

Electrical Requirements

It is the responsibility of the Spa owner to make sure that all electrical connections are made by a Qualified Electrician in accordance to the National Electrical Code and/or any local or State Electrical Codes that may be enforceable at the time of installation. All connections must be made in accordance with the wiring Diagram/ Instructions inside the Spa Control Pack.

Please have your electrician read the following instructions carefully before attempting installation of spa wiring.

*Always be sure that power is not applied to circuits while performing any electrical work.

**You can locate your incoming wire anywhere in the cabinet that is close to the source of the incoming electricity and run it through the cabinet to the spa pack. Seal around the conduit that you placed through the hole in the side panel.

All 120 Volt capable spas require a Dedicated 15 AMP GFCI service connection. An optional 15 Amp GFCI 12ft cable is available from Four Winds Spas. Never use an extension cord to run your spa. Meeting this standard may require you to have your standard receptacle and/or circuit breaker upgraded by a Licensed Electrician. National Electrical Code 680-42

For 230 Volt spas, 1 and 2 pump spas require a Dedicated 50 AMP service and 3 and 4 pump spas require 60 AMP GFCI service connections with a 6/3 AWG (Four Wire) All Copper Conductors. National Electrical Code 422-20.

**Note: Code also requires a disconnect that is readily accessible to spa users, but at least 5 feet from spa.

We recommend using 230Volt Connections in all spas that are 230Volt capable to conserve electricity by getting the most use from the heater element. All of our spa equipment is designed to operate on 60Hz alternating current.

Electrical Installation Instructions

A copper bonding lug connector has been provided on the Spa Control Pack to allow for connection to local ground points. A 6 AWG copper ground wire is required and must be connected securely to a grounded metal structure item such as a cold water pipe or the main ground lug inside of the connecting electrical panel.

1. A green colored terminal or a terminal marked G, GR, Ground, Grounding, or the symbol * is located inside the supply terminal box or Compartment. To reduce the risk of electric shock, this terminal must be connected to the grounding means provided in the electric supply service panel with a continuous copper wire equivalent in size to the circuit conductors supplying this equipment. **IEC Publication 417, Symbol 5019.*
2. A bonding lug has been provided on the outside of the Equipment Package electrical control box. The lug permits the connection of No. 8 AWG (8.42mm²) solid copper bonding conductor between the Equipment Module and all other electrical equipment and exposed metal in the vicinity, as may be needed to comply with local regulations.02895224
3. All field-installed metal components such as rails, ladders, drains or other similar hardware within 5 feet of the spa or hot tub shall be bonded to the equipment grounding bus with copper conductors of No. 8 AWG.
4. This unit must be hardwired only to supply circuit that is protected by ground fault circuit interrupter (GFCI). A GFCI is required by all building codes and should be provided by the installer and must be tested before use. Consult GFCI manufacturers' instructions for correct testing and operation.
5. The electrical supply for this product must include a suitable rated switch or circuit breaker to open all ungrounded supply conductors to comply with the National Electrical Codes. The disconnection means must be readily accessible to the tub occupant but installed at least 5 feet (1.5M) from spa water.
6. Spas must be installed with drainage for electrical equipment compartment.
7. Do not permit any electrical appliance such as a light, telephone, radio, or television within 5 feet (1.5m) of a spa.

***Note:** Connections made improperly, or the use of wire gauge sizes for power connection which are too small, may continually blow fuses in the spa control pack, may damage the internal electrical controls and components, and/or may be unsafe and in any case will VOID the spa Warranty.

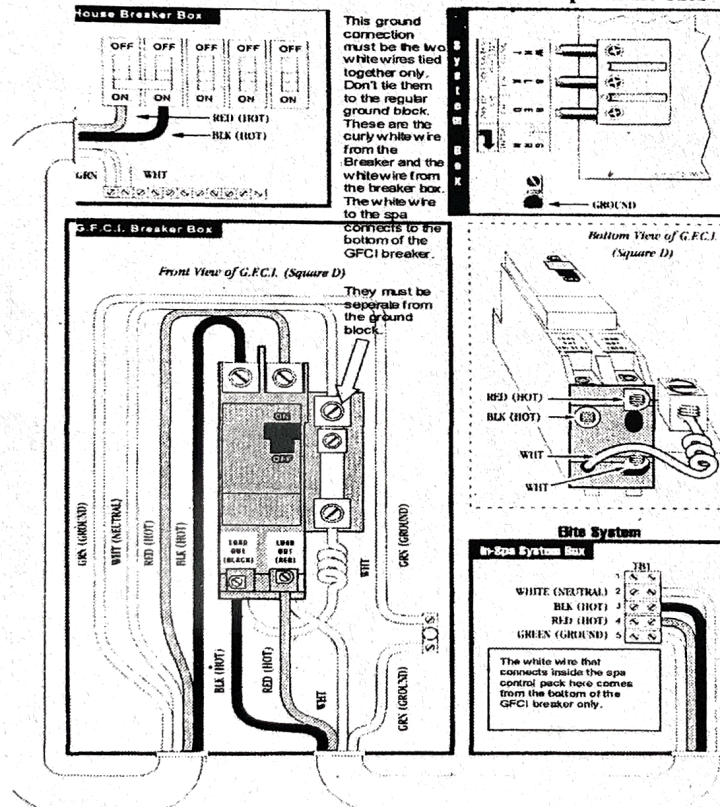
Electrical Installation Instructions

GFCI Breaker Concerns

If after you wire your spa and apply power, the GFCI breaker will not stay engaged, the GFCI breaker is not wired correctly. Check the GFCI breaker wiring chart following this section and verify that all of your connections are correct. Generally if the breaker will not stay engaged, it is a wiring problem on the neutral wire. ****Note:** The neutral and the ground wire cannot touch anywhere in the line between the GFCI breaker and the spa. (See wiring schematic included) The white neutral wire from the spa control system must go to the Load Neutral (bottom of breaker).

50 Amp Service For 1- 2 Pump Spas

50 AMP GFCI WITH 6-3GROUND WIRE standard for all spas in the USA



You should have a disconnect at the spa for all applications and should be located within sight from equipment.

Electrical Safety

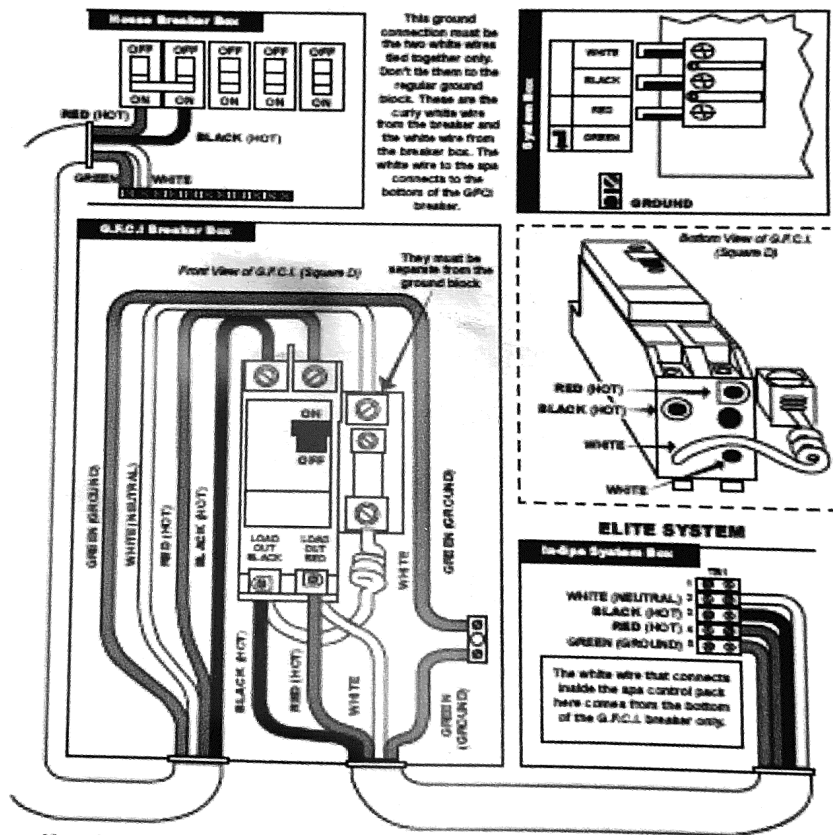
GFCI Breaker Concerns

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50 AMP Service for 1 - 2 Pump Spas

60 AMP Service for 3 - 4 Pump Spas

Diagram 1: USA Only



You should have a disconnect at the spa for all applications and should be located within eight feet from equipment.