



Simultaneous Display of Vector and Waveform

The 5870 and 5872A are combination NTSC signal measurement monitors that integrate a waveform monitor with a vectorscope in one half rack chassis. The 5870 has a SCH phase measurement circuit.

Waveforms and vectors can be independently or simultaneously displayed on a single CRT. For example, both Channel A and B waveform and vectorscope displays can be shown at the same time.

In addition, the 5870 has a SCH phase measuring function for video editing. The SCH phase can be displayed on the CRT with a numerical readout. Phase variations of jitter are also displayed with the waveform.

Furthermore, a full-line selector function is installed for reading the field and line number on the CRT. As a result, the 5870 and 5872A are very useful not only in observing the blanking time intervals for VITS, VIR, character broadcasting and ITS, but also in checking the various characteristics of video camera resolution.

*The 5872A model does not have the SCH phase measuring capability.

**The 5873 model is the PAL equivalent to the 5872A NTSC

FEATURES

- 150 mm rectangular CRT with internal graticule. The 16.5 kV high-accelerating potential facilitates legible, clearly defined display.
- CRT displays of SCH measurements enable correct monitoring without reading errors. (only 5870)
- The full-line selector function used to select optional lines, also vertical interval test signals can be monitored (VITS).
- Stores/recalls up to 9 panel settings.
- Field and line numbers selected by the full line selector are displayed on the CRT for confirmation during waveform observation.
- Dual-channel display shows A and B inputs concurrently.
- Power supply circuit enables operation using supply voltages of 90 to 250 VAC without switching. The standard DC operation function (11 to 20 VDC) enables instrument use in vehicles.
- All front-panel switches can be externally remote-controlled.
- Differential gain (DG) and differential phase (DP) can be displayed through single key operations.
- RGB/YRGB with parade display function.

● 5872A FRONT PANEL



● 5872A REAR PANEL



5873 / 5870 / 5872A SPECIFICATIONS

Model	5873	5870/5872A
CRT		
Type	150 mm rectangular	
Accelerating Potential	16.5 kV	
Effective Display Area	100 (H) × 80 (V) mm	
Scale	Internal graticule (for waveform and vector display) with scale illumination	
Waveform Monitor		
Vertical Axis		
Deflection Sensitivity	1 Vp-p full scale, 1.0 scale: ±1%, x5 MAG: ±3%	1 Vp-p full scale, 140 IRE: ±1% x5 MAG: ±3%
Gain Variable Range	x1 full scale: 0.7 to 2 Vp-p, x5: 0.14 to 0.4 Vp-p	
Maximum Input Voltage	±2V (DC+peak AC), AC coupled	
Frequency Response		
FLAT	25 Hz to 6 MHz±2%, 6 MHz to 8 MHz +2%, -5% at 50 kHz reference	
LUM	Attenuation: 35 dB or more at 4.43 MHz Flatness between FLAT and LUM: 1% or less at 15 kHz	〈5872A〉 Attenuation: 35 dB or more at 3.58 MHz Flatness between FLAT and LUM: 1% or less at 15 kHz
IRE	—	〈5870〉 Conforms to IEEE STD 205 of 1972 Flatness between FLAT and IRE: 1% or less at 15 kHz
CHROMA	4.43 MHz bandpass filter, Bandwidth: 2 MHz ±500 kHz Flatness between FLAT and CHROMA: 1% or less at 4.43 MHz	3.58 MHz bandpass filter, Bandwidth: 2 MHz±500 kHz Flatness between FLAT and CHROMA: 1% or less at 3.58 MHz
Transient Response	1V full scale (2 T pulse and 2 T bar for FLAT)	
Overshoot	±2%	±2 IRE
Preshoot	±2%	±2 IRE
Ringing	±2%	±2 IRE
Pulse to bar Ratio	Within ±1%	
Vertical Window	Within ±2%	
Signal Tilting	Within ±2%	
Input Impedance	15 kΩ or more	
Return Loss	40 dB or more at 50 kHz to 6 MHz	
Video Output	1 Vp-p ±5% at 1.0 scale deflection	1 Vp-p ±5% at 140 IRE scale deflection
Frequency Response	25 Hz to 6 MHz ±5%	
Output Impedance	75 Ω	
DC Restoration	Clamped on the back porch	
Horizontal Axis		
1H Sweep	Displays 1H waveform	
2H Sweep	Displays 2H waveform	
1 μs/div	10 times of 2H sweep	
0.2 μs/div	25 times of 1H sweep	
1V Sweep	Displays 1V waveform	
2V Sweep	Displays 2V waveform	
V. MAG	20 ±3 times 1V and 2V sweeps	
Sweep Time Accuracy	1 μs/div: ±3% 0.2 μs/div: ±3%	
Sweep Length	12.5 div	
Linearity	Within ±3%	
RGB/YRGB	Selectable (RGB at shipment)	
Staircase Input	10 Vp-p ±15% for 9 div display	
Maximum Input	±12V (DC+peak AC)	
Timebase	RGB: 30% or standard length (1H sweep) YRGB: 22% or standard length (1H sweep)	
Control Signal	Apply TTL LOW active signal to rear panel remote connector.	
CAL	Amplitude: 1 Vp-p ±1% Frequency: 100 kHz ±0.1 kHz	
DG and DP Display		
DG Measurement	Range: ±10% Accuracy: ±1%	
DP Measurement	Range: ±10° Accuracy: ±1°	

Model	5873	5870/5872A
Vectorscope Section		
Chrominance Processing		
Bandwidth	Fsc=4.43361875 MHz High Frequency=Fsc+500 kHz Low Frequency=Fsc-500 kHz	Fsc=3.579545 MHz High Frequency=Fsc+500 kHz Low Frequency=Fsc-500 kHz
Phase Accuracy	±2°	
Amplitude Accuracy	±3%	
Differential Phase	±1°	
Differential Gain	±1%	
Subcarrier Regenerator	Sync capture range: ±50 Hz	
Phase Adjustment Range	360°	
Display		
GAIN Variable Range	x1 MAG input: 210 mVp-p to 1.05 Vp-p x5 MAG input: 43.2 to 210 mVp-p	
SCH Mode (5870 only)		
Absolute Accuracy	—	±5° at ambient of 25°C
Relative Accuracy	—	±2°
Display Range	—	External reference: 360° Internal reference: ±80°
CRT Readout	—	SCH+80° to SCH-80°
Required Input		
SCH Mode (5870 only)	—	Sync and burst of composite video or black burst signal: 286 mVp-p ±3 dB
Other Mode	Sync and burst of composite video or black burst signal: 300 mVp-p ±6 dB	Sync and burst of composite video or black burst signal: 286 mVp-p ±6 dB
EXT REF		
Sync Amplitude	Synchronization with 143 mVp-p to 4 Vp-p	
Input Impedance	15 kΩ or more	
Return Loss	40 dB or more at 50 kHz to 6 MHz	
Maximum Input Voltage	±12V (DC+peak AC)	
Line Selector	Field 1, 3: 1 to 313 lines Field 2, 4: 314 to 625 lines Field selection: FD 1, 3, FD 2, 4 or FD 1, 2, 3, 4 Preset: 1 to 9, 9 points	Field 1, 3: 1 to 263 lines Field 2, 4: 1 to 262 lines Field selection: FD 1, 3, FD 2, 4 or FD 1, 2, 3, 4 Preset: 1 to 9, 9 points
CRT Readout	Preset No.: P1 to P9 Field: FD 1, 3, FD 2, 4 or FD 1, 2, 3, 4 Line Number: 1 to 313 or 314 to 625	Preset No.: P1 to P2 Field: FD 1, 3 FD 2, 4 or FD 1, 2, 3, 4 Line Number: 1 to 262 or 1 to 263
Remote Control		
Controllable Section	All front panel functions	
Control Signal	TTL (active low)	
Control Input Connector	Rear panel D-sub 25-pin (REMOTE A) D-sub 9-pin (REMOTE B)	
Power Requirements	90 to 250 VAC, 48 to 440 Hz, 44 W 11 to 20 VDC, 2. 8 A at 12V	
Dimensions and Weight	215 (W) x 132 (H) x 429 (D) mm, 7.1kg (5873, 5870), 7kg (5872A) 8 1/2(W) x 5 1/4(H) x 16 3/4(D) in., 15.6 / 15.4 lbs.	
Supplied Accessories	D-sub 25-pin connector 1 D-sub 9-pin connector 1 Cannon connector 1 Screw (inch size) 2 Illumination lamp 5 Cover, inlet stopper 1 Screw lock 2 E-ring 1 AC power cord 1 Instruction manual 1	