

**Test Equipment  
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### Features

- Monitors SMPTE-259M, SMPTE-292M, SMPTE-296M
- Auto Detection of Input 20 HD-SDI and SD-SDI
- Selectable Colorimetry when needed
- Auto Detection of Ext. Ref. BB/Tri-Level Sync
- Switched SDI Output follows Selected Input
- Total Digital Signal Processing
- Multi-Display Modes with Thumbnail
- Freeze Mode to Compare Input Signals
- Data Dump for Detailed Pixel Analysis
- Adjustable Alarm Thresholds
- Parade/Overlay/Timing  
(YCbCr/YRGB/YGBR/RGB/GBR)
- Full Digital Line Select
- Electronic Graticules Selectable
- Precision Digital Cursors
- Timing for Component Interchannel Errors
- Display Modes for Active and H Blanking
- Vector Magnification (x2, x5 and P-Mag)
- Selectable I&Q Axes and 100%/75% Targets
- Integrated XGA TFT Color LCD Display
- Picture Monitor Output YPbPr or GBR
- XGA Output for Computer Display
- Front Panel Tilt Adjust
- Disembedded Digital Audio Outputs
- Surround Modes (3-1, 3-2, 3-2-2)
- Multi-Lissajous for System Phase Checks
- 8-Channel Bargraph (Peak 60 or 90 dB)
- Selectable Audio Groups 1&2 or 3&4
- Selectable Channel Assignments
- Auto ID 16-Channels of Embedded Audio
- Cable Length (Patented)
- 100 User Presets
- Flash Card for Capture, Logging, Presets & Mirroring
- HD/SD Eye Pattern Auto Measurements (Option 70)
- DC Operation (Option 71)
- Additional HD/SD-SDI Module (Option 72)



### LV 5700 Multi SDI Monitor

The LV 5700 is a Multi SDI Monitor for HD/SD-SDI signals with an XGA TFT color LCD in an adjustable tilt front panel. The monitor tests 20 HD-SDI and SD-SDI formats with total digital processing compliant to SMPTE 259M, SMPTE 292M and SMPTE 296M. Input format, colorimetry and trilevel or black burst external reference inputs are automatically detected.

Extensive monitoring functions include waveform (YCbCr, YRGB, YGBR, RGB or GBR), vector (75% or 100% graticules), picture and surround sound monitoring modes. The first SDI module accepts two SDI inputs switchable from the front panel providing buffered SDI output(s) of the selected feed. Parade, overlay and timing modes facilitate characterization of component waveform levels and timing. Freeze mode allows comparisons of different SDI input signals. Multi-display operating modes include a thumbnail picture display.

Digital audio from HD/SD groups (1 & 2) or (3 & 4) are disembedded and output as four pairs of AES/EBU. Digital audio is also displayed as 3:1, 3:2, or 3:2:2 surround images, multi-lissajous and 8-Ch bargraphs. The peak bargraphs have selectable dynamic ranges as well as average ballistics. Remapping of the channel order allows users to create custom displays.

High resolution decoded pix-monitor outputs may be set to feed monitor requirements as either YPbPr or GBR. Digital line-select, precision digital cursors, menu control of storage of 100 front-panel setups, flash card, USB and Ethernet round out the operating features. The HD/SD status screens list detection of input format, TRS, CRC checks for chroma and luma, video, audio ID, ancillary parity and check sum errors... User adjustable alarm error thresholds are provided for digital component level ranges. Options include: HD/SD eye pattern analysis with automatic Jitter measurements (Op. 70), DC operation (Op. 71), and an additional HD/SD SDI input module (Op. 72).

## Specifications

### Video Formats

HD-SDI	
Video Systems	
1	1920 x 1035 /60i
2	1920 x 1035/59.94i
3	1920 x 1080/60i
4	1920 x 1080/59.94i
5	1920 x 1080/50i
6	1920 x 1080/30p
7	1920 x 1080/29.97p
8	1920 x 1080/25p
9	1920 x 1080/24p
10	1920 x 1080/23.98p
11	1920 x 1080/24sF
12	1920 x 1080/23.98sF
13	1280 x 720/60p
14	1280 x 720/59.94p
15	1280 x 720/50p
16	1280 x 720/30p
17	1280 x 720/29.97p
18	1280 x 720/25p
19	1280 x 720/24p
20	1280 x 720/23.98p
Standards Supported	
HD-SDI	SMPTE 292M
Ancillary Data	SMPTE 291M
Embedded Audio	SMPTE 299M
SD-SDI	
Video Systems	
1	525 /59.94i
2	625/50i
Standards Supported	
SD-SDI	SMPTE 259M
Ancillary Data	SMPTE 291M
Embedded Audio	SMPTE 272M
Format Setting	
Video System	Select manual or automatic setting
Sampling Frequency	HD: Auto switching between 74.25 MHz and 74.25/1.001 MHz SD: 13.5 MHz
<b>Input/Output Connector</b>	
HD-SDI Input	
Input Connector	BNC connector 2 systems A and B, 75 Ω
External Reference Input	
Input Signal	Tri-level sync or NTSC/PAL black burst
Input Connector	BNC passive loop-through 1 system 2 connectors
XGA Output	
Output Signal	XGA signal
Output Connector	D-sub 15 pin female
HD-SDI Output	
Output Connector	BNC 1 connector Outputs the selected signal, 75 Ω
Analog Output	
Output Signal	YPbPr or GBR
Output Connector	BNC 1 system 3 connectors
AES/EBU Output	
Output Signal	CH1/2, CH3/4, CH5/6, CH7/8 Disembedded audio and output Select 2 groups (8 ch) from 4 groups (16 ch)
Output Connector	BNC, 4 connectors, 75 Ω
Remote Connector	
Function	Recalling of presets
Control Signal	TTL level (LOW active)
Control Connector	D-sub 25 pin female 1 connector
Ethernet Connector	
Function	100Base-T remote control from an external computer and monitoring of errors, etc.

### Display Format

Display Format	XGA effective area 1024 x 768 dots
Dot Clock	65 MHz or 64.935 MHz*
Horizontal Frequency	48.363 kHz or 48.315 kHz*
Vertical Frequency	60 Hz or 59.94 Hz
	* Automatically switches according to the input signal
Multi Display	Waveform, vector, picture, audio and status displays on screen in different combinations
Waveform	Displays full screen video signal wave forms
Vector	Displays full screen vector waveforms
Picture	Displays full screen color pictures
Audio	Displays full screen embedded audio input
<b>Waveform Display</b>	
Waveform Operation	
EAV-SAV	Select show or hide
GBR Conversion	Select YPbPr or GBR conversion display
Channel Assignment	Select GBR or RGB display order during GBR conversion
<b>Vertical Axis</b>	
Filter	Flat, Low-pass
Sweep Magnification	Select x1 or x5
<b>Horizontal Axis</b>	
Operation Mode	
Overlay	Displays multiple waveforms overlaid
Parade	Displays waveforms side by side
Timing	Measures time and amplitude differences between channels
	Uses bowtie signal (Authorized by Tektronix, Inc.)
Display Format	
Line Display	1H, 2H
Line Magnification	1H MAG, 2H MAG
Field Display	1V, 2V
H Blanking Display	Displays the H blanking period
V Blanking Display	Displays the V blanking period
Scale Display	
Voltage Scales	0 V to 0.8 V or -0.4 V to 0.8 V
%Scales	0% to 110% or -50% to 120%
<b>Vector Display</b>	
Sweep Magnification	Select from x2,x5 and P-MAG.
Scale	Switches between 75% and 100% colorbar targets
	Show/hide is toggled on/off
I, Q Axes	
<b>Picture Display</b>	
HD Display	Reduced display
SD Display	Magnified display
<b>Embedded Audio Display</b>	
Lissajous Display	
Display Channel	Select from 2 ch or 8 ch displays
Display Method	Select X-Y or L-R
Sound Image Display	
Display Formats	Select 3-1, 3-2 and 3-2-2 ch formats
Audio Level Meter Display	
Display Channel	Simultaneous 8 ch display
Display Method	Peak or average meter ballistics
Dynamic Range	60 or 90 dB peak, + 3 to -20 dB average
Channel	
Ch Mapping	Can be arbitrarily mapped from 1 ch to 8 ch
User Bit Display	
Data Dump Display	Displays 192 bits sequentially
Analysis Display	Analyzes and displays the user bit status
<b>Data Dump Display</b>	
Display Format	Displayed separately as serial or component data

## Digital Signal Analysis

CRC Error	Detects video signal errors
BCH Error	Detects embedded audio errors
Checksum Error	Detects ANC data errors
Parity Error	Detects ANC data errors
TRS Error	Detect TRS errors
EDH Error	Detects EDH errors
Line Number	Detects line number errors
Gamut Error	Detects level over range of GBR video signals
Level Error	Detects video level and reserved data errors
Audio Sequency	Detects continuity errors of embedded audio
Input Format	Detects input SDI video signal format
Audio Identification	Detects the presence or absence of embedded audio on each channel Detects the sampling frequency for each group
Ext. Sync Lock	Displays voice control packets Detects synchronization relationship between the external synchronization signal and the SDI signal
Equivalent Cable Length	Measures the SDI signal level. Displays the cable length relative to 800 mV p-p signal source level
Signal Detection	Detects the presence or absence of SDI signals

## Line Selector

Operation Mode	Interlocked between waveform, vector and picture display
Preset	
Number of Presets/Items	100 points/all settings
Recall	Through the front panel and the remote connector.

## Cursor Measurement

Configuration	Horizontal cursor: 2 lines (REF, Δ) Vertical cursor: 2 lines (REF, Δ)
Amplitude Measurement	Measured in % and V
Time Measurement	Displayed in ms and us
Frequency Measurement	Displays frequency where the time between cursors is considered one cycle.

## Operational Conditions

Operating Temperature	0 to +40° C
Operating Humidity	10 to 80 % RH (without condensation)
Spec Guaranteed Temp.	+10 to +30° C
Spec Guaranteed Humidity	10 to 80 % RH (without condensation)
Power Requirements	90 to 250 VAC (48 Hz to 440 Hz) or 12 VDC optional
Dimensions (W x H x D)	215 x 133 x 448 mm 8 ¾ x 5 ¼ x 17 5/8 in.

## Available Options

- HD/SD Eye Pattern Auto Measurements (Option 70)
- DC Operation (Option 71)
- Additional HD/SD-SDI Module (Option 72)



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