



528A Waveform Monitor mounted side by side with a 1420 Vectorscope.

## 528A/1420 Series

### Parallax-Free Internal Graticule

### Half Rack Width

### Proven Performance

### Available in NTSC, PAL, PAL-M Models

The 528A Waveform Monitor and 1420 Series vectorscopes and X-Y monitors provide complete monitoring of your video signal. One 528A and one 1420 Series monitor mounted side by side in the optional rack adaptor provide a continuous display of both the luminance and chrominance information of your video signal, whether your signal is in the NTSC, PAL, or PAL-M format.

These monitors are ideally suited for use in camera, VTR, video production and post production monitoring applications. They all have simple-to-understand and easy-to-use controls.

### CHARACTERISTICS (528A)

**Inputs** — Two Rear Panel BNC Connectors (A and B): Provide two 75  $\Omega$  loop through connectors (normally ac coupled but may be easily modified for dc coupling).

**Video Output** — The displayed signal is provided at the Video Out rear panel connector.

**Dc Restoration** — Slow acting back porch dc restoration.

**Calibrator** — An internal calibration signal provides a convenient reference to verify the deflection factor. Calibrator amplitude is 1.0 V p-p  $\pm$  1%.

### TIME BASE

Provides four time base operating modes; baseline visible in each mode with no external video or sync inputs.

### EXTERNAL SYNC

**Input Signal Levels** — 1.5 V to 4.5 V p-p (composite sync will synchronize sweeps).

### YRGB AND RGB

The 528A can be used with color camera processing amplifiers that provide the necessary signal switching and staircase signals.

### CHARACTERISTICS (1420, 1421, 1422)

**Chrominance Bandwidth** — Upper — 3 dB Point: Fsc + 550 kHz  $\pm$  100 kHz; Lower — 3 dB Point: Fsc - 550 kHz  $\pm$  100 kHz.

**Vector Phase Accuracy** — Within 1°.

**Phase Control Range** — 360° continuous rotation with goniometer.

**Input Amplitude Range** — 1 V  $\pm$  6 dB.

**Front Panel Gain Control Range** — Unity to +15.12 dB; Unity to -6 dB.

**Input Return Loss** — At least 46 dB to 5 MHz.

**Differential Phase** — 1° or less.

**Differential Gain** — 1% or less.

### AC POWER

**Line Voltage Ranges** — 99 V ac to 132 V ac and 198 V ac to 250 V ac (528A). 90 V ac to 132 V ac and 180 V ac to 250 V ac (1420 Series).

**Typical Power Consumption** — 48 W (528A). 45 W (1420, 1421, 1422).

**Mains Frequency** — 48 Hz to 66 Hz.

### SAFETY

528A Waveform Monitors are CSA556B certified. With cover or carrying case installed they meet the requirements for listing under UL 1244. 528A's without a cover are UL recognized components.

### PHYSICAL CHARACTERISTICS (528A/1420 SERIES)

Dimensions	mm	in
Width	216	8.5
Height	133	5.3
Depth	470	18.5
<b>Weights (528A)</b>		
Net (with accessories)	6.8	15.0
Shipping	10.4	23.0
<b>Weights (1420 Series)</b>		
Net (with cabinet)	7.0	15.5
Net (without cabinet)	5.9	13.0
Shipping	9.1	20.0

### INCLUDED ACCESSORIES

9-pin plug connector for 528A (136-0099-01); manual; 75  $\Omega$  termination for 1420, 1421, 1422 (011-0102-00).

### ORDERING INFORMATION

These instruments are configured for rackmounting and are shipped without cases or covers. To configure for bench or portable use, order appropriate optional accessories.

**528A Option 01 Waveform Monitor** (for use with 525 line systems) ..... **\$2,300**

**Option 03** — (Modified for use with 625 line systems and for 230 V ac power, unless otherwise specified.) ..... **NC**

**1420 Option 01 Vectorscope** (for NTSC, factory wired for 115 V ac power) ..... **\$2,820**

**1421 Option 01 Vectorscope** (for PAL, factory wired for 230 V ac power) ..... **\$2,920**

**1422 Option 01 Vectorscope** (for PAL-M, factory wired for 115 V ac power) ..... **\$3,185**

### OPTIONAL ACCESSORIES

**Cover** — Unfinished aluminum, no handle or feet. Order 437-0100-01 ..... **\$60**

**Carrying Case** — Painted, with handle and feet. Order 390-0018-01 ..... **\$85**

**Camera** — Use standard C-59AP, C-4 Option 02, or standard C-5C. (See camera section of this catalog).

**Side-by-Side Rack Adaptor** — (For two half-rack instruments). Order 016-0115-02 ..... **\$225**

**Blank Panel** — For rack adaptor. Order 016-0116-00 .... **\$42**