

**OPERATOR AND ORGANIZATIONAL MAINTENANCE
MANUAL, TEST SET, TELEPHONE AN/ USM-181**

Headquarters, Department of the Army, Washington, D.C. 20315
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WARNING

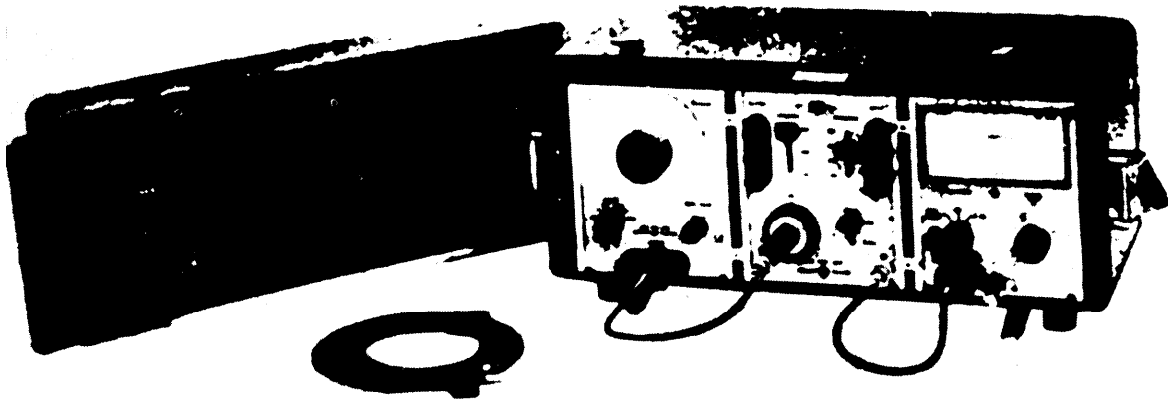
Be careful when working with the 115-volt ac line connection. Serious injury or death may result from contact with these terminals.

DON'T TAKE CHANCES!

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<p>This reprint includes all changes in effect at the time of publication; changes 2, 4 and 5.</p>
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Figure 1. Test Set, Telephone AN/USM-181 (front view).

CHAPTER 1

INTRODUCTION

Section I. GENERAL

1. Scope

This manual describes Test Set, Telephone AN/USM-181 (fig. 1) and provides instructions for installation, operation, and operator and organizational maintenance. It includes instructions for operation under usual and unusual conditions, cleaning and inspection of the equipment, and replacement of parts available to the operator and organizational repairmen.

2. Index of Equipment Publications

Refer to the latest issue of DA Pam 3104 to determine whether there are new editions, changes, or additional publications pertaining to the equipment. Department of the Army Pamphlet No. 30-4 is an index of current technical manuals, technical bulletins, supply manuals (types 4, 6, 7, 8, and 9), supply catalogs (type GL), supply bulletins, lubrication orders, and modification work orders available through publications supply channels. The index lists the individual parts (-10, -20, 35P, etc) and the latest changes to and revisions of each equipment publication.

3. Forms and Records

a. Reports of Maintenance and Unsatisfac-

tory Equipment. Use equipment forms and records in accordance with instructions in TM 38-750.

b. Report of Damaged or Improper Shipment. Fill out and forward DD Form 6 (report of Damaged or Improper Shipment) as prescribed in AR 700-58 (Army), NAVSANDA Publication 378 (Navy), and AFR 71-4 (Air Force).

c. Reporting of Equipment Manual Improvements. The direct reporting of errors, omissions, and recommendations for improving this equipment manual by the individual user is authorized and encouraged. DA Form 2028 will be used for reporting these improvements. This form may be completed by using pencil, pen, or typewriter. DA Forms 2028 will be completed in triplicate and forwarded by the individual using the manual. The original and one copy will be forwarded direct to: Commanding General, U.S. Army Electronics Command, ATT'N: AMSE-MR-MOC; Fort Monmouth N. J. 0770S. One information copy will be provided to the individual's immediate supervisor (officer, noncommissioned officer, supervisor, etc).

Section II DESCRIPTION AND DATA

4. Purpose and Use

Test Set, Telephone AN/USM-181 is a portable oscillator, voltmeter, and patch panel combination for measuring gain and attenuation in relation to frequency, crosstalk, noise, and power levels in telephone transmission lines, carrier circuit, filters, amplifiers, and attenuators. It covers both the audiofrequency and carrier frequency range and is suitable for direct and general support and depot maintenance use. It operates on both alternating current (ac) or on storage batteries within the test set. The

oscillator supplies a test signal through an impedance matching transformer and attenuator in the patch panel to the external circuit under test. The voltmeter receives the test signal from the circuit under test through an impedance matching transformer in the patch panel and indicates the test signal level in decibels (referred to 1 milliwatt (row) in 600 ohms) (dbm), in decibels (db) above or below the level of the test signal applied to the circuit, and in root mean square (rms) volts. The terminals on the patch panel can be connected to