



1-5 HP 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.

TABLE OF CONTENTS

Assembly Instructions.....	4-5
Electrical Assembly Instructions.....	6-7
Digital Timer Operating Instructions.....	8-12
Maintenance.....	13
Winterization.....	14
General Warranty Information.....	15
AquaLock (ALC) Components View.....	16
Troubleshooting Guide.....	17
Pushbutton RGBW Quick Start Program Guide (<i>if applicable</i>).....	19-23

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.

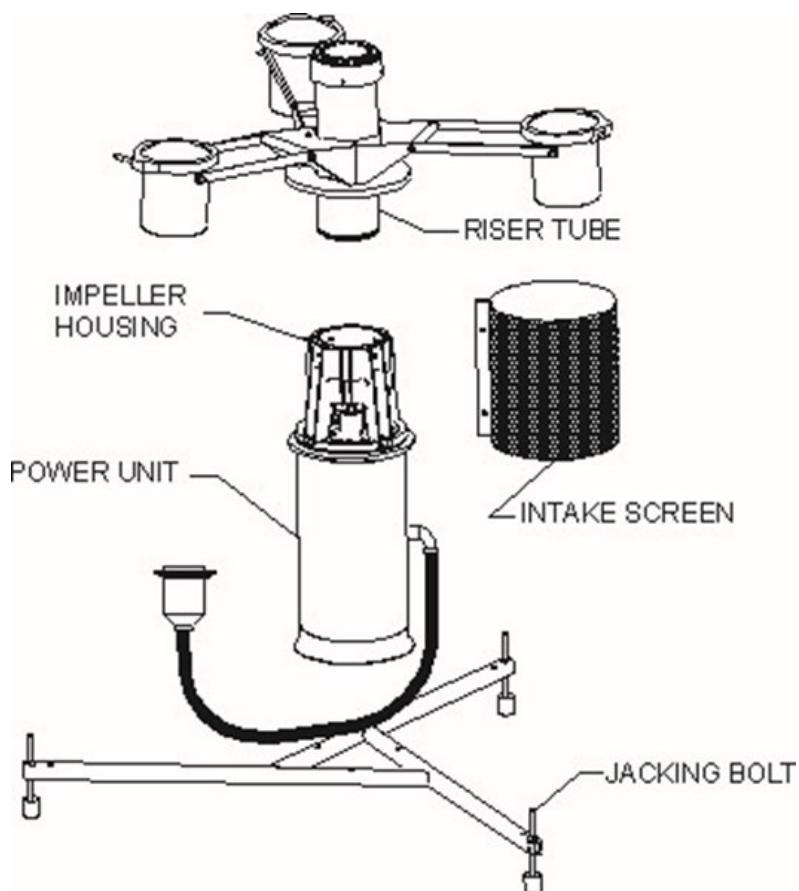
FIXED BASE WATER FEATURE FOUNTAINS 1 - 5HP VERTICAL ASSEMBLY INSTRUCTIONS

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 your unit and inspect for damage.
2. Place the Power Unit on the center of the base.
3. Secure the Power Unit on the base with the (3) stainless steel screws and washers that are provided.
4. Place the Riser Tube into the Impeller Housing.
5. Wrap the Intake Screen around the Impeller Housing with the notch in screen on the Power Unit side.
6. Slide the Intake Screen into the groove of the Power Unit and secure with the (2) stainless steel screws, nuts and washers that are provided.
7. Place the unit in the pond at the desired location.
8. Use Jacking Bolts at (3) locations to level the unit. This will assure the fountain of water goes straight up.
9. The unit may be anchored using holes adjacent to the Jacking Bolts.
- Note:** If you do not wish to put holes in the bottom of the pond, paving blocks may be used under the anchor holes.
10. If lights are provided, adjust the angle of the fixture for desired effect.

FIXED BASE WATER FEATURE FOUNTAINS
1 - 5HP VERTICAL ASSEMBLY INSTRUCTIONS



ELECTRICAL CONNECTION FOR 1 - 5HP

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

WARNING: This unit and lighting system are 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 electrocution to anyone, human or animal, in contact with the water.

- **TURN OFF** electrical power at fuse box or service panel before making any electrical connections.
- The control panel enclosure is rain-tight and includes a GFCI breaker, timer, contactor and overload assembly. **DO NOT** bypass your control panel. Bypassing the control panel could result in electrocution of 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.

Electrical connection to control panel

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

1. Take the four (4) conductor 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 **red lead** from cable to terminal marked 1T3 on terminal strip.
5. Connect **green lead** to the 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 the 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 the terminal strip.
2. Connect **Line 2 to L2** on the terminal strip.
3. Connect **Line 3 to L3** on the terminal strip (3 phase only).
4. Connect the **neutral to N** on the terminal strip (208-240V only).
5. Connect the **ground to the grounding** terminal.
6. Set or verify that the overload assembly in the panel is 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.

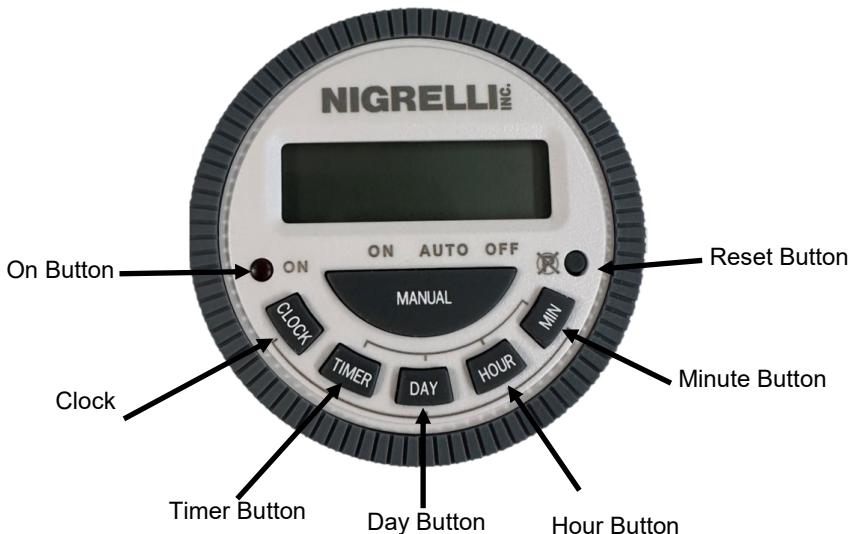
WARNING: DO NOT burn the lighting fixtures out of the water except to test the lamps (60 seconds or less). Light lenses **MUST BE** completely covered with water to prevent lens failure.

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: Advance past 12:00 to set PM.

5. Release the CLOCK button.

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.

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 through 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)

PROGRAM KEY **DISPLAY**

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.

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, "1_{ON}" 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 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 overrided. 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 overrided. 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".

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 there is freezing temperatures for short periods of time, 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

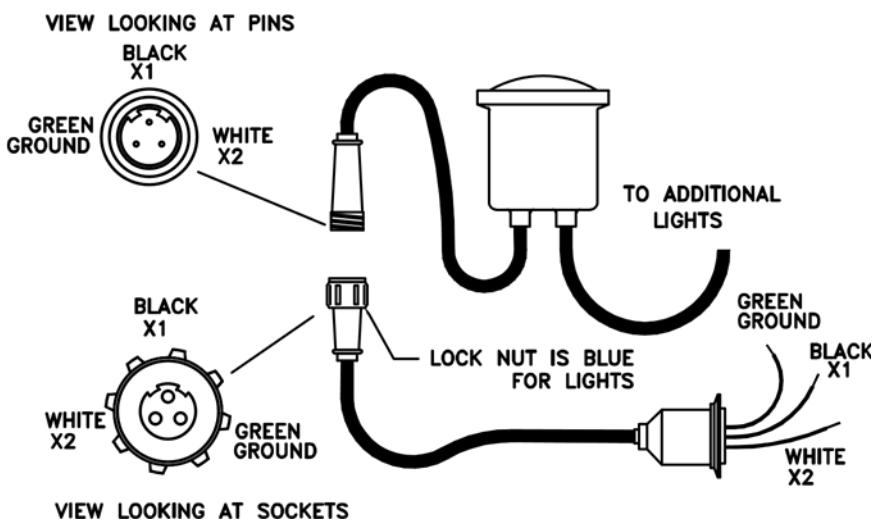
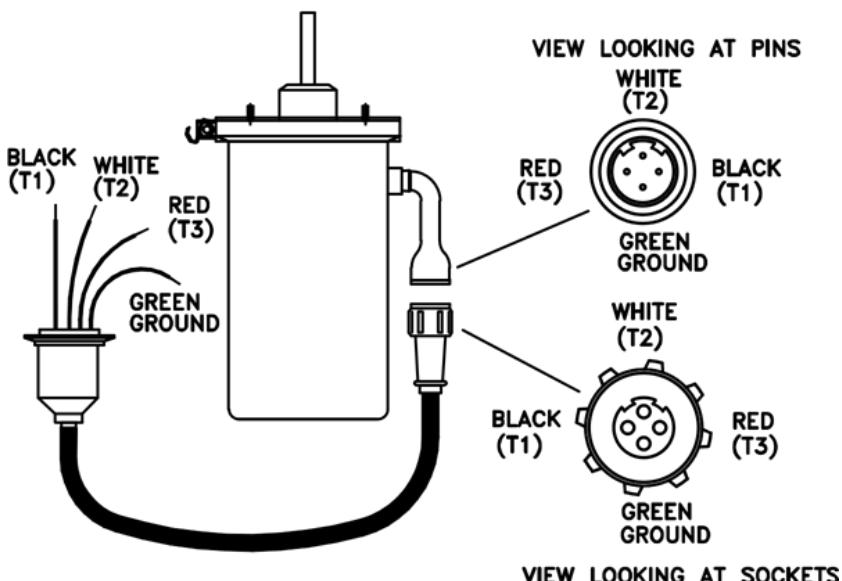
Warranty at a Glance Information can be found at:

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

General Warranty Information can be found at:

www.aquamasterfountains.com

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



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.

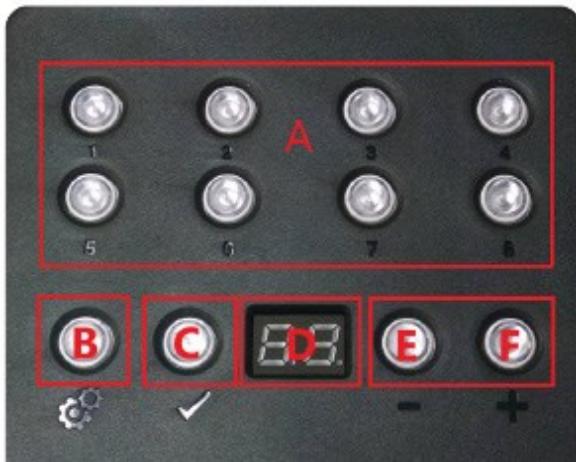
Symptom	Possible Cause	Solution
The unit will not operate.	There is no electrical power.	Check the breakers or fuses at the power source. Check the breakers and fuses in the control panel. Check the connections in the cord/motor disconnect. Check for the proper voltage.
	The motor hums but will not run.	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.

Notes: _____

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.

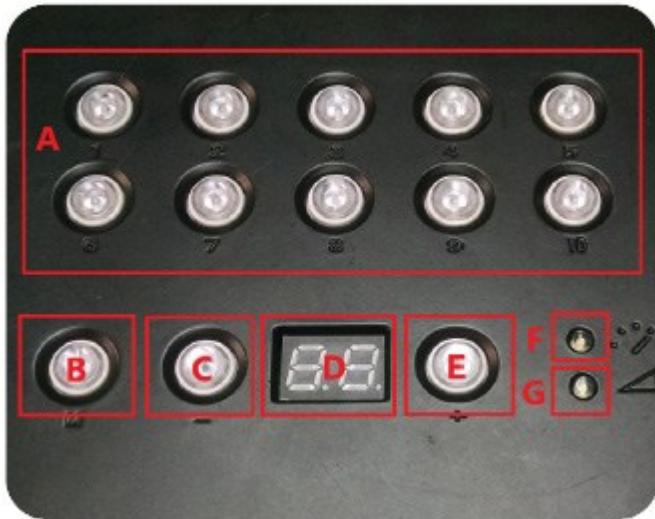
To Change Program Brightness:

1. If not in dimming mode, press the select button (B) until 'dI' 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	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)
	31. Warm White

Custom Programs:

1. White	17. CMYW
2. New Year's Day	18. Red
3. Valentine's Day	19. Orange
4. Mardi Gras	20. Yellow
5. St Patrick's Day	21. Lime
6. 4th of July	22. Green
7. Breast Cancer Awareness	23. Teal
8. Thanksgiving	24. Cyan
9. Hanukkah	25. Indigo
10. Christmas	26. Blue
11. 12 Color Fade	27. Violet
12. Rainbow	28. Magenta
13. Pastel Rainbow	29. Pink
14. Warm Colors	30. Black (Off)
15. Cool Colors	31. Warm White
16. RGBW	

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.



BRINGING WATER TO LIFE

Floating Fountains

Masters Series®
Masters Decorative Series
Masters Grand® Series
Galaxy Select® Series

Lighting and Accessories

Night Glow Lighting and Control Panels
LED or RGBW Lighting System

High Performance Aeration Systems

Volcano II Surface Spray Systems
Volcano III Surface Spray Systems
AquaAir® Ultra Aeration Systems

Fixed Base Water Feature Fountains

Custom Horizontal and Vertical Models

Land Master® Landscape Lighting
LED or RGBW Lighting System