

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

CALIBRATION PROCEDURE FOR
RADIO TEST SET AN/ARM-68

Headquarters, Department of the Army, Washington, D. C.
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		Paragraph	Page
SECTION	I. GENERAL		
	Purpose and scope -----	1	1
	Reporting of technical bulletin improvements -----	2	1
	Description -----	3	1
	General instructions -----	4	3
	Differences among models -----	5	3
	II CALIBRATION		
	Equipment required -----	6	3
	Preliminary procedure -----	7	3
	Meter Linearity -----	8	4
	Final procedure -----	9	4

**SECTION I
GENERAL**

1. Purpose and Scope. a. This bulletin provides information for the periodic calibration of Radio Test Set AN/ARM-68, and is used by qualified calibration personnel. Since maintenance calibration personnel are trained and qualified in the usage of calibration test and measuring equipment, detailed instructions concerning the operation and use of the equipment are not contained in this bulletin.

b. Integrated within this bulletin are illustrations delineating the location of all controls and components utilized in this calibration procedure as well as diagrams showing equipment setups. Equipment ground connections are not necessarily shown in the diagrams.

2. Reporting of Technical Bulletin Improvements. The direct reporting by the individual user of errors, omissions, and recommendations for improving this bulletin, is authorized and encouraged. DA Form 2028 (Recommended Changes to DA Publications) will be used for reporting these improvement recommendations. This form will be completed using pencil, pen, or typewriter, and forwarded direct to Commander, U.S. Army Electronics Command, ATTN: ANSEL-MA-DS, Fort Monmouth, New Jersey, 07703.

3. Description. Radio Test Set, AN/ARM-68, is a special-purpose instrument used for checking and testing radio sets AN/ARC-44 and AN/ARC-45. Additional data is listed in a through c below.

a. Identification.

Nomenclature: Radio Test Set, AN/ARM-68

Federal stock number: 6625-889-1572.

Size: 20 11/16 x 14 13/16 in. x 10 13/16 in.

Weight: 30 lbs.

References: TM 11-6625-447-12,

TM 11-6625-441-35.

b. Specifications.

Input requirements ----- 27.5 volts dc.

Current, with
equipment
connected for

test ----- Receiving 3.6 amperes;
transmitting 5.1 amperes.

*This bulletin supersedes TB 11-6625-447-35/1, 17 May 1966.

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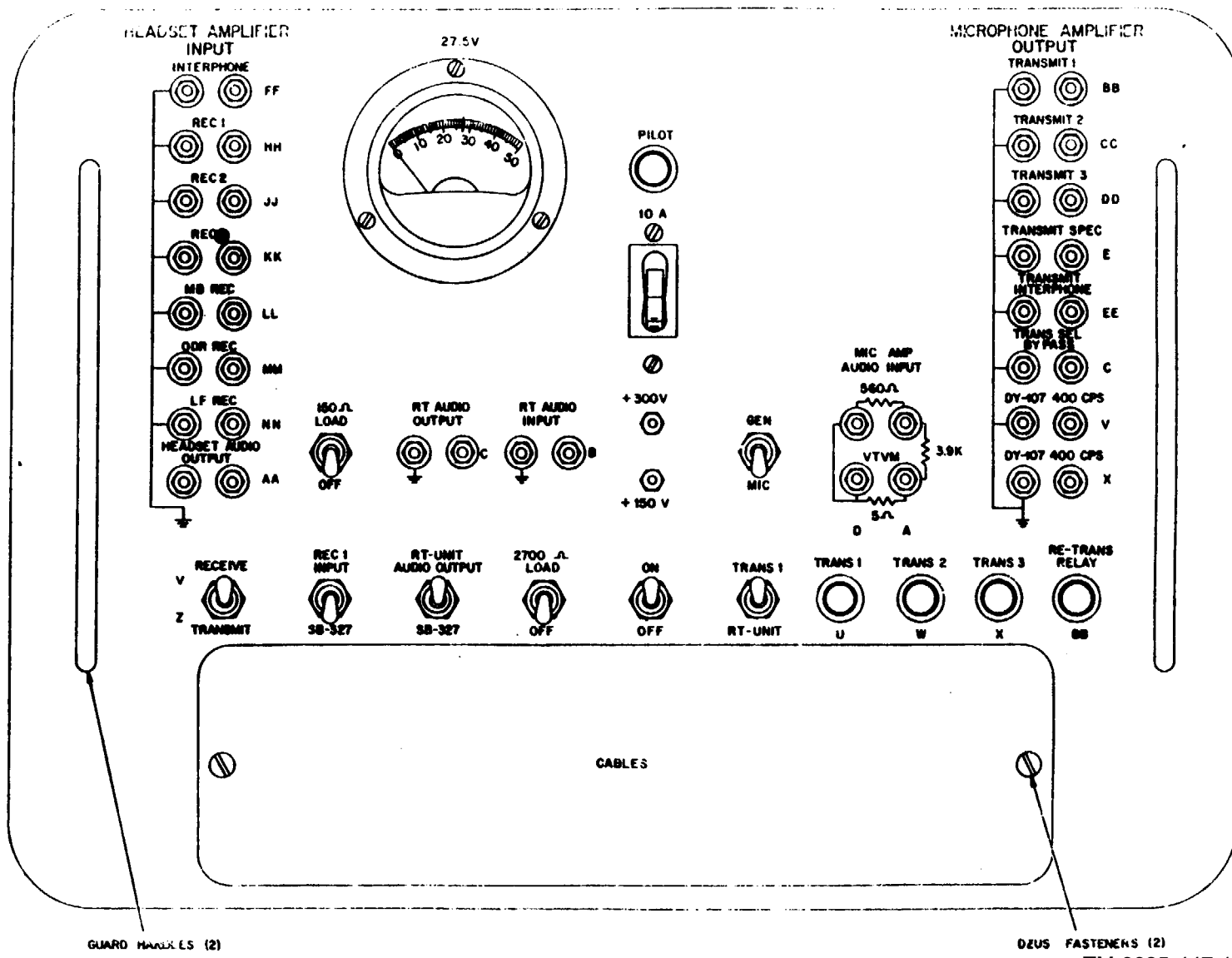


Figure 1. Radio Test Set, AN/ARM-68 front panel view.

TM 6625-447-12-6

Meter:
 Accuracy-----+2 percent full scale.
 Scale calibration-----0-50 volts dc.

c. Program Data.

Time required for calibration: 1 hour (approx).
 Calibration level: Maintenance.

4. General Instructions. *a. Calibration Data Card.* During the performance of this procedure annotate DA Form 2416 (Calibration Data Card) in accordance with TM 38-750.

b. Frequency of Calibration. The maximum time permitted between calibration checks for Radio Test Set AN/ARM-68, is contained in TB 43-180

c. Reporting Requirements. Report accomplishment of maintenance level calibration only when required as instructed in TM 38-750.

d. Unit Under Test. Radio Test Set AN/ARM-68 will be referred to as "unit under test."

e. Removal. Do not remove the unit under test from its protective case unless necessitated by equipment connections and/or components to be adjusted which are not accessible from external ports provided on the unit under test.

5. Differences Among Models None.

**SECTION II
 CALIBRATION**

6. Equipment Required. Equipment required for calibration checks and adjustments is listed in table I. When any of the equipment listed in table I is not available, an equivalent calibrated item may be used.

Table I. Equipment Required for Calibration Performance Checks and Adjustments

A. Authorized Calibration Equipment

Nomenclature	Federal stock No. (Identifying No.)	Minimum use specifications
Differential Voltmeter ME-202/U.	6626-709-0288	RANGE: 9 to 51 vdc ACCURACY: ±1%
Power Supply PP-3135/U	6625-635-7991	OUTPUT: 51 vdc, 200 mA

B. Authorized Accessories

Nomenclature	Federal stock No. (Identifying No.)	Description
Electrical Lead -----	4931-739-4432	24 in. No. 18 (red) single banana plug terminations.
Electrical Lead -----	4931-739-4433	24 in No. 18 (blk) single banana plug terminations.
Cable assembly, RF-----	4931-846-0010	30 in. RD-58/U double banana plug terminations

Note. Personnel should familiarize themselves with the entire procedure prior to performing calibration.

Note. Paragraph 8 is divided into subparagraphs a, performance check, and subparagraph b, adjustments. When the performance check is within tolerance, do not perform the corresponding adjustment. When the performance check is not within tolerance, perform the corresponding adjustment before continuing with the calibration procedure. When the performance check is not within tolerance and no adjustment is specified, the deficiency must be corrected before continuing with the procedure.

7. Preliminary Procedure.

- a. Remove cover from the unit under test.
- b. Remove pilot lamp from unit under test.
- c. Check meter zero indication and adjust if necessary

8. Meter Linearity. *a. Performance Check.*

- (1) Connect equipment as shown in figure 2.

Note. HV Control fully counterclockwise.

- (2) Energize and allow for the equipment to warm up and stabilize, 3 minutes.
- (3) Position the unit under test controls as indicated in (a) and (b) below:
 - (a) 10 ampere circuit breaker to ON (up position).
 - (b) ON-OFF switch to ON.
- (4) Adjust the Power Supply PP-4135/U for output for a 50-volt dc indication on the unit under test meter. Differential Voltmeter ME-202/U should indicate between 49 and 51 volts dc.
- (5) Repeat (4) above for the unit under test meter indications listed in table II and note that the voltmeter indications are within limits.

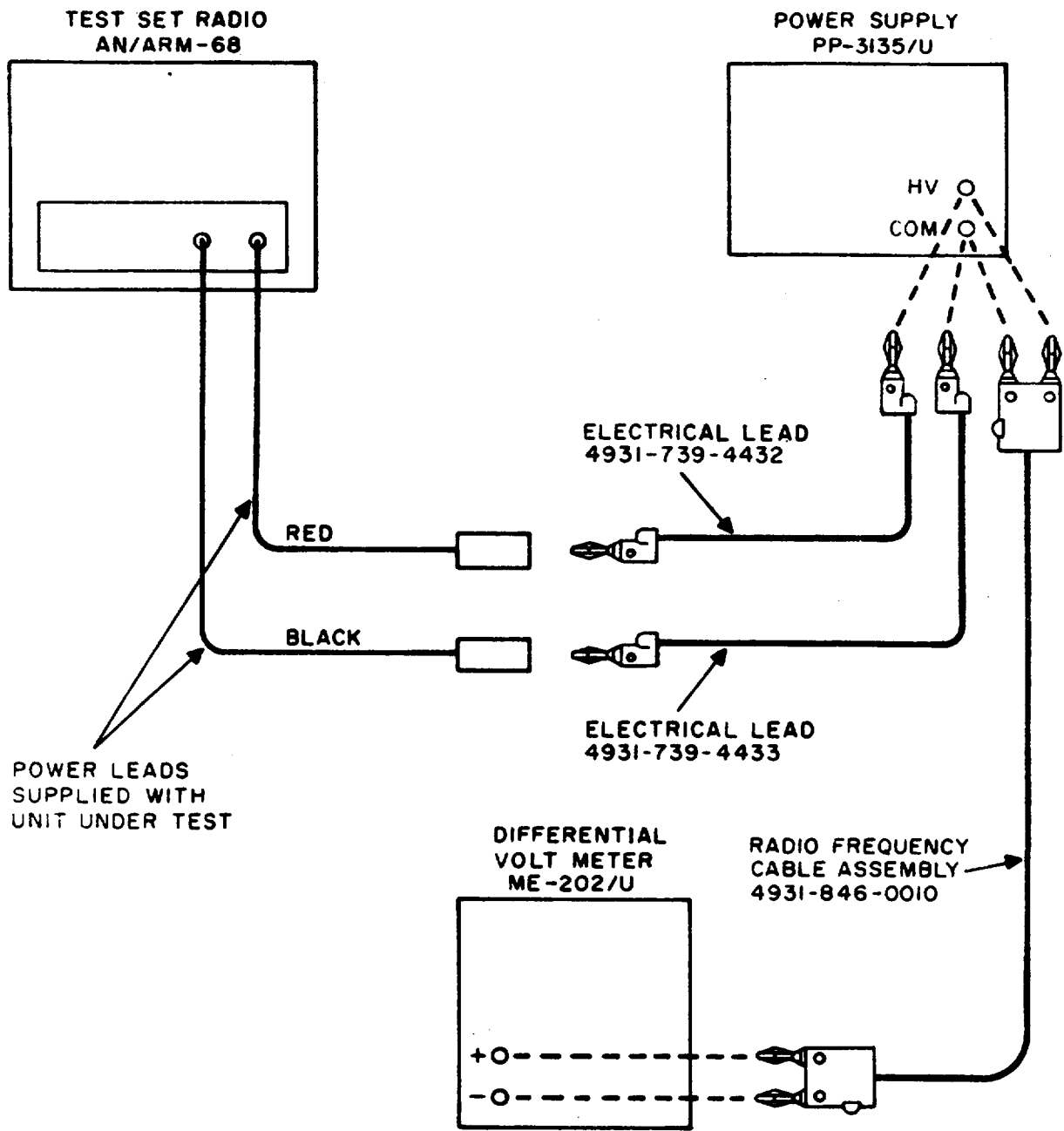
Table II. Meter Calibration

Meter indication	Voltmeter indication (vdc)	
	Min	Max
40	30	41
30	29	31
20	19	21
10	9	11

b. Adjustments. No adjustments can be made.

9. Final Procedure. *a.* Deenergize and disconnect all test equipment, replace the pilot lamp, and install the unit under test in a protective cover.

b. In accordance with TM 38-750, annotate and affix calibration DA Label 80 (U.S. Army Calibration System). When the unit under test cannot be adjusted to within tolerance, annotate and affix DA Form 2417 (Unserviceable Test Instrument or Limited Use Tag) (red tag).



TB 6625-447-35/1

Figure 2. Test Set, Radio AN/ARM-68, meter linearity check test setup.

By Order of the Secretary of the Army:

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General United States Army
Chief of Staff

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Major General, United States Army
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