

### 1.3 PRODUCT DESCRIPTION

As complex as production and transmission equipment has become with today's rapid advances in video technology, there are some basics which haven't changed. The most critical is the need for a clean, undistorted signal at all points in the signal path. Few facilities however, can afford to invest in a complete test and measurement set for every key area. This is especially true since some of the advanced features found in CRT type monitors are not used on a day-to-day basis, but only in specific situations.

The Magni Monitor offers a solution to this problem by providing you with a flexible, accurate and truly economical monitor that does not rely on the costly CRT as its display, but uses an ordinary Picture monitor instead. Additionally, the instruments are rugged, compact, easily installed, and are highly suited for use in remote situations.

#### 1. Feature Summary

The **Combination Vectorscope/Waveform Monitor** version with PAL and NTSC composite and 525/625 component analog capability

\* Unitized Construction:

Base Unit: inputs, outputs and remote connections

Remote unit: selections made through on-screen menus

Power Supply: 6 foot input and 3 foot output power cords

Optional LCD Display unit: compact LCD screen for signal display

- \* Display of waveforms on standard picture monitors or on optional LCD Displays.
- \* Separate user-selectable color and intensity for backgrounds, graticules and waveforms.
- \* SC/H Phase and color frame monitoring with alarm output in and waveform/vectorscope (vectorscope mode) versions
- \* Interchannel component timing monitoring with alarm output in waveform monitor and combination versions
- \* Easy-calibration

## 2. Basic Information

As noted previously, there are three versions of the Magni Monitor: a Waveform Monitor, a Vectorscope, and a combination Waveform/Vectorscope. The configuration required is specified at time of order. Each Base unit can support one or two Remote units. One Remote unit can support Waveform Monitor and Vectorscope Base Units if desired. Two display video outputs are provided and will support two LCD or picture monitor displays. Several loop-thru equipped picture monitors may be used if more are needed; i.e. in a classroom situation. (The LCD Displays are NTSC or PAL-specific -- the Base units and Remote Units are not -- they support both):

## 3. Systems And Formats

The Magni Monitor supports most video formats within the 625/50 and 525/59.94 television systems. These include the NTSC and PAL composite standards, and GBR, M-II, Beta and SMPTE component video formats. System, standard and format selections are made from the Remote unit.

The Magni Monitor support NTSC and PAL com\_osite video formats. The Waveform Monitor and the Waveform/Vectorscope (in the waveform mode) add support for component analog formats. The component inputs on the Waveform Monitor accept the different signals without additional adjustment when the correct system and format are selected.

## 4. Display Flexibility

The CRTs (Cathode-Ray Tubes) used in traditional waveform monitors and vectorscopes have limited applications for many reasons. The depth of CRTs restricts the locations in which they may be used - certain production panels, for instance, cannot accommodate them-and, especially in cramped and/or poorly-ventilated conditions, the heat they generate is enough to cause them to read inaccurately and may adversely affect surrounding equipment.

The basic configuration (Base unit + Remote Unit), produces waveforms (or vectors) as a composite (NTSC or PAL) video output which may be displayed on any standard picture monitor. Signals may be displayed on the optional Magni Monitor NTSC or PAL LCD Display unit. This compact accessory (only two inches deep, and just a half-rack wide when mounted with the Remote Unit), uses an LCD (liquid crystal display) screen as its display medium. The LCD Display, besides eliminating heat-related monitoring problems, provides easy visibility of signal information, and may be installed in locations where space constraints do not permit a full-size monitoring instrument.

## **5. Compact Size**

In facilities already crowded with the latest in video technology, making room for monitoring equipment, however critical that equipment may be, has always been a dilemma. The Magni Monitor's compact design allows you maximum flexibility to incorporate this important function not only where it fits, but where it is needed.

## **6. SC/H Phase/Timing/Component "Vector" Display**

Few parameters are more critical for monitoring purposes than SCjH phase. Yet many facilities cannot devote space or operator time to separate SCjH phase metering equipment.

The vectorscope version of the Magni Monitor incorporates basic SCjH phase monitoring without additional hardware.. An on-screen readout alerts the operator of errors -- an audible alarm also provided may be enabled or disabled by the user, at his preference. No mode changes are required; SCjH phase monitoring occurs continuously, yet only becomes visible to the operator in the event of an error.

Similar features are provided on the waveform monitor version. In component operation, the readout or alarm indicates interchannel timing errors greater than preset limits from a color bar input. When monitoring component colors bars, graticule limit marks are provided to monitor t 5% and 50 errors in the B-Y and R-Y color difference components. These two displays together provide the basic information obtainable from a component vector display, but in a form which is easily interpretable by non-technical operators.

## **7. operational Simplicity**

Using straightforward controls and a menu-based approach, the Magni Monitor is almost instantly operable by even novice operators. Channel selection, magnified modes, 2H and 2F displays, and Hand V positioning are all available under one-button control.

Selections from the menu determine which feature is under control of the rotating knob: these include changing colors and intensities and adjustments to parameters such as display persistence of the waveform or graticule, waveform gamma, vertical gain, input reference, alarm, clamp, and paraded V position offset. Menu items will, like the waveform displays themselves, appear either on the picture monitor screen or on the optional Display Unit, depending on your configuration.

Controls for channel selection, H/V position and vector phase are all provided with LED indicators, for easy visibility. The Magni Monitor controls and front panels have also been designed for maximum visibility in low-light conditions.

## **8. Calibration**

Calibrating traditional CRT monitoring devices generally involves either a factory return or substantial time on the part of a technician. The Magni Monitor is fully self-calibrating, without opening the instrument covers, against a special signal set offered for Magni's Signal Creator test signal generator: simply load and output this signal, and the Magni Monitor does the rest. This self-calibration feature helps guarantee optimum performance from all your equipment under test, and reduces the possibility of extended down time.