Thank you for choosing an ECO Spot™ Gobo projector. Please read this manual before installing or operating this fixture, follow the safety precautions listed below and observe all warnings.

**WARNING!** - To prevent damage to the LED, always connect the driver to the projector FIRST before powering up the driver.

### Package Contents
- Projector with Projection Lens
- External LED Driver
- Test Gobo mounted
- Thread ring with silicone seal for the projection lens

### Safety Information
- Place your fixture at a suitable place with good air flow.
- Keep flammable materials away from the fixture.
- Minimum distance to flammable material = 1 ft (0.3m).
- Provide a minimum clearance of 4 in (10cm) around air vents.
- Do not look directly into the lamp; it can result in eye damage.
- Always unplug the unit from the power mains before any service is done.
- Light fixtures should be installed and maintained only by qualified personnel with experience in lighting equipment and general electrical experience.

### Electrical Safety
- Disconnect the fixture from AC power before handling it.
- Follow all local building and electrical codes and apply both, overload and ground-fault protection.
- Do not use the fixture if the power cable or power plug is in any way damaged, defective or wet, or if they show signs of overheating.
- The fixtures have power plugs for testing and for indoor use but exterior installations usually require hard-wired connections. Follow all related codes.
Outdoor Use

The projector and external driver are designed for outdoor use. The rear, perforated cooling part of the projector including the fan is rated for water exposure. To extend the projector life, an external hood can be placed above the projector but this measure is not mandatory.

Handling Instructions

- Before the initial start-up, please unpack and carefully check for damage caused during transportation.
- When suspending the fixture above ground level, verify that the structure can hold at least 10 times the weight of all installed devices.
- Verify that all external covers and rigging hardware are securely fastened and use an approved means of secondary attachment such as a safety cable.

Warranty

One Year from Date of Purchase. Keep your receipt for reference and contact your dealer in case of warranty issues.

Projection Lenses

The projector accommodates interchangeable projection lenses to allow optimizing the projection size and resulting brightness at varying distances. The more narrow the lens, the smaller and brighter the image will be at a given distance.

Focusing

- Power up the projector.
- If the fixture is equipped with a gobo rotator, turn it on and then off again once the gobo projects in the desired position.
- Loosen the outer ring around the lens that acts as a water seal.
- Focus the projection by twisting the lens in and out until the image is well focused. When used for the first time, the lens will often need to be twisted outwards many rotations to reach the focusing point. When in doubt, keep going.
- Re-tighten the outer ring with the seal to ensure the lens won’t leak water.

Gobo Rotator

If the fixture is equipped with a gobo rotator, it can be turned on/off with the silver push-button on the front plate underneath the lens. There are no controls for rotating speed or direction. Even when not used, the gobo rotator comes handy for straightening the gobo image after a gobo was installed.
Multi-functional Yoke

The yoke can slide over the fixture body to accommodate a wide range of pointing directions. It can serve as stand or can be mounted to a wall, ceiling or truss.

- Pointing position UP: With the long-hole pointing towards the back of the projector, the main pointing position is UP.
- Pointing position DOWN: Remove the yoke screws and flip the projector so the long-hole points to the front plate.

Gobo Placement

The Projector uses M-Size gobos, (see Specifications for Gobo Dimensions).

- If the projector is on, turn it off.
- Even though this is a LED projector, the gobo gets hot, please wait a few minutes for the gobo to cool down if the projector was on.
- Unscrew the thumbscrews to remove the front cover with the projection lens. Keep the rubber seals and re-use them with the thumb screws to prevent leakage.
- Push the two pins of the gobo retaining ring together and pull out the retaining ring. Carefully remove the old gobo and replace it with the new gobo.
- If you have a glass gobo, place the more reflective side towards the light bulb.
- Replace the retaining ring and make sure it evenly pushes the gobo all the way back.
- Replace the front cover and rubber seals and tighten the thumb screws well.
- Adjust the focus by twisting the projection lens in or out.
- Re-tighten the lens retaining ring towards the front plate so the silicone ring makes a water tight seal.
**Power Supply**

90-265V, 50/60Hz

**B90E:** 110W, **B150E:** 180W, **B300E:** 360W

**Ambient Operating Temperature**

-13 to 104°F (-25 to 40°C)

**Dimensions / Weight**

**Fixture Body:** 7.5in x 5.5in x 14.5in (190mm x 140mm x 370mm)

**Total Length:** 18in (460mm) with 25deg. lens, 20in (510mm) with 15 deg. lens

**Yoke Base:** 6.4in x 7.8in (163 x 198mm)

**Yoke Height:** 7.5in (190mm) (from base to center)

**Total Height:** 10in (254mm) (from base to top)

**Weight:** **B90E:** 12lbs (5.4kg), **B150E:** 13lbs (6kg), **B300E:** 17lbs (7.7kg)

**Gobo Dimensions**

Metal or Glass Gobos and Dichroic filters

**Standard Gobo Size:** M-Size

**Outer Diameter (OD):** 66mm

**Image Diameter (ID):** 48mm

**Max Thickness:** 4mm

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**LED Lamp**

**Rated Bulb life:** 40,000h

**Color Temperature:** 6,000k, +/-500k

**Rated luminous flux:**

**B90E:** 7,500lm, **B150E:** 12,000lm, **B300E:** 20.000

**Effective luminous flux:**

**B90E:** 6,200lm, **B150E:** 8,900lm, **B300E:** 11,500lm

**CRI:** 75

**Lens Options**

The projector can be equipped with standard ECO Spot projection lenses.

A larger focal length (f) makes a smaller projection angle and therefore a smaller but brighter image. Currently these lenses are available:

- Medium-Narrow f=115mm 25°
- Medium f=140mm 20°
- Semi-Narrow f=140mm 15°

**IP-Ratings**

**LED Driver:** IP65, **Fixture:** IP55