

10-1987



SPA CENTER 5/10™

owners manual

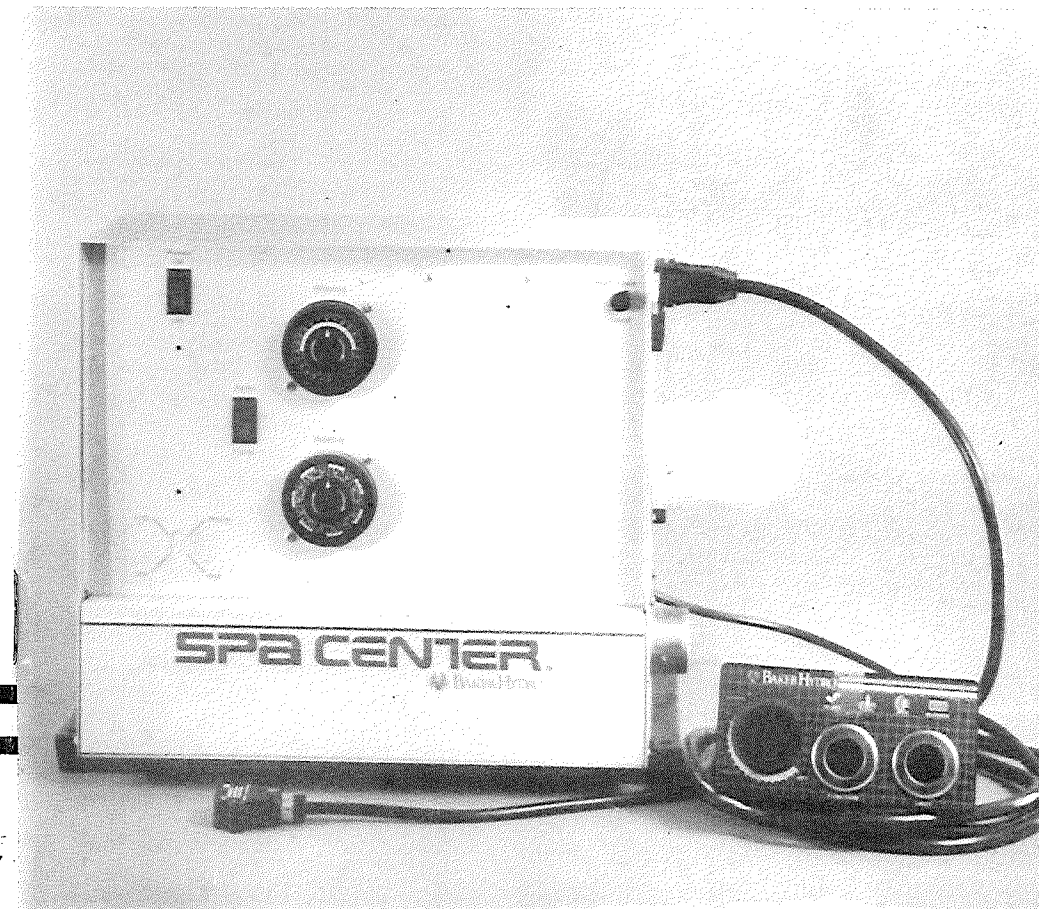
SPA CENTER 5/10 WARRANTY

LIMITED WARRANTY

BAKER HYDRO warrants, to the original purchaser, this equipment to be free from defects in workmanship or material for a period of 24 months from the date of installation, provided the equipment is installed in accordance with factory instructions and operated within the environment and limitations for which it was designed. Within this warranty period, any integral parts of the unit will be repaired or replaced if, in the opinion of the manufacturer, they are proven defective in workmanship or material.

This warranty does not cover component part damage or failure resulting from causes directly or indirectly connected with installation, operation, environment, negligent use, or willful abuse, including without limitation, improper repackaging and damage incurred in shipping. Unless state law provides otherwise, any implied warranties which accompany the sales of these goods are limited to 24 months from the date of installation.

This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.



Main Office: 2441 S. Pullman Ave., Santa Ana, CA 92705
(714) 261-2800/FAX (714) 261-8562/TWX 910-5952424

Manufacturing Facilities: Santa Ana, CA and Augusta, GA SC 5/10 10-87
PN BH0052

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SPA CENTER 5/10

Introduction

The word "spa" is taken from a town in the province of Liege, Belgium where mineral springs were favored for centuries by notables and royalty, including the Russian Tsar Peter the Great and German Kaiser William II.

However, the use of mineral springs for therapeutic purposes dates back to the 5th Century B.C., when hot springs in Greece and the Aegean Islands served as healing clinics. At one of these clinics on the Island of Cos, the Greek physician Hippocrates practiced medicine for a while and wrote exclusively on hydrotherapy.

The Romans, after a day of conquering the world, retreated to the pleasures of spas. In fact, many well-preserved spas built by the Romans still exist in places as far apart as Bath, England; Baden, Switzerland; and Tiberias, Israel. After the fall of Rome in the 5th Century A.D., the number of spas decreased. It was not until the Renaissance, mysteriously enough, that they once again became numerous. Which raises the question: Does the use of spas result in great thinking, or do great thinkers resort to the use of spas?

The Spa Center 5/10 is the modern machine for today's great thinkers. It blends many advanced features to help you enjoy the benefits of heated, filtered water for recreation and therapy.

Baker Hydro originated complete equipment assemblies for spas and hot tubs over a decade ago. Our experience and dedication assure you of the highest quality components and materials of construction. Our workmanship is backed up by a 24 month limited warranty and a nationwide service network.

We wish you years of enjoyment and relaxation with your new spa and Spa Center 5/10. First, please take a few minutes to read the Spa Center 5/10 safety instructions and operating features described in this manual.

IMPORTANT SAFETY INSTRUCTIONS

Read and follow all instructions

When installing and using this electrical system, always observe safety precautions, including the following:

1. **DANGER** — to reduce the risk of injury, do not permit children to use this product unless they are closely supervised at all times.
2. **DANGER** — to reduce the risk of injury to persons, do not remove suction-fitting grate or cover located in spa or hot tub.
3. (For permanently installed units only) A terminal marked "G" is provided within the control box. To reduce the risk of electrical shock, connect this terminal or connector to the grounding terminal of your electric service or supply panel with a continuous green insulated copper wire equivalent in size to the circuit conductors supplying this equipment, No. 8 AWG (8.4 mm²). In addition, a second wire connector is provided on the pump motor for bonding to local ground points. To reduce the risk of electric shock, this connector should be bonded with a No. 8 AWG (8.4 mm²) copper wire to any metal ladders, water pipes, or other metal within 5 feet (1.52 m) of the spa or hot tub.
4. Install to provide drainage of the compartment for electrical components.
5. Install air blower in accordance with diagram on page 5 to keep tub water out of electrical equipment.
6. **DANGER** — Risk of electrical shock. Install the Spa Center 5/10 at least 5 feet (1.52 m) from all metal surfaces.
7. Do not attempt to adjust any internal controls of the Spa Center 5/10. Unless otherwise indicated in this manual, only qualified service people can make adjustments to electrical and mechanical devices in this system.
8. Make certain your Spa Center 5/10 and spa or hot tub are installed in accordance with local codes for electrical wiring. The Spa Center 5/10 will not operate to its rated capacity if local electrical codes are not followed.
9. Make certain your Spa Center 5/10 and spa or hot tub are installed in accordance with local codes for plumbing.

10. Consult your physician about the use of spas and hot tubs if your physical condition is other than normal. People who are ill or who have heart disease should not use a spa or hot tub without the approval of their physician. Pregnant women should be sure to request specific safety instructions from a physician. Persons requiring physical therapy can benefit from a spa or hot tub only when a physician recommends specific conditions for immersion time and temperature.
11. Limit immersion time and observe maximum recommended water temperature of 104° F (40° C) to prevent hyperthermia, which can be fatal. The symptoms of hyperthermia are nausea, dizziness and fainting. For adults in good health, immersion time should be no more than 20 to 30 minutes at temperatures below the maximum recommended water temperature. Immersion time should be reduced as the maximum temperature limit is approached. Keep an accurate thermometer in the water and check it often.
12. Leave the water as quickly as possible if nausea, dizziness or headache occur. Immediately cool off by taking a cool shower or by using ice packs or cold towels. Seek medical attention if the symptoms persist.
13. Never use a spa or hot tub while taking medications, drugs or alcohol. The spa or hot tub can cause dangerous changes in the body when under the influence of these substances.
14. Be sure water always flows freely from the inlet jets inside the spa or hot tub. Any blockage of this flow by persons or objects may damage system components. Water may then damage the surrounding area and/or create an electrical shock hazard.
15. Protect the entire Spa Center 5/10 and piping against freezing. Failure to provide this protection may cause severe damage to the Spa Center 5/10 and void the warranty. (See Cold Weather Protection page 22).
16. Keep the control box closed at all times.
17. Disconnect the Spa Center 5/10 from the power source before allowing any part of the Spa Center 5/10 to be serviced for repair or maintenance.
18. **Save these instructions.**

INSTALLATION INSTRUCTIONS

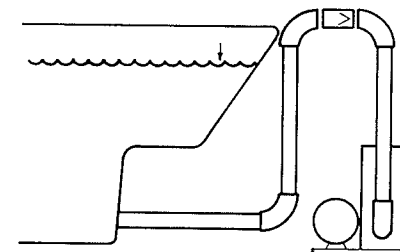
A. General

Although designed for indoor locations, the Spa Center 5/10 may be installed outdoors IF A SUITABLE ENCLOSURE IS PROVIDED TO PREVENT ENTRANCE OF RAIN, SNOW OR GROUND WATER. Electrical installation must be performed by a qualified, licensed electrician and in accordance with the national electric code and local codes.

B. Plumbing Installation

1. The Spa Center 5/10 and spa or hot tub must be installed in accordance with local plumbing codes.
2. The Spa Center 5/10 must be installed below water level. The pump is NOT self priming and requires a constant supply of water in the pumping chamber. Locating the system at or above water level may deprive the pump of water and cause pump failure and heater damage.
3. Install with non-metallic pipe connections to spa or hot tub, and leave at least five (5) feet (1.5m) between the Spa Center 5/10's metal enclosure and the inside wall of the spa or hot tub, unless the access door to electrical equipment is supplied with an interlock switch.
4. The Spa Center 5/10 water-supply piping connections are 1½ inch diameter for the suction and discharge lines and 2 inch diameter for the air blower supply line. It is recommended that schedule-40 PVC piping be used for installation.
5. Valves available as accessories are recommended in all plumbing lines to permit water shutoff for general maintenance and filter cleaning.
6. An air loop and/or check valve must be installed in the air blower supply line. The air loop must be higher than the highest achievable water level as shown in diagram 1. Failure to provide an air loop and/or check valve may allow water to enter the air blower. This will create a potential shock hazard and may cause a serious air blower malfunction, and will void the warranty.

Diagram 1



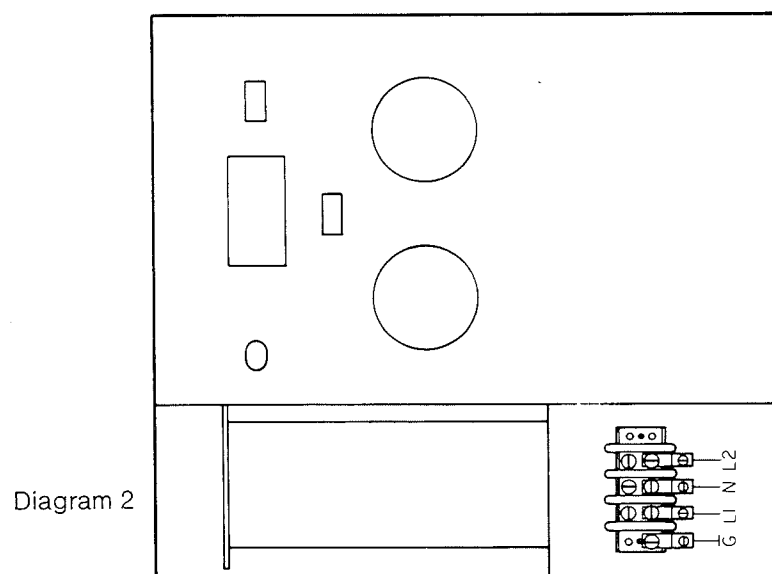
7. DO NOT use PVC solvent cement for final blower connection to Spa Center equipment package. Fumes from PVC cement solvent may be ignited when the air blower is activated.

C. Electrical Installation — General

1. All wiring must be performed by a qualified, licensed electrician and in accordance with the national electric code and local codes, and proper grounding must be provided.

The Spa Center 5/10 is designed for 240 volt 50 Amp electrical circuits.

2. All field electrical connections can be made by opening the lower electrical access door located on the front of the Spa Center 5/10 (Diagram 2).
3. All connections should be made in accordance with the wiring diagram enclosed in the control panel or the wiring diagram within this manual.
4. Connections should be made using copper conductors only. The connecting wire and circuit breaker or fuses must be sized to accommodate the total ampere load, as specified on the Spa Center 5/10 data label.
5. For user safety, the stainless-steel heater housing is a factory bonded leakage current collector.



6. A pressure wire connector is provided on the surface of the control box of the Spa Center 5/10 to permit connection of a bonding wire between this point and any metal equipment, metal enclosures of electrical equipment, metal water pipe or conduit within five feet of the spa or hot tub as needed to comply with local requirements. (See Diagram 3). The bonding wire must be at least No. 8 AWG (8.4 mm²) solid copper wire.
7. The Spa Center 5/10 requires four wire electrical service (Line 1, Line 2, Neutral, and Ground) utilizing No 8 AWG (8.4 mm²) wire.
8. Install field wiring according to Diagram 2.

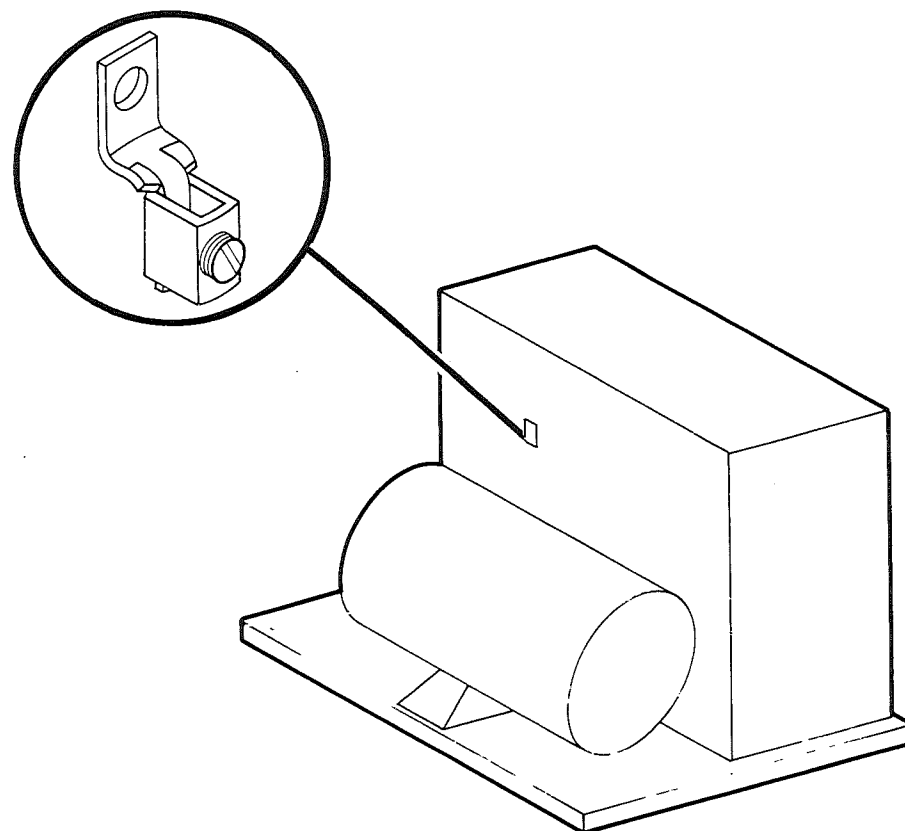


Diagram 3

START-UP CHECK LIST

After your Spa Center is correctly installed, you should follow this simple start-up procedure before applying power.

1. Be sure the Spa Center is grounded in accordance with the National Electric Code and local codes.
2. Be sure electrical power is "OFF" and the thermostat is turned fully counter-clockwise to the "OFF" position.
3. OPEN all water valves in the inlet and outlet plumbing.
4. Fill the spa or hot tub to the manufacturer's recommended level.
5. Inspect plumbing connections for any leaks and repair as needed.
6. Become familiar with all Spa Center controls and operating instructions (Refer to Pages 9 thru 17).
7. Apply power to the Spa Center.
8. IMPORTANT — set the pump on high-speed mode to evacuate all air from the Spa Center. Bleed all of the air from the inline filter before you return the pump to the low-speed mode.
9. Turn the thermostat clockwise to adjust the temperature setting as desired.
10. Set the time clock.
11. FOLLOW OPERATING INSTRUCTIONS.

OPERATING INSTRUCTIONS

A. Single Timer Operation

The timer controls the filtration mode of the spa, by turning on the low speed of the pump during set "on" times of the timer. The heater operates independently of the timer settings.

It is recommended that the filtration timer be set to operate for 30 minute intervals 4 times daily for a total of 2 hours.

To Set The Timer:

1. Set the time of day by turning the dial clockwise until the arrow lines up with the appropriate hour on the dial (AM/PM). For example, if the correct time of day is 8 AM, set the arrow on "8" in the light colored area (Diagram 4).
2. Set the times you want the filtration cycle to start up, and the amount of time you want it to operate, by pushing the tabs on the perimeter of the dial toward the center of the timer. Each tab represents 15 minutes of operating time. For example, push in 2 tabs each at the following hours on the timer 6 AM, 12 Noon, 6 PM, 12 Midnight. The filtration cycle will now operate 4 times daily for a period of 30 minutes each.

Note: The duration of each filtration cycle should be increased by pushing in more tabs if heavy usage is expected or the spa is left uncovered.

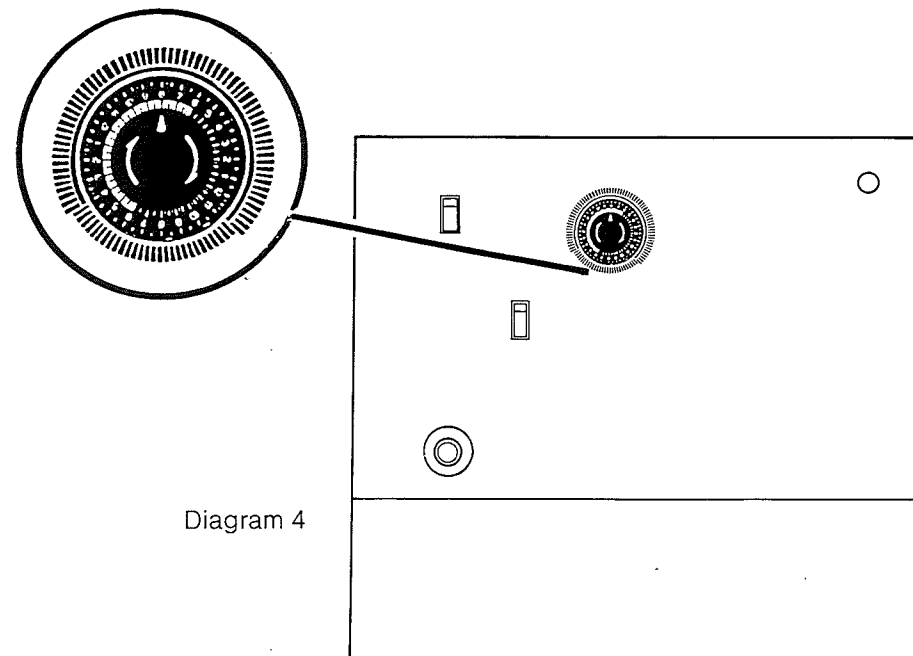


Diagram 4

B. Timer Override Switch

An override switch next to the timer allows you to run the filtration mode when it is normally programmed to be off (Diagram 5). You simply move the switch from the "timer position" to the "24 Hour" position. The spa will then filter continuously until you give control back to the timer.

The "24 Hour" mode is especially useful during times of UNUSUALLY high usage without having to reprogram the timer.

Use of the override switch does not stop the timer. So it isn't necessary to reset the time of day when you return the switch to the "timer" position.

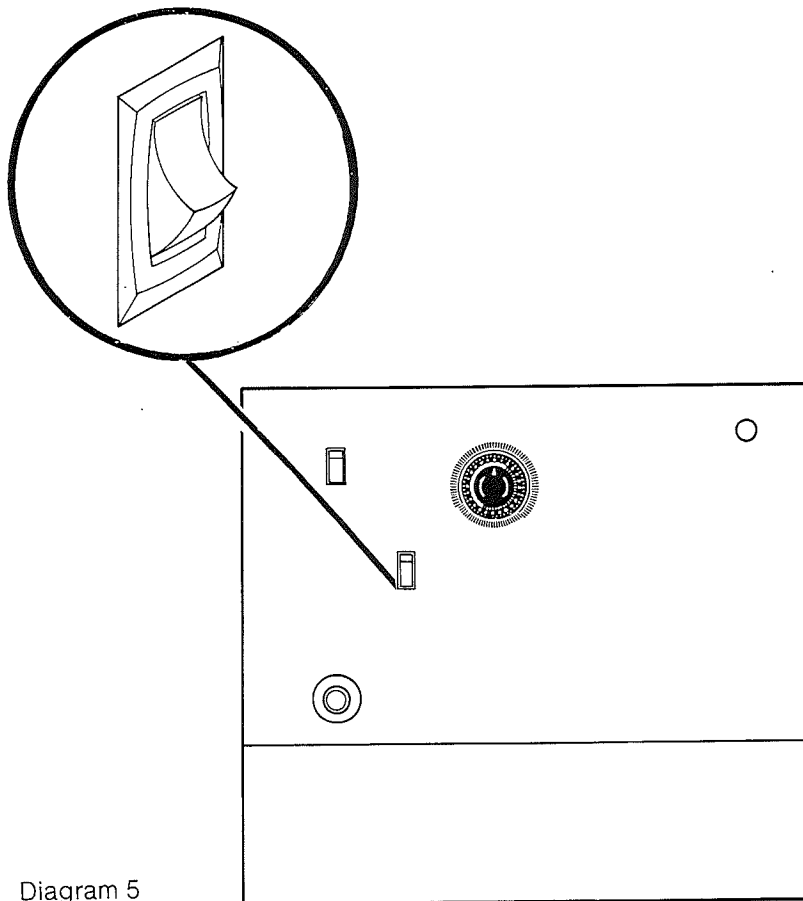


Diagram 5

C. Dual Timer Operation

The dual timer system incorporated into the Spa Center allows INDEPENDENT OPERATION of the filtration cycle and the heating cycle of the spa.

The filtration cycle should be operated daily to maintain spa water quality. The filtration timer operates on a 24 Hour cycle and repeats operation daily.

The heating timer operates on a 7 day cycle and repeats itself weekly. Because of this, the heater can be programmed to deactivate on days of the week and hours that the spa is not normally used. This contributes greatly to energy efficiency by only heating the spa on days and hours of planned usage.

In addition, the heating timer can be easily overridden without disturbing the settings.

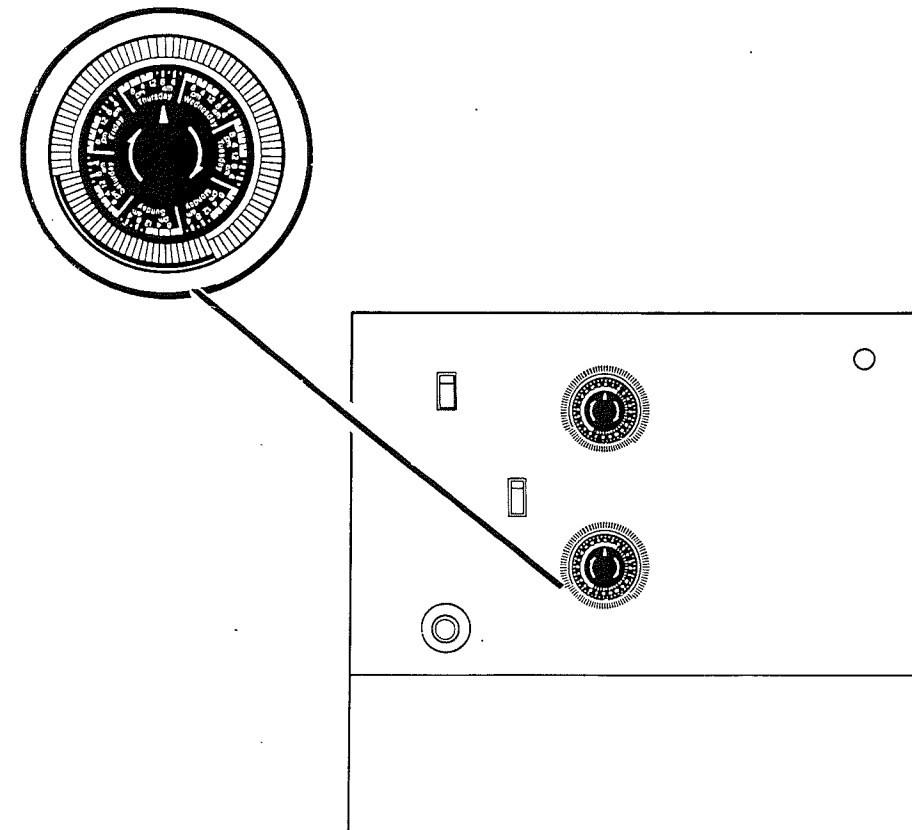


Diagram 6

7 Day Heating Timer

The heater will only activate during set "On" times of the heating timer. With the thermostat calling for heat and timer set for an "On" time, the pump and heater will activate. During this time the pump and heater will economically cycle On/Off to maintain desired temperature.

The 7 Day Timer allows you to activate the heater only on selected days. On days in which spa is not used, the timer can be set to deactivate the heater for energy conservation and economy.

To Set Timer:

1. Set time/day by turning the outer dial counter clockwise until the arrow lines up with the appropriate day and hour. (AM/PM)
2. Set the time/day you wish the heater and pump to activate by pushing the tabs on the perimeter of the dial towards the center of the timeclock. Each tab represents 2 hour operating times.
3. To re-program the timer, simply return all tabs to their outward position and repeat Steps 1 and 2.

Important Note: Temperature rise will depend on weather conditions, and insulation qualities of the spa or hot tub and cover. It may take a little experimenting to find the most convenient and efficient time settings.

Override Switch:

The dual timer Spa Center 5/10 is equipped with a timer override switch which enables the timeclocks to be bypassed.

The override switch allows you to operate your spa even when both timers are in the Off mode.

By simply moving the switch to the continuous operation position, the Spa Center 5/10 heater and pump will operate continuously. This does not disturb the settings of the timers. By returning the switch back to the timer control position, the Spa Center will revert to the pre-programmed timer mode.

D. 24 Hour Filtration Timer

The filtration timer activates the low speed pump for optimum and efficient filtration. It is recommended that the filtration timer be set to come on four times daily for half hour operations. Try to space the half hour On/Off operations evenly throughout the day.

To Set Filtration Timer:

1. Set time of day by turning the outer dial counter clockwise until the arrow lines up with the appropriate hour on the dial. (AM/PM) The illustration shows the correct time of day is 8:00 am, set the arrow on "8" in the light colored area.
2. Set the time you want the Spa Center 5/10 to start filtration and the amount of time you want it to operate by pushing the tabs on the perimeter of the dial towards the center of the timeclock. Each tab represents 15 minute operating time. Illustration B filtration cycles at 6:00 – 6:30 am/ 12:00 – 12:30 pm/ 6:00 – 6:30 pm/ and 12:00 – 12:30 am.
3. To reset the timer, simply return all tabs to their outward position and repeat Steps 1 and 2.

Important Note: Filtration times may vary due to bather load and debris in spa. You may have to alter times to maintain optimum water clarity. Only add chemicals while pump is running.

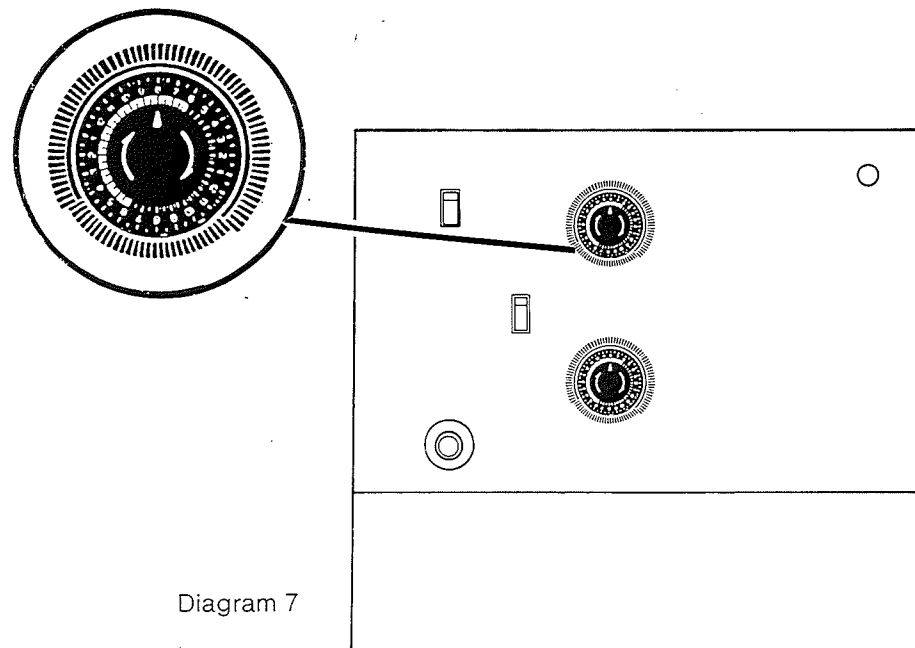


Diagram 7

E. Heater Operation

The spa or hot tub temperature is controlled by the thermostat. The thermostat controls the heater and low speed pump to maintain the temperature setting. As the spa loses heat, the thermostat will turn on the low speed pump and heater and bring the spa water back to the desired temperature. The thermostat will then turn off the pump and heater until heat is called for again.

The Thermostat Settings Function as Follows:

1. Turning the thermostat fully clockwise to the "Hot" position will heat the water to a maximum temperature of approximately 104 ° F (40 ° C).
2. Turning the thermostat to "Low" position will keep the water temperature from dropping below 40 ° F (4 ° C). (See "Freeze Protection" on Page 23 of this manual).
3. With the thermostat in the "Off" position, the heater is deactivated.

ALWAYS TURN THE THERMOSTAT TO THE "OFF" POSITION WHEN DRAINING THE SPA

4. Set the thermostat for a comfortable water temperature somewhere between "Warm" and "Hot". A brief trial period will be needed for you to find the most comfortable setting.

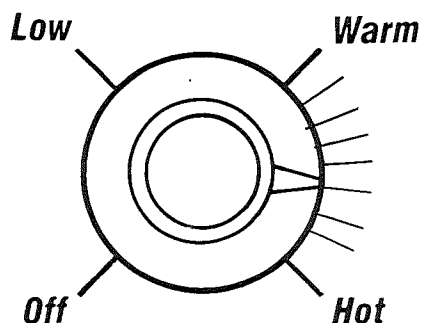


Diagram 8

F. Power Switch

The power switch controls electrical power to all components in the Spa Center 5/10. The power switch should be turned off during any maintenance or servicing of the spa equipment.

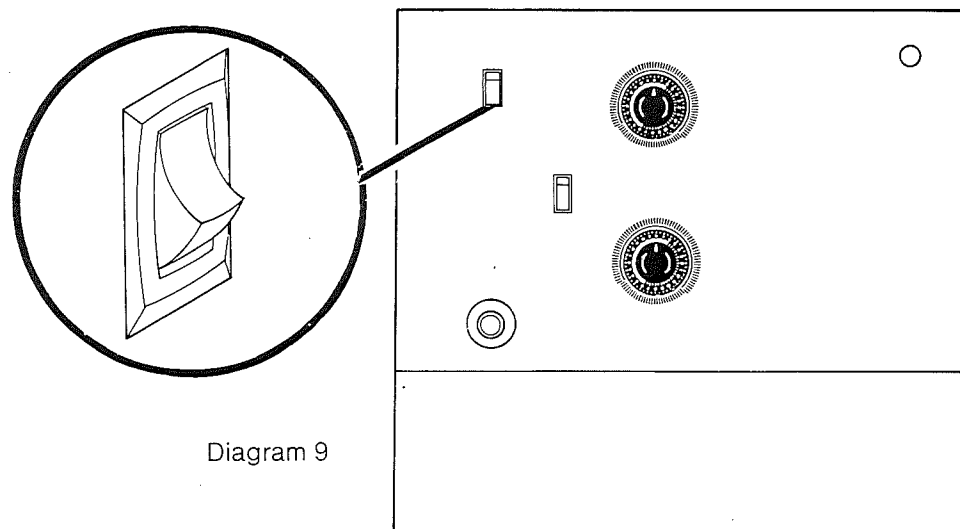


Diagram 9

G. Heater High Limit Switch

The Spa Center 5/10 is equipped with a high-limit safety switch permanently set at 122 ° F (50 ° C). This safety switch will shut the entire system off, should the adjustable thermostat or other components malfunction and allow the spa water to overheat. Be advised that allowing the high speed pump to operate for several hours will also cause the water to overheat and trip the high limit switch. If the high limit switch trips, the "high limit" light will illuminate, indicating an overheat situation. You should go through the "Start Up Check List" (See Page 8) to see that all conditions have been properly met and make sure the pump is in low speed or off.

After the water has been allowed to cool sufficiently, the high limit can be reset by pushing in the reset button located on the right side of the control box. (See Diagram 10).

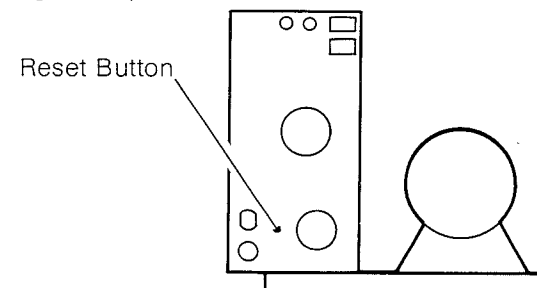


Diagram 10

The high limit light will go out when the high limit switch is reset.

If the high limit switch trips repeatedly, the spa equipment should not be operated until a qualified service technician has corrected the problem.

H. 4 FUNCTION AIR SWITCH

The air switch transmitter on the upper lip of the spa or hot tub gives you convenient control of the pump and air blower. Each time the transmitter is depressed, it steps the switch to the next mode in a fixed sequence, as follows:

SPAS WITH SINGLE SPEED BLOWER

- Mode 1 Pump Low Speed; Blower Off
- Mode 2 Pump High Speed; Blower Off
- Mode 3 Pump High Speed; Blower On
- Mode 4 Pump Low Speed; Blower On

SPAS WITH DUAL SPEED BLOWER

- Mode 1 Pump Low Speed; Blower Off
- Mode 2 Pump High Speed; Blower Off
- Mode 3 Pump High Speed; Blower High Speed
- Mode 4 Pump Low Speed; Blower Low Speed

Note: Always return the switch to Mode 1 after each use.



Diagram 11

I. SPA SIDE CONTROLLER (optional)

The "Spa Side Controller" located on the upper lip of the spa or hot tub as shown in Diagram 12 offers convenient control of water temperature, as well as pump speed and blower On/Off

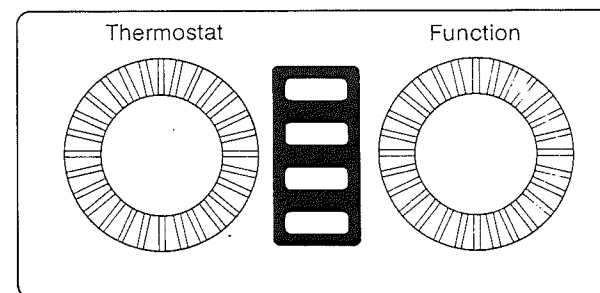


Diagram 12

J. LIGHT SWITCH (optional)

A single On/Off light switch is available with the Spa Center. Press the switch once for on. Press the switch again for off (Diagram 13).

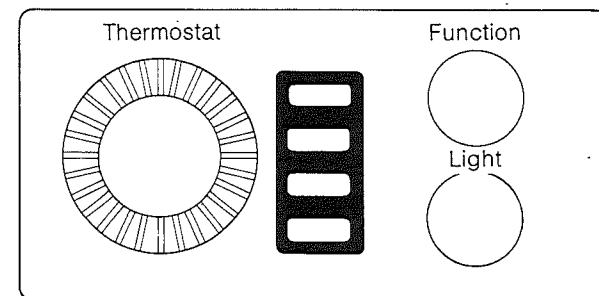


Diagram 13

MAINTENANCE

The Spa center requires very little maintenance. An occasional wipe down with a damp cloth will keep the equipment clean. Accumulations of dirt and debris around the ventilation holes in the pump motor and blower motor should be removed.

Periodically, the filter cartridge must be cleaned. The water chemistry must be balanced regularly to assure a flow of clear, filtered water in the spa or hot tub.

A. FILTER—HOW IT WORKS

During filtration, the pump continuously circulates water from the spa or hot tub through the filter. Water flows through the pleated, polyester fabric of the filter cartridge. Debris or other matter collects on the outer surface of the fabric while clean water passes into the core of the filter and back into the spa or hot tub.

As filtration continues, debris forms a mat on the filter-cartridge surface. This matted surface increases water pressure within the filter and reduces the flow of filtered water back into the spa or hot tub. Eventually the cartridge becomes so matted that water flow is too low for effective filtration.

The cartridge should be cleaned at least once a week, and more often during periods of heavy use, to assure effective filtration. In addition to usage, the frequency of filter cleaning will depend on factors such as location of the spa or hot tub and water chemistry.

B. REMOVING THE FILTER CARTRIDGE

The cartridge of the in-line filter or skimmer filter must be removed for cleaning. This is accomplished as follows:

1. Rotate the thermostat fully counter clockwise to the "Off" position and turn off all electrical power to the system.

NOTE: If your spa or hot tub has a built-in skimmer filter, follow Step 1, above, then remove the cartridge from the housing and proceed to instructions for "Cleaning the Filter Cartridge", page 20. Replace the skimmer filter cartridge when cleaning procedures are completed.

2. If the in-line filter is located below water level, close the valves on the suction and discharge piping to prevent water loss.
3. Drain the water from the filter and spa/hot tub piping using the drain valves in the piping.
4. Place a pan under the filter to catch any spillage when the filter cartridge is removed.
5. Unscrew the retaining ring on the filter assembly by turning the ring clockwise (See Diagram 14): Support the filter assembly and plumbing while unscrewing the retaining ring.
6. Remove the filter housing from the manifold (top of filter).
7. Remove the filter cartridge from the housing and clean, or replace it with a new cartridge (part # 17 B1086).

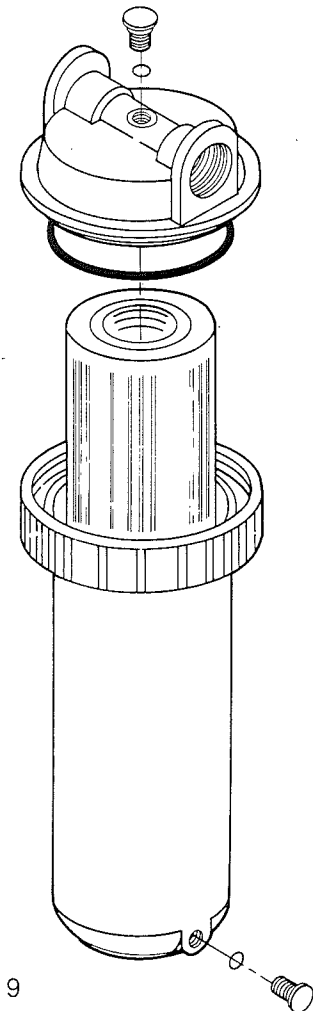


Diagram 14

C. CLEANING THE FILTER CARTRIDGE

1. Hold the cartridge in an upright position and spray downward into the pleats of the fabric with a garden hose to flush away debris. Cleaning will be easier if the garden hose nozzle can be adjusted to a single jet spray.
2. After hosing off the cartridge, it is Highly Recommended that the cartridge be allowed to soak in a solution of tri-sodium phosphate (TSP) and water, or another suitable filter cleaner. (Automatic dishwasher detergent may be used if TSP is not available.) Soak the cartridge for 2 to 4 hours to remove body oils and body lotions that become impregnated in the cartridge fabric during filtration. Rinse the cartridge thoroughly before placing it back in the filter housing.
3. If the cartridge is coated with hard, solid material, it may indicate a calcium build-up on the fabric. This build-up can be removed by soaking the cartridge in a solution of four parts water and one part muriatic acid in a plastic container for several hours. As a safety precaution, use rubber gloves while handling this solution. Brushing this solution into the fabric pleats may also help clean the cartridge. Rinse the cartridge thoroughly before placing the cartridge back into the filter housing.
4. If the cartridge is coated with algae or bacteria, it should be soaked in a solution of one part chlorine and four parts water in a plastic container. As a safety precaution, rubber gloves should be worn while handling this solution. Brushing the solution into the fabric pleats may also help remove algae or bacteria. Rinse the cartridge thoroughly before placing it back into the filter housing.

Observe recommended safety procedures when using acid or chlorine. Always rinse the cartridge thoroughly after applying these solutions.

5. Clean the filter housing and filter housing O-ring. Lubricate the O-ring with silicon lubricant.
6. Return the filter cartridge to the housing and place the housing into the filter manifold. Fasten the retaining ring by manually turning it counter clockwise.
7. Always bleed air from the filter housing by opening the thumbscrew located at the top of the filter housing. Turn the thumbscrew approximately 1 1/2 turns counter clockwise to open. When a steady stream of water is seen coming from the air-relief hole in the screw, re-tighten the screw.
8. Follow the "Start-Up Check List" procedure described on page 8 of this manual.

D. WATER LEVEL

When the spa or hot tub is not in use, keep the water level 1 to 2 inches above the bottom of the skimmer opening as shown in Diagram 15. Always maintain a proper water level to avoid getting air into the system.

Make sure all suction fittings have a water supply at all times. Failure to do this can cause a heater and pump malfunction.

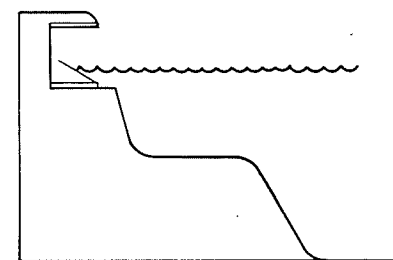


Diagram 15

E. WATER CHEMISTRY

Maintain the chemical balance of the water in strict compliance with the spa or hot tub manufacturer's recommendations. Different types of spas and hot tubs have different requirements for water treatment.

The following points should be kept in mind for maintaining proper chemical balance and adequate sanitation.

1. The chemical balance of heated, aerated water can change rapidly. Changes will occur more rapidly as the number of bathers in the spa or hot tub increases.
2. Keep an accurate test kit and test the water daily for proper pH and chlorine levels.
3. Maintain pH levels between 7.2 and 7.6 for optimum comfort, safety, and equipment life.
4. A low pH (acid condition) can cause corrosion of metal parts. A high pH (alkaline condition) can cause calcium deposits to coat the heating element or plug the filter cartridge.
5. Never add undiluted chemicals directly into the skimmer opening. Instead, disperse the chemicals around the spa or hot tub while the pump is running at HIGH speed. This will provide the most effective dispersal of chemicals.
6. It is highly recommended that your spa or hot tub be drained and cleaned when the water can no longer be kept within the specified ranges for pH and total dissolved solids (TDS), or when the clarity and cleanliness of the water cannot be maintained by treatment with chemicals. Typically, draining and cleaning may be needed every 8 to 12 weeks.

COLD WEATHER PROTECTION

Your Spa Center and spa or hot tub must be protected from freezing temperatures by either de-activating and storing the system or by taking special freeze-protection steps.

NOTE: Winterizing solutions and compounds are not recommended for use in the Spa Center. They are toxic and may also adversely affect components of the Spa Center.

A. DE-ACTIVATION AND STORAGE (WINTERIZING) OF SPA CENTER

The entire system should be de-activated if extended periods of non-use are expected and temperatures are likely to fall below freezing. Follow this procedure for de-activation:

1. Drain the entire system of water.
2. Shut off all valves on the suction and return inlet piping.
3. Remove the plug located at the front of the pump body (Diagram 16) and disconnect union on pump discharge. (Diagram 16 – Letter A.)
4. Remove the filter housing and flush all residue from inside the housing.
5. Remove the filter cartridge and clean it thoroughly. Store the cartridge in a dry place where air can surround it.
6. Disconnect all power to the Spa Center or disconnect the Spa Center from the electrical receptacle.
7. Consult the spa or hot-tub manufacturer concerning de-activation and storage procedures for spas or hot tubs.
8. When re-activating the Spa Center, re-install the filter, tighten all plugs in the pump and filter, and follow the start-up procedure described on page 8 of this manual.

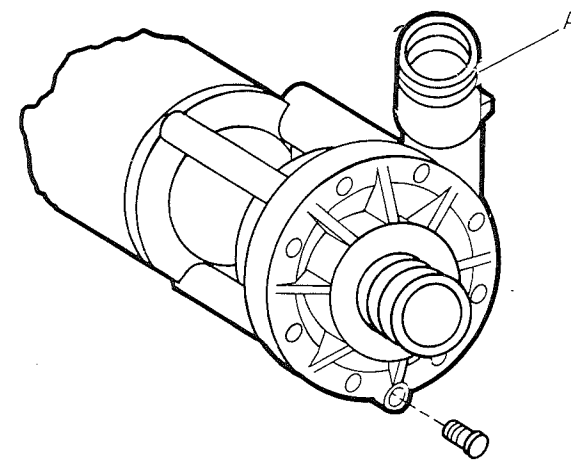


Diagram 16

B. FREEZE PROTECTION

When freezing weather is expected and you do not want to keep the spa hot nor drain the spa, take the following steps to prevent water from freezing and damaging the system:

SINGLE TIMER SYSTEM

Set the thermostat on the "Low" position. The heater will now come on only when the water temperature drops below 40 ° F (4 ° C).

DUAL TIMER SYSTEM

Push in all the tabs on the heating timer and set the thermostat on "Low". the heater will now come on only when the water temperature drops below 40 ° F (4 ° C).