# MODEL 3480

## COMBINATION TUBE TESTER AND VOLT-OHM-MIL-AMMETER

*PART 1*

## VOLT-OHM-MIL-AMMETER OPERATING INSTRUCTIONS

(10,000 OHMS PER VOLT D.C.)
( 2,000 OHMS PER VOLT A.C.)

The Model 3480 Combination tester is a long scale multi-range instrument in a compact portable case. It provides the ranges commonly used in servicing radio receivers as well as those used in the experimental laboratory or at radio transmitting stations.

The instrument sensitivity is 100 Microamperes at 250 Millivolts full scale. This provides for 10,000 ohms per volt sensitivity on the D.C. Volt ranges and a temperature compensated circuit for the Milliampere and Ampere ranges.

The rectified A.C. section is calibrated to ½ Milliampere making the sensitivity for the A.C. Volt ranges 2000 ohms per volt.

The Triplett Model 3480 Volt-ohm-mil-ammeter section is completely self-contained with the following ranges:

**D.C. VOLTS:**
0-3-12-60-300-1200 at 10,000 ohms per volt

**A.C. VOLTS:**
0-3-12-60-300-1200 at 2,000 ohms per volt

**D.C. MILLIAMPERES:**
0-1.2-12-120 at 250 millivolts

**D.C. AMPERES:**
0-12 at 250 millivolts

**OHMS-MEGOHMS:**
0-1000-10,000 ohms, 0-1-50 megohms

**OUTPUT VOLTS:**
0-3-12-60-300-1200 A.C. at 2,000 ohms per volt

## TESTER OPERATION

**(Operation Chart on Page 4)**

**SWITCHES AND JACKS.** Set switches, connect to jacks and read on scale called for in the Operation Chart.

**"OHMS ADJ."** Control on the left side of the panel is used to adjust for variations in battery voltage on the ohm ranges.

**RANGES:** In choosing ranges for measurements always endeavor to have the readings fall in the upper (or right hand) half of the scale for greatest accuracy. A slight error in noting the exact division on the scale will then be a smaller per cent of the true reading than if the same degree of error were made in the lower portion of the scale.

# CAUTION

**FOR MAXIMUM SAFETY DO NOT HANDLE TESTER OR LEADS WHEN CONNECTED TO HIGH VOLTAGES.**

**SWITCHING:** Always start with the highest range first when an unknown value of voltage or current is to be measured. Do not connect the instrument to a capacitor which may be charged to an abnormally high voltage unless the switch is on a sufficiently high voltage range. Do not change the selector switch while the instrument is connected to a voltage or current circuit as the resulting arc may burn out a portion of the switch, requiring replacement of the entire unit.

**HANDLING: Do not drop or severely jar the tester,** as the pivots, jewels or moving element may be damaged.

**POINTER SETTING:** Be sure instrument pointer is on zero before using instrument to take any readings.

**TESTER POSITION:** Operate in a horizontal position for greatest accuracy.

# ACCESSORIES

**BATTERIES:**

Two batteries, one 1.5 Volt and one 67.5 Volt are provided for the ohmmeter circuits.

**BATTERY REPLACEMENTS:**

Access to the batteries may be easily had by removing the four screws from the corners of the panel. The 1.5 Volt battery is held in place by a small clip. The 67.5 Volt battery is held in place by a small bracket and screw. When the ohmmeter circuit can no longer be adjusted by the variable resistance on the panel, replace the 1.5 Volt battery for the three lower ohm ranges and the 67.5 Volt battery for the 50 Meg. range.

**LEADS:**

Two leads each 4 ft. long are provided for connecting to the jacks of the tester. For utmost safety, do not touch these leads when they are connected to a high voltage supply.

Two alligator clips are provided for fastening with a press friction fit to the ends of the test prods to make clip-on connections.

# MAINTENANCE

The panel of the Model 3480 can be moved for the replacement of batteries and other components by removing the four panel screws. A list of replacement parts and their part number is given in this booklet.

# CAPACITY

**FOR MICROFARAD READINGS:** Connect a jumper across the "Output" and "12A" jacks. Connect the "COM" and the "VOMA" jacks in series with the unknown capacitor and a 110 volt, 60 cycle A. C. line. (See Fig. 1 below.)

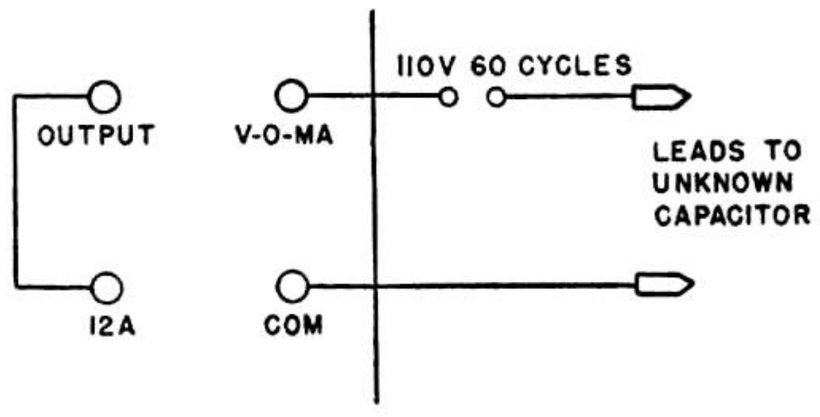


FIG. 1

Read capacitance as noted below on 0-300 A. C. scale.

**CAUTION:** Do not use this test for ELECTROLYTIC capacitors!

| To Measure Mfd. | Set Switch To | Deflection on Red 0-300 A. C. Scale |
|---|---|---|
| .002 | 3V | 30 |
| .004 | | 65 |
| .006 | | 100 |
| .008 | | 135 |
| .01 | | 175 |
| .02 | 12V | 120 |
| .04 | | 215 |
| .06 | 60V | 60 |
| .08 | | 75 |
| 1 | | 95 |
| .2 | | 165 |
| .4 | | 255 |
| .6 | 300V | 60 |
| .8 | | 70 |
| 1. | | 75 |
| 2. | | 85 |
| 4. | | 95 |
| 6. | | 100 |
| 8. | | 103 |
| 10. | | 105 |

# MISCELLANEOUS MEASUREMENTS

**EXTERNAL SHUNTS** for higher D. C. current ranges may be obtained for plugging into the jacks. These shunts are designed for use with the switch on the "1.2 DCMA" position.

**EXTERNAL MULTIPLIERS** may be obtained to extend the volt ranges to 6000 volts. These are designed for use with the switch on the "1200 Volts" position.

**CAPACITORS** may be checked for SHORTS OR LEAKAGE RESISTANCE with the "OHMS" ranges. DISCHARGE CAPACITOR BEFORE MAKING TEST. The tests are made at 1.5 Volts on the 1K, 10K or 1 megohm ranges and at 67.5 Volts on the 50 megohm range.

# VOLT-OHM-MIL-AMMETER OPERATION CHART

**(See Operation and Caution Notes on Pages 1 & 2)**

Set Line Control to "OFF", B-Filament to "OFF", C-Load to "0" and Test Switch to "V-Ω-MA-A".

| To Measure | Set Switch to | | Use Black Jack | Read On | | Each Div. Equals |
|---|---|---|---|---|---|---|
| | | | **D. C. VOLTS** | | **Black Scale** | |
| 0-3 | 3 | DC Volts | Com | V-Ω-Ma | 0-300 ÷ 100 | 0.05 Volt |
| 0-12 | 12 | | | | 0-12 Direct | 0.2 Volt |
| 0-60 | 60 | | | | 0-60 Direct | 1.0 Volt |
| 0-300 | 300 | | | | 0-300 Direct | 5.0 Volts |
| 0-1200 | 1200 | | | | 0-12 × 100 | 20.0 Volts |
| | | | **A. C. VOLTS** | | **Red Scale** | |
| 0-3 | 3 | AC Volts | Com | V-Ω-MA | 0-300 ÷ 100 | 0.05 Volt |
| 0-12 | 12 | | | | 0-12 Direct | 0.2 Volt |
| 0-60 | 60 | | | | 0-60 Direct | 1.0 Volt |
| 0-300 | 300 | | | | 0-300 Direct | 5.0 Volts |
| 0-1200 | 1200 | | | | 0-12 × 100 | 20.0 Volts |

**CAUTION**—HIGH VOLTAGE MEASUREMENTS: Exercise extreme caution. Make connections only with apparatus turned off. Make certain that no capacitors are charged to a high voltage such as filter capacitors or power packs. Be sure switch is on 1200 volt position.

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | **D. C. MILLIAMPERES** | | | |
| 0-1.2 | 1.2 | DC MA | Com | V-Ω-MA | **Black Scale** 0-12 ÷ 10 | 0.02 Ma. |
| 0-12. | 12 | | | | 0-12 Direct | 0.2 Ma. |
| 0-120 | 120 | | | | 0-12 × 10 | 2.0 Ma. |
| | | | **D. C. AMPERES** | | | |
| 0-12 | 12A | | Com | 12A | **Black Scale** 0-12 Direct | 0.2 Amp. |
| | | | **OHMS** | | | |
| 0-1000 | 1K | Ohms | Com | V-Ω-MA | **Green Scale** 0-1K Direct | |
| 0-10,000 | 10K | | | | 0-1K × 10 | |
| | | | **MEGOHMS** | | | |
| 0-1 Meg | 1 Meg | Ohms | Com | V-Ω-MA | **Green Scale** 0-1K × 1000 | |
| 0-50 Meg | 50 Meg | | | | 50 Meg. Direct (black figures) | |

**CAUTION**—RESISTANCE MEASUREMENTS: Under no condition apply voltage between leads when on ohms position as the instrument may thereby be overloaded and damaged.

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | **OUTPUT** | | | |
| 0-3 | 3 | AC Volts | Com | Output | **Red Scale** 0-300 ÷ 100 | 0.05 Volt |
| 0-12 | 12 | | | | 0-12 Direct | 0.2 Volt |
| 0-60 | 60 | | | | 0-60 Direct | 1.0 Volt |
| 0-300 | 300 | | | | 0-300 Direct | 5.0 Volts |
| 0-1200 | 1200 | | | | 0-12 × 100 | 20.0 Volts |

# *PART 2*

# TUBE TESTER OPERATING INSTRUCTIONS

**(Follow in Order Listed)**

### LINE ADJUSTMENT

(1) Insert power cord into a 110 volt 60 cycle supply.
(2) Set "A-CIRCUIT" knob as shown in column "A-CIR."
(3) Set "B-FILAMENT" knob as shown in column "B-FIL."
(4) Set "C-LOAD" knob as shown in column "C-LOAD."
(5) Set levers as shown in column "U-UP" and "D-DOWN."
(6) Insert tube in socket.
(7) Turn "LINE" knob until meter pointer reads at "LINE TEST" mark.

### SHORT TEST

(8) Move each lever referred to in light face type on chart (one at a time) two positions and back. A shorted tube is indicated by a bright red glow of the "SHORT TEST" neon lamp.

### VALUE TEST

(9) Hold "TEST" knob in "VALUE" position and read tube condition on meter.
(10) Release "TEST" knob. Return all levers to center position.

## SPECIAL TESTS

### OPEN ELEMENT TEST

(1a) Follow operations (1) through (9).
(2a) With "Test" knob in "VALUE" position, move each lever in "U" position (only those shown on chart in light face type) to "D" position (one at a time) and return. Continuity between tube pin and the element being tested is indicated by a change in pointer deflection. A small change denotes a satisfactory plate or screen connection. A large change denotes a satisfactory grid connection. When there is only one lever in "U" position, no open element test need be made.
(3a) Release "TEST" knob.

### FILAMENT AND TAP CONTINUITY TEST

(1b) Follow operations (1) through (7).
(2b) Set "B-FILAMENT" knob back to .75 position.
(3b) Move each lever referred to in **dark face** type on chart (one at a time) two positions and back. "Good" filament or other internal pin connection is indicated by a bright red glow of the "SHORT TEST" neon lamp.

**CONTINUITY TEST (pilot lamps and other miniature base bulbs)**

(1c) Follow operations (1) and (7) under "LINE ADJUSTMENT."
(2c) Set "B-FILAMENT" knob to voltage of lamp under test.
(3c) Place lamp in center of 7 prong socket.
(4c) A "good" lamp is indicated by normal lighting of its filament.

**CONTINUITY TEST (ballast tubes and electrical appliances)**

(1d) Follow operations (1) and (7) under "LINE ADJUSTMENT."
(2d) Place jumper lead in No. 1 position (marked) of octal base.
(3d) Set "B-FILAMENT" knob to "OFF" position.
(4d) Set lever "1" in "U" position.
(5d) Set lever "0" in "D" position.
(6d) Short grid cap lead and jumper lead together and note that the neon lamp glows. Connect grid cap clip and jumper lead to pins of ballast tube or to terminals of appliance being tested. A bright glow of the neon lamp indicates continuity.

**CAUTION:** Do not handle the metal parts of the test leads during the test.

(7d) Refer to the ballast tube or appliance manufacturer's data for internal connections.

**TUBE CHART NOTES**

**TEST 2 and TEST 3**

When more than one test is given on the chart for the same tube type, proceed as noted below:
(1e) Follow operation (1) through (10)—(first test).
(2e) Reset all knobs and levers as noted on the chart for Test 2.
(3e) Hold "TEST" knob in "VALUE" position and read tube condition on meter.
(4e) Repeat operations (1e), (2e), and (3e) for Test 3.
(5e) Release "TEST" knob. Return all levers to center position and turn "LINE" knob to "OFF."
Special note on chart refers to the tube directly preceeding note.
Lever markings 1 through 9 designate RMA tube pin numbers 1 through 9 respectively.
Lever "0" designates the Top Cap Connection.
"Good tube reads 5," etc., indicates tubes reading 5 and higher are good.
"Tapped Fil. See Oper. Inst. (1b) to (3b)" is added after the more common tubes with tapped filaments. It is a reminder that filament tap continuity must be checked. For the most accurate check, the FILAMENT AND TAP CONTINUITY TEST should be made on all tubes.
"Use Adapter BN," etc., indicates the use of a plug-in adapter to make tests on these tubes. Adapter BN is not supplied with tester but may be obtained from your distributor on special order. (Part No. 10234).

**GENERAL NOTES**

Pointer indication above full scale indicates tube is extremely good or more than 130%. To make element continuity check on these tubes, turn load control "C" so that pointer falls within end scale markings and proceed with continuity tests.

The jumper lead referred to in "CONTINUITY TEST" is not supplied with tester but may be obtained from your distributor on special order (Part No. T-2566-2, with clip T-79-29.)

The seven pin sub-miniature socket is used for 5, 6 and 7 prong tubes. Place the red dot on the tube to the extreme right to match the dot on the socket.

Cathode to heater leakage is indicated by a **faint** glow of the "SHORT TEST" neon lamp when making short test operation (8).

A space for additional tubes is provided in this instruction book and additional data may be obtained as new tubes come out.

## TUBE SUFFIX LETTER SYMBOLS

In general, tubes with suffixes as noted below can be checked by using the set up for the tube without that suffix.
The letter G indicates a glass tube with an octal base.
GT Indicates use of a T-9 bulb.
Y Indicates an "Intermediate loss" base.
The letters A, B, C, D, E, and F used in sequence indicate improved versions unilaterally interchangeable with the prototype or its subsequent versions.
W Indicates a military type and is assigned only on behalf of the armed forces.
CK is the prefix letters for some Raytheon subminiature tubes. (Example: CK507AX is referred to as 507AX in instruction book or roll chart.)

# INSTRUCTIONS FOR MAKING CHART LISTINGS

## NEW TUBE TYPES

From time to time, supplementary tube data will be available to cover new tube types. Until this data is set up, the following may be used to obtain preliminary chart settings.
Use 3 or more new tubes and proceed as follows:

(1f) Refer to manufacturer's handbook under the particular tube type for filament voltage and pin connections.

(2f) Set "A-CIRCUIT" switch as follows:
"1" for tubes with cathode current below 4 Ma, generally diode types.
"2" for tubes with cathode current from 3 to 15 Ma, generally filament types excluding diodes.
"3" for tubes with cathode current above 8 Ma, generally indirectly heated (cathode) types excluding diodes.
"4" for target or eye tubes, gaseous rectifiers and gaseous control tubes.

(3f) Set "B-FILAMENT" switch to filament voltage.

(4f) Refer to base drawing in "Manufacturer's Handbook" on tubes for the type being set up. Levers "1234, etc." compare to RMA pin numbers.

(5f) Set all levers in normal or center position. This is one of the "FILAMENT" positions and all elements in this position are tied together.

(6f) Find the first filament connection pin on tube base and leave corresponding lever in center position. This connects one side of filament to the filament transformer.

(7f) Find the second filament connection pin on tube base and move corresponding lever to "D" position. This connects the opposite side of the filament to the filament transformer. If filament is tapped at center, move corresponding filament pins to connect the two sections of filament in parallel. If filament has a panel lamp section, move the levers corresponding to this section to "D" position.

(8f) Find the cathode connection pin on tube base and move corresponding lever to "D" position. This connects the cathode to one side of the filament transformer.

(9f) If the tube is of the multi-section type such as duodiodes, duotriodes, etc., find the elements not under test and move corresponding levers to "D" position.

(10f) Move all levers corresponding to the other active elements under test to "U" position.

(11f) Insert tube into proper socket.

(12f) Turn on "LINE" control and adjust so that meter reads at "LINE TEST" mark.

(13f) Hold "TEST" switch in "VALUE" position. Adjust "C-LOAD" control for each tube so that the majority of the new tubes read 70 on the meter scale.

(14f) List settings in the book for further reference.

# ADDITIONAL TUBES

| TUBE TYPE | KNOBS A Cir | B Fil | C Load | LEVER POSITION U Up | D Down |
|---|---|---|---|---|---|
| **00A** | 2 | 5 | 30 | 23 | **4** |
| **01A** | 2 | 5 | 45 | 23 | **4** |
| **0A2** | 4 | Off | 40 | **15** | **247** |
| | (Good Tube Reads 10) | | | | |
| **0A3/VR75** | 4 | Off | 30 | 5 | 237 |
| | (Good Tube Reads 10) | | | | |
| **0B3/VR-90** | 4 | Off | 30 | 5 | 237 |
| | (Good Tube Reads 10) | | | | |
| **0C3/VR-105** | 4 | Off | 30 | 5 | 237 |
| | (Good Tube Reads 10) | | | | |
| **0D3/VR-150** | 4 | Off | 30 | 5 | 237 |
| | (Good Tube Reads 10) | | | | |
| **2C51** | 2 | 6.3 | 23 | 34 | 26789 |
| **2C51 Test 2** | 2 | 6.3 | 23 | 67 | 23489 |
| **2D21** | 3 | 6.3 | 18 | 1567 | 24 |
| **2E24** | 3 | 3.3 | 22 | 350 | **27** |
| | (In Short Test, levers 1, 4 and 6 should show short when moved to "U" position) | | | | |
| **2E26** | 3 | 6.3 | 21 | 350 | 1246 |
| **2E30** | 3 | 3.3 | 12 | 1256 | 34 |
| **2E31** | 1 | 1.2 | 25 | 124 | **5** |
| **2E32** | 1 | 1.2 | 25 | 124 | **5** |
| **2E35** | 1 | 1.2 | 27 | 124 | **5** |
| **2E36** | 1 | 1.2 | 27 | 124 | **5** |
| **2E41** | 1 | 1.2 | 56 | 125 | **6** |
| **2E41 Test 2** | 1 | 1.2 | 95 | 3 | **6** |
| | (Good Tube Reads 10) | | | | |
| **2E42** | 1 | 1.2 | 56 | 125 | **6** |
| **2E42 Test 2** | 1 | 1.2 | 95 | 3 | **6** |
| | (Good Tube Reads 10) | | | | |
| **6AL7** | 1 | 6.3 | 37 | 13456 | **28** |
| **6AS5** | 1 | 6.3 | 19 | 2567 | 13 |
| **6N4** | 3 | 6.3 | 18 | 157 | 246 |
| **7C4/1203-A** | 2 | 6.3 | 33 | 4 | 78 |
| **12A** | 2 | 5 | 26 | 23 | **4** |
| **12AV6** | 3 | 12.6 | 19 | 17 | 24 |
| **12AV6 Test 2** | 1 | 12.6 | 44 | 5 | 24 |
| **12AV6 Test 3** | 1 | 12.6 | 44 | 6 | 24 |
| **12AW6** | 2 | 12.6 | 22 | 1567 | 24 |
| | (No open element check on lever 5) | | | | |
| **12L8G** | 3 | 12.6 | 20 | 345 | 27 |
| **12L8G Test 2** | 3 | 12.6 | 22 | 158 | 27 |
| **12S8** | 1 | 12.6 | 27 | 60 | **28** |
| **12S8 Test 2** | 1 | 12.6 | 39 | 3 | 58 |
| **12S8 Test 3** | 1 | 12.6 | 37 | 1 | **28** |
| **12S8 Test 4** | 1 | 12.6 | 34 | 4 | **28** |
| **26D6** | 2 | 25 | 22 | 16 | 2357 |
| **26D6 Test 2** | 1 | 25 | 40 | 567 | 123 |
| **35C5** | 3 | 32 | 20 | 2567 | 13 |

| TUBE TYPE | KNOBS A Cir | B Fil | C Load | LEVER POSITION U Up | D Down |
|---|---|---|---|---|---|
| **50C5** | 3 | 50 | 17 | 2567 | 13 |
| **210-T** | 3 | 7.5 | 56 | 23 | **4** |
| **230-S** | 2 | 2 | 35 | 23 | **4** |
| **233-S** | 3 | 2 | 39 | 234 | **5** |
| **234-S** | 2 | 2 | 40 | 230 | **4** |
| **262-B** | 3 | 7.5 | 42 | 20 | 34 |
| **274-A** | 3 | 5 | 36 | 2 | **4** |
| **274-A Test 2** | 3 | 5 | 36 | 3 | **4** |
| **300-B** | 3 | 5 | 21 | 23 | 4 |
| **507AX** | 1 | 1.2 | 26 | 124 | **5** |
| **523AX** | 1 | 1.2 | 25 | 124 | **5** |
| **525AX** | 1 | 1.2 | 26 | 124 | **5** |
| **526AX** | 1 | 1.2 | 25 | 124 | **5** |
| **553AXA** | 1 | 1.2 | 25 | 124 | **5** |
| **605CX** | 2 | 6.3 | 22 | 1257 | **46** |
| **606BX** | 2 | 6.3 | 23 | 1 | **34** |
| **608CX** | 3 | 6.3 | 20 | 15 | **46** |
| **619CX** | 2 | 6.3 | 25 | 14 | **35** |
| **816** | 4 | 2.5 | 19 | 0 | **1** |
| **1229** | 1 | 2 | 25 | 230 | **4** |
| **1266** | 4 | Off | 95 | 5 | 237 |
| | (Good tube reads 10. No open element test on levers 3 and 7. Tube normally shows short in short position.) | | | | |
| **1275** | 3 | 5 | 30 | 2 | **34** |
| **1275 Test 2** | 3 | 5 | 30 | 3 | **24** |
| **1635** | 2 | 6.3 | 26 | 34 | 5678 |
| **1635 Test 2** | 2 | 6.3 | 26 | 56 | 3478 |
| **5618** | 3 | 3.3 | 21 | 2346 | **17** |
| **5651** | 4 | Off | 95 | **15** | **247** |
| | (Good tube reads 30) | | | | |
| **5672** | 1 | 1.2 | 26 | 124 | **5** |
| **5676** | 2 | 1.2 | 28 | 13 | **4** |
| **5677** | 1 | 1.2 | 24 | 13 | **4** |
| **5678** | 1 | 1.2 | 23 | 124 | **3** |
| **RK-61** | 1 | 1.4 | 26 | 13 | **4** |

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# ADDITIONAL TUBES

| TUBE TYPE | KNOBS | | | LEVER POSITION | | TUBE TYPE | KNOBS | | | LEVER POSITION | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | A Cir | B Fil | C Load | U Up | D Down | | A Cir | B Fil | C Load | U Up | D Down |
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# REPLACEABLE PARTS, 3480

| Ref. No. | Quan. | Part Name | Description | Function | Triplett Part No. |
|---|---|---|---|---|---|
| A1 | 1 | Socket | Part of tube socket T-2455-73 | Lamp Socket | |
| B1 | 1 | Battery | 67.5 Volt Eveready 467 or Equal | Ohmmeter Battery | T-37-15 |
| B2 | 1 | Battery | 1.5 Volt Burgess No. 2 Uni-cell or Equal | Ohmmeter Battery | T-2426-1 |
| C1 | 1 | Capacitor | 0.5 Mfd. 400 DCWV | Output Ranges | T-2631-P13 |
| C2 | 1 | Capacitor | .1 Mfd. 400 DCWV | Series Capacitor | T-2631-P27 |
| G | 1 | Lamp | Neon 1/25W, GE | Short Test | T-3024-2 |
| M | 1 | Instrument | 100 μa 100 Mv, 626 | Indication | T-52-455 |
| R1 | 1 | Resistor | Variable, 175 ohm, Model H, Ohmite, or Equal | Line Control | T-2472-2C |
| R2 | 1 | Resistor | Composition, 9 Meg, ±1%, 1W | 1200 DCV | T-15-859 |
| R3 | 1 | Resistor | Composition, 2.4 Meg, ±1%, 1W | 300 DCV | T-15-1100 |
| R4 | 1 | Resistor | Composition, 480K, ±1%, 1W | 60 DCV | T-15-1101 |
| R5 | 1 | Resistor | Composition, 90K, ±1%, 1W | 12 DCV | T-15-857 |
| R6 | 1 | Resistor | Composition, 27.5K, ±1%, 1W | 3 DCV | T-15-922 |
| R7 | 1 | Resistor | Composition, 2.5K, ±1%, 10W | Current Limiting | T-15-873 |
| R8 | 1 | Resistor | Wirewound, 50 Ohm, ±1% | Cathode Return Coupling | T-2603-1-50 |
| R9 | 1 | Resistor | Wirewound, 1450 Ohm, ±1% | Line Meter Calib. | T-15-1124 |
| R10 | 1 | Resistor | Composition, 400K Ohm, ±1%, 1W | Line Meter Series | T-15-963 |
| R11 | 1 | Resistor | Wirewound, 2.1 Ohm, ±1%, 1W | 120 DC Ma. | |
| R12 | 1 | Resistor | Wirewound, 1800 Ohm, ±1%, 1W | Tube Test Shunt Res. | T-2603-C-1800 |
| R13 | 1 | Resistor | Wirewound, 21 Ohm, ±1%, 1W | 12 DC Ma. | |
| R14 | 1 | Resistor | Wirewound, 450 Ohm, ±1%, 1W | Tube Test Shunt Res. | T-2603-C-450 |
| R15 | 1 | Resistor | Wirewound, 240 Ohm, ±1%, 1W | 1.2 DC Ma. | |
| R16 | 1 | Resistor | Wirewound, 0.8 Ohm, ±1%, 1W | Tube Test Shunt Res. | T-2603-C-8 |
| R17 | 1 | Resistor | Composition, 5K Ohm, ±1%, ½W | Current Limiting | T-15-1009 |
| R18 | 1 | Resistor | Composition, 1K Ohm, ±1%, ½W | Current Limiting | T-15-1011 |
| R19 | 1 | Resistor | Composition, 100K Ohm, ±10%, 1/10W | Current Limiting Neon | T-2602-1/10-100K |
| R20 | 1 | Resistor | Composition, 250K Ohm, ±10%, ½W | Shunt Neon | T-2601-½-250K |
| R21 | 1 | Resistor | Variable, 200 Ohm | Load Control | T-16-7 |
| R22 | 1 | Resistor | Variable, 20K Ohm | Ohmmeter Zero Adj. | T-16-1 |
| R23 | 1 | Resistor | Composition, 500K Ohm, ±1%, 1W | Series for 50 Meg Range | T-15-878 |
| R24 | 1 | Resistor | Wirewound, 715 Ohm, ±1%, 1W | Series for 1 Meg Range | T-2603-C-715 |
| R25 | 1 | Resistor | Composition, 8530 Ohm, ±1%, 1W | Series Ohmmeter | T-15-913 |
| R26 | 1 | Resistor | Wirewound, 6 Ohm, ±1%, 1W | Series for 10K Ohm Range | T-2603-C-6 |
| R27 | 1 | Resistor | Composition, 125K Ohm, ±1%, 1W | Shunt for 1 Megohm Range | T-15-1104 |
| R28 | 1 | Resistor | Wirewound, 96.4 Ohm, ±1%, 1W | Shunt for 10K Ohm Range | T-2603-C-96.4 |
| R29 | 1 | Resistor | Wirewound, 9.6 Ohm, ±1%, 1W | Shunt for 1K Ohm Range | T-2603-C-9.6 |
| R30 | 1 | Resistor | Wirewound, 2300 Ohm, ±1%, 1W | Rectifier Calib. Res. | T-2603-C-2300 |
| R31 | 1 | Resistor | Wirewound, 4500 Ohm, ±1%, 1W | 3 AC Volt | T-2603-C-4500 |
| R32 | 1 | Resistor | Composition, 18K Ohm, ±1%, 1W | 12 AC Volt | T-15-1068 |
| R33 | 1 | Resistor | Composition, 96K Ohm, ±1%, 1W | 60 AC Volt | T-15-1102 |
| R34 | 1 | Resistor | Composition, 480K Ohm, ±1%, 1W | 300 AC Volt | T-15-1101 |
| R35 | 1 | Resistor | Composition, 1.8 Megohm, ±1%, 1W | 1200 AC Volt | T-15-937 |
| R36 | 1 | Shunt | 250 Mv. strip type | 12 DC Amp Range | T-90-180 |
| R37 | 1 | Resistor | Wirewound, 1500 Ohm, ±1%, 1W | VO Ma. Mv. Calib. | T-2603-C-1500 |
| R38 | 1 | Resistor | Wirewound, 111 Ohm, ±1%, 1W | Tube Tester Ma. Calib. | T-2603-C-111 |
| S1 | 1 | Switch | 20 Position, 5 Deck | Range Switch | T-22-82 |
| S2 | 1 | Switch | 3 Position, 1 Deck | Test Switch | T-22-83 |
| S3 | 10 | Switch | 3 Position Lever, 1 Deck | Element Switch | T-22-56 |

| Ref. No. | Quan. | Part Name | Description | Function | Triplett Part No. |
|---|---|---|---|---|---|
| S4 | 1 | Switch | 20 Position, 1 Deck | Filament Switch | T-22-35 |
| T | 1 | Transformer | 110V. Pri., 22 Sec. taps | Filament & Plate Supply | T-23-10 |
| X | 1 | Rectifier | Copper Oxide, 2 Disc-3 Wire | Linemeter & AC Volt Rec. | 6296 |
| | 1 | Case | With Hardware | Tester Housing | T-10-659 |
| | 1 | Cord | Line, 7 Ft., Brown | Connector | 8971 |
| | 10 | Knob | 7/16D, Round, Brown | Element Sw. Knob | T-34-9 |
| | 4 | Knob | 1¼" Bar, Brown | Control Knob | T-34-11 |
| | 2 | Knob | 2" Bar, Brown | Switch Knob | T-34-10 |
| | 1 | Jack | Black, Bakelite | Connections | T-33-12 |
| | 3 | Jack | Red, Bakelite | Connections | T-33-13 |
| | 1 | Socket | 4 Prong, Brown | Tube Socket | T-2455-70 |
| | 1 | Socket | 5 Prong, Brown | Tube Socket | T-2455-71 |
| | 1 | Socket | 6 Prong, Brown | Tube Socket | T-2455-72 |
| | 1 | Socket | 7 Prong, Brown | Tube Socket | T-2455-73 |
| | 1 | Socket | Octal, Brown | Tube Socket | T-2455-74 |
| | 1 | Socket | Loctal, Brown | Tube Socket | T-2455-75 |
| | 1 | Socket | 9 Prong, Miniature | Tube Socket | T-2455-91 |
| | 1 | Socket | Bantam, 6 prong, brown | Tube Socket | T-2455-77 |
| | 1 | Socket | Miniature, 7 prong, brown | Tube Socket | T-2455-76 |
| | 1 | Socket | Subminiature, 7 prong | Tube Socket | T-2455-79 |

# RMA STANDARD WARRANTY—APPROVED OCTOBER 15, 1947

1. We warrant all products manufactured or sold by us to be free from defects in materials and workmanship. This warranty is limited to repairing or replacing any of said products which prove to be defective upon our inspection, and which are within the warranty period of twelve months from the date of our delivery.
2. Products claimed to be defective may be returned to us after written permission is given by us. When material is returned, it must be properly packed and shipped with transportation prepaid. If upon inspection the equipment is found defective, credit will be given to offset the prepaid transportation.
3. This warranty does not extend to any products which have been subjected to abuse, accident, improper installation or application, alteration or negligence in use, storage, transportation or handling.
4. The failure to return the merchandise within the period specified in Paragraph One shall constitute a final acceptance of the merchandise and conclusively operate as a fulfillment of all warranties, expressed or implied.
5. This warranty excludes all oral or other and implied warranties, and the manufacturer shall in no event be liable for damages for a breach of warranty in an amount exceeding the purchase price of the alleged defective equipment.

# RMA STANDARD WARRANTY FOR MAINTAINING PARTS OF DISCONTINUED MODELS

Standard Warranty adopted by the Instrument and Test Equipment Section of the RMA Parts Division for maintaining parts of discontinued models.

The Triplett Electrical Instrument Company warrants this equipment under the Standard Warranty of the Instrument Section of the RMA Parts Division. Parts will be made available for a minimum period of five (5) years after the manufacture of this equipment has been discontinued

Parts includes all materials, charts, instructions, diagrams, accessories, etc., which have been furnished in the Standard Model.

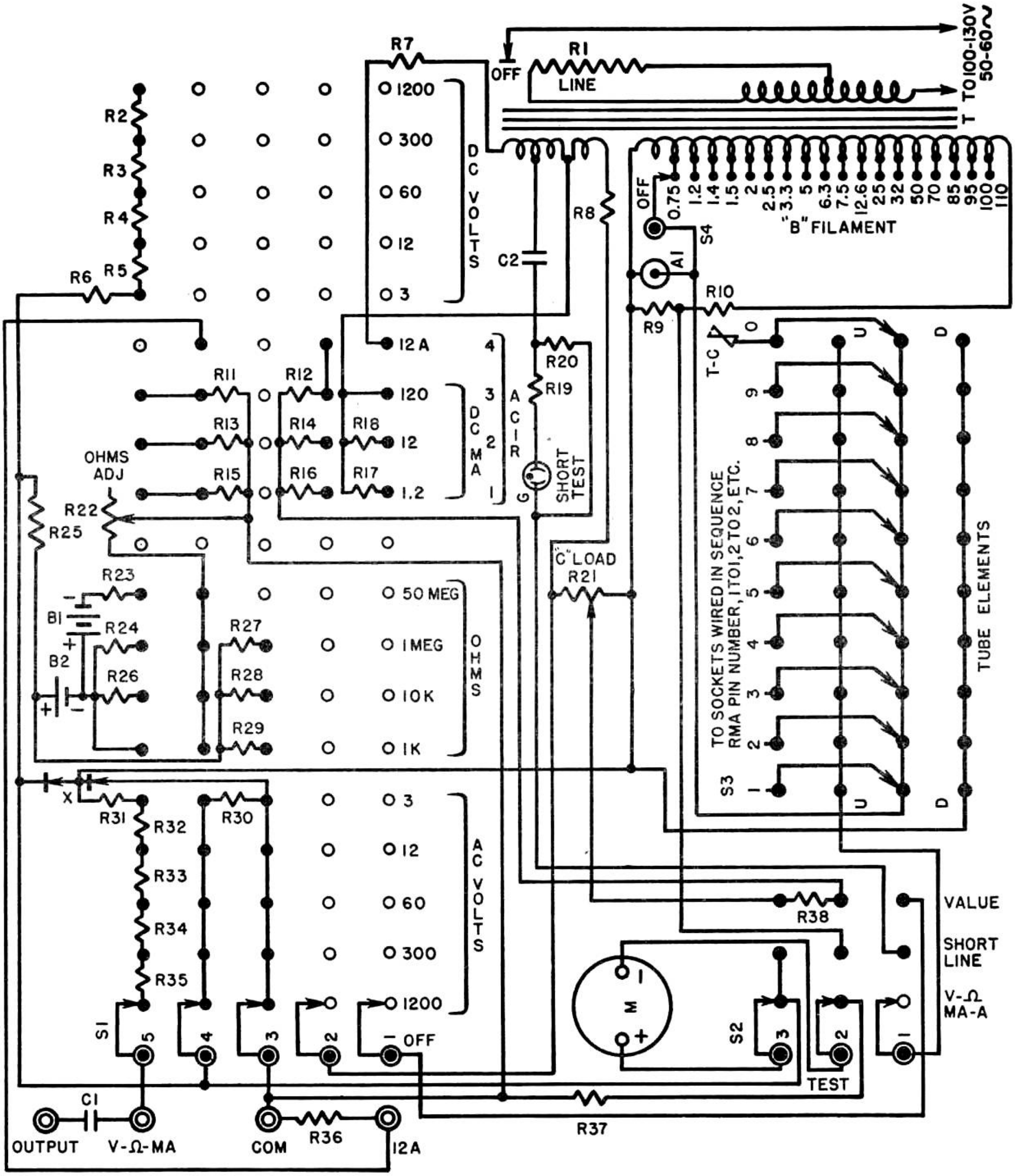


FIG. 2 WIRING DIAGRAM


**THE TRIPLETT ELECTRICAL INSTRUMENT CO.**
**Bluffton, Ohio**

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