



**Panamorph**<sup>®</sup>  
We bring cinema home

# CDR-E1

Direct Attach Cinema Format Conversion Lens

## INSTALLATION GUIDE

(Phillips #2 screwdriver required)

For use only with the **Epson LS12000** projector

**CLEANING.** Small amounts of dust and wipe marks are very noticeable on lens surfaces with a high brightness projection beam but typically will not impact the image as much as damage from excessive cleaning in pursuit of a "perfect" optical surface. Occasionally blowing off the lens surfaces with clean air is the best way to maintain long term performance. If there is any excessive residue or build-up then it is recommended that you clean the optics with professional lens cleaning supplies such as from a camera store while the lens is in front of the lit beam of the projector. This will allow you to quickly see if the cleaning process is causing any damage.

**LIMITED WARRANTY.** Panamorph, Inc. warrants this product against any change in performance or functionality for a period of twenty-four months from our ship date. During this period, a unit may be repaired or replaced, at the discretion of Panamorph, Inc., by returning it in its original packaging with a copy of your receipt. This warranty does not cover damage resultant from lack of prudent care, accident or misuse (including use with other products in ways not intended); any cosmetic damage not reported within 15 days of purchase; or any performance change caused by the environment in which it is used. All damages are limited to the cost of the product. This warranty is not transferable.

### IMPORTANT THEATER GUIDANCE

1. Projection screen should be **flat**, in the **2.4:1** aspect ratio and with a **minimum 2.0" screen border**.
2. Projector lens center should be **between -2 and +6 inches from the top edge of the screen surface** (about +3 inches is ideal) and **horizontally centered** on the screen +/- 3 inches.
3. **Throw ratio** (throw distance divided by screen surface width) should be **at least 1.4:1**.
4. **Edge curvature / distortion** of the image is most noticeable at low throw ratios so longer throw distances are encouraged. The screen border should be used to mask edge curvature of about **1.5" at a 1.4:1** throw ratio; about **1" at 1.6:1**; with **progressively less edge distortion visible as throw ratio increases**. If desired, use the **Epson LS12000 "Point Correction"** for final distortion adjustments and then **"Panel Alignment"** only after finalizing lens setup.

# CDR-E1 Installation Steps

**1 INSTALL THE PROPER LENS RETAINER.** Remove the two front Phillips assembly screws and remove the rear retainer. Use this retainer for a ceiling-mounted projector. Use the other retainer provided for a high shelf-mounted projector (see illustration on reverse). Manually open the projector lens door. The lens will prevent door closure but this will not harm the projector. Squeeze the retainer and work it into the projector opening to nest into the inside rim of the projector housing with **prongs toward the ceiling**.



**2 PREPARE THE PROJECTOR.** Make sure the projector lens is horizontally centered in its opening (ie little or no horizontal lens shift). Adjust the projector roll, tilt and/or yaw so the projector test pattern lines are square to the screen edges and the test pattern is centered on the screen. Then **show a 2.4:1 movie**. Use the Epson “Aspect” button on the remote to select “Anamorphic Wide” and make sure the projector lens is clean and as dust free as possible.

**3 INSTALL THE CDR LENS.** After removing the rear CDR lens cover, install the CDR lens/mount assembly over the retainer prongs. The lens may have some rotational play so rotate as necessary until a stop is felt at which point the lens is vertically aligned with the projector. Insert and tighten the two assembly screws to secure (**do not over tighten**). Remove the front protective film.

**4 ADJUST THE LENS TILT AND PROJECTOR SHIFT.** Adjust the projector lens zoom to fill the width of the screen with the 2.4:1 movie. Tilt the CDR lens and adjust the projector vertical lens shift to make sure the beam is getting through the CDR lens to fill the screen. There is only a slight variation in vertical image height with this adjustment but experimentation may lead to the best fit and geometry. Lock the CDR lens tilt by tightening the single Phillips tilt lock screw (**do not over tighten**). As desired you may want to apply additional “Point Correction” and/or “Panel Alignment” at this time (see Epson manual).

**5 DECIDE HOW TO WATCH 16:9 CONTENT** (including menus). Use the Epson “Aspect” button on the remote to select “Horiz. Squeeze” to watch 16:9 content in the center of the screen or select “Auto” to stretch 16:9 content to fill the entire screen.