



# READ THIS FIRST!!!!

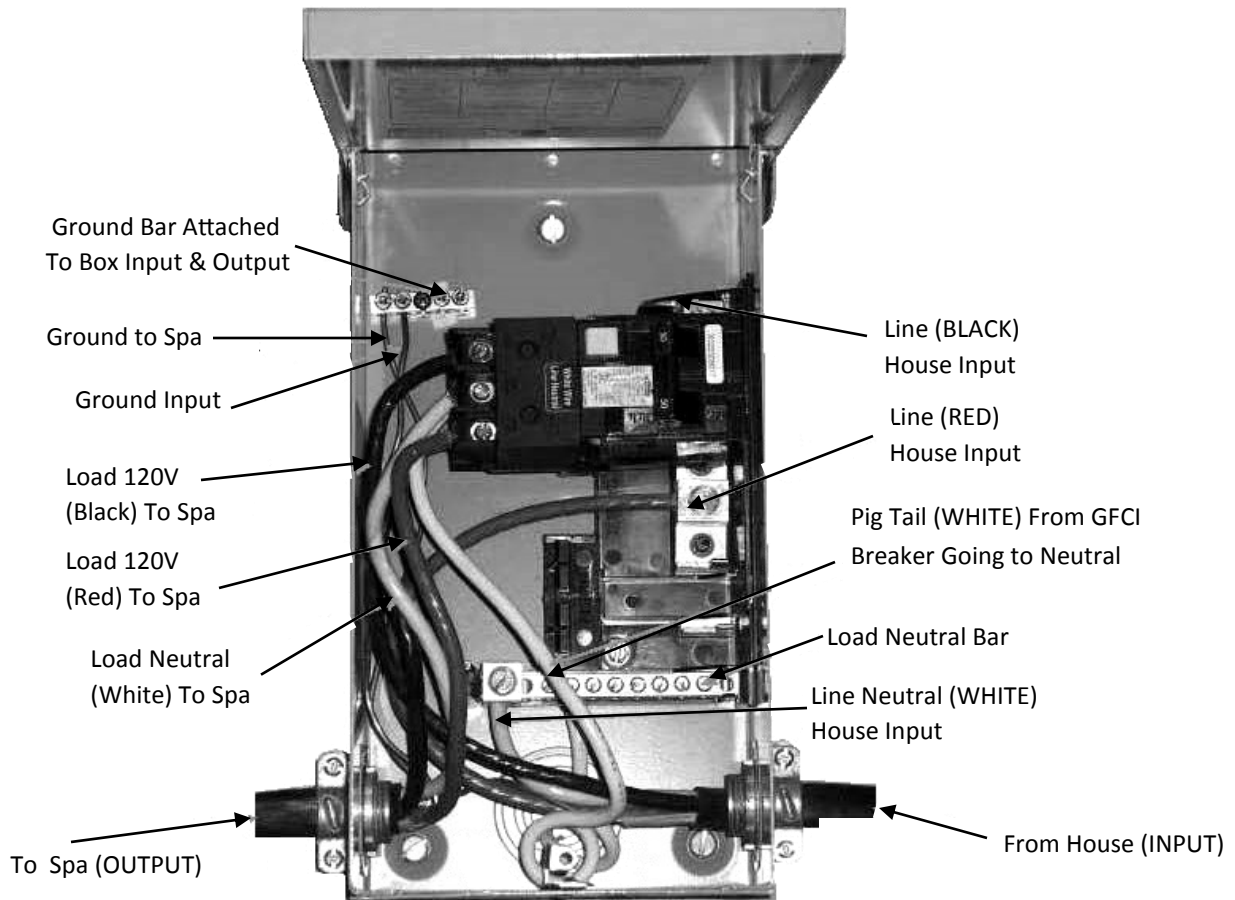
## TYPICAL GFCI INSTALLATION GUIDELINES

### ATTENTION ELECTRICIAN:

ALL PDC SPA UNITS MUST BE INSTALLED WITH AN APPROVED G.F.C.I. IN ACCORDANCE WITH ALL APPLICABLE CODES. INSTALLATION OF G.F.C.I. VARIES AMONG THOSE MANUFACTURERS.

FOLLOW EACH MANUFACTURER'S GUIDELINES TO ENSURE PROPER OPERATION AND PROTECTION OF SPA OCCUPANTS. THIS DIAGRAM IS A "TYPICAL" INSTALLATION TO BE USED ONLY AS A REFERENCE FOR THE INSTALLING ELECTRICIAN. PDC SPAS DOES NOT SUPPLY THE GFCI.

### TYPICAL INSTALLATION BREAKER BOX CLASS A 50 AMP, 120/240 VOLT, GFCI



**TO BE NOTED:** Installation of this GFCI Circuit Breaker, including ampere sizing and choice of qualified electrician in accordance with the National Electrical Code, and all applicable federal, state and local codes and regulations in effect at the time of installation.

**TO BE NOTED:** The white neutral wire from the back of the GFCI Circuit Breaker **MUST** be connected to an incoming Line Neutral. The internal mechanism of the GFCI requires this Neutral connection for proper GFCI function.

**IMPORTANT: 6 GAUGE COPPER WIRE MUST BE USED  
TEST GFCI MONTHLY AND PRIOR TO EACH USE.**

IF INSTALLING WIRING IN A CONDUIT ABOVE OR BELOW GRADE, FOR PROPER GFCI OPERATION THE OPEN END (S) OF THE CONDUIT MUST BE HIGHER THAN THE SURROUNDING SURFACE TO PREVENT WATER INTRUSION INTO THE CONDUIT.

## **GROUND FAULT CIRCUIT INTERRUPTER (GFCI) INFORMATION and TESTING INSTRUCTIONS**

### **WHAT THE GFCI DOES FOR YOU:**

The GFCI helps protect you against hazardous electrical shock that may be caused if your body becomes a path through which electricity travels to reach ground. This could happen when you touch an appliance that is “live” through a faulty mechanism, damp or worn insulation on the power cord, etc. You don’t even have to be on the ground yourself. You could be touching plumbing or other material that leads to the ground. When using a GFCI device you may still feel a shock, but the GFCI is designed to cut off power quickly enough so that a normal, healthy adult will not experience serious electrical injury.

### **WARNING: GFCI’s WILL NOT PROTECT AGAINST:**

Line-to-line shocks (of the type received when touching metal inserted into the slots of a receptacle).

Current overloads or line-to-neutral short circuit. THE FUSE OR CIRCUIT BREAKER AT THE DISTRIBUTION BOX OR PANEL MUST PROVIDE SUCH OVER-CURRENT PROTECTION!

### **CAUTION:**

If the GFCI trips on its own accord, this indicates a possible ground fault condition, which is potentially hazardous. Carry out the test procedure outlined below to ensure that your GFCI is operating properly. If the GFCI does not reset, this indicates a ground fault still exists, and must be corrected. Have a qualified electrician investigate the ground fault condition and correct the defect at once.

**TEST THE GFCI UNIT BEFORE EACH USE! - AT LEAST ONCE PER MONTH.  
DO NOT BYPASS THE GFCI TO USE POTENTIALLY FAULTY EQUIPMENT.**

### **TEST PROCEDURE:**

YOUR GFCI UNIT SHOULD BE CHECKED BEFORE EACH USE.

Turn your equipment ON to the lowest setting. PUSH THE TEST BUTTON. This should result in the motor or lamp going OFF. (NOTE: Be sure you are turning off all applicable motors. Some equipment, such as spas, have blower motors, jet motors, and heater motors.)

CAUTION: If the motor keeps running or lamp remains lit, DO NOT USE YOUR EQUIPMENT. UNPLUG EQUIPMENT OR TURN OFF POWER AT CIRCUIT BREAKER OR FUSE. CONSULT A CERTIFIED ELECTRICIAN.

If the GFCI tests okay, restore power by pushing the RESET button and releasing it. The motors or lamps should go ON again. If the GFCI fails to reset properly, DO NOT USE EQUIPMENT! UNPLUG EQUIPMENT OR TURN OFF POWER AT CIRCUIT BREAKER OR FUSE. CONSULT A QUALIFIED ELECTRICIAN.

### **DANGER—RISK OF ELECTRICAL SHOCK.**

Install at least five feet from all metal surfaces. A spa may be installed within five feet of a metal surface if, in accordance with the Local Electrical Codes, each metal surface is permanently connected by a No. 8 AWG (8.4) solid copper connector attached to the wire connector on the control box that is provided for this purpose.

**PDC SPAS DOES NOT SUPPLY THE GFCI**

# GFCI, WIRING INFO (CONT'D)



## 220 Volt Electrical Requirements

Electrical codes require there is an electrical disconnect in view of, but over 5 feet, from the spa for safety.

Be sure to check with a certified electrician for specifics about applicable local codes.

Use 6 gauge copper 3-wire plus ground from the main panel to a sub-panel or an electrical quick disconnect and also, from there to the spa pack.

A Class A Ground Fault Circuit Interrupter (G.F.C.I.) is required. Refer to rating label for breaker size.

An appropriate sized amperage G.F.C.I. (Ground Fault Circuit Interrupter) circuit breaker may be installed within the main house panel box, or used as the electrical disconnect switch when mounted in a sub panel box in view of the spa but no closer than five feet of the spa or equipment.

When mounting the sub panel outside, a suitable panel box for outside locations is required

All electrical wiring should be performed by a certified electrician. Make sure the electrician has wired an approved Ground Fault Circuit Interrupter into the spas prior to running the unit.

If the installers do not have direct access to the spa site, it is the responsibility of the homeowner to supply additional help to get the spa to the site.

The wiring may be hidden by running it under the deck or underground, obeying all codes that may require special wiring sheathing or conduit. All code requirements are the responsibility of the home owner and should be adhered to for both safety and liability reasons.

A safety sign is enclosed with the Spa Owners Manual and must be displayed within view to all spa users.

Log on to [www.pdcspas.com](http://www.pdcspas.com) and access the 24/7 Customer Care section for troubleshooting FAQ's, a "Preparing for Delivery Guide", and a "Spa Planning Guide" which are all designed to provide valuable information to your consumers as they purchase, install, and operate their PDC Spa.

## Hot Tub Installation

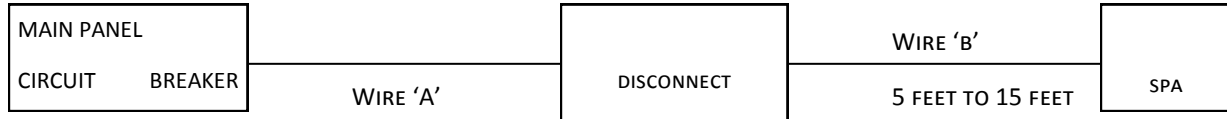
The weight of the spa is from 500 to 800 pounds plus 8 pounds per gallon of water. With the maximum number of users in the spa, it can weigh from 1 to over 2 tons. The weight load is concentrated at the foot well which is usually about 4 square feet, although designs and installations can vary distribution of the weight. Refer to the brochure/web site for spa model specifications.

# GFCI, WIRING INFO (CONT'D)



## SPA WIRING SCHEMATIC FOR CERTIFIED ELECTRICIAN'S REFERENCE ONLY

### OPTION 1

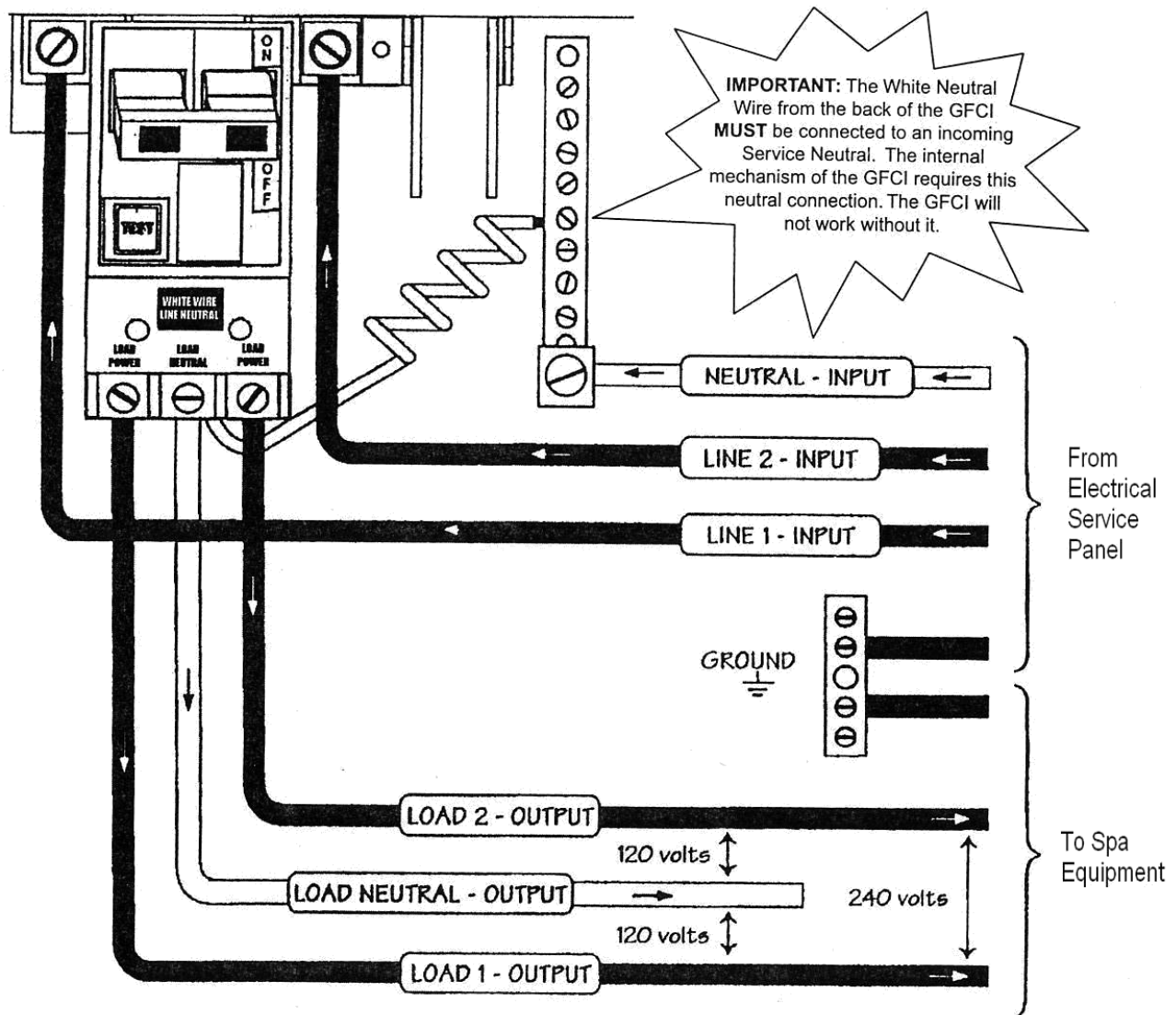


### OPTION 2



## 220V GFCI SPA WIRING DIAGRAM FOR CERTIFIED ELECTRICIAN'S REFERENCE ONLY

Class A G.F.C.I. recommended (not supplied by PDC Spas)



# GFCI, WIIRING INFO (CONT'D)



## Important Service Procedure Information READ THIS!

From time to time when service technicians arrive at the service site they encounter a spa that has not been wired properly. The most common problem found is the omission of the GFCI circuit breaker by either the electrician or home owner.

### **STOP!!! IMMEDIATELY!**

If you or your company perform service work on the spa or do not inform the home owner of that situation and an accident happens, you may be held liable by the court system.

#### **WHAT YOU OR YOUR SERVICE TECHNICIAN SHOULD DO:**

The first step of any service call should be to verify that a GFCI breaker exists at either the main panel box or a disconnect panel box that supplies electricity to spa equipment.

The technician should next push the test button on the GFCI breaker and verify the breaker is working properly before servicing the spa.

#### **WHAT TO DO IF NO GFCI CIRCUIT BREAKER IS PRESENT OR NOT WORKING PROPERLY:**

In the event you encounter a situation where either no GFCI is present or is not working properly we suggest::

- **Turn the breaker off**
- **Do not perform the service work needed until the situation is corrected by a competent electrician.**
- **Inform the homeowner both verbally and in writing of the danger.**  
(We have provided a sample warning on the following page, for the home owner to sign. We suggest your service technicians have blank copies to complete with them when performing service.)
- **Have the homeowner sign verification that they have been informed by you or your technician of the danger.**
- **Tell the home owner that you will be happy to complete the service call after the correction to the electricity has been made.**

# GFCI, WIRING INFO (CONT'D)



## Sample Homeowner Warning

Date \_\_\_\_\_

Service Retailer Company Name

Service Retailer Company address

Dear \_\_\_\_\_

During a recent visit at your spa site our service technician has discovered your spa is incorrectly wired and or not ground fault protected. This could create a hazardous condition. DO NOT use or allow the use of your spa until the existing electrical connection to your spa can be checked by a qualified electrician and wired in accordance with our Owner's Manual or in accordance with the national electrical code.

If your electrician needs further clarification please have them contact us. Once the problem has been corrected we will be happy to service the spa so that your continued use of the spa can be enjoyed.

SERVICE TECHNICIAN SIGNATURE \_\_\_\_\_

HOME OWNER SIGNATURE \_\_\_\_\_