

Release Notes



WFM700HD, WFM700A, & WFM700M Waveform Monitors

061-4247-03

This document applies to firmware version 1.3.X.

Warning

The servicing instructions are for use by qualified personnel only. To avoid personal injury, do not perform any servicing unless you are qualified to do so. Refer to all safety summaries prior to performing service.

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Release Notes



CAUTION. When you download new firmware from the www.tektronix.com web site, you will receive an updated Release Notes document and WFM700 user manual in PDF file format. Be sure to use the firmware upgrade procedure in the updated WFM700 user manual to avoid firmware installation problems.

These release notes provide the following information:

- Descriptions of the new features released with the firmware version covered by this document (firmware version is listed on the title page).
- Descriptions of problems or behaviors that you might encounter while using the waveform monitor and explanations of how you can minimize or eliminate the impact on instrument operation.

New Features with Firmware Version 1.3.x

The following new feature enhancements were implemented with firmware version 1.3.x:

Input Format Configuration. You can use the Input Config submenu of the Configure menu to set the expected signal format on the external reference input and also on the video signal inputs.

You can use the General Alarms submenu of the Configure menu to enable an alarm to inform you when there is a mismatch between the expected format of the external reference signal and the actual format of the external reference signal.

WFM700M Hardware Adjustments. There are seven hardware adjustments and one performance test that can be enabled using the Hardware Settings submenu of the Configuration menu. These menu selections enable special instrument setups, which allow service personnel to adjust internally stored calibration constants affecting WFM700M measurement accuracy.



CAUTION. To prevent a misadjustment of the instrument, do not use the adjustment menu selections in the Hardware Settings submenu without referring to the WFM700HD, WFM700A, & WFM700M Waveform Monitors Service Manual (Tektronix, Inc. part number 071-0915-XX).

New Features with Firmware Version 1.2.x

NOTE. *The following new feature enhancements were implemented with firmware version 1.2.x and are included in firmware version 1.3.x:*

10% LED Illumination. You can enable or disable a constant 10% illumination of the front-panel button LEDs using the Button Illumination soft key in the Display menu. This selection is useful when the instrument is being operated in a darkened room.

Under normal operation, the front-panel LEDs are fully illuminated only when the associated button is selected. Use this menu selection to illuminate all of the LEDs at a 10% level. The LEDs will still illuminate fully when the associated button is selected.

Vector Compass Rose Display. Using the Graticule Setup selection in the Configuration menu, you can enable or disable the compass rose graticule and/or the I/Q axis graticule for component vector displays.

You can select between a component vector graticule or a pseudo-composite vector graticule using the Graticule soft key in the Vector menu. The pseudo-composite vector graticule provides softkeys for selecting between 0% / 7.5% setup and for NTSC / PAL vector target representations.

720p, 24 Hz Signal Format Handling. The waveform monitor will now automatically detect and recognize the following signals conforming to SMPTE 296M:

- 720p, 24 Hz
- 720p, 23.98 Hz

Mag Sweep Enhancement. When operating in 2 Line sweep mode, MAG factors are now chosen that optimize the evaluation of the horizontal blanking interval. To utilize this feature, perform the following steps:

1. Ensure that the waveform display is in OVERLAY mode.
2. Select 2LINE sweep.
3. Use the horizontal position control to adjust the waveform so that the blanking interval is aligned with the horizontal graticule indicating the center of the screen.
4. Select MAG sweep.

Problems and Behaviors

The following problems and behaviors are organized by the affected operating mode(s) in the instrument:

General Topics

The following items apply to multiple operating modes:

Remote Port. The Remote Port feature is not supported in this release. Do not connect other equipment to the Remote Port.

Display Intensity. Display Intensity dims in some modes. Use the Trace Settings in the Display menu to increase the display intensity.

Blank Screen at Power Up. It is normal for the display to be blank for 25 to 40 seconds after you turn on the instrument. If the display is still blank after the normal completion of the power-on sequence, cycle power to achieve normal operation.

Cursor Topic

The following item applies to the measurement cursors:

Overlay / 2 Line Mode. The location of the time cursors may shift slightly relative to the waveform when you switch between normal and Mag in Line or 2 Line mode. However, the relationship between the two time cursors is accurate in either mode. Be sure to line up both cursors in the same mode.

The Mag setting does not affect the voltage cursors.

External Reference Topics

The following items apply to using an external reference signal:

No Valid Signal Present. False Vector Display. If external reference is selected and there is no valid external reference signal, the wrong waveform is displayed when you switch between Vector and Lightning modes. Be sure to supply a valid external reference signal when the input is externally referenced.

Timing Offset. Some standards may not have zero timing shift when switching between internal and a correctly timed external reference.

Freeze Topics

The following items apply to using the Freeze function:

Ghost Images. In Picture and Thumbnail mode, some Freeze operations leave ghost images. To clear these images, select Delete Capture from the Freeze menu or restore the factory preset from Preset menu.

Vector Mode. In Vector mode, Freeze offsets the image to the left by several pixels.

Display Color. If the waveform trace color is white when a capture is completed, the live waveform color turns to green and remains green until you press a major mode button.

Vector Topic

The following item applies to the Vector operating mode:

Gain. In Vector mode, when switching between X1 and X5 gain with a variable gain above 2.8, the signal or graticule magnification may be incorrect. This problem does not occur with variable gain settings under 2.8 or with X10 gain. To correct this problem, select X10 gain and then switch to X1 or X5 gain.

Waveform Topic

The following item applies to the Waveform operating mode:

Parade Mode Display with MAG On (720p, 24 Hz / 23.98 Hz Signals Only). In the Waveform (Parade mode) display with MAG turned on, when horizontally scrolling between the displayed components of a 720p 24 Hz / 23.98 Hz signal, the waveform will shift horizontally as you scroll through the horizontal blanking interval. This shift will appear in the following two cases:

- When the color space display mode is set to YRGB
- When EAV/SAV stripping is turned off and 2 or more paraded components are selected (Y-Pb, R-B, etc.).

For example, with the YRGB components displayed, as you scroll from the Y component to the R component, the leading edge of the R display will suddenly appear (about 1/4 of the screen width from the right edge of the display). Scrolling from the R component to the Y component will produce the same effect on the left side of the screen.