

Radiance Tech Tip 18

Widescreen with Dual Projection Screens

Introduction

The Radiance can be used to simplify aspect ratio control for a system, which uses a 16:9 projector to display an image on dual projection screens. This installation has a fixed 16:9 screen on the wall and a 2.35 screen that is dropped in front of the fixed screen, to watch 2.35 movies. Because both screens are the same width and the 2.35 screen is closer to the projector, the projected image is the correct width for the 2.35 screen, but the image is too wide and spills over the edges of the 16:9 screen.

The projector is left in its default 16:9 mode and at a fixed zoom setting. The user memory buttons on the Lumagen remote are used to control the size of the projected image. Press user memory button "MemA" to shrink the image to fit the 16:9 screen. Press user memory button "MemB" to display a full width image on the 2.35 screen.

Using User Memory Buttons to Control Image Size

The zoom setting on a 16:9 projector is adjusted so that the image fills the width of the 2.35 screen. The projected image spills over the top, bottom and sides of the 16:9 screen. The projector zoom is fixed at this setting. If you are using a 1080p projector, 1080p 2.35 letterboxed video sources are not scaled. i.e. When you play a Bluray 2.35 movie, the Radiance scaler is turned off and the image is displayed at a 1:1 ratio. The 4:3 and 16:9 images are scaled down to fit inside the height and width and height of the 16:9 screen.

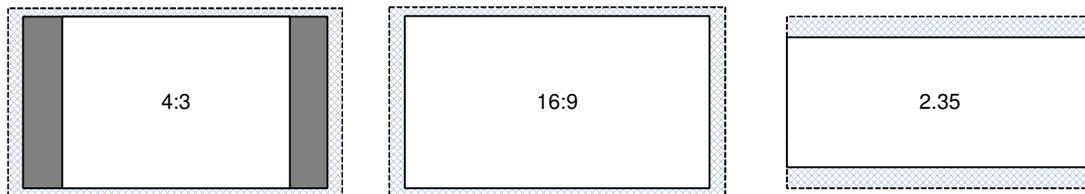


Figure 1, 16:9 projector with fixed zoom used on a 2.35 screen

- 4:3 On the Lumagen remote press "MemA", "4:3". The projected image spills over the top, bottom and sides of the screen and the Radiance shrinks the active image to fit the screen. Black bars are added on both sides of the screen by the Radiance.
- 16:9 On the Lumagen remote press "MemA", "16:9" The projected image spills over the top, bottom and sides of the screen and the Radiance shrinks the active image to fit the screen.
- 2.35 On the Lumagen remote press "MemB", "2.35". The image fills the width of the screen

Procedure

This is the procedure to configure the Radiance for a system that includes a 16:9 projector, a 16:9 screen and a separate 2.35 screen.

"MemA"	2D calibration (CMS1)	16:9 screen (Style0)
"MemA"	3D calibration (CMS2)	16:9 screen (Style0)
"MemB"	2D calibration (CMS1)	2.35 screen (Style1)
"MemB"	3D calibration (CMS2)	2.35 screen (Style1)

This procedure requires software rev 011812 or higher and assumes that you are starting with factory default settings. To do a factory reset press "MENU 0999" and then press "MENU, Save, OK, OK, OK".

- 1 Set the projector to its default 16:9 mode. All aspect ratio control will be handled by the Radiance.
- 2 Set the projector zoom to fill the width of the 2.35 screen and leave the zoom at this setting.
- 3 Turn on service mode by pressing "Menu 0910".
- 4 If the output aspect ratio is not at the default setting of 16:9 (1.78), set the output aspect ratio to 16:9 by pressing "MENU, Output, Styles, [Style], Aspect Ratio, OK, Single output aspect, OK, 178, OK".
- 5 Set the output aspect sidebars to black by pressing "MENU, Output, Styles, [Style], Graybar, Sides, 0%, OK".
- 6 Press "MemA".
- 7 Set user memory "MemA" "2D" to use "CMS1" "Style0". Press "Menu, Output, Output Setup, Ok". Highlight the 2D line and press "Ok". Set the line to read "All:A:All->-----:1:0:-:-" and press "Ok".
- 8 Set user memory "MemA" "3D" to use "CMS2" "Style0". Press "Menu, Output, Output Setup, Ok". Highlight the 3D line and press "Ok". Set the line to read "All:A:All->-----:2:0:-:-" and press "Ok".
- 9 Press "MemB".
- 10 Set user memory "MemB" "2D" to use "CMS1" "Style1". Press "Menu, Output, Output Setup, Ok". Highlight the 2D line and press "Ok". Set the line to read "All:B:All->-----:1:1:-:-" and press "Ok".
- 11 Set user memory "MemB" "3D" to use "CMS1" "Style1". Press "Menu, Output, Output Setup, Ok". Highlight the 3D line and press "Ok". Set the line to read "All:B:All->-----:2:1:-:-" and press "Ok".
- 12 Press the button for input aspect "2.35".
- 13 Set Letterbox Zoom off for "MemB". Press "MENU, Input, Video Setup, [resolution], Size, 2.35, Letterbox Zoom, Off, All, B, OK".

- 14 Press "MemA".
- 15 Press "16:9"
- 16 Adjust the shrink setting for "Style0", so that a 16:9 image fits the 16:9 screen. Press "MENU, Output, Styles, [Style0], Mask/Shrink, Shrink, OK, (adjust the settings to shrink the image to fit the screen), OK".
- 17 Display a 2.35 movie on the 2.35 screen.
- 18 Press "MemB".
- 19 Press "2.35".
- 20 Adjust the vertical shift for "Style1", so that a 2.35 letterboxed image is at the correct vertical position on the 2.35 screen. Press "MENU, Input, Video Setup, [resolution], Size, 2.35, Vert Shift, OK, Setting:#2 of 15, (use up and down arrow buttons to set value), OK".
- 21 Turn off service mode by pressing "Menu 0910".
- 22 When you are finished, save the new settings by pressing "MENU, Save, OK, OK, OK".
- 23 Set all the video sources to widescreen 16:9 output.
- 24 Press "MemA" on the Lumagen remote when you use the 16:9 screen.
- 25 Press the appropriate input aspect ratio button on the Lumagen remote that matches the aspect of the video input. Note: All of the input aspect ratio buttons work correctly. All 2D video formats input to the Radiance use the calibration stored in CMS1. All 3D video formats input to the Radiance use the calibration stored in CMS2.
- 26 Press "MemB" on the Lumagen remote when you use the 2.35 screen.
- 27 Press the "2.35" input aspect ratio button on the Lumagen remote. All 2D video formats input to the Radiance use the calibration stored in CMS1. All 3D video formats input to the Radiance use the calibration stored in CMS2.