DEPARTMENT OF THE ARMY TECHNICAL MANUAL

OPERATOR'S AND ORGANIZATIONAL

MAINTENANCE MANUAL

ELECTRONIC MULTIMETERS TS-505A/U

AND TS-505B/U AND MULTIMETERS

TS-505C/U AND TS-505D/U

This copy is a reprint which includes current pages from Changes 1 through 4.

HEADQUARTERS, DEPARTMENT OF THE ARMY
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TECHNICAL MANUAL

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HEADQUARTERS,
DEPARTMENT OF THE ARMY
WASHINGTON 25, D. C., *30 December 1960*

ELECTRONIC MULTIMETERS TS-505A/U AND TS-505B/U AND MULTIMETERS TS-505C/U AND TS-505D/U

*This manual supersedes so much of TM 11-5511A. 25 August 1955, including C1, 21 February 1956; C2, 23 November 1956; and C3, 2 January 1958, as pertains to operation and organizational maintenance and TM 11-6625-239-10P, 10 July 1959.

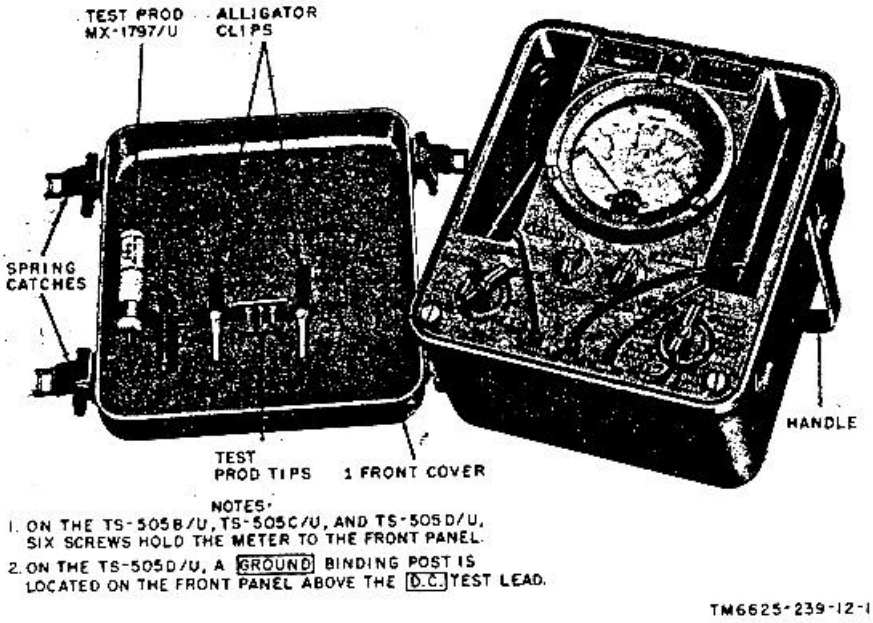

Figure 1. Electronic Multimeter TS-505A/U or TS-505B/U, or Multimeter TS-505C/U or TS-505/U, less running spares

CHAPTER 1
INTRODUCTION

Section I. GENERAL

1. Scope

a. This manual Electronic Multimeters TS-505A/U and TS-505B/U, and Multimeters TS-505C/U and TS-505D/U (fig. 1) and covers installation, operation, and first and second echelon maintenance. It includes instructions for operation under usual and unusual conditions, cleaning and inspection of the equipment, and replacement of parts available to first and second echelon maintenance personnel.

b. Official nomenclature followed by (°) is used to indicate all models of the equipment item covered in this manual. Thus, TS-505(°)/U represents Electronic Multimeters TS-505A/U and TS-505B/U, and Multimeters TS-505C/U and TS-505D/U.

2. Forms *and* Records

a. Electronic Failure Report. Fill out and forward DD Form 787-1 (Electronic Failure Report (Signal Equipment)) to the Commanding Officer, U. S. Army Signal Materiel Support Agency, ATTN: SIGMS-ML, Fort Monmouth, N. J., as prescribed in AR 700-38.

b. Unsatisfactory Equipment Report. Fill out and forward AF TO Form 29 (Unsatisfactory Report) to the Commander, Air Materiel Command, Wright-Patterson Air Force Base, Ohio, as prescribed in AF TO 00-35D-54.

c. 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), Navy Shipping Guide, Article 1850-4 (Navy), and AFR 71 -4 (Air Force).

d. Preventive Maintenance Forms (fig. 9-11). Prepare DA Form 11-266 (Maintenance Check List for Signal Equipment (Test Equipment)) in accordance with instructions on the form.

e. Parts List Form. Forward DA Form 2028 (Recommended Changes to DA Technical Manual Parts Lists or Supply Manual 7, 8, or 9) directly to the Commanding Officer, U. S. Army Signal Materiel Support Agency, SIGMS-ML, Fort Monmouth, N. J., for comments on parts listings.

f. Comments on Manual. Forward all other comments on this manual directly to the Commanding Officer, U. S. Army Signal Materiel Support Agency, ATTN: SIGMS-PA2d, Fort Monmouth. N.J .

Section II. DESCRIPTION AND DATA

3. Purpose and Use

a. Purpose. Electronic Multimeters TS-505A/U and TS-505B/U, and Multimeters TS-505C/U and TS-505D/U measure resistance and alternating current (ac) and direct-current (dc) voltages in electrical and electronic equipments.

b. Use. The TS-505(*)/U can measure resistances from 1 ohm to 1,000 megohms, dc voltages from 0.05 volt to 1,000 volts, and ac voltages from 0.05 volt to 250 volts root mean square (rms) at frequencies from 30 cycles per second (cps) to 1 megacycle (mc). When Test Prod MX-1797/U is used with the D. C. probe, radio frequency (rf) voltages may be measured from 0.05 volt to 40 volts rms at frequencies from 500 kilocycles (kc) to 500 mc

Caution: Do not exceed a 10-second duration for measurements when measuring voltage above 25 volts ac at frequencies between 500 kc and 1 mc. Do not attempt to measure rf voltages greater than 40 volts rms with Test Prod MX-1797/U.

4. Technical Characteristics

Power supply:

Input voltage..... 98 to 132 volts ac, single phase.

Frequency..... 50 to 1,000 cps.

Power consumption ..... Approximately 21 watts.

Indicating meter ..... 1 milliampere dc for full-scale deflection