



*The powerful VTM-300G is the latest enhancement to Videotek's line of Test and Measurement Instruments. The VTM-300G supports Standard Definition-SDI and composite analog video applications with advanced informational displays in a convenient 1-RU form factor. Optional analog, digital, embedded, Dolby® AC-3™ and Dolby® E audio monitoring may be selected for this instrument, as well.*

## Videotek VTM-300G Series of Multi-Format On-Screen Monitors

### Flexibility Without Confusion

Since the development of the first multi-format, multi-display test and measurement instrument over 7 years ago, Videotek has continued to incorporate customer requests into the entire VTM line. This has meant expanding feature flexibility without adding confusion to the visual presentation. The new VTM-300G maintains that solid foundation of providing a recognizable and repeatable display configuration with just the right amount of available customization. Too much flexibility will lead to operational confusion especially when many similar instruments are installed in the same facility. It's satisfying to know that an engineer or operator using Videotek's VTM series instruments can move from one operating position to another and have a familiar display of waveform, vector, picture and audio, correctly and

precisely positioned on screen.

To maximize application flexibility, a high resolution, user customizable display allows presentation of information for various operations including waveform, vector, gamut, relative timing, audio (optional), alarm status, alarm settings and picture. The VTM-300G includes display modifiers of editable waveform, A/B overlay, A/B parade, line select, audio meters, waveform/vector/audio gain and magnification create numerous On Screen combinations. The VTM-300G offers a number of exclusive displays that speed and simplify complex monitoring and measurement tasks, continuing the Videotek tradition of test and measurement leadership.

The VTM-300G's multiple view capabilities let users combine information in ways that have never been available in any of Videotek's instruments. While offering customizable preset displays to view

technical information required, Videotek has designed an optimal approach that offers display flexibility while maintaining user confidence.

### Instant Recall

To recall the familiar VTM-300G multiple view display requires a press of the 'display' button for 2 seconds. Immediately the instrument displays picture, waveform, vector, alarm status, and audio (option). This feature was designed for use when the operator just doesn't have the time to reconfigure or 're-program' the display parameters. A system problem occurring now, must be resolved NOW - no time for reconfiguration or 're-programming'! When rapid response to problems is of utmost importance, Videotek aids in getting to the correct display, of all essential parameters, efficiently and gracefully.

For example, the Director of Engineering or Chief Engineer may not spend a lot of time operating test

and measurement instruments, however from time to time is called into emergency (panic) situations. For this occasional but critical use, Videotek offers a means for a specific user to pre-configure the instrument with 'super-user' access privileges. The instant recall mode can be set exactly as required by the super-user, without interfering with day to day operator's preset parameters. Eight standard presets are available for re-configuration of the VTM-300G using single button press.

### ***Versatile Display***

The VTM-300G features allow the user to modify various display parameters while never losing critical information. The VTM-300G includes a variety of screen views including a display flip feature that instantly and automatically reconfigures the display. The position of the display elements are reversed vertically for critical applications desiring the technical waveform and vector displays at the top of the screen.



***Display Flip, Critical Waveform, Vector, and Alarm status displays are repositioned to the top of the screen.***

Other features offered by the VTM-300G are custom screens for Gamut, Analog/Digital Relative timing, Alarm Settings, Alarm

Status, and Captured Frame. Any time you need a closer look at an individual display, just press the "Display" button for a high-resolution 1024x768 on screen presentation. A menu configures the cycle of the Display button. Pressing Display can cycle through full frame displays of Full Frame Picture, Waveform, Vector, Gamut, Audio, Analog/Digital Relative Video Timing, Alarm Settings, and Captured Frame.

### ***Many Instruments in One***

The VTM-300G, in essence, integrates a traditional waveform monitor, vectorscope, audio display and picture monitor into a single device. The 1-RU instrument produces a multi-display on a standard computer monitor.

Although Videotek has combined many products into a small, lightweight unit, we have not left out any operational features. All standard controls found in waveform monitor, vector scope, professional picture monitor, and audio display products are also found in Videotek's VTM-300G. We have also ensured that controls used most frequently are available on the front panel and do not require multiple button presses for access.

Controls such as Waveform position (H & V), Vector Rotation, Line Select, Waveform Filters, Waveform Gain and Mag., etc. are standard, dedicated controls. To move the waveform position, simply turn the front panel control; the VTM-300G operates exactly like any scope, not like a computer-based clone!

Making conformance measurements is the fundamental charge of test and

measurement instruments. All test and measurement instruments must measure and monitor the quality of the signals that we use day to day. The fact that Videotek has integrated multiple products into one familiar package adds many advantages.

The measurement of every pertinent parameter in a video line can be performed quickly and accurately when all the 'integrated products' operate as a whole. The VTM-300G's line select feature is much like many traditional waveform monitors; that's where the similarity ends. In line select mode not only is the selected line of video displayed on the waveform monitor, it is simultaneously displayed on the vector scope and indicated in the picture monitor as well.

To operate it, press the front panel line select button, turn the line select control to indicate a particular line of video (numeric value of the selected line automatically appears on screen) and the VTM-300G displays all measurements, quickly and concisely. Pressing on the line select control toggles between Odd and Even Fields, very intuitive.



***Portion of VTM-300G control panel depicting dedicated display modifiers.***

### ***Waveform Displays***

A complete range of display modifiers, available directly on the front panel, allows editing of the waveform presentations, that can be displayed in RGB, YCbCr, or

composite formats (composite analog video inputs display as composite only). Waveform zoom, vector zoom, audio zoom, and waveform sweep - 1H, 2H 1V, & 2V, fixed and variable vertical gain are standard features. In addition to a display in its native YC<sub>B</sub>CR, the VTM-300G has the capability to display serial digital video as RGB and composite, thus allowing evaluation of the SDI signal, as it would be distributed in other formats.



***Two video inputs displayed in A/B Parade. Two waveforms, A-Flat Filter, B-Low Pass Filter, and different lines selected.***

Display two video inputs, of the same format, using the VTM-300G's A/B Overlay and Parade feature. The powerful front panel Edit button allows modifications to the waveform display, two 1H or 1V waveforms of the same input can be displayed using individual filters (Flat, Lowpass, or Chroma) or two inputs can be displayed in A/B fashion comparing one to another. The front panel line select can be used to display selected lines of either A or B, as well.

A quick relative timing measurement is performed in A/B Overlay, adjust either input source to the house reference. With the VTM-300G in



***Two Video Inputs Displayed in A/B Overlay. Note Timing difference.***

A/B Overlay mode, adjust the timing of the second source until the waveform in A/B overlay displays the coincidence of the two signals. Additional gain may be added to the waveform display with a press of the Waveform V control. The first press adds 2.5x, next press 5.0x, then 10x and back to 1.0x, one front panel button 'cycles through' vertical gain settings, no need for menu's or secondary controls.



***Magnified view of the upper portion of the waveform display. A feature unique to Videotek's VTM series.***

The Waveform Zoom control is unique to Videotek's VTM series, press it once to get variable vertical gain, again for a magnified view of the bottom portion of the waveform,

and again for the upper portion of the waveform. When in the 'variable' setting, turn the Waveform V control to add any amount of gain from 0.5x to 10x in 0.1x steps. The last variable gain setting is stored in memory, by input and ready for a future use requiring the same variable setting and is available by one press of the Waveform Zoom button.

The utmost in Waveform display quality is presented by the VTM-300G's waveform. It has the look of a traditional 'analog produced' CRT display while demonstrating accuracy of the digital video processing that produced it.



***VTM-300G Multi-Screen View. Note the waveform display with amplitude and time cursors enabled.***

The waveform display includes time and amplitude cursors. Cursors can be positioned anywhere on the waveform display. Each set of cursors has a reference and delta indication. The reference cursor is represented graphically as a solid line, moving the position of this cursor determines the point where the measurement begins.

The delta cursor is represented as a dashed line, moving its position instructs the VTM-300G to measure

the difference between the reference position and delta position. The value measured is displayed on screen. The sign of the value is displayed as a '-' or '+' signature preceding the measured value. Amplitude and time cursors can be used simultaneously or independently. The VTM-300G takes advantage of cursors when setting alarm parameters. During system configuration, alarm thresholds are set using similar waveform cursors and data readout.

### ***Vector Displays***

Traditional component and composite vector displays are included, with selectable 75% and 100% targets. Each display automatically selects the appropriate graticule based on the selected input and its format.



***Vector display with Reference and Delta cursors used to measure color phase.***

Vector cursors are handy in measuring color phase values. Two cursors are provided, the solid cursor is the reference vector; the dashed cursor is the delta vector. The vector display has a readout of the phase measured by the difference in cursor position. Move the reference cursor to the appropriate position on the vector display, and then adjust the delta

cursor to the required position. The difference (sign and phase value - in degrees) is read out on screen. Also use the cursor as a marker of color reference. When a production requires a specific matte color for a background, place the cursor at the phase of the required color matte vector; next adjust the hue of the source until it lands on the cursor. The color can be repeatedly matched precisely with little or no effort. Just another way the VTM-300G makes life a little easier. All cursors can be stored in a preset and recalled with a single button press.



***Digitally produced RGB and Encoded Gamut displays are intuitive and exclusive to Videotek.***

### ***Gamut Display***

Videotek is the industry expert in monitoring and processing serial digital video signals for gamut compliance. Videotek has had patented gamut conformance alarms and displays in a variety of test and measurement instruments for more than 11 years, and is the industry leader in serial digital legalization products.

The VTM-300G series introduces the exclusive digitally produced gamut monitor with measurement and automatic alarms. The patented

Videotek digital gamut display for monitoring RGB and encoded gamut compliance is available only in the VTM-300G and its high definition counter part in the VTM-450E HD/SD.

The same display format is used for both RGB and Encoded formatted signals and is the most intuitive display available. The digital gamut display plots two points for each color the maximum and minimum excursion of that color space (derived from the color and luminance values) as a polar coordinate. This polar plot is somewhat similar to traditional vector display, the difference being that the vector only plots the chroma amplitude and phase information, while the digital gamut plots the upper and lower excursion of the gamut of each color. These displays let the operator visualize whether the displayed serial digital is gamut compliant in an easy to interpret fashion.

Anyone experienced with a vector scope, is an instant expert on the use of the gamut display. The digital gamut display includes graticule markings depicting the gamut range of color bars for the selected format. These markings present the operator a visual guide as to the excursion of signal vs. that of the color bar saturation and gamut for signal format displayed.

The inner and outer rings of the display indicate the gamut range for the format of video selected. For post facilities that may be working for a variety of clients with differing gamut requirements, the VTM-300G provides adjustment to the minimum

and maximum allowable gamut excursions. These settings can be saved as presets for instant re-configuration and recall. Adjusting these 'min/max' values moves the graticule rings on the display appropriately; away from or toward the center.

Another feature that is exclusive to Videotek is a visual warning of gamut violation. When the gamut alarms are enabled, the graticule's inner and outer rings turn color (red) warning the operator that the signal displayed is out of the gamut range. There is never any question as to gamut compliance or of the offending out-of-gamut color.

The VTM-300G gamut display being very similar for RGB and encoded formats, means that there is no need for an operator to learn how to interpret multiple types of displays, all the information required to interpret gamut is presented in a similar manner.

The VTM-300G's powerful display includes not only gamut, but also the waveform, picture, and time code of the problematic video. There is never a question as to the source of the problem.

### ***Analog / Digital Relative Timing Display***

With the addition of serial digital video to an analog video facility, a few new system problems arise. Timing requirements for analog video are determined by system hardware that is switching or mixing multiple sources. Most modern analog production switchers actually have a digital infrastructure that allows a window of timing, for

example + or - 1/2 of a line.

Many products have been produced to monitor and measure this difference, the most common being a



### ***Analog / Digital relative timing display. Directly measures the timing difference between video sources and reference.***

combination of a waveform monitor and vectorscope; both locked to an external reference. Analog composite signals include H and V sync and color sub-carrier. Analog system timing is proper when all the synchronizing signals arrive in time with respect to each other, as measured at a specific point in the system.

Determining system-timing differences of serial digital signals is done in a slightly different manner, as there are no synchronization signals. The first task is to ensure that the vertical interval occurs at the same point, this can be done using a waveform monitor with A/B overlay in 1V or 2V. Time the source under test so that the active video begins at the same point. Now switch the scope to 2 H and adjust the timing so that the EAV (or SAV) line up. The complication of this procedure is that there isn't a way to overlay the analog signal onto the digital signal. The

current generation of waveform monitors will only allow overlay of signal of similar formats.

The VTM-300G's timing display was designed as a solution to this problem. The VTM-300G has a graduated scale denoting the timing differences of selected signals with major marks representing lines of video (upper scale), and a second scale in microseconds (lower scale). A data display provides a read-out of the numeric value (from 37 nsec through all lines of video).

Any two sources can be mapped to this display. Selections are Black-burst reference, analog video inputs and serial digital video inputs. The relative timing display is capable of measuring the differences between either analog composite signals, the analog reference vs. a analog composite source, any two serial digital sources, either serial digital source vs. reference, and either analog input vs. either digital input (analog as reference).



### ***Analog / Digital relative timing scale depicting two signals out of time.***

The scale of the analog/digital relative timing display has two pointers, one for lines of difference, the second for microseconds of difference. When the two sources are out of time, the pointers change color (yellow less than 1  $\mu$ s; green exactly in time, and

red more than 1  $\mu$ s) and indicate the measured difference on the graduated scales. When the timing is proper, the pointers turn green and move to the center of the display labeled "REF". The vertical and horizontal measured differences are displayed also on screen using alphanumeric text.



*One of many types of audio displays offered by the VTM-300G, CineSound® surround sound monitoring.*

### **Audio Displays (Optional Capability)**

Available in the VTM-300G are a range of audio options offering a wide variety of audio monitoring capabilities for analog, digital, and digital embedded audio. Digital audio formatted in native AES/EBU, Dolby® AC-3™ or Dolby® E can be monitored on screen. The VTM-300G audio options provide analog and digital audio outputs for connections to externally powered speakers, including Dolby mix-down to stereo and full decoding of the Dolby formats. Audio displays are very flexible and can be configured to meet exact requirements.

One pair of level bars and lissajous with phase correlation bar, 2 pairs of



*Another VTM-300G audio display: two level bars, two lissajous patterns, and two phase correlation bars.*

level bars with two lissajous and two phase correlation bars, three level bar pairs with three phase correlation bars, and four level bar pairs with phase bar correlation are the types of level bar displays available. Some audio options offer Videotek's patented CineSound® display in 5.1 and 7.1 configurations. CineSound® is very popular with engineers working in surround sound; it offers the best display of the surround sound field in a manner that can be interpreted at a glance by any engineer. The VTM-300G has a large set of factory selectable meter ballistics (including loudness) and meter scales (see the features section at the end of this paper for details). The VTM-300G also offers user customizable ballistics, meter attack and decay that can be set and saved in presets for future use. On screen meter ballistic labels are included to as a handy reminder to operators. User settable meter markers allow the audio engineer to set custom warnings and/or visual indications. Alarms can be tied to the markers, when the level as indicated has been exceeded; an alarm will be generated.

Audio options in the VTM-300G are

field upgradeable. The hardware is a single circuit board that can be removed and replaced at any time with another option board offering enhanced features.

The VTM-300G audio option is configured to follow the selected input. When an analog composite input is selected, any audio source (except embedded) can be selected as well as the meter ballistics and scales. Selecting a digital video input allows mapping to any audio input with format specific meter ballistics and scales.

For example, after the initial setup, any time an analog source is selected, analog audio with VU meters will appear on screen. When a digital input is selected -20 dbFs meters may appear with Peak plus VU ballistics.

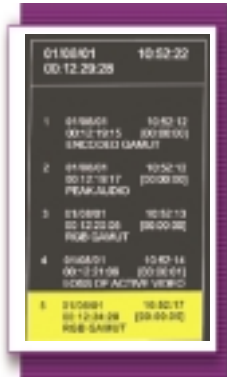
Any combination of input source, ballistic and scale can be recalled when one of the four video inputs are selected. Also, many of the capabilities of the audio option boards are flash upgradeable. If Videotek adds a meter scale in the future, this new scale can be added to the VTM-300G by flash update. (Flash updates are available on the Videotek website - [www.videotek.com](http://www.videotek.com)).

### **VTM-300G Alarms**

Videotek's VTM-300G is designed to not only make precision waveform and vector measurements but also provide a comprehensive set of signal alarm metrics which can be used for automated signal conformance monitoring.

The VTM-300G offers a multitude of audio, video, and timecode alarms, which can report to a user on screen

or through a computer connected to either the serial or ethernet communications port. All alarm information is tagged with time of day, including the source time code and day/date stamp.



***VTM-300G alarm status display: the five most current alarms are displayed on screen.***

The On Screen display indicates current alarms as black text over a yellow bar. Historical alarms are shown as white text over black background. The alarm screen is available in multi-screen mode and full screen displays of audio, waveform and vector. When displaying full field picture, the alarm screen disappears. All alarm settings are saved by input; therefore each input can have a unique set of alarm parameters and are recalled anytime an input source is changed. An instrument of the caliber of the VTM-300G must provide the user methods for efficient use. If the instrument is difficult to use, it doesn't matter how good the quality; it will never be the user's favorite. A seemingly small feature, like the alarm setting screen, adds the friendliness that Videotek customers have come to enjoy. Information isn't nestled in a string of menus; the



***VTM-300G alarm settings alarm screen, a snap shot of all alarms that can be recalled with the press of the display button.***

information required to make fast decisions is a button press or touch of a control away.

### ***Unattended Monitoring and Logging***

To support unattended monitoring applications the VTM-300G maintains a log of 100 alarms, time stamped with Date, Vertical Interval Time Code (VITC) or Longitudinal Time Code (LTC), and time of day real time clock (RTC). The front panel Alarm Scroll control enables the user to browse through the internally stored alarms. Alarm information is displayed by selected input, a separate set of alarms are saved for each input. This feature simplifies sorting of information after the fact. Select the desired input and scroll through its alarm history. Note that alarms are only collected when the input is actively displayed.

### ***SpyderWeb™***

The SpyderWeb™ Monitoring and Control software is included free with each VTM-300G. The program is compatible with Windows 98 (SE), NT-4 and 2000. SpyderWeb™ operates on serial or ethernet

connections. All front panel controls of the VTM-300G have virtual Windows controls. SpyderWeb™



***SpyderWeb™ remote control and logging software.***

software can be used to edit alarm and system settings offline then transfer to the VTM-300G when connected.

SpyderWeb™ software offers enhanced logging capabilities. SpyderWeb™ can log any number of alarms. The files are stored as text delimited allowing analysis using common spreadsheet programs. When connected to a VTM-300G, SpyderWeb™ will collect all alarm information and warn the operator if a fault has occurred. If the operator is not present, the VTM-300G will continue to monitor the signal and update the log. Upon the operator's return, an evaluation of faults can be made.

SpyderWeb™ is also used to initiate and store frame captures. The VTM-300G has a frame capture feature that allows the user to capture and transfer the currently displayed screen to a remote computer for archival or future analysis. The last captured frame is saved in the VTM-300G and available for viewing on the same screen as the live VTM-300G screen.

A frame capture can be triggered by an alarm. This feature allows the user to view the exact image (picture, waveform, vector, audio, Timecode, etc) present at the time the VTM-300G alarm occurred. SpyderWeb™'s log contains entries reflecting the fact that a frame capture was transferred to the PC with the alarm data. Clicking on the frame capture log entry automatically displays the frame capture on the PC for critical evaluation.

### ***Remote Operation***

The availability of state of the art remote control features assists integration of the VTM-300G to many remote monitoring and control applications. As mentioned, a PC may control of all features of the instrument using SpyderWeb™.

The RCU-300G is a remote control panel that connects to the dedicated port of the VTM-300G. The RCU-300G is especially useful in quiet environments; it makes no noise and is a replica of the VTM-300G front panel in a smaller package. Using the built-in 10/100Base-T Ethernet port and the embedded SNMP agent, users with SNMP remote management can add the monitoring capabilities of the VTM-300G for advanced system wide logging.

The fundamental system control interface is the GPI. The VTM-300G has nine GPI inputs and two GPI

outputs. A user menu determines which alarm(s) will trigger the GPI outputs. Any and/or all alarms can trigger either GPI output. The GPI input functions are unique to the VTM-300G. The nine GPI inputs have the following default functions:

- Select Input A
- Select Input B
- Select Input C
- Select Input D
- Capture Frame
- Send Captured Frame
- On Air
- Memory Sequence
- Bypass

A configuration menu allows the user to redefine and re-label each of these inputs for logging purposes. For example, changing the Bypass GPI input (reassign as User GPI #9) could be labeled 'DA-101 P-S' and connected to the power supply alarm contact of a DA frame. If the DA frame power supply has a problem, the VTM-300G will alarm On Screen and enter the alarm into its log. The Power Supply alarm is handled in the same manner as a video or audio alarm generated by the VTM-300G.

The VTM-300G offers GPI interfaces, Serial RS-232/422, Remote Control Panel and Ethernet ports, as well. The communications ports can be used with a PC running SpyderWeb™ or legacy control of any popular automation system.

Other standard VTM-300G interfaces include PS/2® keyboard loop and XGA input. The VTM-300G can be controlled from a standard PS/2® keyboard using shortcuts for control (Such as press W for waveform zoom, I to select Input A, or Control-O for alarm clear, etc.

The VTM-300G has a unique Bypass function. When the VTM-300G is deployed in a system sharing the XGA display and PS/2® keyboard with a computer, looping connectors are provided. Pressing the front panel Bypass button toggles control and display between the VTM-300G and the PC. A nonlinear edit system may only need to view the VTM-300G's technical display when ingesting program material, the operator simply presses the front panel button (or closes a GPI) to change from VTM screen to NLE screen. The bypass function can be configured to occur upon alarm as well.

### ***Security Access***

The VTM-300G also has front panel and preset locking features. Front panel lock is password protected to limit access to specific operators. The display cannot be reconfigured or modified without entry of a password. The Preset lock feature password protects storage of user presets. Protect all presets or individual presets with a password.



# *Features & Benefits*

## System Features

- High-resolution XGA Output with Easy-to-Read Displays
- Digital Processing for Accurate, and Drift-free Operation
- Instrument Presets for Quick Recall of Commonly Used Configurations (Password Protected)
- Alarm Status Screen
- Audio Configuration Automatically Follows Selected Video Input
- Comprehensive Set of Analog and Digital /Video, Audio, and Timecode Alarms
- Selection Indicators for Ease of Use in Darkened Environments
- Silent Remote Control Panels for Noise Sensitive Applications
- Low Cost of Ownership
- Five Year Warranty

## Video and Display Features

- A-B Parade and Overlay
- Digitally Produced RGB and Encoded Gamut Display
- Passive Looping Analog and Digital Inputs
- Serial Digital Interface (SD-SDI) and Composite Inputs
- Analog to Digital Relative Timing Display
- On Screen Closed Captions (CC1 and CC3)
- Vector Gain Variable to 10x
- Waveform Gain Variable to 10x
- Waveform and Vector Cursors
- Frame Capture (Automatic and Manual)
- Safe Action and Safe Title Markers
- Alarm Settings Screen

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# Features & Benefits

## Audio Features

(Available in a Variety of Options):

- Analog, AES, Dolby® AC-3™, Dolby® E™, and Embedded Audio Formats
- Programmable Meter Ballistic Settings:
  - Normal (VU)
  - Peak
  - Peak Hold
  - Peak Hold Infinite
  - True Peak
  - True Peak Hold
  - True Peak Hold Infinite, VU + Peak
  - VU + Peak Hold
  - VU + Peak Hold Infinite, VU + True Peak
  - VU + True Peak Hold, VU + True Peak
  - Hold Infinite
  - Reset Peak Hold
  - Loudness
  - Custom Attack & Decay
  - User Settings
- Programmable Meter Scales:
  - Type I
  - Type IIa
  - Type IIb
  - Type I +8
  - Nordic
  - DIN45406
  - dBfs
  - Zero Ref dBfs
- Loudness Metering / Alarm
- Variable Peak Hold
- Variable Phase Correlation Response Dampening
- User Programmable Meter Markers
- Multiple Audio Lissajous Display
- CineSound® Display for Surround Sound Monitoring
- Decoded Dolby Audio Outputs
- Meta Data Display and Alarms
- Lip-Sync detect alarm
- Alarm for Constant Audio Level (Tone)
- Digital Audio Clip and Mute Alarms
- V-Bit Alarm
- On Screen Selected Meter Ballistic Label
- Internal Delay Compensation for Dolby Audio Formats

- Programmable Analog and Digital Reference Levels

## Communications Features:

- Ethernet port with SNMP Agent
- SpyderWeb™ Monitoring and Remote Control Software
- Remote Control Panel (Option)
- XGA and Keyboard Loop-through with Monitor Bypass Feature
- PS/2® Keyboard Control
- Router Control Ports
- Two GPI Outputs
- Nine GPI Inputs, Customizable
- Serial Port

## Applications:

On Line - Quality Assurance Terminal  
Broadcast Monitoring of Standard Definition (SD)  
Digital and Composite Signals  
Compliance Checking  
Camera Shading  
Contribution Validation  
Mixed format Facilities; Digital and Analog  
Composite  
Content Verification - Audio/Video/Time-Code  
quality at a glance!  
Non-Linear Editing  
Telecine

## Options

Opt. 4a - Analog, AES/EBU and Embedded audio  
with six channels displayed.  
Opt. 5a - Analog, AES/EBU and Embedded audio  
with eight channels and CineSound® Display.  
RCU-300G - Remote control Panel.  
VTM Mobile Opt. 2 - Portable, lightweight carry  
case with integral TFT-LCD

• Dolby® AC-3™ is a trademark of Dolby Laboratories Inc.  
• CineSound® is a registered trademark of Videotek Inc.

• Dolby® E is a registered trademark of Dolby Laboratories Inc.  
• SpyderWeb™ is a trademark of Videotek Inc.

• PS/2® is a registered trademark of IBM Corporation



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