

MTS II

MARQUIS THERAPY SYSTEM II

Two Pump Equipment System

Owner's Manual

THIS IS AN IMPORTANT SAFETY DOCUMENT

- Please take a few minutes to read this manual. A thorough knowledge of the basic safety precautions and proper maintenance procedures will provide years of safe enjoyment of your Marquis Spa.
- Pass it on to any new owner.
- If lost, contact your local Marquis Spa dealer or write to Marquis Corp. and a new copy will be sent at no charge.



MARQUIS SPAS

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SAVE THESE IMPORTANT SAFETY INSTRUCTIONS

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

1. **READ AND FOLLOW ALL INSTRUCTIONS.**
2. **DANGER - RISK OF ELECTRIC SHOCK!** Install at least five feet (1.52 M) from all metal surfaces.
3. **DANGER - Risk of electric shock.** Do not permit any electrical appliance, such as a light, telephone, radio, or T.V. within five feet (1.52 M) of the spa.
4. **DANGER - To reduce the risk of injury, do not permit children to use this product unless they are closely supervised at all times. WARNING - RISK OF CHILD DROWNING.** Extreme caution must be exercised to prevent unauthorized access by children. To avoid accidents, ensure that children cannot use a spa unless they are supervised at all times.
5. **DANGER - To reduce the risk of injury, do not remove suction grates or suction covers.**
6. This spa is designed and intended for residential use only and should not be used in a commercial, public, or semi-public installation.
7. **TO REDUCE THE RISK OF INJURY:** The following spa use rules are most important. Using your spa properly and safely will give you countless hours of enjoyment. But, just as with many products, misuse can be extremely harmful. Protect yourself, your family, and your guests by following the safety rules listed below:
 - A. Do not drink alcoholic beverages before or during spa use. One of the effects of alcohol is slowed reflexes and it can make people drowsy. Hot water also helps induce muscle relaxation. The two together could induce sleep and this, in turn, could possibly lead to drowning. Because of these facts, it is vitally important that you do NOT allow the mixing of alcoholic beverages with spa usage.
 - B. Pregnant women and people under medical care (for such problems as heart disease, diabetes, blood pressure, circulatory problems, or obesity) must consult their physician prior to using the spa. Some medications can induce drowsiness. Never use the spa when taking anticoagulants, antihistamines, vasoconstrictors, vasodilators, stimulants, hypnotics, narcotics, or tranquilizers. In all cases, if you are not thoroughly

familiar with the medication you are taking, check with your doctor prior to using the spa.

- C. Spa water temperatures should be maintained in the 98°F to 104°F range. An accurate underwater thermometer is a "must". 100°F water is generally safe and enjoyable for most adults. However, remaining in 100°F water for an extended period will raise your body temperature to this level and you may experience some discomfort. As a general rule, when you raise the temperature of the spa water, you should reduce the amount of time you soak. Twenty minutes is about the limit for 102°F water; limit your soaking to 10 minutes in water above 102°F. Never soak in water hotter than 104°F because temperatures above this level may raise your body temperature to a level that could cause drowsiness, fainting, heat stroke, or hyperthermia. (Symptoms of hyperthermia can include: muscle incoordination and cramps, nausea, rapid heartbeat, pale skin, and delirium.) Before entering a spa, the user should measure the water temperature with an accurate thermometer since the tolerance of water temperature-regulating devices may vary as much as $\pm 5^{\circ}\text{F}$ (3°C). It is always important to check your in-spa thermometer before using your spa and to limit your time in the spa as suggested above. Use 98°F to 99°F - normal body temperature - for extended periods of soaking.

A WORD ABOUT CHILDREN

As previously explained, soaking in hot water will affect the body's temperature. In small children, the body temperature can increase more quickly than that of a full grown adult. Thus, children must not be allowed to absorb the same amount of heat as an adult. Children's time in the spa should be less than an adult's and children using a spa must be constantly supervised. Children should never be allowed to swim underwater in the spa.

A WORD ABOUT PREGNANT WOMEN

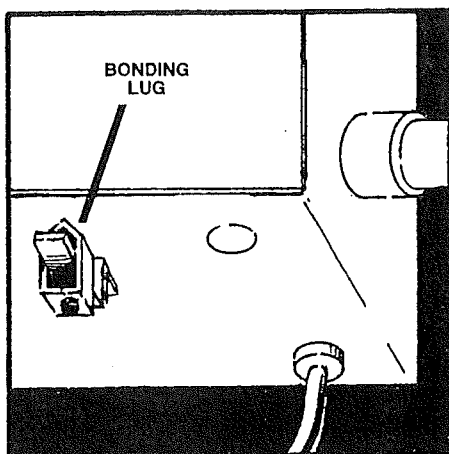
Soaking for extended periods in water 102°F or higher may affect body temperature to the point that it could affect the fetus. This is especially important during the first 90 days of pregnancy. Spa use at 100°F should be limited to no more than 5 minutes. It is strongly suggested that women who are pregnant (or those who are considering becoming pregnant in the near future) check with their doctor for recommendations in safe spa use.

- D. People with infections, skin sores, or open wounds should not use the spa. Warm or hot water may serve as an incubator for some types of bacteria. It is vitally important to keep your spa properly disinfected with

chlorine or other equally effective disinfectants.

- E. It is recommended that people shower before and after using the spa. Showering before removes deodorants, lotions, perspiration, and oils which may clog the filter. Showering after soaking will help remove any non-disinfected bacteria that may have been in the spa.
- F. NEVER allow children to use the spa without adult supervision.
- G. Adults should not use the spa without someone nearby who can be called should anything unexpected occur. As an added precaution, you should post emergency numbers near your phone so that they are handy should a need arise.
- H. Always use unbreakable containers around the spa; never use glass.
- I. Always use caution when entering and exiting the spa. Wet surfaces can be slippery. Hand rails and non-skid surfaces are recommended.
- J. Suction through drains and skimmers can be powerful. Any drain or skimmer with a damaged cover can be dangerous, especially to small children or adults with long hair. Should any part of the body become drawn to a drain or skimmer, turn the spa off immediately! Long hair should be restrained in a bathing cap, never allow it to float in the spa. Immediately replace any broken drain outlet cover.
- K. Keep electrical appliances, including telephones, away from the spa to avoid a possible shock hazard. Do not try to adjust or touch the spa equipment, such as a pump or the control box, or any other electrical appliance while you are in the spa.
- L. Never walk, climb, play, or jump on the Energy Cover of your spa. Never swim or play under this cover when it is installed on the spa. Also, do NOT rely on your Energy Cover as a safety cover for children. It is a precautionary measure only and children must be supervised when they are in or around the spa.
- M. A fence around your spa with a self-closing and self-latching gate can be the best protection against unauthorized entry and use. If your spa is indoors, lock the door to the room to keep out unauthorized users.
- N. Do not use a spa in conjunction with strenuous exercise without consulting your physician and obtaining his/her approval.

8. Turn OFF all electric power at the main circuit breaker or disconnect panel prior to performing any service to the spa equipment.
9. It is the responsibility of the spa owner to ensure that all electrical connections are made in accordance with the National Electric Code and any state and local electrical codes in effect at the time of installation. For all permanently connected units the electrical supply for this product must include a suitably rated switch or circuit breaker to open all ungrounded supply conductors to comply with Section 422-20 of the National Electrical Code, ANSI/NFPA 70-1987. The means of disconnection must be readily accessible and installed at least 5 feet (1.52 M) from spa water.



10. A pressure wire connector is provided on the bottom surface of the control box inside the spa equipment bay to permit connection of a bonding wire between this point and any metal equipment, metal water pipe, or any metal conduit within five feet of the spa as needed to comply with local requirements. The bonding wire must be at least a #8 AWG (8.4 mm²) solid copper wire. This is to reduce the risk of electric shock.
11. Connections should be made with copper conductors only. All conductors, circuit breakers, and/or fuses must be sized in accordance with the Total Amperage Load as specified on the electrical control box data label.
12. All 230V support systems require a three wire plus ground electrical service (line 1, line 2, neutral, ground). All 230V connections can be made by removing the small access panel on the front of the electrical control box.
13. The spa must be installed to provide proper drainage and to keep water out of the electrical equipment components.

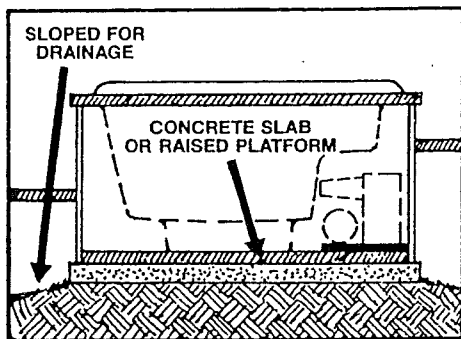
The spa must be installed in such a manner as to provide access for the servicing of all electrical and plumbing components from above or below any decks or floors.
14. NEVER operate the spa support system when the spa is empty. This could result in severe damage to the heater, pump, and spa support components and is a potential fire risk.

15. Add only one chemical at a time to the spa water. Never mix chemicals or chemical solutions together. Always follow the manufacturer's instructions on dilution and handling precautions. When diluting, add chemical to water-not water to chemical. Avoid skin contact when working with chemicals. ALWAYS STORE CHEMICALS OUT OF THE REACH OF CHILDREN.

16. **SAVE THESE INSTRUCTIONS**

INSTALLATION AND USE

LOCATION



17. For your portable spa to function properly and safely, it must be located on a hard, flat, level surface. Inground spas require special installation techniques and should be planned in conjunction with your Marquis dealer. Improper installation can result in structural damage to the spa and the voiding of your spa warranty. Items to discuss with your dealer include local construction codes; electrical service requirements, accessibility,

and serviceability of equipment and components; present underground obstructions such as gas, water, and telephone lines; safety measures such as fences and locks; and visibility of the spa installation from the home, street, and neighbors.

You must allow for sufficient water drainage around the spa to help preserve the wood skirt and support structure and to provide adequate drainage of the equipment bay.

Your spa **MUST** be installed to permit access for servicing the equipment above and/or below any decks or floors. Access is essential and must allow adequate room for service personnel.

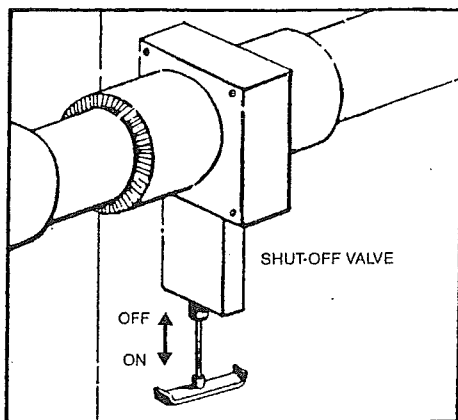
Be sure the spa is in the final position **BEFORE** filling with water. Check for power cords, tools, or hoses which may be caught underneath the spa.

CAUTION: Never try to move a spa that has not been fully drained. To do so can result in damage to the spa and physical injury to the mover.

18. **IMPORTANT:** DO NOT LET AN EMPTY SPA BE EXPOSED TO DIRECT SUNLIGHT FOR MORE THAN A FEW MINUTES. Spa surface

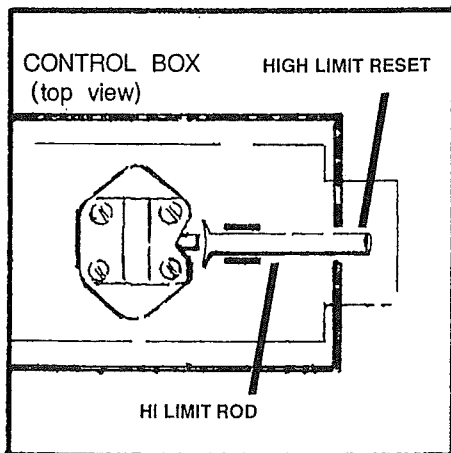
temperatures can reach in excess of 150°F if left exposed to the sun. Significant damage can occur if this is allowed to happen, including warping and blistering of the surface. Damage which may occur as a result of this exposure is not covered under the warranty, as all Marquis Corp. warranties have excluded this type of damage.

SHUT-OFF VALVES



19. Your spa is equipped with four SHUT-OFF VALVES (see diagram on page 27) that can completely shut off the water flow to the support system for dealer servicing. At times, a new spa or one that has recently been serviced may have the SHUT-OFF VALVES partially closed which can restrict the water flow and hinder jet performance. Be sure the valves are fully open.

HEATER HIGH-LIMIT SWITCH

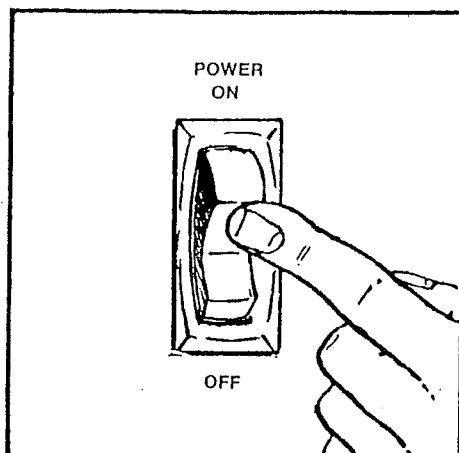


20. The high-limit switch will shut the heater and pumps off if the temperature within the heater assembly reaches a factory-set non-adjustable limit.

Several conditions could cause the switch to activate; eg. low water level, shut-off valves closed while heater is on, dirty filter, or restricted plumbing lines.

21. To reset the high-limit switch, push the HIGH-LIMIT switch button located on the right side of the control box.

The switch cannot be reset until water temperature within the heater assembly drops to a lower, preset temperature. If the switch trips repeatedly, the support system should not be operated until the problem has been corrected. Please consult your Marquis dealer.



POWER ON/OFF SWITCH

22. The System Switch located on the front of the electrical control box prevents unauthorized use of the spa.

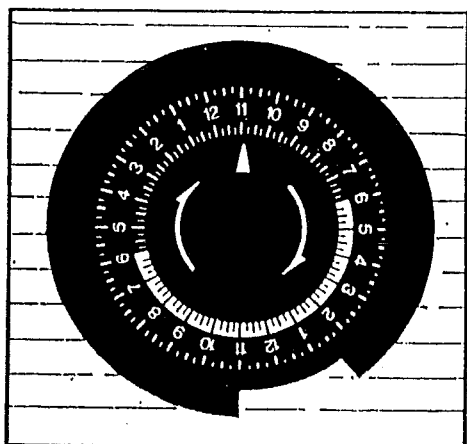
In the ON position, the equipment is controlled by the SPA SIDE CONTROLS.

In the OFF position, the SPA SIDE CONTROLS are inoperable. However, the time clock will continue to keep the correct time.

TIME CLOCK OPERATION (General)

23. Your spa is equipped with a 24 hour Time Clock built into the electrical control box. The Time Clock is designed to give maximum operating convenience and economy. By using the Time Clock the water can be filtered daily or several times a day to maintain sparkling water and ideal chemical distribution.

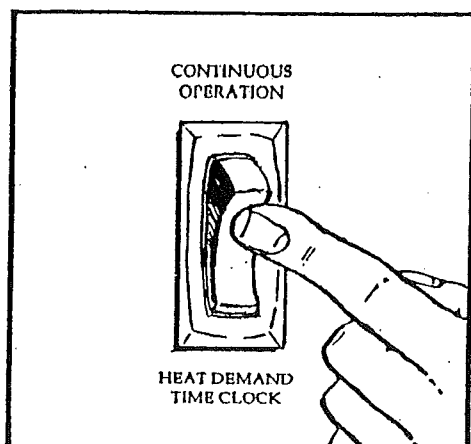
Note: The Time Clock can be over-ridden (Continuous Operation) at any time without disturbing the Time Clock setting. However, any time the spa circuit breaker is shut off the clock will need to be reset to the time of day (see below).



ADJUSTING THE TIME CLOCK

24. SETTING THE CLOCK: Rotate the outer clock ring clockwise and set correct time of day opposite Set Point Arrow.

TIME CLOCK LUGS: (Each lug represents 15 minutes.) Push lugs inward toward center of clock to set ON times. Any combination of times is possible. The illustration shows ON at 11:00 a.m. and OFF at 1:30 p.m. To cancel settings push outward on the lugs.



TIME CLOCK BYPASS SWITCH

25. In the CONTINUOUS OPERATION position the filtration will be continuous. This is desired following periods of heavy use or when adding chemicals.

In the HEAT DEMAND/TIME CLOCK position the Time Clock has control over the filtering cycles and will start and stop filtration as determined by the settings of the Time Clock lugs.

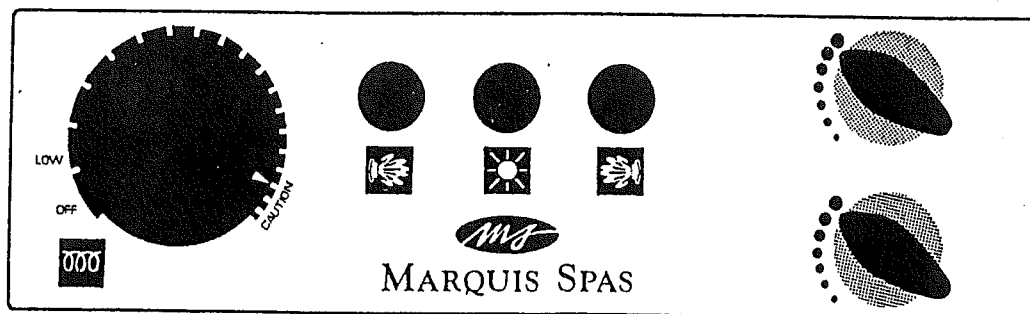
HEAT DEMAND OPERATION

26. As described above, in Continuous Operation mode the pump will run on low speed 24 hours a day. The heater will cycle on and off as called for by the thermostat. In HEAT DEMAND/TIME CLOCK mode the heater will also cycle on and off as called for by the thermostat, however, whenever the heater is on the low speed pump will also be on and whenever the heater is off the low speed pump will be off (unless low speed circulation is called for by the Time Clock). This Heat Demand option is incorporated as an energy conservation feature.

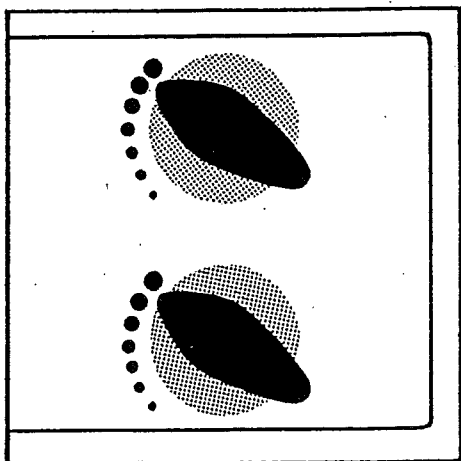
Summary: The pump will operate in low speed under any one of three conditions: 1. In Continuous Operation mode. 2. In Heat Demand/Time Clock mode when the thermostat calls for heat. 3. In Heat Demand/Time Clock mode when the time clock calls for filtration. Under all conditions the heater will cycle on and off whenever the thermostat calls for heat.

SPA SIDE CONTROLS

27. The SPA SIDE CONTROLS place all of your spa's functions within arm's reach. The Power On/Off Switch must be in the ON position for the SPA SIDE CONTROLS to operate.



AIR CONTROL VALVES



28. Your spa is equipped with three air control valves which allow regulation of the water action from the jets during jet pump operation. Two of these air controls are located on the right side of the control panel. These control the air action of the Marquis Therapy, Personal Therapy, and Orbital jets.

Open these air valves by turning the levers clockwise.

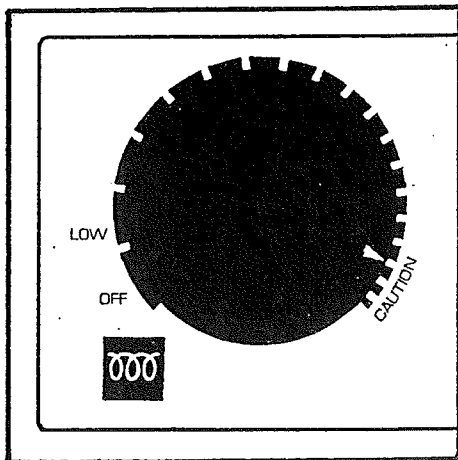
The third air control, located to the left of the control panel, regulates air to the Whirlpool jet.

To help fully circulate all the water in the plumbing lines it is advisable to leave all air valves open when the spa is not in use.

PUMPS

29. The button marked with the purple jet symbol controls the jets on the left side of the spa. Pushing the button either activates jet action or returns the pump to low speed.
30. The button marked with the blue jet symbol controls the jets on the right side of the spa. Pushing the button turns the pump on or off.

HEATER THERMOSTAT



31. The heater is controlled by the large thermostat knob located on the left of the SPA SIDE CONTROLS panel. Turn the thermostat clockwise to increase the temperature and counterclockwise to decrease the temperature.

The length of time it takes the water to reach a desired temperature depends on several factors. Raw water temperature, ambient air temperature, spa size, relative humidity, and the insulative qualities of the cover are all factors.

CAUTION: The spa should never be operated at temperatures above 104°F. An accurate underwater thermometer is vital in monitoring water temperatures. If the thermostat allows the heater to heat the spa to temperatures greater than 104°F, contact your Marquis dealer. Refer to IMPORTANT SAFETY INSTRUCTION #7 in the front of this manual for further information about recommended water temperatures.

UNDERWATER SPA LIGHT

32. The button marked with the light symbol turns the underwater spa light on and off. The light is located in the footwell.

The low-voltage system produces a bright white light in the spa for evening use and makes entering/exiting the spa safer.

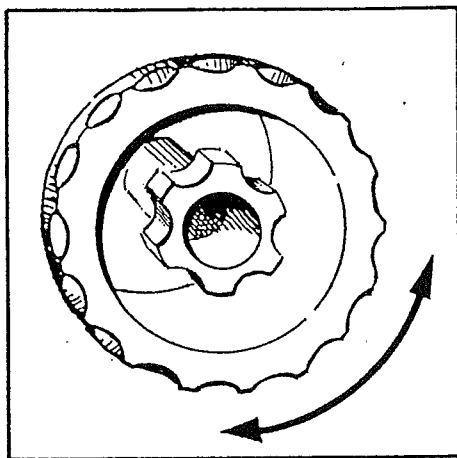
MARQUIS THERAPY JETS

33. Your spa is fitted with directional Marquis Therapy jets. The jet action can be directed 360° by aiming the swivel ball nozzle.

ORBITAL JETS

34. Your spa also includes Orbital jets. When the jet pump is in operation the Orbital jets will rotate in a 360° circle.

WHIRLPOOL JETS



35. Your spa is also equipped with one Whirlpool jet. The control knob for this jet is located on the jet face. By fully turning the knob all the way in one direction you can concentrate the flow of the water away from the Marquis Therapy jets to the Whirlpool jet. Turning the knob in the opposite direction will return the flow to the Marquis Therapy jets. For ease of turning, the jet pump should be on low speed.

PERSONAL THERAPY JETS

36. Your spa has several smaller Personal Therapy jets which offer a softer more overall massaging effect.

OZONE JET

37. Your spa is supplied with a jet which has its air line separate from all other jets. This jet is designed to accept the optional ozone sanitation system. (This jet does not draw air unless the ozonator accessory is installed.) For additional information on the ozonator option, consult your Marquis dealer and the supplemental Marquis ozonator installation manual.

SUCTION FITTINGS

38. There are three suction fittings (drains) in the footwell of your spa. These are the openings through which the jet pumps draw their water. These openings have been equipped with metal safety covers. Water is also drawn through the skimmer/filter area. Suction through the drains and skimmer can be strong. All safety covers must remain in place and undamaged. Any drain or skimmer with a damaged cover can be dangerous, especially to small children or people with long hair. Should any part of the body become drawn to a drain or skimmer, turn the spa off immediately. Long hair should be restrained in a bathing cap, never allow it to float freely in the spa. Immediately replace any missing or damaged pump intake covering.

FILTER CARTRIDGE

39. Your portable spa is equipped with the exclusive Marquis filtration system. This system includes a floating weir, debris catch basket, and top-loading filter cartridge.

Do not operate your spa without a clean filter cartridge in place.

WATER CHEMISTRY GUIDELINES

40. The proper chemical balance of the spa water is essential.

There are several methods available to sanitize the water in your spa. Marquis recommends using chlorine, bromine, or ozone. No other oxidizing agents are suggested. Use of other oxidizing agents may damage equipment and void the warranty.

Consult your Marquis dealer for the proper chemicals and their recommended usage. **NEGLECT IN MAINTAINING THE CORRECT WATER CHEMISTRY CAN VOID YOUR SPA WARRANTY.**

NOTE: If your spa is equipped with an ozone sanitation system, refer to the supplemental booklet dealing with the ozone system for complete instructions and chemical guidelines. The use of an ozone generator will reduce the needed amount of chemical sanitizers, such as chlorine and bromine, but it will not eliminate their use entirely.

41. CAUTION: It is essential that you shock chlorinate your spa after filling it with water BEFORE you begin to use it. Directions should be on the chlorine concentrate container. This shock treatment will give an initial sterilization to your water, kill any algae spores that may be present, and oxidize undesirable minerals and organic matter in the raw water.

This treatment must be repeated anytime the spa is refilled or the water has lost its chemical control due to neglect or lack of use.

It is recommended that sodium dichlorocyanurate (DyCloro) or lithium hypochlorite be used in spas. Calcium hypochlorite is type of chlorine which is used in swimming pools and it is NOT recommended for spa usage.

CHEMICAL LEVELS

42. The pH level should be kept between 7.2 and 7.6. Failure to maintain this level can result in irritation of the eyes, skin rashes, and other discomforts as well as clogged pipes, staining, and equipment damage.

43. Alkalinity should be maintained between 100-150 parts per million (ppm).
44. Chlorine levels should not exceed 3 ppm except during periods of super chlorination. Super chlorination is used only to treat raw water after completely draining the spa and after periods of heavy use.

Since water chemistry and water hardness vary from region to region, you should consult your Marquis dealer about how to best treat your water. He has a complete line of chemicals to help you get optimum use and enjoyment from your spa.

CHEMICAL SAFETY

45. It is important that you read and follow the safety tips for chemical usage and storage listed here. This valuable information is contained on pages 11 and 12 of the "Sensible Way to enjoy Your Spa or Hot Tub" issued by the National Spa and Pool Institute (NSPI) who have granted us permission to use this information here.

The chemicals needed for your spa help make it clean, disinfected, and more attractive to use. But remember that these chemicals are potentially dangerous and may present some hazards if not used properly. Carefully follow the manufacturer's instructions for the use and storage of chemicals.

In general, here are some tips for chemical use and storage:

- * Before using chemicals, read the labels and directions carefully. Follow label instructions.
- * Keep all chemicals out of the reach of children.

STORAGE

- * Chemicals for test kits should be replaced each year.
- * Keep the original lids on all chemical containers and make sure the lids are closed tightly when not in use.
- * Do not stack different chemicals on top of one another.
- * Store your spa chemicals in a clean, cool, dry, and well-ventilated area, preferably off the floor, to prevent contamination from other materials. Keep them away from chemicals and equipment used in garden and lawn maintenance.

- * Keep liquid chemicals away from dry chemicals. Keep separated those chemicals which are different forms of oxidizing compounds. Physically separate all different forms of chemicals.
- * Do not store your spa chemicals where other flammable items may mix with them. The mixing of some chemicals and fertilizers can cause a fire explosion.

USAGE

- * Never mix two chemicals together. Use a clean scoop for each chemical and avoid combining materials from "old" and "new" containers.
- * Test the water in your spa with a reliable test kit on a schedule recommended by your Marquis dealer. Add the necessary chemicals according to the test results and the manufacturer's instructions. The hot water environment of a spa allows disinfectants to rapidly break up and spread out. This requires more frequent water testing. Follow your manufacturer's instructions in this regard. The more people who use the spa, the more frequently you should test the water.
- * Do not inhale dust or fumes from any chemicals. If necessary, use proper protective devices for breathing, handling, and eye protection. Promptly wash off any residues which get on your skin.
- * Never reuse old containers unless specified by the manufacturer.
- * If you have any questions regarding safe handling, storage, or use of spa chemicals, contact the manufacturer of the chemicals.
- * Always add the chemical directly to the spa by; using a suitable feeder, distributing it across the surface of the water, or diluting and pouring it into the water. Follow label use instructions.
- * When preparing water solutions for feeder application, pour the chemical slowly into the appropriate amount of water, stirring constantly to provide mixing and dilution.
- * Always add chemicals to water. Never add water to chemicals.
- * Never add chemicals to the spa water while people are using the spa.

- * Carefully clean up any spilled chemicals with large amounts of water, to dilute and wash away the chemicals. Disinfectants and pH adjustment chemicals can usually be sent to the sewer with large quantities of water, since they are intended for use at low levels.
- * Wash out empty disinfectant containers before disposing to eliminate danger of fire, explosion, or poisoning.

ELECTRICAL REQUIREMENTS

46. Prior to start-up or performing any service to the spa equipment, turn off all electric power at the main circuit breaker or disconnect panel.

It is the responsibility of the spa owner to ensure that all electrical connections are made by a qualified electrician in accordance with the National Electric Code and any state and local electric codes in effect at the time of installation.

All connections must be made in accordance with the wiring diagram found on the inside of the control box cover or the wiring diagrams within this manual.

Connections should be made with copper conductors only. All conductors, circuit breakers, and/or fuses must be sized in accordance to the Total Amperage Load as specified on the electrical control box data label.

This equipment is designed to operate on 60Hz Alternating Current only at a voltage of 230.

A pressure wire connector is located on the exterior of the electrical control box. If the installation includes a common bonding grid (reinforced concrete slab, ground plate beneath the spa, or any metal water pipe connection), then this pressure wire connector should be bonded with at least 8#AWG copper wire to any metal ladder, water pipe, or other metal within five feet of the spa.

230 VOLT INSTALLATION

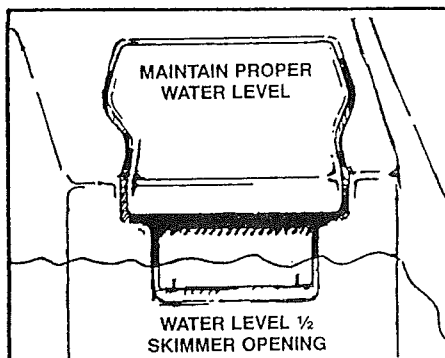
47. Units to be operated at 230V must have all connections made by a qualified electrician in accordance with the National Electric Code and any state and local electric codes in effect at the time of installation. All 230V units require a three wire plus ground (line 1, line 2, neutral, ground). Refer to label below the terminal block.

STARTING YOUR SPA

48. Make sure power supply is off. The circuit breaker in the residence electrical panel must be off and the power switch on the front of the pack must be in the off position.

49. Tighten all disconnects, close the hose bib, open all 4 shut-off valves, and clean all debris from the spa.

Make sure the suction fitting covers are in place in the footwell of your spa. This unit is not to be installed without approved suction fitting covers which prevent the entrapment of hair and other body parts. Approved fittings are supplied by the factory with your Marquis Spa.



50. Fill the spa to the middle of the skimmer opening. Shock chlorinate the water before using the spa. It is essential that this shock treatment be done after each refill.

NOTE: If the spa is equipped with an optional ozone sanitation system, refer to

the supplemental manual for instructions on the sanitation steps needed prior to using the spa.

51. MAKE SURE THERMOSTAT IS IN "LOW" POSITION!
52. Turn on electrical power to the spa. Flip on the circuit breaker in the residence electrical panel and the POWER switch on the spa control box.

OPERATION OF CONTROLS

53. Select the (timer/continuous) mode of operation that you desire and move the timer control switch to the desired position. Refer to the section on TIME CLOCK for further details.

Push the control buttons for the jet pumps and light to assure proper movement of the buttons.

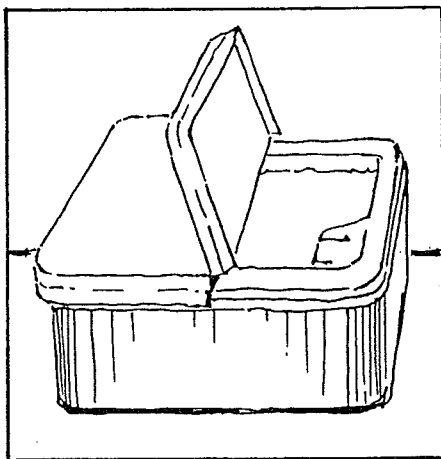
OPERATING THE SPA

54. Allow the jet pumps to circulate for 4-5 minutes to discharge air from the plumbing system. After a full flow of water has been obtained from all the jets, adjust the thermostat to the desired setting and turn the pumps off (one pump to low speed).

NOTE: Your Marquis spa has been filled, test run, and drained at the factory. Even though the hose bib has been left open to drain as much residual water as possible, the first time your spa is filled, some slight discoloration may appear. This discoloration will disappear when the spa is completely filled and the filtration system is activated.

55. Test the water for proper chemical balance and adjust as necessary.
56. For longer pump life, more efficient heating, and lower operating costs, we recommend the timer control switch be left on "CONTINUOUS OPERATION". There is less wear on the equipment when it is run at longer periods rather than short intervals.

An unused spa should circulate for at least four (4) hours per day to maintain proper filtration and water temperature. More frequent use of your spa and cooler air temperatures will require longer circulation times.



ENERGY COVER

57. When the spa is not in use, the Marquis Energy Cover should be kept on the spa to retain the water's heat and to keep out dirt, leaves, etc. Your preset heater thermostat will maintain a constant water temperature between spa uses for a very low daily cost.

FREEZE PROTECTION

58. Your Marquis spa has several features which allow you to choose the degree of freeze protection that is most appropriate for your particular spa usage and environment. If the spa is not going to be fully drained and winterized, then maximum freeze protection is obtained by the following:

- timer control switch on CONTINUOUS OPERATION.
- thermostat set to maintain a water temperature of at least 95°F.

Those desiring a lesser degree of freeze protection can obtain this by using the time clock with the timer control switch in the time clock position. Regardless of the extent of freeze protection required, always maintain a water temperature of at least 95°F and, where possible, leave the spa in continuous operation.

REGULAR MAINTENANCE

WOOD CABINET

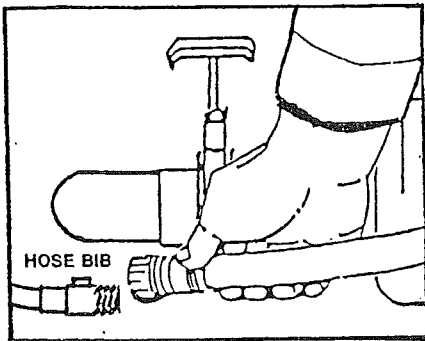
59. Your spa cabinet has been treated with a sealant at the factory. It is suggested that the cabinet be treated twice a year with an additional coat of sealant for maximum weather protection. You should contact your Marquis dealer for advice on which sealants work best in your environment.

DRAINING THE SPA

60. It is recommended that you completely drain your spa AT LEAST four times a year. More frequent draining may be required depending on use. Unless this is done regularly, the water becomes chemically "saturated" and will no longer respond to regular chemical upkeep. The spa should also be drained before long periods of disuse or for major equipment repair. An empty spa should be covered. DIRECT SUNLIGHT on the acrylic surface can cause severe damage or blemishing of the spa shell and can result in the voiding of any surface warranties.

61. To drain the spa for cleaning or servicing complete the following steps:

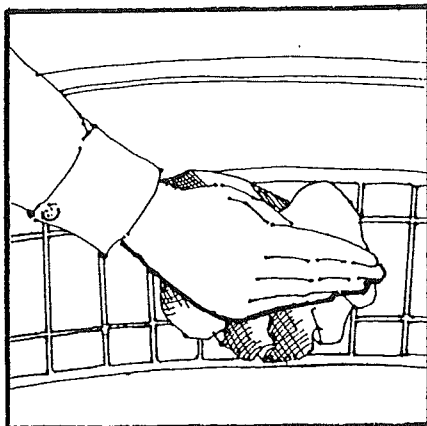
- A. Turn the thermostat to the LOW position and flip the system switch OFF.
- B. Turn off the main circuit breaker or disconnect panel.



- C. Attach a garden hose to the hose bib in the equipment bay.

- D. Open the hose bib by turning counterclockwise. Gravity will cause the water to drain out of the hose.

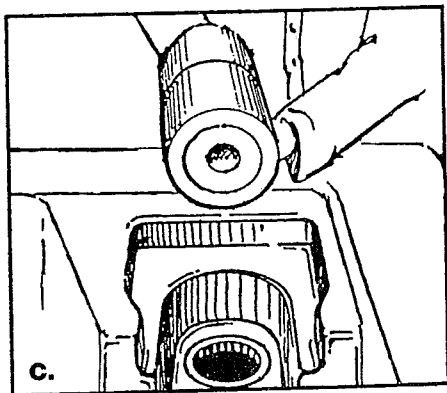
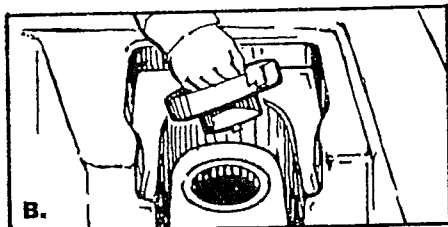
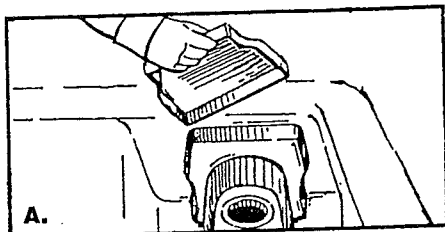
- E. When the spa is empty, close the hose bib and remove the hose.



CLEANING

62. Should the tile or water line become soiled, it can be cleaned with a soft sponge or cloth. Do not use any abrasive cleaners as they can scratch or dull the spa surface or tile.

63. Your Marquis Spa Energy Cover can be cleaned with a non-abrasive household cleaner on both top and bottom sides. A good quality NON-SILICONE based vinyl restorer will help protect the surface from the Sun's rays.



REMOVING THE FILTER

64. Refer to the Spa Maintenance Schedule for cleaning frequency and instructions. The filter cartridge can be removed by completing the following steps:

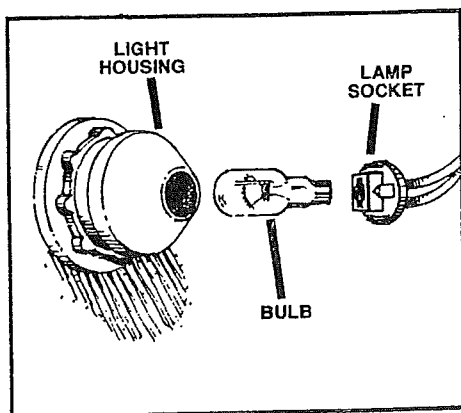
- A. Remove the skimmer lid.
- B. Twist the catch basket counterclockwise and lift out.
- C. Lift out the filter cartridge. Note the position of the filter. The end with the large hole faces DOWN.

- D. To reinstall the filter, simply reverse the procedure outlined above.

REFILLING

65. Fill your spa with fresh water from a garden hose and add the necessary chemicals. Remember, it is essential to shock chlorinate after each refill before using your spa. Be sure to follow the same procedures as outlined in STARTING YOUR SPA.

SPA LIGHT BULB REPLACEMENT



66. To replace a bulb, open the equipment bay door to find the spa light access tunnel located at the rear of the equipment bay. The light housing is accessed by reaching through this tunnel. Remove the lamp socket from the back of the light assembly by turning and pulling at the same time. Gently pull the bulb out of the lamp socket and replace it with bulb, part #69-0436, available from your Marquis dealer. Install the lamp socket back into the light assembly and close the equipment bay door.

WINTERIZING

67. Your Marquis spa was designed for year around use and enjoyment and many people find the combination of hot water, therapy jets, and cool air temperatures to be especially soothing. However, if you decide to discontinue the use of your spa for the winter, or for any other extended period of time, we suggest you follow the steps below:

NOTE: During long periods of inactivity or non-use damage can occur to equipment from condensation within the equipment

- A. Turn the thermostat to the LOW position and place the system switch on OFF.
- B. Turn OFF the main circuit breaker or disconnect panel.
- C. Drain the spa.
- D. Remove all residual water from the seating and footwell. If necessary, use a bucket to bail out the remaining water then dry the spa with towels. A wet/dry vacuum may also be used.
- E. Close all air controls.
- F. Using the wet/dry vacuum, place nozzle over each jet orifice to remove water from plumbing lines, starting with highest jet and finishing with the lowest jet. To insure complete draining of plumbing lines place vacuum nozzle over Whirlpool jets in on and off positions.

- G. Unscrew and disconnect plumbing lines at the heater and both suctions and discharges of the pumps.
- H. Again, using wet/dry vacuum, place nozzle over the pump inlets, to remove excess water. For maximum winterizing protection the pumps should be removed from the spa and stored in a climate controlled room.
- I. Wipe down the tile line.
- J. Remove, clean, and reinstall the filter cartridge.
- K. Reinstall the Marquis Energy Cover.

SPA MAINTENANCE SCHEDULE

68. DAILY _____	Replenish the water level by filling up to 1/2 the skimmer opening. Check and clean the catch basket. Check the water pH balance. Adjust if needed. Check chlorine level and adjust if needed. For proper filtration, the water should be circulating for at least four hours a day.
69. WEEKLY _____	Wipe down the water line. Remove the filter cartridge and rinse thoroughly with a hose and high pressure nozzle. Soak in a solution of trisodium phosphate (TSP) if the spa is equipped with an ozone sanitation system.
70. MONTHLY _____	Soak the filter cartridge in a solution of TSP. Rinse thoroughly in clean water. Clean the spa Energy Cover.

71. EVERY THREE MONTHS	Drain the spa completely, refill with water and replenish the chemicals. While the spa is drained, the interior can be sponged with a spa cleaner and rinsed. NOTE: Do not wax the surface as the wax will dissolve into the water and clog the filter.
72. EVERY SIX MONTHS	Treat wood cabinet with protective sealant.

TROUBLESHOOTING

PLEASE NOTE: The following corrective actions may be performed by the spa owner. If the trouble cannot be corrected with the steps below, please refer to your Marquis dealer for service (improper servicing by an unauthorized serviceman or spa owner could result in damage that will not be covered by the warranty or could cause serious injury).

SYMPTOMS

CORRECTIVE ACTION

EQUIPMENT DOES NOT OPERATE

Check the circuit breaker in the main circuit panel.

Check the system switch for ON positioning.

Check the heating time clock switch for the CONTINUOUS OPERATION position.

PUMP DOES NOT WORK IN
LOW SPEED CIRCULATION

Check that the shut-off valves are completely open.

Flip the heating time clock switch to CONTINUOUS OPERATION.

Check for restrictions at the main drains and catch basket.

Inspect the filter cartridge for dirt and debris. Clean or replace.

PUMP DOES NOT WORK IN
HIGH SPEED CIRCULATION

Push the jet pump buttons on the
SPA SIDE CONTROLS.

Check the above items in "Pump
does not work in low speed
circulation".

WATER IS CLOUDY

Check the water chemistry and
balance as needed.

Clean or replace the filter
cartridge.

INADEQUATE JET ACTION

Check the spa water level. Water
must be 1/2 the depth of the
skimmer opening.

Check that all four shut-off
valves are completely open.

Be sure that the air control
valves are open.

The filter cartridge may be
clogged. Pull the cartridge from
the canister. If the jet action
improves, clean or replace the
filter.

SPA LIGHT DOES NOT WORK

Push the light button on the SPA
SIDE CONTROLS.

Tighten the light bulb in the
socket.

Replace the light bulb.

NO HEAT _____

Check all steps above in "Equipment does not operate".

Check the High-Limit Control switch on the bottom of the control box. Push to reset.

Check that the thermostat dial is set to the desired setting.

Flip the HEATING time clock switch to CONTINUOUS OPERATION.

Remember: Do not expect hot water immediately from the jets. The heater will take several hours to heat the spa to the desired temperature.

Inspect the filter cartridge for dirt and debris.

SERIAL NUMBER LOCATION

On Marquis Spas, the serial number is engraved directly above the filter canister area. On those models which are listed by Underwriters Laboratories (U.L.), you will also find the serial number engraved on the foil tag attached to the equipment bay.

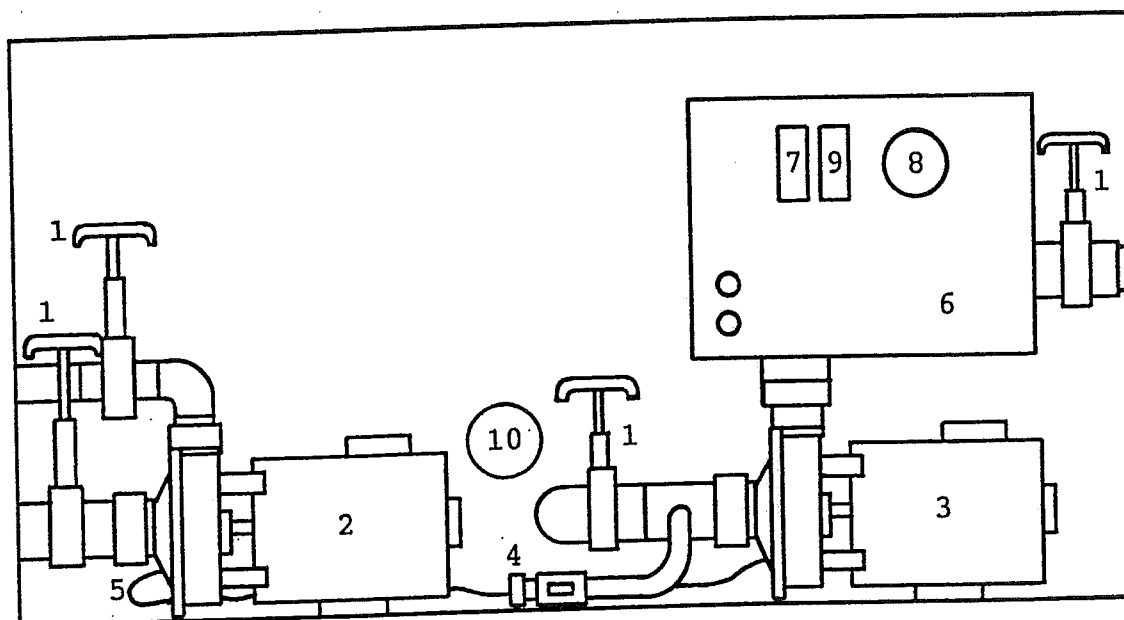
Please fill out for future reference.

Marquis Spa Model

Serial Number

Capacity (gallons) _____

MTS II SUPPORT SYSTEM



1. SHUT OFF VALVES
2. JET PUMP
3. JET/CIRCULATION PUMP
4. DRAIN VALVE
5. FREEZE LINE
6. CONTROL BOX
7. POWER ON/OFF SWITCH
8. TIME CLOCK
9. TIMER CONTROL SWITCH
10. LIGHT TUNNEL