TM 11-6625-203-12

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

OPERATION AND ORGANIZATIONAL MAINTENANCE MULTIMETER AN/URM-105 INCLUDING MULTIMETER ME-77/U

This copy is a reprint which includes current pages from Changes 4 and 6

HEADQUARTERS, DEPARTMENT OF THE ARMY

JUNE 1959

WARNING

HIGH VOLTAGE

as high as 50,000 VOLTS
may be measured with this equipment

DEATH ON CONTACT

may result if operating personnel
fail to observe safety precautions.

Be very careful when measuring voltages in excess of 200 volts. Physical contact with such voltages may result in serious injury or death. To ensure safety, turn off the equipment which is being checked before either attaching or removing the test prods at the point of measurement.

DON'T TAKE CHANCES!

TECHNICAL MANUAL

Operator and Organizational Maintenance
MULTIMETER AN/URM-105, INCLUDING MULTIMETER ME-77/U

TM 11-6625-203-12
CHANGES No. 4

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON 25, D.C., *1 February 1963*

TM 11-6625-203-12, 11 June 1959, is changed as follows:

Note. The parenthetical reference to previous Changes (*example:* "Changes 3") indicates that pertinent material was published in these Changes.

Page 2. Delete paragraphs 2 and 2.1 (Changes 3, 30 Oct 62) and substitute:

2. 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. Department of the Army Pam No. 310-4 is a current index of Technical Manuals, Technical Bulletins, Supply Bulletins, Lubrication Orders, and Modification Work Orders that are available through publications supply channels. The index lists the individual parts (-10, -20, -35P, etc) and the latest changes and revisions of each equipment publication.

2.1. Forms and Records

a. Report of Unsatisfactory Equipment. Fill out DA Form 2407 (Maintenance Request) in accordance with instructions in TM 38-750 and forward it to: Commanding Officer, U.S. Army Electronics Materiel Support Agency, ATTN: SELMS-PIE, Fort Monmouth, N.J. The form should be filled out and forwarded to report—

(1) Receipt of defective equipment (use DD Form 6 (*b* below) if defect is due to damaged or improper shipment).
(2) Equipment deficiencies (deadlined equipments).
(3) Equipment shortcomings (operable, but at less than rated capability or efficiency).
(4) Equipment improvement suggestions and recommendations.

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. Comments. Forward all comments on this publication direct to: Commanding Officer, U.S. Army Electronics Materiel Support Agency, ATTN: SELMS-MP, Fort Monmouth, N.J. (DA Form 1598 (Record of Comments on Publications), DA Form 2496 (Disposition Form), or letter may be used.)

Page 4.

5. Components
(Superseded)

The components of Multimeter AN/URM-105 are listed in appendix III (Changes 3, 30 Oct 62). The major assemblies are illustrated in figure 1.

Page 5. Paragraph 8.

c. (Added) *Dimensions.* The dimensions of the multimeter are 6⅝ by 4 by 3¼ inches and the weight is 2 pounds.

9. Checking Unpacked Equipment
(Superseded)

a. Inspect the equipment for damage incurred during shipment. If the equipment has been damaged, report the damage on DD Form 6 (par. 2.1*b*).

b. See that the equipment is complete as listed on the packing slip. If a packing slip is not available, check the equipment against the items listed in appendix III (Changes 3, 30 Oct 62). Report all discrepancies on DA Form 2407 (par. 2.1*a*).

Note. Shortage of a minor assembly or part that does not affect proper functioning of the equipment (electrical clips, alligator clips) should not prevent use of the multimeter.

c. If the equipment has been used or reconditioned, see whether it has been changed by a modification work order (MWO). If the multimeter has been modified, the MWO number will appear on the cover near the nomenclature plate. Check to see whether the MWO number (if any) and appropriate notations concerning the modification have been entered in this manual.

Note. Current MWO's applicable to this equipment are listed in DA Pam 310-4.

Page 10. Delete paragraphs 18 through 20 and figures 5 and 6 and substitute:

Section I. OPERATOR'S MAINTENANCE

18. Scope of Operator's Mainteannce

The maintenance duties assigned to the operator of Multimeter AN/URM-105 are listed below together with a reference to the paragraphs covering the specific maintenance function. The duties assigned do not require tools or test equipment other than those listed in appendix II (Changes 3, 30 Oct 62).

a. Daily maintenance service and inspection (par. 20).

b. Cleaning (par. 20.1).

19. Operator's Preventive Maintenance

Operator's preventive maintenance is the systematic care, servicing, and inspection of equipment to prevent the occurrence of trouble, to reduce downtime, and to assure that the equipment is serviceable.

a. Systematic Care. The procedures given in paragraphs 20 and 20.1 cover systematic care essential to proper upkeep and operation of the equipment. The cleaning operations (par. 20.1) should be performed once a day. If the equipment is not used daily, however, the cleaning operations must be performed before operation after any extended shutdown, or once a week while the equipment is kept in *standby* condition. The other items must be checked before the equipment is placed in operation after a shutdown, during operation, or after it is turned off, as specified in the applicable paragraph.

b. Maintenance Service and Inspection. The daily maintenance service and inspection chart (par. 20) outlines inspections to be made at daily intervals. These inspections are made to determine combat serviceability: that is, to determine that the equipment is in good general (physical) condition, in good operating condition, and likely to remain combat serviceable. To assist operators in determining and maintaining combat serviceability, the chart indicates what to inspect, how to inspect, and what the normal conditions are; the reference column lists the paragraph that contains additional information. If the defect cannot be remedied by the operator, higher echelon maintenance or repair is required. Records and reports of these inspections must be made in accordance with TM 38-750.

20. Daily Maintenance Service and Inspection Chart

Item No.	Procedure		References
	Item	Normal condition or result	
1	AN/URM-105: Inspect the equipment for—		
	a. Completeness	*a.* Equipment must be complete	*a.* App III (Changes 3, 30 Oct 62).
	b. Proper installation	*b.* Batteries are installed correctly	*b.* Par. 10.
	c. Cleanliness	*c.* Unit must be clean and dry inside and out; free of grease, dirt, rust, corrosion, and fungus.	*c.* Par. 20.1.
7	KNOBS AND SWITCHES: Check for proper mechanical action by setting each control to each of its possible settings.	Action is positive without backlash, binding, or scraping. *Note.* Knobs that require frequent tightening should have setscrews replaced.	Higher echelon maintenance required.
12	DC VOLTAGE OPERATION:		
	a. Set selector switch to 10 DC VOLTS range.	*a.* None	*a.* None.
	b. Connect test prods across a BA-58/U battery and note indication on meter.	*b.* Meter should read approximately 1.5 volts.	*b.* Par. 20.9.
	c. Set selector switch to 100 DC VOLTS range.	*c.* None	*c.* None.
	d. Remove test prods from BA-58/U battery, reconnect test prods across BA-261/U battery, and note indication on meter.	*d.* Meter should read approximately 22.5 volts.	*d.* Par. 20.9.
13	AC VOLTAGE OPERATION:		
	a. Set selector switch to 1000 AC VOLTS range.	*a.* None	*a.* None.