

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

CALIBRATION PROCEDURE FOR

METER, FREQUENCY AN/URM-32 AND AN/URM-32A

Headquarters, Department of the Army, Washington, DC

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REPORTING OF ERRORS

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Section I. INTRODUCTION AND DESCRIPTION

1. Test Instrument Identification. This bulletin provides information for the periodic calibration of Frequency Meter AN/URM-32 and AN/URM-32A and is to be used b) calibration personnel TM 11-5120 was used as the prime data source in compiling these instructions The frequency meter will be referred to as the TI (test instrument) throughout this bulletin

a. Model Variations. Some models contain Electronic Power Supply PP-1243/U In place of batteries There is no difference between model AN/URM-32 and AN/URM-32A

b. The time required for this calibration is approximately two hours, using the low frequency technique

2. Calibration Data Card (DA Form 2416). *a.* Forms, records, and reports required for calibration personnel at all levels are prescribed by TM 38-750 DA Form 2416 must be annotated in accordance with TM 38-750 for each calibration performed

b. Adjustments to be reported on DA Form 2416 are designated (R) at the end of the sentence in which they appear Report only those adjustments made and designated with (R)

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

* This bulletin supersedes TB 9-6625-110-50, 26 May 1966 including all changes.

Table 1. Calibration Description

Test instrument parameters	Performance specifications
Input requirement *	
Battery operation	180±9 vdc, 6 3±0.3 vdc
Power supply operation	180±9 vdc, 6 3 ± 0.3 vac
Input to power supply	115/230 vac, 50-1000 Hz
Crystal oscillator	2.5 MHz (Y 1) and 1.0 MHz (Y2)
Variable frequency oscillator	Range A: 125 kHz to 2.5 MHz±0.01%
	Range B: 2.5 MHz to 65 MHz,±0.01%
	Range C: 65 MHz to 1000 MHz,± 0.01%
Audio power output	0.05 mw (minimum) with 0.1 volt rf input signal
Radiofrequency output	100 uv (minimum) across 50-ohm external load

*These specifications are for information only and are not necessarily verified in this procedure

Section II. EQUIPMENT REQUIREMENTS

4. Equipment Required. Table 2 identifies the specific equipment used in this calibration procedure. This equipment is issued with secondary transfer calibration set, Calibration Set AN/CSM-256, or electronic maintenance shop sets. In performing this procedure, alternate items may be used by the calibrating activity when the equipment listed in table 2 is not available. The items selected must be verified to perform satisfactorily prior to use and bear evidence of current calibration. The equipment must meet or exceed the minimum use specifications listed in table 1. The accuracies listed in table 2 provide a four-to-one

accuracy ratio between the standard and TI. Where the four-to-one ratio cannot be met, the actual accuracy of the equipment selected is shown in parenthesis.

5. Accessories Required. The accessories listed in table 3 are issued with secondary transfer calibration set, Calibration Set AN/GSM-256, or electronic maintenance shop sets and are to be used in this calibration procedure. When necessary, these items may be substituted by equivalent items, unless specifically prohibited.

Table 2. Equipment for Calibration Process

Item No	Common name	Minimum use specifications	Calibration equipment, manufacturer model and part number		
			Secondary transfer Calibration Set	Calibration Set AN/GSM 256	Electronic maintenance shop set
A1	Autotransformer	115 to 125 vac ±3%	GR WIOMT3AS3 (7910809)	GR W1OMT3AS3 (7910809)	CN-16()/U
A2	Electronic counter	Range: 125 kHz to 1000 MHz Accuracy: ±0.01%	S-D Model 1037M (7910823)	HP Model 5245L	AN/USM-207
A3	Oscilloscope	Range: 0.5 to 1.5 v/cm Accuracy: ±0.0025%	Tektronix Model RM 561 A/w plug-in (7911440)	HP 180D	AN/USM-28 1()
A4	Power supply	Range: 0 to 200 vdc 0 to 7 vac Accuracy: ± 3%	J F Model 407DR (7911123-2)	J F Model HB 525M	PP-3 135/U
A5	Electronic voltmeter	Range: 0 to 200 vdc 0 to 7 vac Accuracy: ±3%	J F 887 AB/AN (887ABAN)	J F 887 AB/AN (887ABAN)	ME-202 ()/U
A6	Decade resistor	50ohm	RDS-615B (MIS-10264)A7	GR 1433Y	ZM-16()/U
A8	Signal generator	Range: 10 Hz to 50 MHz	HP Model 652A (MIS 10224)	HP 652A (MIS-10224)	AN/URM-25 ()
	Signal generator	Range: 10 Hz to 135 MHz	HP Model 608C (8598927-1)	HP-8640	AN/USM-44 ()

Table 3. Required Accessories

Item No	Common Name	Description and part number
B1	Lead, electrical *	24-inch, No 18 single banana plug terminations (red) (7907497)
B2	Lead, electrical *	24-inch, No 18 single banana plug terminations (black) (7907498)
B3	Adapter	Single banana jack to alligator clip (red) (7907566)
B4	Adapter	Single banana jack to alligator clip (black) (7907560)
BS5	Cable assembly, RF	30-inch, RG-58A/U, BNC plug terminations (7907467)
B6	Cable assembly, RF	36-inch, RG-58/U, BNC plug and double banana plug terminations (7907471)
B7	Adapter, connector	Double banana jack to phone plug (7907566)