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DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

CALIBRATION PROCEDURE FOR DC TRANSFER STANDARD, JOHN FLUKE MODELS 730A AND 730A/AB

Headquarters, Department of the Army, Washington, DC
10 May 1974

REPORTING OF ERRORS AND RECOMMENDED CHANGES

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: 2028@redstone.army.mil, or FAX 256-842-6546/DSN 788-6546

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CHANGE 3

SECTION I IDENTIFICATION AND DESCRIPTION

1. Test Instrument Identification. This bulletin provides instructions for the calibration of Dc Transfer Standard, John Fluke Models 730A and 730A/AB. The manufacturer's instruction manuals were used as the prime data source in compiling these instructions. The dc transfer standard will be referred to as the "TI" (test instrument) throughout this bulletin.

a. Model Variations. Variations among models are described in text.

b. Time and Technique. The time required for this calibration is approximately 4 hours, using the dc 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) will follow 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.

NOTE

For calibration of model 730A to be valid, the TI ΔE control must be set to the last 3 digits of the value of standard cell used in the calibration.

Table 1. Calibration description

Test Instrument Parameters	Performance Specifications
Accuracy (ARITH MEAN Of 1.018 ΔE Output). ¹	With $\pm 10 \mu V$ of calibrated value at end of calibration period.
Transfer Voltage Accuracy ²	10 V: $\pm 10 \mu V$ 1.00 V: $1 \mu V$ (1.018 ΔE): $\pm 1 \mu V$ (1.019 + ΔE): $\pm 1 \mu V$ ΔE : 0.0 To 999 μV In $1 \mu V$ Steps: $\pm 1 \mu V$

¹This value is not the manufacturer's specified value. This value is the maximum drift allowed over a 90-day period as determined for Army calibration applications.

²Accuracy to which voltage can be standardized.