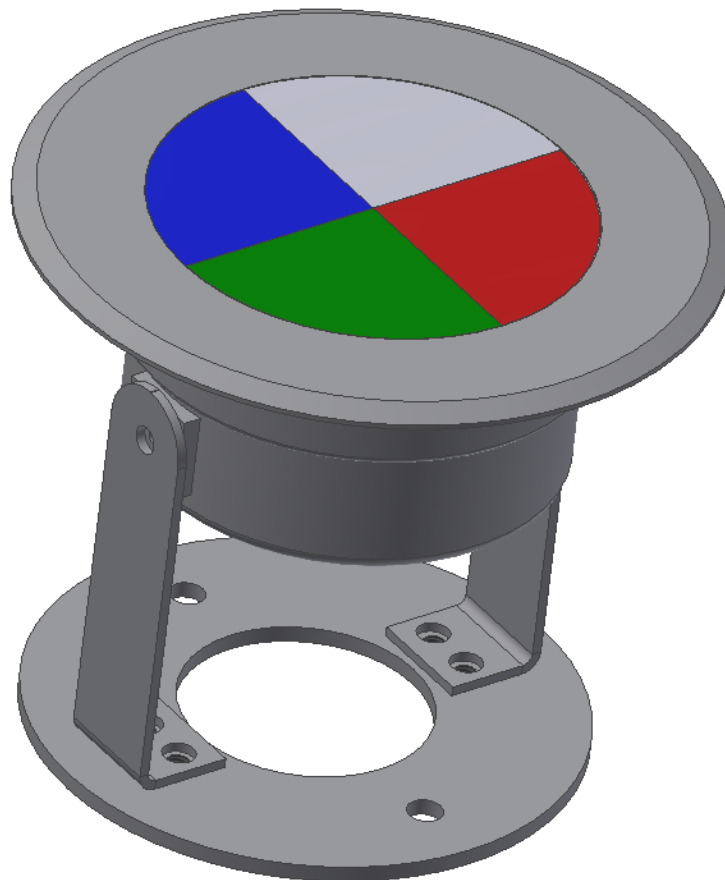




# Midi RGBW Lights Installation/Operation Manual



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## Safety Instructions



**ALL ELECTRICAL WORK MUST BE PERFORMED BY A QUALIFIED LICENSED ELECTRICIAN AND CONFORM WITH ALL APPLICABLE ELECTRICAL SAFETY CODES**

Tous travaux électriques doivent être effectués par un électricien professionnel qualifié et conforme à tous les codes applicables sécurité électrique

**ALWAYS SWITCH OFF/DISCONNECT ALL EQUIPMENT IN THE WATER BEFORE SERVICING OR PERFORMING ANY MAINTENANCE**

Toujours éteindre l'équipement dans l'eau avant entretien ou de tout entretien

**DO NOT OPERATE THE FOUNTAIN WHEN PEOPLE ARE IN THE WATER**

Ne pas utiliser la fontaine quand les gens sont dans l'eau

**CAUTION: KEEP HANDS CLEAR OF THE IMPELLER WHEN OPERATING!**

ATTENTION: Garder les mains loin la turbine lors de l'utilisation!



### WARNINGS

- Before entering, wading in or swimming in the water in which Otterbine Aerators or Fountains are installed, make sure they are **PHYSICALLY** disconnected from their electrical power sources.
- Aerators located in or near garden ponds and similar locations must be equipped with Ground Fault Circuit Interrupter.
- If the power cord is damaged, it must be replaced by a special cord or assembly available from Otterbine/ Barebo, Inc. or an authorized Otterbine/Barebo, Inc. sales and service center.
- Avant d'entrer, pataugeant dans ou en nageant dans l'eau dans laquelle Aérateurs Otterbine ou fontaines sont installées, assurez-vous qu'ils sont physiquement déconnectés de leur source d'alimentation électrique.
- Aérateurs situés dans ou à proximité des bassins de jardin et des emplacements similaires doivent être équipés de disjoncteur.
- Il est possible pour que l'eau devienne légèrement polluée dans les rares cas où une fuite d'huile se produit.
- Si le cordon d'alimentation est endommagé, il doit être remplacé par un cordon spécial ou de montage disponible à partir Otterbine / Barebo, Inc ou une autorisation Otterbine / Barebo, les ventes Inc et centre de service.

## Specifications

### Light 31-0345

Parameter	Value
Input Voltage	AC 12V / DC 12~24V
Power	9W
Working Temperature	-20~45°C -4~113°F
Color Temperature	2700~6500
Luminous Flux	600LM
Light Efficiency	75LM/W
CRI	>80
Control Distance	160ft (50m)*
Lifespan	50000h
IP Rating	IP68
Weight	1.3kg

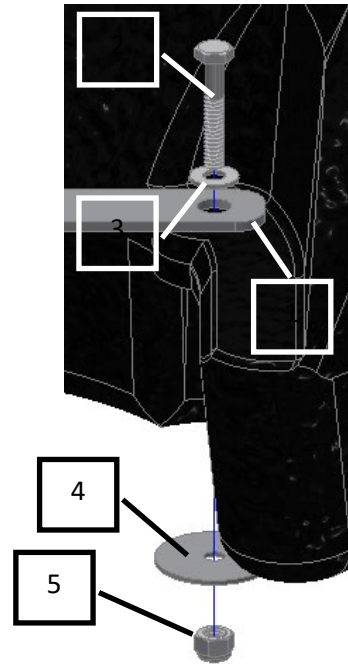
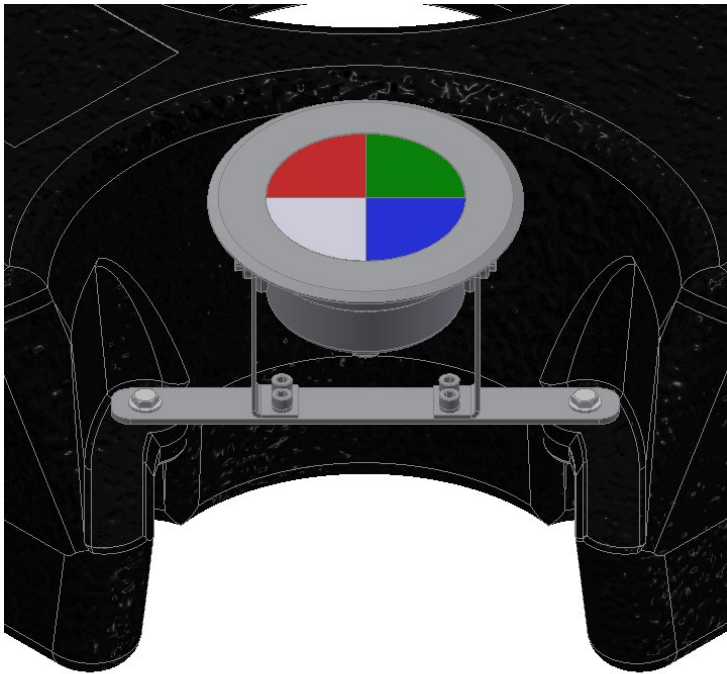
\*If the lights are positioned under water control distance will vary.

### Remote 31-0346

Parameter	Value
Voltage	3V(AAA * 2pcs)
Transmitting Power	10dBm
Standby Power	16μA
RF	433MHz
Modulating Method	LoRa Spread Spectrum
Control Distance	50m (Lamps under .5m underwater)

## Lamp Installation

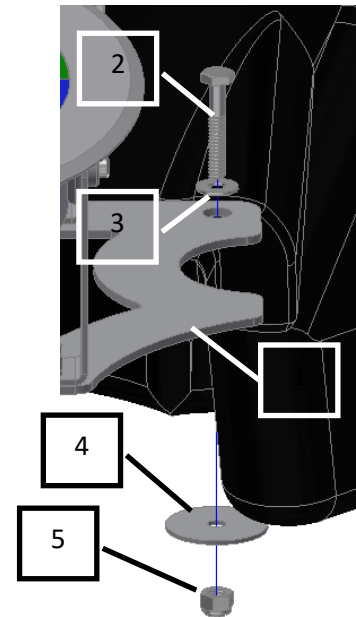
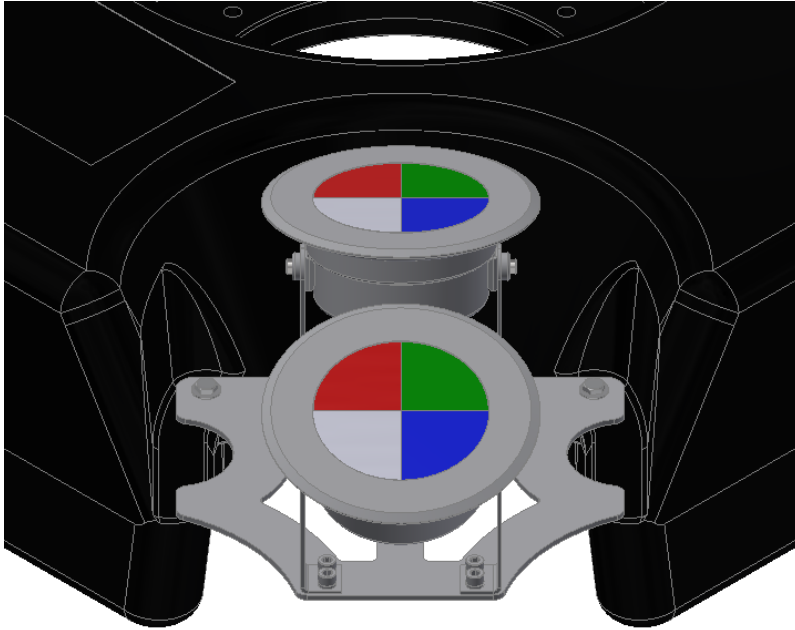
### Concept 3 (Single Light per Pocket)



Mounting Hardware – per Light			
Item	Quantity	Part Number	Description
1	1	40-0420	C3 LIGHT BRACKET MID RGBW
2	2	24-0016	BOLT HEX S/S 1/4-20x1 5"
3	2	927-000	WASHER ¼" FLAT S/S
4	2	28-0001	WASHER FENDER S/S 1/4"x1 5"OD
5	2	C2-112	NUT NYLON LOCK 316S/S 1/4-20

The lights for the Concept 3 units ship with the lights attached to the mounting bracket for the Concept 3 floats. Each of the lights are designed to be mounted in the light pockets in the float. The brackets should be placed on the top of the shelf in the light pocket and then fastened with two (2) bolts passed through the bracket and float with a fender washer and lock nut on the bottom of the float. The cables and splitter assembly should be fastened under the float (and under the screen if used) with cable ties.

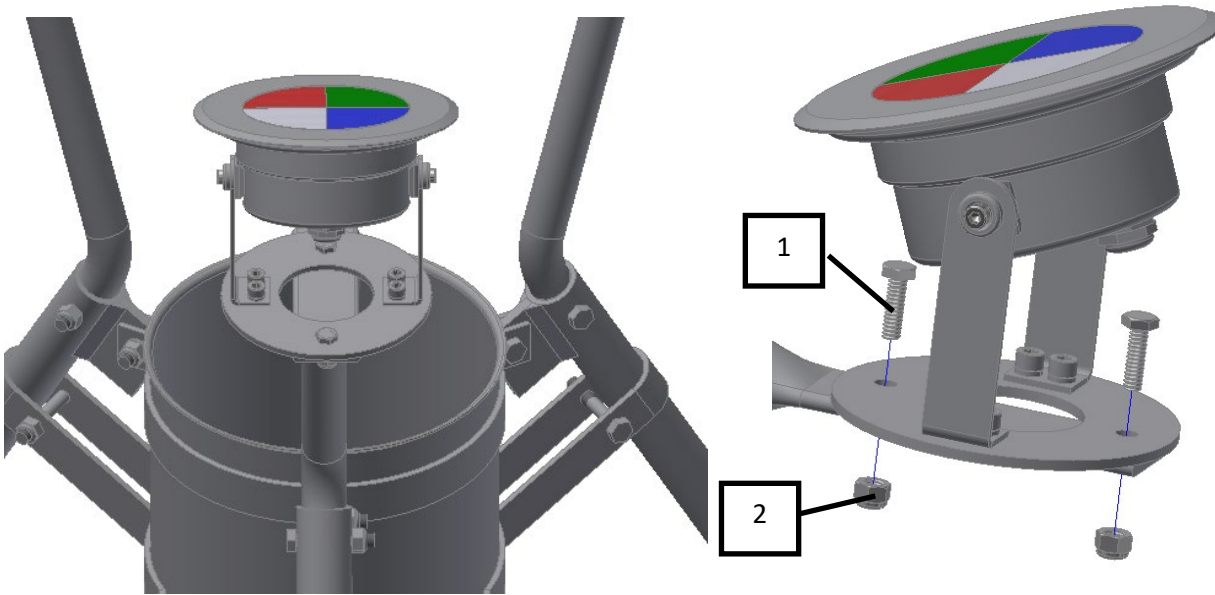
### Concept 3 (2 Lights per Pocket)



Mounting Hardware – per 2 Lights			
Item	Quantity	Part Number	Description
1	1	47-0034	C3 MIDI BRACKET DUAL FIXTURES
2	2	24-0016	BOLT HEX S/S 1/4-20x1 5"
3	2	927-000	WASHER ¼" FLAT S/S
4	2	28-0001	WASHER FENDER S/S 1/4"x1 5"OD
5	2	C2-112	NUT NYLON LOCK 316S/S 1/4-20

The lights for the Concept 3 units ship with the lights attached to the mounting bracket for the Concept 3 floats. Each of the lights are designed to be mounted in the light pockets in the float. The brackets should be placed on the top of the shelf in the light pocket and then fastened with two (2) bolts passed through the bracket and float with a fender washer and lock nut on the bottom of the float. The cables and splitter assembly should be fastened under the float (and under the screen if used) with cable ties.

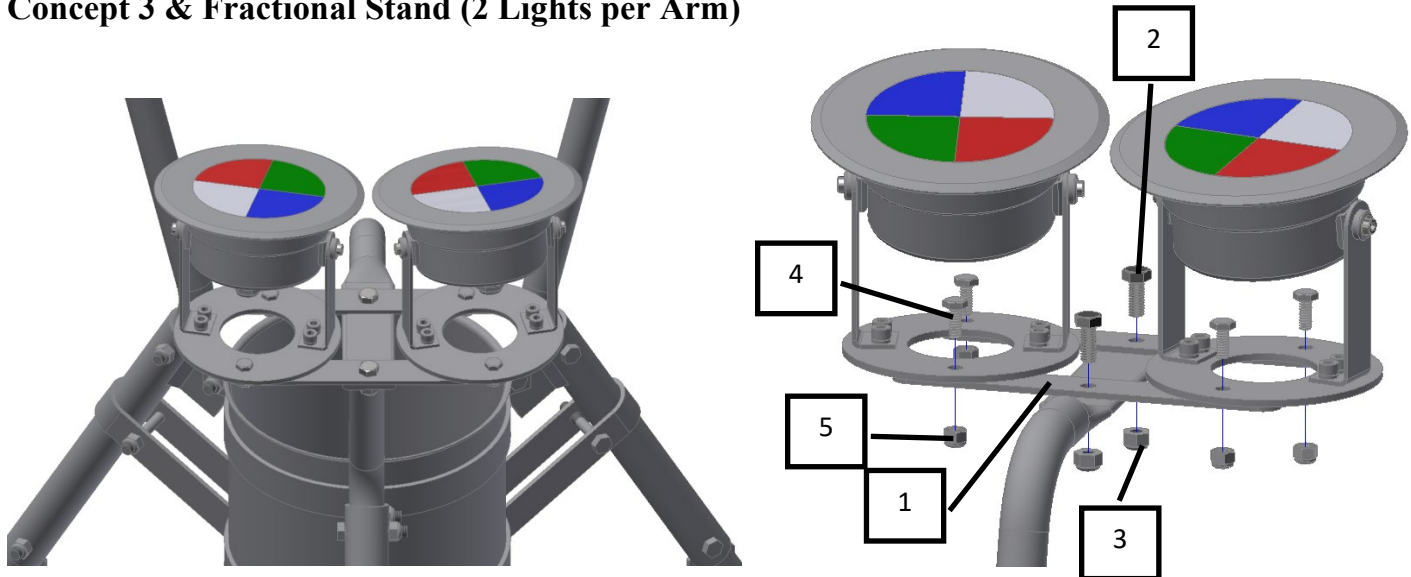
### Concept 3 & Fractional Stand (1 Lights per Arm)



Mounting Hardware – per Light			
Item	Quantity	Part Number	Description
1	2	101-016	BOLT HEX S/S 1/4-20x7/8"
2	2	C2-112	NUT NYLON LOCK 316S/S 1/4-20

The lights for the Concept 3 stand units ship with the lights attached to the mounting ring. The mounting ring of each light should be bolted to the top of the stand light bracket with two (2) bolts passed through the mounting ring and stand light bracket with a lock nut on the bottom of the stand light bracket. The cables and splitter assembly should be fastened below the water level with cable ties.

### Concept 3 & Fractional Stand (2 Lights per Arm)

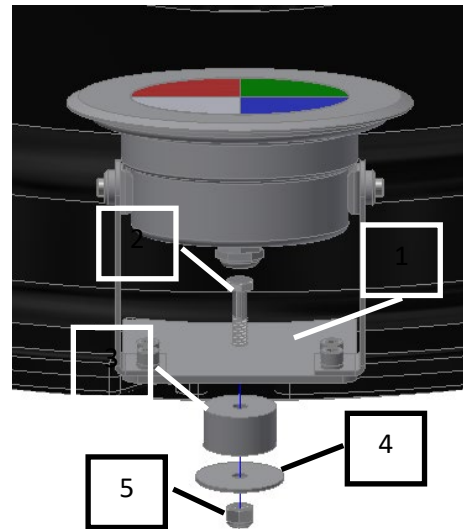
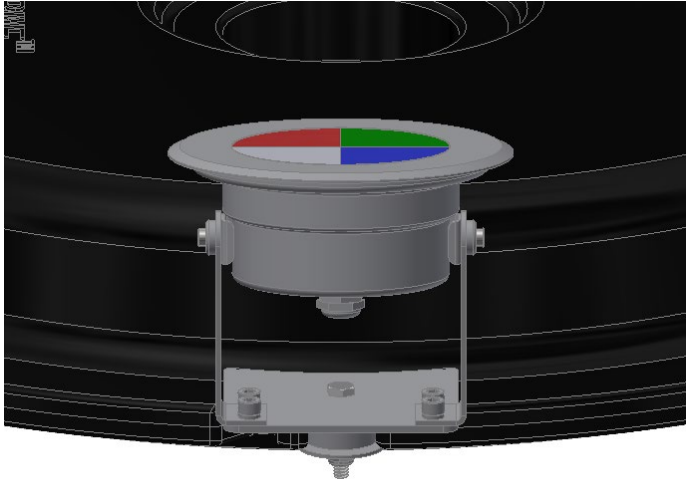


Mounting Hardware – per 2 Lights			
Item	Quantity	Part Number	Description
1	2	40-0422	BRACKET MID RGBW C3 STAND DUAL
2	2	106-302	BOLT HEX S/S 5/16-18x3/4
3	2	GP1208	NUT NYLON LOCK 316S/S 5/16-18
4	4	24-0017	BOLT HEX S/S 1/4-20x5/8"
5	4	C2-112	NUT NYLON LOCK 316S/S 1/4-20

The lights for the Concept 3 stand units ship with the lights attached to the mounting ring. There are two (2) mounting brackets provided for each stand light bracket that will hold two lights. The center hole in each of the mounting brackets is offset slightly. The brackets should be attached to the stand light bracket such that the center hole in the inner bracket is toward the aerator and the outer mounting bracket center hole is furthest from the aerator. These mounting brackets are secured with mounting hardware parts 1 & 2. The mounting ring of each light should be bolted to the mounting brackets with two (2) bolts passed through the mounting ring and bracket with a lock nut on the bottom of the bracket (mounting hardware parts 3&4). The mounting rings should be bolted through the inner holes on the inner bracket and the outer holes on the outer bracket. The cables and splitter assembly should be fastened below the water level with cable ties.



## Fractional Unit



Mounting Hardware – per Light			
Item	Quantity	Part Number	Description
1	1	40-0421	FRA LIGHT BRACKET MID RGBW
2	1	24-0016	BOLT HEX S/S 1/4-20x1 5"
3	1	41-0394	FRA MID RGBW BRACKET SPACER
4	1	28-0001	WASHER FENDER S/S 1/4"x1 5"OD
5	1	C2-112	NUT NYLON LOCK 316S/S 1/4-20

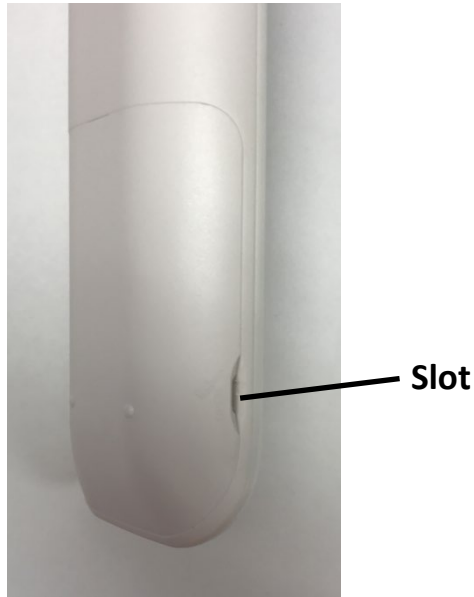
The lights for the fractional units ship with the lights attached to the mounting bracket for the fractional floats. Each of the lights are designed to be mounted in the light pockets in the float. The bracket spacer should be installed in the pocket by pressing the spacer in from the side of the float until it snaps into place. The bracket should be placed on the top of the ledge of the float and then fastened with two bolts passed through the bracket and spacer with a fender washer and lock nut on the bottom of the float. The cables and splitter assembly should be fastened under the float (and under the screen if used) with cable ties.

## Wireless Remote Control

The lamps may be controlled by the wireless remote control.

### Batteries

The wireless remote control uses two (2) AAA batteries. Batteries can be replaced by removing the battery cover at the bottom rear of the remote. There is a small slot located on the lower side of the remote. Use a screwdriver or other tool to pry the cover off.



Replace batteries observing the correct polarity.



Replace cover by snapping the cover back on the unit.

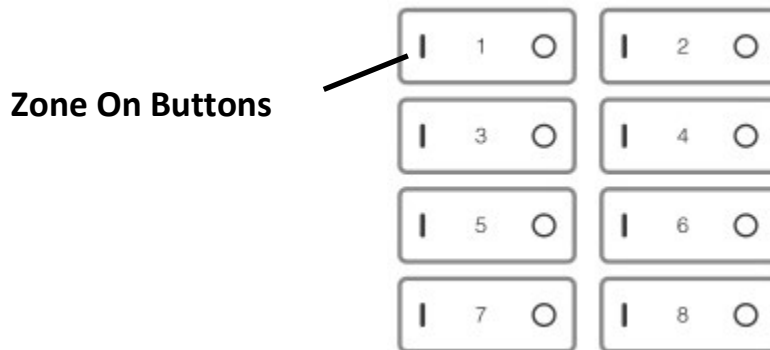
## Linking

In order for the remote to control the lamps, the lamps need to be linked to the remote. The remote control can control lamps assigned to eight (8) zones. When purchased with a light set, the lights are linked to independent zones on the remote. Light 1 linked to zone 1, light 2 linked to zone 2, etc.

**Note:** When linking or unlinking lights, all of the lights that are powered on at the same time will be affected. In order to operate on a single light at a time, all other lights must remain powered off.

Follow the instructions below to link the lamps to a remote:

- A. Turn power off to the lamp(s).
- B. Turn power on to the lamp(s)
- C. Within three (3) seconds of turning on the lamp(s), press the desired zone on button three (3) times.



- D. If successful, the lamp(s) will blink three (3) times and then be steady on.

## Unlinking

Follow the below instructions to unlink the lamp from the remote.

- A. Turn power off to the lamp(s).
- B. Turn power on to the lamp(s)
- C. Within three (3) seconds of turning on the lamp(s), press the desired zone on button five (5) times.



- D. If successful, the lamp(s) will blink ten (10) times and then be steady on.

## Operation

The top of the remote uses a technology similar to a cell phone touch screen. These “buttons” on the remote are touch sensitive areas that will respond to fingers or a touch stylus. The lower section of the remote uses traditional buttons. When the remote is sensing a touch or a button press, an orange indicator light will be visible in the center of the circular area on the face of the remote. The brightness of this light also indicates the strength of the battery.



Button operation is described below:

- Master On – Will turn on all lamps linked to this remote.
- Master Off – Will turn off all lamps linked to this remote. Holding the master off button will set all linked lamps to night light mode.
- Color ring – Touch the area of the ring corresponding to the desired color to change the color of the lamps for the active zone.
- Indicator Light – Indicates that a button on the remote is being pressed. If the indicator light is blinking fast, it indicates that the remote batteries need to be replaced.

- E. CCT Control/Saturation – This area of the remote will change the lighting color of the active lamps to white and set the desired color temperature. Touching toward the right will select higher color temperatures and touching to the left will select lower color temperatures.
- F. Saturation Control – This control will adjust the amount of white light added to the selected color of the active lamps. The higher up the control, the more white light will be added.
- G. Brightness Dimming – This control adjusts the brightness of the selected colors for the active lamps. The higher up the control, the brighter the lights.
- H. Mode – This control will initiate and step through the preprogrammed sequencing modes on the active lamps.

Dynamic Modes	
Number	Mode
1	Mardi Gras
2	Automatic Color Change
3	Sam
4	Gemstone
5	Twilight
6	American
7	Fat Tuesday
8	Party
9	Slow Color Splash

- I. Speed + – This control will speed up the preprogrammed sequencing mode if it is currently running on the active lamps.
- J. Speed - – This control will slow down the preprogrammed sequencing mode if it is currently running on the active lamps.
- K. Zone On – Turns on the lamps linked to zone 1 and makes zone 1 lamps active for the remote.
- L. Zone Off – Turns off the lamps linked to zone 1. Holding the zone off button will set all zone 1 lamps to night light mode.

## Wiring

### PCC Cables & Connections

1. Only Otterbine Barebo, Inc. factory approved power cord is to be used from the PCC panel with no junction boxes or splices. **Only** use power cord gauges and lengths specified by Otterbine at the time of cable purchase. (Contact your Otterbine Distributor for proper cable sizing)
  2. It is recommended that all exposed cable between the PCC panel and the shoreline be installed in non-metallic conduit. It is **important** that aerator and lighting cables be installed in individual conduits to avoid induced interference between cables which could cause random GFCI tripping.
  3. **Always** use strain relief cord connectors to attach the Otterbine cable to the sequencer panel when not using conduit.
  4. Cables and conduits must only enter into the bottom of the sequencer panel.
  5. Factory connections may loosen during shipping. Verify tightness of all screw terminal connections before energizing.
  6. Power input and output wiring connections are accessed from the bottom of the enclosure.
- Reference label inside enclosure for terminal torque values and wire sizes.

## Troubleshooting

- A. Lamps don't turn on
  - a. Verify that the lamps have power.
    - i. Make sure the aerator power control center (PCC) is on.
      - 1. Verify the aerator is running
      - ii. If the lamps are on a timer verify that the timer is sending power to the lamps.
  - b. The lamps themselves have to be turned on in order for them to turn on with the PCC. Try turning on the lamps with the remote. If the lamps are on a timer or photo cell, do not turn off the lamps with the remote or smart phone app.
  - c. Lamps are not linked to the remote. Relink the lamps.
  - d. Remote is set to the wrong zone. Try using the master on button.
- B. Remote indicator light is stuck on
  - a. Remove and replace batteries
- C. Remote indicator light flashing
  - a. Batteries are low – Remove and replace batteries.
- D. Lamps are on, but remote control doesn't control the lamps.
  - a. Incorrect zone selected. Try operating the lamps with each zone active.
  - b. Remote is out of range of lamps. Try operating from a closer location, or from a different angle.
  - c. Lamps are not linked to the remote. Relink the lamps.
  - d. Lamps are submerged. Water will block radio waves. Make sure the lamps are above the surface of the water.

**Limited 2 Year Warranty**  
**Otterbine® Product**

**WARRANTY:** Barebo, Inc 3840 Main Road East, Emmaus Pennsylvania 18049,USA. hereby warrants, subject to the conditions hereinbelow set forth, that should the **OTTERBINE** product prove defective by reason of improper workmanship or materials at any time during the warranty period the Purchaser at retail will be guaranteed that **BAREBO** will repair or replace the said **OTTERBINE** product as may be necessary to restore it to satisfactory operating condition, without any charge for materials or labor necessarily incident to such repair or replacement, provided that:

- a) The enclosed Warranty Registration Card should be mailed to **BAREBO** within fifteen (15) days of the original receipt by the Purchaser at retail in order to avoid delays:
- b) The **OTTERBINE** product must be delivered or shipped, prepaid, in its original container or a container offering an equal degree of protection, to **BAREBO** or a facility authorized by **BAREBO** to render the said repair or replacement services or, if purchased from an authorized **OTTERBINE** dealer, to such dealer;
- c) The **OTTERBINE** product must not have been altered, repaired or serviced by anyone other than **BAREBO**, a service facility authorized by **BAREBO** to render such service, or by an authorized **BAREBO** dealer, and the serial number of the **OTTERBINE** product must not have been removed or altered: and
- d) The **OTTERBINE** product must not have been subjected to lightning strikes and other Acts of God, vandalism, freezing-in, accident, misuse or abuse, and must have been installed in conformance with applicable electrical codes (including proper electrical protection), and also installed, operated and maintained in accordance with guidelines in the Owner's Manual shipped with the Otterbine product.

No implied warranties of any kind are made by **BAREBO** in connection with this **OTTERBINE** product, and no other warranties, whether expressed or implied, including implied warranties of merchantability and fitness for a particular purpose, shall apply to this **OTTERBINE** product. Should this **OTTERBINE** product prove defective in workmanship or material, the retail Purchaser's sole remedy shall be repair or replacement as is hereinabove expressly provided and, under no circumstances, shall **BAREBO** be liable for any loss, damage or injury, direct or consequential, arising out of the use of, or inability to use, the **OTTERBINE** product, including but not limited to retail Purchaser's cost, loss of profits, goodwill, damages due to loss of product or interruption of service, or personal injuries to Purchaser or any person.

# *Water Works With Otterbine!*



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