



# **BL.16**

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## **Operating Instructions**

## Safety

- **Warning:** Do not dim a non-dim fixture.
- Do not service fixture until the appropriate service manual has been read and the unit has been completely de-energized.
- All fixtures are fuse protected.
- To prevent fire or shock hazard, do not expose the unit to water or moisture.
- Do not operate fixture without LED's installed. Operating the fixture without the lamps installed may result in damage to the driver.
- Service on the unit should be performed only by a qualified technician.
- In case of LED failure:
  1. Turn fixture "OFF".
  2. Wait 30 seconds for driver to reset.
  3. Turn fixture "ON".

## Owner's Record

- The serial number of this product can be found on the side of the main housing. You should note the model number and the serial number in the space provided and retain this book for future reference as a permanent record of your purchase.

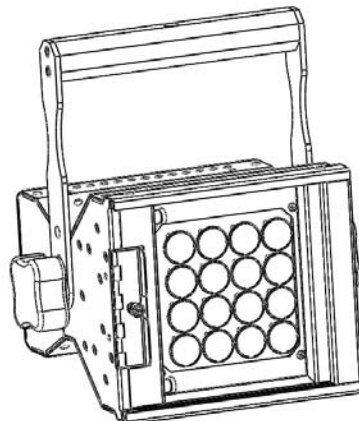
**Model No.** \_\_\_\_\_

**Serial No.** \_\_\_\_\_

**Date of Purchase** \_\_\_\_\_

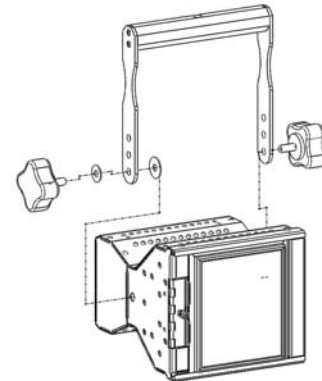
## Product Description

- The Brightline BL.16 is a 38-watt, energy-efficient light fixture. This fixture combines high-frequency electronics with a state-of-the-art optical system to produce a soft, full-spectrum, flicker-free light source.



## Installing the Yoke

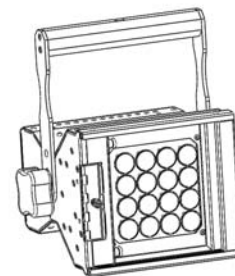
1. Assemble palm handle, yoke, and washers as shown (Fig. 1).



2. Screw palm handle into place (Fig. 2).

*Figure 1*

3. Repeat Steps #1 and #2 for remaining palm handle.



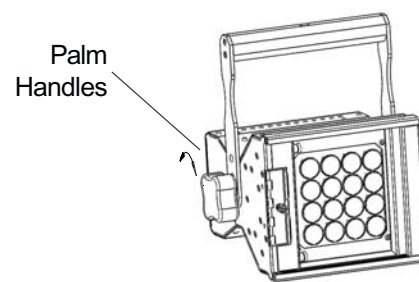
*Figure 2*

## Adjusting the Yoke

1. While firmly grasping fixture, loosen palm handles (Fig. 3).

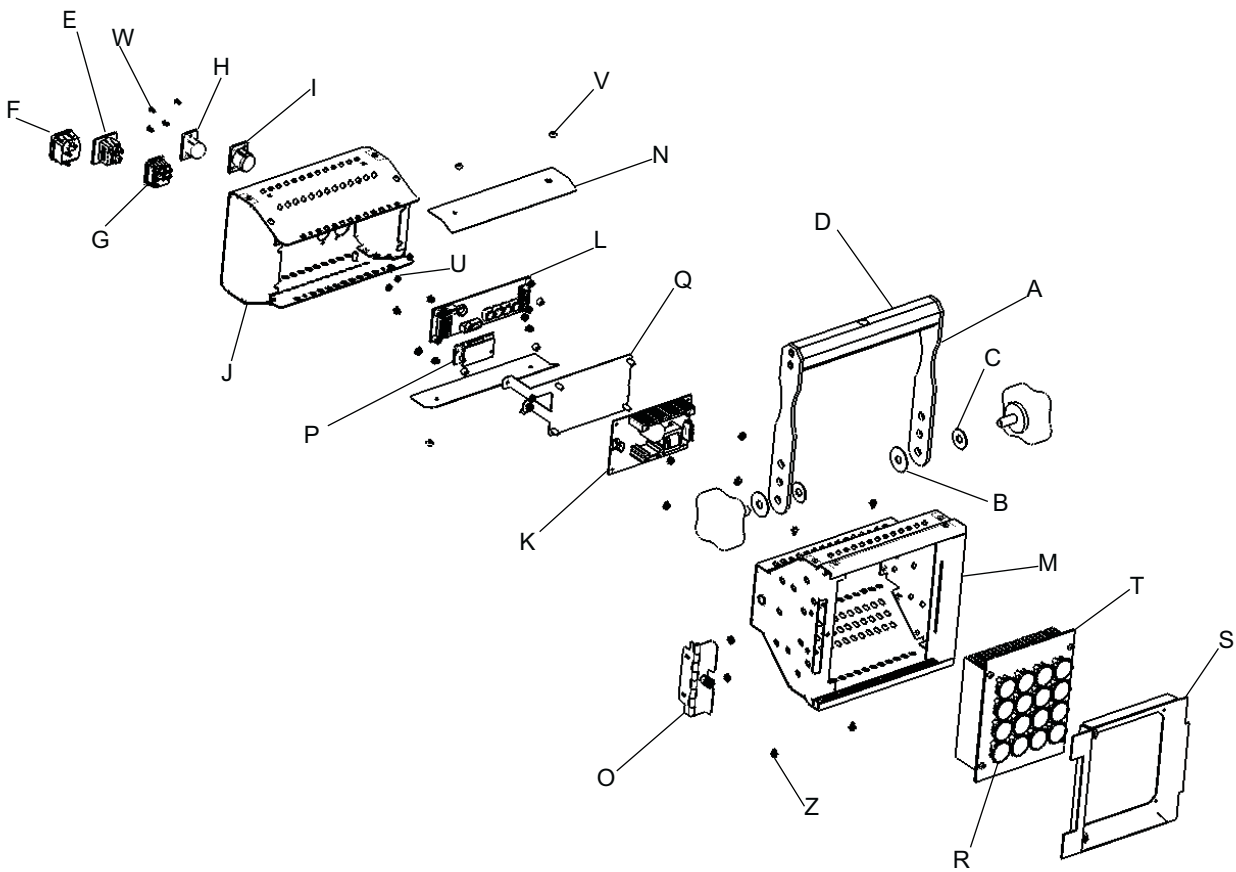
2. Adjust tilt of fixture, as desired.

3. Retighten palm handles.



*Figure 3*

- A - Yoke
- B - Cork Washer
- C - Nylon Washer
- D - Yoke Palm Handle
- E - Receptacle
- F - Power Inlet Module with Fuse
- G - Rocker Switch
- H - Male 5 Pin XLR Receptacle
- I - Female 5 Pin XLR Receptacle
- J - Ballast Housing
- K - Power Supply
- L - Signal Converter
- M - Main Housing
- N - Baffle
- O - Accessory Latch
- P - Display
- Q - Power Bracket
- R - Lens?
- S - Reflector
- T - Light Engine
- U - 6-32 Nut
- V - Nylon Spacer
- W - 4-40 x .31, Phil, Flat
- X - 6-32 x .25 Lg. Screw
- Y - 6-32 Keps Nut
- Z - 6-32 x .25 Black Oxide Screw



BL.16X1

## Installing Adapters (C-Clamp/Spud)

1. Thread mounting screw through yoke and into adapter (Fig. 6).

2. Tightly fasten mounting screw in place (Fig. 7).

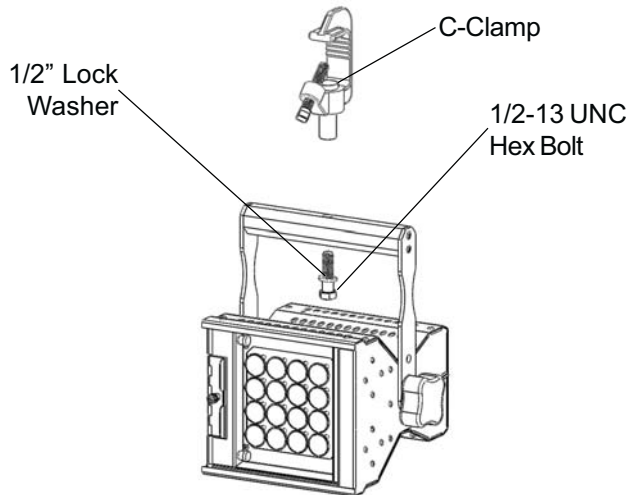


Figure 6

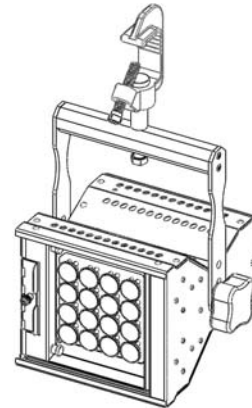


Figure 7

## Notes

## DMX Cable Layout

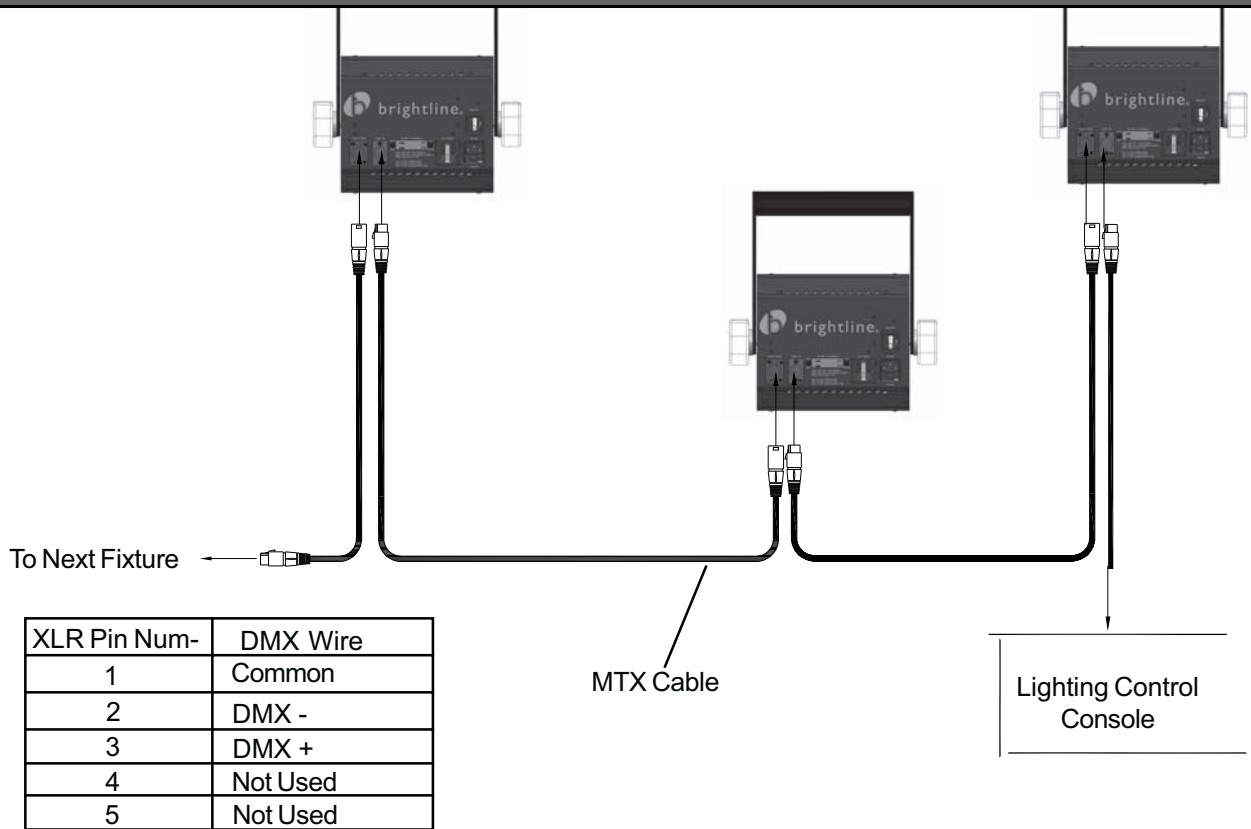


Table 1

### **DMX Networking Guidelines**

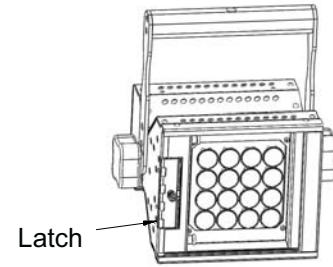
If you are connecting more than one DMX fixture, it is imperative to properly configure the DMX network. Following the guidelines below should reduce the possibility of networking errors.

1. Fixtures and other devices in a DMX network need to be configured in a daisy-chain fashion. The use of DMX "Y" devices or "two-fers" is not appropriate.
2. You can use up to 32 Brightline DMX fixtures on a single DMX data line. If there are more than 32 units, the use of a DMX repeater amplifier or splitter amplifier is required. A repeater amplifier is an electronic device that boosts the DMX signal. A splitter amplifier is an electronic device that boosts the DMX signal and provides for multiple DMX outputs from a single DMX input (since using multiple DMX devices may cause signal degradation).
3. With most DMX devices, there is a "DMX Thru/DMX Terminate" switch that is set to "Terminate" for the last device on the data line and set to "Through" for all other devices. Brightline DMX fixtures are self-terminating, and thus this switch is not provided.
4. Brightline fixtures, like the majority of DMX devices, use 5-pin, XLR-type plugs wired according to Table 1. Pins 4 & 5 are not used, and so, on Brightline fixtures, are not connected. Pin 1 (shield) should be connected to earth ground only at the control console.
5. Only cables intended for DMX operation should be used. Avoid DMX runs parallel to power cables, particularly those from dimmer racks.

Note: These guidelines will help the user configure most DMX networks. For more information, contact the manufacturer of the control console, or a DMX manual. A useful DMX guide is "Recommended Practice for DMX-512" by Adam Bennette, co-published by PLASA in the United Kingdom and USITT in North America.

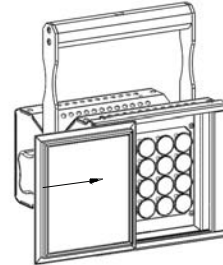
## Installing Accessories

1. Swing latch open (Fig.8).



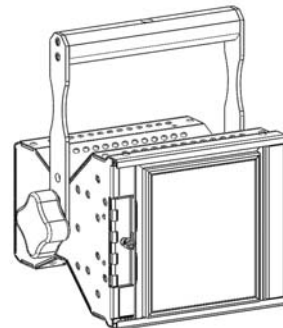
*Figure 8*

2. Insert accessory into the track and slide it forward until it stops (Fig. 9).



*Figure 9*

3. Swing latch closed and fasten in place (Fig. 10).



*Figure 10*

## Installing DMX Control Cables

1. Turn power "OFF" on all devices.

Note: If the fixture power is not turned "OFF" before connecting or disconnecting the DMX cable to the fixture, damage to the ballast may result.

2. Insert the male plug end (Figure 1) into the appropriate female receptacle on the lighting control console.
3. Line up the locking key on the female plug end (Figure 2) with the male receptacle on the first fixture labeled "DMX IN." Insert the plug into the receptacle until it locks into place.

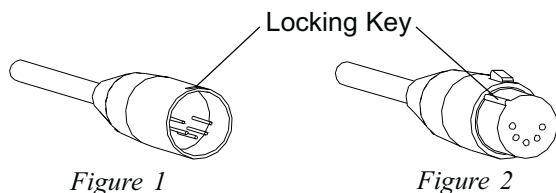


Figure 1

Figure 2

4. To add additional fixtures, line up the locking key on the male plug end of the jumper cable (Figure 1) with the female receptacle labeled "DMX THRU" on the first fixture. Insert the plug into the receptacle until it locks into place.
5. Route the jumper cable to the next fixture.
6. Line up the locking key on the female plug end of the jumper cable (Figure 2) with the male receptacle labeled "DMX IN" on the next fixture. Insert the plug into the receptacle until it locks into place.
7. Repeat Steps 4-6 for remaining fixtures.
8. Turn power "ON" on all devices.

## Disconnecting Cables

1. Turn power "OFF" on all devices.
2. To disconnect the female end of cable, press down the release button on the plug (Figure 3) and pull the plug out of the receptacle (Figure 4). Pressure should be applied to the plug, not the cables.

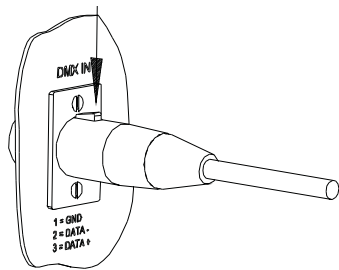


Figure 3

3. To disconnect the male end of cable, press in the release button on the female receptacle (Figure 5) and pull the plug out of the receptacle (Figure 6). Pressure should be applied to the plug, not the cables.

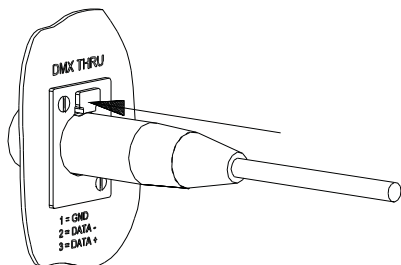


Figure 5



Figure 4



Figure 6



## Replacing Fuse

1. Pull fuse holder out of power inlet module.
2. Remove fuse holder and check for wear (Fig. 11). If fuse is blown, replace with a new fuse or the on-board spare (Fig. 12).
3. Return fuse holder to a closed position.

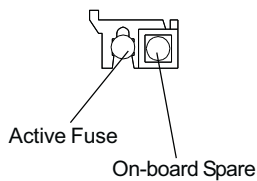


Figure 12

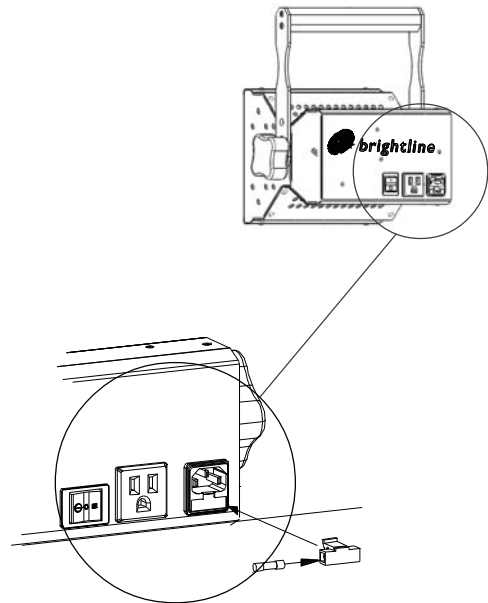


Figure 11

Note: Replace fuse only with 8-amp, time-delay, 250-volt, 5 x 20-mm fuses.

## Installing Power Cord

1. The IEC320 connector mates with the power inlet module (Fig. 13).

Note: The ON/OFF switch should always be in "OFF" position when installing or removing the power cord.

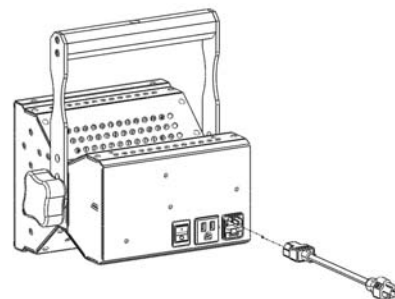


Figure 13

## Reading the LED Display

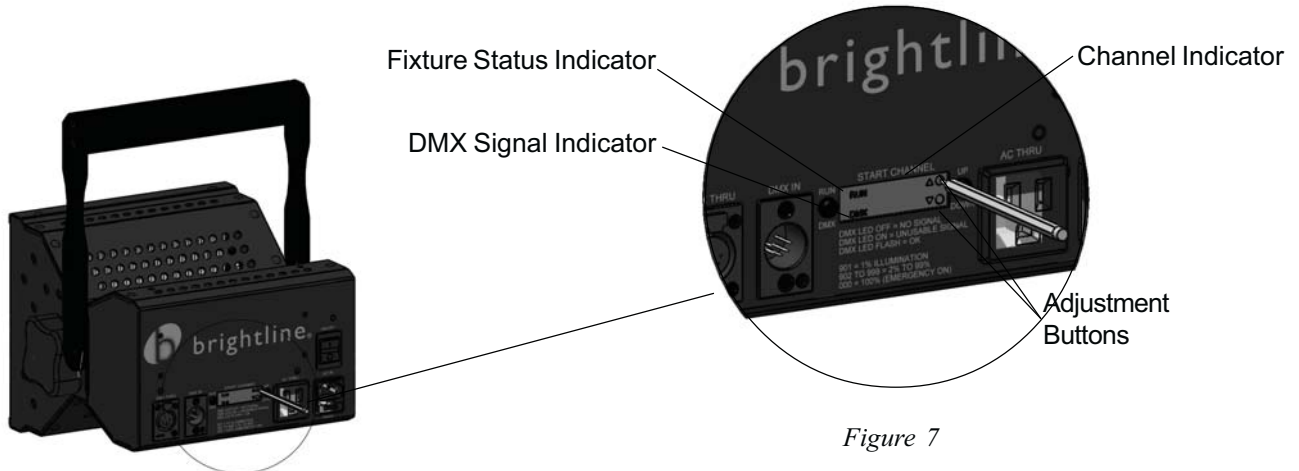


Figure 7

- The channel indicator is used to determine the setting of the fixture in the following modes:
  - Emergency On Mode:** Fixture is manually operating at 100%
  - Manual Dimming Mode:** Fixture is manually dimmed at LED display without the use of a lighting control console.
  - Console Dimming Mode:** Fixture is set to a DMX address for dimming by the use of a lighting control console. Use Table 2 to evaluate the readout of the channel indicator on the LED display (Figure 7).

Channel Indicator	Description
000	Emergency ON/Fixture at 100%
001-512	DMX Address for Lighting Control Console
513-899	Not Available
900-999	Manual Dimming (1% Increments, 900 = OFF, 925 = 25%, etc.)

Table 2

- The DMX signal indicator is used to determine whether the fixture is receiving a DMX signal while in the **Console Dimming Mode**. The lighting control console and all necessary DMX cabling must be installed. Use Table 3 to evaluate the readout of the DMX signal indicator on the LED display (Figure 7).

DMX Signal Indicator	DMX Signal Status
DMX LED Off	No Signal
DMX LED On	Unuseable Signal
DMX LED Flashing	Signal OK

Table 3

- The fixture status indicator is used to determine whether the changes being made to the settings at the LED display are completely processed. Use (Table 4) to evaluate the readout of the fixture status indicator on the LED display (Figure 7). Any changes made to the settings will require a few seconds to be processed.

Fixture Status Indicator	DMX Signal Present	Emergency On/Manual Dimming
Run LED Off	Processing Changes to Settings	Processing Changes to Settings
Run LED On	Settings completely processed	Not Available
Run LED Flashing	Not Available	Settings completely processed

Table 4

Note: Fixtures are supplied with onboard memory capabilities that retain the fixture's last setting.

## Troubleshooting Guide

Problem	Possible Cause	Solution
LED's are flashing or strobing.	Wrong voltage for driver installed.	Verify that the driver's voltage is correct.
Driver buzzes or hums.	Defective driver.	Identify location of buzz and replace driver if necessary.
Light fixture does not turn "on."	Defective or missing fuse.	Install fuse into power entry module.

## Maintenance

- Replace fuse only with 8-amp, time-delay, 250-volt, 5 x 20-mm fuses.
- Clean reflector with a dry, non-abrasive cloth.

## Setting the DMX Address

1. Program DMX addresses by gently pressing in the adjustment buttons with a pointed object such as a pen (Figure 8).

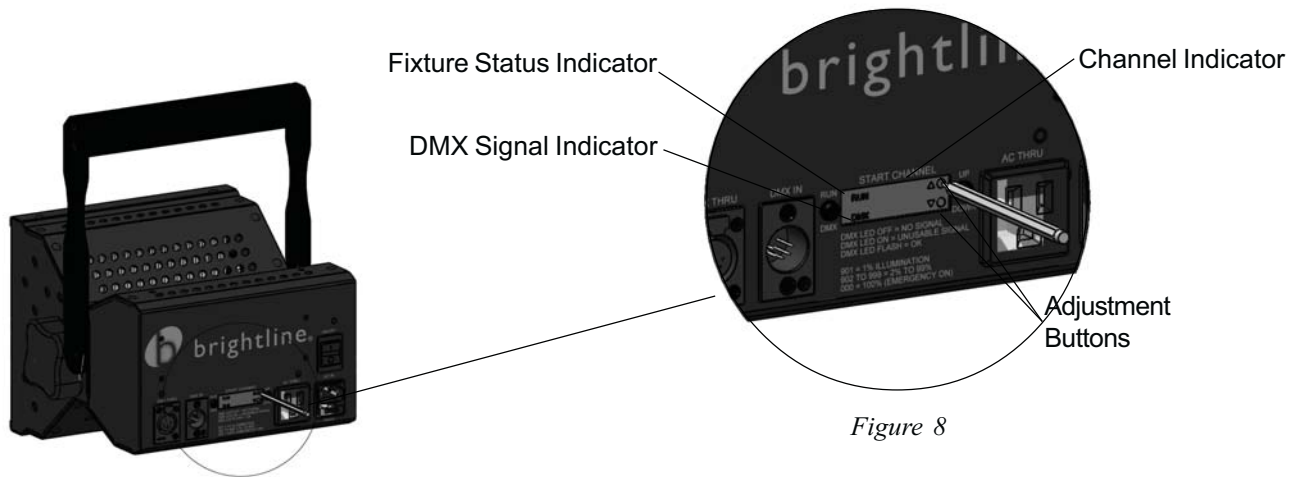


Figure 8

2. Use Channels 001 thru 512 to program the DMX addresses for the lighting control console. Program the DMX address on the fixture to match the desired channel at the lighting control console. (Example: 001 = channel 1, 002 = channel 2, etc.)
3. A fixture can be programmed for individual control by setting the DMX address exclusively to a single fixture. Multiple fixtures can be set to the same DMX address to control a group of fixtures on a single channel at the lighting control console.

## DMX Troubleshooting Guide

Problem	Possible Cause	Solution
No DMX signal on all fixtures in DMX system.	<ol style="list-style-type: none"> <li>1. Lighting control console power is turned "OFF."</li> <li>2. Cabling or connection problem between lighting control console and first fixture in DMX system.</li> </ol>	<ol style="list-style-type: none"> <li>1. Turn lighting control console power "ON."</li> <li>2. Check connections at first fixture and lighting control console or try another DMX cable.</li> </ol>
No DMX signal on a single fixture or group of fixtures in the DMX system.	Cabling or connection problem with jumper cable.	Check connection of jumper cable between fixture with no signal and previous fixture in DMX system or try another DMX jumper cable.
Fixture is turned "ON" and cannot be dimmed at lighting control console.	<ol style="list-style-type: none"> <li>1. Fixture is set to "Emergency ON" mode or "Manual Dimming" mode.</li> <li>2. Cabling or connection problem and fixture is remembering last setting.</li> </ol>	<ol style="list-style-type: none"> <li>1. Set DMX address at fixture to match desired channel at the lighting control console.</li> <li>2. Check cabling and connections in DMX system.</li> </ol>
Unusable DMX signal.	<ol style="list-style-type: none"> <li>1. Cabling problem.</li> <li>2. Start channel is set higher than number of channels transmitted by lighting control console.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the wiring in DMX cable plug ends. The DMX + and DMX - wires may be crossed.</li> <li>2. Set start channel lower to accommodate the number of channels transmitted by the lighting control console.</li> </ol>

## Specifications

**Housing:** 14-gauge (.060) formed, aluminum sheet-metal construction. See finish note.

**LED:** 16 CREE XP.E 3200°K or 5600°K 50,000-hour-rated lamp life.

**Optional Accessories:** Fixture screens, snoot, and gel frame.

**Power Cord:** 12' length, 3/18 gauge SOW cable 10 amp/250 V. IEC320 connector to grounded Edison (3) prong plug - NEMA 5-15P standard. (Optional connectors available upon request.) Black finish.

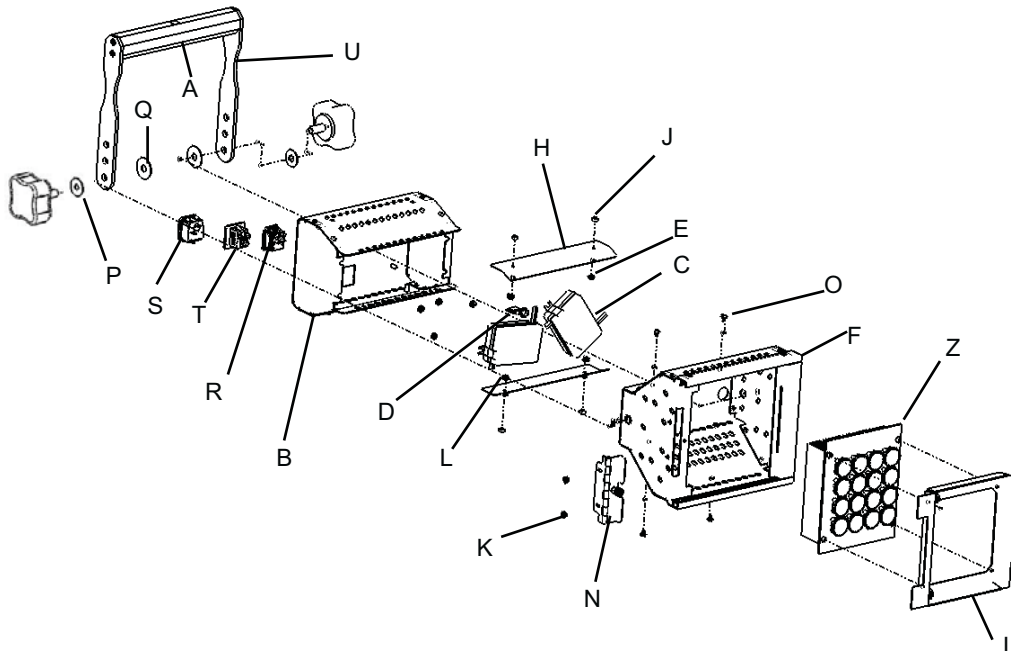
**Mounting:** 10-gauge (.125) extruded-aluminum yoke, welded construction (standard). 2" O.D. pipe clamp or TVMP adapter provided.

**Power Entry Module:** 8-amp fuse (with on-board spare) and IEC connector incorporated within housing.

**Finish:** Low glare, polyester powder coat.

**Switch:** Rocker ON/OFF power switch.

## Exploded Assembly



- A - Palm Handle
- B - Ballast Housing
- C - Driver
- D - Zip tie
- E - #6-32 Nut
- F - Housing
- H - Baffle
- I - Reflector
- J - Nylon Spacer
- K - #6-32 x .31 lg. Screw
- L - #6-32 Nut
- M - #4-40 X .38 lg. Screw
- N - Latch
- O - #6-32 screw
- P - Nylon Washer
- Q - Cork Washer
- R - Rocker Switch Power
- S - Power Inlet Module
- T - Receptacle
- U - Yoke
- V - Wire Guard Bracket

BL.16P



brightline®

## WARRANTY

Brightline guarantees all its products to be free from defects in materials and workmanship for a period of one (1) year from the date of shipment.

## PROCEDURES

If any product is found to be unsatisfactory under this warranty, the buyer must notify Brightline immediately. Once a course of action has been determined, if it is necessary to return the product to Brightline a Return Authorization (RA) will be issued. Ship the product directly to Brightline, 580 Mayer Street, Building #7, Bridgeville, PA 15017. The RA number should be marked on the shipping carton. The unit will be replaced or put into proper operating condition, free of all charges. The correction of any defects through repair or replacement by Brightline shall constitute fulfillment of all obligations and liability of Brightline to the buyer under this warranty and the contract of sale.

## DISCLAIMERS

Brightline is not responsible for damage to its products caused by improper installation, maintenance, or use; by improper electrical hookups; or by unauthorized repairs.

Failure to notify Brightline of unsatisfactory operation or any improper or unauthorized installation, maintenance, use, repairs, or adjustments shall terminate the warranty and Brightline shall have no further responsibility under the warranty. Brightline shall not be liable for special or consequential damages in any claim, action, suit, or proceeding arising under this warranty or contract of sale, nor shall Brightline be liable for claims for labor, loss of profits or goodwill, repairs, or other expenses incidental to replacement. Brightline makes no other warranty of any kind whatsoever, expressed or implied, and all implied warranties of merchantability and fitness for a particular purpose that exceed the obligation specifically described in this warranty are hereby disclaimed by Brightline and excluded from this agreement. All shipments, unless otherwise noted, are F.O.B. factory. The customer is advised to inspect for shipping damage, apparent and/or hidden. If detected, notify the transportation company and file your claim.

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## Notes