

WFM 300A Component/Composite Waveform Monitor

Features And Benefits

- Menu Selectable Electronic Graticules
- Component and Composite Waveform Display
- Lightning Display for Equipment Setup and Monitoring
 - Bowtie Display for System Timing
- Menu Selectable Component Format Options
- Menu Selected 625/50 or 525/60 Configuration
- Separate GBR and Composite Picture Monitor Outputs
 - Front Panel User Recalls for Fast Operation
- UL, CSA, ANSI/ISA, IEC, FCC and 89/336/EEC Approved

Applications

- Color Gamut Violation Indication
- Component/Composite Waveform Monitoring in Broadcast and Post Production Facilities

The WFM 300A is a comprehensive component television signal monitor with important features to monitor associated composite signals. It is designed specifically for signal evaluation and equipment alignment in production suites using RGB, Betacam or MII component formats. In addition, composite (NTSC or PAL) waveforms existing in the facility may be monitored with the WFM 300A and composite vectors displayed on a companion 1720 Series composite vectorscope.

The WFM 300A provides a full set of component monitoring features. Its innovative and unique Lightning display allows accurate adjustment of component equipment to replay Betacam or MII format tapes without a requirement for special test signals. Off-tape color bars provide all necessary information to quickly set the playback recorder setup, video gain, chroma and Y/C delay for accurate reproduction. All of these recorder adjustments are accomplished while viewing one convenient, easy-to-interpret display. Electronic graticules for the various component formats used throughout the world are selected from an on-screen menu.

The traditional parade display of the three component signals provides side-by-side comparison. In addition, any combination of the three signals can be overlaid for accurate comparison. A composite signal may also be compared to the component luminance signal. Three sweep rates (1 line, 2 lines and 2 fields) are provided. Both horizontal and vertical magnification can be applied for detailed inspection of the signals being observed.

A component vector mode, useful for estimating color hue and saturation values, provides a familiar color bar vector display of color difference signals.

The Bowtie mode uses the Tektronix Bowtie timing test signal from component test signal generators, allowing precise timing of three wire component television systems. This utilizes a channel 1 minus channel 2 and 3 mode to provide a side-by-side differential comparison (1-2 and 1-3) of all three channels.

In addition to a luminance filter, which provides a smooth roll-off of chroma components in a composite signal, the WFM 300A provides a differentiated step filter for measurement of luminance non-linearities in component signal channels.

Two separate picture monitor outputs are provided, one for the composite PAL or NTSC input signal and one GBR set for the component input signal. All color difference format component input signals are transcoded to GBR using one of two plug-in resistor matrixes supplied with the WFM 300A. The valid GBR gamut limit is monitored to ensure the operator is warned if a combination of signals will not be valid when later encoded into PAL or NTSC composite format. Front panel LEDs indicate whether positive or negative gamut limit has been exceeded and the operator may enable a flashing on-screen indication of the offending area on the picture monitor.

