TB 9-6625-2350-35

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

CALIBRATION PROCEDURE FOR DIGITAL MULTIMETER AN/USM-486A

Headquarters, Department of the Army, Washington, DC
6 November 2003

REPORTING OF ERRORS AND RECOMMENDING IMPROVEMENTS

You can improve this manual. If you find any mistakes or if you know of a way to improve these procedures, please let us know. Mail your letter or DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to: Commander, U.S. Army Aviation and Missile Command, ATTN: AMSAM-MMC-MA-NP, Redstone Arsenal, AL 35898-5000. A reply will be furnished to you. You may also provide DA Form 2028 information to AMCOM via e-mail, fax, or the World Wide Web. Our fax number is DSN 788-6546 or Commercial 256-842-6546. Our e-mail address is: 2028@redstone.army.mil. Instructions for sending an electronic 2028 may be found at the back of this manual. For the World Wide Web, use https://amcom2028.redstone.army.mil.

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SECTION I
IDENTIFICATION AND DESCRIPTION

1. Test Instrument Identification. This bulletin provides instructions for the calibration of Digital Multimeter, AN/USM-486A. TM 11-6625-3277-14 and the manufacturers' manuals were used as the prime data sources in compiling these instructions. The equipment being calibrated will be referred to as the TI (test instrument) throughout this bulletin.

a. Model Variations. None

b. Time and Technique. The time required for this calibration is approximately 1 hour, using the dc and low frequency technique.

2. Forms, Records, and Reports

a. Forms, records, and reports required for calibration personnel at all levels are prescribed by TB 750-25.

b. Adjustments to be reported are designated (R) at the end of the sentence in which they appear. When adjustments are in tables, the (R) follows the designated adjustment. 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.

Table 1. Calibration Description

Test instrument parameters	Performance specifications
Dc voltage	Range: 0 to 1000 V in 5 ranges Accuracy: 200 mV range; ±0.05 % +10 counts 2, 20, 200, 1000 V ranges; 0.05% + 30 counts
Dc current	Range: 0 to 10 A in 6 ranges Accuracy: 200 µA, 2 mA, 20 mA, 200 mA; ±0.2% + 10 counts 2000 mA, 10 A; ±0.5% + 20 counts
Ac voltage	Range: 0 to 750 V in 5 ranges Accuracy: ± (% of input + counts)

Ac voltage — Frequency

	20–50 Hz	50 Hz–10 kHz	10–20 kHz	20 – 50 kHz	50–100 kHz
200 mV;	1.5 + 100	0.5 + 100	1.0 + 100	2.0 + 500	29.2 + 0
2 V;	1.5 + 100	0.5 + 100	1.0 + 100	2.0 + 500	29.2 + 0
20 V;	1.5 + 100	0.5 + 100	1.0 + 100	2.0 + 500	29.2 + 0
200 V;	1.5 + 100	0.5 + 100	1.0 + 100	2.0 + 500	29.2 + 0
750 V;	1.5 + 100	0.5 + 100	1.0 + 100	2.0 + 500	29.2 + 0