*TB 9-6625-2338-24

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

CALIBRATION PROCEDURE FOR DIGITAL DELAY / PULSE GENERATOR DG535

Headquarters, Department of the Army, Washington, DC
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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, U.S. 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 send in your comments electronically to our E-mail address: 2028@redstone.army.mil or by fax 256-842-6546/DSN 788-6546. For the World Wide Web use: https://amcom2028.redstone.army.mil. Instructions for sending an electronic 2028 can be found at the back of this manual.

*This bulletin supersedes TB 9-6625-2338-35, dated 30 March 2005.

SECTION I
IDENTIFICATION AND DESCRIPTION

1. Test Instrument Identification. This bulletin provides instructions for the calibration of Digital Delay/Pulse Generator DG535. The manufacturer's manual was used as the prime data source in compiling these instructions. The equipment being calibrated will be referred to as the TI (test instrument) throughout this bulletin.

a. Model Variations. None

b. Time and Technique. The time required for this calibration is approximately 3 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. Adjustments to be reported are designated (R) at the end of the sentence in which they appear. When adjustments are in tables, the (R) follows 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.

Table 1. Calibration Description

Test instrument parameters	Performance specifications
Time base	Frequency: 10 MHz Accuracy: $< 1 \times 10^{-6}$
Delays	Channels: Four independent delay outputs; A, B, C, and D Range: 0 to 999.999,999,999,995 seconds Resolution: 5 ps Accuracy: 500 ps + time base error X delay RMS Jitter: Ext. Trig. to any output: 60 ps + delay X 10^{-8}, to any output (Jitter not verified in this procedure)
Internal rate generator	Rate: Single shot, .001 Hz to 1.000 MHz, or line Resolution: 0.001 Hz below 10 Hz, otherwise 4 digits Jitter: 1:10,000 (Jitter not verified in this procedure) Settling: < 2 s at any rate change Burst Mode: 2 to 32766 pulses per burst integer multiples (4 to 32767) of the trigger period
Outputs	Selections: 9 ea. (T0, A, B, C, D, AB, –AB, CD and –CD Load: 50 Ω or high impedance Risetime: ECL; <2 ns TTL; <3 ns Levels: ECL;–1.8 to –.8 V dc, normal or inverted TTL; 0 to 4 V dc normal or inverted NIM; –.8 to 0 V dc, normal or inverted VAR; Adjustable offset and amplitude between –3 and +4 V dc with 4 V maximum step size Offset: 0.0 ± 10 mV dc Accuracy: 50 mV + 3% of pulse amplitude

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 and 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, actual 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)
FREQUENCY COUNTER	Range: 0 to 10 MHz Accuracy: ± 0.25 Hz Range: 0 to 10 s Accuracy: 125 ps	Fluke, Model PM6681/656 (PM6681/656)
OSCILLOSCOPE	Range: 0 to 300 MHz Accuracy: <.5 ns rise time Range: -3 to +4 V dc Accuracy: 12.5 mV + 0.75% of pulse amplitude	Agilent, OS-303/G (OS-303/G)

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 result 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 control 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 OUPUT(S) to minimum after each step within the performance check where applicable.

CAUTION

Before connecting TI to power source, make sure TI is set to the power source line voltage as shown on rear of TI.

a. Connect TI to 115 V ac power source.

b. Press power key to on and allow at least 30 minutes for TI to reach operating temperature.

8. Time Base Accuracy

a. Performance Check

(1) Set TI **10.000 MHz** source switch (rear panel) to **INT**.

(2) Connect TI **OUT 50Ω** (rear panel) to frequency counter channel **A**.

(3) Set up frequency counter to measure frequency to 1 Hz resolution.

(4) If frequency counter does not indicate within limits specified in table 3, perform **b** below.

Table 3. Time Base Accuracy

Test instrument output (MHz)	Frequency counter indication (MHz)	
	Min	Max
10.000	9.999999	10.000001

b. Adjustments

(1) Press and hold down the TI **BSP** key, then press and release the TI **STORE** key.

(2) Release the TI **BSP** key.

(3) Use the TI left/right (**4**, **6**) and the TI up/down (**8**, **2**) cursor control keys to adjust the displayed value until the frequency counter indicates 10.000000 MHz ±1 Hz.

9. Output Amplitude

a. Performance Check

(1) Connect TI **T0** output to oscilloscope **Vertical 1** input.

(2) Press TI keys as listed in (a) through (f) below:

(a) Press **RECALL**, **0**, **EXC**.
(b) **4** (cursor left), **4**.

(c) **TRIG**, **NUM/REM**, **100000**, **EXC**.
(d) **DELAY**, **DELAY**, **NUM/REM**, **5**, **EXP**, **–**, **6** (cursor right), **EXC**.
(e) **DELAY**, **DELAY**, **NUM/REM**, **5**, **EXP**, **–**, **6**, **EXC**.
(f) **OUTPUT**, **OUTPUT**, **OUTPUT**, **6**, **EXC**.

(3) Configure oscilloscope for a peak to peak measurement and measure TI **T0 NIM** output. If oscilloscope does not indicate within limits shown in T0/NIM row of table 4, perform **b** below.

Table 4. Output Amplitude

Test instrument		Oscilloscope indications	
Output	Mode	Min	Max
T0	NIM	726 mV	874 mV
T0	TTL	3.83 V	4.17 V
T0	VAR	2.86 V	3.14 V
T0	ECL	-1.904 V	-1.696 V
A	NIM	726 mV	874 mV
A	TTL	3.83 V	4.17 V
A	VAR	2.86 V	3.14 V
A	ECL	-1.904 V	-1.696 V
B	NIM	726 mV	874 mV
B	TTL	3.83 V	4.17 V
B	VAR	2.86 V	3.14 V
B	ECL	-1.904 V	-1.696 V
+AB	NIM	726 mV	874 mV
+AB	TTL	3.83 V	4.17 V
+AB	VAR	2.86 V	3.14 V
+AB	ECL	–1.904 V	–1.696 V
C	NIM	726 mV	874 mV
C	TTL	3.83 V	4.17 V
C	VAR	2.86 V	3.14 V
C	ECL	–1.904 V	–1.696 V
D	NIM	726 mV	874 mV
D	TTL	3.83 V	4.17 V
D	VAR	2.86 V	3.14 V
D	ECL	–1.904 V	–1.696 V
+CD	NIM	726 mV	874 mV
+CD	TTL	3.83 V	4.17 V
+CD	VAR	2.86 V	3.14 V
+CD	ECL	–1.904 V	–1.696 V

(4) Select TI **T0** output **TTL** mode by pressing **4** and measure output. If oscilloscope does not indicate within limits shown in T0/TTL row of table 4, perform **b** below.

(5) Press TI key **6**, **6**, **6**.

(6) Press TI **OUTPUT** key and set output amplitude to **3.00 V**.

(7) Press TI **OUTPUT** key and set output offset to **0.00 V**.

(8) Measure output. If oscilloscope does not indicate within limits shown in T0/VAR row of table 4, perform **b** below.

(9) Select TI **T0** output **ECL** mode by pushing **4**.

(10) Configure oscilloscope for a base measurement and measure **T0 ECL** output. If oscilloscope does not indicate within limits shown in T0/ECL row of table 4, perform **b** below.

(11) Disconnect oscilloscope **Vertical 1** input from TI **T0** output.

(12) Connect TI **A** output to oscilloscope **Vertical 1** input.

(13) Repeat technique of (3) through (11) for TI output **A**. If oscilloscope does not indicate within limits specified, perform **b** below.

(14) Repeat technique of (11) through (12) above for TI remaining output modes listed in table 4. If oscilloscope does not indicate within limits specified, perform **b** below.

b. Adjustments

(1) Set all TI outputs to **NIM** mode.

(2) Connect oscilloscope **Vertical 1** input to TI **T0** output.

(3) Press and hold down the TI **BSP** key then press and release the TI **GPIB** key until TI display indicates **Amplitude T0 ###**.

(4) Release the TI **BSP** key.

(5) Use the TI left/right (**4**, **6**) and the up/down (**8**, **2**) cursor control keys to adjust the displayed value until the oscilloscope waveform amplitude is 0.800 Vpp (R).

(6) Disconnect oscilloscope **Vertical 1** input from TI **T0** output.

(7) Connect oscilloscope **Vertical 1** input to TI **A** output.

(8) Press and hold down the TI **BSP** key then press and release the TI **GPIB** key until TI display indicates **Amplitude A ###**.

(9) Release the TI **BSP** key.

(10) Use the TI left/right (**4**, **6**) and the up/down (**8**, **2**) cursor control keys to adjust the displayed value until the oscilloscope waveform amplitude is 0.800 Vpp (R).

(11) Disconnect oscilloscope **Vertical 1** input from TI **A** output.

(12) Connect oscilloscope **Vertical 1** input to TI **B** output.

(13) Press and hold down the TI **BSP** key then press and release the TI **GPIB** key until TI display indicates **Amplitude B ###**.

(14) Release the TI **BSP** key.

(15) Use the TI left/right (**4**, **6**) and the up/down (**8**, **2**) cursor control keys to adjust the displayed value until the oscilloscope waveform amplitude is 0.800 Vpp (R).

(16) Disconnect oscilloscope **Vertical 1** input from TI **B** output.

(17) Connect oscilloscope **Vertical 1** input to TI **+AB** output.

(18) Press and hold down the TI **BSP** key then press and release the TI **GPIB** key until TI display indicates **Amplitude AB ###**.

(19) Release the **BSP** key.

(20) Use the TI left/right (**4**, **6**) and the up/down (**8**, **2**) cursor control keys to adjust the displayed value until the oscilloscope waveform amplitude is 0.800 Vpp (R).

(21) Disconnect oscilloscope **Vertical 1** input from TI **+AB** output.

(22) Connect oscilloscope **Vertical 1** input to TI **C** output.

(23) Press and hold down the TI **BSP** key then press and release the TI **GPIB** key until TI display indicates **Amplitude C ###**.

(24) Release the TI **BSP** key.

(25) Use the TI left/right (**4**, **6**) and the up/down (**8**, **2**) cursor control keys to adjust the displayed value until the oscilloscope waveform amplitude is 0.800 Vpp (R).

(26) Disconnect oscilloscope **Vertical 1** input from TI **C** output.

(27) Connect oscilloscope **Vertical 1** input to TI **D** output.

(28) Press and hold down the TI **BSP** key then press and release the TI **GPIB** key until TI display indicates **Amplitude D ###**.

(29) Release the TI **BSP** key.

(30) Use the TI left/right (**4**, **6**) and the up/down (**8**, **2**) cursor control keys to adjust the displayed value until the oscilloscope waveform amplitude is 0.800 Vpp (R).

(31) Disconnect oscilloscope **Vertical 1** input from TI **D** output.

(32) Connect oscilloscope **Vertical 1** input to TI **+CD** output.

(33) Press and hold down the TI **BSP** key then press and release the TI **GPIB** key until TI display indicates **Amplitude +CD ###**.

(34) Release the TI **BSP** key.

(35) Use the TI left/right (**4**, **6**) and the up/down (**8**, **2**) cursor control keys to adjust the displayed value until the oscilloscope waveform amplitude is 0.800 Vpp (R).

10. Output Offset

a. Performance Check

(1) Connect TI **T0** output to oscilloscope **Vertical 1** input.

(2) Press TI keys as listed in (a) through (f) below:

(a) Press **RECALL**, **0**, **EXC**.
(b) **4** (cursor left), **4**.
(c) **TRIG**, **NUM/REM**, **100000**, **EXC**.
(d) **DELAY**, **DELAY**, **NUM/REM**, **5**, **EXP**, **–**, **6** (cursor right), **EXC**.
(e) **DELAY**, **DELAY**, **NUM/REM**, **5**, **EXP**, **–**, **6**, **EXC**.
(f) **OUTPUT**, **OUTPUT**, **OUTPUT**, **6**, **EXC**.

(3) Set oscilloscope for a display of 4 vertical divisions, 4 pulses and to measure **V top**. Measure TI **T0** output. If oscilloscope does not indicate within limits shown in first row of table 5, perform b below.

(4) Move oscilloscope **Vertical 1** input connection from TI **T0** output to TI **A** output.

(5) Repeat technique of (3) and (4) above for TI outputs listed in table 5. If oscilloscope does not indicate within limits specified, perform b below.

Table 5. Output Offset

Test instrument output	Oscilloscope indications (pk/pk)	
	Min	Max
T0	–10 mV	10 mV
A	–10 mV	10 mV
B	–10 mV	10 mV
+AB	–10 mV	10 mV
–AB	–10 mV	10 mV
C	–10 mV	10 mV
D	–10 mV	10 mV
+CD	–10 mV	10 mV
–CD	–10 mV	10 mV

b. Adjustments

(1) Set all TI outputs to **NIM** mode.

(2) Set TI trigger rate to 100 kHz.

(3) Set TI **B** delay time to 5 μs.

(4) Set TI **D** delay time to 5 μs.

(5) Set all TI outputs to **HighZ**.

(6) Connect oscilloscope **Vertical 1** input to TI **T0** output.

(7) Set oscilloscope for **V top** measurement.

(8) Press and hold down the TI **BSP** key then press and release the TI **OUTPUT** key until TI display indicates **Offset T0 ###**.

(9) Release the TI **BSP** key.

(10) Use the TI left/right (**4**, **6**) and the up/down (**8**, **2**) cursor control keys to adjust the displayed value until the **V top** measured value displayed on the oscilloscope is equal to 0.0 mV ±10 mV (R).

(11) Disconnect oscilloscope **Vertical 1** input from **T0** output.

(12) Connect oscilloscope **Vertical 1** input to **A** output.

(13) Press and hold down the TI **BSP** key then press and release the TI **OUTPUT** key until TI display indicates **Offset A ###**.

(14) Release the TI **BSP** key.

(15) Use the TI left/right (**4**, **6**) and the up/down (**8**, **2**) cursor control keys to adjust the displayed value until the **V top** measured value displayed on the oscilloscope is equal to 0.0 mV ± 10 mV (R).

(16) Disconnect oscilloscope **Vertical 1** input from **A** output.

(17) Connect oscilloscope **Vertical 1** input to **B** output.

(18) Press and hold down the TI **BSP** key then press and release the TI **OUTPUT** key until TI display indicates **Offset B ###**.

(19) Release the TI **BSP** key.

(20) Use the TI left/right (**4**, **6**) and the up/down (**8**, **2**) cursor control keys to adjust the displayed value until the **V top** measured value displayed on the oscilloscope is equal to 0.0 mV ± 10 mV (R).

(21) Disconnect oscilloscope **Vertical 1** input from **B** output.

(22) Connect oscilloscope **Vertical 1** input to **+AB** output.

(23) Press and hold down the TI **BSP** key then press and release the TI **OUTPUT** key until TI display indicates **Offset AB ###**.

(24) Release the TI **BSP** key.

(25) Use the TI left/right (**4**, **6**) and the up/down (**8**, **2**) cursor control keys to adjust the displayed value until the **V top** measured value displayed on the oscilloscope is equal to 0.0 mV ± 10 mV (R).

(26) Disconnect oscilloscope **Vertical 1** input from **+AB** output.

(27) Connect oscilloscope **Vertical 1** input to **–AB** output.

(28) Press and hold down the TI **BSP** key then press and release the TI **OUTPUT** key until TI display indicates **Offset –AB ###**.

(29) Release the TI **BSP** key.

(30) Use the TI left/right (**4**, **6**) and the up/down (**8**, **2**) cursor control keys to adjust the displayed value until the **V top** measured value displayed on the oscilloscope is equal to 0.0 mV ± 10 mV (R).

(31) Disconnect oscilloscope **Vertical 1** input from **–AB** output.

(32) Connect oscilloscope **Vertical 1** input to **C** output.

(33) Press and hold down the TI **BSP** key then press and release the TI **OUTPUT** key until TI display indicates **Offset C ###**.

(34) Release the TI **BSP** key.

(35) Use the TI left/right (**4**, **6**) and the up/down (**8**, **2**) cursor control keys to adjust the displayed value until the **V top** measured value displayed on the oscilloscope is equal to 0.0 mV ± 10 mV (R).

(36) Disconnect oscilloscope **Vertical 1** input from **C** output.

(37) Connect oscilloscope **Vertical 1** input to **D** output.

(38) Press and hold down the TI **BSP** key then press and release the TI **OUTPUT** key until TI display indicates **Offset D ###**.

(39) Release the TI **BSP** key.

(40) Use the TI left/right (**4**, **6**) and the up/down (**8**, **2**) cursor control keys to adjust the displayed value until the **V top** measured value displayed on the oscilloscope is equal to 0.0 mV ± 10 mV (R).

(41) Disconnect oscilloscope **Vertical 1** input from **D** output.

(42) Connect oscilloscope **Vertical 1** input to **+CD** output.

(43) Press and hold down the TI **BSP** key then press and release the TI **OUTPUT** key until TI display indicates **Offset CD ###**.

(44) Release the TI **BSP** key.

(45) Use the TI left/right (**4**, **6**) and the up/down (**8**, **2**) cursor control keys to adjust the displayed value until the **V top** measured value displayed on the oscilloscope is equal to 0.0 mV ± 10 mV (R).

(46) Disconnect oscilloscope **Vertical 1** input from **+CD** output.

(47) Connect oscilloscope **Vertical 1** input to **–CD** output.

(48) Press and hold down the TI **BSP** key then press and release the TI **OUTPUT** key until TI display indicates **Offset –CD ###**.

(49) Release the TI **BSP** key.

(50) Use the TI left/right (**4**, **6**) and the up/down (**8**, **2**) cursor control keys to adjust the displayed value until the **V top** measured value displayed on the oscilloscope is equal to 0.0 mV ± 10 mV (R).

11. Risetime

a. Performance Check

(1) Connect TI **T0** output to oscilloscope **Vertical 1** input.

(2) Press TI keys as listed in (a) through (d) below:

(a) Press **RECALL**, **0**, **EXC**.
(b) **4** (cursor left), **4**.
(c) **TRIG**, **NUM/REM**, **1000000**, **EXC**.
(d) **OUTPUT**, **OUTPUT**, **OUTPUT**, **6**, **6**.

(3) Set oscilloscope to perform risetime measurement and measure TI **T0 ECL** risetime. Measured risetime will be within limits specified in first row of table 6.

(4) Set TI **T0** output mode to **TTL** by pushing; **4**, **4**.

(5) Measure TI **T0 TTL** risetime. Measured risetime will be within limits specified in second row of table 6.

(6) Disconnect oscilloscope **Vertical 1** input from **T0** output and connect to **A** output.

(7) Repeat technique of (3) through (6) above for outputs and modes listed in table 6. Measured risetime will be within specified limits.

b. Adjustments: No adjustments can be made.

Table 6. Risetime

Test instrument		Oscilloscope indications
Output[1]	Mode	Max
T0	ECL	<2 ns
T0	TTL	<3 ns
A	ECL	<2 ns
A	TTL	<3 ns
B	ECL	<2 ns
B	TTL	<3 ns
+AB[1]	ECL	<2 ns
+AB[1]	TTL	<3 ns
C	ECL	<2 ns
C	TTL	<3 ns
D	ECL	<2 ns
D	TTL	<3 ns
+CD[1]	ECL	<2 ns
+CD[1]	TTL	<3 ns

[1]Set trigger rate to 10 kHz for +AB and +CD outputs only.

12. Delay Time Accuracy

a. Performance Check

(1) Using two cables of equal length connect TI **T0** output to frequency counter channel **INPUT A** and TI **A** output to frequency counter channel **INPUT B**.

(2) Press TI keys as listed in (a) through (c) below:

(a) **RECALL**, **0**, **EXC**.
(b) **4** (cursor left), **4**.
(c) **DELAY**, **NUM/REM**, **1**, **EXC**.

(3) Configure frequency counter for an interval A to B measurement with gate time set to 100 seconds.

(4) Frequency counter will indicate within limits specified in first row of table 7.

(5) Press TI keys; **100**, **EXP**, **–**, **3**, **EXC**.

(6) Set frequency counter gate time to 10 seconds.

(7) Frequency counter will indicate within the limits specified in second row of table 7.

(8) Repeat technique of (5) and (6) above for remaining settings listed in table 7. Frequency counter will indicate within the limits specified.

(9) Press TI keys as listed in (a) through (d) below:

(a) Press; **100**, **EXP**, –, **6**, **EXC**.
(b) **DELAY**, **NUM/REM**, **150**, **EXP**, **–**, **6**, **EXC**.
(c) **DELAY**, **NUM/REM**, **200**, **EXP**, **–**, **6**, **EXC**.
(d) **DELAY**, **NUM/REM**, **250**, **EXP**, **–**, **6**, **EXC**.

Table 7. T0 to A Delay Time Accuracy

Test instrument settings		Frequency counter settings	Frequency counter indications	
Outputs	Delay time	Gate time	Min	Min
T0 / A	1 s	100 s	.9999989965 s	1.0000010035 s
T0 / A	100 ms	10 s	99.9998965 ms	100.0001035 ms
T0 / A	10 ms	1 s	9.9999865 ms	10.0000135 ms
T0 / A	1 ms	1 s	.9999955 ms	1.0000045 ms
T0 / A	100 µs	10 ms	99.9964 µs	100.0036 µs
T0 / A	10 µs	10 ms	9.99649 µs	10.00351 µs
T0 / A	1 µs	10 ms	.996499 µs	1.003501 µs
T0 / A	100 ns	10 ms	96.4999 ns	103.5001 ns

(10) Set frequency counter gate time to 1 second.

(11) Disconnect TI **A** output from frequency counter channel **B**.

(12) Connect TI **B** output to frequency counter channel **B**.

(13) Frequency counter will indicate within the limits indicated in the first row of table 8.

(14) Repeat technique of (11) and (12) above for outputs listed in table 8. Frequency counter will indicate within the limits specified.

Table 8. Delay Time Accuracy

Test instrument	Frequency counter indications (µs)	
Outputs	Min	Max
T0 / B	149.99635	150.00365
T0 / C	199.9963	200.0037
T0 / D	249.99625	250.00375

(15) Disconnect TI **T0** output from frequency counter channel **A**.

(16) Disconnect TI **D** output from frequency counter channel **B**.

(17) Connect TI **+AB** output to frequency counter channel **A**.

(18) Connect TI **–AB** output to frequency counter channel **B**.

(19) Frequency counter will indicate within the limits specified in first row of table 9.

(20) Repeat technique of (15) through (19) above for remaining output listed in table 9. Frequency counter will indicate within the limits specified.

Table 9. Delay Time Accuracy

Test instrument	Frequency counter indications (μs)	
Outputs	Min	Max
+AB / –AB	49.9975	50.0025
+CD / –CD	49.9975	50.0025

b. Adjustments. No adjustments can be made.

13. 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

0722109

Distribution:

To be distributed in accordance with the initial distribution number (IDN) 344759, requirements for calibration procedure TB 9-6625-2338-24.

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.