TB 9-6625-096-50

Change 2

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

CALIBRATION PROCEDURE FOR SIGNAL GENERAL, SG-13/ARN

Headquarters, Department of the Army, Washington, DC
5 December 1974

TB 9-6625-096-50, 18 May 1973, is changed as follows:

Page 12, paragraph *16a(6), line 5. "10400" is changed to "10440."

By Order of the Secretary of the Army:

FRED C. WEYAND
General, United States Army
Chief of Staff

Official:

VERNE L. BOWERS
Major General, United States Army
The Adjutant General

Distribution:
To be distributed in accordance with DA Form 12-34 (qty rqr block No. 75), requirements for calibration procedure publications.

US GOVERNMENT PRINTING OFFICE: 1974-665136/422

***Please note: Para 16a(6) is now para 15a(6).**

PIN NO: 010324-002

TB 9-6625-096-50

Change 1

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

CALIBRATION PROCEDURE FOR SIGNAL GENERATOR, SG-13/ARN

Headquarters, Department of the Army, Washington, DC
26 July 1974

TB 9-6625-096-50, 18 May 1973, is changed as follows:

Page 2. At the end of paragraph 2, the following is added: "Report all adjustments made in this technical bulletin."

Page 11. In paragraph 13a, subparagraphs (8) and (9) are deleted.

In paragraph 14a the note between subparagraphs (7) and (8) is superseded as follows:

NOTE

Indication obtained in (7) above must be maintained when performing (8) through (15) below.

Paragraph 14a. The following subparagraphs are added:

(11) Connect equipment as shown in figure 4.

(12) Turn AUDIO SELECTOR to 90 ~ .

(13) Adjust oscilloscope controls as necessary. If oscilloscope display is not as shown in figure 6, perform b below.

(14) Turn AUDIO SELECTOR to 150.

(15) Repeat (13) above.

Paragraph 14b is superseded as follows:

b. Adjustments. Adjust LEVEL SET (fig. 3) as necessary for midrange voltage obtained in (7) above.

By Order of the Secretary of the Army:

CREIGHTON W. ABRAMS
General, United States Army
Chief of Staff

Official:

VERNE L. BOWERS
Major General, United States Army
The Adjutant General

Distribution:

To be distributed in accordance with DA Form 12-34 (qty rqr block no 75) requirements for calibration procedures publications.

US GOVERNMENT PRINTING OFFICE: 1974-665132/61

PIN NO: 010324-001

*TB 9-6625-096-50

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

CALIBRATION PROCEDURE FOR SIGNAL GENERATOR, SG-13/ARN

Headquarters, Department of the Army, Washington, DC
18 May 1973

♦REPORTING OF ERRORS♦

You can help improve this publication by calling attention to errors and by recommending improvements and stating your reasons for the recommendations. Your letter or DA Form 2028, Recommended Changes to Publications, should be mailed directly to Commander, U.S. Army Aviation and Missile Command, ATTN: AMSAM-TMDE-EP, Redstone Arsenal, AL 35898-5000. FAX to DSN 788-2313 (commercial 256-842-2313). A reply will be furnished directly to you.

*This bulletin supersedes TB 9-6625-096-50, 21 November 1967, including all changes.

SECTION I
IDENTIFICATION AND DESCRIPTION

1. Test Instrument Identification. This bulletin provides instructions for the calibration of Signal Generator, SG-13/ARN. The manufacturer's instruction manual was used as the prime data source in compiling these instructions. The signal generator 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 3 hours, using the dc and low frequency technique.

2. Calibration Data Card (DA Form 2416). Maintenance forms, records, and reports which are to be used by calibration personnel at all calibration levels are listed in and prescribed by TM 38-750. Report all adjustments made in this technical bulletin.

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
Input power requirements	Voltage: 21 to 29 vdc Current rating: [1] 5.4 amps
Carrier frequency	Range: 108 to 335 MHz in two ranges: 108 to 135.9 and 329.3 to 335.0 in 100 kHz steps Accuracy: ±0.0065%
Modulator frequency	Range: 30 to 9,960 Hz in five ranges: 30, 90, 150, 1000, and 9960 Hz Accuracy: ±1% for 30, 90, and 150; ±2% for 9960, ±15% for 1000
Output	52 ohm output impedance; 4 μv to 0.2 v, continuously variable; amplitude or frequency modulation; RF level accuracy ±25%
Field strength	100 μv at 100 ft from antenna
VOR accuracy	±0.7° [2]

[1]This specification is for information only and is not verified in this bulletin.
[2]Certified to ±1° at 180° and to ±2° at other points.

SECTION II
EQUIPMENT REQUIREMENTS

4. Equipment Required. Table 2 identifies the specific equipment used in this calibration procedure. This equipment is issued with secondary transfer calibration standards set 4931-621-7877 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

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 accuracy ratio between the standard and test instrument. Where the four-to-one ratio cannot be met, the actual accuracy of the equipment selected is shown in parenthesis.

5. Accessories Required. The accessories listed in table 3 are issued with secondary transfer calibration standards set 4931-621-7877 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	CALIBRATION TESTER (ZIFOR)	Range: 180° Accuracy: ±0.5°	Collins, Model 478A-2 ZIFOR 2 (6625-150-6977)
A2	DIGITAL VOLTMETER	Range: 0 to 21.5 vdc Accuracy: ±1% of indication	Dana, Model 5703-S-2127 (7912606)
A3	FREQ/TIME MEASUREMENT SYSTEM (FREQUENCY COUNTER)	Range: 0 to 335 MHz Accuracy: ±0.002%	Systron-Donner, Model 1037M2 (7910628)
A4	OSCILLOSCOPE w/PLUG-INS	Display area: 8x10 cm Range: 0 to 1 v/div; 0 to 1 msec/div	Tektronix, Model RM561A (7910655-2) Tektronix, Model 3A6 (7911441-1) Tektronix, Model 3B4 (7912040-1)
A5	RADIO TEST SET (POWER METER) w/THERMISTOR MOUNT	Range: 1.13 to 1350 µw Accuracy: ±8%	Hewlett-Packard, Model 431C (7910462-2) Hewlett-Packard, Model 478A (7910461)
A6	POWER SUPPLY	Range: 25 vdc 6 amps	NJE, Model CS36CR30 (7907346-2)
A7	TEST OSCILLATOR	Range: 9,100 to 10,800 Hz	Preston, X-Mod 134A (MIS10224)
A8	TRUE RMS VOLTMETER	Range: 0 to 10 v rms Accuracy: ±1%	Singer, Model 3574M (MIS10299)

Table 3. Accessories Required

Item	Common name	Description and part number
B1	ADAPTER	BNC jack to UHF plug (7601754)
B2	ADAPTER	BNC T, 2 jacks, 1 plug (MS-35173)
B3	ADAPTER	BNC plug to N jack (10519458)
B4	ADAPTER	BNC jack to N plug (10519457)
B5	ADAPTER	Double banana jack to BNC plug (7909401)
B6	ADAPTER[1]	Single banana jack to alligator clip (red) (7907556)
B7	CABLE[2]	36-in., RG58( )/U BNC plug to alligator clips (7909410)
B8	CABLE[2]	30-in. RG58( )/U BNC plug terminations 97907467)
B9	LEAD[2]	24-in. No 18, single banana plug terminations (red) (7907497)
B10	LEAD[2]	24-in. No. 18, single banana plug terminations (black) (7907498)

[1]Two required.
[2]Three required.

SECTION III
PRELIMINARY OPERATIONS

6. Preliminary Instructions

a. The instructions outlined in this section are preparatory to the calibration process. Personnel should become familiar with the entire bulletin before beginning the calibration.

b. Items of equipment used in this procedure are referenced within the text by common name and item identification number as listed in tables 2 and 3. For the identification of equipment referenced by item numbers prefixed with A, see table 2, and for prefix B, see table 3.

WARNING

HIGH VOLTAGE is used during the performance of this calibration. DEATH ON CONTACT may result if personnel fail to observe safety precautions.

7. Equipment Setup

a. Remove TI from case.

b. Connect equipment as shown in figure 1.

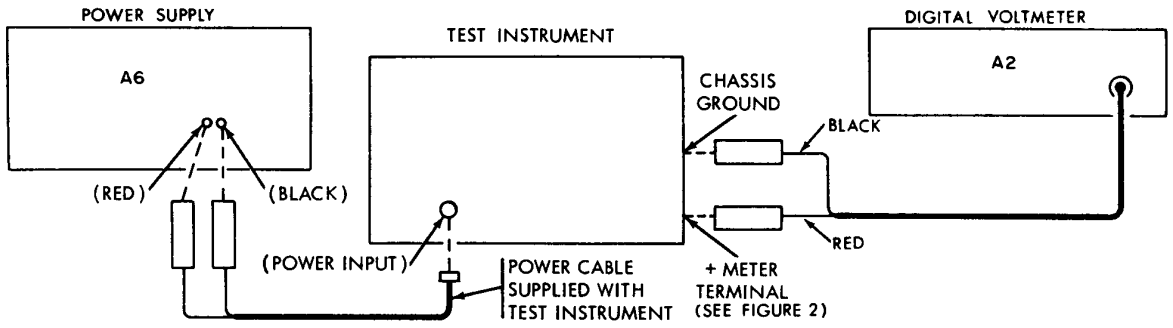

Figure 1. Panel meter accuracy - equipment setup.

c. Position TI controls as listed in (1) through (4) below:

(1) METER switch to LINE.

(2) AUDIO SELECTOR switch to VOR.

(3) NAV-GS switch to NAV.

(4) CARRIER SET control fully counterclockwise to detented position

d. Energize equipment and allow sufficient time for warm-up and stabilization.

SECTION IV
CALIBRATION PROCESS

NOTE

Unless otherwise specified, verify the results of each test and take corrective action whenever the test requirement is not met before continuing with the calibration.

8. Panel Meter Accuracy

a. Performance Check

(1) Adjust controls of power supply (A6) for 25-volt output.

(2) Adjust SET LINE TO 21V control for red line indication on TI meter. Digital voltmeter (A2) will indicate between 20.5 and 21.5 volts dc.

b. Adjustments. No adjustments can be made.

9. RF Output Level and Attenuation

a. Performance Check

(1) Connect THERMISTOR MOUNT connector of power meter (A5) to OUTPUT NAV connector of TI, using thermistor mount (part of A5), adapter (B3), and cable supplied with power meter.

(2) Position TI controls as indicated in (a) through (d) below:

(a) METER switch to CAR.

(b) METER ZERO control for zero indication on TI meter.

(c) CARRIER SET control for red line indication on TI meter.

(d) MICROVOLTS control to 200 K.

(3) Turn MEGACYCLES control throughout its range while maintaining red line indication with CARRIER SET control. Power meter will indicate between 392 and 1350 microwatts. If not, perform **b**(1) and (2) below.

(4) Turn MICROVOLTS control to 100K.

(5) Repeat technique of (3) above. Power meter will indicate between 113 and 313 microwatts. If not, perform **b**(1) through(4) below.

(6) Turn MICROVOLTS control to 10K.

(7) Repeat technique of (3) above. Power meter will indicate between 1.13 and 3.13 microwatts. If not, perform **b**(1) through (4) below.

(8) Connect power meter THERMISTOR MOUNT connector to OUTPUT GS, using thermistor mount, adapter, and power meter cable.

(9) Turn NAV-GS switch to GS and MICROVOLTS control to 200K.

(10) Repeat technique of (3) above over the frequency range of 329.3 to 335.0 MHz. Power meter will indicate between 392 and 1350 microwatts. If not, perform **b**(5) below.

b. Adjustments

(1) Loosen MICROVOLTS control set screws and remove control knob.

(2) Repeat **a**(3) above while adjusting MICROVOLTS control shaft to physical position yielding optimum within-tolerance power meter indications.

(3) Replace control knob on shaft and align corresponding control mark with index mark on front panel.

(4) Repeat **a**(4) and (5) above. If beyond tolerance indications are obtained, reposition MICROVOLTS control knob shaft setting so that all indications for **a**(2) through (7) above are within tolerance.

(5) Repeat **a**(9) and (10) above while adjusting R1544 (fig. 2) for optimum within tolerance indication.

10. RF Output

a. Performance Check

(1) Connect frequency counter (A3) to TI OUTPUT NAV, using cable (B8) and adapter (B4).

(2) Position TI controls as indicated in (a) through (g) below:

(a) MICROVOLTS control fully clockwise.

(b) NAV-GS switch to NAV.

(c) MEGACYCLES coarse control to 108.

(d) MEGACYCLES fine control to .0.

(e) LOC-GS control to midrange.

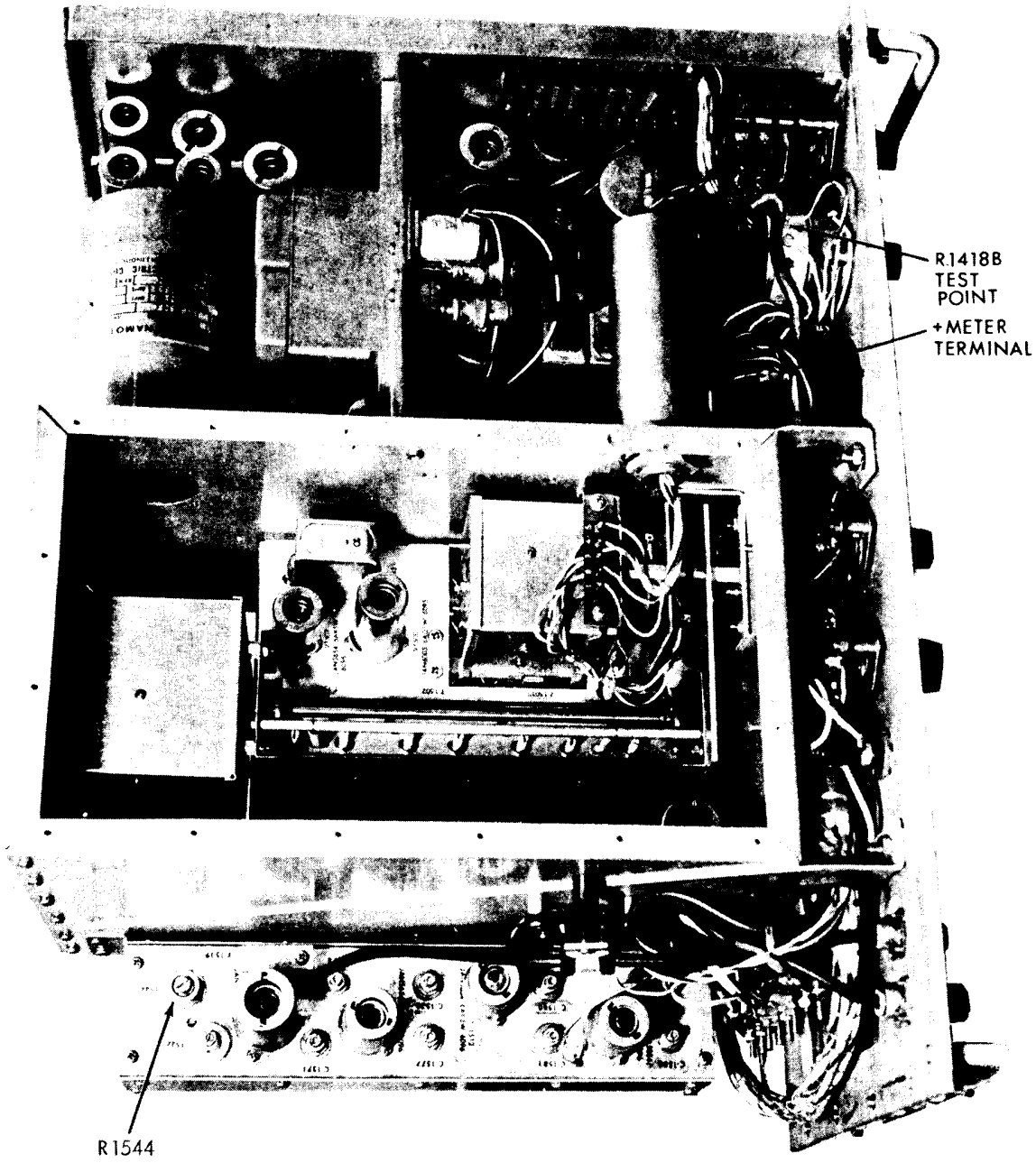

Figure 2. Test instrument - top interior view.

(f) VOR control to 180.

(g) AUDIO SELECTOR switch to 30~VAR Ø.

(3) Frequency counter will indicate between 107.99298 and 108.00702 MHz. If not, perform **b** below.

(4) Turn MEGACYCLES controls for settings shown in table 4. Frequency counter indications will be within limits specified for indicated MEGACYCLES settings. If not, perform **b** below.

Table 4. RF Output

Test Instrument		Frequency Counter Indications (MHz)	
MEGACYCLES Coarse Control Setting	MEGACYCLES Fine Control Setting	Min	Max
108	.1	108.09297	108.10703
108	.2	108.19296	108.20703
108	.3	108.29296	108.30704
108	.4	108.39295	108.40705
108	.5	108.49295	108.50705
108	.6	108.59294	108.60706
108	.7	108.69293	108.70707
108	.8	108.79295	108.80707
108	.9	108.89292	108.90708
109	0	108.99291	109.00709
110	0	109.99285	110.00715
111	0	110.99278	11.00722
112	0	111.99272	112.00728
113	0	112.99265	113.00735
114	0	113.99259	114.00741
115	0	114.99252	115.00748
116	0	115.99246	116.00754
117	0	116.99239	117.00761
118	0	117.99233	118.00767
119	0	118.99226	119.00774
120	0	119.99220	120.00780
121	0	120.99213	121.00787
122	0	121.99207	122.00793
123	0	122.99200	121.00800
124	0	123.99194	124.00806
125	0	124.99187	125.00813
126	0	125.99181	126.00819
127	0	126.99174	127.00826
128	0	127.99168	128.00832
129	0	128.99161	129.00839
130	0	129.99155	130.00845
131	0	130.99148	131.00852
132	0	131.99142	132.00858
133	0	132.99135	133.00865
134	0	133.99129	134.00871
135	0	134.99122	135.00878

(5) Connect frequency counter to OUTPUT GS connector of TI.

(6) Position TI controls as indicated in (a) through (c) below:

(a) NAV-GS switch to GS

(b) MEGACYCLES coarse control to 332.

(c) MEGACYCLES fine control to 0.

(7) Frequency counter will indicate between 331.9786 and 332.0214 MHz. If not, perform **b** below.

b. Adjustments. Repeat **a** above and adjust C1534 (fig. 3) for optimum within-tolerance indications.

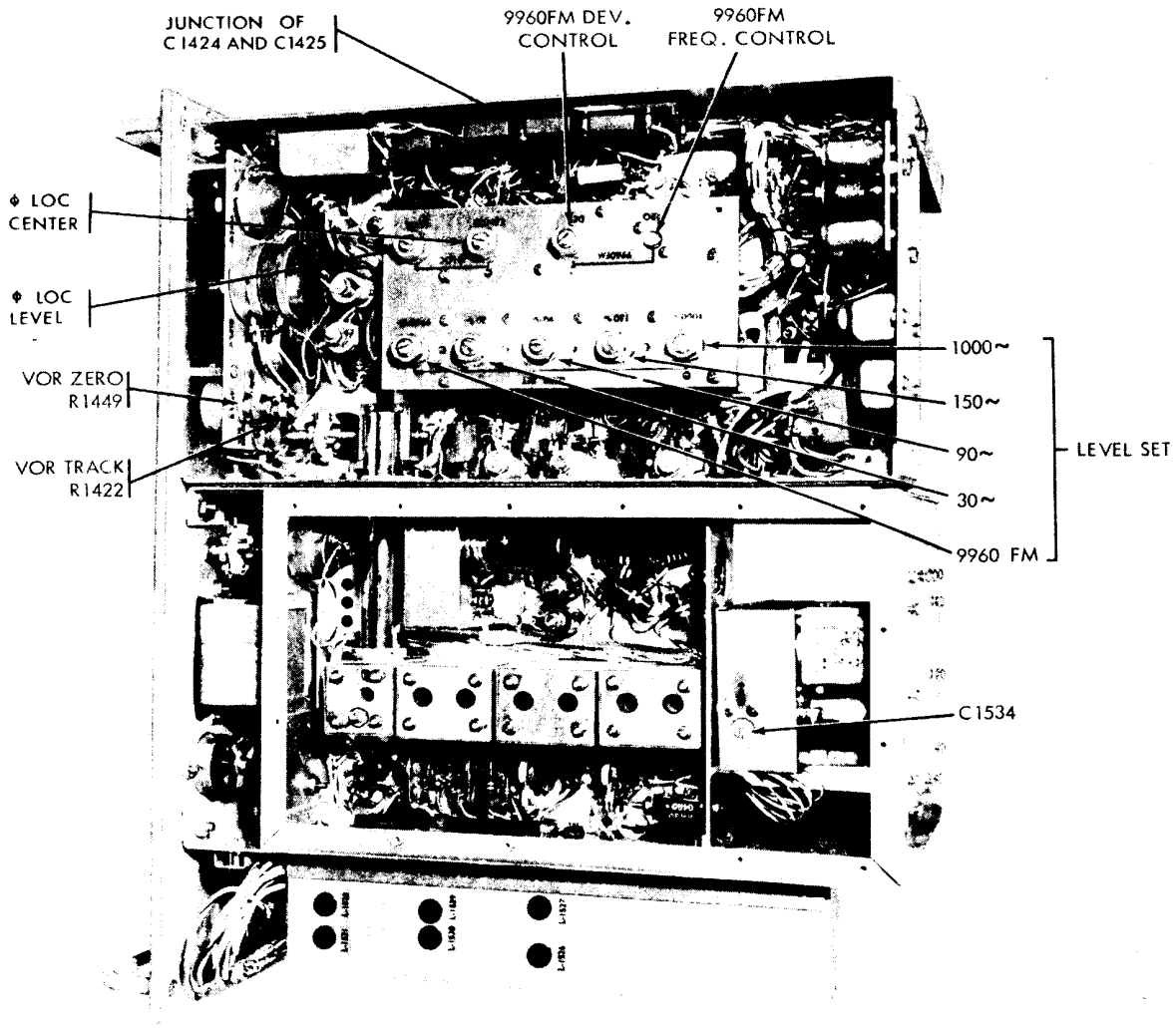

Figure 3. Test instrument - bottom interior view.

11. Audio Output

a. Performance Check

(1) Connect frequency counter (A3) to TI AUDIO OUT, using cable (B8).

(2) Turn NAV-GS switch to NAV and AUDIO SELECTOR switch to 1,000 ~. Frequency counter will indicate between 800 and 1200 Hz. If not, perform **b** below.

(3) Turn AUDIO SELECTOR switch for settings shown in table 5. Frequency counter indications will be within specified limits for indicated AUDIO SELECTOR settings.

Table 5. Audio Output

Test Instrument AUDIO SELECTOR Switch Position	Frequency Counter Indication (ms)	
	Min	Max
30 ~ VAR ∅	33.33[1]	33.33
90~	10.90	11.34
150~	6.54	6.80

[1]Adjust 30~control for exactly 30 Hz. Convert to period measurement for greater accuracy. If 30 Hz is not precisely adjusted, lengthy computations will be required in paragraph 17.

NOTE

9960 FM frequency will be checked during the performance of paragraph 15 below.

b. Adjustments. Adjust 1,000 ~ control (front panel) for 1,000 Hz as indicated on frequency counter.

12. Percent Modulation

a. Performance Check

(1) Connect equipment as shown in figure 4.

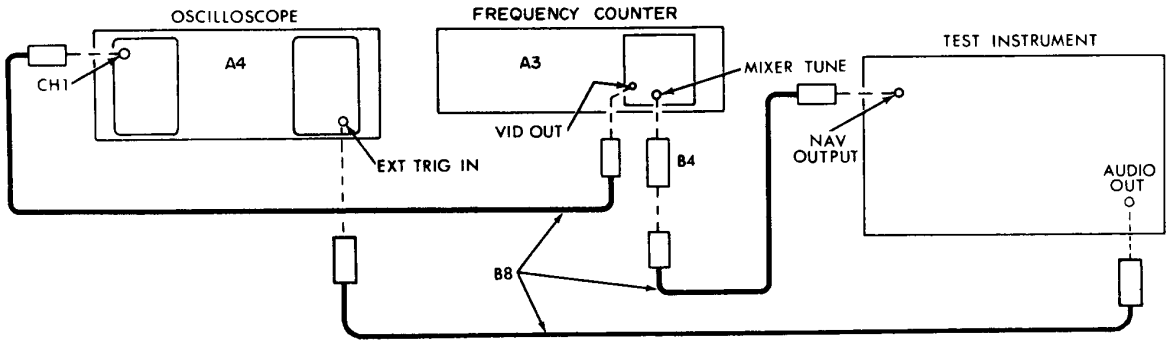

Figure 4. Percent modulation - equipment setup.

(2) Position controls of TI as indicated in (a) through (c) below:

(a) MEGACYCLES coarse control to 108.

(b) MEGACYCLES fine control to 0.

(c) AUDIO SELECTOR switch to 1,000 ~.

NOTE

Frequency counter (A3) must be slightly tuned off zero beat to obtain the proper oscilloscope (A4) display.

(3) Adjust oscilloscope controls as necessary. Oscilloscope display will be as shown in figure 5. If not, perform **b** below.

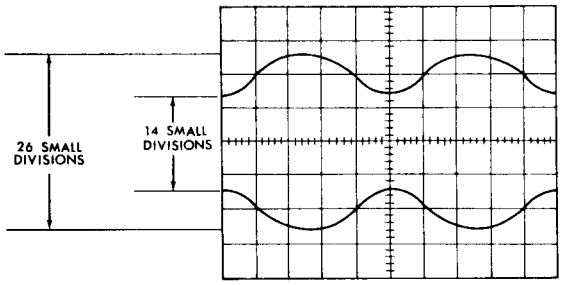

Figure 5. Test instrument - 30-percent modulation waveform.

(4) Turn AUDIO SELECTOR switch to 30 ~,

(5) Repeat (3) above.

(6) Turn AUDIO SELECTOR switch to 9960 FM.

(7) Repeat (3) above.

NOTE

150 Hz modulation will be checked during the performance of paragraph **13** below.

b. Adjustments. Adjust LEVEL SET adjustments (fig. 3) as necessary to produce required waveforms.

13. Tone Localizer Centering

a. Performance Check

(1) Connect AUDIO OUT connector of TI to true rms voltmeter (A8) using cable (B8) and adapter (B1).

(2) Position controls of TI as indicated in (a) and (b) below:

(a) AUDIO SELECTOR- switch to 90 ~.

(b) LOC-GS control fully counterclockwise.

(3) Record indication of true rms voltmeter.

(4) Turn LOC-GS control of TI fully clockwise.

(5) Record indication of true rms voltmeter.

(6) Subtract indication recorded in (3) above from indication recorded in (5)above and divide the difference by 2. The quotient plus indication recorded in (3) above is the midrange voltage.

(7) Turn LOC-GS control of TI until midrange voltage obtained in (6) above is indicated on true rms voltmeter.

NOTE

Indication obtained in (7) above must be maintained when performing (8) through (15) below.

(8) Loosen setscrews on LOC-GS knob and turn knob until white line on knob coincides with pointer on panel.

(9) Turn AUDIO SELECTOR switch of TI to 150 ~

(10) Observe that true rms voltmeter indication is same as obtained in (7) above. If not, perform **b** below.

(11) Connect equipment as shown in figure 4.

(12) Turn AUDIO SELECTOR to 90 ~.

(13) Adjust oscilloscope as necessary. If oscilloscope display is not as shown in figure 6, perform **b** below.

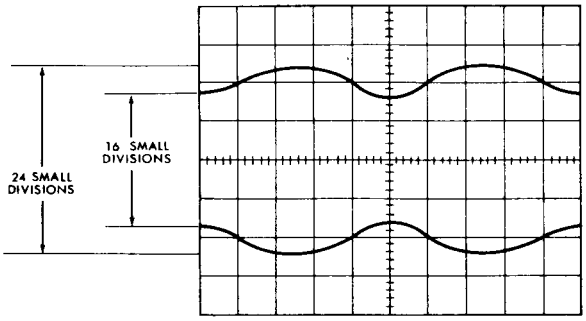

Figure 6. Test instrument - 20-percent modulation waveform.

(14) Turn AUDIO SELECTOR to 150.

(15) Repeat (13) above.

b. Adjustments. Adjust LEVEL SET (fig. 3) as necessary for midrange voltage obtained in (7) above.

14. Tab Adjustment

a. Performance Check

(1) Connect AUDIO OUT connector of TI to true rms voltmeter (A8), using cable (B8) and adapter (B1).

(2) Position controls of TI as indicated in (a) through (e) below:

(a) VOR control to 0.

(b) METER switch to CAR.

(c) NAV-GS switch to NAV.

(d) AUDIO SELECTOR switch to 90 ~.

(e) LOG-GS control mark aligned with top mark on DOWN-RIGHT tab.

(3) Record indication of true rms voltmeter.

(4) Turn AUDIO SELECTOR switch to 150 ~. Record indication of true rms voltmeter.

(5) Observe that indication obtained in (3) above is twice the voltage indicated in (4) above. If not, perform **b** below.

(6) Turn LOC-GS control of TI until mark on knob is aligned with top mark on UP-LEFT tab. Record indication of true rms voltmeter.

(7) Turn AUDIO SELECTOR switch to 90 ~. Record indication of true rms voltmeter.

(8) Observe that indication obtained in (6) above is twice the indication observed in (7) above. If not, perform **b** below.

b. Adjustments

(1) Repeat **a**(2) through (4) above.

(2) Turn LOC-GS control until indication in **a**(5) above is obtained.

(3) Loosen screw on DOWN-RIGHT tab and align top mark of tab with mark on LOC-GS control. Tighten screw.

(4) Repeat **a**(6) and (7) above.

(5) Turn LOC-GS control until indication in **a**(8) above is obtained.

(6) Loosen screw on UP-LEFT tab and align top mark of tab with mark on LOC-GS control. Tighten screw.

15. FM Deviation Ratio

a. Performance Check

(1) Connect equipment as shown in figure 7.

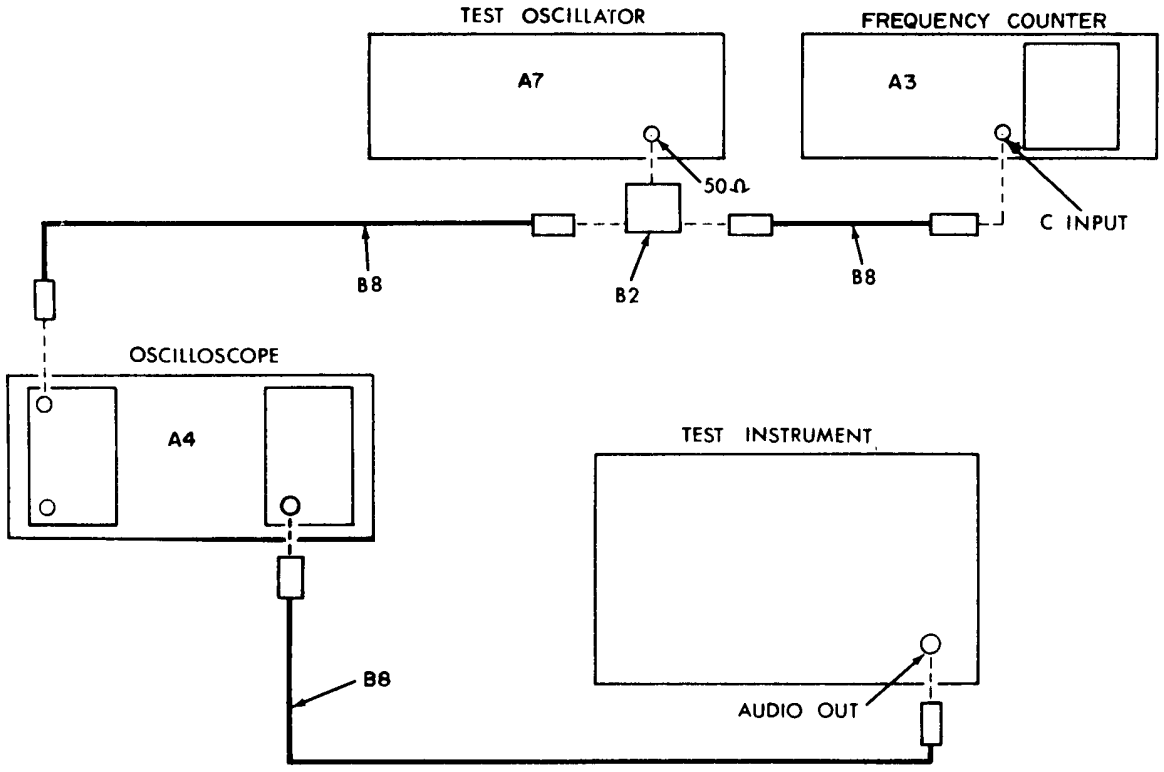

Figure 7. FM deviation ratio - equipment setup.

(2) Turn AUDIO SELECTOR switch to 9960 FM.

(3) Adjust test oscillator (A7) for an output of 9,960 Hz.

(4) Adjust necessary controls to obtain, on oscilloscope (A4), a maximum intensity ellipse within the lissajous pattern corresponding to the low FM swing. Zero beat will occur at approximately 9,480 Hz.

NOTE

A 1-Hz lissajous drift is permissible in (4) above and (6) below.

(5) Record frequency counter (A3) indication.

(6) Adjust necessary controls to obtain, on oscilloscope, a maximum intensity ellipse within the lissajous pattern corresponding to the upper FM swing. Zero beat will occur at approximately 10,440 Hz.

(7) Record frequency counter indication.

(8) Subtract the value recorded in (5) above from the value recorded in (7)above.

(9) Divide the difference obtained in (8) above by two. The quotient will be between 470.4 and 489.6 Hz. If not, perform **b** below.

(10) Add the value recorded in (5) above to the quotient obtained in (9) above. This sum will be between 9,760.8 and 10,159.2 Hz. If not perform **b** below.

b. Adjustments

(1) Rotate 9960 FM DEV control (fig. 3) fully counterclockwise.

(2) Set test oscillator (A7) for 9,960 Hz.

(3) Adjust 9960 FM FREQ control (fig. 3) for a 1:1 lissajous pattern.

(4) Adjust test oscillator for a frequency counter indication of 9,480 Hz.

(5) Without disturbing the test oscillator frequency output, adjust 9960 FM DEV control to obtain a maximum intensity ellipse within the lissajous pattern.

(6) Repeat **a** above.

16. VOR Azimuth

a. Performance Check

NOTE

On all test equipment power cords, use 2 prong to 3-prong isolation adapters to prevent ground loops.

(1) Connect ZIFOR (A1) INPUT connector to TI AUDIO OUT jack, using cable (B8).

(2) Position TI controls as indicated in (a) through (c) below:

(a) AUDIO SELECTOR switch to VOR.

(b) CARRIER SET to redline on meter.

(c) VOR control to 180.

(3) Adjust VOR ZERO adjustment (fig. 3) for 0 (zero) indication on ZIFOR.

NOTE

It may be necessary to further adjust CARRIER frequency and CARRIER SET to obtain sufficient voltage output for null on ZIFOR.

(4) Connect equipment as shown in figure 8.

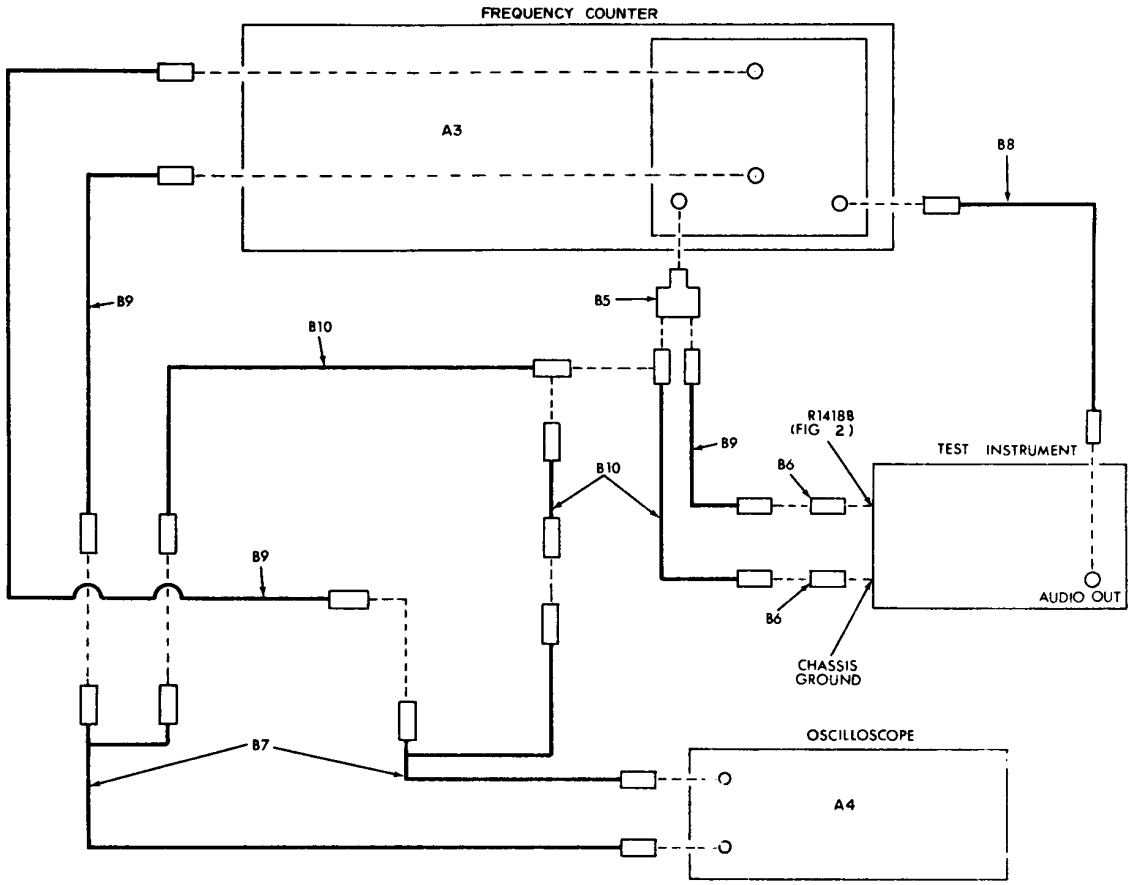

Figure 8. VOR azimuth - equipment setup.

(5) Position frequency counter (A3) controls as indicated in (a) through (f) below:

(a) A and B SLOPE; switches to + (positive).

(b) SEP-COM switch to SEP.

(c) FUNCTION switch to TIME B-A.

(d) A and B switches to AC.

(e) A and B TRIGGER LEVEL controls fully clockwise

(f) A and B RANGE selectors to 1.

(6) Turn AUDIO SELECTOR switch to 30 - VAR ∅ and VOR switch to 180.

(7) Turn A TRIGGER LEVEL control of frequency counter slowly counterclockwise until frequency counter begins to count.

(8) Adjust oscilloscope (A4) controls to display 1-1/2 cycles on channel 1.

(9) Slowly readjust frequency counter A TRIGGER LEVEL control to obtain the most stable negative portion of channel 1 display. Note the exact width of negative portion of channel 1 display.

NOTE

It may be necessary to use the magnifier function of the oscilloscope to accomplish (9) above.

(10) Slowly adjust frequency counter B TRIGGER LEVEL control until the counter stops counting. Readjust B TRIGGER LEVEL control until the negative portion of channel 2 display is identical in width to the width noted in (9) above.

NOTE

It may be necessary to slightly readjust both A and B TRIGGER LEVEL controls to obtain (10) above.

NOTE

Insure that the conditions of (10) above are maintained while recording the counts in the following steps.

(11) Set display control on counter so that the count is displayed long enough to read and record. Record five counts. Average the counts and record the average.

(12) Turn TI VOR switch to 135 position. Record five counts of counter. Average the counts and record the average. Subtract this average from the average recorded in (11) above. The difference will be between 3,981.5 and 4,351.9 microseconds. If not, perform **b** below.

(13) Repeat (12) above for TI 'VOLTS switch settings of 90 and 45. The differences will be between 8,148.1 and 8,518.5 microseconds for 90° settings, and between 12,314.8 and 12,685.2 microseconds for the 45° setting. If not, perform **b** below.

b. Adjustments. Adjust VOR TRACK adjustment (fig. 3) until the indications in **a**(12) and (13) above are within tolerance. Repeat **a** above.

NOTE

Since VOR TRACK and VOR ZERO adjustments interact, if VOR TRACK adjustment is made, the VOR ZERO adjustment must be reset.

17. Final Procedure

a. Deenergize and disconnect all equipment and replace TI within protective cover.

b. In accordance with TM 38-750, annotate and affix DA Label 80 (U.S. Army Calibration System). When the TI cannot be adjusted within tolerance, annotate and affix DA Form 2417 (Unserviceable or Limited Use tag).

By Order of the Secretary of the Army:

CREIGHTON W. ABRAMS,
General, United States Army
Chief of Staff

Official:

VERNE L. BOWERS
Major General, United States Army
The Adjutant General

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