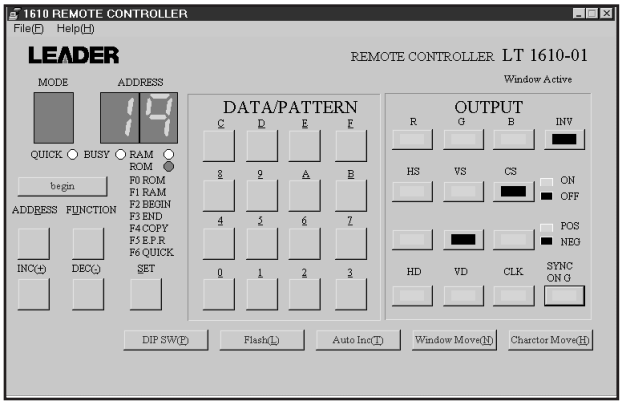
HD RGB Programmable Generators

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

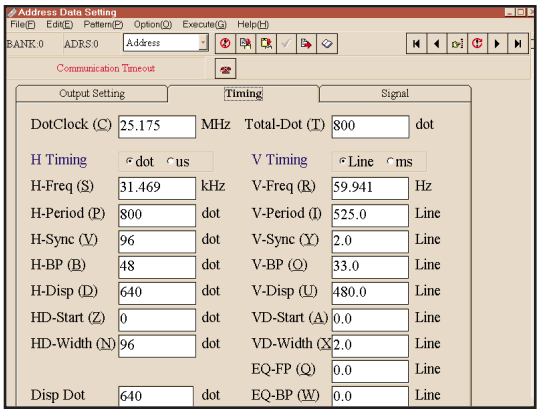
- *PC Programming and Control Operates in Windows* Environ ment*
- *ROM Setup and Control for Stand-Alone Operations*
- *Analog RGB, Clock to 260 MHz, Model LT 1613*
- *Digital RGB, Clock to 200 MHz, Model LT 1614*
- *Both Analog and Digital RGB, Clock to 260 MHz/200 MHz, Model LT 1615*
- *Digital Outputs 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)*

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 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.

KEY SPECIFICATIONS (LT 1613 - LT 1615)

DOT CLOCK FREQUENCY
Analog (LT 1613, LT 1615)
1.024-260 MHz (10 ppm)
Digital (LT 1614, LT l615)
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, CTRLO, CTRL1, Vcc (+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 dBµ (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)
11 5/8 x 4 3/8 x 8 1/4 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)