

INSTALLATION AND QUICK START UP GUIDE

OUTDOOR INSTALLATION

If you are going to install your spa outdoors, select a solid, level surface to place it on. The bottom of your spa is totally protected and it will not rot. Special preparation, such as a concrete pad or wood deck, is not mandatory, although they make very suitable bases. If installing your spa on a wood deck, ensure that the deck is built to code and that it will withstand the filled weight of the spa. When full, your spa weighs approximately 90 lbs. (41kg) per square foot. Ensure that you do not install your spa underneath overhead power lines.

INDOOR INSTALLATION

If you are going to install your spa indoors, you should ensure that your doorway is at least 36 inches (91 cm) wide. The location where you intend to place your spa should be equipped with adequate ventilation, to remove chemical odors and added humidity, and adequate drainage to handle splashing and in case of a spa leak. It is not recommended to install your spa above a ground level floor.

INSTALLATION

- CONNECTING THE ELECTRICITY:** If you plan to operate your spa using a 110 volt electrical supply, a 12' electrical cord, with attached GFCI, is already connected to your spa. It must be plugged into a dedicated 15 amp wall outlet. **DO NOT plug the cord into your electrical outlet until you have completed Step 4 and your spa is full of water. DO NOT use an extension cord. DO NOT remove the GFCI from the electrical cord. This will void your electrical approval.** If you plan to operate your spa using a 220 volt electrical supply, you will be required to install a 220 volt GFCI breaker and disconnect box. You will require a minimum 30 amp GFCI. It is recommended that you use a certified electrician to install your GFCI breaker and disconnect box and to connect your spa to your house electrical panel. The spa pack in the 110-16 model is convertible and can be connected with a 110 volt or a 220 volt electrical power supply. Instructions to convert the spa pack are located on the inside of the spa pack cover. **Ensure that the 220 volt breaker is disconnected until you have completed Step 4 and your spa is full of water.**
- SETTING THE SPA IN PLACE:** Leave a minimum of 36 inches (91 cm) of space at each end of the spa. This ensures that you will be able to remove the end panels and you'll be able to access your spa equipment. Leave enough room on the side(s) of the spa to be able to take your cover off and put it back on without obstruction.
- ATTACHING THE ACCESSORIES:** Open the accessories box and remove the waterfall assembly. Lubricate the rubber O-ring with a bit of water and insert it into its housing on the top of the spa. Remove the four fork lift channel covers and the hardware kit. Following the instructions in the hardware kit, install the covers. **Do this before you fill the spa with water.** You may have to slightly lift the spa to position the covers in their proper place.
- CHECKING THE CONNECTIONS AND SETTINGS:** Remove the door at the end of the spa with the captain's chairs. To remove the door(s), remove the 4 screws located near the ground in each door. Check the unions to the pump and to the heater manifold to ensure that they are tight. Vibration during shipping may cause them to loosen. **Do not overtighten these unions with channel locks. You could crack or damage them.** It is also recommended that you check these unions regularly. Pump vibration can cause them to loosen and this can cause a leak. Ensure that the two slice valves are in their open positions and that they have shaft lock clips installed on the stems to prevent self-closing. Ensure that the shut off valve on the end of the drain hose assembly is closed. It is located in the end with the equipment. Remove the cover of the equipment pack by loosening the two screws at the front. Near the bottom of the circuit board, you will see a small red panel with 10 white DIP switches. These switches should be factory set; however, you should ensure that they are properly set as shown below. Replace the equipment pack cover after checking the settings

MODEL	110-16 (110V)										110-16 (220V)									
ON		X	X				X			X		X	X				X			
OFF	X			X	X	X		X	X		X			X	X	X		X	X	X
DIP #	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10

- FILLING THE SPA:** To fill your spa, remove the filter cover and the filter cartridge by turning it counter clockwise. **If your source water contains metals, such as iron, it is recommended that you attach a pre filter to your garden hose. This will help to remove any precipitated metals and to make start up easier.** Put your garden hose into the threaded hole where the filter cartridge is located and begin to fill your spa through this hole. This will purge air from the water lines and it will make priming the pump easier. Fill your spa approximately 6 inches (15 cm) from the top of the spa. The level that you keep your spa water at will be determined by your personal use and preferences.

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6. **PRIMING THE PUMP:** When your spa is full of water, plug the power cord into your wall outlet or switch your 220 volt GFCI breaker to the on position. The top side control display will sequence through a numbered test pattern. When you see the initials PR, press the jets button to start the pump. If there is air in the line and the pump sounds like it is straining, you may have to depress the jets button to off and on several times before the pump will start. Be aware that it may take a few minutes for the pump to prime and for water to start flowing. When your pump starts to flow, and the jets begin to operate, press either the temperature up or down arrow to exit priming mode.
7. **SETTING THE TEMPERATURE:** The top side control will display dashes until the current water temperature is detected and displayed. This may take up to one minute. To set your desired temperature, press either the temperature up or down arrow. The set temperature will begin to flash. To change the set temperature, press either the up or down arrow until you reach your desired setting. When the temperature reading stops flashing, your desired temperature is set.
8. **SETTING THE FILTER CYCLE:** Your spa should be factory programmed to circulate twice a day, 4 hours at a time. This setting should be sufficient for normal usage. Your first filter cycle begins 6 minutes after you connect power to your spa. The second cycle will begin 12 hours later. Your spa is capable of circulating for 1-8 hour intervals, twice a day. To ensure that the cycles are properly set or to change this setting, press either the temperature down or up arrow, then press the «Jets» icon. The top side control display should show F4. Press either the temperature up or down arrow to increase or decrease the filtration cycle time. Press the «Jets» icon to exit the filter cycle program.
9. **CONTROLLING THE TEMPERATURE:** If your spa is not operating in a filter cycle, but the water requires heating, the spa pump and the heater will turn on until the set water temperature has been reached. Both components will then shut off automatically. This prevents your water from cooling down. Your spa is also equipped with freeze protection. If the water temperature drops below 45°F (7°C), the pump will automatically turn on. It will turn itself off 4 minutes after the water temperature has risen back to 45°F (7°C). **IMPORTANT: Your spa automatically checks the water temperature for 1 minute, every 30 minutes, to increase the temperature if it has dropped. If you are operating your spa using a 110V electrical supply, the heater will disengage when your pump is turned on to high speed. If your set temperature has dropped during usage, the heater may not come on automatically when you change your pump from high speed to low speed. To turn the heater back on, decrease your set temperature to one (1) degree below the current temperature and wait for the display to stop flashing. After stopping, raise the set temperature back to your original setting. This should reengage the heater within one (1) minute.**

SPA OPERATION

JETS

Operating the jets is very simple. There is a “Jets” button on the top side control panel. Depress the button once and the spa will begin to operate on low speed. Depress the button a second time and the spa will turn on to high speed. Depress the button a third time and the spa will turn off. If the spa is in filter cycle or heat demand, it will continue to operate on low speed. Each jet is individually adjustable and the intensity can be increased or decreased for your desired comfort.

LED LIGHTING

There is a “Lights” button on the top side control panel. It controls the LED main light and the individual LED lights. You can set the lighting to several different colors and/or modes by slowly depressing the lights button off and on until your desired setting is reached.

AIR CONTROL

The spa jets can be operated with water only or with a water/air mix. There is a valve located beside the top side control panel. By turning this valve counter clockwise, air will begin to enter the spa water through the jets. Closing the valve by turning it clockwise will stop the air. **NOTE: Leave this valve in its closed position when the spa is not in use. This will prevent ambient air from entering and cooling the water, it will make heating the spa water more efficient and it prevents the pump from running continuously. TO AVOID SEAL DAMAGE, DO NOT OVERTIGHTEN THIS VALVE.**

WATERFALL

Your spa is equipped with a cascading waterfall. It will operate when your pump is operating. The intensity of the water flow can be adjusted by turning the on/off valve. **NOTE: Do not try to remove the waterfall assembly by grabbing and pulling the black deflector. It will break. Grab each end of the clear fixture and wiggle it back and forth.**

FILTER

The spa filter cartridge is located on the side of the spa under the filter cover. To remove the filter, simply remove the filter cover and turn the filter counter clockwise. To replace the filter, turn it clockwise to secure it in the spa. Your filter should be cleaned on a regular basis, depending on spa usage.