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DEPARTMENT OF THE ARMY TECHNICAL MANUAL

RADAR TEST SET

AN/UPM-60A

OPERATION AND
ORGANIZATIONAL
MAINTENANCE

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RADAR TEST SET AN/UPM-60A

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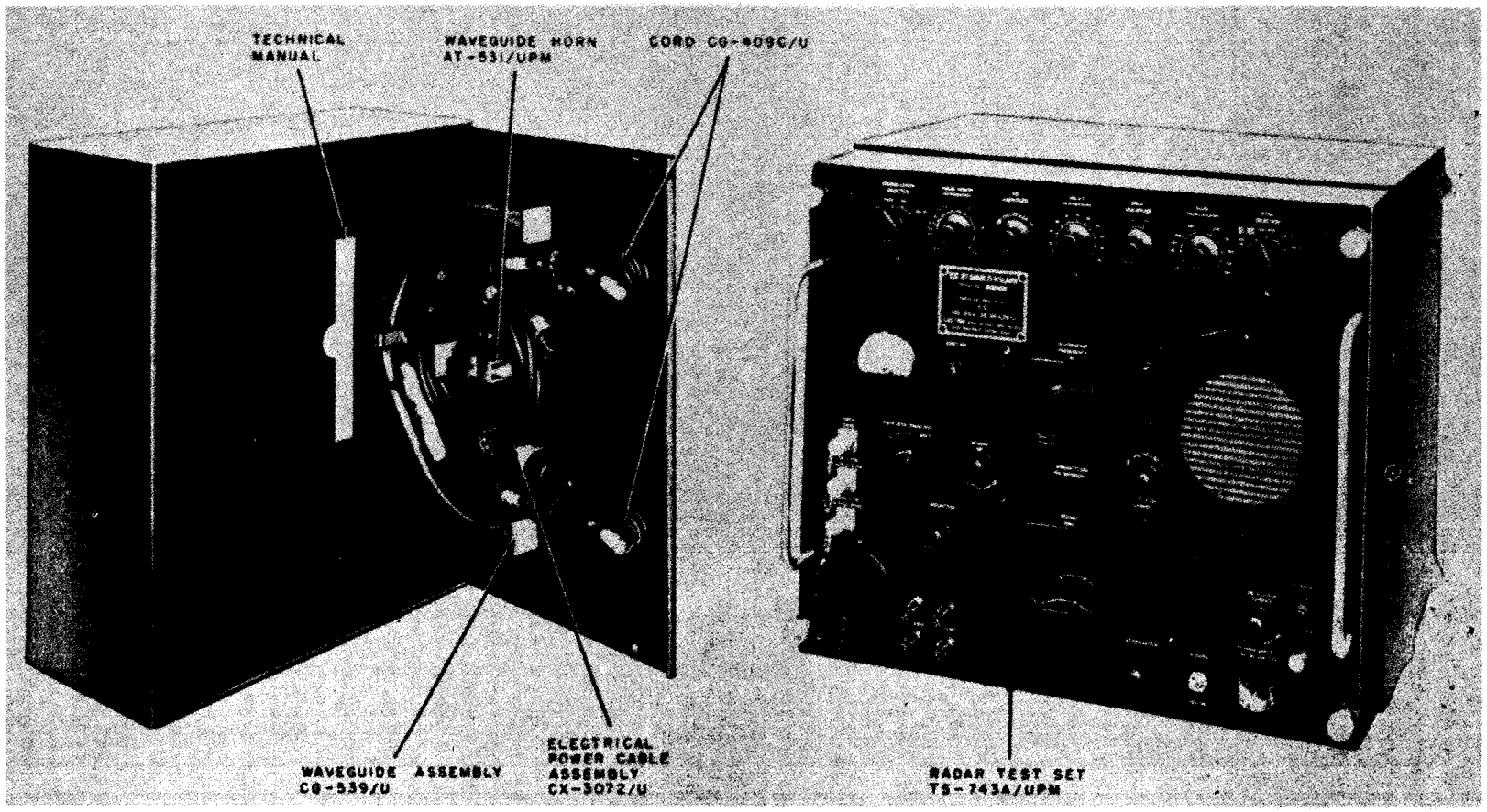

Figure 1. Radar Test Set AN/UPM-60A.

CHAPTER 1

INTRODUCTION

Section I. GENERAL

1. Scope

This manual describes Radar Test Set AN/UPM-60A (fig. 1) and covers its installation, operation, and organizational maintenance. It includes instructions for cleaning and inspection of the equipment and replacement of parts available to organizational maintenance. The appendix contains the Maintenance Allocation Chart.

2. Forms and Records

a. Unsatisfactory Equipment Report. 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.

b. Damaged or Improper Shipment Report. Fill out and forward DD Form 6 (Report of Damaged or Improper Shipment) as prescribed in AR 700–58 (Army) ; and AFR 71-4 (Air Force).

c. Preventive Maintenance Forms. Prepare DA Form 11-266 (Maintenance Check List for Signal Equipment (Test Equipment)) (fig. 10) in accordance with instructions on the form.

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

Section II. DESCRIPTION AND DATA

3. Purpose and Use

a. General. Radar Test Set AN/UPM-60A (fig. 1) is a 15,750- to 16,250-mc microwave signal generator and measuring device that is used to test the performance of radar receivers and transmitters. It incorporates facilities for producing an undelayed video pulse, a delayed video pulse, pulsed radiofrequency (RF) signals, frequency-modulated (FM) signals, and continuous-wave (CW) signals.

b. Undelayed Video Trigger Pulse. An undelayed video trigger pulse of positive polarity with a peak amplitude of 20 to 50 volts, pulse width of 0.5 to 1 microsecond (psec), and pulse repetition rate of 100 to 10,000 pulses per second (pps) is available. The leading edge of the undelayed video trigger pulse coincides with the leading edge of either an input trigger pulse or an internally generated trigger.

c. Delayed Video Trigger Pulses. A delayed video trigger pulse is available having characteristics identical with the undelayed video trigger pulse. The delay between this video pulse and the undelayed video trigger pulse is variable from 1 to either 1,000 psec or 90 percent of the interval between trigger pulses, whichever is less. The delayed video trigger pulse can be used to check the time bases of radar indicators.

d. Pulsed RF Signal. A pulsed RF signal that may be varied over a frequency range of 15,750 megacycles (mc) .to 16,250 mc is available for checking receivers in pulse-modulated radar systems. The frequency in mc and the power level in decibels referred to 1 milliwatt (dbm) are indicated on calibrated front panel controls. The pulsed RF signal occurs not more than 1 psec after the delayed video trigger pulse. The delay between the RF pulse and the undelayed video trigger pulse is variable as described in *c* above. The pulse width is variable between 0.2 and 2 psec. The pulse repetition rate is variable between 100 and 10,000 pps.

e. Frequency-Modulated Signal. A frequency-modulated (FM) signal is available for checking