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DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

CALIBRATION PROCEDURE FOR DIGITAL MULTIMETER ME-518/U (JOHN FLUKE, MODEL 8600A-01) AND JOHN FLUKE, MODEL 8600A

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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, ME-518/U (John Fluke, Model 8600A-01) and John Fluke, Model 8600A. The manufacturer's 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. Model ME-518/U (John Fluke, Model 8600A-01) has rechargeable batteries; otherwise, models are the same.

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. 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						
	Accuracy: ± (% of reading + % of range) 4 1/2 digits (1999.9 maximum display)						
Dc voltage	Range: 0 to 1200 V (in 5 ranges)						
	Accuracy:						
	Range		Accuracy				
	200 mV		.04 + .010				
	2, 20, and 200 V		.02 + .005				
	1200		.02 + .008				
Ac voltage	Range: 0 to 1200 V (in 5 ranges)						
	Frequency: 30 Hz to 100 kHz ¹						
	Accuracy:						
	Range	Frequency					
		30 Hz	50 Hz	10 kHz	20 kHz	50 kHz	100 Hz
	200 mV	.5 + .1	.2 + .08	.5 + .1		.5 + .5	
	2 V through 200 V	.5 + .025	.2 + .015	.5 + .025		1 + .05	
	1200 V: 10 to 500 V	.5 + .08	.2 + .03	.5 + .08	Not specified		
500 to 1200 V	.5 + .08	.37 + .03	.5 + .08	Not specified			

See footnotes at end of table.