ECO Lines™ F80/F150 Focus Guide

This guide is a supplement to the regular projector manual if the projector is a third generation ECO Lines™ projector. Both new F80 and F150 models accommodate adjustment of the focal length of the lens assembly to accommodate various installation heights.

ECO Lines F150

ECO Lines F80

Description

The F-series of ECO Lines™ virtual line projectors feature a newly designed lens housing, which incorporates a telescopic barrel with screw threads to allow for adjustment of the focus distance of the projector.

Adjustable projectors will be focused to a standard projection distance of 24' during production. These projectors are designed to be easily adjusted during installation, as well as during field maintenance. This guide will explain the steps for both adjusting focus as well as interchanging lens configurations.

Focal length adjustment

The lens barrel assembly is secured in place with a collar and gasket, with thumbscrews facing outwards. Adjusting the focus distance of the projector requires no tools.

To begin adjusting the lens assembly:

1. Loosen and set aside the six (6) front-facing thumbscrews
2. Slide off the front collar
3. Remove the orange gasket ring

With the barrel released, the assembly can be manually adjusted by hand. Turing the barrel counterclockwise, facing the front of the lens, will move the barrel outwards, eventually releasing it from the threads.

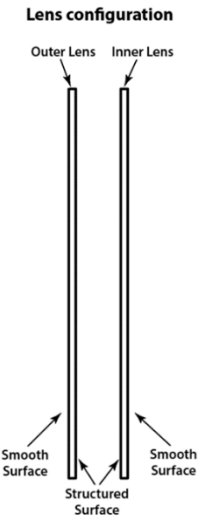
To adjust projection distance of the lens assembly:

- Increase distance: turn the lens barrel clockwise
- Decrease distance: turn the barrel counterclockwise

The projected line will be in focus every half rotation. It is expected that focal length will increase or decrease 4' with every half rotation. For example, a projection distance of 30' will require a full clockwise rotation (two half rotations) from the production configuration.

Interchanging lens

Do not touch the lens surface. If it needs to be cleaned, use compressed air, or wipe it with a soft cloth. Do not use cleaning chemicals.



The lens assembly, composed of an inner and outer lens, is secured in the lens barrel with a threaded collar. The lenses have a smooth surface on one side and a structured surface on the other.

- The structured surfaces face each other
- The smooth surfaces face outward

The outer lens is distinguished with a sticker, denoting the optical angle of the lens. The sticker should be forward facing and readable in a proper installation.

The stock configuration of the F-series projectors includes a 90-degree optical angle outer lens. To change the length of the virtual line, alternative outer lens can be interchanged by releasing the lens collar.

There are two notches in the threaded collar to assist in disassembly. While taking precautions to protect the smooth lens surface, such as with a microfiber cloth, a metal tool, such as a flathead screwdriver, can be placed in one or both notches to loosen the production lens assembly. If loosening the collar is difficult while the barrel assembly is installed in the projector, the barrel may be removed to be worked on separately.

After the first adjustment, the collar can remain hand tightened if the two lens mediums do not freely rotate in the barrel.