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DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

CALIBRATION PROCEDURE FOR AC VOLTAGE STANDARD, HEWLETT-PACKARD MODEL 745A AND HIGH VOLTAGE AMPLIFIER, HEWLETT-PACKARD MODEL 746A INCLUDING OPTIONS C90, C91, AND C93

Headquarters, Department of the Army, Washington, DC
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REPORTING OF ERRORS

You can help improve this publication. If you find any mistakes or if you know of a way to improve the procedure, please let us know. Mail your letter or DA Form 2028 to: Commander, U. S. Army Aviation and Missile Command, ATTN: AMSAM-MMC-MA-NP, Redstone Arsenal, AL 35898-5230. A reply will be furnished to you. You may also send in your comments electronically to our e-mail address: ls-lp@redstone.army.mil or FAX 256-842-6546/DSN 788-6546.

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SECTION I IDENTIFICATION AND DESCRIPTION

1. Test Instrument Identification. This bulletin provides instructions for the calibration of Ac Voltage Standard, Hewlett-Packard Model 745A and High Voltage Amplifier, Hewlett-Packard Model 746A including Options C90, C91, and C93. The manufacturer's instruction manuals were 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. There are no variations among models which affect the calibration of the TI. The C90 option adds slides to the instrument. The C91 option adds a blower to the instrument. The C93 option adds slides and a blower to the instrument.

b. Time and Technique. The time required for this calibration is approximately 8 hours, using the dc (direct current) and low frequency technique.

2. Calibration Data Card, DA Form 2416

a. Forms, records, and reports required for calibration personnel at all levels are prescribed by TM 38-750. DA Form 2416 must be annotated in accordance with TM 38-750 for each calibration performed.

b. Adjustments to be reported on DA Form 2416 are designated (R) at the end of the sentence in which they appear. When adjustments are in tables, the (R) follows the designated adjustment. 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
Output frequency range	Continuously adjustable from 10 Hz to 110 kHz in 4 decade ranges with 10% overlap
Frequency accuracy	±2% of setting
Error measurement range	±0.3% and ±0.3% with zero center dial
Error measurement accuracy	±0.51% of FS
Distortion and noise	(0.05% of setting + 10 μV)

See footnote at end of table.