SECTION I
GENERAL INFORMATION

1-1. DESCRIPTION.

1-2. The -hp- Model 403B Transistorized AC Voltmeter is a general purpose instrument that measures rms values of ac voltages in the 5 Hz to 2 MHz range. The instrument has full-scale ranges from 1 mV to 300 volts (-72 dBm to +52 dBm) in a 1, 3, 10 sequence. The Model 403B meter face is calibrated with the upper scale in volts (rms); the Model 403B Option 01 meter face is calibrated with the upper scale in dB. Models 403B and 403B Option 01 are shown in Figure 1-1, and specifications are given in Table 1-1.

1-3. The Model 403B operates from Nickel Cadmium batteries. The instrument also includes a self-contained battery charger which operates on 115 or 230 volts ac.

1-5. INSTRUMENT AND MANUAL IDENTIFICATION.

1-6. Hewlett-Packard uses a two-section serial number. If the first section (serial prefix) of the serial number on your instrument does not agree with those on the title page of this manual, change sheets supplied with the manual will define the differences between your instrument and the Model 403B described in this manual. Some serial numbers may have a letter separating the two sections of the number. This letter indicates the country in which the instrument was manufactured.

1-7. ACCESSORIES AVAILABLE.

1-8. To increase the usefulness of your instrument, the following accessories are available:

a. -hp- Model 11005A Line Bridging Transformer.

b. -hp- Model 11039A Capacitive Voltage Divider.

c. -hp- Model 10111A BNC-To-Binding Post Adapter.

1-9. Table 1-2 provides information and use of the accessories mentioned above as well as other useful accessories.

Table 1-1. Specifications

RANGE:
0.001 to 300 volts rms full scale (12 ranges) in a 1, 3, 10 sequence.

FREQUENCY RANGE:
5 Hz to 2 MHz

ACCURACY:
% of Full Scale.

MODEL 403B ACCURACY SPECIFICATION

Frequency	0 to 50°C	0 to -20°C
10 Hz to 1 MHz	±2%	±8%
5 to 10 Hz and 1 to 2 MHz	±5%	±8%

MODEL 403B OPTION 01 ACCURACY SPECIFICATION

Frequency	0 to 50°C	0 to -20°C
10 Hz to 1 MHz	±0.2 dB	±0.7 dB
5 to 10 Hz and 1 to 2 MHz	±0.4 dB	±0.7 dB

METER:
Individually calibrated, taut band. Responds to average value of input waveform and is calibrated in the rms value of a sine wave.

NOMINAL INPUT IMPEDANCE:
2 megohms; shunted by < 60 pF on 0.001-volt to 0.03-volt ranges, < 30 pF on 0.1-volt to 300-volt ranges.

OVERLOAD PROTECTION:
Fuse protected:

DC ISOLATION:
Signal ground may be ±500 Vdc from external chassis.

POWER SUPPLY:
4 rechargeable batteries (furnished). 40-hour operation per recharge (20 hours at -20°C), up to 500 recharging cycles (expected battery life of 20,000 hours). Recharging circuit is self-contained and functions automatically when instrument is operated from ac line (115 or 230V ±10% 48 to 440 Hz, < 3 watts).

TEMPERATURE RANGE:
-20°C to +50°C.

DIMENSIONS:
5-1/8 in. wide, 6-3/32 in. high, 8 in. deep.

ACCESSORIES AVAILABLE:
-hp- 11002A Test Leads, 5 ft. long, dual banana plug to alligator clips. -hp- 11003A Test Leads, 5 ft. long, dual banana plug to probe and alligator clip.

ACCESSORY FURNISHED:
Detachable power cord.