

50HZ 1-5 HP OWNER'S MANUAL

# MASTERS<sup>®</sup> HORIZONTAL SERIES

Every **AquaMaster®** unit is fully inspected and produced in accordance with applicable standards for safety, and are listed by Underwriters Laboratories, Inc. (UL) for safety in the USA and Canada.

**AquaMaster®** will continue to build the best units to assure you, the customer, of many years of enjoyable and reliable service. AquaMaster's commitment to excellence ensures superior aquatic management systems.

All **AquaMaster®** products are designed and built to be installed with an **AquaMaster®** UL Listed control panel and to be operated as a complete system. Any alterations to or substitution for items in this system, unless allowed by these installation instructions, will **void** the UL Listing and will void the product warranty. **It may also create a hazardous installation.** Read these instructions thoroughly before starting your installation and follow them carefully throughout.

### **WARNING**



**NOTICE:** Save and pass the installation, anchoring and operating instructions to subsequent owners. The information provided is intended to notify and warn about making unsafe modifications, making unsafe repairs, or using unauthorized parts or repair facilities.

- Improper installation, operation, service, repair, maintenance or alteration of this product may result in property damage or bodily injury.
- Turn **OFF** electrical power at disconnect switch or service panel before servicing this unit or lighting system.
- Risk of electric shock! This pump or lighting system has not been investigated for use in swimming pool or marine areas. **DO NOT use in swimming or marine areas.**
- Only qualified personnel shall service and install **AquaMaster®** pumps or lighting systems. Installation and service to be in accordance with the National Electric Code and local codes and/or ordinances. This unit is intended to be operated only after it is properly installed, anchored and wired.
- Risk of electrical shock! **DO NOT** operate this unit dry unless testing for proper rotational/mechanical function (see electrical connections, later in this manual). If this unit has been inadvertently operated out of the water, the unit must be serviced by a qualified person before being returned to service.
- Risk of electric shock! This pump and lighting system is supplied with a grounding conductor. To reduce the risk of electric shock, be certain that it is connected only to a proper ground. Use a copper conductor of the correct size from the grounding terminal in the control box to a grounding connection in the service panel.
- This pump and lighting fixtures are provided with flexible underwater cable and strain relief. **DO NOT** remove as electrical shock and/or damage to this unit or lighting system could occur.
- Risk of electrical shock! **DO NOT** remove the wire harness from the pump housing or underwater disconnect. **DO NOT** connect conduit to pump.
- This unit and lighting system is intended for water use only. **DO NOT** operate out of the water unless checking for proper mechanical/electrical function.
- This lighting system is intended to be used with the **AquaMaster®** floating fountain or aeration systems only. **DO NOT** use this fixture in any other manner.
- Risk of electrical shock! Submerge lighting fixtures before turning on.
- This pump and lighting fixtures are for fresh water only.

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## SHIPPING CLAIMS

When you receive your **AquaMaster®** unit, examine the package for any signs of external damage it may have sustained enroute. If there is apparent damage either outside the box or to its contents, make a claim with the shipper immediately. Save the original shipping carton and the packing material if a claim is to be filed.

**Pictures and images used in this manual are for representational purposes only, may not depict the actual product.**

## MASTERS SERIES® 1-5 H.P. 50HZ HORIZONTAL ASSEMBLY INSTRUCTIONS

**WARNING:** Read these instructions carefully. Failure to follow these instructions could cause a malfunction of the system. Improper installation, wiring or anchoring could result in property damage or bodily injury.



This unit has been shipped partially assembled to avoid damage during shipment. Please refer to enclosed drawings for part locations.

1. Carefully unpack your unit and inspect for damage.
2. To begin assembly, place the screened in power unit assembly on a flat level surface with the three sides of the screen exposed. Remove the plastic parts bag from the screen. This parts bag contains the float tube bolts, O-ring, washers and nuts and silicone grease.
3. Install the O-ring provided in the groove on the elbow assembly (#2). Apply a thin coat of silicone grease to the O-ring, groove and pump housing interior to allow for easier installation. Insert the elbow assembly, with the open side of the elbow pointing up. Insert four bolts, lock washers and flat washers to secure the elbow assembly in the pump housing.
4. Install the float support bracket (#8) onto the back screen plate. Secure with two self threading screws that are provided.
5. Install O-ring (provided) in the lower groove of the float tube. Apply a thin coat of silicone grease to the O-ring, float tube and interior of the elbow to allow for easier installation.
6. Lift float assembly (#1) and insert float tube into elbow (#2) making sure to align the holes in the elbow with the holes in the float tube.
7. Secure the float tube to the elbow (#2) with (4) stainless steel screws and washers (#4).
8. Use a 3/8" flat washer, bolt and nuts (#5) to secure the perimeter of the float to the rear bracket.

**CAUTION: DO NOT** operate without the suction screen in place.



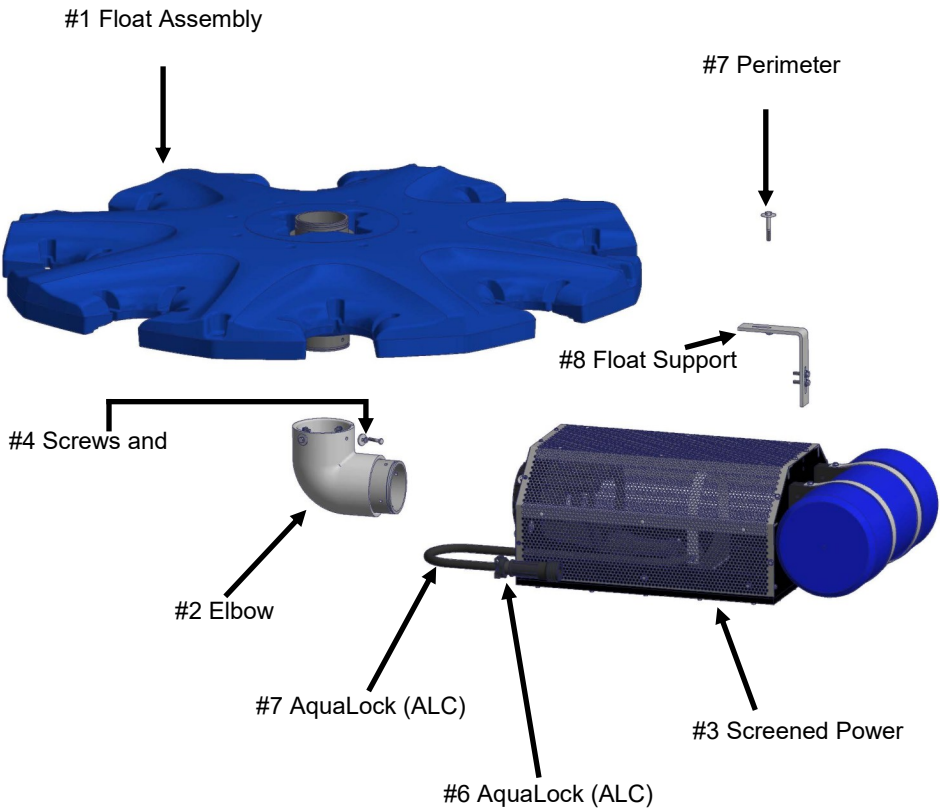
9. Attach cable support grip on snap clip provided on the front screen plate to keep strain off cable.
10. Attach the AquaLock (ALC) connector.

**CAUTION: HAND TIGHTEN ONLY!** Do not use tools such as a pipe wrench or pliers as you may over tighten and damage the connectors.



**Note:** When your unit and/or lighting system requires removal, protective caps have been provided to assist in maintaining a clean cable environment. Simply hand tighten one half to your power unit and the other half to your cable end. When you remove the protective caps, keep them in a safe place, such as the control panel.

ASSEMBLY INSTRUCTIONS (CONT.)



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## NIGHT GLOW LIGHTING SYSTEMS ASSEMBLY INSTRUCTIONS

(Pictures used for representational purposes, may not depict actual product)

Check to see that all light fixture retaining bands are in place. To install the retaining bands follow the instructions below, to install light fixtures, skip to step 2.

### 1. To install light fixture retaining band on existing float:

- Place the unit on level surface with motor down and float up.
- Place one bent leg in float slot as shown.
- Maneuver the leg into the slot as far as it will go.
- Work second bent leg into the other slot.
- Center the clip over opening and bolt into place using hardware provided.

**Note:** The large washers are assembled on the top of the float and the small washer and nut are assembled against the light fixture retaining band on the bottom.

- Before tightening, slide the retaining band and bolt as far as they will go towards the center of the float.

Figure 1



Figure 2



### 2. To install light fixture into float with existing light fixture retaining band:

- Position the fixtures around the float.
- Place the light fixture clamp ring under the angle tabs as shown.
- Slide the light fixture in until it snaps into place. The fixture may have some free movement, but should not fall out.
- Rotate lights to bring the clamp ring stud behind the float edge.

Figure 3



Figure 4



## NIGHT GLOW LIGHTING SYSTEMS ASSEMBLY INSTRUCTIONS (CONT.)

### 3. To remove light fixture from float with light fixture retaining band:

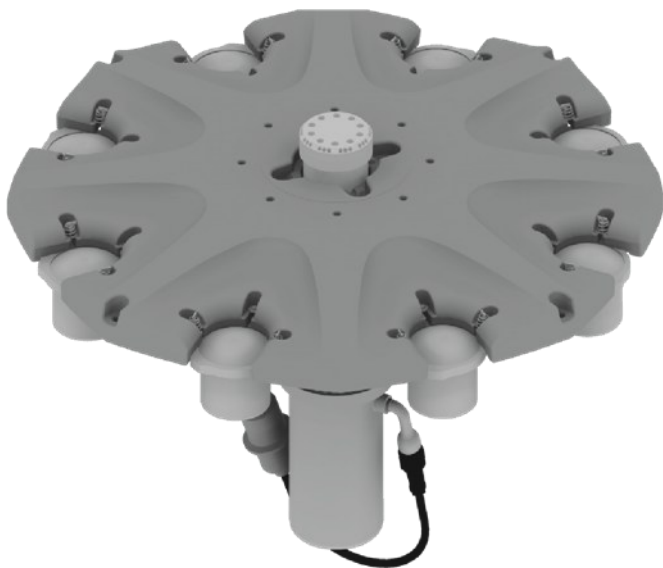
- a. Pull any fixture toward the open side of the float.
- b. As the fixture meets obstruction of the float, angle the fixture slightly as shown to clear the float and continue to pull away from the float center line.

### 4. After fixtures are installed on the float, connect the Aqua Lock (ALC) together. **HAND TIGHTEN ONLY!**

**CAUTION: HAND TIGHTEN ONLY!** Do not use tools such as a pipe wrench or pliers as you may over tighten and damage the connectors.



**Note:** When your unit and/or lighting system requires removal, protective caps have been provided to maintain a clean cable environment. Simply hand-tighten one half to your light set and the other half to your cable end. When you remove the protective caps, keep them in a safe place, such as the control panel.



## **ELECTRICAL CONNECTION – 50Hz**

### **(Electrical Control Panel NOT supplied by AquaMaster®)**

Electrical connections must be completed by a licensed electrician or installer in accordance with European community, national, local codes or ordinances.

**CAUTION:** Aeration systems require the use of a residual current device (RCD) with a rated residual operating current not exceeding 30 mA for safe operation. If the proper grounding and RCD are not used, serious FATAL electrical shock may occur.

### **ELECTRICAL NOTICE**

Supply conductors must be of sufficient cross sectional area to operate the equipment in regard to cable length, motor nameplate current and voltage ratings. All cables, conduits and external ducts must enter the enclosure from the bottom only. Install cables, conduits and external wiring ducts by qualified installer and per local codes utilizing appropriate bushings and glands. Care must be used to protect cables when entering and leaving the pond area by the use of protective duct, conduits or like protection devices. Electrical cable must extend completely onto shore to power source without breaks or splices. Underwater splices are dangerous and will void the warranty.

### **WARNING**



**BEFORE INSTALLING INTO THE WATER**, test the unit briefly (30 seconds or less) to make sure it runs and check for proper rotation (counter clockwise looking down from top of power unit). Listen for any unusual noises. Unit should run smoothly and quietly. If single phase rotation is backwards, **PLEASE CONTACT THE FACTORY IMMEDIATELY**. If three phase rotation is backwards, change any two motor load leads. If rotation is still backwards check all connections or contact the factory for assistance. **DO NOT** operate the unit out of the water except for testing and checking rotation (30 seconds or less). **DO NOT** attempt maintenance procedures or adjustments with unit in operation. **DO NOT** burn the lighting fixtures out of the water except to test the lamps (60 seconds or less).

**NOTE:** Excessive buildup on the lenses may cause the lenses to crack, lamps to burn out and gaskets to fail. To maintain maximum light output and long lamp life, cleaning of the lenses may become necessary.

### **GROUNDING**

Permanently ground this unit in accordance with European community, national, local codes or ordinances. Use a copper conductor of the correct size from the grounding terminal in the control box to a grounded connection in the service panel or a properly driven and electrically grounded ground rod.

### **OPERATING CONDITIONS**

**OPERATE UNIT ONLY IN FRESH WATER WITH WATER TEMPERATURE NOT EXCEEDING 40 degree C. DO NOT OPERATE IN SWIMMING AREAS.**



## **ELECTRICAL CONNECTION – 50Hz (Supplied with AquaMaster® control panel)**

Electrical connections must be completed by a licensed electrician or installer in accordance with European community, national, local codes or ordinances.

**CAUTION:** Aeration systems require the use of a residual current device (RCD) with a rated residual operating current not exceeding 30 mA for safe operation. If the proper grounding and RCD are not used, serial FATAL electrical shock may occur.

### **ELECTRICAL NOTICE**

Supply conductors must be of sufficient cross sectional area to operate the equipment in regard to cable length, motor nameplate current and voltage ratings. All cables, conduits and external ducts must enter the enclosure from the bottom only. Install cables, conduits and external wiring ducts by qualified installer and per local codes utilizing appropriate bushings and glands. Care must be used to protect cables when entering and leaving the pond area by the use of protective duct, conduits or like protection devices. Electrical cable must extend completely onto shore to power source without breaks or splices. Underwater splices are dangerous and will void the warranty.

### **WARNING**



**DO NOT** burn the lighting fixtures out of the water except to test the lamps (60 seconds or less).

**NOTE:** Excessive buildup on the lenses may cause the lenses to crack, lamps to burn out and gaskets to fail. To maintain maximum light output and long lamp life, cleaning of the lenses may become necessary.

**DO NOT BYPASS YOUR CONTROL PANEL. (TO DO SO COULD RESULT IN THE DANGER OF ELECTROCUTION TO ANYONE, HUMAN OR ANIMAL, IN CONTACT WITH THE WATER IF AN ELECTRICAL SHORT SHOULD OCCUR.)**

1. To wire your unit and main power to your control panel proceed as follows:
  - a.) Electrical cable must extend completely onto shore to power source without breakers or splices. Underwater splices are dangerous and will void the warranty. Securely fasten electrical cables with appropriate devices.
  - b.) Connect black lead from cable to terminal marked 1T1 on terminal strip.
  - c.) Connect white lead from cable to terminal marked 1T2 on terminal strip.
  - d.) Connect red lead from cable to terminal marked 1T3 on terminal strip.
  - e.) Connect the green lead to the earthing system terminal.

## ELECTRICAL CONNECTION – 50Hz (CONT.) (Supplied with AquaMaster® control panel)

2. To connect power to control panel:
  - a. Connect Line 1 to L1 on the terminal strip.
  - b.. Connect Line 2 to L2 on the terminal strip.
  - c. Connect Line 3 to L3 on the terminal strip (3 Phase Only).
  - d. Connect the neutral to N on the terminal strip (3 Phase Only).
  - e. Connect the ground to the earthing system terminal.

**WARNING:** Always make sure power is off when changing motor direction!



3. Set or verify the overload device in the panel is set to the motor nameplate value plus two amperes.
4. **BEFORE INSTALLING INTO THE WATER**, test the unit briefly (30 seconds or less) to make sure it runs and check for proper rotation (counter clockwise looking down from top of power unit). Listen for any unusual noises. Unit should run smoothly and quietly. If single phase rotation is backwards, **PLEASE CONTACT THE FACTORY IMMEDIATELY**. If three phase rotation is backwards, change any two motor load leads. If rotation is still backwards check all connections or contact the factory for assistance.

**DO NOT** operate the unit out of the water except for testing and checking rotation (30 seconds or less). **DO NOT** attempt maintenance procedures or adjustments with unit in operation.

### GROUNDING

Permanently ground this unit in accordance with local codes or ordinances. Use a copper conductor of the correct size from the grounding terminal in the control box to a grounded connection in the service panel or a properly driven and electrically grounded ground rod.

## TIMER OPERATING INSTRUCTIONS



1. To set the time, hold down the CLOCK Key while pressing either the HOUR or MINUTE keys. Continue pressing until the desired number is shown. Then simply lift finger off the CLOCK Key to set.
2. To Set Program (ON/OFF) times: Press the TIMER Key once to enter into program mode. Display will show "1 ON-- --".
3. Press the HOUR Key and then the MINUTE Key to select the desired first OFF time. Repeat the entire sequence to complete up to eight ON/OFF times as desired.
4. When programming is done, press the CLOCK Key then the SELECT Key repeatedly until the indicator bar is above the word "AUTO".

**CAUTION:** Disconnect all power before servicing. **DO NOT** install or operate in swimming areas.

## OPERATING CONDITIONS

**OPERATE UNIT ONLY IN FRESH WATER WITH WATER TEMPERATURE NOT EXCEEDING 40 degree C. DO NOT OPERATE IN SWIMMING AREAS.**



1. Make sure the timer is set to the proper time on the front dial of the timer. Set the on-off sequence to turn the fountains on and off at the desired time. 2. Turn on supply disconnect which is located on the right side of the panel.
2. Turn on the Residual Current Operator. Test to make sure that this safety device works properly. Press the test button and the breaker should trip. If it does not trip, check for proper wiring or defective device.

**NOTE: DO NOT BYPASS THIS SAFETY DEVICE. THIS DEVICE MUST BE TESTED EVERY MONTH.**

3. Reset the breaker.
4. Sit back and enjoy your fountain/aerator.

**CAUTION: DISCONNECT ALL POWER BEFORE SERVICING**

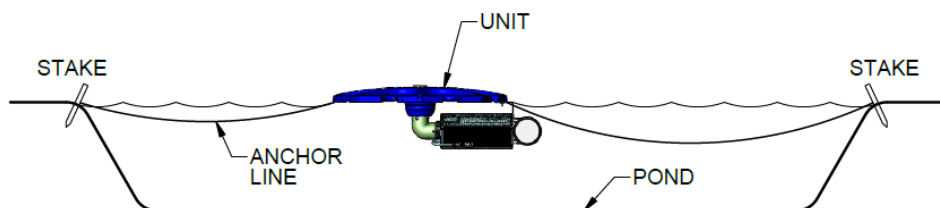
## ANCHORING INSTRUCTIONS

**CAUTION:** If the unit is not properly anchored with adequate tension, the unit will rotate when in operation, resulting in twisted and damaged electrical cable (s).



FIGURE 1 is most applicable for a smaller pond, or one that is easily accessible from two sides.

**FIGURE 1**



### Required Equipment (not provided)

- Two (2) anchor lines (1/4 inch nylon, 1/8" stainless steel cable, or equivalent).
- Two (2) stakes (wood stake or metal rod that can be driven securely into pond's edge).

### Anchoring Steps

1. With the unit fully assembled and still on shore, attach anchor lines to the float. Only use the anchor holes which are opposite from one another. Next, carefully lower unit into the pond. **DO NOT** tangle anchor lines and electrical cable(s).
2. Once the unit is floating freely hold or secure one anchor line. With second line, walk slowly away from the first stake to opposite side of pond, pulling unit with you. Continue until unit is in desired location.
3. Secure all lines, keeping tension on all. Make sure electrical cable(s) is untangled and has some slack from unit to shore.

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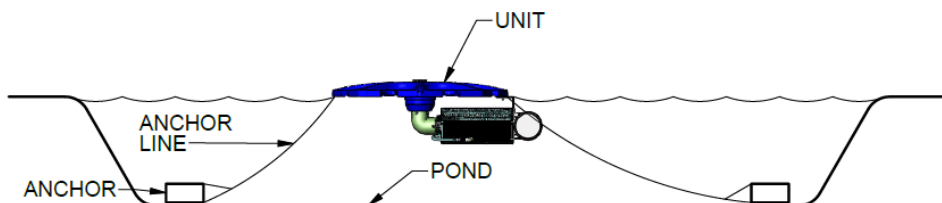
## ANCHORING INSTRUCTIONS (CONT.)

**CAUTION:** If the unit is not properly anchored with adequate tension, the unit will rotate when in operation, resulting in twisted and damaged electrical cable(s).



In a larger body of water or where vandalism is a concern, FIGURE 2 is the preferred method.

FIGURE 2



### Required Equipment (not provided)

- Two (2) anchor lines (1/4 inch nylon, 1/8" stainless steel cable or equivalent). Anchor Line length should equal twice the depth of the pond at point of installation. (Example, if pond depth is eight feet, each anchor line should be at least sixteen feet.) **If the depth of the pond varies more than three feet use FIGURE 1.**
- Two (2) anchors (eight inch concrete blocks, approximate weight of 30 pounds each is sufficient).

### Anchoring Steps

1. With unit fully assembled and still on shore, attach anchor lines to the float. Only use the anchor holes which are opposite from one another. Next, carefully lower unit into the pond. **DO NOT** tangle anchor lines and electrical cable(s).
2. Position unit at desired location in pond, playing out electrical cable(s) from shore. Attach anchor lines to anchors and anchor unit making sure you cannot rotate unit more than 45 degrees. Some movement is necessary to allow float to move up and down with changes in water depth. **If you can rotate float more than 45 degrees, adjust anchor lines or relocate anchors.**

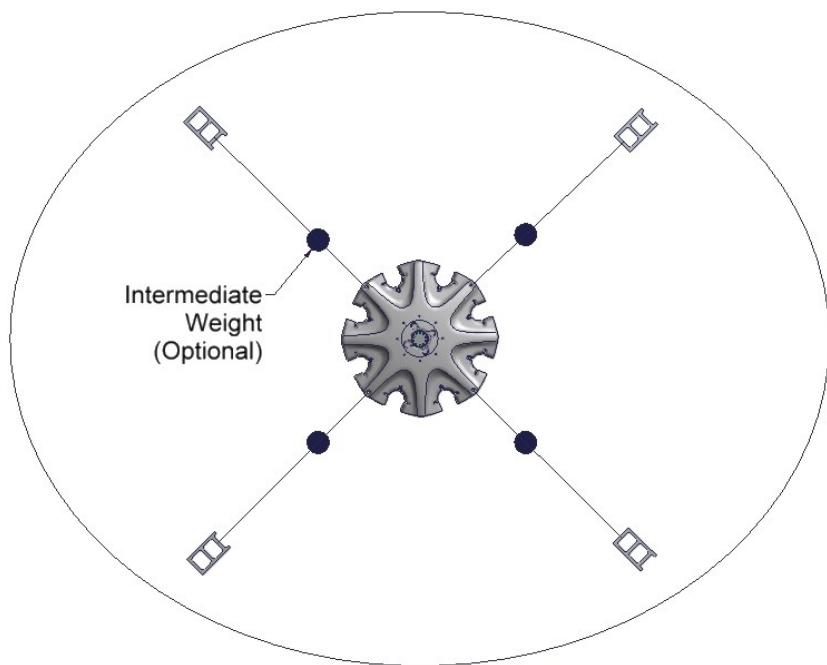
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## FOUR-POINT ANCHORING

At times, because of pond depth, pattern, or pond size, four-point anchoring may become necessary or desirable to prevent your unit from rocking.

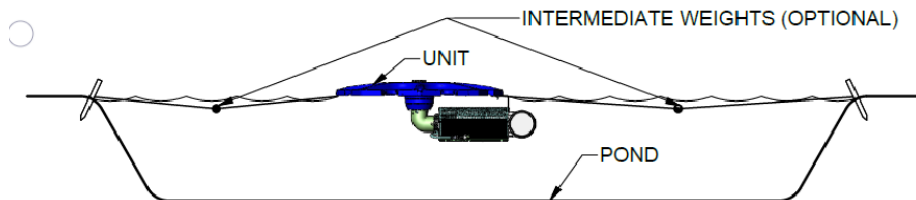
1. Below are two drawings that depict the manner in which the anchors are to be deployed.
2. You will need to pick four anchor points on the float and secure your anchor lines to these points.
3. About 10 to 15 feet from your anchor points on your float, intermediate weights of approximately 5 lbs. each should be secured to your anchor lines. These weights will keep tension on your anchor lines even though the water depth may vary.
4. Stretch out your anchor lines so your intermediate weights are suspended in the water and not sitting on the bottom. When the anchor lines are properly stretched out, fasten them securely to your anchors on shore or the bottom as required.

**CAUTION:** If the unit is not properly anchored with adequate attention, the unit will rotate when in operation, resulting in twisted and damaged electrical cable (s).



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## ANCHORING INSTRUCTIONS (CONT.)



Intermediate weights can also be used with all kind of anchoring to keep constant tension on the anchor lines when the pond depth varies. Follow the installation instructions from the previous page.

## MAINTENANCE

### WARNING: DISCONNECT ALL POWER BEFORE SERVICING



Like all pieces of precision machinery, certain maintenance procedures must be performed to keep the unit running trouble free for years. The following recommendations should be done annually to prevent a more serious and costly problem from occurring.

Following these recommended procedures will result in years of trouble free operation, as well as keeping the warranty in effect.

- In all cases it is strongly recommended that the unit is removed from the water annually for a good visual inspection.
- Remove the unit from the water and inspect the nuts, bolts, brackets and float. Replace any broken or worn parts. Tighten any nuts and bolts that may have worked loose.
- Make sure the intake screen is in place, intact and free of debris. If debris is floating in the water (plastic bags, fishing line, etc.), performing routine maintenance more frequently on the unit will help assure years of trouble free operation.
- Inspect the motor shaft, propeller and diffuser making sure they are not damaged. If there is damage to any parts, replace them. If debris has wrapped around them, remove it, and inspect the shaft especially around the seal area. Debris wrapped in this area can push the seal faces apart causing water to enter the unit and shorting out the motor. If there is any evidence of this an annual maintenance should be performed (oil and seal change) to keep the unit running properly and warranty in effect.
- Check motor bearings by turning the propeller shaft by hand; it should turn smoothly and quietly.
- Inspect the power cable making sure there are no cuts, worn spots or animal chew marks. If any damage has occurred, replacement of the cable must be done, do not splice your cables. Make sure the cable support grip is not broken and securely fastened to the unit before putting the unit back into the water.
- Under normal conditions, internal maintenance is not required for a specific period of time after the initial installation of the unit. Routine maintenance consisting of power unit oil and seal change, along with inspection of all other in-water and electrical control panel components is recommended annually when installed in saltwater or highly brackish water conditions. Preventative or routine maintenance expenses are the responsibility of the customer. For warranty repair or replacement consideration, equipment must be pre-approved and returned to the **AquaMaster®** factory for inspection, repair or replacement.
- On 1-5HP units it is recommended that maintenance of replacing the seal and oil be performed annually after the initial 3 years of operation and every year thereafter.

For further information, parts ordering assistance and the name of the closest distributor contact the factory at 920.693.3121.



## WINTERIZATION

**AquaMaster®** strongly suggests removing the unit for winter if you experience long periods of cold, freezing weather. Damage to the float, lighting, and power unit could result from ice around the unit or lighting system. Also, possible damage to the motor could result if the propeller or impeller is frozen in the ice when the unit tries to start.

There are specific maintenance procedures, as outlined in these assembly instructions, that will keep your unit trouble free for years. These procedures are especially important should you live in a potentially cold climate. The removal of your **AquaMaster®** unit before freezing conditions occur is a perfect opportunity to inspect your unit and keep it running trouble free.

If you have freezing temperatures for short periods of time, you can decrease the chance of freezing by running the unit for 24 hours a day.

**NOTICE:** Freeze damage to any component of your **AquaMaster®** unit or lighting system will not be covered under warranty.

**WARNING:** When operating the unit in ice covered bodies of water, the ice around the open water will be dangerously thinner than the rest of the body of water. Signs such as **DANGER THIN ICE** need to be posted. Injury and/or fatality may result if this danger is not posted. **Owner assumes all responsibility.**



## **GENERAL WARRANTY INFORMATION**

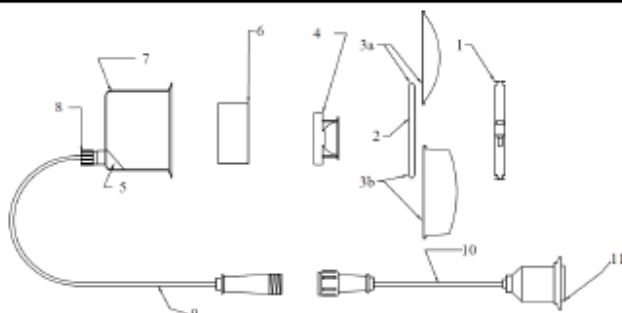
Warranty at a Glance Information can be found at:

<https://www.aquamasterfountains.com/warranty-information/>

General Warranty Information can be found at:

[www.aquamasterfountains.com](http://www.aquamasterfountains.com)

# 120V/220V LED Lighting



Item	Description	Part Number						
		11 Watt LED	18 Watt LED	21 Watt LED	22 Watt LED	35 Watt LED	20 Watt RGBW LED	40 Watt RGBW LED
1	Clamp	880004	880035	880035	880035	880035	880004	880035
2	Lens Gasket	880055	880111	880111	880111	880111	880055	880111
3a	Clear Lens Kit	761079	761073	761073	761073	761073	761079	761073
3b	Clear Top Hat Lens Kit	N/A	761070	761070	761070	761070	N/A	761070
4	Light Plate Assembly**	CBA11**	****	****	CBA22**	CBA35**	761085	761069
5	Potting Resin (1 per 2 Light Housing)	880128	880128	880128	880128	880128	880128	880128
6	Power Supply Kit**	880276	880277	****	880277	880278	761043	761045
7a	Housing Single Hub w/ Studs	880016	880012	880012	880012	880012	880016	880012
	Housing Single Hub w/o Studs	880044	880106	880106	880106	880106	880044	880106
7b	Housing Double Hub w/ Studs	880017	880013	880013	880013	880013	880017	880013
	Housing Double Hub w/o Studs	880045	880107	880107	880107	880107	880045	880107
8	Cord Connector	860016	860016	860016	860016	860016	860016	860016
9	ALC Assembly, Light End	760512-68	760512-68	760512-68	760512-68	760512-68	760977	760977
10	ALC Assembly, Cable End	760517	760517	760517	760517	760517	760975	760975
11	Kit - O-Ring & Wire Nut	760830	760830	760830	760830	760830	761087	761087
Light Jumper Kit		***Requires Potting Resin (Item 5)						
12	6FT without SSB	3000121	3000121	3000121	3000121	3000121	N/A	N/A
	6FT with SSB	3000125	3000125	3000125	3000125	3000125	3000134	3000134
	8FT without SSB	3000122	3000122	3000122	3000122	3000122	N/A	N/A
	8FT with SSB	3000126	3000126	3000126	3000126	3000126	3000135	3000135
	10FT without SSB	3000123	3000123	3000123	3000123	3000123	N/A	N/A
	10FT with SSB	3000127	3000127	3000127	3000127	3000127	3000136	3000136
Sequencer Light Jumper Kit		***Requires Potting Resin (Item 5)						
13	6FT without SSB	3000128	3000128	3000128	3000128	3000128	N/A	N/A
	6FT with SSB	3000131	3000131	3000131	3000131	3000131		
	8FT without SSB	3000129	3000129	3000129	3000129	3000129		
	8FT with SSB	3000132	3000132	3000132	3000132	3000132		
	10FT without SSB	3000130	3000130	3000130	3000130	3000130		
	10FT with SSB	3000133	3000133	3000133	3000133	3000133		

\* Select a Board color: Amber, Blue, Green, Red, White, Warm White.

\*\* Replacement of Lens Gasket is mandatory anytime lens is removed.

\*\*\* Requires Potting Resin (Item 5)

\*\*\*\* Consult Factory

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AquaMaster

Revision: F, 2021-11-30

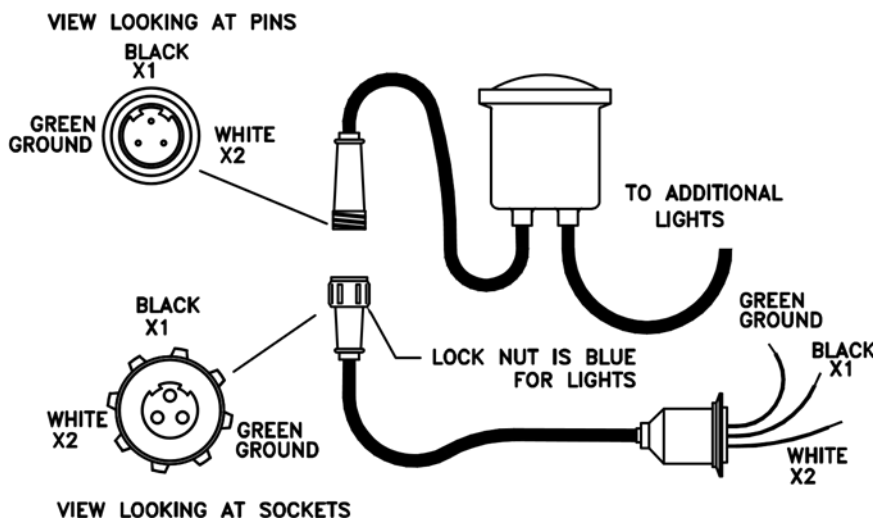
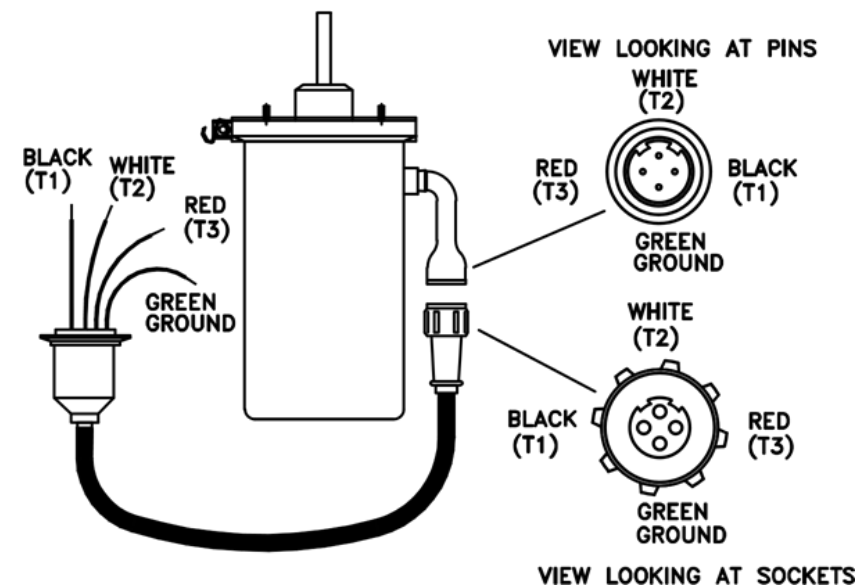
## TROUBLESHOOTING GUIDE

**WARNING:** Turn off all electrical power before servicing the unit. To prevent accidental startup of the unit while repairs are in process or while servicing the unit, the main electrical equipment disconnect should be turned off and the panel should be locked out.



Symptom	Possible Cause	Solution
The unit will not operate.	There is no electrical power.	Check the breakers or fuses at the power source. Check the breakers and fuses in the control panel. Check the connections in the cord/motor disconnect. Check for the proper voltage.
	The motor hums but will not run.	Check the capacitors.
	GFCI tripped.	Reset the GFCI. If the GFCI continues to trip, have a qualified electrician check to determine the cause. Check the power cable for bite or chew marks (animal damage). Check the power cable cuts. If cut or damaged, replace the cable.
	The timer is not correct.	Reset the timer. This should be done after any power interruption. Check the voltage to the timer.
The motor runs but there is no spray pattern or the pattern is erratic.	The propeller is loose or missing. The propeller is bent.	Tighten or replace the propeller assembly. Replace the propeller diffuser assembly.
	Debris in the propeller diffuser assembly	Clean the debris out. <b>NOTE:</b> Plastic bags, plastic wrap on the propeller or shaft. This must be cleaned out for proper performance.
	The nozzle is clogged. The propeller is bent.	Remove the nozzle and clean out the debris. <b>NOTE:</b> If the water is very dirty, put on an oversized intake screen.
	The unit is touching the bottom of the water.	Reposition the unit to a deeper point in the water.
	High Winds.	No corrective action to be taken. The pattern will return to normal as the winds subside.
	Sinking float.	Replace the float.
The timer will not run.	Blown fuse.	Replace the control fuse.
	Bad timer.	Replace the timer.
The timer runs and the power are okay but the unit will not run.	Bad timer contacts.	Replace the timer.
The contactor is not good.	Overload tripped.	Reset the overload.
	Contactor is defective.	Replace the motor contactor.
The unit runs but stops and starts by itself.	Low oil in the unit.	Consult a dealer or authorized repair center.
	Leaky seal or damaged cable connector.	Consult a dealer or authorized repair center.

**MATCHING WIRE COLOR TO PIN LOCATION  
FOR AQUALOCK (ALC)  
USE FOR DIAGNOSTIC PURPOSES ONLY**

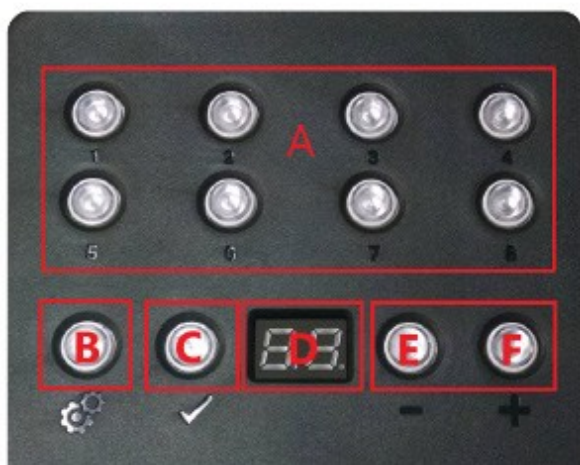


MD001-608

# **Pushbutton RGBW Quick Start Program Guide**

3000989

## RGBW Controller Quick Start Guide - New Controller



### To Change Programs:

1. If not in scene mode, press the select button (B) until 'SA' appears in the LED display, and press the check button (C) to confirm.
2. Select programs 1-8 directly using the numbered push buttons (A).
3. Use the plus (F) and minus (E) buttons to select a program number, and press the check button to confirm.

### To Change Program Speed:

1. If not in speed mode, press the select button (B) until 'SP' appears in the display (D), and press the check button (C) to confirm.
2. Use the '+' and '-' buttons to increase or decrease speed, and press the check button (C) to confirm.

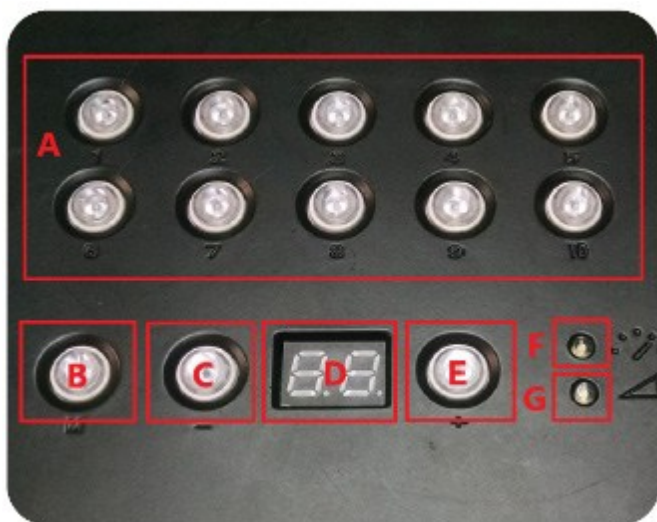
### To Change Program Brightness:

1. If not in dimming mode, press the select button (B) until 'dl' appears in the display (D), and press the check button (C) to confirm.
2. Use the plus (F) and minus (E) buttons to increase or decrease speed, and press the check button (C) to confirm.

**NOTE:** Decreasing brightness dims all lights, and increasing brightness turns up the white component of the RGBW light.

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## RGBW Controller Quick Start Guide - Old Controller



### To Change Programs:

1. Select programs 1-10 directly by pressing any of the numbered buttons (A).
2. Use the plus (E) and minus (C) buttons to cycle through the programs. Upon reaching the desired program, hold down the plus (E) or minus (C) button. The program number will flash in the LED display (D) when it is selected.

### To Change Program Speed:

1. Press the mode button (B) until the speed indicator lights up (F).
2. Use the plus (E) and minus (C) buttons to increase or decrease speed.

### To Change Brightness:

1. Press the mode button (B) until the brightness indicator lights up (G).
2. Use the plus (E) and minus (C) buttons to increase or decrease brightness.

**NOTE:** Decreasing brightness dims all lights, and increasing brightness turns up the white component of the RGBW light.

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## RGBW Program List and Custom Programs

### Program List:

- |                            |                 |
|----------------------------|-----------------|
| 1. White                   | 15. Cool Colors |
| 2. New Year's Day          | 16. RGBW        |
| 3. Valentine's Day         | 17. CMYW        |
| 4. Mardi Gras              | 18. Red         |
| 5. St Patrick's Day        | 19. Orange      |
| 6. 4th of July             | 20. Yellow      |
| 7. Breast Cancer Awareness | 21. Lime        |
| 8. Thanksgiving            | 22. Green       |
| 9. Hanukkah                | 23. Teal        |
| 10. Christmas              | 24. Cyan        |
| 11. 12 Color Fade          | 25. Indigo      |
| 12. Rainbow                | 26. Blue        |
| 13. Pastel Rainbow         | 27. Violet      |
| 14. Warm Colors            | 28. Magenta     |
|                            | 29. Pink        |
|                            | 30. Black (Off) |

### Custom Programs:

- |                            |                 |
|----------------------------|-----------------|
| 1. White                   | 16. RGBW        |
| 2. New Year's Day          | 17. CMYW        |
| 3. Valentine's Day         | 18. Red         |
| 4. Mardi Gras              | 19. Orange      |
| 5. St Patrick's Day        | 20. Yellow      |
| 6. 4th of July             | 21. Lime        |
| 7. Breast Cancer Awareness | 22. Green       |
| 8. Thanksgiving            | 23. Teal        |
| 9. Hanukkah                | 24. Cyan        |
| 10. Christmas              | 25. Indigo      |
| 11. 12 Color Fade          | 26. Blue        |
| 12. Rainbow                | 27. Violet      |
| 13. Pastel Rainbow         | 28. Magenta     |
| 14. Warm Colors            | 29. Pink        |
| 15. Cool Colors            | 30. Black (Off) |

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## RGBW Program Guide

**New Years:** Different intensities of white blinking and flashing.

**Valentine's Day:** Reds, pinks and whites chasing around.

**Mardi Gras:** Yellow, teal and magenta fading together.

**St Patrick's Day:** Light and dark shades of green chasing around.

**4th of July:** Red, white and blue fading together.

**Breast Cancer Awareness:** Pink.

**Thanksgiving:** Autumn colors of yellow, red, brown, and orange chasing around.

**Hanukkah:** Blues and silvers fading together.

**Christmas:** Red, white and green fading together.

**12 Color Fade:** 12 colors around the color wheel fading together.

**Rainbow:** 12 colors around the color wheel chasing.

**Pastel Rainbow:** 12 colors around the color wheel with a white element chasing.

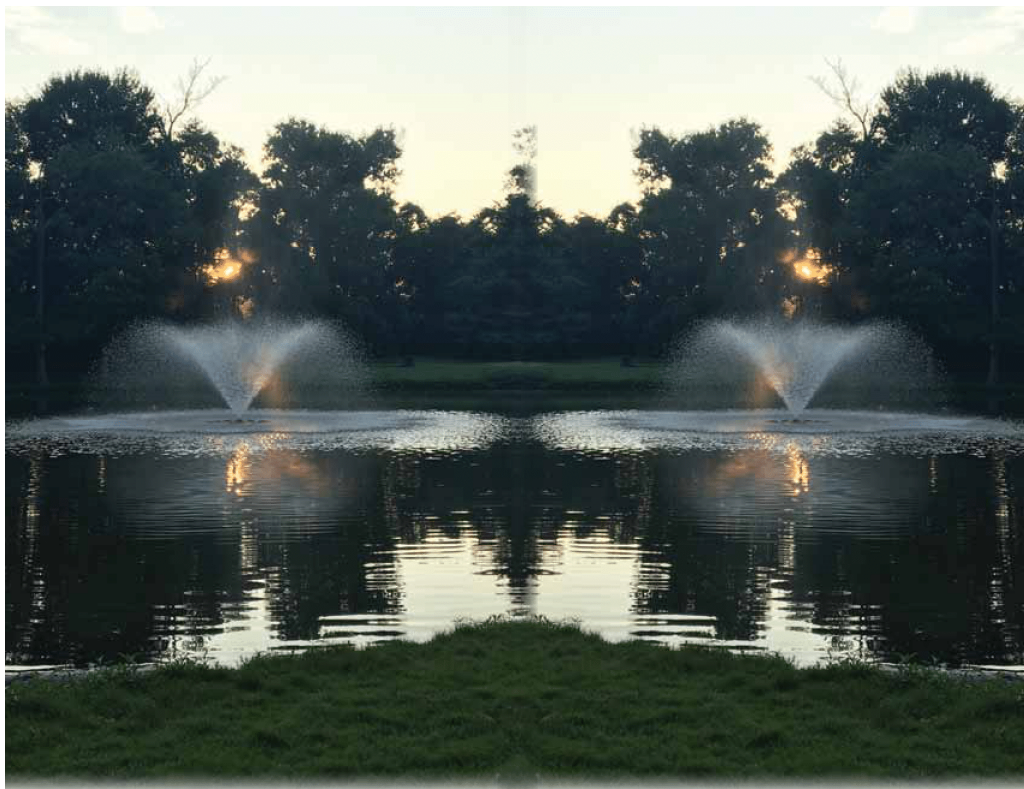
**Warm Colors:** Red, orange and yellow fading together.

**Cool Colors:** Blues and greens fading together.

**RGBW:** Red, green, blue and white fading together.

**CMYW:** Cyan, magenta, yellow and white fading together.





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