

LV 5170D HD-SDI Monitor

- Dual CRT's Waveform w/Vec/Pix/Audio/Data
- YPbPr Monitoring including 24p HD Cameras
- Pix Monitor Output Full 1920 x 1080 10 bit
- Multiformat HD-SDI + Analog & SD 480p Analog
- Auto Detect, Setup & Display 14 HD Formats
- Hex Display of Any Pixel in Raster
- Optional SD-SDI & Eye or HD-SDI Eye
- Selectable Digital Alarms & Error Logs



LV 5152DA HDTV Digital/Analog Waveform Monitor

- HDTV Waveform Monitor with 1080/24 Segmented Frame Compatibility in Addition to 720p and 1080i
- Hex Readout of all Data Points Improves Troubleshooting Capabilities
- Readout of SDI Level in Terms of Equivalent Cable Length
- Separates Embedded Digital Audio from the SDI and Outputs 8 Channels of AES/EBU Digital Audio
- Gamut Error Log
- AES/EBU Digital Audio Output (4 Pairs)
- Dual Matrices
- Automatic System Recognition Setup & Display



Format	Lines/Frames	Applicable Standards
1035/60i	1920x1035/59.94i (60i)	SMPTE 240M, 260M BTA S-001B, 002B
1080/60i	1920x1080/59.94i (60i)	SMPTE 274M BTA S-001B, 002B
1080/50i	1920x1080/50i	SMPTE 274M
1080/30p	1920x1080/29.97p (30p)	SMPTE 274M
1080/25p	1920x1080/25p	SMPTE 274M
1080/24p	1920x1080/23.98p (24p)	SMPTE 274M
1080/24sF	1920x1080/23.98sF (24sF)	SMPTE 274M
720/60p	1280x720/59.94p (60p)	SMPTE 296M

LV 5152 HDTV Analog Waveform Monitor

- Optional 1080/24p
- Handles 1080i*, 720p and 480p Systems
- YCbCr and GBR Waveform Monitoring
- Logs Time of First Error, Time Elapsed and Total Error Count
- Two Sets of 3-Wire Inputs with Switched Output
- YPbPr or GBR Picture Monitor Outputs
- Full Line Select
- * Y Matrix Complies with SMPTE 274M



Format	Lines/Frames	Applicable Standards
1080/60i	1125/29.97 (30)	SMPTE 274M
1080/50i	1125/25	SMPTE 274M
1080/48i	1125/23.98 (24)	SMPTE 274M
720/60p	750/59.94 (60)	SMPTE 296M
480/60p	525/59.94 (60)	SMPTE 293M
480/60i	525/29.97 (30)	SMPTE 253M
1080/50i	1250/25	SMPTE 295M
576/50p	625/50	ITU-R BT.1358
576/50i	625/25	ITU-R BT.601-4

LT 442D HDTV Signal Generator



- Five Common HD-SDI Output Signal Formats
- Embedded Digital Audio Output per SMPTE 299M
- Six-Channel AES/EBU Digital Audio Output
- Analog Tri-level Sync Outputs per SMPTE 240M
- SID Characters can be Superimposed on All Patterns
- Simultaneous Test Pattern and Digital Black Output Optional
- HD-SDI Black, SD-SDI, and Analog BB Outputs Optional

LT 441D Multi-Format HDTV Digital Generator



- Supports 14 Variations of 720p, 1035i, 1080i line systems including 1080/24 Segmented Frame
- Digital Genlock to Tri-Level Sync or NTSC/PAL Black Burst
- ± 100 Line Advance/Delay
- Eight Channels of AES/EBU Embedded Audio
- Six Channels of AES/EBU Digital Outputs
- New Monoscope Test Pattern Plus Pathological Check Field Patterns
- Dynamic Patterns for Compression Tests
- Optional Bitmap Download Capabilities

Leader Instruments Corporation

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Digital/Analog Component Waveform Monitors LV 5100D/LV 5100DE (LV 5100DE shown)

- Component Digital and Component/Composite Analog
- Active Serial Output of Selected A or B Serial Input
- 4:2:2 Serial Digital Component
- 525/60 and 625/50
- Eye Pattern (SDI Waveform), Model LV 5100DE Only
- EDH Facilities
- Digital Signal-Status Readout
- Hex Readout of All Data Samples
- Serial Data Signal Strength Reading in Terms of Equivalent Length of Coax Cable



- User-Selected Alarms
- YCbCr or GBR Waveforms
- 3-Wire Analog Picture Out (YCbCr or GBR)
- Picture Display or Y or G
- Overlay, Parade and Timing Waveforms
- Component Vector Display
- X-Y Stereo Display
- Full Line Select with Strobe on Picture Display
- Preset/Recall of 10 Front Panel Setups

LV 5100DU Component Digital Waveform Monitor

- All of the Features of the Popular LV 5100D Except for Analog Inputs
- Active Serial Output of Selected A or B Serial Input
- 4:2:2 Serial Digital Component
- 525/60 and 625/50
- EDH Facilities
- Digital Signal-Status Readout
- Hex Readout of All Data Samples
- Serial Data Signal Strength Reading in Terms of Equivalent Length of Coax Cable



- User-Selected Alarms
- YCbCr or GBR Waveforms
- 3-Wire Analog Picture Out (YCbCr or GBR)
- Picture Display or Y or G
- Overlay, Parade and Timing Waveforms
- Component Vector Display
- X-Y Stereo Display
- Full Line Select with Strobe on Picture Display
- Preset/Recall of 10 Front Panel Setups

LT 5910 SDI Analyzer



- Continuous Monitoring of EDH, TRS, ANC and Gamut Errors
- SDI Level in Terms of Equivalent Cable Length
- Handles Digital Composite and Component at 525/60 & 625/50
- Active SDI & Frame-Stored Data
- Records Error Totals for Designated Periods
- Reads FF & AP EDH Errors, FFCRC and APCRC Codes and EDH Flags
- Ability to Edit and Output Frame Stored Data
- Reads Status of 16 Audio Channels

LV 5836B Surround Audio Monitor



- 6-Channel AES/EBU Digital Inputs
- 6-Channel Bargraph Level Display for Dolby Digital
- Accepts 6-CH Digital Audio Inputs from LV 5152DA
- Channel Status Screens for Basic Metadata and Bit Dump
- Precision Sound Image Display Confirms Mixing and Mic Placement
- Surround Sound Image Shows Balance Left to Right and Front to Rear
- Displays Dolby Pro-Logic L-C-R-S (4:2:4) Mode
- Displays Dolby Digital L/R, C/Lfe, Ls/Rs (5.1) Mode

LT 425D Digital Component Test Signal Generator



- 4 Serial (includes digital black) and 1 Parallel Outputs
- EDH Codes in Accordance with RP-165
- 4-Channel AES/EBU Embedded Audio **plus**
- Independent AES/EBU Digital Audio Output
- Compression Tests Include Variable Speed, Direction Controlled Marker and Sequentially Switched Patterns
- Digital Genlock with Programmed Advance and Delay
- 27-MHz Clock Output
- 2 Analog Black Burst Outputs
- 20 Character Programmable ID and Calendar/Clock
- Test Signals (Adapt Automatically to 625/50 or 525/60 Requirements)
- Full Field 100% Color Bars
- Full Field 75% Color Bars (EBU Bars in 625/50)
- SMPTE Color Bars (BBC Bars in 625/50)
- Combination Color Bars/Ramp (SMPTE or BBC)
- Flat Field, Red
- Multiburst 100% or 60%
- Multipulse

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5222 NTSC/PAL/SECAM Waveform Monitor

- Handles NTSC, PAL and SECAM
- 8 Channels plus EXT REF
- Parade and Overlay Displays
- Picture Display (with Line-Select Strobe)
- Full Line Select with 525/60 and 625/50 Notation
- Menu Selected Setup
- Memory Storage of 10 Panel Setups
- Cursor Measurement of Level and Time (0.5%)



- Level Cursors Read in Volts, IRE, % and dB
- Dual Filter Display
- RGB and YRGB
- Y/C Monitoring
- Universal Power Supply (90-250 V ac, 48-440 Hz)
- Remote Control
- X-Y Operation (Option)
- White Phosphor (Option)

5212 NTSC/PAL Vectorscope

- Handles both NTSC and PAL
- Overlay Display of 3 Channels Plus EXT REF
- Auto Burst Zeroing
- CRT Readout of DG/DP to 2 Decimal Places
- Storage/Recall of 10 Front Panel Setups
- Remote Control and Line Select (via 5222)
- X-Y Display for Stereo Monitoring



- Digital Phase Measurement
- Phase Accuracy Within 1°
- Universal Power Supply (90 - 250 V ac, 48 - 440 Hz)

Models 408/408P/408NPS (Model 408 shown)



- NTSC M (408 and 408NPS)
- PAL-B, C, D, G, H, I, K and L (408P and 408NPS)
- SECAM III-B, D, G, H, K and L (408NPS only)
- Composite, RGB, Y/R-Y/B-Y, Y/C
- VHF/UHF/Cable R-F Coverage
- Programmable Parameters
- 100 Program Storage
- 15 MHz Sweep and Multiburst

LT 446 Multi-Format Pattern Generator



- Sixteen HD and SD Raster Formats
- GBR and YPbPr Analog Signal Outputs
- Thirteen Test Patterns
- Auto Pattern Switching
- GBR and YPbPr On-Off plus Polarity Invert
- Tri-Level Sync on all Three GBR/YPbPr Outputs

LF 983/LF 982 (LF 982 shown)

- 5-870 MHz, 950-2150 MHz Satellite IF Coverage (Sub-band LF 983 only)
- Level Readings for Analog/Digital 8VSB, OFDM QAM-256, QPSK, BPSK, 8PSK (MSK LF 983 only)
- Spectrum Display Helps Assess Reception Conditions
- C/N for Analog & Digital Satellite
- DC Output for LNB Power and Control
- Extensive World-Wide Channel Charts
- Data Logger 100,00 Events to User's Flash Card (LF 983 only)



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Waveform Monitor Select Guide

DIGITAL/ANALOG COMPONENT	LV 5170D	LV 5152DA	LV 5152D	LV 5100D	LV 5100DU	LV 5100DE	LV 5152	5100	5222
Multi-Format HD, SDI	✓	✓	✓						
525/60, 625/50 SD SDI	OPT			✓	✓	✓			
Multi-Format HD Analog Channels	3	3	3				6	4	
525/60, 625/50 SD Analog Channels	OPT	OPT		3		3	6		8*
Embedded Audio Separation	✓	✓							
Overlay/Parade/Timing Waveforms	✓	✓	✓	✓	✓	✓	✓	✓	✓
Eye Pattern	OPT					✓			
Component Vector	✓	✓	✓	✓	✓	✓	✓	✓	✓
Picture Display (Y or G)	✓	✓	✓	✓	✓	✓	✓		
Line Select	✓	✓	✓	✓	✓	✓	✓	✓	✓
Precision Cursor Measurements	✓	✓	✓	✓	✓	✓	✓	✓	✓
Error Detection & Alarms	✓	✓	✓	✓	✓	✓			
Gamut Error Detection & Log	✓	✓							
SDI Cable Length	✓	✓	✓	✓	✓	✓			
Pixel Data Readout	✓	✓		✓		✓			
Number of Presets	10	10	10	10	10	10	10	12	10
Stereo Phase/Amplitude	✓	✓	✓	✓	✓	✓	✓		OPT

* Also handles NTSC, PAL and SECAM.

Signal Generator Select Guide

DIGITAL/ANALOG COMPONENT	LT 442D	LT 441D	LT 440D	LT 425D	LT 446	LT 449
HD Multi-Format	✓	✓			✓	
HD 1080, 1035, 59.94	✓	✓	✓			✓
SD 525/59.94, 625/50	*			✓		
Serial SDI/Parallel Out	2/	3/	3/	4/1		
Embedded Audio Channels	8	8	8	4		
Separate AES/EBU Channels	6	6	2	2		
Analog YPbPr/GBR	OPT	OPT			✓	✓
Error Detection Support	✓	✓	✓	✓		
Digital Genlock	✓	✓	✓	✓		
Sync Advance/Delay	✓	✓				
Compression Tests	✓	✓		✓		
Tri-Level Sync + H&V Drive	✓	✓	✓			

* 1080i only

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