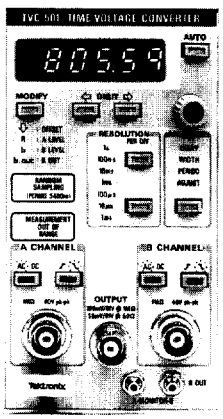
TVC 501 TIME-INTERVAL TO VOLTAGE CONVERTER

The TVC 501 adds three measurement functions to a scope's voltage vs. time capability: time-delay vs. time, pulse-width vs. time, and period vs. time. The TVC

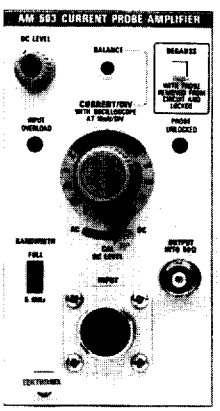


continuously measures the timing parameter and instantaneously generates a voltage proportional to the measurement. Conversions are performed pulse-to-pulse without averaging. The TVC 501 provides seven vertical scales from 1 µsec to 1 sec per division. Up to 30,000 divisions of offset permits small timing variations to be viewed on events with large average values.

The continuous TVC output becomes another trace on a scope that can be correlated, measured, and analyzed with waveforms on other channels. Since the TVC generates voltages proportional to time-intervals, a scope can be set to trigger on timing violations such as a time-delay that exceeds a threshold or an incorrectly narrow pulse or glitch. See page 338 for detailed information.

AM 503/AM 503S CURRENT PROBE AMPLIFIER

The AM 503 Current-Probe Amplifier allows display of current on any oscilloscope having 10 mV/div sensitivity, 50 Ω or 1 MΩ input, and (for performance to full band-



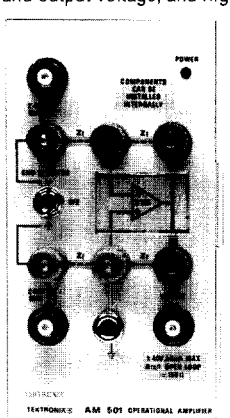
AM503 Amplifier

width) at least 100 MHz bandwidth. The amplifier attenuator has 12 calibrated steps in a 1-2-5 sequence, and the knob-skirt is illuminated to indicate current/division. See page 325 for detailed information. The AM 503/A6302 and AM 503/A6303 Current Probe Systems have a wide variety of applications from SCR and power-supply measurements to medical applications. These probes use inductive coupling to minimize interference with the circuit under test. By combining an oscilloscope, such as the SC 504, with the AM 503/A6303 Current Probe Amplifier in a TM 500/TM 5000 mainframe, you will have a convenient and compact high-current amplification/measurement system.

A current probe package is available (AM 503S) that includes the AM 503, A6302 (and/or A6303), and the 016-0362-02 Tool Box Module for probe storage, all in a TM 502A Power Module.

AM 501 OPERATIONAL AMPLIFIER

The AM 501 Operational Amplifier features high input impedance (FET), high slew rate, a wide range of input and output voltage, and high output current. The output



(40 V and 50 mA across 800 Ω loads) can drive many electronic and electro-mechanical applications. This high-output unit has front-panel connectors that let you change configurations by selecting feedback components. The AM 501 is easily set up for differentiation, integration, summing, offsetting, and impedance-transformation problems.

The AM 501 is ideal for quickly prototyping circuits using the versatility of high-gain operational amplifier blocks. The AM 501's V+ and V– power is supplied by any TM 500 or TM 5000 mainframe eliminating the task of securing or dedicating a dual-output power supply. When used with the accessory board described below, the AM 501 permits rapid performance comparisons of different circuit topologies.

CHARACTERISTICS

Open Loop Gain – At least 10,000 at 60 Hz into 800 Ω load.

Unity Gain Bandwidth – At least 5 MHz into 800 Ω load.

Common-Mode Rejection Ratio – Typically >20,000:1 at 60 Hz for common-mode signals up to ±40 V.

Slew Rate – At least 50 V/µs into an 800 Ω load.

Input Bias Current – Typically < 500 pA at 25°C, < 2 nA at 50°C.

Drift – <100 µV/°C.

Noise – <10 µV rms.

Maximum Differential Input Voltage – 80 V.

Voltage Range – At least ±40 V into 2 kΩ.

Current Limit – At least ±50 mA.

Open Loop Output R – ≈150 Ω.

AM 501 AUXILIARY CIRCUIT BOARD KIT

The Auxiliary Circuit Board Kit attaches to the input and output terminals on the front of the AM 501 Amplifier. The pc board has six terminal studs that attach to the amplifier's banana jacks and is approximately 2.5-inches square. The designer can configure a network of components for use in conjunction with the AM 501's input, output, or feedback circuits.

NEW TVC 501
Time–Voltage Converter

- *Real-Time Scope Display of Time Interval Variations vs. Time*
- *Time Delay, Pulse Width, and Period Measurements*
- *>2 Million Uninterrupted Event-by-Event Measurements/Second*

AM 503/AM 503S
Current Probe Amplifier

- *Displays Current Signals on an Oscilloscope*
- *DC to 50 MHz bandwidth*

ORDERING INFORMATION

TVC 501 Time-Voltage Converter. See page 338 for further information	**$2,500**
AM 503 Current-Probe Amplifier. See page 325 for further information.	**$1,450**
AM 503S Current Probe System Includes: AM 503, A6302 (calibrated to AM 503), Tool Box, TM 502A. See page 325 for further information.	**$2,400**

AM 501
Operational Amplifier

- *40 V, 50 mA Output*
- *Open-Loop Gain 10,000*
- *50 V/µs Slew Rate*
- *Symmetrical Differential Design*
- *Optional Circuit Board to Customize Function*

ORDERING INFORMATION

AM 501 Operational Amplifier Includes: Instruction manual (070-1616-01).	**$995**
AM 501 Auxiliary Circuit Board Kit Order 013-0146-00	**$33**