

Radiance Tech Tip 5

Using Test Patterns

Introduction

The Lumagen Radiance video processor features high accuracy, internally generated, test patterns that can be used for testing and calibration.

The test patterns can be generated at the same horizontal and vertical resolution as the current output mode or they can also be generated at a user specified, output mode, 2D/3D type, CMS and Style. The test patterns can be used for calibrating displays, calibrating 3D glasses, and troubleshooting.

The test patterns are arranged in thirteen pattern groups. To display the test pattern menu, press "MENU, Other, Test Pattern".

Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
Geometry	Contrast	Lines	Gray1	Gray2	Color1
Crosshatch Overscan Overscan 2.35 Aspect Squares	Contrast 1 Contrast 2 Black Ramp Low Clip White Ramp High Clip Targets Check Inverted Check Video Black Video White	Horizontal Vertical	Ramp	Large Window Small Window Solid Window	Colorbars 100 Colorbars 75

Group 7	Group 8	Group 9	Group 10	Group 11	Group 12	Group 13
Red	Green	Blue	Yellow	Cyan	Magenta	UserColor
Large Window Small Window Solid Window	Large Window Small Window Solid Window	Large Window Small Window Solid Window	Large Window Small Window Solid Window	Large Window Small Window Solid Window	Large Window Small Window Solid Window	Large Window Small Window Solid Window

Controlling the test patterns

<>	Select the pattern group.
^v	Adjust IRE on some patterns.
"1"	Step backward through the patterns within a group.
"2"	Hide/display the menu.
"4"	Step forward through the patterns within a group.
"CLR"	Completely exit the test patterns.
"Ok"	Leave the test pattern up and display the menu.
"PRV"	Toggle between video input and test pattern.
"ALT"	Exit the menu.

Test pattern operation

- Location To display the test pattern menu, press “MENU, Other, Test Pattern”.
- A/R Indicator Indicator for test patterns shows whether it's an Adjustable pattern or a Reference pattern. A small black “A” or “R” is shown in the lower right corner of the test pattern label.



This same “A” or “R” is displayed for 6 seconds, in the upper right corner of the test pattern, when you use the RS-232 command interface to display a test pattern. The indicator is designed to have a negligible affect on the average picture level of the test pattern.

- Menu timeout The test pattern timeout setting controls the length of time the test patterns are displayed. In the “Normal” setting the test patterns are displayed for 3 minutes. In the “Slow” setting the test patterns are displayed for 30 minutes. Press “MENU, Other, Menu control, Timeouts, Test pattern timeout, [Normal, Slow], OK”.

Test Pattern Menu

- Reference Uses the current output mode. These patterns are only affected by the Output PC/Video level settings and can be used to calibrate the controls on your display.
- Adjustable Uses the current output mode. These patterns are affected by all the Output Color Management settings and can be used to calibrate the controls on your Radiance.
- Warm up Displays a warm up pattern of 20IRE to 50IRE. Use the up and down arrow buttons to change the IRE level. This pattern is safe for long-term use on a CRT or plasma display and can be used to warm up a display for calibration.
- Ref w/Mode Uses the specified Test Mode. These patterns are only affected by the Output PC/Video level settings and can be used to calibrate the controls on your display.
- Adj w/Mode Uses the specified Test Mode. These patterns are affected by all the Output Color Management settings and can be used to calibrate the controls on your Radiance.
- Test Mode User specified test mode that can be used to display test patterns in a user defined output mode, 2D/3D type, CMS and Style.

Test Pattern Example

The Radiance allows you to view the adjustable test pattern or an external video input while making adjustments to the Radiance input and output controls. This can be very useful when you are doing a video calibration.

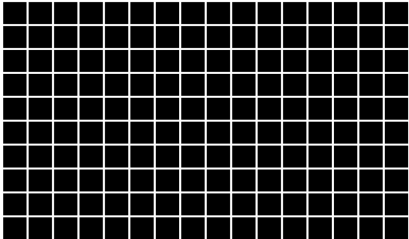
1. Enable the "Service mode" menu by pressing "Menu, Other, Menu control, Menu Mode, Ok, Service mode, Ok".
2. Display the adjustable test pattern by pressing "Menu, Other, Test Pattern, Adjustable, Ok".
3. Press the right arrow button three times to display the "Gray1: Ramp" pattern.
4. Press the "Ok" button to leave the test pattern displayed and return to the menu.
5. Use the arrow buttons to navigate the menu to "Menu, Output, CMS's, [*CMS], Gamma Factor, Ok".
6. Use the up and down arrow buttons to adjust the gamma factor of the output and notice the affect on the display.
7. Press the "PRV" button to display the input video.
8. Use the up and down arrow buttons to adjust the gamma factor of the output and notice the affect on the display.
9. Press the "PRV" button again to return to the test pattern display.
10. Press the "ALT" button to return to the test pattern command menu.
11. Press the left/right arrow button to choose a different test pattern group.
12. Press the "CLR" button to clear the test pattern.
13. Cycle the power on the Radiance to reload the last saved configuration.

Test Pattern Directory

Note: The following drawings are illustrations and may vary from the actual test patterns.

Group 1

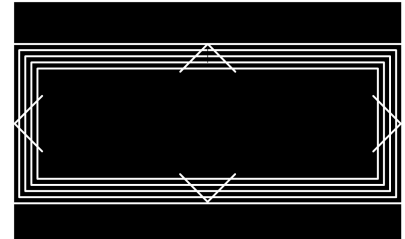
Geometry: Crosshatch



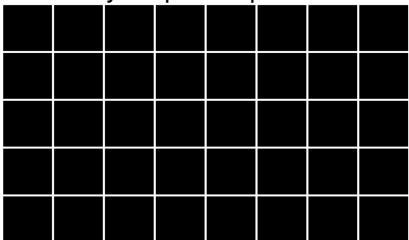
Geometry: Overscan



Geometry: Overscan 2.35

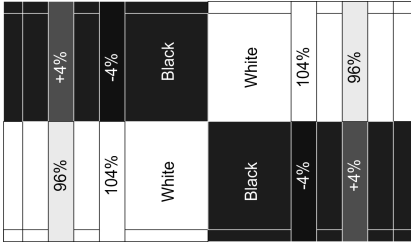


Geometry: Aspect Squares

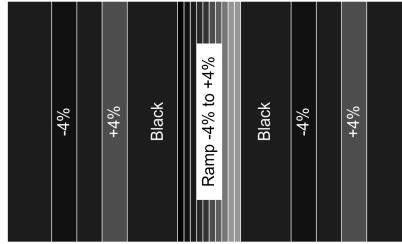


Group 2

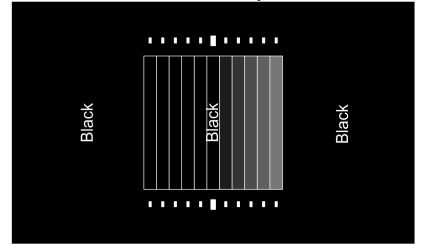
Contrast: Contrast 1



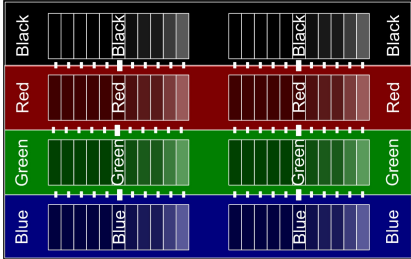
Contrast: Contrast 2



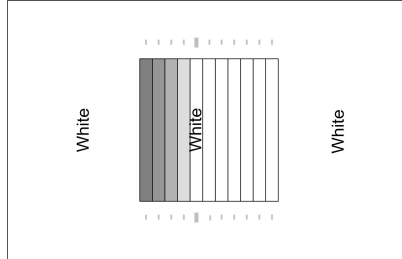
Contrast: Black Ramp



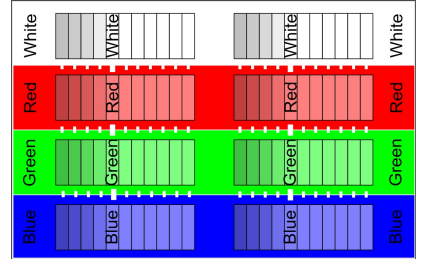
Contrast: Low Clip



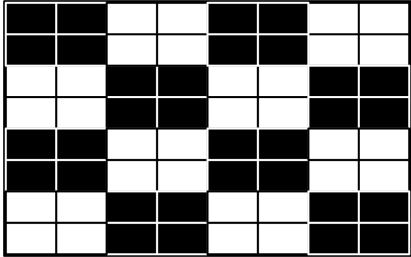
Contrast: White Ramp



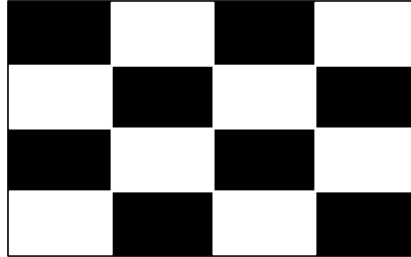
Contrast: High Clip



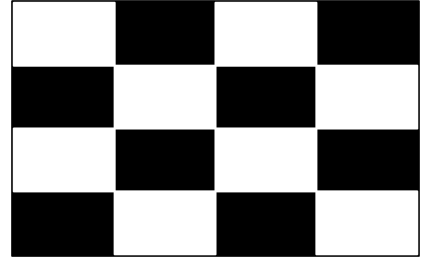
Contrast: Targets



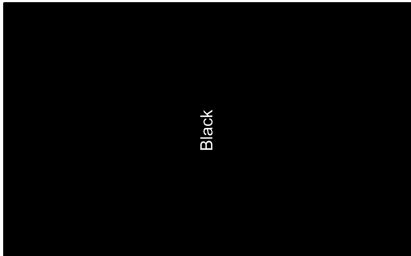
Contrast: Check



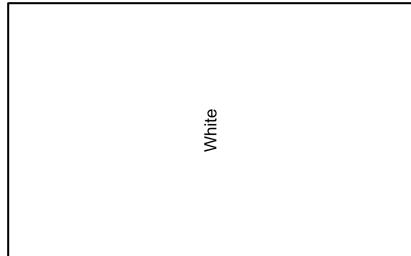
Contrast: Inv Check



Contrast: Video Black

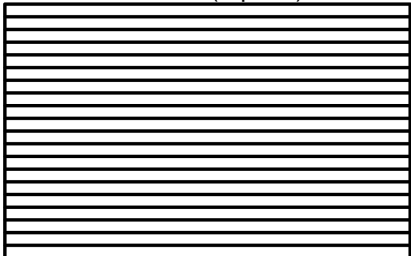


Contrast: Video White

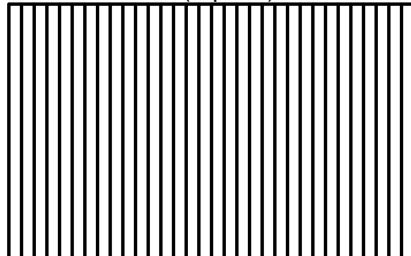


Group 3

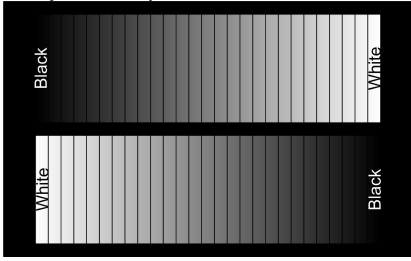
Lines: Horizontal (1 pixel)



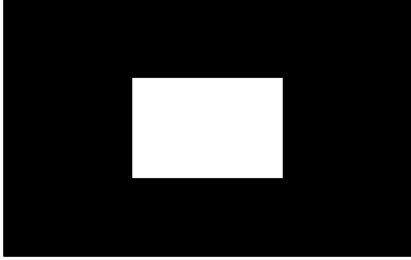
Lines: Vertical (1 pixel)



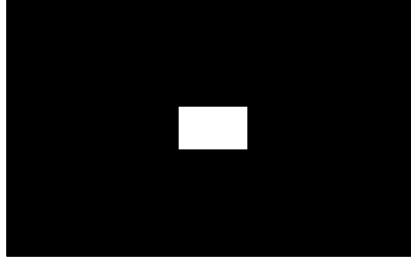
Group 4
Gray1: Ramp



Group 5
Gray: Large window



Gray: Small window



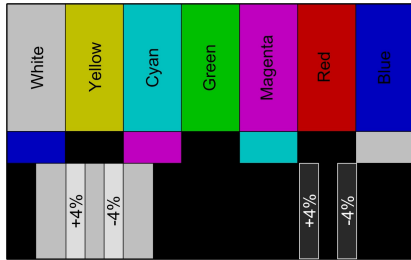
Gray: Solid window



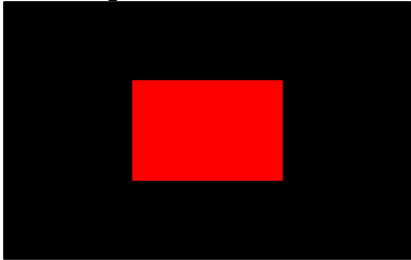
Group 6
Color1: Colorbars 100



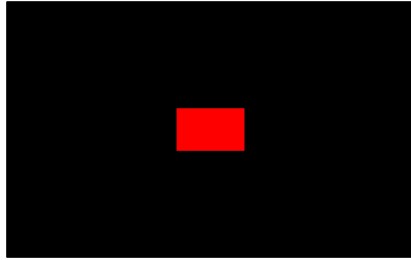
Color1: Colorbars 75



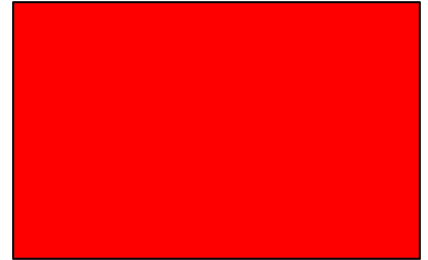
Group 7
Red: Large Window



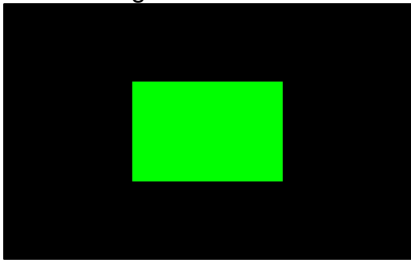
Red: Small Window



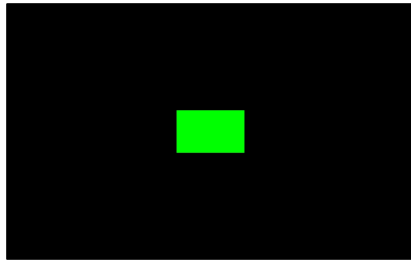
Red: Solid Window



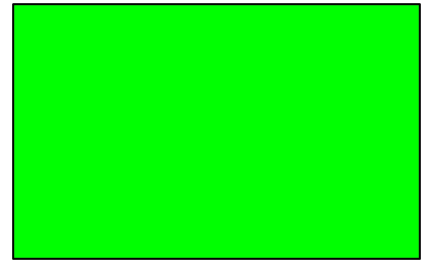
Group 8
Green: Large Window



Green: Small Window

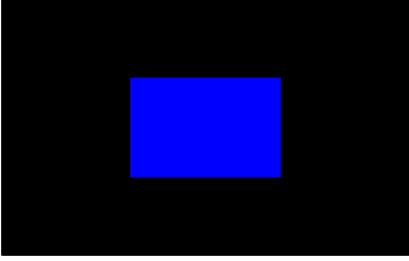


Green: Solid Window

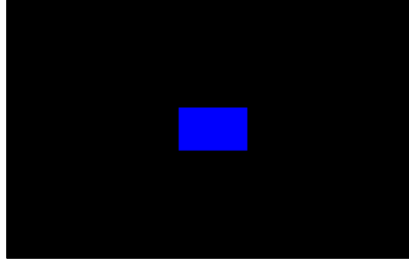


Group 9

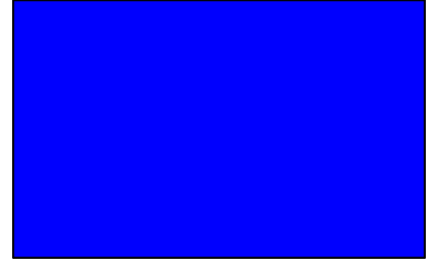
Blue: Large Window



Blue: Small Window



Blue: Solid Window

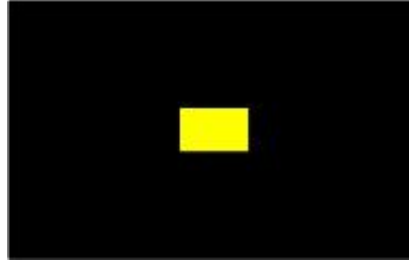


Group 10

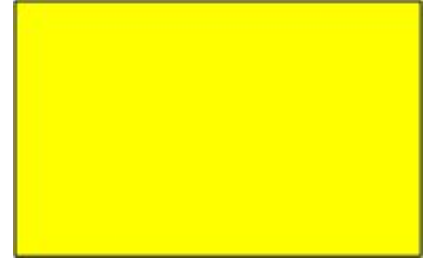
Yellow: Large Window



Yellow: Small Window

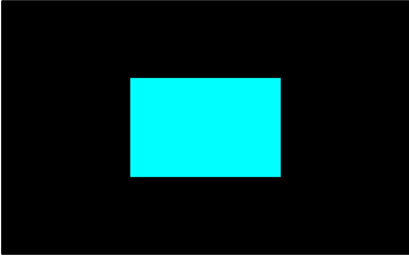


Yellow: Solid Window

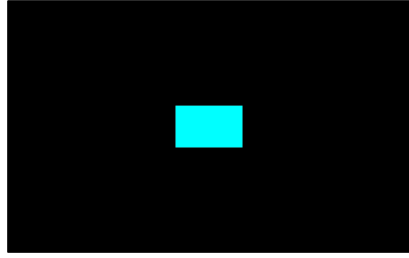


Group 11

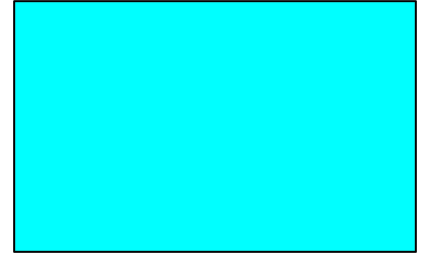
Cyan: Large Window



Cyan: Small Window

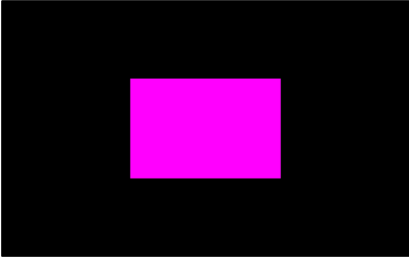


Cyan: Solid Window

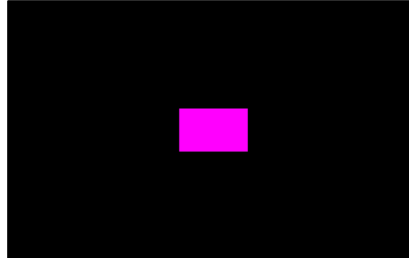


Group 12

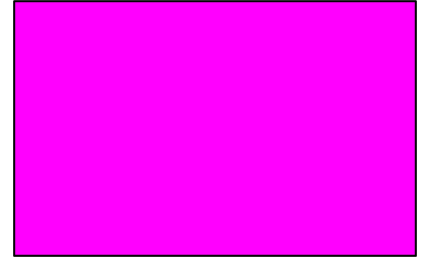
Magenta: Large Window



Magenta: Small Window

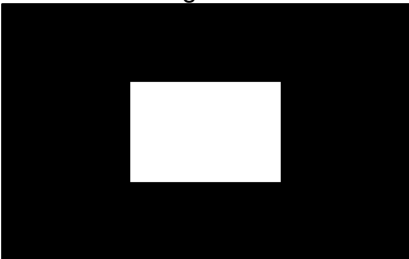


Magenta: Solid Window

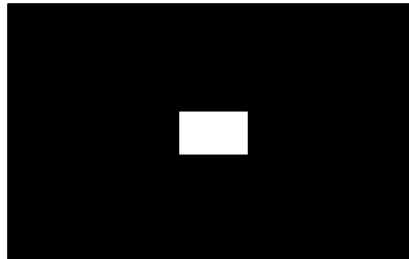


Group 13

User Color: Large Window



User Color: Small Window



User Color: Solid Window

