.
- Persons suffering from any condition requiring medical treatment, the elderly, or infants should consult with a physician before using a spa.
- The use of alcohol, drugs, or medication before or during spa use may lead to unconsciousness with the possibility of drowning.

7. **WARNING: RISK OF SEVERE INJURY OR DEATH!**
   - Prolonged immersion in a spa may be injurious to your health.
   - Observe a reasonable time limit when using the spa. Exposures at higher temperatures can cause high body temperature (over-heating). Symptoms may include dizziness, nausea, fainting, drowsiness, and reduced awareness. These effects could possibly result in drowning or serious injury.
   - Never use a spa immediately following strenuous exercise. Enter and exit the spa slowly. Wet surfaces can be slippery.

8. **WARNING: TO DECREASE RISK OF INFECTION OR DISEASE!**
   - To reduce the risk of contracting a waterborne illness (e.g. an infection, bacteria or virus) and/or respiratory ailments, maintain water chemistry within the parameters listed on the chemical container label. Guidelines are listed on page 139 of this manual and consult with a licensed engineer regarding proper ventilation if installed indoors or in an enclosed area.
   - People with infectious diseases should not use a spa to avoid water contamination, which could result in spreading infections to others.
   - Always shower before and after using your spa. Maintain water chemistry in accordance with chemical manufacturer's instructions. Failure to do so may result in contracting a waterborne illness (e.g. an infection, bacteria or virus).

*Information is subject to change without notice.

Safety Information & Warnings

9. **WARNING: RISK OF SEVERE INJURY OR DEATH!**

The appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience or knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

10. **WARNING - VENTILATION.**

In addition to maintenance of filters and water chemistry, proper ventilation is recommended to reduce the risk of contracting a waterborne illness (e.g. an infection, bacteria or virus) and/or respiratory ailments that could be present in the air or water. Consult a licensed architect or building contractor to determine your specific needs if installing your hot tub indoors.

11. **CAUTION: TO DECREASE RISK OF PRODUCT DAMAGE.**

- Maintain water chemistry in accordance with the chemical manufacturer's instructions.
- Proper chemical maintenance of spa water is necessary to maintain safe water and prevent possible damage to spa components.
- If you do not intend to use your spa, or if there is a prolonged power outage during periods of severe freezing temperatures, it is important that all water be removed from the spa and equipment to protect against damage from freezing.

12. **NOTE:**

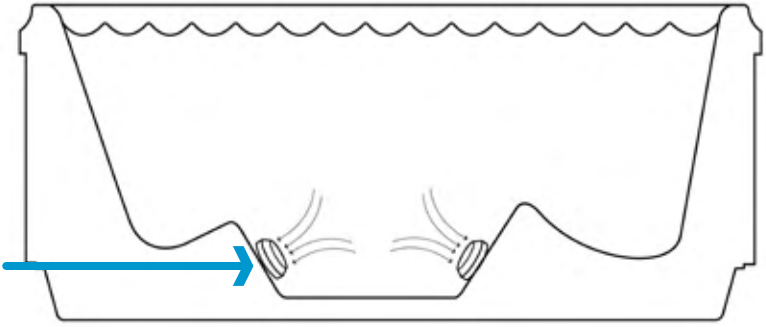
This spa is not intended nor designed to be used in a commercial or public application. The spa buyer shall determine whether there are any code restrictions on the use or installation of this spa since local code requirements vary from one locality to another.

Entrapment Risk

DANGER **RISK OF PERSONAL INJURY OR DEATH!**

Never operate the spa if a suction fitting, suction cover, filter, filter lid or skimmer assembly are broken, damaged or missing.

Suction Fitings, Suction Covers (locations vary by models)



Note: Suction covers must be replaced every 7 years.

*Information is subject to change without notice.

Entrapment Risk

1. **DANGER: RISK OF SEVERE INJURY OR DROWNING! Hair entrapment:**
   May occur if hair is entangled, knotted or snagged in a drain suction or skimmer assembly. This has been reported in persons who, when they submerged themselves underwater, allowed hair to come close and/or within the reach of the suction fittings, suction covers or skimmer assembly.

   - Keep hair away from suction fittings, suction covers, filter, filter lid or skimmer assembly.
   - Children are at risk for hair entrapment if swimming underwater.
   - Never allow children to play or get near the suction fittings, suction covers, filter, filter lid or skimmer assembly.

2. **DANGER: RISK OF SEVERE INJURY OR DROWNING! Limb entrapment:**
   May occur when a limb becomes entrapped, inserted or sucked into a suction or outlet opening.

   - Always keep suction fittings, suction covers, filter, filter lid or skimmer assembly in place when operating to avoid limb entrapment.
   - Never allow children to play or get near the suction fittings, suction covers, filter, filter lid or skimmer assembly.

3. **DANGER: RISK OF SEVERE INJURY OR DROWNING! Body entrapment:**
   May occur when part of the torso becomes entrapped, inserted or sucked into a suction or outlet opening.

   - Never allow children to play or get near the suction fittings, suction covers, filter, filter lid or skimmer assembly.

*Information is subject to change without notice.

Entrapment Risk

4. **DANGER: RISK OF SEVERE INJURY OR DROWNING! Evisceration (disembowelment) entrapment:**

   - May occur when the buttocks becomes entrapped, inserted or sucked into a suction or outlet opening.
   - Never sit on suction fittings, suction covers, filter, filter lid or skimmer assembly.
   - Never allow children to play or get near the suction fittings, suction covers, filter, filter lid or skimmer assembly.

5. **DANGER: RISK OF SEVERE INJURY OR DROWNING! Mechanical entrapment:**

   May occur when jewelry, swimsuit, or hair accessories become entangled, knotted or snagged in a drain suction or skimmer assembly.

   - Never allow your jewelry, swimsuit, or hair accessories to come close to the suction fittings, suction covers or skimmer assembly.
   - Never allow children to play or get near the suction fittings, suction covers, filter, filter lid or skimmer assembly.
   - An emergency stop switch controlling all spa pool pumps, blowers and heaters shall be provided within 3.0m of the spa pool and shall be visible at all times.
   - As per SPASA compliance guide, Industry accepted best practice for emergency stop switches may include an electrical switch, isolator switch or any other emergency stop switch control measure.

*Information is subject to change without notice.

Hyperthermia

Prolonged immersion in hot water may induce hyperthermia (over- heating). The use of alcohol or drugs can greatly increase the risk of fatal hyperthermia in spas. A description of the causes, symptoms, and effects of hyperthermia are as follows:

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 drowsiness, lethargy (fatigue), and an increase in the internal temperature of the body (feeling of being too hot). The effects of hyperthermia include:

- Unawareness of impending hazard;
- Failure to perceive heat;
- Failure to recognize the need to exit spa;
- Physical inability to exit spa;
- Fetal damage in pregnant women; and
- Unconsciousness and danger of drowning.

Choosing a Location

General Considerations

The spa must be installed in such a manner as to provide drainage away from it. Placing the spa in a depression without provisions for proper drainage could allow rain, overflow, leaks from spa plumbing, and other casual water to flood the equipment and create a wet condition in which it would sit. This is not covered under warranty.

When installing spas below ground or recessing a spa into a floor or deck, make sure the equipment can still be easily accessed for servicing.

There should be no obstructions that would prevent access to jet components or the removal of cabinet panels,especially on the side with the equipment bay.

*Information is subject to change without notice.

Outdoor Location

In selecting the ideal outdoor location for your spa, we suggest that you take into consideration:

- The proximity to changing area and shelter (especially in colder weather).
- The pathway to and from your spa (this should be free of debris so that dirt and leaves are not easily tracked into the spa).The closeness to trees and shrubbery (remember that leaves and birds could create extra work in keeping the spa clean).
- A sheltered environment (less wind and weather exposure can result in lowered operation and maintenance costs).
- The overall enhancement of your environment. It is preferable not to place the spa under an unguttered roof overhang since run-off water will shorten the life expectancy of the spa cover.
- For spas that are to rest on balconies, roofs or other platforms not specifically tied into main structural support, consult a professional Structural Engineer with experience in this type of application.
- In the unlikely event that you should ever need to access or gain entry to any portion of the spa for servicing, it is highly recommended that you plan your outdoor installation to provide full access to the entire spa. Please take this into consideration when placing the spa in a deck or enclosed by a surrounding.
- Consider locating your spa away from any reflective surface or glass to prevent any damage to the synthetic cabinet.
- Do not shim the spa. To ensure proper support the spa must sit flat on the intended foundation.

Choosing a Location
Indoor

Indoor Location

For indoor installations many factors need to be considered before installing a spa indoors:

- Proper Foundation: Consult a Structural Engineer when considering a foundation that will adequately support the spa the entire time it is in place.
  Proper support is critical especially if the spa is to rest on a second story or higher. For spas that are to rest on balconies, roofs or other platforms not specifically tied into the main structural support, you should consult a professional Structural Engineer with experience in this type of application.

- Proper Drainage: It is extremely important to have in place measures to sufficiently handle excessive water spillage. Be sure the flooring in which the spa rests on has adequate drainage and can handle the entire contents of the spa. Be sure to make provisions for ceilings and other structures that may be below the spas installation. Areas around your spa can become wet or moist so all flooring and subsequent furniture, walls and adjacent structures should be able to withstand or resist water and moisture.

- Proper Ventilation: Proper ventilation should be discussed with an Engineer or authority competent enough to understand the necessary provisions needed to vent moist or heated air and air associated with chemical odors outdoors. When the spa is in use, considerable amounts of moisture will escape, potentially causing mould and mildew over time, which can damage certain surfaces and/ or surroundings.

- Sufficient Access: In the unlikely event that you should ever need to access or gain entry to any portion of the spa for servicing, it is highly recommended that you plan your indoor installation to provide full access to the entire spa.

*Information is subject to change without notice.

Choosing a Location
Indoor

- Warranty: Damage caused by not following these guidelines or any improper installation not in accordance to local codes or authorities is not covered under the spas warranty. Please consult your local state or city building ordinances.
- Do not shim the spa. To ensure proper support the spa must sit flat on the intended foundation.

CAUTION: *If the spa is indoors or located in an enclosed area, proper ventilation should be discussed with an Engineer an or authority competent enough to understand the necessary provisions needed to vent moist or heated air and air associated with chemical odors outdoors. When the spa is in use considerable amounts of moisture will escape potentially causing mold and mildew. This can cause health risk. Over time, this can damage certain surfaces, surroundings, and equipment.*

*Information is subject to change without notice.

Equipment Location
Fisher 2™

Colour code equipment

Equipment Bay	Drain Valve	Circulation Pump
Keypad	Boost Pump	Heater
Conduit Access	Subwoofer	

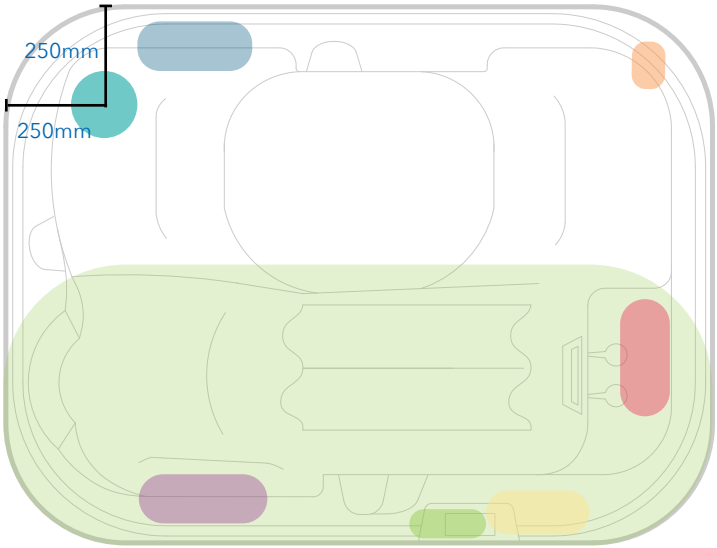
Fisher 2™

**WiFi & Audio Kit optional upgrade is not available in this model.

*Information is subject to change without notice.

Equipment Location
Fisher 3™

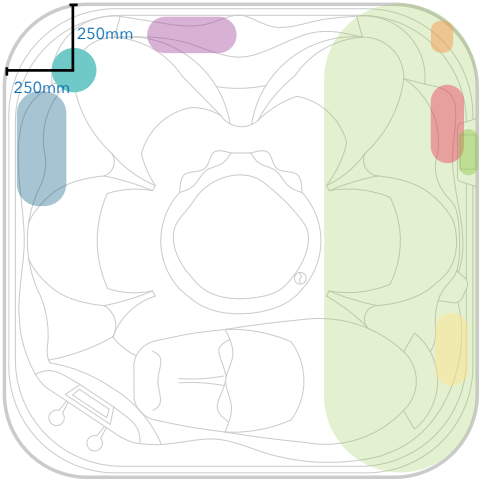
Fisher 3™



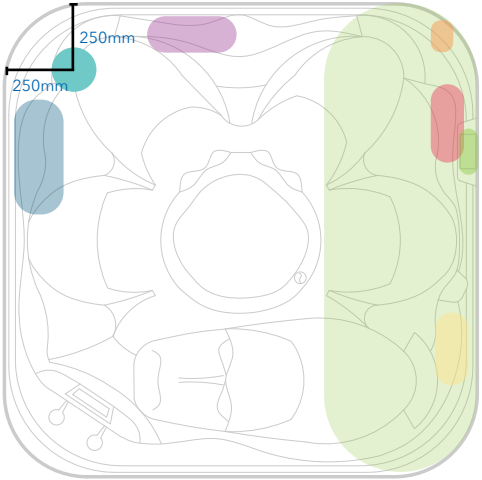
*Information is subject to change without notice.

Equipment Location
Fisher 5S™ & Fisher 5SE™

Fisher 5S™



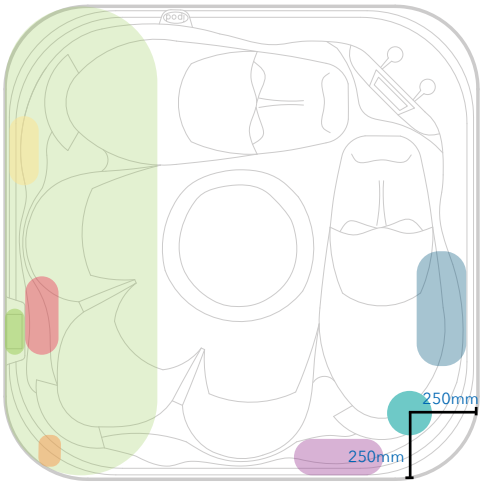
Fisher 5SE™



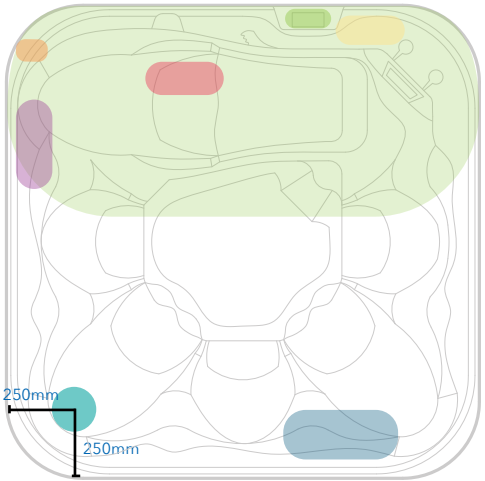
*Information is subject to change without notice.

Equipment Location
Fisher 5D™ & Fisher 6™

Fisher 5D™



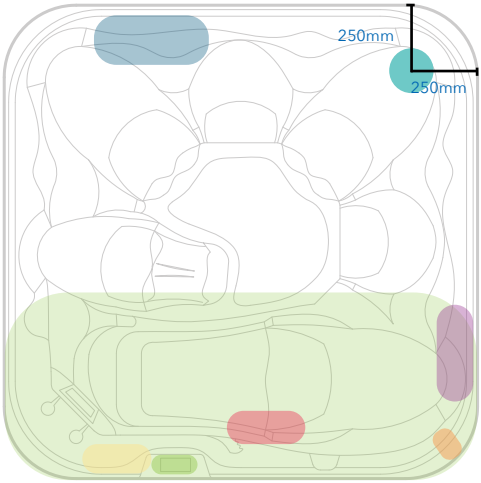
Fisher 6™



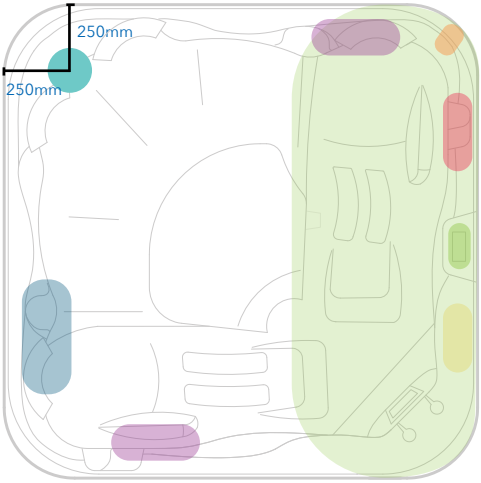
*Information is subject to change without notice.

Equipment Location
Fisher 7™ & Fisher 8™

Fisher 7™



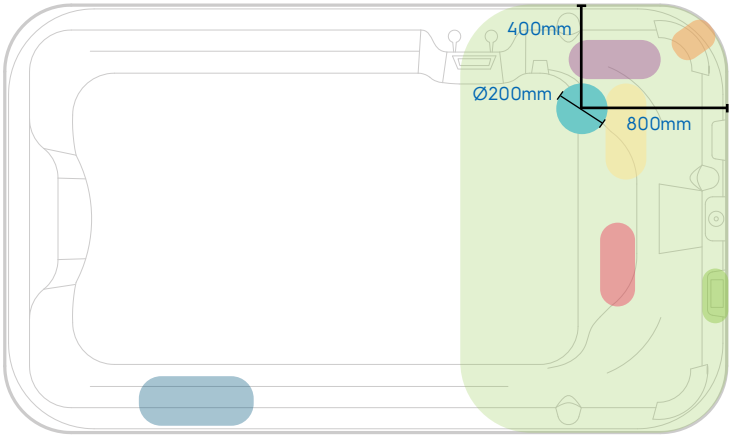
Fisher 8™



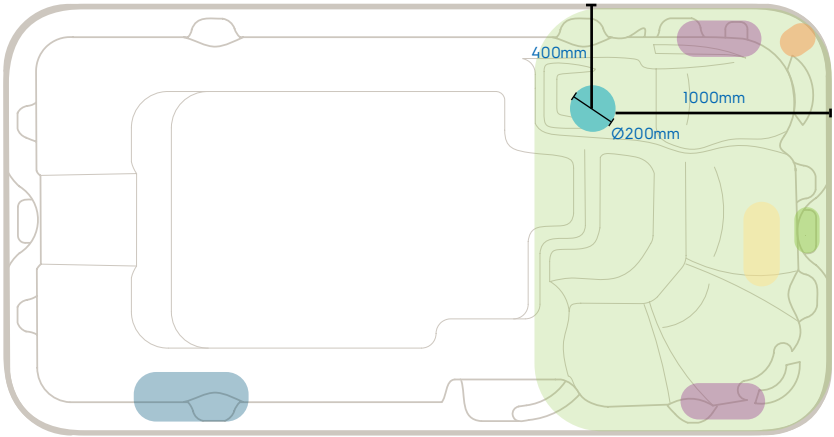
*Information is subject to change without notice.

Equipment Location
Fisher Play™

Fisher Play™



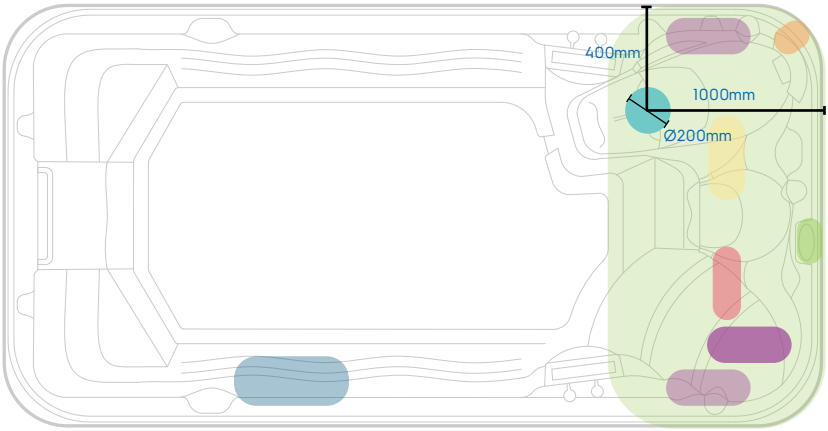
Fisher Train™



*Information is subject to change without notice.

Equipment Location
Fisher Swim™

Fisher Swim™



Equipment Bay	Drain Valve	Circulation Pump
Keypad	Boost Pump	Heater
Conduit Access	Extra Boost Pump	Subwoofer

*Information is subject to change without notice.

Power Requirements

Recommended power requirement

Spa Model	Electrical Requirement	Controller
Fisher 2™	10 Amps*	SVM1
Fisher 3™	10 Amps*	SVM1
Fisher 5S™	15 Amps	SVM2
Fisher 5SE™	10 Amps*	SVM1
Fisher 5D™	15 Amps	SVM2
Fisher 6™	15 Amps	SVM2
Fisher 7™	15 Amps	SVM2
Fisher 8™	25 Amps	SVM2
Fisher Play™	10 Amps*	SVM1
Fisher Train™	32 Amps	SV3
Fisher Swim™	32 Amps	SV3

*Check with an electrician about dedicated circuit requirements.

Start-up Procedure
Check Barrel Unions

1. Check barrel unions are tight.

Remove spa cabinet side panel (on key pad side) to access equipment bay. See page 20 to locate your spa equipment bay.

Barrel unions are the connections between the pumps and heater and the plumbing of the spa. If they become loose, this can cause water loss. It is important to check the tightness of these unions periodically, and especially when spa is first delivered. The unions are designed to be retightened by hand. Rotate the locking nut clockwise to tighten.

Check barrel unions

Only tighten the barrel union by hand

NOTE: *If you see water escaping from beneath your spa, the barrel unions should be the first thing you check.* **LEAKS FROM BARREL UNIONS ARE NOT COVERED BY THE SPA'S WARRANTY.**

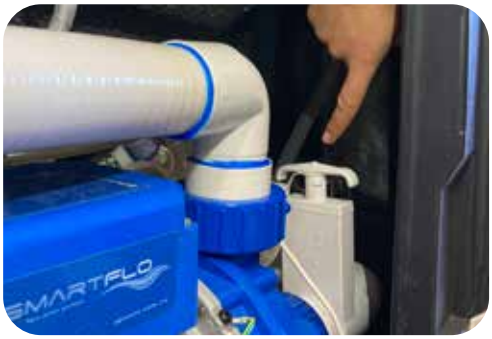
*Information is subject to change without notice.

Start-up Procedure
Check Isolation Valves

2. Check isolation valves are open.

T-handle, isolation valves, enable the water flow to be closed to allow removal of spa equipment for servicing without the need to empty the spa. The isolation valve T handles must be pulled UP to be OPEN and allow water flow.

T-handle valves Open



T-handle valves Closed

Start-up Procedure
Check Drain Valve

3. Check that the drain valve is closed and firmly tightened

To find the drain valve check page 20 for equipment location

If it is open, twist and press in the drain cap.

Tighten the cap. Close drain valve.

4. Check all jets are open.

Water flow to most jets can be turned on or off by rotating the jet face clockwise (on) or anti-clockwise (off). Check to ensure all jets are open before filing with water.

Filling Your Spa Pool

Spa fill up procedure

For best results, read each step in its entirety before proceeding with this procedure. Make sure the drain is closed before you begin, page 30.

1. **Prepare the spa for filling**
   - Clear all debris from the spa. (Although the spa shell has been polished at the factory, you may want to treat it with a specially formulated spa cleaner.) Consult your authorized Fisher™ dealer for additional information prior to filling spa.
   - If using the primary filter inlet to fill, remove the filter cover, then remove the filter cartridge as outlined in the next page.

2. **Fill spa**

   Fill your spa from a source of clean water such as domestic tap water or rainwater, DO NOT OVERFILL your spa. Fill until the water comes up to the fill line on the filter face. Do not let the water fill to the point of touching the bottom of the lowest headrest.

   2.1. Remove one of the spa filters. To remove the filters you need to twist the filter clockwise - to install the filters, you push down while twisting the filters counter-clockwise. See the following pages.

   2.2. Remove any fitting from the end of your garden hose that might come off or stop the hose end from fitting down the hole where the filter that you have removed is located.

   2.3. Insert the end of your garden hose, no more than 250mm into the hole where the filter was placed. We do not recommend filling the spa by placing the hose into the foot well of the spa because it can create an air bubble in the plumbing system that can cause an error when starting up. See ER-3 in the troubleshooting section, check water prime page 94 for SpaNet™ SV Mini™ models and page 149 for SpaNet™ SV2, SV3 and SV4 models.

*Information is subject to change without notice.

2.4. Turn on the water

2.5. Fill until the water reaches the fill line on the filter face.

Single filter

Filter face, unscrew the fitting.
Not all models have screws. If your model does, remove the screw by turning counter clockwise

Remove spa filter face

Filling Your Spa Pool
Single Filter

Remove the leaf catcher

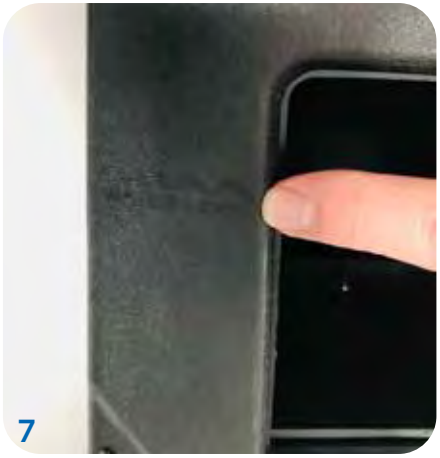
Remove the filter counter-clockwise

Remove the pleated filter

*Information is subject to change without notice.

Filling Your Spa Pool
Single Filter

Insert hose down inlet no more than 250mm



Fill with water until it reaches the fill line

*Information is subject to change without notice.

Filling Your Spa Pool
Two Filters

Filter face, unscrew the fitting

Remove the spa filter face

Remove the leaf catcher

*Information is subject to change without notice.

Filling Your Spa Pool
Two Filters

Remove one of the two filters counter-clockwise

Insert the end of the hose into the filter pipe

Fill with water until it reaches the fill line

*Information is subject to change without notice.

Water Care
Warnings

WARNING **Not following this guide can damage components in your spa and this damage is not covered under warranty.**

Do not turn on the jet pumps or clean cycle for at least 30 minutes after you have added the sanitiser.

TO DECREASE RISK OF INFECTION OR DISEASE! Always maintain your spa filter as outlined below to ensure healthy spa water. Refer to pages 50 for additional information.

Required filter maintenance

Your new spa is equipped with an advanced water filtration system that provides unsurpassed water quality! To ensure maximum water quality at all times, you should clean the filter cartridges each month, or as necessary. See page 52 for filter cartridge cleaning instructions.

Required water replacement

TO DECREASE RISK OF INFECTION OR DISEASE! As a guide, spa water should be changed every 3-6 months for portable spas and 12-18 months for swim spas; or as needed, depending on factors including the number of spa users and hygiene. You will know it is time for a change when you cannot control foaming and/or you can no longer get the normal feel or sparkle to the water, even though the key water balance measurements are all within the proper parameters.

ALWAYS FOLLOW THE SAFETY, USAGE AND STORAGE INSTRUCTIONS FOUND ON THE CHEMICAL CONTAINER LABEL.

*Information is subject to change without notice.

Water Care
Healthy Spa Water Parameters

Always maintain your spa's water chemistry within the following parameters:

PH	7.5 - 7.8
Free Chlorine	2.0 - 3.0mg/L
Free Bromine	4.0 - 6.0mg/L
Total Alkalinity	80 - 200mg/L
Calcium Hardness	150 - 250mg/L
Hydrogen Peroxide	100 - 150mg/L

*Information is subject to change without notice.

Water Care

Spa Chlorine Dosage per Model

Spa Model	**Water Capacity** (litres)	**Maintenance Dosage** (6-10 grams of Spa Chlorine per 1000L daily)	**Shock Dosage** (7 times the daily dosage rate))
Fisher 2™	519	3	13
Fisher 3™	880	5	22
Fisher 5S™	1097	7	27
Fisher 5SE™	1097	7	27
Fisher 5D™	1030	6	26
Fisher 6™	1230	7	31
Fisher 7™	1450	9	36
Fisher 8™	1380	8	35
Fisher Play™	5586	33	140
Fisher Train™	5700	34	143
Fisher Swim™	6120	37	153

*This is a reference only. Always follow the dosing instructions found on the sanitiser container.

Add start-up chemicals

Once the spa water has reached your desired temperature, use the test strips to measure pH and Alkalinity. See page 39 for the correct pH and Alkalinity levels. Wait at least 20 minutes after applying any balancer chemicals before testing again.

If PH is out of balance:

- If the PH is too LOW, add alkalinity increaser (alkalinity up).
- If the PH is too HIGH, add PH decreaser (PH down).

If Alkalinity out of balance:

- If the alkalinity is too LOW, add alkalinity increaser (alkalinity up).
- If the alkalinity is too HIGH, add PH decreaser (PH down).

Sanitise your spa water

Once your spa water is balanced, sanitise your spa with Spa Chlorine.
Use a start-up shock dose of 25 grams per 1,000 litres of spa water. See the sanitiser container label for the specific dosing instructions. Obtain your spa litreage from the table on page 40.

IMPORTANT: *Do not turn on jet pumps for at least 30min after sanitising your spa.*
Leave spa cover open while sanitising or shocking your spa

*Information is subject to change without notice.

Water Care
Regular Chemical Maintenance

Following the instructions on the sanitiser container label, dose your spa with Spa Chlorine see table in page 40.
In the event of heavy spa use or water clarity issues, a shock dose of 25 grams per 1,000 litres of spa water can be used. See the chemical product label for the specific dosing instructions.

Do not use the test strips to monitor chlorine levels. Use the daily dosing instructions on the back of the chlorine container instead. Failure to follow this can result in damage to your spa or unsafe conditions.

Recommended weekly maintenance:

Step 1. To test the water is balanced, use a test strip following the instructions on the back of the test strip container.

Step 2. Adjust pH, alkalinity and total hardness.

Step 3. Remove and rinse your pleated filters.

Recommended monthly maintenance:

Step 1. Remove and clean your pleated cartridge filters using Cartridge Cleaner solution by following the instructions on the container.

Tip: If your water is cloudy, clean your filters more frequently.

*Information is subject to change without notice.

Water Care
Regular Chemical Maintenance

Recommended 3 - 6 monthly maintenance:

As a guide, spa water should be changed every 3-6 months for portable spas and 12-18 months for swim spas; or as needed, depending on factors including the number of spa users and hygiene.

Step 1. Drain your spa by following the draining procedure in page 147. Be sure to rinse and wipe down surfaces.

Step 2. Restart by following the start guide.

Pleated filters should be replaced every 12 - 18 months.

IMPORTANT: *Follow dosage and safety instructions on chemical containers. The use of poor quality chemicals can lead to damage not covered by your spa warranty. Mix sanitiser in a bucket of spa water before adding to your spa. Don't risk damage to your spa.*

CAUTION **Do not use test strips to monitor chlorine levels.**

Use the daily dosing instructions on the back of the chlorine container instead. Failure to follow this can result in damage to your spa or unsafe conditions. Always pre-mix the chlorine with water in a bucket before adding it to the spa water.

Spa Cover Installation

Place cover on spa

- Keeping the insulating cover in place anytime the spa is not in use will reduce the time required for heating, thereby minimizing operating costs.
- The time required for initial heat-up will vary depending on the starting water ambient temperature and your desired temperature set point.
- While the spa is filling you can attach the cover locks. Cover locks are a small but important safety feature that prevents the spa from being accessed by children and the cover from blowing off in normal conditions. If you live in a high wind environment we recommend purchasing an optional "Hurricane Strap" for your spa cover.

Cover locks position

The corner cover latches are the only latches installed at the factory so that the owner can determine which way the cover is going to be installed and place the remaining latches correctly. The other latches can be found in the spa welcome kit included with the spa.

1. First determine which way you want the cover hinge to be located. This will depend on your unique installation location.
2. Click all the pre-installed cover locks into place
3. You should not be able to fit an object greater than 100mm between the lip of the spa and the cover, when the cover is closed and latched into place.
4. All of the cover locks need to be installed

Tools and Parts Needed:

*Information is subject to change without notice.

Spa Cover Installation

Assembly process

1. Get the cover lock and attach it to the latch. Make the strap taught and loosen slightly to get the strap in the correct position.
2. Holding the strap in place, use a marker to mark the side and bottom of the latch with a line. Then, remove.
3. Unclip the latch and place the lock over the marks. Draw three holes: one on each side and one above. Pre drill holes on the cabinet mark using a 2mm drill bit.
4. Attached the lock to the cabinet, screwing it into place. Test the latch.
5. Repeat all the steps above on the remaining three centre latches.

Get the strap and cover lock into position

Mark the lock position on the cabinet

Spa Cover Installation

Drill the holes on the marked position

Screw lock into place on the cabinet

Test the latch and repeat steps

*Information is subject to change without notice.

How to Drain Your Spa

As a guide, spa water should be changed every 3-6 months for portable spas and 12-18 months for swim spas; or as needed, depending on factors including the number of spa users and hygiene. To drain your spa, power must be disconnected at the circuit breaker. Locate the drain inside at the bottom end of the spa cabinet. To find the drain valve position please check your spa model tech pack for equipment location or see page 20 in this manual.

You must follow your local council for guidelines for spa water disposal. We recommend that you stop adding chemicals to your spa 48 hours prior to draining your spa and to not sit in your spa during this time. This will allow residual sanitiser to dissipate from the spa water prior to dumping the water.

NOTE: *The drain will not remove all of the water in the spa. You may have to remove a smalll amount of water by hand.*

Steps:

To drain, spa power must be disconnected.

How to Drain Your Spa

Locate the drain valve at the bottom end of the spa cabinet.

Twist the cap and pull it midway out

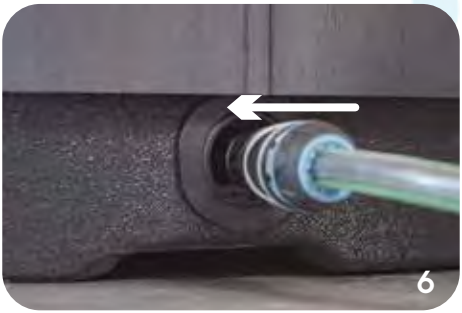
Remove the cap

Replace the cap with the hose nozzle and twist until it is hand tight

NOTE: *Your spa comes with a specialized hose adapter. Unfortunately, it can't be purchased at any local hardware store. So please make sure not to lose it.*

*Information is subject to change without notice.

How to Drain Your Spa



Attach the hose to the nozzle

When you are ready to drain your spa; pull out to extend the drain valve

To activate the draining process. Give the valve a quarter turn and fully extend the open position

Drain your spa into an appropiate area

*Information is subject to change without notice.

Filter Cartridges

Most spas are equipped with one, two or four filter cartridges (depending on the spa model).

• All the Fisher™ spas use a 205 x 170mm Spa pool filter 125488.

• Only the Gemini™ and Fisher 2™ spas use a 235 x 125mm FC-FAA231.

*Information is subject to change without notice.

Filter Cartridges

NOTE: *Filter cartridges may require replacement or cleaning more frequently depending on user hygiene, length and frequency of regular spa use.*

Removing filters:

To remove the filters simply unscrew the cartridge in an anti-clockwise direction and pull out from spa pool.

Reinstalling filters:

When reinstalling filters first hold the cartridge underwater until the air stops bubbling (at this point most of the air has been removed from the cartridge). Then screw the cartridge back into place in a clockwise direction.

NOTE: DO NOT *screw the cartridge back into place excessively tight. Only screw the cartridge until it no longer spins freely. The suction from the pumps will put the cartridges in further once operated. If the cartridge is screwed in place excessively tight before pump operation, the cartridge may be difficult to remove or could even cause the filter thread connection to twist or break the next time the cartridge is removed. This breakage is not covered by warranty.*

How to Clean Your Filter Cartridges

Step 1. Remove the filter from the spa. See page 51.

Step 2. Using a hose, first rinse off all large particles.

We recommend doing this weekly or as needed.

Step 3. Monthly or as needed, we recommend soaking your filters for 24 hours in a spa filter cartridge cleaner. Follow the dosing instruction on the label of the filter cartridge cleaner.

Step 4. After your filters have soaked for 24 hours remove them from the solution, rinse them off with a filter cleaning wand, and set them out to dry.

*Information is subject to change without notice.

Winterise Your Spa

It seems crazy not to soak in your spa during the cold winter months! But maybe you are going away for the colder months or just taking a break from using your spa pool or swim spa?

Whatever the reason, correctly winterizing your spa can save you time and money when you are ready to use it again.

Keep in mind, we strongly recommend that you never leave your spa empty for a period of 2 weeks or more. Leaving your spa empty can cause damage to the pumps, heater element, and shell. In most cases, you are better off turning the temperature of your spa down to the minimum setting and maintaining your PH & Alkalinity levels to ensure they stay within recommended readings.

If for some reason you need to empty your spa for a period longer than 2 weeks we recommend the following steps;

SPECIAL NOTES:

- *If you live in an area prone to freezing you will want to take extra care in ensuring that all of the water is removed from your spa.*
- *If at any time you feel uncomfortable with the steps below, contacting a professional spa technician is a great idea.*

Products to empty and winterize your spa or swim spa

1. Pipe Degreaser / Cleaner
2. Filter Cleaner
3. Vinyl Cleaner
4. Vinyl protectant
5. Sponge or wet and dry vac (Optional but easier)

Winterise Your Spa

Step 1. Clean the pipes and inner surfaces

We recommend using a **spa pipe degreaser** to circulate through your spa system. Follow the dosing instructions on the label and circulate the pipe cleaner for the prescribed amount of time. This will clean the internal surfaces of the spa plumbing and equipment.

Step 2. Make certain the power to your spa is disconnected

Remove the fuse or turn off the main circuit breaker to disconnect power to your spa.

Step 3. Remove the drain cap on your spa and drain the water

Follow the manufacturer's instructions to ensure you use the correct process for your spa. Read our detailed instructions on how to drain your spa water in page 48 on this manual.

Step 4. Loosen fittings on your spa plumbing

Once the spa is empty, open the cabinet door to gain access to your controller and all pumps. Undo the barrel unions that connect the plumbing to the spa controller, heater and pumps. Undoing these unions will allow any excess water in the pipework of the spa to be drained. Without following this process stagnant water will sit in the pipework and cause damage to the seals in your pumps, your heater element, and control sensors. See page 28 for more information about barrel unions.

*Information is subject to change without notice.

Step 5. Purge water from the pipes and shell

Many people will use a wet and dry vac to either suck or blow the remaining water from the pipes. This is more critical if you are in a colder climate. Use a sponge or the wet and dry vac to remove remaining water from the foot well, seats and filter well.

Once the spa pipework is empty of water, carefully re-connect and tighten the unions ensuring that the O-ring seal is seated correctly.

Step 6. Clean the spa shell

This is a perfect time to clean the spa shell. We recommend using pipe cleaner on a non-scratch sponge to clean the shell surface. You can use white vinegar, diluted with water by 50%, to remove any white calcium lines.

The key is to use very little water in the cleaning process so there is less to remove. Dry the shell with a soft towel. Our recommendation is to leave the cover off for a period of time to allow the shell to dry. (As per warning instructions on the shell, do not expose the acrylic shell to direct sunlight for extended periods of time)

Equipotential Bonding

IMPORTANT: Read and follow ALL instructions.

When using this electrical equipment, basic safety precautions should always be followed, including the following:

What is equipotential bonding?

Equipotential bonding, commonly known as bonding, is a crucial electrical procedure that reduces the risk of personal injury and damage to equipment. The process works by connecting exposed parts to an earthing system (also known as a grounding system).

What is the purpose of equipotential bonding?

The main purpose of equipotential bonding is to safely protect the user of the product from electric shock and damage to equipment as a result of an electrical fault.
In the case of a spa user, equipotential bonding will protect the swimmer from being injured by an electrical fault with the spa.

Do I require equipotential bonding?

According to the Australian and New Zealand Standards (AS/NZS 3000: 2018 Electrical Installations), you will need your product to be equipotentially bonded if the product has a conductive metallic surface that is greater than 100mm in any dimension and the product is installed within arms reach (1.25m) of a body of water, including but not limited to spa pools, swim spas or pools. These standards are commonly known as Wiring Rules.

What objects need equipotential bonding?

Objects that need equipotential bonding are any conductive metals greater than 100mm in any dimension and within arms reach of the spa pool. These may include but are not limited to cover lifters, grab rails, pool safety barriers, ladders, spa steps, pergolas, gazebos and umbrellas.

Equipotential Bonding

Who does equipotential bonding?

A licensed electrician must carry out the equipotential bonding work. If you are the owner of the product that requires equipotential bonding, you are responsible for ensuring the product complies with the requirements, at your own expense.

Electrical wiring (Terminal Block Connections)

AUS/NZ/European Models (230-240V AC)

Tools Required: Wire Strippers, Phillips head screwdriver, flat head screwdriver.

1. Remove five (5) x Phillips screws from mains lid to access terminal block.
2. Cut away appropriate length of outer insulation from mains power cable and strip away 25mm (1") of wire insulation from the end of each wire.
3. Route mains cable through one of the two snap out holes provided and secure the cable with a gland to provide adequate cable strain relief (Tighten gland with use of a tool to ensure supply line anchorage point cannot be removed by hand).
4. Push the wires into the correct terminals as labelled. Refer wiring guide below or on the sticker inside the terminal block area.
5. Tighten all screws on the terminal block with a screwdriver and check to ensure each wire has been firmly secured. Then screw mains lid back on.

SpaNet™ Controller Warnings
SV Mini 1, SV Mini 2, SV2, SV3 & SV4

WARNING: RISK OF ELECTRICAL SHOCK

Please read the following before installing or connecting this appliance.

- All electrical connections must be performed by a licensed electrician and must confirm to all national, state and local electrical codes in effect at the time of installation.
- The appliance should be supplied through a residual current device (RCD) having a rated residual operating current not exceeding 30mA.
- The appliance must be connected to a suitable rated and weather protected power supply. The supply line should be a dedicated power circuit and means for disconnection must be incorporated in the fixed wiring in accordance with your local wiring regulations. Means for disconnection from the supply mains should have a contact separation in all poles that provide full disconnection under over voltage Category III conditions.
- Earthed appliances must be permanently connected to fixed wiring (European models only).
- The appliance contains no serviceable parts. Do not attempt service of this control pack. Contact your dealer or authorised service agent for assistance.
- Turn the mains power OFF before servicing appliance or modifying any cable connection.
- Suitable for indoor use only or when installed under a weatherproof spa skirt. The appliance should be installed in an enclosure such that all electrical connections cannot be accessible to the user without the use of a tool.
- Low voltage or improper wiring may cause damage to this appliance. Read and follow all wiring instructions when connecting to power supply.

*Information is subject to change without notice.

SpaNet™ Controller Warnings
SV Mini 1, SV Mini 2, SV2, SV3 & SV4

- Any damaged cable must be replaced immediately.
- To prevent electric shock hazard and/or water damage to this appliance, all unused receptacles must have a water proof seal in place.
- Parts incorporating electrical components must be located or fixed so that they cannot fall into the bath or spa.
- Parts containing live parts, except parts supplied with safety extra-low voltage not exceeding 12V must be inaccessible to a person in the bath or spa.
- This appliance must not be installed in proximity to highly flammable materials.
- Water temperature in excess of 38°C may cause hyperthermia (heat stress).
- It is the spa manufacturer's and/or installer's responsibility to select suitable loads and configure load shed settings (if required) to ensure the system does not exceed its rated maximum total load.
- It is the installer's responsibility to ensure the floor is capable of supporting the expected load of the bath or spa and an adequate drainage system has to be provided to deal with overflow water.
- A spa pool should incorporate a water filtration system where the required level of water purity can be achieved.
- An adequate drainage system has to be provided if the equipment is to be installed in a pit.

SpaNet™ Controller Warnings
SV Mini 1, SV Mini 2, SV2, SV3 & SV4

- This appliance is not intended for use 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 concerning use of the appliance by a person responsible for their safety.
- Children should be supervised to ensure that they do not play with the appliance.

SET THE DATE AND TIME BEFORE USING THE SPA

Be sure to set the date and time before operating the spa (refer to page 56 for SV Mini models and page 93 for SV2,SV3 & SV4 models).

Vital control functions require the time and date to be set correctly.

POOR WATER MAINTENANCE CAN VOID YOUR WARRANTY

It is your responsibility to regularly check and maintain the chemical water balance of the spa pool to ensure it remains within reasonable levels as detailed in page 41). Unbalanced water chemistry greatly accelerates corrosion and may lead to early product or component failure. **Product or component failures caused as a result of poor water chemistry maintenance will NOT be covered by the Product Warranty.**

*Information is subject to change without notice.

Turn On Power
SV Mini 1, SV Mini 2, SV2, SV3 & SV4

Turn on power to spa at the home's circuit breaker and isolation switch. The heater and filter/circulation pump will automatically activate.

- The spa will prime and this can take a few minutes. Priming is the process of water flowing through the circulation pump into the plumbing and back into the spa. If the priming is successful, you will see bubbles floating up from the foot-well.

In the rare event that you see error 3 on the keypad during or after the priming has been activated:

- Disconnect the power to the spa.
- Remove the cabinet to expose the circulation pump.
  NOTE: *There is only one pump on* **Gemini™**
- Turn the barrel union on the top of the small circulation pump slightly until air hisses out and then only water comes out.
- Tighten the barrel union back up.
- Apply power to the spa.
- If you continue to get an Er-3, remove the filter where you inserted the hose to fill the spa and make sure the isolation valves are open (see page 39 for more info.).
- If you still get an Er-3, contact your dealer.

If you see error 4 on the keypad

- Follow the same procedure for an Er- 3 but also loosen the heater barrel union until water comes out to remove any air.
- Apply power to the spa.
- If you continue to see an error 4, Er-4 on the control panels, contact your dealer.

Electrical Installation

SpaNet™ SV Mini 1™,SV Mini 2™, SV2,SV3 & SV4

WARNING

- **This appliance must be supplied through a residual current device (RCD) having a rated residual operating current not exceeding 30mA.**
- Correct wiring of the main electricity board, RCD and spa pack is critical.
- When installing the appliance, refer to your local wiring regulations.
- It is recommended that when installing the mains power cable that a service loop (additional wire length for future serviceability) is provided.
- All electrical work must be performed by a licensed electrician in compliance with the local electrical regulations.

IMPORTANT:

- All electrical connections must be performed by a licensed electrician and must conform to all national, state and local electrical codes in effect at the time of installation.
- The appliance should be supplied through a residual current device (RCD) having a rated residual operating current not exceeding 30mA.
- The supply line should be a dedicated power circuit. The installer should consider the sum total load of all devices connected to the SV Mini controller when determining the size of the power circuit and install an appropriately sized circuit breaker to suit. Ensure circuit breaker is rated for motor start up currents. Maximum rated power circuit is 25A.
- Heater load shedding is set by default, so that the heater load sheds and turns off as soon as any device other than Pump 1 is switched on. The installer should consider this when determining the size of the power circuit required. Heater load shedding can be adjusted if desired.

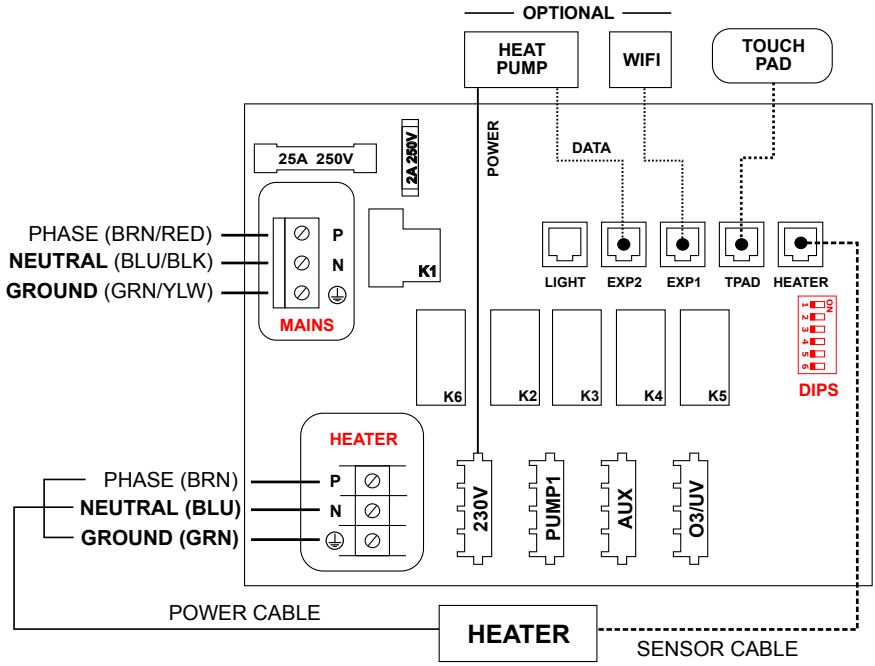
Electrical specifications

Model	Max Current	Input Voltage	Phases	Hz	Heater Size
Mini 1 / Mini 2	25A	230-240V AC	1	50/60	1.5kW / 2.0 kW / 3.0kW

*Information is subject to change without notice.

Electrical Installation
SpaNet™ SV Mini 1 Wiring

Wiring diagram



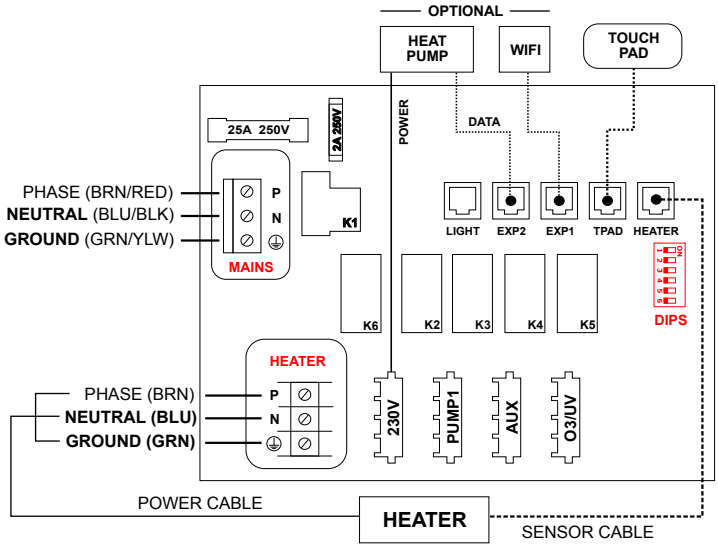
SV Mini 1 output ratings

Model	Outlet	Max Current	Output Voltage	Hz	Heater Size
SV Mini 1	230V	10A	230-240V AC	50/60	1.5kW / 2.0 kW / 3.0kW
	Pump 1	10A	230-240V AC	50/60	Circ / 2-spd or 1-spd Pump
	Aux	10A	230-240V AC	50/60	1-spd Pump / Air Blower
	03/UV	2A	230-240V AC	50/60	Ozone / UV Sanitiser

*Information is subject to change without notice.

Electrical Installation
SpaNet™ SV Mini 2

Wiring diagram



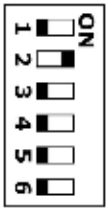
SV Mini 2 output ratings

Model	Outlet	Max Current	Output Voltage	Hz	Heater Size
SV Mini 2	230V	10A	230-240V AC	50/60	1.5kW / 2.0 kW / 3.0kW
	Pump 1	10A	230-240V AC	50/60	Circ / 2-spd or 1-spd Pump
	Pump 2	10A	230-240V AC	50/60	1-spd Pump / Air Blower
	03/UV	2A	230-240V AC	50/60	Ozone / UV Sanitiser
	Pump 3	10A	230-240V AC	50/60	1-spd Pump
	Blower	4.5A	230-240V AC	50/60	Air Blower

*Information is subject to change without notice.

DIP Switches
SpaNet™ SV Mini 1 & SV Mini2

The dip switches determine the configuration of pumps connected to the SV Mini controllers. The installer must correctly configure the dip switches to match the pump(s) connected to the spa controller. The dip switch bank (illustrated below) has six individual switches. Switches set to the right of the switch bank (away from the numbers) are in the ON position. Switches set to the left of the switch bank (closest to the numbers) are in the OFF position. Refer to diagram below for dip switch settings:



SW	Setting	OFF (left)	On (right)	Notes
1	Not used	-	-	-
2	Pump 1 Type	Single Speed	Two Speed	Determines if P1 = 1spd/2spd
3	Pump 3 Fitted *	Not Fitted	Fitted	Determines if P3 is connected
4	Not used	-	-	
5	Not used	-	-	
6	Not used	-	-	

** SpaNet™ SV Mini 2 models only*

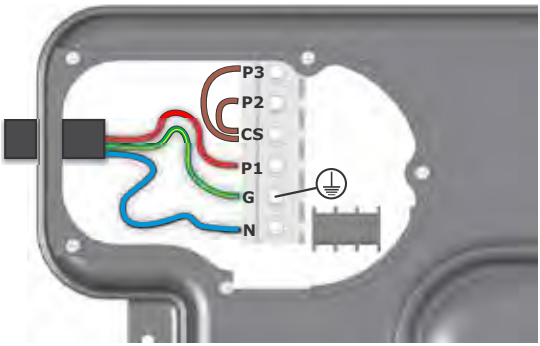
Note: *The dip switches will already be set by your spa manufacturer during production and should not require adjusting. This information is for reference when installing a new control to an existing spa.*

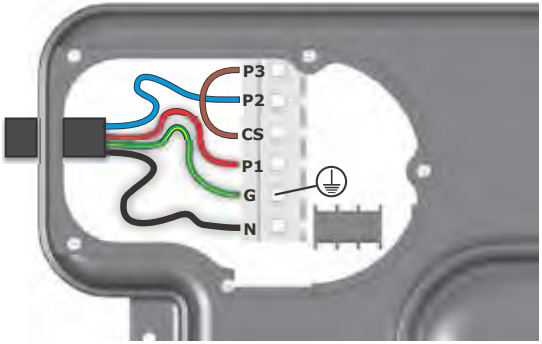
Electrical Installation

SpaNet™ SV2,SV3 & SV4 Wiring

230-240V (3 wire) single phase

Terminal	Wiring
P3	Link to CS
P2	Link to CS
CS	Link to P3 and P2
P1	Phase
G	Earth
N	Neutral
Dip Switch 5	OFF
Dip Switch 6	OFF





230-240V (4 wire) dual phase

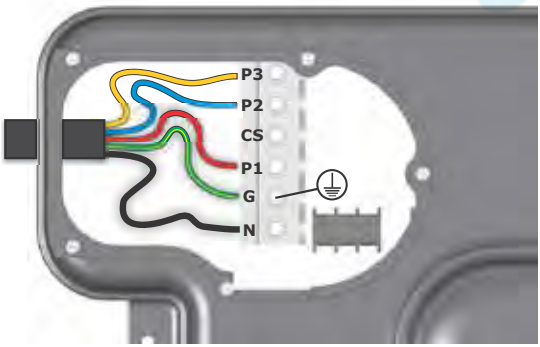
Terminal	Wiring
P3	Link to CS
P2	Phase 2
CS	Link to P3
P1	Phase 1
G	Earth
N	Neutral
Dip Switch 5	ON
Dip Switch 6	OFF

*Information is subject to change without notice.

Electrical Installation
SpaNet™ SV2,SV3 & SV4 Wiring

230-240V (5 wire) three phase

Terminal	Wiring
P3	Phase 3
P2	Phase 2
CS	Not Used
P1	Phase 1
G	Earth
N	Neutral
Dip Switch 5	ON
Dip Switch 6	ON



*Information is subject to change without notice.

DIP Switches
SpaNet™ SV2, SV3 & SV4

System configuration.

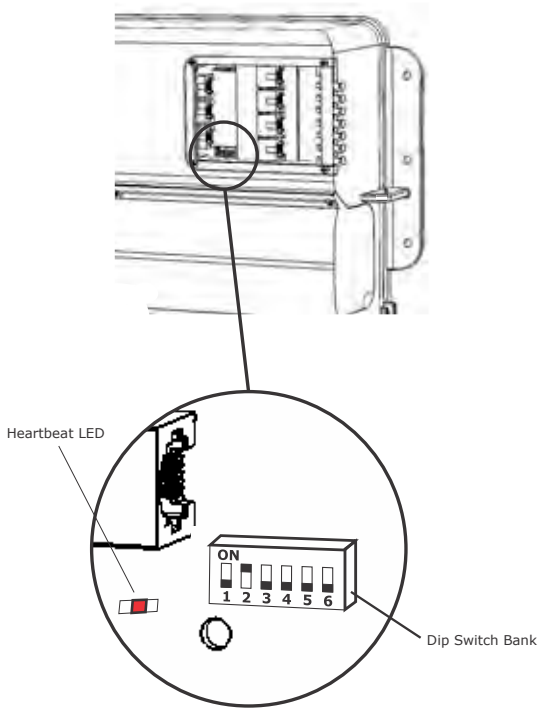
Basic spa configuration is achieved by setting dip switches. The dip switches determine pump configuration and select the number of input phases wired to the spa pack. The installer must correctly configure the dip switches to match the pump and power configuration connected to the spa pack.
The dip switch bank (pictured right) has six individual switches. Switches set to the top of the switch bank are in the ON position. Switches set to the bottom of the switch bank (closest to the numbers) are in the OFF position. Refer to tables below for dip switch settings:

SW	Setting	OFF	ON	NOTES SV2/SV4 Models
1	Circ Fitted	Not Fitted	Fitted	
2	Pump 1 Type	Single Speed	Two Speed	If set to 'OFF' pump2 assumed fitted
3	Pump 3 Type	Single Speed	Two Speed	Not used on SV2/SV2-VH models
4	Pump 4 Fitted	Not Fitted	Fitted	Not used on SV2/SV2-VH models
5	Phase Selection	Single Phase	2/3 Phase	If set to 'ON' dip switch 6 is enabled
6	Multi Phase	Two Phase	Three Phase	

SW	Setting	OFF	ON	NOTES SV3 Models
1	Circ Fitted	Not Fitted	Fitted	
2	Pump 1 Type	Single Speed	Two Speed	If set to 'OFF' pump2 assumed fitted
3	Pump 3 Fitted	Not Fitted	Fitted	
4	Not Used	-	-	
5	Phase Selection	Single Phase	2/3 Phase	If set to 'ON' dip switch 6 is enabled
6	Multi Phase	Two Phase	Three Phase	

*Information is subject to change without notice.

DIP Switches
SpaNet™ SV2, SV3 & SV4



Heartbeat LED

All SV model spa packs feature a heartbeat LED. The heartbeat LED flashes to indicate the current health/status of the spa pack. When the spa pack is functioning correctly with no errors to report the heartbeat LED emits a single flash in a constant pulse much like a heartbeat (ON, OFF, ON, OFF).

If the spa pack encounters a fault the heartbeat LED will begin flashing in sequence with the error code number being experienced (ie. ER2 = ON,ON; OFF ON,ON; OFF).

The heartbeat LED is located beside the bottom left hand corner of the dip switch bank and will emit its red flash through the tinted low voltage connection cover, making it clearly visible from the front of the spa pack.

SpaNet™ SV Mini 1 & Mini 2
Top Side Panel Layout

SpaNet™ SV Mini 1

DISPLAY MODE ICONS
- Water Temperature
- Set Temperature
- Clock

MENU ICONS
- Sleep timer menu icon
- Light menu icon
- Blower menu icon

STATUS ICONS
- Keypad locked
- Sanitise cycle operating
- Filtration cycle operating
- Fault condition has occured

1. UP button
2. DOWN button
3. OK button
4. Light On / Off
5. Pump A
6. Auxiliary
7. Auto Mode LED
8. Heater on LED
9. Sleep Cycle LED

*Information is subject to change without notice.

SpaNet™ SV Mini 2
Topside Panel Layout

SpaNet™ SV Mini 2

1. UP button
2. DOWN button
3. OK button
4. Light On / Off
5. Pump A
6. Pump B
7. Pump C
8. Air Blower
9. Sleep Cycle LED
10. Heater on LED
11. Sleep Cycle LED

*Information is subject to change without notice.

Topside Panels
SpaNet™ SV Mini 1 & SV Mini 2

LED Indicator lights

The topside panel function buttons (i.e. Pumps, Light, and Blower) feature a green LED light to clearly indicate whether the accessory is ON or OFF. The green LED will light up when the accessory is ON. In addition, the topside panels have three red indicator LEDs to advise the user the current status of the spa:

AUTO Automatic mode

The AUTO LED indicator turns ON when the filtration pump is in automatic mode. In automatic mode the filtration pump will turn on / off as required to satisfy heating and filtration requirements. If the filtration pump is manually turned on or off the AUTO LED indicator turns OFF. The control will automatically return to AUTO mode after a 45 minute idle timeout period if not returned to AUTO mode by the spa user.

Heater ON

The Heater LED indicator turns ON when the heater element is active. The heater is automatically controlled, it will turn ON and OFF as required (in conjunction with the filtration pump) to maintain the set water temperature. If the filtration pump is manually turned OFF the heater will NOT operate.

NOTE: *In some configurations, engaging high speed on a 2 speed pump or operating multiple pumps will cause the heater to load shed and turn OFF (even if heating is required) to keep the system within its rated power supply.*

zZz Sleep cycle ON

The Sleep Cycle LED indicator turns ON when the spa control is within a designated sleep cycle (if set). During a sleep cycle, all automatic system operation will stop so that the spa is silent – i.e. filtration and heating will not occur.

*Information is subject to change without notice.

Display Modes

SpaNet™ SV Mini 1 & SV Mini 2

The SV Mini has three (3) x display modes. The spa user can scroll through the different displays by pressing a short single press of either the UP or DOWN button. Each display has a unique icon to indicate the current mode being viewed. As you scroll through each mode a brief title screen will be shown followed by the actual display mode (note change in icon). The available display modes are as follows:

Icon	Title	Display	Notes
	**W.TMP**	Water Temperature	1. The default display mode is (W.TMP) water temperature.
	**S.TMP**	Set Temperature	2. There is a 10 second inactivity timeout on all non-default displays. No button press for 10 secs display reverts to default.
	**TIME**	Clock	3. If no icon is displayed the temp shown is from when the filter pump last ran. Once the filter pump next runs for 10 mins the temp will update and W.TMP icon will return.

OTHER DISPLAY ICONS

Filtration Cycle
The spa is carrying out filtration

Sanitise Cycle
The spa is carrying out a sanitisation cycle

Keypad Locked
The keypad has been locked

System Error
A fault has been detected. The system has halted operation so that corrective action can be taken. Take note of scrolling error code and consult trouble shooting section of this manual.

Setting Date/Time
SpaNet™ SV Mini 1 & SV Mini 2

Be sure to set the date and time before operating the spa. Vital functions such as filtration, sanitisation cycles and sleep timer settings depend on the time and date being set correctly.

- Press a short single press of the DOWN button to change display to Time/Clock setting
- Press the OK button to enter date/time adjustment
- The settings appear in the following order:
    - Time Format (24 hr / 12 hr)
    - Year (yyyy)
    - Month (mm)
    - Day (dd)
    - Weekday (mon-sun)
    - Hours (xx:oo)
    - Minutes (oo:xx)
- Press the UP or DOWN buttons to adjust each setting
- Press the OK button to confirm each setting and skip to the next one
- Once the minutes have been selected and confirmed the system will exit the date/time adjustment and the display will return to the default display mode

NOTES: *1. Leap years are taken into account.*
2. The system does not automatically adjust for daylight savings times. User must adjust manually.
3. The date/time clock has a capacitor backup which will hold the date/time even if mains power is turned off. The capacitor backup will last 8-12 hours. If power remains off for longer than this period the date/time may need to be set again.

Automatic Heating/Filtration

SpaNet™ SV Mini 1 & SV Mini 2

Automatic heating/filtration

The SV Mini spa controls have been designed with simplicity in mind. Their intelligent software constantly monitors the spa water, automatically controlling the heater and filtration pump to ensure the desired set water temperature is maintained and required level of daily filtration achieved.

With set-and-forget technology, the spa user simply selects their desired water temperature (10°C - 41°C. Default = 38°C) and thereafter the spa control will automatically heat to and maintain that selected water temperature. This is called demand heating - the filtration pump and heater will be activated when required to maintain the set water temperature.

*Information is subject to change without notice.

Adjusting Set Temperature
SpaNet™ SV Mini 1 & SV Mini 2

The time spent heating the pool and running the filtration pump under normal operation will be taken into account and where required the pump will run for additional periods every three hours to maintain the minimum level of daily filtration as set by the user.

Dependant on the amount of normal spa use, set water temperature, minimum hours of filtration per day, climatic conditions and season being experienced, the spa control will engage the heater and / or filtration pump for differing periods of time, at differing times of day. The advanced software constantly monitors and recalculates after each heating / filtration cycle to ensure the correct daily filtration time is achieved and desired set water temperature is maintained.

Unless adjusted the SV controller will automatically heat to and maintain the default temperature of 38°C. The water temperature set point can be adjusted from 10°C to 41°C in steps of 0.2°C increments.

Adjusting set temperature

*Information is subject to change without notice.

Adjusting Set Temperature
SpaNet™ SV Mini 1 & SV Mini 2

- Press and hold the UP or DOWN button to begin set temperature adjustment
- The display will show the (S.TMP) set temperature indicator icon, the main digits flash and temperature will begin adjusting
- Press the UP or DOWN buttons to adjust the set temperature by 0.2°C increments to your desired temperature
- Press OK to confirm and save setting, or wait for the 10 second idle timeout. The main digits will stop flashing and display returns to default display mode

NOTES:

1. *During a heating cycle the SV Mini may raise the water temperature up to 0.5°C above set temperature point to provide an average water temperature of set point at most times.*
2. *If an optional heat pump is NOT fitted the spa controller has NO ability to cool the spa water. Lowering the set temperature point will NOT cause the water to cool.*
3. *If an optional heat pump IS fitted the spa water CAN be cooled as well as heated. Lowering the set temperature point will ensure the heat pump engages/disengages a cooling cycle (if required) to maintain the desired set water temperature so long as H.PMP mode is set to AUTO.*
4. *If the spa control has been in standby mode (idle) for some time and the set temperature point is adjusted, the filtration/circulation pump may run for up to ten (10) minutes to complete a mixing cycle before the heater / heat pump engages to heat or cool (heat pump only) the water. To skip this mixing cycle and begin heating/(cooling) immediately press the PUMP A button multiple times to toggle the filtration pump through ON/OFF/AUTO. Once AUTO is re-engaged the heater will activate immediately.*

Pump Operation
SpaNet™ SV Mini 1

A designated filtration pump (pump 1) will automatically switch on and off as required to perform filtration and heating functions. All pump(s) will also operate for a short period during the daily sanitise cycle. In addition, the following manual pump controls are provided and will override automatic control.

The pump buttons are located on the right-hand side of the topside panels. The functions of the pump buttons change depending on pump configuration, however the Pump-A button is used to control the filtration pump (pump 1). For every press of a pump button the screen will temporarily display the selected pump state: ON, OFF, LOW, HIGH or AUTO and then revert to the default display mode. Possible pump configurations & button sequences are referenced in the tables below:

SpaNet™ SV Mini 1 pump buttons

SPA CONFIGURATION	PUMP A BUTTON	AUXILIARY BUTTON
Pump 1 = 2 speed Aux = Not Fitted	**2 speed pump:** Low / High / Off / Auto	-
Pump 1 = 1 speed Aux = Not Fitted	**1 speed pump:** On / Off / Auto	-
Pump 1 = 2 speed Aux = 1 speed or Blower	**2 speed pump:** Low / High / Off / Auto	**1 speed pump or Blower:** On / Off
Pump 1 = Circ or 1 speed Aux = 1 speed or Blower	**Circ pump or 1 speed pump:** On / Off / Auto	**1 speed pump or Blower:** On / Off

*Information is subject to change without notice.

Pump Operation
SpaNet™ SV Mini 2

SpaNet™ SV Mini 2 pump buttons

SPA CONFIGURATION	PUMP A	PUMP B	PUMP C	AUXILIARY BUTTON
Pump 1 = 2 speed Pump 2 = 1 speed Pump 3 = Not Fitted Blower = Fitted	**2 speed pump:** Low / High / Off / Auto	**1 speed:** On / Off	-	Vari / Ramp /Off
Pump 1 = Circ or 1 spd Pump 2 = 1 speed Pump 3 = Not Fitted Blower = Fitted	**Circ pump or 1 spd:** On / Off / Auto	**1 speed:** On / Off	-	Vari / Ramp /Off
Pump 1 = Circ Pump 2 = 1 speed Pump 3 = 1 speed Blower = Not Fitted	**Circ pump:** On / Off / Auto	**1 speed:** On / Off	**1 speed:** On / Off	-
Pump 1 = Circ Pump 2 = 1 speed Pump 3 = 1 speed Blower = Not Fitted	**Circ pump:** On / Off / Auto	**1 speed:** On / Off	**1 speed:** On / Off	Vari / Ramp /Off

NOTES:

1. *If left ON, pumps automatically turn OFF after a 30 minute time-out period from the last button press.*
2. *If pump 1 is operating and heater is ON and pump is to be switched OFF, the pump will turn off after a 5 second delay – to allow the heater to cool down.*
3. *In some configurations, engaging high speed on a 2 speed pump or operating multiple pumps will cause the heater to load shed and turn OFF (even if heating is required) to keep the system within its available power supply.*

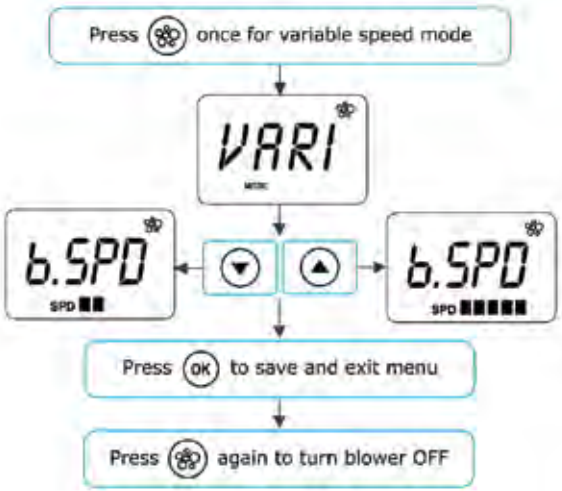
Blower Operation
SpaNet™ SV Mini 2

Blower operation SV Mini 2 models only

SV Mini 2 models feature a dedicated air blower power socket and button. The blower button is used to toggle the air blower ON/OFF and allow adjustment of the blower speed. The selected speed is saved and will be restored the next time the blower is turned on, for future on/off use. Two modes of operation are provided.

Variable speed mode

- Press the BLOWER button once to activate blower in variable speed mode
- Display will flash VARI then present the blower speed (b.SPD) adjustment men
- Press the UP or DOWN buttons to increase/decrease blower speed
- Press the OK button to confirm or wait for 10 second idle time-out
- Once running press the BLOWER button again to turn blower OFF

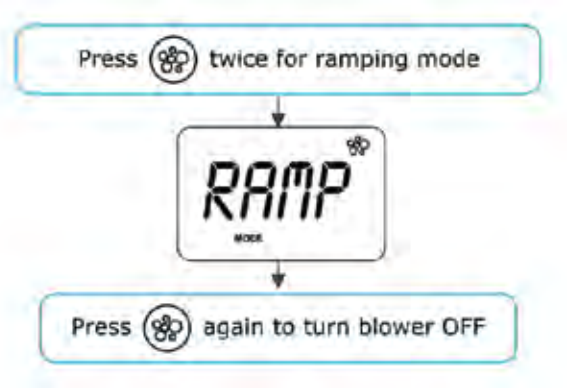


*Information is subject to change without notice.

Blower Operation
SpaNet™ SV Mini 2

Ramping mode

- Press the BLOWER button TWICE to activate blower in ramping mode
- Display will flash RAMP and blower operates in a ramping speed manner
- Once running press the BLOWER button again to turn blower OFF



NOTES:
1. *When blower is first turned ON it will always run at maximum speed for 3-4 seconds before changing to the last used speed.*
2. *If left ON, blower will automatically turn OFF after a 30 minute time-out period from the last button press.*

Light Operation
SpaNet™ SV Mini 1 & SV Mini 2

Multi-colour LED lighting effects

The light button is used to toggle the spa light(s) ON / OFF and to access the light mode menus. The features that can be adjusted are the light colour, light effect mode, light effect transition speed, and light brightness. All light settings are saved and will be restored the next time the light is turned ON, for future ON / OFF use.

Selecting light colour or effect mode

Press the LIGHT button to turn light(s) on/off => light will display last used light mode. If no changes are required there is no need to do anything further. If however you wish to adjust the light settings refer below:

Use the UP or DOWN buttons to toggle between the two light modes:

Title	Mode	Description
U.CLR	User Colour	Select from 7 possible colours
FADE	Fade Effect	Fade transition through all colours

*Information is subject to change without notice.

Light Operation
SpaNet™ SV Mini 1 & SV Mini 2

User colour mode

If user colour mode is selected press OK or wait 10 seconds for the display to show the current selected colour number. There are 7 colours to choose from (CL:00 – CL:07). Use the UP or DOWN buttons to adjust the colour. Press OK to confirm and skip to the light brightness adjustment or wait for the 10 second inactivity time out.

Fade effect mode

If fade effect mode is selected press OK or wait 10 seconds for the display to show the light speed (L.SPD) adjustment screen where the speed of the fade transition between colours can be adjusted. Use the UP or DOWN buttons to increase or decrease the transition speed to your desired level. Press OK to confirm and skip to the light brightness adjustment or wait for the 10 second inactivity time out inactivity time out.

Light brightness

Once light mode and colour or light speed has been selected the controller offers a light brightness adjustment. Use the UP or DOWN buttons to increase/decrease the light brightness to your desired level. Press OK to confirm or wait for the 10 second inactivity timeout.

*Information is subject to change without notice.

Keylock Function
SpaNet™ SV Mini 1 & SV Mini 2

NOTES:
1. *The light mode / user colour / light speed / light brightness adjustment screens are only displayed for 10 seconds each when the light(s) are first turned ON. If no adjustment is made the light(s) will run as per the last used settings, and the screen will time-out and revert to the default display mode. If you wish to adjust the light(s) settings once the light(s) have been running for a period of time, the light(s) must be turned OFF and back ON again to restore the light mode adjustment screens.*
2. *If left ON, the light(s) will automatically turn OFF after a 45 minute time out period from the last button presss.*

Keylock fuction

How to set full or partial keylock

The keypad buttons can be locked to prevent accidental key presses or to limit access to certain controller functions. This feature is helpful where children are present or spa is used by many people.

There are two types of keylock:

Full Lock All buttons are disabled

Partial Lock Allows use of pumps, blower, and light but locks out settings and temperature adjustments

Full Lock

- Press and hold UP + DOWN + PUMP A until LOCK appears on the display
- Once locked if any button is pressed the key stroke will be ignored and display will show LOCK

*Information is subject to change without notice.

- To unlock press and hold UP + DOWN + PUMP A

Partial Lock

- Press and hold UP + DOWN + PUMP B until LOCK appears on the display
- Once locked only pumps, blower, and light can be used. Other key strokes will be ignored and display will show LOCK
- To unlock press and hold UP + DOWN + PUMP B

AUTO daily sanitise

The controller will automatically run a 10 minute sanitise cycle every day at 9:00am. This sanitisation cycle runs the filtration pump and ozone/UV (if fitted) to filter the pool water to restore and refresh water quality. If pump 1 is a 2 speed pump the pump will run in high speed for the duration of the cycle. In addition at the start and end of the cycle thecontroller will sequentially run any additional accessories (auxiliary, pump2, pump3 or blower if fitted) for one minute each to purge the plumbing and clear any unfiltered water trapped in those accessory lines.

NOTES:
1. *If the controller is in a programmed sleep period at 9:00am it will wait until the sleep period ends before the daily sanitise cycle runs.*
2. *If the spa is in use prior to the 9:00am sanitise cycle start time the cycle is cancelled for the day. Spa in use = button has been pressed and spa has not had the 45 minute inactivity time out expire since the last button press.*

Set-up Menu
SpaNet™ SV Mini 1 & SV Mini 2

Set-up menu

The SV Mini controllers feature a setup menu which allows customisation of adjustable software settings. These settings do not need to be modified often and in most cases the default settings are all that is required, however if the spa owner wishes to customise any settings it is completed through the setup menu.

- To access the setup menu press and hold the **UP** + **DOWN** buttons simultaneously until display shows **FILT**
- Use the **UP** or **DOWN** buttons to navigate through setup menu items
- Press the **OK** button to enter setting adjustmentms
- Press the **UP** or **DOWN** buttons to adjust setting
- Press the **OK** button to confirm and save the setting adjustment

Refer table on the following page for details on setup menu items.

NOTES:
1. *The setup menu settings are stored in non-volatile memory (EEPROM) and are remembered when the mains power is turned OFF. No need to reprogram settings when power is restored.*
2. *A ten (10) second idle menu time out period exists. If a button press is not detected for 10 seconds the menu will time out and the screen will return to the default display mode.*

*Information is subject to change without notice.

Set-up Menu
SpaNet™ SV Mini 1 & SV Mini 2

Item	Settings	Notes
FILT	Hours of filtration per day	Adjustable from 1 to 24 hours
SNZE	Sleep Timer Menu	
1.SNZ	Sleep timer 1	[1.DAY] Days of week, [1.BGN] Begin Time, [1.END] End Time
D.DIS	Default display mode	Water Temp (W.TMP) / Set Temp (S.TMP) / Clock (TIME)
WIFI	WiFi Setup Menu	
HOT	Hot spot mode	Activates hot spot mode for WiFi setup process
INFR	Infrastructure mode	Force a disconnect/reconnect to WiFi server to refresh connection
RSET	Reset WiFi module	Deletes all settings and prepares WiFi module for setup process
H.PMP*	Heat pump mode	Auto (heat & cool) / Heat only / Cool only / Off (HP disabled)
H.ELE*	HP + element boost	Off = heat pump only, electric heater disabled (default setting) On = heat pump + electric heater combined for heating

** H.PMP and H.ELE setup menu items will only be visable if a SV Series heat pump is installed and connected to the SV Mini control.*

Set-up Menu
SpaNet™ SV Mini 1 & SV Mini 2

FILT – Filtration (total hours per day)

Automatic filtration is provided to ensure that the pool water is filtered for at least a minimum number of hours each day. Total daily runtime can be adjusted from 1-24 hours (default = 2 hours). Total filtration runtime is broken into smaller blocks which occur every three hours. All time spent running the pump under normal operation (manual use, heating, sanitise cycle) will be taken into account and where required the pump will run for additional periods throughout the day to maintain the minimum level of daily filtration as specified by the user.

SNZE – Sleep Timer

The sleep timer is a very handy feature that enables the user to stop all spa activity and silence the spa during certain times of day or night. While the controller is sleeping NO automatic heating or filtration maintenance will occur, however the spa can still be operated by manual use without the need to adjust sleep time settings. The sleep timer setup consists of defining days of operation and begin time and end time of sleep period. Use the UP or DOWN button to adjust each setting within the sleep setup and press OK to confirm and skip to the next setting. Sleep timer settings are referenced in this table:

Title	Settings	Options
1.DAY	Selected days of operation	Sat-Fri (7 days), Sat-Sun (weekend), Mon-Fri (weekdays), OFF
1.BGN	Time sleep period begins	Adjustable to any time 0:00 to 23:59 (Default = 22:00 PM)
1.END	Time sleep period begins	Adjustable to any time 0:00 to 23:59 (Default = 07:00 AM)

*Information is subject to change without notice.

Set-up Menu
SpaNet™ SV Mini 1 & SV Mini 2

NOTES:
1. *SV Mini is preset with a default sleep timer – 7 days a week, begin 22:00 (10PM), end 07:00 (7AM)*
2. *Set 1.DAY=OFF to disable sleep timer*
3. *If spa in use at begin time of sleep period, spa will not sleep until 45 min inactivity timeout has elapsed*

D.DIS – Default Display

The user can adjust the default display mode to show their preferred selection of either: W.TMP (water temperature), S.TMP (set temperature) or TIME (current time and day).

WIFI – WiFi Setup

This menu is only of use if the optional SpaNET™ SmartLINK™ or SmartSTREAM™ WiFi module has been installed and connected to the SV Mini. This menu has three commands that can be executed. Use the UP or DOWN buttons to select desired command and press the OK button to execute – display will show WAIT whilst the WiFi module carries out the command.

HOT Puts WiFi module in hot spot mode for initial app setup. **Note:** Once initial app setup has been completed if the HOT command is executed again all WiFi settings Once locked if any button is pressed the key stroke will

INFR Forces WiFi module to disconnect/reconnect from the SpaNET™ app server to refresh connection if spa is not automatically coming online once the app setup process has been completed.

RSET Deletes programmed settings from WiFi module and returns the module to its factory default state. **Note:** If this command is executed settings are lost and the app setup process must be run again.

Set-up Menu
SpaNet™ SV Mini 1 & SV Mini 2

H.PMP – Heat Pump Mode

This setting is only visible if a SV Series heat pump is connected and defines heat pump operating mode.

The available operating modes are as follows:

AUTO	Heat pump will heat and cool
HEAT	Heat pump will only heat (Default)
COOL	Heat pump will only cool
OFF	Heat pump disabled

H.ELE – Heat Pump + SV Element Boost

This setting is only visible if a SV Series heat pump is connected and defines how the SV Mini electric heating element operates with a heat pump. By default, this setting is set to OFF which disables the electric heater using only the heat pump for heating. Set to ON to allow the electric element to run in conjunction with the heat pump to boost heating speed if the water temperature is 2°C or more below set temperature point or the heat pump has been operating for more than 1 hour and set point has not been achieved. The H.ELE setting choices are:

OFF	SV element disabled (heat pump only)
ON	SV element + Heat Pump for heating

Heating Control & Protection
SpaNet™ SV Mini 1 & SV Mini 2

Fast heat cycle

After initial mains power on the SV Mini will perform a fast heat up cycle that enables continuous demand heating regardless of programmed/default sleep timer. Once the set temperature has been reached the fast heat up cycle is cancelled and normal operation resumes and sleep timer is obeyed. The purpose of a fast heat up cycle is to help the spa reach set temperature as soon as possible after it has been powered up. For new spas or spas refilled with cold water it is desirable not to have sleep time delaying the time to takes for the spa to reach set temperature point.

NOTES:
1. *A fast heat up cycle is cancelled by manually forcing the filtration pump to OFF via the keypad.*
2. *For new spas or when a spa has just been refilled it is common for spa users to test the operation of each pump when the power is first turned on. This process will cancel the fast heat up cycle. After completing testing of the spa functions remember to reset mains power if you wish to reactivate fast heat up cycle.*

Freeze protection

Freeze protection will be activated whenever the water temperature drops below 4°C. It runs back to back 10 minute sanitise cycles and displays **"WARM"** on the LCD. It also runs each spa accessory (i.e. jet pumps and air blower) in sequence to run water through the pipe work whilst running the filtration pump and heater. During the "WARM" cycle the heater and heat pump (if fitted) will operate however heater load shedding may occur when accessory pumps are running depending on control and load shed settings.
At the end of each 10 minute **"WARM"** cycle the water temperature is checked. If it is above 4°C freeze protection stops and the controller returns to its prior state. If the temperature is not above 4°C another cycle will run.

Heating Control & Protection
SpaNet™ SV Mini 1 & SV Mini 2

NOTES: *Freeze protection overrides the sleep timer– if the water temperature drops below 4°C and the controller is in a sleep period it will wake up. So even if high amounts of sleep time and a low set temperature point have been programmed the SV Mini will always maintain the water temperature at least above 4°C.*

Defrost cycle (heat pump models only)

During periods of low ambient temperatures defrost cycles may be required to prevent the heat pump's condenser from freezing. Ambient and condenser temperatures are constantly monitored and defrost cycles will be automatically activated if certain conditions are met. Defrost cycles run for a minimum of 3 minutes to a maximum of 10 min.

Overheat protection

All SV controllers feature three forms of overheat protection:

1. If sensed water temperature within the heater unit exceeds safe working limits the heating element will be disabled and the controller will shut down and latch fault code (ER4 - Thermal Trip). Normal operation will not resume until heater element has cooled and main power is reset

2. If sensed water temperature exceeds 42°C filtration is stopped until the temperature falls below 42°C to prevent heat rise from filtration pump operation

3. If sensed water temperature exceeds 45°C the controller will shut down and latch fault code (Er5 - Pool too hot, see page 96). Normal operation will not resume until mains power is reset

*Information is subject to change without notice.

Error Codes/Troubleshooting
SpaNet™ SV Mini 1 & SV Mini 2

SV spa controllers feature self-diagnostics and scrolling error messages to quickly troubleshoot possible problems. Should the spa control encounter a problem the error code / message will scroll across the topside panel screen until the problem is resolved. If an error condition is experienced all spa functions are shut down and the spa should not be used until the error condition has been resolved. A list of error codes with descriptions of problems and possible solutions is detailed below for your reference.

IMPORTANT NOTE

- *For most error codes mains power to the spa control must be turned OFF and then back ON before the error condition will be cleared. Before attempting any troubleshooting always ensure mains power is isolated and turned OFF.*

Heartbeat LED

All SV Mini spa packs feature a red flashing heartbeat LED light. The heartbeat LED is located on the main printed circuit board of the spa pack itself (spa pack enclosure cover needs to be removed).

The heartbeat LED flashes to indicate the current health/status of the spa pack. When the spa pack is functioning correctly with no errors to report the heartbeat LED emits a single flash in a constant pulse much like a heartbeat (ON, OFF, ON, OFF). If the spa pack encounters a fault the heartbeat LED will begin flashing in sequence with the error code number being experienced (ie. ER2 = ON,ON; OFF ON,ON; OFF).

If the keypad display is ever blank a spa user can still determine the health / status of the SV Mini controller by removing a panel from the spa skirt and checking the heartbeat LED on the front of the spa pack itself.

Error Codes/Troubleshooting
SpaNet™ SV Mini 1 & SV Mini 2

ER-2 HEATER PLUG

Problem: No heater sensor communication

Cause: Heater sensor communication problem. Sensor cable is not correctly connected to spa control or is damaged

Solutions:

- Turn mains power OFF, remove spa cabinet panel and SV Mini enclosure cover
- Check heater sensor cable is firmly plugged into spa control socket labelled HEATER
- Unplug and re-plug heater sensor cable to re-establish connection to spa control
- Check for damage to sensor lead, replace covers and test spa again
- Contact spa reseller if problem is not resolved

ER-3 WATER PRIME

Problem: Water prime failed – air detected in heater tube

Cause: Airlock in pipe work, low water level, dirty filter cartridges

Solutions:

- Press Pump A button to retry water prime
- Check spa water level (refill if necessary)
- Remove filter cartridges and press Pump A button to retry prime
- Bleed airlock from pipe work by slightly loosening couplings on front of filtration pump
- Remove filter cartridges and flush water down pipe work with a hose

ER-4 THERMAL TRIP

Problem: Heater thermal trip activated. Heater has been active and has had insufficient water flow over the element. Low or no water flow has caused the heater temperature to exceed its maximum limits and the spa control has shut down operation to prevent any damage to the heater unit.

Cause: Low water level, airlock in pipe work, closed shut-off valves, dirty filter cartridges, filtration pump failed or operation intermittent

Solutions:

- Turn mains power OFF and wait 20-30 minutes for element to cool and thermal cut-out device to reset. Then turn power back ON
- Check spa water level (refill if necessary)
- Remove filter cartridges and clean as per manufacturer's recommendations or replace cartridges if required
- Check under spa cabinet to ensure all shut-off valves are in the OPEN position
- Bleed airlock from pipe work by slightly loosening couplings on front of filtration pump or by removing filters and flushing water down pipe work with a hose.
- Contact your spa reseller if problem persists

Error Codes/Troubleshooting
SpaNet™ SV Mini 1 & SV Mini 2

ER-5 POOL TOO HOT

Problem: Pool over temperature. Temperature sensor reading ≥ 45°C.

Cause: High ambient temperatures (especially in summer months) have caused water temperature to rise above set temp point, Excessive filtration time, Jet pumps have been operating for extended periods with the spa cover still on.

Solutions:

- Turn mains power OFF, remove spa cover, allow spa to cool then turn power back ON
- Check daily filtration time (refer filtration section) and reduce daily filtration time if required
- Check spa cover is not resting on topside panel buttons causing jet pumps to start when cover is on. Use keylock function to lock keypad buttons when spa not in use
- Contact your spa reseller if problem persists

ER-6 12V OVERLOAD

Problem: 12V (port) current draw over 1A limit

Cause: Total 12V current drawn by keypad(s), light(s), expansion ports and in pool temp sensor is excessive, 12V power supply is overloaded, too many LED light bulbs installed, faulty LED light

Solutions:

- Turn mains power OFF and restart spa to see if problem reoccurs
- Perform EPRM software reset to factory defaults
- Reduce number of LED lights connected to spa control
- Systematically unplug lights, keypads and expansion port loads from spa pack (one by one) to identify the faulty 12V device
- Contact spa reseller if problem is not resolved

*Information is subject to change without notice.

ER-8 CTRL FAULT HVS

Problem: Heater relay is on when it should be off

Cause: Power surge, periods of low or high voltage, water on spa pack terminal block, relay fault

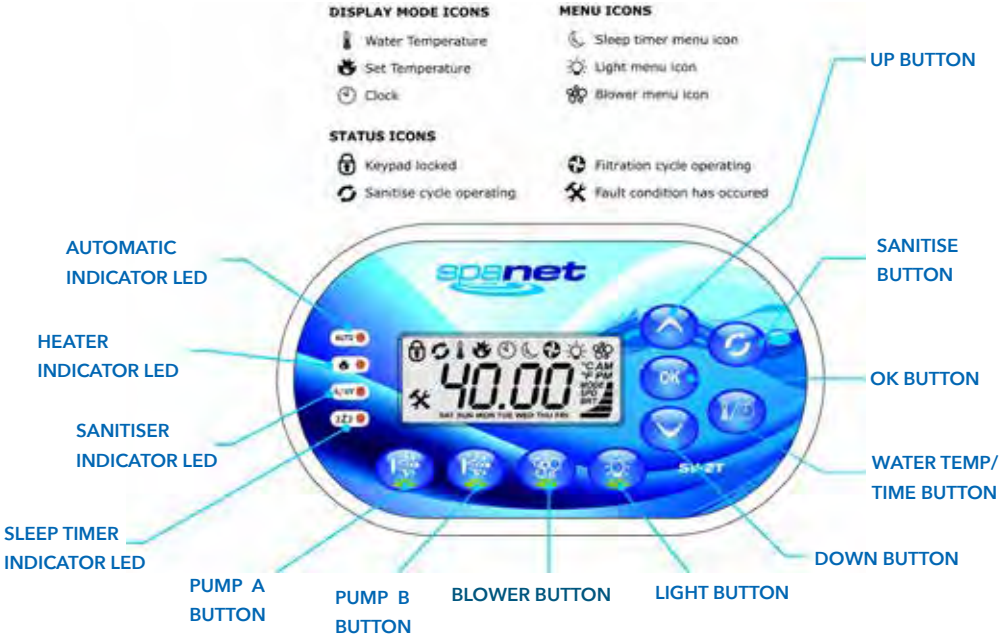
Solutions:

- Turn mains power OFF and back ON again to see if spa control recovers from ER8 fault
- Inspect under spa cabinet for evidence of water leaking onto spa control. If water present, turn mains power OFF and isolate, then resolve leak, dry up excess water, and allow spa control to dry out before restoring power.
- Contact spa reseller if problem is not resolved

SpaNet™ SV2
Topside Panel

Keypad Overview

Buttons and indicator LEDs



AUTOMATIC INDICATOR LED: This LED will turn on whenever the filtration pump is in automatic mode.

HEATER INDICATOR LED: This LED will turn on when the heater or heat pump (if fitted) is operating.

SANITISER INDICATOR LED: This LED will turn on to indicate that the ozone or uv sanitiser unit is operating (if fitted).

SLEEP TIMER INDICATOR LED: This LED will turn on when the controller is in a sleep mode.

PUMP A BUTTON: Used to toggle the filtration pump on / off / auto.

*Information is subject to change without notice.

SpaNet™ SV2
Topside Panel

PUMP B BUTTON: Used to toggle any additional jet pump on / off (if fitted).

BLOWER BUTTON: Press to toggle blower on/off. A single press turns blower on in vari-speed mode. Use up & down buttons to vary speed. A double press activates the ramping mode.

LIGHT BUTTON: Press to toggle spa lights on / off. When light is first turned on the user has the ability to adjust the light effect mode or colour via the up, down & OK buttons.

DOWN BUTTON: Short single presses toggle through the three display modes:

W.TMP = Water Temperature, S.TMP = Set Temperature, TIME = Clock.

Holding the button will force the controller to begin adjusting the set temperature and will lower the set temperature point.

Also used for adjusting settings.

WATER TEMP / TIME BUTTON: A shortcut key designed to quickly toggle between actual water temperature and time display modes.

OK BUTTON: Used to confirm and save setting adjustments or to enter setting adjustment menus.

SANITISE BUTTON: Press once to activate a 20 minute sanitisation and clean up cycle to refresh water quality after spa use. A second press will cancel the cycle if already running.

UP BUTTON: Short single presses toggle through the three display modes:

W.TMP = Water Temperature, **S.TMP** = Set Temperature, **TIME** = Clock.

Holding the button will force the controller to begin adjusting the set temperature and will raise the set temperature point.

Also used for adjusting settings.

SpaNet™ SV3
Topside Panel

Keypad Overview

Buttons and indicator LEDs

AUTOMATIC INDICATOR LED: This LED will turn on whenever the filtration pump is in automatic mode.

HEATER INDICATOR LED: This LED will turn on when the heater or heat pump (if fitted) is operating.

SANITISER INDICATOR LED: This LED will turn on to indicate that the ozone or uv sanitiser unit is operating (if fitted).

SLEEP TIMER INDICATOR LED: This LED will turn on when the controller is in a sleep mode.

INVERT SCREEN BUTTON: Press to flip screen 180° for easy viewing when spa in use..

*Information is subject to change without notice.

SpaNet™ SV3
Topside Panel

PUMP (A, B, C) BUTTON: Used to toggle filtration pump and / or any additional jet pump(s on / off (if fitted).

BLOWER BUTTON: Press to toggle blower on/off. A single press turns blower on in vari-speed mode. Use up & down buttons to vary speed. A double press activates the ramping mode.

SANITISE BUTTON: Press once to activate a 20 minute sanitisation and clean up cycle to refresh water quality after spa use. A second press will cancel the cycle if already running.

DOWN BUTTON: Short single presses toggle through the three display modes:

W.TMP = Water Temperature, S.TMP = Set Temperature, TIME = Clock.

Holding the button will force the controller to begin adjusting the set temperature and will lower the set temperature point.

Also used for adjusting settings.

LIGHT (SPEED/COLOUR) BUTTON: Press to activate light speed or user colour selection menus. Use up & down buttons to adjust.

OK BUTTON: Used to confirm and save setting adjustments or to enter setting adjustment menus.

LIGHT (MODE) BUTTON: Press to activate light mode menu & use up & down buttons to select one of five different lighting effect modes.

LIGHT (ON/OFF) BUTTON: Press to toggle spa lights on / off.

UP BUTTON: Short single presses toggle through the three display modes:

W.TMP = Water Temperature, S.TMP = Set Temperature, TIME = Clock.

Holding the button will force the controller to begin adjusting the set temperature and will raise the set temperature point. Also used for adjusting settings.

SpaNet™ SV4
Topside Panel

Keypad Overview

Buttons and indicator LEDs

AUTOMATIC INDICATOR LED: This LED will turn on whenever the filtration pump is in automatic mode.

HEATER INDICATOR LED: This LED will turn on when the heater or heat pump (if fitted) is operating.

SANITISER INDICATOR LED: This LED will turn on to indicate that the ozone or uv sanitiser unit is operating (if fitted).

SLEEP TIMER INDICATOR LED: This LED will turn on when the controller is in a sleep mode.

*Information is subject to change without notice.

SpaNet™ SV4
Topside Panel

PUMP (A, B, C, D) BUTTON: Used to toggle filtration pump and / or any additional jet pump(s) on / off (if fitted).

BLOWER BUTTON: Press to toggle blower on/off. A single press turns blower on in vari-speed mode. Use up & down buttons to vary speed. A double press activates the ramping mode.

SANITISE BUTTON: Press once to activate a 20 minute sanitisation and clean up cycle to refresh water quality after spa use. A second press will cancel the cycle if already running.

DOWN BUTTON: Short single presses toggle through the three display modes:

W.TMP = Water Temperature, S.TMP = Set Temperature, TIME = Clock.

Holding the button will force the controller to begin adjusting the set temperature and will lower the set temperature point.

Also used for adjusting settings.

INVERT SCREEN BUTTON: Press to flip screen 180° for easy viewing when spa in use.

OK BUTTON: Used to confirm and save setting adjustments or to enter setting adjustment menus.

LIGHT (SPEED/COLOUR) BUTTON: Press to activate light speed or user colour selection menus. Use up & down buttons to adjust.

LIGHT (ON/OFF) BUTTON: Press to toggle spa lights on / off.

UP BUTTON: Short single presses toggle through the three display modes:

W.TMP = Water Temperature, S.TMP = Set Temperature, TIME = Clock.

Holding the button will force the controller to begin adjusting the set temperature and will raise the set temperature point. Also used for adjusting settings. Purge air from plumbing system.

SpaNet™ SV2, SV3 & SV4 Instructions

SV Series features overview

Power SMART

Welcome to the eco-friendly world of power smart spa controls with the SV Series from SpaNET™. Sophisticated real-time current sensing and variable heater technology allows the SV to make optimum use of any available power supply. Multi-phase capable, the SV Series also provides flexibility with connection to mains power supplies supporting connection to 1,2 or 3 phases from 10 to 60A. Add in the host of exclusive PowerSMART energy saving features such as the dedicated heat pump interface, Dynamic Thermal Tuning, Off-Peak PowerSAVE software, and user-adjustable heating modes and the SpaNET™ SV Series stands apart from all rivals as the most power efficient spa control available that provides the lowest possible daily operating cost.

Variable heater

Most SV Series controller models feature SpaNET's innovative variable heater technology. With real-time current sensing the variable heater will automatically alter its power level (kW) to match the residual power available (amperage) after considering any operating accessory loads (i.e. jet pumps, air blowers). The benefit is that you can take advantage of a larger heater size for faster heat recovery and rest easy knowing this same heater will automatically reduce its size to maximise heating input when accessory loads are operating. The variable heater is automatically controlled and does not require adjustment. SV Series spa controller models that include the variable heater can be identified by a "-VH" suffix to the controller model number (i.e. SV3-VH).

Heat pump interface

The SV Series spa controls are the first in the world to feature a dedicated expansion module for seamless integration of an energy efficient heat pump to the spa heating / cooling control system. The SV heat pump interface revolutionises spa temperature

*Information is subject to change without notice.

control. We can now offer both automatic heating and cooling of the spa water (from 10°C - 40°C) all conveniently controlled via the spa-side keypad, whilst also providing greatly reduced heat recovery times which can be further reduced with the exclusive SV element boost and fast heat up cycle options. The SpaNET™ SV heat pump technology maintains your spa's water temperature using around 75% less energy than a conventional electric heater resulting in an eco-friendly and amazingly cost efficient appliance. If connected, the heat pump will automatically be controlled by the SV Series spa controller. If the temperature is adjusted the control system automatically responds and will use the heat pump to heat or cool where required to regulate the water to the new set temperature point. With solid state diagnostics and real time heat pump monitoring the SV series control system correctly looks after every need of the heat pump ensuring long term reliability whilst delivering absolute minimum operating costs.

Dynamic thermal tuning

No two spas are the same when it comes to thermal performance and heat retention. The SV control system will automatically adapt and tune itself to the thermal properties of your spa pool in its environment, day to day, season to season, to reduce demand heat cycling. Dynamic Thermal Tuning provides optimal thermal regulation whilst minimising power usage, resulting in lower daily operating costs.

Power SAVE (Off-peak filtration and heating)

Enjoy the benefits of greatly reduced off peak power tariffs to lower your spa's daily operating cost. The SV PowerSAVE technology controls automatic power consumption to off peak times whilst maintaining spa water temperature and daily filtration times. Simply enable PowerSAVE and set the tariff times and begin saving money.

*Information is subject to change without notice.

Water Priming Mode
SpaNet™ SV2, SV3 & SV4

TIPS ON FILLING SPA

- Before filling remove spa cabinet panel and be sure that all valves in the plumbing system are fully open to maximise the amount of air that can escape the pipe work during filling.
- Remove filter cartridge(s) before filling and be sure to fill the spa through the filter itself to flood the pipe work with water and minimise the chance of air pockets forming in the plumbing during the filling process.
- DO NOT fill spa by placing hose in the foot well. Filling a spa this way will create a large number of air pockets in the pipe work and may cause difficulty when priming. Always fill spa through the filter area.
- Once the spa is filled to the correct level attempt to power up the spa with the filter cartridges still removed. Verify that the spa controller completes its priming sequence and begins normal operation. Once normal operation has been verified turn mains power off, re-install filter cartridge(s) and restart spa.

WARNING

RESTRICTION OF WATER FLOW DUE TO DIRTY FILTER CARTRIDGES IS THE MOST COMMON CAUSE OF ER-3 FAULTS. IF THE SPA POOL HAS BEEN OPERATING NORMALLY THEN INTERMITTENT ER-3 FAULTS START TO OCCUR THE FILTER CARTRIDGE(S) WILL REQUIRE SERVICING.
DEPENDING ON TYPE OF FILTER CARTRIDGE(S) INSTALLED THE FILTERS WILL EITHER REQUIRE CLEANING, SOAKING IN A FILTER CARTRIDGE DEGREASER SOLUTION OR REPLACING. REFER TO SPA RESELLER / MANUFACTURER FOR DETAILS ON TYPE OF CARTRIDGE INSTALLED AND RECOMMENDED CLEANING FREQUENCY & METHODS.

*Information is subject to change without notice.

Water Priming Mode
SpaNet™ SV2, SV3 & SV4

Every time the power is turned on the SV controller will initiate a water priming sequence on start up. During a priming sequence the filtration pump will run for up to 20 seconds at a time in an attempt to purge air from the plumbing. The keypad display will scroll PRIMING during this sequence.
If the spa controller is successful in clearing all of the air from the heater tube the system will begin normal operation. However if air is still detected the spa controller will shutdown and latch on fault code (ER3-Water Prime, page 131).

How do I solve ER-3 WATER PRIME:

- Press Pump A  button to retry water priming sequence
- Check spa is filled to correct operating level as advised by spa manufacturer (refill if necessary)
- Remove filter cartridge(s) and retry water prime
- With mains power turned OFF, bleed airlock from pipe work by slightly loosening couplings on front of filtration pump and allowing air to escape
- With filter cartridge(s) removed use hose to flush water down pipe work in an attempt to clear the air pockets from the plumbing

IMPORTANT NOTE

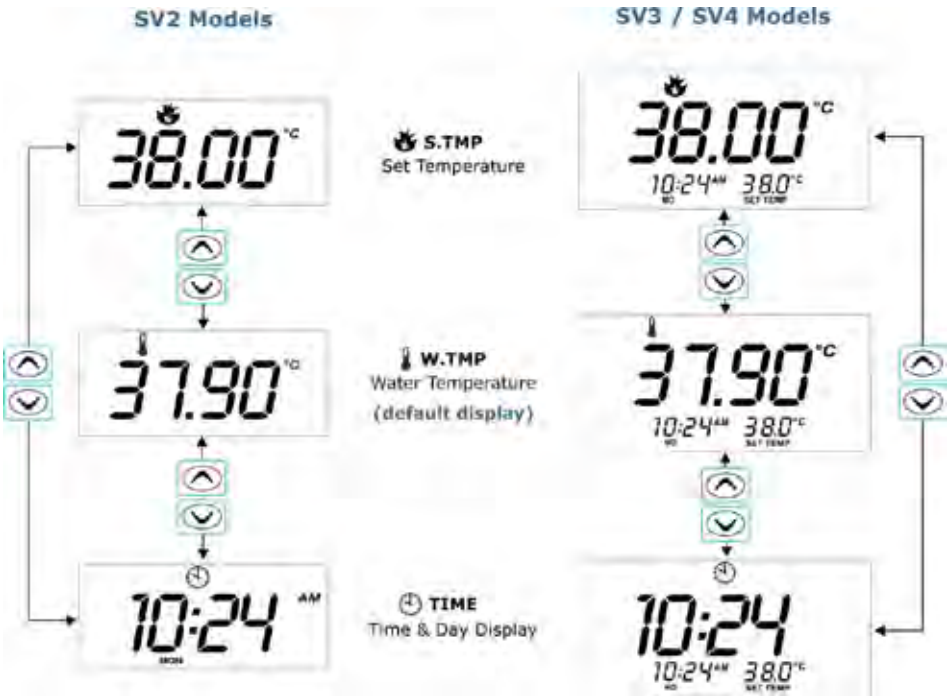
Do not allow the filtration pump to continue to run after five (5) x failed priming attempts. Operating a pump without water for extended periods may cause damage to the pump. Turn power off, wait ten (10) minutes and then try again later.

Display Modes
SpaNet™ SV2, SV3 & SV4

The in-heater water sensor constantly monitors the presence of water in the heater tube. If at any time air bubbles are detected the spa controller will automatically cancel all current operations and force a water priming sequence to begin. This will occur whether the spa is in automatic mode or manual use. If the priming sequence is successful in clearing the air pockets from the plumbing normal spa operation will resume in automatic mode. If unsuccessful the spa controller will shut down and latch on fault code ER-3 Water Prime.

Display modes

Water Temperature / Set Temperature / Time



*Information is subject to change without notice.

Display Modes
SpaNet™ SV2, SV3 & SV4

IMPORTANT NOTE

• A ten (10) second idle time out period exists on non-default display modes. If the display mode is changed the screen will time out and return to the default display after ten seconds of idle activity has elapsed (i.e. no button presses).

• At times the WTMP icon will not appear and the temperature reading may take a while to update. This is normal and results from the SV control updating and performing dynamic thermal tuning to your spa and its environment. If this occurs, ***the filtration pump may need to run for up to ten (10) minutes before the WTMP readout is refreshed.***

The SV keypads feature three different display modes to select from:

Mode	Icon	Description
W.TMP		Water Temperature
S.TMP		Set Temperature
TIME		Clock (Time & Day)

- The default display mode for all SV controller models is (W.TMP) Water Temperature.
- A short single press of the ^ or v button will navigate through the different display modes (refer illustrations aside).

Display Modes
SpaNet™ SV2, SV3 & SV4

- The purpose of the different display modes is to allow easy set temperature point and clock adjustment on all SV2/SV3/SV4 models.
- Please note the display mode icon at the top of the screen. These icons denote what display mode is currently being viewed.

Other display icons

Filtration Cycle
The spa is performing a filtration cycle

Sanitise Cycle
The spa is performing an automatic or manual sanitisation cycle

Keypad Locked
The keypad has been locked

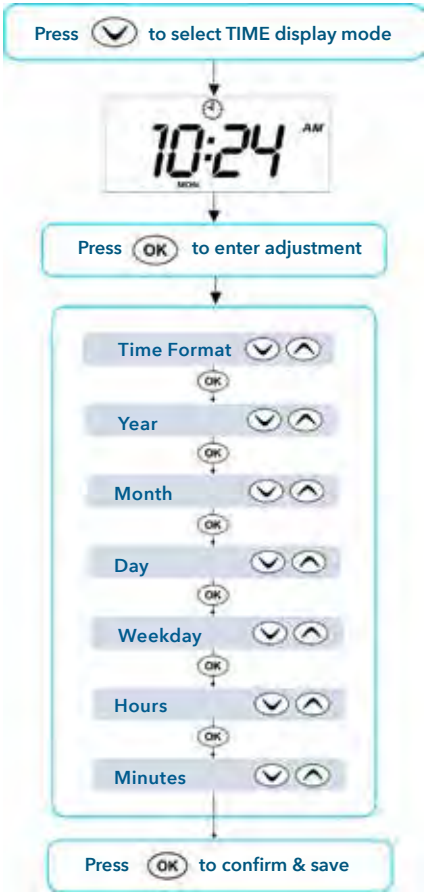
System Error
A fault has been detected. The system has halted operation so that corrective action can be taken. Take note of scrolling error code and consult trouble shooting section of this manual.

Setting the date and time

Be sure to set the date and time before operating the spa. Vital functions such as filtration, sanitisation cycles and power saving settings depend on the time and date being set correctly.

Setting Day/Time
SpaNet™ SV2, SV3 & SV4

How to program the clock



*Information is subject to change without notice.

Setting Day/Time
SpaNet™ SV2, SV3 & SV4

Steps:

- Press the ⌄ button to change display mode to TIME
- Press OK to enter clock adjustment
- The settings appear in the following order:

TIME & DATE

Format	(24 hr / 12 hr)
Year	(yyyy)
Month	(mm)
Day	(dd)
Weekday	(mon – sun)
Hours	(xx:00)
Minutes	(00:xx)

- Press the ⌄ or ⌄ button
  - to set year, month, day, hours and minutes
  - to change between 24-hour format and 12-hour format
- Press the OK button to save each setting and move to the next setting

IMPORTANT NOTE

- *Leap years are taken into account*
- *Daylight savings times are NOT taken into account. The clock will NOT automatically adjust. It must be changed manually*
- *The real time clock will continue to operate when mains power is off for a period up to 16 hrs*

*Information is subject to change without notice.

Adjusting Set TemperaturePoint
SpaNet™ SV2, SV3 & SV4

How to program the desired water temperature

The SV series spa controllers have been designed with simplicity in mind. The intelligent software constantly monitors the spa water, automatically controlling the heater and/or heat pump (if fitted) to ensure the desired set water temperature is maintained and required level of daily filtration achieved.

With set-and-forget technology, the spa user simply selects their desired water temperature (Range: 10°C - 41°C; Default: 38°C) and thereafter the SV controller will automatically

*Information is subject to change without notice.

Adjusting Set Temperature Point
SpaNet™ SV2, SV3 & SV4

heat to and maintain that selected water temperature. This is called demand heating - the filtration pump and heater will be activated as required to maintain the set water temperature. The time spent heating the spa and running the pump under normal operation will be taken into account and where required the filtration pump will run for additional periods throughout the day to maintain the minimum level of daily filtration.

Dependant on the amount of normal spa use, set water temperature, daily filtration times, and climatic conditions being experienced, the SV controller will engage the heater and/or heat pump (if fitted) for differing periods of time, at differing times of day. The advanced software constantly monitors and recalculates after each heating/filtration cycle to ensure the correct daily filtration time is achieved and desired set water temperature is maintained.

IMPORTANT NOTES

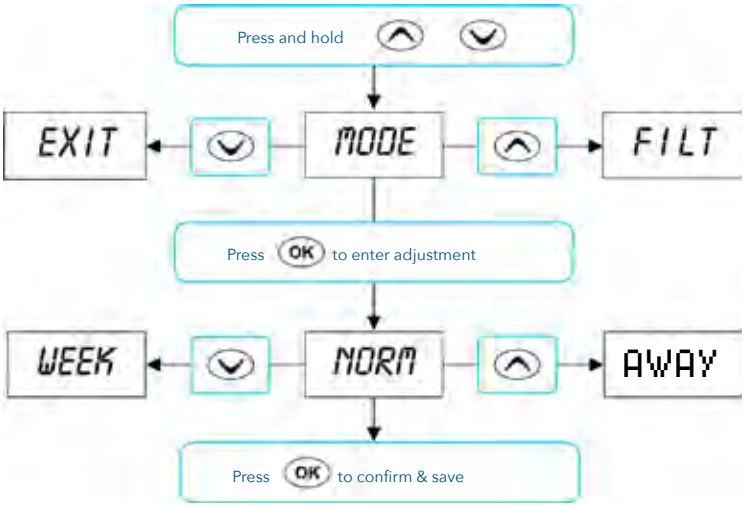
- *During a heating cycle the SV controller may raise the water temperature up to 0.6°C above set temperature point to provide an average water temperature of set point at most times.*
- ***If an optional heat pump is NOT fitted** the spa controller has **NO** ability to cool the spa water. Lowering the set temperature point will NOT cause the water to cool.*
- ***If an optional heat pump IS fitted** the spa water **CAN** be cooled as well as heated. Lowering the set temperature point will ensure the heat pump engages/disengages a cooling cycle (if required) to maintain the desired set water temperature.*

If the spa control has been in standby mode (idle) for some time and the set temperature point is adjusted, the filtration/circulation pump may run for up to ten (10) minutes before the heater / heat pump engages to heat or cool (heat pump only) the water.

*Information is subject to change without notice.

Heater Operating Modes
SpaNet™ SV2, SV3 & SV4

Normal / Away / Week Modes



IMPORTANT NOTES

- *If Away mode is selected all heating is completely disabled. The heater will not engage unless the water temperature falls below 4°C and freeze protection activates.*
- ***If a heat pump is fitted and demand cooling is required to maintain the set water temperature, the demand cooling will also be governed by the heating operating modes in the same way that demand heating is.***

*Information is subject to change without notice.

Heater Operating Modes
SpaNet™ SV2, SV3 & SV4

The SV controllers feature four different operating modes that effect demand heating and filtration behaviour (refer table below).

Item	Mode	Notes
NORM	Normal	Normal operation for demand heating and filtration
AWAY	Away	Demand heating is DISABLED. Filtration is fixed at 1 hour per day (the keypad will scroll "AWAY MODE" every 60 secs)
WEEK	Week	Monday to Thursday: Demand heating is DISABLED and filtration fixed at 1 hour per day. Friday to Sunday: Normal Operation

- Press and hold ⌄ and ⌄ buttons together until [MODE] is displayed
- Press OK button to enter operating mode (MODE) adjustment
- Press ⌄ or ⌄ to select desired operating mode
- Press OK button to confirm and save setting

*Information is subject to change without notice.

Heater Operating Modes
SpaNet™ SV2, SV3 & SV4

IMPORTANT NOTES

- *The Week mode is ideal for spas used only on weekends or located at weekend holiday homes. To minimize operating costs during the week (when the spa will not be used) demand heating is disabled and filtration is reduced to 1 hour per day. During Friday, Saturday and Sunday the spa controller will operate as if in normal mode.*
- *If Week mode is selected, the spa controller will obey all programmed values (set temperature, sleep timers, power save timers, filtration etc) on Friday, Saturday and Sunday. Depending on current season and ambient temperatures the spa water temperature may fall significantly during Monday to Thursday when demand heating is disabled. The spa user must take into consideration all programmed settings including sleep timers and power save timers for the spa to have sufficient time to reheat to set temperature point on Friday (refer page 119 Setup Menu for further details on programmable settings).*

Heating Control & Protection
SpaNet™ SV2, SV3 & SV4

Fast Heat Cycle / freeze and overheat protection

Fast heat cycle

After initial mains power on the SV controller will perform a fast heat up cycle that enables continuous demand heating regardless of programmed sleep timers or choice of or Normal (NORM) heating modes. Once the set temperature has been reached the fast heat up cycle is cancelled and normal operation resumes.

The purpose of a fast heat up cycle is to help the spa reach set temperature as soon as possible after it has been powered up. For new spas or spas refilled with cold water it is desirable not to have sleep time or economy heating mode delay the time to takes for the spa to reach set temperature point.

Note: AWAY mode disables a fast heat up cycle.

IMPORTANT NOTES

- *A fast heat up cycle is cancelled by manually forcing the filtration pump to OFF via the keypad.*
- *For new spas or when a spa has just been refilled it is common for spa owners to test the operation of each pump when the power is first turned on. This process will effectively cancel the fast heat up cycle. After completing testing of spa functions remember to reset mains power if you wish to reactivate the fast heat up cycle.*

Heating Control & Protection
SpaNet™ SV2, SV3 & SV4

Freeze protection

Freeze protection will be activated whenever the water temperature drops below 4°C. It runs back to back 10 minute sanitise cycles and displays "WARM" on the LCD. It also runs each spa accessory (ie. jet pumps and air blower) in sequence to run water through the pipe work whilst running the filtration pump and heater. During the "WARM" cycle the heater and heat pump (if fitted) will operate however heater load shedding may occur when accessory pumps are running depending on controller settings.

At the end of each 10 minute "WARM" cycle the water temperature is checked. If it is above 4°C freeze protection stops and the controller returns to its prior state. If the temperature is not above 4°C another cycle will run.

Note: *Freeze protection overrides sleep time or power save times – if the water temperature drops below 4°C and the controller is in a sleep period it will wake up. So even if high amounts of sleep time, power save time and a low set temperature point have been programmed, the SV controller will always maintain the water temperature at least above 4°C.*

Defrost cycle (heat pump models only)

During periods of low ambient temperatures defrost cycles may be required to prevent the heat pump's condenser from freezing. Ambient and condenser temperatures are constantly monitored and defrost cycles will be automatically activated if certain conditions are met. Defrost cycles run for a minimum of 3 minutes to a maximum of 10 minutes.

Heating Control Protection
SpaNet™ SV2, SV3 & SV4

Overheat protection

All SV controllers feature three forms of overheat protection:

- If sensed water temperature within the heater unit exceeds safe working limits the heating element will be disabled and the controller will shut down and latch fault code (ER4 - Thermal Trip, page 134). Normal operation will not resume until heater element has cooled and mains power is reset

- If sensed water temperature exceeds 42°C filtration is stopped until the temperature falls below 42°C to prevent heat rise from filtration pump operation

- If sensed water temperature exceeds 45°C the controller will shut down and latch fault code (Er5 - Pool too hot). Normal operation will not resume until mains power is reset

Pump Operation
SpaNet™ SV2, SV3 & SV4

Pump buttons

The jet pumps and/or filtration pump are controlled via the pump buttons on the keypad. The functions of the pump buttons change depending on pump configuration, however Pump-A button is mostly used to control the filtration pump.

The intention is to make best possible use of these buttons for all possible pump configurations. For every press of a pump button the display will temporarily show the selected pump state:

ON / OFF / LOW / HIGH / AUTO

and then revert to the default display mode. The most common pump configurations and button assignments are referenced in the next page table.

IMPORTANT NOTES

- *In configurations where a pump button controls the filtration pump and the heater is ON and pump is to be turned OFF; the pump will turn OFF after a 5 second delay to allow the heater to cool down.*
- *If left running, pumps will turn off after a 30 minute time out period. Time out period can be adjusted from 10 to 60 minutes via the Setup Menu item T.OUT.*
- *If after manual spa use filtration pump is left OFF, controller will revert to automatic mode 15 minutes after the expiry of the T.OUT period.*

Pump Operation
SpaNet™ SV2, SV3 & SV4

Keypad pump button assignments

PUMP CONFIGURATIONS					
MODEL	CIRC	PUMP1	PUMP2	PUMP3	PUMP4
SV2	no	1 spd	-	-	-
SV2	no	2 spd	-	-	-
SV2	yes	1 spd	-	-	-
SV2	yes	2 spd	-	-	-
SV3	no	1 spd	1 spd	-	-
SV3	no	1 spd	1 spd	1 spd	-
SV3	no	2 spd	n/a	1 spd	-
SV3	yes	1 spd	1 spd	-	-
SV3	yes	1 spd	1 spd	1 spd	-
SV3	yes	2 spd	n/a	1 spd	-
SV4	no	1 spd	1 spd	1 spd	1 spd
SV4	no	2 spd	n/a	1 spd	1 spd
SV4	no	2 spd	n/a	2 spd	n/a
SV4	yes	1 spd	1 spd	1 spd	1 spd
SV4	yes	2 spd	n/a	1 spd	1 spd
SV4	yes	2 spd	n/a	2 spd	n/a

*Information is subject to change without notice.

Pump Operation
SpaNet™ SV2, SV3 & SV4

BUTTON ASSIGNMENTS			
PUMP A	PUMP B	PUMP C	PUMP D
pump1 (on/off/auto)	-	-	-
pump1 (low/off/auto)	pump1 (high/low)	-	-
circ pump (on/off/auto)	pump1 (on/off)	-	-
circ pump (on/off/auto)	pump1 (low/high/off)	-	-
pump1 (on/off/auto)	pump2 (on/off)	-	-
pump1 (on/off/auto)	pump2 (on/off)	pump3 (on/off)	-
pump1 (low/off/auto)	pump1 (high/low)	pump3 (on/off)	-
circ pump (on/off/auto)	pump1 (on/off)	pump2 (on/off)	-
pump1 (on/off)	pump2 (on/off)	pump3 (on/off)	-
circ pump (on/off/auto)	pump1 (low/high/off)	pump3 (on/off)	-
pump1 (on/off/auto)	pump2 (on/off)	pump3 (on/off)	pump4 (on/off)
pump1 (low/off/auto)	pump1 (high/low)	pump3 (on/off)	pump4 (on/off)
pump1 (low/off/auto)	pump1 (high/low)	pump3 (low/off)	pump3 (high/low)
pump1 (on/off)	pump2 (on/off)	pump3 (on/off)	pump4 (on/off)
circ pump (on/off/auto)	pump1 (low/high/off)	pump3 (on/off)	pump4 (on/off)
circ pump (on/off/auto)	pump1 (low/high/off)	pump3 (low/high/off)	-

*Information is subject to change without notice.

Air Blower Operation
SpaNet™ SV2, SV3 & SV4

IMPORTANT NOTE

In some configurations if heater is ON, activating multiple pumps may cause the heater to load shed and turn OFF, or reduce element power (variable heater models). This is to keep the system within its maximum current limit. The heater will be reengaged or returned to full capacity as soon as the number of pumps running is reduced.

Air Blower Operation

Blower button

The blower button is used to toggle the air blower ON/OFF and allow adjustment of the blower speed. The selected speed is saved and will be restored the next time the blower is turned on, for future ON/OFF use. Two modes of operation are provided:

Variable speed mode

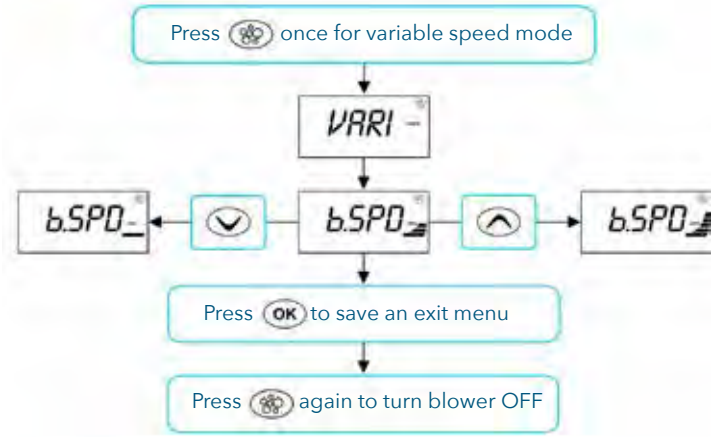
In this mode the blower speed can be manually adjusted to one of five (5) x different speed settings.

- Press button once to activate blower in variable speed mode
- Display will flash VARI mode then present b.SPD (blower speed) adjustment menu (refer illustration aside)
- Press or buttons to increase or decrease the blower speed (note: bar graph segments adjust with blower speed)
- Press OK button to exit menu or wait for 10 second display time out
- Press button a second time to turn blower off

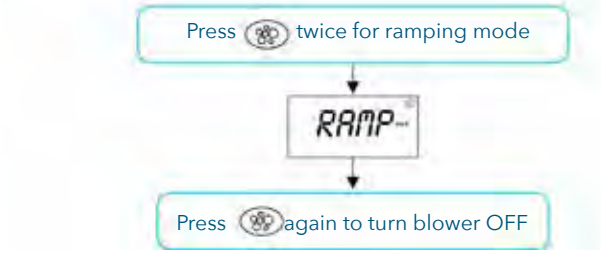
*Information is subject to change without notice.

Air Blower Operation
SpaNet™ SV2, SV3 & SV4

Variable Speed Mode



Ramping Mode



Ramping mode

In this mode the blower speed gradually increases and decreases through the blower speed range in a ramping manner.

- Press button twice to activate blower in ramping mode
- Display will flash RAMP mode and blower operates in a ramping manner
- Press button a second time to turn blower off

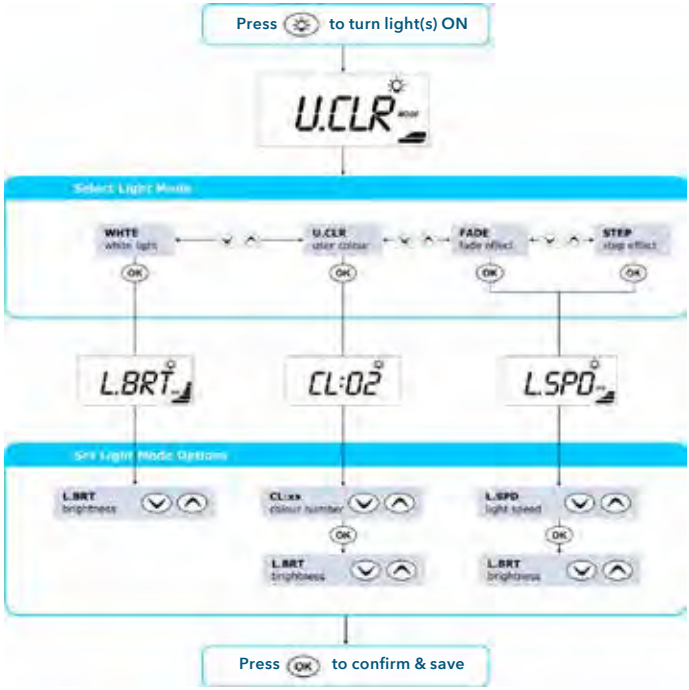
Light Operation
SpaNet™ SV2

IMPORTANT NOTE

- *When blower is turned on it runs at maximum speed for 3-4 seconds before changing to preset speed (this is normal)*
- *If left running, blower will turn off after a 30 minute time out period. Time out period can be adjusted from 10 to 60 minutes via the Setup Menu item T.OUT).*

Spa light operation (SV2.T models)

Multi-colour LED lighting effect modes



*Information is subject to change without notice.

Light Operation
SpaNet™ SV2

Light button

The light button is used to toggle the spa light(s) **ON / OFF** and to access the light mode menus. The features that can be adjusted are the light colour, light effect mode, light effect transition speed, and light brightness. All light settings are saved and will be restored the next time the light is turned **ON**, for future **ON / OFF** use.

- Press button to turn light(s) on / off
- When light is turned on keypad will display light mode menu showing current light mode in use (refer illustration aside)
- Press or button to navigate through choice of light modes:

  WHTE White Light
  UCLR User Colour
  FADE Fade Effect
  STEP Step Effect
- Press OK button to confirm light mode selection
- Dependant on light mode selected the keypad will display one of three light mode option screens (refer aside)

  L.BRT Light Brightness
  CL:xx User Colour Number (CL:00 - CL:20)
  L.SPD Light Effect Transition Speed
- Press or button to adjust each setting
- Press OK button to save each setting and move to the next setting

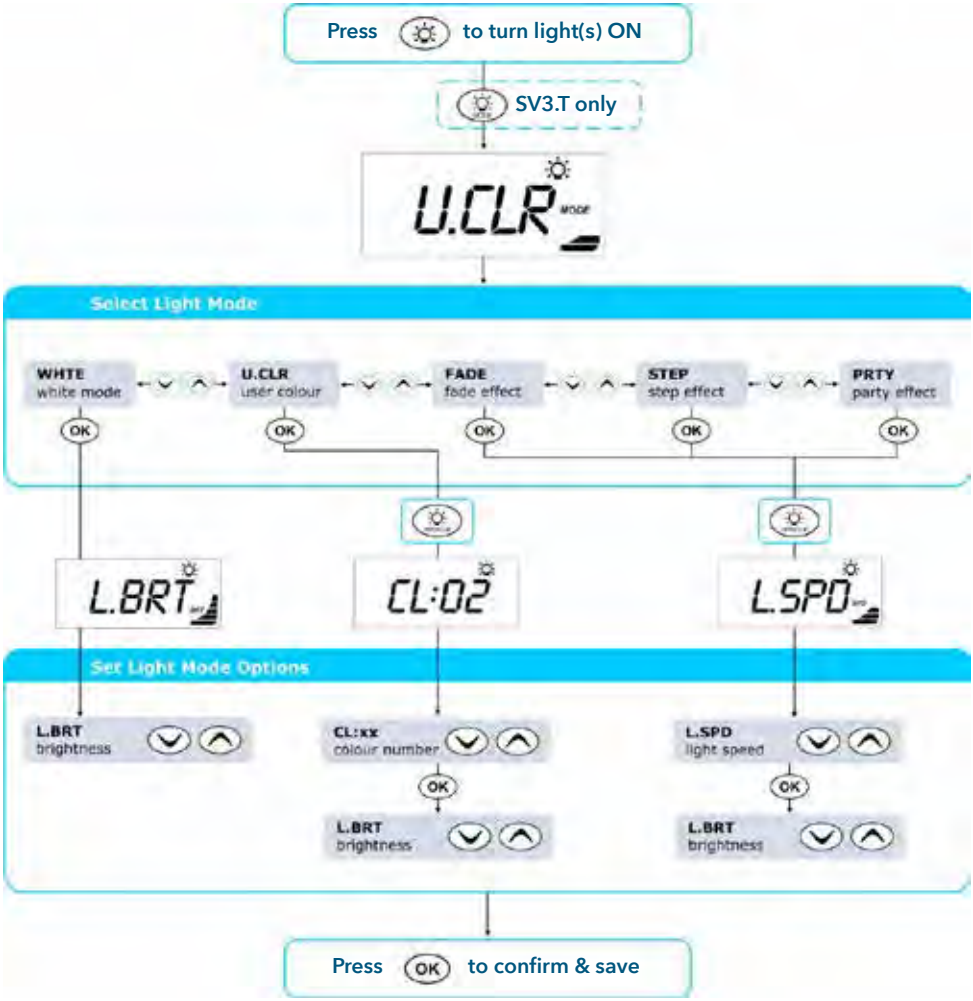
IMPORTANT NOTE

- *When blower is turned on it runs at maximum speed for 3-4 seconds before changing to preset speed (this is normal)*

Light Operation
SpaNet™ SV3/SV4

Spa Light Operation (SV3/SV4 Models)

Multi-colour LED lighting effect modes



*Information is subject to change without notice.

Light Operation
SpaNet™ SV3/SV4

Light button

The light buttons are used to toggle the spa light(s) **ON / OFF** and to access the light mode menus. The features that can be adjusted are the light colour, light effect mode, light effect transition speed, and light brightness. All light settings are saved and will be restored the next time the light is turned **ON**, for future **ON / OFF** use.

- Press button to turn light(s) on / off
- SV4.T models go straight to the next step

  SV3.T models => press to access light mode menu
- Press or button to navigate through choice of light modes:

  WHTE White Light

  UCLR User Colour

  FADE Fade Effect

  STEP Step Effect

  PRTY Party Effect
- Press OK button to confirm light mode selection
- Press to access light speed / colour menu
- Dependant on light mode selected the keypad will display one of three light mode option screens (refer aside)

  L.BRT Light Brightness

  CL:xx User Colour Number (CL:00 - CL:20)

  L.SPD Light Effect Transition Speed
- Press or button to adjust each setting
- Press OK button to save each setting and move to the next setting

IMPORTANT NOTE

- *If left switched on, light(s) will turn off 15 minutes after the expiry of the pump/blower time out periods.*

Sanitise Cycles
SpaNet™ SV2, SV3 & SV4

Automatic and manual water clean cycles

Press to activate sanitise cycle

Whilst the cycle is running the display alternates between the W.CLN (water clean) title screen and the minutes remaining in the cycle (refer image).

IMPORTANT NOTES

- *When the cycle is started automatic mode is enabled and if running any additional jet pumps and the blower are turned off.*
- *If the controller falls within a designated sleep or power save period during a sanitise cycle, the controller will not sleep until the sanitise cycle is finished.*

*Information is subject to change without notice.

Sanitise Cycles
SpaNet™ SV2, SV3 & SV4

Sanitise button

The sanitise button activates a twenty minute sanitisation cycle that runs the filtration pump and ozone / uv (if fitted) to filter the pool water to restore and refresh water quality. With circ pump systems jet pump1 will also run for the full 20 minute cycle. Where 2-speed filtration pumps are used the pump will run in high speed for the duration of the cycle. In addition, at the start and end of the cycle, the controller will sequentially (one at a time) run any additional pumps (pump2, pump3, pump4 if fitted) and the blower for one minute each to purge the plumbing and clear any unfiltered water trapped in those lines.

- Press  button to activate a 20 minute sanitise cycle
- Press  button again to cancel cycle (if desired)

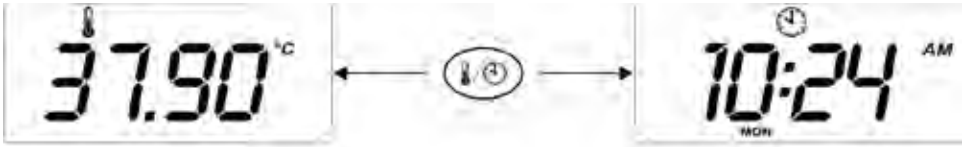
Automatic daily sanitise cycle

The controller will automatically run a 10 minute sanitise cycle every day at a user adjustable time (Default = 9:00am). The automatic sanitise cycle works in the same manner as a manual sanitise excepting that the cycle only runs for 10 minutes. This feature cannot be disabled – only the time this cycle is activated may be changed via the Setup Menu item W.CLN (refer page 123).

IMPORTANT NOTES

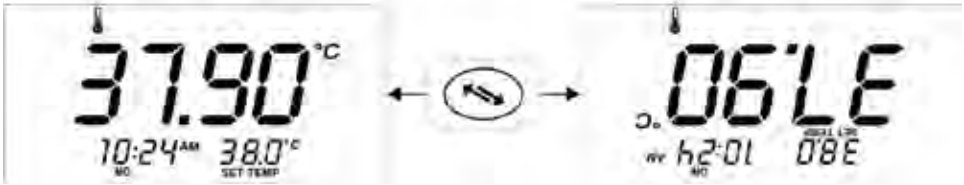
- *If the controller is in a sleep period at the specified automatic sanitise cycle time, it will wait until the sleep period ends before the sanitise cycle runs.*
- *If the spa pool is in manual use (i.e. the loads have not timed out and the spa has not returned to auto mode) at the time the automatic sanitise cycle is set to run the cycle will be cancelled for that day.*

Special Function Buttons
SpaNet™ SV2, SV3 & SV4



Water Temperature

Time and Day



Normal Orientation

Inverted Orientation

*Information is subject to change without notice.

Special Function Buttons
SpaNet™ SV2, SV3 & SV4

SpaNet™ SV2

 **Water temp / time toggle button**

Featured on SV2 models only, this button is a shortcut key designed to quickly toggle the display mode between [W.TMP] Water Temperature or [TIME] Time & Day display modes.

SpaNet™ SV3 / SV4

 **Invert display**

On SV3 and SV4 model controllers the orientation of the keypad display can be inverted (flipped 180°) for easy reading in and out of the spa.

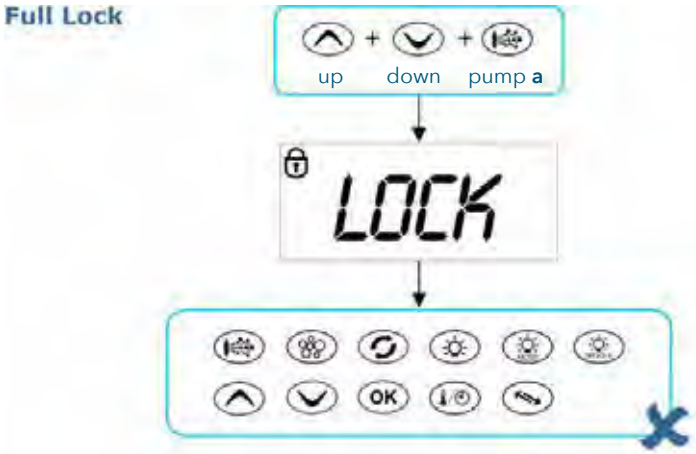
- Press  button to invert display orientation

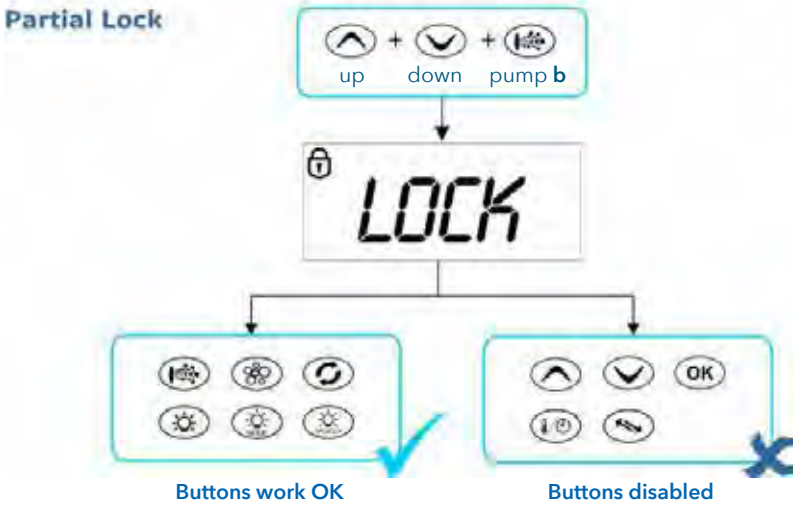
IMPORTANT NOTES

- *The operation of the*  *and*  *buttons also reverse to match the current display orientation.*
- *If the spa pool is in manual use (i.e. the loads have not timed out and the spa has not returned to auto mode) at the time the automatic sanitise cycle is set to run the cycle will be cancelled for that day.*

Special Function Buttons
SpaNet™ SV2, SV3 & SV4

Model specific function buttons





*Information is subject to change without notice.

Special Function Buttons
SpaNet™ SV2, SV3 & SV4

The keypad buttons can be locked to prevent accidental key presses or to limit access to certain controller functions. This feature is particularly helpful when spa covers are used or where children are present.

There are two types of keylock:

- **Full Lock** all buttons are disabled
- **Partial Lock** allows use of pumps, blower, light and sanitise buttons however prevents adjustment of set temperature and other programmable settings

Full lock

- Press and hold  +  +  until LOCK appears on the display
  up down pump **a**
- Once locked if any button is pressed the key stroke will be ignored and display will show LOCK (refer aside).
- To unlock keypad press and hold  +  + 
  up down pump **a**

Partial lock

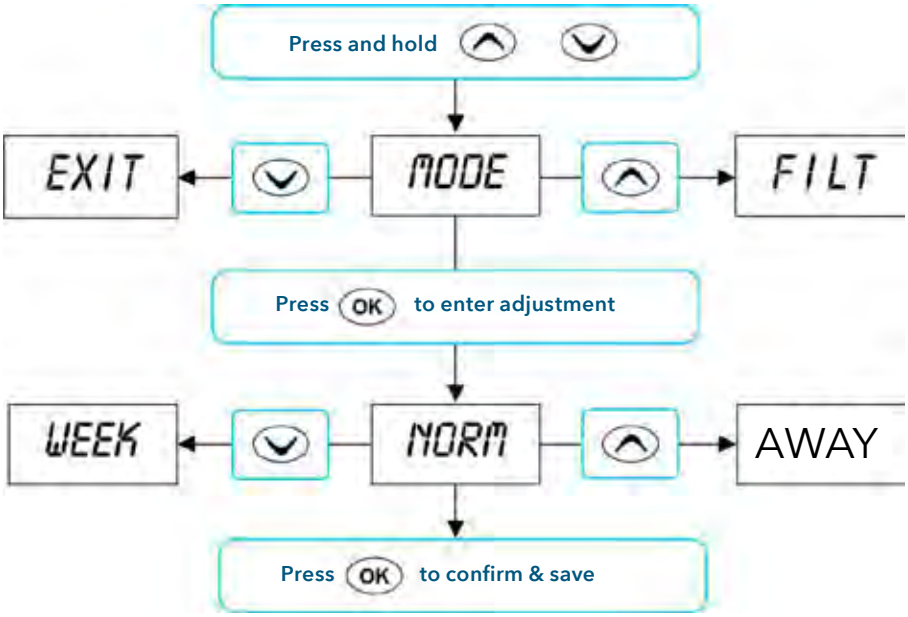
- Press and hold  +  +  until LOCK appears on the display
  up down pump **b**
  Once locked only pumps, blower, light and sanitise buttons can be used. Access to all other buttons is disabled.
- To exit partial lock mode press and hold  +  + 
  up down pump **b**

*Information is subject to change without notice.

Advanced Configurations
SpaNet™ SV2, SV3 & SV4

Set-up menu

How to program advanced configuration settings



*Information is subject to change without notice.

Set-up Menu
SpaNet™ SV2, SV3 & SV4

The SV controllers feature an advanced setup menu which allows customisation of the adjustable controller settings. Menu item options are detailed in the list below.

- To enter menu press and hold ^ and v buttons until [MODE] is displayed
- Press ^ or v to navigate through menu item list
- Press OK to enter menu item adjustment
- Press ^ or v to adjust setting
- Press OK to confirm setting and exit menu

IMPORTANT NOTES

- *The setup menu item settings are stored in non volatile memory (EEPROM) and are remembered when power is turned off. No need to reprogram settings when power is restored.*
- *A ten (10) second idle menu time out period exists. If a button press is not detected for 10 seconds the menu will time out and the screen will return to the default display mode.*

Set-up Menu
SpaNet™ SV2, SV3 & SV4

Menu Item	Setting	Notes
MODE	Operating Mode	Normal / Economy / Away / Week Modes
FILT	Hours of filtration per day	1 to 24 hours
F.CYC	Filtration cycle blocks	Set filtration to run every 1,2,3,4,6,8,12 or 24 hrs
SNZE	Sleep time menu	
1.SNZ	Sleep timer 1	[1.DAY] Days of week, [1.BGN] Begin Time, [1.END] End Time
2.SNZ	Sleep timer 2	[2.DAY] Days of week, [2.BGN] Begin Time, [2.END] End Time
R.SET	Reset sleep timers	Reset sleep timers to factory defaults
EXIT	Exit sleep time submenu	
P.SAV	Power save settings	Off, Low (off-peak filtration), High (off-peak filtration & heating)
W.CLN	Automatic sanitise time	Daily run time of automatic sanitise cycle (00:00 - 23:59)
D.DIS	Default display mode	Water Temp (W.TMP), Set Temp (S.TMP) or Clock (TIME
T.OUT	Load time out period	Pump / Blower time out period (10 to 60 minutes)
H.PMP	Heat pump operating mode	Auto (heat or cool) / Heat / Cool / Off (heat pump disabled)
H.ELE	Heat pump with SV element boost	On = Heat pump + SV element combined for heating Off = Heat pump only
EXIT	Exit setup menu	

*Information is subject to change without notice.

Setup menu item details

MODE Operating mode

The SV controllers feature four different operating modes that effect demand heating and filtration behaviour (refer table below).

Menu Item	Setting	Notes
NORM*	Normal	Normal operation for demand heating and filtration
AWAY	Away	Demand heating is DISABLED. Filtration is fixed at 1 hour per day (the keypad will scroll "AWAY MODE" every 60 secs)
WEEK	Week	Monday to Thursday: Demand heating is DISABLED and filtration fixed at 1 hour per day. Friday to Sunday:Normal Operation

* Default Setting = NORM

FILT Filtration (hours per day)

Automatic filtration is provided to ensure that the pool water is filtered for at least a minimum time each day after considering how often the pool has had manual use or how long the filtration pump runs for water temperature maintenance. All time spent running the pump under normal operation (manual use, water temperature maintenance, sanitisation cycles) will be taken into account and where required the pump will run for additional periods throughout the day to maintain the minimum level of daily filtration as specified by the user. SV controllers support two different types of pump for heating and filtration.

Set-up Menu
SpaNet™ SV2, SV3 & SV4

Filtration (hours per day)

The default filtration hours and adjustment limits differ for each pump type as follows:

	Small circ pump (2A or less)	**Jet pump** (2spd or 1spd)
Minimum filtration hrs p/day	1	1
Maximum filtration hrs p/day	24	8
Default filtration hrs p/day	4	3

F.CYC Filtration Cycle Blocks (how often filtration cycles occur)

This setting allows the user to adjust the frequency of the filtration cycle(s). The user can set filtration blocks to occur every hour, right down to once a day, or somewhere in between.

Select filtration to occur every 1 / 2 / 3 / 4 / 6 / 8 / 12 or 24 hours
Default setting = 4 hrs (i.e. a filtration block will run every 4 hours)

SNZE Sleep Timers

Programmable feature to disable automatic heating and filtration to stop all spa activity during certain times of day or night (refer detailed notes on page 125).

Default Setting = Sleep Timer 1 (Sat – Fri; Sleep period 22:00 – 07:00)

P.SAV Power Save Setting (off peak filtration and heating)

Lower daily operating costs by programming either filtration only (LOW), or both filtration and heating (HIGH) to occur during off-peak power periods when the electricity rates are cheaper.

*Information is subject to change without notice.

The setting choices are: **OFF / LOW** (off-peak filtration) / **HIGH** (off-peak filtration & heating)

Default Setting = **OFF**

W.CLN Automatic Daily Sanitise Cycle Run Time

SV controllers are automatically programmed to activate a 10 minute daily sanitisation cycle at a given time, where each pump/blower is operated to purge pipe work whilst operating the filtration pump. This setting allows adjustment of the start time of the automatic daily sanitise cycle.

Setting ranges from 00:00 to 23:59
Default = 09:00 (9AM)

D.DIS Default Display Mode

This setting allows adjustment of the default display mode. The d.DIS setting choices are:

W.TMP	Water Temperature	(Default on SV3/SV4 models)
S.TMP	Set Temperature	(Default on SV2 models)
TIME	Time & Day	

H.PMP Heat Pump Operating Mode

This setting defines the heat pump mode of operation.

The H.PMP setting choices are:

AUTO	Heat pump will heat and cool (Default)
HEAT	Heat pump will only heat
COOL	Heat pump will only cool (SV element heating also disabled)
OFF	Heat pump disabled

Set-up Menu
SpaNet™ SV2, SV3 & SV4

T.OUT Adjustable Load Time Out

All accessory loads (ie. jet pumps and/or air blower) automatically turn off after a time out period has elapsed. Fifteen (15) minutes later the lights will switch off and the pool will return to automatic mode. This setting allows the length of the time out period to be adjusted.

The T.OUT setting ranges from: 10 to 60 minutes

Default = 30 minutes

H.ELE Heat Pump with SV Element Boost

This setting defines how the in-built SV electric heating element operates with a heat pump (if fitted). Set to OFF to disable electric heating. Set to ON to allow the SV electric element to boost heat pump heating if the water temperature is 2°C or more below set temperature point or the heat pump has been operating for more than 1 hour and setpoint has not been achieved.

The H.ELE setting choices are:

OFF SV element disabled (heat pump only)
ON SV element + Heat Pump for heating

Default = OFF

EXIT Exit setup menu

IMPORTANT NOTES

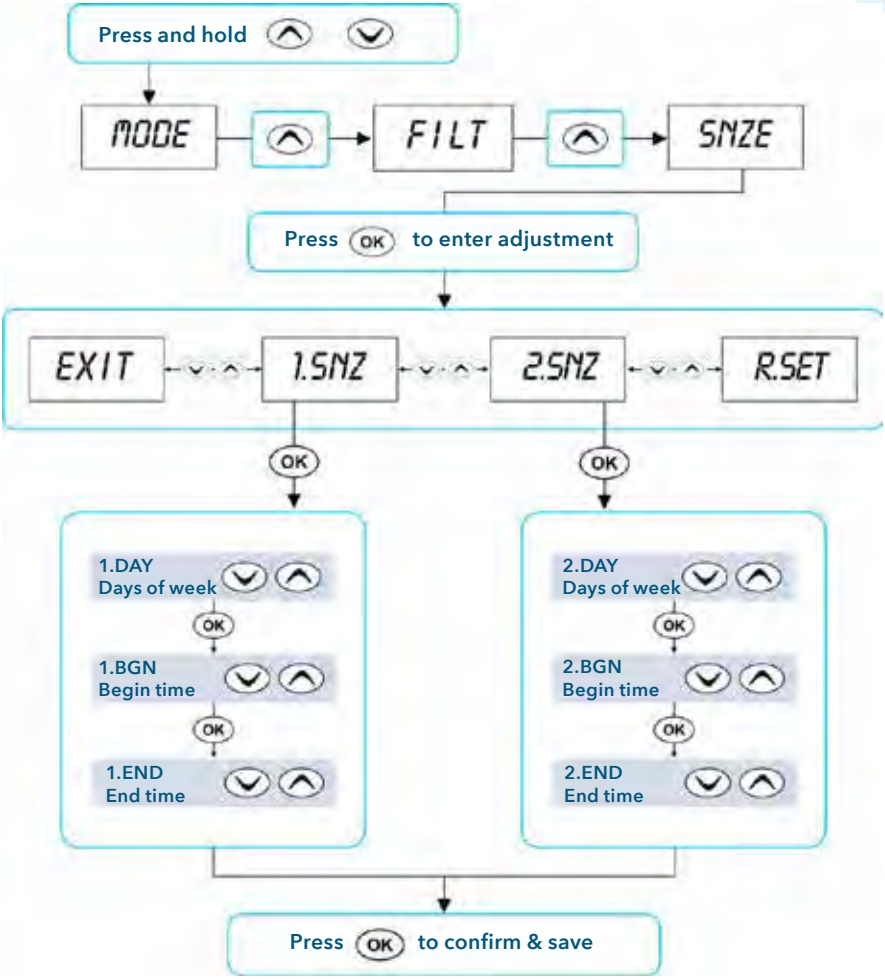
- *If the ambient temperature is below the operational limit of the heat pump (-10°C) the in-built SV electric heating element will automatically be enabled regardless of the H.ELE setting.*

*Information is subject to change without notice.

Sleep Timer [SNZE]
SpaNet™ SV2, SV3 & SV4

[SNZE] Sleep Timer Menu

How to program sleep timers.



Sleep Timer [SNZE]
SpaNet™ SV2, SV3 & SV4

How to program sleep timers

Accessed via the Setup Menu, Sleep timers are a very handy feature that enables the user to stop all spa activity during certain times of day or night. While the controller is sleeping NO automatic heating or filtration maintenance will occur, however the spa can still be operated by manual use without the need to adjust sleep time settings.

There are two individual sleep timers that can be set, each of which can operate on one or more specified weekdays. This enables the user to program different sleep times for different days (ie. weekdays vs weekends), as well as custom settings on a particular day/time where the user may want the spa silenced.

- Press and hold ^ and v buttons together until [MODE] is displayed
- Press ^ button until [SNZE] is displayed
- Press OK button to enter sleep timers (SNZE) adjustment
- Press ^ or v to select from [1.SNZ] Sleep Timer 1; [2.SNZ] Sleep Timer 2; [R.SET] Reset sleep times to default; [EXIT] Exit sleep menu
- Press OK button to confirm and move to the next setting

*Information is subject to change without notice.

Sleep Timer [SNZE]
SpaNet™ SV2, SV3 & SV4

Each sleep time setting consists of a week day setting, start time and stop time (refer table below).

Item	Description	Notes
#.DAY	Selected day of operation	Sat / Sun / Mon / Tue / Wed / Thu / Fri Sat-Sun / Mon-Fri / Sat-Fri / : **Default = Sat-Fri (Note : = disabled)**
#.BGN	Begin Time Sleep time period begins	Adjustable: 00:00 - 23:59 **Default = 22:00 (10PM)**
#.END	End Time Sleep time period ends	Adjustable: 00:00 - 23:59 **Default = 07:00 (7AM)**

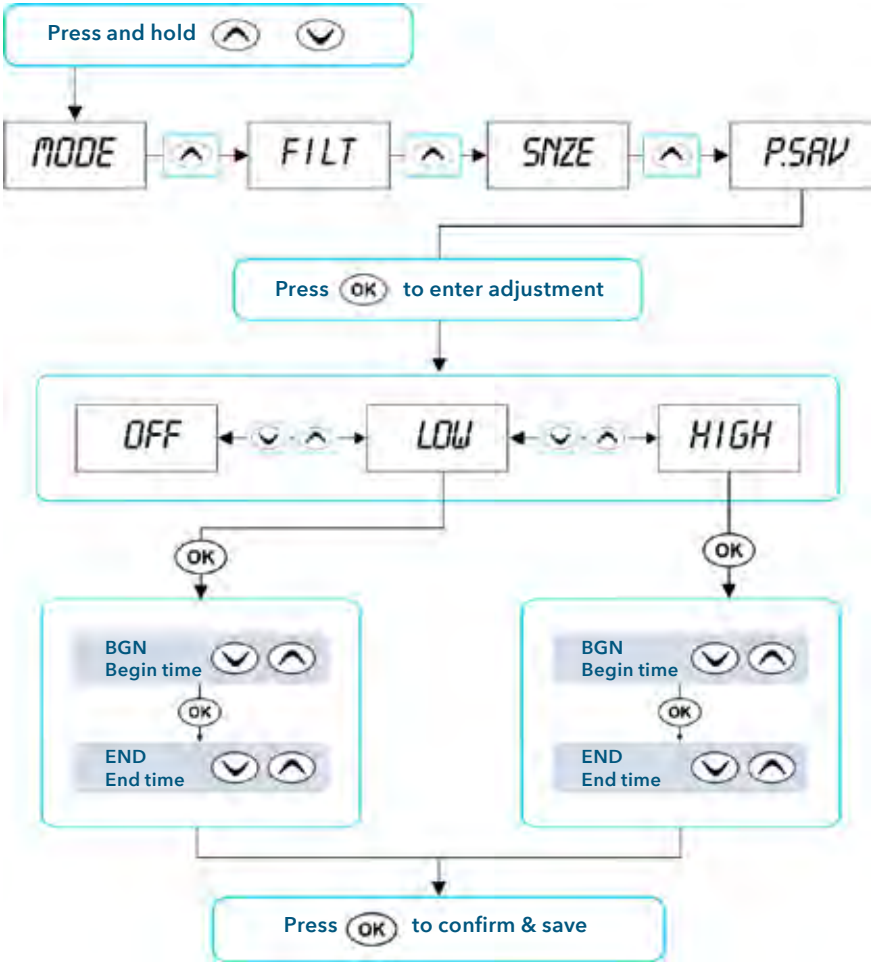
IMPORTANT NOTES

- *There is a default sleep timer pre-programmed into each SV controller. By default: Sleep Timer 1 [1.SNZ] is set to operate every day of the week (Sat – Fri) with sleep period between 22:00 (10PM) and 07:00 (7AM)*
- *Sleep Timers will override any programmed PowerSAVE [P.SAV] times. Spa users must consider cancelling the default sleep timer when programming P.SAV times for off-peak heating and filtration (refer page 146)*
- *Freeze protection will override sleep timers*

Power Save Setting [P.SAV]
SpaNet™ SV2, SV3 & SV4

[P.SAV] PowerSAVE Menu (off-peak)

How to program off-peak filtration and heating



*Information is subject to change without notice.

Power Save Setting [P.SAV]
SpaNet™ SV2, SV3 & SV4

Power utilities in some regions offer household power meters that can track power usage during different times of the day. This allows the utilities to offer greatly reduced power pricing during off peak power times. The Power Save (P.SAV) function allows the user to program in the peak power period so the spa control knows not to perform filtration and/or heating during those expensive hours. Instead the controller will take advantage of the competitively priced off peak hours, and run the filtration and/or heating during the off peak hours.

- Press and hold ^ and v buttons together until [MODE] is displayed
- Press ^ button until [P.SAV] is displayed
- Press OK button to enter power save (P.SAV) adjustment

The power save setting consists of a choice of mode, peak power period start time and peak power period end time (refer table below).

Item	Description	Notes
P.SAV	Power Save Mode Functions disabled during peak power periods	**OFF = P.SAV disabled (default)** LOW = Filtration disabled HIGH = Filtration & Heating disabled
BGN	Begin Time Peak power period begins	Adjustable: 00:00 - 23:59 **Default = 14:00 (2PM)**
END	End Time Peak power period ends	Adjustable: 00:00 - 23:59 **Default = 20:00 (8PM)**

- Press and hold ^ and v buttons together until [MODE] is displayed
- Press OK button until [P.SAV] is displayed

*Information is subject to change without notice.

Error Codes/Troubleshooting
SpaNet™ SV2, SV3 & SV4

IMPORTANT NOTE

- *If P.SAV function is to be used the spa user MUST consider any sleep timers [SNZE] and adjust them accordingly. Sleep timer settings will OVERIDE any P.SAV settings. All SV controllers have a default sleep timer (Sat – Fri; Sleep period 22:00 – 07:00). If P.SAV is set and the default sleep timer is not adjusted the spa controller may have insufficient awake hours for water temperature maintenance. Refer to page 143 for further details regarding sleep timers.*

Error Codes & Troubleshooting Problems

How to troubleshoot spa problems

SV spa controllers feature self diagnostics and scrolling error messages to quickly troubleshoot possible problems. Should the spa control encounter a problem the error code / message will scroll across the topside panel screen until the problem is resolved.

If an error condition is experienced all spa functions are shut down and the spa should not be used until the error condition has been resolved. A list of error codes with descriptions of problems and possible solutions is detailed below for your reference.

IMPORTANT NOTE

For most error codes main power to the spa control must be turned OFF and then back ON before the error condition will be cleared.

Error Codes/Troubleshooting
SpaNet™ SV2, SV3 & SV4

Heartbeat LED

All SV model spa packs feature a red flashing heartbeat LED light. The heartbeat LED is located on the front right hand side of the spa pack itself (installed underneath spa skirt). The heartbeat LED flashes to indicate the current health/status of the spa pack. When the spa pack is functioning correctly with no errors to report the heartbeat LED emits a single flash in a constant pulse much like a heartbeat (ON, OFF, ON, OFF). If the spa pack encounters a fault the heartbeat LED will begin flashing in sequence with the error code number being experienced (ie. ER2 = ON,ON; OFF ON,ON; OFF).

If the keypad display is ever blank a spa user can still determine the health / status of the SV controller by removing a panel from the spa skirt and checking the heartbeat LED on the front of the spa pack itself.

ER-2 HEATER PLUG

Problem: No heater sensor communication

Cause: Internal heater sensor communication problem

Solutions:
- Turn mains power OFF, wait 5 minutes then restart spa
- Contact spa reseller if problem is not resolved with power reset

ER-3 WATER PRIME

Problem: Water prime failed – air detected in heater tube

Cause: Airlock in pipe work, low water level, dirty filter cartridges

Solutions:
- Press Pump A button to retry water prime
- Check spa water level (refill if necessary)
- Remove filter cartridges and press Pump A button to retry prime
- Bleed airlock from pipe work by slightly loosening couplings on front of filtration pump
- Remove filter cartridges and flush water down pipe work with a hose

Error Codes/Troubleshooting
SpaNet™ SV2, SV3 & SV4

ER-4 THERMAL TRIP

Problem: Heater thermal trip activated. Heater has been active and has had insufficient water flow over the element. Low or no water flow has caused the heater temperature to exceed its maximum limits and the spa control has shut down operation to prevent any damage to the heater unit

Cause: Low water level, airlock in pipe work, closed shut-off valves, dirty filter cartridges, filtration pump failed or operation intermittent

Solutions:

- Turn mains power OFF and wait 10-15 minutes for element to cool and thermal cut-out device to reset. Then turn power back ON
- Check spa water level (refill if necessary)
- Remove filters and clean as per manufacturer's recommendations or replace cartridges if required
- Check under spa cabinet to ensure all shut-off valves are in the OPEN position
- Bleed airlock from pipe work by slightly loosening couplings on front of filtration pump or by removing filters and flushing water down pipe work with a hose.

ER-5 POOL TOO HOT

Problem: Pool over temperature. Temperature sensor reading ≥ 45°C heater unit

Cause: High ambient temperatures (especially in summer months) have caused water temperature to rise above set temp point, Excessive filtration time, Jet pumps have been operating for extended periods with the spa cover still on.

*Information is subject to change without notice.

Solutions:

- Turn mains power OFF, remove spa cover, allow spa to cool then turn power back ON
- Check daily filtration time (refer filtration section) and reduce daily filtration time if required
- Check spa cover is not resting on topside panel buttons causing jet pumps to start when cover is on. Use keylock function to lock keypad buttons when spa not in use.

ER-6 12V OVERLOAD

Problem: 12V (port) current draw over 1A limit

Cause: Total 12V current drawn by keypad(s), light(s), expansion ports and in pool temp sensor is excessive, 12V power supply is overloaded, too many LED light bulbs installed, faulty LED light. Turn mains power OFF and wait 10-15 minutes for element to cool and thermal cut-out device to reset. Then turn power back ON

Solutions:

- Turn mains power OFF and restart spa to see if problem reoccurs
- Reduce number of LED lights being installed
- Systematically unplug lights, in pool temp sensor, keypads and expansion port loads from spa pack (one by one) to identify faulty part
- Contact your spa reseller if problem persists

Error Codes/Troubleshooting
SpaNet™ SV2, SV3 & SV4

ER-8 CTRL FAULT HVS

Problem: Heater relay is on when it should be off

Cause: Power surge, periods of low or high voltage, water on spa pack terminal block, relay problem

Solutions:

- Turn mains power OFF and back ON again to see if spa control recovers from ER8 fault
- Inspect under spa cabinet for evidence of water leaking onto spa control. If water present, turn mains power OFF and isolate, then resolve leak, dry up excess water, and allow spa control to dry out before restoring power
- Contact your spa reseller if problem persists

ER-10 OVER CURRENT

Problem: Mains (230V) current draw above current limit (C.LMT) detected

Cause: Accessory devices current draw is too large for the C.LMT setting, faulty jet pump or air blower drawing excessive current, current limit (C.LMT) settings are not configured to match circuit breaker rating, load shed (L.SHD) and/or load limit (L.LMT) settings incorrect

Solutions:

- Turn mains power OFF and back ON again
- Check operation of each pump => attempt to identify problematic pump or blower causing ER10 to occur
- Contact your reseller to check controller settings are configured to match available power and circuit breaker rating

Heat Pump Error Codes
SpaNet™ SV2, SV3 & SV4

If an optional heat pump is fitted and a heat pump fault condition is detected a warning message is scrolled across the touch pad LCD every 60 seconds and the heat pump is disabled.

Spa operation will continue however the spa will now heat with the inbuilt SV electric element and there will be no ability to cool the water. The heat pump warning message will continue to scroll every 60 seconds, and the heat pump will remain disabled until the mains power is turned OFF and back ON again.

If after resetting mains power the fault condition persists please contact your spa and report the warning message that is shown. A list of the fault conditions and reseller warning messages are detailed below for reference.

WARNING MESSAGE	DESCRIPTION
"HEAT PUMP AMB"	Ambient thermistor temperature sensor error
"HEAT PUMP COND"	Condenser thermistor temperature sensor error
"HEAT PUMP FLOW"	Water flow not detected
"HEAT PUMP LOW P"	Compressor low pressure switch open
"HEAT PUMP HIGH P"	Compressor high pressure switch open
"HEAT PUMP COMP"	Compressor thermal cut out open
"HEAT PUMP EXCH"	Heat exchanger thermal cut out open

IMPORTANT NOTE

- *If a heat pump encounters an error the heat pump will remain disabled until the mains power to the SV spa controller is turned OFF and back ON again. The heat pump warning message will continue to scroll every 60 seconds until the power is reset.*

SpaNet™ Product Warranty

Unless otherwise specifically stated herein, all SpaNET™ control systems including topside panels (touch pads), heaters, and in pool temperature sensors manufactured by SpaNET Pty Ltd and that are supplied, pre-installed on a complete spa pool are warranted to be free from defects in workmanship and materials for a period of two (2) years from date of manufacture at SpaNET Pty Ltd. All pumps, heat pumps, air blowers and underwater lighting supplied by SpaNET Pty Ltd are warranted to be free from defects in workmanship and materials for a period of twelve (12) months from date of supply. All replacement spare parts supplied by SpaNET Pty Ltd are warranted to be free from defects in workmanship and materials for a period of six (6) months from date of supply.

Warranty exclusions

This warranty or a claim made under it may be refused if the defect claimed has arisen for reasons other than faulty or defective parts or workmanship. Circumstances in which a warranty claim may be invalidated include, but are not necessarily limited to the following:

1. Product or component failures caused by improper water maintenance resulting in abrasive/acid water
2. Damage caused by incorrect electrical installation, electrical brownouts, voltage spikes and/or surges, lightning strikes, or operating the system outside of the specified voltage range by more than +/- 5%
3. Incomplete or improper installation of SpaNET™ products
4. Operating SpaNET™ products on an extension lead
5. Damage caused by misuse, abuse or neglect including failure to properly maintain
6. Damage caused by insect or vermin infestation
7. Acts of god
8. Water damage to products not installed in a suitable location or environment

*Information is subject to change without notice.

SpaNet™ Product Warranty

9. Water damage to products caused by but not limited to leaking pipes, pumps, unions and joints on the spa pool
10. Commercial use of SpaNET™ products reduces all warranties to a period of 6 months

Warranty coverage

SpaNET Pty Ltd only extends this warranty to the original purchaser and only if the product has been purchased through an authorised SpaNET Pty Ltd reseller. Written notice and proof of purchase must be provided to SpaNET Pty Ltd or in some instances a representative nominated by SpaNET Pty Ltd within 14 days of the defect occurring. To action warranty contact the authorised SpaNET™ reseller you purchased from. Labour, travel and related costs and expenses for service calls in the field or at customer's site are also excluded and are not covered by this warranty. All products covered by this warranty must be returned for inspection and assessment freight prepaid to either SpaNET Pty Ltd or an authorised SpaNET Pty Ltd service centre. SpaNET Pty Ltd reserves the right to offer a repaired or replaced product where the warranty claim has been deemed to be warranty by SpaNET Pty Ltd. All other remedies of any kind are waived by the customer and specifically excluded from this warranty. Products sold by SpaNET Pty Ltd at No Charge are specifically excluded from this warranty. Where a warranty repair is carried out or parts/components are supplied under warranty, the warranty of such expires as per the original warranty period offered on the original product.

Electrical connection

All electrical connections must be carried out by a qualified electrician. Failure to do so will immediately VOID this warranty. The SpaNET™ control system must be connected to a dedicated MAINS electrical supply circuit supplied through a residual current device (RCD) having a rated residual operating current not exceeding 30mA.

Optional Upgrade
WiFi & Audio Kit

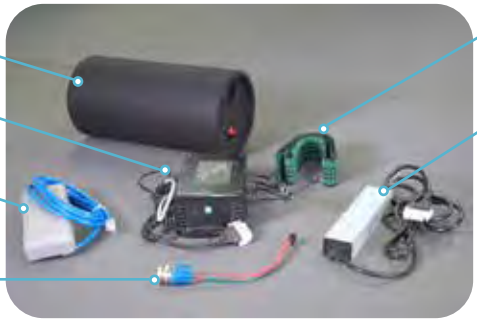
Safety Considerations:

- Disconnect power to the spa before removing any cabinet panels.
- To reduce the risk of injury, do not permit children to install this product.

Tools Required

- Battery-powered screwdriver
- Phillips screwdriver

Included in your Kit



*Information is subject to change without notice.

SmartLink™ Wifi & SpaLink™ Requirements

The SmartLink™ WiFi module and SpaLink™ App lets you use an Apple® or Android™ smartphone or tablet as a wireless remote control for your SV Series equipped spa. Using simple touch screen menus, you can control all spa accessories including pumps, air blowers and LED spa lights. You can also configure your spa including adjustment of the temperature, selecting your desired heating mode, programming filtration, sleep or power save timers and more. Available anywhere, anytime, just as if you were standing in front of the spa, or better yet, sitting in it.

For a smooth and successful setup process you must complete each installation section and steps in their correct order:

1. WiFi Internet Access
2. Install the SpaLink™ App
3. Register a User Account
4. SpaLink™ App setup process

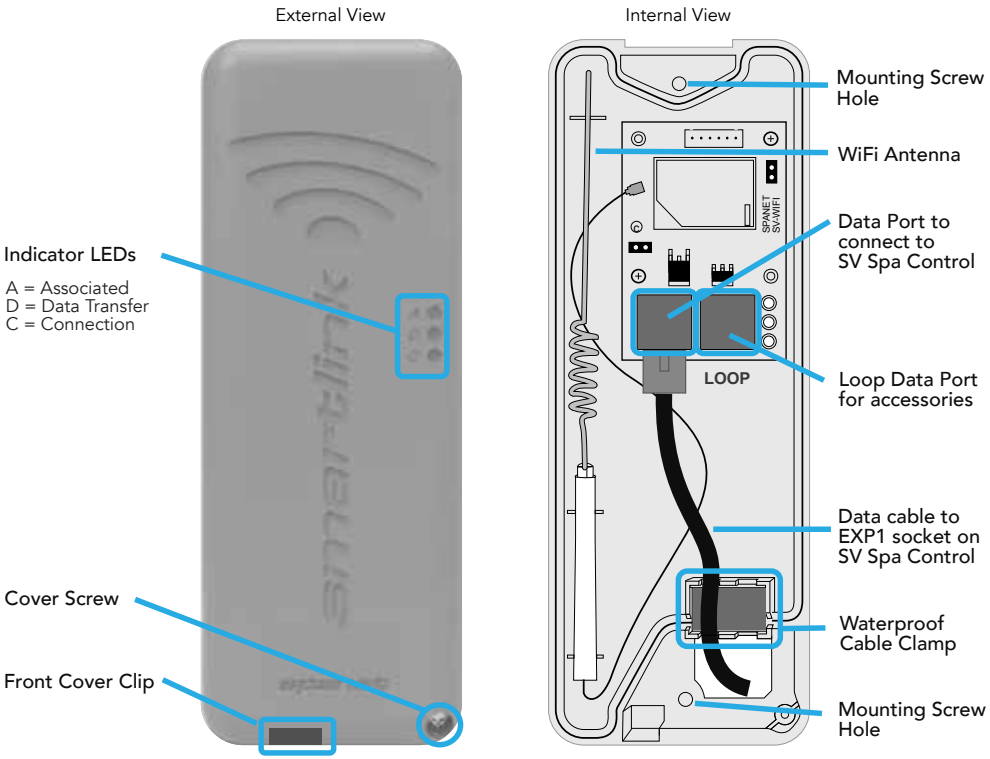
Hardware Requirement

Your SpaNET™ SV Series spa control must be fitted with the SV SmartLink™ WiFi module for the app to work. The SmartLink™ WiFi module requires a permanent active internet connection via a wireless router to operate. The Internet connection/router must remain powered on at all times for you to use the SpaLink™ App.

*Information is subject to change without notice.

WiFi & Audio Kit Installation

SmartLink™ Module



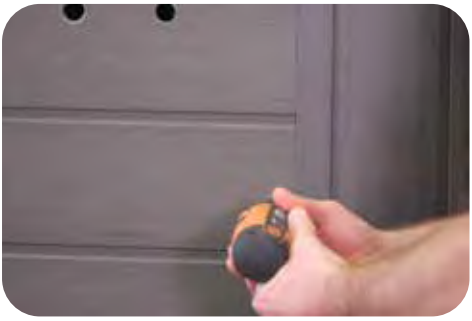
*Information is subject to change without notice.

WiFi & Audio Kit Installation

Step 1: Locate the equipment bay in your spa. Fisher™ spas have their equipment bay located directly under the keypad. However, that is not always the case in all models. To check your spa equipment location, see page 20 in this manual, or scan the QR code on the instructions for your Fisher™ Spa WiFi and Audio Kit.
Your Fisher™ spa will come with two pre-drilled holes on the cabinet. One, for the On/Off switch Audio system, and another hole to feed the cable through to the WiFi model. The pre-drilled holes comes with blanking caps pre-install.

If you are not using Fisher™ Spa WiFi and Audio Kit, leave the caps in the holes.

Step 2: Remove cabinet panel to access black box.



Step 3: Mounting the transformer & stereo.

Once the cabinet panel is removed. Find the black box where you will mount the stereo and transformer. It already has the Ozone generator mounted in it.

*Information is subject to change without notice.

WiFi & Audio Kit Installation

Note: *The Fisher™ WiFi and Audio Kit comes with two different length set of screws:*

- ***Longer screws,*** *for securing down the Sub Speaker.*
- ***Small screws,*** *are used for mounting the Stereo & Transformer into the black box.*

Using the right size of screws is essential. The pipe behind the black box can be pierced if you use larger screws.

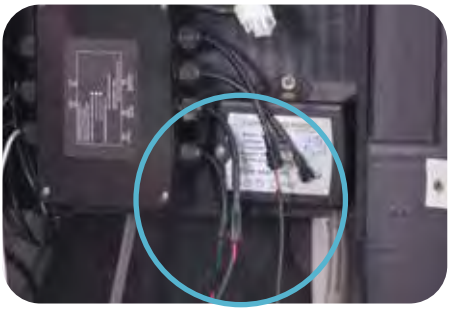
Step 4: Use two small screws to attach the transformer.

Step 5: Using four small screws attach Amplifier to the black box.

*Information is subject to change without notice.

WiFi & Audio Kit Installation

Step 6: Connect speaker cables 3, 2 and 1.

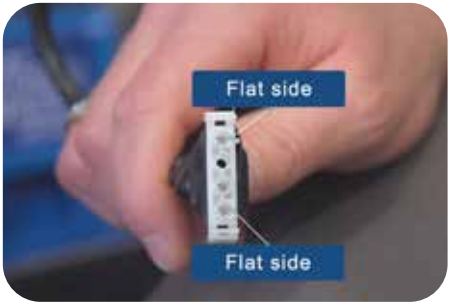


Step 7: Connect power supply to amplifier.

Connect the white two-pin connectors.

Step 8: Connect power supply to the SpaNet™ controller

The two outside pins of the connector have flat sides, meaning you can plug in only one way.



*Information is subject to change without notice.

WiFi & Audio Kit Installation
Hydravibe™ Subwoofer

Connect power supply to SpaNet™ controller.

Note: ***Install the Audio WiFi Kit before fixing the spa into position.***

- *The subwoofer mounting location is different for each spa; see page 20 of this manual: Equipment location, for the drawings showing the placement of the sub-speaker for each model.*
- *WiFi & Audio Kit optional upgrade is not available in* **Gemini™** *and* **Fisher 2™** *models.*

Step 9: Locate and remove cabinet panel to access the subwoofer mounting plate. See page 20, for your spa model equipment location.

*Information is subject to change without notice.

WiFi & Audio Kit Installation

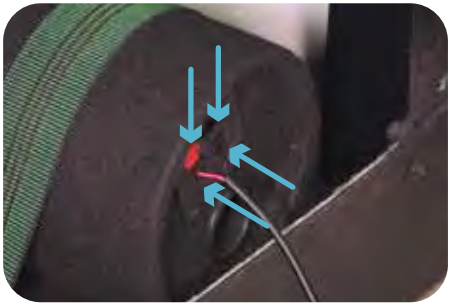
Step 10: Mount the subwoofer using the provided strapping.

Place the subwoofer over the speaker base plate. Using the strape included in the kit, bring the strap over the subwoofer and screw the strapping down.

Note: *You might have to pull out one of the side panels of your spa to run the cables around to the subwoofer location. (See page 20 for your spa equipment location)*

Step 11: Insert positive and negative wires into amplifier. Re-attach cabinet panel.

Put the red wire into the red section, push down the red tab and push the wire in. Repeat for the black wire. Make sure the wires are sitting in place.



WiFi & Audio Kit Installation

Step 12: Mount the SpaNet™ module on the cabinet panel.

Locate the two pre-drilled holes on your spa cabinet panel. Remove the caps. And ununscrew the cabinet panel.

Push the SmartLink™ connector cable through one of the holes.

Use the adhesive backing from the SpaNet™ to secure the module into the spa cabinet.

*Information is subject to change without notice.

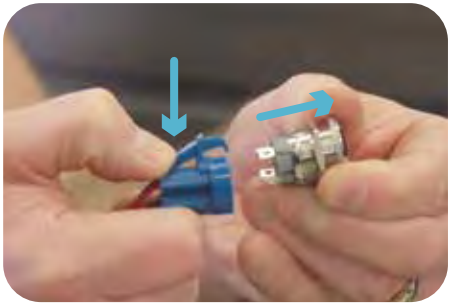
WiFi & Audio Kit Installation

Attach the module vertically to the cabinet panel covering the pre-drilled hole.

NOTE: *The module MUST be positioned in a vertical orientation, with the wifi symbol at the top to maintain waterproofing and for best signal strength.*

Step 13: Installing On/Off button.

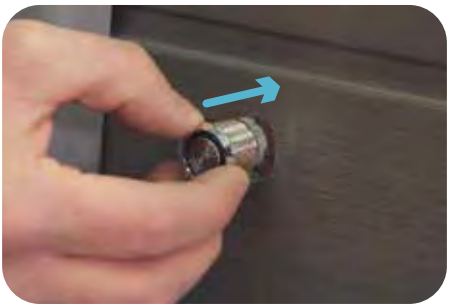
First, remove the button plug from the ON/Off button by pressing the latch on the back and pull the button out.



Remove the fastening nut from the back of the On/Off button so the button can be pushed through the cabinet panel.

WiFi & Audio Kit Installation

Fix the button using the locking nut to secure it to the back of the cabinet panel.



Complete the final connection by plugging the button into the connector on the back.

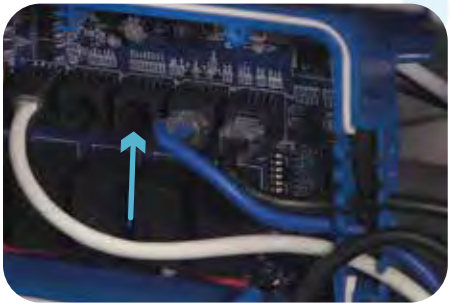
Step 15: Connect the SmartLink™ antenna into the SpaNet™ controller.

To connect the SmartLink™ module to the controller. Remove the screws from the front of the SpaNet™ controller panel to access.

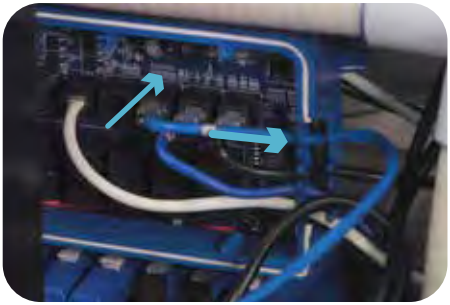
*Information is subject to change without notice.

WiFi & Audio Kit Installation

Expansion port 1 is the third port from the right. Also, labeled underneath the port as Exp 1.



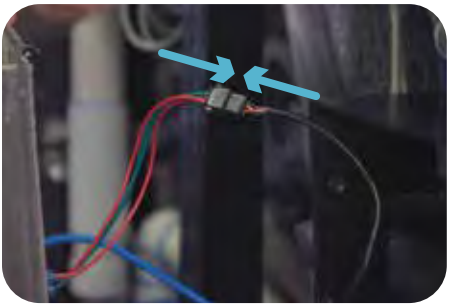
Insert the SmartLink™ cable into Exp 1. Make sure it connects properly, then run the cable through one of the gaps in the side cord grip.



Re-attach the SpaNet™ controller panel.

WiFi & Audio Kit Installation

Step 16: Connect the On/Off cable to the stereo lead.



Step 17: Re-attached cabinet panel. The installation of your spa WiFi and Audio Kit components is complete.

Step 18: Via Bluetooth, connect the smart device to the system. See page 172 for instructions on how to do it on different devices.

WiFi Internet Access
SSID Name and Router Password

The SmartLink™ WiFi module requires a permanent, active Internet connection via a wireless router to operate. To be able to access your spa from anywhere, at any time, the router must remain powered on at all times. WiFi signal strength is extremely important for stable, reliable app operation. If the WiFi signal is too weak, the app setup process may not be able to be completed or the spa could have intermittent connections and drop offs. In this situation the WiFi signal would need to be boosted/improved by either ensuring your SmartLink™ module is mounted external to the spa cabinet, relocating your router, installing an additional access point or WiFi range extender in closer proximity to the spa.

SSID Name and Router Password

Before beginning the SpaLink™ App setup process you must be aware of your WiFi router's SSID name and password. Failure to have these login credentials on hand whilst you are beside the spa completing the setup process may lead to a failed setup. The login credentials may be labelled on the WiFi router and/or on a card your ISP supplied at time of installation. Please write them here for reference:

Router SSID name: .....

Router password: .....

NOTE: *Your router password is case sensitive and must be entered 100% correct during the setup process for a successful installation.* **The SmartLink™ module CANNOT interrogate your password to ensure it is correct. It relies on you entering it correctly.** *If the password is entered incorrectly you will have to complete the setup process again.*

WiFi Signal Strength

WiFi signal strength is extremely important for reliable communication between the SmartLink™ WiFi module and your router. A strong WiFi signal to the SmartLink™ will result in the app being stable, respond faster and the spa will remain online. A weak WiFi signal can cause the app to respond slowly, timeout or cause the spa to drop offline. During the setup process the app will display a list of wireless network SSIDs discovered in proximity to the spa. The signal strength of each network is detailed on the right-hand side in decibels (-db). The closer the value is to 0, the stronger the signal. This means that -64db is a stronger signal than -70db. A value of -70db or better is required for reliable operation.

NOTE: *During the setup process you can use the refresh arrow in the top right corner to perform another WiFi scan and update the dB signal readings (Fig 1). This can be helpful if you are trying to determine the best position for mounting your SmartLink™ module or router.*

FIG. 1

*Information is subject to change without notice.

Indicator LEDs

Associated (Red LED)

Fast Flash – module is NOT connected to a router or network

Off – module IS successfully connected to a router or network

Data Transfer (Blue LED)

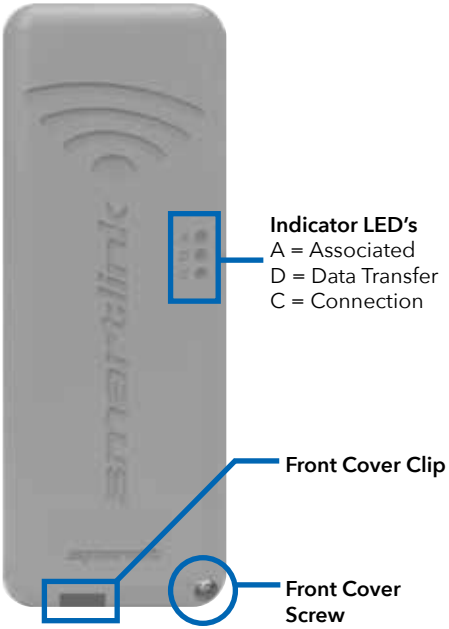
On or Flashing – data is being transferred

Connection Status (Green LED)

On Solid – Internet connection active and working OK

Fast Flash – indicates no IP address assigned or module in command mode

Slow Flash – indicates IP address is OK, but no TCP or Internet access



NOTE: *By default, when the module is first connected to the SV spa control it should be in HOT spot mode ready for the SmartLink™ app setup process. The indicator LEDs will be flashing green and red.*

*Information is subject to change without notice.

Install the SpaLink™ App

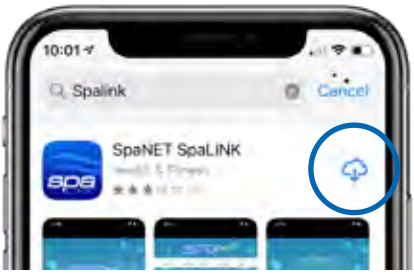
Finding SpaLink™ App on Ipad

The SpaLink™ App is available for both Apple and Android devices.

Step 1: Open App Store / Google Play

Step 2: Search "Spanet™ SpaLink™"

Step 3: Press on install link to download and install app



Finding SpaLink™ App on iPad

If you are using an iPad you may need to change the App Store to search for "iPhone only apps" instead of "iPad only apps". The iPhone app works successfully on the iPad.

Register an user account

With the SpaLink™ app now installed you need to register a user account on our SpaNET™ cloud server which provides a secure login to access your spa. Think of it as the portal between the SpaLink™ app on your phone and the SmartLink™ module on your spa. Your user account allows for multiple SV controllers to be configured on the one account, in case you own a dual-zone swim spa or more than one spa.

*Information is subject to change without notice.

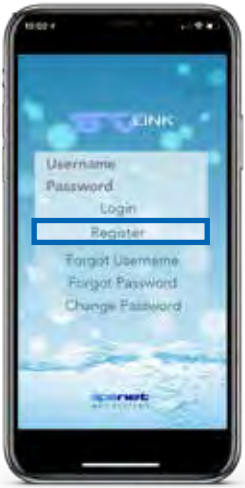
Register an User Account

NOTE: ***You only ever need to register ONE user account once, even if you wish to operate the app across multiple smart devices, concurrently or individually.*** *Complete the user account registration on your first device and take note of the username and password you select during the registration process. On other devices, simply download and install the app and then enter the username and password you have already registered to login to the app. DO NOT complete multiple registrations on each new device. A spa can only be linked to one user account.*

Step 1: Tap the SpaLink™ App icon to open the app.

Step 2: Tap REGISTER

Step 3: Tap in the Name field to enter your full name using the pop-up keyboard.



*Information is subject to change without notice.

SpaLink™
Register an User Account

Step 4: Enter your desired username.

Step 5: Enter your email address.

Step 4: Confirm your email address.

Step 5: Enter your desired password.

*Information is subject to change without notice.

SpaLink™ App Setup

Step 8: Confirm your password.

Step 9: Review your registration details then tap REGISTER to proceed.

SpaLink™ App Setup Process

With the user account now registered, you need to configure the Internet access to your spa in the same way you would connect a laptop or TV to your WiFi router.

The setup process is a one-time event that programs the SmartLink™ WiFi module with your WiFi router's login credentials (SSID and password).

Login details are stored in the SmartLink™ WiFi module and remembered even if power is lost to the spa or router. Unless the router login details change, you shouldn't need to run the setup process again.

To complete the setup process, ensure that:

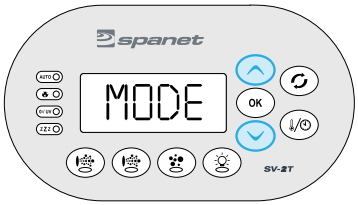
- Your smart device has an active WiFi, 3G or 4G Internet connection.
- You have the login credentials for your WiFi router (SSID name and password) at hand.
- Your router is using WPA/WPA2 security encryption by default. DO NOT us WEP encryption.

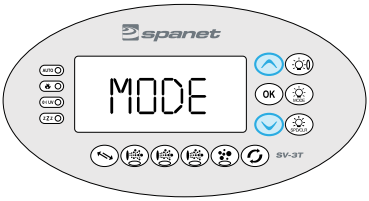
*Information is subject to change without notice.

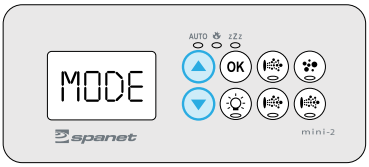
SmartLink™ Module into Hot Spot Mode

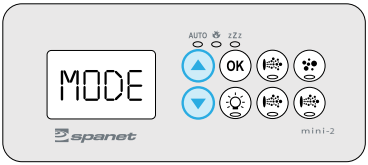
Standard Keypads

Step 1: On you spa-side keypad, press and hold the UP + DOWN buttons simultaneously until the display shows [MODE].

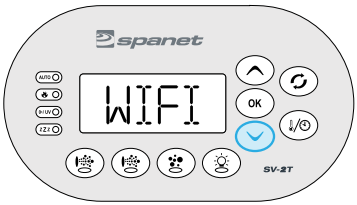


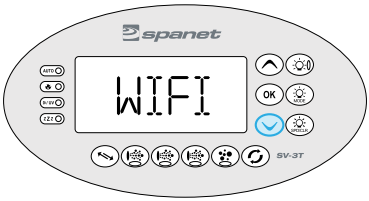


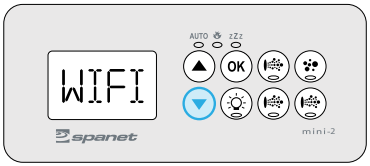


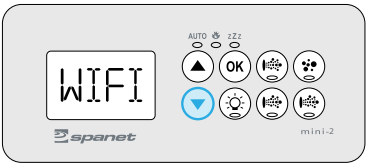


Step 1: Press the DOWN button multiple times until display shows [WIFI].





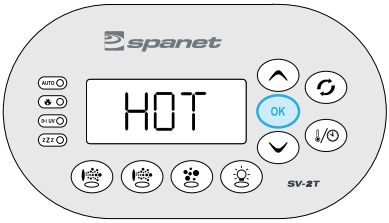


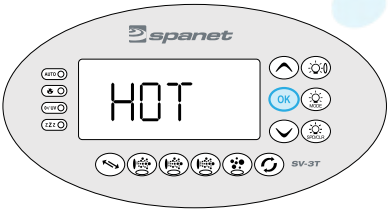


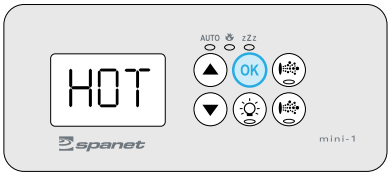
*Information is subject to change without notice.

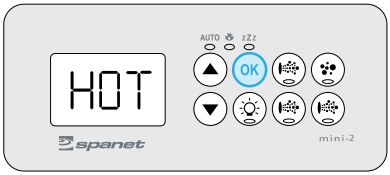
SmartLink™ Module into Hot Spot Mode

Step 3: Press the OK button to enter the WIFI menu => the display will show [HOT]. If HOT is not displayed press the DOWN button until it is.

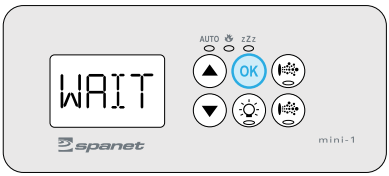


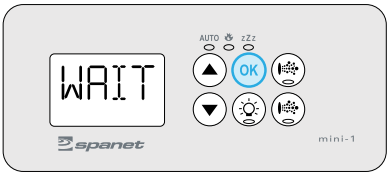






Step 4: Press the OK button to execute the Hot Spot mode command => the display will briefly show [WAIT] whilst the command is carried out.





*Information is subject to change without notice.

Apple iOS Devices
SpaLink™ App Setup

Step 1: Open app and press login. If you just registered, you will already be logged into this spa list screen.

Step 2: Tap the New Device bar.

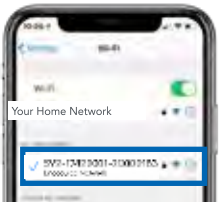
Step 3: Press on the X button to close the pop-up box but DO NOT press the Setup bar yet.

Step 4: Press or slide your Apple home button and navigate to your Apple Settings.

*Information is subject to change without notice.

Apple iOS Devices
SpaLink™ App Setup

Step 5: Enter the Apple WiFi settings and locate the SV WiFi network, which matches your spa control's serial number.



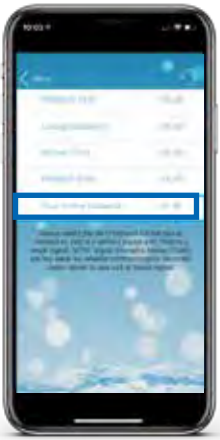
Step 6: Press on the SV network to connect to it.
NOTE: ***No password is required to connect.***

Wait for a moment to ensure the SV network is connected properly.

NOTE: *If no SV network is found, repeat page 176 again to activate the SmartLink WiFi hot spot mode. If still unsuccessful follow Troubleshooting in page 195.*

Step 7: Tap SETUP bar once only to begin a WiFi scan and display a list of nearby wireless networks detected.
NOTE: ***Wait for the scan to complete before pressing anything else.***

Step 8: Select the wireless network to connect your spa to, ensuring the signal strength is -70db or better. Or press the Refresh arrow in the top right to perform another WiFi scan.



*Information is subject to change without notice.

Apple iOS Devices
SpaLink™ App Setup

Step 9: Enter your router password to access your home wireless network.
NOTE: ***Take care, the app cannot check the password. It relies on correct entry.***

Step 10: You have now confirmed the SSID and password for the WiFi network the spa will connect to. Press the OK button to continue.

Step 11: Press on the X button to close the pop-up box and then press or slide your Apple home button and navigate to your Apple WiFi settings.

Step 12: The SV network should have disappeared and your phone should have reconnected to your home network. If not wait a moment, then manually connect to your home network.

*Information is subject to change without notice.

Apple iOS Devices
SpaLink™ App Setup

Step 13: Navigate back to app and then enter a name for your spa and press on Register to complete the setup process. **NOTE:** ***The name can be changed after setup if desired.***

Step 14: The SmartLink™ module is now connecting to your router and preparing to come online. The spa will show offline at this point. It may take 2-5 mins for initial connection. Press refresh arrow to recheck status.

Step 15: The spa now shows as online, the WiFi signal strength is displayed and spa name can be changed using the Edit pencil. Press on the spa name to login to the spa.

To check your actual WiFi signal strength press on the WiFi bar graph icon.

The signal strength is displayed in decibels with a time stamp of when that signal strength was taken. The signal will be updated every 5-10 minutes.

*Information is subject to change without notice.

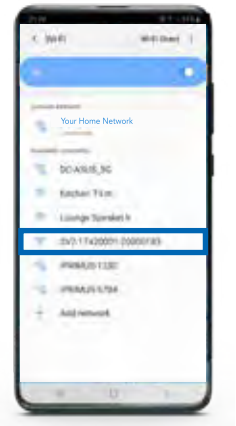
Android Devices
SpaLink™ App Setup

Step 1: Open app and press login. If you have just registered, you will already be logged into this spa list screen.

Step 2: Tap on New Device bar.

Step 3: Tap the X button to close the pop-up box. **NOTE:** ***Your device will launch straight into your Android WiFi Settings.***

Step 4: Under Available Networks locate the SV WiFi network, which matches your spa control's serial number.

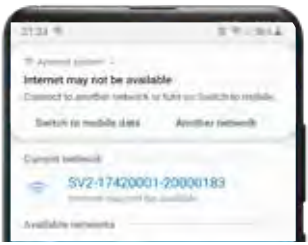


NOTE: *If no SV network is found, repeat page 176 again to activate the SmartLink™ WiFi hot spot mode. If still unsuccessful follow Troubleshooting in page 196.*

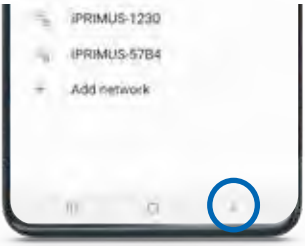
*Information is subject to change without notice.

Android Devices
SpaLink™ App Setup

Step 5: When you connect to the SV network, Android will present a popup advising the network does not have Internet access. Remain connected and simply wait for that pop-up to disappear.



Step 6: Once connected to the SV network, tap the Android Back butto to re-enter the SpaLink™ app.
NOTE: ***DO NOT press the Home button, you MUST use the Back button to continue setup.***



Step 7: Tap SETUP bar once only to begin a WiFi scan and display a list of nearby wireless networks detected.
NOTE: ***Wait for the scan to complete before pressing anything else.***

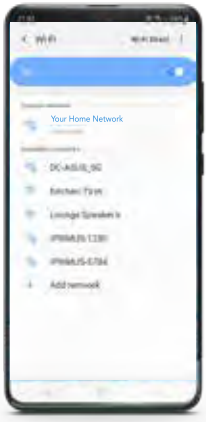
Step 8: Select the wireless network to connect your spa to, ensuring the signal strength is -70db or better. Or press the Refresh arrow in the top right to perform another WiFi scan.

Android Devices
SpaLink™ App Setup

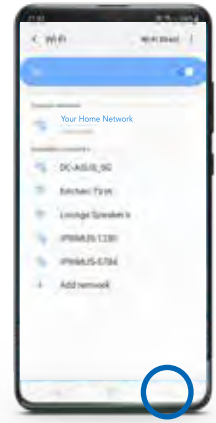
Step 9: Enter your router password to access your home wireless network.
NOTE: ***Take care, the app cannot check the password. It relies on correct entry.***

Step 10: Tap the X button to close the pop-up box.
NOTE: ***Your device will launch straight into your Android WiFi Settings.***

Step 11: The SV network should have disappeared and your phone should have reconnected to your home network.
If not wait a moment, then manually connect to your home network.



Step 12: Once connected to your home network, tap the Android Back button to re-enter the SpaLink™ app.
NOTE: ***DO NOT press the Home button, you MUST use the Back button to continue setup***.



*Information is subject to change without notice.

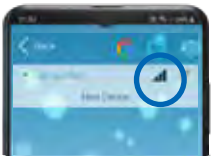
Android Devices
SpaLink™ App Setup

Step 13: Enter a name for your spa and press on Register to complete the setup process.
NOTE: ***The name can be changed after setup if desired.***

Step 15: The spa now shows as online, the WiFi signal strength is displayed and spa name can be changed using the Edit pencil. Press on the spa name to login to the spa.

Step 14: The SmartLink™ module is now connecting to your router and preparing to come online. The spa will show off-line at this point. It may take 2-5 minutes for initial connection. Press refresh arrow to recheck status.

To check your actual WiFi signal strength press on the WiFi bar graph icon.



The signal strength is displayed in decibels with a time stamp of when that signal strength was taken. The signal will be updated every 5-10 minutes.

Voice Control
Link Spa to Google Assistant

The MySpaPool vocal skill allows you to control any spa pool fitted with our SmartLink™ or SmartStream™ WiFi module by voice commands. Available on both Google Assistant and Amazon Alexa platforms, you can now talk to your spa to activate accessories and alter settings or ask it questions about active modes, settings and status. It really is as simple as talking to your spa.

How to Link Spa to Google Assistant

The following instructions assume you already have Google Assistant installed and activated on your phone or your Google Home device is powered on and connected to your home WiFi network.

Google Assistant

Step 1: The first step is to link your SpaLink app to your Google account. Open SpaLink, tap Login and then tap Google logo at top of screen.

Step 2: The Google Sign-In page will be presented. Tap on the Sign In button at bottom of screen.

*Information is subject to change without notice.

Link Spa to Google Assistant
Voice Control

Step 3: Select your Google account. If you have multiple accounts, use the account that is linked to your Google Home device.

Step 4: The next step is to link your Google account to the mySpaPool action. Start by saying **"Hey Google, talk to my spa pool".**

Step 5: When you answer 'Yes' to the link question you will see this screen.
Tap Log In with Google to complete the account linking.

Step 6: The final step is to advise MySpaPool which spa to issue commands to. Start by saying **"Hey Google, talk to my spa pool".**

*Information is subject to change without notice.

Link Spa to Google Assistant
Voice Control

Step 7: Now say **"List my spa"** and Google will list any spas setup on your SpaLink app. Select the spa number (i.e. 1 or 2), not the spa name, to complete the link.

Setup Complete: TThe setup is now complete. You can begin issuing vocal commands to your spa. i.e. **"Hey Google, ask my spa pool... turn pumps on".**

Change Spas: If you have a dual-zone spa or multiple spas you can switch between available spas by issuing the **"List my spa"** command at anytime.

*Information is subject to change without notice.

Link Spa to Amazon Alexa
Voice Control

The following instructions assume your Alexa device is powered on, connected to your home WiFi network and has been linked to your Amazon Alexa account.

Amazon Alexa

Step 1: The first step is to open the Amazon Alexa app and navigate to **Skills & Games** via the menu bar in the top left corner.

Step 2: Use the search bar to search for **"My Spa Pool"** and the skill will be displayed. Tap on the skill to select it.

*Information is subject to change without notice.

Link Spa to Amazon Alexa
Voice Control

Step 3: The next step is to enable the skill, tap on the Enable bar.

Step 4: You have now successfully linked the MySpaPool skill to your Amazon Alexa account. The next step is to link the SpaLink app to your Alexa account.

Step 5: Open SpaLink™, tap Login and then tap on the Amazon Alexa logo at top of screen.

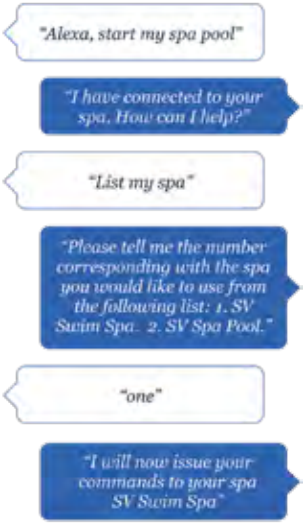
Step 6: Tap on the Login with Amazon button and confi rm your acceptance to complete the account link with SpaLink™.

*Information is subject to change without notice.

Link Spa to Amazon Alexa
Voice Control

Step 7: With account linked, the final step is to confi rm which spa to issue commands to. Start by saying, **"Alexa... start my spa pool".**

Setup Complete: Now say **"List my spa"** and Alexa will list any spas setup on your SpaLink™ app. Select the spa number (i.e. 1 or 2), not the spa name, to complete the link.



Change Spas: You can now issue vocal commands to your spa. i.e. **"Hey Alexa... ask my spa pool... turn pumps on".** To change spas issue the **"List my spa".** command again.

*Information is subject to change without notice.

Vocal Assistant Command List

Voice Control

Google Assistant

Hey/OK Google... **ask my spa pool**...

<command>

OR

Hey/OK Google... **talk to my spa pool**...

<command>

Amazon Alexa

Hey/OK Google... **ask my spa pool**...

<command>

OR

Hey/OK Google... **talk to my spa pool**...

<command>

Action commands

Start my spa
(all pumps/blower/lights on)

Stop my spa
(all pumps/blower/lights off)

Turn pumps on/off
(turns all pumps on/off)

Turn XXX pump on/off
(XXX = 1st, 2nd, 3rd or 4th)

Turn lights on/off
(lights turn on in last used mode)

Turn lights on XXX
(XXX = White, Fade, Step or Party)

Turn blower on/off

Start/Stop
Water Clean Cycle

Get Commands

What's the water temperature?
(actual water temp)

What's the target temperature?
(set temp point)

What's the operating mode?

What's the heat pump mode?

Current element boost state?

Set Commands

Set temperature to XX'C
(XX = 10'C to 40'C)

Set filtration to XX hours
(XX = 1 to 24)

Set operating mode to XXX
(XXX = Normal, Away or Week)

Set heat pump mode to XXX
(XXX = Auto, Heat, Cool or Off)

Set element boost mode to on/off

*** Note:** ***Can also use change, adjust or modify instead of set)***

*Information is subject to change without notice.

Unable to locate SpaLink™ App on App Store

Problem	Causes	Solutions/Actions
Cannot find app when searching on an iPad device	Tap Filters to left of search bar and change from "iPad Only" to "iPhone Only"	On some devices the SpaLink App is listed as an iPhone only app

Unable to locate SpaLink App on App Store

Problem	Causes	Solutions/Actions
"Username Taken" error when trying to register	Another user has already registered the username you entered	- Press YES to accept the alternative username suggested - Press NO to go back, enter a different username, then try register again
	You have already completed the registration process previously	Use the Forgot Password link on the Login page to recover your password
"Email address already registered" error when trying to register	A successful registration has already been completed with the email address entered	Use the Forgot Username or Forgot Password links on the Login page to recover your details

Troubleshooting

Unable to login to app

Problem	Causes	Solutions/Actions
App will not respond to Log-in press OR app crashes or hangs on spinning wait icon when attempting to Login OR "The Internet connection is offline" error when attempting to Login	Your smart device has no Internet connection OR you are connected to the SmartLink SV hot spot instead of your home WiFi network	- Check that you are connected to your home WiFi network OR ensure mobile data is active if running off your phone carrier's cellular data. - Open a browser or a different app to confirm Internet is working OK on your device -Disconnect from the SV network and reconnect to your home WiFi network

NOTE: *If you are attempting to run the app setup process, DO NOT connect to the SV network hot spot until prompted by the app. You must have normal Internet connection to Login to the app and start the "New Device" process.*

Cannot see the SV network in WiFi Setting during setup

Problem	Causes	Solutions/Actions
The SVx-xxxx-xxxx network is not showing in the WiFi settings list	The SmartLink™ WiFi module may not be in HOT mode	The SmartLink™ WiFi module may not be in HOT mode
	The SmartLink™ module is not releasing from your router from a prior failed setup	Complete a master reset to HOT mode: 1) Access the WIFI menu via your spa-side keypad 2) Press the UP or + button until display shows [RSET] 3) Press the OK or SAVE button to execute the RSET (reset) command 4) Wait for 20-30 seconds for the reset process to be completed 5) Reset mains power to spa (power spa OFF for 10 sec, then power spa back ON) 6) After priming cycle access the WIFI menu again via your spaside keypad 7) Press the OK or SAVE button to execute the [HOT] command

NOTE: *If you still cannot see the SV network in your WiFi list after following the above instructions, power OFF your router.*
Complete the 7 x steps above again (whilst the router is still powered OFF), then power your router back ON.

Troubleshooting

Unable to connect to SV network during setup

Problem	Causes	Solutions/Actions
"Unable to connect" error when selecting SV network from WiFi list	SmartLink™ module HOT mode has not executed properly	Follow these steps in this exact order: 1) Disconnect from SV network and reconnect to your home WiFi network 2) Force close SpaLink app 3) Access the WIFI menu via your spa-side keypad 4) Press the UP or + button until display shows [RSET] 5) Press the OK or SAVE button to execute the RSET (reset) command 6) Wait for 20-30 seconds for the reset process to be completed 7) Reset mains power to spa (power spa OFF for 10 sec, then power spa back ON) 8) Login to app and start setup process again

*Information is subject to change without notice.

Input socket error during setup process

Problem	Causes	Solutions/Actions
"Input socket" error when pressing on Setup bar to conduct WiFi scan during setup process	SmartLink™ module HOT mode has not executed properly	Follow these steps in this exact order: 1) Force close the app 2) Go to your device WiFi settings, disconnect from the SV network and reconnect to your home WiFi network 3) Access the WIFI menu via your spa-side keypad 4) Press the UP or + button until display shows [RSET] 5) Press the OK or SAVE button to execute the RSET (reset) command 6) Wait for 20-30 seconds for the reset process to be completed 7) Reboot your phone or tablet 8) Reset mains power to spa (power spa OFF for 10 sec, then power spa back ON) 9) After priming cycle access the WIFI menu again via your spaside keypad 10) Press the OK or SAVE button to execute the [HOT] command 11) Login to app and start setup process again

Troubleshooting

Home WiFi network not detected during app WiFi scan

Problem	Causes	Solutions/Actions
WiFi scan during setup hangs or reports "No network found"	The signal strength between SmartLink module and home router is too weak	Take steps to improve WiFi signal strength to be -70dB or stronger 1) Ensure module is positioned on spa side closest to house 2) Ensure module is positioned high enough with direct line of sightto router 3) Consider mounting module external to spa cabinet (refer to page 164) 4) Relocate router closer to spa 5) Install additional access point or WiFi extender in closer proximity to spa

*Information is subject to change without notice.

Spa not online after setup process

Problem	Causes	Solutions/Actions
Setup process completed successfully but spa always showing offline status	SmartLink™ module has not switched out of HOT mode successfully	Execute the INFR command to force a reconnection with the SpaNET App Server: 1) Access the WIFI menu via your spa-side keypad 2) Press the UP or + button until display shows [INFR] 3) Press the OK or SAVE button to execute the INFR (infrastructure) command 4) Wait for 1-2 minutes and check spa online/offline status
	Incorrect router password entered during app setup process	Check the LED indicator lights on the SmartLink module => if the RED light is flashing it indicates the router password was incorrectly entered during the setup process. In this instance you will need activate HOT mode, delete the spa and run setup again: 1) Execute the HOT command via the WIFI menu on your spa side keypad 2) Click on the Edit pencil on the offline spa, then press DELETE 3) Press on New Device and run the app setup process again 4) Be sure to take extra time and care when entering your router password

*Information is subject to change without notice.

Troubleshooting

Spa not online after setup process

Problem	Causes	Solutions/Actions
WiFi scan during setup hangs or reports "No network found"	WiFi signal between SmartLink module and router too weak	Check the LED indicator lights on the SmartLink module => if the RED light is OFF, and GREEN light is flashing it indicates a problem with weak WiFi signal strength. Take steps to improve signal strength (refer to solutions in Page 198)

Spa was online but has dropped offline

Problem	Causes	Solutions/Actions
Spa was working but has now dropped offline and is failing to reconnect	Connection between the spa and your router has been lost	Execute the INFR command to force a reconnection with the SpaNET App Server: 1) Access the WIFI menu via your spa-side keypad 2) Press the UP or + button until display shows [INFR] 3) Press the OK or SAVE button to execute the INFR (infrastructure) command 4) Wait for 1-2 minutes and check spa online/offline status. If the above steps do not work reboot your router (power OFF / ON)
	WiFi signal between SmartLink™ module and router too weak	Take steps to improve signal strength (refer solutions in page 198)

*Information is subject to change without notice.

SmartLink™
Legal Information

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Apple and App Store are trademarks of Apple Inc., registered in the U.S. and other countries.

Android@ and Google Playware trademarks of Google Inc.

Contains Transmitter Module FCC ID: T9J-RNS2

Contains Transmitter Module FCC ID: T9J-RN131,171

This device complies with Part IS of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part IS of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

To satisfy FCC RF Exposure requirements for mobile and base station transmission devices, a separation distance of 20 cm or more should be maintained between the antenna of this device and persons during operation. To ensure compliance, operation at closer than this distance is not recommended. The antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

*Information is subject to change without notice.

Optional Upgrade
Aquatic Fitness Tethering System

The swim pole is an optional upgrade available on select models.

The swim pole allows the user to swim or jog against tension while in the water resulting in a low-impact workout.

*Information is subject to change without notice.

Optional Upgrade
Aquatic Fitness Tethering System

Included in your Kit:

- Waist Strap
- Tether
- Pole
- Pole Socket

Pole Socket

*Information is subject to change without notice.

Notes

Model name: _____

Serial number: _____

Delivery date: _____

Sales order number: _____

Sales person details: _____

Dealer information: _____

Fisher Spas Limited Warranty

Lifetime Warranty on Permaframe™ Frames
Vortex Leisure Pty Ltd warrants the structural integrity of the spa frame against defects in workmanship and materials for the lifetime of the spa subject to the limitations, conditions and exclusions expressed in this warranty.

10 year non pro rata structural warranty
Vortex Leisure Pty Ltd warrants the structure of the spa shell against defects in workmanship and materials leading to water loss from the spa for a period of 10 years from date of manufacture subject to the limitations and conditions expressed in this warranty.

5 year acrylic warranty
Vortex Leisure Pty Ltd warrants against the loss of water through the acrylic surface of the spa shell for a period of 5 years from date of manufacture, subject to limitations and conditions in this warranty.

5 year jet warranty
Vortex Leisure Pty Ltd warrants the removable spa jets to be free of manufacturing defects for a period of 5 years from date of manufacture. This warranty excludes damage by grit, sand and improper water chemistry causing corrosion of the part and is limited to supply of replacement parts after the faulty part has been returned to Vortex Leisure Pty Ltd for warranty inspection. Leaking from jets is covered by the plumbing warranty. Laminar jets have a 1 year parts only warranty.

5 year heater warranty
Vortex Leisure Pty Ltd warrants the heater element against defects in materials and workmanship for a period of 5 years from date of manufacture. After 1 year this warranty is limited to the supply of replacement parts and excludes labour and freight costs. This warranty does not cover damage to heaters caused by incorrect water balance resulting in the heater being subjected to abrasive/acid water.

5 year plumbing warranty
Vortex Leisure Pty Ltd warrants the plumbing piping and plumbing joints against defects in materials and workmanship causing leaking for a period of 5 years from date of manufacture. After 1 year this warranty is limited to the supply of replacement parts and excludes all labor and freight costs.

*Information is subject to change without notice.

Fisher Spas Limited Warranty

2 year pump warranty
Vortex Leisure Pty Ltd warrants the water pumps against defects in materials and workmanship for a period of 2 years from date of manufacture. After 1 year this warranty is limited to the supply of replacement parts and excludes all labour and freight costs. Damage to the pump motor caused by incorrect chemical balance will not be covered under this warranty. Vortex Leisure Pty Ltd reserves the right to request that the pump be returned for assessment before it is replaced under this warranty.

1 year air blower warranty
Vortex Leisure Pty Ltd warrants the air blower against defects in materials and workmanship for a period of 1 year. This warranty will become void if the blower damage is caused by overfilling.

1 year thermoclad cabinet warranty
Vortex Leisure Pty Ltd warrants the thermoclad spa cabinet against defects in materials and workmanship for a period of 1 year from date of manufacture. This warranty specifically covers the structural integrity of the cabinet. The thermoclad cabinet finish is warranted to be free from defects in materials and workmanship at the time of initial delivery. Fading and weathering of the surface will occur naturally over time, and are not considered defects.

1 year Wifi, audio system, ozone, UV, LED light(s) warranty
Vortex Leisure Pty Ltd warrants the factory installed Wifi, audio system, UV sanitiser, Ozone sanitiser and LED Light(s) assemblies, to be free from defects in materials and workmanship for 1 year. The UV globe is a parts only warranty, if it fails within the 1 year period, a replacement globe will be sent out free of charge to be installed by the customer

1 year external heat pump warranty
Vortex Leisure Pty Ltd warrants the External Heat Pump to be free from defects in materials and workmanship for 1 year. Installation is to be carried out by a qualified contractor. Failure to do so will immediately VOID this warranty. Vortex Leisure Pty Ltd reserves the right to request the return of the heat pump for assessment before it is replaced or repaired.

1 year spa hardcover warranty
Your Spa Cover is warranted for a period of 1 Year from the date of delivery. This warranty applies only to the structural integrity of the cover and the vinyl. Damage caused to stitching, straps or locks due to improper use of the cover will not be covered under warranty. Disposal of any cover replaced under warranty will be the owners responsibility.

*Information is subject to change without notice.

Fisher Spas Limited Warranty

Warranty coverage

Warranty coverage begins at the delivery date. Vortex Leisure Pty Ltd only extends this warranty to the original purchaser and only if the spa has been purchased through an authorized Vortex Leisure Pty Ltd reseller. Written notice of the defect and proof of purchase must be provided to Vortex Leisure Pty Ltd or it's nominated representative within 14 days of the defect occurring. If the spa is required to be returned to Vortex Leisure Pty Ltd for rectification all freight costs shall be pre paid by the customer. Repair or replacement of any defective product is at the sole discretion of Vortex Leisure Pty Ltd. To action warranty service contact the authorized Vortex Leisure Pty Ltd reseller you purchased from. If you are unable to obtain satisfactory service from your reseller, written notification must be provided to Vortex Leisure Pty Ltd within 14 days of the defect occurring. Vortex Leisure Pty Ltd will pay the travel costs of the service agent for the first 40km from their base. Any further travel charges shall be the responsibility of the spa owner.

Electrical connection

All electrical connections must be carried out by a qualified electrical contractor. Failure to do so will immediately VOID this warranty. The spa must be connected to a dedicated MAINS electrical supply circuit protected by a compliant earth leakage circuit breaker safety switch. Vortex Leisure Pty Ltd reserves the right to ask for proof that the spa has been installed by a qualified electrician.

Warranty exclusions

1. Damage resulting from improper water maintenance.
2. Damage from operating the spa above 45°C.
3. Damage caused by clogged filters
4. Damage caused to the spa by improper use of spa cover and excessive exposure to sunlight.
5. Acts of God.
6. Damage caused by not installing spa on sufficient hard level surface.
7. Damage caused by incorrect electrical installation, brownouts, voltage spikes or operating spa out of +/- 10% of voltage range.
8. Warranty is not extended to filter cartridges, head rests, pump seals or drain hoses.
9. Commercial use reduces all warranties to maximum 6 months.
10. Damage caused by relocation of the spa from its original installed location.
11. Damage by termites, borer or other pests.
12. Damage caused by flooding
13. Damage caused by third party carriers.
14. Damage or corrosion to frame caused by un-repaired leaks or improper drainage.

*Information is subject to change without notice.

Fisher Spas Limited Warranty

Limitations

This warranty is the only warranty offered by Vortex Leisure Pty Ltd and excludes any other implied or oral undertakings. Except as described above, this warranty does not cover defects or damage due to normal wear and tear, improper installation, alteration without Vortex Leisure Pty Ltd's prior written consent, accident, acts of God, misuse, abuse, commercial or industrial use of an accessory not approved by Vortex Leisure Pty Ltd, failure to follow Fisher Spas'™ Pre-Delivery Instructions or Owner's Manual, or repairs made or attempted by anyone other than an authorized representative of Vortex Leisure Pty Ltd. Vortex Leisure Pty Ltd or its agents will not be liable for any incidental or consequential loss or injury. Vortex Leisure Pty Ltd will not be liable for costs associated with but not limited to building alterations, removal costs, delivery costs or labour costs associated with the replacement of a spa.

You must check and tighten all barrel unions regularly. Failure to do so may affect your warranty. See your user manual for further information.

*Information is subject to change without notice.

Information on composition and disposal of the packaging

DESCRIPTION	MATERIAL	SYMBOL	DISPOSAL RECOMMENDATION
WOODEN PALLET WOODEN CRATE WOODEN PANEL	**WOOD** **FOR 50**	 **FOR 50**	SEPARATE WASTE COLLECTION WOOD *for the correct disposal of this packaging, check the local provisions with the competent body*
CARDBOARD BOX CARDBOARD SHEET	**CORRUGATED CARDBOARD** **PAP 20**	 **PAP 20**	SEPARATE WASTE COLLECTION PAPER *for the correct disposal of this packaging, check the local provisions with the competent body*
CARDBOARD "L" SHAPED PROTECTOR	**CARDBOARD (DIFFERENT TYPES) PAP 21**	 **PAP 21**	SEPARATE WASTE COLLECTION PAPER *for the correct disposal of this packaging, check the local provisions with the competent body*
AVANA PACKING PAPER	**PAPER** **PAP 22**	 **PAP 22**	SEPARATE WASTE COLLECTION PAPER *for the correct disposal of this packaging, check the local provisions with the competent body*
PLASTIC "L" SHAPED PROTECTOR BAG ENVELOPE	**LOW-DENSITY POLYETHYLENE** **LDPE 4**	 **LDPE 4**	SEPARATE WASTE COLLECTION PLASTIC *for the correct disposal of this packaging, check the local provisions with the competent body*
"BIG AIR BUBBLE" BUBBLE WRAP	**HIGH-DENSITY POLYETHYLENE** **HDPE 2**	 **HDPE 2**	SEPARATE WASTE COLLECTION PLASTIC *for the correct disposal of this packaging, check the local provisions with the competent body*
"SMALL AIR BUBBLE" BUBBLE WRAP	**POLYETHYLENE** **PE 7**	 **PE 7**	SEPARATE WASTE COLLECTION PLASTIC *for the correct disposal of this packaging, check the local provisions with the competent body*
STRAPS	**POLYPROPYLENE** **PP 5**	 **PP 5**	SEPARATE WASTE COLLECTION PLASTIC *for the correct disposal of this packaging, check the local provisions with the competent body*
PLASTIC PIECES various sizes	**POLYSTYRENE** **EPS 6**	 **EPS 6**	SEPARATE WASTE COLLECTION PLASTIC *for the correct disposal of this packaging, check the local provisions with the competent body*
PLASTIC SHEETS	**POLYURETHANE** **PUR 7**	 **PUR 7**	SEPARATE WASTE COLLECTION PLASTIC *for the correct disposal of this packaging, check the local provisions with the competent body*
AVANA PADDED BUBBLE ENVELOPE	**POLYETHYLENE + PAPER** **PE1+PAP22**	 **PE1+PAP22**	SEPARATE WASTE COLLECTION SEPARATE PLASTIC LINING FROM PAPER *for the correct disposal of this packaging, check the local provisions with the competent body*

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