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DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

CALIBRATION PROCEDURE FOR DIGITAL MULTIMETER, JOHN FLUKE, MODEL 8506A/CT

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REPORTING OF ERRORS AND RECOMMENDING IMPROVEMENTS

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SECTION I IDENTIFICATION AND DESCRIPTION

1. Test Instrument Identification. This bulletin provides instructions for the calibration of Digital Multimeter, John Fluke, Model 8506A/CT. The manufacturer's manual and MIS-35947 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 2 hours, 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. Software corrections to be reported are designated (R) at the end of the sentence in which they appear. Report only those software corrections made and designated with (R). Use the range or parameter being corrected to report software corrections; i.e., V dc, 100 V ac.

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 ¹		
Dc voltage	Range: 0 to 1000 V Range Accuracy: $\pm$ (% of reading + % of range) 100 .004 + .001 1 V through 1000 V .005 + 0		
Ac voltage	Range: 0 to 1000 V rms (in 9 ranges) Frequency: 20 Hz through 100 kHz ² Accuracy: $\pm$ (% of reading + % of range)		
	Frequency	Range	
		100 mV, 500 V, and 1000 V	300 mV through 100 V
	20 to 50 Hz	.1 + .01	.1 + .004
	50 Hz to 2 kHz	.05 + .015	.04 + .01
	2 to 20 kHz	.14 + .025	.07 + .02
	20 to 100 kHz	.24 + .05	.2 + .04

See footnotes at end of table.