



Vector Display for Composite Video Signal

The 5851V and 5850V Vectorscope are designed to simultaneously measure the amplitude and phase of chrominance components contained in a composite video signal. To measure phase (i.e., direction with respect to burst signal) and amplitude (i.e., length from center) in vector format, the chrominance components containing color information of the video signal are first demodulated, then displayed on the CRT. VITS and VTR can also be displayed in vector format by applying blanking signal output from the waveform monitor to Z INPUT of the vectorscope.

FEATURES

- The 150 mm rectangular CRT with internal graticule (with the scale illumination), it is possible to measure without parallax reading error.
- DP and DG measurements enable using the modulated staircase.
- Use with a waveform monitor to observe the vector VITS and VIR signals.
- The optional rackmount adapter enables a pattern generator, color monitor, and vectorscope to be integrated in a system.

5850V FRONT PANEL



5851V REAR PANEL



5851V(PAL) 5850V(NTSC) SPECIFICATIONS

| Model | 5851V | 5850V |
|-------------------------------------|--|--|
| CRT | | |
| Type | 150 mm rectangular, internal graticule with scale illumination | |
| Accelerating Potential | 12 kV | |
| Effective Display Area | 80 (V) × 100 (H) mm | |
| Beam Rotator | Adjustable from the front panel | |
| Graticule | Internal scale Allowable frame: ±20%/ ±10° of standard color bar, circle, angle, U axis, V axis DG and DP, ±5%/ ±3° of standard color bar, and ±20 %/ ±10° of burst signal | Internal scale Allowable frame: ±20%/ ±10° of standard color bar, circle, angle, R-Y axis, B-Y axis, I axis, Q axis, DG and DP, ±2.5 IRE/±2.5° of standard color bar, and ±20 %/ ±10° of burst signal |
| Composite Video Signal Input | | |
| Input | A, B and EXT REF on the rear panel (loop-through, BNC connector) | |
| Input Impedance | A, B: 2 MΩ, EXT REF: 10 kΩ | |
| Max. Input Voltage | ±5 V (DC+peak AC) | |
| Calibrated Value | Color Saturation: 75%, 100%, full scale Amplitude: 1 Vp-p, 1.24 Vp-p Variable Range: 0.5 to 5 times of the calibrated value EXT REF Subcarrier: 2 Vp-p ±6 dB Black Burst: 0.45 Vp-p ±6 dB (5851V)/ 0.43 Vp-p ±6 dB (5850V) | |
| Blanking Input | | |
| Sensitivity | DC ±1 V | |
| Polarity | Brightens With positive voltage | |
| Chrominance | | |
| Bandwidth | Center: Fsc=4.43361875 MHz High Freq.=Fsc +500 kHz Low Freq.=Fsc -500 kHz | Center: Fsc=3.579545 MHz High Freq.=Fsc +500 kHz Low Freq.=Fsc -500 kHz |
| Phase Accuracy | ±2° | |
| Amplitude Accuracy | ±3% | |
| Differential Phase | ±1° | |
| Differential Gain | ±1% | |

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|---|---|------------------|
| Measurement Item | | |
| Vector Measurement | Phase and amplitude of chrominance component in 75% or 100% saturation color bar signal | |
| Horizontal Synchronization | | |
| Input | Synchronization by the horizontal sync signal of composite video signal from input A or B. | |
| Sync Polarity | Negative | |
| Sync Level Range | 0.3 Vp-p ±6 dB | 0.286 Vp-p ±6 dB |
| Subcarrier Signal Synchronization | | |
| Synchronization by Burst Signal (of composite video signal) | | |
| Sync Level Range | 0.3 Vp-p ±6 dB | 0.286 Vp-p ±6 dB |
| Synchronization by External Subcarrier Signal (which is applied to the EXT REF input) | | |
| Subcarrier Signal Sync Level Range | 2 Vp-p ±6 dB | |
| Synchronization by Black Burst Signal (which is applied to the EXT REF input) | | |
| Black Burst Sync Level Range | 0.45 Vp-p ±6 dB | 0.43 Vp-p ±6 dB |
| Note: The external subcarrier signal is switched to and from the black burst signal internally. (set in black burst mode at shipment) | | |
| Subcarrier Frequency | 4.43361875 MHz | 3.579545 MHz |
| Sync Capture Range | ±50 Hz (0°C to 40°C) | |
| Phase Adjustment Range | 360°, continuously variable | |
| Calibration | | |
| Test Circle | Set the chrominance signal applied from the input connector in asynchronous mode. | |
| Power Requirements | 100, 120, 200, 240 VAC, selectable by internal wiring 50/60 Hz, 40 VA | |
| Dimensions and Weight | 215 (W) × 132 (H) × 429 (D) mm, 7.3 kg | |
| Accessories | Illumination lamp5 Cover/Inlet stopper1 Screw, rack mounting (inch size)2 Power cord1 Instruction manual1 | |

THE ANGLES FOR EACH HUE 5851V (PAL)

