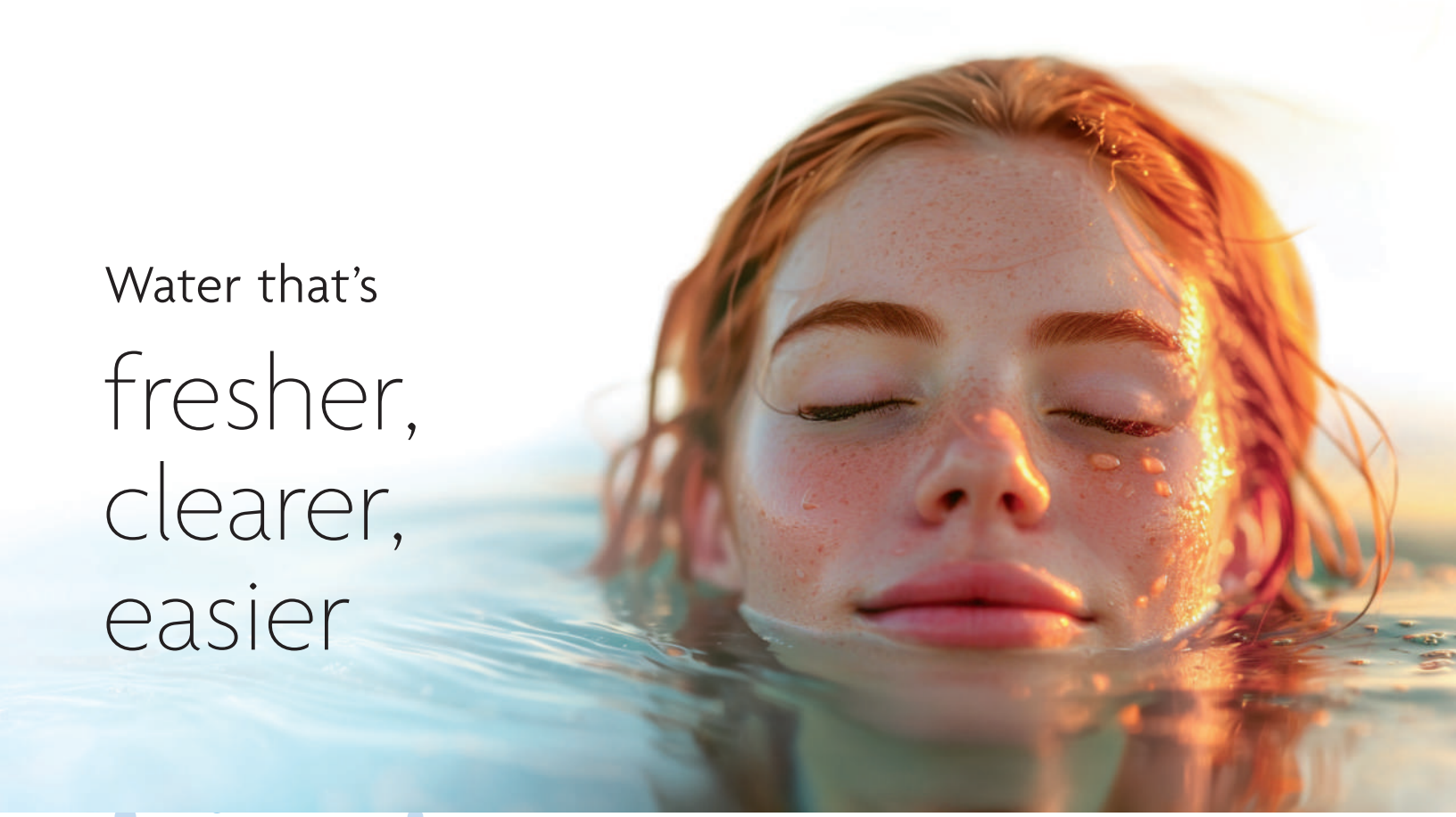
Master Clear®

Salt System

BY MASTERSPAS



Water that's

fresher,
clearer,
easier

TABLE OF CONTENTS

Safety Instructions 1-2
Factory Equipped 3
Activation Kit 4-7
Conversion Kit 8-9
Initial StartUp 10-12
Water Maintenance 13
Water Chemistry Guide 14
Master Clear Salt System App 15-16
Master Clear Salt System Controller 17
Water Maintenance Troubleshooting 18
Master Clear System Operation Troubleshooting 19
Master Clear Salt System Limited Warranty 20

Master Clear®
Salt System
BY MASTERSPAS

SAFETY INSTRUCTIONS

SAVE THESE INSTRUCTIONS

These instructions noted below are specific to the Saltwater Generator:

INTRODUCTION

Welcome to the Master Clear Salt System by MasterSpas. By fully understanding the operation of each of the features of your new saltwater chlorinator, you will be able to sit back and relax enjoying low maintenance hot water therapy and fun.

Your safety is of paramount importance to the MasterSpas family. We urge you to carefully read, understand, and follow all the information in this user manual before installing and using the Master Clear Salt System. These warnings, instructions, and safety guidelines address some common risks when using automated systems with water recreation, but they cannot cover all risks and dangers in all cases. Always use caution, common sense, and good judgment when enjoying any water activity. Retain this information for future use.

IMPORTANT SAFETY INSTRUCTIONS

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

READ AND FOLLOW ALL INSTRUCTIONS

WARNING – To reduce the risk of injury, do not permit children to use or contact this product.

WARNING – The appliance is not to be used 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.

CAUTION – Test the ground fault circuit interrupter before each use of the pool/spa and operation of the Master Clear Salt System.

CAUTION – Connect only to a circuit protected by a class A ground fault circuit interrupter

WARNING – To reduce the risk of electric shock, replace damaged cord immediately.

WARNING – To reduce the risk of electric shock, do not use an extension cord to connect unit to electric supply; provide properly located outlet.

WARNING – Install Master Clear Salt System in accordance with all national and local electrical, plumbing, safety, and other applicable codes.

WARNING – Protect the power supply and outlet from exposure to the elements, i.e. direct sun, rain, snow, condensation, etc.

WARNING – Cutting the cord from the power supply to the Master Clear Salt System Smart Cell voids the warranty.

WARNING – Check Smart Cell and associated wires for damage before use.

WARNING – **DO NOT** operate Master Clear Salt System if it is damaged in any way.

WARNING – **DO NOT** pull on the wires to disconnect the power supply from the power source.

WARNING – **DO NOT** allow water to get inside any electrical connections, especially the connections regularly exposed to water in the filter housing. Water intrusion may contribute to premature system damage and risk of electric shock.

CAUTION – Disconnect, remove and store Master Clear Salt System indoors if spa has been winterized or drained.

CAUTION – Leave the spa cover open at least 1 minute to allow trapped gases to escape prior to use.

CAUTION – **ALWAYS** install protective, water resistant cap and gasket over the wall connector in the spa when the Smart Cell is removed. Leaving wall connector open and exposed can result in unwarranted deterioration and damage to the connections and Master Clear Salt System. Replacement cap and gasket can be purchased from your MasterSpas dealer or local service center.

CAUTION – **ALWAYS** check chemical levels regularly and adjust as needed prior to use to ensure safe water conditions.

CAUTION – **DO NOT** exceed the maximum salt concentrations listed in this document, or unwarranted damage may occur to spa system components.

CAUTION – The use of Master Clear Salt Plus is **HIGHLY** recommended for optimal system operation and user experience. Other forms of salt may be used but may not provide the most desirable experience. If an alternative salt is used, ensure that it is pure sodium chloride (NaCl) and does NOT contain high mineral, iodine, or anti-caking additives, as these contaminants will adversely affect system operation, lifespan, and warranty.

WARNING – **DO NOT** touch or handle the Master Clear Smart Cell during chlorine generation (visible bubbling, when submerged under water). Discomfort may be felt in cuts, sores, or sensitive skin areas due to the chlorine concentration from operation.

CAUTION – To reduce the risk of overchlorination, **ONLY** increase the cycle level by **ONE** level at a time, waiting at least 24-48 hours before adjusting further.

ADDITIONALLY, FOR AFTERMARKET, ACTIVATION KIT INSTALLATIONS:

WARNING – If powering this device through the spa pack using the provided Power Cable, verify the spa is connected to a branch circuit protected by a ground-fault circuit interrupter (GFCI). Contact a qualified electrician if you cannot verify that the circuit is protected by GFCI.

WARNING – Do not modify the cables on this product. Only connect power using the supplied MasterSpas power cables.

WARNING – Remove the Smart Cell from the water when spa is in use.

SAVE THESE INSTRUCTIONS

US & CANADA – FCC COMPLIANCE:

Contains TX FCC ID: 2ABCB-RPI4B

Contains IC: 20953-RPI4B

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

SAFETY INSTRUCTIONS CONT.

CAUTION

Any changes or modifications to the equipment not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. This equipment has been tested and found to comply within the limits for a Class B digital device, pursuant to part 15 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:

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

For products available in the USA/Canada market, only channels 1 to 11 are available for 2.4GHz WLAN. This device and its antenna(s) must not be co-located or operated in conjunction with any other antenna or transmitter except in accordance with FCC's multi-transmitter procedures. This device operates in the 5.15–5.25GHz frequency range and is restricted to indoor use only.

ISED CANADA COMPLIANCE

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

1. This device may not cause interference.
2. This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

1. L'appareil ne doit pas produire de brouillage.
2. L'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

For products available in the USA/Canada market, only channels 1 to 11 are available for 2.4GHz WLAN Selection of other channels is not possible.

Pour les produits disponibles sur le marché USA / Canada, seuls les canaux 1 à 11 sont disponibles pour le réseau local sans fil 2,4 GHz. La sélection d'autres canaux n'est pas possible.

This device and its antenna(s) must not be co-located with any other transmitters except in accordance with IC multi-transmitter product procedures.

Cet appareil et son antenne/ses antennes ne doivent pas être co-localisés avec un autre émetteur, sauf en conformité avec les procédures de Industry Canada pour les produits multi-émetteurs.

The device for operation in the band 5150–5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems.

Les dispositifs fonctionnant dans la bande 5150-5250 MHz sont réservés uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmesde satellites mobiles utilisant les mêmes canaux.

IMPORTANT NOTE IC RADIATION EXPOSURE STATEMENT

This equipment complies with IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum separation distance of 20cm between the device and all persons.

Cet équipement est conforme aux limites d'exposition au rayonnement IC RSS-102 définies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec une distance de séparation minimale de 20 cm entre l'appareil et toutes les personnel.

INTERNATIONAL - RADIO EQUIPMENT DIRECTIVE

In accordance with Article 10.8 of the Radio Equipment Directive: The device 'Raspberry Pi 4B' operates in compliance with harmonised standard EN 300 328 v2.2.2 and transceives within the frequency band 2,400 MHz to 2,483.5 MHz and, as per Clause 4.3.2.2 for wideband modulation type equipment, operates at a maximum e.i.r.p. of 20dBm.

The Raspberry Pi 4B also operates in compliance with harmonised standard EN 301 893 V2.1.1 and transceives within the frequency bands 5150-5250MHz, 5250-5350MHz, and 5470-5725MHzw and, as per Clause 4.2.3.2 for wideband modulation type equipment, operates at a maximum e.i.r.p. of 20dBm (5150-5350MHz) and 20dBm (5450-5725MHz).

In accordance with Article 10.10 of the Radio Equipment Directive, and as per below list of country codes, the operating bands 5150-5350MHz are strictly for indoor usage only.

WEEE DIRECTIVE STATEMENT FOR THE EUROPEAN UNION

This marking indicates that this product should not be disposed of with other household waste throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmentally safe recycling.



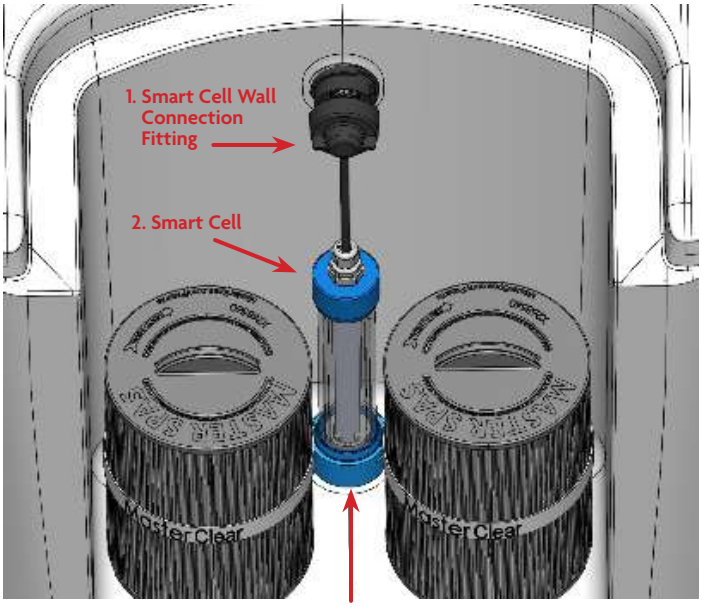
FACTORY EQUIPPED

The Master Clear Salt System makes maintaining crystal-clear water easier than ever! The system uses a Smart Cell to automatically produce chlorine in your spa from highly purified salt that has been dissolved in the water. The salt concentration is much lower than other systems on the market, while still providing the luxurious soaking experience that comes from relaxing in salt water. The Master Clear Salt System allows you to spend more time enjoying your spa and spend less time maintaining it.

The Master Clear Salt System can be equipped and pre-installed from the factory on select models when the spa is ordered with the optional upgrade.* The Master Clear Salt System will help reduce the amount of water care and maintenance required for your MasterSpa. Substitute these instructions for filling and maintenance instead of the general chemical instructions listed in the spa owner's manual.

*Not available from the factory on all models. Options vary by model.

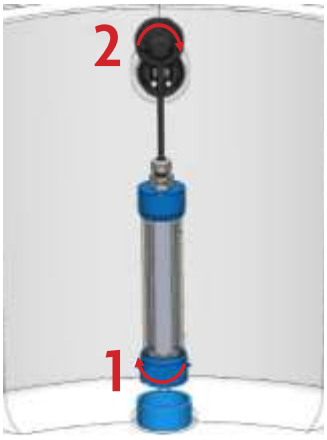








REMOVING SMART CELL



CONNECTING SMART CELL

Water Resistant Cap & Gasket for Smart Cell Wall Connection This cap and its gasket should be installed on the Wall Connection anytime the Smart Cell is removed for maintenance or draining and storage of the spa.

Contact your MasterSpas authorized dealer or local service center to acquire replacement.





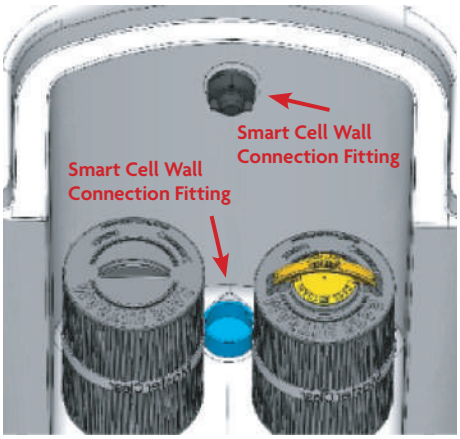
ACTIVATION KIT



This Master Clear Salt System Activation Kit can be installed to upgrade select spa models built as "Salt system ready." If your 2025 or newer Twilight or Michael Phelps Legend Series spa is "Salt system ready," you will see both a wall connector and a base fitting prepped in the filter area of your spa (see Filter Housing figure below). The wall connector will have a wire connection coming through the insulation near the filter housing within the skirting cabinet of the spa.

If you don't see these fittings in your spa, you'll need to use a **Master Clear Salt System Conversion Kit** instead. See page 8 for those instructions.

SALT SYSTEM READY COMPONENTS



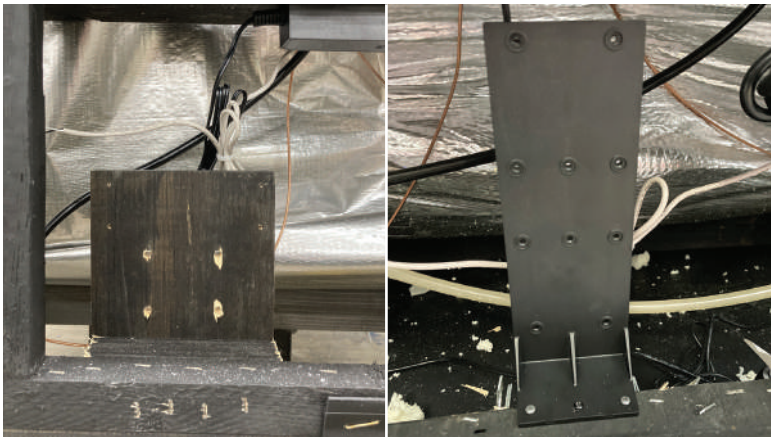
FILTER HOUSING for a Salt System Ready spa



HARNESS CONNECTION (C) is attached to the frame with a red cap directly behind the filter housing area. The filter housing is covered by the foam filter lid/cup holder. This will either be in the corner on the front side of the spa, or it is in the middle of one of the other sides. See the table below to reference which panels need removed to locate the harness connection and mounting board/bracket.

MODEL	LOCATION
TS 6.2	Front panel
TS 67.25	Front and back panel
TS 7.2	Front panel
TS 7.25	Front panel
TS 8.2	Front panel
TS8.25	Front and left panel
MPL 700	Front and right panel
MPL 800	Front panel
MPL 850	Front and left panel
MPL 900	Front panel

MODEL REFERENCE CHART for skirting cabinet removal



MOUNTING BOARD or **BRACKET** is located in the main equipment area beneath the spa control pack.



WATER RESISTANT CAP & GASKET FOR SMART CELL WALL CONNECTION This cap and its gasket should be installed on the Wall Connection anytime the Smart Cell is removed for maintenance or draining and storage of the spa. Contact your MasterSpas authorized dealer or local service center to acquire replacement.

ACTIVATION KIT CONT.

KIT CONTENTS

The Activation Kit is an upgrade for "Salt system ready" spas. It includes the additional components needed to convert your spa to operate using a salt system. A drill or Phillips-head screwdriver will be required to complete the installation.

The kit includes:

- Controller with mounting hardware (4 screws)
- Smart Cell
- Extension Cable
- Power Cord
- 3-Way Power Splitter



Controller and Smart Cell



Extension Cable



Power Cord



3-way Power Splitter

INSTALLATION STEPS

1. Begin by turning off all power to the spa. The safest way is to turn off the GFCI breaker the spa is connected to.



2. We recommend draining and cleaning your spa before you add the Activation kit. Fresh water helps ensure everything runs smoothly and reduces the chance of water getting into the electrical connections during the installation process.
3. Remove the front skirting cabinet panel. If your filter housing is in the middle of a side instead of in the corner of your spa, you will need to remove the skirting cabinet panel nearest the filter housing in addition to the front skirting cabinet panel. Reference your spa owner's manual for instructions on how to remove the skirting panels.

Scan for Twilight owner's manual

Scan for MP Legend owner's manual

4. With everything open, take time to locate the harness hooked to the frame near the filter housing and the mounting board or bracket located in the main equipment area.
5. Install the Smart Cell.
   a. Take the Smart Cell from the kit and lock it into the base connection fitting in the filter housing by turning it clockwise.



   b. Remove the water resistant cap and gasket from the Smart Cell wall connection fitting by turning it counterclockwise.

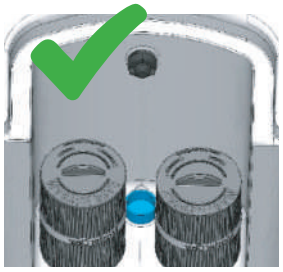


   c. Line up the Smart Cell wire with the wall connection fitting and push them together. Lock the outer cover in place by pushing in and turning clockwise once the wires are connected.





   d. Remove the filter with the EcoPur Charge mineral cartridge and install a regular filter element.



Correct – with regular filter

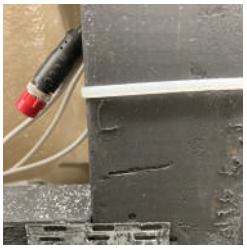


Incorrect – with EcoPur Charge

ACTIVATION KIT CONT.

6. Install the extension cable.

a. This extension cable provides a connection between the wire coming from the back of the Smart Cell wall fitting and the Master Clear Salt System Controller.

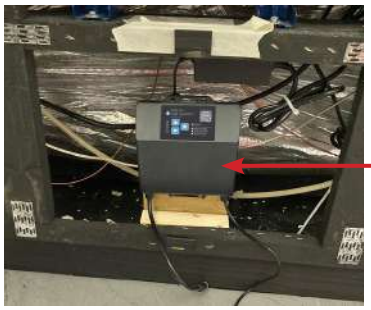



b. You will notice the wall connection fitting wire is labeled with the letter C. Match this end up with the end of the extension cable end labeled C. Make sure the tabs are aligned, press firmly and tighten the silver collars together.



c. Route the extension cable through the frame to the space beneath the spa pack.

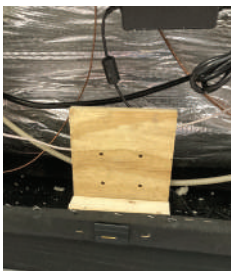
7. Mount the Controller.



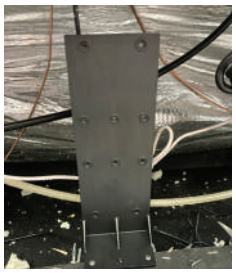

a. Line up the Controller with the mounting board/bracket to gauge spacing. When mounted you should have easy access to the buttons at the top of the Controller.

b. Mount the Controller to the mounting board/bracket with the 2-4 screws in the bottom and/or top of the Controller.

i. Option 1: Wooden mounting board – You will need to use 2 screws to mount the bottom of the Controller to the board using a drill.



ii. Option 2: Mounting bracket with prepared holes – You will likely be able to use all 4 screws to mount the Controller. 2 screws will secure the top and 2 screws will secure the bottom. A Philips head screw driver will be needed to secure the Controller to the bracket.



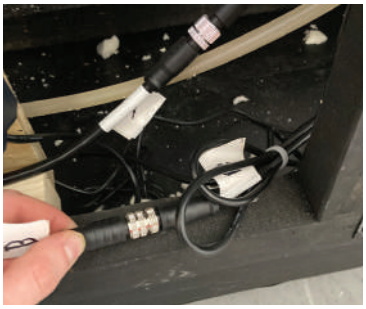
8. Connect the extension cable to the Controller.




a. The open end of the extension cable will be labeled as B. The wire coming out of the right side of the Controller is also labeled as B.

b. Line up the tabs, press firmly and tighten the silver collars together.

9. Connect the power wire to the Controller.



a. The power wire is labeled with an A. This connects to the wire coming from the Controller labeled A.

b. Line up the tabs, press firmly and tighten the silver collars together.

10. Connect the power wire using the 3-way splitter to the spa pack.

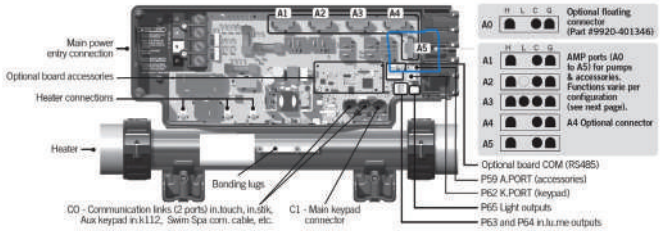


ACTIVATION KIT CONT.

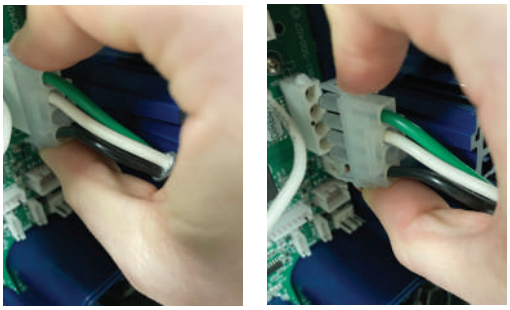
a. Open the spa pack by loosening the two screws on the left side with a Phillips head screwdriver or drill. The screws are captive and will not come all the way out of the pack lid. Pull on the left side of the pack lid and it will pivot out as you remove it.



b. Locate the A5 AC power port on the circuit board. This will be a 4-pin port that is positioned vertically on the right side of the circuit board.



c. There will likely be skirting lights or a stereo already plugged into this port. Pinch the plug on the top and bottom and pull out to remove.



d. Plug the power cable into one of the 3 female connectors on the 3-way splitter.

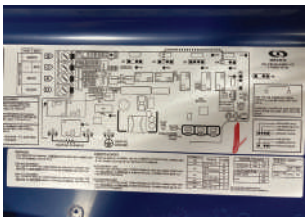
e. Plug the cable or cables removed from the circuit board into he 3-way splitter using the other two female connectors.

f. Plug the male end of the 3-way splitter into the A5 port on the circuit board.

11. Unhook any equipped ozone or UV water care system.

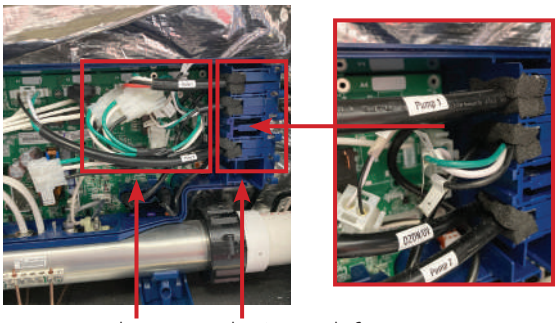
a. Each wire going into the spa pack should be labeled. Find the wire labeled ozone or UV and unplug it from the circuit board since is no longer effective with the use of the Master Clear Salt System.

TIP: You can use the QR code on the front of the spa pack lid to pull up a diagram of the circuit board. It will list the low-level configurations at the bottom of the document. Match up the configuration number written on the board diagram (see picture) on the back of the spa pack lid to the corresponding low level configuration number. The low level configuration will list out which port each component is plugged into.



b. You can remove the ozone or UV water care system from the spa cabinet and plumbing if desired. (Additional parts and plumbing modification needed)

c. Once finished inside the spa pack, route the wires through the in.claw/strain relief fittings on the right side of the spa



pack, so they fit through nicely. Tuck the splitter and wires gently into the middle area of the spa pack and reinstall the spa pack lid.

d. You can secure any excess cable length from the extension harness or power cable by zip tying them to the spa frame.

12. Reinstall the skirting cabinet panel(s) and continue to the Initial start-up section for filling and chemical instructions.

CONVERSION KIT



The Master Clear Salt System Conversion Kit can be used to convert any spa into a luxurious saltwater experience. It uses the same Smart Cell technology as the Factory Installed system and the Activation Kit to help make water care easier than ever.

The Conversion Kit is designed for spas with a maximum water capacity of 500 gallons (1.89 cubic meters). It should not be used in spas that exceed this volume, as performance and water quality may be affected.

KIT CONTENTS

The Conversion Kit is designed to work with any spa system. It will include components that can be used to install the kit on the skirting cabinet of your spa or even inside the main equipment area (location options and spacing will vary depending on spa brand and model). The tools you may need are: A drill, a Phillips-head screwdriver, and a #1 square head screwdriver.

WARNING: DO NOT modify or operate this kit in any manner other than what is described in this manual.

The kit includes:

- Controller with mounting hardware (4 Phillips head screws)
- Smart Cell – 10' cord
- 10' GFCI Power Cord with M12 lock
- Mounting bracket and hardware (3 #1 square head screws)
- Power Cord with 4-pin Plug – 5' cord (optional, alternative power connection)
- 3-way Power Splitter (optional, alternative power connection)

NOTE: These parts are prepared for multiple installation methods. Not every component will be needed for every installation.

*Optional component for internal power connection with the spa control circuit board, if compatible. Spa control systems vary, and compatibility must be evaluated.


Controller & Smart Cell


GFCI Power Cord


Power Cord*


3-Way Power Splitter*


Mounting bracket


4 x Phillips screws


3 x #1 square head screws


M12 Lock

SIDE SKIRT CABINET INSTALLATION

1. We recommend draining and cleaning your spa before you add the Master Clear Salt System Conversion kit. Fresh water helps ensure everything runs smoothly as you start the system up. During this process remove any mineral cartridges or mineral filters from the spa (i.e. replace EcoPur mineral filters with standard filters).

2. Take a moment to plan out where you will place the Controller to provide access to the control buttons and easy connection to an outlet. Consider the placement of the Smart Cell cord as it will route over the shell and into the water (ideally at the hinge area of your cover, if a folding cover is in use).



NOTE: If you need to add an extension cord, make sure the supplied GFCI plug is protected and not sitting directly on the ground and be sure your extension cord is plugged into a properly grounded and GFCI protected outlet.

3. Connect the Smart Cell cord, labeled (B), to the Controller. Line up the pins on each cord and push them together firmly. Tighten the collar to secure the connection.

4. Using a drill or Phillips-head screwdriver mount the Controller directly to the skirting cabinet using the 4 Phillips head mounting screws provided. Make sure the control buttons are easily accessible.

5. Drape the Smart Cell over the side of the spa. The Smart Cell should sit just above the floor of the spa. **Avoid letting the Smart Cell rest right next to a stainless-steel fitting. High chlorine levels and low pH around the Smart Cell will cause stainless-steel to rust over time.**

   TIP: To minimize interrupting the cover seal on a folding cover, route the Smart Cell wire over the shell at the middle hinge.

6. Coil up any extra wire, so it doesn't hang loosely. You can use a zip tie to secure any extra wire.

CONVERSION KIT CONT.

7. Plug the GFCI power cord into an outlet to power on. Proceed to the Initial Startup instructions for filling and user instructions. The Master Clear Salt System will not start running until you connect to it with the Master Clear Salt System App.

   NOTE: Remove any mineral cartridges or mineral filters (i.e. replace EcoPur mineral filters with standard filters). Excessive minerals can reduce performance and effectiveness of the system.

   NOTE: It is unnecessary to keep any ozone or UV generators powered within the spa and can be beneficial to simply disconnect any equipped systems from power.

   WARNING: To prevent damage, always remove the Smart Cell from the water anytime someone is using the spa.

   WARNING: To prevent injury, DO NOT use and immediately replace the Smart Cell if its housing is damaged or cracked and/or internal plates and components are exposed. Damaged housing and exposed components could be sharp and cause injury if contacted or stepped on.

   WARNING: To prevent unwarranted damage to spa components, DO NOT let the smart cell rest against metal fittings.

OPTIONAL – EQUIPMENT AREA INSTALLATION

(Equipment location, configurations and layout will vary by spa brand and model)

WARNING: If your spa is not GFCI protected, DO NOT proceed with installation and immediately consult a licensed electrician, as the spa is not safely and properly wired.

NOTE: Installing the Controller inside the skirting cabinet in the spa's equipment area will require a direct 120V or 240V connection from the circuit board to the black wire and white wire pin locations of the optional power cord.

1. Begin by turning off all power to the spa. This method will vary depending on the brand and model of spa, but most will require turning off a GFCI breaker.
2. We recommend draining and cleaning your spa before you add the Master Clear Salt System Conversion kit. Fresh water helps ensure everything runs smoothly as you start the system up. During this process remove any mineral cartridges or mineral filters from the spa (i.e. replace EcoPur mineral filters with standard filters).
3. Remove the skirting cabinet panel closest to the spa control system. Locate any available space to install the mounting bracket either vertically, or horizontally to the frame. You need approximately 1 square foot of space.
4. Using the 3 square head screws and a drill or #1 square head screwdriver, secure the mounting bracket to the frame.
5. Disconnect the GFCI power cord from the Controller and install the power cord with the 4-pin power adapter.
   a. Open the M12 lock using a pointed tool. A screwdriver could work for this.
   b. Unscrew the metal collar and disconnect the GFCI power cord.
   c. Connect the power cord with the 4-pin power adapter, labeled (A), to the Controller cord also labeled as (A). Line up the pins on each cord and push them together firmly. Tighten the collar to secure the connection.
   d. Lock the M12 lock onto the new connection.
6. Connect the Smart Cell cord, labeled (B), to the Controller cord also labeled as (B). Line up the pins on each cord and push them together firmly. Tighten the collar to secure the connection.
7. Using a drill or Phillips-head screwdriver mount the Controller to the mounting bracket. Depending on spacing and installation, you can use 2-4 of the Phillips head mounting screws to fasten the Controller to the mounting bracket.
8. Open the spa control pack and plug the power cord into a direct 120V or 240V connection point. See your spa control system electrical diagram and be sure you have proper connection and power at the white and black wire pin locations.
9. Unplug any ozone or UV sanitation system from the spa pack.
10. You will likely need to create a U-shape opening in the skirting cabinet panel to route the Smart Cell cord outside of the skirting cabinet.
11. Drape the Smart Cell over the side of the spa. The Smart Cell should sit just above the floor of the spa. **Avoid letting the Smart Cell rest right next to a stainless-steel fitting. High chlorine and low pH levels around the Smart Cell will cause stainless-steel to rust over time.**



   TIP: To minimize interrupting the cover seal on a folding cover, route the Smart Cell wire over the shell at the middle hinge.
12. Coil up any extra wire so it doesn't hang loosely. You can use a zip tie to secure any extra wire.
13. Proceed to the Initial Startup instructions for filling and user instructions. The Master Clear Salt System will not start running until you connect to it with the Master Clear Salt System App.

    NOTE: Remove any mineral cartridges or mineral filters (i.e. replace EcoPur mineral filters with standard filters). Excessive minerals can reduce performance and effectiveness of the system.

    NOTE: It is unnecessary to keep any ozone or UV generators powered within the spa and can be beneficial to simply disconnect any ozone or UV generators connected to the spa.

    WARNING: To prevent damage, always remove the Smart Cell from the water anytime someone is using the spa.

    WARNING: To prevent injury, DO NOT use and immediately replace the Smart Cell if its housing is damaged or cracked and/or internal plates and components are exposed. Damaged housing and exposed components could be sharp and cause injury if contacted or stepped on.

    WARNING: To prevent unwarranted damage to spa components, DO NOT let the smart cell rest against metal fittings.

INITIAL STARTUP

Now that your Master Clear Salt System is installed and ready, check to make sure your Smart Cell is locked into your filter housing (Factory Equipped or Activation Kit) or hanging near the bottom of your spa away from any metal fittings.

Make sure to remove any mineral filters or cartridges (i.e. replace EcoPur mineral filters with standard filters). In addition to the installed Smart Cell, the Controller will be located in the spa equipment area.

NECESSARY STARTUP SUPPLIES:

- Master Clear Salt System Startup Chemical Kit
  - » 1-Micron Garden Hose Filter
  - » Metal Protect
  - » Test Strips
  - » pH Increaser
  - » pH Reducer
  - » Oxidizer
  - » Fast & Clear Water Boost
- Master Clear Salt Plus 10 lbs.

NOTE: As needed, contact your MasterSpas authorized dealer or local service center to acquire these necessary supplies.

STARTUP STEPS

NOTE: When adding any chemical or salt, turn on all pumps to high speed, position any diverter(s) to the middle position and sprinkle the chemical across a broad area of the water. This helps the chemicals dissolve and disperse throughout the entirety of the spa. Always wait at least 15 minutes (1 pump cycle) after adding any chemicals before retesting the water to allow time for it to dissolve and circulate throughout the spa.

1. Your spa should be filled with fresh tap water using the 1-micron filter provided in the startup kit. This filter will help remove as many minerals as possible from the water. Lower mineral levels will help provide optimal performance and longevity of the system and Smart Cell. It is best to use unsoftened water to further reduce excess minerals in the solution, but never fill with more than 50% softened water. Remove the filters from the filter housing and drape the 1-micron filter attached to your garden hose into the filter area to help prevent air locks from occurring during the filling process.
2. During the initial filling of the spa, add the bottle of Metal Protect to combat any remaining suspended minerals in the water. Always follow the instructions listed on the bottle and allow water to circulate and filter for at least 30 minutes (or per bottle recommendations) before adding any other chemicals.
3. Test water for pH and Total Alkalinity. There are two different methods you can use to test your water.
   a. **TEST STRIPS:** The pads on these thin strips react by changing colors when you dip them in the hot tub water. To avoid faulty test results, use care when removing a testing strip from the packaging. Open the package and shake one strip out into your hand, avoiding contact, if possible, with the remaining strips. Seal the container immediately so the remaining strips are not exposed to moisture. Dip the test strip into the water and follow the instructions supplied with test strips as instructions may vary. Note and compare the colors on your testing strip to the key on the test strip container to determine if each category is neutral, high, or low.
   b. **TESTING KIT:** When using a testing kit, you will be examining an actual water sample from your hot tub, rather than a strip. Be careful to follow the instructions on your kit, filling the container to the appropriate level and then dropping the instructed liquid into the container. Compare the new color of your water to the key provided with the kit to determine how to proceed. Depending on which kit has been purchased, it can test each of the elements: total alkalinity, pH, chlorine and calcium hardness.

PARAMETER	VALUE[a]
Water Clarity	Clear view of bottom
Color of Water	No color should be observed[b]
Total Alkalinity (TA)	60 – 120 PPM
pH Value[c,d]	7.0 – 7.2
Chlorine	2 – 4 PPM
Calcium Hardness	180 – 250 PPM

When using alternative/additional disinfectants other appropriate parameters may be considered.
[a]Consult national regulations and guidelines for any deviations.
[b]Natural water sources may introduce water coloration.
[c]Subject to the flocculant(s) used (if any).
[d]When pH is greater than 7.5, the free active chlorine is less than 50%.

4. Adjust pH and Total Alkalinity (TA) utilizing the directions on the pH Increaser and pH Reducer chemical bottles. The ideal pH level for the Master Clear Salt System is between 7.0-7.2 for optimal performance. Adjusting these chemical levels may require multiple rounds of testing and additional chemical treatments to help achieve the proper balances. Refer to bottle labels for further details and timing between each water test.

   NOTE: Improper use of chemicals may result in unsanitary and unsafe water conditions as well as unwarranted discoloration, degradation, damage and other imperfections to both the Master Clear Salt System and spa surfaces and components.
5. Once Alkalinity and pH are balanced (pH 7.0-7.2), use the one-cup measuring scoop to slowly add up to **half** of the recommended salt quantity using the salt measurement table below (see spa owner's manual for correct water volume specifications). Initially, you should **only add half** of the recommended Master Clear Salt Plus. It will take 15-30 minutes to completely dissolve and circulate throughout the spa. Continue to Step 6 before adding any more Salt Plus.

   NOTE: To avoid adding too much Salt Plus to your water, allow the water temperatures to reach **AT LEAST** 80°F, preferably even closer to your **DESIRED** water temperature, **BEFORE** adding Salt Plus. The salt, as well as most chemicals, will mix and dissolve into the solution faster as water temperatures rise. Be sure to keep the pumps running when adding Salt Plus. Continue running the pumps until all the salt has dissolved, with no visible accumulation seen throughout the spa.

INITIAL STARTUP CONT.

FIRST DOSE
(values below are half of maximum recommended salt)

GALLONS	CUPS (Half of Max)	POUNDS (Half of Max)
200	1 5/8	1
250	2	1 1/4
300	2 3/8	1 1/2
350	2 3/4	1 3/4
400	3 1/8	2
450	3 1/2	2 1/4
500	3 7/8	2 1/2
550	4 1/4	2 3/4
600	4 5/8	3

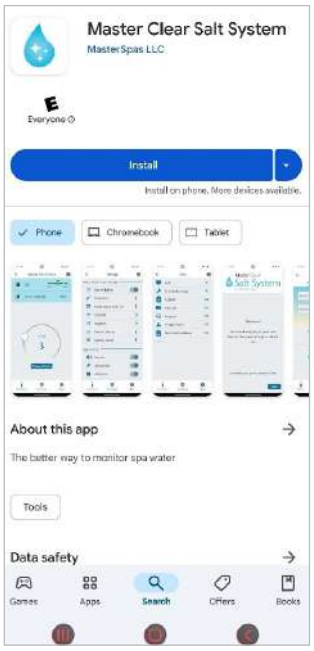
6. While waiting for the Salt Plus to dissolve and absorb into the water (15-30 minutes), it is time to get connected to the Master Clear Salt System through either the iOS or Android app. If you haven't already, download the Master Clear app from your app store.

   NOTICE: The app connection process, through Bluetooth, is a critical step that **MUST BE** completed to engage the Master Clear Salt System. The system will not operate and remains in a "paused" state until the proper spa model or fill volume are entered in the app.

Scan for Apple App Store

Scan for Google Play Store





7. Follow the prompts in the app to set up the Bluetooth connection and select the spa model/fill volume. Bluetooth is required to operate the Master Clear Salt System on startup. You can also connect the system to Wi-Fi, allowing you to check the system anywhere as long as you have a valid internet connection. If you do not want to connect your unit to Wi-Fi, you can use the app locally through Bluetooth whenever you are near the spa (roughly 5'). You can also operate the system directly using the physical buttons on the Controller.

   a. Open the app on your mobile device, while standing within 5 feet of your spa and the Master Clear Salt System Controller.

   b. During the initial startup, the app will request permissions from your operating system, such as permission to use Bluetooth. Be sure to allow these requests on your mobile device for proper connection and operation to occur. Also, be sure Bluetooth is turned on in your device settings.

   c. Follow the app prompts for configuring your Master Clear Salt system. It will also have you create an account/login for controlling the system through Wi-Fi.

      NOTE: If Wi-Fi signal is a problem, or you do not wish to set up the Wi-Fi login and connection, you can connect with the basic configuration and engage the Master Clear Salt System strictly through Bluetooth on the app by selecting the "Skip for now, (you can always come back!)" on the opening page of the app.

   d. After entering the spa model or volume in the app, the Master Clear Salt System will be engaged to start normal operations.

      NOTE: For further details, see the Master Clear Salt System App section of this manual.

8. With the app connected, the salt indications at the top of the app screen may show the salt concentration is low initially. Make sure the system has engaged and shows "Cancel Cycle" below the level indicator. If it has not engaged, select "Cycle Now," to activate the Smart Cell. Bubbles will be rising visibly from the Smart Cell when it is running a cycle. After a few minutes of running the first cycle, the app will update the salt level indication. Whenever a cycle is running, the LED indicator on the Master Clear Salt System Controller will display the updated salt level indication as well.

MASTER CLEAR SALT SYSTEM CONTROLLER LED INDICATORS:

Solid **Red** – Salt level high when running a cycle

Solid **Green** – Salt level balanced when running a cycle

Solid **Yellow** – Salt level low when running a cycle

Solid **Yellow** & **Red** – Excessively high salt levels and the Master Clear Salt System has shut down to protect the power supply and the Smart Cell.

Solid **Blue** – Editing mode is activated

Flashing **Blue** – (once every ten seconds) – System is in standby mode

Flashing **Blue** (twice every ten seconds) – Smart Cell is nearing the end of its service life and is within one month or less of needing replacement.

NOTE: At startup it is better for the salt to be at the lower end of the balanced (**Green**) range, especially if the salt was added at water temperatures lower than your desired water temperature. This helps prevent adding too much salt into the system during use. It is always easier to add than to take away from the solution.

INITIAL START UP CONT.

NOTE: After making the initial Bluetooth connection, you can also operate the Controller directly using its physical buttons.



9. It may take the system several minutes to register an accurate salt level as the salt is still dissolving, especially if the salt is added at water temperatures lower than your desired water temperature. If the indicator in the app and on the Controller remain low (**Yellow**) 30 minutes after the first cycle has started, add Salt Plus in increments of no more than 1 cup at a time. Wait at least 15 minutes after each additional cup is added before adding more Salt Plus. Repeat until the salt level enters the balanced (**Green**) range.

   CAUTION – DO NOT exceed the measurements listed in the Maximum Salt Concentration table, especially if the salt was added at water temperatures lower than your desired water temperature. Excessive salt concentration can result in unwarranted, accelerated deterioration, corrosion and failure of both Master Clear Salt System and spa components.

   MAXIMUM SALT CONCENTRATION

GALLONS	CUPS	POUNDS
200	3 1/4	2
250	4	2 1/2
300	4 3/4	3
350	5 1/2	3 1/2
400	6 1/4	4
450	7	4 1/2
500	7 3/4	5
550	8 1/2	5 1/2
600	9 1/4	6

   (ideal amount, assuming no salt present in source water)

   NOTE: To avoid adding too much Salt Plus to your water, allow the water temperatures to reach **AT LEAST** 80°F, and preferably even closer to your **DESIRED** water temperature, **BEFORE** adding Salt Plus. The salt, as well as most chemicals, will mix and dissolve into the solution faster as water temperatures rise. Be sure to keep the pumps running when adding Salt Plus. Continue running the pumps until all salt has dissolved, with no visible accumulation seen throughout the spa.

10. Monitor the system over the next 24-48 hours to ensure the generator is producing sanitizer before use by testing the water for chlorine levels.

    NOTE: The Master Clear Salt System works to maintain the sanitizer levels by regularly running generation cycles. At the initial startup, the Master Clear Salt System may take as much as 24-48 hours to bring the chlorine up to sufficient sanitization levels. Fast & Clear Water Boost can be used to jump-start and sanitize the system initially for more immediate use.

11. **(Optional)** Once salt levels are in the balanced (**Green**) range, turn on all spa pumps and add Fast & Clear Water Boost to jump-start the system.

    a. If the spa was simply drained and refilled for normal maintenance or to add the Master Clear Salt System, add a couple of teaspoons at a time until sufficient sanitizer levels are achieved.

    b. If this is the initial startup of the spa or the spa has been winterized or drained for some time, add Fast & Clear Water Boost, a couple of teaspoons at a time, until 5-10 PPM of chlorine level is achieved. **DO NOT** enter the spa until chlorine levels drop below 5 PPM. This chlorine treatment helps sanitize the system while the Master Clear Salt System starts to operate.

       NOTE: When the high sanitizer levels from the Fast & Clear Water Boost are present in the water, the Master Clear Salt System operation will automatically measure these high sanitizer levels and delay system operation. It will begin engaging again once the Smart Cell detects the sanitizer level is low enough to start a generation cycle. Fast & Clear Water Boost (sodium dichlor granules) should only be used on initial startup and should not be used regularly.

WATER MAINTENANCE

BEFORE EACH USE

- Test the spa water for proper pH and chlorine and adjust as needed.
- The pH may increase during the first few weeks after filling the spa. This is completely normal when using a salt system. Simply check and adjust the pH as needed to ensure the pH is in the proper range for use.
- Verify that the sanitizer level is within the recommended range. If either are lower than recommended or no sanitizer is seen when testing the water, adjust the cycle level on the Controller or in the app to increase the sanitation provided by the Smart Cell. **ONLY** increase the cycle level by **ONE** level at a time, waiting at least 24-48 hours before adjusting further.
- Check the Master Clear Salt System app or Controller for current salt levels and ensure operational parameters are balanced.

AFTER HEAVY USE

- The Master Clear Salt System is designed to check the sanitizer regularly and run a generation cycle as needed. After heavy use, it may be helpful to manually start a cycle by pressing "Cycle Now," in the app, or pressing the ***** button on the Controller to immediately begin generating sanitizer.

ONCE A WEEK

- Add Oxidizer shock treatment to help with water clarity, by freeing up any combined sanitizer.
- Test the spa water and adjust pH levels as needed.
- Test the spa water for sanitizer levels. If tests regularly show levels below the recommended range, use the Master Clear Salt System app or Controller to adjust the cycle level, if needed. **ONLY** increase the cycle level by **ONE** level at a time, waiting at least 24-48 hours before adjusting further.

AT LEAST ONCE A MONTH

Inspect the Smart Cell at least once per month. If your source water has high hardness, more frequent inspections may be necessary. To ensure optimal performance and longevity of your Master Clear Salt System Smart Cell, regular inspection and cleaning are essential. Mineral scaling—such as calcium or lime buildup—can impair sanitizer sensing and production, and reduce the lifespan of the Smart Cell.

Remove the Smart Cell from the spa. Install the protective water-resistant cap and gasket over the electrical connection in the filter area. Soak the Smart Cell in undiluted distilled white vinegar for at least 1 hour. For severe scaling, an overnight soak may be required. Swirl the Smart Cell in the vinegar solution once per hour to help dislodge buildup. Once scaling is dissolved or removed, rinse the Smart Cell thoroughly with clean water. Reinstall the Smart Cell in the spa. If scaling is frequent or severe, consider using a Scale Defense water treatment regimen to reduce and slow mineral buildup. Consult your MasterSpas dealer or local service center to obtain Scale Defense products and for additional support.

EVERY 180 DAYS

Drain and refill your spa with fresh water, clean the filters, and repeat the startup procedure. Over time and bather use, biofilm buildup can occur. Chemical products are available to help remove biofilm and can be used periodically before draining.

EVERY 1 YEAR

It is necessary to replace the Master Clear Smart Cell after about a year. Make sure to monitor your Smart Cell lifespan, in the app or using the Controller, and replace the Smart Cell when it has reached 0% lifespan. High water hardness and mineral content in the water may result in more frequent replacement, especially if the Smart Cell is not regularly inspected and scaling cleaned off of it.

AS NEEDED

If the water looks hazy, make sure pH is in the proper range and make sure the output level is maintaining the proper sanitizer levels. Treat with Oxidizer shock if free chlorine is less than total chlorine. Always refer to the chemical manufacturer's dosage recommendations listed on the container. Free chlorine levels should be maintained per the Water Chemistry Guide.

A defoamer may be used when excessive foaming occurs. Overuse of a defoamer will result in cloudy, milky water. These are general recommendations for water maintenance that may vary by usage and bather load. Depending on bather load and frequency of use, drain and refill times may vary.

USE ONLY SPA CHEMICALS

Do not use chemicals designed for use in swimming pools. With a spa, you are working with a small volume of hot water instead of a larger volume of relatively cool water in a swimming pool. Because of this, chemicals will have a shorter lifespan, and bacteria can grow more quickly than in a swimming pool. A spa is less forgiving than a pool and requires whatever is put into it to have a pH as close to neutral as possible. This is why only chemicals made for spas should be used. Always refer to the chemical manufacturer's dosage recommendations listed on the container.

WATER CHEMISTRY GUIDE

Before treating your water, refer to the Model Specifications section in the spa's manual for the correct gallons listed for your spa, to ensure you are adding the correct amount of chemicals. The concentration of active ingredients in spa chemicals varies by manufacturer, so always consult the chemical manufacturer's instructions. When adding spa chemicals, make sure to always spread them across the surface of the water while the pumps are running. See the chart for recommended ranges.

*Chemical names and recommendations listed in this manual are specific to the Master Clear Salt System chemicals by MasterSpas. Chemical amounts and instructions will vary by manufacturer.

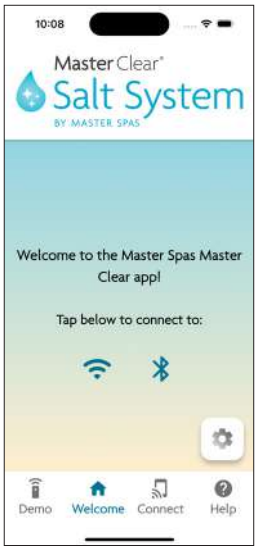
NOTE: Improper use of chemicals may result in unsanitary and unsafe water conditions as well as unwarranted discoloration, degradation, damage and other imperfections to both the Master Clear Salt System and spa surfaces and components.

PARAMETER	VALUE[a]
Water Clarity	Clear view of bottom
Color of Water	No color should be observed[b]
Total Alkalinity (TA)	60 – 120 PPM
pH Value[c,d]	7.0 – 7.2
Chlorine	2 – 4 PPM
Calcium Hardness	180 – 250 PPM

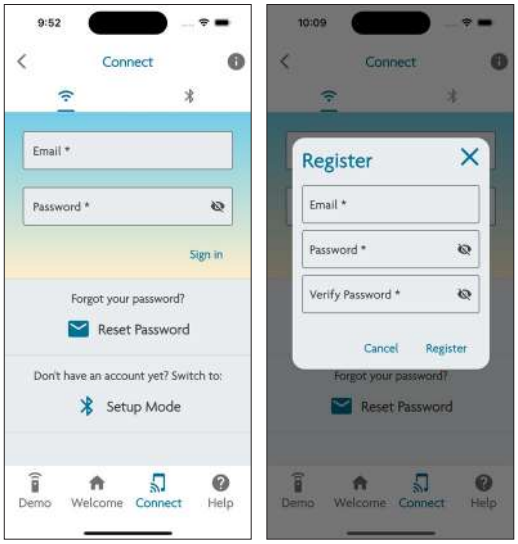
When using alternative/additional disinfectants other appropriate parameters may be considered.
[a]Consult national regulations and guidelines for any deviations.
[b]Natural water sources may introduce water coloration.
[c]Subject to the flocculant(s) used (if any).
[d]When pH is greater than 7.5, the free active chlorine is less than 50%.

MASTER CLEAR SALT SYSTEM APP

1. When you open up the app you will see the main screen. Here you will choose to connect using Wi-Fi or Bluetooth.



2. Selecting the Wi-Fi option will bring you to the registration page. Here, you can register/create an account, allowing connection to the Master Clear Salt System as long as you have a valid internet connection.



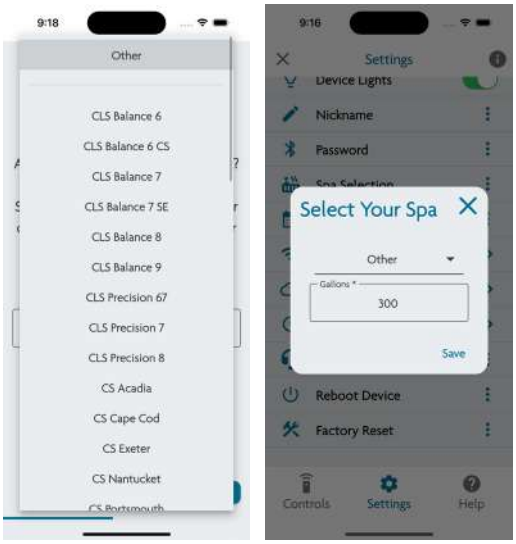
3. After creating your account, anytime you open up the app and select the Wi-Fi option, it will display the connection page where you can connect and manage your account.



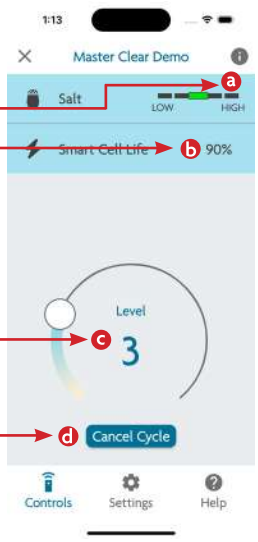
4. If you choose the Bluetooth option for operation within about 5' from the system, the system will search for and display the Master Clear Salt System present to connect to.



5. When you first open the app, select your spa model. If your spa is not listed, choose "Other" and enter your spa's gallon capacity. The salt system will then complete the setup and begin its first cycle.



6. The Controls section of the app allows you to monitor and engage your Master Clear Salt System.



a. Salt level indicator
b. Smart Cell lifespan
c. Cycle level
d. "Cycle Now"/"Cancel Cycle" button

MASTER CLEAR SALT SYSTEM APP CONT.

CONTROLS

1. Salt level indicator – This shows whether the salt concentration is listed to be low, high or balanced. When the salt indication shows balanced, the bar will be green. At startup it is better for the salt to be at the lower end of the balanced range, especially if the salt was added at water temperatures lower than your desired water temperature. This helps prevent adding too much salt into the system during use. It is always easier to add than to take away from the solution.
2. Smart Cell lifespan – Here you can monitor the lifespan of the Smart Cell. When the lifespan reaches 0%, it has reached the end of its service life. It is time to change the Smart Cell.
3. Cycle level – This value determines how the Smart Cell monitors and generates sanitizer (chlorine). Any time the level is changed, **ONLY** adjust the level by increments of **ONE** level at a time, waiting at 24-48 hours before adjusting again.
4. "Cycle Now"/"Cancel Cycle" button – Press this button to manually start or stop a generation cycle.

SETTINGS

The app allows you to change some of the basic settings for the Master Clear Salt System and the App.

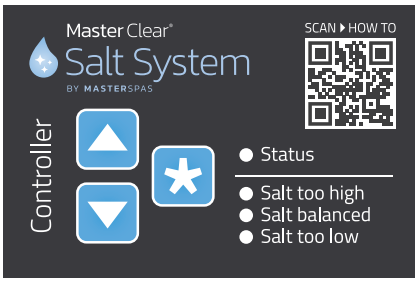
MASTER CLEAR SALT SYSTEM SETTINGS

- Device Lights – Enable or disable the indicator lights on the Controller behind the skirting.
- Nickname – Name your Salt System
- Bluetooth Password – Add, change or adjust your Bluetooth password
- Spa Selection – Model/Gallons
- Reset Smart Cell Life – Used when a new Smart Cell is added
- Wi-Fi – Add, change or update your Wi-Fi connection settings
- Sync Account – Add, change or update your user account
- Updates – Displays any firmware updates available for the Master Clear Salt System
- Support Data – This menu displays the various software information and settings the app is using for operation.
    - » Operation History – The operation history allows you to see a log when your system is sensing and running. When the system is connected to the Internet, the app will send the history to the cloud daily. You can also manually upload this data using the cloud upload icon for troubleshooting purposes.
- Reboot Device – Typically used to reset settings
- Factory Reset – Used for troubleshooting or connecting to a new system.

MASTER CLEAR SALT SYSTEM APP SETTINGS

- Sounds – Toggle app sounds on or off.
- Animations – Toggle app animations on or off.
- Analytics – This anonymously tracks the app functions and sends crash reports for app improvement. Toggle on or off.
- Units – Toggle between Imperial and Metric
- Reset Walkthrough – If you would like to change some of the initial settings, you can reset the walkthrough from when first setting up the app.
- Name – You can change your app account details
- Bluetooth – Takes you directly to your device's Bluetooth settings
- Notifications – Takes you directly to your device's notification settings.

MASTER CLEAR SALT SYSTEM CONTROLLER



NOTE: This section is only applicable if the Master Clear Salt System app is not utilized to control and monitor the Master Clear Salt System after the initial startup.

OPERATION

Use of the Master Clear Salt System app through Bluetooth or Wi-Fi connection is highly recommended for the easiest user experience. However, the system may also be monitored and adjusted through the buttons and LEDs on the Controller. The information below only pertains to system operation using the Controller buttons and LEDs.

The Master Clear Salt System utilizes 3 buttons and 4 lights on the control unit to operate the Smart Cell without using the App.

LED LIGHTS

Solid **Red** – Salt level high when running a cycle

Solid **Green** – Salt level balanced when running a cycle

Solid **Yellow** – Salt level low when running a cycle

Solid **Yellow** & **Red** – Excessive salt levels and the Master Clear Salt System has shut down to protect the power supply and the Smart Cell.

- **Drain some water and refill with fresh water to dilute the salt level.**
- **Cycle the power to press the * button to have it check again**

Solid **Blue** – Editing mode is activated.

Flashing **Blue** (once every ten seconds) – System is in standby mode.

Flashing **Blue** (twice every ten seconds) – Smart Cell is nearing the end of its service life and is within one month or less of needing replacement.

NOTE: The indicator lights can be disabled from the app. If this option has been disabled, reboot the Controller to re-enable the lights.

HOW TO READ THE LED LIGHTS REPRESENTING NUMBERS:

There are a couple of troubleshooting features that will flash different colored lights to represent numbers. The LED lights will flash repeatedly to represent the 1s, 10s, and 100s places. Each flash will indicate 1 of its respective number category.

Red = 100

Green = 10

Yellow = 1

Examples:

Red flashes once. The system is indicating the value of 100.

Green flashes 7 times and **Yellow** flashes 3 times. The Controller is saying the value is 10+10+10+10+10+10+10+1+1+1 or 70+3 = 73.

BUTTONS

*****

Press "*****" to manually start/stop the generation cycles.

Press and hold "*****" during startup to reset the Bluetooth password.

- When resetting the Bluetooth password, all lights will light up and remain solid.

Up

Press **Up** to show the current output level.

- The lights flash the value on a scale of 1-10. To indicate this the **Red** light will flash between 1 and 9 times to indicate levels 1-9. The light will flash **Green** once for level 10.
- This provides the same function as pressing **Up + Down** if the button is held throughout the level readout indication.

Down

Press **Down** to display the Smart Cell value. This is used for troubleshooting purposes and is not needed for average use.

- When the Smart Cell is actively in a cycle/producing chlorine, the LED indicators will flash to show the current amperage value.
- When the Smart Cell is between cycles/standby, the LED indicators will flash to show the sensor millivolt value.

Up + Down

Press **Up + Down** to enter the level editing mode.

- The **Blue** light becomes solid, indicating the editing mode is active.
- While in the level editing mode, press **Up** or **Down** to adjust the output level. Each time **Up** or **Down** is pressed, the **Yellow** or **Red** light will flash: **Yellow** for **Up** and **Red** for **Down**.
  - » At Level 1, the **Red** light stays solid, indicating the low end of the scale.
  - » At Level 10, the **Yellow** light stays solid, indicating the high end of the scale.

Wait a few seconds after the level has been adjusted, and the lights will display the final value before resuming operation. To indicate this the **Red** light will flash between 1 and 9 times to indicate levels 1-9. The light will flash **Green** once for level 10.

Up + Down + *

Press **Up + Down + *** to reset the Smart Cell life. Press all three buttons at the same time and all 4 lights will flash to indicate the Smart Cell life has been reset.

Up + *

During the initial power up of the unit, press and hold **Up** + ***** to perform a factory reset.

- When pressing and holding **Up** + ***** during the startup sequence, you will see the unit flash all the lights twice. After the second flash, the reset option has been initiated. Continue holding the buttons for about 5 seconds (15 flashes) until the lights turn solid. Let the buttons go and the system will reset.

  CAUTION – Factory Reset should only be done at recommendation of MasterSpas support. Factory Reset will require reconnecting to the Controller through the app to re-engage operation, once spa model or volume is set.

WATER MAINTENANCE TROUBLESHOOTING

STRONG CHLORINE ODOR

Excessive Chlorine The smell could be from chloramines. Compare the free and total chlorine levels. If your free chlorine levels test lower than total chlorine levels, it would indicate the need to shock the water with an Oxidizer/non-chlorine shock treatment. If total chlorine levels test high, output level of the Master Clear Salt System Controller may need lowered. Do not enter spa water if chlorine levels exceed 5 PPM.

pH Out of Range Adjust the pH using pH increaser or reducer as needed.

WATER ODOR

Chlorine is Low If both total and free chlorine read low, check the Master Clear Salt System app or the Controller to determine salt content.

- If the salt level is in the balanced range, adjust the cycle level setting by one. Wait 24-48 hours while the system adjusts, monitoring the system to determine if more level adjustment is needed. **ONLY** increase the cycle level by **ONE** level at a time, waiting at least 24-48 hours before adjusting further.
- If the salt level is in the low range, add salt in half-cup increments, waiting at least 15 minutes to allow the salt to dissolve and mix through the system before adding more.
- If the salt level is in the high range, it is possible the Smart Cell has shut down to protect itself. Drain some of the water, refill with fresh water, using the 1-micron filter, and adjust water chemistry as needed.

pH Out of Range Adjust the pH using pH increaser or reducer as needed.

Bacteria or Algae Growth If chlorine has been adjusted and is in the appropriate range, it may be necessary to super-chlorinate the system or perform a system flush.

- Super-chlorinating the system involves adding chlorine granules (fast dissolving, sodium dichlor) to bring the system up between 5-10 PPM, letting the chlorine level drop back down over time. **DO NOT** enter the spa until the chlorine level drops below 5 PPM.

  NOTE: When the high chlorine levels from the Fast & Clear Water Boost are present in the water, the Master Clear Salt System operation will automatically measure these high sanitizer levels and delay system operation. It will begin engaging again once the Smart Cell detects the sanitizer level is low enough to start a chlorine generation cycle.
- A system flush would involve adding a spa purging agent. Remove the Smart Cell from the system, install the water resistant cap and gasket over the Smart Cell electrical connection in the filter area and circulate the spa purging agent throughout the spa, following manufacturer's instructions for the spa purging agent.

CLOUDY WATER

Dirty Filters or Inadequate Filtration Clean the filters with a filter cleaner or replace them as necessary. Adjust the filtration cycles for the spa.

Unbalanced Water Chemistry Test the water and adjust pH, salt, and/or the cycle levels as needed.

Old Water Drain, clean the spa shell, and refill using the 1-micron filter and start up instructions.

CLOUDY AND GREEN WATER

Total Alkalinity Levels are Low Adjust using pH increaser

Chlorine Levels are Low Apply Oxidizer/non-chlorine shock treatment and adjust salt or cycle level as needed.

CLEAR GREEN WATER

High Iron or Copper Content Use a metal sequestering (Metal Protect) agent to suspend the minerals in the water.

Chlorine Levels are Low Apply Oxidizer/non-chlorine shock treatment, and adjust salt or cycle level as needed.

BROWN WATER

High Iron or Manganese Level Use a metal sequestering agent (Metal Protect) agent to suspend the minerals in the water.

FOAMING

High Levels of Body Oils, Lotions, Soap, etc. Apply Oxidizer/non-chlorine shock treatment. Add a small amount of defoamer or an enzyme product and check the water chemistry.

Low Calcium Hardness Use a calcium hardness increaser.

Unbalanced Water Chemistry Test the water and adjust pH, salt, and/or the cycle levels as needed.

EYE OR SKIN IRRITATION

Unsanitary Water Test the water and adjust pH, salt, and/or the cycle levels as needed.

Total Chlorine Level Above 5 PPM Apply Oxidizer/non-chlorine shock treatment. Wait for chlorine levels to drop below 5 PPM before use. Consider lowering cycle level by **ONE** (waiting 24-48 hours before further adjustment of levels).

SCUM DEPOSITS AT WATERLINE

Body Oils and Dirt Use a multi-purpose cleaner to clean the spa surface and add an enzyme product to the spa water.

CHALKY, WHITE SCALE DEPOSITS

Minerals Present in the Water and Lack of Sequestering Agent Use When the spa is drained, use a multi-purpose cleaner or white vinegar and scrub with a soft cloth. Add a Scale Defense treatment to water care regiment, to help reduce and slow scaling.

PITTING AND CORROSION OF METAL FIXTURES

Low pH or Total Alkalinity Test the water and adjust using pH increaser or reducer.

High Chlorine Level and Off Gases Adjust the cycle Levels as needed.

Excessive, High Salt Levels Adjust Salt levels down into the balanced range by draining some water and diluting concentration by filling with fresh water using 1 micron garden hose filter.

Lack of regular care and maintenance to rinse/clean metal fixtures of chemical and organic buildup.

MASTER CLEAR SYSTEM OPERATION TROUBLESHOOTING

CONTROLLER LIGHTS ARE FLASHING CONTINUOUSLY

If all four lights flash continuously and the app connections become unresponsive, the Controller is experiencing an error and is not producing chlorine.

- Power down the system and wait at least 10 seconds before powering up again.
- Check the system components.
    - » Power supply/Controller – Check for loose connections or damaged wires.
    - » Smart Cell – Check for buildup on the plates or wires due to water hardness. Remove the Smart Cell from the spa, install the water resistant cap and gasket and soak in white vinegar to reduce buildup. The Smart Cell may need to be replaced.

THE SYSTEM IS NOT RUNNING CHLORINE GENERATION CYCLES

Test your water to confirm free and total chlorine levels.

- Bubbles should be visible, rising from the Smart Cell when it is running a cycle.
- If both total and free chlorine read low on the test strip, check the Master Clear Salt System app or the Controller to determine salt content.
- If the salt level is in the balanced range, adjust the cycle level setting up by one level. Wait 24-48 hours while the system adjusts, monitoring the system to determine if more is needed. **ONLY** increase the cycle level by **ONE** level at a time, waiting at least 24-48 hours before adjusting further.
- If the salt level is in the low range, add salt in half-cup increments, waiting at least 15 minutes to allow the salt to dissolve and mix through the system before adding any more.
- If the salt level is in the high range, it is possible the Smart Cell has shut down to protect itself. Drain some of the water, and refill with fresh water using the 1-micron filter and adjust water chemistry as needed.

THE CONTROLLER KEEPS RESETTING

- Check the power supply/Controller for loose connections. Power off the system, unplug each connection, and reconnect them, making sure they make good solid connections.
- Your Master Clear Salt System may also be resetting because of extremely high salt levels. Check your salt levels in the app or on the Controller. If the salt level is in the high range on the app or the **Yellow** and **Red** lights are both solid, drain some of the water, refill with fresh water using the 1-micron filter, and adjust water chemistry as needed.

THE CONTROLLER BUTTONS OR LIGHTS ARE NOT WORKING

- Check your app settings to make sure the lights have not been deactivated.
- Check the power supply/Controller for loose connections. Power off the system, unplug each connection and reconnect them, making sure they make good solid connections.
- If lights are engaged in the app and cycling power does not resolve the problem, the power supply or Controller may need replaced. Contact your MasterSpas authorized dealer or service center for support or to purchase replacement.

MASTER CLEAR SALT SYSTEM LIMITED WARRANTY

NOTE: This standard Limited Warranty applies to residential use.

1 YEAR – CONTROLLER AND HARNESSES

MasterSpas warrants to the original retail purchaser that the Master Clear Salt System Controller and harnesses will not malfunction due to defects in materials or workmanship for a period of 1 year from the date of the original retail purchase. If the salt system were to malfunction due to a defect in materials or workmanship, MasterSpas will repair or replace the applicable components (parts only).

30 DAYS – SMART CELL

MasterSpas warrants to the original retail purchase that the Master Clear Smart Cell will not malfunction due to defects in materials or workmanship for a period of 30 days from the date of the original retail purchase. If the Master Clear Smart Cell were to malfunction due to a defect in material or workmanship, MasterSpas will repair or replace the Smart Cell generator (parts only).

EXCLUSIONS

This limited warranty is enforceable only by the original retail purchaser from the date of original retail purchase but is voidable if the entire purchase price has not been paid to the dealer. Normal wear and weathering of finishes and components are not defects and specifically excluded from this limited warranty. All warranties are void if the system is operated for commercial use (including use at rental properties). Shipping costs associated with sending replacement components are excluded from this limited warranty.

LIMITATIONS

This limited warranty is voidable if the Master Clear Salt System has been subject to misuse, alteration or attempted alteration, repairs or attempted repairs not approved my MasterSpas or if a failure or malfunction is due to improper installation, improper water chemistry, improper salt levels, improper maintenance or lack of normal maintenance as prescribed in the MasterSpas Owner's Manual, an act of God, weather conditions, animals, rodents, pests or any damage from causes beyond the control of MasterSpas. Misuse or abuse shall mean operation of the spa other than in conformity with the MasterSpas Owner's Manual. Such misuse and abuse shall include but not be limited to the following:

- Damage to the components caused by contact with unapproved cleaners or solvents.
- Damage caused by operation of water temperatures outside the range of 34˚F–104˚F.
- Freeze Damage
- Damage caused to the salt system and/or the spa and its components due to use of unapproved sanitizers such as calcium hypochlorite, sodium hydroxide, "tri-chlor" type chlorines.
- Damage caused to the salt system and/or the spa and its components due to repeat treatment of products containing cyanuric acid (most forms of tablet or granule chlorine products).
- Damages or malfunction caused from improper aftermarket installation of the Master Clear Salt System.
- Damages or malfunction caused from overfilling the spa, over the Smart Cell Connector (for Activation Kit, OE Installation systems).
- Damages or malfunction caused by not placing protective, water resistant gasket and cap over the wall fitting connector, when Smart Cell is removed (for Activation Kit, OE Installation systems).
- Damages or malfunctions caused to the Master Clear Salt System and/or the spa and its components due to high salt concentrations in the spa water (such as, but not limited to, corrosion of components).
- Damages or malfunctions caused by excessive force when disconnecting and reconnecting Smart Cell and its wall fittings.
- Damages or malfunctions caused by calcium and mineral scaling on the Smart Cell due to hardness of the source water.

WARRANTY REGISTRATION AND WARRANTY CLAIM PROCEDURE

The original retail purchaser must retain legible proof of purchase, clearly showing their date of original retail purchase and being the original retail purchaser of the product. Upon any warranty claim, legible proof of purchase must be provided to confirm warranty status based on the original retail purchase date with the original retail purchaser. In the event of a warranty claim of a defect covered under the provisions of this limited warranty, the retail purchaser must provide detailed description of the claimed problem and submit any applicable picture(s) or short video(s) supporting the claim to the retail dealer or MasterSpas Customer Service department within ten (10) days of the initial malfunction or discovery of the defect. If the retail dealer does not provide support, then the purchaser should contact MasterSpas Customer Service department, via the web site or email, or provide written notice including pictures or a video of the defect at the address below. Upon notice of the warranty claim, the retail dealer or MasterSpas Customer Service department will work with the retail purchaser to determine if the claimed defect is covered under this limited warranty.

If it is determined that the defect is covered under this limited warranty, MasterSpas will cover the applicable replacement component(s). Shipping costs are not covered by this limited warranty. In the event of replacement, the replacement component(s) will carry the balance of the original limited warranty from the original retail purchase date. The limited warranty is extended only to the original retail purchaser and is not transferable.

DISCLAIMERS:

MASTERSPAS LLC, NEITHER ASSUMES NOR DO WE AUTHORIZE ANY OTHER PERSON TO ASSUME FOR US, ANY OTHER LIABILITY IN CONNECTION WITH THE SALE OF THE MASTER CLEAR SALT SYSTEM. THIS LIMITED WARRANTY SHALL BE THE EXCLUSIVE REMEDY AVAILABLE TO A PURCHASER AND MASTERSPAS SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM MISUSE OF THE MASTER CLEAR SALT SYSTEM OR CAUSED BY ANY DEFECT, FAILURE OR MALFUNCTION OF THE MASTER CLEAR SALT SYSTEM, WHETHER A CLAIM IS BASED UPON WARRANTY, CONTRACT, NEGLIGENCE OR OTHERWISE. SOME STATES DO NOT ALLOW THE EXCLUSION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THIS LIMITATION MAY NOT APPLY TO YOU.

TO THE EXTENT PERMITTED BY APPLICABLE LAW, THIS LIMITED WARRANTY SPECIFICALLY EXCLUDES ANY AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR PURPOSE, OTHERWISE ALL IMPLIED WARRANTIES ARE LIMITED IN DURATION TO ONE (1) YEAR FROM THE ORIGINAL DATE OF RETAIL PURCHASE. SOME STATES DO NOT ALLOW THE LIMITATION OF THE DURATION OF IMPLIED WARRANTIES, SO THIS LIMITATION MAY NOT APPLY TO YOU. THERE ARE NO OTHER WARRANTIES, EITHER EXPRESSED OR IMPLIED, OF ANY KIND OR NATURE WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. SOME STATES DO NOT ALLOW THE LIMITATIONS OF REMEDIES SO THESE LIMITATIONS MAY NOT APPLY TO YOU.

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REV. 202503

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