*TB 9-6625-2189-24

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

CALIBRATION PROCEDURE FOR DIGITAL MULTIMETER AN/GSM-64D (FLUKE MODEL 8840A/AF WITH OPTION 05) AND FLUKE MODEL 8840A/AF WITH OR WITHOUT OPTION 05 AND FLUKE MODEL 8840A WITH OR WITHOUT OPTIONS 05 AND 09

Headquarters, Department of the Army, Washington, DC
28 June 2007

REPORTING OF ERRORS AND RECOMMENDING IMPROVEMENTS

You can improve this manual. If you find any mistakes or if you know of a way to improve these procedures, please let us know. Mail your letter or DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to Commander, US Army Aviation and Missile Command, ATTN: AMSAM-MMC-MA-NP, Redstone Arsenal, AL 35898-5000. A reply will be furnished to you. You may also provide DA Form 2028 information to AMCOM via e-mail, fax, or the World Wide Web. Our FAX number is: DSN 788-6546 or Commercial 256-842-6546. Our e-mail address is: 2028@redstone.army.mil. Instructions for sending an electronic 2028 may be found at the back of this manual. For the World Wide Web, use: https://amcom2028.redstone.army.mil.

*This bulletin supersedes TB 9-6625-2189-35, dated 17 April 1993.

SECTION I
IDENTIFICATION AND DESCRIPTION

1. Test Instrument Identification. This bulletin provides instructions for the calibration of Digital Multimeter AN/GSM-64D (Fluke, Model 8840A/AF with Option 05) and Fluke, Model 8840A/AF with or without Options 05 and Fluke Model 8840A with or without Options 05 and 09. TM 11-6625-444-14-3 and the manufacturers' manuals were used as the prime data sources in compiling these instructions. The equipment being calibrated will be referred to as the TI (test instrument) throughout this bulletin.

a. Model Variations. Option 09 of model 8840A is true RMS (AC Voltage and AC Current). If not equipped, disregard AC functions. Additional variations among models are described in the text and tables.

b. Time and Technique. The time required for this calibration is approximately 2 hours, using the dc and low frequency technique.

2. Forms, Records, and Reports

a. Forms, records, and reports required for calibration personnel at all levels are prescribed by TB 750-25.

b. Software adjustments to be reported are designated (R) at the beginning of the subparagraph in which they appear. Report only those software adjustments made and designated with (R). To report software adjustments, use parameter and range failing performance check; i.e., 10 V dc, 100Ω, etc.

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	
	5 1/2 digit display @ S reading rate	
	Ranges	Accuracy
Dc voltage	200 mV	± (0.007% + 4 counts)
	2 V	± (0.004% + 3 counts)
	20 V	± (0.005% + 3 counts)
	200 V	± (0.005% + 3 counts)
	1000 V	± (0.005% + 3 counts)

Table 1. Calibration Description - Continued

Test instrument parameters	Performance specifications	
	5 1/2 digit display @ S reading rate	
Ac voltage[1] 200 mV – 1000V	Frequency	Accuracy
	20 Hz to 45 Hz	± (1.2 % + 100 counts)
	45 Hz to 100 Hz	± (0.35% + 100 counts)
	10 Hz to 0 KHz	± (0.14% + 100 counts)
	20 KHz to 50 KHz	± (0.19% + 150 counts)
	50 KHz to 100 KHz	± (0.5 % + 300 counts)
Dc current 2000 mA range	Input	Accuracy
	≤ 1A	± (0.04% + 4 counts)
	> 1 A	± (0.1 % + 4 counts)
Ac current 2000 mA range	Frequency	Accuracy
	20 Hz to 45 Hz	± (2.0% + 200 counts)
	45 Hz to 100 Hz	± (0.5% + 200 counts)
	100 Hz to 5 KHz	± (0.4% + 200 counts)
Resistance[2]	Range	Accuracy
	200 Ω	± (0.011% + 4 counts)
	2 KΩ	± (0.01 % + 3 counts)
	20 KΩ	± (0.01 % + 3 counts)
	200 KΩ	± (0.01 % + 3 counts)
	2000 KΩ	± (0.027 % + 3 counts)
	20 MΩ	± (0.043 % + 4 counts)
Ratio[3]	Reference Voltage	Accuracy
	10.0 – 19.9999 V	± (0.01% + 5 counts)
	1.0 – 9.9999 V	± (0.01% + 5 counts) x (10/Vref)

[1]Maximum input: Model AN/GSM-64D and 8840A/AF 1000 V rms or 2 x 10^7 Volts-Hertz product (whichever is less); model 8840A w/opt09 700 V rms, or 2 x 10^7 Volts-Hertz product (whichever is less).
[2]Resistance 2-wire and 4-wire ohms using offset function.
[3]AN/GSM-64D and Fluke 8840A/AF Models only.

SECTION II
EQUIPMENT REQUIREMENTS

4. Equipment Required. Table 2 identifies the specific equipment to be used in this calibration procedure. This equipment is issued with Secondary Transfer Calibration Standards Set AN/GSM-286, AN/GSM-287 or AN/GSM-705. Alternate items may be used by the calibrating activity. 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 TI. Where the four-to-one ratio cannot be met, the accuracy of the equipment selected is shown in parenthesis.

5 Accessories Required. The accessories required for this calibration are common usage accessories, issued as indicated in paragraph **4** above, and are not listed in this calibration procedure.

Table 2. Minimum Specifications of Equipment Required

Common name	Minimum use specifications			Manufacturer and model (part number)
CALIBRATOR	Dc voltage:			Fluke, Model 5720A (5720A) (p/o MIS-35947); w amplifier, Fluke 5725A/AR (5725A/AR)
	Voltage	Accuracy		
	100 mV	±27.5 ppm		
	1 V	±17.5 ppm		
	10 V to 1000 V	±20.0 ppm		
	Resistance:			
	Range	Accuracy		
	100Ω	±37.5 ppm		
	1 KΩ to 100 kΩ	±32.5 ppm		
	1.0 MΩ	±75.0 ppm		
	10MΩ	±117.5 ppm		
	Dc current:			
	Range	Accuracy		
	1.0A	±0.011%		
	Ac current: at 1.0 A			
	frequency	Accuracy		
	20 Hz	±0.55%		
	50 Hz	±0.175%		
	1.0 KHz to 5.0 kHz	±0.15%		
	Ac voltage: Range: 100 mV to 700 V			
	Volts	Frequency	Accuracy	
	100 mV to 100 V	1 kHz	±.06%	
	10 V	20 Hz	±.325%	
	10 V	50 Hz	±.112%	
	10 V	45 kHz	±.085%	
	10 V	100 kHz	±.2%	
	700 V	1 kHz	±.071%	
DC VOLTAGE DIVIDER[1]	Range: 1:1 to 10:1 Accuracy: 37 ppm			ESI, Model RV722 (RV722)

[1]Required only for Fluke, Model AN/GSM-64D and 8840A/AF with or without option 05.

SECTION III
CALIBRATION PROCESS

6. Preliminary Instructions

a. The instructions outlined in paragraphs **6** and **7** 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 as listed in table 2.

c. Unless otherwise specified, verify the results of each test and, whenever the test requirement is not met, take corrective action before continuing with the calibration, Adjustments required to calibrate the TI are included in this procedure. Additional maintenance information is contained in the manufacturer's manual for this TI.

d. Unless otherwise specified, all controls and control settings refer to the TI.

7. Equipment Setup

WARNING

HIGH VOLTAGE is used or exposed during the performance of this calibration. DEATH ON CONTACT may result if personnel fail to observe safety precautions. REDUCE OUTPUT(S) to minimum after each step within the performance checks where applicable.

a. Connect TI to a 115 V ac power source.

b. Ensure **INPUTS FRONT/REAR** switch is in the **FRONT** (out) position.

NOTE

When TI is turned on, an internal self-test is performed. TI inputs must be left open-circuited while the self-test is performed otherwise the TI may indicate errors are present. Errors may also be caused by inductive or capacitive pick-up from long test leads. If option 09 is not installed in model 8840A the TI skips tests 1, 2, and 3.

c. Press TI **POWER** switch to **ON** and allow at least 1 hour for warm-up and stabilization.

d. Press and hold TI **SRQ** pushbutton for 3 seconds. The **TEST** annunciator will then light up and TI will run through its analog test in sequence. Each test number is displayed for approximately 1 second.

e. If TI detects an error during one of the tests, it displays the **ERROR** annunciator and the test number for approximately 2 1/2 seconds and then proceeds to the next test.

f. If TI fails to perform diagnostic self-test, perform paragraph **14** below.

8. Dc Volts

a. Performance Check

(1) Connect a high quality short between TI **HI** and **LO INPUT** terminals.

(2) Press TI **V DC** function pushbutton.

(3) Press TI **RATE** pushbutton for a **SLOW (S)** reading rate on display.

(4) Press TI **200Ω/mV** range pushbutton.

(5) Press TI **OFFSET** pushbutton to **ON.** TI will indicate 0 (±00.004 V dc); if not, perform **b** below.

(6) Repeat technique of (4) above for **2, 20, 200,** and **2000** range pushbuttons. TI will indicate 0 (±3 counts); if not, perform **b** below.

(7) Remove short from TI and connect **INPUT** terminals to calibrator **OUTPUT** terminals.

(8) Press TI **200Ω/mV** range pushbutton and set calibrator for an output of 100 mV. TI will indicate between 99.989 to 100.011 mV; if not, perform **b** below.

(9) Repeat technique of (8) above for settings and indications listed in table 3.

(10) Reduce calibrator output to minimum.

Table 3. Dc Volts

Test instrument range pushbutton	Calibrator output (V dc)	Test instrument indications	
		Min	Max
2	1	.99993	1.00007
20	10	9.9992	10.0008
200	100	99.992	100.008
2000	1000	999.92	1000.08

b. Adjustments. Perform paragraph **14** below.

9. Ac Volts (Models AN/GSM-64D and Fluke 8840A/AF w/wo opt05 and 8840A w/opt09)

a. Performance Check

CAUTION

To avoid instrument damage when calibrating AN/GSM-64 or model 8840A/AF maximum input is 1000 V rms or $2x10^7$ Volt-Hertz product (whichever is less), for model 8840A w/opt09 do not apply input potentials greater than 700 V rms or $2x10^7$ Volt-Hertz product (whichever is less).

(1) Connect TI **INPUT** terminals to calibrator **OUTPUT** pushbutton.

(2) Press TI **V AC** function pushbutton.

(3) Set TI range and calibrator **OUTPUT** as specified in table 4. If TI fails to indicate within limits specified, perform **b** below.

(4) Reduce calibrator output to minimum.

b. Adjustments. Perform paragraph **14** below.

Table 4. Ac Volts

Test instrument range pushbuttons	Calibrator output		Test instrument indications	
	Voltage	Frequency	Min	Max
200 Ω/mV	100 mV	1 kHz	99.760 mV	100.240 mV
2	1 V	1 kHz	.99760 V	1.00240 V
20	10 V	20 Hz	9.8700 V	10.1300 V
20	10 V	50 Hz	9.9550 V	10.0450 V
20	10 V	1 kHz	9.9760 V	10.0240 V
20	10 V	45 kHz	9.9660 V	10.0340 V
20	10 V	100 kHz	9.9200 V	10.0800 V
200	100 V	1 kHz	99.760 V	100.240 V
2000	700 V	1 kHz	698.02 V	701.98 V

10. Resistance

a. Performance Check

(1) Connect calibrator **OUTPUT** and **SENSE** terminals to TI **INPUT** and **SENSE** terminals.

(2) Press **kΩ 4 WIRE** and **200Ω/mV** pushbuttons.

(3) Set calibrator for a 0 Ω output. (**EX SNS**: **ON** and **2-WIRE COMP**: **OFF**). Press TI **OFFSET** pushbutton. TI will indicate 0 (±4 digits); if not, perform **b** below.

(4) Verify that TI will indicate 0 Ω (±3 digits) for each of the remaining ranges; if not, perform **b** below.

(5) Set calibrator for a 100 Ω nominal output then, using output adjustment control, set calibrator display indication to equal TI indication. The calibrator **Error** display will be within ±0.015%.

(6) Repeat technique of (5) above for TI range and calibrator outputs listed in table 5. TI will indicate within the specified limits; if not, perform **b** below.

(7) Set calibrator for a 0 Ω output. Press TI **200Ω/mV** and **kΩ 2-WIRE** function pushbuttons.

(8) Move leads from TI **SENSE** to **OUTPUT** terminals (4 wire from calibrator to 2 wire at TI).

(9) Set calibrator **2-WIRE COMP** to **ON**. Press TI **OFFSET** pushbutton.

(10) Repeat technique of (3) through (6) above for the **kΩ 2-WIRE** function. (Note, in (3) above, calibrator **2-WIRE COMP** should remain **ON** for checks through 10 kΩ.

NOTE

While performing the 2-wire ohms check, use calibrator 4-wire function connected to TI **INPUT HI** and **LO** terminals.

Table 5. Resistance

Test instrument Range pushbuttons	Calibrator nominal output	Calibrator error display ±(%)
2 KΩ	1 kΩ	.013
20 KΩ	10 kΩ	.013
200 KΩ	100 kΩ	.013
2000 KΩ	1 MΩ	.03
20 MΩ	10 MΩ	.047

b. **Adjustments**. Perform paragraph **14** below.

11. Dc Current

a. Performance Check

(1) Connect calibrator **OUTPUT** terminals to TI **2A** and **LO INPUT** terminals.

(2) Press TI mA function pushbutton and **AUTO** range pushbutton.

(3) Set calibrator for an output of 0 mA. TI will indicate 0 (±000.04 mA) (open circuit). If TI fails to indicate within limits specified, perform **b** below.

(4) Set calibrator for an output of 1.0 A. TI will indicate between 999.56 to 1000.44 mA. If TI fails to indicate within limits specified, perform **b** below.

b. Adjustments. Perform paragraph **14** below.

12. Ac Current (models AN/GSM-64D and Fluke 8840A/AF w/wo opt05 and 8840A w/opt09)

a. Performance Check

(1) Connect calibrator **OUTPUT** terminals to TI **2A** and **LO INPUT** terminals.

(2) Press TI **mA ~** function pushbutton and **AUTO** range pushbutton.

(3) Set calibrator for an output of 1.0 A at 1 kHz. TI should indicate between 994.00 to 1006.00 mA. If TI fails to indicate within limits specified, perform **b** below.

(4) Repeat technique of paragraph (3) above for settings and indications listed in table 6.

b. Adjustments. Perform paragraph **14** below.

Table 6. Ac Current

Test instrument range	Calibrator output		Test instrument indications	
pushbuttons	Current	Frequency	Min	Max
2000	1.0 A	20 Hz	978.00	1022.00
2000	1.0 A	50 Hz	993.00	1007.00
2000	1.0 A	5.0 kHz	994.00	1006.00

13. DC Ratio (Models AN/GSM-64D and Fluke, Model 8840A/AF w/wo opt 05 only)

a. Performance Check

(1) Connect equipment as shown in figure 1.

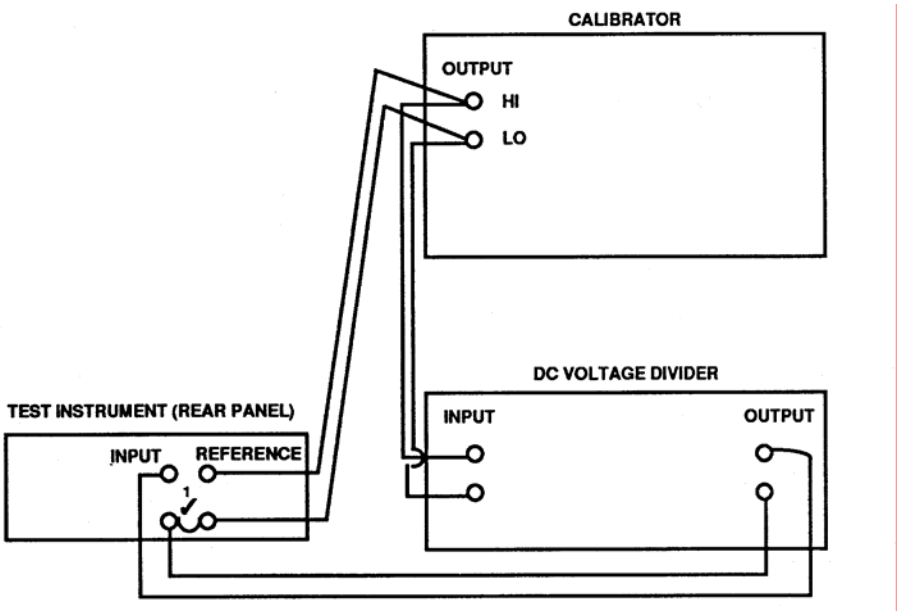

Figure 1. DC ratio.

[1] **INPUT AND REFERENCE LOs CONNECTED.**

(2) Press TI **INPUT FRONT/REAR RATIO** switch to **REAR RATIO** (in) position.

(3) Press TI **V DC** function and **2** range pushbuttons.

(4) Set dc voltage divider dials to value of 1.0000000 (may have to set dials to .999,999,ten).

(5) Set calibrator for an output of 1 V dc. TI should indicate between +.99450 and +1.00550.

(6) Set dc voltage divider dials to .1000000.

(7) Set calibrator for an output of 10 V dc. TI should indicate between +.09998 and +.10002.

b. Adjustments. No adjustments can be made for dc ratio.

14. Software Adjustments

CAUTION

To avoid accidentally voiding internal constants, do not allow cycle power on and off while the **CAL ENABLE** light is illuminated on display.

NOTE

Ensure that TI has had at least a 1 hour warm-up before performing adjustments.

a. A/D Converter (R)

NOTE

The A/D converter procedure is an iterative process. Each pass through the procedure uses the constants stored previously and improves them. Also, if A/D converter is performed it must be followed by performance of **b** below (Offset and Gain), and **c** below (High Frequency).

(1) If necessary, set calibrator to **STANDBY** and press **RESET** pushbutton; then disconnect TI from calibrator.

(2) Press TI **CAL ENABLE** switch using suitable instrument. (The **CAL ENABLE** switch is located on the right side on the display. It is recessed and may be covered by a calibration seal.)

(3) When **.0 V DC** is displayed, short **INPUT HI** and **LO** terminals.

(4) Press **TRIG/STORE** pushbutton.

NOTE

When **TRIG/STORE** pushbutton is pressed, the TI display field blanks while necessary calculations are being performed. Do not change input voltage while the display is blank.

(5) When **-.03 V DC** is displayed, remove short from TI and connect calibrator **OUTPUT** to TI **INPUT HI** and **LO** terminals.

(6) Set calibrator for a -30 mV dc (-0.03 V) output. Allow approximately 10 seconds for calibrator output stabilization, then press TI **TRIG/STORE** pushbutton.

(7) Repeat technique of (6) above for each successive prompted voltage displayed by the TI, being careful to apply proper voltage and indicated polarity. The last prompt should be **+.0725 V DC.** Afterwards, the TI will begin taking readings in the 2 V range.

(8) Verify the A/D converter by applying the inputs listed in table 7. If TI does not indicate within the limits specified, repeat steps (1) through (7) above with the following exception: in step (2), press **EX TRIG/A/D** pushbutton instead of the **CAL ENABLE** pushbutton.

Table 7. A/D Converter Verification Test

Input	Test instrument indications	Tolerance[1] (± digits)
0	.00000 V dc	2
-0.03 V dc	-30.000 mV dc	2
+0.03 V dc	+30.000 mV dc	2
-0.66 V dc	-0.6600 V dc	3
+0.66 V dc	+0.6600 V dc	3
-1.97 V dc	-1.97000 V dc	4
+1.97 V dc	+1.97000 V dc	4

[1]This test is not considered a performance test; therefore, the specification listed in table 2 will not apply.

b. Offset and Gain (R)

(1) Dc Voltage

(a) Disconnect calibrator from TI. Press **VDC** function pushbutton.

(b) When **+00.0** is displayed, short **INPUT HI** and **LO** terminals. Press **TRIG/STORE** pushbutton.

NOTE

When **TRIG/STORE** pushbutton is pressed, the TI display field blanks while necessary calculations are being performed. Do not change input voltage while the display is blank.

(c) When **+190.0 mV DC** is displayed, connect calibrator **OUTPUT** to TI **INPUT HI** and **LO** terminals.

(d) Set calibrator for a +190 mV dc output. Allow approximately 10 seconds for calibrator output stabilization, then press TI **TRIG/STORE** pushbutton.

(e) Repeat technique of (d) above for each successive prompted voltage displayed by the TI, being careful to apply proper voltage and indicated polarity. The last prompt should be **+1000. V DC**. Afterwards, the TI will begin taking readings in the 1000 V range.

(f) Set calibrator to **STANDBY** and press **RESET** pushbutton.

(2) Ac Voltage

(a) Press TI **V~** function pushbutton.

(b) When **10.0 mV AC** is displayed, connect ac divider (p/o calibrator) between calibrator **OUTPUT** and TI **INPUT HI** and **LO** terminals.

(c) Set calibrator for a 10 V, 1 kHz output. (This will result in a 10 mV input to TI.) Allow approximately 10 seconds for calibrator output stabilization, then press TI **TRIG/ STORE** pushbutton.

(d) When **100.0 mV AC** is displayed, remove ac divider from equipment setup and set calibrator for a 100 mV, 1 kHz output. Allow approximately 10 seconds for calibrator output stabilization, then press TI **TRIG/STORE** pushbutton.

(e) Repeat technique of (d) above for each successive prompted voltage displayed by the TI. The last prompt should be **500. V AC.** Afterwards, the TI will begin taking readings in the 1000 V range.

(f) Set calibrator to **STANDBY** and press **RESET** pushbutton.

(3) Resistance

(a) Disconnect calibrator from TI. Press TI **kΩ 2 WIRE** function pushbutton. When **0.00Ω** is displayed, connect a short between **INPUT HI** and **LO** terminals. Press **TRIG/STORE** pushbutton.

(b) When **100.0Ω** is displayed, connect calibrator **OUTPUT** and **SENSE** to TI **INPUT HI** and **LO** terminals (4 wire to 2 terminal technique).

(c) Set calibrator for a nominal 100Ω output.

(d) Set calibrator **EX SNS** to on and set **2-WIRE COMP** to **ON**. (Note: Set **2-WIRE COMP** to **OFF** for outputs above 10 kΩ and during the forthcoming 4-wire adjustment).

(e) Press **OFFSET/VAR IN** pushbutton. Display will change to **100.000Ω**. Using the range pushbuttons (**2 / DIGIT 1, 20/ DIGIT 2,** etc.), increment each digit, as required, until TI display is the rounded off value of the calibrator displayed value for nominal 100 Ω.

(f) Press **TRIG/STORE** pushbutton.

(g) Repeat technique of (c) through (f) above for each successive prompted resistance displayed by the TI. The last prompt should be **10.00 MΩ**. Afterwards, the TI will begin taking readings in the 20 MΩ range.

(h) Set calibrator to **STANDBY** and press **RESET** pushbutton. Disconnect calibrator from TI.

(i) Press TI **kΩ 4 WIRE** function pushbutton. When **0.00Ω** is displayed, connect a 4-wire short between **INPUT** and **SENSE** terminals.

(j) Press **TRIG/STORE** pushbutton.

(k) When **100.0Ω** is displayed, connect calibrator **OUTPUT** and **SENSE** terminals to TI **INPUT** and **SENSE** terminals (4-wire technique).

(l) Repeat technique of (c) through (h) above for kΩ 4-wire function.

(4) Dc Current

(a) Press **mA DC** function pushbutton. When **000**. **mA DC** is displayed, short **INPUT 2A** and **LO** terminals.

(b) Press **TRIG/STORE** pushbutton.

(c) When **1000**. **mA DC** is displayed, connect calibrator **OUTPUT** to TI **INPUT 2A** and **LO** terminals.

(d) Set calibrator for a 1.0 A dc output. Allow approximately 10 seconds for calibrator output stabilization, then press TI **TRIG/STORE** pushbutton.

(e) When display returns, taking readings on the 2000 mA range, set calibrator to **STANDBY**.

(5) Ac Current

(a) Press **mA~** function pushbutton.

(b) When **100**. **mA AC** is displayed, set calibrator for a 100 mA, 1 kHz output. Allow approximately 10 seconds for calibrator output stabilization, then press TI **TRIG/STORE** pushbutton.

(c) When **1000**. **mA AC** is displayed, set calibrator for a 1.0 A, 1 kHz output. Allow approximately 10 seconds for calibrator output stabilization, then press TI **TRIG/STORE** pushbutton.

(d) When display returns, taking readings on the 2000 mA range, set calibrator to **STANDBY** and press **RESET** pushbutton.

(e) Disconnect calibrator from TI.

c. **High Frequency (R)**

(1) Press **LOCAL/HF AC** pushbutton. When **100.00 mV AC** is displayed (also, a **U** should appear in the display), connect calibrator to TI **INPUT HI** and **LO** terminals.

(2) Set calibrator for a 100 mV, 100 kHz output. Allow approximately 10 seconds for calibrator output stabilization, then press TI **TRIG/STORE** pushbutton.

NOTE

When **TRIG/STORE** pushbutton is pressed, the TI display field blanks while necessary calculations are being performed. Do not change input voltage while the display is blank.

(3) Repeat technique of (2) above for each successive prompted voltage (at 100 kHz) displayed by the TI. The last prompt should be **200.0 V AC.** Afterwards, the TI will begin taking readings in the 1000 V ac range.

(4) Set calibrator to **STANDBY** and press **RESET** pushbutton. Disconnect calibrator from TI.

(5) Press **CAL ENABLE** switch to off, using suitable instrument.

(6) Repeat, or perform initially, paragraphs **8** through **13** above.

15. Final Procedure

a. Deenergize and disconnect all equipment

b. Annotate and affix DA label/form in accordance with TB 750-25.

By Order of the Secretary of the Army:

GEORGE W. CASEY, JR.
General, United States Army
Chief of Staff

Official:

JOYCE E. MORROW
Administrative Assistant to the
Secretary of the Army

0711602

Distribution:

To be distributed in accordance with the initial distribution number (IDN) 342274, requirements for calibration procedure TB 9-6625-2189-24.

Instructions for Submitting an Electronic 2028

The following format must be used if submitting an electronic 2028. The subject line must be exactly the same and all fields must be included; however, only the following fields are mandatory: 1, 3, 4, 5, 6, 7, 8, 9, 10, 13, 15, 16, 17, and 27.

From: "Whomever" whomever@redstone.army.mil
To: <2028@redstone.army.mil

Subject: DA Form 2028
1. **From**: Joe Smith
2. Unit: home
3. **Address**: 4300 Park
4. **City**: Hometown
5. **St**: MO
6. **Zip**: 77777
7. **Date Sent**: 19-OCT –93
8. **Pub no:** 55-2840-229-23
9. **Pub Title**: TM
10. **Publication Date**: 04-JUL-85
11. Change Number: 7
12. Submitter Rank: MSG
13. **Submitter FName**: Joe
14. Submitter MName: T
15. **Submitter LName**: Smith
16. **Submitter Phone**: 123-123-1234
17. **Problem**: 1
18. Page: 2
19. Paragraph: 3
20. Line: 4
21. NSN: 5
22. Reference: 6
23. Figure: 7
24. Table: 8
25. Item: 9
26. Total: 123
27. **Text**

This is the text for the problem below line 27.