

SECTION 5.3.1

3000B

PERFORMANCE TEST

5.3.1 INTRODUCTION

The purpose of the performance test in the following section is to verify that the Service Monitor meets its published specifications (Section 1.2) Individual performance tests consist of: the specification to be verified, the method of testing, a list of equipment required, and a detailed test procedure.

Critical specifications for each item of test equipment are listed in Section 5.3.2, Recommended Test Equipment. Except as detailed, settings of test equipment apply to performance test procedures. All other test equipment operating details are omitted.

The Service Monitor should have its bottom cover installed for the performance test. Before applying power to the Service Monitor, see Section 2 for details of electrical installation. The line voltage should be maintained at 115 or 230 volts. $\pm 10\%$, 50 to 60 Hz $\pm 5\%$ throughout the test. The performance test procedures are begun after a 15 minute minimum warmup of the Service Monitor in a $+20^{\circ}$ to $+30^{\circ}\text{C}$ ambient temperature range.

A copy of the Performance Test Record (PTR) is provided at the end of this section for convenience in recording the performance of the Service Monitor during performance tests. It can be filled out and used as a permanent record for incoming inspection, or it can be used as a guide for routing performance testing. The PTR lists the section, test, and specification limits. All tests refer to this record.

5.3.2 REQUIRED TEST EQUIPMENT

A. AT THE BENCH

The following equipment should be at unit technician's bench during the performance test procedure.

1. Standard Generator: A Wavetek Model 3010 referenced to 10 MHz house standard.
2. DVM: A Fluke Model 8010 or equivalent type DVM.

3. Variable frequency audio function generator: Wavetek Model 180/182 or equivalent.
4. Frequency Counter: Hewlett Packard Model 5383 or Mid State Model CM 1000 or equivalent referenced to 10 MHz house standard.
5. SINAD Test Set: Helper Instruments Model S101 and accompanying interconnect devices.
6. AC Line Monitor: VIZ or equivalent.
7. VARIAC and 240 V outlet.
8. RF Simulation box.
9. Standard Mobile Microphone.
10. Loop Probe (see Diagram 2).
11. Coaxial Termination 50 ohm (HP 908A) or equivalent.
12. Oscilloscope: Tektronix 2213 or equivalent.

B. TRANSPORTABLE EQUIPMENT

The following equipment should be available to the unit technician and remain in the area aboard a rolling transport device with appropriate cables.

1. Spectrum Analyzer: Hewlett Packard Model 8558.
2. Modulation Analyzer: Hewlett Packard Model 8901.
3. RF Power Source: RF power cart with VHF and UHF high and low power source and wattmeter.
4. Amplifier: Hewlett Packard Model 8447D (.1-1300 MHz, 26 dB), 2 needed.