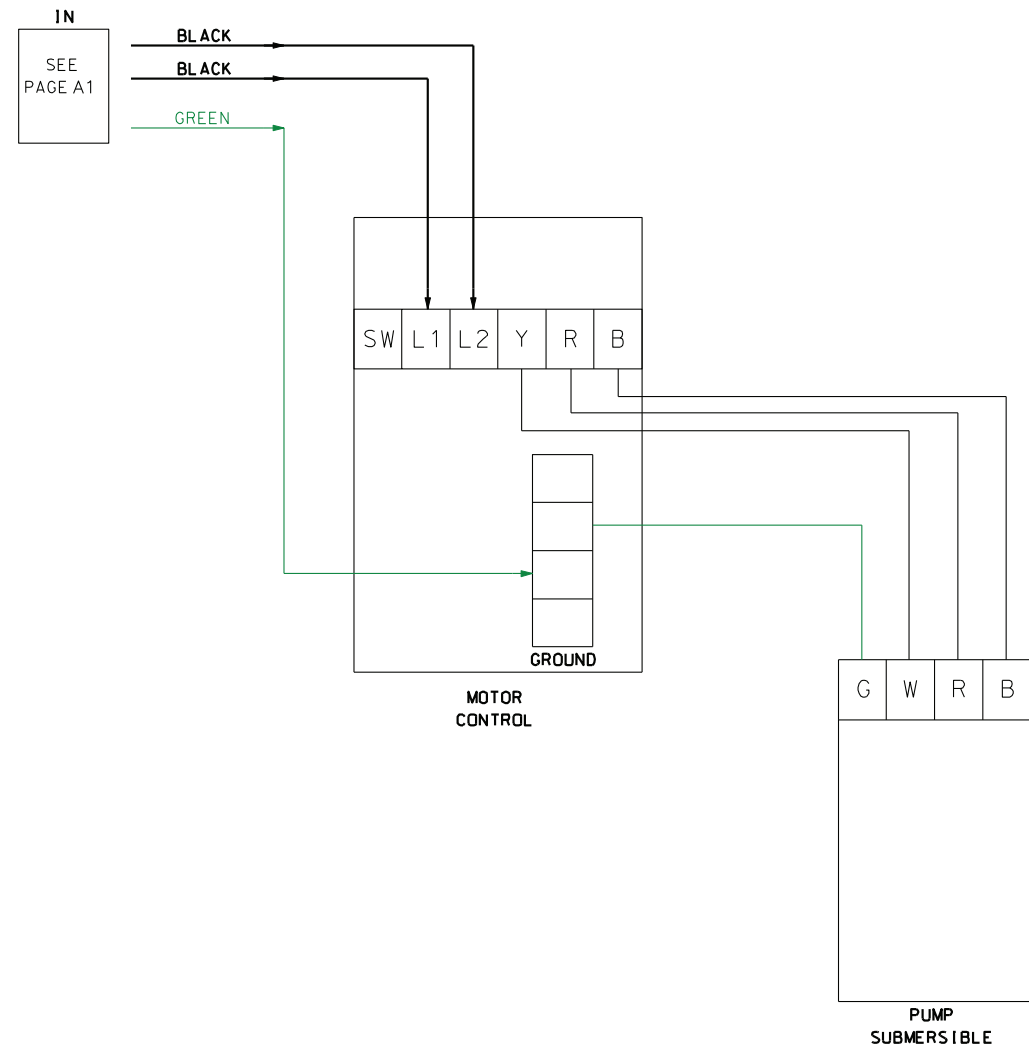



Desert Rain™

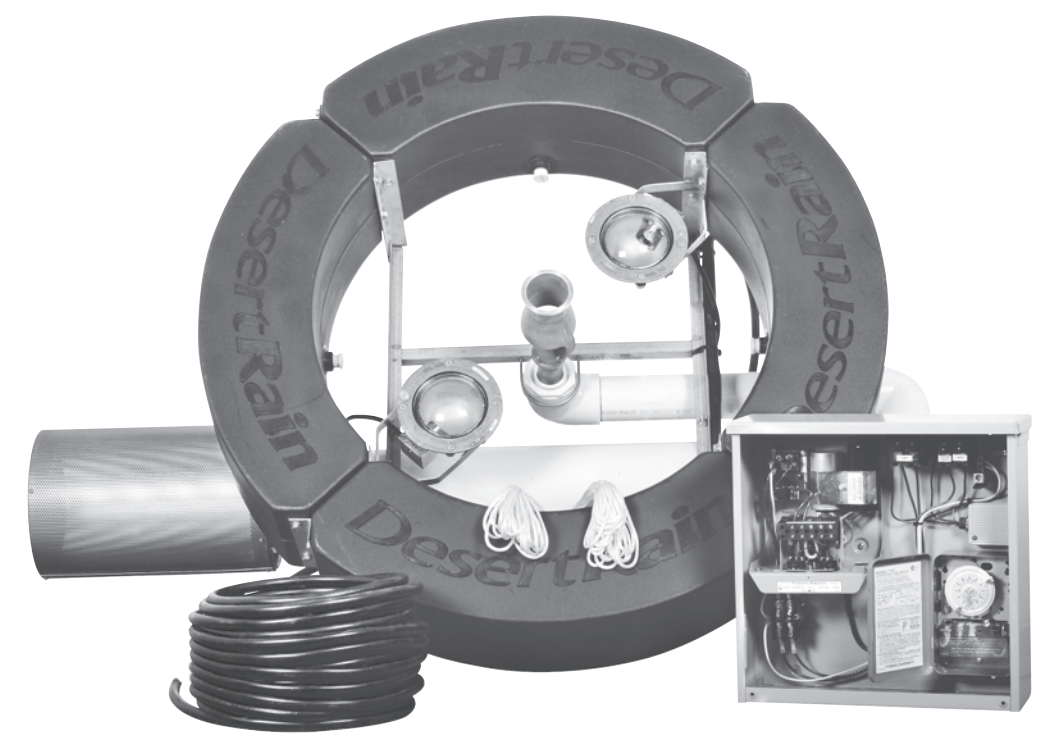
FLOATING  FOUNTAINS

Desert Rain™ Traditional Floating Fountains Owner's Manual and Installation Guide



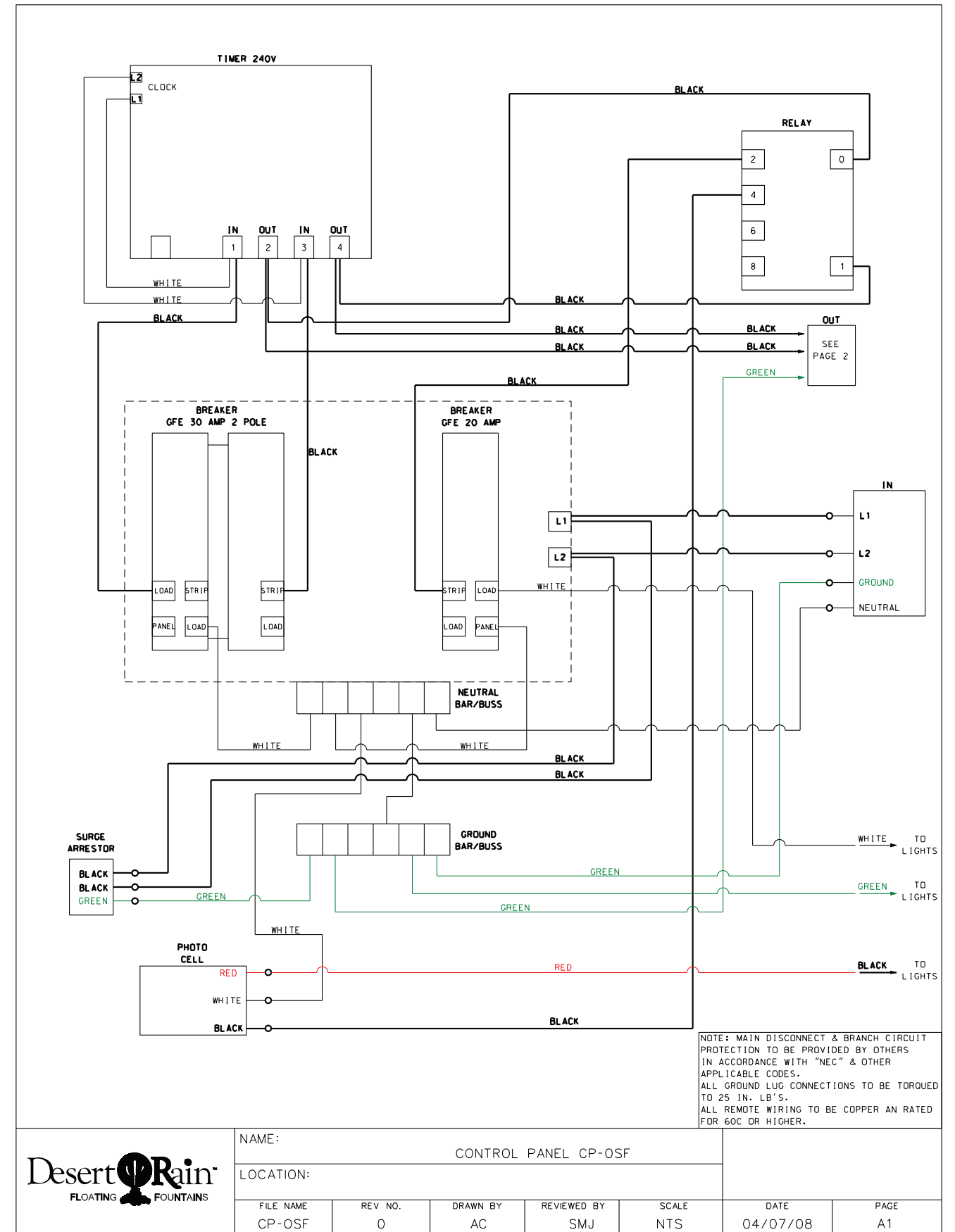
NOTE: MAIN DISCONNECT & BRANCH CIRCUIT PROTECTION TO BE PROVIDED BY OTHERS IN ACCORDANCE WITH "NEC" & OTHER APPLICABLE CODES.
ALL GROUND LUG CONNECTIONS TO BE TORQUED TO 25 IN. LB'S.
ALL REMOTE WIRING TO BE COPPER AN RATED FOR 60C OR HIGHER.

	NAME: CONTROL PANEL CP-OSF						
	LOCATION:						
	FILE NAME CP-OSF	REV. NO. 0	DRAWN BY AC	REVIEWED BY SMJ	SCALE NTS	DATE 04/10/08	PAGE A2



AQUATIC
ECO-SYSTEMS, INC.
Since 1978

Appendix: Control Panel Wiring Diagrams



Lighting Fixtures

The lenses of the lights will need to be cleaned periodically to remove film. A stiff-bristled nylon brush will aid in this task. Bulbs last on average about two years and must be replaced with bulbs of the correct type, voltage and wattage. The light fixtures are provided with extra cable to allow bulb replacements without having to remove the fountain from the water. Support the fixture while removing the two bolts that attach it to the brackets. Take care not to drop the fixture or the bolts. Cut the wire tie underneath the fixture to free the extra cable and lift the fixture into your boat for bulb replacements and/or cleaning of heavy buildup on the lenses.



Fountain with lighting features attached.

Winterizing

In regions where there is significant freezing in the wintertime, the fountain should be removed from the water to protect it from the expansion pressure of ice. In many areas, a fountain will keep some amount of ice open through the winter. However, when the water is thrust into the air it is exposed to the colder air temperatures longer and can actually make ice thicker on the pond/lake in the vicinity of the fountain.

Troubleshooting

Should the fountain pump fail to run, verify that correct voltage is supplied to the control panel, the GFCI for the pump is not tripped and the two red reset buttons located underneath the start/run capacitor box have not been tripped (230-volt, single-phase units). This should correct the problem and allow the pump to run.

Ground fault circuit interrupters are a safety feature that can also alert you to electrical leaks in the equipment. If you have repeated, consistent ground fault trips, the equipment and power cables should be inspected for damage. A qualified electrician may be needed to diagnose these problems. For further assistance, please call 407-886-3939.

Standard Warranty

Desert Rain™ Fountains, when properly installed and operated under normal conditions of use, are warranted by Aquatic Eco-Systems, Inc. to be free from defects in material and workmanship for a period of 12 months from the date of invoice, unless otherwise stated. In order to obtain performance

under this warranty, the buyer must promptly give verbal or written notice of the defect by calling our Returns Department at 407-886-3939, sending a fax to 407-886-6787 or by visiting deserrain.com. The buyer is responsible for freight charges, both to and from Aquatic Eco-Systems, Inc. in all cases.

Aquatic Eco-Systems, Inc. warranties do not extend to any goods or parts which have been subjected to misuse, modification, lack of maintenance, neglect, transit damage or damage resulting from lightning, natural or accidental flooding, fire or accident. Operating use or circumstances outside normal conditions may also be excluded from this warranty.

THIS EXPRESS WARRANTY EXCLUDES ALL OTHER WARRANTIES OR REPRESENTATIONS EXPRESSED OR IMPLIED BY ANY LITERATURE, DATA OR PERSON. THE MAXIMUM LIABILITY OF AES UNDER THIS EXCLUSIVE REMEDY SHALL NEVER EXCEED THE COST OF THE SUBJECT PRODUCT AND AES RESERVES THE RIGHT, AT ITS SOLE DISCRETION, TO REFUND THE PURCHASE PRICE IN LIEU OF REPAIR OR REPLACEMENT.

Aquatic Eco-Systems, Inc. WILL NOT BE RESPONSIBLE OR LIABLE FOR INDIRECT OR CONSEQUENTIAL DAMAGES OF ANY KIND, however arising, including but not limited to those for use of any products, loss of time, inconvenience, lost profit, labor charges or other incidental or consequential damages with respect to persons, animals, business or property, whether as a result of breach of warranty, negligence or otherwise. Notwithstanding any other provision of this warranty, BUYER'S REMEDY AGAINST AES FOR GOODS SUPPLIED OR FOR NON-DELIVERED GOODS OR FAILURE TO FURNISH GOODS, WHETHER OR NOT BASED ON NEGLIGENCE, STRICT LIABILITY OR BREACH OF EXPRESS OR IMPLIED WARRANTY IS LIMITED SOLELY, AT THE OPTION OF AES, TO REPLACEMENT OF OR CURE OF SUCH NONCONFORMING OR NON-DELIVERED GOODS OR RETURN OF THE PURCHASE PRICE FOR SUCH GOODS AND, IN NO EVENT, SHALL EXCEED THE PRICE OR CHARGE FOR SUCH GOODS. AES EXPRESSLY DISCLAIMS ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE WITH RESPECT TO THE GOODS SOLD. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTIONS SET FORTH IN THIS WARRANTY, notwithstanding any knowledge of Aquatic Eco-Systems, Inc. regarding the use or uses intended to be made of goods, proposed changes or additions to goods or any assistance or suggestions that may have been made by AES personnel. Unauthorized extensions of warranties by the customer shall remain the customer's responsibility.

CUSTOMER IS RESPONSIBLE FOR DETERMINING THE SUITABILITY OF AES PRODUCTS FOR CUSTOMER'S USE OR RESALE OR FOR INCORPORATING THEM INTO OBJECTS OR APPLICATIONS THAT THE CUSTOMER DESIGNS, ASSEMBLES, CONSTRUCTS OR MANUFACTURES.

Warranty is void if:

- The Fountain is not installed and maintained properly according to the installation and maintenance recommendations supplied in this owner's manual.
- The power cord(s) are cut or tampered with.
- Damage occurs due to abnormal operating conditions, accident, abuse, misuse or unauthorized alteration/repair.
- Low voltage is supplied to the motor, causing it to fail.

Only Aquatic Eco-Systems, Inc. personnel can modify this warranty, by signing a specific, written description of any modifications.

Table of Contents

	Page
Safety Instructions	1
Owner's Instructions	1
Before Installation	1
Installation	1
Preparation.....	1
Positioning.....	1
Nozzle Assembly.....	2
Anchoring.....	2
Ballasting.....	2
Electrical Hook-Up.....	2
Operation	3
Maintenance Recommendations	3
Time Clock.....	3
Cooling.....	3
Nozzle and Intake Screen Cleaning.....	3
Lighting Fixtures.....	4
Winterizing.....	4
Nozzle and Intake Screen Cleaning	4
Troubleshooting	4
Standard Warranty	4
Appendix	5

Congratulations!

Thank you for your purchase of a Desert Rain™ Traditional Floating Fountain. Installation is easy and should take about two hours to complete. Please read the literature thoroughly before beginning the installation and retain it for future reference. To provide the best performance of your new fountain and to ensure its lasting beauty, please comply with all recommendations contained in this manual.

Important Safety & Handling Instructions

- Extreme caution should be used around water.
- Do not use boats that tip easily for fountain installation (i.e., canoes).
- Never attempt to lift, drag or tow the fountain into place by the power cords. Use the anchoring ropes.
- Caution should be used when dealing with any electrical equipment, especially in wet environments.
- All Desert Rain™ fountain control panels are GFCI-protected; however, no one should enter the water under any circumstances while the fountain is in operation.
- Never operate the unit or turn on the lights out of water, as both are water-cooled and can be damaged by doing so.

General Owner's Instructions

Inspect the Shipment

Immediately inspect your Desert Rain™ fountain shipment for any visible damages. Any damage found should be reported to your carrier.

Proper Installation

Proper installation of your Desert Rain™ Fountain must include a power source consisting of the correct voltage and phase supplied to the fountain pump motor and the light fixtures. We strongly recommend a qualified electrician for the fountain installation.

Use and Operation

Desert Rain™ Fountains are designed and tested for continuous duty and will provide years of reliable service once properly installed. It is extremely important that proper and sufficient voltage is supplied to the fountain motor. Voltage drop to the motor is the number one cause of failure and is not covered by warranty.

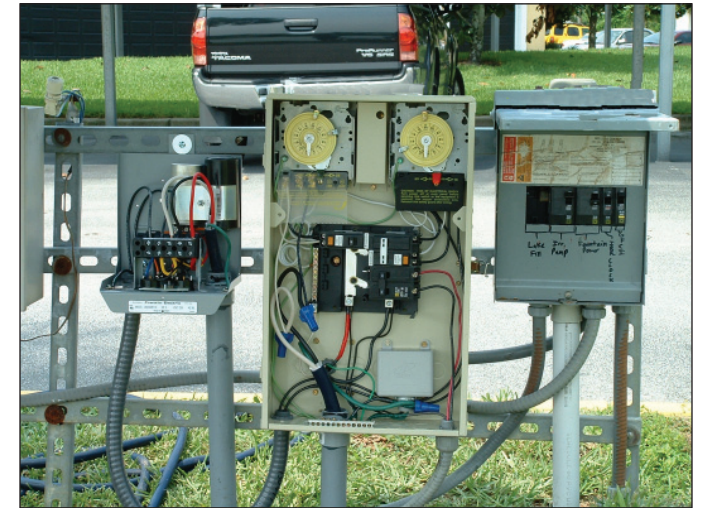
Optional Light Fixtures

Do not operate lights out of water. Overheating will ruin the lamp and/or shatter the glass lens. The light fixtures are pivot-mounted to allow

directional adjustment of the beams. The two pivot mounting bolts on each fixture also facilitate removal from the water for lamp changes and/or lens cleaning. Enough cord length has been provided with each fixture to allow removal with the fountain left anchored in place.

Before Installation

Make sure you have the proper electrical supply, voltage and phase in place for your fountain and lights. Have a qualified commercial electrician with pool pump experience evaluate electrical situation at the proposed fountain site. The electrician will know right away if a dedicated line needs to be run to provide correct power for the fountain. Have this electrician perform all the fountain's electrical hook-ups.



We recommend having an electrician perform all necessary wiring.



WARNING

Consult National Electrical Code Article 680 prior to installation.

It is the buyer's responsibility to check all electrical codes prior to installation of electrical equipment.

The installation and operation of electrical products underwater, if not carried out by a qualified, licensed electrician in a careful and workmanlike manner in accordance with the National Electrical Code, applicable safety regulations and Desert Rain™ installation instructions, may present a potentially hazardous condition.

The National Electrical Code requires the use of a "Class A" ground fault circuit interrupter (GFCI) on each submersible equipment circuit above 15 volts.

AES lends its full support to all provisions of NEC Article 680 of the National Electrical Code and accepts no responsibility whatsoever for installations not made in accordance with all provisions of said article and all other applicable codes or restrictions.

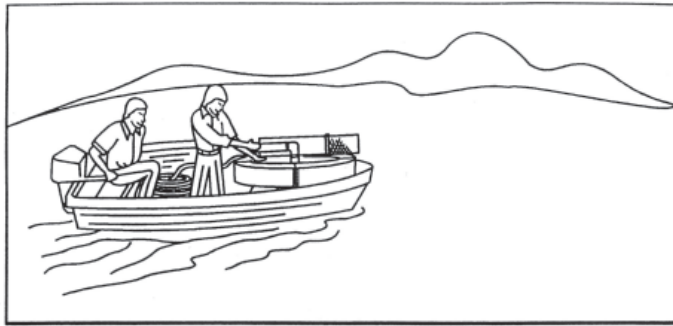
Fountain Installation

Step One: Preparation

After unpacking the fountain and inspecting for damage, install the intake screen assembly onto the end of the pump induction tube by lightly taping into place. Do not use glue. A friction fit is all that is needed to hold the screen in place and allow future maintenance.

Step Two: Positioning

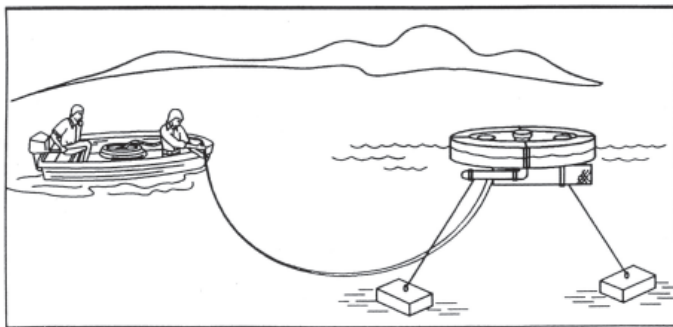
The preferred method is to move the cable(s) and fountain to the final location via boat, anchor the fountain, and pay out cable(s) as you return to shore. This process is illustrated on the next page.



Positioning



Placement



Anchoring

Alternatively, the fountain can be set in the water at lake's edge and towed to its final position via the anchor lines (do not pull the fountain by the power cable(s)). If water depth is restrictive, the fountain can be placed in the water inverted, towed into position, flipped right side up and then anchored. Water depth at the float location must be at least 36".

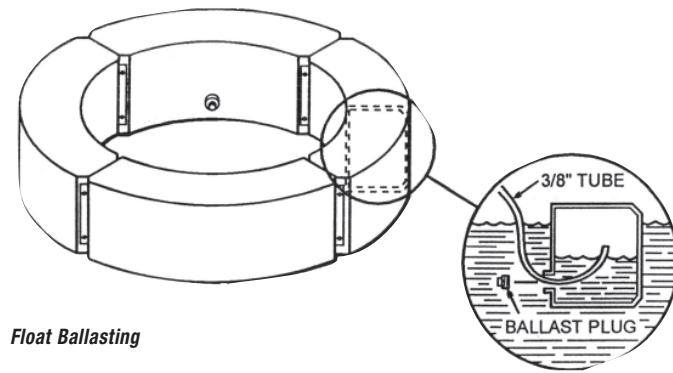
Two workers are an advantage using this method. One person may position the fountain while the other pays out cable from the shore. If heavy resistance is encountered, stop, recoil the cable(s) and try again. Use care to prevent damage to the cable attachment points located on the fountain frame.

Step Three: Nozzle Assembly

After positioning the fountain, the nozzle can be installed on the riser pipe. Do not use pipe dope compound; use Teflon® tape only. Be careful not to cross thread the riser pipe. Hand-tighten the nozzle(s) only.

Step Four: Anchoring

When anchoring the fountain in place, use two concrete blocks on two lengths of nylon rope, which are tied to the stainless steel frame of the fountain on opposite sides. Each rope length should be at least twice the water depth. A good rule of thumb is to use three feet of rope for each foot of depth. Leave some slack in the rope to allow vertical movement of the fountain as water levels change. An alternate method is to stake the anchor ropes at opposing shorelines. Conceal the anchor line from view by hanging several weights on a dark colored anchor rope.



Float Ballasting

Step Five: Ballasting

Now that the float assembly is anchored in position and the cable ends are on the shoreline, the next step is to lower and level the floats (see illustration).

To add water: With the fountain in the water, remove ballast plugs; insert the flexible tube that has been provided for this purpose into float at plughole. Be sure the tube is at the top of the float compartment. Blow a short burst of air into the tube to clear the water from it. Now the air from inside the float will begin to vent. Ballast each float section until desired elevation is obtained.



Properly ballasted fountain.

To remove water: Insert the tube as instructed above and blow air into the float section displacing the water.

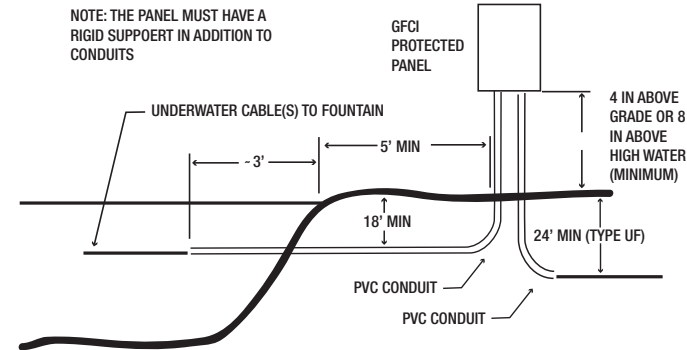
As a general rule, ballast until the tops of the steel float connectors are at the water line. This will leave the float assembly about 1" above the water surface. Replace the ballast plugs.

Step Six: Electrical Hook-Up

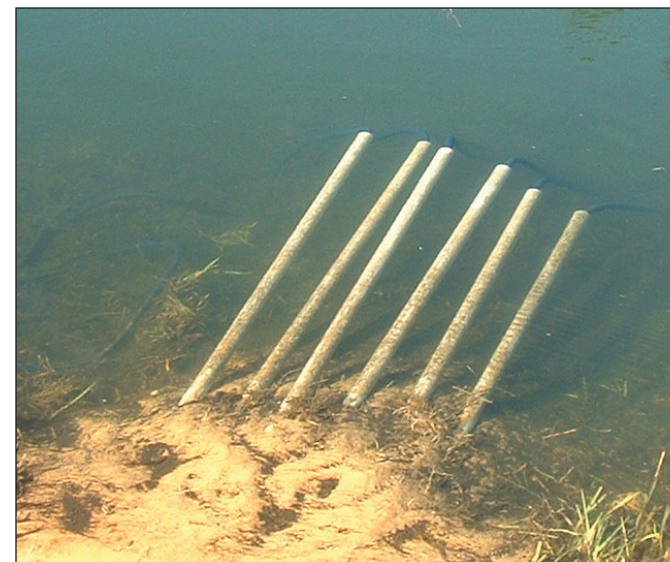
Although the fountain control panel is prewired internally, have a qualified electrician bring correct and sufficient voltage into the control panel and hook up the fountain cables. Attempting to run a 220-volt pump on 120 volts will quickly damage the pump motor, so use care to keep cables properly coded.

Your GFCI-protected control panel should be located near the shore and mounted on a post or uni-strut rack above the high water line. This is to your benefit to reduce the length of underwater cable to the floating fountain. Also, shorter GFCI-protected cable runs reduce the possibility of nuisance tripping.

The underwater cable is similar in cost to the feeder your electrician must trench in the ground to the shore for your control panel. The difference is that your feeder is installed once, while the underwater cable is subject to replacement if damaged by turtles, muskrats or fish hooks.



A typical control panel installation consists of a buried PVC conduit sleeve from the control panel that exits below water level a few feet off shore, allowing the motor and light cables to be pulled into place and connected once inside the control panel.



Conduit pipe with electrical cable.

Disclaimer: All electric installations must comply with the National Electric Code. AES is not responsible for direct or consequential damages arising from the use of this information.

The fountain cable(s) supplied is/are not rated for direct burial so the use of conduit is required. This conduit sleeve is typically 1 1/4" for single cables (fountain without lights) or 1 1/2" and up for fountains with multiple cables. Be generous with the diameter because a few years down the road, when the conduit is filled with mud, you may need to pull the cable back out.

Fountain Operation

Starting the Fountain for the First Time

Turn on the pump and light circuit breakers. Set the correct time of day on the time clock(s) dial by lifting the wheel and aligning the pointer. Loosen the thumb screws for the on and off trips and set to desired on and off times for the fountain and lights. Move the manual start lever under each timer dial to the ON position. The clock(s) will automatically control the fountain and lights per your settings.

Maintenance Recommendations



CAUTION

Always remove power to the fountain before any maintenance procedures are performed. Under no circumstances should anyone enter the water while a fountain is operating.

Time Clock Setting

The time clock setting in the control panel should be checked and updated periodically. Any interruption of power to the clock will cause the timer to lose track of the correct time.

Adequate Cooling

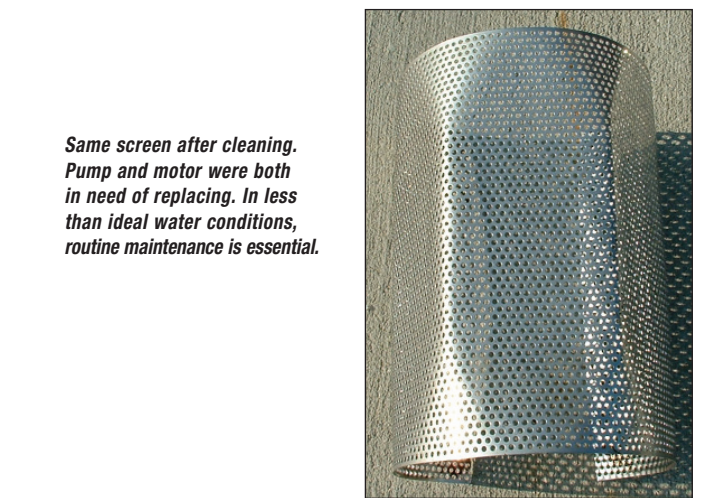
Your fountain's motor is water lubricated and water-cooled. It contains no oil so there are no periodic oil changes. It relies on the ability of water to flow easily over the motor. Keeping your water clean will keep your fountain clear of debris, mineral deposits, plant deposits and other water flow restricting elements. If your water is challenged with these environmental problems, periodically check your fountain for debris hazards, plant and mineral buildups. Periodic cleaning of the intake screen is easily done with a long handle wire brush without removal of the fountain. Motor damage caused by environmental hazards is not covered by your warranty.

Nozzle and Intake Screen Cleaning

If the fountain display appears abnormal or display performance decreases, the nozzle and/or the intake screen may be clogged and require removal for cleaning.



Intake screen clogged with aquatic weeds.



Same screen after cleaning. Pump and motor were both in need of replacing. In less than ideal water conditions, routine maintenance is essential.