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Test & Measurement

- sales
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- calibration
- repair
- disposal

Complimentary Reference Material

This PDF has been made available as a complimentary service for you to assist in evaluating this model for your testing requirements.

TMG offers a wide range of test equipment solutions, from renting short to long term, buying refurbished and purchasing new. Financing options, such as Financial Rental, and Leasing are also available on application.

TMG will assist if you are unsure whether this model will suit your requirements.

Call TMG if you need to organise repair and/or calibrate your unit.

If you click on the "Click-to-Call" logo below, you can all us for FREE!

TMG Corporate Website **TMG Products Website**

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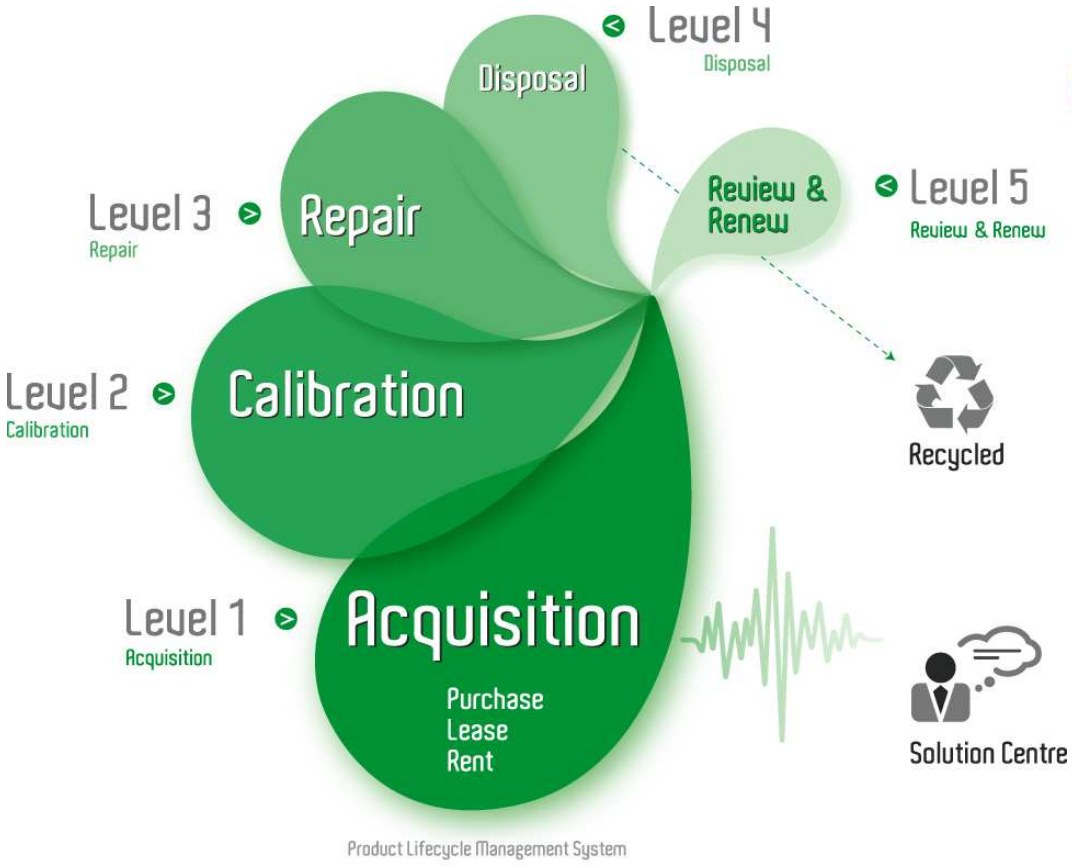

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Multi-standard, Multi-format Waveform Monitors

▶ WFM6100 • WFM7000 • WFM7100

WFM6100

The SD-capable WFM6100 offers high-performance monitoring and measurement capabilities. It can be configured to monitor either NTSC/PAL analog video (Opt. CPS), SD digital video (Opt. SD), or both video formats. Available audio options offer support for monitoring digital audio (embedded and AES/EBU inputs), analog audio and Dolby audio formats. Available measurement options offer in-depth digital data analysis and SDI signal measurements, such as Eye diagrams and jitter.

WFM7000

The HD-capable WFM7000 offers basic monitoring capabilities for applications involving HD digital video. It can be configured to monitor NTSC/PAL analog video (Option CPS), SD digital video (Option SD), HD digital video (Option HD) or any combination of these video formats. Available audio options offer support for monitoring digital audio (embedded or AES/EBU inputs) and analog audio.

WFM7100

The HD-capable WFM7100 offers high-performance monitoring and measurement for applications involving HD digital video. It combines the video and audio monitoring capabilities available on the WFM7000 with available support for Dolby audio, in-depth data analysis and SDI signal measurement.

Ideal for multi-format environments, the WFM6100 and the WFM7000 Series Waveform Monitors offer the performance and flexibility needed for demanding video applications.

▶ Features & Benefits

The WFM7000 and WFM7100 Support HD, SD and Composite Video Formats

The WFM6100 Supports SD and Composite Video Formats

FlexVu™ XGA Display Increases Productivity with the Ability to Create Hundreds of Custom Multiple-view Displays Tailored to Specific Work Practices

CaptureVu Video Frame Capture Improves Efficiency in Trouble-shooting and Equipment Setup

MyMenu User-defined Menu Saves Time by Placing Frequently Used Controls On a Single, Easily-accessed Touch-screen Menu

Exclusive Tektronix Gamut Displays Help Ensure Compliant Content

Patented Tektronix Timing and Lightning Displays Help Rapidly and Accurately Adjusts Critical Plant Timing

Extensive Fault Monitoring, Status Reporting and Error Logging Simplify Content Quality Control

Available High-performance SDI Signal Measurement and In-depth Digital Data Analysis Help Quickly Resolve Difficult Quality and Reliability Problems

Exceptional Audio Monitoring Available, Including Support for Dolby Audio Formats and a Front-panel Headphone Connector, Reduce Time and Effort in Verifying Multi-channel Audio Content

Standard and User-definable Safe Area Graticules Help Avoid Errors and Rework in Editing and Format Conversion

Front-panel USB Port For Easy Storage and Transfer of Instrument Settings and Video Data

Network Access and Control Supports Remote-site Monitoring

Fully Digital Processing for Accurate, Repeatable, Drift-free Operation

▶ Applications

Monitoring and Compliance Checking in Video Distribution and Broadcasting

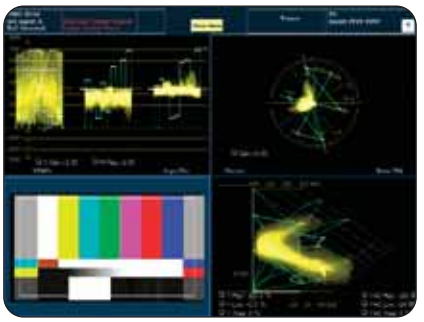
Quality Control in Video Production and Post-production

Equipment Qualification and Troubleshooting in the Installation and Maintenance of Video Facilities and Systems

Tektronix

Enabling Innovation

► Figure 1. Flexible configurations and upgrades.



► Figure 2. CaptureVu can compare captured data and live signal on multiple displays.

► Figure 3. Use FlexVu™ to create the multi-view display that best fits your needs.

Flexible Configurations and Upgrades – Helping You Manage the Digital Transition

To help address the challenges of maintaining both legacy analog and emerging digital video technology during the digital transition, the WFM6100 and the WFM7000 Series offer an exceptionally broad range of options and upgrades. Video monitoring, audio monitoring and measurement options can be added to a previously purchased instrument with a field-installable upgrade. For example, you can purchase a WFM6100 configuration that only monitors composite analog and then add support for SD digital video when your facilities make the transition. If you anticipate a future transition to HD digital technology, you can purchase WFM7000 or WFM7100 configurations without HD support, and then add this capability when your needs change.

CaptureVu – Much More Than "Freezing" a Display

The CaptureVu capability on the WFM6100 and WFM7100 can capture and store the video data from an entire video frame and display this data on waveform, vector, gamut and picture displays. Unlike "freeze" captures, you can compare the live signal to capture data in one kind of display (for example, a waveform display), and then make the same live-to-capture comparison in a different display (such as a vector or picture display).

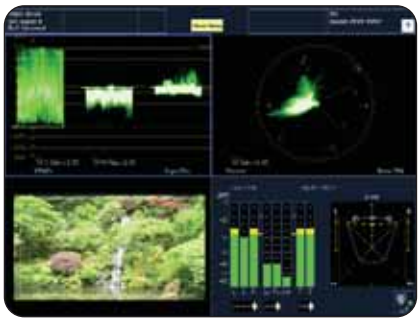
In addition to user-initiated captures, the instrument can do a triggered capture that automatically acquires data on the occurrence of specific faults. Triggered captures are particularly useful for finding intermittent errors and for capturing data about fault conditions at remote sites.

With CaptureVu, you can store a video frame generated by one piece of equipment (for example, a camera), and use this as a reference to configure other equipment to have matching video characteristics. The data can also be stored on a USB memory device and transferred to another instrument.

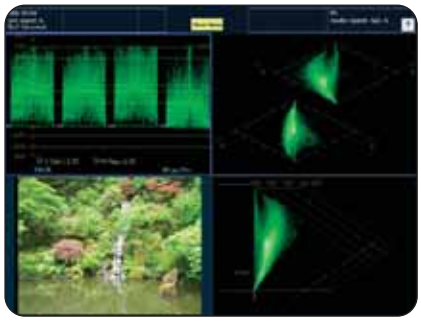
FlexVu™ Display Interface – Four Instruments in One

The WFM6000 and the WFM7000 Series models have an integrated, XGA-resolution display with the Tektronix FlexVu™ user interface. With FlexVu, you can combine separate monitoring and measurement displays four at a time, in almost any combination. Unlike instruments with pre-determined view combinations or more restricted choices, FlexVu lets you create a multi-view display best suited to your specific needs and work practices.

▶ Figure 4. Personalize the menu interface with MyMenu.



▶ Figure 5. Waveform and Vector displays.



▶ Figure 6. Quickly detect Gamut errors using specialized displays.

MyMenu and Presets – Frequent tasks at your fingertips

All models offer the MyMenu capability that lets you create a special menu tailored to your particular needs. MyMenu helps streamline instrument operation by letting you place up to seven of your most frequently used functions in one handy on-screen menu.

Using presets, you can quickly configure the instrument for specific tasks or personal preferences. These instruments can store up to 20 presets organized into four groups. You can label the presets and preset groups for easy identification. Each preset can store a different MyMenu. The presets and MyMenu data can be downloaded to a USB memory device and transferred to another instrument.

Waveform Displays – Quickly Verify and Adjust Critical Signal Parameters

Familiar video waveform displays can show digital video signals in RGB, YPbPr, YRGB or composite formats with flat or low-pass filtering. Waveform displays of composite analog video signals can show NTSC and PAL signals with luma, chroma and luma+chroma filtering. Signal components can be displayed in either parade or overlay mode, and in composite format displays with setup selection. The waveform display has several sweep rates and easy, touch-screen control of vertical gain and horizontal magnification to help you efficiently monitor and measure video waveform parameters. With FlexVu you can see four differently configured waveform displays of the same signal.

Vector, Lightning and SCH Phase Displays – Accurately Control Color Parameters

The vector display offers user-selectable graticules, color targets (75% and 100%) and color axis. The patented Tektronix Lightning display shows luma and chroma amplitudes and lets you verify component timing using a color bar signal. The SCH Phase display helps quickly verify this critical timing parameter of composite analog video signals.

Tektronix-exclusive Gamut Displays – Efficiently Detect and Correct Gamut Problems

The patented Tektronix Split Diamond and Arrowhead gamut displays simplify the process of verifying gamut compliance. The Split Diamond display helps easily identify and correct RGB gamut errors in digital video signals. The Arrowhead display saves time in verifying the gamut compliance of the composite analog video signal generated from a digital video signal. With FlexVu,™ you can simultaneously monitor both gamut displays to quickly gain complete confidence in content compliance throughout the delivery chain. Also, user-selectable gamut thresholds let you tailor these displays, and the associated gamut alarms, to your particular compliance standards.

► Figure 7. Patented Tektronix Timing display.

► Figure 8. Picture display with Closed Caption, Safe area graticules and gamut brightups.

Timing Display – Simplify Plant Timing

The patented Tektronix Timing display makes facility timing easy through a simple graphical representation which shows the relative timing of the input signal (the circle) versus the reference signal (the crosshair).

For proper timing, the circle is centered on the crosshair and changes color from red to green. The display also has numeric readouts of the timing difference relative to the reference signal, showing vertical timing as number of lines and horizontal time difference in µsec.

Picture Displays – Quick Visual Conformation and Precision Content Adjustment

A full-color picture display shows the video content of the monitored input. The instrument can display the picture on the full-screen, or on up to four views in a multiple-view display. For different input formats, the picture display automatically adjusts to show the full image content. The picture display can also show content advisory codes and decoded closed caption data (EIA608 formats) for easy verification of this critical ancillary data. Editors can choose from several Safe Area graticules on the picture display to quickly verify correct placement of graphics, titles or logos. Graticule choices include the Safe Action and Safe Title graticules defined in the SMPTE, ITU and ARIB standards, plus custom, user-definable graticules. Using FlexVu, editors can see two or more pictures with different graticules to verify correct placement for different formats and standards.

You can also select “brightup” conditions that show the location of RGB or composite gamut errors on the picture display. Line and sample brightups show the location of the currently selected line or video data sample.

▶ Figure 9. Alarms, status, quality logistics and logging.

▶ Figure 10. Audio bars and Surround Sound displays.

Alarms, Quality Statistics and Logging – Thorough and Fast Content Verification

All models offer a variety of displays for "status at a glance" signal monitoring and quick, thorough content verification. Using the alarm status display, operators and technicians can quickly detect video faults including gamut, EDH and CRC errors, SDI format problems and many more. The instrument offers several alarm notification methods, including on-screen error icons, audible beep, ground-closure output and SNMP traps.

For verifying and documenting content compliance, the Video Session display shows key status information on the signal plus quality statistics like errored seconds and percentage content with errors.

To support unattended monitoring, and to supply documentation for maintenance records or service level agreements, the instrument logs alarms and other key events (such as format changes). Log entries can be time-stamped with date, time-of-day and time code reference (VITC, ATC or LTC).

All models also offer extensive ancillary data monitoring. This includes monitoring the presence of closed caption content formats defined by EIA608, EIA708 and ARIB standards.

Audio Monitoring - Versatile Tools Help Confirm and Adjust Sound Quality

The WFM6100 and the WFM7000 Series offer several options for monitoring both analog and digital audio.

Available on all models:

- Option DS monitors digital audio, both embedded and AES/EBU inputs
- Option AD monitors analog audio formats and all the digital audio formats included in Option DS

Available on the WFM6100 and WFM7100:

- Option DD monitors and decodes Dolby Digital audio (AC-3) plus the analog and digital audio formats included in Option AD
- Option DDE monitors and decodes Dolby E plus all the audio formats included in Option DD

Options DD and DDE automatically sense Dolby audio formats and place a status message in the appropriate audio bar, eliminating confusion about audio input formats. Dolby status displays offer in-depth review of decoded Dolby metadata.

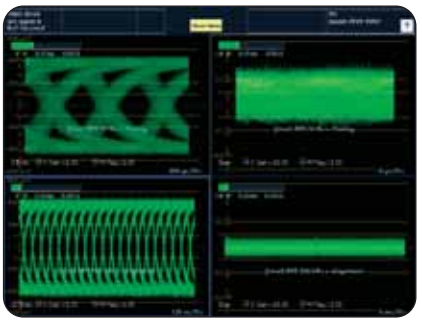
All audio options have an audio bar display that can display up to six audio bars for analog inputs, up to eight audio bars on AES/EBU inputs and embedded audio sources and up to ten audio bars when decoding Dolby Digital and Dolby E formats.

The audio options provide user-selectable scales, meter ballistics and audio level indicators. "In-bar" messages show status and fault conditions for each monitored audio channel, reducing the likelihood of an undetected audio problem.

Audio phase displays include phase correlation meters, a flexible Lissajous display (for any pair of channels) and a multiple-channel "Surround Sound" display that shows audio levels (A-weighted or linear), total sound volume, phantom source locations and the dominant sound position.

The Audio Session display shows audio error conditions (such as parity errors), highest true peak and the number of detected, clips, mutes, over-levels and silences. User-specified threshold values determine over-level and silence conditions and the duration a potential audio problem must persist before the instrument generates an alarm.

In addition to monitoring audio inputs, these options can generate analog or digital audio outputs from the analog or AES/EBU audio inputs. They can also generate audio outputs from embedded audio in the video input, or by decoding Dolby audio inputs, including stereo down-mixes. A convenient front-panel headphone connector lets you listen to any stereo audio output.



► Figure 11. 3-Eye, 20-Eye and jitter waveform.

SDI Signal Measurement and Data Analysis - Resolve the Most Challenging Problems

The WFM6100 and WFM7100 offer options for monitoring and measuring SDI signal parameters:

- For basic SDI signal monitoring, Option EYE has Eye pattern displays, plus readouts of jitter and key cable parameters
- For more complete SDI signal measurement, Option PHY has all the capabilities of the EYE option plus a jitter waveform display and automated Eye parameter measurements

On the WFM6100, Options EYE and PHY measure SD-SDI signal parameters. On the WFM7100, these options measure both SD-SDI and HD-SDI signal parameters. Both the EYE and PHY options can display Eye Patterns in 3-Eye, 10-Eye (SD-SDI) or 20-Eye (HD-SDI) mode. These displays include cursors to manually measure Eye parameters and user-selectable clock bandwidths to help isolate jitter components. Option PHY automatically measures Eye amplitude, rise-time and fall-time.

Both options use a phase demodulation technique with selectable filters to continuously monitor and measure the peak-to-peak amplitudes of timing and alignment jitter.

The phase demodulation approach helps better characterize the random and deterministic jitter in the input signal. An easy-to-interpret jitter gauge augments the numeric jitter readouts. The jitter waveform display available with Option PHY lets engineers examine signal jitter in greater detail.

An SDI signal status display summarizes key signal parameters. This includes signal strength, cable loss and estimated cable length based on the user-selected cable type. With FlexVu,™ you can simultaneously display timing and alignment jitter values, cable parameter measurements and different Eye Patterns to help quickly diagnose and resolve problems related to SDI jitter or cable attenuation.

To help efficiently detect and diagnose errors in digital video data, the WFM6100 and WFM7100 offer Option DAT, containing a color-coded data word display, logic waveforms of the video data and a display of data words in user-specified ancillary data packets.

▶ Figure 12. USB ports and Headphone connector.

Signal Inputs and Outputs, Peripherals, Communication – Convenient Interfaces for Video Systems

The digital video options (Options SD and HD) have two SDI inputs and a switched output of the selected input signal. The analog video option (Option CPS) has two composite analog video inputs with passive loop-though outputs.

The instrument senses the input format and automatically configures the required settings. It will signal a format mismatch if the applied external reference format is not compatible with the input signal.

The audio options (Options DS, AD, DD and DDE) have up to 16 AES/EBU input channels and up to 8 AES/EBU output channels. Those with support for analog audio have up to 12 analog audio inputs and up to 8 analog audio outputs. All audio options can output to the front-panel headphone port.

The front-panel USB port makes it easy to store captured data or instrument settings on a USB memory stick and transfer this information to another instrument.

All models have a 10/100Base-T Ethernet connection and offer remote access and control with a standard Web-browser. You can use this interface to download presets and error logs or print the screen contents for easy record keeping.

For simple remote control, a ground-closure type remote interface can indicate alarm condition or execute instrument presets. An SNMP interface allows easy integration with network management software.

► Characteristics

Video Input and External Reference Formats

WFM6000/7000 Waveform Monitors accept a diverse range of signal formats and external references. The following chart shows all accepted video formats and their compatible external references.

The monitor will automatically detect the signal format and establish the appropriate settings for the various displays.

You can select an expected signal format from the list of supported formats. If the expected format and detected format differ, the instrument will report a format mismatch.

► Supported Input Formats

	Opt. CPS	Opt. SD	Opt. HD	External Reference Inputs												
				Bi-Level Sync		Tri-Level 720p			Tri-Level 1080p		Tri-Level 1080i			1080 SF	
				NTSC	PAL	50 Hz	59.94 Hz	60 Hz	23.98 Hz	24 Hz	50 Hz	59.94 Hz	60 Hz	23.98 Hz	24 Hz
NTSC 59.94 Hz	x			x											
PAL 50 Hz	x				x										
BT601 483i, 59.94 Hz (525)		x		x			x					x			
BT601 576i, 50 Hz (625)		x			x	x					x				
296M 720p, 23.98 Hz			x	x(/5)			x(/5)		x			x(/5)		x	
296M 720p, 24 Hz			x					x		x			x(/5)		x
296M 720p, 25 Hz			x		x	x					x				
296M 720p, 29.97 Hz			x	x			x					x			
296M 720p, 30 Hz			x					x					x		
296M 720p, 50.00 Hz			x		x	x					x				
296M 720p, 59.94 Hz			x	x			x					x		x	
296M 720p, 60.00 Hz			x					x		x			x		x
240M 1035i, 59.94 Hz			x	x			x					x			
240M 1035i, 60 Hz			x					x		x(/5)			x		x
274M, 1080i, 50 Hz			x		x	x					x				
274M, 1080i, 59.94 Hz			x	x			x					x			
274M, 1080i, 60 Hz			x					x		x(/5)			x		x
274M, 1080p, 23.98 Hz			x	x(/5)			x(/5)		x			x(/5)		x	
274M, 1080p, 24 Hz			x					x		x			x(/5)		x
274M, 1080p, 25 Hz			x		x	x					x				
274M, 1080p, 29.97 Hz			x	x			x					x			
274M, 1080p, 30 Hz			x					x					x		
274M, 1080sf, 23.98 Hz			x	x(/5)			x(/5)		x(/2)			x(/5)		x	
274M, 1080sf, 24 Hz			x					x		x(/2)			x(/5)		x
274M, 1080sf, 25 Hz			x		x	x					x				
274M, 1080sf, 29.97 Hz			x	x			x					x			
274M, 1080sf, 30 Hz			x					x					x		

Serial Digital Video Interface

Inputs –
2, only one active at a time. The inputs autodetect between HD and SD signals.
Input Type – 75 Ω BNC, internally terminated.
Input Level – 800 mV_{Pk-Pk}, ±10%.
Return Loss – >15 dB from 1 MHz to 1.5 GHz.
Receiver Equalization Range – Typical.
SD: to 250 m of type 8281 cable.
HD: to 100 m of type 8281 cable.

Composite Video Interface (Option CPS)

Inputs –
Two, only one active at a time. Input Type – Passive loopthrough BNC, 75 Ω compensated.
Input Dynamic Range – ±6 dB.
Maximum Operating Amplitude –
–1.8 V to +2.2 V, DC + peak AC.
Absolute Maximum Input Voltage –
–6.0 V to +6.0 V, DC + peak AC.
DC Input Impedance – 20 kΩ, nominal.
Return Loss –
>40 dB to 6 MHz, power on.
>40 dB to 10 MHz (typical).
>46 dB to 6 MHz (typical).
35 dB, power off (standard amplitude video).
Crosstalk Between Channels – >60 dB to 6 MHz.
Loopthrough Isolation – >70 dB to 6 MHz.
DC Offset with Restore Off – <7 mV. DC Restore 50 Hz and 60 Hz Attenuation – Fast Mode >95% attenuation, Slow Mode <10% attenuation, <10% peaking. Slow mode Typ peaking 8% at 50 Hz and 60 Hz. Lock Range – ±50 ppm remains locked.

External Reference

Input Type –
Passive loopthrough BNC, 75 Ω compensated.
DC Input Impedance – 20 kΩ, nominal.
Return Loss –
>40 dB to 6 MHz, >35 dB to 30 MHz.

User Interface

1024 (H) x 768 (V) pixels LCD.
With FlexVu,™ Touchscreen and backlit buttons.

Serial Digital Waveform Vertical Characteristics

Vertical Measurement Accuracy –
At 1X, ±0.5%; at 5X, ±0.2% of 700mV full-scale mode.
Gain – X1, X2, X5 and X10.
Frequency Response –
HD:
Luminance Channel (Y): 50 kHz to 30 MHz ±0.5%.
Chrominance Channels (Pb,Pr): 50 kHz to 15 MHz ±0.5%.
SD:
Luminance Channel (Y): 50 KHz to 5.75 MHz ±0.5%.
Chrominance Channels: 50 KHz to 2.75 MHz ±0.5%.

Analog Composite Waveform Vertical Characteristics (Option CPS)

Vertical Measurement Accuracy –
±1% all gain settings.
Gain – X1, X2, X5 and X10.
Frequency Response – Flat to 5.75 MHz, ±1%.

Waveform Horizontal Sweep Characteristics

Sweep Timing Accuracy –
±0.5%, all rates, fully digital system.
Sweep Linearity –
0.2% of time displayed on screen, fully digital system.

Audio Characteristics (Optional Capability)

Level Meter Resolution –
0.056 dB steps at 30 dB scale, from full scale to –20 dB FS.
User-selectable Scales –
Analog: dBu, Din, Nordic, VU, IEEE, PPM and user-definable.
Digital: dBFS and user-definable.
Meter Ballistics –
Selectable from true peak, PPM type 1, PPM Type 2 and Extended VU.
Defined/Programmable Level Detection –
Mute, clip user-programmable silence, over.
Level Meter Accuracy Over Frequency –
+0.1dB from 20 Hz to 20 kHz 0 to –40 dBFS sine wave, Peak Ballistic mode (except for within 5 Hz of some submultiples of the sampling frequency).

Digital Audio (Options DDE, DD, AD and DS)

AES Inputs –
Two sets with 8 Channels each, 32 to 192 kHz, 24-Bit, meets requirements of AES 3-ID and SMPTE 276M-1995.
AES Input Characteristics –
BNC, 75 Ω terminated, unbalanced, 0.2 V to 2 V_{Pk-Pk}.
AES Input Return Loss –
25 dB Relative to 75 Ω from 0.1 to 6 MHz Typ better than 30 dB to 24 MHz.
AES Outputs –
Up to 8 channels, AES3-ID Output, 48 kHz, 20-Bit for embedded, 48 kHz, 24-Bit for analog to AES, for AES to AES loopthrough, output format equals input format. Meets requirements of SMPTE 276M-1995 (AES 3-ID). For decoded Dolby Digital, output is 24-Bits at a rate of 32, 44.1 or 48 kHz for any one decoded pair. For decoded Dolby E, the output is 24-Bits at 48 KHz, or 47.952 kHz for up to 4 pairs.
AES Output Characteristics –
BNC, 75 Ω terminated, unbalanced, 0.9 V to 1.1 V_{Pk-Pk} into 75 Ω.
AES Output Return Loss –
>25 dB relative to 75 Ω from 0.1 to 6 MHz.
AES Output Jitter –
3.5 ns, peak, typical, with 700 Hz high-pass filter per AES specification.

Analog Audio (Options DDE, DD and AD)

Analog Inputs – Two sets of 6 channels each.
Analog Input Characteristics –
Balanced, unterminated via rear panel connector.
Cross Talk – <90 dB.
Input Impedance – 24 kΩ, typical.
Analog Outputs – 8 channels.
Analog Output Characteristics –
Balanced, un-terminated via rear panel connector.
Maximum Output Level –
Balanced: +24 dBu ±0.5 dB.
Digital Input to Analog Output Gain Accuracy Over Frequency –
±0.5 dB, 20 Hz to 20 kHz, 0 to –40 dBFS, 20- or 24-Bit inputs.
Analog Input to Analog Output Gain Accuracy Over Frequency –
+0.8 dB, 20 Hz to 20 kHz, 24 dBu to –16 dBu.
Output Impedance – 50 Ω, nominal.

Power

100 to 240 VAC ±10%, 50/60 Hz.

Physical Characteristics

Dimensions	**mm**	**in.**
Height	133.4	5.25
Width	215.9	8.5
Depth (front to back including handles and BNCs)	460.4	18.125
Weight	**kg**	**lbs.**
Net	5.5	12

► Ordering Information

WFM Models and Options

Must select one and then desired options.

WFM7100

HD-capable performance monitor.

WFM7000

HD-capable basic monitor.

WFM6100

SD-capable performance monitor.

Video Options

Must choose at least one when ordering any model.

CPS – (Available for all models).
Adds support for Composite Analog Monitoring;
2 Composite Analog Inputs.

SD – (available for all models).
Adds support for Standard Definition Monitoring;
2 SD SDI Inputs.

HD – (available for WFM7000 and WFM7100).
Adds support for High Definition inputs.

Audio Options

If audio test is required, select only one option (the advanced options include the features of the basic ones).

DS – (Available for all models).
Adds support for Digital Audio Monitoring in embedded and AES/EBU formats.

AD – (Available for all models).
Adds support for Digital Audio monitoring (embedded and AES/EBU inputs) and for Analog Audio Monitoring.

DD – (Available for WFM6100 and WFM7100).
Adds support for Dolby Digital (AC-3) decode, Digital Audio (embedded and AES/EBU inputs) and for Analog Audio Monitoring.

DDE – (Available for WFM6100 and WFM7100).
Adds support for Dolby E decode, Dolby Digital (AC-3) decode, Digital Audio (embedded and AES/EBU inputs) and for Analog Audio Monitoring. Supports digital audio formats with up to eight channels.

Eye/Jitter and Data Analysis Options

SD or HD option required for these options.

EYE – (Available for WFM6100 and WFM7100).
Adds eye pattern and basic jitter measurement. The EYE option enables the display of Eye Patterns in 3-Eye, 10-Eye (SD) or 20-Eye (HD) modes and cable length measurements (including source signal level and cable loss).

PHY – (Available for WFM6100 and WFM7100).
Includes the capabilities of EYE option plus advanced physical layer measurements; jitter waveform and automated eye measurements.

DAT – (Available for WFM6100 and WFM7100).
Adds data analysis capabilities. Allows for logic-level view of video and audio digital data stream and ANC data extraction.

WFM7100

Base unit can be equipped with options for SD, HD and composite analog video advanced monitoring and measurement.

Video Options

Must choose at least one when ordering.

CPS – Composite Analog Monitoring.

SD – Standard Definition Monitoring.

HD – High Definition Monitoring.

Audio Options

DS – Audio Monitoring for AES/EBU formats.

AD – DS capabilities plus Analog Audio Monitoring.

DD – AD capabilities plus Monitoring for Dolby Digital (AC-3) decode.

DDE – DD capabilities plus Dolby E decode monitoring.

Eye/Jitter and Data Analysis Options

EYE – Eye pattern and basic jitter measurement.

PHY – EYE capabilities plus advanced physical layer measurements.

DAT – Data analysis capabilities.

WFM7000

Base unit can be equipped with options for SD, HD and composite analog video monitoring.

Video Options

Must choose at least one when ordering.

CPS – Composite Analog Monitoring.

SD – Standard Definition Monitoring.

HD – High-definition Monitoring.

Audio Options

DS – Audio Monitoring for AES/EBU formats.

AD – DS capabilities plus Analog Audio Monitoring.

WFM6100

Base unit can be equipped with options for SD and composite analog video advanced monitoring and measurement.

Video Options

Must choose at least one when ordering.

CPS – Composite Analog Monitoring.

SD – Standard Definition Monitoring.

Audio Options

DS – Audio Monitoring for AES/EBU formats.

AD – DS capabilities plus Analog Audio Monitoring.

DD – AD capabilities plus Monitoring for Dolby Digital (AC-3) decode.

DDE – DD capabilities plus Dolby E decode monitoring.

Eye/Jitter and Data Analysis Options

EYE – Eye pattern and basic jitter measurement.

PHY – EYE capabilities plus advanced physical layer measurements.

DAT – Data analysis capabilities.

Power Options

Opt. A0 – North America power.

Opt. A1 – Universal Euro power.

Opt. A2 – United Kingdom power.

Opt. A3 – Australia power.

Opt. A4 – 240 V, North America power.

Opt. A5 – Switzerland power.

Opt. A6 – Japan power.

Opt. A10 – China power.

Opt. A99 – No power cord or AC adapter.

Language Options

L0 – English manual.

L5 – Japanese manual.

L7 – Simplified Chinese manual.

Service Options

Opt. CA1 – Single Calibration.

Opt. C3 – Calibration Service 3 Years.

Opt. C5 – Calibration Service 5 Years.

Opt. D1 – Calibration Data Report.

Opt. D3 – Calibration Data Report 3 years (with Option C3).

Opt. D5 – Calibration Data Report 5 years (with Option C5).

Opt. R3 – Repair Service 3 years (including warranty).

Opt. R5 – Repair Service 5 years (including warranty).

Other Options

Opt. NRC – No portable or rack cabinet.

Opt. 01 – Portable cabinet.

Opt. 02 – Dual rack cabinet (same as WFM7F05 option NN).

Opt. 05 – Dual rack cabinet (same as WFM7F05 option ON).

Opt. 06 – Filler panel for dual rack cabinet.

Opt. 07 – Drawer for dual rack cabinet.

Opt. 62 – Analog audio breakout cable.

Optional Accessories

WFM7F02 – Portable cabinet with handle, feet, tilt bail and front panel cover.

WFM7F05 – Dual rackmount for WFM6100, WFM7000, WFM7100, 1700 Series, WFM601 Series, WFM700 Series, 760A and 764.

071-0915-xx – Service Manual for the WFM6100 and the WFM7000 Series products.

Post-sale Upgrades

WFM61UP – Upgrade kit for WFM6100. Upgrade by ordering WFM61UP with appropriate options: CPS, SD, DS, AD, DD, DDE, EYE, PHY, DAT.

WFM70UP – Upgrade kit for WFM7000. Upgrade by ordering WFM70UP with appropriate options: CPS, SD, HD, DS, AD.

WFM71UP – Upgrade kit for WFM7100. Upgrade by ordering WFM71UP with appropriate options: CPS, HD, SD, DS, AD, DD, DDE, EYE, PHY, DAT.

Extended Service Offerings

See next page.

Extended Service Offerings

WFM6100

WFM6100-CA1 – Single Calibration.

WFM6100-R1PW – Repair Service 1 year (post warranty).

WFM6100-R2PW – Repair Service 2 years (post warranty).

WFM6100-R3DW – Repair Service 3 years (includes warranty).

WFM6100-R5DW – Repair Service 5 years (includes warranty).

WFM7000

WFM7000-CA1 – Single Calibration

WFM7000-R1PW – Repair Service 1 year (post warranty).

WFM7000-R2PW – Repair Service 2 years (post warranty).

WFM7000-R3DW – Repair Service 3 years (includes warranty).

WFM7000-R5DW – Repair Service 5 years (includes warranty).

WFM7100

WFM7100-CA1 – Single Calibration.

WFM7100-R1PW – Repair Service 1 year (post warranty).

WFM7100-R2PW – Repair Service 2 years (post warranty).

WFM7100-R3DW – Repair Service 3 years (includes warranty).

WFM7100-R5DW – Repair Service 5 years (includes warranty).

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Our most up-to-date product information is available at:
www.tektronix.com

Product(s) are manufactured in ISO registered facilities.

Product(s) complies with IEEE Standard 488.1-1987, RS-232-C, and with Tektronix Standard Codes and Formats.

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