

TM 11-6625-316-12

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

OPERATOR AND ORGANIZATIONAL
MAINTENANCE MANUAL

TEST SETS
ELECTRON TUBE
TV-2/U, TV-2A/U
AND TV-2B/U

This copy is a reprint which includes current
pages from Changes 2 through 3

HEADQUARTERS, DEPARTMENT OF THE ARMY

MARCH 1961

TECHNICAL MANUAL	}	DEPARTMENTS OF THE ARMY
No. 11-6625-316-12		AND THE AIR FORCE
TECHNICAL ORDER		WASHINGTON 25, D. C., 16 March 1961

TEST SETS, ELECTRON TUBE TV-2/U, TV-2A/U, AND TV-2 B/U

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*This manual supersedes so much of TM 11-2661, 11 May 1955, including C4, 8 November 1957; C5, 21 April 1958; C6, 15 May 1959, as pertains to operator's and organizational maintenance and so much of TM 11-6625-316-12P, 23 July 1959, as pertains to the basic issue items list and the maintenance allocation chart.

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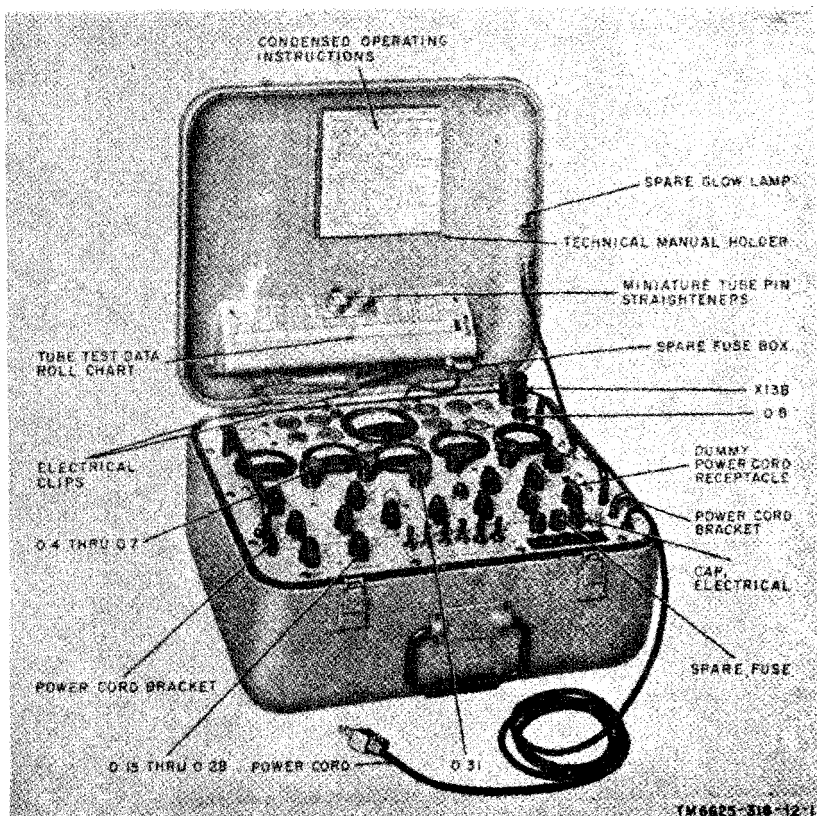


Figure 1. Test Set, Electron Tube TV-2(*)/U, less running spares.

CHAPTER 1

INTRODUCTION

Section I. GENERAL

1. Scope

a. This manual describes Test Sets, Electron Tube TV-2/U, TV-2A/U, and TV-2B/U (fig. 1) and covers operation and the operator's and organizational maintenance. It includes instructions for operation under usual conditions, for cleaning and inspection of the equipment, and for replacement of parts available to first and second echelon maintenance.

b. Official nomenclature followed by (*) is used to indicate all models of the equipment item covered in this manual. Thus Test Set, Electron Tube TV-2 (*)/U represents Test Sets, Electron Tube TV-2/U, TV-2A/U, and TV-2B/U.

c. Throughout this manual, Test Set, Electron Tube TV-2 (*) /U is referred to as the *tube tester*.

2. Forms and Records

a. *Unsatisfactory Equipment 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 700-39.

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. *Preventive Maintenance Forms*. Prepare DA Form 11-266 (figs. 6, 7, and 9) (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, or 9), directly to the Commanding Officer, U.S. Army Signal Materiel Support Agency, ATTN: SIGMS-ML Fort Monmouth, N. J., with comments on parts listings.

e. *Comments on Manual*. Forward all other comments on this publication directly to the Commanding Officer, U.S. Army Signal

Section II. DESCRIPTION AND DATA

3. Purpose and Use

Test Set, Electron Tube TV-2(*)/U (fig. 1) is a portable tube tester of the dynamic mutual conductance type. It is used to test and to measure performance capabilities and to determine rejection limit for electron tubes used in receivers, low-powered transmitters, and other electronic equipment. The following tests can be made with the tube tester.

- a. Short test.
- b. Interelement leakage test.
- c. Filament continuity test.
- d. Dynamic mutual conductance test for amplifier tubes.
- e. Gas test for amplifier tubes.
- f. Emission test for vacuum rectifier tubes.
- g. Test of gas rectifier tubes.
- h. Test of voltage regulator tubes.
- i. Plate current tests for triodes.
- j. Test of thyatron tubes.
- k. Electron-ray indicator test for electronic indicator tubes.
- l. Ballast tube test.

4. Technical Characteristics

a. Power supply:

Input voltage _____ 103.5 to 126.5 volts ac.
Frequency----- 50 to 1,000 cps, single-phase.
Power consumption -----70 watts (no tube under test).
Temperature range ----- Satisfactory operation from -4° F. to 125° F.

b. Meters:

FILAMENT VOLTS meter:

Type----- Dc voltmeter movement.
Frequency range ----- 50 to 1,000 cps.
Ac voltage ranges ----- 0 to 2.5 volts, 0 to 10 volts, 0 to 40 volts, and
0 to 120 volts. Redlines at 0.625, 6.3, 12.6,
and 117 on appropriate scale.
Accuracy ----- ±5 percent error at full scale.

GRID BIAS VOLTS meter:

Type -----Dc voltmeter.
Sensitivity ----- 1,000 ohms per volt.
Dc voltage ranges ----- 0 to 5 volts, 0 to 10 volts, and 0 to 50 volts.
Accuracy----- ±2 percent error at full scale.