TB 9-6625-2153-35

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

CALIBRATION PROCEDURE FOR RESISTANCE DECADES AND RESISTANCE STANDARDS (GENERAL)

Headquarters, Department of the Army, Washington, DC
21 September 2005

REPORTING OF ERRORS AND RECOMMENDING IMPROVEMENTS

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*This bulletin supersedes TB 9-6625-2153-35, dated 4 November 1996.

SECTION I
IDENTIFICATION AND DESCRIPTION

1. Test Instrument Identification. This bulletin provides instructions for the calibration of Resistance Decades and Resistance Standards (General). 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. Variations among models are indicated in the text.

b. Time and Technique. The time required for this calibration is approximately 1 to 4 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. No adjustments can be made.

3. Calibration Description. Table 1 lists the manufacturer's model number or the military designator for the TIs to be calibrated with this procedure. Table 1 also contains a reference to specific tables for performance specifications for TI to be calibrated.

Table 1. Test Instrument

Manufacturers	Models or military designators	Tables for specifications and calibration performance limits
- - -	9063641	3
- - -	ZM-16/U, ZM-16A/U and ZM-16B/U	4
- - -	ZM-57/U	5
- - -	ZM-58/U	6
Biddle-Gray	601147-1 71-631	8
Cornell-Dubilier	RDA	9
Electro-Scientific Industries	DB-62	10
	DB-877	10
General Radio	602-M	5
	670-F	5
	1432 Series	6
	1433 Series	11
	1434 Series	15
General Resistance	RDS-615B	12
Biddle-Gray	E1143C and E1144D	7
ICC	CR10M, CR100M, and CR1000M	13
Leeds and Northrup	4755 and 4776	16
Winslow	334W and 334X	14

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-287 and Secondary Reference Calibration Standard Set NSN 4931-00-621-7878. Alternate items may be used by the calibrating activity. The item 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 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)
MULTIMETER	Range: 0 Ω to 1 MΩ Accuracy: ±0.0025%[1] Range: 10 MΩ Accuracy: ± 0.0125% Range: 100 MΩ Accuracy: ±0.0625%	Hewlett-Packard, Model 3458A (3458A)

[1]For reference level support of RDS-615B, accuracy is 12.5 ppm.

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 and item identification number as listed in table 2.

c. This is a general procedure which provides instructions for the calibration of a variety of resistance decades and/or standards.

d. 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. Additional maintenance information is contained in the manufacturer's manual for this TI.

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

7. Equipment Setup

a. On all models with decade dial switches, rotate each decade switch throughout its range at least three times.

b. Position all TI dials to **0**.

c. Disconnect shorting bar (if supplied) on TI.

8. Resistance Accuracy

a. Performance Check

(1) Connect TI to multimeter using 4 wire technique.

(2) Connect TI shield (ground) terminal to multimeter guard.

(3) Measure and record indication as zero resistance.

(4) The value recorded in (3) above will be equal to or less than the zero resistance as indicated in table for the individual TI.

(5) Turn TI lowest decade to 1.

(6) Measure and record the value.

(7) Subtract value recorded in (3) from (5) above. The difference will be within the tolerances as listed in the table for the individual TI.

(8) Repeat technique of (5) through (7) above, using TI switch settings listed in table for individual TI.

NOTE

For TI switch positions of 1000 Ω or greater, value recorded in (3) above may be omitted.

b. Adjustments. No adjustments can be made.

Table 3. Resistance Decade, APN 9063641

Test instrument		Performance specifications	
9063641		Range: 1 Ω per step Accuracy: ±.25% Range: 10 Ω and above per step Accuracy: ±.1%	
Ohms			
Decade switch	Decade switch positions	Resistance indications	
		Min	Max
1	1	0.9975000	1.0025000
1	2	1.9950000	2.0050000
1	3	2.9925000	3.0075000
1	4	3.9900000	4.0100000
1	5	4.9875000	5.0125000
1	6	5.9850000	6.0150000
1	7	6.9825000	7.0175000
1	8	7.9800000	8.0200000
1	9	8.9775000	9.0225000
1	10	9.9750000	10.0250000
1	0	- - -	- - -
10	1	9.9900000	10.0100000
10	2	19.980000	20.020000
10	3	29.970000	30.030000
10	4	39.960000	40.040000
10	5	49.95000	50.05000
10	6	59.94000	60.06000
10	7	69.93000	70.07000
10	8	79.92000	80.08000
10	9	89.91000	90.09000
10	10	99.900000	100.10000
10	0	- - -	- - -
100	1	99.90000	100.10000
100	2	199.80000	200.20000
100	3	299.70000	300.30000
100	4	399.60000	400.40000
100	5	499.50000	500.50000
100	6	599.40000	600.60000
100	7	699.30000	700.70000
100	8	799.20000	800.80000
100	9	899.10000	900.90000
100	10	999.00000	1001.00000
100	0	- - -	- - -
Kilohms			
1K	1	0.9990000	1.0010000
1K	2	1.9980000	2.0020000
1K	3	2.9970000	3.0030000
1K	4	3.9960000	4.0040000

Table 3. Resistance Decade, APN 9063641 - Continued

Test instrument		Performance specifications	
9063641		Range: 1 Ω per step Accuracy: ±.25% Range: 10 Ω and above per step Accuracy: ±.1%	
Ohms			
Decade switch	Decade switch positions	Resistance indications	
		Min	Max
Kilohms - Continued			
1 K	5	4.9950000	5.0050000
1 K	6	5.9940000	6.0060000
1 K	7	6.9930000	7.0070000
1 K	8	7.9920000	8.0080000
1 K	9	8.9910000	9.0090000
1 K	10	9.9900000	10.010000
1 K	0	- - -	- - -
10 K	1	9.9900000	10.010000
10 K	2	19.980000	20.020000
10 K	3	29.970000	30.030000
10 K	4	39.960000	40.040000
10 K	5	49.950000	50.050000
10 K	6	59.940000	60.060000
10 K	7	69.930000	70.070000
10 K	8	79.920000	80.080000
10 K	9	89.910000	90.090000
10 K	10	99.900000	100.10000
10 K	0	- - -	- - -
100 K	1	99.900000	100.10000
100 K	2	199.80000	200.20000
100 K	3	299.70000	300.30000
100 K	4	399.60000	400.40000
100 K	5	499.50000	500.50000
100 K	6	599.40000	600.60000
100 K	7	699.30000	700.70000
100 K	8	799.20000	800.80000
100 K	9	899.10000	900.90000
100 K	10	999.0000	1001.0000
100 K	0	- - -	- - -
Megohms			
1 MEG	1	0.9990000	1.0010000
1 MEG	2	1.9980000	2.0020000
1 MEG	3	2.9970000	3.0030000
1 MEG	4	3.9960000	4.0040000
1 MEG	5	4.9950000	5.0050000
1 MEG	6	5.9940000	6.0060000

Table 3. Resistance Decade, APN 9063641 - Continued

Test instrument		Performance specifications	
Megohms - Continued			
	Decade switch	Resistance indications	
Decade switch	positions	Min	Max
1 MEG	7	6.9930000	7.0070000
1 MEG	8	7.9920000	8.0080000
1 MEG	9	8.9910000	9.0090000
1 MEG	10	9.9900000	10.010000

Table 4. ZM-16/U, ZM-16A/U, and ZM-16B/U

Test instrument		Performance specifications	
All models		Range: 0.1 Ω to 1 Ω Accuracy: ±2% Range: 1 Ω to 100 MΩ Accuracy: ±1% Zero resistance: Less than .05 Ω	
Ohms			
	Decade switch	Resistance indications	
Decade switch	positions	Min	Max
X 0.1	1	00.09800	00.10200
X 0.1	2	00.19600	00.20400
X 0.1	3	00.29400	00.30600
X 0.1	4	00.39200	00.40800
X 0.1	5	00.49000	00.51000
X 0.1	6	00.58800	00.61200
X 0.1	7	00.68600	00.71400
X 0.1	8	00.78400	00.81600
X 0.1	9	00.88200	00.91800
X 0.1	10	00.98000	01.02000
X 0.1	0	- - -	- - -
X 1	1	00.99000	01.01000
X 1	2	01.98000	02.02000
X 1	3	02.97000	03.03000
X 1	4	03.96000	04.04000
X 1	5	04.95000	05.05000
X 1	6	05.94000	06.06000
X 1	7	06.93000	07.07000
X 1	8	07.92000	08.08000
X 1	9	08.91000	09.09000
X 1	10	09.90000	10.10000
X 1	0	- - -	- - -
X 10	1	09.90000	10.10000
X 10	2	19.80000	20.20000
X 10	3	29.70000	30.30000
X 10	4	39.60000	40.40000
X 10	5	49.50000	50.50000
X 10	6	59.40000	60.60000

Table 4. ZM-16/U, ZM-16A/U, and ZM-16B/U - Continued

Test instrument		Performance specifications	
	Decade switch	Resistance indications	
Decade switch	positions	Min	Max
Ohms - Continued			
X 10	7	69.30000	70.70000
X 10	8	79.20000	80.80000
X 10	9	89.10000	90.90000
X 10	10	99.00000	101.00000
X 10	0	- - -	- - -
X 100	1	99.00000	101.00000
X 100	2	198.00000	202.00000
X 100	3	297.00000	303.00000
X 100	4	396.00000	404.00000
X 100	5	495.00000	505.00000
X 100	6	594.00000	606.00000
X 100	7	693.00000	707.00000
X 100	8	792.00000	808.00000
X 100	9	891.00000	909.00000
X 100	10	990.00000	1.0100000 kΩ
X 100	0	- - -	- - -
Kilohms			
X 1000	1	0.9900000	1.0100000
X 1000	2	1.9800000	2.0200000
X 1000	3	2.9700000	3.0300000
X 1000	4	3.9600000	4.0400000
X 1000	5	4.9500000	5.0500000
X 1000	6	5.9400000	6.0600000
X 1000	7	6.9300000	7.0700000
X 1000	8	7.9200000	8.0800000
X 1000	9	8.9100000	9.0900000
X 1000	10	9.9000000	10.100000
X 1000	0	- - -	- - -
X 10000	1	9.9000000	10.100000
X 10000	2	19.800000	20.200000
X 10000	3	29.700000	30.300000
X 10000	4	39.600000	40.400000
X 10000	5	49.500000	50.500000
X 10000	6	59.400000	60.600000
X 10000	7	69.300000	70.700000
X 10000	8	79.200000	80.800000
X 10000	9	89.100000	90.900000
X 10000	10	99.000000	101.00000
X 10000	0	- - -	- - -
X 100000	1	99.000000	101.00000
X 100000	2	198.00000	202.00000
X 100000	3	297.00000	303.00000
X 100000	4	398.00000	404.00000
X 100000	5	495.00000	505.00000
X 100000	6	594.00000	606.00000

Table 4. ZM-16/U, ZM16A/U, and ZM-16B/U - Continued

Test instrument		Resistance indications	
Decade switch	Decade switch positions	Min	Max
Kilohms - Continued			
X 100000	7	693.00000	707.00000
X 100000	8	792.00000	808.00000
X 100000	9	891.00000	909.00000
X 100000	0	990.00000	1.0100000 MΩ
X 100000	0	- - -	- - -
Megohms			
X 1 Meg	1	00.990000	01.010000
X 1 Meg	2	01.980000	02.020000
X 1 Meg	3	02.970000	03.030000
X 1 Meg	4	03.960000	04.040000
X 1 Meg	5	04.950000	05.050000
X 1 Meg	6	05.940000	06.060000
X 1 Meg	7	06.930000	07.070000
X 1 Meg	8	07.920000	08.080000
X 1 Meg	9	08.910000	09.090000
X 1 Meg	10	09.900000	010.10000
X 1 Meg	0	- - -	- - -
X 10 Meg	1	09.900000	010.10000
X 10 Meg	2	019.80000	020.20000
X 10 Meg	3	029.70000	030.30000
X 10 Meg	4	039.60000	040.40000
X 10 Meg	5	049.50000	050.50000
X 10 Meg	6	059.40000	060.60000
X 10 Meg	7	069.30000	070.70000
X 10 Meg	8	079.20000	080.80000
X 10 Meg	9	089.10000	090.90000
X 10 Meg	10	099.00000	101.00000
X 10 Meg	0	- - -	- - -

Table 5. ZM-57/U and General Radio, Models 602-M and 670-F

Test instrument	Performance specifications			
All models		Accuracy		
	Range	670-F	602-M	ZM-57/U
	0.1Ω per step	±1%	- - -	±2%
	1Ω per step	±0.25%	±0.25%	±0.25%
	10Ω per step	±0.1%	±0.1%	±.07%
	100Ω per step	- - -	±0.1%	±.05%
	1000Ω per step	- - -	±0.1%	±0.5%
	10,000Ω per step	- - -	±0.1%	- - -
	Zero resistance	.055Ω	.003Ω/dial	.002Ω/dial

Table 5. ZM-57/U and General Radio, Models 602-M and 670-F - Continued

Ohms					
Test instrument		Resistance indications			
		670-F and 602-M		ZM-57/U	
Decade switch	Decade switch positions	Min	Max	Min	Max
0.1Ω/step	1	00.09900	00.10100	00.09800	00.10200
	2	00.19800	00.20200	00.19600	00.20400
	3	00.29700	00.30300	00.29400	00.30600
	4	00.39600	00.40400	00.39200	00.40800
	5	00.49500	00.50500	00.49000	00.51000
	6	00.59400	00.60600	00.58800	00.61200
	7	00.69300	00.70700	00.68600	00.71400
	8	00.79200	00.80800	00.78400	00.81800
	9	00.89100	00.90900	00.88200	00.91800
	10	00.99000	01.01000	00.98000	01.02000
	0	- - -	- - -	- - -	- - -
1Ω/step	1	00.99750	01.00250	00.99750	01.00250
	2	01.99500	02.00500	01.99500	02.00500
	3	02.99250	03.00750	02.99250	03.00750
	4	03.99000	04.01000	03.99000	04.01000
	5	04.98750	05.01250	04.98750	05.01250
	6	05.98500	06.01500	05.98500	06.01500
	7	06.98250	07.01750	06.98250	07.01750
	8	07.98000	08.02000	07.98000	08.02000
	9	08.97750	09.02250	08.97750	09.02250
	10	09.97500	10.02500	09.97500	10.02500
	0	- - -	- - -	- - -	- - -
10Ω/step	1	09.99000	10.01000	09.99300	10.00700
	2	19.98000	20.02000	19.98600	20.01400
	3	29.97000	30.03000	29.97900	30.02100
	4	39.96000	40.04000	39.97200	40.02800
	5	49.95000	50.05000	49.96500	50.03500
	6	59.94000	60.06000	59.95800	60.04200
	7	69.93000	70.07000	69.95100	70.04900
	8	79.92000	80.08000	79.94400	80.05600
	9	89.91000	90.09000	89.93700	90.06300
	10	99.90000	100.10000	99.93000	100.07000
	0	- - -	- - -	- - -	- - -
100Ω/step	1	99.90000	100.10000	99.95000	100.05000
	2	199.80000	200.20000	199.90000	200.10000
	3	299.70000	300.30000	299.85000	300.15000
	4	399.60000	400.40000	399.80000	400.20000
	5	499.50000	500.50000	499.75000	500.25000
	6	599.40000	600.60000	599.70000	600.30000
	7	699.30000	700.70000	699.65000	700.35000
	8	799.20000	800.80000	799.60000	800.40000
	9	899.10000	900.90000	899.55000	900.45000
	10	999.00000	1001.00000	999.50000	1000.50000
	0	- - -	- - -	- - -	- - -

Table 5. ZM-57/U and General Radio, Models 602-M and 670-F - Continued

Test instrument		Performance specifications			
Kilohms					
1 kΩ/step	1	0.9990000	1.0010000	0.9995000	1.0005000
	2	1.9980000	2.0020000	1.9990000	2.0010000
	3	2.9970000	3.0030000	2.9985000	3.0015000
	4	3.9960000	4.0040000	3.9980000	4.0020000
	5	4.9950000	5.0050000	4.9975000	5.0025000
	6	5.9940000	6.0060000	5.9970000	6.0030000
	7	6.9930000	7.0070000	6.9965000	7.0035000
	8	7.9920000	8.0080000	7.9960000	8.0040000
	9	8.9910000	9.0090000	8.9955000	9.0045000
	10	9.9900000	10.010000	9.9950000	10.005000
	0	- - -	- - -	- - -	- - -
10 kΩ/step	1	9.9900000	10.010000	- - -	- - -
	2	19.980000	20.020000	- - -	- - -
	3	29.970000	30.030000	- - -	- - -
	4	39.960000	40.040000	- - -	- - -
	5	49.950000	50.050000	- - -	- - -
	6	59.940000	60.060000	- - -	- - -
	7	69.930000	70.070000	- - -	- - -
	8	79.920000	80.080000	- - -	- - -
	9	89.910000	90.090000	- - -	- - -
	10	99.900000	100.10000	- - -	- - -
	0	- - -	- - -	- - -	- - -

Table 6. Resistance Decade, ZM-58/U and General Radio 1432 Series

Test instrument		Performance specifications	
ZM-58/U and General Radio 1432 Series		Range: 1 Ω to 999.999 Ω in 6 decades Accuracy: ±5% on 1 Ω decade and ±2% on all other decades	
Ohms			
Decade switch	Decade switch positions	Min	Max
X1Ω/step	1	00.95000	01.05000
	2	01.90000	02.10000
	3	02.85000	03.15000
	4	03.80000	04.20000
	5	04.75000	05.25000
	6	05.70000	06.30000
	7	06.65000	07.35000
	8	07.60000	08.40000
	9	08.55000	09.45000
	0		
X10Ω/step	1	09.80000	10.20000
	2	19.60000	20.40000
	3	29.40000	30.60000
	4	39.20000	40.80000
	5	49.00000	51.00000
	6	58.80000	61.20000

Table 6. Resistance Decade, ZM-58/U and General Radio 1432 Series - Continued

Test instrument		Performance specifications	
Ohms - Continued			
X10Ω/step (cont)	7	68.60000	71.40000
	8	78.40000	81.60000
	9	88.20000	91.80000
	0	- - -	- - -
X100Ω/step	1	98.00000	102.00000
	2	196.00000	204.00000
	3	294.00000	306.00000
	4	392.00000	408.00000
	5	490.00000	510.00000
	6	588.00000	612.00000
	7	686.00000	714.00000
	8	784.000000	816.00000
	9	882.00000	918.00000
	0	- - -	- - -
Kilohms			
X1MΩ/step[1]	1	0.9800000	1.0200000
	2	1.9600000	2.0400000
	3	2.9400000	3.0600000
	4	3.9200000	4.0800000
	5	4.9000000	5.1000000
	6	5.8800000	6.1200000
	7	6.8600000	7.1400000
	8	7.8400000	8.1600000
	9	8.8200000	9.1800000
	0	- - -	- - -
X10 MΩ/step[1]	1	9.8000000	10.200000
	2	19.600000	20.400000
	3	29.400000	30.600000
	4	39.200000	40.800000
	5	49.000000	51.000000
	6	58.800000	61.200000
	7	68.600000	71.400000
	8	78.400000	81.600000
	9	88.200000	91.800000
	0	- - -	- - -
X100MΩ/step[1]	1	98.000000	102.00000
	2	196.00000	204.00000
	3	294.00000	306.00000
	4	392.00000	408.00000
	5	490.00000	510.00000
	6	588.00000	612.00000
	7	686.00000	714.00000
	8	784.00000	816.00000
	9	882.00000	918.00000
	0	- - -	- - -

[1]M = Kilohms

Table 7. Biddle-Gray, Models E1143C and E1144D

Test instrument		Performance specifications	
All models		Range	Accuracy
			E1143C / E1144D
		1 Ω/step	±0.1% / - - -
		10 Ω and above/step	±.05% / ±.05%
		Zero resistance:	Less than .002 Ω per dial
Ohms			
Decade switch	Decade switch positions	Resistance indications Min	Max
1Ω/step	1	00.99900	01.00100
	2	01.99800	2.00200
	3	02.99700	03.00300
	4	03.99600	04.00400
	5	04.99500	05.00500
	6	05.99400	06.00600
	7	06.99300	07.00700
	8	07.99200	08.00800
	9	08.99100	09.00900
	10	09.99000	10.01000
	0	- - -	- - -
10Ω/step	1	09.99500	10.00500
	2	19.99000	20.01000
	3	29.98500	30.01500
	4	39.98000	40.02000
	5	49.97500	50.02500
	6	59.97000	60.03000
	7	69.96500	70.03500
	8	79.96000	80.04000
	9	89.95500	90.04500
	10	99.95000	100.05000
	0	- - -	- - -
100Ω/step	1	99.95000	100.05000
	2	199.90000	200.10000
	3	299.85000	300.15000
	4	399.80000	400.20000
	5	499.75000	500.25000
	6	599.70000	600.30000
	7	699.65000	700.35000
	8	799.60000	800.40000
	9	899.55000	900.45000
	10	999.50000	1000.50000
Kilohms			
1 kΩ/step	1	0.9995000	1.0005000
	2	1.9990000	2.0010000
	3	2.9985000	3.0015000
	4	3.9980000	4.0020000
	5	4.9975000	5.0025000

Table 7. Biddle-Gray, Models E1143C and E1144D - Continued

Test instrument		Performance specifications	
Kilohms - Continued			
		Resistance indications	
Decade switch	Decade switch positions	Min	Max
1 kΩ/step (cont)	6	5.9970000	6.0030000
	7	6.9965000	7.0035000
	8	7.9960000	8.0040000
	9	8.9955000	9.0045000
	10	9.9950000	10.0050000
	0	- - -	- - -
10 kΩ/step	1	9.9950000	10.005000
	2	19.9900000	20.010000
	3	29.985000	30.015000
	4	39.980000	40.020000
	5	49.975000	50.025000
	6	59.970000	60.030000
	7	69.965000	70.035000
	8	79.960000	80.040000
	9	89.955000	90.045000
	10	99.950000	100.05000
	0	- - -	- - -
100 kΩ/step	1	99.950000	100.05000
	2	199.90000	200.10000
	3	299.85000	300.15000
	4	399.80000	400.20000
	5	499.75000	500.25000
	6	599.70000	600.30000
	7	699.65000	700.35000
	8	799.60000	800.40000
	9	899.55000	900.45000
	10	999.50000	1000.50000
	0	- - -	- - -

Table 8. Biddle-Gray, Models, 601147-1 and 71-631

Test instrument		Performance specifications	
Models 601147-1 and 71-631		Range: 0.01Ω to 1,111,111Ω in 8 decades Accuracy: ±0.03% of indication ±0.0005Ω for each decade involved Zero resistance 0.01Ω or less	
Ohms			
	Decade switch	Resistance indications	
Decade switch	positions	Min	Max
X.01	1	00.009497	00.01503
	2	00.019494	00.020506
	3	00.029491	00.030509

Table 8. Biddle-Gray, Models 601147-1 and 71-631 - Continued

Test instrument		Performance specifications	
Ohms - Continued			
	Decade switch	Resistance indications	
Decade switch	positions	Min	Max
X.01 (cont)	4	00.039488	00.040512
	5	00.049485	00.050515
	6	00.059482	00.060518
	7	00.069479	00.070521
	8	00.079476	00.080524
	9	00.089473	00.090527
	X	00.099470	00.100530
	0	- - -	- - -
X.1	1	00.099470	00.100530
	2	00.19944	00.20056
	3	00.29941	00.30059
	4	00.39938	00.40062
	5	00.49935	00.50065
	6	00.59932	00.60068
	7	00.69929	00.70071
	8	00.79926	00.80074
	9	00.89923	00.90077
	X	00.99920	01.00080
	0	- - -	- - -
X1	1	00.99920	01.00080
	2	01.99890	02.00110
	3	02.99860	03.00140
	4	03.99830	04.00170
	5	04.99800	05.00200
	6	05.99770	06.00230
	7	06.99740	07.00260
	8	07.99710	08.00290
	9	08.99680	09.00320
	X	09.99650	10.00350
	0	- - -	- - -
X10	1	09.99650	10.00350
	2	19.99350	20.00650
	3	29.99050	30.00950
	4	39.98750	40.01250
	5	49.98450	50.01550
	6	59.98150	60.01850
	7	69.97850	70.02150
	8	79.97550	80.02450
	9	89.97250	90.02750
	X	99.96950	100.03050
	0	- - -	- - -
Kilohms			
X100	1	0.0999695	0.10003050
	2	0.1999400	0.2000600
	3	0.2999100	0.3000900
	4	0.3998800	0.4001200

Table 8. Biddle-Gray, Models 601147-1 and 71-631 - Continued

Test instrument		Performance specifications	
Kilohms - Continued			
	Decade switch	Resistance indications	
Decade switch	positions	Min	Max
X100 (cont)	5	0.4998500	0.5001500
	6	0.5998200	0.6001800
	7	0.6997900	0.7002100
	8	0.7997600	0.8002400
	9	0.8997300	0.9002700
	X	0.9997000	1.0003000
	0	- - -	- - -
X1K	1	0.9997000	1.0003000
	2	1.9994000	2.0006000
	3	2.9991000	3.0009000
	4	3.9988000	4.0012000
	5	4.9985000	5.0015000
	6	5.9982000	6.0018000
	7	6.9979000	7.0021000
	8	7.9976000	8.0024000
	9	8.9973000	9.0027000
	X	9.9970000	10.003000
	0	- - -	- - -
X10K	1	9.9970000	10.003000
	2	19.994000	20.006000
	3	29.991000	30.009000
	4	39.988000	40.012000
	5	49.985000	50.015000
	6	59.982000	60.018000
	7	69.979000	70.021000
	8	79.976000	80.024000
	9	89.973000	90.027000
	X	99.970000	100.03000
	0	- - -	- - -
Megohms			
X100K	1	00.099970	00.100030
	2	00.199940	00.200060
	3	00.299910	00.300090
	4	00.399880	00.400120
	5	00.499850	00.500150
	6	00.599820	00.600180
	7	00.699790	00.700210
	8	00.799760	00.800240
	9	00.899730	00.900270
	X	00.999700	01.000300
	0	- - -	- - -

Table 9. Cornell-Dubilier, Model RDA

Test instrument		Performance specifications	
		Range: 1 Ω to 10 Ω Accuracy: ±5% Range: 10 Ω to 100 Ω Accuracy: ±3%	
Decade switch	Decade switch positions	Resistance indications (Ω)	
		Min	Max
0 to 10	1	00.95000	01.05000
	2	01.90000	02.10000
	3	02.85000	03.15000
	4	03.80000	04.20000
	5	04.75000	05.25000
	6	05. 70000	06.30000
	7	06.65000	07.35000
	8	07.60000	08.40000
	9	08.55000	09.45000
	10	09.50000	10.50000
	0	- - -	- - -
0 to 100	1	09.70000	10.30000
	2	19.40000	20.60000
	3	29.10000	30.90000
	4	38.80000	41.20000
	5	48.50000	51.50000
	6	58.20000	61.80000
	7	67.90000	72.10000
	8	77.60000	82.40000
	9	87.30000	92.70000
	10	97.00000	103.00000
	0	- - -	- - -

Table 10. ESI, Models DB-62 and DB-877

Test instrument	Performance specifications		
ESI, Models DB-62 and DB 877	Range[1]	Accuracy	
		DB-62	DB-877
	0.01Ω/step	±5%	±10%
	0.1Ω/step	±0.5%	±1%
	1Ω/step	±0.07%	±0.12%
	10Ω/step	±0.025%	±0.03%
	100Ω/step	±0.02%	±0.02%
	1000Ω/step	±0.02%	±0.02%
	10,000Ω/step	±0.02%	±0.02%
	100,000Ω/step	±0.02%	±0.02%
	1,000,000Ω/step	±0.02%	±0.02%

See footnote at end of table.

Table 10. ESI, Models DB-62 and DB-877 - Continued

Test instrument		Performance specifications			
		Ohms			
		Resistance indications			
Decade switch	Decade switch positions	DB-62		DB-877	
		Min	Max	Min	Max
0.01Ω/step	1	00.00950	00.01050	00.00900	00.01100
	2	00.01900	00.02100	00.01800	00.02200
	3	00.02850	00.03150	00.02700	00.03300
	4	00.03800	00.04200	00.03600	00.04400
	5	00.04750	00.05250	00.04500	00.05500
	6	00.05700	00.06300	00.05400	00.06600
	7	00.06650	00.07350	00.06300	00.07700
	8	00.07600	00.08400	00.07200	00.08800
	9	00.08550	00.09450	00.08100	00.09900
	10	00.09500	00.10500	00.09000	00.11000
	0	- - -	- - -	- - -	- - -
0.1Ω/step	1	00.09950	00.10050	00.09900	00.10100
	2	00.19900	00.20100	00.19800	00.20200
	3	00.29850	00.30150	00.29700	00.30300
	4	00.39800	00.40200	00.39600	00.40400
	5	00.49750	00.50250	00.49500	00.50500
	6	00.59700	00.60300	00.59400	00.60600
	7	00.696500	00.70350	00.69300	00.70700
	8	00.79600	00.80400	00.79200	00.80800
	9	00.89550	00.90450	00.89100	00.90900
	10	00.99500	01.00500	00.99000	01.01000
	0	- - -	- - -	- - -	- - -
1Ω/step	1	00.99930	01.00070	00.99880	01.00120
	2	01.99860	02.00140	01.99760	02.00240
	3	02.99790	03.00210	02.99640	03.00360
	4	03.99720	04.00280	03.99520	04.00480
	5	04.99650	05.00350	04.99400	05.00600
	6	05.99580	06.00420	05.99280	06.00720
	7	06.99510	07.00490	06.99160	07.00840
	8	07.99440	08.00560	07.99040	08.00960
	9	08.99370	09.00630	08.98920	09.01080
	10	09.99300	10.00700	09.98800	10.01200
	0	- - -	- - -	- - -	- - -
10Ω/step	1	09.99750	10.00250	09.99700	10.00300
	2	19.99500	20.00500	19.99400	20.00600
	3	29.99250	30.00750	29.99100	30.00900
	4	39.99000	40.01000	39.98800	40.01200
	5	49.98750	50.01250	49.98500	50.01500
	6	59.98500	60.01500	59.98200	60.01800
	7	69.98250	70.01750	69.97900	70.02100
	8	79.98000	80.02000	79.97600	80.02400
	9	89.97750	90.02250	89.97300	90.02700
	10	99.97500	100.02500	99.97000	100.03000
	0	- - -	- - -	- - -	- - -

See footnote at end of table.

Table 10. ESI, Models DB-62 and DB-877 - Continued

Test instrument		Resistance indications	
Ohms			
Decade switch	Decade switch positions	DB-62 Min	DB-877 Max
100Ω/step	1	99.98000	100.02000
	2	199.96000	200.04000
	3	299.94000	300.06000
	4	399.92000	400.08000
	5	499.90000	500.10000
	6	599.88000	600.12000
	7	699.86000	700.14000
	8	799.84000	800.16000
	9	899.82000	900.18000
	10	999.80000	1000.20000
	0	- - -	- - -
Kilohms			
1 kΩ/step	1	0.9998000	1.0002000
	2	1.9996000	2.0004000
	3	2.9994000	3.0006000
	4	3.9992000	4.0008000
	5	4.9990000	5.0010000
	6	5.9988000	6.0012000
	7	6.9986000	7.0014000
	8	7.9984000	8.0016000
	9	8.9982000	9.0018000
	10	9.9980000	10.0020000
	0	- - -	- - -
10 kΩ/step	1	9.9980000	10.002000
	2	19.996000	20.004000
	3	29.994000	30.006000
	4	39.992000	40.008000
	5	49.990000	50.010000
	6	59.988000	60.012000
	7	69.986000	70.014000
	8	79.984000	80.016000
	9	89.982000	90.018000
	10	99.980000	100.02000
	0	- - -	- - -
100 kΩ/step	1	99. 980000	100.02000
	2	199.96000	200.04000
	3	299.94000	300.06000
	4	399.92000	400.08000
	5	499.90000	500.10000
	6	599.88000	600.12000
	7	699.86000	700.14000
	8	799.84000	800.16000
	9	899.82000	900.18000
	10	999.80000	1000.20000
	0	- - -	- - -

See footnote at end of table.

Table 10. ESI, Models DB-62 and DB-877 - Continued

Test instrument		Resistance indications	
Megohms			
Decade switch	Decade switch positions	DB-62 Min	DB-877 Max
1 MΩ/step	1	0.999800	1.000200
	2	1.999600	2.000400
	3	2.999400	3.000600
	4	3.999200	4.000800
	5	4.999000	5.001000
	6	5.998800	6.001200
	7	6.998600	7.001400
	8	7.998400	8.001600
	9	8.998200	9.001800
	10	9.998000	10.002000
	0	- - -	- - -

[1]Use appropriate ranges for particular model of TI being tested.

Table 11. General Radio, Model 1433 Series

Test instrument		Performance Specifications	
1433 Series		Range[1] 0.01 Ω/step 0.1 Ω/step 1 Ω/step 10 Ω/step 100 Ω and above/step Zero resistance: Less than 0.001 Ω per dial	Accuracy ±2% ±0.4% ±0.1% ±0.04% ±0.01%
Decade switch	Decade switch positions	Resistance indications Min	Max
Ohms			
0.01Ω/step	1	00.00980	00.01020
	2	00.01960	00.02040
	3	00.02940	00.03060
	4	00.03920	00.04080
	5	00.04900	00.05100
	6	00.05880	00.06120
	7	00.06860	00.07140
	8	00.07840	00.08160
	9	00.08820	00.09180
	10	00.09800	00.10200
	0	- - -	- - -
0.1Ω/step	1	00.09960	00.10040
	2	00.19920	00.20080
	3	00.29880	00.30120
	4	00.39840	00.40160
	5	00.49800	00.50200
	6	00.59760	00.60240

See footnote at end of table.

Table 11. General Radio, Model 1433 Series - Continued

Test instrument		Performance Specifications	
		Resistance indications	
Decade switch	Decade switch positions	Min	Max
Ohms - Continued			
0.1Ω/step (cont)	7	00.69720	00.70280
	8	00.79680	00.80320
	9	00.89640	00.90360
	10	00.99600	01.00400
	0	- - -	- - -
1Ω/step	1	00.99900	01.00100
	2	01.99800	02.00200
	3	02.99700	03.00300
	4	03.99600	04.00400
	5	04.99500	05.00500
	6	05.99400	06.00600
	7	06.99300	07.00700
	8	07.99200	08.00800
	9	08.99100	09.00900
	10	09.99000	10.01000
	0	- - -	- - -
10Ω/step	1	09.99600	10.00400
	2	19.99200	20.00800
	3	29.98800	30.01200
	4	39.98400	40.01600
	5	49.98000	50.02000
	6	59.97600	60.02400
	7	69.97200	70.02800
	8	79.96800	80.03200
	9	89.96400	90.03600
	10	99.96000	100.04000
	0	- - -	- - -
100Ω/step	1	99.99000	100.01000
	2	199.98000	200.02000
	3	299.97000	300.03000
	4	399.96000	400.04000
	5	499.95000	500.05000
	6	599.94000	600.06000
	7	699.93000	700.07000
	8	799.92000	800.08000
	9	899.91000	900.09000
	10	999.90000	1000.10000
	0	- - -	- - -
Kilohms			
1 kΩ/step	1	0.99990000	1.0001000
	2	1.9998000	2.0002000
	3	2.9997000	3.0003000
	4	3.9996000	4.0004000

See footnote at end of table.

Table 11. General Radio, Model 1433 Series - Continued

Test instrument		Performance Specifications	
		Resistance indications	
Decade switch	Decade switch positions	Min	Max
Kilohms - Continued			
1 kΩ/step (cont)	5	4.9995000	5.0005000
	6	5.9994000	6.0006000
	7	6.9993000	7.0007000
	8	7.9992000	8.0008000
	9	8.9991000	9.0009000
	10	9.9990000	10.001000
	0	- - -	- - -
10 kΩ/step	1	9.9990000	10.001000
	2	19.998000	20.002000
	3	29.997000	30.003000
	4	39.996000	40.004000
	5	49.995000	50.005000
	6	59.994000	60.006000
	7	69.993000	70.007000
	8	79.992000	80.008000
	9	89.991000	90.009000
	10	99.990000	100.01000
	0	- - -	- - -
100 kΩ/step	1	99.990000	100.01000
	2	199.98000	200.02000
	3	299.97000	300.03000
	4	399.96000	400.04000
	5	499.95000	500.05000
	6	599.94000	600.06000
	7	699.93000	700.07000
	8	799.92000	800.08000
	9	899.91000	900.09000
	10	999.90000	1000.10000
	0	- - -	- - -
Megohms			
1 MΩ/step[2]	1	00.999900	01.000100
	2	01.999800	02.000200
	3	02.999700	03.000300
	4	03.999600	04.000400
	5	04.999500	05.000500
	6	05.999400	06.000600
	7	06.999300	07.000700
	8	07.999200	08.000800
	9	08.999100	09.000900
	10	09.999000	10.001000
	0	- - -	- - -

[1]Use appropriate ranges for particular model of TI being tested.

[2]Use resistance measuring system, ESI, Model SP2980.

Table 12. General Resistance, Model RDS-615B

Test instrument		Performance specifications	
RDS-615B		Range: 1 Ω to 10 Ω Accuracy: ±0.1% Range: 10 Ω to 100 Ω Accuracy: ±0.01% Range: 100 Ω to 1 MΩ Accuracy: ±0.005% Zero resistance: 10 mΩ or less	
Test instrument		Resistance indications	
Decade switch	Decade switch positions	Min	Max
Ohms			
1Ω/step	1	00.99900	01.00100
	2	01.99800	02.00200
	3	02.99700	03.00300
	4	03.99600	04.00400
	5	04.99500	05.00500
	6	05.99400	06.00600
	7	06.99300	07.00700
	8	07.99200	08.00800
	9	08.99100	09.00900
	10	09.99000	10.01000
10Ω/step	1	09.99900	10.00100
	2	19.99800	20.00200
	3	29.99700	30.00300
	4	39.99600	40.00400
	5	49.99500	50.00500
	6	59.99400	60.00600
	7	69.99300	70.00700
	8	79.99200	80.00800
	9	89.99100	90.00900
	10	99.99000	100.01000
100Ω/step	1	99.99500	100.00500
	2	199.99000	200.01000
	3	299.98500	300.01500
	4	399.98000	400.02000
	5	499.97500	500.02500
	6	599.97000	600.03000
	7	699.96500	700.03500
	8	799.96000	800.04000
	9	899.95500	900.04500
	10	999.95000	1000.05000
Kilohms			
1 kΩ/step	1	0.9999500	1.0000500
	2	1.9999000	2.0001000
	3	2.9998500	3.0001500
	4	3.9998000	4.0002000
	5	4.9997500	5.0002500
	6	5.9997000	6.0003000
	7	6.9996500	7.0003500
	8	7.9996000	8.0004000

Table 12. General Resistance, Model RDS-615B - Continued

Test instrument		Performance specifications Resistance indications	
Decade switch	Decade switch positions	Min	Max
Kilohms - Continued			
1 kΩ/step (cont)	9	8.9995500	9.0004500
	10	9.9995000	10.000500
10 kΩ/step	1	9.9995000	10.000500
	2	19.999000	20.001000
	3	29.998500	30.001500
	4	39.998000	40.002000
	5	49.997500	50.002500
	6	59.997000	60.003000
	7	69.996500	70.003500
	8	79.996000	80.004000
	9	89.995500	90.004500
	10	99.995000	100.00500
100 kΩ/step	1	99.995000	100.00500
	2	199.99000	200.01000
	3	299.98500	300.01500
	4	399.98000	400.02000
	5	499.97500	500.02500
	6	599.97000	600.03000
	7	699.96500	700.03500
	8	799.96000	800.04000
	9	899.95500	900.04500
	10	999.95000	1000.05000

Table 13. ICC, Models CR10M, and CR100M, and CR1000M[1]

Test instrument	Performance specifications	
CR10M CR100M CR1000M	Range: 10 MΩ in 1 MΩ steps Accuracy: ±0.02% Range: 100 MΩ in 10 MΩ steps Accuracy: ±0.05% Range: 1000 MΩ in 100 MΩ steps Accuracy: ±0.25%	
Model	Resistance indications	
	Min	Max
CR10M	999.80000 kΩ	01.000200 MΩ
CR100M	09.995000 MΩ	010.00500 MΩ
CR1000M	099.75000 MΩ	100.2500 MΩ

[1]Repeat measurement for each pair of resistance terminals (2 and 3, 3 and 4, 4 and 5, etc.). Resistance measuring system will indicate within limits specified for TI model as listed in table 13. Prepare a calibration test report for all TIs calibrated at reference level if the TI is not within limits specified in table 13. When calibrating at transfer level, if the TI is not within limits specified in table 13, the TI will be evacuated to the ACL for calibration support. Once a test report is prepared, all subsequent support for the TI will be at the ACL. When TI is repaired, and measures within specified limits, a test report is no longer required and item will revert to original support level (reference or transfer).

NOTE
Calibration Test Report

The purpose of a calibration test report is to allow utilization of:

a. Instruments whose values have drifted outside manufacturer's specifications when referenced to nominal values, yet the drift rate is sufficiently low to allow use within manufacturer's specified accuracy of the previous test report value.

b. The performance specifications shall be ascertained by referencing present measured values to previous measured values in lieu of nominal values. If present measured values are not within manufacturer's accuracy specification of last measured value, the TI must be red-tagged. Calibration activities will maintain a case history file of test reports for the TI. The file will contain an accumulation of at least six of the most recent test reports. If, in four successive calibrations, the measured value drifts from nominal value as much as three times the manufacturer's accuracy specification, the instrument must be red-tagged, An example of calibration data to be annotated on the test report is shown on the sample test report.

Table 14. Winslow, Models 334W and 334X

Test instrument		Performance specifications	
Model 334W Model 334X		Range: 0.1 Ω to 11,110 Ω Range: 1 Ω to 111,110 Ω Accuracy: ±0.1% + 0.005 Ω	
Decade switch	Decade switch positions	Resistance indications	
		Min	Max
Ohms			
0.1Ω/step[1]	1	00.09490	00.10510
	2	00.19480	00.20520
	3	00.29470	00.30530
	4	00.39460	00.40540
	5	00.49450	00.50550
	6	00.59440	00.60560
	7	00.69430	00.70570
	8	00.79420	00.80580
	9	00.89410	00.90590
	10	00.99400	01.00600
1.0Ω/step	1	00.99400	01.00600
	2	01.99300	02.00700
	3	02.99200	03.00800
	4	03.99100	04.00900
	5	04.99000	05.01000

See footnote at end of table.

Table 14. Winslow, Models 334W and 334X - Continued

Test instrument		Resistance indications	
Decade switch	Decade switch positions	Min	Max
Ohms - Continued			
1.0Ω/step (cont)	6	05.98900	06.01100
	7	06.98800	07.01200
	8	07.98700	08.01300
	9	08.98600	09.01400
	10	09.98500	10.01500
10Ω/step	1	09.98500	10.01500
	2	19.97500	20.02500
	3	29.96500	30.03500
	4	39.95500	40.04500
	5	49.94500	50.05500
	6	59.93500	60.06500
	7	69.92500	70.07500
	8	79.91500	80.08500
	9	89.90500	90.09500
	10	99.89500	100.10500
100Ω/step	1	99.89500	100.10500
	2	199.79500	200.20500
	3	299.69500	300.30500
	4	399.59500	400.40500
	5	499.49500	500.50500
	6	599.39500	600.60500
	7	699.29500	700.70500
	8	799.19500	800.80500
	9	899.09500	900.90500
	10	998.99500	1001.00500
Kilohms			
1 kΩ/step	1	0.99900000	1.0010000
	2	1.9980000	2.0020000
	3	2.9970000	3.0030000
	4	3.9960000	4.0040000
	5	4.9950000	5.0050000
	6	5.9940000	6.0060000
	7	6.9930000	7.0070000
	8	7.9920000	8.0080000
	9	8.991000	9.009000
	10	9.990000	10.010000
10 kΩ/step	1	9.990000	10.010000
	2	19.980000	20.020000
	3	29.970000	30.030000
	4	39.960000	40.040000
	5	49.950000	50.050000
	6	59.940000	60.060000
	7	69.930000	70.070000
	8	79.920000	80.080000
	9	89.910000	90.090000
	10	99.900000	100.100000

[1] This decade applicable to model 334W only.

Table 15. General Radio, Model 1434 Series

Test instrument		Performance specifications	
1434 Series		Range[1]	Accuracy [2]
		.1Ω/step	±3%
		1Ω/step	±0.3%
		10Ω/step	±0.05%
		100Ω and above/step	±0.02%
		Resistance indications	
Decade switch	Decade switch positions	Min	Max
Ohms			
0.1Ω/step	1	00.09700	00.10300
	2	00.19400	00.20600
	3	00.29100	00.30900
	4	00.38800	00.41200
	5	00.48500	00.51500
	6	00.58200	00.61800
	7	00.67900	00.72100
	8	00.77600	00.82400
	9	00.87300	00.92700
	10	00.97000	01.03000
	0	- - -	- - -
1Ω/step	1	00.99700	01.00300
	2	01.99400	02.00600
	3	02.99100	03.00900
	4	03.98800	04.01200
	5	04.98500	05.01500
	6	05.98200	06.01800
	7	06.97900	07.02100
	8	07.97600	08.02400
	9	08.97300	09.02700
	10	09.97000	10.03000
	0	- - -	- - -
10Ω/step	1	09.99500	10.00500
	2	19.99000	20.01000
	3	29.98500	30.01500
	4	39.98000	40.02000
	5	49.97500	50.02500
	6	59.97000	60.03000
	7	69.96500	70.03500
	8	79.96000	80.04000
	9	89.95500	90.04500
	10	99.95000	100.05000
	0	- - -	- - -
100Ω/step	1	99.98000	100.02000
	2	199.96000	200.04000
	3	299.94000	300.06000
	4	399.92000	400.08000
	5	499.90000	500.10000

See footnotes at end of table.

Table 15. General Radio, Model 1434 Series - Continued

Test instrument		Resistance indications	
Decade switch	Decade switch positions	Min	Max
Ohms			
100Ω/step (cont)	6	599.88000	600.12000
	7	699.86000	700.14000
	8	799.84000	800.16000
	9	899.92000	900.18000
	10	999.80000	1000.20000
	0	- - -	- - -
Kilohms			
1 kΩ/step	1	0.9998000	1.0002000
	2	1.9996000	2.0004000
	3	2.9994000	3.0006000
	4	3.9992000	4.0008000
	5	4.9990000	5.0010000
	6	5.9988000	6.0012000
	7	6.9986000	7.0014000
	8	7.9984000	8.0016000
	9	8.9982000	9.0018000
	10	9.9980000	10.0020000
	0	- - -	- - -
10 kΩ/step	1	9.9980000	10.0020000
	2	19.996000	20.004000
	3	29.994000	30.006000
	4	39.992000	40.008000
	5	49.990000	50.010000
	6	59.988000	60.012000
	7	69.986000	70.014000
	8	79.984000	80.016000
	9	89.982000	90.018000
	10	99.980000	100.020000
	0	- - -	- - -
100 kΩ/step	1	99.980000	100.020000
	2	199.96000	200.04000
	3	299.94000	300.06000
	4	399.92000	400.08000
	5	499.90000	500.10000
	6	599.88000	600.12000
	7	699.86000	700.14000
	8	799.84000	800.16000
	9	899.82000	900.18000
	10	999.80000	1000.20000
	0	- - -	- - -

[1]Use appropriate ranges for particular model of TI being tested.
[2]Accuracy for 100 Ω Rheostat (1434 QC only) is ± 1 Ω.

Table 16. Leeds and Northrup, Models 4755 and 4776

Test instrument		Performance specifications			
4755 4776		Range: 0.1 Ω/ step to 1 kΩ/step Accuracy: ±0.05% + 0.005 Ω Range: 0.1 Ω/ step to 1 kΩ/step Accuracy: ±0.1% + 0.01 Ω			
Ohms					
		Resistance indications			
Decade switch	Decade switch position	Min	Max	Min	Max
0.1Ω/step	1	00.09945	00.10055	00.08990	00.11010
	2	00.19940	00.20060	00.18980	00.21020
	3	00.29935	00.30065	00.28970	00.31030
	4	00.39930	00.40070	00.38960	00.41040
	5	00.49925	00.50075	00.48950	00.51050
	6	00.59920	00.60080	00.58940	00.61060
	7	00.69915	00.70085	00.68930	00.71070
	8	00.79910	00.80090	00.78920	00.81080
	9	00.89905	00.90095	00.88910	00.91090
	10	00.99900	01.00100	- - -	- - -
	0	- - -	- - -	- - -	- - -
1Ω/step	1	00.99450	01.00550	00.98900	01.01100
	2	01.99400	02.00600	01.98800	02.01200
	3	02.99350	03.00650	02.98700	03.01300
	4	03.99300	04.00700	03.98600	04.01400
	5	04.99250	05.00750	04.98500	05.01500
	6	05.99200	06.00800	05.98400	06.01600
	7	06.99150	07.00850	06.98300	07.01700
	8	07.99100	08.00900	07.98200	08.0180
	9	08.99050	09.00950	08.98100	09.01900
	10	09.99000	10.01000	- - -	- - -
	0	- - -	- - -	- - -	- - -
10Ω/step	1	09.99000	10.01000	09.9800	10.02000
	2	19.98500	20.01500	19.97000	20.03000
	3	29.98000	30.02000	29.96000	30.04000
	4	39.97500	40.02500	39.95000	40.05000
	5	49.97000	50.03000	49.94000	50.06000
	6	59.96500	60.03500	59.93000	60.07000
	7	69.96000	70.04000	69.92000	70.08000
	8	79.95500	80.04500	79.91000	80.09000
	9	89.95000	90.05000	89.90000	90.10000
	10	99.94500	100.05500	- - -	- - -
	0	- - -	- - -	- - -	- - -
100Ω/step	1	99.94500	100.05500	99.89000	100.11000
	2	199.89500	200.10500	199.79000	200.21000
	3	299.84500	300.15500	299.69000	300.31000
	4	399.79500	400.20500	399.59000	400.41000
	5	499.74500	500.25500	499.49000	500.51000
	6	599.69500	600.30500	599.39000	600.61000

Table 16. Leeds and Northrup, Models 4755 and 4776 - Continued

Test instrument		Resistance indications			
		4755		4776	
Decade switch	Decade switch position	Min	Max	Min	Max
100Ω/step(cont)	7	699.64500	700.35500	699.29000	700.71000
	8	799.59500	800.40500	799.19000	800.81000
	9	899.54500	900.45500	899.09000	900.91000
	10	999.49500	1000.50500	- - -	- - -
	0	- - -	- - -	- - -	- - -
Kilohms					
1 kΩ/step	1	0.9994950	1.0005050	0.9989900	1.0010100
	2	1.9989950	2.0010050	1.9979900	2.0020100
`	3	2.9984950	3.0015050	2.9969900	3.0030100
	4	3.9979950	4.0020050	3.9959900	4.0040100
	5	4.9974950	5.0025050	4.9949900	5.0050100
	6	5.9969950	6.0030050	5.9939900	6.0060100
	7	6.9964950	7.0035050	6.9929900	7.0070100
	8	7.9959950	8.0040050	7.9919900	8.0080100
	9	8.9954950	9.0045050	8.9909900	9.0090100
	10	9.9949950	10.005005	- - -	- - -
	0	- - -	- - -	- - -	- - -

9. Final Procedure

a. Deenergize and disconnect all equipment.

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

SAMPLE CALIBRATION TEST REPORT

(Organization) _____

_____

REPORT OF CALIBRATION FOR
RESISTANCE STANDARD

(Nomenclature)

INTERNATIONAL RESISTANCE CO. INDUSTRIAL INSTRUMENTS CO.

(Manufacturer)

***** _____ **CR10M**

(Identification)
(Model and Serial No.

SUBMITTED BY:

(Activity) _____
and _____
UIC _____

CALIBRATION MEASUREMENT VALUES

Nominal Value (Ohms):	**Measured Value (Ohms)**
	1-2:
	2-3:
	3-4:
	4-5:
	5-6:
	6-7:
	7-8:
	8-9:
	9-10:
	10-11:

***** Under the conditions stated, the above readings are in error by no more than

±0.02% for 1 MΩ step

±0.05% for 10 MΩ step

±0.25% for 100 MΩ step

This calibration is traceable to and compatible with NIST.

Calibration Report No.: _____ _____

Calibration Technician

Temperature: _____

_____

Facility Chief

Rel Humidity: _____

Page _____ of _____ Pages

Date: _____

*Use appropriate manufacturer/model number and accuracy.

By Order of the Secretary of the Army:

Official

PETER J. SCHOOMAKER
General, United States Army
Chief of Staff

SANDRA R. RILEY
Administrative Assistant to the
Secretary of the Army

0520813

Distribution:

To be distributed in accordance with the initial distribution number (IDN) 342252, requirements for calibration procedure TB 9-6625-2153-35.

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.