



PAT. PEND.
The cabinet is sold
separately.

Precise DG/DP Measurements with CRT Readout Three Video Inputs, One External Reference Input X-Y Display Capability, Auto Phase & Mag Burst

The Model 5212 is precision Vectorscope designed to monitor video signals. The 5212 with its bright CRT features a vector display, DG/DP function to measure differential gain and differential phase with a line display, X-Y display mode for stereo audio signals, and menu screen for setting functions. These instruments have three video inputs and one external reference input channel. Up to four waveforms, including the external reference, can be displayed. The newly developed digital phase control ensures a phase measurement accuracy of within 1%. These instruments can also be remotely controlled when combined with the 5222 Waveform Monitor.

FEATURES

- **Three video inputs and one external reference input channel**
Up to four waveforms, including the external reference, can be displayed simultaneously.
- **Digital phase control**
The newly developed digital phase control ensures a phase measurement accuracy of within 1% and display resolution of within 0.1° with alphanumeric readout.
- **DG/DP measuring function**
These instruments enable accurate measurement of differential gain (DG) and differential phase (DP) with alphanumeric readout.

- **X-Y display function**

The level and phase of stereo audio signals can be measured.

- **Menu function**

For user-friendly front panel control, a menu controller is provided for various functions.

- **Preset function**

The front panel settings, including vertical and horizontal positioning, can be stored in memory, and recalled from the front panel or via the remote control connector on the rear panel. You can reduce setup time by presetting frequently used measuring conditions.

- **Automatic NTSC/PAL system discriminator (5212 only)**

The 5212 automatically selects the NTSC or PAL color system.

- **Y/C input**

The C signal vector can be displayed by respectively applying the Y signal and C-signal to the CH1 and CH2 input connectors.

- **Remote control**

These instruments can also be remotely controlled when combined with the 5222 Waveform Monitor. The line selected by the waveform monitor is displayed automatically.

- **Bright CRT, accelerating potential of 16.5 kV**

- **Universal AC power supply, 90 to 250 V**

CRT Type Accelerating Potential Effective Display Area Graticule	150 mm rectangular (P4) 16.5 kV 100 (H) × 80 (V) mm Illuminated internal graticule	
Input Input Channel Input Impedance Maximum Input Voltage Return Loss Isolation Between Channels Gain Difference Between Channels Phase Difference Between Channels Loop-Through Isolation	CH1, CH2, CH3, EXT ≥15 kΩ, 75 Ω loop-through ±12 V (DC+peak AC) ≥40 dB (50 kHz to 6 MHz) ≥70 dB (Fsc) ≤±0.5% ≤±0.5% (Fsc) ≥70 dB (Fsc)	
Synchronization Sync Amplitude CH1, 2, 3 Video Signal EXT Video Signal Subcarrier Signal Selection	PAL Burst, sync amplitude 0.3 Vp-p ±6 dB Burst, sync amplitude 0.3 Vp-p ±6 dB 2 Vp-p ±6 dB Video or subcarrier, selectable	NTSC Burst, sync amplitude 0.286 Vp-p ±6 dB Burst, sync amplitude 0.286 Vp-p ±6 dB
Vector Mode Bandwidth Upper -3 dB Point Lower -3 dB Point Center Frequency (Fsc) Display Phase Accuracy Amplitude Accuracy Digital Phase Control Phase Accuracy Subcarrier Regeneration Pull-In Range Pull-In Time Phase Control Range Phase Shift Phase Shift Burst Jitter Position Variable Range Vertical Position Horizontal Position	PAL Fsc+500 kHz ±100 kHz Fsc-500 kHz ±100 kHz 4.43361875 MHz Color bars 75%, 100% MAG mode setting OFF: Within ±1° BURST: Within ±2° ×5 MAG: Within ±2° OFF: Within ±3% BURST: Within ±3% ×5 MAG: Within ±5% Within ±0.5° Within ±150 Hz Within 1 sec 360° Within ±2° (Fsc ±50 Hz) Within ±2° (Burst amplitude ±6 dB) ≤±0.5° At least ±8 mm from center At least ±8 mm from center	NTSC Fsc+500 kHz ±100 kHz Fsc-500 kHz ±100 kHz 3.579545 MHz Color bars 75%, 100% MAG mode setting OFF: Within ±1° BURST: Within ±2° ×5 MAG: Within ±2° OFF: Within ±3% BURST: Within ±3% ×5 MAG: Within ±5% Within ±0.5° Within ±150 Hz Within 1 sec 360° Within ±2° (Fsc ±50 Hz) Within ±2° (Burst amplitude ±6 dB) ≤±0.5° At least ±8 mm from center At least ±8 mm from center
DG/DP Mode Measurement Accuracy DG DP Position Control Range Vertical Position Horizontal Position Auto Setup DG Setup Accuracy DP Setup Accuracy	Within ±0.5% Within ±0.5% ±40 mm ±4 mm from center At least ±8 mm from center At CAL position Within ±2% Within ±2°	
X-Y Mode Input Input Impedance Calibration Accuracy Input Amplitude Maximum Input Voltage Frequency Response X-Y Phase Difference Input Connector V Position Control Range H Position Control Range	DC-coupled differential inputs (Balanced input) ≥20 kΩ Within ±3% 0 dBm to 12 dBm (600 Ω) (0.775 V to 3.1 Vrms) ±12 V (DC+peak AC) DC to 20 kHz, ≤3 dB ≤1° (20 kHz) 15-Pin D-sub connector (rear panel) At least ±8 mm from center At least ±8 mm from center	

GAIN GAIN Variable Range Phase Shift by GAIN	+3 dB to -14 dB or more Within ±1° (+3 dB to -6 dB)
Auto Phase Accuracy	Burst phase is set to -(B-Y) axis. Within ±2°
REF SET VECT Mode DG Mode DP Mode	PHASE display is set to 0.0° DG display is set to 0.00% DP display is set to 0.00°
Preset Function Controllable Functions	Up to 10 panel settings All front panel controls (except INTEN, FOCUS, ROTATION, ILLUM, GAIN, VAR, POWER), and Menu (SYSTEM, DISPLAY)
Remote Control Combinations Line Selection Recall Function Controllable Functions Control Signal Input Connector	5222 → 5212 (NTSC/PAL) Full line selection capability Window display capability Available INPUT, REF, Y/C, RECALL TTL, low active D-sub, 9-pin (rear panel)
CRT Readout Color System Phase Display Resolution NTSC Setup REF Channel DG Display Resolution DP Display Resolution X-Y Display Recall Mode Y/C Display	NTSC/PAL (SYNC ABSENT) 0.0° to 359.9° 0.1° SETUP 7.5%/SETUP 0% CH1, CH2, CH3, EXT +10.00% to -10.00% (DG mode) 0.01% +10.00° to -10.00° (DP mode) 0.01° X-Y scale is displayed (X-Y mode). Address to be recalled Y/C is displayed (Y/C mode).
Environmental Conditions Operating Spec-Guaranteed	Temperature: 0 to 40°C Humidity: ≤ 90% RH (without condensation) Temperature: 10 to 35°C Humidity: ≤ 80% RH (without condensation)
Power Requirements Power Consumption	90 to 250 VAC, 48 to 440 Hz 55 Wmax.
Dimensions and Weight	215 (W) × 132 (H) × 429 (D) mm, 4 kg 8 1/2 (W) × 5 1/4 (H) × 16 3/4 (D) in., 8.8 lbs
Supplied Accessories	Illumination lamp5 Screw, rack mounting (inch size)2 15-pin D-sub connector1 Metal case, 15-pin D-sub connector1 9-pin to 9-pin D-sub connector cable1 Power cord1 Cover, inlet stopper1 Screw lock6 E-ring3 Instruction manual1
Optional Accessories	LR 2427B (Cabinet, with handle) LR 2404A (Cabinet, without handle) LR 2700A-I (Rack-Mount Adapter, inch size)

5212 REAR PANEL

