

***TB 9-6625-2265-35**

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

CALIBRATION PROCEDURE FOR DIGITAL MULTIMETER BALLANTINE, MODEL 3100A

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REPORTING OF ERRORS AND RECOMMENDING IMPROVEMENTS

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*This bulletin supersedes TB 9-6625-2265-35, dated 31 October 1991.

SECTION I IDENTIFICATION AND DESCRIPTION

1. Test Instrument Identification. This bulletin provides instructions for the calibration of Digital Multimeter, Ballantine, Model 3100A. 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 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 (3 1/2 digit display)				
Dc voltage	Range: 0 to 1000 V (in 5 ranges) Accuracy: ± (0.1% of reading + 1 digit)				
Ac voltage	Range: 0 to 750 V (in 5 ranges) Frequency: 40 Hz to 5 kHz Accuracy: ± (% of reading + digits)				
	Range		Frequency		
			40 Hz to 1 kHz	1 to 2 kHz	2 to 5 kHz
	200 mV		.75 + 2	1.5 + 3	5.0 + 5
	2 V				
	20 V				
	200 V				N/A
750 V		1.0 + 2	N/A	N/A	
Resistance	Range: 0 to 20 MΩ (in 6 ranges) Accuracy: ± (% of reading + digits)				
	Range:				
	200Ω	0.2	+	3	
	2 through 200 kΩ	0.1	+	1	
	2 MΩ	.15	+	1	
	20 MΩ	2.0	+	1	