ECO Spot™ C40PCE User Manual

Thank you for choosing an ECO Spot™ Gobo projector.
This manual covers the ECO Spot PCE Series models.

Please read this manual before installing or operating the fixture, follow the safety precautions listed below and observe all warnings.

Package Contents

- ✓ Projector with power cord
- ✓ Test Gobo
- ✓ Spare gobo retaining ring
- ✓ Mounting hardware for yoke

Safety Information

- Please unpack and carefully check for damage caused during transportation.
- Light fixtures should be installed and maintained only by qualified personnel with experience in lighting equipment and general electrical experience.
- 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.
- 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.
- Use only genuine spare parts for part replacement.
- 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.

Electrical Safety

- Disconnect the fixture from AC power before handling it.
- Always ground (earth) the fixture electrically.
- Use only a power source that complies with local building and electrical codes and has both, overload and ground-fault protection.
- Do not use the fixture if the power cable or power plug is in any way damaged or defective, or if they show signs of overheating.

Warranty

Two years 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 narrower the lens, the smaller and brighter the image will be at a given distance.

When replacing lenses, ensure to also move the lock ring and silicone seal O-ring to the new lens.

Focusing

- Power up the projector.
- 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 done secure the lens by tightening the lockring. If used in wet environments, make sure the silicone O-ring seal between the lockring is not missing.

Yoke

- The projector comes with a yoke that may not have been previously attached. Attach it to the projector by using the provided mounting screws

Gobo Placement (see *Specifications* for Gobo Dimensions)

The projector is equipped with an integrated gobo holder, which is accessible after removing the lens tube (not the lens).

- Unscrew the lens tube to expose the gobo holder attached to the fixture.
- Squeeze the two pins of the gobo retaining ring together and pull it out of the holder. Carefully remove the old gobo and replace it with the new one.
- 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.
- Before replacing the lens tube, turn on the projector and hold it in front of the gobo to check the position of the projected image. Rotate the gobo inside the holder to fine-adjust its position.
- Replace the lens tube by twisting it all the way in and compress the silicone seal.

- Depending on the gobo thickness, you may have to re-adjust the focus. Refer to "Focusing".

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Model / Gobo Size	Color Temp.	Lens	Beam Mult.	Effective In	CD	Value	PROJECTION DISTANCE IN FEET (ft) 3	6	9	12	15	20	24	30	36	42	64	88	112	136	200	300
ES-C40 ES-C40E ES-C40+	6000k +/- 500k	140mm (10°)	0.18	1648	64,800	Size (ft)			1.6	2.2	2.7	3.6	4.3	5.4	6.5	7.6	11.5	15.8	20.2	24.5	36.0	
						Brightn (fc)			800	450	288	162	113	72	50	37	18	8	5	4	2	
		100mm (15°)	0.26	2254	42,480	Size (ft)		1.6	2.3	3.1	3.9	5.2	6.2	7.8	9.4	11	17	23	29			
						Brightn (fc)		1180	524	295	189	106	74	47	33	24	10	5	3			
E-Size ID=25mm		70mm (20°)	0.35	2354	24,480	Size (ft)	1.1	2.1	3.2	4.2	5.3	7.0	8.4	10.5	12.6	14.7	22.4	30.8				
						Brightn (fc)	1720	680	302	170	109	61	43	27	19	14	4	3				
		80mm (25°)	0.45	3090	19,440	Size (ft)	1.4	2.7	4.1	5.4	6.8	9.0	11	14	16	19	29	40				
						Brightn (fc)	2160	540	240	135	86	49	34	22	15	11	5	3				
		28mm² (45°)	0.88	3501	5,760	Size (ft)	2.6	5.3	7.9	10.6	13.2	17.6	21.1	26.4	31.7	37.0	MAX ID For this Lens is 23MM					
						Brightn (fc)	640	160	71	40	26	16	10	6	4	3						

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How to Read the Illumination Values

Foot Candles [ft]	For a quick overview, the illumination values in the tables are color coded. There are many factors that determine the visibility of a projection, such as ambient light, color and reflectiveness of the projection surface, competing light, gobo colors, projector color temperature, and other factors. Therefore our recommendations should only be used as guidelines and we cannot guarantee a successful application. If you are unsure, please call us to discuss.
Projection Size Calculation	For the resulting Projection Size at any given Distance, Multiply the number in the "Beam Mult." column with your Projection Distance. For the Distance needed to achieve a desired Projection Size, Divide the Projection size by the Beam Multiplier. **Projection Size = Distance x Beam Mult.** **Distance = Projection Size / Beam Mult.**
300+	Extreme brightness for extremely bright environments, i.e. bright areas, additionally flooded with daylight, such as Lobby-, Retail-, Trade Show-, Environment. Outdoors (shady, no direct sunlight).
150-300	Very high brightness for very bright environments, such as light flooded Office-, Lobby-, Retail-, Trade Show-, Environment. Color gobos project in vibrant colors. Outdoors well visible at night with vibrant colors.
45-150	The most common brightness bracket for bright environments, such as Office, Lobby, Retail, Tradeshow. Outdoors extremely bright at night. Color gobos project well.
15-45	Sufficient brightness for environments, such as Bars, Clubs, and intimate Restaurants, Theaters, and dimmed Conference rooms. Outdoors well visible at night. Color gobos should preferably be used with lighter colors and the projection surface should be light and somewhat reflective.
15-2	Only advisable for dark environments and subtle projection of light colored artwork, preferably on light, reflective projection surface. If all conditions are met, the max. listed image distance/size can be doubled in most cases.

Metric Conversions: For Meters multiply feet by .3048. For Lux multiply footcandles by 10.76