DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

CALIBRATION PROCEDURE FOR RADIO FREQUENCY VOLTAGE STANDARD AN/URM-93A (NSN 6625-00-679-3432) AND BOOTON MODELS 245-C AND 245-D

Headquarters, Department of the Army, Washington, D.C.
22 February 1978

REPORTING OF ERRORS

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Section I. IDENTIFICATION AND DESCRIPTION

1. Test Instrument Identification. This bulletin provides instructions for the calibration of Radio Frequency Voltage Standard AN/URM-93A (fig. 1) and Boonton, Models 245-C, and 245-D. The technical manual was the prime data source used in compiling these instructions. The equipment being calibrated will be referred to as the Test Instrument throughout this bulletin.

a. Model Variations. Model variations do not affect the calibration process.

b. Time and Technique. The time required for this calibration is approximately 2 hours using the dc-low frequency technique.

2. Calibration Data Card (DA Form 2416). Forms, records, and reports required by calibration personnel at all levels are prescribed by TM 38-750. The DA Form 2416 Calibration Data Card will be annotated in accordance with TM 38-750 for each calibration performed. Reportable adjustments are followed by (R) in this procedure. Report only those adjustments made and followed by (R).

3. Calibration Description. Test Instrument parameters and performance specifications which pertain to this calibration are listed in table 1.

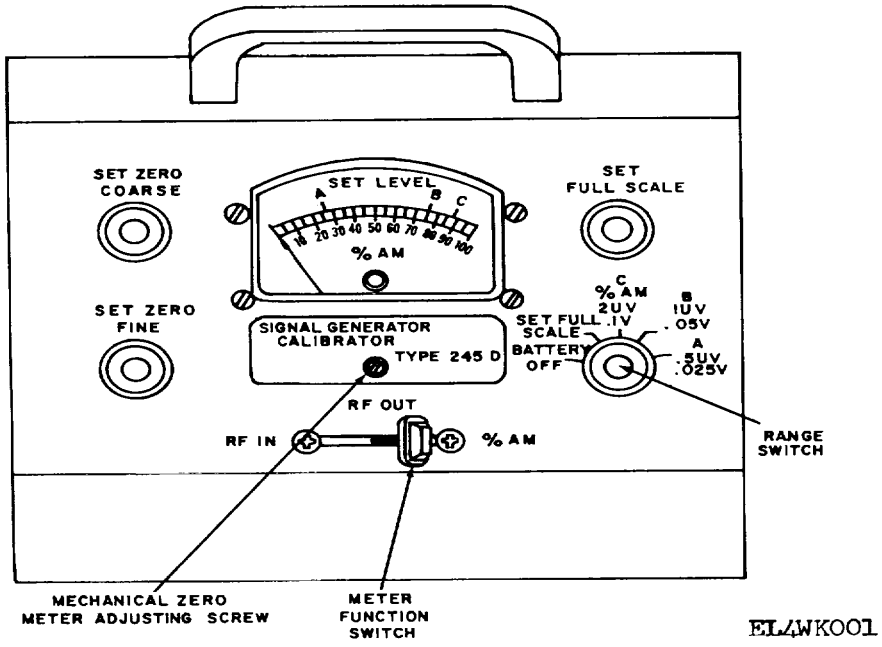

Figure 1. Radio Frequency Voltage Standard-controls and indicators.

Table 1. Calibration Description

Test Instrument parameters	Performance specifications
Power input requirements I ...	Two mercury batteries, 4.0 volts
Frequency range:	
Rf	500 kHz to 1 GHz
Af ..... modulation frequency.	20 Hz to 20 kHz
Rf input voltage required:	
For sensitivity and calibration measurements.	0.025, 0.05, or 0.1V
For percent am measurements.	0.1V

Table 1. Calibration Description-continued

Test Instrument parameters	Performance specifications
Rf output voltages:	
Type 245-C	5, 10, or 20 μV
AN/URM-93A and Type 245-D.	0.5, 1, or 2 μV
Accuracy of rf input voltage...	Within ±10%, 500 kHz to 500MHz. Within :±15%, 500 MHz to 1,000 MHz.
Accuracy of rf output voltage measured at output jack with 50-ohm termination, or at	Within ±10%, 500 kHz to 500 MHz. Within ±20%, 500