

SECTION I

GENERAL INFORMATION

1-1. INTRODUCTION.

1-2. This manual contains all information required to install, operate, test, adjust, and service the Hewlett-Packard Model 8447A Amplifier (see Figure 1-1). This section contains instrument identification, description, options, accessories, specifications, and other basic information.

1-3. The various sections in this manual provide information as follows:

SECTION II, INSTALLATION, provides information relative to incoming inspection, power requirements, mounting, packing and shipping, etc.

SECTION III, OPERATION, provides information relative to operating the instrument.

SECTION IV, PERFORMANCE TEST, provides information required to verify that the instrument is performing in accordance with published specifications.

SECTION V, ADJUSTMENTS, provides information required to properly adjust and align the instrument after repairs are made.

SECTION VI, PARTS LIST, provides ordering information for all replaceable parts and assemblies.

SECTION VII, MANUAL CHANGES, normally will contain no relevant information in the original issue of a manual. This section is reserved to provide back dated and up dated information in manual revision or reprints.

SECTION VIII, SERVICE, includes information necessary to efficiently service the instrument.

1-4. INSTRUMENT COVERED BY MANUAL.

1-5. Hewlett-Packard instruments carry an 8-digit serial number prefix (see Figure 1-3) on the back of the panel. When the serial number prefix on the instrument serial number plate of your instrument is the same as one of the serial prefix numbers on the inside title page of this manual, the manual applies directly to the instrument. When the instrument serial number prefix is not listed on

the inside title page, manual changes sheets and manual updating information is provided. Later editions or revisions to the manual contain the required change information in Section VII.

1-6. DESCRIPTION.

1-7. HP Model 8447A Amplifier is a general purpose, low-noise, wideband amplifier (see Figure 1-1). The 8447A provides 20 dB gain to signals in 50 ohm systems from .1 to 400 MHz.

1-8. The Model 8447A amplifier can be used to make up resistive probe losses or improve sensitivity when used as a preamplifier to a spectrum analyzer or oscilloscope.

1-9. OPTIONS.

1-10. The Model 8447A -001 Dual Amplifier (see Figure 1-2) is a two-amplifier configuration which can be operated separately. Each amplifier provides 20 dB gain or the amplifiers can be cascaded by a front panel patch cable to provide a total gain of 40 dB.

Table 1-1. Specifications

Frequency Range: 0.1 to 400 MHz.
Gain: 20 dB \pm 0.5 dB*.
Gain Flatness: \pm 0.5 dB.
Noise Figure: <5 dB, 1 to 400 MHz.
Output Level: >+7 dBm at 1-dB compression point.
Distortion: Harmonics at least 35 dB down at output levels up to 0 dBm.
Impedance: 50 Ω both ports, $ \rho < 0.26$ (VSWR <1.7).
Power Requirements: 115 or 230 Vac \pm 10%, 50 to 400 Hz, 15 Watts, 27 VA max.
Weight: Net, 3 lbs, 7 oz. (1,56 kg), shipping: 5 lbs, 1 oz. (2,30 kg)
Dimensions: 8-1/2 inches (216 mm) by 5-1/8 inch (130 mm) by 3-3/8 inches (85,8 mm).

*Measured at 10 MHz.