



SeriesTWO  
RGB Fluorescent Fixtures

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Installation and  
Instruction Manual

The Brightline Mini-Cyc Series models are controllable, fluorescent color changing fixtures designed to be used for perimeter lighting, light walls, cove lighting or behind semitransparent materials. These fixtures combine high frequency electronics with state of the art optical system to produce a soft, full color spectrum, flicker free light source.

## Safety

- Do not service the fixtures until they have been completely de-energized.
- These fixtures are listed for Indoor Use Only.
- To prevent fire or shock hazard, do not expose the units to water or moisture. Do not operate in an environment where water will condense on fixture.
- Installation of the fixtures should be performed in accordance with Local and National Codes.
- All fixtures must be properly grounded, in compliance with Code.
- Do not operate fixture without lamp installed or ballast may be damaged.
- Never work with your hands near exposed socket that is energized.
- Never remove or insert lamps into the fixture while it is energized.
- Service on the unit should only be performed by a qualified technician.
- In case of lamp failure:
  1. Disconnect power to fixture.
  2. Wait 30 seconds for ballast to reset.
  3. Install new lamp.
  4. Reconnect fixture power.

## RGB Fixture Installation Guidelines

1. Master Fixtures are connected to a DMX signal source, such as a Console, and receive their intensity information from the DMX signal.
2. Remote fixtures get their intensity information from a Master fixture. Each Master fixture can control up to five Remote fixtures.
3. A Start fixture is used to begin each fixture run. This fixture is also used as an Inline fixture where new line voltage feed is required. This unit is provided with knockouts for Power input. An "Inline" fixture receives its power from an adjacent Start fixture, and may receive its intensity information from it as well.
4. Check Local and National electrical codes before wiring AC power.
5. The fixture on the end of each run should have a termination endcap installed to block access to the power and control receptacles for safety.
6. Each fixture is provided with two splice plates to attach it to the adjacent fixture. Fixtures mounted in a row should have the splice plates installed to mechanically fasten fixtures end-to-end and increase the mechanical rigidity of the fixture run.

## Installation

1. Prepare the AC power and DMX control wiring to the Start Master fixture.
2. Install the Start Master fixture as described in the **Installing Start Master** section.
3. You can install a Remote fixture immediately after the Start Master fixture as described in the **Installing Remote Fixture** section.
4. You can install an Inline Master fixture after a Remote fixture as described in the **Installing Inline Master** section.
5. Install the remainder of the Mini-Cyc fixtures per appropriate system configuration and guidelines.
6. Install the termination endcap on the last fixture of the run as described in the **Installing Termination Endcap** section.
7. Connect the fixtures to a DMX control device and set the DMX addresses as described in the **Setting the DMX Address** section.
8. If application requires colored sleeves, install them as described in the **Installing Color Sleeves** section.
9. Install the lamps as described in the **Installing Lamps** section.
10. If application requires prismatic lens, install the prismatic lens as described in the **Installing Prismatic Lens** section.

## Installing Start Master Fixture

1. Remove the cover by loosening the # 6-32 Phillips head screws.
2. Mount Start fixture of run by using either of the following methods: use 1/4 $\emptyset$  hardware through mounting holes in fixture housing to provide 42" mounting centers; or use the external mounting brackets for 32" mounting centers.
3. Remove a knockout from the housing by using a screwdriver or a pair of pliers. Start Master fixtures are provided with multiple knockouts located at the endcap, sides and bottom of fixture. When installing a Start Master fixture Inline for new line voltage run, the side or bottom knockouts must be used.
4. Route the AC power cabling through a strain relief (not provided) and through the knockout hole in the housing.
5. Wire AC power cabling. Each Start Master fixture contains a hot, neutral and common ground. Use wire nuts for splicing wires to the AC power cabling.
6. Connect the DMX control input plug on the Start Master fixture to the DMX signal source. An Inline Master fixture may receive its DMX signal from an adjacent Start fixture.
7. Reinstall the cover by tightening the # 6-32 Phillips head screws.

## Installing Remote Fixture

1. If mounting the Remote fixture through the holes of the fixture housing, remove the reflective cover by loosening the # 6-32 Phillips head screws.
2. Insert the AC Power input plug of the Remote fixture into the AC Power output receptacle of the previous Master fixture. Remote fixtures receive their intensity information from a Master fixture, so normally the Remote unit will be adjacent to a Master fixture.
3. Insert the DSI/DALI (7-pin) control input plug of the Remote fixture into the DALI control output receptacle of the previous Master fixture.
4. Insert the AC power input plug of the Remote fixture into the power output receptacle of the previous Master fixture.
5. Align the Remote fixture end-to-end with the previous Master fixture. The AC Power and DALI control input wires will slide into the Remote fixture.
6. Mount the Remote fixture by using either of the following methods: use 1/4" hardware through mounting holes of the fixture housing to provide 42" mounting centers; or use the external mounting brackets to provide 32" mounting centers
7. Install splice plates with supplied #6-32 nuts between the Remote fixture and the previous Master fixture.
8. If removed, reinstall the cover by tightening the # 6-32 Phillips head screws.

## Installing Inline Master Fixture

1. If mounting the Inline Master fixture through the holes of the fixture housing, remove the reflective cover by loosening the # 6-32 Phillips head screws.
2. Insert the AC Power input plug of the Inline Master fixture into the AC Power output receptacle of the previous Remote fixture. Each Inline Master fixture must have a Start Master or Inline Remote fixture immediately adjacent to it.
3. Connect the DMX control input plug of the Inline Master fixture to the DMX control source, which may be an adjacent Start Master fixture.
4. Align the Inline Master fixture end-to-end with the previous fixture. The AC Power and DMX control input wires will slide into the Inline Master fixture
5. Mount the Inline Master fixture by using either of the following methods: use 1/4" hardware through mounting holes of the fixture housing to provide 42" mounting centers; or use the external mounting brackets to provide 32" mounting centers
6. Install splice plates with supplied #6-32 nuts between the Inline Master fixture and the previous Remote fixture.
7. Reinstall the ballast cover by tightening the # 6-32 Phillips head screws.

## Setting the DMX Address

DMX Fixtures receive their intensity information from a DMX signal, provided by a control console or other DMX device. The fixture must be on when performing this procedure.

1. Using a paperclip or similar device, the DMX address can be set by pressing the Up or Down recessed adjustment buttons on the left side of the Channel Indicator.
2. The fixture responds to three or four consecutive DMX channels as shown on the LED window. A three-channel fixture is set with red, then green, then blue; a four-channel fixture adds a white channel to the above. If for example the Channel Indicator is set to 101, the red lamps are controlled by DMX channel 101, the blue lamps 102, and the green lamps 103. The fourth channel if present would be 104.
3. A steady-on LED indicator in the top-left corner of the Indicator indicates that the unit is working properly. If the LED in the bottom-left corner is flashing, it's receiving a useable DMX signal. If the LED is off there's no DMX signal present; or if it's steady-on, there's a signal present but it's not useable for some reason.
4. To test the lamps, you can set the Channel Indicator to a number between 900 and 999. All the lamps will light to the intensity of the last two digits; setting it to 950 for example will operate all the lamps at 50% intensity. When you're done, reset the Indicator to the correct DMX channel number.

## Installing the Endcap

For safety, the last fixture on a run should have an Endcap installed.

1. Slide the termination endcap onto last fixture of the run.
2. Tighten the #6-32 nuts to fasten to the termination endcap to the last fixture.

## Installing Color Sleeves

1. Red, Green, and Blue colored sleeves are provided for more saturated color. Match each colored sleeve to the correct colored lamp. The lamp's color will be marked on one end near the socket.
2. Slide the lamp into the colored sleeve.

Note: Colored sleeves must be installed prior to installing the lamps into fixture.

## Installing the Lamps

Make sure fixture power is Off before inserting or removing lamps.

1. Identify the color of each lamp by looking at the marking at the end of the lamp.
2. Determine the correct lamp position of each lamp. Lamp positions are identified by color at the socket areas of the Mini-Cyc fixtures.

R = Primary Red  
G = Primary Green  
B = Primary Blue

3. Insert the pins of the lamp into the appropriate sockets of the fixture.
4. Holding the lamp at each end, rotate approximately 90° until the lamp is locked into position in both sockets.
5. Repeat steps #3 and #4 for the remaining lamps.

Note: New fluorescent lamps must be burned in at full intensity for 100 hours to obtain the full 20,000 hour life time.

## Installing Prismatic Lens

1. Install the lens mounting brackets with supplied #6-32 Phillips head screws to the sides of the housing. If prismatic lens was specified on order, the lens mounting brackets were installed at the factory.
2. Slide the tabs on one of the lens mounting brackets into the slots on one side of the prismatic lens.
3. Push the opposite side of prismatic lens inward so that the lens clears the tabs of the lens mounting bracket.
4. With the side of prismatic lens pushed inward, push the prismatic lens down so that the tabs align with the slots on the side of the prismatic lens.
5. Release pressure on the prismatic lens side and the tabs will slide into the slots of the prismatic lens locking it into place.

## Specifications

**Housing:** 20 gauge (.040) formed aluminum sheet metal construction with 18 gauge (.047) cold-rolled steel endcaps. See finish note.

### **Ballast:**

(3) or (4) digital high-frequency electronic ballast for 28 watt lamps. 120 or 240VAC, 60 Hz. power factor  $\Rightarrow$ .97, Class "A" sound rating, THD <10%. The ballast will allow dimming down to 1% intensity without flashing or flickering. There may be a mix of one- and two-lamp ballasts.

### **Lamps:**

(3) or (4) 28 watt colored T5 fluorescent lamps, available in red, green, and blue. Optimized for RGB color mixing applications. Red, green, and blue colored sleeves are provided for more saturated color.

**Lamp Socket:** G5 2-pin twist and lock molded white high-strength thermoplastic. Push wire connections for 18 gauge leads.

**Splice Plates:** (2) 18 gauge (.047) cold-rolled steel splice plates provided to mechanically fasten fixtures end-to-end and increase the mechanical rigidity of the fixture run.

**Termination Endcap:** 22 gauge (.029) cold-rolled steel termination endcap for last fixture on a run.

**Finish:** Low glare, polyester powder coat RAL9010 standard; custom finish colors available.

**Power and Control Wiring:** Modular input/ and or output connectors for DALI or DMX signal and the AC power supply

**Optional Accessories:**

**Lens:** Removable acrylic prismatic lens. Mounting brackets for lens to be attached to fixture.

**Mounting Brackets:** Four right angle brackets are installed that provide for 32” mounting centers. Brackets that provide 24” centers are available; they must be specified and installed at factory.

**Labels:** UL, CE and cUL approved.