

HD RGB Programmable Generators



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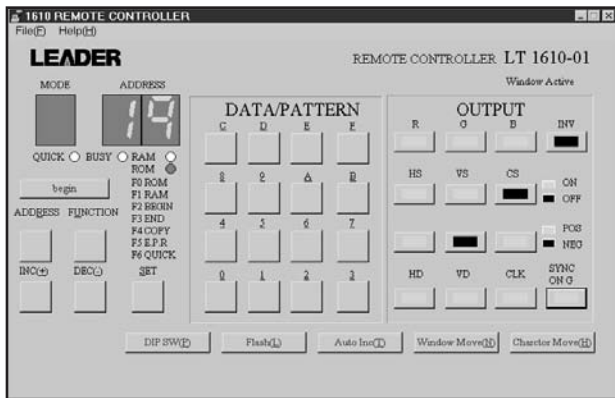
LT 1613, LT 1614, LT 1615 (LT 1615 shown)

This group of three RGB generators offers dedicated analog, digital or combined analog/digital outputs to best suit application needs. High dot-clock capabilities are featured, up to 260 MHz in analog, which allows operation in UXGA (1600 x 1200) systems. All in the group operate from user-replaceable ROMs making them ideal for production operations wherein parameters are not to be altered by operators. Remote control units (LT 1610-01) extend program selection to remote control points and widen operator control to signal-output conditions including sync format and polarities. Full PC control gives the operator complete control over raster architecture, signal-output conditions and selection from stock and

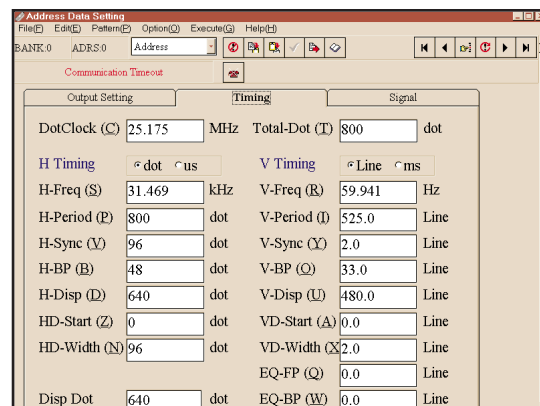
- PC Programming and Control Operates in Windows* Environment
- ROM Setup and Control for Stand-Alone Operations
- Analog RGB, Clock to 260 MHz, Model LT 1613
- Digital RGB, Clock to 200 MHz, Model LT 1614
- Both Analog and Digital RGB, Clock to 260 MHz/200 MHz, Model LT 1615
- Digital Outputs 8-Bit Parallel, Models LT 1614 & LT 1615, Handles Most Flat-Panel Displays
- High Speed Switching Speeds Pattern Selection
- Power Saving Display Function as Specified in VESA Standards
- Graphic Design of Custom Test Patterns
- Stock Test Patterns Include SMPTE 133 & Flower Image
- Image Downloading
- X-Y Display Function Locates Pixel Coordinates (to Locate Display Faults)
- Auto Display Functions (Pattern Switching & Scroll)

custom patterns. Control extends to the graphic design of custom patterns and the downloading of images from digital still cameras or scanners. X-Y cursors permit the coordinates of defective pixels in the display to be accurately established and provision is made to test monitor power saving actions spelled out in VESA standards. Fast image switching speeds production work by reducing the wait for new images to appear. Image sequencing may be programmed and scrolling window or character actions aid in gauging image-decay characteristics. A factory option adds 4 MB of RAM to extend image memory to accommodate up to 12 VGA format images.

*Windows is a registered trademark of Microsoft Corporation in the United States and/or other countries.



Remote control achieved through the PC shows operating choices of ROM/RAM addresses, pattern selection and control of RGB and sync outputs.



Timing file display shows raster timing parameters, in this case in terms of dots horizontally and lines vertically. Microseconds and milliseconds are the operating option with automatic conversion and calculations.

HD RGB Programmable Generators

KEY SPECIFICATIONS (LT 1613 - LT 1615)

DOT CLOCK FREQUENCY

Analog (LT 1613, LT 1615)

1.024-260 MHz (10 ppm)

Digital (LT 1614, LT 1615)

1/1 Clock Mode: 1.024-100 MHz

1/2 Clock Mode: 2.048-200 MHz

HORIZONTAL FREQUENCY

3.077-250 kHz, 8192 dots max.

SCAN LINES

8179 (interlace)

VIDEO MEMORY

(2048 x 2048) x 8

PATTERNS

Stock

28 fixed patterns (still picture, SMPTE

RP-133, dot, crosshatch, gray scale, window, character list, circle, etc.)

Custom

16 programmable patterns (15 variable parameters and 1 special)

SIGNAL OUTPUT LEVELS

Analog (LT 1613, LT 1615)

Video: RGB 0.300-1.2 V in 5 mV steps

Sync: 0.000-0.600 V in 5 mV steps

Setup: 0.000-0.250 V in 1 mV steps

LT 1615 HS, VS, CS: CMOS/TTL 5 V/3.3 V, selectable

LT 1615 DISP: CMOS/TTL 5 V/3.3 V, selectable

Clock Output

ECL amplitude, AC coupled

Output Connectors

R, G, B, HS, VS, CS: BNC

DISP, CLK: SMA

Digital (LT 1614, LT 1615)

CMOS/TTL 5 V/3.3 V, selectable

TTL

R, G, B, R', G', B' HS, VS, CS, HD, VD, I, I'

Output Level

CMOS/TTL, 5 V

Output Connector

Amphenol 57 series, 24 pin

DIGITAL OUTPUTS (LT 1614, LT 1615)

Video Output 1

R7-R0, G7-G0, B7-B0, HS, VS, CS, HD, VD, DISP, CLK, CTRL0, CTRL1, V_{cc} (+5 V/+3.3 V)

Video Output 2

R7-R0, G7-G0, B7-B0, Field (1/2 clock rate), CTRS2 (+5 V/+3.3 V)

Output Connector

Amphenol 57 series, 50-pin

ANALOG CONTROLS (LT 1613, LT 1615)

RGB video

on-off

Fine Output Adjustment

Offset RGB: individual

Video Level: RGB common

RGB Balance: R & B only

PULSE/SCAN CONTROL

Equalizing Pulse

Off, 0.5H, 1H

Serration Pulse

Off, 0.5H, 1H

Scanning

Non-interlace (progressive), interlace, interlace shrink

OUTPUT CONTROL

On/off and inverted RGB

On/off and ± HS, VS, CS, HD, VD, DISP, CLK

On/off sync on G, B, R

DOT CLOCK INPUT

116 dB_μ (50 Ω) 1.024-260.000 MHz (LT 1614)

1.024-200.000 MHz)

EXTERNAL INTERFACE

RS-232C: D-sub 9-pin connector

Remote: Amphenol 57 series, 36-pin connector

ENVIRONMENTAL

Operating Temperature

0-40°C

POWER REQUIREMENTS

90-250 V ac, 50/60 Hz

PHYSICAL

Size (W x H x D)

11⁵/₈ x 4³/₈ x 8¹/₄ in.

295 x 111 x 210 mm

SUPPLIED ACCESSORIES

User ROM

Windows Application Software

Spare Fuse

OPTIONAL ACCESSORIES

LT 1609-06/LT1609-012 Video

Distributor

LT 1610-01 Remote Control

AVAILABLE OPTION

Still Picture Backup Ram (4 MB)