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DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

CALIBRATION PROCEDURE FOR MULTIMETER MERCER, MODEL 83K

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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 Multimeter Mercer, Model 83K. 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. Forms, records, and reports required for calibration personnel at all levels are prescribed by TB 750-25.

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: 250 mV to 1000 V in 7 ranges Accuracy: $\pm 3\%$ FS
Dc current	Range: 50 μ A to 500 mA in 5 ranges Accuracy: $\pm 3\%$ FS
Ac voltage	Range: 2.5 to 1000 V in 6 ranges at 400 Hz Accuracy: $\pm 4\%$ FS
Resistance	Range: 0 to 20 M Ω in 4 ranges (center scale at 20 Ω , 200 Ω , 20 k Ω , 200 k Ω) Accuracy: $\pm 3^\circ$ of arc

SECTION II EQUIPMENT REQUIREMENTS

4. Equipment Required. Table 2 identifies the specific equipment to be used in this calibration procedure. This equipment is issued with Secondary Transfer Calibration Standards Set AN/GSM-286. Alternate items may be used by the calibrating activity. The items selected must be verified to perform satisfactorily prior to use and must bear evidence of current calibration. The equipment must meet or exceed the minimum use specifications listed in table 2. The accuracies listed in table 2 provide a four-to-one ratio between the standard and TI.

5. Accessories Required. The accessories required for this calibration are common usage accessories issued as indicated in paragraph 4 above and are not listed in this calibration procedure.