WAVEFORM MONITOR

5861V(PAL) 5860V(NTSC)

LEADER

NTSC 5860V

PAL 5861V

CE
Upon request
(5861V only)

Measurements of Composite Video Signal Amplitude, Timing, and Frequency Response

The 5861V and 5860V Waveform Monitors are oscilloscopes that are capable of quick monitoring amplitude, time and frequency response, etc. of composite TV signals, which are hard for ordinary oscilloscopes to measure.
The waveform monitor is equipped with various modes and trigger functions that are optimum to video signal monitoring. Such various modes as 2H, 1H, 1 µs/div, 2V, 1V, and 2V MAG can be selected by the horizontal axis sweep. As FLAT, LUM (5861V), IRE (5860V), CHROMA, DIF GAIN and DIF'D STEP can be switched, it is possible to observe various characteristics of video signals.
Furthermore, the line selector function is provided for observing VITS and VIR signals which are inserted during the vertical blanking period. In addition, the blanking output connector for blanking other periods that lines selected by the line selector, video output connector and other functions necessary for video signal monitoring are provided.

FEATURES

- Depending on synchronization system and subcarrier frequency, the 5860V is compatible with the M system, and 5861V is compatible with the B, C, D, G, H, I, and K systems.
- Differentiated-step methods are used to display the differential of staircase signals to make measuring the linearity of transmission system luminance components easier.
- Built-in line selector function for monitoring VITS and VIR signals, a blanking output and a video output.
- Horizontal sweep mode selection from 2H, 1H, 1 µs/div, 2V, 1V, and 2V MAG. The frequency response of the vertical axis is switchable among FLAT, LUM (5861V), IRE (5860V), CHROMA, DIF GAIN, and DIF'D STEP.
- K factor scale provided for checking of frequency characteristics.

■5860V FRONT PANEL

■5861V REAR PANEL

5861V(PAL) 5860V(NTSC) SPECIFICATIONS

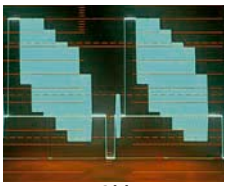
LEADER

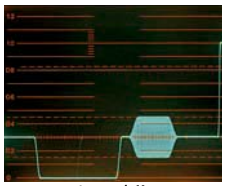
Model	5861V	5860V
CRT		
Type	150 mm rectangular, internal graticule with scale illumination	
Accelerating Potential	12 kV	
Effective Display Area	80 (V)×100 (H) mm	
Beam Rotator	Adjustable from the front panel	
Input Section		
Input Connector	A and B on the rear panel (loop-through, BNC connector)	
Input Impedance	1 Vp-p full scale range: 15 kΩ, 50 pF 4 Vp-p full scale range: 60 kΩ, 50 pF	
Maximum Input	±5 V (DC+peak AC), AC coupled	
Full Scale Graticule		
Full Scale	1.0 scale	140 IRE
SYNC	0.3 scale	40 IRE
VIDEO	0.7 scale	100 IRE
Deflection Accuracy		
1 V Full-scale Range	Within ±2% of 1.0 scale at 1 V input	Within ±2% of 140 IRE at 1 V input
4 V Full-scale Range	Within ±4% of 1.0 scale at 4 V input	Within ±4% of 140 IRE at 4 V input
Frequency Characteristics		
FLAT	25 Hz to 3.6 MHz ±2%, 3.6 MHz to 5 MHz+2%, –5% at 50 kHz reference	
LUM	More than 35 dB of attenuation at 4.43 Mz	——
IRE	——	Conforms to IRE STD23S-1 (1958); more than 22 dB of attenuation at 4.43 MHz
CHROMA	4.43 MHz bandpass filter	3.58 MHz bandpass filter
	Response: Within ±2% at filter FLAT	
DIF GAIN	4.43 MHz bandpass filter	3.58 MHz bandpass filter
	3 to 5.5 times of CHROMA amplitude	
DIF'D STEP	For measuring the linearity of luminance 450 kHz bandpass filter Response at filter "FLAT" 400 kHz: Within ±2% 500 kHz: Within +0, –20% 14 kHz, 2 MHz: Within –90% 3.58 MHz (5861V), 4.43 MHz (5860V): –99%	
Transient Response	±1.5% or less in overshoot, preshoot, and ringing using the $\sin^2$ pulse & bar signal at FLAT with 1 V full scale range.	±2 IRE or less in overshoot, preshoot, and ringing using the $\sin^2$ pulse & bar signal at FLAT with 1 V full scale range.
Sag (Vertical window signal)	2% or less	
Variable Range	Input voltage of 1.0 full scale	Input voltage of 140 IRE full scale
1 V Full-scale Range	0.25 V or less to 1 V	
4 V Full-scale Range	1 V or less to 4 V	
DC Regeneration	Clamped at the back porch	

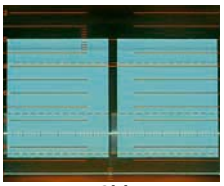
Model	5861V	5860V
Video Output		
Output Connector	BNC connector on the rear panel	
Output Voltage	1 V ±15% at full scale input	
Output Impedance	75 Ω ±10%	
Frequency Characteristics	25 Hz to 5 MHz ±5%	
Sweep		
1H Sweep	Display of 1H waveform	
2H Sweep	Display of 2H waveform	
1 µs/div	10 times magnification of 2H sweep, 1 µs/div ±3%	
1V Sweep	Display of 1 V waveform	
2V Sweep	Display of 2 V waveform	
2V MAG Sweep	Approx. 20 times magnification of 2V sweep	
Linearity	±3%	
RGB/YRGB Display	RGB is standard. (YRGB is optional.)	
Staircase	10 V ±15%/9 div	
Maximum Input Voltage	±12 V (DC+peak AC)	
Sweep	1H display at 2H sweep 1V display at 2V sweep	
Sweep Line Length	RGB: 30%×3 or composite display YRGB: 22%×4 of composite display	
Composite to YRGB	Remote control from external or internal control signal	
Control Signal	12 to 15 V (negative or positive), 15 mA	
Control Signal	9-pin MT socket on the rear panel	
RGB and YRGB Input	9-pin D-sub connector (option)	
External Synchronization		
Input Connector	2 terminals, BNC, loop-through type on the rear panel	
Input Impedance	15 kΩ	
Input Sensitivity	0.143 to 5 Vp-p (Level of sync signal in composite video signal)	
Maximum Input Voltage	±8 Vp-p	
Line Selector		
Display Line	13 to 22 and 325 to 334 lines	14 to 21 lines of first and second fields
Blanking Output		
Output Connector	BNC connector on the rear panel	
Voltage Level	0 V: selected by line selector –2 V: for other duration	
Calibrator		
Waveform	Square waveform	
Amplitude	1 Vp-p ±1%	
Frequency	32 kHz	
Environmental Conditions		
Operating	Temperature: 0 to 40°C	
Power Requirements	100, 120, 200, 240 VAC, 50/60 Hz, 50 Wmax.	
Dimensions and Weight	215 (W)×132 (H)×429 (D) mm, 7.4 kg 8 1/2 (W)×5 1/4 (H)×16 3/4 (D) in., 16.3 lbs	
Accessories	Scale illumination lamp ……5 9-pin MT plug ……1 Cover/Inlet stopper ……1 Screw, rack mounting(inch size) ……2 Power cord ……1 Instruction manual ……1	

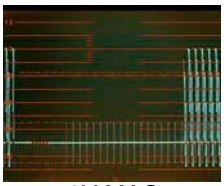
■5861V WAVEFORMS DISPLAY

•Sweep Range

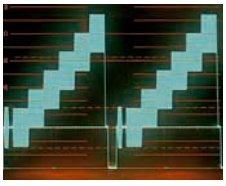

2H

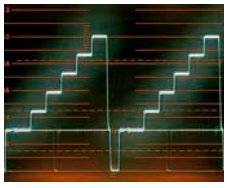

1 µs/div

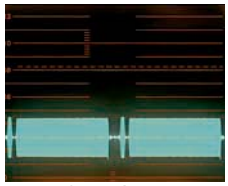

2V

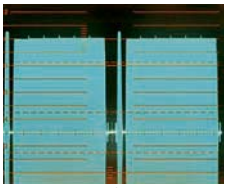

2V MAG

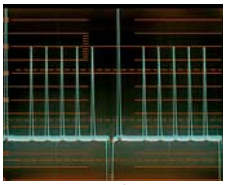
•Frequency Response Range


FLAT


LUM


CHROMA


DIF GAIN


DIF'D STEP