OPERATING MANUAL FOR 2020

**Equipment**

 **Underwater light, 12 volts 9 watt:** Client controlled by the white air button located on the interior wall of the float room.

 **Client call system:** This system is client initiated. To make a call to an attendant or one of your staff members, the client simply pushes the button on the float room call station located on the interior wall of the float room. This will ring the appropriate handset station and will be announced by a 4 stroke or 2 stroke chime and LED. To reply to your client, simply push the appropriate float room button on the main intercom station and speak to them. Your client needs only to push the button once. After that, the rest of the conversation will be hands free for the client. When the conversation is over, hang up the handset and the call will end.

 **UV Sanitation:** Manufacturer information is in the specification’s manual.

 **Ozone generator:** JED-203 by Jed Engineering Inc. with built air in pump. Manufacturer information is in the specification’s manual.

 **Waterway top load 50 sf cartridge filter assembly**: Replace with Clarathon filter # FC2390,Diameter: 4-15/16", Length: 13-5/16", Top: 2-1/8" Open, Bottom: 2-1/8" Open, Surface Area: 50 Sf. Filtering 5 microns.

 **Pump(s)**: Laing E14; 240 volts. 36 GPM ea. Manufacturer information is in the specification’s manual.

 **Spa water heater**: Versa-Therm universal spa heater, 1.375 kw, 115 volts. Stainless steel housing with Titanium heater element.

**Elite water heater:** Brett Aqualine, 1.375 kw, 115 voltes

 **Air heater:** Qmark infrared cove heater 240 volts, 750 watts, 3.1 amps.

**Float session control buttons:** Choose pe-set,30 min session, 60 min. session, 90 min. session, or custom session.

To initiate a float session, push the desired, timed session button to begin a float session. When the float session has ended, the system will reset itself and will be ready to for you to initiate the next float session. If you need to end a session early, push the end session early button and the system will go through a 10 min cleaning session then reset. To turn on/off any of the lighting or equipment, put the control panel in manual mode and click the appropriate button.

**Float session details for 30, 60, 90, or custom. sessions**

Turn float room light off 2015 thru 2018 models. Turn soffit lights on, low intensity 2020 and up models.

Turn fan on

Wait 1 minuets

Turn fan off

Turn ozone on

Wait 1 minuets

Turn ozone off

Wait 2 minuets

Turn Pump/ Heater off, (5 minuet mark)

Wait 1 minuet

Turn soffit light off

Turn Audio on; ramps up over 5 seconds and plays for 1 to 10 min. then fades off. The play time, 1 thru 10 min., is adjustable by staff on the app control panel), the music play is part of the session time.

Wait 30min, or 60 min. or 90 min, or custom min.

Turn audio on; ramps up over 10 seconds and plays for 1 to 10 min. (adjustable by staff) the music play is part of the session time and will only play while a session is running.

Turn light on very low brightness 2015 thru 2019 models. Turn underwater light on in 2020 and up models.

Wait 1 minuet

Turn soffit light on

Wait 1 minuet

Turn chemical feeder on, 12 seconds

Turn chemical feeder off

Turn Pump/Heater on

Wait 5 minutes

Turn ozone on

Wait 10 minuets

Turn ozone off

Turn soffit light off, or returns to previous setting

System returns to default mode

**End session early button**

Stop the session in progress

Turn light on very low brightness

Wait 2 minuets

Turn chemical feeder on, 30 seconds

 Turn chemical feeder off

Turn Pump/Heater on

Wait 2 minutes

Turn ozone on

Wait 5 minuets

Turn ozone off

Turn light off, or returns to default

System returns to default mode

**Default mode is;** pump on, water heater on, air heater on, UV sanitation on, underwater light on.

**Session reset button**

If you click on any of the preset session buttons by mistake, you can click on the reset button to stop that process and select a different session time.

**Temperature control**

When the control system is first started, the water and air temperature default is 0 degrees and must be set to desired temperature or the heater will not turn on.

**Spa water temperature setting:** For the best float session experience, set the temperature of the water to to 94 degrees F.

**Air temperature settings:** For best results, set the air temperature to

94- or 95-Degrees F

To set air and/or water temperatures, click on the appropriate temp reading. Using the drop-down list, set the desired temperature and click set. The temperature displayed will be the actual water or air temperature.

Whenever the power is turned off to the control system the temperature settings will go back to 0 and will have to be reset

**Note:** During a float session. Once the circulation pump is turned off, (there is no water circulating), the water temperature sensor located in one of the pipes (outside of the room), is actually reading the temperature of the water in that pipe, not in the float room tub. That temperature reading will begin to drop, but the actual temperature of the water in the tub should not go down by more than .5 degrees. If you lose more than 1 degree during a float session, do not adjust the temperature of the water; instead, turn up the air temperature 1 degree at a time until a desired temperature outcome is reached. Turning up the air temperature will not bother the floaters, but it will make it more difficult for the temperature inside the room (air and water), to lose heat because it is surrounding the entire surface of the fiberglass walls and tub with warm air. **Note: you don't want the air conditioning on in the utility room; it will only fight the float room heaters that are trying to maintain a consistent warm temperature.**

During the winter months, make sure that there is plenty of heat throughout the float room utility space. Always keep this space as warm as you can to minimize heat lose, and as to not over work the heaters. Also, not keeping this space warm will cause the air temperature to be hard to control. Keeping this space warm will also have a positive effect on your electric bill.

**Other on-screen controls and manual control**

Lights, on/off

Fan, on/off

Pump/Heater, on/off

Ozone, on/off

UV sanitizer, on/off

Air heater, on/off

Underwater light, on/off

Audio, on/off

Audio fade, on/off

**Note:** The Ultraviolet sanitizer is always on.

**Note:** The light button(s) and the fan button (s) on the app control is an on/off switch. Push once for on and push again to turn it off.

**Audio on/off**

Turns the audio option on or off. With the audio turned off, there will be no audio played during a float session.

**Audio fade button on/off**

Turns the audio fade option on or off. With the audio fade turned off, audio will play throughout the entire float session.

To set the audio fade time, click on the audio icon. Using the drop-down keypad, set the desired time, between 1 and 10 minutes then click OK. Whenever the power is turned off to the control system the fade time settings will go back to 0 and will have to be reset.

**Filling the tub for the first time**

 Make sure all plumbing unions are tight. Hand tight, do not use a wrench to tighten them. They should arrive tight but may have loosened during shipping. Make sure the filter assembly air release petcock located on the top of the filter assembly is open. Turn on the water valve leading to the pump housing or turn on your hose at the entry to the float room and fill, hot water is preferred. Let the water run until the water level is just below the return jets.

**Turning on the electrical system for the first time:** After the water has been added, turn on the electric using the switch on the cover of the control panel. The water should begin to flow freely. If it does not flow freely, turn the system off, wait a few seconds and turn it back on. You may have to repeat this process more than once. When the water begins to flow freely add more water to the tub until the water level is about 8”. Set the air and water temperature by clicking on the appropriate icon. Leave the system in automatic mode as a default setting. Put the system in manual mode to manually control any of the individual pieces of equipment.

**Adding the salt:** Add 20 to 22, 50lb bags of pharmaceutical grade Epsom salt. Mix the salt and the water together until all the salt is below the water level. At this point the salt does not have to be completely dissolved; it just needs to be below the water level. Now add more warm water, bringing the level up to 10” deep. Finish dissolving the salt. Once the salt is dissolved, the water may not be very clear. You may have to give it up to 24 hours of filtering before it becomes clear.

**Normal running mode:** Leaving the circulation pump running is the default running mode of operation. In this mode, the circulation pump and the heater will run continuously, (heater will turn off when it reaches the desired temperature). The circulation pump and the heater are always, by default, running at the same time. This cannot be changed. You cannot turn off one without turning off both. The only time these two components are turned off, is during a float session. If these two components are turned off, the water will not be heated, and it will eventually start to cool down.

**Maintenance**

**Purging the system: T**wice a year or as needed, drain the tubs. Re-fill the tub to just above the water intakes with clean water. Add a spa purge cleaner to the water as per product instructions and let circulate as per product instruction. When purge is complete, Spray down the walls of the float room with 27% H2O2 diluted by 50%. Rinse everything completely at least two times, draining the tub each time and refilling it with clean water. When this is complete add your salt and let circulate.

To shine and protect the fiberglass walls and ceiling finishes, a marine fiberglass polish can be used. A suggested product would be a 3M product called Restore.

**Underwater light**: Replace LED unit with, Starburst 18-LED Color Changing Spa Light. Cane purchased at spadepot.com.

**UV Sanitation:** Change the Ultraviolet bulb in this unit every 12 months. The bulb will last 18 months or more, but it will begin to weaken after 12 months. Manufacturer information is in the specification’s manual.

**Ozone generator**: This equipment is completely automated and will need no regular maintenance. **NOTE:** Keep an eye on the tubing for the ozone. Water will tend to run up the line but will stop at the check valve when the check valve is kept clean. This is normal. Sometimes the check valve will get gummed up from the salt and stop working as it should. If that happens, either the water will make its way past the check valve, if it gets stuck open, or it will not let the ozone into the water, if it gets stuck closed. IF THE WATER GETTS PAST THE CHECK VALVE, AND GETS INTO THE OZONE GENERATOR, IT COULD DAMAGE THE SYSTEM. So, keep an eye on the check valve. If it gets gummed up, you will have to remove it and rinse it out with warm water to free it up and get it working properly again. If it is too difficult to disconnect it from the tubing just heat up the tubing around the check valve with a heat gun or hairdryer and it will come apart easier.

**Chemical feeder:** The H2O2 is dispensed at a rate of approx. 2 oz. between each float session. Make sure the chemical reservoir does not run dry.

**Cartridge filter:** On a weekly basis, remove the filter cartridge from its assembly and replace it with a clean or new cartridge. Rinse and clean the soiled cartridge using detergent or cartridge cleaner. Let it dry completely so that it will be ready for reuse. Replace the filter cartridge when it becomes too soiled and cannot be cleaned or if it becomes damaged.

**Check the water level:** Periodically check the water level to make sure that 10” of water is maintained. If a water level of 10” is not maintained, air may enter the system and a gurgling noise may be heard. The primary cause of a diminished water level is evaporation. When the water in the float room evaporates, it leaves the salt behind, causing the density of the saltwater solution to rise. If the water level becomes too low, the result will be a density level that is too high.

**Check the density of the saltwater solution:** On a bi-weekly basis, check the density or specific gravity of the saltwater solution in your float room. The optimum specific gravity for you float room is 1.26 to 1.275. This density level is equal to about 5 lb. of Epsom salt per 1 gal. of solution. If the density level gets to low, it will negatively affect the quality of your client’s float session. If the density is too high, the salt will begin to crystallize on the surface of the water, or in the equipment and may harm the equipment.

**Daily:** If you do not have a chemical feeder, add four oz. of 27% H2O2 to each float room at the end of each day.

**Ph:** Some consider this the most important component of water balance. It measures how acidic or basic your water is. The ideal pH range for spas is 7.2 to 7.8. Any reading below 7.2 means your water is acidic. To correct this, you would add [Spa Up](http://www.spacare.com/subcatmfgprod.asp?0=200&1=235&2=-1). If the pH reading is above 7.8, it means the water is basic or alkaline. To bring the pH level down you would use [Spa Down](http://www.spacare.com/index.asp?PageAction=VIEWCATS&Category=235). Another pH balancing product is called [pH Balance](http://www.spacare.com/index.asp?PageAction=VIEWPROD&ProdID=4343) it works great following some simple instructions included. Once again to achieve these readings, you will need a test kit or test strips. It is also best to get your sanitizer level at a reasonable measure before testing the pH. Test weekly, or twice a week if float room use is heavy.

**Visually inspect the water:** after every float session. If necessary, skim out any hair or loose partials that may be left in the water after each float session. Don’t rely on the filter system to catch every partial between float sessions. The system works well, but even one hair left behind, can be enough to turn off a client.

**Cloudy water:** is typically caused by microscopic debris smaller than the 5 microns that the filter is able to capture. To rectify this situation, add to the water, a clarifier. You will find this product at any pool and spa store. The clarifier will take those tiny particles, and coagulate them, joining them together to form larger particles that can be captured by the filter. If you use a clarifier, clean or replace your filter after the water has cleared up.

**Water Quality:** Each spa is filled with approximately 200 gallons of saltwater solution. 1000 lbs. of dissolved, pharmaceutical grade Epsom salt make up this solution. That concentration of salt alone would be an excellent sanitizer, but in addition to that, we use a powerful dose of ultraviolet light, ozone, and a daily treatment of a 27% H2O2 solution. Also, we believe that it is important to use a non-chlorine/ non-bromine sanitizer in addition to these other means of sanitation. Filtering is accomplished through a cartridge filter system which traps debris as small as 5 microns. The entire system runs 24 hours a day, 7 days a week, apart from float session time.

**Maintenance Schedule Summary**

**Daily:**

Wave Classic and Wave LS, UV and ozone sanitation are automated. Add 4oz. of H2O2 as a shock at the end of the day.

Wave Elite UV, ozone and H2O2 sanitation are automated.

**Twice Weekly:**

Check sanitizer (Biguanide), Add one tbsp. if reading is low.

Add two or three tbsp. of enzymes. (Enzymes and Sanitizer, alternate days)

Check alkalinity and PH, balance as needed.

Check the water level. Maintain 10” of saltwater solution. Top off as needed.

Change and clean the cartridge filter

Check the water density. Add salt as needed.

**Weekly:**

Change and clean the cartridge filter

Clean and shock. Spray down the walls and ceiling with a 50/50 solution of H2O2 and water. Rinse the walls and ceiling and add 8oz of H2O2 to the water. Let circulate for 12 hours before use.

**Yearly:**

Purge the system; tub, plumbing lines. Clean walls and ceiling. Instructions can be found in your manual.

Change the UV light bulb. Even if it still seems to be operating, the UV bulb will begin to weaken, and needs to be changed yearly.

**Suggested Products for Sanitation: Aqua Silk non- chlorine and Aqua Silk sanitizer (Biguanide).**

**Poor Water Quality Prevention:**

* Following these basic procedures will help prevent problems:
* Start out with clean water. Shock if necessary.
* Encourage good hygiene. A shower prior to use is a must.
* Monitor and adjust water ph.
* Avoid using float room when wounds or open cuts are present.
* Maintain adequate sanitizer level at all times.
* After heavy use, or if smelly or cloudy water is noticed, shock with Super chlorination shock to quickly clear up problems. Let set until chlorine dissipates.
* Maintain proper pH level to optimize sanitizer effectiveness.
* Test your water frequently using spa water test strips.
* Keep waterline and adjoining surfaces clean.
* Clean filter regularly with a commercial cleaning compound such as Eco Soak or Power Soak. Replace quarterly
* Thoroughly clean float room at each drain/refill. Don't forget to clean walls and ceiling.
* Use a Spa System Flush to rid your plumbing and heating systems of grime, oils, dirty buildup, etc.

**Decontamination:** If the float room water has become severely contaminated, the plumbing system and filter may be harboring excessive amounts of bacteria in biofilm which may be resistant to your normal sanitizing methods. If you suspect such a problem, a decontamination procedure should be followed as a precaution, since normal draining, cleaning, and replacement of the spa water may not completely correct it. Decontamination is also a good practice when switching to a new or alternative sanitizer system.

Fortunately, there is a disinfection procedure which can bring a neglected float room back to good health. This corrective action involves three basic phases:

* Decontamination
* Water replacement
* Verification.

**Phase 1 - Decontamination**

**Filter;** After cleaning and rinsing filter, completely submerge the cartridge in a strong solution of Dichlor Chlorine in a clean plastic bucket (use about 1 teaspoon Dichlor in 3-5 gallons of water). Soak for 2 to 4 hours. Also inspect and clean the interior of the filter housing and skimmer.

**Float room Super chlorination**

Now that the filter has been addressed, we can focus on the float room itself. Super chlorinate the float room water to at least 100 ppm using 6oz or ¾ cup of Dichlor Granular Chlorine which has been first pre-dissolved in a plastic bucket of water. Pre-dissolving the chlorine will prevent possible damage to your float room’s fiberglass surface from direct contact of chlorine granules. Now raise the water level in the spa to about 1 inch above the normal high-water mark. Circulate the spa water for 30 minutes with the float room door closed

**NOTE:** Avoid inhalation of vapors or mist during the decontamination procedures.

**Flushing Spa Plumbing System**

 Next, and prior to draining, add Spa System Flush (spa depot) per label directions. Allow water to circulate for an additional 30 minutes, continuing to turn air injectors and/or blower on and off at above intervals.

Spa System Flush is important, as it breaks up and flushes away inaccessible oily deposits, dirt, and other debris from your spa's internal plumbing system. Completes the cleaning process from the inside out.

**Phase 2 - Water Replacement**

Reinstall the cleaned and sanitized filter, or better still, install a new filter

Refill the spa with fresh water. Now balance the water, paying close attention to Total Alkalinity and pH.

Do not add your sanitizer at this time but proceed to Phase 3.

**Phase 3 – Verification**

The final, and perhaps most important step is verification of decontamination. Now shock the refilled float room with 10 ppm of Dichlor Granular Chlorine, (spa depot), pre-dissolved in a plastic bucket of water. This will be approx. .5 oz. or 1 tablespoon.

Allow the pump to circulate for 8-12 hours or overnight.

After this circulation period, check the free chlorine level with Universal Test Strips. If you get a residual free chlorine reading on your test strips, decontamination was likely successful. If no free chlorine residual is present, excessive demand may still exist, indicating that contamination is still present and depleting the chlorine. So, if no free chlorine is present, repeat the decontamination procedure.

After successful decontamination has been verified, you can resume your regular sanitizing procedure. (Any residual chlorine will normally deplete in a few days). Maintaining your sanitizer and using Spa System Flush with every water change will help prevent the need for a total decontamination again in the future.

**Network Router Setup**

If you need to replace your network router, you will need to change the IP address to 10.74.13.1

You can replace the router with different brand or a different type. If this is the case, follow the instructions that came with the new router to change the IP address. If you purchase a Netgear router similar to the one the came with your float room, follow the instructions below to change the IP address and the name of the Network.

1. Plug the router into a 110v wall socket.
2. Plug one end of the Ethernet cord into port #1 or 2 or 3 etc. on the router and the other end of the cord into the Ethernet port on a computer.
3. Open a browser.
4. Type in 192.168.1.1/index.htm, username is admin and the password is admin or password. Your new password is wave.
5. On the Netgear home page click advanced. On the right menu bar click setup, then click LAN Setup.
6. On the top line, change the IP address to 10.74.13.1
7. On the bottom-line change from 254 to 90.
8. Click apply (green Button) and wait for re-boot. Then click sign in.
9. Next: on the right menu bar, Basic, click wireless
10. Change name (SSID) from Netgear23 to Wave Rooms, then click Apply.
11. IP change is complete.