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DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

CALIBRATION PROCEDURE FOR DIGITAL MULTIMETER JOHN FLUKE, MODELS 87 AND 87 III

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		Paragraph	Page
SECTION	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 5
		Accessories required	5 5
	III.	CALIBRATION PROCESS	
		Preliminary instructions	6 5
		Equipment setup	7 6
		Frequency	8 6
		Dc voltage	9 6
		Dc current	10 8
		Ac voltage	11 9
		Ac current	12 10
		Resistance/Conductance.....	13 11
		Capacitance.....	14 12
		Final procedure.....	15 12

SECTION I IDENTIFICATION AND DESCRIPTION

1. Test Instrument Identification. This bulletin provides instructions for the calibration of Digital Multimeter, John Fluke, Models 87 and 87 III. 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. Variations among models are described in text.

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
Frequency	Range: 0.5 Hz to 200 kHz Accuracy: $\pm 0.005\%$ + 1 count
Dc voltage Model 87	Range: 0 to 1000 V in 5 ranges Accuracy: $\pm 0.1\%$ of input + 1 count
Model 87 III	Accuracy: $\pm 0.1\%$ of input + 1 count for 400 mV range $\pm 0.05\%$ of input + 1 count for all other ranges
Dc current Model 87	Range: 0 to 10 A in 6 ranges Accuracy: $\pm 0.2\%$ of input + 2 counts
Model 87 III	Accuracy: $\pm 0.2\%$ of input + 2 counts in 4000 μ A, 400 mA and 10.00 A ranges; $\pm 0.2\%$ of input + 4 counts in 400 μ A, 40 mA and 4000 mA ranges