

1/2HP OWNER'S MANUAL

VERTICAL FIXED BASE 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 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 **AquaMaster®** unit is received , 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.

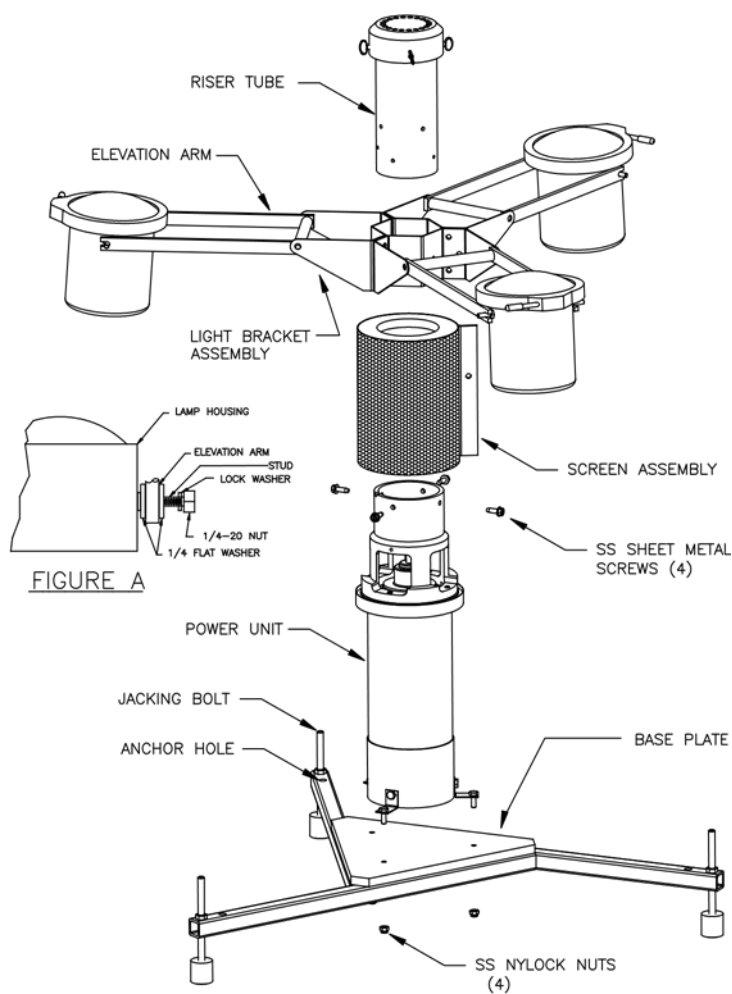
FIXED BASE WATER FEATURE FOUNTAINS 1/2HP VERTICAL ASSEMBLY INSTRUCTIONS

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 unit and inspect for damage.
2. Insert riser tube into impeller housing and secure with four (4) sheet metal screws provided. Bolt head on riser tube must rest in alignment notch in housing.
3. Place power unit onto base plate and secure with three (3) 1/4-20 bolts and Nylock nuts provided.
4. Loosen four (4) thumb screws and remove nozzle temporarily.
5. Slide screen assembly over riser tube.
6. If you purchased lighting, slide the light bracket assembly over riser tube and tighten six (6) screws equally to clamp assembly in location.
7. Loosen hardware on lamp housing and slide onto elevation arms as shown in Figure A. Tighten 1/4-20 nut after desired angle is achieved.
8. Replace nozzle.
9. Place unit in pond at desired location.
10. Use jacking bolts at three (3) locations to level unit. This will assure the fountain of water goes straight up.
11. Frame may be anchored using holes adjacent to jacking bolts. If you do not wish to put holes in the bottom of the pond, you may use paving blocks under anchor holes.
12. If lights are provided, adjust angle of fixture for desired effect.

FIXED BASE WATER FEATURE FOUNTAINS **1/2HP VERTICAL ASSEMBLY INSTRUCTIONS (CONT.)**



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ELECTRICAL CONNECTION

Electrical Connection to be completed by licensed electrician in accordance with the National Electric Code and local codes or ordinances.

WARNING: This unit is pre-wired and is provided with a GFCI for the safety of the operator and the equipment in the event of an electrical short, ground or equipment failure. **DO NOT** remove or modify the GFCI. Removal or modifications could result in the danger of electrocution to any one, human or animal, in contact with the water.

- **TURN OFF** electrical power at fuse box or service panel before making any electrical connections.
 - If supplied with a control panel, **DO NOT** bypass the control panel. The control panel enclosure is rain-tight and includes a GFCI breaker, timer, contactor and overload assembly. Bypassing the control panel could result in electrocution to anyone, human or animal, in contact with the water.
 - Underwater splices are dangerous and will void the warranty. Electrical cable(s) must extend completely onto shore to power source without breaks or splices.
1. If your unit is 120 Volt and comes with a 120 Volt plug and GFCI assembly, it is ready for operation and no further wiring is necessary.
 2. If your unit is 120 Volt or 208-240 Volt and has a control panel with or without a plug proceed as follows:

Electrical connection to control panel

WARNING: Make sure power is **OFF!**

1. Take the electrical cable from unit and securely fasten it to the control panel.
2. Connect **black lead** from cable to terminal marked 1T1 on terminal strip.
3. Connect **white lead** from cable to terminal marked 1T2 on terminal strip.
4. Connect **green lead** to grounding terminal.

Steps A – D are for optional lighting system.

- a. Take the three (3) conductor cable for the lighting system and securely fasten it to the control panel.
- b. Connect **black lead** from cable to terminal marked X1 on terminal strip.
- c. Connect **white lead** from cable to terminal marked X2 on terminal strip.
- d. Connect **green lead** to grounding terminal.

ELECTRICAL CONNECTION (CONT.)

Electrical connection to customer supplied power source

WARNING: Make sure power is **OFF**!

1. Connect **Line 1 to L1** on terminal strip.
2. Connect **Line 2 to L2** on terminal strip (208-240V only).
3. Connect the **neutral to N** on terminal strip.
4. Connect the **ground to the grounding** terminal.
5. On 208-240V units, the overload relay must be set to the motor nameplate value plus two (2) amperes.

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.

WARNING: Always make sure power is **OFF** when changing motor direction.

WARNING: 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.

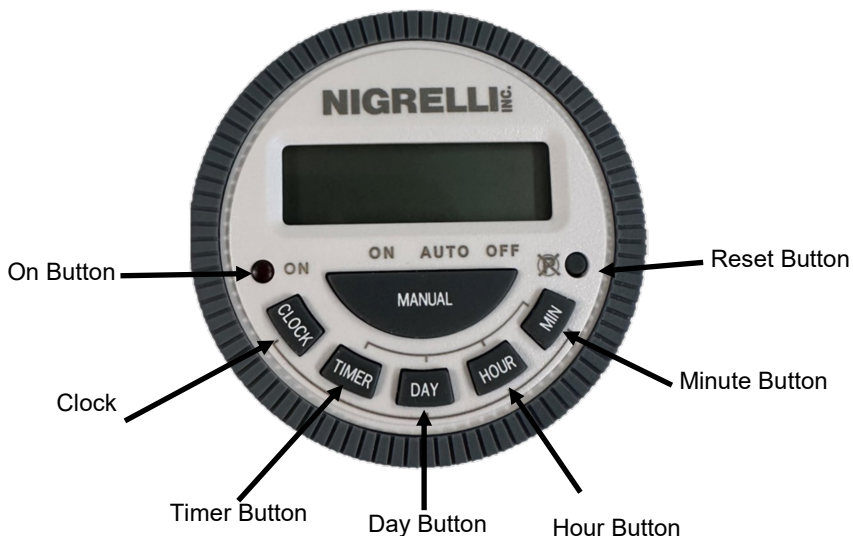
WARNING: DO NOT burn the lighting fixtures out of the water except to test the lamps (60 seconds or less).

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.

GROUNDING

Permanently ground this unit in accordance with the National Electric Code and 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.

DIGITAL TIMER OPERATING INSTRUCTIONS



1. Apply power to turn the timer on.
2. Press the RESET button to clear all data from memory. Use a pen point to press.

SETTING THE CLOCK

3. Press and hold the CLOCK button.
4. While holding the CLOCK button, press the DAY, HOUR or MINUTE button to the desired day / time.

Note: You must advance past 12:00 to set PM.

5. Release the CLOCK button.

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DIGITAL TIMER OPERATING INSTRUCTIONS (CONT.) PROGRAMMING

1. There are 15 daily program settings built into the timer.
 - a. MO TU WE TH FR SA SU
 - b. MO
 - c. TU
 - d. WE
 - e. TH
 - f. FR
 - g. SA
 - h. SU
 - i. MO TU WE TH FR
 - j. SA SU
 - k. MO TU WE TH FR SA
 - l. MO TU WE
 - m. TH FR SA
 - n. MO WE FR
 - o. TU TH SA
2. Press the TIMER button once. "1^{ON} --:--" appears.
3. Press the DAY button repeatedly for desired days ON.
Ex. Mo Tu We Th Fr Sa Su.
4. Press the HOUR / MIN button repeatedly for desired ON time.
Note: Advance past 12:00 to set PM.
5. Press the TIMER button once. "1OFF --:--" appears.
6. Press the DAY button repeatedly for desired days OFF.
Note: Must match "1^{ON}" day settings.
7. Press the HOUR / MIN button repeatedly for desired OFF time.
Note: You must advance past 12:00 to set PM.
8. Repeat steps 1 through 7 for more events if desired, up to a maximum of 8 ON/OFF events per day.
9. When finished programming, press the CLOCK to execute programs.
10. Press the MANUAL button until the line is above AUTO.

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DIGITAL TIMER OPERATING INSTRUCTIONS (CONT.)

PROGRAMMING (CONT.)

Program Example 1

Simple 7 Day Week Program - Timer to turn on at 7:00 AM everyday and off at 11:30 PM everyday.

PROGRAM KEY DISPLAY

EVENT 1 - ON

1. Press the TIMER button. "1^{ON} --:--" appears.
2. Press the DAY button until Mo through Su is displayed.
3. Press the HOUR button until 7:00 AM appears.
4. Use the MIN button until :00 appears.
5. Press the TIMER button. "1OFF --:--" appears.

EVENT 1 - OFF

1. Press the DAY button until Mo though Su is displayed.
2. Press the HOUR button until 11:00 PM appears.
3. Press the MIN button until :30 PM appears.
4. Press the CLOCK button to execute the program.
5. Press the MANUAL button until the line is above AUTO.

Program Example 2

3 Event Program

Event 1:

Turn timer ON at 7:30 AM and OFF at 11:30 PM Monday through Friday.

Event 2:

Turn timer ON at 8:00 AM Saturday and turn timer OFF at 2:00 AM Sunday.

Event 3:

Turn timer ON at 9:00 AM Sunday and turn timer OFF at 10:00 PM Sunday. This is a 3 event program. There will be 5 events left if needed.

EVENT 1 - ON (Timer is ON at 7:30 AM Monday through Friday)

<u>PROGRAM KEY</u>	<u>DISPLAY</u>
--------------------	----------------

- | | |
|---|----------------------------------|
| 1. Press the TIMER button. | "1 ^{ON} --:--" appears. |
| 2. Press the DAY button until Mo Tu We Th Fr appears. | |
| 3. Press the HOUR button until 7:00 AM appears. | |
| 4. Press the MIN button until :30 AM appears. | |
| 5. Press the TIMER button. | "1OFF --:--" appears. |

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DIGITAL TIMER OPERATING INSTRUCTIONS (CONT.)

Program Example 2 (cont.)

EVENT 1 - OFF (Timer is OFF at 11:30 PM Monday through Friday)

1. Press the DAY button until Mo Tu We Th Fr appears.
2. Press the HOUR button until 11:00 PM appears.
3. Press the MIN button until :30 PM appears.
4. Press the TIMER button until "2_{ON} --:--" appears.

EVENT 2 - ON (Timer is ON at 8:00 AM Saturday)

1. Press the DAY button until Sa appears.
2. Press the HOUR button until 8:00 AM appears.
3. Press the TIMER button until "2OFF --:--" appears.

EVENT 2 - OFF (Timer is OFF at 2:00 AM Sunday)

1. Press the DAY button until Su appears.
2. Press the HOUR button until 2:00 AM appears.
3. Press the TIMER button until "3_{ON} --:--" appears.

EVENT 3 - ON (Timer is ON at 9:00 AM Sunday)

1. Press the DAY button until Su appears.
2. Press the HOUR button until 9:00 AM appears.
3. Press the TIMER button until "3OFF --:--" appears.

EVENT 3 - OFF (Timer is OFF at 10:00 PM Sunday)

1. Press the DAY button until Su appears.
2. Press the HOUR button until 10:00 PM appears.
3. Press the CLOCK button to execute the program.
4. Press the MANUAL button until the line is above AUTO.

DIGITAL TIMER OPERATING INSTRUCTIONS (CONT.)

REVIEWING PROGRAMMED EVENTS

To review the events at any time, press the TIMER button, "1ON" will be displayed. Press the TIMER button again to review the "1OFF" setting. Press the TIMER button repeatedly to review events 2 through 8. Press the CLOCK button to return to the time of day.

CHANGING AN EVENT

1. Press the TIMER button repeatedly until the event that wish to change is displayed.
2. Press the DAY, HOUR, or MIN button to adjust the event setting.
3. Press the CLOCK button to return to the time of day.

NOTE: If you need to delete an on / off time, you must **RESET** the timer.

HOW TO REPLACE THE BATTERIES

1. The timer is equipped with a CR2032 lithium battery which keeps the time on the timer correct if power is removed from the timer.
2. To replace the battery, use a coin to remove the battery cover on back of the timer. Turn the cover one quarter turn clockwise and remove the cover.
3. Using a small screwdriver, pry out the battery. Install the new battery and replace the cover.

Note: The timer settings will be retained for approximately one (1) minute once the battery is removed.

Note: The battery can be purchased in most local drug and big box stores.

TEMPORARY OVERRIDE

1. When the timer's output status is "ON".

Press the MANUAL key to move the indicator from "AUTO" to "OFF", timer shall turn to "OFF" status, programs overridden. Press the MANUAL again to switch the timer status to "AUTO", timer's output shall continue maintaining "OFF". Timer shall resume its automatic operation when the next program (event) calls for "ON".

2. When the timer's output status is "OFF".

Press the MANUAL key, to move the indicator from "AUTO" to "ON", timer shall turn to "ON" status, programs overridden. Press the MANUAL again to switch the timer's status to "AUTO", the timer's output shall continue maintaining "ON". The timer shall resume its automatic operation when the next program (event) calls for "OFF".

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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 5 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 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.**

MASTERS SERIES® 1/2HP IN-WATER COMPONENTS PRODUCT WARRANTY (LIMITED)

AQUAMASTER®, hereinafter referred to as The Seller, warrants your Series 304 and/or Series 316 Stainless Steel 1/2HP motor and seal assembly, float and underwater power cable (referred to as in-water components) for a period of 5 years on parts and labor, **when used in fresh water only**. This coverage is at 100% replacement costs, should it fail due to defects in materials or workmanship, during the 5 year period. This is in effect from the date of shipment, when given normal and proper usage as determined by The Seller or its authorized representative upon examination, and when owned by the original user. **Please note that normal and proper usage does not include any salt water or highly brackish water conditions. Series 316 Stainless Steel units must be used for these conditions.**

SERIES 316 STAINLESS STEEL IN-WATER COMPONENTS PRODUCT WARRANTY

The Seller warrants your Series 316 Stainless Steel 1/2HP in-water components for a period of 2 years on parts and labor, when operating in any salt water or highly brackish water conditions. This coverage is at 100% replacement costs, should it fail due to defects in materials or workmanship, during the 2 year period. This is in effect from the date of shipment, when given normal and proper usage as determined by The Seller or its authorized representative upon examination, and when owned by the original user.

ELECTRICAL CONTROL PANEL AND THEIR COMPONENTS PRODUCT WARRANTY

The Seller warrants all parts of its electrical control panel and their components against defects in material or workmanship for a period of 3 years on parts and 1 year on labor from date of shipment when given normal and proper usage as determined by The Seller upon examination, and when owned by the original user. Components purchased by The Seller as complete units and used as an integral part of The Seller's equipment will be covered by the standard warranty of the manufacturer thereof. The Seller will repair or replace F.O.B. original shipping point (but not install) any part or parts of its manufacture which in its judgment shall disclose defects in either material or workmanship. If requested by The Seller, parts for which a warranty claim is made are to be returned transportation prepaid to our Factory. This warranty becomes void if the article claimed to be defective has been repaired or altered in any way, or if the unit has been subject to misuse, negligence or accident, or when instructions for installing or operating have been disregarded.

It is recommended that the enclosed warranty card is returned to The Seller. A return authorization number must be obtained prior to any required return. We make no other warranty, expressed or implied, and make no warranty of merchantability or of fitness for any particular purposes, and there are no warranties which extend beyond the description of the face hereof. No employee or representative is authorized to change this warranty in any way or grant any other warranty. The remedies hereinabove afforded to original user are exclusive of all other remedies provided by law. The Seller shall not be liable for indirect or consequential damages where the loss sustained is of a commercial nature.

UNDERWATER NIGHT GLOW LIGHTING SYSTEM IN-WATER COMPONENTS PRODUCT WARRANTY

AQUAMASTER®, hereinafter referred to as the seller, warrants all products and parts of its own manufacture against defects in material or workmanship for a period of 3 years on parts and labor, 3 years on LED lamps from date of shipment when given normal and proper usage as determined by seller upon examination, and when owned by the original user, **when used in fresh water only or if purchased Series 316 Stainless Steel to operate in any salt water or highly brackish water conditions.** Components purchased by seller as complete units and used as an integral part of sellers equipment will be covered by the standard warranty of the manufacturer thereof. Seller will repair or replace F.O.B. original shipping point (but not install) any part or parts of its manufacture which in its judgment, shall disclose defects in either material or workmanship. If requested by seller, parts for which a warranty claim is made are to be returned transportation prepaid to our factory. Expressly excluded from this warranty are replacement light bulbs, which are normal wear and replacement items. This warranty becomes void if article claimed to be defective has been repaired or altered in any way or when the article has been subject to misuse, negligence or accident, or when instructions for installing or operation have been disregarded. This coverage is at 100% replacement costs, should it fail due to defects in materials or workmanship, during the 3 year period, halogen lamps have no warranty. This is in effect from the date of shipment, when given normal and proper usage as determined by The Seller or its authorized representative upon examination, and when owned by the original user. **Please note that normal and proper usage does not include any salt water or highly brackish water conditions. Series 316 Stainless Steel units must be used for these conditions.**

GENERAL WARRANTY INFORMATION

AquaMaster® products and their accessories are warranted against defects in material and workmanship. The warranty period commences on the date the unit is installed as shown on the warranty registration card that must be returned to **AquaMaster®**. If no card has been returned, the warranty commences on the date the unit was shipped from our factory.

During the warranty period, **AquaMaster®** will repair or, at our discretion replace at no charge, all defective components provided the product is returned, shipping prepaid, to the **AquaMaster®** Service Department.

All warranty claims require prior Factory approval and authorization for return or service. Any and all warranty service work must be performed by **Aquamaster®** or approved Factory Trained Authorized Service Centers. Any type of service and repair performed within the warranty period by unauthorized personnel will void the warranty.

Before returning a unit to the factory for repair, a Return Goods Authorization Number must be obtained. You can receive a number by calling the factory during normal business hours of 7:00 a.m. to 4:30 p.m. Central Standard Time at 920-693-3121.

If after inspection of a unit sent in for repair no problem is found, a standard service fee may apply.

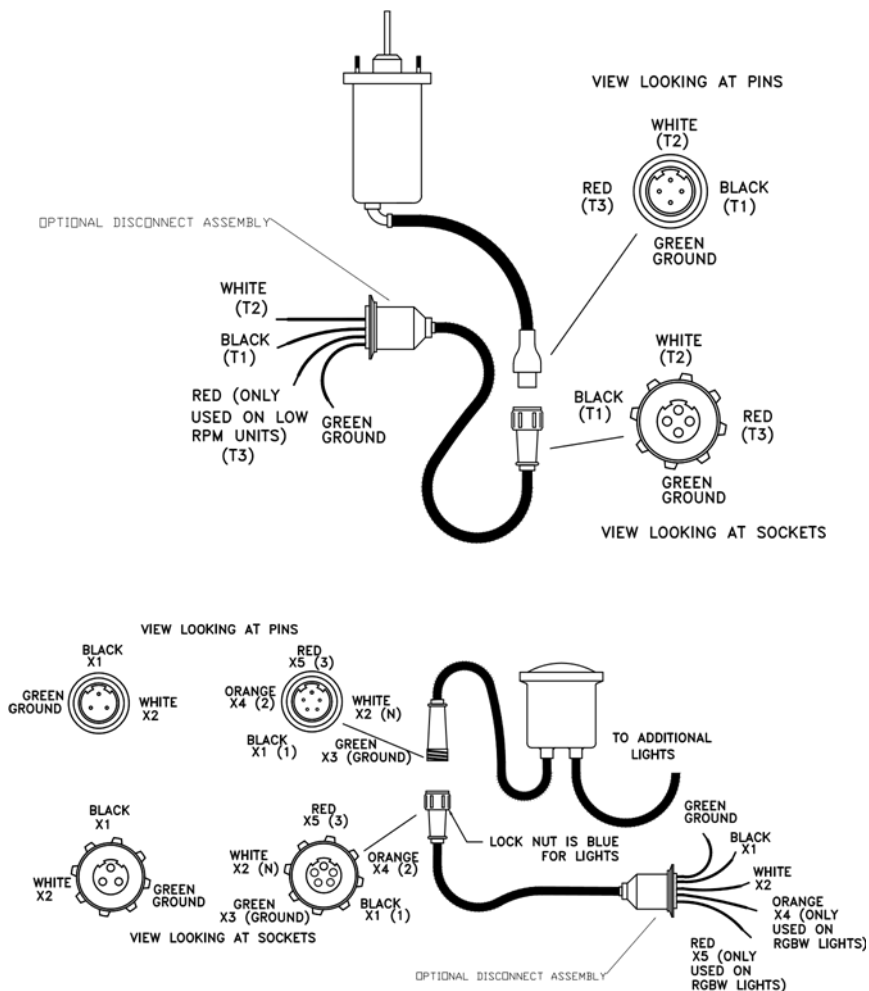
TROUBLESHOOTING GUIDE

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. NOTE: 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. NOTE: 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.

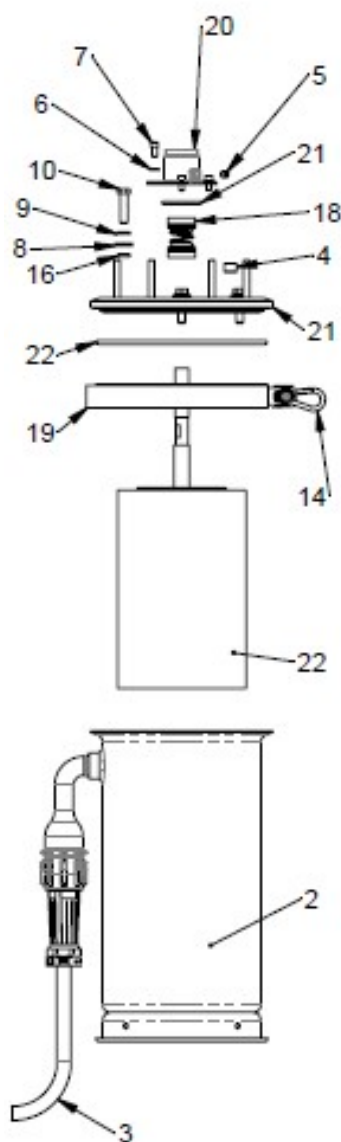
MATCHING WIRE COLOR TO PIN LOCATION FOR AQUALOCK (ALC)

USE FOR DIAGNOSTIC PURPOSES ONLY



MD001-608

ITEM	QTY	PART NO.	DESCRIPTION
1	8.2	3000174	OIL, FINAVESTAN U 210, 1/2 - 5.5 HP
2	1	760460	HOUSING ASSEMBLY, 1-5.5HP POWER UNIT, W/CHIME, 304 SS
3	1	760494	Cable Assembly, 10 GA (P/U), ALC End, Std. Disconnect
4	2	790005	PLUG, PIPE, 3/8, BRASS
5	1	790013	PLUG, PIPE, 1/16, BRASS
6	4	790084	WASHER, SPLIT LOCK 1/4, 304 SS
7	4	790116	SCREW, SHCS 1/4-20 X 0.50, 304 SS
8	4	790121	WASHER, FLAT, 0.38, Ø0.88 OD X 0.13 THK, 304 SS
9	4	790123	WASHER, SPLIT LOCK 3/8, 304 SS
10	4	790134	SCREW, HEX, 3/8-16 X 1.50, PT, 304 SS
11	2	790138	NUT, NYLOCK 5/16-24, 304 SS
12	2	790142	WASHER, FLAT, 0.31, Ø0.75 OD X 0.04 THK, 304 SS
13	4	790224	STUD, 5/16-18 X 2, 304 SS
14	1	790229	CLIP, SPRING, 1/4, 316SS
15	1	790369	THREAD PROTECTOR CAP, BLACK 0.30ID X 0.31
16	4	800019	O-RING, ID 0.38, OD 0.63, 0.13 THK, NBR 70, #204
	1	800034	MOTOR, 1HP, 3PH, 208/230V
	1	800037	MOTOR, 3HP, 3PH, 208/230/380/460V
	1	800038	MOTOR, 5HP, 1PH, 208/240V, 60HZ
	1	800039	MOTOR, 5HP, 3PH, 208/230/380/440V
21	1	800051	O-RING, ID 1.75, OD 2.00, 0.13 THK, NBR 70, #224
22	1	800055	MOTOR, 1HP, 1PH, 120/240V, 50/60HZ
	1	800056	MOTOR, 2HP, 1PH, 208/240V, 50/60HZ
	1	800061	MOTOR, 2HP, 3PH, 208/230V, 50/60HZ
18	1	800063	SEAL, SHAFT ASSEMBLY, 1-5HP
	1	800072	MOTOR, 3.5HP, 1PH, 208/240V, 60HZ
19	1	810013	Clamp, Housing, 1-5HP, 304 SS
20	1	810022	SEAL CARTRIDGE, 1-5HP, MACHINED, 304 SS
21	1	810023	PLATE, TOP, 1-5HP, 304 SS
22	1	810027	O-RING, ID 8.25, OD 8.63, 0.19 THK, NBR 70, #370

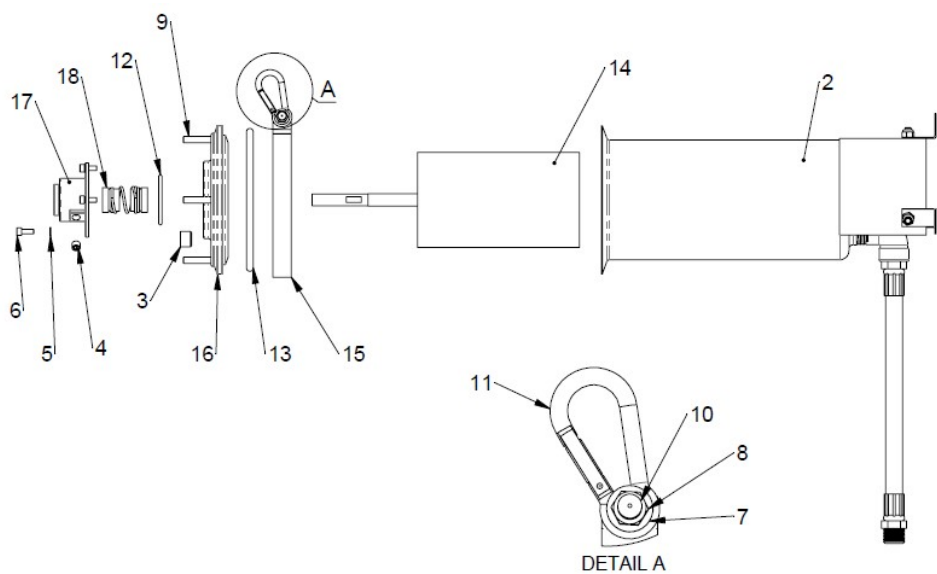


MAINTENANCE KIT
PART #870126

SEAL INSTALLATION
TOOL PART #870012

MD002-246

ITEM	QTY	PART NO.	DESCRIPTION
1	1	3000174	OIL, FINAVESTAN U 210, 1/2 - 5.5 HP
2	1	760458	Housing Assembly, 1/2HP Oxymax, 304 SS
3	1	790005	PLUG, PIPE, 3/8, BRASS
4	1	790013	PLUG, PIPE, 1/16, BRASS
5	4	790049	WASHER, SPLIT LOCK #10, 304 SS
6	4	790065	SCREW, SHCS 10-24 X 0.50, 304 SS
7	2	790085	WASHER, FLAT, 0.25, Ø0.63 OD X 0.04 THK, 304 SS
8	2	790088	NUT, NYLOCK 1/4-20, 304 SS
9	4	790252	STUD, 1/4-20 X 1-1/2 18-8 SS
10	1	790374	CAP, THREAD PROTECTOR, BLACK, .240" X .375"
11	1	790445	CLIP, SPRING, 1/4", WITH EYELET, 316 SS
12	1	800051	O-RING, ID 1.75, OD 2.00, 0.13 THK, NBR 70, #224
13	1	830068	O-RING, ID 5.25, OD 5.75, 0.25 THK, NBR 70, #431
14	1	830075	MOTOR, 1/2HP LEESON 120/240 WITH CAPACITOR
15	1	880004	CLAMP, 6.0", 1/2HP MOTOR HSG, 5.5" LIGHT HSG, XL DISCONNECT, 304 SS
16	1	910033	TOP PLATE, 1/2HP, 1/2" SHAFT, 304 SS
17	1	910034	SEAL CARTRIDGE, 1/2HP, MACHINED, 304 SS
18	1	910040	SEAL ASSEMBLY, 1/2HP, 1/2" SHAFT



MD002-225

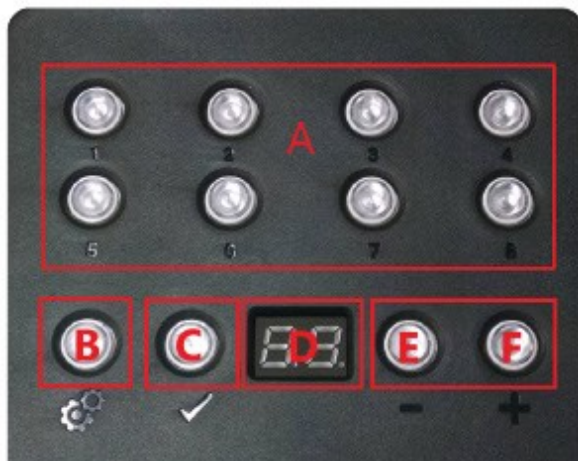
Notes: _____

Page 24

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.

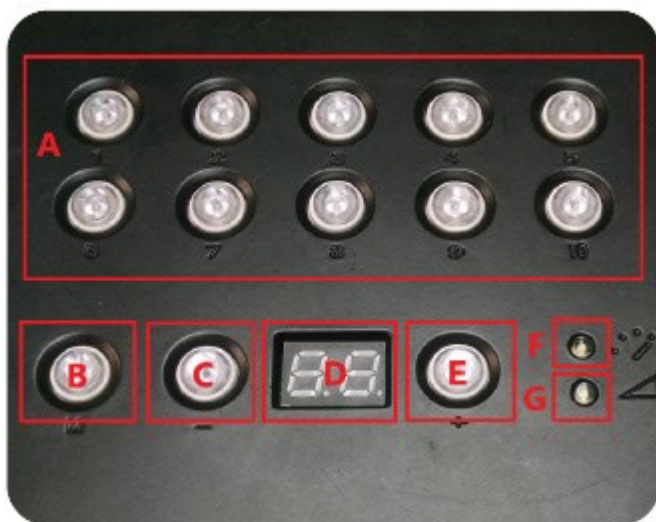
To Change Program Brightness:

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.

3000989

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.

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) |

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.

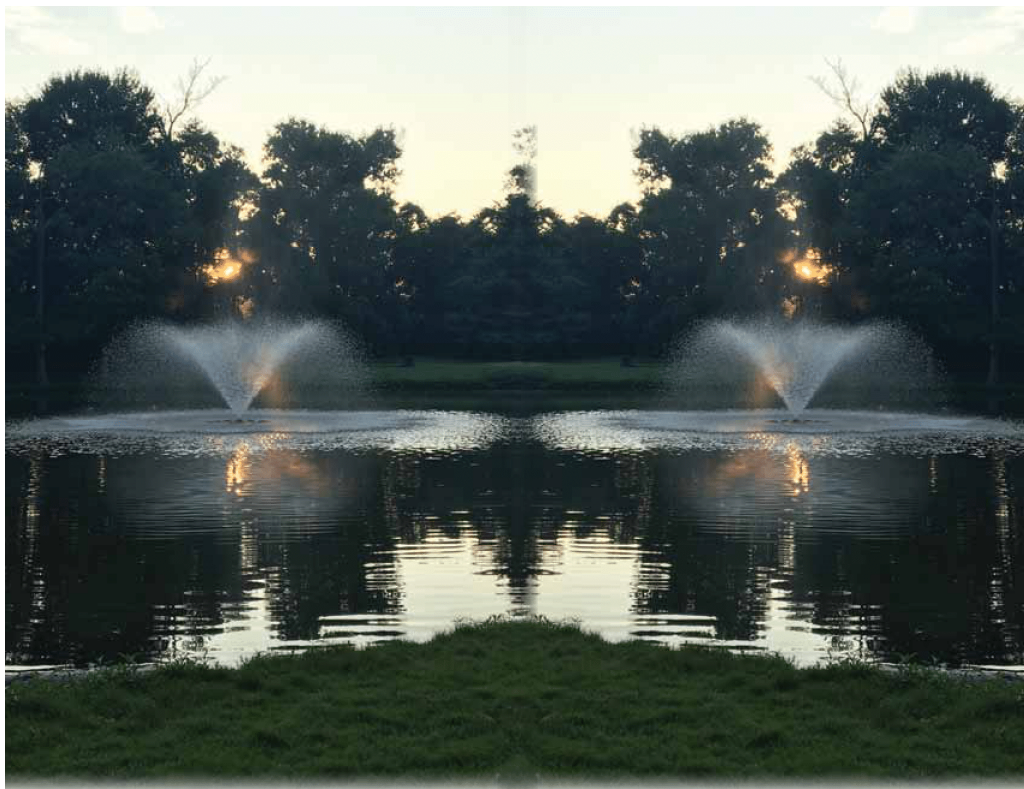
Warm Colors: Red, orange and yellow fading together.

Cool Colors: Blues and greens fading together.

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

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

Notes: _____



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