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DEPARTMENT OF THE ARMY TECHNICAL MANUAL

OPERATION AND ORGANIZATIONAL MAINTENANCE

ELECTRICAL POWER TEST SETS AN/UPM-93 AND AN/UPM-100

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
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ELECTRICAL POWER TEST SETS AN/UPM-93 AND AN/UPM-100

*This manual supersedes the operation and organizational maintenance portions of TB SIG 318, 24 March 1958.

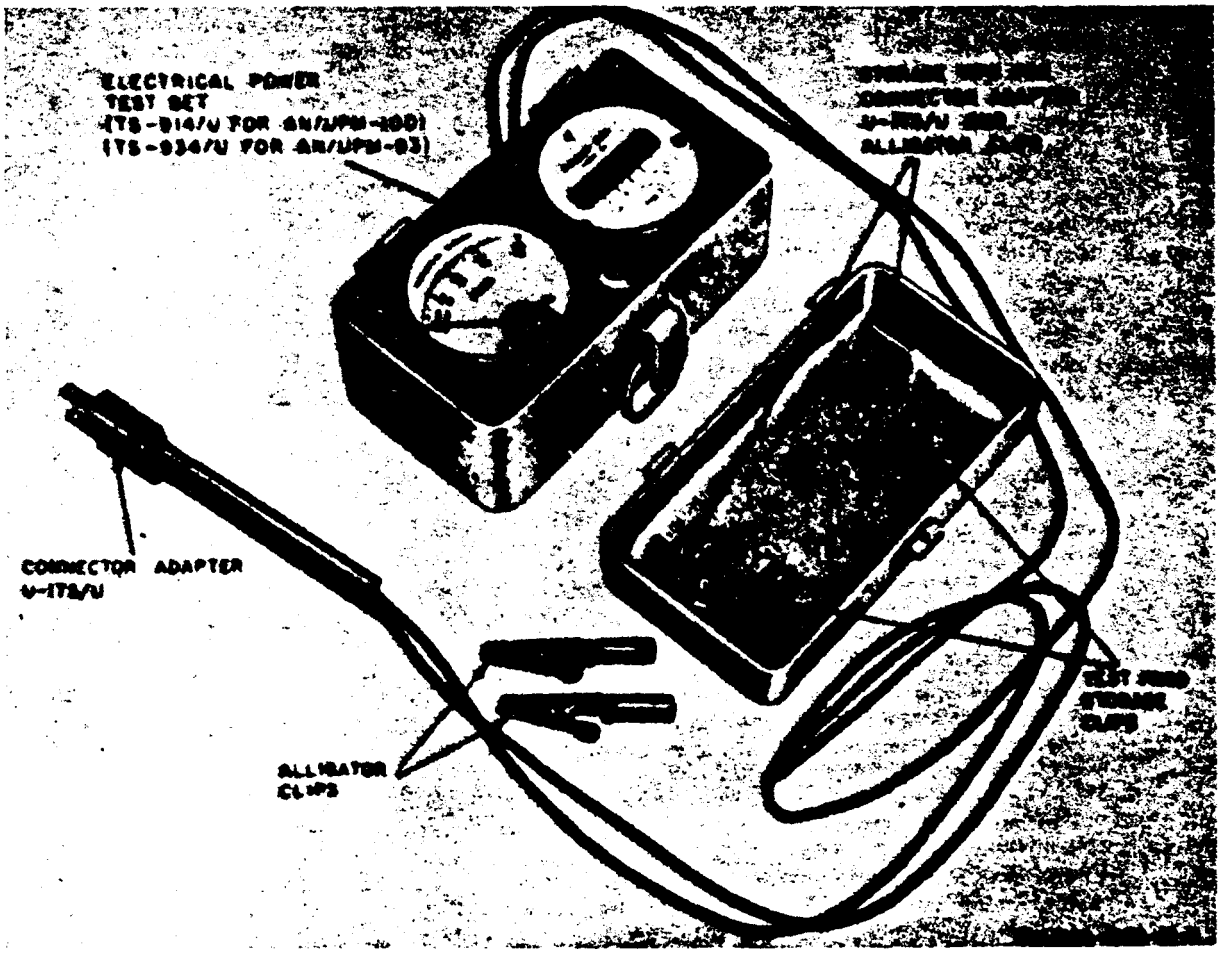

Figure 1. Electrical Power Test Set AN/UPM-93 or AN/UPM-100.

CHAPTER 1

INTRODUCTION

Section I. GENERAL

1. Scope

a. **This manual describes Electrical Power Test Sets AN/UPM–93 and AN/UPM–100 (fig. 1) and covers installation, operation, and first and second echelon maintenance. It includes instructions for operation under usual and unusual conditions, instructions for cleaning and inspection of the equipment, and replacement of parts available to second echelon maintenance.**

b. **The appendix of this manual contains the maintenance allocation charts.**

2. Forms and Records

a. Unsatisfactory Equipment Reports.

(1) **Fill out and forward DA Form 468 (Unsatisfactory Equipment Report) to the Commanding Officer, U.S. Army Signal Equipment Support Agency, Fort Monmouth, N.J., as prescribed in AR 700–38.**

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

b. Report of Damaged or Improper Shipment. Fill out end forward DD Form 6 (Report of Damaged or Improper Shipment) as prescribed in AR 700-58 (Army), Navy Shipping Guide, Article 18504 (Navy), and AFR 71-4 (Air Force).

c. Preventice Maintenance Form (figs. 5 and 6). Prepare DA Form 11-266 (Maintenance **Check** List for Signal Equipment (Test Equipment)) in accordance with instructions on the form.

d. Parts List Form. Forward DA Form 2028 (Recommended Changes to DA Technical Manual Parts Lists or Supply Manuals 7,8, and 9) directly to the Commanding Officer, U.S. Army Signal Equipment Support Agency, Fort Monmouth, N.J., with comments on omissions and discrepancies in the appendix.

e. Comments on Manual Forward all other comments on this publication direct to the Commanding Officer, U.S. Army Signal Publications Agency, Fort Monmouth, N.J.

Section II. DESCRIPTION AND DATA

3. Purpose and Use

Electical Power Test Sets AN/UPM-93 and AN/UPM-100(fig. 1) are portable test sets used to make voltage and frequency measurements of 400 and 60-cycles per second (cps) power circuits, respectively. The taster is connected to the measurment points by two test prods which may be connected to alligator clips or plugged into Connector Adapter U-175/U.

4. Technical Charactoriatics

Frequency range----------	**380 to 420 cps (AN/UPM-93) .**
	58 to 62 cps (AN/UPM-100).
Voltage ranges----- 0	**to 150 volts.**
	0 to 300 volts.
Power consumption-	**3 watts.**
Accuracy of frequency calibration-	**±5 percent of indicated frequency (AN/UPM-93).**
	±3 percent or indicated frequency (AN/UPM-100).
Accuracy of voltage calibration----------	**±2 percent of full-scale value.**

5. Table of Components
(fig. 1)

The following chart lists the components of Electrical Power Test Sets AN/UPM-93 and AN/UPM-l00.

Quantity	Item	Height (in.)	Depth (in.)	Width (in.)	Unit weight (lb.)
1	Electrical Power Ted Set TS-934/U (AN/UPM-93 only).	3¼	2%	6%	2.42
1	Electrical Power Ted Set TS-914/U (AN/UPM-100 only).	3¼	2%	6%	2.42
1	Connector Adapter U-175/U				
2	Alligator clip ---------				

6. Common Names

Common names are assigned to nomenclature items as follows:

Nomenclature	Common names
Electrical Power Test Set AN/UPM-93 or AN/UPM-100.	Teat set.
Electrical Power Test &t TS-914/U or TS-934/U	Tester.
Connector Adapter U-175/U	Adapter.

7. Description of Test Sets
(fig. 1)

a. The tester consists of *a* voltmeter and a frequency meter, mounted in a metal case with a removable hinged cover. A latch on the case secures the cover. A voltage selector switch and permanently attached test leads are between the meters. Spring clips and storage tips are attached to the inside of the cover to secure the alligator clips, the adapter, and the test prods when they are not in use.

b. Connector Adapter U-175/U has two flat, parallel blades on one end and two pin prod jacks on the other end.

c. The alligator clips are covered with an insulating material. Each clip has a pin prod jack at one end for connection to one of the test prods.

8. Differences in Models

Electrical Power Test Sets AN/UPM-93 and AN/UPM-100 are similar in purpose, operation, and appearance. The AN/UPM-93 is used to make voltage and frequency measurments on 400-cps power circuits; the AN/UPM-100 is used to make voltage and frequency measurements on 60-cps power circuits The frequency meter male on the TS-934U is marked from 380 to 420 cps in 5-cycle graduations; the frequency meter scale on the TS-914/U is marked from 56 to 62 cps, in half-cycle graduations (fig. 4).