

**WFM8200 and WFM8300
Waveform Monitors
Release Notes**

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Release Notes

This document describes the key features and known limitations of software version 2.5.X of the WFM8200 and WFM8300 Waveform Monitors. Some of these notes apply only to instruments with specific options installed. A list of available instrument options is available at www.tektronix.com.

Key New Features and Options

Software version 2.5.X adds the following capabilities and new options:

- Additional Support for 3D Transports Field Interlaced and Top-Bottom.
- New Tally mode the Ground Closure Remote feature.
- Updates the Audio Loudness algorithms to the latest ITU-R BS.1770-2 spec revisions.
- New video format support (720p 50 / 59.94 / 60) for built-in color bar and pathological signal generator.
- New 3G Level B 1080p RGB (4:4:4) format support for Out-of-Service A/V Delay.
- New support measuring Timecode discontinuities and Jog/Shuttle detection.
- New audio output mode in 16-channel embedded audio monitoring mode.

Key Features and Benefits

Video/Audio/Data Monitor and Analyzer.

- The all-in-one WFM8300 and WFM8200 platforms come standard with auto-detection of HD/SD-SDI and multiple Dual Link video formats (including RGB and XYZ color space support).
- Optional capabilities include four SDI input monitoring (Option 2SDI), 3G-SDI (Level A and Level B) format support (Option 3G), Composite Analog Video support (Option CPS), Analog and Digital Audio (Option AD), and Dolby E, Dolby Digital, Dolby Digital Plus Audio (Option DPE) decoding and monitoring.
- The WFM8300 model comes standard with Simultaneous Input Monitoring capability, ANC Data Inspector, and numerical/graphical display of A/V Delay for analog, digital (with Option AD), and Dolby audio formats (with Option DPE).
- The WFM8300 model comes standard with the new Tektronix-trademarked SyncVu feature allowing you to identically configure two inputs at the same

time when the instrument is in simultaneous input mode. SyncVu is added to the WFM8200 with Option 3D.

- The WFM8300 model comes standard with Stereoscopic 3D Video support to support 3DTV. Stereoscopic 3D Video support is added to the WFM8200 with Option 3D.

Superior Physical Layer Signal Integrity Analyzer.

- High-performance real-time eye pattern display, jitter measurements, and patented cable length measurement (WFM8300 Option PHY or WFM8200 Option EYE).
- Most comprehensive eye pattern measurements including eye amplitude, rise/fall time, and overshoot/undershoot measurements as well as Tektronix jitter waveform display (WFM8300 Option PHY only).
- Field-upgradeable HD/SD-SDI eye pattern input module to full 3G-SDI and HD/SD-SDI support with the purchase of an upgrade key (WFM830UP Option 3G or WFM820UP Option 3G).

Black Picture and Tektronix-patented Frozen Picture Detection.

Tektronix-patented Timing and Lightning Displays Facilitate Accurate Adjustment of Critical Plant Timing.

New Tektronix-patented Spearhead Display and Luma Qualified Vector (LQV™) Display Facilitate Precise Color Adjustment for Post Production Applications (Option PROD).

Most Comprehensive Audio Monitoring.

- Multi-channel Surround Sound Display.¹
- Flexible Lissajous Display (Option AD or Option DPE).
- Audio Loudness monitoring tools include a loudness meter, which provides indications of audio loudness levels, and a loudness session display, which tracks and plots audio loudness values over a given, user selectable display window. You can also store loudness measurement values to USB or through the Web interface. (Option AD or Option DPE).
- Comprehensive Dolby Metadata Decode and Display including VANC Metadata (Option DPE).
- User-selectable Dolby E Guard Band limits with intuitive Dolby E Guard Band meter (Option DPE).

¹ Audio Surround Sound Display licensed from Radio Technische Werksütten GmbH and Co. KG (RTW).

Most Comprehensive ANC Data Monitoring.

- Simultaneous CEA708/608 Closed Caption monitoring; Teletext and OP47 subtitle monitoring.
- Detect and decode ANC data including AFD, WSS, Video Index, TSID, V-Chip, Broadcast Flag/CGMS-A, VITC, LTC, and ANC TC.
- ARIB STD-B35/B37/B39, TR-B22, and TR-B23 support.

Most In-depth Digital Data Analysis Helps Quickly Resolve Difficult Content Quality and Reliability Issues (Standard on WFM8300; Option DAT for WFM8200).**Unmatched Display Versatility.**

- FlexVu™, the most flexible four-tile display, tailors to various application needs to increase productivity.
- Standard and User-definable Safe Area Graticules facilitate editing and format conversions tasks, reducing the need for reworks.
- Active Format Description (AFD) detect, decode, and automatically adjusted graticule on picture display enable easy identification of aspect-ratio related issues.

Unmatched Usability.

- CaptureVu® advanced video frame data capture simplifies troubleshooting and equipment setup.
- 32 instrument presets for quick recall of commonly used configurations tailored to engineers or operators.
- Front-panel USB port enables easy transfer of presets, captured video frame data, screenshots, and error log.
- Front-panel headphone port enables quick verification of selected audio pair.
- Intuitive menu structure and context-sensitive help.
- Extensive alarms, status reporting, and error logging.
- Bright, crisp, high-resolution LED backlight display.
- SNMP and Ethernet remote interface capabilities and GPI control facilitate centralized monitoring and control.

General Limitations

This release has the following general limitations. Topics are listed in alphabetical order.

Dolby Operation With Option DPE

- For listening mode selections other than FULL or EX, clipping may occur. For example, if the Dolby Digital input is 3/2 with full-scale test tones and Stereo listening mode is selected, clipping will likely occur. To avoid clipping, choose either compression mode, Dialnorm+Line or Dialnorm+RF, in CONFIG > Audio Input/Outputs > Dolby D (AC-3) Setup > Dialnorm&DynRng.
- When in Channel Mode 2/2 and Phantom Listening Mode, the Surround Sound display (AUDIO tile) shows the Ls and Rs levels attenuated by 3 dB instead of displaying at full amplitude for this channel mode/listening mode combination.
- When in Channel Mode 3/0 and 3-Stereo Listening Mode, the Surround Sound display (AUDIO tile) shows the C level attenuated by 3 dB instead of displaying at full amplitude for this channel mode/listening mode combination.
- The Dolby E/Dolby Digital decoder will pass through PCM audio at 48 kHz frequencies or less. Audio frequencies above this will not pass through and may cause noise or distortion on both the bars and the audio outputs. If PCM audio at frequencies greater than 48 kHz is used, choose either AES A or B as the input source.

Firmware Update with any Dolby Option

When updating the instrument firmware to 2.3.x and a Dolby Option is installed, do not cycle the instrument power until the Power-on diagnostic screen is cleared and the User interface is fully running. If the Instrument Fault LED is lit (red Power/Standby button), an additional instrument reboot is required. This may be performed by pressing the Power/Standby button. When the upgrade is complete, the Dolby firmware version will be 2.1.2.1. You can confirm the version on your instrument from the CONFIG > Utilities > SW Version menu.

Incompatible Operation

When applying 3 Gb/s signals to any instrument that does not support the signal formats, the unit indicates that the signal input is not standard. Applying unsupported video signals may result in a frozen PICT display.

SNMP Messages

Commands returning the audCurOutput OID return the string “Embed 7 & 8” for embedded audio channel pairs 9 & 10, 11 & 12, 13 & 14, and 15 & 16.

Sweep

The waveform style must be set to Overlay to get 2 line or 2 field sweep.

- USB**
- Always press the MAIN button and select USB Status to safely “Unmount” and remove the USB memory device from the USB port. You risk permanent loss of any files saved on the USB device if you do not use the “Unmount” feature.
 - If there are more than 32 files saved in a Capture or Presets directory on the USB device, you can only view the first 32 files.

Waveform Mode Cursor for XYZ Color Space

The voltage cursors are given in millivolt scale, but the XYZ color space is referenced in hex scale. To see the values for 000 to FFF, change the graticule settings to max and percent.

Web Browser

- The Web browser applet will not resize when running in some versions of the Netscape browser and in some non-Windows Operating Systems (for example, Solaris).
- We recommend using Java Runtime Engine (JRE) version 1.6 or above.