

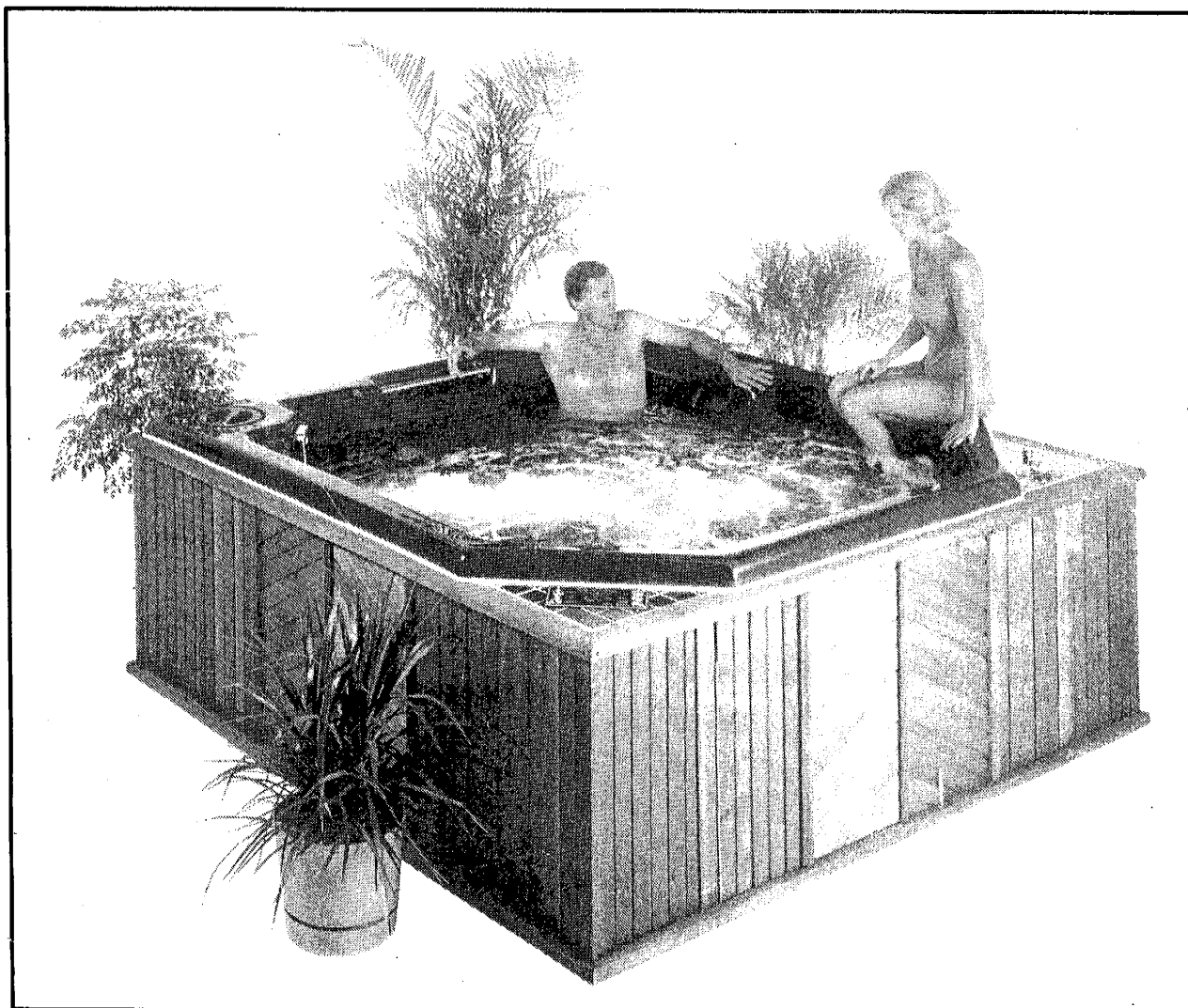
Happiness is
a Warm Spa
by

CalSpa

A DIVISION OF CALIFORNIA ACRYLIC INDUSTRIES, INC.
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INSTALLATION and OPERATING MANUAL



PORTABLES/INGROUNDS

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GLOSSARY OF TERMS

MAIN DRAIN:

During the operation of the equipment the main drain works in conjunction with the skimmer to return water to the filter along with the surface and bottom debris, keeping the spa sparkling clean.

SKIMMER:

This is the rectangular outlet at the water level. The skimmer moves surface debris to the filter. The water level in the spa should be kept at the center of the skimmer for best operation.

RETURN INLET: (HYDROJETS:)

After passing through the filter and heating equipment, the water is returned to the hydro jets.

PUMP:

The pump draws water from the main drain and skimmer and pushes it through the filter and heater returning to the spa through the return inlet and/or the hydrojets(s).

FILTER:

The filter cleans the spa by passing the water through a filtering system where debris and impurities are removed. Read the manufacturer's recommendations for cleaning and servicing.

HYDROJETS:

Works with water which causes a venturi action to draw in air to provide healthful spot massage and jet action.

HEATER:

The thermostatically controlled heater raises the temperature of the water to a desired degree.

THERMAL CYCLE:

The thermal cycle automatically turns on the pump, filter, and heater. This automatic thermal cycle is thermostatically controlled and will allow for a minimum of one hour per day of operation even if the spa is not used.

AIR BLOWER:

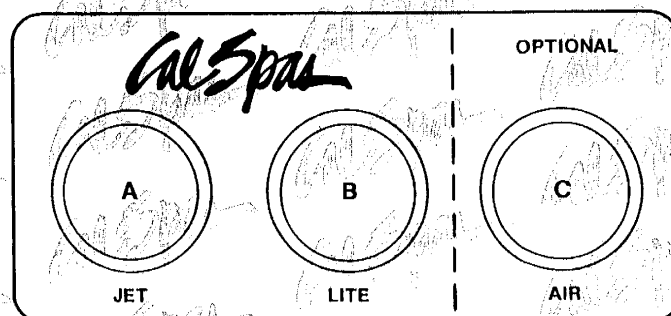
The air blower supplies air to the small holes in the lower portion of the spa, creating the hydro massage action. The blower works independently of the pump, filter, and heater.

AIR CONTROL VALVE:

Mounted generally on the lip of the spa and regulates the amount of air going to the jets.

AIR CONTROL BUTTON:

Mounted generally on the lip of spa. Buttons are used to select modes of operation (A) Jets (high pump) (B) Air (blowers) (C) Optional Lite Unit.



SPA CONTROL PANEL

SET-UP AND DELIVERY GUIDELINES:

GETTING READY FOR DELIVERY AND SET-UP OF YOUR NEW CAL-SPA:

Listed herein is a checklist of CUSTOMER REQUIREMENT AND RESPONSIBILITIES required for delivery and set-up of your new portable spa.

ELECTRICAL REQUIREMENTS:

- a. All 110vac portable spas require an ISOLATED (No other appliances or lights on this circuit at any time) 120 volt, 20 amp GROUNDED outlet within 10 feet of where spa is to be located.
- b. NO EXTENSION CORDS are to be used in conjunction with the operation of the spa. Low voltage damage could result, which is not covered by warranty.
- c. All electrical must be to NEC (National Electric Code) and any pertaining local electric codes.
- d. IF YOU HAVE ANY DOUBTS, HAVE YOUR CIRCUIT CHECKED BY A QUALIFIED AND LICENSED TECHNICIAN.

SURFACE AND PAD REQUIREMENTS:

- a. Your new portable spa should be placed on a uniformly firm and flat concrete pad — with NO high and low spots. Alternate decking methods require approval.
- b. If your spa is to be located near where sprinklers may hit, adjust or cap them so as not to hit the skirt or equipment.

ACCESS AND CLEARANCE:

- a. All portable spas require 30 to 40 inches of clearance through gates, between house and side fences, around corners and 7-1/2 to 9-1/2 feet of overhead clearance, depending on size of unit.
- b. Restricted clearance, second story or balcony locations that would require a crane or other special equipment or devices is the responsibility of the homeowner.
- c. All debris, limiting or blocking access to or on set-up location must be removed prior to delivery.
- d. Delivery crews do not trim trees or bushes, move debris or perform other general maintenance in order to set up the spa.

REQUIREMENTS FOR DECKING, FENCES, GATES AND BALCONIES:

- a. Decking must be constructed to support 150 pounds per square foot.
- b. Gates must be self-closing and self-locking (California requirements).
- c. Balconies must be constructed to current state and local codes (spa load requirements are 150 pounds per square foot).

MAINTENANCE OF YOUR SPA:

GENERAL MAINTENANCE:

- a. ACCESS TO ELECTRICAL EQUIPMENT — The power-pak system is located under the wood skirt. The equipment can be serviced by simply undoing the latch and opening the doors. The service doors should always be closed and secure prior to operation.
- b. SPA WATER MAINTENANCE — You should drain your spa at least every 2 to 3 months. Between this period you should chemically treat the water for a clean, healthy spa.

WARNING

Do Not Exceed 104°

Excessive Temperature Voids Warranty

PERSONAL SAFETY AND HEALTH CONSIDERATION:

- a. Each person's body and circulation system has different tolerances and responds differently to warm/hot immersion. The amount of time that safe, health soaking and therapeutic use of Spas or Hot Tubs will vary. Most people in good health find a water temperature of about 102°F to be satisfying and limit time in water at his temperature to 20-30 minutes. Use of alcoholic beverages and certain medications may affect the way your body system reacts to warm/hot water immersion. Consult your physician for recommendations.
- b. Always check water temperature with a thermometer. Do not get into Spa if water temperature is above 104°. Prolonged immersion in water at temperature above 100° F may be detrimental to the health of the user. Before using your Spa, consider your present state of health, medical history and age. Consult your physician for recommendations.
- c. Water chemistry is very important. For maximum enjoyment and longer equipment life, refer to your chemical guide. Periodic draining of your Spa is highly recommended. Do not use acid (or any based product, I.E. Tri-Chlor) to adjust pH as this will damage your spa finish and corrode your heater.

SAFETY INSTRUCTIONS:

- a. Always check water temperature with a thermometer. Water temperature above 104°F may be detrimental to the health of the user. Before using your Spa, consider your present state of health, medical history and age. Consult your physician for recommendations.
Spas and Hot Tubs should not be used by persons under the influence of alcohol or medication inducing drowsiness.
Never touch or come in contact with any electrical accessory when in your Spa or when your body is wet.
Prior to performing any service to the Cal-Spa Pack, turn off ALL power to the system at the main power source breaker.
- b. Never turn Equipment Pack on unless Spa is filled with water to the center of skimmer.
The following steps will help lower operating costs and conserve energy: Use high speed pump mode to operate jets, only when Spa is being used. The same is true for the air blower, since the bubble action and surface agitation increases heat loss. A suitable cover for your Spa will prevent excessive heat loss. NOTE: Keep the spa covered at all times with an approved cover except when it is in use.
If Spa is to be drained and left unattended for an extended period, turn off breakers. Replace cover and secure.

NO ACID
Tri-Chlor or Algecide Solutions
They Ruin Acrylic Spas

Read all instructions carefully and completely before installation. Incorrect installation of the spa may void the warranty. If you have any questions that are not explained in this manual, consult your spa dealer. Consult your local building department for any permits you may need, i.e., plumbing, electrical, etc. Some areas may require a swimming pool or building permit.

A. GENERAL INFORMATION

SPA PLACEMENT — Consider the following suggestions when deciding a site for your Cal-Spa:

- a. **AESTHETICS** — Select a location that enhances the overall aesthetics of your home and landscape.
- b. **LOCAL CODES** — Check local codes pertaining to fences, gates, and electric prior to locating your spa.
- c. **PRIVACY AND WIND SHIELDING** — Consider how your spa will be used and how wind will affect the water temperature.

ELECTRICAL SERVICE — Remember, your Spa requires a 110 volt, 20 amp, (Model 110) or a 220 volt, 40 amps (Model 220) grounded electrical circuit to operate SAFELY AND EFFICIENTLY.

- a. To install the 110 volt system, you should plug directly into a grounded 110 volt 20 amp dedicated receptacle.
- b. To install the 220 volt 40 amp system, you must contact a licensed electrical contractor to install the SPA unit, as improper installation could cause damage to not only your property, but result in serious harm to spa users.

NOTE: INSTALLATION OF YOUR SPA — Select a flat, level area for placement of your spa. The surface must be concrete. Your Cal-Spa is completely self supporting when placed on a solid foundation and does not require any type of structural support.

GENERAL OPERATING INSTRUCTIONS — Your Cal-Spa is designed and constructed using the finest materials and workmanship, and will provide you with years of satisfactory performance, with a minimum of effort on your part. The following operating and maintenance instructions are very important and must be carefully followed to insure that the spa provides you with the greatest satisfaction.

- a. All portable spas include a filter, heater, pump, and blower. Regardless of specific supporting equipment, the following procedures must be followed.
- b. The pump should be operated a minimum of two hours per day for cleaning and heating.
- c. The pump and heater are thermostatically controlled. This will allow the spa to be ready to use without any further effort on your part. The length of time required to heat the spa to the desired temperature (usually about 90° F to 101° F) will vary depending on heater size, season, water temperature, wind velocity, etc. Therefore this is something each owner must determine and adjust to his personal needs. We highly recommend using a thermal blanket and/or vinyl hard cover, available from your spa dealer, to minimize heat losses when your spa is not in use.
- d. **EXCEPTIONS:** time clock models must be programed for heating and prolong time.

WARNING

Do Not Exceed 104°

Excessive Temperature Voids Warranty

GENERAL INFORMATION (Continued)

- e. Operating the air blower should be limited to when the spa is being used. Continuous operation dissipates chlorine.
- f. The filter is the replaceable cartridge type. A routine cleaning of the cartridge is the best practice. Make sure pump is off, remove the cartridge, wash it off with a water hose and re-assemble. Be careful not to overtighten filter console. This should be done on a routine basis, whether you think it really needs it or not. A routine cleaning is important.
- g. Keep the spa filled to approximately the center of the skimmer. Never allow the water to drop below the bottom of the skimmer opening. This will allow air into the main water line to the pump, causing it to lose its prime (water flo). Running without water will damage the pump seal assembly.

SKIRTED SPAS — Listed below are some items that a portable buyer should definitely be familiar with:

- a. Spas require a solid flat foundation underneath, **WITH NO HIGH OR LOW SPOTS.**
- b. 110 Volt portable spas must be on a 20 amp circuit with no other items.
- c. Extension cords should not be used. If you cannot get by with the existing cord that is supplied, phone us for advice.
- d. 220V unit must be hard wired into a double 40 amp breaker, direct from your electric main.
- e. Ground fault interrupters are supplied with all 110V portables. If you have a problem with the GFI, there is a good chance that it is a fault of the equipment.
- f. If your spa has a redwood skirt keep it oiled with any suitable oil. We use linseed oil initially.
- g. Water chemistry is especially important. Try to keep it right. It is best to add chemicals with the air blower only on for about 15 minutes, after you have used the spa, or 2 hours prior to use. Do not add chemicals when in use, "DO NOT USE ACID". This will void your warranty.
- h. Heaters require both a proper thermostat setting and sufficient flow of water through the heater element to work. If you have a dirty filter it is quite possible that the heater element will not function.
- i. Pump failure is most commonly caused by pump cavitation which occurs from a lack of water supply. This can be caused during the filling (trapped air pocket) or draining (water level becomes too low). Gate valves should be open. See Pump Priming section.
- j. The following steps will help lower operating costs and conserve energy:
Use high speed pump mode to operate jets only when spa is being used. The same is true for the air blower since the bubble action and surface agitation increases heat loss. A suitable cover for your new spa will prevent excessive heat loss. NOTE: Keep the spa covered at all times with an approved cover except when it is in use. Keep air venturies tightly closed when heating or not in use.

The equipment access doors are equipped with a safety power shut-off switch. Because of this, the doors **MUST** be closed to operate.

k. Air switch modes are as follows:

- 1st Button — Jets
- 2nd Button — Lite
- 3rd Button — Air Blower

NOTES

l. When jets and air are off/thermostat will turn low pump on and off to maintain temperature.

EXCEPTIONS

- m. Time clock models must have running and heating time programmed on the clock. (220 only)
- n. 220 Volt systems will heat on high or low speed pump setting.

GENERAL MAINTENANCE (continued)

c. **USE OF SOLAR BLANKET AND/OR COVER** — A solar blanket is an optional item for use with your spa, but the solar cover is essential for proper temperature control and efficient operation. It is highly desirable and is available from your dealer. It has been proven that a cover saves considerable energy costs.

d. **CLEANING YOUR SPA** — When spa is drained, you may want to clean it. Use a liquid cleaner that contains no abrasives. Such cleaners would be, for example: 409 Fantastic, Spa Gloss. **DO NOT** use a cleanser or hard brushes. A light detergent could be used.

e. **WINTERIZING** — In areas of the country where the temperature goes below 32 degrees, follow these steps:

Step 1. If spa is not be used, drain completely and store in garage.

Step 2. If you are going to use the spa, set in "No Freeze" mode and spa will stay warm. **DO NOT TURN UNIT OFF** as frozen water may burst plumbing.

f. **DRAINING SPA** — Do not empty spa below drain fitting or loose prime to pump because these condition will damage pump and void warranty.

(a) Turn thermostat counter clockwise to "OFF" position.

(b) Attach garden hose to outdoor hose fitting located on equipment package.

(c) Plug off skimmer with 1½" plastic plug to maintain prime when water level drops below skimmer.

(d) Press sequence button to pump mode. Water will flow out of garden hose.

(e) Watch water level! When water level is just above drain fitting, turn power off or the water pump will cavitate.

(f) Siphon out balance of water.

g. **PUMP PRIMING** — The water pump is the heart of a spa and it is essential that the pump is operated correctly to prevent serious damage to your equipment. Therefore, knowing how to prime your pump and maintain the pump prime is very important.

Pump cavitation is caused by the formation of air pockets at the inlet of the pump which in turn prevents the pump from pushing water through the power-pak. This condition can damage the pump or heater assembly. These air pockets are formed by: 1) trapped air during initial filling, 2) spa water level dropping below the skimmer and, 3) water level dropping below the suction fittings during draining (see spa maintenance section), 4) when filter is taken apart for cleaning.

When the pump is not primed, the following characteristics are present:

(a) No water jet action.

(b) Jet stream "sputters" with a "crackling" noise sound.

When these conditions occur you should refer to priming instructions.

SPA WATER CHEMISTRY

WARNING

Absolutely **DO NOT** purchase chemicals from a local pool supply store which are anything different from what we recommend. Pool supply stores are trained to treat large volumes of pool water in non-Acrylic finishes. They will try to sell you "Acid" or "PH Down" to lower the "PH" level, that could ruin your Acrylic spa finish. If your "PH" level gets too high, a safe substitute for "Acid" to lower the level is Baking Soda. Try a teaspoon full of Baking Soda, and more if needed. Still, the most effective way in many cases is to empty the spa and refill with fresh water.

NO ACID

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SPA WATER CHEMISTRY

With the purchase of your new spa or hot tub, you have made an important investment. We at Cal Spas are dedicated to helping you protect that investment. With Cal Spas proper start-up kit and Cal Spas program, you can keep your spa water looking beautiful, clean and safe.

SPA CHLORINE:

Add 1/2 ounce concentrated chlorinating granules per 500 gallons of water to the water prior to entering the spa. Wait 5 minutes then check chlorine residual. Residual chlorine must read between 2 to 3 ppm. If it does not, additional dosages of chlorine should be added until it does.

Add chlorine daily or as necessary to maintain 2 to 3 ppm residual chlorine. Frequent checks of the chlorine level should be made with a reliable test kit. Heavy bather usage or the use of oils and lotions may increase the chlorine demand.

Refer to directions on back of chlorine bottle for further instructions.

BROMINE COMPOUND: (Adjust a-Flo spa feeder)

Bromine is used in conjunction with chlorine as a more effective disinfectant in hot water temperatures. Twist cap of bromine spa feeder supplied and place automatic feeder in water. Test bromine residual frequently (every few hours). When 2 to 4 ppm is achieved, reduce setting to a low maintenance setting by twisting cap. (Arrows on top of cap will show you which way to decrease setting)

SPA DEFENDER:

Spa Defender is a stain inhibitor that prevents calcium build-up on walls and in plumbing equipment. Use Spa Defender on a day that you are not using Spa Bright & Clear as it could affect the performance of Spa Defender. **USE AT LEAST ONCE A WEEK.**

Use 2 oz. for spas up to 800 gallons and 4 oz. for those over 800 gallons (add directly to water). Allow filtration system to run for 1 hour after application. As Spa Defender begins to work, it may cloud your water temporarily. This is a normal occurrence. Please refer to back of Spa Defender bottle for further instructions.

SPA BRIGHT & CLEAR:

Spa Bright & Clear removes oil film, soap, and all suspended particles.

Use at least 2 times a week. Use 2 oz. for spas up to 800 gallons and 4 oz. for those over 800 gallons. First, turn OFF all equipment. Then turn ON air blower. Add Spa Bright & Clear directly to water. Allow air blower to run for a few minutes. Then finally, turn on filter system until spa water is clear. Please refer to back of the Spa Bright & Clear bottle for further information.

SPA FOAM DOWN:

Spa Foam Down is an anti-foaming agent. Simply add 3 caps full of Foam Down directly to foamy area. Use as often as needed.

SPA METAL GON:

Spa Metal Gon prevents metal build-ups from staining your spa finish. Use entire contents of the bottle provided. First, turn OFF all equipment. Then pour Spa Metal Gon around edge of water line. Then run filter for at least 30 minutes. Good to use when filling spa for the first time or when refilling.

A Chlorine and Bromine test kit has been included in your start-up kit from Cal Spas. Follow directions provided in kit to accurately determine chlorine and bromine levels. Use test kit often to help maintain proper water chemistry.

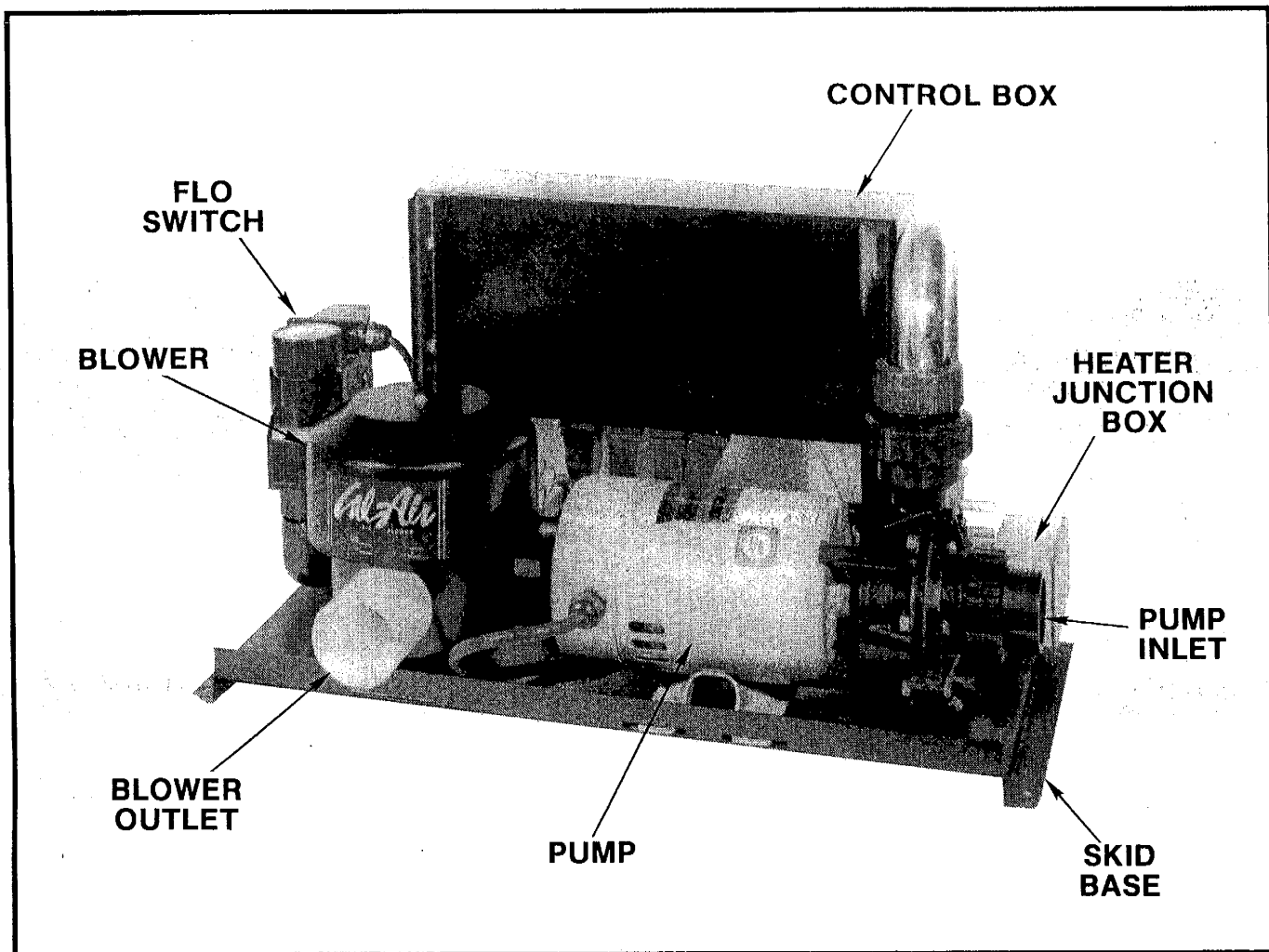
NOTE: We recommend you drain your spa every 3 months, polish and refill with clean water. This too will aide in maintaining proper water chemistry.

WARNING

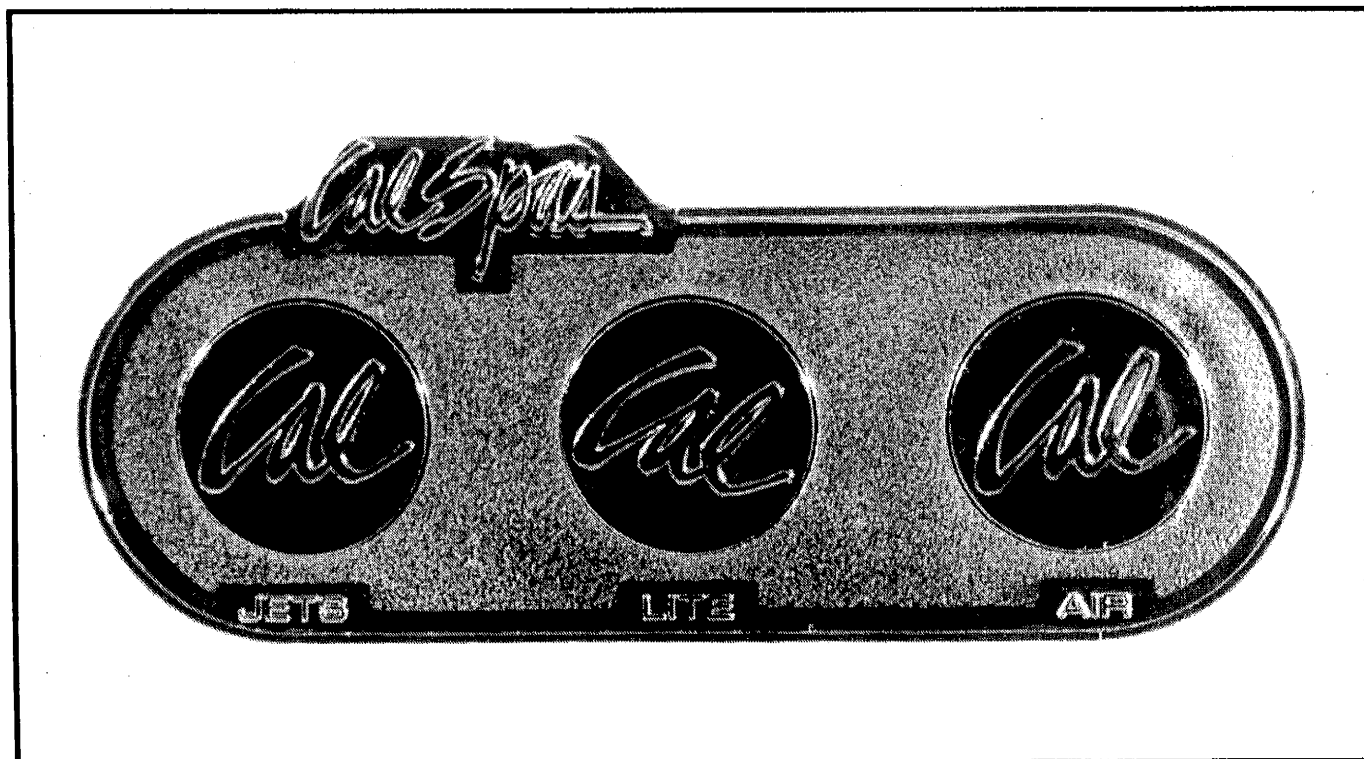
Do Not Exceed 104°

Excessive Temperature Voids Warranty

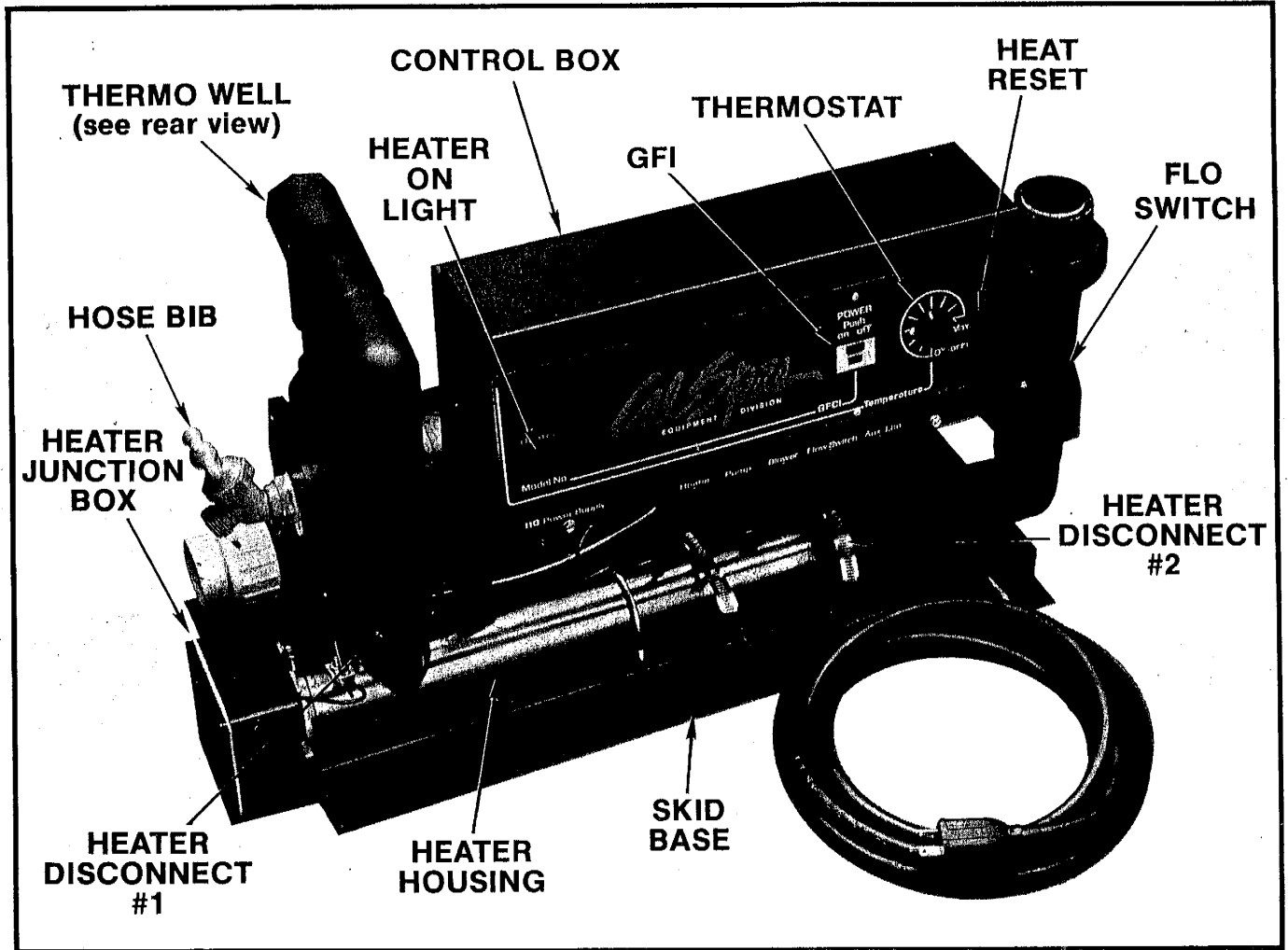
BACK OF SKID PACK (110 or 220 volt)



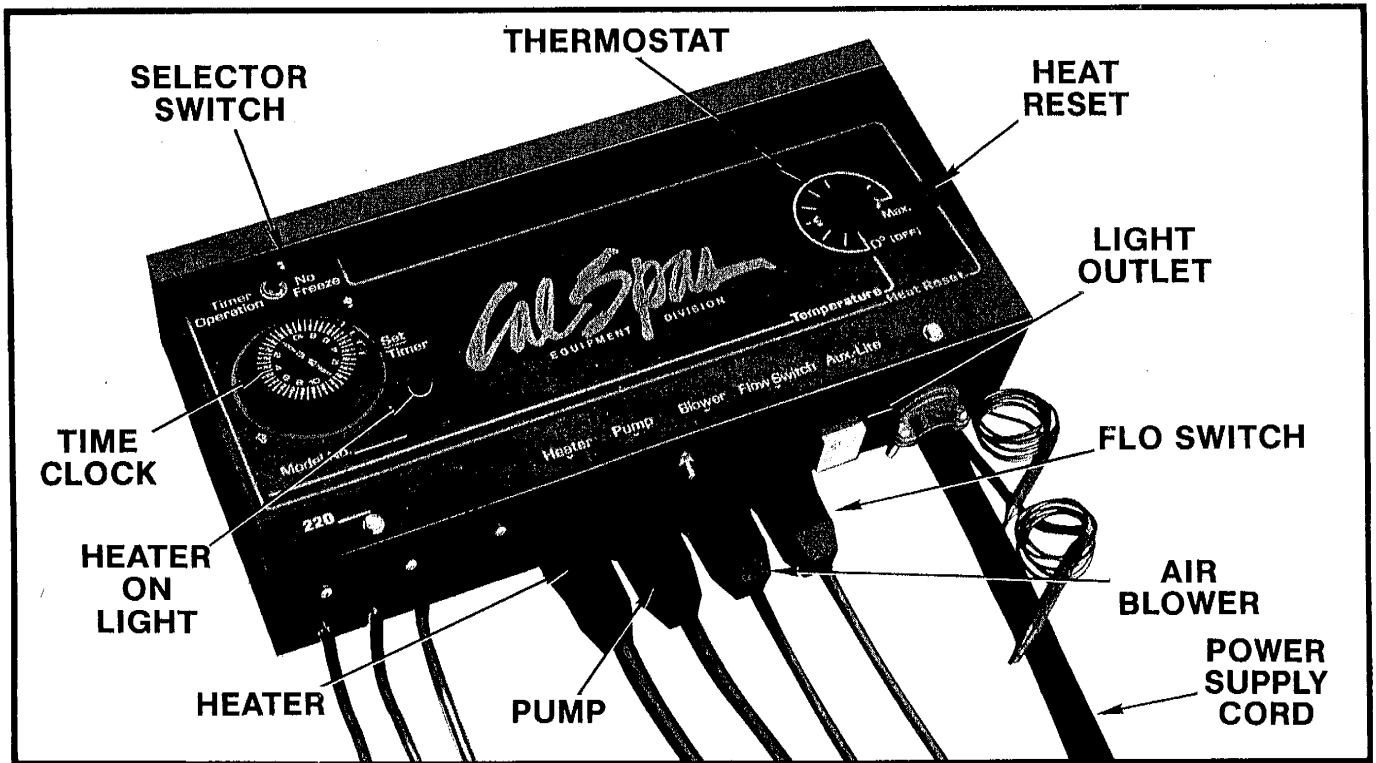
SPA SIDE CONTROL



SKID PACK (w/110 volt Control Box)



220 VOLT CONTROL BOX



SPA PRE-OPERATION

- Step 1. DO NOT plug in 110 volt power cord. For 220VAC system, make sure branch breakers are OFF.
- Step 2. Make sure **ALL** electrical power to equipment is in the OFF position.
- Step 3. Make sure thermostat is rotated counter-clockwise to the OFF position.
- Step 4. Make sure the two 1-1/2 gate valves (located at the inlet and outlet are in the OPEN position, lift up on T handle.
- Step 5. Make sure drain (hose—bib) valve is tightly closed.
- Step 6. Fill spa with water to center of skimmer — DO NOT permit water line to drop below skimmer at anytime
- Step 7. Wait approximately 15 minutes and:
- Step 8. Inspect spa water connections and spa perimeter for any leaks or puddles of water. If there are any leaks, and you have checked all unions and connections, call service for repair if the leak cannot be readily corrected, i.e.; connections, etc.
- Step 9. Open Air Relief Valve (located at top of filter) to allow air out of piping system. When water begins to flow, close Air Relief Valve. This process may need to be repeated if there is no water flow during power operation.

SPA POWER OPERATION:

- Step 1. Plug power cord into 110VAC power receptacle. Make sure the branch main breaker is ON for 110VAC or 220VAC systems.
- Step 2. Make certain GFCI "reset" button on control panel is pushed in. (110V system only)
- Step 3. Press air switch button labeled (jets) operate for 1 minute minimum. When the jets are noted to have a full steady jet stream, then the system is ready. If no jet flow after 1 minute, repeat (priming) - try again.
- Step 4. Press "test" button on GFI — this shuts off the system. Reset button to operate. (110V system only)
- Step 5. Press jet air switch button to 1st mode (**ALL-OFF**).
- Step 6. Turn thermostat clockwise to the desired setting. The pump (LO) and heater will turn on, and the spa will begin to heat. (exception time clock 220)
NOTE: Heater operates when pump is on low speed only for 110V system only. 220V system heater is on demand for **all** modes. (exception time clock 220)
- Step 7. **Cover spa** and the spa will maintain the preset temperature continuously, 24 hours per day, when pump is left on low speed.

NOTES

Portable spas must have covers to heat
110 Volt spas heat 2° - 3° per hour with cover.
220 Volt spas heat 5° - 7° per hour with cover.

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FILTER MAINTENANCE:

Your spa cartridge filter utilizes a reusable single element, reinforced polyester filter cartridge to provide a high degree of water clarity with minimum care. It is designed for in-line piping systems and may be used with a wide range of pumps and flow rates.

If calcium or mineral deposits are excessive, the cartridge may be restored to "like new" condition by soaking in muriatic acid. Use commercially available 20% muriatic acid added to water in 1 to 1 ratio. Use a plastic container and take extreme care when handling cleaning agents as they can be harmful to eyes, skin and clothing. After cleaning, flush with water.

A spare "standby" cartridge filter element is an excellent investment. It provides convenience and assures that your filter will always be ready to operate at peak efficiency.

WINTERIZING FILTER:

In areas where sub-freezing temperatures can be expected, the filter should be drained, and/or removed from its operating location and stored indoors. Remove and clean cartridge and store with filter housing in a secure place.

CAL SPAS HIGH FLO 50 FILTER

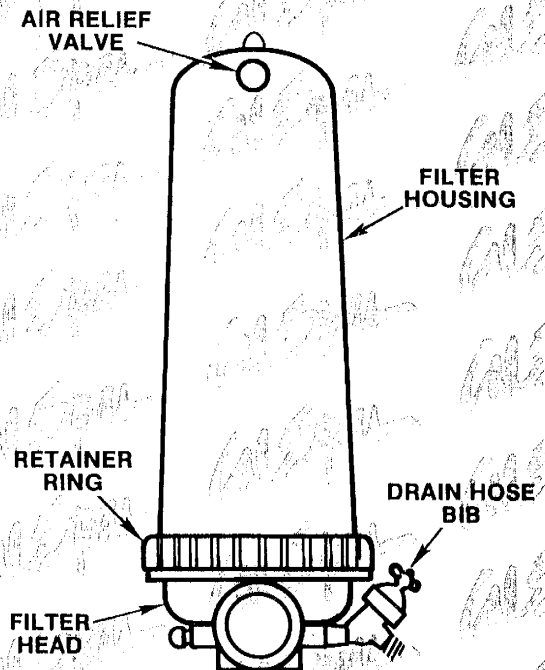
OPERATING INSTRUCTIONS

STARTING FILTER

1. Close filter drain; be sure filter housing is securely in place.
2. Open suction and discharge valves. Prime filter with air relief.

CLEANING FILTER

1. Turn off pump. If below water level, close valves to prevent backflow.
2. Open drain valve and allow water to drain from filter (optional).
3. Unscrew retainer ring and remove filter housing.
4. Remove cartridge and clean with a high pressure garden hose.
5. Clean O-ring. Apply a very light film of vaseline to all O-rings and threads.
6. Reinstall cartridge in filter housing with o-ring in place.
7. Screw retainer ring into filter head. Do not over tighten. Close the drain valve.



Filter Size	50 sq. ft.
Filter Area	50 sq. ft.
Working Pressure	50 lbs.
Automatic Bypass Replacement Cartridge	(H) F50

NOTE: DO NOT overtighten retaining rings or connections.

FILTER MAINTENANCE (Continued)

PLUMBING:

Plumbing connections are 1½" N.P.T. When making connections, use *plastic* adapters. Apply three turns of Teflon tape or plastic pipe sealant to the male threads. Screw the fitting into the thread hand tight; then using a wrench, tighten one more full turn. Additional tightening is unnecessary and could result in damage to the components. Be sure to properly support pipe connections.

The Micro filter features an automatic by-pass orifice for use on spa systems. The by-pass allows for greater flow rates through the filter and system. To use by-pass — remove plug inside filter body.

BEFORE STARTING THE FILTER:

Chlorinate the water by adding diluted unstablized granular or liquid chlorine. Stabilized forms of chlorine are recommended for normal daily use *after* the initial clean-up of the water. Follow dealer and chemical manufacturer's recommendations for chlorination and normal daily use. **DO NOT USE TRI-CHLOR OR ALGECIDE SOLUTION.**

STARTING THE FILTER:

Be sure filter drain valve and air relief valve are closed. Open the suction and return valves (when used). Be sure filter knob is secure (hand-tight).

Prime and start the pump following the manufacturer's instructions. Air trapped in the system will automatically vent to the pool.

FILTERING:

Filtration starts as soon as flow is steady through the filter. As the filter cartridge removes the dirt from the pool water, the accumulated dirt causes a resistance to flow. As a result, the flow will decrease. When flow decreases below desired rate, clean or replace the filter cartridge.

CLEAN/REPLACE CARTRIDGE:

Removing Cartridge Element

1. Shut off the pump.
2. If filter is located below water level, close valves (or block off suction and discharge lines) to prevent back-flow of water from pool.
3. Open top air relief valve, and bottom drain valve to allow water to drain from filter.
4. Hold filter knob firmly and unscrew. Then remove dome.
5. Remove cartridge element and clean. Or, replace with clean, spare cartridge. (See Cleaning Cartridge).

Reinstalling Cartridge Element

1. Clean any collected debris from the bottom of the filter housing.
2. Reinstall cartridge in filter housing. Be sure O-ring is in place on threads.
3. Clean O-ring. For ease of future disassembly, apply a very light film of Vaseline or lubricant to O-ring and threads on lower part of filter.
4. Screw top knob onto filter head. Do not overtighten. Tighten drain valve and top air relief valve.

Cleaning Cartridges:

The cartridge filter element can be cleaned by pressure washing inside and out with a garden hose. Rotate cartridge, hosing from top down. (The cartridge is easier to clean when dry.) After hosing the cartridge, for best results, allow cartridge to dry and carefully brush pleated surface areas to remove fine particles.

Algae, suntan oil and body oils can form a coating on the cartridge pleats which may not be thoroughly removed by hosing. To remove such materials, soak the cartridge in a solution of filter element cleaner (various brands available at pool dealer). Follow manufacturer's directions for use and allow an hour for soaking. Hose thoroughly before re-installing in filter.

ELECTRICAL COMPONENT MAINTENANCE:

THERMOSTAT:

Allows you to select and maintain desired temperature. Rotating dial clockwise increases temperature setting; counterclockwise decreases temperature. Maximum temperature setting is 106°F, with a design tolerance of +, or - 3°F. For safety purposes do not allow water temperature to exceed 104°F maximum. A cause for temperatures varying could be the result from the temperature sensing bulbs slipping out of the bulb holders in the heater pipe manifold. (See troubleshooting guide)

HI-LIMIT SWITCH:

A protection switch to prevent system damage in event of excessive heat build-up. Excess heat build-up is usually caused by sensing bulb for thermostat receiving false reading, caused by sensing bulb slipping out of holder tube in heater pipe manifold. Another cause of excessive heat build-up is operating the heater without adequate water flow to dissipate heat through the piping system. If the High-Limit switch "trips", power to heater will shut off until heater has cooled below shut-off temperature. The cool-down time is 15-30 minutes after which the system will automatically turn the heater on except in models that employ a manual reset Hi-Limit switch.

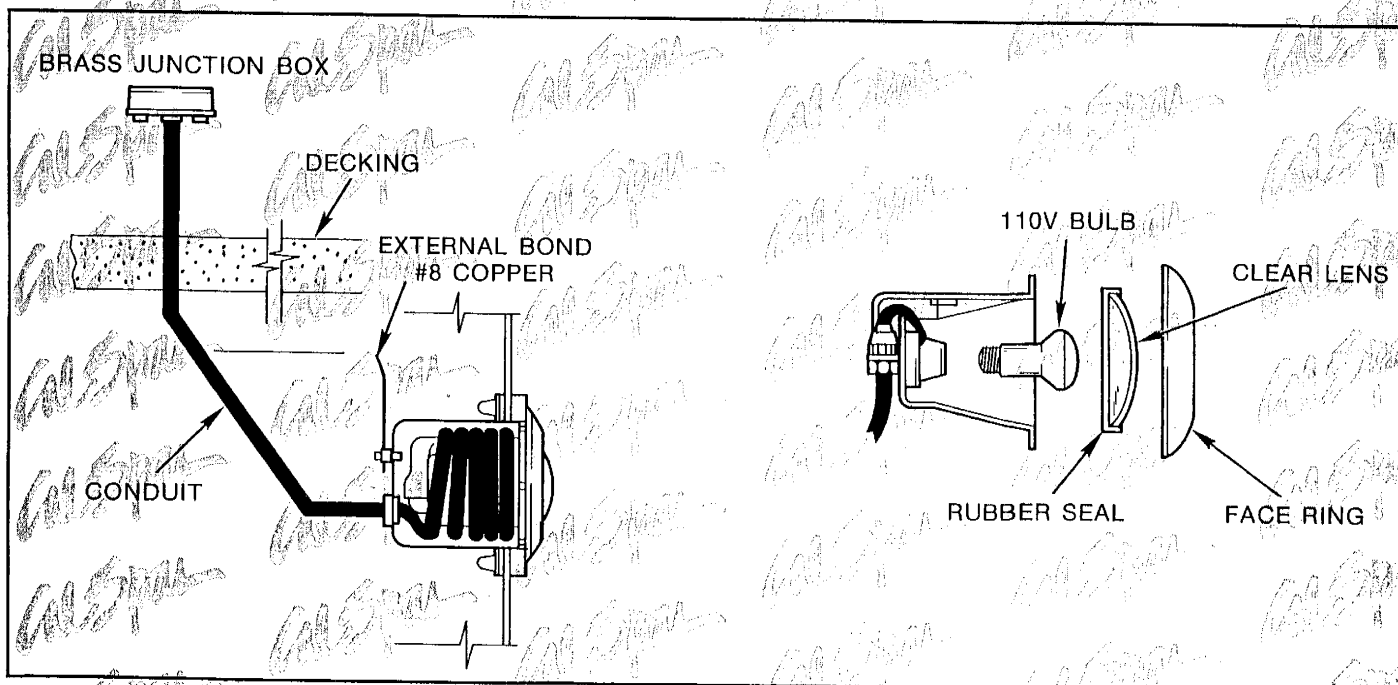
AIR BLOWER REMOVAL:

- Step 1. To avoid shock hazard, disconnect main power supply from spa outlet being serviced.
- Step 2. Disconnect electrical cord.
- Step 3. To remove Air Blower from system, loosen the quick disconnect fitting and unfasten screws from metal skid.

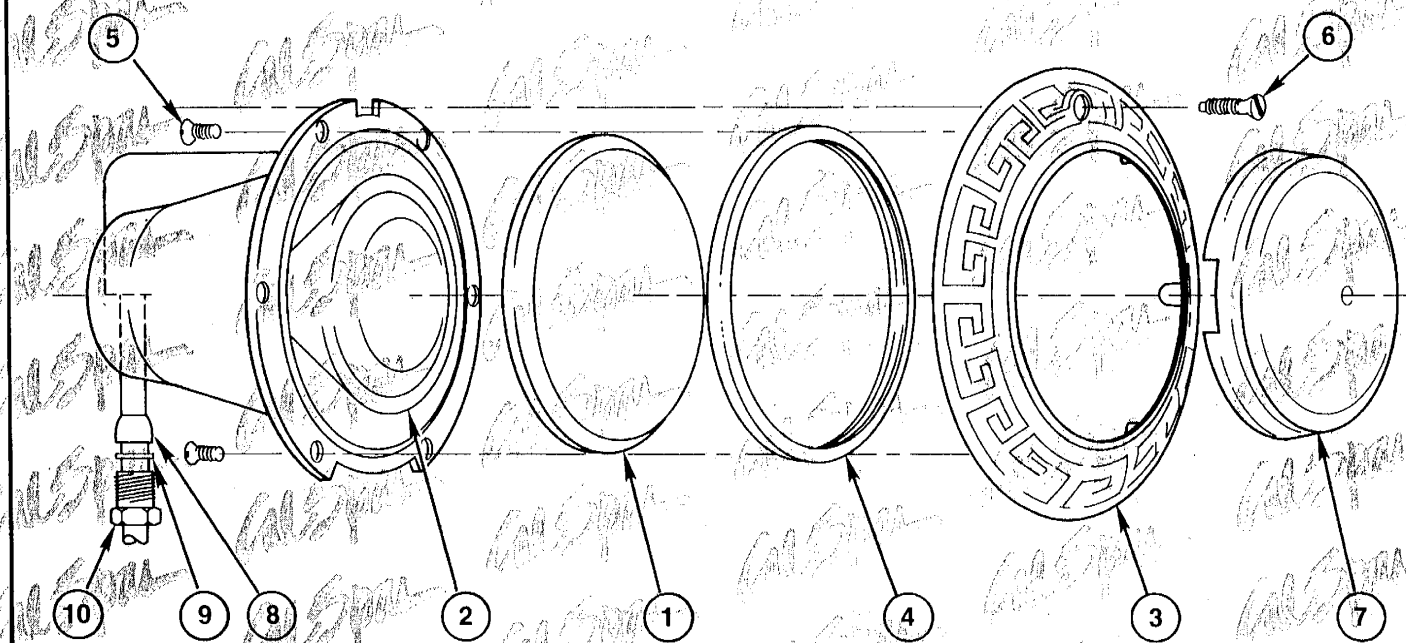
LIGHT AND REPLACEMENT:

The light, incorporated in some spas, is located under the skirt (Cal-Spa above ground light). The light is secured to a high temperature plastic plate which is threaded into a lens assembly. The light (12 volt) is actuated by an on/off switch mounted at the top of the spa. To replace the light, make sure you turn the branch breaker power OFF and then unfasten the light back plate. The bulb is replaceable and can be purchased at your local spa dealer or any motor (RV) supply outlet.

For installation of your inground light, follow owner's manual which is included in a box together with the light. Installation must be made by a qualified electrician. NOTE: A ground fault interrupter is required.



INGROUND SPA LITE UNIT

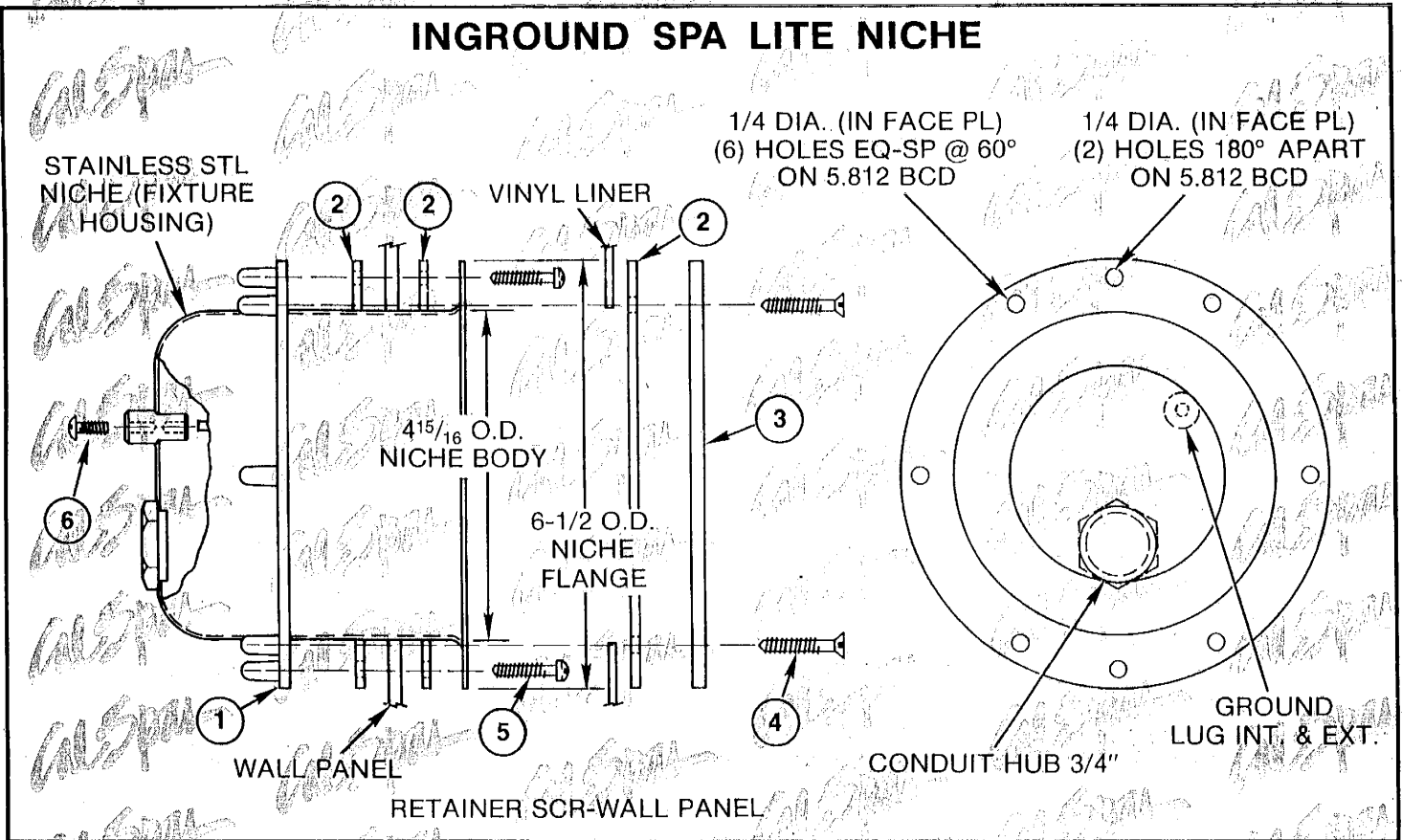


1. Lens, clear, 4" diameter, tempered
2. Floodlamp, medium base, 100 watt, 120 volt
2. Floodlamp, medium base, 100 watt, 12 volt
3. Face ring, brass-chrome
4. Gasket for 4" diameter lens
5. Screw, stainless steel 10-24 X 1/2" (6 required)
6. Pilot screw captive gum washer
7. Kwik-change color lens, red
7. Kwik-change color lens, blue
8. Grommet, 1/2"
9. Friction ring, 1/2"
10. Compression plug

WARNING

Do Not Exceed 104°
Excessive Temperature Voids Warranty

INGROUND SPA LITE NICHE



DESCRIPTION

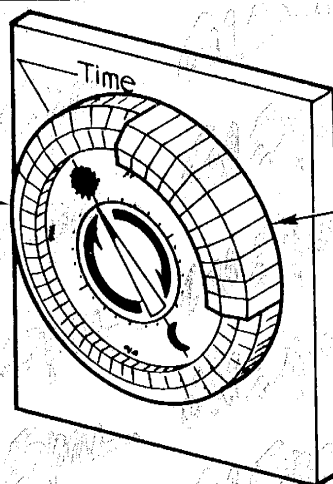
1. Back-up ring, brass, for #782434 niche
2. Gasket, each, for #782434 niche (3 required)
3. Sealing ring, brass-chrome for #782434 niche
4. Sealing screw, each, 10-24 X 1-1/8" flat head, stainless steel for #782434 niche (6 required)
Mounting ring, brass
Screw kit, spa brite niche
5. Screw, retainer, fillister head, 12-24 X 3/4"
6. Screw, grounding 10-24 X 1/2"

NO ACID

Tri-Chlor or Algecide Solutions
They Ruin Acrylic Spas

TIME CLOCK

KEYS LEFT IN WILL TURN SPA OFF



KEYS PULLED OUT WILL TURN SPA ON

TO SET TIMER

- a. Simply pull out on blue keys to set time you desire your spa to run. (Each key is equivalent to 1/2 hour).
- b. Keys left pushed in will turn spa off.
- c. Turn dial clockwise to set the time of day.
- d. Your spa will be filtered and heated daily, to temperature set on thermostat, for the programmed time.

NOTES

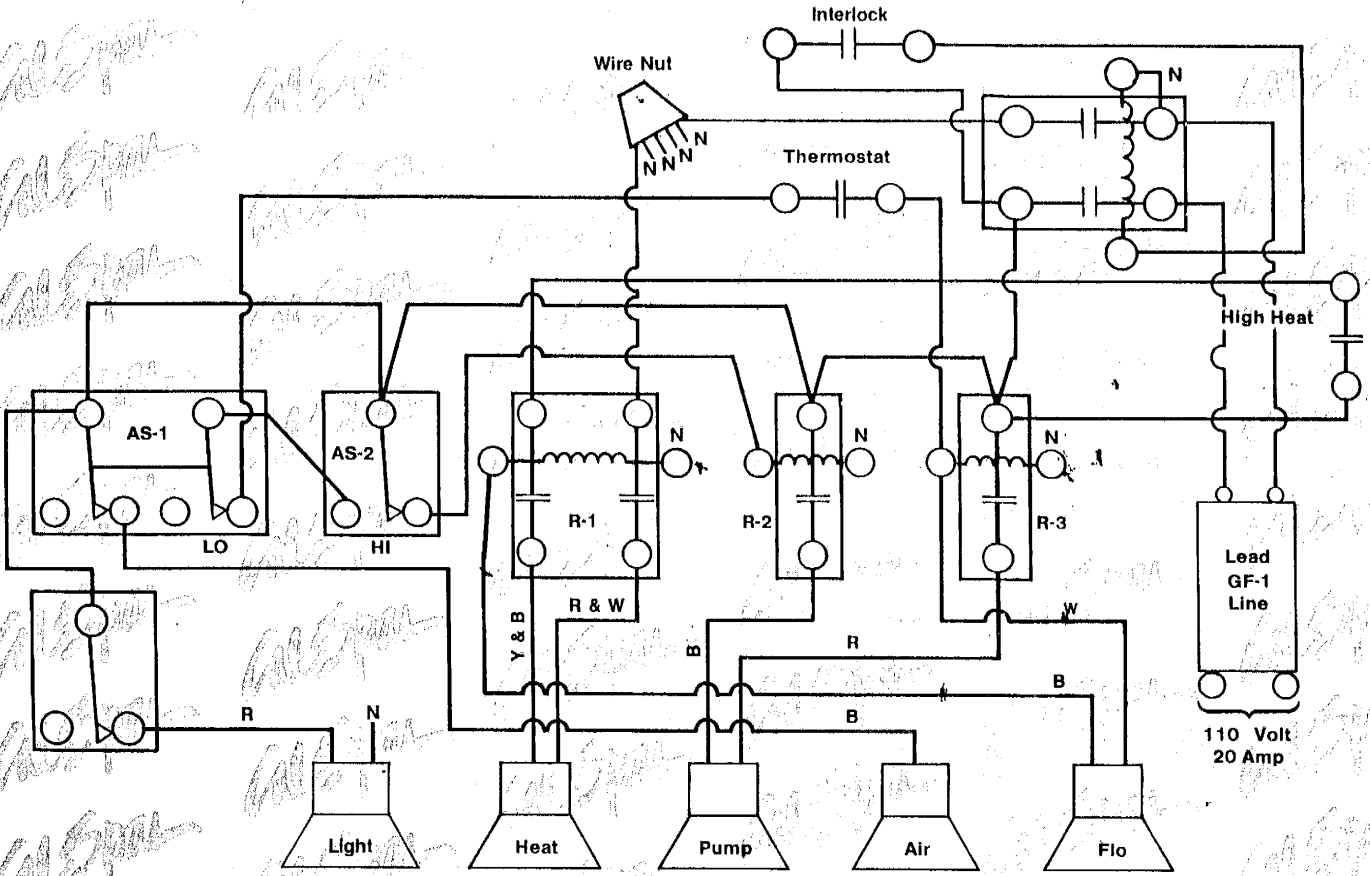
Your time clock controlled units are equipped with a SELECTOR SWITCH located above timer dial.

TIMER OPERATION — The time clock will turn low speed pump on or off at times selected by user. This is when the spa water is filtered and heated. (NOTE: Water will heat to temperature set on thermostat, provided running time is adequate). Unit heats 5° to 7° per hour.

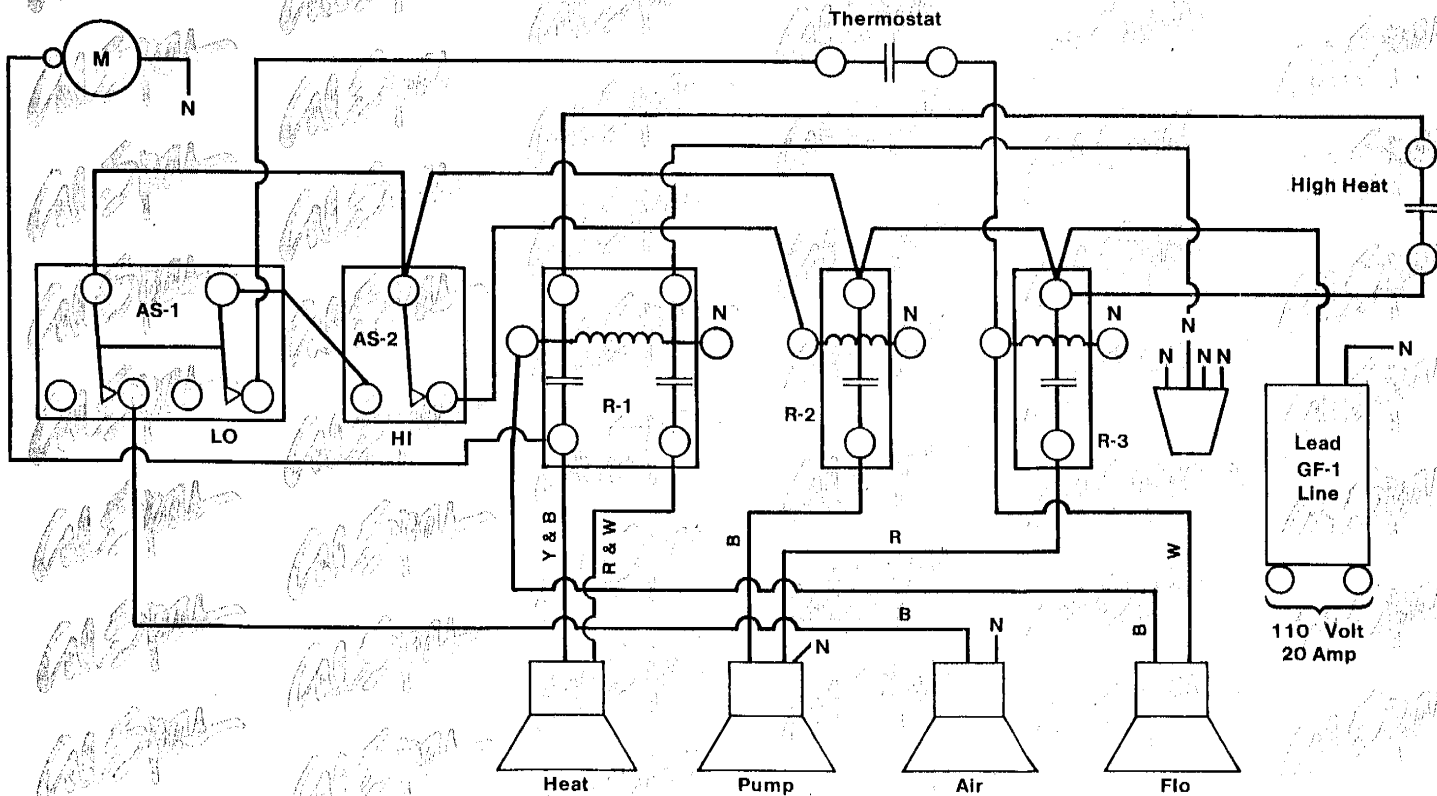
NO FREEZE (automatic) — this mode is thermostatically controlled and will automatically turn on or off to maintain temperature set on thermostat.

For ease of operation, use the NO FREEZE (automatic) during the initial starting and heating of your spa. NO FREEZE (freeze protection) is the same as automatic with a lower temperature setting.

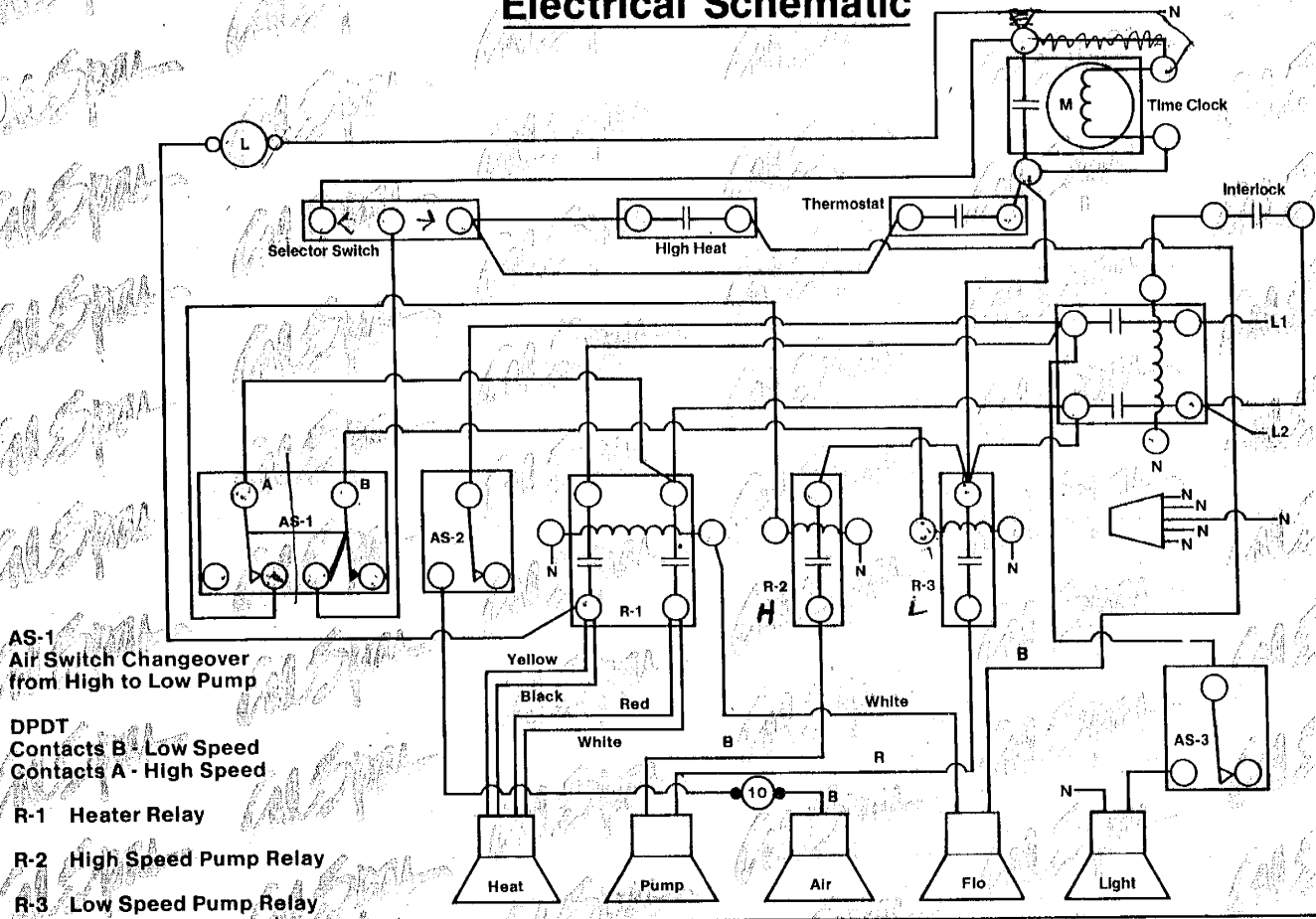
110 Volt U.R. Electrical Schematic



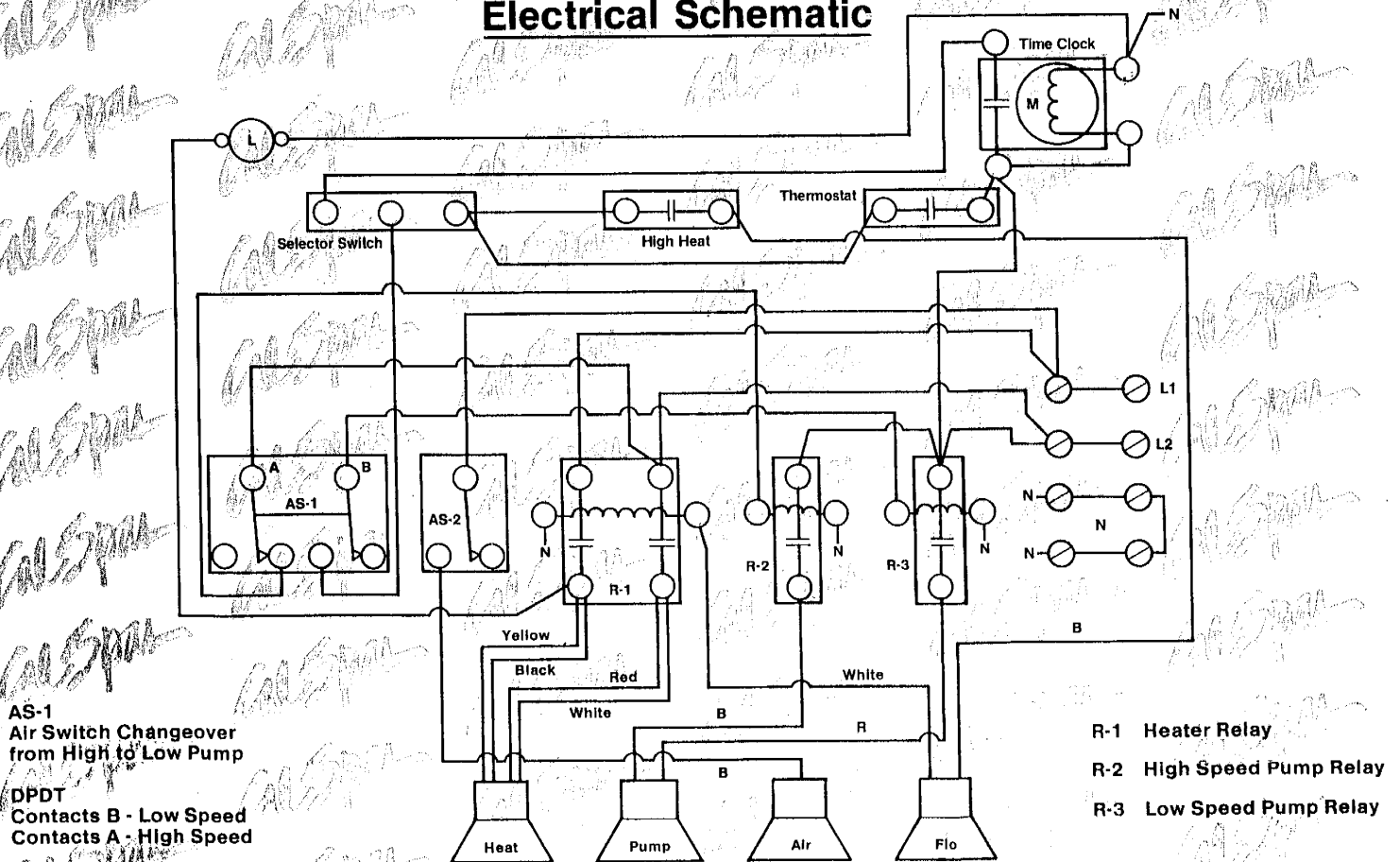
110 Volt U.L. Electrical Schematic



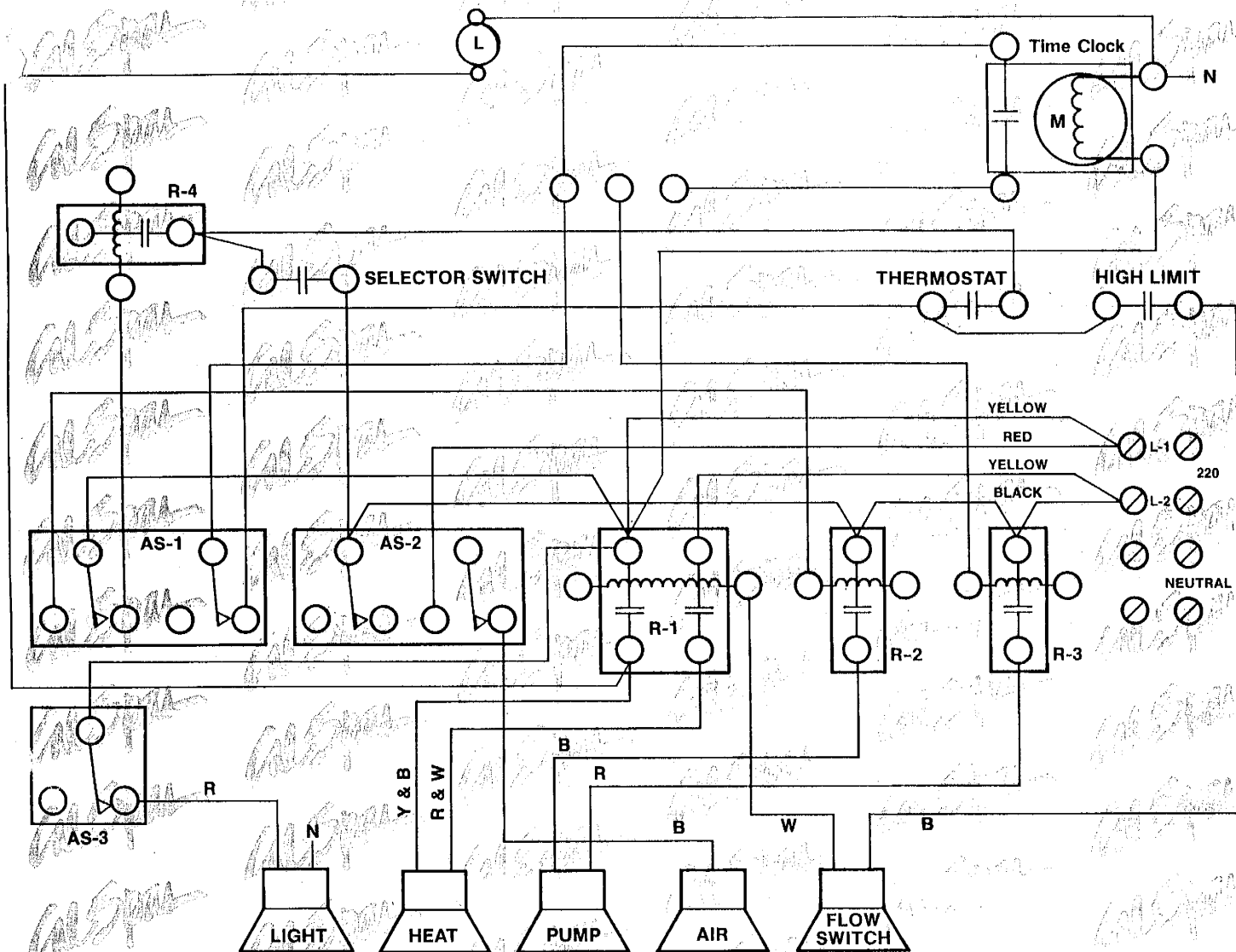
220 Volt U.R. Electrical Schematic



220 Volt U.L. Electrical Schematic



110 Volt/220 Volt Convertible Electrical Schematic



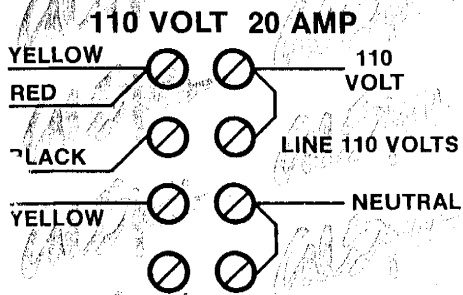
TO CHANGE UNITS FROM 220 VOLTS TO 110 VOLT OPERATION:

1. Remove 220 volt power cord.
2. Install #12 AWG 3 conductor cord with G.F.I.
 - A. Connect hot wire (black) to #1 and jumper to #2.
 - B. Connect white wire to #3.

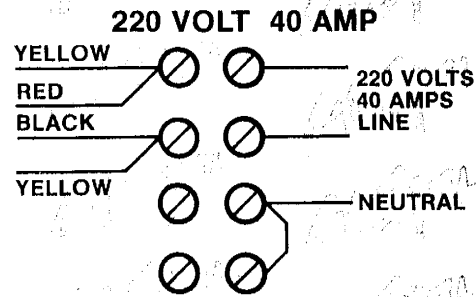
Important: Move yellow wire from #2 to #3 on terminal block. Move selector switch to 110 volt position.

110 VOLT OPERATION REQUIRES:
 20 AMP BREAKER
 #12 COPPER WIRE
 1 #12 - BLACK
 1 #12 - WHITE
 1 #12 - GREEN
 GECI REQUIRED

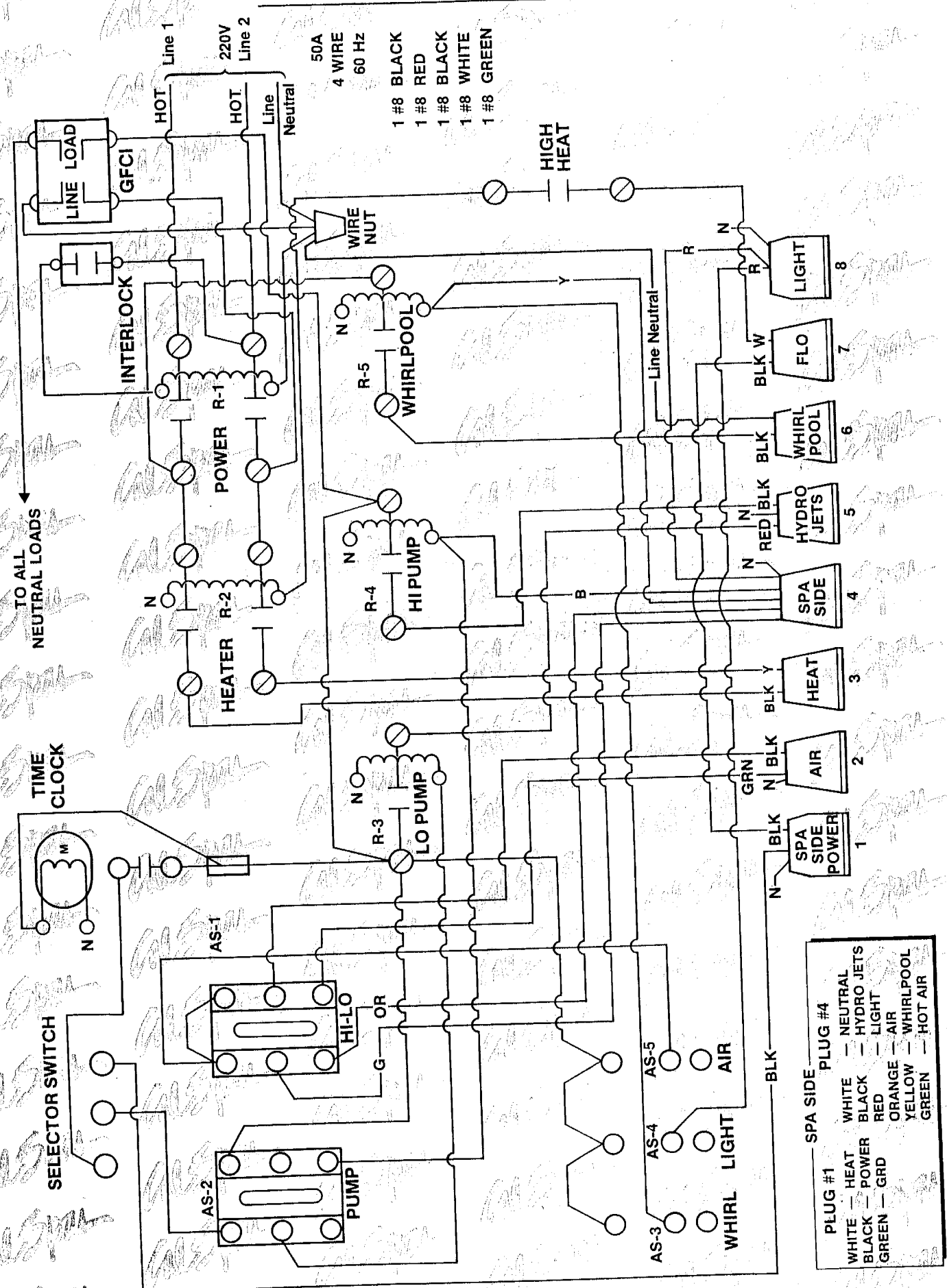
220 VOLT OPERATION REQUIRES:
 40 AMP BREAKER
 #8 COPPER WIRE
 1 #8 - BLACK
 1 #8 - RED
 1 #8 - WHITE
 1 #8 - GREEN



WARNING
 UNIT MUST BE BONDED
 #8 BARE COPPER WIRE



220 Volt - California Classic Electrical Schematic



50A
4 WIRE
60 Hz
1 #8 BLACK
1 #8 RED
1 #8 BLACK
1 #8 WHITE
1 #8 GREEN

TO ALL NEUTRAL LOADS

TIME CLOCK

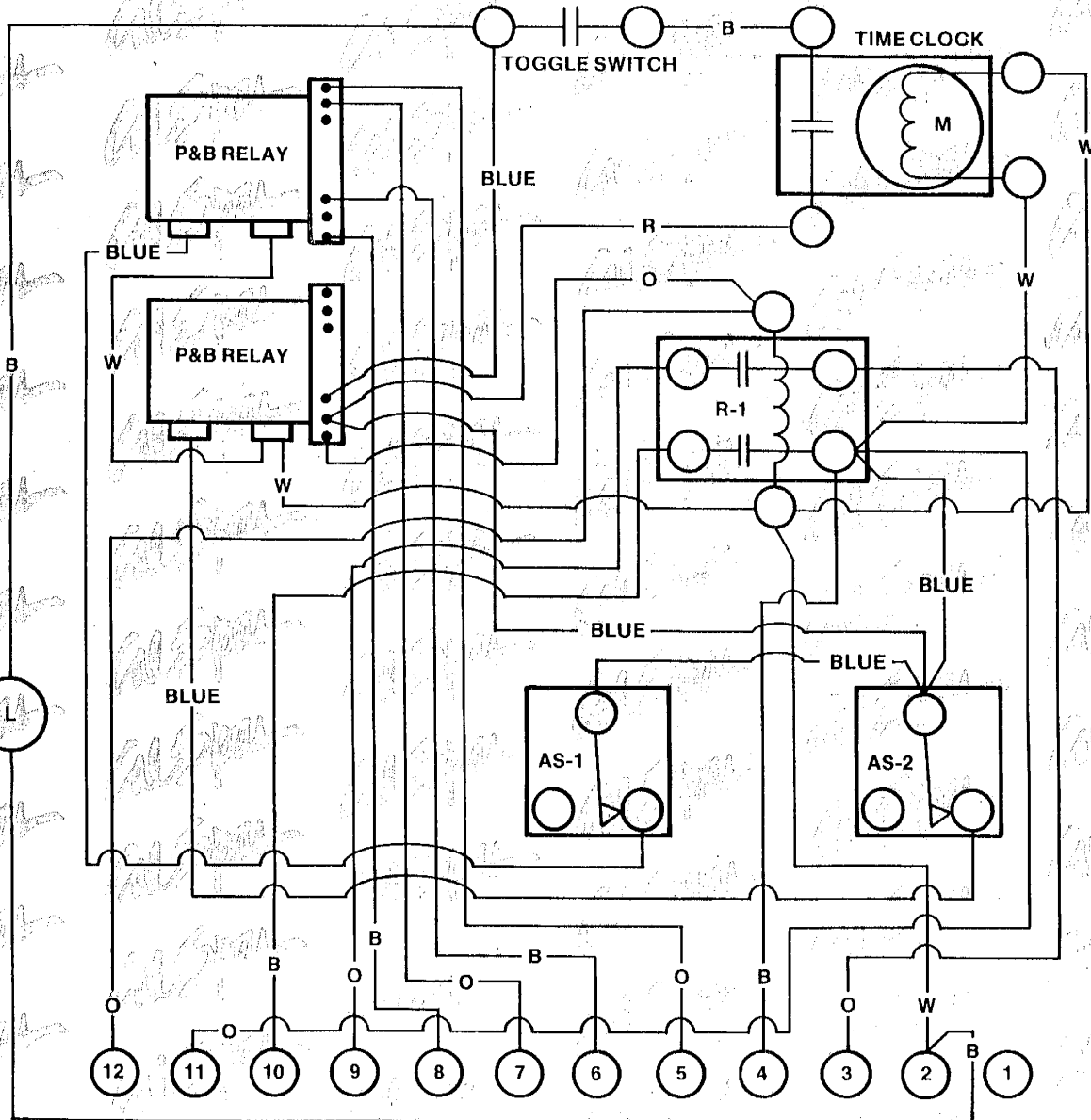
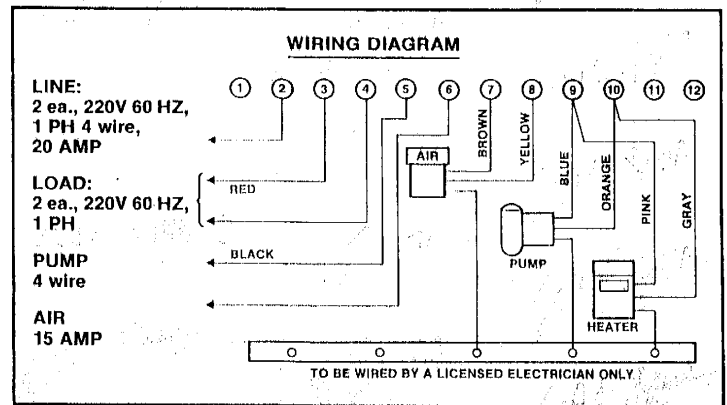
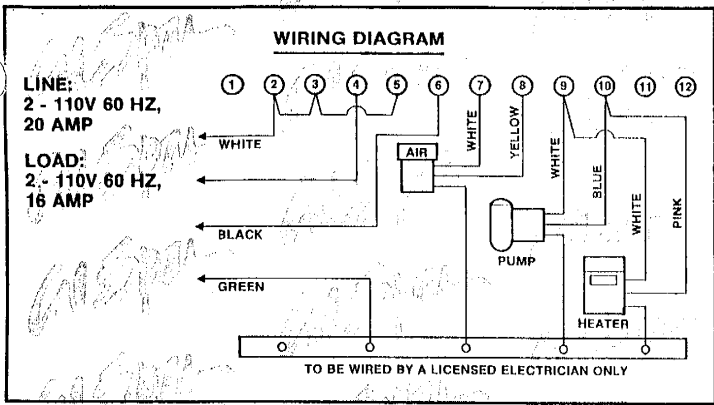
SELECTOR SWITCH

PLUG #1		PLUG #4	
WHITE	HEAT	WHITE	NEUTRAL
BLACK	POWER	BLACK	HYDRO JETS
GREEN	GRD	RED	LIGHT
		ORANGE	AIR
		YELLOW	WHIRLPOOL
		GREEN	HOT AIR

Gas Paks

CTC-221 110 Volt U.L.

CTC-221 220 Volt U.L.



CTC-221 110V
LINE: 2-110 Volt
 60 HZ 20 Amp Circuits
LOAD: 2-110 Volt
 60 HZ 16 Amp Circuits

CTC-221 220V
LINE: 2 each 220 Volt
 60 HZ 1 PH
 4 Wire 20 Amp Circuit
LOAD: 2 each 220 Volt
 60 HZ 1 PH
 4 Wire 15 Amp Circuit

**SPECIAL INSTRUCTIONS
FOR
110/220 CONVERTIBLE WITH TIME CLOCKS**

1. WHEN UNIT IS WIRED FOR 110 VOLTS

- A. The GFCI is located on the end of the power cord. Follow test procedure indicated by the manufacturer.
- B. Initial heat up. Set selector switch to no-freeze and set thermostat 1 notch from maximum, and cover. 110V spas will not heat without adequate spa cover.

2. FOR UNITS WIRED 220 VOLTS.

- A. The conversion from 110V to 220V must be done by a qualified electrician.
- B. The 110V GFCI must be removed.
- C. The unit must be hard wired with #8 wire copper conductors only, 40 amp 4 wire conduit.
- D. 2 Hots
1 Ground
1 Neutral
- E. The unit must be bonded with #8 bare copper wire.

3. ADVANTAGES OF A 220 VOLT SYSTEM.

- A. Heats 4 times faster.
- B. Heats in all modes.
- C. Will maintain heat while in use.

WARNING

Do Not Exceed 104°
Excessive Temperature Voids Warranty

THERAPEUTIC POOLS (SPAS)—SAFETY RULES:

Therapeutic pools or "spa" pools are usually piped and controlled so that very warm or hot water, often with air injection, is forced at high velocity into a confined area of a swimming pool or into a small separate pool. Both the energy of the water and the heat furnish certain hydro-therapeutic benefits. These pools are excellent for relaxation, body-conditioning and for arthritic and rheumatic problems, but can be hazardous. The Consumer Product Safety Commission has recommended the following "Safety Rules for Hot Tubs":

1. Spa or hot tub water temperature should never exceed 104°F (40°C). A temperature of 100°F (38°C) is considered safe for a healthy adult. Special caution is suggested for young children.
2. Drinking of alcoholic beverages before or during spa or hot tub use can cause drowsiness which could lead to unconsciousness and subsequently result in drowning.
3. Pregnant women beware! Soaking in water above 102°F (39°C) can cause fetal damage during the first three months of pregnancy (resulting in the birth of a brain-damaged or deformed child). Pregnant women should stick to the 100°F (38°C) maximum rule.
4. Before entering the spa or hot tub, users should check the water temperature with an accurate thermometer; spa or hot tub thermostats may err in regulating water temperatures by as much as four degrees Fahrenheit (2.2°C).
5. Persons with medical history of heart disease, circulatory problems, diabetes or blood pressure problems should obtain their physician's advice before using spas or hot tubs.
6. Persons taking medications which induce drowsiness, such as tranquilizers, antihistamines or anti-coagulants, should not use spas or hot tubs.

NO ACID

Tri-Chlor or Algecide Solutions
They Ruin Acrylic Spas

SPECIFICATIONS

MODEL — 110 VOLT

Component	Voltage	Pump	
		(HI)	(LOW)
Heater 1.5 KW	115V	—	12.0
Air Blower (1½ HP)	115V	6.5	—
Pump (¾ HP — 2-speed)	115V	(HI) 8.8	(LO) 2.4
Total Amps		15.3	14.4

Spa Specifications:

Power Service	20 Amp (115V)
Power Operating	16 Amp (115V)
Power Connection	115V Flex cord-plug-in
Power Protection	GFI built-in
Temperature Range	70°F — 110°F
Temperature Operate	100°F — 103°F
Recovery Rate	2-3° per hour (approx.)
Filtration	25 sq. ft. filter
Standby Usage	5-10 KW/hr. per day (approx.)
Operate Usage	6-8 KW/hr. per day (approx.)

Wiring: 3 #10 wires

Black Wire —	Hot
White Wire —	Neutral
Green Wire —	Ground

MODEL — 220 VOLT

Component	Voltage	Pump		
		(HI)	L2	(LOW)
Heater 5.5 KW	220V	L1 21.0	L2 21.0	Amp 21.0
Air Blower (1½ HP)	115V	—	6.5	—
Pump (1 HP — 2-speed)	115V	(HI) 11.0	—	(LO) 2.6
Total Amps		32.0	27.5	23.6

Spa Specifications:

Power Service	40 Amp (220V)
Power Operating	32 Amp (220V)
Power Connection	220V hard conduit
Power Protection	40 amp breaker
Temperature Range	70°F — 110°F
Temperature Operate	100°F — 103°F
Recovery Rate	5-10° per hour (approx.)
Filtration	25 sq. ft. filter
Standby Usage	5-10 KW/hr. per day (approx.)
Operate Usage	6-8 KW/hr. per day (approx.)

Wiring: 4 #8 wires

Red Wire —	Hot
Black Wire —	Hot
White Wire —	Neutral
Green Wire —	Ground

TROUBLESHOOTING GUIDE — AIR BLOWER ASSEMBLY

SYMPTOMS

PROBABLE CAUSE

RECOMMENDED ACTION

Air Blower will not operate.

Improper setting of air button control switches.

Air button sequencer is on air position.

Blower not plugged in.

Plug Blower in.

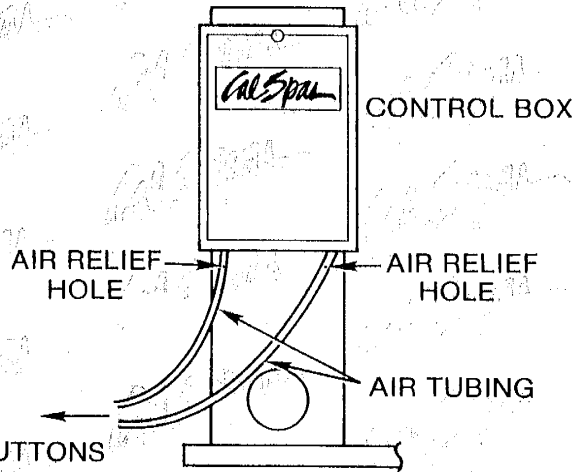
Air tubing disconnected.

Connect air tubing.

For Gas Paks Only:

NOTE: Air lines require small relief holes to keep pressure from building in air lines which could cause equipment to stay on or come on by itself. To correct this, puncture air lines with a hot safety pin where noted in diagram.

Simple solutions to small problems as this can and should be learned by owner as this will be considered a maintenance call and not a warranty call. A trip charge could result if the service department is called out on this account.



Air supply low.

Improper line voltage.

Have electrician check line voltage.

Leak in air line.

Check for air leak at coupler and fittings. Correct accordingly.

TROUBLESHOOTING GUIDE—PUMP ASSEMBLY

SYMPTOMS

PROBABLE CAUSE

RECOMMENDED ACTION

Pump will not prime.

No water in pump.

Make sure water level in spa is midway in skimmer mouth.

Air lock.

Bleed off air at Air Relief Valve.

Closed valves or blocked lines.

Open all valves (2) in system.

Motor does not run.

No power to motor.

Check all power switches and circuit breakers. Check motor wiring at terminals.

Not plugged in.

Plug in pump.

Pump jammed from foreign matter in impeller.

Call Cal Spas for recommended action.

Pump ran dry.

Call Cal Spas for recommended action.

Low water flow.

Dirty filter.

Remove filter cartridge and clean.

Closed valves or blocked lines.

(See above under "Pump will not prime")

Low voltage or incorrect voltage.

Wiring to be corrected by licensed electrician.

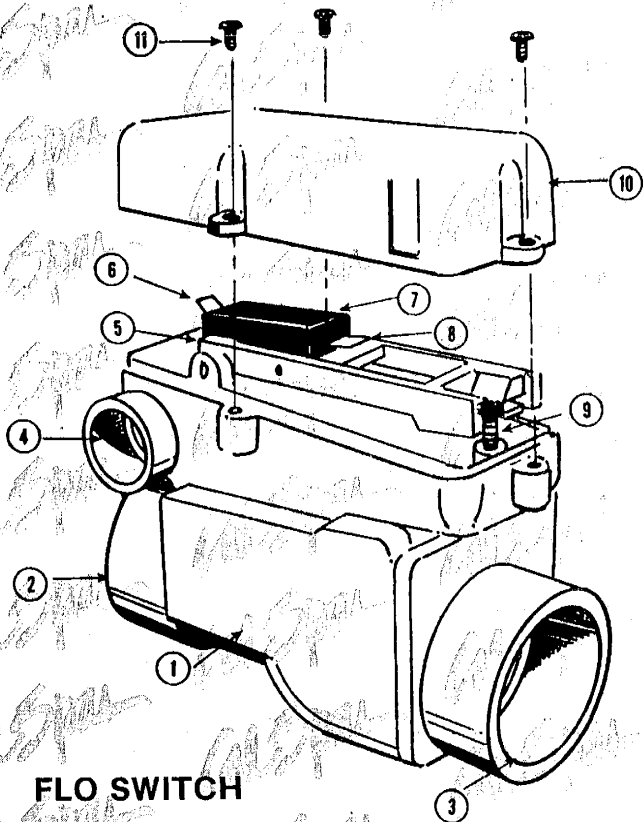
Motor runs hot. These motors will feel hot to the touch. This is normal. The internal overload protector will turn the motor off if there is an overload or high temperature problem. Excessive heat can be caused by:

Poor ventilation.

Do not tightly cover or enclose pump motor.

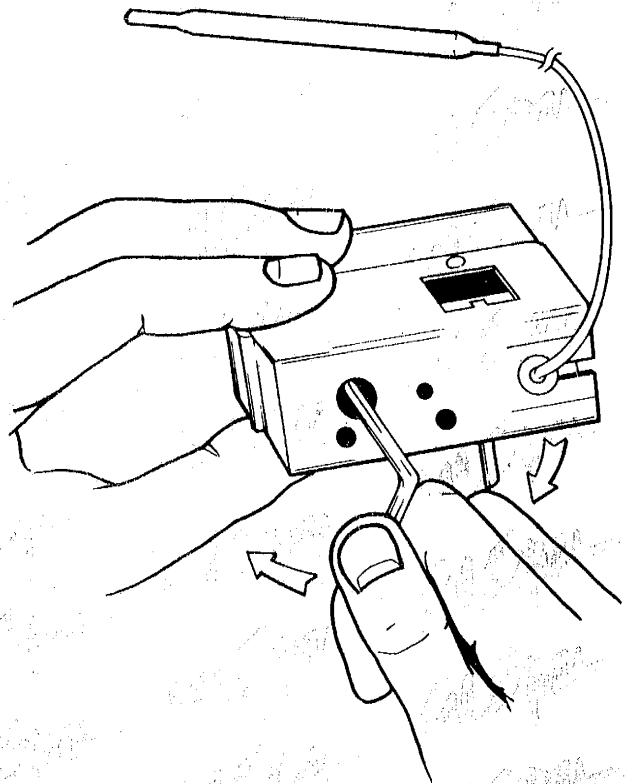
Restricted suction line.

Make sure all valves are open.



FLO SWITCH

- 1. Flowswitch body
- 2. Outlet 1½" slip PVC
- 3. Inlet 1½" slip PVC
- 4. ½" conduit socket, (both sides)
- 5. Electrical connection N.C. (load)
- 6. Electrical connection N.O. (load)
- 7. Switch
- 8. Electrical connection (line)
- 9. Calibration screw
- 10. Cover
- 11. Cover screw (3)



THERMOSTAT

CLOCKWISE INCREASES
MAX TEMP. CALIBRATION

WARNING
DO NOT EXCEED 1/4 TURN

TROUBLESHOOTING GUIDE—HEATER ASSEMBLY

SYMPTOMS

PROBABLE CAUSE

RECOMMENDED ACTION

No heat or heat too low. Not adequate heating time.

Reset timer dial to allow longer heating period.

Thermostat Max. Temp. Calibration set too low.

Reset Thermostat Max. Temp. Calibration. (Refer to diagram above)

High-Limit Thermostat kicked out.

Push reset button.

O-rings in Air Venturi caps not sealing properly

Check O-rings in Air Venturi caps for proper seal. Replace and/or lubricate, if needed.

Improper line voltage.

Have licensed electrician check line voltage.

Inadequate water flow due to dirty filter.

Clean filter. (May have to adjust Flo Switch)

NOTE: Use of Air Blower and/or Air Venturi's while heating, will result in water temperature below desired setting.

WARNING

Do Not Exceed 104°
Excessive Temperature Voids Warranty

TROUBLESHOOTING GUIDE—HEATER ASSEMBLE (Continued)

SYMPTOMS

PROBABLE CAUSE

RECOMMENDED ACTION

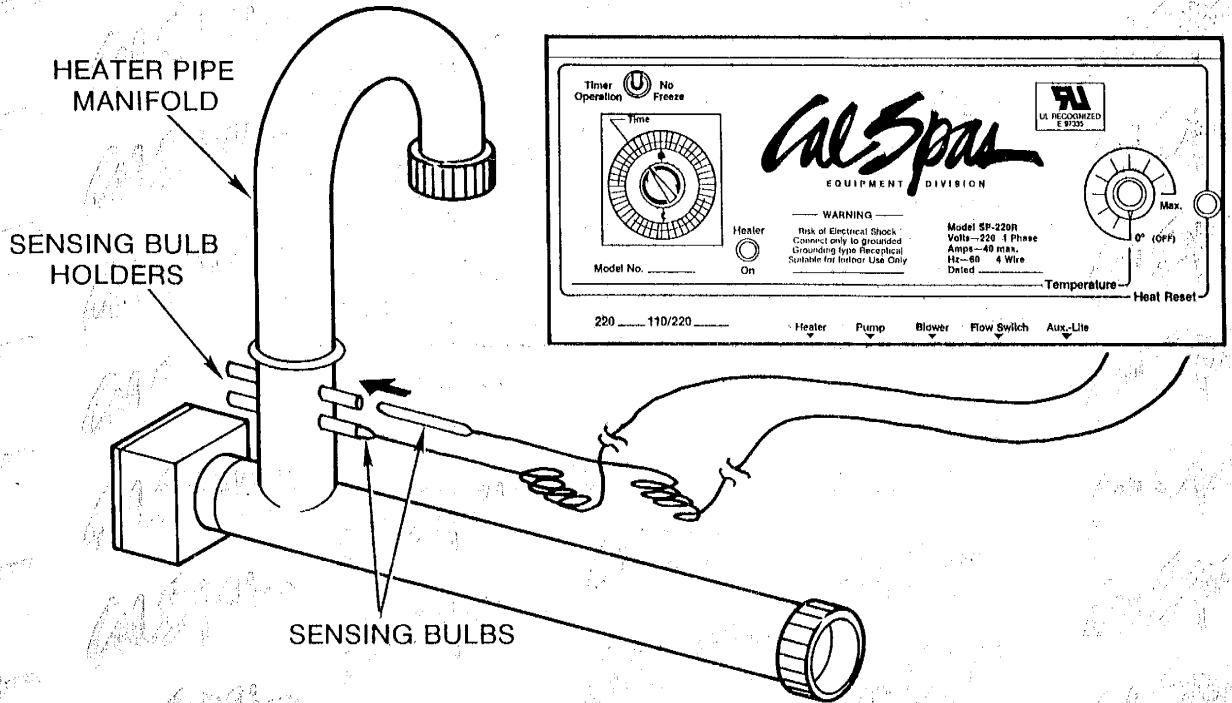
Heat too high.

Thermostat setting too high.

Decrease setting on Thermostat.

Thermostat sensing bulbs out of holders in Heating Manifold.

Reinsert sensing bulbs into holders in Heating Manifold. (See diagram)



"Snapping" or "crackling" noises from heater. Inadequate or blocked water flow from water pump.

Turn heater OFF immediately. Check items in Pump assembly and Filter assembly sections.

Check water pump prime.

TROUBLESHOOTING GUIDE—SPA LIGHT

SYMPTOMS

PROBABLE CAUSE

RECOMMENDED ACTION

Light does not operate.

Light GFI may need to be reset.

Reset button.

Bulb may be burnt out.

Replace bulb.

Faulty light switch button.

Replace switch.

NO ACID

**Tri-Chlor or Algecide Solutions
They Ruin Acrylic Spas**

SECTION II
INGROUND SPAS
INSTALLATION PROCEDURE

PRE-PLANNING STEPS FOR INSTALLATION

Selecting the right site for installing your spa is very important. Ease of access, surrounding architectural styling, landscaping and other recreational areas are factors in choosing your location.

In order to determine the amount of supplies and length of pipes needed, carefully lay out the measurements of the spa site on paper. A number of considerations that will be helpful in planning follow:

1. Local codes pertaining to fences, gates, electrical, and plumbing.
2. Finished height of spa rim.
3. Location of pump, filter, and heater.
4. Good site drainage.
5. Wind direction and shielding.
6. Surrounding decking.

DO NOT INSTALL PUMP AND HEATER MORE THAN 25 FEET FROM SPA IF POSSIBLE.

DO NOT INSTAL EQUIPMENT HIGHER THAN SIX INCHES ABOVE WATER LEVEL OF SPA OR LOWER THAN THE BOTTOM LEVEL OF THE SPA.

EXCAVATION

Check local codes for trench depths. Dig hole 4 inches deeper than finished spa depth for sand base and one foot larger all around to allow for plumbing and backfill. See drawing.

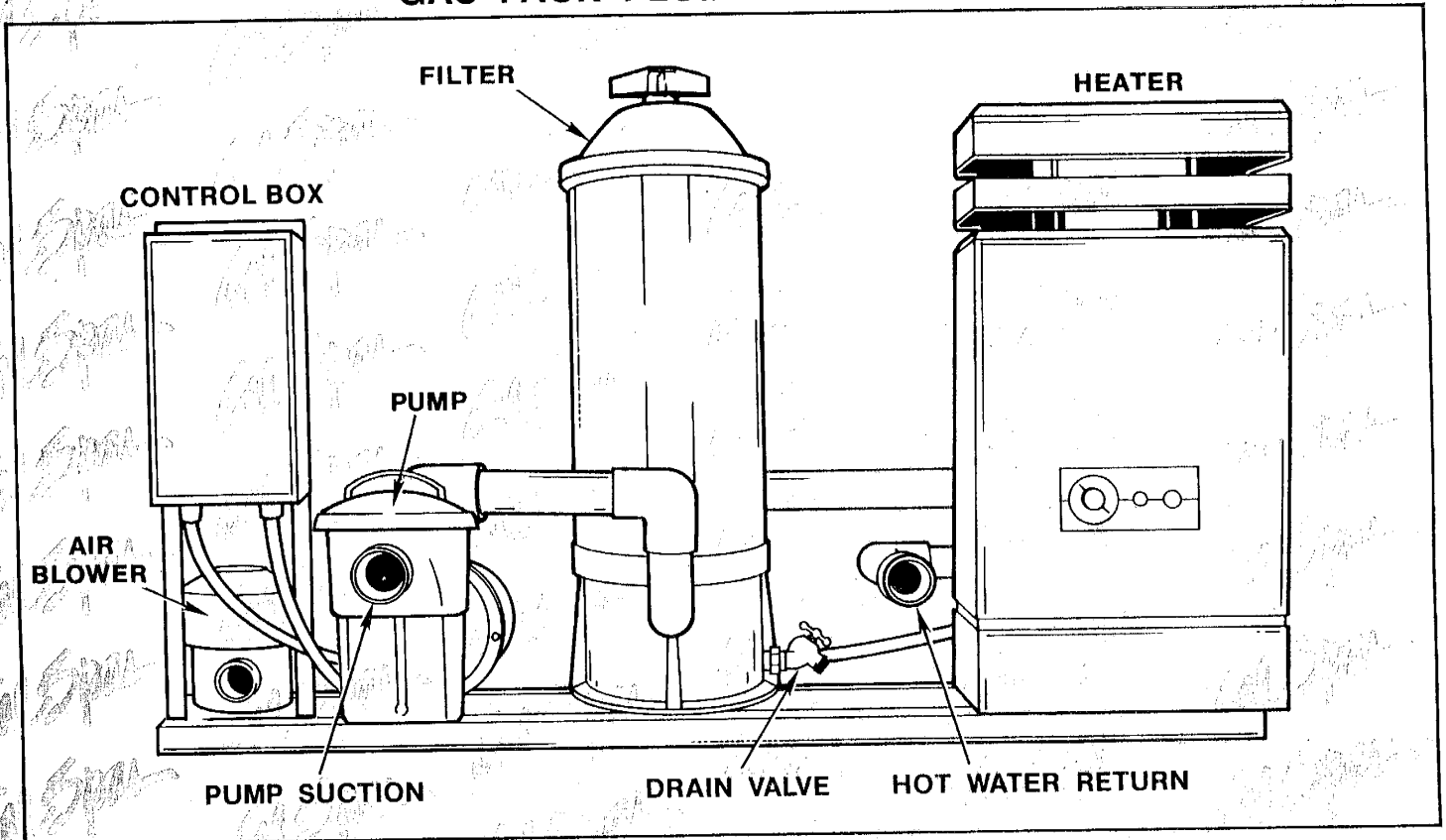
PRE-PLUMBING SPA

The spa should be pre-plumbed and "water tested" before setting it into the hole. Without enough people to help carefully set this spa into the hole, pipes and fitting can be knocked loose so be sure to have plenty of help at this critical time.

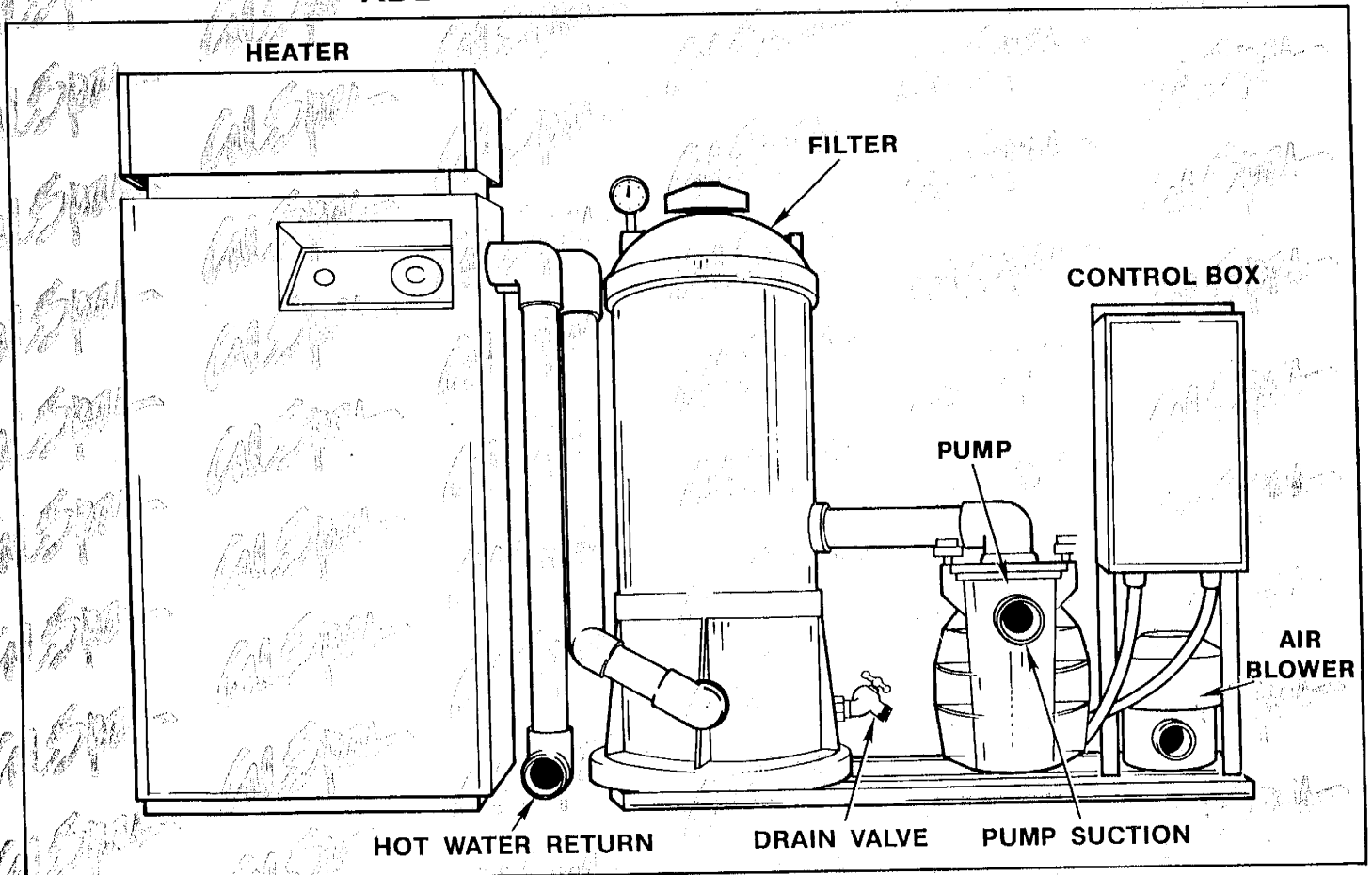
NO ACID

Tri-Chlor or Algecide Solutions
They Ruin Acrylic Spas

GAS PACK PLUMBING DIAGRAM



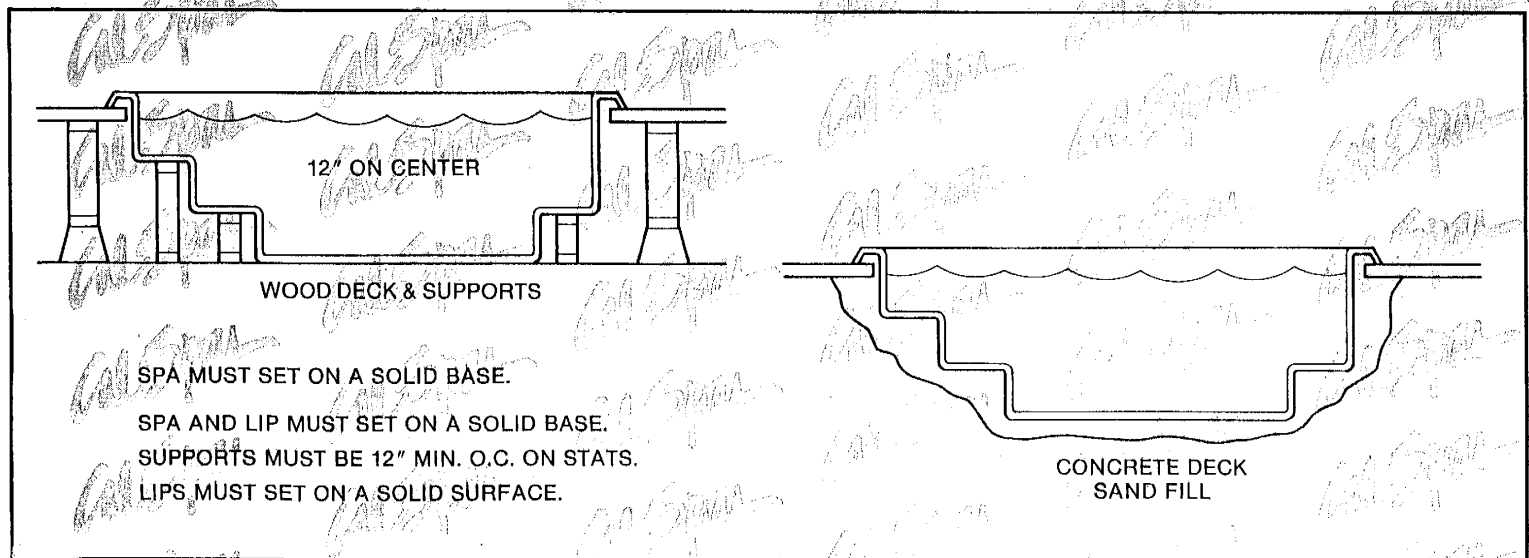
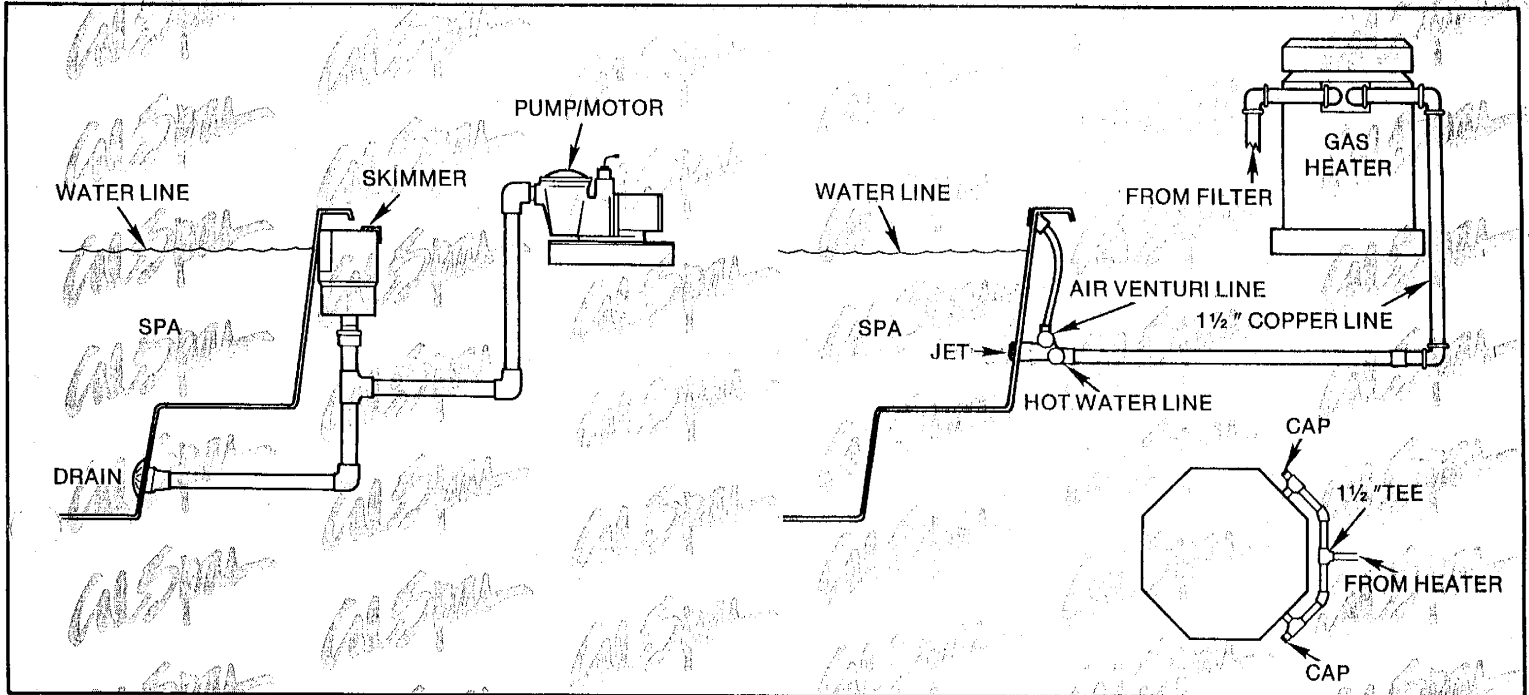
ADD-A-PACK PLUMBING DIAGRAM



After it has been decided where the jets are to be installed and marked, the holes can be cut in the spa wall. A standard hole saw of the proper size can be used. Next the thru-wall fittings and the jets can be installed. Depending on the fitting manufacturer and how the assembly of the jet is accomplished, it is recommended that a fine bead of clear silicone be placed on the inner flange flush to the spa wall. If you are working with a spa that has a tight radius, it may be necessary to place the gasket to the inside of the spa wall and possibly use two gaskets.

When tightening the jet to the wall fitting, never over tighten. A good rule is approximately one and one-half turns beyond tight.

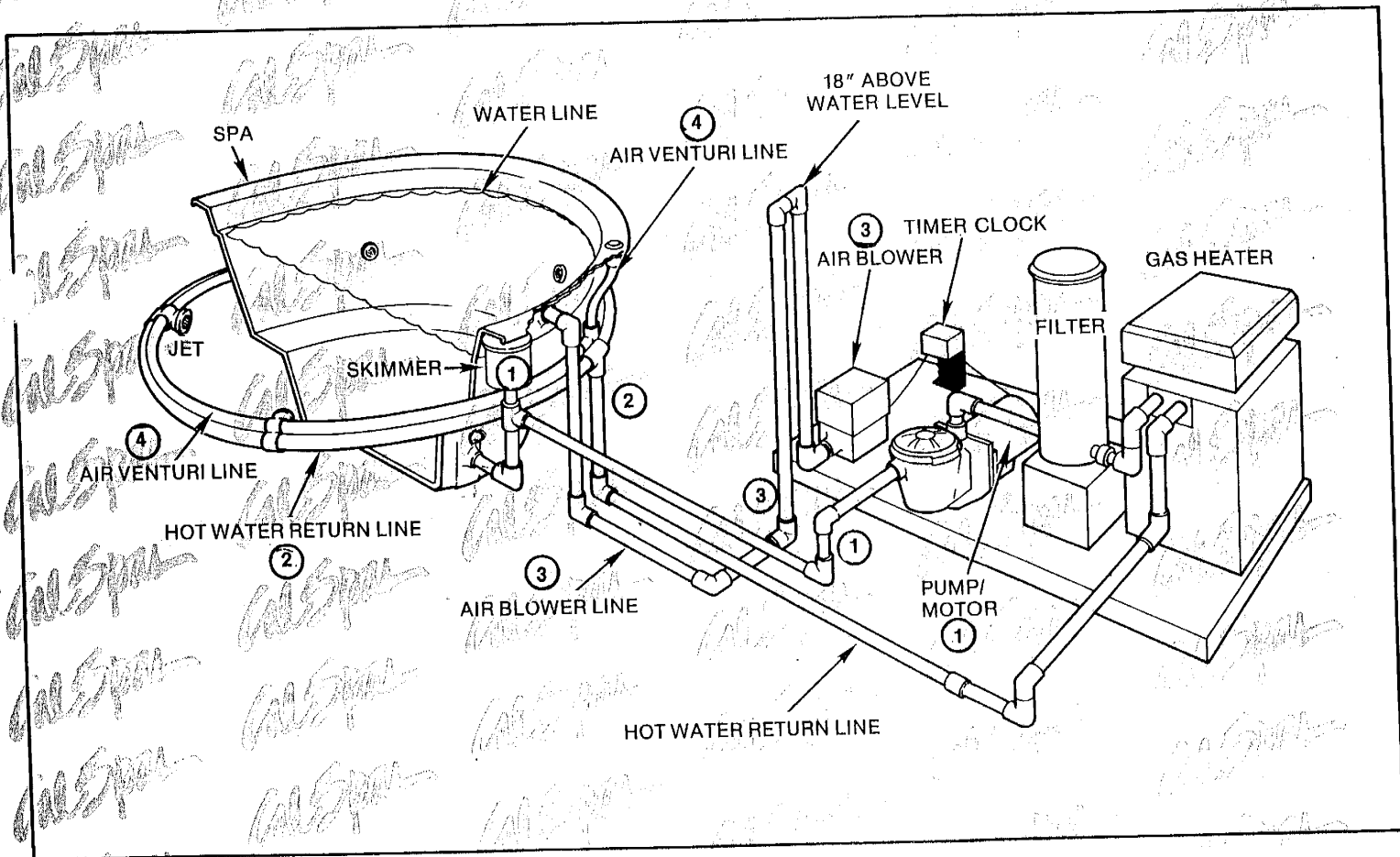
Prior to plumbing the spa it should be predetermined at which point on the spa the plumbing will be stubbed out. The plumbing should be stubbed out to line up with all piping that goes to the equipment.



The manifold piping around the spa can now be completed. The jets that have been installed in the spa can now be joined together through common plumbing. It isn't necessary to completely loop the plumbing to all the jets to get equal flow. It is, however, necessary that the inlet from the pump be split equally among the jets. The line that supplies the air to the venturi should be also be plumbed in the same manner. This air line should be brought up to the highest point possible on the spa. The reason for this is when the system is turned on the air line will clear itself of water much faster than if it is plumbed at a lower depth.

The main drain can be installed in the same manner as the jets using a holesaw or a jigsaw to cut the hole, and silicone to insure a proper seal. The main drain plumbing should be interconnected with the skimmer plumbing by the way of a "T" fitting. The line from this "T" to the pump should be 1½ inches. The main drain should be equipped with an approved anti-vortex cover or other safety device.

The main lines that run from the equipment to the spa should never be reduced in size from that recommended by the manufacturer. Any reduction in size could dramatically impair the performance. Straight runs of pipe, eliminating turns and 90 degree els, will also improve performance. Several diagrams are included in this booklet that should be helpful in pre-plumbing and setting up the equipment.



WARNING
Do Not Exceed 104°
Excessive Temperature Voids Warranty

INSTALLATION OF SPA

Water test spa above ground prior to placing in ground. Also install no decking around spa until spa has operated for an adequate amount of time to assure all parties that there are no leaks.

Mound 8" of wet sand in bottom of excavation for spa to rest on.

Before lowering spa into excavation, be sure that the finished rim elevation is established in relation to ground level.

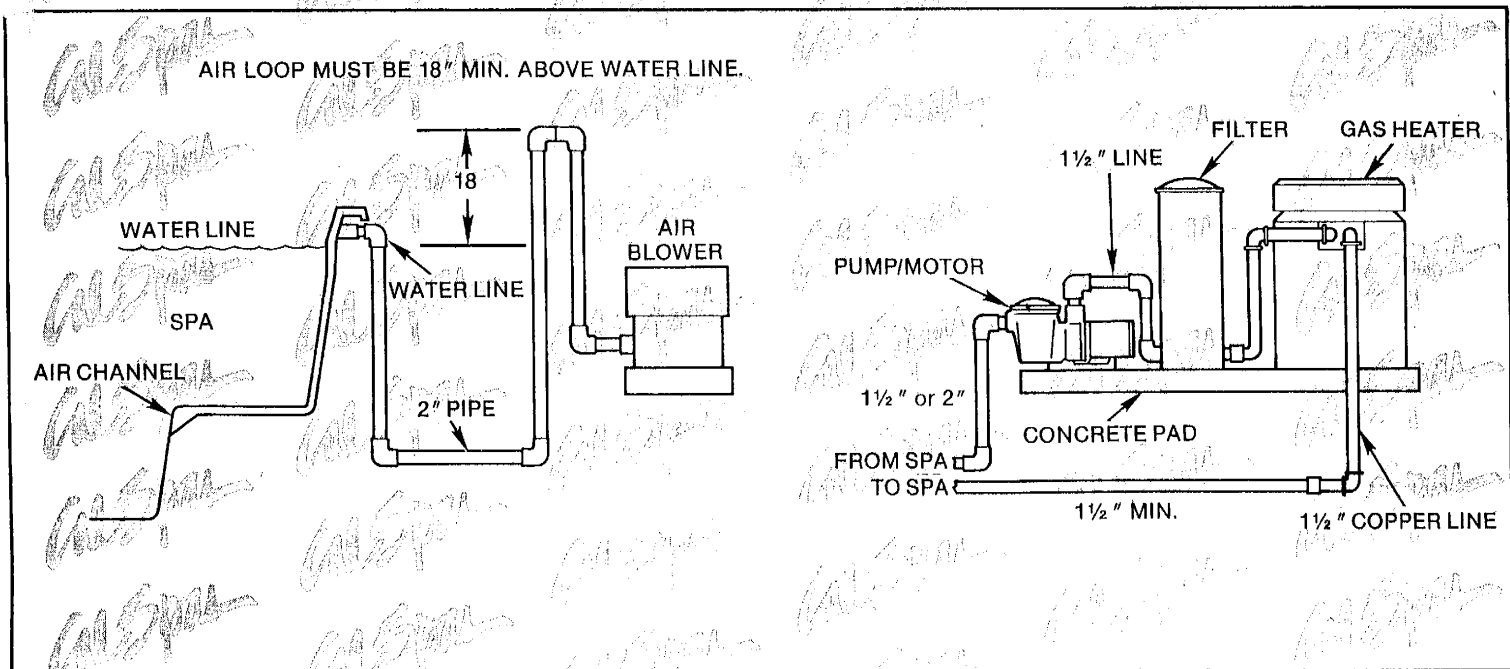
Carefully lower spa into excavation centering on the mound of sand. With a downward force and slightly rotating back and forth, work spa into measured level. Pack sand around main drain and under bottom of spa, leaving no voids.

Set 2 x 4 on rim of spa with level, then rotate 2 x 4 checking level in all directions. Make sure that sand is filling all voids under bottom.

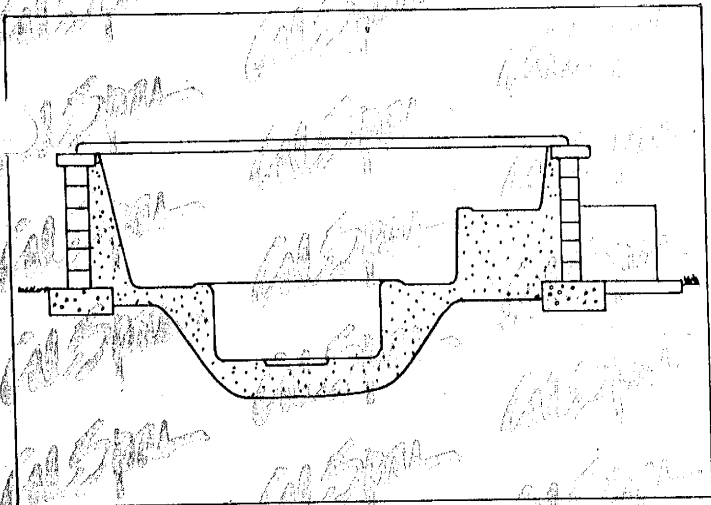
Prior to backfilling the remainder, fill the footwell area of the spa with water to assist in leveling. During the backfilling, fill all voids under bottom.

Backfill in one foot increments. After each level, use a water hose to swirl water in and around backfill, being careful not to flood the excavation. This process will ensure that all the sand is formed around the sides of the spa leaving no voids after the water has drained through. Do not backfill sand around jet plumbing of the spa until spa has been completely hooked to the equipment and run to check for possible leaks.

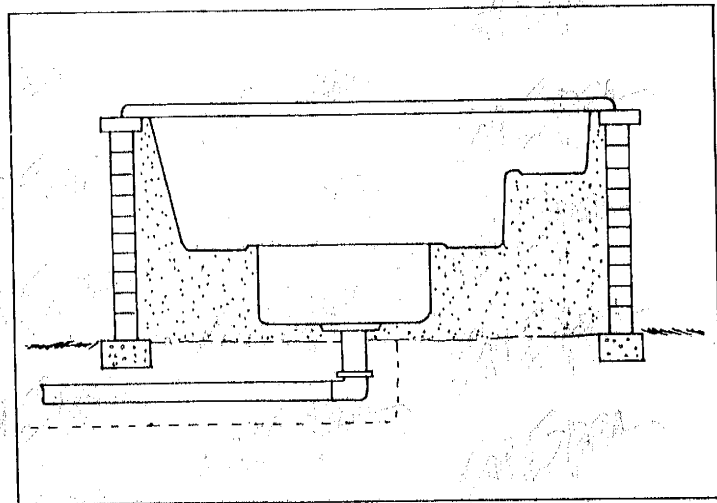
For equipment hook-up, refer to diagrams in this manual.



NO ACID
Tri-Chlor or Algecide Solutions
They Ruin Acrylic Spas



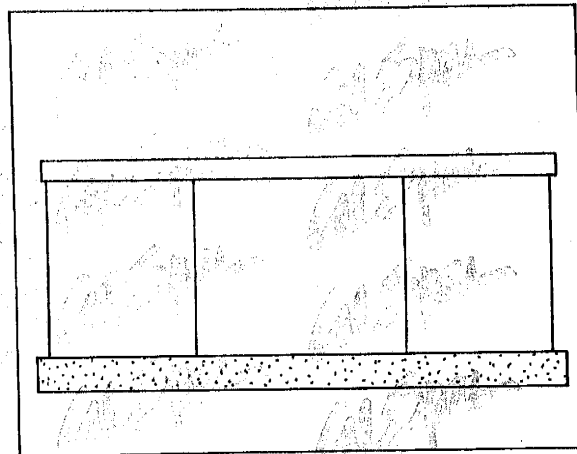
Left: Excavation for partially above-ground spa will depend on how deep you want to set it. In this example excavation is required for the footwell area of the spa and for concrete footings for retainer walls.



Right: Above-ground spas require a trench under wall footings for plumbing. Walls can be brick, concrete block or poured concrete.



On a steep hillside, retainer walls are used on both the uphill and downhill sides of the spa excavation. In some situations this method may be easier than trying to level a large area around the spa.



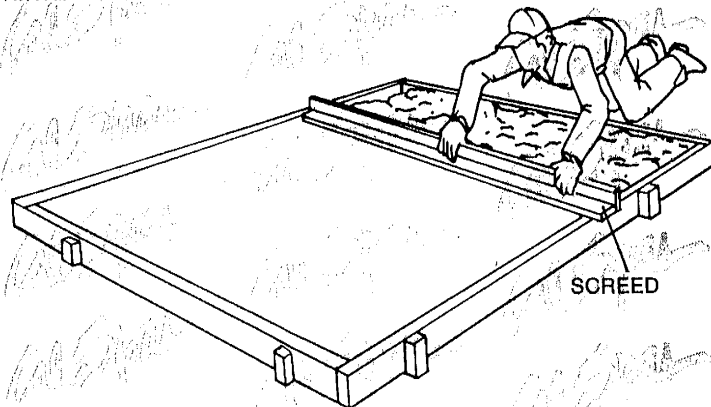
Hillside tub must have a retainer wall on uphill side only. This installation requires a minimum of decking. Deck should have safety railing.

Build concrete form of 2x4s and 1x2 stakes as shown. Excavate 2 inches below bottom of forms and fill with clean sand.

Lay a 1-foot-square grid of 1/2-inch reinforcing rods over leveled sand bed. Tie rods together with balling wire. Mix concrete and pour it in the form. Spread concrete evenly with a sturdy steel rake.

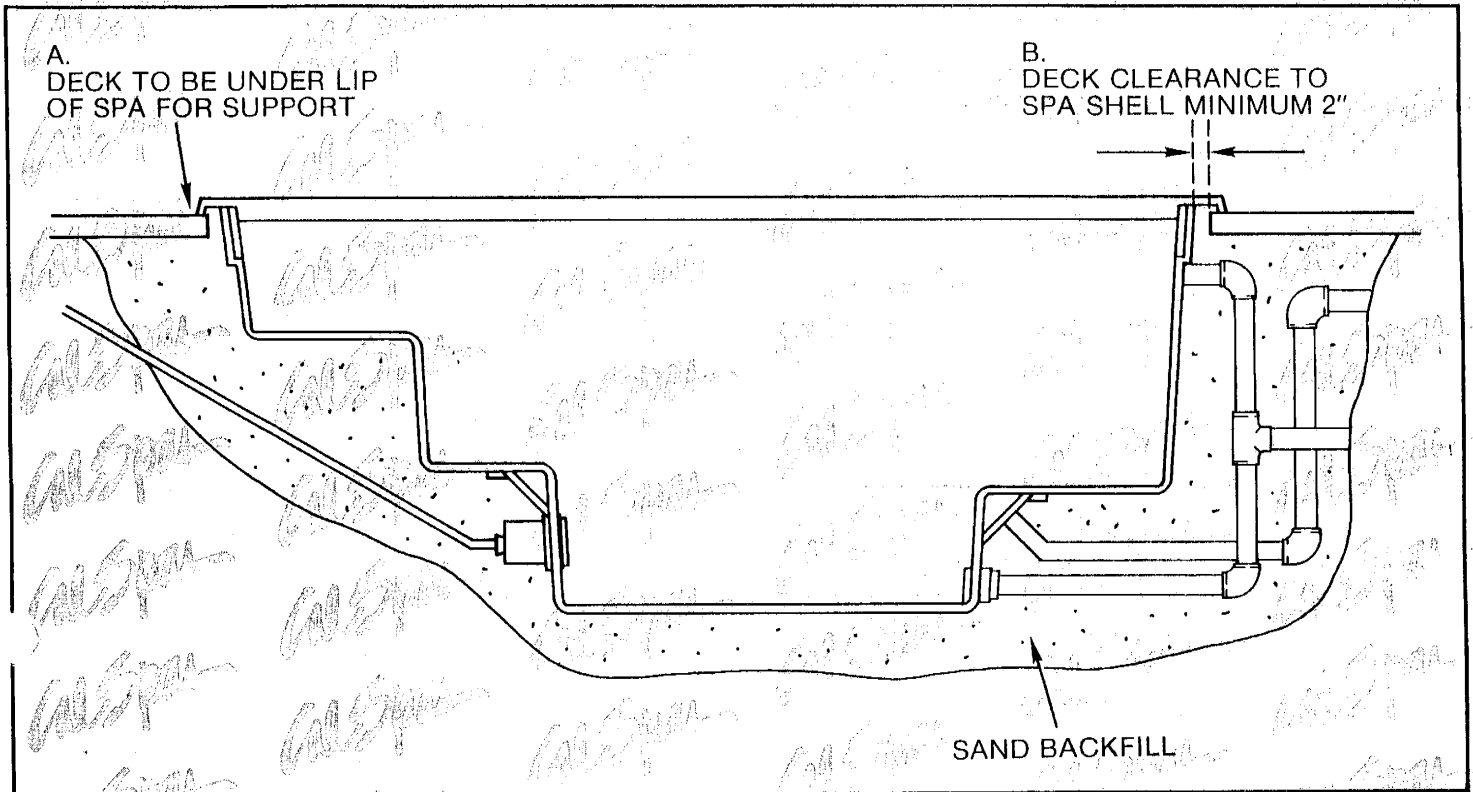
Level concrete with a screed built from 1x4s as shown. Pull the screed toward you with a side-topside zigzag motion. When concrete is leveled, smooth out with a large mason's float. Allow concrete to cure at least two days before setting tub.

SKIRTED SPA FOUNDATION.



INGROUND SPA DECK REQUIREMENTS

- A) Deck must go under lip of spa uniformly for proper lip support, lip is not to bear any weight from spa. Deck is only to stop lip from flexing when stepped or sat on.
- B) Deck must not be poured up against spa shell as cement expands and contracts as temperature changes, leave a gap of 2" from shell for proper structure protection.



WARNING

Do Not Exceed 104°
Excessive Temperature Voids Warranty

CALIFORNIA ACRYLIC INDUSTRIES, INC.

LIMITED WARRANTY

THIS IS TO CERTIFY that the portable in-ground SPA, MODEL _____, SERIAL NUMBER _____, is hereby registered to:

NAME: _____
ADDRESS: _____
CITY: _____
STATE: _____ ZIP: _____
TELEPHONE: () _____

and is warranted to be free of all defects in material and workmanship for the following periods from this date of registration, the _____ day of _____, 19 _____, **TO THE ORIGINAL PURCHASER AND THE ORIGINAL PURCHASER ONLY AT THE ORIGINAL SITE OF DELIVERY:**

FIVE (5) YEARS: The spa shell, excluding its finish and factory installed accessories and pre-plumbing. In the event of a defect in material and/or workmanship within the said period, the spa shell shall be repaired or replaced, at the option of the manufacturer, and shall assume as its warranty period only the remaining time under this original five (5) year warranty.

ONE (1) YEAR: The acrylic finish applied to the interior surface of the spa shell. In the event of a defect in material and/or workmanship within said period, the spa finish shall be repaired or replaced, at the option of the manufacturer, and shall assume as its warranty period only the remaining time under this original one (1) year warranty.

THREE (3) MONTH: Pre-plumbing and factory installed accessories, including air jets, skimmer, suction fittings, tile, air-switch, and skirting. In the event of a defect in material and/or workmanship within said period, the defective item shall be repaired or replaced, at the option of the manufacturer, and shall assume as its warranty period only the remaining time under this original three (3) month warranty.

EQUIPMENT: Any and all equipment sold in conjunction with the above identified spa is excluded from this Limited Warranty. All such equipment, if expressly warranted, is in accordance with its manufacturer's warranty, a copy of which is provided with each piece of equipment sold herewith. Buyer is instructed to comply with and follow the instructions contained in said warranties for service in the event of a claimed defect.

THIS WARRANTY DOES NOT APPLY to any defects caused by negligence, misuse, accidents or intentional vandalism. Examples of the more common act of negligence which will invalidate this warranty is (1) the use of acid or acid products in said spa. **NO ACID OR ACID PRODUCT MAY BE UTILIZED IN THIS SPA.** Please refer to your owner's manual for instructions on properly maintaining the required chemical balance; (2) failure to adequately protect your spa from the extremes in temperature; spa covers and other accessories are available to assist you in this regard; and (3) improper installation by Buyer's who either install or personally arrange installation of their spa. **AS SPECIFIED IN YOUR OWNER'S MANUAL, YOUR SPA MUST BE INSTALLED ON A LEVEL SURFACE, IF PORTABLE, OR ADEQUATELY BACKFILLED WITH SAND IF INSTALLED IN-GROUND.** Failure to follow these simple precautions will result in excessive stress in areas of your spa with resulting cracking.

Within the above specified periods, **CALIFORNIA ACRYLIC INDUSTRIES, INC.** is obliged to repair or replace any specified part proving defective in material and/or workmanship. Buyer is instructed to contact directly the Dealer from whom he or she had purchased the spa who will arrange warranty service. **IN THE EVENT THE BUYER SHOULD BE UNABLE, FOR ANY REASON, TO EITHER OBTAIN SUCH SERVICE OR OBTAIN SATISFACTORY SERVICE, HE OR SHE IS INSTRUCTED TO CONTACT MANUFACTURER'S SERVICE CENTER, CUSTOMER SERVICE DEPARTMENT, LOCATED AT 1462 9TH STREET, POMONA, CALIFORNIA 91766, TELEPHONE: (714) 623-8781, WHICH WILL IMMEDIATELY TAKE STEPS TO PROVIDE ALL SERVICE TO WHICH BUYER MAY BE ENTITLED UNDER THIS WARRANTY.** All expenses related to replacing or repairing a defective spa, finish, or part under this warranty shall be assumed by the manufacturer, **EXCEPT THAT BUYER SHALL ASSUME AND BE RESPONSIBLE FOR ANY AND ALL EXPENSES INCURRED IN TRANSPORTATION COSTS, OR IN OBTAINING ACCESS TO SAID SPA, FINISH OR PART FOR ITS REPAIR OR REMOVAL AND/OR REPLACEMENT.**

BUYER MUST NOTIFY manufacturer of any defect, malfunction, or nonconformity promptly upon discovery. Notification by Buyer to his or her selling Dealer will satisfy this requirement. Within **TWENTY (20)** days after giving notice to said Dealer, Dealer will commence and diligently pursue warranty service to completion or Buyer is advised to contact manufacturer as specified hereinabove.

Manufacturer neither assumes nor authorizes any Dealer or other representative or person to assume for it any other liability in connection with the sale or shipment of the above specified products. Manufacturer reserves the right to make changes or improvements in our products without incurring any obligation to similarly alter products previously purchased.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE. The Buyer has the right to bring any action at law or equity to resolve disputes concerning or to enforce the provisions of this warranty.

CALIFORNIA ACRYLIC INDUSTRIES, INC.
1462 East 9th Street
Pomona, California 91766
(714) 623-8781

EFFECTIVE DATE: 10/1/87

Happiness is
a Warm Spa
by



A DIVISION OF CALIFORNIA ACRYLIC INDUSTRIES, INC.
1462 E. Ninth St. • Pomona, California 91766
Corporate Office (714) 623-8781

Owners Information

Dealer _____

Company _____

Address _____

Phone _____

Installer _____

Company _____ **Lic. #** _____

Address _____

Phone _____

Spa # _____

Equipment Pak # _____

Date of Delivery: _____

Signature of Sales Representative