

VIDIGRAF

BAR GRAPH DISPLAY GENERATOR

MODEL
970

FEATURES:

- 16 or 32 bar graphs replace the same number of VU meters in a single display.
- Standard VU ballistics, 0 dB reference adjustable.
- Dynamic display range of 30 dB.
- Monitors audio signals and/or automation control voltages.
- Real time frequency analysis of audio signal.
- Single module, or "split screen" dual module display.
- Modular design for maximum flexibility and later expansion.
- Versatile interface with consoles, automation, and tape machines.
- Built-in programmable alpha-numeric display labeling.

VIDIGRAF is a bar graph display generator which operates into any N.T.S.C. standard video monitor or (with an inexpensive accessory) black & white TV receiver. The system provides both VU level display and frequency spectrum level information. It is designed primarily for multi-track recording studio applications. However, its DC to 20 kHz input capability suggests its use for a wide range of DC or AC analog voltage measurements.

The 970 VIDIGRAF's modular construction provides the user complete flexibility to adapt the system to his specific needs. A maximum of four 16 channel input display modules may be installed for VU level, automation control voltages, or frequency spectrum viewing. Each module may be individually switched to the video generator in the single mode. In the dual display mode, the screen is split vertically to accommodate the information from any two input modules simultaneously. Instantaneous identification of the input channel sources and/or frequencies, as well as vertical scaling indices are automatically provided by the built-in programmable character generators. This eliminates any need for screen overlays or masks, and assures accurate positioning of the alpha-numeric information regardless of screen size or width and height adjustments.

Some typical displays are:

- 16 or 32 simultaneous VU channels.
- 16 or 2 x 16 bands of frequency spectrum (1 or 2 channels).
- 16 VU channels, plus 16 channels of automation control voltages.
- 16 VU channels, plus 15 bands of frequency spectrum and 1 composite level.



A single VU MODULE provides 16 bar graphs with standard VU ballistics over a display range of 30 dB. Each bar has two shades of gray, with the lighter shade above 0 dB reference. When a signal is applied to any of the 16 inputs, a bright bar moves up and down with the signal level, clearly visible against the background. The 0 dB reference point is continuously adjustable to any standard from 0 dB to +8 dB. The signal inputs accept 16 balanced or unbalanced sources, through the module's edge connector. The VU MODULE is user programmable to display a logarithmic scale from -20 to +3 dB when measuring audio signals, or to read linearly from 0 to 10 for display of AC or automation DC control voltages. Also user programmable is the nomenclature to be displayed beneath the bars, either 1 thru 16 or 17 thru 32.

The SPECTRUM module provides visual real-time display of VU level vs. frequency of an audio signal, as an aid to setting equalization and adjusting frequency balance. This module provides 16 bar graphs with visual characteristics similar to those of the VU MODULE. One bar is assigned to the full spectrum of the audio signal, while the other 15 channels display increments of the frequency spectrum, centered on standard ISO $\frac{2}{3}$ octave filter frequencies. Nomenclature and scales are user programmable. Additionally the display may be visually identified as "Channel A" or "Channel B". Two independent controls adjust the level of the full spectrum bar relative to the spectrum analysis bars.

A "REMOTE CONTROL CENTER" is available as an accessory. It duplicates all front panel operating controls of the VIDIGRAF for convenient operation at a recording console or other remote location.

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TECHNICAL SPECIFICATIONS

ELECTRICAL:

Input	: Balanced bridging differential amplifier.
Input Impedance	: 40 kohms, used as balanced input. 20 kohms, used as unbalanced (single-ended) input.
Maximum Input Level	: +20 dBm (7.75 V RMS).
Frequency Response	: ± 0.5 dB, DC - 20 kHz.
Output	: Composite NTSC video.
Output Impedance	: 75 ohms.
Output Level	: 1.0 volt.
Power Requirements	: 100-125 VAC, or 200 -250 VAC, 50/60 Hz, switch selectable; less than 25W.
Environment	: Operating, 0°C to +50°C; storage, -20°C to 60°C.

VU MODULE

Display Range	: 30 dB.
Resolution	: 0.1 dB, about 0 dB reference point.
0 dB Reference	: 0 dB to +8 dB, continuously adjustable.
Ballistics	: Standard VU.
Number of Channels	: 16
Nomenclature	: User programmable, numbers 1 - 16 or 17 - 32.
Scale	: User programmable, -20 to +3 dB (Logarithmic), or numbers 0 to 10 (Linear).

SPECTRUM MODULE

Display Range	: 30 dB.
Resolution	: 0.1 dB, about 0 dB reference point.
Reference Level	: Independently adjustable for full spectrum and analyzer bands.
Ballistics	: Standard VU.
Number of Channels	: 16 (1 channel - full spectrum, 15 channels - analyzer bands).
Frequencies	: Standard ISO, $\frac{2}{3}$ octave intervals: 25, 40, 63, 100, 160, 250, 400, 630 Hz, 1k, 1.6k, 2.5k, 4k, 6.3k, 10k, 16 kHz.
Nomenclature	: User programmable, Channel A or Channel B.
Scale	: User Programmable, -20 to +3 dB (Logarithmic) or numbers 0 to 10 (Linear).

PHYSICAL

Dimensions	: 483 x 133 mm rack panel; depth behind panel 356 mm (19" x 5 $\frac{1}{4}$ " x 14").
Finish	: Panel is 3.18 mm ($\frac{1}{8}$ "') brushed black anodized aluminum. Chassis is cadmium plated steel.
Weight	: 11.34 kg (25 pounds).
Shipping Weight	: 13.61 kg (30 pounds).