Component/Composite Waveform Monitor

WFM300A

Dual input display of composite and component Y-channel color bar signals.

CHARACTERISTICS

Vertical Deflection System

Frequency Response -
1 V Full Scale: 50 kHz to 6 MHz within 2% of response at 50 kHz.
X5 Gain: 50 kHz to 5 MHz within 2% of response at 50 kHz.
Diff'd Step Filter: ≥-20 dB at 14 kHz and 2 MHz.
Luminance Filter: >-25 dB at 3.58 and 4.43 MHz.

Transient Response -
1 V Full Scale; Pulse-to-bar 0.99:1.00 to 1.01:1.00.
Ringing and Overshoot: ≤2%.

Tilt - ≤1%.

Variable Gain Range - 1 V Full Scale; Input signals between 0.7 V and 2.0 V can be adjusted to 1.0 V display.

Deflection Accuracy - 1 V within 2% with 1 V input.

DC Restoration

Attenuation of 50 Hz on Input Signal - ≤20%.

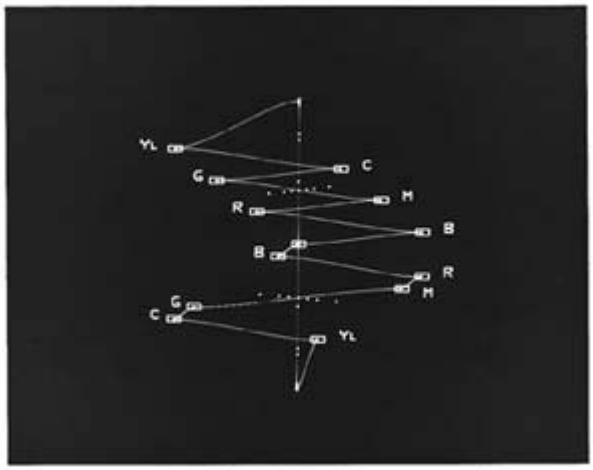
Blanking Level Shift with 10% to 90% APL Change - ≤1%.

Inputs

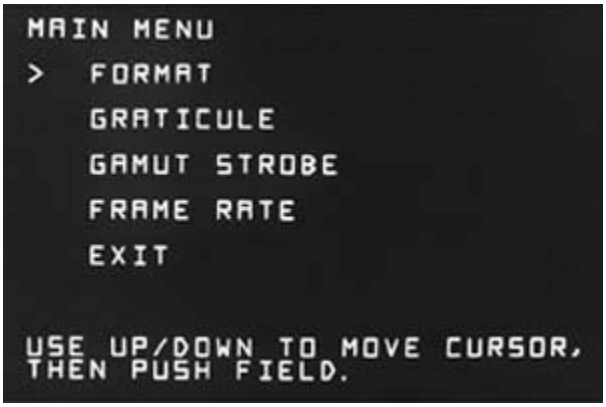
Component Channels 2, 3 and External Reference - Return Loss (75 Ohm) at least 40 dB from 50 kHz to 6 MHz.

Composite Channel - Return Loss (75 Ohm) at least 30 dB from 50 kHz to 6 MHz.

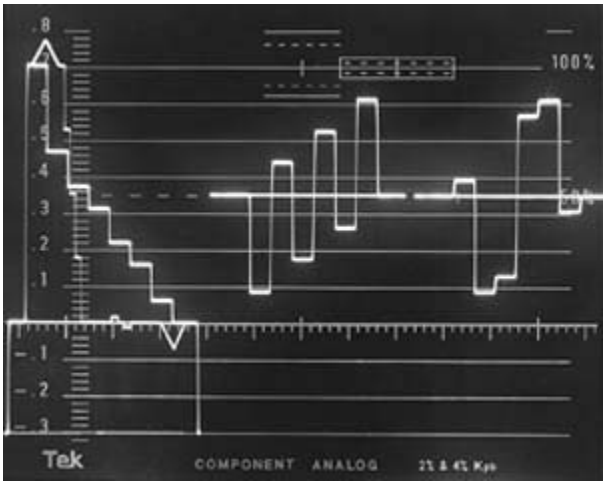
Lightning display allows monitoring of important component parameters using just color bars.



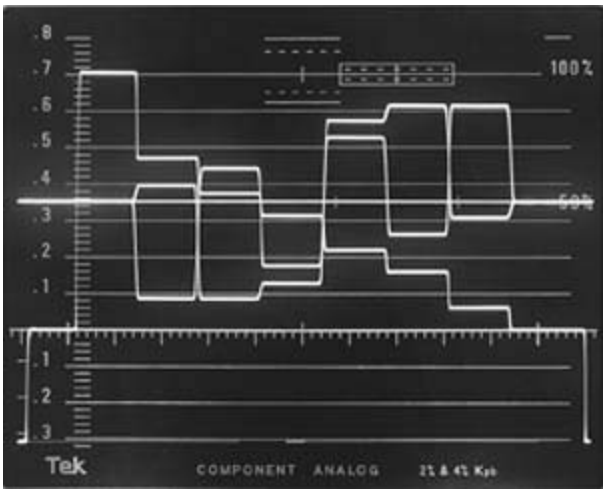
Instrument is configured to the desired application through on-screen menus.



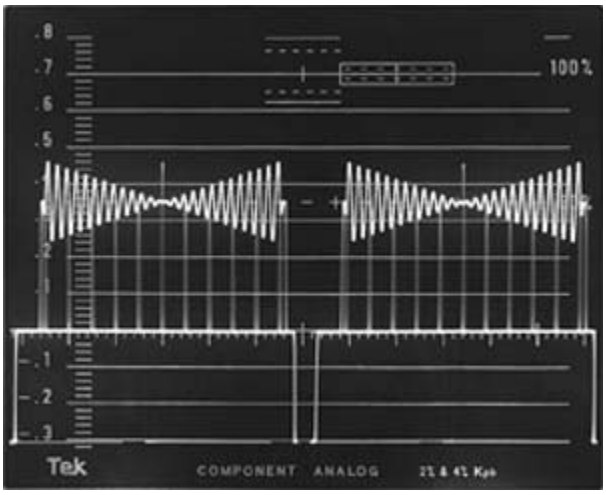
Component Parade display.



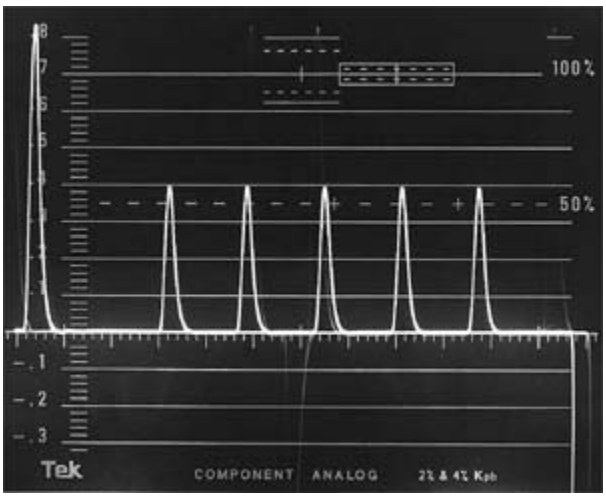
Component Overlay display.



Bowtie display of Inter-channel Timing Error.



Luminance Linearity display.



Cross Talk Between Channels - >46 dB isolation between channels.

Loop-through Isolation -
>60 dB isolation between channels.

Maximum Input Level for Normal Operation:
Component channels. 2, 3 and Composite. ±2 V (DC + peak AC).

External Reference - +2 to -4 V peak AC (compatible with composite sync).

Horizontal Deflection System

(Waveform and Parade Mode) - Sweep will occur in all sweep rate settings with or without a reference signal.

Synchronization - Sweep will synchronize to sync amplitude of 0.3 V_{p-p} ±6 dB.

2 FLD Sweep Repetition Rate - Equal to frame rate of selected reference.

2 FLD MAG (Magnification) - Approx. X20.

1 LINE Sweep Repetition Rate - Equal to line rate of selected reference.

2 LINE Sweep Repetition Rate - Equal to half line rate of selected reference.

Timing Accuracy -
1 µs/div: Within 2%.
0.2 µs/div: Within 2%.

Parade Mode Sweep Repetition Rate - Field or line.

Vector Mode

Vertical Bandwidth - 900 kHz ±100 kHz.

Horizontal to Vertical Bandwidth Matching - No eye opening at 500 kHz or 2 MHz.

Vertical Gain Accuracy - ±1%.

Horizontal Gain Accuracy - ±1%.

Electronic Graticule Accuracy - ±1%.

Bowtie Mode

Common Mode Rejection Ratio - >40 dB.

Calibration - Calibrator accuracy within 1%.

Transcoder

Accuracy - Within 1%.

GBR Outputs - Impedance 75 Ohm nominal Back porch clamped to 0.0 V.

Gamut Limit - Preset threshold settings are nominally +735 mV and -35 mV within ±5 mV.

CRT Display

CRT Viewing Area - 80 x 100 mm.

Horizontal - 12.5 div.

Accelerating Potential - Nominally 13.75 kV.

Trace Rotation Range - >±1° from horizontal.

Power Source

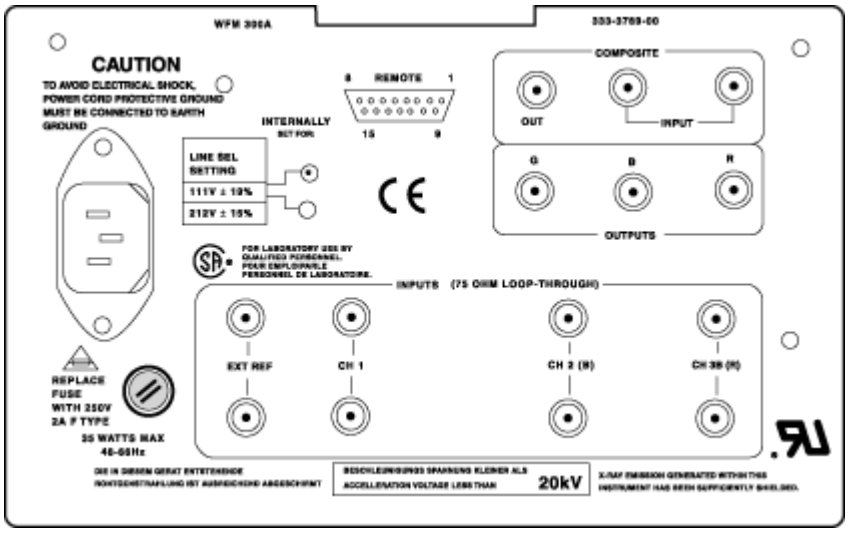
Mains Voltage Ranges - 110 V (88-132 V); 220 V (198-242 V).

Mains Frequency Range - 48 Hz to 66 Hz.

Power Consumption - 35 W maximum.

Environmental

Temperature -
Nonoperating: -55°C to +75°C.
Operating: 0° to +50°C.



WFM300A Rear Panel.

Altitude -
Nonoperating: To 50,000 feet.
Operating: To 15,000 feet.

Vibration Operating - 15 minutes each axis at 0.15 in., frequency varied from 10-55-10 Hz in 1-minute cycles with instrument secured to vibration platform. Ten minutes each axis at any resonant point or at 55 Hz if no resonant point is found.

Shock Nonoperating - 30 G, 1/2 sine, 11 ms duration, 3 shocks per surface (18 total).

Transportation - Qualified under NSTA Test Procedure 1A, Category II (24 inch drop).

Humidity - Meets Tektronix Standard 062-2847-00.

Certifications

EMC - Certified to the EMC Directive 89/336/EEC.

Safety -
UL1244, CSA231, EN61010-1, IEC61010-1.

Physical Characteristics

Dimensions	mm	in.
Height	133	5.25
Width	214	8.424
Depth	464	18.125

Weight (approximate)	kg	lbs.
Net	4	9