# BATHOLOGY

### rediscover bathing

## Spectrum 510

### Color Bathing Experience

## Installation and Operation Manual

# Spectrum 510

## Contents

# Installation Considerations

## Please read this manual in its entirely prior to installation

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`CAUTION` Carefully review all installation options and instructions before proceeding.

`CAUTION` For safety purposes, use safety goggles at all times.

`⚠WARNING` Before wiring to power supply, turn off electricity at the fuse or circuit breaker box.

`⚠WARNING` Check for piping / electrical before cutting or drilling.

`⚠WARNING` Some electrical components are not waterproof.

`⚠WARNING` If there is any risk of uninsulated electrical connections in your wall / ceiling area, use insulating gloves.

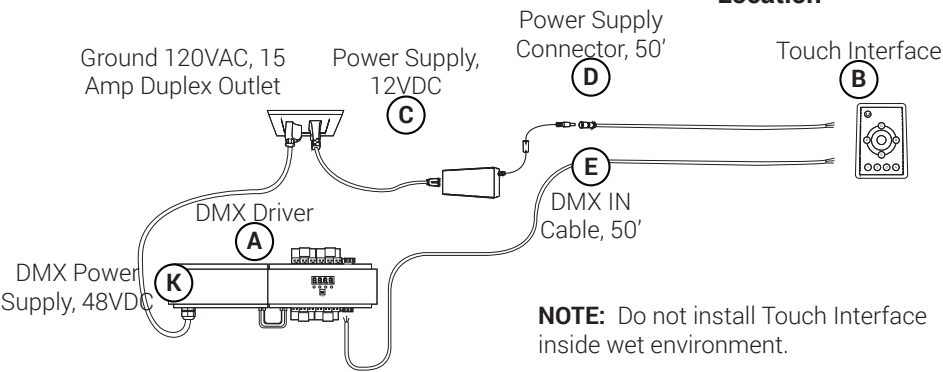`! IMPORTANT` All wiring must be done in accordance with National Electric Code and local building code.

`! IMPORTANT` Prior to installation, consider the placement carefully, taking into account the location of electrical, plumbing, and other fixtures.

`! IMPORTANT` Touch Interface can be installed outside of a wet environment, on a vertical wall, convenient for user operation. It can be installed a dry bathing environment 48" above the floor maximum. It must also avoid elements such as direct water and steam emissions.

# Spectrum 510

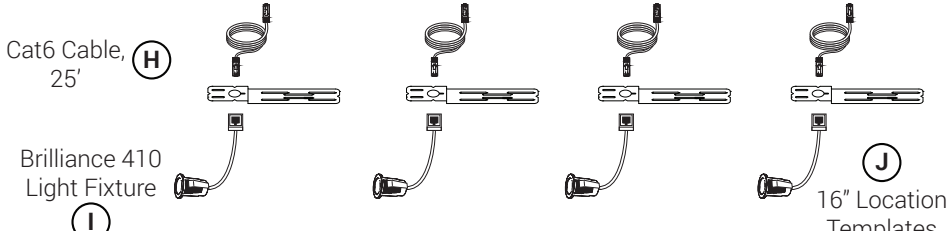## Installation - Overview

**Accessible, Dry Location**

**Desired Interface Location**

Power Supply Connector, 50'

Ground 120VAC, 15 Amp Duplex Outlet

Power Supply, 12VDC

Touch Interface

**(D)**

**(B)**

**(C)**

DMX Driver

**(A)**

**(E)**

DMX IN Cable, 50'

DMX Power Supply, 48VDC

**(K)**

**NOTE:** Do not install Touch Interface inside wet environment.

**NOTE:** Both ends of splitter must be used, if a splitter is used. Lights are in series and will not illuminate if a Splitter port is left open. Exclude Splitter and Cat6 Cable, 1' if only one light will be used in a particular zone / port.

Cat6 Cable, 1'

**(F)**

RJ-45 Splitter

**(G)**

**Desired Light Locations**

Cat6 Cable, 25'

**(H)**

Brilliance 410 Light Fixture

**(I)**

**(J)**

16" Location Templates

**NOTE:** Do not hot swap any electrical components. Fully disconnect system from power source before swapping electrical components.

**NOTE:** It is recommended that all electrical equipment be tested prior to installation.

### Package Includes

| Item | Quantity | Description |
|------|----------|-------------|
| A | 1 | DMX Driver |
| B | 1 | Touch Interface |
| C | 1 | Power Supply, 12VDC |
| D | 1 | Power Supply Connector, 50' |
| E | 1 | DMX IN Cable, 50' |
| F | 1 | Cat6 Cable, 1' |

| Item | Quantity | Description |
|------|----------|-------------|
| G | 1 | RJ-45 Splitter |
| H | 1 | Cat6 Cable, 25' |
| I | 1 | Brilliance 410 Light Fixture |
| J | 1 | 16" Location Templates |
| K | 1 | DMX Power Supply, 48VDC |
| | 1 | Silicone Sealant, 1 oz tube |

# Installation - DMX Driver / Power Supply
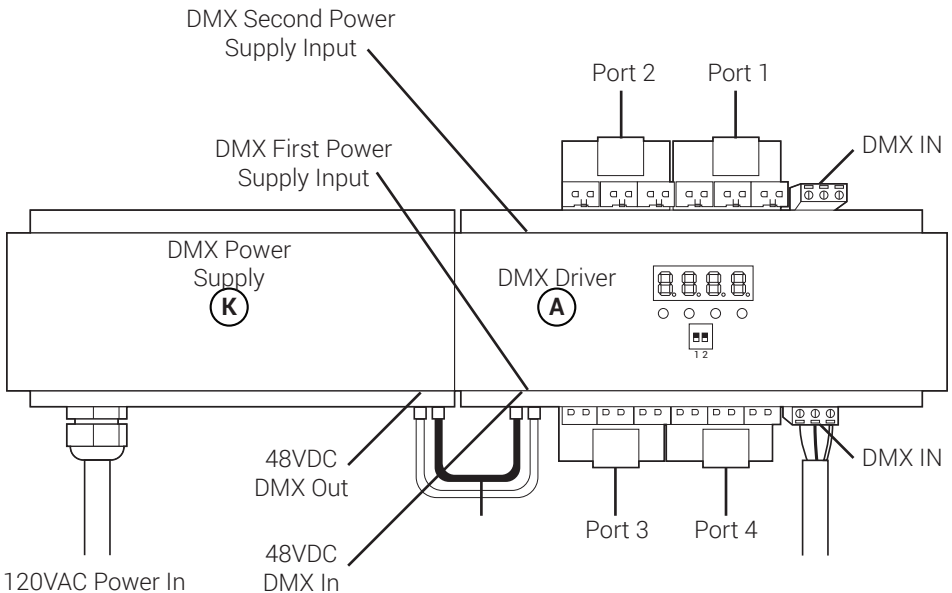
**Installation for 1-24 Lights**

1. Determine best location for DMX Driver (A) and DMX Power Supply (K), making note of cord lengths.

2. Using a screwdriver fully loosen the 48VDC Output + and – on power supply (K) and 48VDC Input + and – on the DMX driver (A).

3. Connect the Red wire to the + Output on the power supply (K) and the other end to the + Input on the DMX driver (A).

4. Connect the Black wire to the - Output on the power supply (K) and the other end to the - Input on the DMX driver (A).

**Dip Switches**

Brilliance lights run on 350mA. Ensure that Dip switch 1 and 2 are both in the down position at 350mA.

200mA ● ●
250mA ● ○
300mA ○ ●
350mA ○ ○

1  2        1  2

DMX Second Power Supply Input

DMX First Power Supply Input

Port 2    Port 1

DMX IN

DMX Power Supply (K)

DMX Driver (A)

48VDC DMX Out

48VDC DMX In

120VAC Power In

Port 3    Port 4

DMX IN

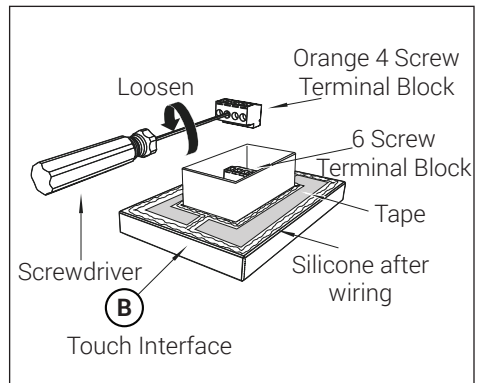## Installation - DMX Driver / Power Supply (Continued)

**Additional Power Supply for 25 - 48 Lights**

1. Follow and complete installation for 1-24 lights.

2. Mount power supply (K) next to first power supply (K).

3. Using a screwdriver fully loosen the 48VDC Output + and – on power supply (K) and 48VDC Input + and – on the DMX driver (A).

4. Connect the Red wire to the + Output on the power supply (K) and the other end to the + Input on the DMX driver (A).

5. Connect the Black wire to the - Output (K) on the power supply and the other end to the - Input on the DMX driver (A).
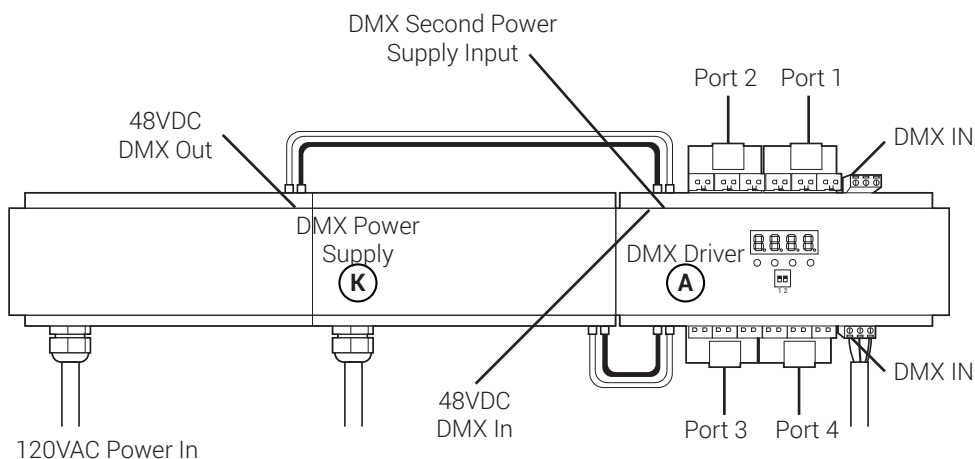
# Installation - Touch Interface

1. Determine the desierd location for the Touch Interface (B), making note of the cord lenghts.

2. Cut a 1-1/2"W x 2-13/32" H hole in desired location for the Touch Interface (B).

3. Install a standard single gang electrical box in an accessible dry location.

4. Run a grounded 120VAC from the power supply to the accessible dry location's electrical box.

5. Run the DMX IN Cable (E) wires and the Power Supply Connector (D) wires to the Touch Interface's (B) hole cutout.

6. Remove orange 4 screw terminal block and 7 screw terminal block from respective pin terminals.

7. Using a screwdriver, fully loosen the "GND", "D-", and "D+" sections of the orange 4 screw terminal, and "GND", and "V in +" of the 7 screw terminal.

8. Connect the DMX IN Cable (E) GND to the "GND" orange 4 screw terminal block.

9. Connect the DMX IN Cable (E) Red D- to the "D-" orange 4 screw terminal block.

10. Connect the DMX IN Cable (E) Black + to the "D+" orange 4 screw terminal block.



Loosen

Orange 4 Screw Terminal Block

6 Screw Terminal Block

Tape

Silicone after wiring
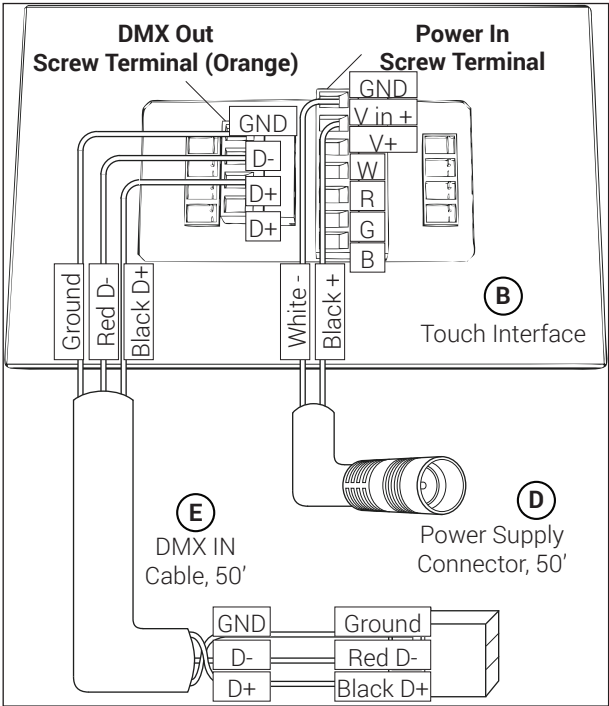
Screwdriver

B

Touch Interface

## Installation - Touch Interface (Continued)

11. Connect the Power Supply Connector (D) White - to the "GND" 7 screw terminal block.

12. Connect the Power Supply Connector (D) Black + to the "V in +" 7 screw terminal block.

13. Using a screw driver, tighten the "GND", "DMX -", "DMX +", sections of the 4 screw terminal, and "GND", and "V in +" of the 7 screw terminal.

14. Insert orange 4 screw terminal block and 7 screw terminal block into their respective pin terminals.

15. Remove DMX Driver's (A) DMX IN screw terminal block from pin terminal.

16. Connect the DMX IN Cable (E) Ground to the DMX Driver's (A) DMX IN screw terminal block's "GND".

17. Connect the DMX IN Cable (E) Red to the DMX Driver's (A) DMX IN screw terminal block's "D-".

18. Connect the DMX IN Cable (E) Black to the DMX Driver's (A) DMX IN screw terminal block's "D+".

19. Using a screwdriver, tighten the "GND", "D-", and "D+" sections of the DMX IN screw terminal block.

20. Insert DMX IN screw terminal block into its pin terminal.

21. Test light system prior to mounting Touch Interface (B) to wall.  Verify connections are secure and working properly.

22. Apply a 1/8" bead of silicone around the back of the Touch Interface (B).

23. Peel off tape and mount Touch Interface (B) to hole cutout area.

24. Apply a 1/8" of silicone around the edge of the mounted Touch Interface (B) as required to form a water tight seal.

25. Allow silicone to cure for 24 hours before exposing product to any source of moisture.

# Installation - Touch Interface (Continued)

**DMX Out**
**Screw Terminal (Orange)**

**Power In**
**Screw Terminal**

GND
V in +
V+
W
R
G
B

GND
D-
D+
D+

Ground
Red D-
Black D+

White -
Black +

**B** Touch Interface

**E**
DMX IN
Cable, 50'

**D**
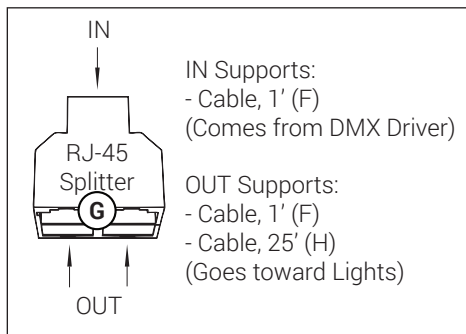Power Supply
Connector, 50'
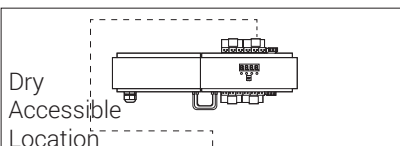
GND
D-
D+

Ground
Red D-
Black D+

## Installation - Brilliance Light Fixtures

**Warning:** The Splitters (G) should be kept in an accessible location when installed. Only use the Splitters (G) when assembling the Brilliance Light Fixtures (I) and ocmponents of this kit.

**Important:** Driver has 4 ports. Each port operates **12** lights max. Take this into consideration when planning light installation.

1. Determine number of lights per port. Limit 12 lights per port.

2. Construct light assembly using the diagrams on the next page.

3. Repeat steps 1 and 2 for additional zones.

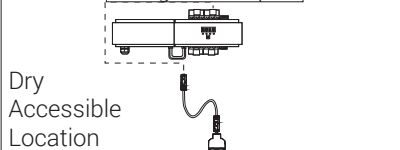4. Determine desired Brilliance Light Fixture (I) location.
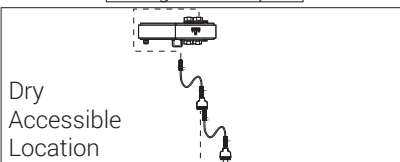
IN

RJ-45 Splitter
G

OUT

IN Supports:
- Cable, 1' (F)
(Comes from DMX Driver)

OUT Supports:
- Cable, 1' (F)
- Cable, 25' (H)
(Goes toward Lights)

## 1 Light Example

Dry Accessible Location

Desired Light Location

## 4 Light Example

Dry Accessible Location

Desired Light Location

## 2 Light Example

Dry Accessible Location

Desired Light Location

## 5 Light Example

Dry Accessible Location

Desired Light Location

## 3 Light Example

Dry Accessible Location
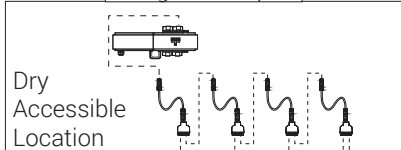
Desired Light Location

## 6 Light Example

Dry Accessible Location
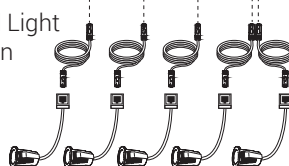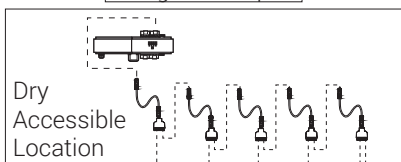
Desired Light Location
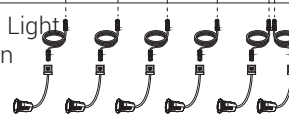
## Installation - Brilliance Light Fixtures (Continued)



Desired Fixture Location

Notch used to align fixture center to other fixture centers

J

16" Location Templates
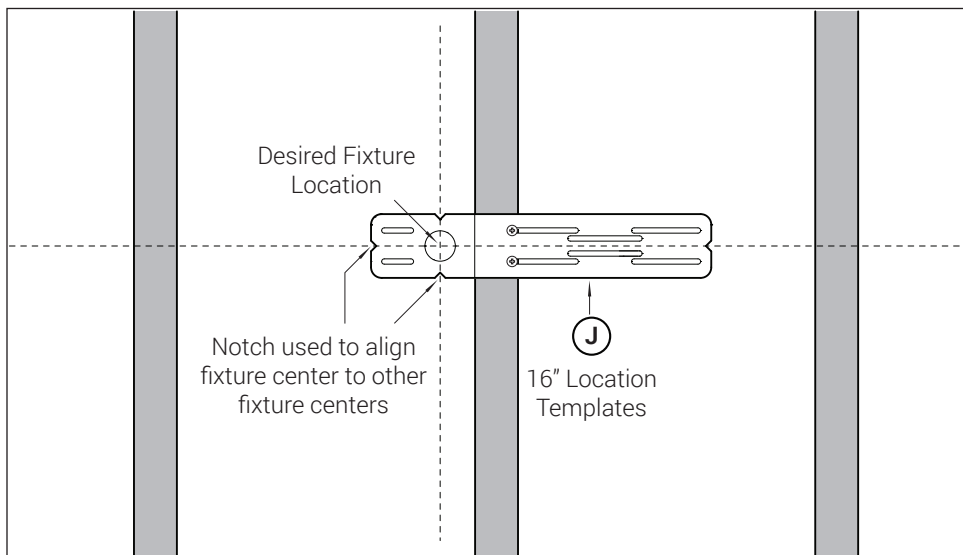
5. FOR REMODELS: Skip to 6. FOR NEW ROOMS: Mount 16" Location Template (J) to ceiling joist to indicate desired Brilliance Light Fixture (I) location. Use notches to quickly align desired location to other fixtures in the room.



16" Location Templates

J

1" Ceiling / Wall Material
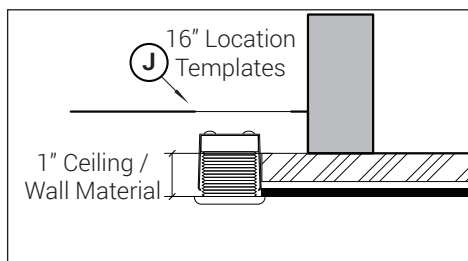
6. Make a 1-5/8" hole in desired location.

7. Install light assemblies.

8. Apply a 1/8" bead of silicone around the edge of the Brilliance Light Fixture (I) as required to form a water tight seal.



1/8" Silicone Bead Placement (Wet Environment)

I  Brilliance 410 Light Fixture

9. Mount Brillinace Light Fixture (I) to ceiling through 1-5/8" cutout.

10. Repeat steps 4 - 9 for each light.
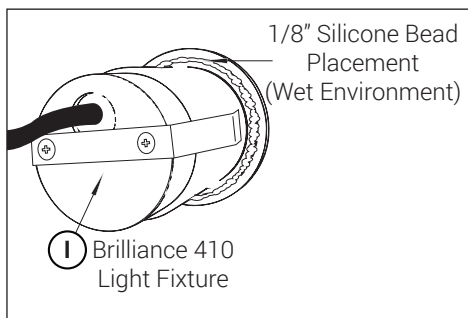
11. Allow silicone to cure for 24 hours before exposing product to any source of moisture.

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## Operation

### On / Off
Power Off - Press and hold for 2 seconds.  Turns on Touch Interface.  Restores most recent settings.

Power On - Press and hold for 2 seconds.  Turns off touch Interface.

### Color
"C" Button - Press and Hold for 2 seconds.  Enables color mode.

"1" Button - Red.
"2" Button - Green.
"3" Button - Blue.
"4" Button - White.

Touch Toggle - Press and drag in a clockwise or counter-clockwise motion to cycle through all colors.

### Brightness
"B" Button - Press and hold for 2 seconds.  Enables brightness mode.

"1", "2", "3", "4" Button - Uses color mode or pre-programmed scene mode "1", "2", "3", "4" functionality, based on which mode was used prior to brightness mode.

Touch Toggle - Press and drag in a clockwise motion to increase brightness.  Counter-clockwise decreases brightness.

## Operation (Continued)

**Pre-
Programmed
Scene**

"P" Button - Press and hold for 2 seconds.  Enables Pre-Programmed Scene mode.

"1" Button - Red - Magenta - White - Turquoise - Green - Yellow - White - Magenta - Blue - Turquoise - White - Yellow.

"2" Button - Red - Yellow - Green - Turquoise - Blue - Magenta

"3" Button - Yellow - Turquoise - Magenta

"4" Button - Red - Magenta - White - Turquoise - Green - Yellow - White - Magenta - Blue - Turquoise - White - Yellow (Faster version of "1")

Touch Toggle - Press and drag in a clockwise or counter-clockwise motion to cycle through 10 pre-programmed scenes.
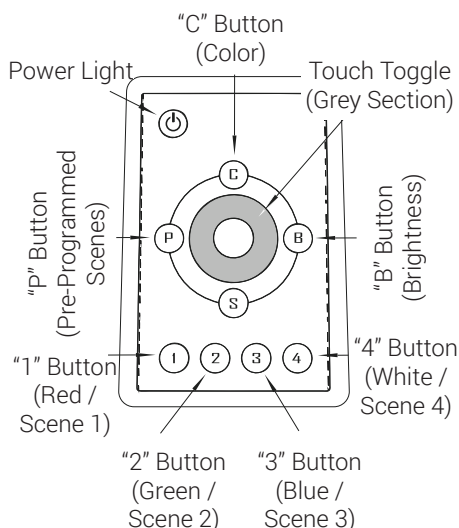
## Product Care

For routine cleaning, simply use a soft damp cloth and common household soap. Use a damp cloth to wipe clean, then dry. Clean product frequently to avoid calcium deposits on surfaces. Use only mild soap. **Never use abrasive cleaners, bleach, disinfectants or cleaning products containing alcohol, ammonia, hydrochloric or phosphoric acids** as they may damage the product's finish. To clean electrical components, gently wipe down using a dry cloth or duster. **Never use a wet duster, water, or any other liquid to clean the device.**

## Specifications

### DMX Driver

**Operating Voltage:** 48VDC

**Power Consumption:** 192W

**Nominal Amperage:** .35 x 12 Amps

**Power Output:** 4-47VDC, 1050mA / Port (3x350mA)

**Dimensions:**  5.47"L x 2.87"H x 2.60"D

**DNX IN Cable:** 3-Pin, 24Gauge, 50'

**Listing:** UL / CE / RoHS

### Power Supply DMX Driver

**Operating Voltage:** 120VAC

**Output voltage:** 48VDC

**Power Consumption:** 96W

**Nominal Amperage:** 2 Amps

**Dimensions:**  5.47"W x 2.87"H x 2.60"D

**Listing:** UL / CE / RoHS

### Touch Interface

**Trim:** Steel, Polished Chrome Finish

**Housing:** Aluminum Housing, Glass Panel

**Dimensions:** 3-3/16"W x 4-15/16"H x 11/16"D

**Loading:** 2A per Channel, 6A in Total

## Replacement Parts

Contact your Bathology representative for Spectrum 510 Color Bathing Experience replacement parts.

800-957-2862

www.Bathology.com

# Specifications (Continued)

## Power Supply Touch Pad

**Operating Voltage:** 120VAC

**Output voltage:** 12VDC

**Power Consumption:** 48W

**Nominal Amperage:** 1.8 Amps

**Dimensions:**  2"W x 7"L x 1-1/4"H

**Connector:** 12V - 50' Long

## Brilliance Fixture

**Type:**  LED RGB

**Operating Voltage:**  12VDC

**Maximum Input Current:**  350mA

**LED:**  1 x 3 Watt RGB in One

**Beam Angle:**  40°

**Lumen:**  88

**Trim Finish:**  Polished Chrome

**Housing Composition:**  First Grade Stainless Steel

**Lens:**  Clear or Frosted, 7/8" Diameter

**Lens Composition:**  Otpical Grade PMMA

**Rough-in Cutout:**  1-5/8"

**Rating:**  IP68

**Certifications:**  CE / RoHS / WEEE

**Max Operating Temperature:** 130°F when installed per instructions

## Construction Template

**Composition:**  Steel, Galvanized, Gauge 22

**Dimensions:**  15-1/8" L x 1/32" H x 3" D

## Troubleshooting

The DMX driver will turn on automatically when supplied with power. The screen is always on. The screen will default back to A.001 after 15 of inactivity.

**Warning:** Do not change out lights with DMX driver power on.

### Default Settings
Press enter then Up or Down to change if not showing default setting listed below then press back to save. If already showing default proceed to next step.

1. Press the Up button until A.001 displays. Press enter then Up or Down to change if not showing A.001 then press back to save. If already showing A.001 proceed to step 2

2. Press the Up button, CH12 should display.

3. Press the Up button, PF01 should display.

4. Press the Up button, BT16 should display.

5. Press the Up button, 9A1.0 should display.

6. Press the Up button, DP1.1 should display.

7. Press the Up button, Run1 should display.

### Enter Testing Mode

1. Press Down on the DMX driver until RUN1 displays then press Enter

2. Press up until RUN2 displays then press Back button.

3. Power Cycle DMX driver for at least 10 seconds. If you have 2 power supplies both will have to be unplugged at the same time.

4. Display should now read RUN2.

## Zone 1
### Red Zone 1 Channel 1

1. Press UP button until 01.00 displays then press Enter

2. Press Down until 01.FL displays.

3. Go to room and verify Red is working on all Zone 1 lights

4. Press Up then Enter then Up until 01.00 displays then press Back

### Green Zone 1 Channel 2

1. Press UP button until 02.00 displays then press Enter

2. Press Down until 02.FL displays.

3. Go to room and verify Green is working on all Zone 1 lights

4. Press Up then Enter then Up until 02.00 displays then press Back

### Blue Zone 1 Channel 3

1. Press UP button until 03.00 displays then press Enter

2. Press Down until 03.FL displays.

3. Go to room and verify Blue is working on all Zone 1 lights

4. Press Up then Enter then Up until 03.00 displays then press Back

## Zone 2
### Red Zone 2 Channel 4

1. Press UP button until 04.00 displays then press Enter

2. Press Down until 04.FL displays.

3. Go to room and verify Red is working on all Zone 2 lights

4. Press Up then Enter then Up until 04.00 displays then press Back

### Green Zone 2 Channel 5

1. Press UP button until 05.00 displays then press Enter

2. Press Down until 05.FL displays.

3. Go to room and verify Green is working on all Zone 2 lights

4. Press Up then Enter then Up until 05.00 displays then press Back

### Blue Zone 2 Channel 6

1. Press UP button until 06.00 displays then press Enter

2. Press Down until 06.FL displays.

3. Go to room and verify Blue is working on all Zone 2 lights

4. Press Up then Enter then Up until 06.00 displays then press Back

## Troubleshooting (Continued)

### Zone 3
### Red Zone 3 Channel 7

1. Press UP button until 07.00 displays then press Enter

2. Press Down until 07.FL displays.

3. Go to room and verify Red is working on all Zone 3 lights

4. Press Up then Enter then Up until 07.00 displays then press Back

### Green Zone 3 Channel 8

1. Press UP button until 08.00 displays then press Enter

2. Press Down until 08.FL displays.

3. Go to room and verify Green is working on all Zone 3 lights

4. Press Up then Enter then Up until 08.00 displays then press Back

### Blue Zone 3 Channel 9

1. Press UP button until 09.00 displays then press Enter.

2. Press Down until 09.FL displays.

3. Go to room and verify Blue is working on all Zone 3 lights.

4. Press Up then Enter then Up until 09.00 displays then press Back.

### Zone 4
### Red Zone 4 Channel 10

1. Press UP button until 10.00 displays then press Enter.

2. Press Down until 10.FL displays.

3. Go to room and verify Red is working on all Zone 4 lights.

4. Press Up then Enter then Up until 10.00 displays then press Back.

### Green Zone 4 Channel 11

1. Press UP button until 11.00 displays then press Enter.

2. Press Down until 11.FL displays.

3. Go to room and verify Green is working on all Zone 4 lights.

4. Press Up then Enter then Up until 11.00 displays then press Back.

### Blue Zone 4 Channel 12

1. Press UP button until 12.00 displays then press Enter.

2. Press Down until 12.FL displays.

3. Go to room and verify Blue is working on all Zone 4 lights.

4. Press Up then Enter then Up until 12.00 displays then press Back.

### Returning to Run 1

1. Press Enter then press up until Run 1 displays.

2. Press Back

3. Power Cycle DMX driver for at least 10 seconds. If you have 2 power supplies both will have to be unplugged at the same time.

4. Display should now read 001

## Notes

## Notes

# Notes

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