



by GPM Industries, Inc.

INSTALLATION & OPERATION MANUAL

**ELITE PLUS SERIES SPAS
OPTIMA OPTION**

Revised December, 1996

IMPORTANT SAFETY INSTRUCTIONS

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

1. READ AND FOLLOW ALL INSTRUCTIONS.

2. **WARNING**-To reduce the risk of injury, do not permit children to use this product unless they are closely supervised at all times.
3. A wire connector is provided on this unit to connect a minimum No. 8 AWG (8.4mm²) solid copper conductor between this unit and any metal equipment, metal enclosures of electrical equipment, metal water pipe, or conduit within 5 feet (1.5m) of the unit.
4. (For cord-connected/convertible units)
DANGER-Risk of injury.
 - a) Replace damaged cord immediately.
 - b) Do not bury cord.
 - c) Connect to a grounded, grounding type receptacle only.
5. **WARNING**-If this product is provided with a ground-fault circuit-interrupter on the end of the power cord. The GFCI must be tested before each use. With the product operating, open the service door. If the product stops operating, this merely indicates that the door is equipped with an electrical interlock. Next, push the test button on the GFCI and close the service door. The product should not operate. Now open the service door, push the reset button on the GFCI and close the service door. The product should now operate normally. If the product fails to operate in this manner, there is a ground current flowing indicating the possibility of an electric shock. Disconnect the power until the fault has been identified and corrected.
6. **DANGER**-Risk of Accidental Drowning. Extreme caution must be exercised to prevent unauthorized access by children. To avoid accidents, ensure that children cannot use this spa unless they are supervised at all times.
7. **DANGER**-Risk of Injury. The suction fittings in this spa are sized to match the specific water flow created by the pump. Should the need arise to replace the suction fittings or the pump, be sure that the flow rates are compatible. Never operate the spa if the suction fittings are broken or missing. Never replace a suction fitting with one rated less than the flow rate marked on the original fitting.
8. **DANGER**- Risk of Electric Shock. Install at least 5 feet (1.5 m) from all metal surfaces. As an alternative, a spa may be installed within 5 feet of metal surfaces if each metal surface is permanently connected by a minimum No. 8 AWG (8.4 mm²) solid copper conductor to the wire connector on the terminal box that is provided for this purpose.
9. **DANGER**-Risk of Electric Shock. Do not permit any electric appliance, such as a light, telephone, radio, or television, within 5 feet (1.5 m) of a spa.
10. **WARNING**-To reduce the risk of injury:
 - a) The water in a spa should never exceed 40°C (104°F). Water temperatures between 38°C (100°F) and 40° C are considered safe for a healthy adult. Lower water temperatures are recommended for young children and when spa use exceeds 10 minutes.
 - b) Since excessive water temperatures have a high potential for causing fetal damage during the early months of pregnancy, pregnant or possibly pregnant women should limit spa water temperatures to 38° C (100° F).
 - c) Before entering a spa, the user should measure the water temperature with an accurate thermometer since the tolerance of water temperature-regulating devices varies.
 - d) The use of alcohol, drugs, or medication before or during spa use may lead to unconsciousness with the possibility of drowning.
 - e) Persons suffering from obesity or with a medical history of heart disease, low or high blood pressure, circulatory system problems, or diabetes should consult a physician before using a spa.
 - f) Persons using medication should consult a physician before using a spa since some medication may induce drowsiness while other medication may affect heart rate, blood pressure, and circulation.

11. SAVE THESE INSTRUCTIONS.

INSTALLATION

Your Great Lakes Spa® was designed to be used either indoors or outdoors. If you intend to use your spa indoors, remember that water may be splashed out of the spa, particularly as people exit the spa, so you will want to design your room accordingly. Humidity will not be a problem if the spa is used for shorter periods of time and if the cover is kept on the spa when not in use.

For outdoor placement of your spa, be sure to keep in mind natural elements such as wind, view, falling leaves, etc. You will want to locate your spa in such a way as to provide maximum enjoyment. In either case it is recommended that you locate your spa in either a locked room or fenced area to prevent access to the spa by children.

Your portable Great Lakes Spa® must be placed on a flat surface that supports the entire spa. Most sites such as patios, decks, rooms, etc. are structurally sound and will support a spa since the weight is distributed over a wide area. However, it is always a good idea to have your dealer or a contractor review your proposed site to assure that there are no support problems.

SETUP

The Equipment Module must be protected by the skirting of the spa or some other protective covering. The Equipment Module must never be installed in an open unprotected area. All warranties are void if the spa is not installed in accordance with these instructions.

Install the spa to provide for adequate drainage of the Equipment Module compartment to prevent water from entering the electrical equipment area. Install the spa to permit safe access for servicing and routine maintenance of the Equipment Module.

A multi-terminal bonding connector, located on the side of the Equipment Module, is provided to permit connection of a bonding wire between this point and any accessible metal surface within 5 feet of the spa, as may be needed to comply with local requirements. The bonding wire connecting this bonding connector to the accessible metal surfaces must be a solid, No. 8 AWG copper conductor. This bonding connector may also be used to bond any field wired components.

All electrical connections to the Equipment Module must be accomplished by a qualified electrician in accordance with the National Electrical Code and in accordance with any local electrical codes in effect at the time of installation. All electrical connections must be made in accordance with the wiring information contained in this manual, or on the back of the field wiring access panel of the Equipment Module. National Electrical Code requires a Ground Fault Circuit Interrupter (GFCI) at the power source. All installations require an overcurrent protection device of 60 amperes and a minimum supply conductor ampacity of 60 amperes. Use copper conductors only. **WARNING:** Improper electrical connections or conductor sizing may cause the Equipment Module to operate improperly, create the potential for an electrical hazard, and may void the warranty. **CAUTION:** Use only approved pressure-type wire splicing lugs or connectors suitable for the size and type of wiring used.

Once the electric has been hooked up, be sure that all fittings to the support system are tight including the drain faucet (fittings may loosen during shipping). Remember, when tightening fittings, **HAND TIGHTEN ONLY!**

Prior to filling the spa with water, be sure that the push/pull valves on both pumps of the support system are pulled out in the open position. Using a garden hose, fill with water to 2-4" above the skim filter. Always fill your spa with hard (not softened) water. **NOTE:** Do not overfill. After the spa is filled, remove the garden hose and check the equipment module area for water leaks. If there is water dripping, it is probably a loose connection and you should re-check the tightness of the fittings and placement of the "O"-rings.

OPERATION

Refer to the Control Manual operating instructions for the spa-side control unit. During the initial start-up, operate both pumps for approximately 2 minutes to purge all of the air from the plumbing. The two-speed pump should be operated in high speed.

CONTROLS/JETS

Air Controls: Your spa comes equipped with air controls. The air controls allow air to flow through the jets when the pump is on high speed, and each control regulates the air flow to a different jet or jets. Turn the air control counterclockwise while the pump is on high speed and you will see the jets produce added agitation. Turning the control clockwise will return the jets to water-only operation.

Jet Options: Your Great Lakes Spa comes equipped with a variety of jets. Some of the jets allow you to control the amount of waterflow by rotating the trim ring around the jet. Turning the trim ring clockwise will reduce the water flow from the jet and turning it counterclockwise will increase the waterflow.

Ozone Jet: In the footwell of your spa there is a mini jet which allows ozone to be drawn into your spa when your spa is equipped with an ozone unit. With an ozonator installed, there will be a steady stream of small air bubbles coming from the ozone jet whenever the spa pump is in operation. Your spa is manufactured "ozone-ready", which means that you can easily hook up an ozone unit to your spa. See your dealer for optional ozone installation.

Spa Light: Red and blue colored light lenses are included with your spa. To install or remove lenses simply push them on or pull them off from the light wall fitting. To replace the spa light bulb; turn off all power to the Equipment Module. Locate the rear of the spa light assembly and unscrew the lamp holder from the clear lens body. Pull the bulb from the socket and replace by reversing the above steps. CAUTION: The replacement bulb must be the same rating as the factory installed bulb (standard automotive type #91"

SPA CARE & MAINTENANCE

Draining Your Spa

Every 3-4 months you should change the water in your spa. This is made easy by way of the drain faucet which is included in your Great Lakes Spa® and is located in the equipment module area. Simply attach a garden hose to the faucet and run the hose to where you want to drain the water. When the water level reaches the bottom of the filter canister, close the drain faucet. The remaining water in the spa can be scooped or siphoned out and you are now ready to clean the acrylic surface.

Acrylic Shell Care

Your Great Lakes Spa® is manufactured with a premium grade acrylic, and the quality finish is very durable and easy to maintain. When the spa is empty, wipe the spa shell with warm water and a sponge. Do not use an abrasive brush or cleaning agent as it will scratch the acrylic finish. If you have a stubborn dirt or scum mark, use an acrylic spa cleaner which is available at your local spa dealership. Do not use detergent or soap to clean the spa as the residue will remain on the surface and appear in the water upon refilling and cause foaming.

Thermal Spa Cover

It is important that you properly care for your spa cover. Do not sit or stand on the cover as it will break with weight of this type. Do not let snow build up on your cover. Lock-down tabs are included with your cover, and if your spa is outdoors it is important that you use the tie down tabs to prevent the wind from lifting the cover off your spa. Periodically clean your cover as described in the maintenance and cleaning instructions provided with the cover. When handling your cover, take care not to drag it over rough surfaces which will scuff or tear the fabric. Always lift by the handles.

Cabinet Care

Wooden Great Lakes Spa® cabinets are manufactured with Western Red Cedar. The cabinet will naturally weather over time. If you wish to minimize the weathering effect, you should treat your spa with an exterior penetrating oil-based stain. Your local paint supply store can assist you in various options you have in wood treatment.

Molded Permalife cabinets are factory finished with a durable exterior lacquer paint. Any high quality exterior grade latex or based paint can be applied over this product if desired.

Filter Maintenance

Your Great Lakes Spa® has been equipped with a top-loading filter for ease of cleaning and maintenance. Every two weeks you should clean your filter which has picked up hair, body oils and other debris that may have come into the spa water.

To clean your filter, turn the equipment module off. Remove the basket and floating weir by turning it counter clockwise until the flat sides of the basket line up with the tabs on the filter canister. The basket/weir can now be removed by lifting it straight up to gain access to the filter cartridge.

It is recommended that you have a second filter so that while one is being cleaned the other can be in the spa. If you have a clean second filter, place it back into the filter housing now. Replace the basket/weir making sure the flat sides of the basket line up with the tabs on the filter. Turn the basket/weir clockwise to keep it in place.

WATER CARE

Chemicals

Due to the warm temperatures in your spa, it is important to properly test and maintain your spa water for health and appearance reasons. Chemical imbalance can cause skin irritations and dirty water is both unsightly and undesirable to soak in. With a minimum of effort you can have sparkling clean water for your constant enjoyment. This can be attained by the use of spa chemicals and with the assistance of a spa ozonator. Consult your dealer to set up a proper water treatment program.

Please be aware that the mineral content of spa water increases from water evaporation and with the addition of algacidal and sanitizing chemicals. If the mineral concentration of the water becomes too high, the minerals will precipitate and deposit on the spa, in the filter, and on the heater. The spa water must be changed when the amount of dissolved solids becomes excessive.

Algacidal and sanitizing chemicals are either alkaline or acidic. Sodium and calcium hypochlorite are alkaline. Chlorine gas and practically all other dry chlorine products are acidic. Whichever type of chlorine is used, it is very important that the pH level be checked frequently and maintained between 7.2 and 7.8.

CAUTION: Do NOT store spa or pool chemicals near the Equipment Module because their corrosive fumes may cause damage. Change the spa water frequently, typically every 3 to 4 months or when the water clarity and cleanliness can no longer be maintained by chemical treatment. It is recommended that the total alkalinity of the spa water be kept from 80 to 100 parts per million (ppm) when sodium or calcium hypochlorites are used, and 100 to 120 ppm when other dry chlorine products are used.

WARNING: Failure to maintain the proper chemical levels as stated above may cause excessive damage to components in contact with the spa water. Damage to components resulting from improper chemical maintenance will NOT be covered under warranty.

Ozone

The optional ozonator is a unit which contains a special ultra-violet light. When the unit is activated, ozone is generated which is drawn into the spa via the ozone jet. The ozone gas appears as tiny bubbles which come from the ozone jet. The ozone coming into your spa purifies the water without the skin irritation and chemical smell which can occur with the use of conventional chemicals. The ozone unit operates when installed according to the instructions provided with the ozone unit and when the equipment module is in the filtering mode.

WINTERIZING

If you live in an area where the danger of freezing exists, you must take extra precautions to insure that your spa will operate properly. If you plan to operate your spa throughout the winter, be sure that the thermostat is set to keep the water warm. In addition, in freezing temperatures it is recommended that longer filtration cycles be selected. If you intend on closing down your spa for the winter, you should follow the winterizing procedures listed below:

1. Drain the spa as explained in the "Draining Your Spa" section.
2. Briefly (15 seconds) run the air blower to be sure the air blower lines are clear of water.
3. Be sure that all water is removed from the spa.
4. Shut off all electrical power at the breaker box.
5. Disconnect the unions from the equipment module to allow the water in the spa lines to drain.
6. Remove the pump-to-pump water circulation line connected to the front of both pump housings, and drain all water from the pump housings and the line, then reconnect the line.
7. Remove the filter element from the filter housing and see that the filter housing is dry. If water is left in the filter housing it will freeze and cause the housing to crack.
8. Cover your spa with your spa cover and be sure it is locked in place.

DOUBLE-SHOOTING

A. Equipment Module Will Not Operate

1. Make sure the spa-side control is connected to the spa-side receptacle, located inside the Equipment Module.
2. Check the main circuit breaker panel. If the GFCI or circuit breaker has tripped, reset the breaker. If the circuit breaker trips repeatedly, contact your dealer.
3. Turn the circuit breaker, or switch, supplying power to the Equipment Module OFF then ON.

B. Pump Will Run But There Is No Water Flow

1. Make sure all valves are in the open position.
2. Make sure the filter is clean.
3. Make sure the suction intake covers are free of debris.
4. Make sure the water level of the spa is at least 2" above the skim filter.
5. Check to make sure all adjustable flow-type jets are turned open.

C. Pump Runs And There Is Water Flow But No Heat

1. Press the temperature set button to increase temperature. Do NOT expect to feel hot water coming from the jets.
2. Make sure all valves are open to allow full water flow through the system. Limited water flow will NOT build enough pressure to allow the heater to come on.
3. Clean the filter to assure maximum water flow.
4. The system is equipped with a heater delay switch that will prevent heater operation from occurring for approximately 20 seconds after the pump starts. Make sure the pump has been operating for at least 20 seconds.

D. Pulsating Or Minimal Water Flow In High Speed Mode

1. Make sure water level of the spa is at least 2" above the skim filter.
2. Make sure all valves are open.
3. Make sure the filter element is clean.
4. Make sure the suction intake covers are free of debris.

E. Blower Will Not Blow Air Into The Spa

1. Check air blower connections for leaks.
2. Make sure the air blower is plugged into the air blower receptacle located on the side of the Equipment Module.

GPM INDUSTRIES, INC./ENCORE & ELITE SERIES

LIMITED WARRANTY

GPM Industries, Inc. ("GPM") extends this Limited Warranty solely to the original consumer purchaser of any GPM Encore & Elite Series Portable Spa manufactured and installed in the U.S.A. after October 1, 1996.

TEN YEAR STRUCTURAL WARRANTY

GPM warrants the fiberglass spa shell against water loss due to defects in the fiberglass spa shell for a period of ten (10) years from the date of purchase.

FIVE YEAR SURFACE WARRANTY

GPM warrants the spa surface against cracks, blisters, or delamination for a period of five (5) years from the date of purchase.

TWO YEAR COMPONENT WARRANTY

GPM warrants the mechanical equipment, plumbing, fittings, and controls against defects in workmanship for a period of two (2) years from the date of purchase.

LABOR WARRANTY.

All labor for work performed in accordance with this warranty shall be at no cost to the purchaser for a period of two (2) years from the date of purchase. Travel, trip, or mileage costs are not covered under this warranty, and repairman travel charges may be assessed to the consumer.

EXTENT OF WARRANTY.

This warranty extends only to the original "consumer" purchaser of the GPM Encore & Elite Series Spa as that term is defined in the Magnuson-Moss Warranty Act, 15 USC Section 101, as amended. Coverage shall commence as of the original date of purchase and the duration of such coverage shall not extend for any reason beyond the stated time periods. This warranty terminates upon transfer of ownership.

WARRANTY PERFORMANCE.

In the event of any malfunction or defect covered by this warranty, contact the authorized GPM Dealer from whom you purchased your spa. All service work must be performed by an authorized GPM Dealer or an authorized agent of GPM. In the event there is not an authorized GPM Dealer or repair firm in your area, the spa can be returned pre-paid freight (you pay) to GPM for repair of the defect. GPM will then ship the spa back to you pre-paid (GPM pays) upon completion of the repair. In the event the spa needs to be returned to GPM for repair, contact GPM in advance at: 428 West 22nd Street, Holland, Michigan 49423, phone number: (616)392-5947, for packaging and shipping instructions. In addition, GPM reserves the right to inspect or designate a person to inspect any part that is claimed to be defective and covered by this warranty. For any warranty service, GPM reserves the right to choose at its option repair of the problem or a replacement of the defective part. The purchaser is responsible to provide adequate access to the spa, equipment and plumbing. GPM reserves the right to substitute a spa shell or component of equivalent value, either new or factory reconditioned, and any such repair or replacement shall assume as its warranty only the remaining portion of the warranty on the original product. With regard to spa surface repairs, no warranty is made that the color or texture of the repair will match the original surface.

ACTS INVALIDATING WARRANTY.

This warranty is void if the GPM spa has been subject to alteration, misuse or abuse, or if any repairs on the spa are attempted by anyone other than an authorized representative of GPM. Alteration shall include but is not limited to any component or plumbing change, electrical conversion, or the addition of any non-approved sanitation or water purification device or heating system which contributes to a component or unit failure or unsafe operation system. Use of the spa in an application for which it is not designed will void this warranty. This includes but is not limited to damage caused by operation of the spa at water temperatures outside the range of 32 degrees F. and 110 degrees F., damage caused by dirty, clogged or calcified filter cartridges, damage caused by a defective Support System or other defective components, damage to the spa surface caused by harsh chemicals which are not recommended by the acrylic manufacturer, damage caused by allowing undissolved spa sanitizing chemicals to lie on the spa surface, damage to components or spa surface caused by improper water chemistry maintenance, damage caused to the spa by leaving it uncovered in direct sunlight and damage to the spa surface caused by movement of the product, and damage to the spa caused by acts of God.

DISCLAIMERS.

Any implied warranties arising out of an original purchaser's purchase of a GPM spa, including but not limited to the implied warranties of merchantability and fitness for a particular purpose, are limited in duration equal to the duration of the applicable warranty stated above. GPM shall not be liable for loss of use of the GPM spa or other incidental or consequential costs, expenses or damage, which may include but are not limited to, the removal of or reinstallation of a wall, deck or other fixture, water leakage, costs of shipping or packaging, applicable taxes, or the payment of any costs or expenses of disassembly, removal, or reinstallation of the product or any part. Under no circumstances shall GPM or its representatives be held liable for injury to any person or damage to any property, however arising, even if caused by GPM or its representatives' negligence. Some states do not allow limitation on how long an implied warranty lasts, and some states do not allow the exclusion or limitation of incidental or consequential damages, so these limitations or exclusions may not apply to you. These warranties give you specific legal rights, and you may also have other rights which vary from state to state. **No distributor, salesperson, dealer, retailer, or other representative of GPM has the authority to alter or change these warranties either orally or in writing.**

