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DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

CALIBRATION PROCEDURE FOR DIGITAL MULTIMETER AN/PSM-45A

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REPORTING OF ERRORS AND RECOMMENDING IMPROVEMENTS

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SECTION		Paragraph	Page
I.	IDENTIFICATION AND DESCRIPTION		
	Test instrument identification.....	1	2
	Forms, records, and reports	2	2
	Calibration description.....	3	2
II.	EQUIPMENT REQUIREMENTS		
	Equipment required	4	3
	Accessories required	5	3
III.	CALIBRATION PROCESS		
	Preliminary instructions.....	6	3
	Equipment setup	7	4
	Dc voltage.....	8	4
	Dc current	9	5
	Ac voltage	10	5
	Resistance	11	7
	Final procedure.....	12	7

*This bulletin supersedes TB 9-6625-2190-35, dated 16 April 2001.

SECTION I IDENTIFICATION AND DESCRIPTION

1. Test Instrument Identification. This bulletin provides instructions for the calibration of Digital Multimeter, AN/PSM-45A. TM 11-6625-3199-14 and Army Specification No. 3002838 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 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 (5000 V using high voltage probe) Accuracy: $\pm(0.1\%$ of reading + 1 digit) $\pm(1\%$ of reading using high voltage probe)
Dc current	Range: 0 to 10 A in 5 ranges Accuracy: $\pm(0.75\%$ of reading + 2 digits)
Ac voltage	Range: 0 to 1000 V in 5 ranges Accuracy: 20 to 40 Hz; $\pm(1.5\%$ of reading + 5 digits) 40 Hz to 1 kHz; $\pm(0.5\%$ of reading + 5 digits) 1 to 5 kHz; $\pm(5\%$ of reading + 5 digits)
Ac current ¹	Range: 0 to 10 A in 5 ranges Accuracy: All ranges: 20 to 40 Hz; $\pm(2\%$ of reading + 5 digits) 40 Hz to 1 kHz; $\pm(1.5\%$ of reading + 5 digits)
Resistance	Range: 0 Ω to 32 M Ω in 6 ranges Accuracy: 320 Ω range; $\pm(0.3\%$ of reading + 2 digits) 3.2 k Ω to 3.2 M Ω ranges; $\pm(0.25\%$ of reading + 1 digit) 32 M Ω range; $\pm(1\%$ of reading + 1 digit)

¹Ac current verified by dc current check because current measurements of ac and dc are made using same shunt resistor.