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DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

CALIBRATION PROCEDURE FOR MULTIMETER HEWLETT PACKARD MODEL 3458A

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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	4
	Accessories required	5	4
III.	CALIBRATION PROCESS		
	Preliminary instructions	6	6
	Equipment setup.....	7	7
	Dc voltage.....	8	8
	Resistance.....	9	12
	Dc current	10	14
	Ac voltage.....	11	16
	Frequency counter	12	18
IV.	ADJUSTMENT PROCESS		
	Preliminary instructions	13	19
	Front terminal offset	14	19
	Rear terminal offset.....	15	20
	Dc gain.....	16	20
	Resistance and dc current.....	17	20
	Ac	18	21
	Final procedure.....	19	23

*This bulletin supersedes TB 9-6625-2246-50, 29 May 1992.

SECTION I IDENTIFICATION AND DESCRIPTION

1. Test Instrument Identification. This bulletin provides instructions for the calibration of Multimeter, Hewlett-Packard Model 3458A. The manufacturer's manual was used as the prime data source 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 4 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. All software adjustments made in Section IV are reportable. Report software adjustments made using parameter and range failing performance check; i.e., 10 V dc, 100 Ω , etc.

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: $\pm(\text{ppm of reading} + \text{ppm of range})$	
	Range	Accuracy
	100 mV	11 + 10.3
	1 V	10 + 1.1
	10 V	10 + 0.3
	100 V	12 + 0.4
	1000 V	12 ¹ + 0.2
Resistance	Range 0 to 1 G Ω (in 9 ranges)	
	Accuracy: $\pm(\text{ppm of reading} + \text{ppm of range})^2$	
	Range	Accuracy
	10 Ω	18 + 6
	100 Ω	15 + 6
	1 k Ω	13 + 0.6
	10 k Ω	13 + 0.6

See footnotes at end of table