



Control **VL260 + VL400** Hot Tub Manual



GREAT NEWS ON YOUR NEW SPA PURCHASE.

Your Hot Tub is designed and manufactured with the finest components available and is engineered for comfort, low maintenance, and durability in mind.

This manual will help you to determine the best way to take care of your spa based on the amount of use and the type of environment your spa is installed.

It is very important that you take time to read the entire manual before using your spa. Within in this manual are important start-up guidelines and maintenance procedures as well as safety precautions that must be followed to ensure the prolonged life of your spa and the safety of the people using the hot tub.

Failure to follow start-up procedures may result in damage to your Hot Tub and void your warranty. Please feel free to call Superior Spas Ltd if you have any further questions after reading this manual. Your Hot Tub comes with a warranty, information relating to your warranty can be found in Section 13 of this manual.

We hope you enjoy many years of fun and relaxation in your new Hot Tub.



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IMPORTANT SAFETY INFORMATION

When installing and using this electrical equipment be sure to follow these basic safety precautions:

- 1. WARNING:** To reduce the risk of injury, do not permit children to use this product unless they are closely supervised at all times
- 2. DANGER:** Risk of accidental drowning. Extreme caution must be exercised to prevent unauthorized access by children. To avoid accidents, ensure that children cannot use this spa unless they are supervised at all times
- 3. DANGER:** Risk of injury. The suction fittings in this spa are sized to match specific water flow created by the pump. Should the need arise to replace the suction fitting or the pump, ensure that the flow rates are compatible. Never operate the spa if suction fittings are broken or missing. Never replace a suction fitting with one rated less than the flow rate marked on the original suction fitting
- 4. DANGER:** Risk of Electrical Shock. Install at least 5 feet (1.5m) from all metal surfaces. As an alternative, spa may be installed within 5 feet (1.5m) of metal surfaces if each metal surface is permanently connected (bonded) by a minimum ground wire
- 5. DANGER:** Risk of Electrical Shock. Do not permit any electrical appliance such as a light, telephone, radio, television, etc. within 5 feet (1.5m) of a spa unless such appliances are installed and built-in by the manufacturer
- 6. ELECTRICAL SUPPLY:** The electrical supply for this product must include a suitably rated switch or circuit breaker to open all ungrounded supply conductors to comply with the national electrical standards. This disconnect must be readily accessible and visible to the spa occupant but installed at least 5 feet (1.5m), from the spa water
- 7. WARNING:** To reduce the risk of injury:
 - a) The water in the spa should never exceed 40°C (104°F). Water temperature between 38°C (100°F) and 40°C (104°F) is considered safe for a healthy adult
Lower water temperatures are recommended for young children and when the spa use exceeds 10 minutes
 - b) Since excessive water temperatures have a high potential for causing foetal damage during early months of pregnancy, pregnant women should limit spa water temperatures to 38°C (100°F)
 - c) Before entering a spa, the user should measure the water temperature with an accurate thermometer since the tolerance of water temperature regulating devices varies
 - d) The use of alcohol, drugs, or medication before or during spa use may lead to unconsciousness with the possibility of drowning
 - e) Obese persons and persons with a history of heart disease, low or high blood pressure, circulatory system problems, or diabetes should consult a physician before using a spa
 - f) 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
- 8. AUDIO/VIDEO EQUIPMENT WARNINGS** (Optional equipment based on model)
CAUTION: Risk of Electrical Shock. Do not leave compartment door open
- 9. CAUTION:** Risk of Electrical Shock. Replace components only with identical components
- 10. WARNING:** Prevent Electrocution.
Do not connect any auxiliary components (for example cable, additional speakers, headphones, additional audio/video components, etc.) to system
- 11. CAUTION:** Risk of Electrical Shock.
Do not service this product yourself as opening or removing audio covers may expose you to dangerous voltage or other risk of injury. Refer all servicing to qualified service personnel
- 12. CAUTION:** Risk of Electrical Shock. When the power supply connections or power supply cord(s) are damaged; if water is entering the audio / video compartment or any electrical equipment compartment area; if the protective shields or barriers are showing signs of deterioration; or if there are signs of other potential damage to the unit, turn off the unit and refer the servicing to a qualified service personnel
- 13. MAINTAIN:** This unit should be subject to periodic routine maintenance (for example, once every 3 months) to make sure that the unit is operating properly
- 14. CAUTION:** Do not operate audio video controls while inside the spa
- 15. INSTALLATION** of the spa for other than a residential dwelling will result in voiding the manufacturer's warranty
- 16. CAUTION:** Do not bring any object into the spa that could damage the spa shell
- 17. CAUTION:** Never insert any object into any opening
- 18. WARNING:** Do not sit on the spa cover or place objects on it
- 19. MAINTAIN:** Remove any water or debris that may collect on the spa cover
- 20. WARNING:** Do not use the spa immediately after strenuous exercise
- 21. WARNING:** If you feel pain or dizziness at any time while using the spa, discontinue use and contact a physician
- 22. WARNING:** To reduce risk of injury it is especially important that persons with pre-existing health conditions or problems such as obesity, heart disease, high or low blood pressure, circulatory problems, pregnancy or diabetes to consult their doctor before using the spa
- 23. WARNING:** Observe reasonable time limits when using the spa. Long exposures at high temperatures can cause high body temperatures. Symptoms may include dizziness, nausea, fainting, drowsiness, and reduced awareness. These effects could possibly result in drowning
- 24. WARNING:** The spa jets produce a stream of water with relatively high pressure. Prolonged exposure of localized area of the body may cause bruises to the skin
- 25. IMPORTANT:** The include warning sign must be posted where all users of the spa can see and read it
- 26. WARNING:** To avoid risk of drowning. The Spa cover should be in place and properly latched when spa is not in use
- 27. IMPORTANT:** Read and understand the warnings on the spa cover
- 28. MAINTAIN:** Proper water chemistry is necessary to maintain the water and prevent possible damage to spa components

Section 3

PRE-INSTALLATION & SET-UP

Selecting a site for your spa

Choose an area in your garden that will be suitable for your Hot Tub, you may wish to consult your electrician to ensure the correct electrical supply can be provided before preparing the base for the hot tub to sit on. An area in front of your hot tub should be clear so that grass and debris are not transferred to the water. Allow access for steps.

Preparing your base

An un-level base may cause your spa to run inefficiently and cause major ongoing faults. When creating your base remember it must be; flat, firm and reinforced if you plan to place your hot tub on a raised platform, such as decking. Please take into consideration the average weight of filled hot tub is 1500kg, you will then need to account for the weight of 4-6 people, plus it will be placed here for a long period of time.



PLEASE NOTE – If you decide to position your hot tub in the ground/pit or with decking built around it, you will need a design plan to allow access to all side for maintenance and repairs, 600mm around each side is required to ALL sides of the spa, any obstacle's blocking the access may result in rescheduling. Revisits may be chargeable.

When you have decided on the positioning of your hot tub, it is fundamental that a solid foundation is in place, grass will not be suitable. Please note, it is the responsibility of the customer to provide a suitable base that is flat, level and solid to prevent distortion from occurring. Any structural damage caused by improper base or base failure may invalidate manufacturer's warranty.

An ideal base would be concrete 100 – 150mm thick. However, existing patio slabs and block paving may also be used. Wooden decking is also a popular base, however, please ensure your base can hold the weight of the hot tub, water and people in it. Please refer to Section 1 for the weight details of your spa. Using "packers" to level the spa is not acceptable

Please Note: Bases must be prepared in plenty of time prior to delivery, thus allowing time for the concrete, etc to fully cure. Any revisits will be chargeable

Service Access

Access is required around the hot tub for any future maintenance, ideally 600mm. If this is not practical then the hot tub must be emptied of water prior to our visit so that the hot tub can be moved to allow access.

Think about

When deciding on the final location of your hot tub, please take into consideration what accessories you have ordered for your spa. For example...

- Have you allowed enough space (8 inches is needed) to let your cover fall behind your spa when using your cover lifter?
- Have you prepared the base to allow room for the steps? 700mm is what we recommend



Access to the desired final hot tub position

It is very important that you have adequate access for the size of the spa you have chosen. Obtain the dimensions of your chosen hot tub and check the route of access for the hot tub. Check the widths & heights of doorways, passages and gates to make sure the hot tub can pass through. Gates, fences and doors may need to be removed prior to delivery, the delivery team will not do this for you.

Make sure that there is nothing protruding such as drainage pipes, steps or sills that could obstruct the way.

Check to see if there are any low roofs or branches that would hinder vertical clearance. If there are any corners on the path to your designated installation site, check to see the hot tub will pass. The route to where the hot tub is to be sited should be flat and level and not soft ground. Check and inform us if there are any slopes, retaining walls, steps or level differences that may cause problems. Any extra resources required such as cranes or hiab vehicles would be an additional charge and would need arranging by yourselves through a third party company.

Under special circumstances, where there is no clear or easy route, a crane can be used to position your hot tub. Please contact a local crane company to arrange this service if you think it may be necessary. Please note that the cost of the crane would be charged to you and not included in our price.

Personnel

We supply a suitable amount of personnel to deliver the hot tub on our hot tub cart or spa sled and position in place, should any further personnel be required then this would be down to yourselves to arrange for your delivery date.

Our colleagues will NOT be able to remove the hot tub from the hot tub cart/ sledge until it reaches the base where it will be permanently situated.

Section 4

ELECTRICAL REQUIREMENTS

Electrical Requirements and Connections

Before installing a hot tub, the appropriate electrical supply must be installed, inspected and confirmed as in line with government Regulations. Below is a simple guide to make sure your electrical supply is in line with the appropriate regulations.

Please see Section 1 for the electrical requirements of your hot tub.

Hot tubs must have a suitable electrical supply in order to run, as they have a specific section in the 16th edition IEE (Institute of Electrical Engineers) Regulations. Do not attempt to install the electrics yourself unless you are a fully qualified electrician as the government introduced a law in January 2005 which states that most electrical work in UK households must be carried out by a 'competent person'. This means that Electrical safety requirements have been included in a new Part P of the Building Regulations.

What is Part P?

The law introduced by the Government in 2005 states that anyone carrying out fixed electrical installations in English and Welsh households must ensure they are:

- Designed and installed to afford appropriate protection against Damage, whether that is mechanical or thermal, so that they do not present any danger in the form of electric shocks or fire hazards
- Suitably inspected and tested in order to verify that they meet the relevant equipment and installation requirements.
- If you have a new circuit installed in your home, it is a legal obligation to have it inspected and tested to ensure that it is compliant with Part P. This can be achieved in one of two ways:

1. Appoint an electrical contractor who is registered with a competent person scheme. Visit the websites of the following organisations if you are unsure of who is Part P qualified:

NICEIC – www.niceic.org.uk

NAPIT – www.napit.org.uk

ELECSA – www.elecsa.co.uk

BSI – www.bsi-global.com/kitemark

BRE – www.partp.co.uk

OR

2. Appoint a contractor who is not Part P registered, but contact your local authority's Building Control Department first as the work will have to be inspected and tested by your local authority before it can be confirmed and signed off. There is a charge for this service.

Whichever route you choose to take, you will receive a Part P certificate to confirm that the electrical work is in line with government regulations. From post 2007 this paperwork must be kept on file and presented, even if you sell your house as part of the Home Seller's Packs.

We, as your hot tub retailer, can liaise with your electrical contractor regarding the exact specification for your chosen hot tub model. However, you must meet the following specification:

- The hot tub must be hard wired on its own fused spur back to your household consumer unit (i.e. the hot tub should not share a supply with any other appliances.)
- The hot tub should be appropriately protected by a sufficiently rated MCB (mains circuit breaker) and should cover the maximum amperage pull of the hot tub plus 25% to allow for brake torque (i.e. the rush of current when pumps are first turned on.) So, for example, a hot tub that has a maximum current draw of 20 amps should be fitted with a 25amp MCB.
- Your hot tub should be protected against earth faults also, by an RCD (residual current device). This is a trip switch which works to prevent the danger of electric shocks from damaged or waterlogged cables and connections. A suitable rated 30Ma RCD is what is recommended

- Any outdoor cabling should be suitably protected from damage by either laying protective ducting (pc pipe) below ground or by using SWA (steel wired armored) cable. Your electrician will calculate the size of cable required dependent upon loading and the distance from the mains supply.

'Plug & Play' Hot Tubs (13 AMP) Electrical Requirements

13AMP (plug & play) hot tubs come fitted with a 3 pin plug which is equipped with an RDC protector, this RCD protector means the plug is much larger than a standard plug so adequate water protection will be needed. We recommend waterproof casings such as:



The plug will simply plug into a standard domestic power supply.

32 AMP and 40AMP Electrical Requirements

A 6mm² 3-core SWA cable is needed for a 32AMP hot tub and a 10mm² 3-core SWA cable is needed for a 40AMP hot tub. An IP65 Rotary Isolator Switch is recommended in order for the hot tub to be isolated outdoors in an emergency or for service work. This is a rotary on/off switch must be sited at least 2 meters away from the hot tub so that users cannot be in the hot tub whilst touching the switch.



A suitable weather proof block connector can be fitted to the end of the tail from the isolator in order for the hot tub to then be directly hard wired into the weatherproof block connector inside the hot tub. Waterproof gland packs should be used to prevent ingress of water on all electrical connections (2 at the isolation switch).

It must be ensured that all earth cables are clearly colour coded with green/yellow insulating tape, or an earth sleeve.

If you have booked our full installation package, our installation team will commission the Hot Tub and check everything is fully operational before the hot tub is 'handed over' to you, give you instruction on the control operation and provide chemical training.

If you are in any doubt about the required electrical guidelines you should seek professional advice from a fully qualified electrician.

Please note: Your electrician should leave 4 meters of spare cable leading from the isolator. Our technicians are qualified to connect this cable to the inside of the Hot Tub.

Our delivery team will NOT hardwire your hot tub to the mains supply. We advise you seek a professional electrician to be present on the delivery day.

Section 5

DELIVERY OF YOUR SPA

Access + Delivery

Prior to delivery you must check that you have the relevant access for your spa. This information can be found in the product specification in Section 1.

Please consider the following when checking your access

- Vehicle access for 3.5 tonne van
- The route the spa will need to take
- Any obstructions, such as electricity boxes, overhanging trees, gates, steps up or down.

If access is not possible than a crane will be required, this may require redelivery. Redelivery and crane will incur additional costs.

Hiab Cranes organized by us will include 1 hour labour for the crane company. Any additional time required be changeable to the customer.

If you are unsure and have any queries regarding your access, we will be happy to assist by reviewing photo's/videos sent by you. Site visits may incur an additional charge.

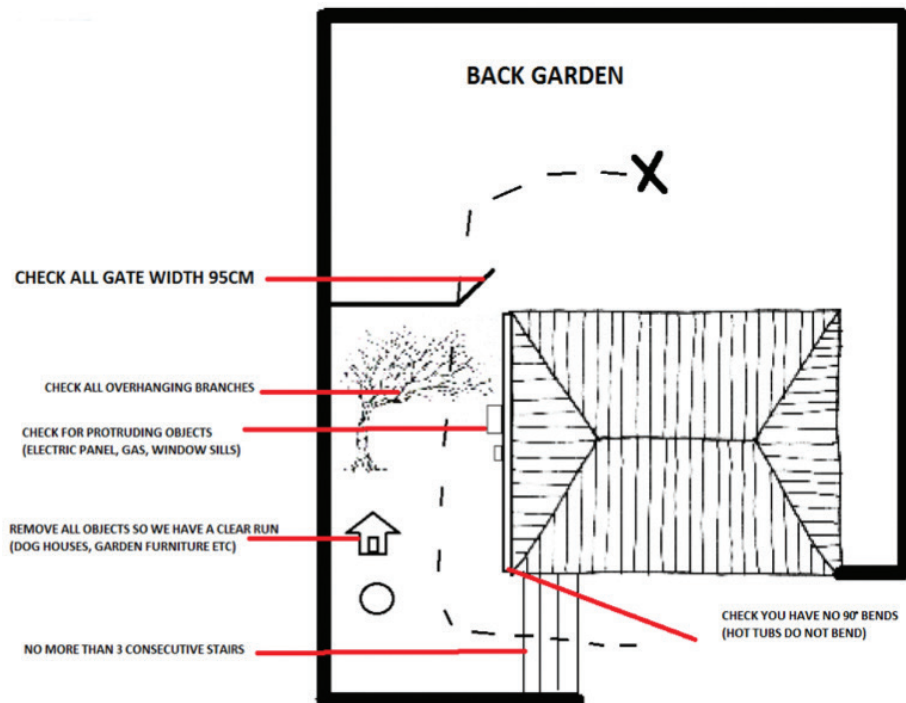
For any support on this matter please contact our office on **01246 559071**.

Office opening hours are...

Mon-Fri 9am-5pm

Saturday 9am-2pm

Alternatively please email us on **info@superiorspas.co.uk**



Section 6

CHECKLIST BEFORE USING YOUR SPA

The control panel operation (Section 7) is filled with valuable information to give you an idea of how your spa works and how to prevent any mishaps or damage to your new hot tub before you get to use it.

Fill It Up

1. Place a garden hose into the filter area (Let your hose run for 5 mins before putting into the spa to clear out any stagnant water in the hose before putting it into the hot tub.) Also, it's a good idea to use a hose-ended filter/water softner, this will fill your spa from the pumps and pipework first to prevent any airlocks in the system. Also, it's a good idea to use a hose-end filter/water softener will make balancing water easier and to reduce the amount of impurities that can contaminate your water. At this point your hot tub should be turned off at the isolator.
2. Fill water to recommended water level as indicated by the minimum water level in your hot tub. Low water levels can cause damage to the pump and heater element so is good practice to top up your spa on a weekly basis. If there is no water level indicator, you should fit your hot tub to 1 inch above the top of the back jets
3. Remove side panel and check for any leaks around the plumbing. It is not unusual for fittings to come lose during shipment. If you do detect any small leaks, you'll want to hand-tighten them right away. (Using a wrench can easily crack the nut and cause the leak to worsen).

Power up the Spa

After checking all the fittings are tight and are sure no leaks are occurring, you can re-fit the side panel and turn the power on at the isolator point. Read Section 7 on how to operate your new spa controls and how to turn on the hot tub.

Hot tubs can take approximately 12 – 24 hours to rise to temperature. Heat time depends on spa size, voltage and other factors such as outside temperature. Plug & Play hot tubs take longer to heat than 32AMP.

Balance Your Water

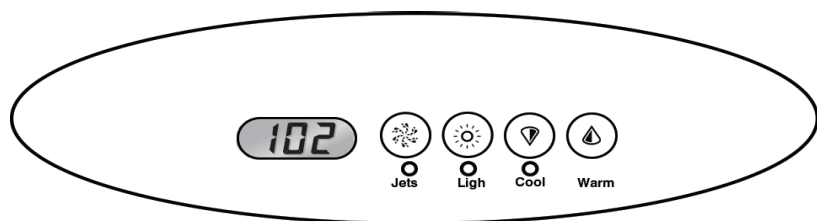
Test and balance your hot tub water before you introduce any sanitizers. It is important to balance prior to adding sanitizers to avoid unwanted problems such as cloudiness, discoloration or foul smelling water. Also, keeping your water balanced is crucial to promote long equipment life, and healthy, clean, clear spa water. Poor water management which results in components of your spa degrading/failing can invalidate your warranty.

More information on treating your water can be found in Section 9.



START YOUR JOURNEY
TO **ULTIMATE RELAXATION**

CONTROL PANEL OPERATIONS VL260



FIRST RUN

The control of the spa starts with the Priming mode indicated on the display screen with the **Pr** sign. This mode takes less than 5 minutes, then the spa begins to heat and keep the water temperature in Standard mode, „St“

JETS - STARTING THE ENGINES

Press the JET button to start the pump at low speed. When you press the button second time, the pump operates at a higher speed. Press the button the third time and it will shut the pump down. The control program contains a safety shut-down function, which shuts down the engines after 4 hours at low rotating speed and after 15 minutes at high rotating speed. The system starts the engine automatically every 30 minutes and operates for a minimum of two minutes. It is intended to check the water temperature and turns on the heater if needed (depending on the set operating mode). When the system turns on automatically at low speed, it cannot be turned off from the control panel, but the second gear can be turned on.

COOL WARM – SETTING THE TEMPERATURE

AT FIRST START THE DEFAULT TEMPERATURE IS 37°C. THE LAST MEASURED TEMPERATURE IS CONTINUOUSLY DISPLAYED ON THE CONTROL PANEL. REMEMBER, THE CONTROL PANEL ONLY DISPLAYS THE CURRENT TEMPERATURE IF THE ENGINE HAS BEEN OPERATING FOR AT LEAST 2 MINUTES. The default temperature can be reduced by pressing the COOL button and increased by pressing the WARM button. In this case the value of the temperature will flash on the display screen. When you have completed the setting, after 3 seconds the screen will continuously display the current temperature again.

LIGHT

Press the LIGHT button to turn on the lighting in the spa. The power lights turn off automatically after 4 hours.

MODES

To change modes press the following buttons sequentially: „Light“ and „Cool“ or „Light“ and „Warm“.

STANDARD MODE

In normal mode the spa water will be heated to the set temperature. The sign on display will be „St“

ECONOMY MODE

In economy mode the spa water is only heated in filtration cycles so it reaches the set temperature more slowly. The Economy mode sign on display will be „Ec“

SLEEP MODE

In this mode the spa water is heated to maximum 10°C (frost protection). The sign on display will be „SL“

SETTING FILTERING TIME

The first filtration cycle begins 6 minutes after the spa is powered. The second filtration cycle begins 12 hours later. The filtration cycle is programmable for 1-8 hours or to continuous filtration (The sign on display will be **FL**)

For programming press the COOL or WARM button, then the JETS button.

To set the filtering time press COOL or WARM . Press the JETS button to stop.

FROST PROTECTION

If the temperature sensors detect water temperature below 6.7°C, the engine and heating will start automatically to prevent the spa water from freezing. When the sensors detect 7.2°C, the system will shut down.

Error messages on display

Sign	Meaning	Message / necessary actions
	There is no message on the screen. The spa is not plugged in.	The control panel is only usable if the spa is plugged in. The settings are stored in the memory until the system is turned on again.
--	Unknown temperature	The actual temperature will appear on the screen 2 minutes after the engine has been turned on.
HH	"Overheat" - Excessive water temperature, the spa has stopped. One of the sensors has detected 48°C (118°F)	DO NOT STEP INTO THE SPA. Remove the spa cover to allow the water to cool. Press any button on the control panel. If the system does not reset, turn it off and call the official service provider.
OH	"Overheat" - Excessive water temperature, the spa has stopped. One of the sensors has detected 43°C (108°F)	DO NOT STEP INTO THE SPA. Remove the spa cover to allow the water to cool. Press any button on the control panel. If the system does not reset, turn it off and call the official service provider.
IC	"Ice" - Possible freezing condition.	No action should be taken. The engine start regardless the state of the spa and runs for 4 minutes until the sensors sense 7,2 °C or higher water temperature
SA	The spa is shutting down. Sensor A is out of service.	If the problem comes up repeatedly, contact the official service provider.
Sb	The spa is shutting down. Sensor B is out of service.	If the problem comes up repeatedly, contact the official service provider.
Sn	The sensors are out of sync. If it is displayed together with the temperature, the problem is temporary. If it is displayed alone and flashing, the spa will shut down.*	If the problem comes up repeatedly, contact the official service provider.
HL	There is a significant difference between sensor values. This could indicate a flow problem.	Check the water level - it should be 2-3cm below the head-rests. Pour in more water if necessary. Check if the engine has been primed. If the problem comes up repeatedly, contact the official service provider.
LF	Recurring flow problem. The heating unit shuts down, but all other functions of the spa are serviceable.	Follow the instructions detailed here HL . Check the cleanliness of the filter. If necessary, clean or change the filter. Press any button to reset.
dr	Low water in the heating unit. Slow flow or air bubbles in the heating unit. The spa will shut down for 15 minutes.	the water level is OK, check if all the engines have been primed. Press any button to reset. If the problem comes up repeatedly, contact the official service provider.
dy	Low water in the heating unit. Low water in the heating unit. (appears if dr is displayed 3 times.)*	Follow the instructions detailed at the dr sign. Press any button to reset.

* Some functions may turn on when the spa is shut down when there is a need for frost protection.

Section 8

MAINTENANCE

Daily: It is possible to select how many filtration cycles a day you want to your hot tub to perform. We advise to set your filtration setting to run twice per day, for at least an hour each time.

Weekly: It is good practice to test your water a couple of times a week, then adjust alkalinity, pH, sanitizer, and calcium hardness as required to bring the levels back in line with the 'okay' range on your test strip pack. If you've added sanitizer during the week, you may not need to add a weekly dose, so always be sure to test before adding anything.

Every Three Months: It is advised to drain your hot tub every three months and refill with fresh water. Before you drain your hot tub, add some hot tub flush to your hot tub and let this circulate through the lines and jets, this will eliminate any build up of bacteria and prevent biofilm.

After the bacteria in your lines is dead and circulating, completely drain the dirty water out of your spa. Rinse with clean water then drain. Clean your hot tub, wash or replace your filter cartridges, then refill your spa with fresh water (Let your hose run for 5 mins before putting into the spa to clear out any stagnant water in the hose before putting it into the hot tub). Consider using a hose filter/ water softener to prevent metals and other contaminants from entering your spa in the first place.

After you refill your hot tub, balance the water chemistry and use a shock treatment to rid of any non-organic compounds that have entered via the hose pipe. Be sure to test the water one last time before stepping into it the first time. This will ensure your spa contains the correct amount of sanitizer to destroy contaminants quickly.

Draining Your Spa

Approximately every 3 months it is recommended to replace your water, the frequency of which you replace your spa water depends on regularity of use, care taken in maintaining the water quality etc.

It will be apparent when your water is ready for a change when you can no longer control sud, scum and cloudiness of the water even though the key water balance measurements are all within the proper parameters. Another alternative is to use a submersible pump, this will allow you to drain your hot tub much quicker.

NOTE: Always power off the spa before draining it. Do not power on until the spa has been filled to the water level line.

Even though the spa is empty do not allow it to sit in direct sunlight and always return the spa cover.

If you intend to drain to shut down for winter, please follow the steps in Section 11.



Your drain valve will look something like this. To operate, unscrew the center section and screw in the drain valve adapter that arrived with your hot tub. The action of screwing in the drain valve adapter releases the water flow.

You may wish to attach a hose to the adapter to run the water away.

Filter Care

Cleaning your hot tub filter is a vital part of hot tub maintenance and plays a key role in keeping your hot tub's water safe and clean. While cleaning your hot tub filter may seem complex and cumbersome, it can actually be quite simple. This will walk you through the most common ways to keep your hot tub's filter spotless.

Tip 1: Filter Replacement

Regardless of how clean you keep your spa's filter, it is imperative that you replace it at least every 6 – 9 months. In addition to putting a severe strain on your hot tub's

pump, worn-out filters are unable to properly trap contaminants.

Tip 2: Basic Rinsing

Your spa's filter should be given a thorough rinsing once every 2 weeks. If you make frequent use of your spa, however, you may want to utilize this method of filter-cleaning on a somewhat more frequent basis. This method is very simple and can often be accomplished with nothing more than a garden hose and an old tooth brush. Taking care to remove every speck of dirt, use the hose to give your filter a vigorous soaking and use the tooth brush to carefully brush out in between the filters paper pleats.

If the filter is particularly dirty, all-natural cleaning products can be used in conjunction with this method. It is also important to rinse your filter off in this fashion whenever you change the water in your spa, regardless of how recently its last cleaning took place.

Tip 3: Cleaning Products

If your spa's filter is exceptionally dirty you may want to consider incorporating the aid of cleaning products. Filter/cartridge cleaner has proven extremely effective in laying waste to caked-on dirt and calcium. Please follow instructions on packaging. Ensure you rinse the filter thoroughly and leave to dry out completely before placing back in your spa.

Tip 4: Mistakes to Avoid

When cleaning your hot tub filter, there are several things you should avoid. First off, do not attempt to clean your hot tub filter in a washing machine, dish washer or pressure washer as the immense water pressure can damage the filter irreparably. Secondly, do not try to clean your filter with bleach or laundry detergents, as they will cause severe foaming problems with your hot tub's water, much like other commercial cleaning products.

General Care

Vacuuming the spa: Debris from wind, trees and spa users will occasionally accumulate on the bottom of your spa. Your spa's filtration system will remove the smaller debris. Debris that is too large or too heavy for the filtration system will have to be removed by the use of a spa vacuum or net.

Headrest Care: Remove and clean the headrest cushion as needed with soapy water using a cloth or soft sponge or brush.

Tip: always remove the pillows when adding chemical treatments to the spa water. Replace after 30 minutes of running the chemicals through the system with the spa cover off. This will prolong their life and avoid reduce damage.

Maintaining the Cover: Use a household hosepipe to gently rinse the spa cover of any debris.

Using a soft brush or sponge clean the cover with soapy water or a hot tub cover detergent. Do NOT use on the inside of the cover.

Tip: To prolong the life of the spa, handle with care or use a hot tub cover lifter and clean regularly.

NOTE: Do not use solvents, abrasive products or aggressive detergents e.g. containing alcohol or bleach.

NEVER allow anyone to stand or sit on the spa cover.

Panel Maintenance: Panels do not require any special maintenance regime. To clean, simply wipe down with a wet cloth. Never spray water against the panels as directly behind are electrical components.

Spa Shell Surface: To maintain the sheen of your spa shell, it is crucial that you do not use any abrasive cleaners. Only use specific surface cleaners.

NOTE: Regardless of your chosen cleaning method always ensure all the residue has been removed from the surface as this could result in your spa having to be drained and refilled.

Section 9

WATER CARE

Water Care Overview

Creating and sticking to a water care plan for your hot tub is the single most important thing you can do to keep your spa—and all the people who enjoy it—healthy.

Follow water care best practices, and you'll prevent many potential chemistry issues.

REMEMBER—More is not best when it comes to sanitizing!!

Additional notes:

1. Do not mix chemicals with each other before adding them to the water. Add only one chemical at a time
2. Never add concentrated liquid chemicals directly to the water. Always dilute chemicals in a large plastic bucket or pail before adding them
3. When diluting chemicals, always add them to the water. Never add water to the chemicals
4. Always dilute the chemical slowly and evenly before adding into the water. Never add any chemical, diluted or otherwise, into any skimmer device
5. Always store chemicals according to the manufacturer's label directions and keep them out of reach of children
6. To maximize efficiency of chemicals, change the water in your spa every 3 months.

Water Chemistry explained

Moderation is the key when adding any chemicals to your hot tub. Everything you pour in affects something else. They all have the potential to harm you or your spa and components if your chemistry isn't balanced.

So if you find you have too much bromine or chlorine in your hot tub, don't worry! You can avoid complications by taking the simple steps to bring it down to healthy levels as soon as possible. You'll be back to enjoying your spa in no time.

Sanitisers

A sanitiser is absolutely essential. It doesn't matter how clean your Hot Tub is, bacteria can still form. Our range of sanitising products – such as chlorine and bromine – will provide an excellent defense against bacteria.

pH regulators

For your sanitizer to work properly the pH level of the hot tub water must be at the recommended level. This can be adjusted by using either a pH increaser or pH decreaser depending on your tests.

Shock Treatment

Don't panic, this isn't quite as drastic as it sounds. Shock Treatment is simply carried out to prevent the effects of organic waste compounds and involves periodically adding an increased amount of chlorine or bromine to your hot tub; either a weekly or fortnightly dose is recommended, depending on how often you use your hot tub.

Clarifiers

A Clarifier will help to keep your water crystal clear and can be used on a weekly basis. It works by fighting the particles that slip through the filter system.

We understand that the above may seem like a daunting proposition, but it really isn't. Your health is important to us and by following these simple procedures you will ensure that your Hot Tub remains clean and sanitized. If you have any concerns please don't hesitate to contact us.

DOSING YOUR SPA FOR THE FIRST TIME

Shock your water

Chlorine Shock

These types of shock are both oxidizers and disinfectants as well. They should be used periodically but not every single time you need to give your hot tub a good shock as the chemicals can be rather hard on your hot tub's plumbing if you're not careful.

Chlorine based shock is best used when you first open your hot tub or when you change the water and when you need to give it a good cleaning after a heavy bather load.

Non-Chlorine Shock

These shocks won't disinfect the water, so if you are worried about bacteria this isn't the right one to use. They are, however, great at oxidizing other contaminants and cleaning up the water.

This type of shock is recommended for regular use such as on a weekly basis to keep the water in great shape while you are using your spa on a fairly regular basis.

Why Shock Your Water

Remove organic compounds from the water: If you use your hot tub often or you have 3 or 4 bathers in there at once, the level of organic compounds can spike quickly. Removing these compounds is a must for clean water.

Kill bacteria: Chlorine and bromine based shock compounds can easily kill bacteria growing in the water so it is safe. However, if you use other types of shock compounds, they will not disinfect the water.

Remove bromamines or chloramines from the hot tub: Adding shock once a week will help break the bonds that form these contaminants so they can easily be removed from the water.

Reactivate bromides in the spa: If your hot tub uses bromine, adding shock once a week will help activate it to properly clean the water of your hot tub.

How to Shock Your Water

1. Remove the hot tub cover to allow any gasses to be released
2. Adjust the pH levels of your spa's water to between 7.2 and 7.8
3. Turn off the jets but leave the circulation pump running so the water is moving but is not too agitated.
4. Measure the amount of shock you need for the number of liters of water in your hot tub. Check your shock's label instructions to find this information.
5. Add the shock to your hot tub carefully by dosing this into the filter housing.

MAINTAINING YOUR SPA WATER

Use test strips to check the chemical and mineral levels in your spa.

You should be checking and adjusting the chemical levels in your spa 1-3 times a week depending on your usage. To do this you should use appropriate test strips for the types of chemicals you are using.

Chlorine—3 Way

Bromine—4 Way

Both Above, inc Calcium Hardness—5 Way

Put these strips in your spa for 15 seconds, remove the stripe and hold strip horizontally and view results.

PLEASE NOTE: Only add one chemical to your spa at a time.

When adjusting hot tub chemical levels, add one chemical to the water, and then wait a full two hours before adding another chemical. This will allow the chemicals to disperse naturally and will help to maximize their effectiveness. Waiting also minimizes the risk of a chemical reactions between the additives that can cause problems.

- Keep your spa cover off for at least 15 minutes after you have added your chemicals.

- Use an old jug to extract spa water and use this to pre-mix your granulated chemicals.

- Keep your spa water running when you add the chemicals. Pour mixture into the spa filter housing.

- Pre-measure your chemicals before you add them to your tub. NEVER pour chemical granules directly into the spa. Make sure you are achieving the right balance by measuring the chemicals before adding them.

Check the pH levels

Add pH Plus (Increaser) or pH Minus (decreaser) as necessary.

Your pH should stay between 7.2-7.8. If the pH is off, first work to stabilise the total alkalinity. Then make sure you have added the proper amounts of chlorine/bromine to your spa. And then if the pH is still off, add a pH balance product to your spa pH level. Your pH levels may be adjusted if: the sanitiser you use is not working well, your spa has cloudy water, scales have developed on your filter, or the water is causing skin and eye irritations.

Check total alkalinity.

Depending on the test reading, add Alkalinity, Use Alkalinity Builder (to build up) or pH Minus (to reduce) as needed. Use your test strips a well-balanced spa should be between 80-120 PPM in Total Alkalinity.

If the total alkalinity goes above 120, you should add pH minus (to reduce). If the test strip reads below 80, add Alkalinity Builder (to build up).

Add the granules to your spa and then recheck your alkalinity in around an hour. It is important to maintain your alkalinity first because it affects your overall pH re.

Check for calcium hardness.

The best way to keep the calcium hardness in your spa in check is to use soft water in your spa. If your spa has too much calcium hardness, it will cause scales to form in your spa. You can use a spa defender product to protect against these scales. On the other hand, if your spa does not have enough calcium hardness, the water will start to draw minerals from other sources, like the aluminum or iron in your equipment. In this case, use a calcium booster to balance the calcium hardness in your spa.

Calcium hardness should stay between 100-250 PPM. Using a water softener at the time of filling the spa will help with this.

Use chlorine or bromine to sanitise your hot tub.

Make sure to use test strips to maintain the correct chemical levels.

Chlorine and Bromine can be purchased in granular form or in 1-inch tablets. It is useful to have both, as if you are using tablets and need a boost it is easy to add a little extra granules to your spa water. Granular Chlorine or Bromine is usually dissolved in warm water and then applied to the water, tablets are usually placed into a floating dispenser which has a flow regulator to change how quickly the tablets will dissolve, these can be bought seperatley.

Ensure that you follow the dosage guidelines on the relevant product packaging.

Do not over sanitize your spa with Chlorine or Bromine. Make sure you use the recommended level of Chlorine or Bromine. Over dosing can cause serious damage to the spas equipment and cover.

If you find you have over sanitised your water there are a few options to helps reduce the levels.

The first option would simply be to do nothing, leaving your spa will allow the sanitizer levels to naturally decrease. It would be advised you don't use the spa for a couple of days before you test the water again. If you find the sanitizer level is still far too high, move on the next phase.

The next step would be to remove your hot tub cover. This allows significantly more water (and by extension, chlorine or bromine) to evaporate. It will lower chlorine or bromine levels in your hot tub, plus decrease your water level so you can move on to the next action. The water level will likely have dropped a couple of inches, and you can simply top up your spa with fresh, clean water which will dilute the chlorine/bromine levels. Let it circulate, then test it again. But if you didn't lose much through evaporation, and your spa is still nearly full, you'll need to remove some water so you can reduce the concentration of sanitizer with fresh water. This will be enough to lower the bromine or chlorine to the desired level in most situations. If your spa water has been in your hot tub for two or three months, it's about time to drain and clean your hot tub anyway. Also, if your water chemistry has been difficult to balance aside from high sanitizer levels, that's another indication that it's time to drain and clean. In either case, it makes more sense to start with a full load of fresh water than trying to top off old or highly unstable water.

	Probable Cause:	Solutions:
Cloudy Water	<ul style="list-style-type: none">• Dirty filters• Excessive oils or organic matter (moisturiser, fabric conditioners, make up• Improper sanitising• Suspended particles or organic matter• Overused or old water	<ul style="list-style-type: none">• Clean filters with a filter Cleaner or replace filters• Shock spa with sanitiser e.g. Non Chlorine Shock (Bromine) or HTC Chlorine Shock• Add sanitiser (Chlorine or Bromine)• Adjust pH and/or alkalinity with pH/Alkalinity +Plus or pH -Minus• In severe cases use a spa flush solution, Run jet pumps, clean/replace filters, drain, clean and refill the spa
Water Odour	<ul style="list-style-type: none">• Excessive organics in water• Improper sanitisation, not enough Bromine/Chlorine in water• Low pH	<ul style="list-style-type: none">• Shock spa with sanitiser• Add sanitizer• Adjust pH with pH/Alkalinity +Plus to recommended range• In severe cases use a spa flush solution, Run jet pump and clean/replace filters, drain, clean and refill the spa
Chlorine Odour	<ul style="list-style-type: none">• Chlorine level too high• Low pH	<ul style="list-style-type: none">• Shock spa with sanitiser• Adjust pH with pH/Alkalinity +Plus to recommended range
Musty Odour	<ul style="list-style-type: none">• Bacteria or algae growth	<ul style="list-style-type: none">• Shock spa with sanitiser• If the problem is visible or persistent, drain, clean and refill the spa
Organic Buildup/ Scum Ring around Spa	<ul style="list-style-type: none">• Build-up of oils and dirt	<ul style="list-style-type: none">• Wipe off scum with clean rag• If severe, drain the spa, use Spa Surface cleaning to protect the spa shell, and refill the spa
Foaming Water	<ul style="list-style-type: none">• Build-up of oils and dirt	<ul style="list-style-type: none">• Add spa Foam Away product• In severe cases use a spa flush solution, Run jet pump and clean/replace filters, drain, clean and refill the spa
Algae Growth	<ul style="list-style-type: none">• High pH• Low sanitiser level	<ul style="list-style-type: none">• Shock spa with sanitiser.• Adjust pH with pH/Alkalinity -Minus to recommended range• Shock spa with sanitiser, and maintain sanitiser level
Eye Irritation	<ul style="list-style-type: none">• Low pH• Low sanitiser level	<ul style="list-style-type: none">• Adjust pH with pH/Alkalinity +Plus• Shock spa with sanitiser, and maintain sanitiser level
Skin Irritation/Rash	<ul style="list-style-type: none">• Unsanitary water• Free chlorine level above 5 ppm	<ul style="list-style-type: none">• Shock spa with sanitiser and maintain sanitiser level• Allow free chlorine level to drop below 5 ppm before spa use
Stains	<ul style="list-style-type: none">• Total alkalinity and/or pH too low• High iron or copper in source water	<ul style="list-style-type: none">• Adjust total alkalinity and/or pH with pH/Alkalinity +Plus• Use Spa Stain & Scale to inhibit metals
Scale	<ul style="list-style-type: none">• Total alkalinity and/or pH too high• High calcium content in water	<ul style="list-style-type: none">• Adjust total alkalinity and pH with pH/Alkalinity -Minus• If scale requires removal, drain the spa, clean spa shell with Spa Surface Cleaner, and refill the spa• Add Stain & Scale and balance the water using pH/Alkalinity +Plus or pH -Minus• It is advised to use Test Strips showing Water Hardness

Section 10

PREPARE YOUR SPA FOR A HOLIDAY

Less than 7 days...

For shorter stays away from the house, there are a number of water treatment options available dependent on the duration of your absence from the house that will ensure that your hot tub water and equipment stays healthy and balanced, and ready for when you return.

Here's a 6 step rundown of what to do before departure:

1. Test and balance the alkalinity and hardness level of your water
2. Clean your filter thoroughly or just replace it with a clean one while you're away
3. Add an appropriate amount of sanitizer to a floating dispenser - Shock your water with sanitizer before you leave
4. Secure hot tub cover
5. If you wish, you can drop the temperature to save energy and money.
6. Do not turn off the power to your hot tub.

More than 7 days...

For longer holidays of over 7 days, it's extremely important that you take the time to prepare your hot tub correctly.

1. Test and balance the alkalinity and hardness level of your water
2. Clean your filter thoroughly or just replace it with a clean one while you're away
3. Add an appropriate amount of sanitizing tablets to a floating dispenser. If you can, ask a neighbor to come by every few days to add in a few appropriate chemicals
4. Shock your water with sanitizer before you leave
5. Add water clarifier
6. Secure hot tub cover
7. If you wish, you can drop the temperature to save energy and money or it is possible to place your spa in sleep mode. Please refer to the control panel operations for instructions of how to do this
8. Use a Hot Tub Protection Bag. This will also help cut down electricity cost and protect the external sides of your spa. Available to purchase separately

Section 11

SPA WINTERISATION

If you do not intend on using your spa throughout winter it is important you prepare your spa for winter

PLEASE NOTE: If any water is left in your hot tub, it can freeze and cause issues when re-commissioning your hot tub after winter.

What you will need: Hot tub flush

1. Drain valve (provided with the spa from new) or submersible Pump
2. Wet and Dry Vacuum
3. Filter Cleaner
4. Hot Tub Surface Cleaner
5. Hot Tub Cover cleaner

Step by Step....

1. Remove the filters
2. Put the correct dosage of hot tub flush in spa and circulate with all jets on for 30 minutes. Switch off at your main power supply. Ensure there is absolutely no power getting to your hot tub
3. Drain the water. Using a submersible pump or the drain plug, begin draining your hot tub completely. If you decide to use a sub pump, make sure when you're finished to remove the drain plug from your hot tub anyway to drain of as much of the water as possible
4. If you use the drain plug the hot tub will allow you to attach a garden hose to it. A sub pump is recommended instead of the drain because the pump works much faster
5. Check to see if your hot tub has an air blower. If it does, then you should get the remaining water out of it. To do this, turn off the heater – this will prevent the heater from being damaged when you turn the hot tub electric back on (the heater element should never run without water)
6. Put the cover back on the hot tub and turn on the electric – this will run the air blower. Let it run for about 30 seconds, then shut the power off to your hot tub. It would also be a good idea to completely unplug the hot tub if it's not hard-wired

7. Take the cover off your tub. At this time, it's a good idea to clean them with filter cartridge cleaner and store in a dry place
8. Use a wet and dry vacuum to make sure that the filter housing has no water in it
9. Open up the cabinet to your hot tub and locate the pump or pumps. If there are unions that attached the PVC pipe to the pump(s), loosen them. Remove all the drain plugs from the pump(s) as well. This will allow water to drain from your pipes if condensation builds up inside. Make sure to keep the drain plugs in a safe place that you'll remember (place them in a sandwich bag and sellotape to the pump)
10. Clear out the pipework. Take a wet and dry vacuum and turn the setting to blow, or whatever will force air out instead of suction.
11. 11. Get in your empty hot tub and place the wet and dry vacuum hose up to all your jets. Work your way around the entire hot tub until you've blown out every single jet. To be thorough, repeat this process
12. Now that you've blown out the pipework, you notice water in the tub. Make sure you get all the water out of the tub by using a submersible pump, wet and dry vacuum, or a sponge. Ensure the spa is completely dry
13. Now that you have an empty hot tub, it is recommended you clean the shell thoroughly with a hot tub surface cleaner. If the cleaner you use requires you to rinse with water, please ensure you remove that water completely.
14. 14. Deep clean the cover by using a hot tub cover cleaner on both the outside and inside
15. 15. It's important that you secure the cover to your hot tub by using the straps. If your hot tub cover will lock to your tub, then do so
16. As an extra precaution you could purchase a Hot Tub Protection Bag.

Section 12

SERVICING

It is important to service your spa, without regular care and maintenance, parts such as the heater, pumps and pipe-work will eventually develop a build-up of dirt and debris commonly referred to as bio-film, this contains parasites, viruses, bacteria and mould – all of which are extremely difficult to remove.

Draining and re-filling your spa alone will not tackle the build up of contaminants within the pipe work. Having your hot tub serviced annually will dramatically help towards keeping your spa in a hygienic state whilst maintaining the key components through the routine safety and diagnostics test. Not servicing your hot tub may result in your warranty being void. Please contact your local Superior Spas dealer to arrange your service.

Section 13

WARRANTY

Your hot tub comes with a warranty to cover you in case of any breakdowns or damaged parts. Details of your warranty are available from the Superior Spa's dealer you purchased your spa from.

In such a case where you need to log a warranty claim, please visit superiorwarranty.co.uk where you will be asked to create an account and log your claim. ALL claims must be processed via the online system before we can proceed.

HOT TUB TROUBLESHOOTING

The Problem	The Likely Cause(s)	Troubleshooting Solutions	Do you need to call a professional technician?
The spa is inoperative	<ul style="list-style-type: none"> Power failure The breaker has tripped Heater's high-limit thermostat has tripped Spa lock is activated 	<ul style="list-style-type: none"> Check for problems with your power source Reset the breaker Disconnect the power for 30 seconds to reset the thermostat; then check for clogged filters Deactivate the spa lock 	<ul style="list-style-type: none"> Contact an electrician if your power source is inoperative Call for your electrician if the breaker won't reset Call for spa service if the high-limit thermostat has tripped
Spa won't heat, even while the jets and lights operate	<ul style="list-style-type: none"> Air lock was created after filling the spa Blocked filters Failed air circulation pump or heater 	<ul style="list-style-type: none"> Remove air locks by loosening pump and/or heater unions Check for blocked filters, try removing filter and see if spa heats okay Check for water movement 	<ul style="list-style-type: none"> Call for spa service if the heater not working Call for spa service if the circulation pump has failed
Jet operation is weak or surging	<ul style="list-style-type: none"> Spa water level is too low Filters are clogged Air control lever is closed 	<ul style="list-style-type: none"> Add water to the spa Clean the filters Open the air control lever Turn individual jets if not working 	<ul style="list-style-type: none"> Reach out to your dealer if you have further questions about optimal jet performance and maintenance
Light is inoperative	<ul style="list-style-type: none"> Spa lock is activated Light wiring or assembly is faulty 	<ul style="list-style-type: none"> Deactivate the spa lock Replace the light assembly 	<ul style="list-style-type: none"> Call for spa service if you are unsure of how to replace your light assembly
Flo, Htr dry, Dr, Dy displayed	<ul style="list-style-type: none"> Filters may be blocked Circulation pump may have failed 	<ul style="list-style-type: none"> Check and replace/clean filters if needed Id the water in the spa moving 	<ul style="list-style-type: none"> Call for service on no water movement
Remote responds intermittently within the 30-foot range	<ul style="list-style-type: none"> An outside source is interfering with the signal 	<ul style="list-style-type: none"> Change the channel on the remote by pressing the Lights button on the dock unit until the buttons flash and you see a change channel screen on the remote; press UP or DOWN to adjust the channel, and OK to set it 	<ul style="list-style-type: none"> Reach out to your dealer with further questions about operating your control panel and remote
Touchscreen continues to read "Searching for spa" on a black screen	<ul style="list-style-type: none"> Remote is not paired with the control panel 	<ul style="list-style-type: none"> Press the Jets button on the dock unit until the buttons flash; press and hold on the screen until Pairing Yes/No displays; press Yes to pair 	<ul style="list-style-type: none"> Contact your dealer for technical support if problems with your control panel or remote continue



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