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DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

CALIBRATION PROCEDURE FOR TEST FACILITIES KIT MK-994/AR (NSN 6625-00-802-7191)

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

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WARNING

Voltages up to 115 volts are present at TB1. DEATH ON CONTACT may result if personnel fail to observe safety precautions.

SECTION I. IDENTIFICATION AND DESCRIPTION

1. Test Instrument Identification. This bulletin provides instructions for calibration of the Test Facilities Kit MK-994/AR. The only equipment in the Test Facilities Kit MK-994/AR that requires calibration is the Heading-Radio Bearing Indicator ID-1351(*). The ID-1351(*) will be referred to as the TI (test instrument).

NOTE

Heading-Radio Bearing Indicator ID-1351(*) is adjusted, repaired, and aligned at depot avionics maintenance shops only. Under no circumstances will the personnel performing the calibration break the seal on the ID-1351(*).

a. Model Variations. ID-1351(*) refers to ID-1351/A, ID-1351A/A or ID-1351B/A. Externally all models of ID-1351(*) are the same. Calibration of all models is identical,

b. Time and Technique. The time required for this calibration is approximately 3 hours, using the technique described herein.

2. Calibration Data Card (DA Form 2416). 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.

3. Calibration Description. TI parameters and performance specifications which pertain to this calibration are listed in table 1.

Table 1. Calibration Description

TI parameters	Performance specifications
Heading dial	Null voltages: 60°, 120°, 180°, 240°, and 300° ±1° 30 minutes
Heading differential	Output voltage: 0 to 10.2 Vac
Radio bearing pointer	XMTR No. 1 at 0° Radio bearing pointer at S, ADF pointer tracks XMTR 2
Steering indicator (M1)	Mechanical alignment: When unit is horizontal M1 is aligned with center dot ± 1/64'' Electrical alignment: With 75±20 μ *amps* M1 indicates at first dot. With 150± 12 μ amps M1 is aligned with 2nd dot.
Station approach indicator (M2)	Mechanical alignment: When unit is horizontal M2 aligns with upper dot ± 1/64 inch Electrical alignment: With 75±20 μ amps M2 indicates at center of first dot, with 150±12 μ amps M2 indicates center of second dot.
Signal strength meter (M3)	All black indication: With 22 or less volts applied Alternate black and white indication: With 0.5 volt applied.
Power warning indicator (M4)	As M4 just starts to move out of position multimeter should indicate 20 or more volts. With M4 fully out of sight multimeter indicates 36 volts ±4.

SECTION II. EQUIPMENT REQUIREMENTS

4. Equipment Required. Table 2 identifies the specific equipment used in this calibration procedure. This equipment is available in avionics repair facilities, and is to be used in performing this procedure. Alternate items may be used by the calibrating activity when the equipment listed in table 2 is not available. 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 the TI.

5. Accessories Required. The accessories required in table 2 are issued as indicated in paragraph 4 above and are to be used in this calibration procedure when necessary. These items may be substituted by equivalent items unless specifically prohibited.

Table 2. Minimum Specifications of Equipment Required

Item	Common name	Minimum use specifications	Manufacturer, model, and part number
A1	GYRO SIGNAL SIMULATOR	Must provide 2 independent synchro transmitter outputs, three-wire synchro type, adjustable through 360° and set table to 1 minute of arc.	Simulator, Gyro Compass, signal SM-486/ASN, with correction chart.
A2	VOLTMETER	Range: 0 to 26 Vac Accuracy: ±5%	Multimeter ME-30/U
A3	MULTIMETER	Range volts 0-40 Vdc amperes, 0-230 μa ohms, 0-100 k ohms Accuracy: ±5%	Multimeter AN/USM-223
A4	POWER SUPPLY	Range: volts, 0-40 Vdc amperes, 0-230 μa Accuracy: N/A	Power supply PP-4838/U