This copy is a reprint which includes current pages from Change 1 and Change 2.

*TM 11-6625-475-10

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

Operator's Manual

MULTIMETERS AN/PSM4, AN/PSM-6A, AND AN/PSM-6B

Headquarters, Department of the Army, Washington, D.C.
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*This manual supersedes TM 11-6625-475-10, 5 July 1962, including C 1, 6 December 1963, and C 2, 20 November 1964.

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SECTION I

GENERAL DESCRIPTION

1. General

This manual comprises the operating instructions for Multimeter AN/PSM-6, part number 56-5002A, FSN 6625+43-1686; Multimeter AN/PSM-6, part number 56-5002B, FSN 6625-643-1686; Multimeter AN/PSM-6A, part number 165-5002, FSN 6625-656-5871; and Multimeter AN/PSM-6B, part number 199-5002, FSN 6625-957--4374. Figure 1 shows Multimeter AN/PSM-6, using Multimeter ME-70A/PSM-6 as its major component. Serial numbers 25298 and above are assigned to these units. The Multimeter AN/PSM-6, illustrated in figure 2, uses Multimeter ME-70/PSM-6, to which serial numbers below 25298 are assigned, Multimeter AN/PSM-6A, illustrated in figure 3, uses Multimeter ME-70B/PSM-6A as its major component.

2. Purpose

A. Multimeter AN/PSM-6, AN/PSM-6A, and AN/PSM-6B, are items of general purpose test equipment designed to measure dc and ac voltage, dc current and resistance in the ranges most commonly encountered in electrical equipment. The maximum values which can be mensured are as follows :

(1) dc voltage-5,000 volts.
(2) ac voltage-1,000 volts.
(3) dc current-10 amperes.
(4) resistance-10 megohms.

b. Multimeter AN/PSM-6A differs from Multimeter AN/PSM-6 in the following two respects:

(1) The output function in the AN/PSM-6 has been replaced in the AN/PSM-6A by the more useful pulsed dc current function which is employed in the maintenance of certain Fire Control apparatus. This makes it. possible to measure pulsating dc currents having high peak values 1 and average values up to 1 ampere. Such currents cannot be measured accurately with the AN/PSM-6 incorporating Multimeter MF-70A/PSM-6.

(2) To minimize down-time of the Multimeter in the field, a protective system has been incorporated in the AN/PSM-6A to protect the instrument against damage due to incorrect setting of the RANGE or FUNCTION Switch or wrong polarity of test bad connection. This system is capable of protecting every RANGE-FUNCTION combination under the following maximum conditions:

From a power source having 2000 volts open circuit capable of delivering 1 maximum short-circuit current of 375 ma and a maximum surge current of 30 amperes which decays to 400 ma within 2 milliseconds:

2000 volts dc applied in the forward direction,
2000 volts dc applied in the reverse direction,
2000 volts ac at 60 cps.

From a power source such that the multimeter is not required to dissipate more than 750 watts of power in any current range:

10 amperes dc applied in the forward direction,
10 amperes dc applied in the reverse direction,
10 amperes ac at 60 ecps.

Note. Because of the variability among identical components with respect to their ability to withstand peak overload voltages and currents the number of overloads for which any individual multimeter is protected will vary from unit to unit.

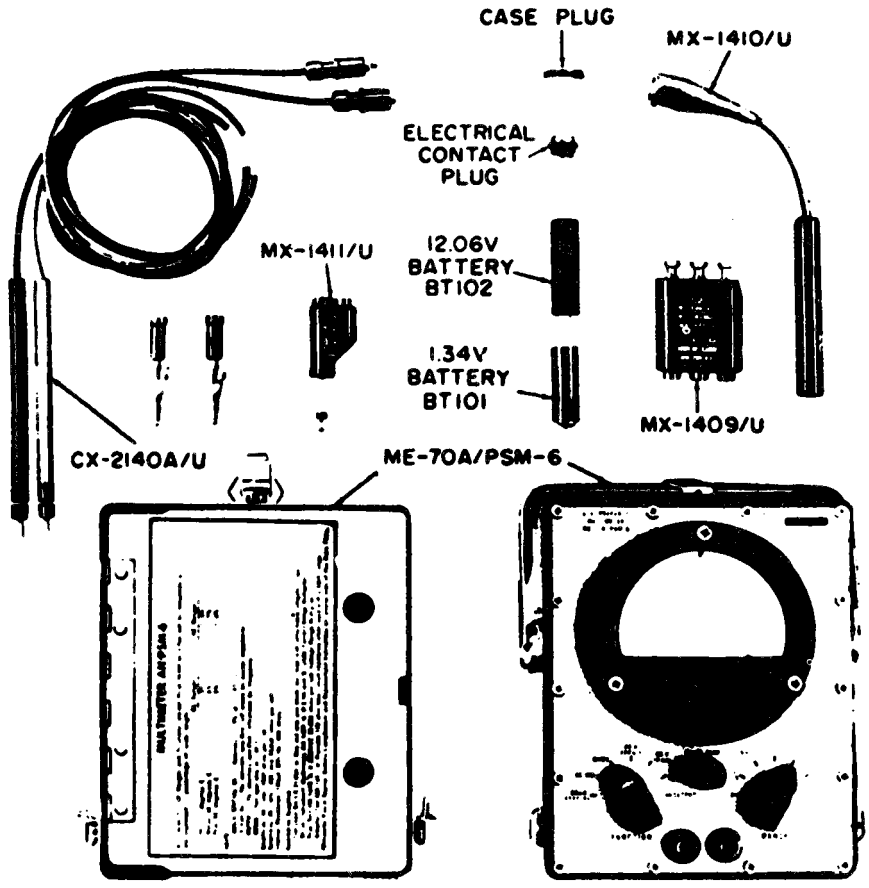

Figure 1. Multimeter AN/PSM-6 using Multimeter ME-70A/PSM-6.

3. Index of Publications

Refer to the latest issue of DA Pam 310-4 to determine whether there are new editions, changes, or additional publications pertaining to this equipment DA Pam 310-4 is an index of current technical manuals technical bulletins, supply manuals (types 7, 8, and 9), 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.

4. Forms and Records

a. Reports of Maintenance and Unsatisfactory 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.

c. *Reporting of Equipment Manual Improvements.* The direct reporting by the individual user of errors, omissions and recommendations for improving this manual is authorized and encouraged. D A F o r m 2028 (Recommended Changes to DA Publications) will be used formporting these improvement recommendations. This form will be completed using pencil pen, or typewriter and forwarded direct to Commanding General, U.S. Army Electronics Command, ATTN: AMSEL-MR-NMP-MA, Fort Monmouth, N.J. 07703.

5. Multimeter AN/PSM-6

Multimeter AN/PSM-6 consists of the following items in one completely self-contained case:

a. Multimeter ME-70/PSM-6 or ME-70A/PSM-6.

b. Multirange Instrument Shunt MX-1409/U.

c. Test Prod MX-1410/U.

d. Test Adapter MX-1411/U.

e. Teat Lead Set CX-2140/U or CX-2140A/U.