LV 7700(HD/SD-SDI) LV 7720(SD-SDI)

(LV 7700 Shown)

LV 7700 and LV 7720 Rasterizers
The Smallest, Full Featured Test Package in Pro-video Today!

Born of the success of our LV 5700A Multi-SDI Studio Test Monitor and the LV 5750 Multi-SDI Field Test Monitor, the LV 7700 brings all of the test features of the award winning LV 5750 in a rasterizer (on-screen monitor) package.

Waveform, vector, picture, audio and status/protocol screens are available individually or in several screen combinations. Test results and test screens are output via a DVI-I connector and can drive VGA/XGA monitors. The instrument can be controlled via front panel or remote controlled via Ethernet. And, the entire solution fits in a half-rack wide, one rack unit high space (16 inches deep). It is an ideal solution for locations where a computer monitor already exists (i.e. non-linear edit bays) or for remote monitoring locations.

Compatible with 17 SD and HD standards, the LV 7700 provides for 2 auto-sensing SD/HD inputs. The LV 7720 is the SD-only version of the LV 7700 (all specifications are identical for both units unless otherwise noted). The selected input is reclocked and can be fed to a downstream process. For external reference, the LV 7700 accepts tri-level sync or NTSC or PAL black burst (LV 7720 : NTSC/PAL black burst only).

All screens can be captured and stored; the captured image can be superimposed on live for comparative purposes; an ideal feature for production, camera shading and level matching applications. Captured screens can be stored to a compact flash card as *.BMP files for documentation purposes; the same feature on the LV 5750, has been used in production for set documentation purposes and in system integration and maintenance for proof-of-performance documentation purposes.

Waveform monitor and vectorscope functions include cursor measurements, filters, gain and timing control for all your pro-video measurement needs. Full line select capabilities aid in detailed signal examination; a data dump showing the actual data for each line can be reviewed in detail and with various data layout options.

The Picture monitor includes various markers for safe action and safe title; as well, aspect ratio markers are available to aid in the production process. The Picture monitor also allows a pixel-by-pixel examination of the picture (zoom function).

The instrument also includes a virtual converter and converts Y, Cb, Cr to a Y, R, G, B and NTSC display to aid in gamut monitoring and assist in the color correction process. Y, R, G, B is shown as a waveform and also as a Delta display. The Delta display provides a graphical representation of gamut violations and aids in the error correction and color correction process.

Embedded audio monitoring features include sound image monitoring (surround sound application), multi-lissajous image monitoring, bar graphs with settable hold and value displays. The instrument can monitor and display 8 channels at a time and can be set to work with either group 1 (ch 1 - 8) or group 2 (ch 9 -16).

A variety of protocol parameter monitoring is available and error detection can be turned on and off for individual parameters. Gamut and video level error monitoring is also available and the error levels are user settable. Protocol, gamut and level error logs are maintained; logs can be viewed on the attached monitor (not included), downloaded on the flash card or through the Ethernet (SNMP).

The instrument is DC powered (XLR DC input connector); 12 Vdc, 3A. An AC power adaptor is included; the adaptor accepts universal AC input (100 Vac - 240 Vac).

NOTE ON LV 7720 : The LV 7720 SD Rasterizer is our SD-only solution. It is upgradeable to HD and the upgrade can be done at a later time after purchase. The LV 7720's specifications are identical to the LV 7700 except where noted.

LV 7700 Rear Panel

FEATURES

- Multi-Format SD And HD-SDI Rasterizer Conforms To 17 SD & HD Standards; Accommodates 2 SDI Inputs (LV 7720 : SD only).
- Waveform, Vector, Audio, Picture And Data Monitoring Functions Can Be Displayed Individually Or In Several Screen Combinations.
- XGA Output Provides For Excellent Display Clarity And Resolution.
- Extensive Error Detection And Error Logging Facilities Include Gamut Detection And Settable Error Limits.
- Digital Analysis Screens Include Data Dump As Well As Equivalent Cable Length Readings.
- Instrument Can Be Controlled Via Front Panel Or Ethernet.
- All Screens Can Be Captured And Compared To Live; Captured Screens Can Be Saved To A Compact Flash Card For Documentation Purposes.
- DC Powered For Ease Of Use In The Field; AC Adapter Is Included.

LV 7700/7720 RASTERIZER SPECIFICATIONS

Active Lines	Format	Standard
1080i/p *	60i/59.94i/50i/30p/ 29.97p/25p/24p/ 23.98p	SMPTE 274M, 292M
1080PsF *	30PsF/29.97PsF/ 25PsF/ 24PsF/ 23.98PsF	SMPTE RP211, 292M
720p *	60p/59.94p	SMPTE 296M
525i **625i**	59.94i 50i	SMPTE 259M
Ancillary Data	SMPTE 291M	
Embedded Audio	HD-SDI SMPTE299M *, SD-SDI SMPTE 272M	
Format Setting		
Format Setting	Auto or Manual format setting	
Sampling Frequency	74.25MHz(HDTV) *, 74.25/1.001MHz(HDTV) *, 13.5MHz(SDTV)	
SDI Input		
Input Connector	BNC connector, 2 systems (A and B switch)	
Input Impedance	75 Ω	
Input Return Loss	≥15dB, 5MHz to serial clock frequency	
Max Input Voltage	±2V (DC+AC peak)	
Ext Ref Input		
Input Signal	Tri-level sync signal * or NTSC/PAL black burst	
Input Connector	BNC connector, 1 system 2 connectors	
Input Impedance	15kΩ, Passive Loop-through	
Input Return Loss	≥30dB	
Max Input Voltage	±5V (DC+AC peak)	
SDI Output		
Output Connector	BNC connector, 1 connector Reclocks and outputs the selected SDI input signal	
Output Impedance	75 Ω	
Output Voltage	800 mVp-p ± 10%	
Output Return Loss	≥15dB, 5MHz to serial clock frequency	
CF Memory Card		
Function	Saves screen captures, error logs, preset data, and data dumps	
Remote Control		
Function	Recalling of presets, output of errors	
Control Signal	TTL level (LOW active)	
Control Connector	25-pin D-sub, 1 connector (female)	
Ethernet		
Function	Remote control from PC and output data	
Type	10BASE-T/100BASE-TX, Auto switching	
Input/Output Connector	RJ-45, 1 connector	
Standard	Conforms to IEEE802.3	
DVI-I Connector		
Signal Format	Single Link T.M.D.S Analog R, G, B	
Display Format	XGA	
DDC Function	Not Compliant	
Hot Plug Detect Function	Not Compliant	
Output Connector	DVI-I, 1 system	
Display		
Format	XGA, Effective area 1024x768 dots	
Full Screen	Wfm/Vec/Pix/Audio/Status	
2-screen Display	Wfm/Vec, Wfm/Pix, Wfm/Audio,	
4-screen Display	Wfm/Vec/Pix and Audio or Status	
Waveform		
Overlay/Parade	Component signals in overlay/side by side	
Timing Display	Calculates and displays Y-C_B and Y-C_R Bowtie signals (Authorized by Tektronix, Inc.)	
EAV/SAV	Select show or hide	
GBR Conversion	Converts YC_BC_R into GBR display	
Pseudo-Composite	Converts/displays pseudo-composite	
Channel Parade	GBR or RGB format is selectable	
Scale	V or % scale is selectable	
Line Select	Displays the selected line	
Vertical Axis		
Gain	Select x1, x5, or variable	
Variable Gain	x0.2 to x10.0	
Amplitude Accuracy	±0.5 %	
Frequency Response HD *	Y: ±0.5 % 1MHz-30MHz, C_BC_R: ±0.5 % 0.5MHz-15MHz	
Low-pass Attenuation	≥20 dB at 3.8MHz	
Frequency Response SD	Y: ±0.5 % 1MHz-5.75MHz, CBCR: ±0.5 % 0.5MHz-2.75MHz	
Low-pass Attenuation	≥20 dB at 3.8MHz	
Horizontal Axis		
Horizontal Sweep	Overlay: 1H, 2H; Parade: 1H, 2H, 3H; Timing: 2H	
Magnification	Select x1 or x10	
Active Display	Displays active video only	
Blank Display	H Blanking when set to overlay 2H	
Field Display	Overlay: 1V, 2V (no 2V p) Parade: 1V, 2V, 3V	
Time Base Accuracy/Mag	±0.5%, Select x1, x20, x40	
Vector		
Sensitivity	Select 75 % or 100 %	
Accuracy/Gain	±0.5 %/x1, x5, IQ-MAG, variable x0.2 to x10.0	
IQ Axis	Select show or hide	
Line Select	Displays the selected line	
Pseudo-Composite	Converts/displays pseudo-composite	
Picture		
Marker Display	Center marker, 4:3, 16:9 *, Safe action, Safe title	
Line Select	Displays the selected line	
Audio		
Quantization Accuracy	HDTV: 24 bits *, SDTV: 20 bits	
Groups	Select two arbitrary groups from groups 1, 2, 3, and 4	
Level Meter Display	8-channel simultaneous	
Meter	60dB, 90dB peak, average VU, Peak hold	
Status		
Digital Protocols	Detects SDI, CRC *, EDH, BCH, Checksum, Parity, Gamut, Composite-Gamut, Audio, Cable Length	
Data Dump		
Format	Serial or component data	
Line/Sample Select	Displays the selected line/samples	
Jump	Move to EAV or SAV by one-key operation	
Data Output	To a PC by CF memory card/Ethernet	
Error Count	100,000 selected errors are counted	
Event Log		
Log Mode	Select overwrite or update 1k events	
Logged Items	Errored items, time stamps, etc	
Audio Status		
Channel Status	Dumps, analyzes channel status of the embedded audio	
Voice Control Packets	Voice control packets analyze/display	
EDH error	Displays the status of the EDH error	
Packet Content	Analyzes and displays EDH packets	
Screen Capture		
Media	Internal RAM or CF memory card	
Data Output	To a PC by CF memory card/Ethernet	
30 Presets		
Media	Internal RAM or CF memory card	
Recall Method	From front panel, remote or Ethernet	
Copy	Copy presets to/from CF memory card	
Other Display Settings		
LCD Backlight/Auto off	Select high/low/sleep time	
Format	Displays input signal format	
Color System	YC_BC_R, GBR, RGB, or COMP	
Date/Time	Select year/month/day order, system clock	
Illumination of Key LEDs	Turns on LEDs for all keys	
General Specifications		
Operating Temperature	0-40 ˚C, ≤85 % RH (without condensation)	
Spec-Guaranteed Temperature	10-30 ˚C, ≤85 % RH (without condensation)	
Power Requirements	DC 12V (10 to 18V), 30 Wmax	
Dimensions & Weight	215(W) x 44(H) x 400(D) mm, 2 kg 8.5 x 1.7 x 15.8 inch, 4.5 lbs	
Supplied Accessories	Instruction manual, AC adapter	

* For LV 7700 only