Radiance Tech Tip 7
Fixed anamorphic lens

Introduction

The Radiance can be used for any system that has a fixed anamorphic lens. A projector with a fixed anamorphic lens will project an image that fills a 2.37 (typical), or other screen aspect ratio. When using an anamorphic lens to fill a 2.37 screen the lens provides significantly more light output for anamorphic sources verses no lens in place.

A Horizontal Expansion lens horizontally stretches the projector raster to create a 2.37 aspect ratio image on the screen. A Vertical Compression lens vertically compresses a projector raster to create a 2.37 aspect ratio image on the screen. Both types of anamorphic lenses essentially turn the projector into a fixed 2.37 aspect ratio projector. The setup for both types of anamorphic lenses is the same and is described below.
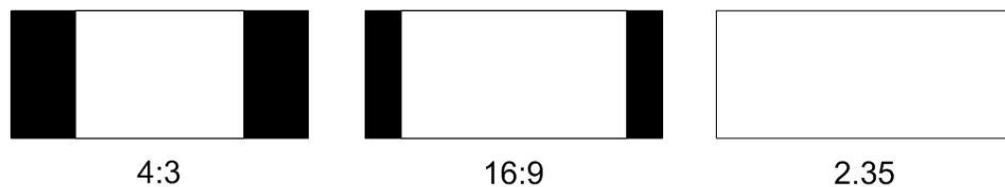

Figure 1: Fixed anamorphic lens aspect ratio examples

The Procedure

Use the following procedure to configure the Radiance for a system that includes a 16:9 (or 17:9, etc.) projector with a fixed anamorphic lens and a 2.37 aspect ratio screen.

1. Set the output aspect ratio by pressing:
   MENU, Output, Styles, [Style], Aspect Ratio, OK, Single output aspect, OK, 237, OK
   Note "Style 0" is used for all sources at factory defaults, but this can be changed.

2. Set the projector to its default 16:9 mode.

3. Set all the video sources to widescreen 16:9 output.

4. Press the appropriate input aspect ratio button on the Lumagen remote that matches the aspect of the video source. Note that for a 2.40 source press the two button sequence of 2.35 and then ALT to select input aspect as 2.40.

5. To horizontally stretch a 16:9 image to fill the 2.37 screen, press "16:9" and then "NLS."

6. Note: To avoid the small black side bars for a 2.35 source, and top/bottom bars for a 2.40 source, you can choose to optically zoom a 2.35 source until it fills the width of the screen plus some overscan, and then use the Radiance output "Mask" to mask the top and bottom to have the desired overscan:
   MENU, Output, Styles, [Style], Mask/Shrink, Mask
   Then check a 2.40 source to make sure it fills the height of the screen. You can adjust the optical zoom and the left/right and top/bottom masking until both a 2.35 and a 2.40 source fill the screen with an appropriate amount of overscan.

7. Radiance 2XXX and Radiance Pro processors have a "Soft Edge" feature that rolls off intensity at the edge of the image. This eliminates the hard edge that is sometimes visible on the screen frame. Increase the overscan some and then select:
   MENU, Output, Styles, [Style], Soft Edge, On

8. Make sure to do a Save (MENU, up-arrow, OK, OK, OK) after any changes or they will be lost going to Stand-by, or if wall-power is removed.