

WAR DEPARTMENT TECHNICAL MANUAL
TM 11-2627

TUBE TESTER I-177



WAR DEPARTMENT

3 AUGUST 1944

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WAR DEPARTMENT,
WASHINGTON 25, D. C., 3 AUGUST 1944.

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X

(For explanation of symbols see FM 21-6.)

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DESTRUCTION NOTICE

WHY —To prevent the enemy from using or salvaging this equipment for his benefit.

WHEN—When ordered by your commander.

HOW —1. *Smash*—Use sledges, axes, handaxes, pickaxes, hammers, crow-bars, heavy tools.

2. *Cut*—Use axes, handaxes, machetes.

3. *Burn*—Use gasoline, kerosene, oil, flame throwers, incendiary grenades.

4. *Explosives*—Use firearms, grenades, TNT.

5. *Disposal*—Bury in slit trenches, fox holes, other holes. Throw in streams. Scatter.

USE ANYTHING IMMEDIATELY AVAILABLE FOR DESTRUCTION OF THIS EQUIPMENT

WHAT—1. *Smash*—Meters, controls, panels.

2. *Cut*—Cables and all wiring.

3. *Burn*—Resistors, capacitors, all technical manuals, instruction books, tube charts.

4. *Bury or scatter*—Any or all of the above pieces after destroying their usefulness.

D E S T R O Y E V E R Y T H I N G

SAFETY NOTICE

THE PRESENCE OF HIGH VOLTAGES IN THIS EQUIPMENT IS DANGEROUS TO LIFE. OPERATING PERSONNEL MUST EXERCISE EXTREME CARE. SAFETY REGULATIONS AND CAUTION NOTICES WHICH APPEAR THROUGHOUT THIS MANUAL MUST BE OBSERVED AT ALL TIMES. MAKE TESTS EXACTLY AS DIRECTED. PERSONNEL NOT FAMILIAR WITH THE SERVICING OF HIGH-VOLTAGE CIRCUITS SHOULD NEVER MAKE TESTS INVOLVING SUCH CIRCUITS.



TL-14593

Figure 1. Tube Tester I-177 with cover raised.

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SECTION I

DESCRIPTION

1. PURPOSE. Tube Tester I-177 is an instrument used to test and measure mutual conductance values of vacuum tubes. The purpose of this manual is to acquaint the repairman with the construction, operating principles, maintenance, and use of this instrument.

2. TUBE TESTER I-177 (fig. 1).

a. This instrument is furnished both as an individual unit or as a part of Test Set I-56-K. As a part of Test Set I-56-K it fits into a compartment of Carrying Case CS-130. The weights and dimensions of the tube tester and carrying case are given below.

<i>Equipment</i>	<i>Dimension (in.)</i>			<i>Weight (lb.)</i>
	<i>Height</i>	<i>Width</i>	<i>Depth</i>	
Tube Tester I-177	5 $\frac{3}{4}$	15 $\frac{1}{2}$	8 $\frac{1}{2}$	15.75
Carrying Case CS-130	14 $\frac{3}{4}$	20 $\frac{1}{2}$	9 $\frac{3}{4}$	25.6

b. Tube Tester I-177 is fundamentally a dynamic mutual conductance tube tester designed to provide either REPLACE-GOOD readings or mutual conductance values in micromhos for Signal Corps and commercial receiving tubes and small transmitting tubes. Noise tests of tubes can be made by connecting the input of a radio receiver to two NOISE TEST jacks. An extra topcap lead permits testing of transmitting tubes having plate connections to envelope topcaps. Special switches are provided for making gas tests of tubes. Mutual conductance values of tubes can be measured in three ranges: 0-3,000 micromhos, 0-6,000 micromhos and 0-15,000 micromhos. The tube tester operates on 105- to 125-volt, 60-cycle alternating current. Tube testing data is given in a loose-leaf booklet attached to the inside of the cover of the instrument. The power cord is wound on brackets on the inside of the cover.

SECTION II

OPERATION

3. PRELIMINARY INSTRUCTIONS. Before handling Tube Tester I-177, read the operating instructions carefully. This is a delicate electrical instrument containing a meter and parts that can easily be damaged by mishandling. Pay particular attention to caution notices.

CAUTION: After testing tubes *always* set all controls to off or safety positions as indicated in the following table. Tubes may be burned out if inserted in test sockets before the controls have been properly set.

<i>Control</i>	<i>Safety position</i>
POWER	OFF
SHORT-TUBE TEST	1
LINE ADJUSTMENT	Extreme counterclockwise
A	1
B	1
FIL	OFF
MICROMHOS	15,000
L	80
R	80

4. SHORTS TEST.

- a. Make sure all controls are in safety positions (par. 3).
- b. Plug the power cord of the tester into a suitable a-c power outlet (105 to 125 volts).
- c. Determine the type number of the tube to be tested, and locate this type number in the column headed Tube Type on the loose-leaf test data cards fastened inside the cover of the instrument. If the tube is marked

with Signal Corps nomenclature, use the table in section V or the table on the back of the first card in the tester to determine the commercial equivalent.

- d. Set selector switch A to the number indicated in column A.
- e. Set selector switch B to the number indicated in column B.
- f. Set selector switch FIL to the number indicated in the column headed Fil. volts.
- g. Insert the tube in the socket indicated in the column headed Socket Letter.

NOTE: When inserting or removing a loctal or acorn tube from a socket, handle the tube as gently as possible. Tube pins pass directly through the glass seals and excessive force will crack the glass. A slight sidewise pressure applied to a loctal tube will release the lock and permit easy removal of the tube from the socket.

h. If the tube has a topcap, attach the clip of the CAP lead to the cap. For acorn tubes, use the ACORN CAP lead and clip. For tubes having a star in the Notations column (such as 807, 871, etc.), connect the plate topcap of the tube to the upper left contact of 6-pin socket C with the 12-inch lead having a clip and banana plug.

i. Set POWER switch to ON position.

j. To adjust the line voltage, press and hold down the LINE TEST button and turn the LINE ADJUSTMENT knob until the meter pointer is exactly at the LINE TEST position (at 1,500, not at the ? on the scale); then release LINE TEST button.

k. After allowing at least 30 seconds for the tube to warm up, turn the SHORT-TUBE TEST switch slowly from position 1 to positions 2, 3, 4, and 5 successively while tapping the tube with a finger and watching the SHORTS neon lamp. If the neon lamp burns continuously or glows during tapping in any of the five positions, the tube contains shorted electrodes and should be discarded without further testing (to prevent damage to the meter) unless an exception is noted on the test data card. Disregard a momentary flash of the neon lamp while the switch is being turned from one position to the next, since this is due to charging of a capacitor in the lamp circuit.

NOTE: Before discarding the tube, refer to the Notations column on the test data card to see if the tube being tested normally appears to

be shorted on certain positions of the switch. Thus, for the 1LN5, the notation "Short on 4-5" on the card means that the neon lamp will normally glow at positions 4 and 5 for good tubes. This tube has no shorts if the neon lamp stays out for positions 1, 2, and 3.

- i.* On tubes having several sections, the shorts test need be made only once.

5. QUALITY TEST.

a. Test the tube for shorts by following the complete procedure given in paragraph 4. If the tube is shorted, discard it without making further tests.

b. If the tube is not shorted, turn the SHORT-TUBE TEST switch to the TUBE TEST position. Do not change any of the other controls used for the shorts test.

c. Set potentiometer L to the number indicated in column L on the test data card.

d. Set potentiometer R to the number indicated in column R.

e. Set the MICROMHOS range switch at 3,000.

f. Press the button indicated in the Press column on the test data card, and read the meter on the RED-GREEN scale.

g. Normally, if the pointer stops in the GREEN sector the tube is good; if in the RED sector, the tube is defective and should be discarded. If the pointer stops in the ? sector, the tube is usable for a few more hours but should be replaced soon. For tubes in the Notations column having a note such as "OK over 160" (for example, type 40), read the meter on the 0-3,000 micromhos scale. Tubes reading higher than the value given in the Notations column are good. Good diode sections may read in the portion of the RED scale marked DIODES O.K. Only diodes reading to the left of this section (to the left of A in REPLACE on the scale) should be considered defective.

CAUTION: Do not press the red AMPL. TEST button while testing rectifier tubes. When testing small diodes, do not press either the AMPL. TEST or a RECTIFIER TEST button, because the high voltage would damage the delicate cathode. Press only the DIODE TEST button as called for on the test data card.

h. If a tube is listed two or more times on the test data card, it has two or more sections requiring individual tests, or has two input grids (for example, 6A8 pentagrid converter) requiring separate dynamic tests.

Remove the tube from the socket after the first test is completed. Then repeat the quality test in paragraph 5 for each additional listing in turn. The shorts test should be made *only* for the first listing, however. The tube section covered by a listing is identified in the Notations column on the test data cards.

6. MEASURING MUTUAL CONDUCTANCE.

This procedure gives a mutual conductance reading in micromhos for an amplifier tube or amplifier section, instead of a RED-GREEN reading.

- a. Test the amplifier tube or section for shorts by following the complete procedure given in paragraph 4. If the tube is shorted, discard it without making further tests.
- b. If the tube is not shorted, turn the SHORT-TUBE TEST switch to the TUBE TEST position. Do not change any of the other controls used for the shorts test.
- c. Set potentiometer L at G_M (replaces 60 on dial).
- d. Set potentiometer R to the number indicated in column R on the test data card.
- e. Set the MICROMHOS range switch to an appropriate range for measuring the value given in the Mut. Cond. column on the test data card.
- f. Press the button called for in the Press column, and read the meter on the scale to which the MICROMHOS switch is set. This reading is the mutual conductance of the tube in micromhos under the element voltage conditions provided by the tube tester.
- g. If a tube is listed two or more times on the test data card, remove the tube from its socket after the first test. Then repeat all tests except the shorts test for the next listing, as if testing another tube.

7. GAS TEST.

This procedure determines whether or not an amplifier tube contains too much gas.

- a. Carry out the shorts test procedure given in paragraph 4. If dealing with a multisection tube, the shorts test and gas test must be made on an amplifier section. The gas test does not apply to diode sections or to rectifiers.
- b. Set potentiometer L at G_M (replaces 60 on dial).
- c. Set the MICROMHOS range switch at 3000.
- d. Hold down the GAS NO. 1 button and adjust potentiometer R until the meter reads 100 micromhos on the 0-3000 scale.
- e. While holding down GAS NO. 1 button, press GAS NO. 2 button.

If the meter pointer moves upward more than one scale division, the tube contains too much gas for satisfactory operation. If the pointer movement is less than one division, the tube can be considered sufficiently free from gas.

NOTE: If the pointer cannot be brought down to 1000 micromhos by adjusting potentiometer R, set R at 82, note the position of the pointer, and press GAS NO. 2 button to see if the pointer moves upward more than one scale division. In some cases it may be necessary to let the tube warm up for a few minutes before making the gas test, since the tubes may develop gas only after filament current has been on for a period of time.

8. NOISE TEST. This procedure detects intermittent contacts between tube electrodes during the shorts test, even though the shorts are too brief to be detected by the neon SHORTS lamp.

a. After completing the conventional shorts test in paragraph 4, connect the NOISE TEST jacks on the panel of Tube Tester I-177 to the antenna and ground terminals of a radio receiver.

b. With the radio receiver turned on, with volume advanced, and with the tube tester still set as in paragraph 4*k*, tap the tube while turning the SHORT-TUBE TEST switch slowly from position 1 to 5. Loud static noises coming from the loudspeaker indicate intermittent shorts between electrodes, and mean that the tube is bad.

9. TESTING CATHODE-RAY INDICATOR TUBES. Since the function of these tubes is to indicate rather than amplify, conventional mutual conductance or quality tests cannot be made. Test data is therefore given on the last test data card rather than in numerical sequence, and is repeated here in greater detail. No shorts tests are made. The meter and controls L, R, and MICROMHOS are not used in this test. The procedure checks only the opening and closing action of the eye.

a. Turn on the tube tester and adjust the line voltage as in paragraph 4*j*.

b. Set the FIL switch at the correct filament voltage (2.5 for the 2E5 tube; 6.3 for tube types starting with 6).

c. For 2E5, 6AB5, 6E5, 6G5, 6H5, 6N5, and 6U5 tubes, set selector switch A at 12, set selector switch B at 3, and press the red AMPL. TEST button. The eye should open. Release the button, set selector switch B at 2, and again press the AMPL. TEST button. The eye should now close if the tube is good.

d. For 6AD6 and 6AF6 tubes, set selector switch B at 8, set selector switch A at 2, and press the red AMPL. TEST button. Eye No. 1 should

open, and eye No. 2 should close. Release the button, set selector switch A at 3, and again press the AMPL. TEST button. Eye No. 2 should open and eye No. 1 should close if the tube is good.

10. TESTING PILOT LAMPS.

- a. To check a pilot lamp or other type of lamp having a miniature base, set selector switch FIL to the correct voltage for the lamp. This voltage is generally marked on the lamp base.
- b. Turn ON the POWER switch, adjust line voltage as instructed in paragraph 4j and hold the lamp in the center of socket D. If the lamp lights with normal brilliancy, it is good; if it does not light, it is bad.

11. SERVICING RADIO EQUIPMENT WITH TUBE TESTER I-177.

Almost all receiving tubes and the lower-powered transmitting tubes may be tested with Tube Tester I-177. The repairman should be thoroughly familiar with the operation of the tube tester as outlined in previous paragraphs of this section before attempting to make any tests.

- a. *Receiver Tubes.* Test all tubes in the receiver for internal shorts and for quality. Install new tubes in place of those found to be defective. To prevent replacing a tube in the wrong socket, check one tube at a time.

- b. *Transmitter Tubes.* Test all tubes that can be handled by Tube Tester I-177 and check the remaining tubes by replacing them one at a time with good tubes of the same type, noting the effect on the transmitter performance.

WARNING: Voltages high enough to cause death on contact are used in transmitters. Before touching any part of a transmitter circuit or attempting to remove a tube from the transmitter or its power supply, *turn off all power*. Discharge capacitors and ground exposed circuit components with a tool having a well-insulated handle. Remove shorts and grounds after a repair has been made or a tube replaced, before applying power to the transmitter.

SECTION III

FUNCTIONING OF PARTS

12. GENERAL. Individual circuits of Tube Tester I-177 are presented and described below as they function for the various types of tests made with this instrument. The circuit diagrams in this section are included primarily for a better understanding of this equipment, and therefore have been simplified in some instances. These diagrams must not be used for unauthorized repairs.

13. LINE TEST (fig. 2). Pushing the LINE TEST button connects the meter of the tube tester in series with the type 83 rectifier across a secondary winding of the power transformer, with suitable series and shunt resistors 75 and 74 in this calibrating circuit so the meter will receive a d-c voltage proportional to the a-c voltage across the transformer primary. Factory calibration is such that, when 200-ohm LINE ADJUSTMENT rheostat 47 in series with the power transformer primary is adjusted so the meter pointer is exactly at 1500 (near the center of the scale), the a-c input voltage of the transformer is exactly 93 volts, the value at which the instrument was designed to operate. A small automobile-type lamp 20 is included in the transformer primary circuit as the FUSE LAMP to protect the entire instrument from dangerous overloads. It will burn out during an overload. Setting the FIL. switch to the rated filament voltage value of a tube, followed by the setting of the LINE ADJUSTMENT

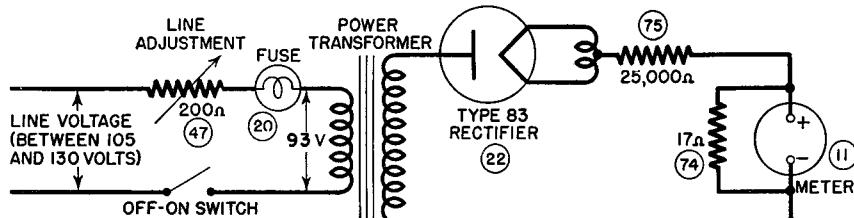


Figure 2. Tube Tester I-177, simplified line test circuit.

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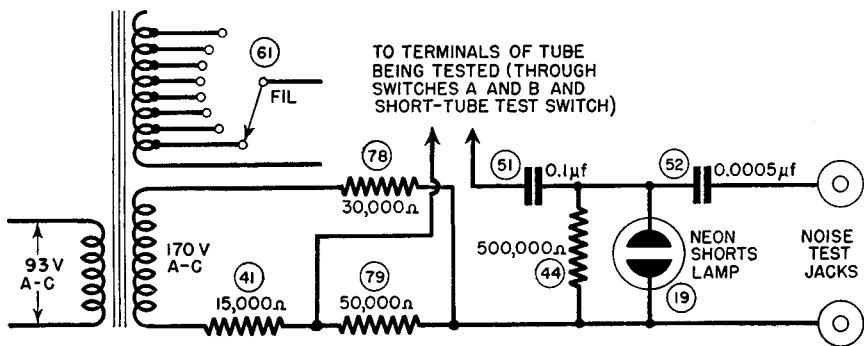


Figure 3. Tube Tester I-177, simplified noise and shorts test circuit.

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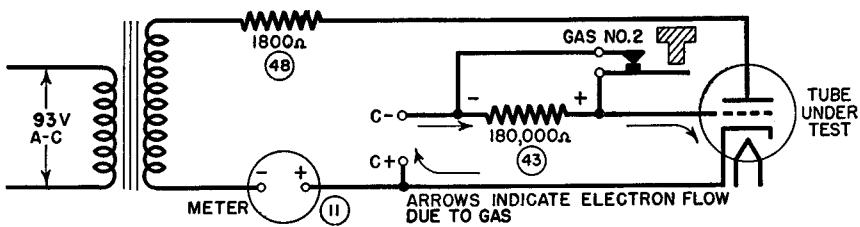


Figure 4. Tube Tester I-177, gas test circuit.

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control, provides the correct filament voltage. For filament voltages of 12.6 volts and less, the switch places a center-tapped resistor in the filament circuit for use as a cathode return terminal.

14. SHORT TEST (fig. 3). Turning the SHORT-TUBE TEST switch through positions 1, 2, 3, 4, and 5 connects various pairs of tube electrodes in turn across the test terminals of the circuit. Tubes having shorts between elements complete the circuit and apply transformer voltage to neon SHORTS lamp 19, causing it to glow. Good tubes do not complete the circuit, and the lamp does not glow. Switches A and B (not shown) provide the proper tube socket connections for the tube under test, and the FIL. switch connects the tube filament to the correct tap on the filament winding.

15. NOISE TEST (fig. 3). This circuit is also used for making a noise test of vacuum tubes. With the antenna and ground terminals of a radio receiver connected to the NOISE TEST jacks, any intermittent short between tube electrodes momentarily permits alternating voltage from the power transformer to be applied to the neon lamp, causing a brief oscillation that will be reproduced as an audible signal in the receiver speaker.

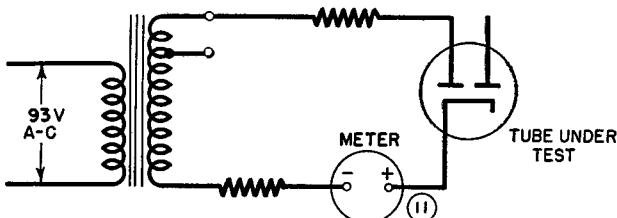


Figure 5. Tube Tester I-177, simplified rectifier test circuit.

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16. GAS TEST (fig. 4). Pressing GAS NO. 1 button applies definite values of plate and grid voltages to the tube under test, causing a definite value of plate current to flow. Pressing GAS NO. 2 button inserts 180,000-ohm resistor 43 in the grid circuit. If the grid bias voltage source is sending current through the grid circuit due to gas in the tube, this current develops a voltage drop across resistor 43 that reduces the negative bias, causing a corresponding increase in the plate current being measured by the meter. A tube with negligible gas gives less than a scale division of plate current increase when GAS NO. 2 button is depressed.

17. RECTIFIER TEST (fig. 5). This circuit is used for making emission tests of standard full-wave rectifiers, diodes and 0Z4 tubes. An a-c voltage of definite value is applied between a cathode and plate of the tube under test, through resistors and the meter. The total resistance and the voltage are set automatically to the correct values for a GOOD-REPLACE meter reading when selector switches A and B are set at the positions specified on the test data card for the tube being tested. As an example, one plate of a four-prong full-wave rectifier is connected into the circuit when selector A is set at position 1. The second plate is connected into the circuit when selector A is set at 3. The special pushbutton for 0Z4 rectifier tubes provides a higher plate-cathode voltage than is used for heater or filament-type rectifiers, with a resistor in the circuit to limit the current if the tube elements are shorted. The special pushbutton for diodes provides a lower voltage than for regular tubes. It also provides a protective series resistance.

18. QUALITY TEST FOR AMPLIFIER TUBES (fig. 6).

a. The mutual conductance (g_m) of an amplifier-type vacuum tube, also called the grid-plate transconductance, is an expression representing the efficiency of performance of a tube as indicated by the *change in plate current* (ΔI_p) divided by the *change in grid voltage* (ΔE_g). The relation is generally written $g_m = \Delta I_p / \Delta E_g$. The value is expressed in micromhos

FUNCTIONING OF PARTS

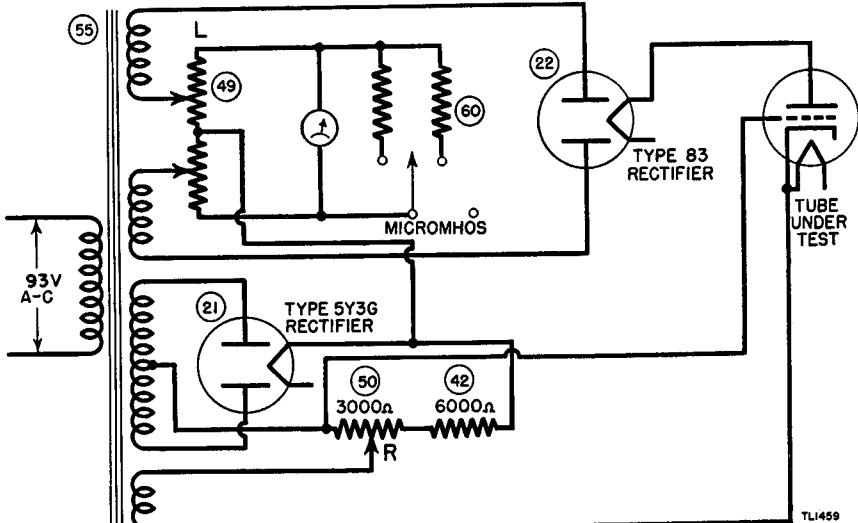


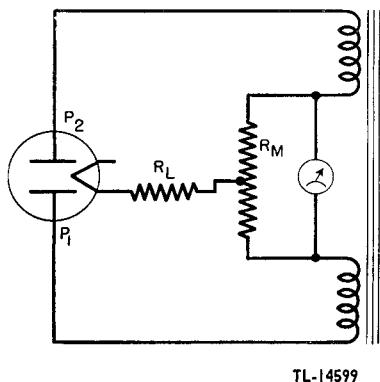
Figure 6. Tube Tester I-177, simplified quality test circuit.

and is a performance indication because it shows how effective a tube is in converting a small change in grid voltage (grid signal) to a large change in plate current. The mutual conductance values given on the test data cards are those supplied by tube manufacturers, and can be checked directly with Tube Tester I-177 by setting its controls for mutual conductance measurements. These values also form the basis for the dynamic quality tests during which the controls are adjusted so that the meter automatically reads GOOD if the mutual conductance is satisfactorily near the rated value for a particular tube.

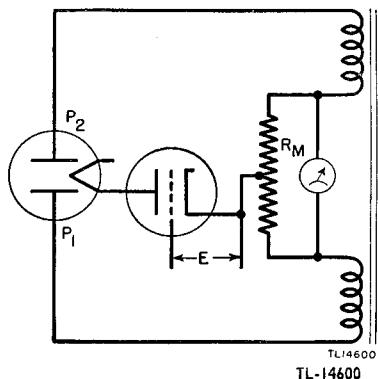
b. For the RED-GREEN quality test based upon dynamic mutual conductance or for measurement of the mutual conductance value directly, the proper d-c grid voltage for the tube under test is supplied by a full-wave rectifier circuit using a 5Y3G tube. Setting potentiometer R at the value called for on the test data card adjusts this negative bias voltage to the correct value for the particular tube under test.

c. An alternating voltage of 4.7 volts rms, obtained from a separate secondary winding on the power transformer, acts in series with the grid bias as required for this type of test. This voltage alternately swings the grid in positive and negative directions from the d-c bias value, thereby producing the grid-voltage change (ΔE_g) required for a dynamic test.

d. The plate voltage for the tube under test is supplied by another full-wave rectifier circuit, using a type 83 tube. The return lead contains the meter circuit which serves to measure the plate-current change (ΔI_p). The meter circuit consists essentially of dual potentiometer L shunted across the meter. Adjusting control L on the panel adjusts the effective shunt



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Figure 7. Tube Tester I-177, rectifier diagram illustrating theory.

Figure 8. Tube Tester I-177, simplified mutual conductance test circuit.

resistance so the meter pointer will read in the GREEN section of the scale if the tube under test is good. Pressing the AMPL. test button completes the circuit as just outlined, and the meter then reads the quality of the tube.

19. THEORY OF OPERATION OF QUALITY TEST CIRCUIT.

a. Examine first the simple full-wave rectifier circuit shown in figure 7. The two power transformer secondary windings have their inner ends connected to a direct-current milliammeter. Across the milliammeter is a center-tapped resistor R_M . The load is shown as a resistance R_L , connected between the center tap and the rectifier filament as in any full-wave rectifier circuit. When rectifier plate P_2 is positive, electron flow is through the upper half of R_M , and the meter tends to deflect in one direction. When P_1 is positive, electron flow is through the lower half of R_M , and the meter tends to deflect in the other direction. With the load resistance fixed and equal forces acting on the meter in both cases, the meter stays at zero because it cannot follow variations at the power line frequency.

b. If the vacuum tube to be tested is substituted for the fixed load resistance, and a fixed bias E is applied to the tube as in figure 8, the meter will still read zero because a vacuum tube under steady-state conditions acts like a fixed resistance.

c. If an a-c potential is applied to the grid of the tube under test in addition to the d-c bias, the circuit becomes equivalent to that employed for quality and mutual conductance tests in Tube Tester I-177. When this a-c potential swings the grid positive, the plate current of the tube is increased, and when the plate-cathode resistance is correspondingly lowered, more current flows through R_M and the deflecting force on the meter is greater

than before. When the grid swings negative on the other half-cycle, the resistance of the tube under test is increased and the deflecting force on the meter is less. With unbalanced currents on adjacent half-cycles and consequent unequal forces on the meter, the meter reading becomes proportional to the difference in currents. Since this difference is created by the a-c grid potential, the meter indicates the plate-current changes produced by the applied grid voltage change, or in other words, the meter indicates mutual conductance.

20. MUTUAL CONDUCTANCE MEASUREMENTS. For mutual conductance measurements, the MICROMHOS switch places additional fixed shunt resistors across the meter as required for the three ranges.

SECTION IV

MAINTENANCE

NOTE: Unsatisfactory performance of this equipment will be reported immediately on W.D., A.G.O. Form No. 468. If this form is not available, see TM 38-250.

21. GENERAL DESCRIPTION. Tube Tester I-177 contains two tubes, a fuse lamp, a neon lamp, and tube charts, all of which may require replacement. The fuse lamp, neon lamp, and tube charts can be replaced directly without removing the panel. The tubes can be replaced by removing the 10 screws that fasten the panel to the case, then lifting out the panel assembly.

CAUTION: The tube tester panel must be opened only to make necessary tube replacements. No other repairs should be attempted except by authorized Signal Corps repair shops or by the manufacturer.

22. FUSE LAMP REPLACEMENT. To replace the No. 81 6-8-volt, 6-cp auto bulb used as a fuse, press down on the bulb and twist it counterclockwise, then lift out the bulb. Insert the new bulb so its pins fit into the slots in the socket, then press down and twist clockwise.

23. NEON LAMP REPLACEMENT. The $\frac{1}{4}$ -watt, 105- to 125-volt neon lamp serving as a SHORTS indicator is replaced by unscrewing the lamp from its socket and screwing in a new lamp. This lamp should last indefinitely unless its glass bulb is broken.

24. TUBE CHART REPLACEMENT. Test data cards for Tube Tester I-177 may be replaced by opening the binding rings.

MAINTENANCE

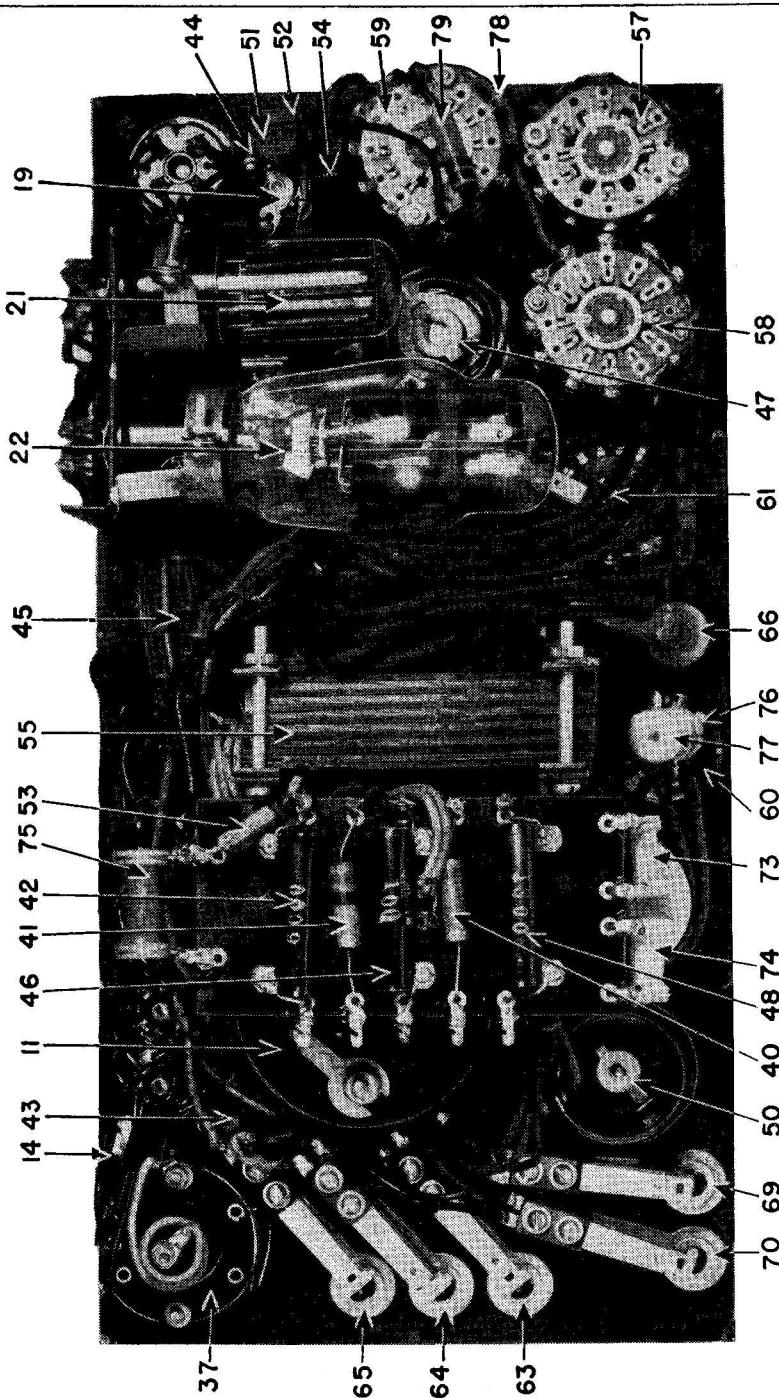


Figure 9 Tube Tester 1-177, bottom view of chassis

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25. TUBE REPLACEMENT. To replace either the type 83 or 5Y3GT tubes, remove the panel mounting screws and lift the panel assembly carefully out of the case. Loosen the tube clamp bolt, then carefully pull the tube out of the socket and clamp, rocking the tube from side to side while pulling. Insert the new tube in its clamp and socket, and tighten the tube clamp bolt. Put the panel back in the case and replace all panel screws. If replacement of tubes does not restore correct operation, return the tester as defective. Do not attempt to repair the instrument because considerable damage can be done to the tube tester if the operator is not entirely familiar with the repair of this type of precision instrument.

26. PREVENTIVE MAINTENANCE.

a. General Instructions. The performance of the items of maintenance outlined in these paragraphs will provide, periodically, an indication of the operational condition of this test equipment and assure proper mechanical and electrical upkeep.

- (1) The communication officer should schedule definite times for checks. The operator should take the readings indicated and check in the appropriate columns in the check sheets.
- (2) Equipment not in use must be checked once a month for deterioration, rust, broken parts, and general operation.
- (3) The maintenance items are listed in subparagraphs 26 *b*, *c*, *d*, and *e*. In paragraphs *b* and *c* the maintenance items are numbered consecutively with an explanation of the appropriate action appearing opposite each item. The items, arranged in the same order in check list form, appear in paragraphs *d* and *e*.
- (4) Deficiencies must be reported to the communication officer of the unit.

b. Weekly Checks.

<i>Item</i>	<i>Action</i>
(1) External surfaces.	Remove dust, dirt, grease, and rust. Note under remarks on weekly check list if touch-up painting is necessary.
(2) Meter.	See that the pointer is not bent, operates freely, and always returns to zero.
(3) Leads, clips, and cord.	Check condition of cord, plug, leads, and clips. Look for broken conductors inside insulation at sharp bends.
(4) Tube sockets.	Check contacts in all tube sockets. Note under remarks on weekly check-list if any contacts are loose or broken.
(5) Control knobs, switches, and pushbuttons.	See that all control knobs are tight and that all switches and pushbuttons operate normally.

c. Monthly Checks.

<i>Item</i>	<i>Action</i>
(1) Interior surfaces.	Remove dust and other foreign matter from the interior of the case.
(2) Pushbutton switch contacts.	Without disturbing adjustments, thoroughly clean all pushbutton switch contacts.
(3) Controls.	Check all controls for smoothness of operation. Clean or replace as necessary. Note under remarks in monthly check list.
(4) Paint.	Repaint where necessary.
(5) Wooden case.	Note condition of case. Repair if damaged.

*d. Weekly Check List (suggested form).***PREVENTIVE MAINTENANCE—FIELD TEST EQUIPMENT**

Tube Tester I-177

Serial No.

Enter a check in the form below if the item has been found satisfactory.

ITEM	1	2	3	4	5	6	7	8	9	10
(1) External surfaces.										
(2) Meter.										
(3) Leads, clips, cord.										
(4) Tube sockets.										
(5) Control knobs, switches.										

Enter a check in the form below if the action has been completed.

ITEM	1	2	3	4	5	6	7	8	9	10
(6) Unsatisfactory items brought to attention of communication officer.										
(7) Previously reported unsatisfactory items completed.										

REMARKS:

Date Through Signature

Rating

e. Monthly Check List (suggested form)

PREVENTIVE MAINTENANCE—FIELD TEST EQUIPMENT

Tube Tester I-177

Serial No.

Enter a check in the form below if the item has been found satisfactory.

ITEM	1	2	3	4	5	6
(1) Interior surfaces.						
(2) Pushbutton switch contacts.						
(3) Controls.						
(4) Paint.						
(5) Wooden case.						

Enter a check in the form below if the action has been completed.

ITEM	1	2	3	4	5	6
(6) Unsatisfactory items brought to attention of communication officer.						
(7) Previously reported unsatisfactory items corrected.						

REMARKS:

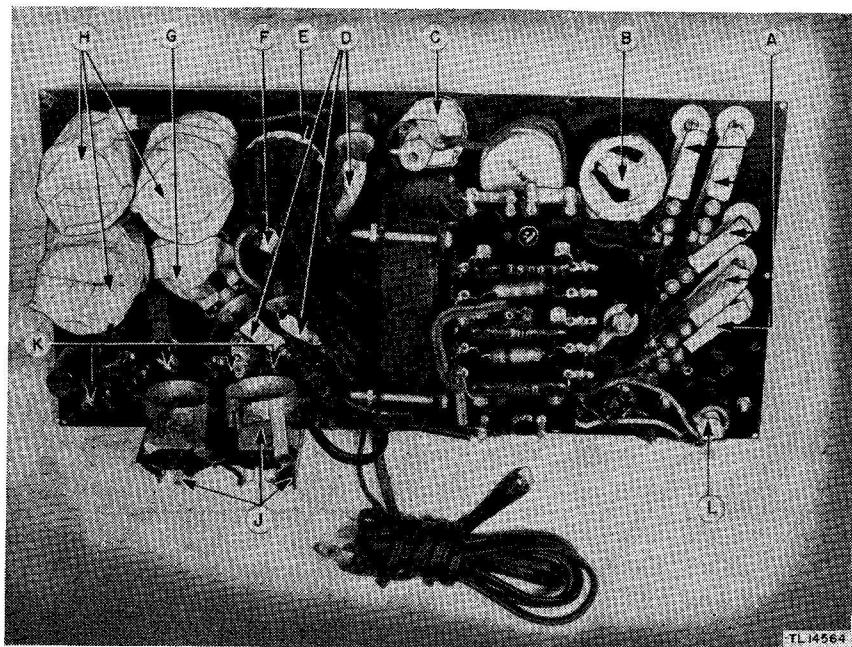
Date Through Signature

Rating

27. MOISTUREPROOFING AND FUNGIPROOFING.

a. *General.* Communication failures commonly occur when Signal Corps equipment is operated in tropical areas where temperature and relative humidity are extremely high. The following problems are typical:

- (1) Resistors and capacitors fail.
- (2) Electrolytic action takes place in coils, chokes, transformer windings, etc., causing eventual break-down.
- (3) Hook-up wire and cable insulation break down. Fungus growth accelerates deterioration.



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Figure 10. Tube Tester I-177, bottom view, masking for moistureproofing and fungiproofing.

- (4) Moisture forms electrical leakage paths on terminal boards and insulating strips, causing flash-overs and crosstalk.
- (5) Moisture provides leakage paths between battery terminals.

b. Treatment. A moistureproofing and fungiproofing treatment has been devised which, if properly applied, provides a reasonable degree of protection against fungus growth, insects, corrosion, salt spray, and moisture. The treatment involves the use of a moisture-resistant and fungi-resistant varnish applied with a spray gun. A brief description of the method of application follows:

- (1) Make all repairs and adjustments necessary for the proper operation of the equipment.
- (2) Thoroughly clean equipment to be processed of all dirt, dust, rust, fungus, oil, grease, etc.
- (3) Partially disassemble equipment and cover with masking tape certain points, such as relay contacts, open switches, air capacitors, sockets, bearings, etc.
- (4) Thoroughly dry equipment by heat to expel moisture which the circuit elements have absorbed.

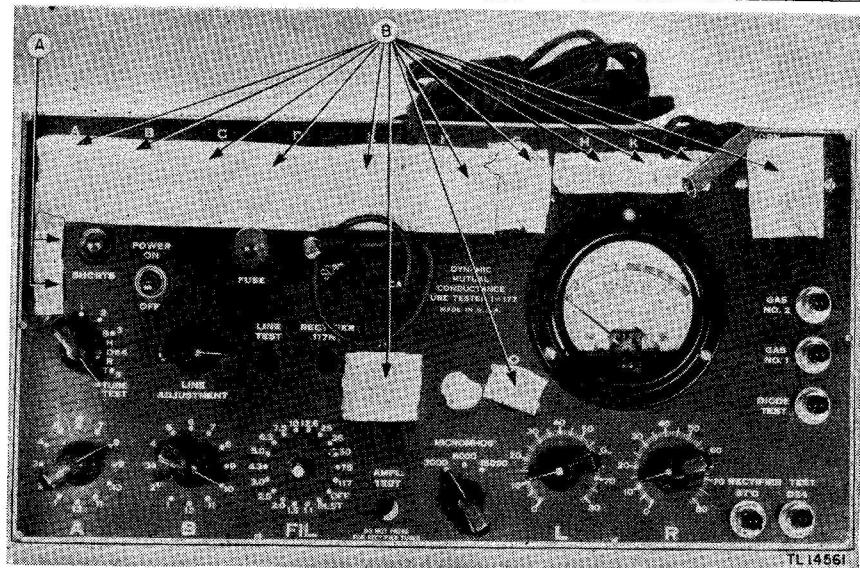


Figure 11. Tube Tester I-177, front view, masking for moistureproofing and fungiproofing.

(5) Spray or paint all circuit elements and all parts of the equipment with three coats of moistureproofing and fungiproofing varnish.

(6) Give the equipment a final operational check.

c. Step-by-step instructions.

(1) DISASSEMBLY:

(a) Remove cover by disengaging hinges.

(b) Remove 10 screws holding front panel to case. Remove front panel assembly.

(c) Loosen screws and nuts on tube clamps and remove vacuum tubes 83 and 5Y3 from their sockets.

(d) Remove locknuts holding the following pushbutton switches to front panel, allowing LINE TEST switch, RECTIFIER 117N7 Switch, and AMPL. TEST switch to hang freely on wiring.

(e) Loosen setscrew on knob of filament selector switch and remove knob.

(f) Loosen nut on filament switch and push shaft through hole in front panel, allowing switch to hang freely on wiring.

(2) MASKING: Cover the following components with masking tape as shown in figures 10 and 11:

MAINTENANCE

-
- (a) Contacts of 5 pushbutton switches, item A, figure 10.
 - (b) Variable rheostat, item B, figure 10.
 - (c) Holes in wafer and casing of micromhos selector switch, item C, figure 10.
 - (d) Three pushbutton switches, item D, figure 10.
 - (e) Holes in case of filament switch, item E, figure 10.
 - (f) Switch contacts on rear of filament selector switch, item F, figure 10.
 - (g) Line adjustment rheostat, item G, figure 10.
 - (h) Three wafer switches (A, B, and SHORT-TUBE TEST), item H, figure 10.
 - (i) Contacts of sockets for vacuum tubes 83 and 5Y3, item J, figure 10.
 - (j) Contacts on tube sockets A, B, C, and D, item K, figure 10.
 - (k) Contact on acorn socket, item L, figure 10.
 - (l) Faces of noise test jacks, item A, figure 11.
 - (m) Faces of all sockets mounted on front panel, item B, figure 11.

(3) PREPARATION. Thoroughly clean all equipment to be treated by removing all oil, dirt, rust, or fungus adhering to components.

(4) DRYING.

- (a) Place components to be treated in heat chamber.
- (b) Bake for 2 or 3 hours at 160° F. Do not exceed 160° F.
- (c) If wax should begin to melt on any of the components, decrease the temperature and increase the baking time approximately 1 hour for each 10° drop in temperature.

(5) VARNISHING.

- (a) Apply 3 coats of moistureproofing and fungiproofing varnish to all equipment to be treated, including inside of cases, allowing a 15- to 20-minute drying period after each coat.
- (b) Using a brush, apply varnish to those portions not reached by spray gun, making sure that all components are adequately protected by varnish.

(6) REASSEMBLY.

- (a) Remove all masking tape.
- (b) Reassemble unit by following instructions for disassembly in the reverse order.
- (c) Mark cases MFP with date of treatment.
- (d) Check overall performance of equipment.

CAUTION: Varnish spray may have toxic effects. Use respirator if available. Otherwise fasten cheesecloth or other cloth material over nose and mouth.

d. Reference. For a full description of the varnish spray method of moistureproofing and fungiproofing, refer to TB SIG 13.

SECTION V

SUPPLEMENTARY DATA

28. TUBE-BASE CHART FOR SIGNAL CORPS AND COMMERCIAL TUBES.

a. *Signal Corps Tubes.* (See tube-base connection diagrams in Fig. 12.)

Tube	Base	Tube	Base	Tube	Base	Tube	Base
VT-7	4D	VT-51	4D	VT-86-A	7R	VT-105	8S
VT-24	4D	VT-52	4D	VT-86-B	7R	VT-107	7AC
VT-25	4D	VT-54	4M	VT-87	7T	VT-107-A ..	7AC
VT-25-A	4D	VT-56	5A	VT-87-A	7T	VT-107-B ..	7AC
VT-26	4K	VT-57	6F	VT-88	7V	VT-112	8N
VT-27	4D	VT-58	6F	VT-88-A	7V	VT-114	5T
VT-28	5E	VT-62	4D	VT-89	6F	VT-115	7AC
VT-29	5A	VT-63	5C	VT-90	7Q	VT-115-A ..	7AC
VT-30	4D	VT-65	6Q	VT-91	7R	VT-116	8N
VT-31	4D	VT-66	7S	VT-91-A	7R	VT-116-B	8N
VT-33	5K	VT-67	4D	VT-92	7V	VT-117	8N
VT-35	5E	VT-68	7D	VT-92-A	7V	VT-119	4AB
VT-36	5E	VT-69	6F	VT-93	8E	VT-120	5BB
VT-37	5A	VT-70	7E	VT-94	6Q	VT-121	5BC
VT-38	5F	VT-72	4D	VT-94-A	6Q	VT-124	6X
VT-40	4D	VT-73	5A	VT-94-D	6Q	VT-125	6X
VT-41	4K	VT-74	5L	VT-95	4D	VT-126	6S
VT-44	4K	VT-75	6G	VT-96	8B	VT-126-A	6S
VT-45	4D	VT-76	5A	VT-97	5T	VT-126-B	6S
VT-46	4P	VT-77	6F	VT-98	6R	VT-131	8N
VT-46-A	4P	VT-78	6F	VT-99	8G	VT-132	8K
VT-47	5B	VT-80	4C	VT-100	5AW	VT-133	8Q
VT-48	6B	VT-83	4C	VT-101	6BM	VT-134	7AC
VT-49	5F	VT-84	5D	VT-103	8Q	VT-135	6Q
VT-50	4D	VT-86	7R	VT-104	8Q	VT-135-A	6Q

SUPPLEMENTARY DATA

<i>Tube</i>	<i>Base</i>	<i>Tube</i>	<i>Base</i>	<i>Tube</i>	<i>Base</i>	<i>Tube</i>	<i>Base</i>
VT-136	5AZ	VT-173	6AR	VT-201	7AC	VT-235	3P
VT-137	6Q	VT-174	7BA	VT-201-C	7AC	VT-237	5BD
VT-138	7AL	VT-175	7S	VT-202	7BS	VT-238	5BB
VT-139	4AJ	VT-176	8N	VT-203	7BD	VT-239	4AA
VT-145	4C	VT-177	5AG	VT-205	8Q	VT-241	8BN
VT-146	5Y	VT-178	7AK	VT-206-A	5L	VT-243	4AH
VT-147	7E	VT-179	7AO	VT-207	8BE	VT-244	5T
VT-148	8AJ	VT-180	6BB	VT-208	8X	VT-245	8BA
VT-149	8AS	VT-181	5AB	VT-209	8BK	VT-247	8Y
VT-150	8R	VT-182	7BE	VT-210	7AV	VT-260	4AJ
VT-151	8A	VT-183	4AH	VT-211	8BK	VT-264	7BA
VT-151-B	8A	VT-184	4AJ	VT-212	5BD	VT-266	4P
VT-152	7S	VT-185	6BB	VT-213-A	6Q	VT-268	8S
VT-153	8E	VT-188	8W	VT-214	7Q	VT-269	8BK
VT-161	8R	VT-189	8AC	VT-215	6R	VT-288	8BK
VT-162	8N	VT-190	8V	VT-216	4P	VT-289	8BD
VT-163	8G	VT-192	5AC	VT-221	7AP		
VT-167	8K	VT-193	8V	VT-223	5Z		
VT-168	7AC	VT-194	8AR	VT-224	7BL		
VT-168-A ..	7AC	VT-195	5AQ	VT-225	5J		
VT-169	8E	VT-196	6S	VT-227	6BO		
VT-170	5Y	VT-197-A	5T	VT-229	8BD		
VT-171	7AT	VT-198-A	7S	VT-231	8BD		
VT-171-A ..	7AT	VT-199	8N	VT-233	8Q		
VT-172	6AU	VT-200	4AJ	VT-234	2T		

b. Commercial Tubes. (See tube-base connection diagrams in Fig. 12.)

<i>Tube</i>	<i>Base</i>	<i>Tube</i>	<i>Base</i>	<i>Tube</i>	<i>Base</i>	<i>Tube</i>	<i>Base</i>
AD	4G	PZ	5B	1	4G	1B4	4M
AF	4C	PZH	5B	D-1	4C	1B5/25S	6M
AG	4C	Wnd A	6N	KR-1	4G	1B7-G	7Z
AX	4Q	XXD	8AC	RA-1	4Q	1B8	8AW
B	4E	XXL	5AC	RE-1	4C	1C1	4A
BA	4J	00	4D	SO-1	4Q	1C5-G	6X
BH	4J	00A	4D	1A1	4A	1C6	6L
BR	4H	0A4	4V	1A3	5AP	1C7	7Z
BX	4D	0Z3	5N	1A4-P	4M	1C21	4V
DE	4D	0Z4	4R	1A4-T	4K	1D1	4A
E	4D	01	4D	1A5-G	6X	1D5, 1D5-GP ..	5Y
G	4D	01A	4D	1A6-GT	6L	1D5-GT	5R
GA	5B	01AA	4D	1A6-S	6L	1D7-G	7Z
H	4D	01B	4D	1A7-G	7Z	1D8-GT	8AJ
LA	5B	D-½	4B	1B1	4A	1E1	4A

TUBE TESTER 1-177

Tube	Base	Tube	Base	Tube	Base	Tube	Base
1E4-G	5S	1S4	7AV	0A3/VR75 ..	4AJ	6A4/LA	5B
1E5-G	5R	1S5	6AU	0B3/VR90 ..	4AJ	6A5-G	6T
1E5-GP	5Y	1SA6	6BD	0C3/VR105 ..	4AJ	6A6	7B
1E7-G	8C	1SB6	6BE	0D3/VR150 ..	4AJ	6AB5	6R
1F1	4A	1T1-G	4T	3A4	7BB	6AB6	7AU
1F4	5K	1T4	6AR	3A5	7BC	6AB7/1853 ..	8N
1F5-G	6X	1T5	6AF	3A8-GT	8AS	6AC5-G	6Q
1F6	6W	1T5-GT	6X	3B5-GT	7AP	6AC6-G	7W
1F7-G, GH, GV	7AD	1-V	4G	3B7/1291 ..	7BE	6AC7/1852 ..	8N
		1V1	4A	3B21	4C	6AD5-G	6Q
1G1	4A	1Y1	4A	3B22	4C	6AD6-G	7AG
1G4-G	5S	1Z1	4A	3B23/RK22 ..	4AN	6AD7-G	8AY
1G5-G	6X	2	4A	3C5-GT	7AQ	6AE5-GT	6Q
1G6-G	7AB	G-2	5D	3D6/1299 ..	6BB	6AE6-G	7AH
1H4-G	5S	G-2S	5D	3LE4	6BA	6AE7-GT ..	7AX
1H5-G	5Z	KR-2	4G	3LF4	6BB	6AF5-G	6Q
1H6-G	7AA	RE-2	4B	3Q4	7BA	6AF6-G	7AG
1J1	4A	SO-2	4D	3Q5-GT	7AP	6AF7	8AG
1J5-G	6X	2A3	4D	3S4	7BA	6AG5	7BD
1J6-G	7AB	2A3-H	4Q	4	4A	6AG7	8Y
1K1	4A	2A4-G	5S	G-4	5D	6AH5-G	6AP
1L1	4T	2A5	6B	G-4 S	5D	6AH7-GT ..	8BE
1L4	6AR	2A6	6G	4A6-G	8L	6AK5	6BD
1LA4	5AD	2A7	7C	4B24	4C	6AK6	7BK
1LA6	7AK	2B4	5A	4B25	4C	6AL6-G	6AM
1LB4	5AD	2B6	7J	4S	5D	6A7	7C
1LB6	8AX	2B7	7D	5	4A	6A7-M	8A
1LC5	7AO	2C4	5AS	A(5)	5H	6A7-S	7C
1LC6	7AK	2C21/RK33 ..	7BH	KR5	5B	6A8	8A
1LD5	6AX	2C22	4AM	IN5-GT	5Y	6B4-G	5S
1LE3	4AA	2C34/RK34 ..	7BL	5R4-GY	5T	6B5	6AS
1LH4	5AG	2E5	6R	5T4	5T	6B6-G	7V
1LN5	7AO	2E22	5J	5U4-G	5T	6B7	7D
1N1	4T	2G5	6R	5V4-G	5L	6B8	8E
1N5-G	5Y	2S/4S	5D	5W4	5T	6C4	6BG
1N6-G	7AM	2V3-G	4Y	5X3	4C	6C5	6Q
1P1	4T	2W3	4X	5X4G	5Q	6C5-G	6Q
1P5-G	5Y	2X2/879 ..	4AB	5Y3-G	5T	6C6	6F
1Q1	4T	2X3	4E	5Y4-G	5Q	6C7	7G
1Q5-GT	6AF	2Y2	4AB	5Z3	4C	6C8-G	8G
1R1-G	4T	2Y3	4C	5Z4	5L	6D5	6Q
1R4/1294 ..	4AH	2Y4	5D	6	4A	6D6	6F
1R5	7AT	2Z2	4B	A(6)	6N	6D7	7H
1S1-G	4T	3	4A	6A3	4D	6D8-G	8A

SUPPLEMENTARY DATA

<i>Tube</i>	<i>Base</i>	<i>Tube</i>	<i>Base</i>	<i>Tube</i>	<i>Base</i>	<i>Tube</i>	<i>Base</i>
6E5	6R	6S7-G	7R	7A6	7AJ	12C8	8E
6E6	7B	6SA7	8R	7A7-LM	8V	12E5-GT	6Q
6E7	7H	6SA7-GT ... 8AD		7A8	8U	12F5-GT	5M
6F5	5M	6SC7	8S	7B4	5AC	12G7	7V
6F5-G	5M	6SD7-GT ... 8N		7B5	6AE	12H6	7Q
6F6	7S	6SE7-GT 8N		7B6	8W	12J5-GT	6Q
6F7	7E	6SF5	6AB	7B7	8V	12J7-GT	7R
6F7-S	7E	6SF7	7AZ	7B8	8X	12K7-GT	7R
6F8-G	8G	6SG7	8BK	7C4/1203A .. 4AH		12K8	8K
6G5	6R	6SH7	8BK	7C5	6AA	12L8-GT ... 8BU	
6G6-G	7S	6SJ7	8N	7C6	8W	12Q7-GT	7V
6G7	7N	6SK7	8N	7C7	8V	12SA7	8R
6G7-S	7N	6SL7-GT ... 8BD		7E5/1201 .. 8BN		12SA7-GT .. 8AD	
6H4-G1 5AF		6SN7-GT ... 8BD		7E6	8W	12SC7	8S
6H5	6R	6SQ7	8Q	7E7	8AE	12SF5	6AB
6H6	7Q	6SR7	8Q	7F7	8AC	12SF7	7AZ
6H7	7P	6SS7	8N	7G7	8V	12SG7	8BK
6H7-S	7P	6ST7	8Q	7H7	8V	12SH7	8BK
6H8	8F	6T5	6R	7J7	8AR	12SJ7	8N
6J5	6Q	6T7-G	7V	7K7	8BF	12SK7	8N
6J6	7BF	6U5/6G5 6R		7L7	8V	12SL7-GT .. 8BD	
6J7	7R	6U6-GT 7AC		7N7	8AC	12SN7-GT .. 8BD	
6J7-G	7R	6U7-G	7R	7P7	8V	12SQ7	8Q
6J7-GT	7R	6V4	5D	7Q7	8AL	12SR7	8Q
6J8-G	8H	6V6	7AC	7R7	8AE	12Z3	4G
6K5-G	5U	6V7-G	7V	7S7	8BL	12Z5	6K
6K6-G	7S	6W5-G	6S	7T7	8V	14	5E
6K7	7R	6W6-GT 7AC		7V7	8V	14A4	5AC
6K8	8K	6W7-G	7R	7W7	8BJ	14A5	6AA
6L5-G	6Q	6X5	6S	7Y4	5AB	14A7	8V
6L6	7AC	6X6	7AL	7Z4	5AB	14AF7	8AC
6L6-GX	7S	6Y3	4AG	8	4A	14B6	8W
6L7	7T	6Y5	6J	9	4A	14B8	8X
6N5	6R	6Y6-G	7AC	10	4D	14C5	6AA
6N6-G	7AU	6Y7-G	8B	WX-12	4D	14C7	8V
6N7	8B	6Z3	4G	12A	4D	14E6	8W
6P5-G	6Q	6Z4	5D	12A5	7F	14E7	8AE
6P7-G	7U	6Z5	6K	12A6	7AC	14F7	8AC
6Q5	6Q	6Z6	7Q	12A7	7K	14H7	8V
6Q6-G	6Y	6Z7-G	8B	12A8-GT 8A		14J7	8AR
6Q7	7V	6ZY5-G	6S	12AH7-GT .. 8BE		14N7	8AC
6R6-G	6AW	7	4A	12B6	6Y	14Q7	8AI
6R7	7V	7A4	5AC	12B7	8V	14R7	8AE
6S6-GT 5AK		7A5	6AA	12B8-GT 8T		14S7	8BL

Tube	Base	Tube	Base	Tube	Base	Tube	Base
14W7	8BJ	27S	5A	46	5C	75S	6G
14Y4	5AB	K27	5A	46A1	2S	VR75-30 ..	4AJ
14Z3	4G	A28	4D	46B1	2S	76	5A
15	5F	29	6N	47	5B	77	6F
17	5A	30	4D	RK47	5J	77M	7R
18	6B	A-30	4Q	48	6A	78	6F
19	6C	R-30	4D	A48	4Q	78S	6F
RK19	4AN	31	4D	50	4D	79	6H
20	4D	KR31	4G	VR50	4W	80	4C
KR20	6N	32	4K	50A5	6AA	81	4B
RK21	4AB	A32	4Q	50C6-G	7AC	82V	4L
22	4K	32L7-GT	8Z	50L6-GT	7AC	83	4C
A-22	4D	33	5K	50Y6-GT	7Q	83V	4L
AC22	5E	RK33/2C21 ..	7BH	50Z6-G	7Q	84/6Z4	5D
KR22	6N	34	4M	50Z7-G	8AN	G-84	5D
RK22/3B23 ..	4AN	RK34/2C34 ..	7BL	51	5E	85	6G
K24	5E	35	5E	52	5C	85AS	6G
RK24	4D	35A5-LT ...	6AA	53	7B	85L7	8AB
24A	5E	35L6-GT	7AC	55	6G	85M	7V
24S	5E	35Y4	5AL	56	5A	85S	6G
25	6M	35Z3-LT	4Z	56AS	5A	86M	6Q
KR25	6B	35Z4-GT ...	5AA	56S	5A	87S	6F
25A6	7S	35Z5-GT	6AD	57	6F	88	4C
25A7-G	8F	35Z6-G	7Q	57AS	6F	88M	7R
25AC5-GT ...	6Q	36	5E	57S	6F	88S	6F
25B5	6D	37	5A	58	6F	89	6F
25B6-G	7S	38	5F	58AS	6F	89RS	7N
25B8-GT	8T	39/44	5F	58S	6F	VR105-30 ..	4AJ
25C6-G	7AC	RK-39	5AW	59	7A	112A	4D
25D8-GT ...	8AF	40	4D	59A	7A	113HY	5K
25L6	7AC	A40	4Q	59S	7A	HY-114B ...	2T
25N6-G	7W	40Z5	6AD	HY61/807 ..	5AW	115HY	5K
25S	6M	41	6B	RK62	4D	117L7-GT ..	8AO
25X6-GT	7Q	41M	7S	64	5E	117M7-GT ..	8AO
25Y4-GT ...	5AA	42	6B	65	5E	117N7-GT ..	8AV
25Y5	6E	42A2	3S	67	5A	117P7-GT ..	8AV
25Z3	4G	42B2	3S	68	5E	117Z4-GT ..	5AA
25Z4	5AA	43	6B	69	5E	117Z6-GT ..	7Q
25Z5	6E	43-MG	7S	70	6N	125HY	5K
25Z6	7Q	44	5F	70A7-GT ..	8AB	VR150-30 ..	4AJ
26	4D	45	4D	70L7-GT ...	8AA	165R	4A
A26	4D	45 special	4D	71A	4D	165R4	4A
27	5A	45Z3	5AM	75	6G	165R8	4A
27HM	5A	45Z5-GT ...	6AD	75M	7V	181	4D

SUPPLEMENTARY DATA

<i>Tube</i>	<i>Base</i>	<i>Tube</i>	<i>Base</i>	<i>Tube</i>	<i>Base</i>	<i>Tube</i>	<i>Base</i>
182A	4D	310A	6F	840	5J	1299/3D6	6BB
182B	4D	311A	5F	841	4D	1602	4D
183/483	4D	312A	6BK	842	4D	1603	6F
185R	4A	323A	5AU	843	5A	1608	4D
185R4	4A	328	6F	864	4D	1609	5K
185R8	4A	348A	7R	865	4AR	1610	5B
210T	4D	349A	7S	866, 866A	4P	1612	7T
213, 213B	4C	350A, WE 350A		874	4S	1613	7S
216, 216B	4B		5AW	878	4AU	1614	7AC
231D, WE 231D		350B	7S	879	4AB	1616	4P
	4D	351A	6S	884	6Q		
239A	4G	383A	5AT	885	5A	1619	7AC
242C	4D	385A	6BL	941	4D	1620	7R
244A	5A	482A, 482B	4D	942	4D	1621	7S
245A	4D	483	4D	950	5K	1622	7AC
249B	4AU	484	5A	951	4K	1625	5AZ
252A	4D	485	5A	954	5BB	1626	6Q
257	5B	486	5S	955	5BC	1629	7AL
257A, WE 257A		WL578/8020 ..	4P	956	5BB	1631	7AC
	3Q	585	4D	957	5BD	1632	7AC
259A	5E	586	4D	958	5BD	1633	8BD
264	4D	HY-615B	3P	959	5BE	1634	8S
271A	5A	713, 713A, WE-		985	5D	1635	8B
274-A	4C	713A	8BK	986	4C	1642	7BH
274-B	5T	717, 717A, WE-		1005, CK1005	5AQ	1851	7R
275-A	4D	717A	8BK	1201/7E5 ..	8BN	1852	8N
282-A	4AR	801, 801A	4D	1203	4AH	1853	8N
283-A	5A	802	6BM	1203/7C4 ..	4AH	2050	8BA
287A	5AU	803	5J	1204	8BO	7184, KR 7184	6BO
291	5G	804	5J	1221	6F	8005	3O
293	5G	807	5AW	1223	7R	8013A	4P
295	5G	811	3O	1231	8V	8020/WL578 ..	4P
WE 300A	4D	812	3O	1232	8V	9001	7BD
WE 300B	4D	813	5BA	1284	8V	9002	7BS
301A	4C	814	5J	1291/3B7 ..	7BE	9003	7BD
307A, WE 307-A		816	4P	1293	4AA	9004	4BJ
	5J					9005	5BG
310	4D	837	6BM	1294	4AH	9006	6BH

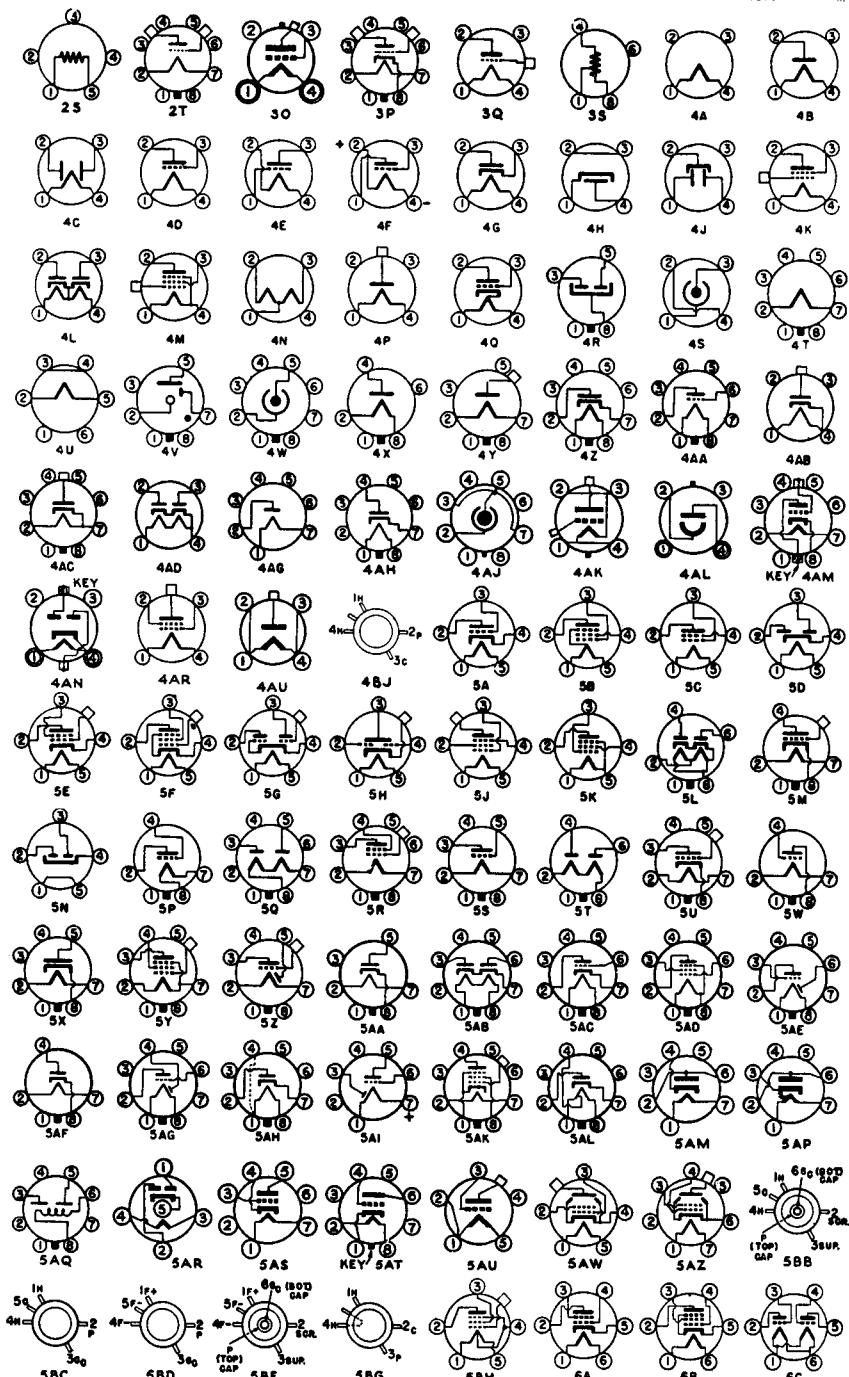
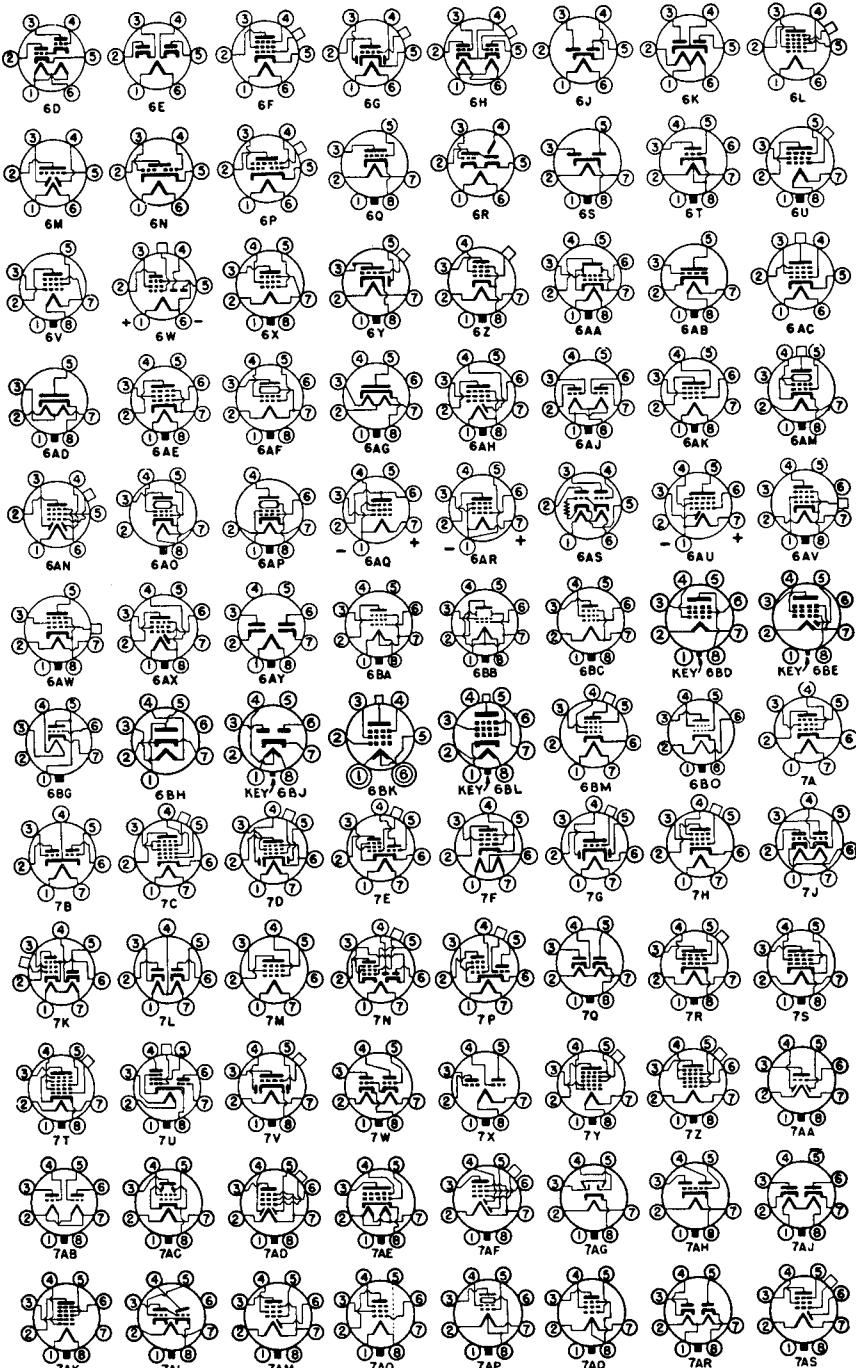


Figure 12.1. Tube base diagrams 2S to 6C

TI-7493a

SUPPLEMENTARY DATA



TL-7494a

Figure 12.2. Tube base diagrams, 6D to 7AS.

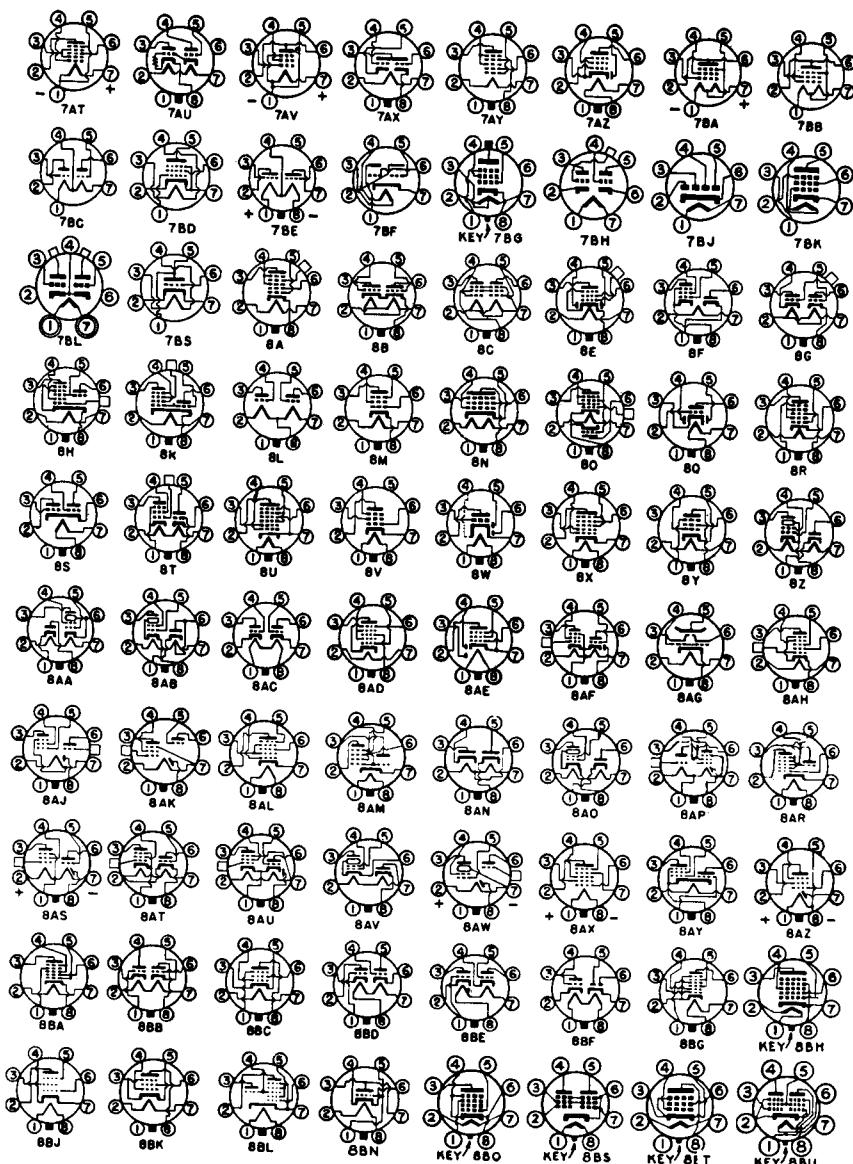


Figure 12.3. Tube base diagrams, 7AT to 8BU

TL-7495a

29. COMMERCIAL EQUIVALENTS OF SIGNAL CORPS TUBES.

<i>Signal Corps tube</i>	<i>Commercial tube equivalent</i>	<i>Signal Corps tube</i>	<i>Commercial tube equivalent</i>	<i>Signal Corps tube</i>	<i>Commercial tube equivalent</i>
VT-2	WE205B	VT-51 ..	841, PT841, 941	VT-90-A	
VT-4-B ..	211, 242A, 311	VT-52	45 Special		6H6GT, 6H6GT/G
VT-4-C	211 Special	VT-54	34	VT-91	6J7
VT-5 ...	WE215A, 215A	VT-55	865	VT-91-A	6J7GT
VT-7	WX12	VT-56	56	VT-92	6Q7
VT-17	860	VT 57	57	VT-92-A	6Q7G
VT-19	861	VT-58	58	VT-93	6B8
VT-22	204A	VT-60	850	VT-93-A	6B8G
VT-24	864	VT-62 ..	801, 801A, 310	VT-94	6J5
VT-25	10	VT-63	46	VT-94-A	6J5G
VT-25-A 10 Special, 10Y		VT-64	800, RK30	VT-94-D	6J5GT
VT-26	22	VT-65	6C5	VT-95	2A3
VT-27	30	VT-65-A	6C5G	VT-96	6N7
VT-28	24, 24A	VT-66	6F6	VT-97	5W4
VT-29	27	VT-66-A	6F6G		
VT-30	01A, 01	VT-67	30 Special	VT-98	
VT-31	31	VT-68	6B7		6U5/6G5, 6G5, 6U5
VT-33	33	VT-69	6D6	VT-99	6F8G
VT-34	207, F307	VT-70	6F7	VT-100	807, RK39,
VT-35	35/51	VT-72	842, 942		HY61, HY61/807
VT-36	36, 36A	VT-73	843	VT-100-A	
VT-37	37, 37A	VT-74	5Z4		807, 807A, Modified
VT-38	38, 38A	VT-75	75	VT-101	837, RK44
VT-39	869	VT-76	76	VT-103	6SQ7
VT-39-A ..	869A, F369B	VT-77	77	VT-104	12SQ7
VT-40	40	VT-78	78	VT-105	6SC7
VT-41	851, 951	VT-80	80	VT-106	
VT-42	872, F-353A	VT-83	83		803, RKE8A, WE322A
VT-42-A		VT-84	84/6Z4	VT-107	6V6
	872 Special filament	VT-86	6K7		
VT-43 ...A45, 845, 945, WE284D, 384D		VT-86-A	6K7G	VT-107-A	
VT-44	32	VT-86-B	6K7GT		6V6GT, 6V6GT/G
VT-45	45	VT-87	6L7	VT-107-B	6V6G
VT-46	866, 966	VT-87-A	6L7G	VT-108	450TH, WL450, HK854H
VT-46-A ... 866A, 966A		VT-88	6R7G	VT-109 ... 2051, WL630	
VT-47	47	VT-88-B	6R7GT	VT-111	2525D5, 5BP4/1808P4, 1802P4
VT-48	41	VT-89	89	VT-112 6AC7/1852, 1852	
VT-49	39/44	VT-90	6H6	VT-114	5T4
VT-50	50, 585, 586				

Signal Corps tube	Commercial tube equivalent	Signal Corps tube	Commercial tube equivalent	Signal Corps tube	Commercial tube equivalent
VT-115	6L6	VT-141	53L, WL531	VT-178	1LC6
VT-115-A	6L6G, 6L6GA	VT-142	WE31DY1	VT-179	1LN5
VT-116, VT-116-B..	6SJ7	VT-143		VT-180	3LF4
VT-116A	6SJ7GT	805, WE331A, 905, RK57		VT-181	7Z4
VT-116-B		VT-144	813	VT-182	
6SJ7Y, 6SJ7 special (micanol or ceramic base)		VT-145	5Z3	3B7/1291, 3B7, 1291	
VT-117	6SK7	VT-146	IN5GT, IN5GT/G	VT-183	
VT-117-A	6SK7GT	VT-147	1A7GT	1R4/1294, 1294, 1R4	
VT-118	832	VT-148	1D8GT	VT-184	VR90-30, OB3/VR90, VR90
VT-119	2X2/879	VT-149	3A8GT	VT-185	
VT-120	954	VT-150	6SA7	3D6/1299, 3D6, 1299	
VT-121	955	VT-150-A	6SA7GT	VT-187	575A, F375A, 975A, GL512
VT-122	WL530, 530	VT-151	6A8GT	VT-188	7E6
VT-124	1A5GT, 1A5GT/G	VT-152	6K6GT, 6K6GT/G	VT-189	7F7
VT-125	1C5GT, 1C5GT/G	VT-152-A	6K6G	VT-190	7H7
VT-126	6X5	VT-153	12C8 special	VT-191	316A
VT-126-A	6X5G	VT-154		VT-192	7A4
VT-126-B	6X5GT, 6X5GT/G	814, 12C8Y, RK47		VT-193	7C7
VT-127	100TS	VT-161..814(GL), 12SA7		VT-194	7J7
VT-127-A		VT-162	12SJ7	VT-195 ..	CK1005, 1005
100TS modified		VT-163	6C8G	VT-196	6W5C
VT-128	1630, A5588	VT-164	1619	VT-197-A	
VT-129		VT-165	1624	5Y3GT/G, 5Y3GT	
304TL, WL525, HK304L		VT-166	371A,	VT-198-A	6G6G
VT-130 250TL, HK454L		Amperex 221A, WE371A		VT-199	6SS7
VT-131	12SK7	VT-167	6K8	VT-200	
VT-132					VR105-30, VR105
12K8 special, 12K8		VT-167-A	6K8G	VT-201	25L6
VT-133	12SR7	VT-168-A	6Y6G	VT-201-C	
VT-134	12A6	VT-169	12C8	25L6GT, 25L6GT/G	
VT-135	12J5GT	VT-170	1E5GP	VT-202	9002
VT-135-A	12J5	VT-171	1R5	VT-203	9003
VT-136	1625	VT-171-A ...	1R5 octal	VT-204 ...3C24, HK24G	
VT-137	1626	VT-172	1S5	VT-205	6ST7
VT-138	1629	VT-173	1T4	VT-206-A ..	5V4G, 274B
VT-139 ..	OD3/VR150, VR150-30, VA150	VT-174	3S4	VT-207	12AH7GT
		VT-175 ...	1613, 6L6GX	VT-208	7B8
		VT-176		VT-209	12SG7
		6AB7/1853, 6AB7, 1853		VT-210	1S4
		VT-177	1LH4	VT-211	6SG7

SUPPLEMENTARY DATA

<i>Signal Corps tube</i>	<i>Commercial tube equivalent</i>	<i>Signal Corps tube</i>	<i>Commercial tube equivalent</i>	<i>Signal Corps tube</i>	<i>Commercial tube equivalent</i>
VT-212	958	VT-232		VT-251 ..	WL441 series,
VT-213-A	6L5G	1148, E1148, HYE1148		2J30 to 2J34S "K" series	
VT-214	12H6	VT-233	6SR7	VT-252	923
VT-215	6E5	VT-234		VT-254	304TH,
VT-216.816, 866JR, 2B26		HY/114B, NU114B		WL535, HK304M	
VT-217	811	VT-235..	HY615, NU615	VT-255	
VT-218 ..	100TH, RK38	VT-236	836	705A, 8021, WE705A	
VT-219	8007	VT-237	957	VT-256..	GL486, ZP486
VT-220		VT-238	956	VT-257	K-7
	250TH, RK63, HK454	VT-239	1LE3	VT-259	829
VT-221		VT-240	710A,	VT-260	VR75-30
	3Q5GT, 3Q5GT/G	WL538, 8011, WE710A		VT-264	3Q4
VT-222	884	VT-241		VT-266..	1616, 866JR, 660
VT-223			7E5/1201, 7E5, 1201	VT-267	578, WL578
	1H5GT, 1H5GT/G	VT-243		VT-268	12SC7
			7C4/1203A, 7C4, 1203	VT-269 ..	717A, WE717A
VT-224	RK34	VT-244	5U4G	VT-277	417, WL417
VT-225....WE307A, 307A		VT-245	2050	VT-279 ..	GY2, D161831
VT-226 ..	3EP1/1806P1,	VT-246 ..	.918, CE1, PJ23	VT-282	ZG489
	3EP1, 1806P1	VT-247	6AG7	VT-286	832A
VT-227 ..	7184, KR7184	VT-248 ..	3CP1/1808P1,	VT-287	815
			3CP1-S1, 3CP1, 1808P1	VT-288	12SH7
VT-228	8012	VT-249 ..	CK1006, 1006	VT-289	12SL7GT
VT-229	6SL7GT	VT-250	EF50		

30. SIGNAL CORPS EQUIVALENTS OF COMMERCIAL TUBES.

<i>Commercial type</i>	<i>Signal Corps equivalent</i>	<i>Commercial type</i>	<i>Signal Corps equivalent</i>	<i>Commercial type</i>	<i>Signal Corps equivalent</i>
01, 01A	VT-30	1LE3	VT-239	2A3	VT-95
CE1	VT-246	1LH4	VT-177	2B26	VT-46-A
1A5GT, 1A5GT/G		1LN5	VT-179	2J30 to 2J34 "K"	
	VT-124	1N5GT, 1N5GT/G		series	VT-251
1A7GT	VT-147		VT-146	2X2/879, 2X2 ..	VT-119
1C5GT, 1C5GT/G		1R4, 1R4/1294 ..	VT-183	OA3/VR75	VT-260
	VT-125	1R5	VT-171	OB3/VR90	VT-184
1D8GT	VT-148	1R5 (octal) ..	VT-171-A	OC3/VR105 ...	VT-200
1E5GP	VT-170	1S4	VT-210	OD3/VR150 ...	VT-139
1H5GT, 1H5GT/B		1S5	VT-172	3A8GT	VT-149
	VT-223	1T4	VT-173	3B7, 3B7/1291 ..	VT-182
1LC6	VT-178	GY2	VT-279	3C24	VT-204

<i>Commercial type</i>	<i>Signal Corps equivalent</i>	<i>Commercial type</i>	<i>Signal Corps equivalent</i>	<i>Commercial type</i>	<i>Signal Corps equivalent</i>
3CP1, 3CP1/1808P1, 3CP1-S1	VT-248	6G6G	VT-198-A	6U5, 6U5/6G5 ..	VT-98
3D6, 3D6/1299 ..	VT-185	6H6	VT-90	6V6	VT-107
3EP1, 3EP1/1806P1	VT-226	6H6GT, 6H6GT/G	VT-90-A	6V6GT, 6V6GT/G	VT-107-A
3LF4	VT-180	6J5	VT-94	6V6G	VT-107-B
3Q4	VT-264	6J5G	VT-94-A	6W5-6	VT-196
3Q5GT, 3Q5GT/G	VT-221	6J6GT	VT-94-D	6X5	VT-126
3S4	VT-174	6J7	VT-91	6X5G	VT-126-A
5BP4, 5BP4/1802P4	VT-111	6J7GT	VT-91-A	6X5GT, 6X5GT/G	VT-126-B
5T4	VT-114	6K6G	VT-152	6Y6G	VT-168-A
5U4G	VT-244	6K6GT, 6K6GT/G	VT-152	6Z4, 6Z4/84	VT-84
5V4G	VT-206-A	6K7	VT-86	K-7	VT-257
5W4	VT-97	6K7G	VT-86-A	7A4	VT-192
5Y3-GT, 5YGT/G	VT-197-A	6K7GT	VT-86-B	7B8	VT-208
5Z3	VT-145	6L8	VT-167	7C4, 7C4/1203A .	VT-243
5Z4	VT-74	6L8G	VT-167-A	7C7	VT-193
6A8G	VT-151	6L9	VT-213-A	7E5, 7E5/1201 ..	VT-241
6A8GT	VT-151-B	6L9G	VT-115	7E6	VT-188
6AB7, 6AB7/1853	VT-176	6L6	VT-115-A	7F7	VT-189
6AC7, 6AC7/1852	VT-112	6L6G, GL6GA..	VT-115-A	7H7	VT-190
6AG7	VT-247	6L6GX	VT-175	7J7	VT-194
6B7	VT-68	6L7	VT-87	7Z4	VT-181
6B8	VT-93	6Q7	VT-92	10	VT-25
6B8G	VT-93-A	6Q7G	VT-92-A	10Y, 10 special..	VT-25-A
6C5	VT-65	6R7	VT-88	WX12	VT-7
6C5G	VT-65-A	6R7GT	VT-88-B	12A6	VT-134
6C8G	VT-163	6SA7	VT-150	12AH7GT	VT-207
6D6	VT-69	6SA7GT	VT-150-A	12C8	VT-169
6E5	VT-215	6SC7	VT-105	12C8Y, 12C8 special	VT-153
6F6	VT-66	6SG7	VT-211	12H6	VT-214
6F6G	VT-66-A	6SJ7	VT-116	12J5	VT-135-A
6F7	VT-70	6SJ7GT	VT-116-A	12J5-GT	VT-135
6F8G	VT-99	6SJ7Y, 6SJ7 special	VT-116-B	12K8, 12K8 special	VT-132
6L7G	VT-87-A	6SK7	VT-117	12SA7	VT-161
6N7	VT-96	6SK7GT, 6SK7GT/G	VT-117-A	12SC7	VT-268
6G5	VT-98	6SL7GT	VT-229	12SG7	VT-209
		6SN7GT	VT-231	12SH7	VT-288
		6SQ7	VT-103	12SJ7	VT-162
		6SR7	VT-233	12SK7	VT-131
		6SS7	VT-199	12SL7-GT	VT-289
		6ST7	VT-205		

SUPPLEMENTARY DATA

<i>Commercial type</i>	<i>Signal Corps equivalent</i>	<i>Commercial type</i>	<i>Signal Corps equivalent</i>	<i>Commercial type</i>	<i>Signal Corps equivalent</i>
12SQ7	VT-104	57	VT-57	310	VT-62
12SR7	VT-133	58	VT-58	311	VT-4-B
22	VT-26	HY61, HY61/807.	VT-100	WE316A	VT-191
PJ23	VT-246	RK63	VT-220	WE322A	VT-106
24, 24A	VT-28	75	VT-75	WE331A	VT-143
HK24G	VT-204	VR75-30	VT-260	WE350A	VT-230
25L6	VT-201	76	VT-76	F353A	VT-42
25L6GT, 25L6GT/G	VT-201-C	77	VT-77	F369	VT-39-A
27	VT-29	78	VT-78	371A, WE371A..	VT-166
RK28A	VT-106	80	VT-80	F375A	VT-187
30	VT-27	83	VT-83	384D	VT-43
30 special	VT-67	84, 84/6Z4	VT-84	417, WL417	VT-277
RK30	VT-64	89	VT-89	WL441 series ..	VT-251
31	VT-31	VR90, VR90-30..	VT-184	450TH, WL450 ..	VT-108
32	VT-44	98	VT-84	HK454H	VT-220
33	VT-33	100TH	VT-218	HK454L	VT-130
34	VT-54	100TS	VT-127	ZP486, GL486 ..	VT-256
RK34	VT-224	100TS modified	VT-127-A	ZG489	VT-282
35, 35/51	VT-35	VR105, VR105-30	VT-200	GL512	VT-187
36, 36A	VT-36	HY114B, NU114B	VT-234	WL525	VT-129
37, 37A	VT-37	VR150, VR150-30	VT-139	530, WL530	VT-122
38, 38A	VT-38	204A	VT-22	531, WL531	VT-141
RK38	VT-218	WE205B	VT-2	WL535	VT-254
39, 39/44	VT-49	207	VT-34	WL538	VT-240
WE39DY1	VT-142	211	VT-4-B	575A	VT-187
RK39	VT-100	211 special	VT-4-C	578, WL578	VT-267
40	VT-40	215A, WE215A	VT-5	585, 586	VT-50
41	VT-48	Amperex 221A ..	VT-166	HY615, NU615 ..	VT-235
44	VT-49	242A	VT-4-B	WL630	VT-109
RK44	VT-101	250TH	VT-220	WE705A	VT-255
45	VT-45	250TL	VT-130	710A, WE710A ..	VT-240
A45	VT-43	274B	VT-206-A	WE717A	VT-269
45 special	VT-52	WE284D	VT-43	800	VT-64
46	VT-63	HK304L	VT-129	801, 801A	VT-62
47	VT-47	304TH, HK304M	VT-254	803	VT-106
RK47	VT-154	304TL	VT-129	805	VT-143
50	VT-50	WE307	VT-34	807	VT-100
EF50	VT-250	307A, WE307A..	VT-225	807A, 807 modified	VT-100-A
51	VT-35	811	VT-217	813	VT-144
56	VT-56	814, 814 (GL)...	VT-154	814	VT-154
RK57	VT-143				

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<i>Commercial type</i>	<i>Signal Corps equivalent</i>	<i>Commercial type</i>	<i>Signal Corps equivalent</i>	<i>Commercial type</i>	<i>Signal Corps equivalent</i>
815	VT-287	905	VT-143	1613	VT-175
816	VT-216	918	VT-246	1616	VT-266
829	VT-259	923	VT-252	1619	VT-164
832	VT-118	CW931	VT-2	1624	VT-165
832A	VT-286	941	VT-51	1625	VT-136
836	VT-236	942	VT-72	1626	VT-137
837	VT-101	945	VT-43	1629	VT-138
841, PT841	VT-51	951	VT-41	1630	VT-128
842	VT-72	954	VT-120	1802P4	VT-111
843	VT-73	955	VT-121	1806P1	VT-226
845	VT-43	956	VT-238	1808P1	VT-248
850	VT-60	957	VT-237	1852	VT-112
851	VT-41	958	VT-212	1853	VT-176
HK854H	VT-108	966	VT-46	2050	VT-245
860	VT-17	966A	VT-46-A	2051	VT-109
861	VT-19	972	VT-42	2525D5	VT-111
864, 864 special ..	VT-24	975A	VT-187	A5586	VT-123
865	VT-55	1005, CK1005 ..	VT-195	A5588	VT-128
866	VT-46	1006, CK1006 ..	VT-249	7184, KR7184 ..	VT-227
866A, 866JR ..	VT-46-A	1148, E1148, HY-		8007	VT-219
869	VT-39	E1148	VT-232	8011	VT-240
869A	VT-39-A	1201	VT-241	8012	VT-228
872	VT-42	1203A	VT-243	8021	VT-255
872A	VT-42-A	1291	VT-182	9002	VT-202
879	VT-119	1294	VT-183	9003	VT-203
884	VT-222	1299	VT-185	D161831	VT-279

31. TUBE TEST DATA.

NOTE: A Star (★) appearing in Notations Column indicates that the PLATE CAP of the tube should be connected to the UPPER LEFT CONTACT of the 6-pin socket. A 12-inch lead with clip and banana plug is provided for that purpose.

Tube Type	Socket Letter	Select. A	Select. B	Fil. Volts	Potent. L	Potent. R	Mut. Cond. Press	Notations
00A	A	2	10	5	23	27	666	Ampl.
0A4G	E	10	2	†	15	0	....	Diode †Tube strikes at 50V.
01A	A	2	10	5	26	39	725	Ampl.
0Z4	E	4	8	...	...	...	....	Check for Shorts
0Z4	E	2	9	...	60	0	....	0Z4 Button
0Z4	E	10	2	...	60	0	....	0Z4 Button
1A3	H	10	5	1.5	0	0	....	Diode Also Press 117N7 But.
1A4	A	2	5	1	27	24	750	Ampl.
1A5G	E	8	5	1.5	32	35	800	Ampl.
1A6	C	1	5	2	0	29	500	Ampl. Section
1A6	C	9	7	2	60	29	150	Ampl. Osc. Sec. OK over 120
1A7G	E	7	7	1.5	32	20	800	Ampl. Pent. Section
1A7G	E	12	7	1.5	60	38	300	Ampl. Osc. Sec. OK over 240
1B4	A	2	5	2	18	29	640	Ampl.
1B5	C	7	8	2	60	23	475	Ampl. Sec. OK over 380
1B5	C	10	8	2	0	0	....	Diode But.
1B5	C	12	3	2	0	0	....	Diode But.
1B7G	E	7	7	1.5	32	20	800	Ampl. Pent. Section
1B7G	E	12	7	1.5	60	38	300	Ampl. Osc. Sec. OK over 240
1C5G	E	8	5	1.5	55	36	1550	Ampl.
1C6	C	1	5	2	20	24	560	Ampl. Section
1C6	C	9	7	2	60	41	300	Ampl. Osc. Sec. OK over 240
1C7G	E	2	5	2	20	24	650	Ampl. Section
1C7G	E	12	7	2	60	41	300	Ampl. Osc. Sec. OK over 240
1D5G	E	2	5	2	27	24	750	Ampl.
1D7G	E	2	5	2	0	29	500	Ampl. Section
1D7G	E	12	7	2	60	35	200	Ampl. Osc. Sec. OK over 160
1D8GT	E	8	5	1.5	35	41	925	Ampl. Pent. Section
1D8GT	E	11	5	1.5	11	9	575	Ampl. Triode Section
1D8GT	E	5	1	1.5	0	0	....	Diode Section
1E4G	E	7	5	1.5	32	30	825	Ampl.
1E5G	E	2	5	2	18	29	640	Ampl.
1E7G	E	8	8	2	45	17	1150	Ampl. No. 1 Plate
1E7G	E	11	6	2	45	17	1150	Ampl. No. 2 Plate
1F4	B	1	5	2	51	19	1400	Ampl.
1F5G	E	8	5	2	51	19	1400	Ampl.
1F6	C	1	7	2	20	21	650	Ampl. Section
1F6	C	11	1	2	0	0	....	Diode But. OK over 500
1F6	C	5	5	2	0	0	....	Diode But. OK over 500

Tube Type	Socket Letter	Select. A	Select. B	Fil. Volts	Potent. L	Potent. R	Mut. Cond. Press	Notations
1F7G	E	1	5	2	20	21	650	Ampl. Pentode Sec.
1F7G	E	4	5	2	0	0	....	Diode Button
1F7G	E	7	1	2	0	0	....	Diode Button
1G4G	E	7	5	1.5	33	40	825	Ampl.
1G5G	E	8	5	2	54	30	1500	Ampl.
1G6G	E	2	9	1.5	22	13	675	Ampl. No. 1 Plate
1G6G	E	12	5	1.5	22	13	675	Ampl. No. 2 Plate
1H4G	E	7	5	2	36	33	900	Ampl.
1H5G	E	8	5	1.5	60	13	275	Ampl. OK over 220
1H5G	E	8	1	1.5	0	0	....	Diode Button
1H6G	E	7	8	2	60	23	475	Ampl. Section
1H6G	E	10	8	2	0	0	....	Diode Button
1H6G	E	11	3	2	0	0	....	Diode Button
1J5G	E	8	5	2	37	37	950	Ampl.
1J6G	E	8	8	2	42	12	1000	Ampl. No. 1 Plate
1J6G	E	11	6	2	42	12	1000	Ampl. No. 2 Plate
1L4	H	1	7	1.5	43	16	1025	Ampl. Short on 4-5
1LA4	F	6	2	1.5	32	35	800	Ampl.
1LA6	F	6	3	1.5	32	20	800	Ampl. Pent. Section
1LA6	F	2	8	1.5	60	38	300	Ampl. Osc. Sec. OK over 240
1LB4	F	6	2	1.5	38	42	925	Ampl.
1LC5	F	6	2	1.5	30	24	775	Ampl. Short on 4-5
1LC6	F	6	3	1.5	41	19	1000	Ampl. Pent. Sect.
1LC6	F	2	8	1.5	10	19	550	Ampl. Osc. Sect.
1LD5	F	6	2	1.5	14	23	600	Ampl. Pent. Sec.
1LD5	F	4	9	1.5	0	0	....	Diode
1LE3	F	6	2	1.5	50	0	1300	Ampl.
1LH4	F	6	3	1.5	60	13	275	Ampl. Sec. OK over 220
1LH4	F	10	10	1.5	0	0	....	Diode Section
1LN5	F	6	2	1.5	28	9	750	Ampl. Short on 4-5
1N5G	E	8	5	1.5	28	9	750	Ampl.
1N6G	E	8	5	1.5	31	35	800	Ampl.
1P5G	E	8	5	1.5	31	9	800	Ampl.
1Q5G	E	8	5	1.5	61	30	2100	Ampl.
1R4	F	10	5	1.5	0	0	....	Diode
1R5	H	7	7	1.5	19	29	650	Ampl. No. 1 Grid, Short on 4-5
1R5	H	1	7	1.5	0	29	500	Ampl. No. 2 Grid
1S4	H	4	6	1.5	34	82	850	Diode Button, Short on 3-4-5
1S5	H	6	6	1.5	9	28	525	Ampl. Pent. Section
1S5	H	3	6	1.5	0	0	....	Diode
1SA6GT	E	3	4	1.5	39	19	950	Ampl.
1SB6GT	E	2	5	1.5	20	22	650	Ampl.
1T4	H	1	7	1.5	28	28	750	Ampl. Short on 4-5
1T5GT	E	8	5	1.5	46	37	1150	Ampl.
1V	A	1	5	6.3	40	0	....	Rect. St.
2A3	A	2	10	2.5	67	55	3000	Ampl.
2A4G	E	7	5	2.5	76	*	....	Press Rect. Std. But. Tube strikes at about 60
2A5	C	8	5	2.5	60	24	2000	Ampl.

SUPPLEMENTARY DATA

Tube Type	Socket Letter	Select. A	Select. B	Fil. Volts	Potent. L	Potent. R	Mut. Cond. Press	Notations
2A6	C	7	6	2.5	28	9	750	Ampl. Section
2A6	C	10	6	2.5	0	0	....	Diode Button
2A6	C	10	3	2.5	0	0	....	Diode Button
2A7	D	7	6	2.5	41	18	1000	Ampl. Section
2A7	D	10	6	2.5	60	25	400	Ampl. Osc. OK over 320
2B6	D	3	2	2.5	15	30	600	Ampl. Input Section
2B6	D	7	6	2.5	64	12	2500	Ampl. Output Sec. Short on 3
2B7	D	7	6	2.5	41	25	1000	Ampl. Pentode Section
2B7	D	10	6	2.5	0	0	....	Diode Button
2B7	D	10	3	2.5	0	0	....	Diode Button
2C21	D	10	3	6.3	51	14	1375	Ampl. Plate No. 1
2C21	D	3	3	6.3	51	14	1375	Ampl. Plate No. 2
2C22	E	7	2	6.3	67	11	3000	Ampl. NOTE A
2V3G	E	7	1	2.5	0	0	....	Rect. Std. OK over 1000
2W3	E	4	11	2.5	33	0	....	Rect. Std. Button
2X2	A	7	1	2.5	0	0	....	Rect. Std. OK over 1000 ★
2Z2	A	2	7	2.5	35	0	....	Rect. Std. Button
3A4	H	11	2	1.1	0	0	....	Diode Short on 3-4-5
3A5	H	8	8	3	60	12	2000	Ampl. Plt. No. 1 Short on 4-5
3A5	H	6	2	3	60	18	2000	Ampl. Plt. No. 2 Short on 4-5
3A8GT	E	8	5	2.5	28	10	750	Ampl. Pent. Sec. Short on 1
3A8GT	E	11	5	2.5	0	10	500	Ampl. Triode Section
3A8GT	E	5	1	2.5	0	0	....	Diode Section
3B5GT	E	8	5	2.5	54	49	1500	Ampl. Short on 4-5
3D6	F	6	2	1.5	61	30	2100	Ampl. Short on 1
3Q4	H	4	6	1.5	34	82	850	Press Diode But Short on 3-4-5
3Q5GT	E	8	5	3	58	31	1800	Ampl. Short on 4-5
3S4	H	4	6	2.5	28	82	750	Press Diode But Short on 3-4-5
4A6G	E	2	9	3	41	0	1000	Ampl. No. 1 Plate
4A6G	E	12	5	3	41	13	1000	Ampl. No. 2 Plate
5R4GY	E	4	11	5	40	0	....	Rect. Std. Plt. No. 1
5R4GY	E	5	11	5	40	0	....	Rect. Std. Plt. No. 2
5T4	E	4	11	5	40	0	....	Rect. Std.
5T4	E	5	11	5	40	0	....	Rect. Std.
5U4G	E	4	11	5	40	0	....	Rect. Std.
5U4G	E	5	11	5	40	0	....	Rect. Std.
5V4G	E	4	11	5	40	0	....	Rect. Std.
5V4G	E	5	11	5	40	0	....	Rect. Std.
5W4	E	4	11	5	33	0	....	Rect. Std.
5W4	E	5	11	5	33	0	....	Rect. Std.
5X4G	E	7	9	5	40	0	....	Rect. Std.
5X4G	E	12	4	5	40	0	....	Rect. Std.
5Y3	E	4	11	5	40	0	....	Rect. Std.
5Y3	E	5	11	5	40	0	....	Rect. Std.
5Y4G	E	7	9	5	35	0	....	Rect. Std.
5Y4G	E	12	4	5	35	0	....	Rect. Std.
5Z3	A	2	7	5	40	0	....	Rect. Std.
5Z3	A	3	7	5	40	0	....	Rect. Std.

Tube Type	Socket Letter	Select. A	Select. B	Fil. Volts	Potent. L	Potent. R	Mut. Cond. Press	Notations
5Z4	E	4	11	5	40	0	....	Rect. Std.
5Z4	E	5	11	5	40	0	....	Rect. Std.
6A3	A	2	10	6.3	67	55	3000	Ampl.
6A4	B	1	5	6.3	60	23	2000	Ampl.
6A5G	E	7	5	6.3	67	55	3000	Ampl.
6A6	D	1	5	6.3	53	10	1500	Ampl. No. 1 Plate
6A6	D	12	5	6.3	53	10	1500	Ampl. No. 2 Plate
6A7	D	7	6	6.3	41	18	1000	Ampl. Pent. Section
6A7	D	10	6	6.3	60	25	400	Ampl. Osc. Sec. OK over 320
6A8	E	7	7	6.3	41	18	1000	Ampl. Pent. Section
6A8	E	12	7	6.3	60	30	300	Ampl. Osc. Sec. OK over 240
6AB6G	E	8	5	6.3	53	0	1450	Ampl.
6AB7	E	4	2	6.3	69	0	3500	Ampl.
6AC5G	E	8	5	6.3	40	0	1000	Ampl.
6AC6G	E	8	5	6.3	63	0	2400	Ampl.
6AC7	E	4	2	6.3	71	0	3500	Ampl.
6AD7G	E	8	5	6.3	60	24	2000	Ampl. Pent. Sect.
6AD7G	E	5	5	6.3	60	65	325	Diode Triode Sec. OK over 260
6AE5G	E	7	5	6.3	47	56	1200	Ampl.
6AE6G	E	7	5	6.3	34	0	850	Ampl. No. 1 Plate
6AE6G	E	10	5	6.3	28	0	750	Ampl. No. 2 Plate
6AE7GT	E	1	8	6.3	54	27	1500	Ampl. No. 1 Cathode
6AE7GT	E	8	8	6.3	54	27	1500	Ampl. No. 2 Cathode
6AF5G	E	8	5	6.3	53	42	1500	Ampl.
6AG7	E	4	2	6.3	72	15	5000	Ampl.
6AH7GT	E	7	9	6.3	60	35	2000	Press Gas No. 1 Short on 2-3
6AH7GT	E	11	9	6.3	60	35	2000	Press Gas No. 1 Short on 3-4-5
6AK5	K	1	9	6.3	71	0	4500	Ampl. Short on 4-5
6AL6G	E	8	5	6.3	73	19	5000	Ampl. Connect Cap to Plate Contact of 5 Pin Socket
6B4G	E	7	5	6.3	67	55	3000	Ampl.
6B5	C	8	5	6.3	52	0	1500	Ampl.
6B6	E	7	5	6.3	28	9	750	Ampl. Section
6B6	E	10	5	6.3	0	0	....	Diode Button
6B6	E	10	2	6.3	0	0	....	Diode Button
6B7	D	7	6	6.3	41	25	1000	Ampl. Pent. Section
6B7	D	10	6	6.3	0	0	....	Diode Button
6B7	D	10	3	6.3	0	0	....	Diode Button
6B8	E	7	5	6.3	42	25	1000	Ampl. Pent. Section
6B8	E	10	5	6.3	0	0	....	Diode Button
6B8	E	10	2	6.3	0	0	....	Diode Button
6C4	L	2	9	6.3	67	20	3000	Ampl.
6C5	E	7	5	6.3	60	17	2000	Ampl.
6C6	C	1	7	6.3	49	17	1225	Ampl.
6C7	D	7	6	6.3	49	24	1250	Ampl. Section
6C7	D	10	6	6.3	0	0	....	Diode Button
6C7	D	10	3	6.3	0	0	....	Diode Button

SUPPLEMENTARY DATA

Tube Type	Socket Letter	Select. A	Select. B	Fil. Volts	Potent. L	Mut. R	Mut. Cond. Press	Notations
6C8G	E	8	7	6.3	42	14	1000	Ampl. No. 1 Plate
6C8G	E	11	7	6.3	42	14	1000	Ampl. No. 2 Plate
6D5	E	7	5	6.3	60	47	2000	Ampl.
6D6	C	1	7	6.3	56	17	1600	Ampl.
6D7	D	7	6	6.3	48	20	1225	Ampl.
6D8G	E	7	7	6.3	41	22	1000	Ampl. Pentode Section
6D8G	E	12	7	6.3	60	20	300	Ampl. Osc. Sec. OK over 240
6E6	D	1	5	6.3	52	23	1400	Ampl. No. 1 Plate
6E6	D	12	5	6.3	52	23	1400	Ampl. No. 2 Plate
6E7	D	7	6	6.3	55	20	1500	Ampl.
6F5	E	10	5	6.3	43	10	1000	Ampl.
6F6	E	8	5	6.3	60	24	2000	Ampl.
6F7	D	7	6	6.3	45	23	1100	Ampl. Pent. Section
6F7	D	10	6	6.3	60	23	450	Ampl. Tri. Sec. OK over 360
6F8G	E	8	7	6.3	60	13	2000	Ampl. No. 1 Plate
6F8G	E	11	7	6.3	60	13	2000	Ampl. No. 2 Plate
6G6G	E	8	5	6.3	61	19	2100	Ampl.
6H4GT	E	4	8	6.3	50	0	....	Diode Section
6H6	E	7	2	6.3	50	0	....	Diode Button
6H6	E	7	5	6.3	50	0	....	Diode Button
6J5G	E	7	5	6.3	60	24	2000	Ampl.
6J6	K	1	2	6.3	72	0	5000	Ampl. Plt. No. 1
6J6	K	11	8	6.3	72	0	5000	Ampl. Plt. No. 2
6J7	E	1	9	6.3	48	18	1225	Ampl.
6J8G	E	8	5	6.3	41	15	1000	Ampl. Heptode Section
6J8G	E	11	5	6.3	0	25	500	Ampl. Triode Section
6K5G	E	7	5	6.3	40	17	1000	Ampl.
6K6G	E	8	5	6.3	55	28	1600	Ampl.
6K7	E	8	5	6.3	54	16	1450	Ampl.
6K8	E	8	5	6.3	41	9	1000	Ampl. Hexode Section
6K8	E	11	5	6.3	63	9	2400	Ampl. Triode Section
6L5G	E	7	5	6.3	56	22	1500	Ampl.
6L6	E	8	5	6.3	73	19	5000	Ampl.
6L7	E	1	9	6.3	20	19	650	Ampl. Cap Grid
6L7	E	8	5	6.3	20	22	650	Ampl. Pin Grid
6N6MG	E	8	5	6.3	52	0	1500	Ampl.
6N7	E	2	9	6.3	53	10	1500	Ampl. No. 1 Plate
6N7	E	12	5	6.3	53	10	1500	Ampl. No. 2 Plate
6P5G	E	7	5	6.3	53	24	1450	Ampl.
6P7	E	3	12	6.3	45	23	1100	Ampl. Pent. Section
6P7	E	6	12	6.3	60	23	450	Ampl. Tri. Sec. OK over 360
6Q6G	E	7	5	6.3	40	14	1000	Ampl. Section
6Q6G	E	7	2	6.3	0	0	....	Diode Button
6Q7	E	7	5	6.3	33	14	800	Ampl. Section
6Q7	E	10	5	6.3	0	0	Diode Button
6Q7	E	10	2	6.3	0	0	Diode Button

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Tube Type	Socket Letter	Select. A	Select. B	Fil. Volts	Potent. L	Mut. R	Mut. Cond. Press	Notations
6R7	E	7	5	6.3	60	17	1900	Ampl. Section
6R7	E	10	5	6.3	0	0	....	Diode Button
6R7	E	10	2	6.3	0	0	....	Diode Button
6S7G	E	8	5	6.3	57	22	1750	Ampl.
6SA7	E	1	7	6.3	28	17	750	Ampl. Section
6SA7	E	7	7	6.3	28	17	750	Ampl. Osc. Section
6SC7	G	10	3	6.3	42	0	1000	Ampl.
6SC7	G	1	3	6.3	42	0	1000	Ampl.
6SD7GT	E	4	2	6.3	64	13	2500	Ampl.
6SF5	E	7	4	6.3	56	13	1600	Ampl.
6SF7	E	6	7	6.3	60	0	2000	Ampl.
6SF7	E	8	1	6.3	0	0	....	Diode
6SG7	E	4	2	6.3	68	10	3300	Ampl.
6SH7	E	4	2	6.3	69	0	3400	Ampl.
6SJ7	E	4	2	6.3	56	18	1575	Ampl.
6SK7	E	4	2	6.3	59	18	1900	Ampl.
6SL7	G	4	1	6.3	36	0	900	Ampl.
6SL7	G	10	4	6.3	53	0	1400	Ampl. Short on 2-3
6SN7	G	4	1	6.3	56	24	1650	Ampl. Plt. No. 1
6SN7	G	10	4	6.3	56	24	1650	Ampl. Plt. No. 2 Short on 2-3
6SQ7	G	6	6	6.3	42	0	1000	Ampl. Triode Sec.
6SQ7	G	3	7	6.3	0	0	....	Diode Diode No. 1
6SQ7	G	7	1	6.3	0	0	....	Diode Diode No. 2
6SR7	G	6	6	6.3	59	15	1900	Ampl. Triode Sect.
6SR7	G	3	7	6.3	0	0	....	Diode Diode No. 1
6SR7	G	7	1	6.3	0	0	....	Diode Diode No. 2
6SS7	E	4	2	6.3	58	16	1850	Ampl.
6ST7	G	6	7	6.3	59	12	1900	Ampl. Triode Section
6ST7	G	3	7	6.3	0	0	....	Diode Diode No. 1
6ST7	G	7	1	6.3	0	0	....	Diode Diode No. 2
6T7G	E	7	5	6.3	40	14	1000	Ampl. Triode Section
6T7G	E	10	5	6.3	0	0	....	Diode Button
6T7G	E	10	2	6.3	0	0	....	Diode Button
6U6GT	E	8	5	6.3	73	27	6200	Ampl.
6U7G	E	8	5	6.3	56	17	1600	Ampl.
6V6G	E	8	5	6.3	67	25	3000	Ampl.
6V7G	E	7	5	6.3	40	32	975	Ampl. Section
6V7G	E	10	5	6.3	0	0	....	Diode Button
6V7G	E	10	2	6.3	0	0	....	Diode Button
6W5	E	2	9	6.3	40	0	....	Rect. Std.
6W5	E	10	2	6.3	40	0	....	Rect. Std.
6W6GT	E	8	5	6.3	67	46	3000	Ampl.
6W7G	E	1	9	6.3	41	20	1000	Ampl.
6X5	E	2	9	6.3	40	0	....	Rect. Std.
6X5	E	10	2	6.3	40	0	....	Rect. Std.
6Y5	C	9	8	6.3	40	0	....	Rect. Std.
6Y5	C	12	8	6.3	40	0	....	Rect. Std.
6Y6G	E	8	5	6.3	74	36	7000	Ampl.
6Y7G	E	2	9	6.3	39	12	1000	Ampl. No. 1 Plate
6Y7G	E	12	5	6.3	39	12	1000	Ampl. No. 2 Plate

SUPPLEMENTARY DATA

Tube Type	Socket Letter	Select. A	Select. B	Fil. Volts	Potent. L	Mut. R	Cond. Press	Notations
6Z3	A	1	5	6.3	40	0	....	Rect. Std.
6Z4-84	B	7	7	6.3	40	0	....	Rect. Std.
6Z4-80	B	5	1	6.3	40	0	....	Rect. Std.
6Z5	C	9	12	6.3	40	0	....	Rect. Std.
6Z5	C	12	12	6.3	40	0	....	Rect. Std.
6Z7G	E	2	9	6.3	45	0	1200	Ampl. No. 1 Plate
6Z7G	E	12	5	6.3	45	0	1200	Ampl. No. 2 Plate
6ZY5G	E	7	2	6.3	40	0	....	Rect. Std.
6ZY5G	E	7	5	6.3	40	0	....	Rect. Std.
7A4	F	6	2	6.3	66	14	2600	Ampl.
7A5	F	6	2	6.3	71	23	6000	Ampl.
7A6	F	8	5	6.3	40	0	....	Diode Short 1-4-5
7A6	F	11	5	6.3	40	0	....	Diode
7A7	F	6	2	6.3	58	22	1750	Ampl.
7A8	F	5	3	6.3	41	20	1000	Ampl. Section
7A8	F	8	10	6.3	0	21	500	Ampl. Osc. Section
7B4	F	6	2	6.3	43	10	1000	Ampl.
7B5	F	6	2	6.3	56	28	1600	Ampl.
7B6	F	2	3	6.3	28	9	750	Ampl. Sec. Short 1-4-5
7B6	F	8	3	6.3	0	0	....	Diode
7B6	F	6	10	6.3	0	0	....	Diode
7B7	F	5	4	6.3	57	22	1700	Ampl.
7B8	F	5	3	6.3	40	22	1000	Ampl. Pentode Section
7B8	F	8	10	6.3	0	15	500	Ampl. Osc. Section
7C4	F	9	5	6.3	25	0	....	Diode
7C5	F	6	2	6.3	67	25	3000	Ampl.
7C6	F	2	3	6.3	15	8	600	Ampl. Sec. Short 1-4-5
7C6	F	8	3	6.3	0	0	....	Diode
7C6	F	6	10	6.3	0	0	....	Diode
7C7	F	6	2	6.3	49	18	1300	Ampl. Section
7E5	N	12	4	6.3	67	0	3000	Ampl. Short on 1-2-5
7E6	F	2	3	6.3	59	15	1900	Ampl. Sec. Short 1-4-5
7E6	F	8	3	6.3	0	0	....	Diode
7E6	F	12	10	6.3	0	0	....	Diode
7E7	F	6	3	6.3	49	18	1300	Ampl. Pent. Section
7E7	F	1	8	6.3	0	0	....	Diode
7E7	F	4	8	6.3	0	0	....	Diode
7F7	F	2	9	6.3	56	0	1600	Ampl. No. 1 Plate Short on 1
7F7	F	12	5	6.3	56	0	1600	Ampl. No. 2 Plate
7H7	F	6	2	6.3	67	0	3000	Ampl.
7J7	F	6	3	6.3	31	15	800	Ampl. Hexode Section
7J7	F	2	8	6.3	42	15	1000	Ampl. Triode Section
7K7	F	2	8	6.3	41	0	1000	Ampl. Triode Short on 1-4-5
7K7	F	9	2	6.3	0	0	....	Diode Diode No. 1
7K7	F	5	9	6.3	0	0	....	Diode Diode No. 2
7L7	F	6	2	6.3	60	10	2000	Ampl.
7N7	F	2	9	6.3	60	13	2000	Ampl. Plate No. 1 Short on 1-4-5
7N7	F	12	5	6.3	60	13	2000	Ampl. Plate No. 2

Tube Type	Socket Letter	Select. A	Select. B	Fil. Volts	Potent. L	Mut. R	Cond. Press	Notations
7Q7	F	6	2	6.3	33	17	800	Ampl.
7R7	F	6	3	6.3	67	8	3000	Ampl. Pentode Section
7R7	F	1	8	6.3	0	0	....	Diode Diode No. 1
7R7	F	4	8	6.3	0	0	....	Diode Diode No. 2
7S7	F	6	3	6.3	15	53	1500	Ampl. Hexode
7S7	F	2	8	6.3	0	53	1500	Ampl. Triode
7V7	F	6	2	6.3	72	5	4400	Ampl.
7W7	F	6	2	6.3	67	9	3000	Ampl. Short on 1-4-5
7Y4	F	1	6	6.3	40	0	....	Rect. Std.
7Y4	F	6	6	6.3	40	0	....	Rect. Std.
7Z4	F	1	6	6.3	40	0	....	Rect. Std.
7Z4	F	6	6	6.3	40	0	....	Rect. Std.
10	A	2	10	7.5	50	32	1250	Ampl.
10Y	A	2	10	7.5	53	10	1500	Ampl. (Also 10 special)
12A	A	2	10	5	57	36	1650	Ampl.
12A5	D	1	12	6.3	...	...	....	Check for Shorts
12A5	D	2	10	12.6	58	42	1800	Ampl.
12A6	E	8	5	12.6	67	10	3000	Ampl.
12A7	D	7	6	12.6	39	39	975	Ampl. Pent. Section
12A7	D	7	3	12.6	40	0	....	Rect. Std.
12A8GT	E	7	7	12.6	41	18	1000	Ampl. Pent. Section
12A8GT	E	12	7	12.6	60	30	300	Ampl. Osc. Sec. OK over 240
12AH7GT	E	7	9	12.6	60	35	2000	Press Gas No. 1 Short on 2-3
12AH7GT	E	11	9	12.6	60	35	2000	Press Gas No. 1 Short on 3-4-5
12B7	F	6	2	12.6	59	18	1900	Ampl.
12B8GT	E	7	7	12.6	0	0	....	Test for Shorts
12B8GT	E	1	7	12.6	58	18	1800	Ampl. Pent. Section
12B8GT	E	11	1	12.6	60	0	2000	Ampl. Triode Section
12C8	E	7	5	12.6	45	20	1150	Ampl. Pent. Section
12C8	E	10	5	12.6	0	0	....	Diode
12C8	E	10	2	12.6	0	0	....	Diode
12F5GT	E	10	5	12.6	41	10	1000	Ampl.
12H6	E	7	2	12.6	50	0	....	Diode
12H6	E	7	5	12.6	50	0	....	Diode
12J5GT	E	7	5	12.6	60	24	2000	Ampl.
12J7GT	E	1	9	12.6	48	18	1225	Ampl.
12K7GT	E	8	5	12.6	54	20	1450	Ampl.
12K8	E	8	5	12.6	41	9	1000	Ampl. Hex. Sec.
12K8	E	11	5	12.6	63	9	2400	Ampl. Triode Sec.
12Q7GT	E	7	5	12.6	33	14	800	Ampl. Triode Sec.
12Q7GT	E	10	5	12.6	0	0	....	Diode
12Q7GT	E	10	2	12.6	0	0	....	Diode
12SA7	E	1	7	12.6	28	17	750	Ampl. No. 1 Grid
12SA7	E	7	7	12.6	28	17	750	Ampl. No. 2 Grid
12SC7	G	10	3	12.6	42	0	1000	Ampl.
12SC7	G	1	3	12.6	42	0	1000	Ampl.
12SF5	E	7	4	12.6	56	13	1600	Ampl.

SUPPLEMENTARY DATA

Tube Type	Socket Letter	Select. A	Select. B	Fil. Volts	Potent. L	Mut. R	Cond. Press	Notations
12SF7	G	6	7	12.6	60	0	2000	Ampl.
12SF7	G	8	1	12.6	0	0	....	Diode
12SG7	7	4	2	12.6	68	10	3300	Ampl.
12SH7	E	4	2	12.6	69	0	3400	Ampl.
12SJ7	E	4	2	12.6	56	18	1575	Ampl.
12SK7	E	4	2	12.6	59	18	1900	Ampl.
12SL7	G	4	1	12.6	53	0	1400	Ampl. Short on 2-3
12SL7	G	10	4	12.6	53	0	1400	Ampl. Short on 2-3
12SN7	G	4	1	12.6	67	0	3000	Ampl. Plt. No. 1
12SN7	G	10	4	12.6	67	0	3000	Ampl. Plt. No. 2 Short on 2-3
12SQ7	G	6	6	12.6	42	0	1125	Ampl. Triode Sect.
12SQ7	G	3	7	12.6	0	0	....	Diode Diode No. 1
12SQ7	G	7	1	12.6	0	0	....	Diode Diode No. 2
12SR7	G	6	6	12.6	59	15	1900	Ampl. Triode Sect.
12SR7	G	3	7	12.6	0	0	....	Diode Diode No. 1
12SR7	G	7	1	12.6	0	0	....	Diode Diode No. 2
12Z3	A	1	5	12.6	40	0	....	Rect. Std.
12Z5	D	6	1	6.3	40	0	....	Check for Shorts
12Z5	D	1	8	12.6	40	0	....	Rect. Std.
12Z5	D	12	8	12.6	40	0	....	Rect. Std.
14A4	F	6	2	12.6	66	14	2600	Ampl.
14A7	F	6	2	12.6	59	18	1900	Ampl.
14B6	F	2	3	12.6	44	0	1100	Ampl. Triode Sec. Short on 1-4-5
14B6	F	8	3	12.6	0	0	....	Diode No. 1
14B6	F	12	10	12.6	0	0	....	Diode No. 2
14B8	F	5	3	12.6	40	22	1000	Ampl. Pentode Section
14B8	F	8	10	12.6	0	15	500	Ampl. Osc. Section
14C5	F	6	2	12.6	69	19	3700	Ampl.
14C7	F	6	2	12.6	63	9	2275	Ampl.
14E6	F	2	3	12.6	58	10	1800	Ampl. Triode Sect. Short on 1-4-5
14E6	F	8	3	12.6	0	0	....	Diode Diode No. 1
14E6	F	6	10	12.6	0	0	....	Diode Diode No. 2
14E7	F	6	3	12.6	50	20	1300	Ampl.
14E7	F	1	8	12.6	0	0	....	Diode
14E7	F	10	10	12.6	0	0	....	Diode
14F7	F	2	9	12.6	56	0	1600	Ampl. Plate 1
14F7	F	12	5	12.6	56	0	1600	Ampl. Plate 2
14H7	F	6	2	12.6	67	0	3000	Ampl.
14J7	F	6	3	12.6	31	15	800	Ampl. Hex. Sec.
14J7	F	2	8	12.6	42	15	1000	Ampl. Triode Sec.
14N7	F	2	9	12.6	60	13	2000	Ampl. Short on 1-4-5 Plt. 1
14N7	F	12	5	12.6	60	13	2000	Ampl. Plt. 3
14Q7	F	6	2	12.6	31	14	800	Ampl.
14R7	F	6	3	12.6	67	8	3000	Ampl. Pentode Section
14R7	F	1	8	12.6	0	0	....	Diode Diode No. 1
14R7	F	4	8	12.6	0	0	....	Diode Diode No. 2
14S7	F	6	3	12.6	53	15	1500	Ampl. Heptode Section
14S7	F	2	8	12.6	53	0	1500	Ampl. Triode Section

Tube Type	Socket Letter	Select. A	Select. B	Fil. Volts	Potent. L	Potent. R	Mut. Cond. Press	Notations
14W7	F	6	2	12.6	67	9	3000	Ampl.
14Y4	F	1	6	12.6	40	0	....	Rect. Std.
14Y4	F	6	6	12.6	40	0	....	Rect. Std.
14Z3	A	1	5	12.6	40	0	....	Rect. Std.
15	B	7	6	2	16	18	625	Ampl.
19	C	8	8	2	42	12	1000	Ampl.
19	C	11	6	2	42	12	1000	Ampl.
22	A	2	5	3	0	37	500	Ampl.
24	B	7	6	2.5	42	10	1000	Ampl. Also 24A
25A6	E	8	5	25	62	35	2300	Ampl.
25A7	E	11	5	25	40	0	....	Check for Shorts
25A7	E	11	5	25	40	0	....	Rect. Std.
25A7	E	8	5	25	58	35	1800	Ampl.
25AC5	E	7	5	25	52	0	1500	Ampl.
25B5	C	8	5	25	64	0	2500	Ampl.
25B6G	E	8	5	25	71	43	4000	Ampl.
25B8GT	E	1	7	25	60	18	2000	Ampl. Pentode Section
25B8GT	E	11	1	25	54	8	1500	Ampl. Triode Section
25C6G	E	8	5	25	74	36	7000	Ampl.
25D8GT	E	8	5	25	59	15	1900	Ampl. Pent. Section
25D8GT	E	11	5	25	45	0	1100	Ampl. Triode Section
25D8GT	E	5	1	25	0	0	....	Diode
25L6	E	8	5	25	75	15	8000	Ampl.
25N6G	E	8	5	25	64	0	2500	Ampl.
25X6	E	7	2	25	40	0	....	Rect. Std. Plate No. 1
25X6	E	7	5	25	40	0	....	Rect. Std. Plate No. 2
25Y5	C	7	8	25	40	0	....	Rect. Std.
25Y5	C	12	8	25	40	0	....	Rect. Std.
25Z3	A	1	5	25	40	0	....	Rect. Std.
25Z4	E	7	2	25	35	0	....	Rect. Std.
25Z5	C	7	8	25	40	0	....	Rect. Std.
25Z5	C	12	8	25	40	0	....	Rect. Std.
25Z5MG	E	7	2	25	40	0	....	Rect. Std.
25Z5MG	E	7	5	25	40	0	....	Rect. Std.
25Z6	E	7	2	25	40	0	....	Rect. Std.
25Z6	E	7	5	25	40	0	....	Rect. Std.
26	A	2	10	1.5	46	35	1150	Ampl.
27	B	1	6	2.5	40	34	1000	Ampl. Also 27S
28D7	F	8	1	25	60	12	2000	Diode Plt. No. 1
28D7	F	3	6	25	60	12	2000	Ampl. Plt. No. 2
30	A	2	10	2	36	33	900	Ampl.
30 special	A	2	10	2	43	30	1025	Ampl.
31	A	2	10	2	35	53	925	Ampl.
32	A	2	5	2	19	30	640	Ampl.
32L7GT	E	11	5	35	0	0	....	Test for Shorts
32L7GT	E	8	5	35	71	18	4800	Ampl.
32L7GT	E	11	5	35	40	0	....	Rect. Std.
33	B	1	5	2	50	29	1450	Ampl.

SUPPLEMENTARY DATA

Tube Type	Socket Letter	Select. A	Select. B	Fil. Volts	Potent. L	Potent. R	Mut. Cond. Press	Notations
RK33	D	3	3	6.3	42	28	1000	Ampl.
RK33	D	9	3	6.3	42	28	1000	Ampl.
34	A	2	5	2	14	27	600	Ampl.
35	B	7	6	2.5	42	20	1020	Ampl. Also 35S
35A5	F	6	2	35	74	27	5900	Ampl.
35L6GT	E	8	5	35	71	32	5800	Ampl.
35Z3	F	1	1	35	35	0	....	Rect. Std.
35Z4GT	E	10	2	35	40	0	....	Rect. Std.
35Z5GT	E	1	3	BLST	40	0	....	Short Test—Should light on 1-2-3-4-5
35Z5GT	E	11	1	35	40	0	....	Rect. Std.
35Z6G	E	7	2	35	40	0	....	Rect. Std. Plate No. 1
35Z6G	E	7	5	35	40	0	....	Rect. Std. Plate No. 2
36	B	7	6	6.3	43	20	1050	Ampl.
37	B	1	6	6.3	36	34	900	Ampl.
38	B	7	6	6.3	41	32	1050	Ampl.
39-44	B	7	6	6.3	41	23	1000	Ampl.
40	A	2	10	5	60	26	200	Ampl. OK over 160
41	C	8	5	6.3	55	28	1600	Ampl.
42	C	8	5	6.3	60	24	2000	Ampl.
43	C	8	5	25	62	35	2300	Ampl.
45	A	2	10	2.5	59	50	1850	Ampl.
45Z3	H	10	2	35	35	0	....	Rect. Std. also Press 117N7
45Z5GT	E	11	1	35	40	0	....	Rect. Std.
45Z5GT	E	1	3	BLST	40	0	....	Short Test—Should light on 1-2-3-4-5
46	B	1	5	2.5	60	25	2000	Ampl.
47	B	1	5	2.5	60	18	2000	Ampl.
48	C	8	5	25	60	48	2000	Ampl.
49	B	1	5	2	45	40	1125	Ampl.
50	A	2	10	7.5	53	50	1500	Ampl.
50A5	F	6	2	50	74	25	7500	Ampl.
50C6G	E	8	5	50	74	36	7000	Ampl.
50L6GT	E	8	5	50	74	25	7500	Ampl.
50Y6GT	E	7	2	50	40	0	....	Rect. Std. Plate No. 1
50Y6GT	E	7	5	50	40	0	....	Rect. Std. Plate No. 2
50Z7G	E	7	6	50	40	0	....	Rect. Std. Plate No. 1 Short on 4-5
50Z7G	E	10	2	50	40	0	....	Rect. Std. Plate No. 2
51	B	7	6	2.5	42	20	1020	Ampl. Also 51S
52	B	1	5	6.3	63	27	2400	Ampl.
53	D	1	5	2.5	53	10	1500	Ampl. No. 1 Plate
53	D	12	5	2.5	53	10	1500	Ampl. No. 2 Plate
55	C	7	6	2.5	40	32	975	Ampl.
55	C	10	6	2.5	0	0	....	Diode OK over 500
55	C	10	3	2.5	0	0	....	Diode OK over 500
56	B	1	6	2.5	53	26	1450	Ampl.
57	C	2	5	2.5	48	17	1225	Ampl. Also 57S

Tube Type	Socket Letter	Select. A	Select. B	Fil. Volts	Potent. L	Potent. R	Mut. Cond. Press	Notations
57A	A	2	5	6.3	48	17	1225	Ampl. Also 57AS
58	C	2	5	2.5	54	20	1450	Ampl. Also 58S
58A	C	2	5	6.3	54	20	1450	Ampl. Also 58AS
59	D	8	8	2.5	60	18	2000	Ampl.
70A7GT	E	8	5	75	71	17	5800	Ampl. Short on 1-4-5
70A7GT	E	11	5	75	0	0	....	Diode OK over 300
70L7GT	E	6	12	75	71	34	....	Check for Shorts
70L7GT	E	7	7	75	71	34	5000	Ampl.
70L7GT	E	5	1	75	40	0	....	Rect. Std.
71A	A	2	10	5	56	60	1650	Ampl.
75	C	7	6	6.3	28	9	750	Ampl. Section
75	C	10	6	6.3	0	0	....	Diode
75	C	10	3	6.3	0	0	....	Diode
75MG	E	9	5	6.3	28	9	750	Ampl. Section
75MG	E	12	2	6.3	0	0	....	Diode
75MG	E	12	5	6.3	0	0	....	Diode
76	B	1	6	6.3	53	24	1450	Ampl.
77	C	2	5	6.3	48	17	1225	Ampl.
78	C	2	5	6.3	54	20	1450	Ampl.
79	C	2	10	6.3	39	12	1000	Ampl. No. 1 Plate
79	C	5	10	6.3	39	12	1000	Ampl. No. 2 Plate
80	A	2	7	5	35	0	....	Rect. Std.
80	A	3	7	5	35	0	....	Rect. Std.
81	A	2	7	7.5	33	0	....	Rect. Std.
82	A	2	7	2.5	40	0	....	Rect. Std.
82	A	3	7	2.5	40	0	....	Rect. Std.
82V	A	2	7	2.5	40	0	....	Rect. Std.
82V	A	2	7	2.5	40	0	....	Rect. Std.
83	A	2	7	5	40	0	....	Rect. Std.
83	A	3	7	5	40	0	....	Rect. Std.
83V	A	2	7	5	40	0	....	Rect. Std.
83V	A	3	7	5	40	0	....	Rect. Std.
84-6Z4	B	7	7	6.3	40	0	....	Rect. Std.
84-6Z4	B	5	1	6.3	40	0	....	Rect. Std.
85	C	7	6	6.3	40	32	975	Ampl. Section
85	C	10	6	6.3	0	0	....	Diode
85	C	10	3	6.3	0	0	....	Diode
89	C	2	5	6.3	54	30	1550	Ampl.
99	A	2	10	3	60	45	425	Ampl. OK over 340
112A	A	2	10	5	57	36	1650	Ampl.
117L7GT	E	2	8	117	72	30	4000	Ampl. Short on 1-4-5
117L7GT	E	5	8	117	40	0	....	Rect. Std.
117M7GT	E	2	8	117	73	28	6000	Ampl. Short on 1-4-5
117M7GT	E	5	8	117	40	0	....	Rect. Std.
117N7GT	E	8	10	117	74	25	7000	Ampl.
117N7GT	E	4	3	117	40	0	....	Rect. Std. Also Press 117N7 But.

SUPPLEMENTARY DATA

Tube Type	Socket Letter	Select, A	Select, B	Fil. Volts	Potent. L	Mut. R	Mut. Cond. Press	Notations
117P7GT	E	8	10	117	70	25	4000	Ampl.
117P7GT	E	4	3	117	40	0	....	Rect. Std. Also Press 117N7
117Z4GT	E	10	2	117	40	0	....	Rect. Std.
117Z6G	E	2	7	117	75	0	....	Press Gas No. 1
117Z6G	E	10	2	117	75	0	....	Press Gas No. 1
								Early Tubes Short 1-3
								Late Tubes Short 3
717A	E	4	2	6.3	69	0	3500	Ampl.
801A	A	2	10	7.5	53	0	1500	Ampl.
802	D	10	3	6.3	60	18	2000	Ampl. ★
807	B	12	1	6.3	70	27	3800	Ampl. ★
816	A	7	1	2.5	20	0	....	Rect. Std. ★
837	D	10	3	12.6	71	0	4000	Ampl. ★
841	A	2	10	7.5	42	0	1000	Ampl.
842	A	2	10	7.5	46	50	1150	Ampl.
843	B	1	6	2.5	56	10	1625	Ampl.
864	A	2	10	1.5	18	37	650	Ampl.
865	A	10	4	7.5	16	28	625	Ampl. ★
866A	A	7	1	2.5	40	0	....	Rect. Std. ★
871	A	7	1	2.5	20	0	....	Rect. Std. ★
XXB	F	2	10	2.5	30	30	800	Ampl.
XXB	F	12	6	2.5	31	60	400	Ampl. OK over 320
XXD	F	12	5	12.6	64	0	2500	Ampl. Plt. No. 1 Short on 1-4-5
XXD	F	2	9	12.6	64	0	2500	Ampl. Plt. No. 2
XXFM	F	1	2	6.3	30	0	900	Ampl. Short 1-4-5
XXFM	F	12	8	6.3	0	0	....	Diode
XXFM	F	7	3	6.3	0	0	....	Diode
XXL	F	6	2	6.3	67	0	3000	Ampl.
879	A	7	1	2.5	0	0	....	Rect. Std. OK over 1000 ★
884	E	7	5	6.3	40	*	....	Rect. Std. Strikes at 60 on R
885	B	1	6	2.5	40	*	....	Rect. Std. Strikes at 60 on R
950	B	1	5	2	37	37	950	Ampl.
951	A	2	5	2	18	29	640	Ampl.
954	M	6	7	6.3	44	17	1100	Ampl.
955	M	9	7	6.3	59	18	1900	Ampl.
956	M	6	7	6.3	53	14	1500	Ampl.
957	M	9	7	1.1	19	23	650	Ampl. Short on 4-5
958	M	9	7	1.1	47	34	1200	Ampl. Short on 4-5
959	M	6	7	1.1	14	23	600	Ampl. Short on 4-5
1201	N	12	4	6.3	67	0	3000	Ampl. Short on 1-2-5
1203	F	9	5	6.3	25	0	....	Diode
1204	N	3	9	6.3	58	0	1800	Ampl. Short on 4-5
1231	F	5	4	6.3	71	10	4000	Ampl.
1232	F	5	4	6.3	60	15	2000	Ampl.
1284	F	6	2	12.6	60	23	2000	Ampl.
1291	F	1	6	1.5	0	15	2000	Diode Short on 4-5
								Reads in Green Plt. No. 1
1291	F	6	6	1.5	0	15	2000	Diode Reads in Green Plt. No. 2
1293	F	6	2	1.5	50	25	1300	Ampl.

Tube Type	Socket Letter	Select. A	Select. B	Fil. Volts	Potent. L	Potent. R	Mut. Cond. Press	Notations
1294	F	10	5	1.5	0	0	....	Diode
1299	F	6	2	1.5	61	30	2100	Ampl. Short on 1
1609	B	1	5	1.5	26	18	725	Ampl.
1612	E	1	9	6.3	20	19	650	Ampl. Cap Grid
1612	E	8	5	6.3	20	22	650	Ampl. Pin Grid
1613	E	8	5	6.3	62	0	2250	Ampl.
1616	A	7	1	2.5	35	0	....	Rect. Std. ★
1619	E	8	5	2.5	69	10	3400	Ampl.
1620	E	1	9	6.3	48	18	1225	Ampl.
1621	E	8	5	6.3	60	24	2000	Ampl.
1622	E	8	5	6.3	73	19	5000	Ampl.
1624	B	12	1	2.5	71	14	4000	Ampl. ★
1625	D	10	3	12.6	70	27	3800	Ampl. ★
1626	E	8	5	12.6	61	43	2100	Ampl.
1631	E	8	5	12.6	73	19	5000	Ampl.
1632	E	8	5	12.6	75	15	8000	Ampl.
1633	G	4	1	25	75	0	8500	Ampl. Plt. No. 1
1633	G	10	4	25	69	0	3400	Ampl. Plt. No. 2 Short on 2-3
1634	G	10	3	12.6	42	0	1000	Ampl. Plt. No. 1
1634	G	1	3	12.6	42	0	1000	Ampl. Plt. No. 2
1851	E	8	5	6.3	71	10	4000	Ampl.
1852	G	4	2	6.3	71	0	3500	Ampl.
1853	E	4	2	6.3	71	10	3500	Ampl.
HY113	O	7	5	1.5	0	40	500	Ampl.
HY115	O	7	5	1.5	60	32	370	Ampl. OK over 290
HY125	O	7	5	1.5	60	45	450	Ampl. OK over 360
HY145	O	7	5	1.5	60	32	370	Ampl. OK over 290
HY155	O	7	5	1.5	60	45	450	Ampl. OK over 360
2050	E	8	5	6.3	40	*	....	Rect. Std. Strikes at 32 on R
2051	E	8	5	6.3	40	*	....	Rect. Std. Strikes at 32 on R
7193	E	7	2	6.3	67	0	3000	Ampl. ★
9001	K	1	9	6.3	44	17	1100	Ampl. Short on 4-5
9002	L	2	9	6.3	59	18	1900	Ampl. Short on 4-5
9003	K	1	9	6.3	54	14	1500	Ampl. Short on 4-5
9006	L	2	9	6.3	20	0	....	Diode Short on 4-5
38142	A	2	10	7.5	62	30	2200	Ampl.

TO TEST MAGIC EYE TUBES: Insert in Socket C. Set proper Filament Voltage.
Press "Amp." Button

2E5—6AB5—6E5—6G5—6H5—6N5—6T5—6U5

A	B	
12	3	Eye Open.
12	2	Eye Closed.

6AD6—6AF6.

A	B	
2	8	Eye No. 1 Open, No. 2 Closed.
3	8	Eye No. 2 Open, No. 1 Closed.

SUPPLEMENTARY DATA

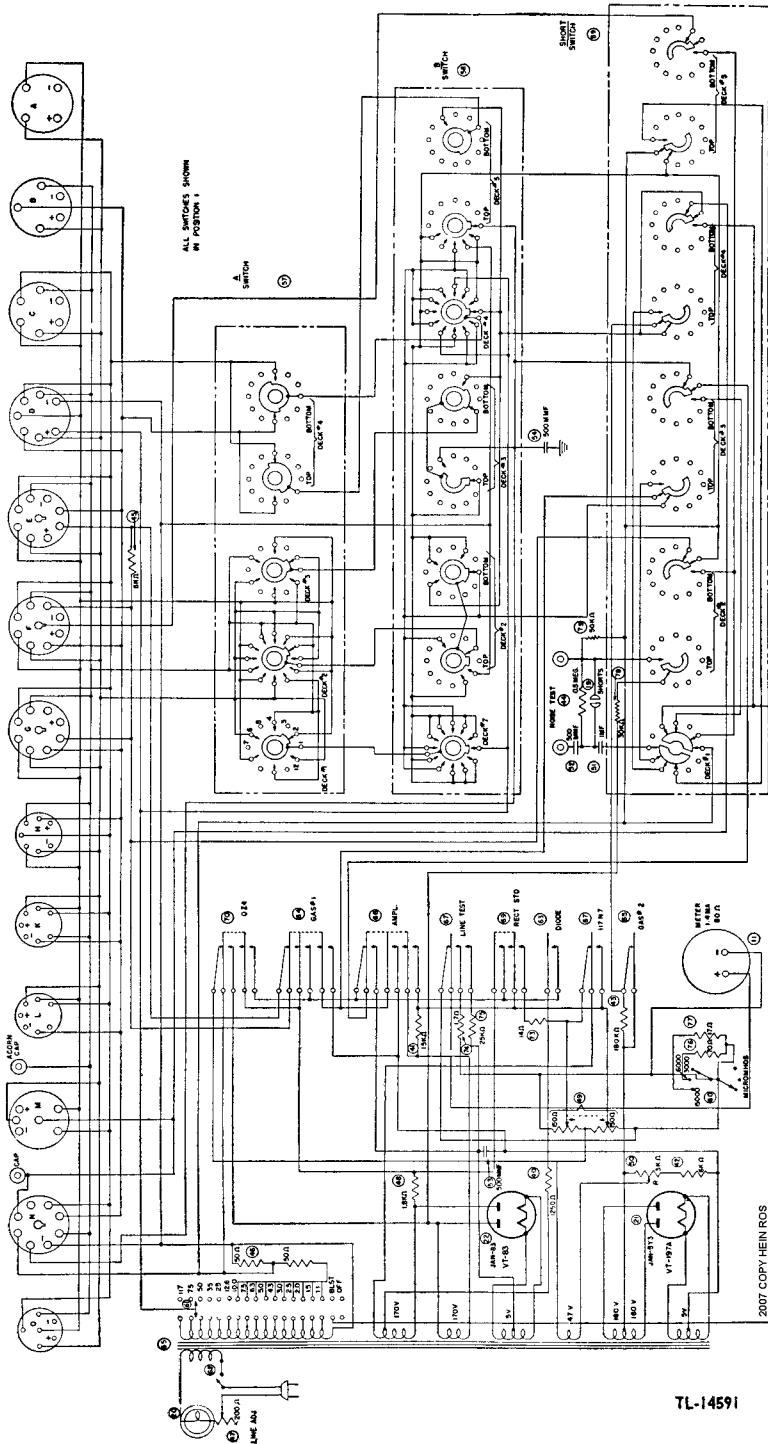


Figure 13. Tube Tester I-177, schematic diagram.

TL-14591

§ 32. MAINTENANCE PARTS LIST FOR TUBE TESTER I-177.

NOTE: Order maintenance parts by stock number, name, and description.
Only maintenance parts can be requisitioned.

Ref. symbol	Signal Corps stock No.	Name of part and description	Quant per unit	Run ning spares	Orgn stock	3d ech	4th ech	5th ech	Depot stock
71	3Z9824-56	BUTTON: plunger type; red bakelite; $\frac{1}{4}$ " diam; $1\frac{1}{4}$ " long.	1		*	*	*	*	*
72	3Z9824-56.1	BUTTON: plunger type; black bakelite; $\frac{1}{4}$ " diam; $1\frac{1}{4}$ " long.	7		*	*	*	*	*
52, 53, 54	3DK9500-106	CAPACITOR: moulded mica; 500-mmf \pm 20%; 400 v dc (working); wire leads.	3		*	*	*	*	*
51	3DA100-250	CAPACITOR: tubular; paper; 100,000-mmf \pm 15%; 400 v dc (working).	1		*	*	*	*	*
56	3E7197	CORD: line; with 2 No. 18 rubber-covered conduc- tors 8 ft. long; with rubber plug.	1		*	*	*	*	*
12, 13, 14, 15	2Z5581-5	JACK: pin; black bakelite.	4		*	*	*	*	*
3, 4, 5, 6, 7, 8, 9, 10	2Z5848	KNOB: bar; $1\frac{1}{4}$ " \times $\frac{5}{8}$ "; moulded black bakelite with white index line; for $\frac{1}{4}$ " shaft.	8		*	*	*	*	*

SUPPLEMENTARY DATA

11	3F1350	METER : 0-1.4-ma d-c milliammeter; resistance 80 ohms.	1
49	2Z7284.44	POTENTIOMETER : dual; wire-wound; 150 ohms per section; $\frac{1}{4}$ " shaft.	1
50	2Z7280-32	POTENTIOMETER : wire-wound; tapered; $\frac{1}{4}$ " shaft.	1
73	3Z6001D4-9	RESISTOR : fixed; wire-wound; 14-ohm $\pm \frac{1}{2}$ ohm; 1-watt.	1
74	3Z6001G7-4	RESISTOR : fixed; wire-wound; 17-ohm $\pm \frac{1}{2}$ ohm; 1-watt.	1
77	3Z6001G7-4	RESISTOR : fixed; wire-wound; 17-ohm $\pm \frac{1}{2}$ ohm; 1-watt; calibrated resistor for 15,000-microhmo range; special.	1
76	3Z6007-6	RESISTOR : fixed; wire-wound; 70-ohm ± 1 ohm; 1-watt.	1
46	3Z6010-110	RESISTOR : fixed; wire-wound; 2-section; 50-ohms each $\pm 2\%$; 10-watt.	1
40	3Z6125-2	RESISTOR : fixed; carbon; 1,250-ohm $\pm 10\%$; 1-watt.	1
48	3Z6180-14	RESISTOR : fixed; wire-wound; 1,800-ohm $\pm 10\%$; 10-watt.	1

* Indicates stock available.

32. MAINTENANCE PARTS LIST FOR TUBE TESTER I-177. (continued)

Ref. symbol	Signal Corps stock No.	Name of part and description	Quan- tity per unit	Run- ning spares	Orgn stock	3d ech	4th ech	5th ech	Depot stock
45	3Z6500-176	RESISTOR : fixed; carbon; 5,000-ohm \pm 15%; $1\frac{1}{2}$ -watt.	1			*	*	*	*
75	3Z6625-118	RESISTOR : fixed; wire-wound; 12,500-ohm; two in series to give 25,000 ohms.	2			*	*	*	*
41	3Z6615-27	RESISTOR : fixed; carbon; 15,000-ohm \pm 5%; 1-watt.	1			*	*	*	*
78	3Z6630-72	RESISTOR : 30,000-ohm \pm 15%.	1			*	*	*	*
79	3Z6650-137	RESISTOR : 50,000-ohm \pm 15%; 1-watt.	1			*	*	*	*
43	3Z6718-14	RESISTOR : carbon; 180,000-ohm \pm 15%; 1-watt.	1			*	*	*	*
44	3Z6700-91	RESISTOR : carbon; 500,000-ohm \pm 15%; $1\frac{1}{2}$ -watt.	1			*	*	*	*
47	3Z7200-5	RHEOSTAT : wire-wound; 200-ohm \pm 15%; 25-watt; $1\frac{1}{2}$ " shaft.	1			*	*	*	*
23, 24	2Z8674.8	SOCKET : tube; 4-pin; bakelite.	2			*	*	*	*
25	2Z8687	SOCKET : tube; 5-pin; bakelite.	1			*	*	*	*

SUPPLEMENTARY DATA

26	228688	SOCKET: tube; 6-pin; bakelite.	1
27	228677.6	SOCKET: tube; 7-pin; bakelite.	1
28, 29, 30	228678.62	SOCKET: tube; 8-pin; octal; bakelite.	3
31, 32	228678.21	SOCKET: receiver tube; standard locata.	2
33, 34, 35	228677.5	SOCKET: receiver tube; miniature; 7-prong; bakelite.	3
36	228676.2	SOCKET: receiver tube; bantam; 5-prong; bakelite.	1
37	228676.22	SOCKET: receiver tube; acorn; 5-prong; bakelite.	1
38	225884-47	SOCKET: candelabra.	1
39	628332	SOCKET: lamp; bayonet; single-contact.	1
63	329826-11.1	SWITCH: pushbutton; 2-blade, 1-make.	1
65	329826-11	SWITCH: pushbutton; 2-blade, 1-break.	1
68	329826-11.2	SWITCH: pushbutton; 3-blade, 1-make, 1-break.	1
69	329826-11.3	SWITCH: pushbutton; 4-blade, 2-make.	1
67	329826-11.4	SWITCH: pushbutton; 4-blade, 2-make, 1-break.	1

*Indicates stock available.

32. MAINTENANCE PARTS LIST FOR TUBE TESTER I-177. (continued)

Ref. Symbol	Signal Corps stock No.	Name of part and description	Quan- tity per unit	Run- ning spares	Ordn- er stuck	3d ech	4th ech	5th ech	Depot stock
70	3Z9826-11.5	SWITCH: pushbutton; 5-blade, 2-make, 1-break.	1			*	*	*	*
64	3Z9826-11.6	SWITCH: pushbutton; 6-blade, 2-make, 1-break.	1			*	*	*	*
66	3Z9826-11.7	SWITCH: pushbutton; 7-blade; 1 SPDT section, 1 DPST section.	1		*	*	*	*	*
60	3Z9825-55.11	SWITCH: selector; rotary; 3-position; 2-pole.	1		*	*	*	*	*
59	3Z9825-62.49	SWITCH: selector; rotary; 5-deck; 6-position; special contacts.	1		*	*	*	*	*
57	3Z9825-62.47	SWITCH: selector; rotary; 4-deck; 12-position; special multicontact.	1		*	*	*	*	*
58	3Z9825-62.48	SWITCH: selector; rotary; 5-deck; 12-position; special contacts.	1		*	*	*	*	*
61	3Z9880-9	SWITCH: selector; rotary; 18-position.	1		*	*	*	*	*
62	3Z9858-8.1	SWITCH: toggle; SPST; 3-amp; 250-volt; barrel $\frac{1}{2}$ " diam; $\frac{3}{8}$ " long.	1		*	*	*	*	*

SUPPLEMENTARY DATA

18	3F5700-177/L2	TEST LEAD: rubber covered; black; approx. 16" overall length with banana plug at one end.	1	*	*	*	*	*
55	229611.67	TRANSFORMER: filament and plate; primary 93-v ac, 60 cycle, 2 170-volt secondaries, 1 320-volt center-tapped secondary, 2 5-volt secondaries; 1 18-tap universal filament winding.	1	*	*	*	*	*
19	3F4056A/L2	LAMP: neon; $\frac{1}{4}$ -watt; candelabra base; 105-125 volts.	1	*	*	*	*	*
20	2Z5929-2	LAMP: auto; 6-candlepower; 6.3 volt.	1	*	*	*	*	*
21	2T197A	TUBE JAN 5Y3GT/G: VT-197A.	1	*	*	*	*	*
22	2T183	TUBE JAN 83: VT-83.	1	*	*	*	*	*

*Indicates stock available.

Orders No. 6397-Phila.-44, 24475-Phila.-44 and 27612-Phila.-44; 14000; August 44.

TECHNICAL MANUAL
TUBE TESTER I-177

CHANGES
No. 1 }

WAR DEPARTMENT
WASHINGTON 25, D. C., 24 October 1945

TM 11-2627, 3 August 1944, is changed as follows:
The classification RESTRICTED is removed from the manual by
Section IX, War Department Circular 186, 1945.

Figure 1.—Tube Tester I-177 in wooden case, with cover raised.



Figure 1.1—Tube Tester I-177 in metal case, with cover raised.

1. PURPOSE. Tube Tester I-177 *** of vacuum tube. Later equipments are inclosed in metal cases instead of the original

*This change supersedes TB 11-2627-1, June 1945.

wooden cases but all operate the same. The purpose of * * * of this instrument.

2. TUBE TESTER I-177 (figs. 1 and 1.1).

a. (Superseded.) This instrument is furnished either as an individual unit or as part of Test Set I-56-K. As a part of Test Set I-56-K it fits into a compartment of Carrying Case CS-130 (fig. 1.2). The weights and dimensions of the tube tester and other components of the test set are given below.

Equipment	Dimensions (in.)			Volume (cu. ft.)	Weight (lb)	
	Height	Width	Depth		Wooden case	Metal case
Voltohmometer I-166-----	5. 5	6. 0	7. 0	0. 13	4. 75	5. 5
Test Unit I-176-----	5. 5	11. 5	8. 5	0. 31	9. 0	10. 0
Tube Tester I-177-----	5. 75	15. 5	8. 5	0. 44	15. 75	16. 5
Case CS-130-----	14. 75	20. 5	9. 75	1. 76	-----	25. 6

The following table gives the dimensions and approximate weight of the packed units:

Equipment	Dimensions (in.)			Volume (cu. ft.)	Weight (lb)
	Height	Width	Depth		
Tube Tester I-177 (packed for domestic shipment)-----	8	17. 9	10. 5	0. 87	17
Tube Tester I-177, two in carton (packed for domestic shipment)-----	13. 5	17	10. 5	1. 39	37
Test Set I-56-K, one in a wooden case-----	15	21	11	2. 01	73
Test Set I-56-K, three in a wooden case-----	17. 5	23. 5	35	8. 33	215

b. Tube Tester I-177 * * * and 0-15,000 microohms. Most tube testers operate on 105- to 125-volt, 60-cycle alternating current. Some equipments on Orders No. 12139-Phila-45-10 and 28948-Phila-45-10 may be operated on 105 to 125 volts or on 210 to 250 volts, the range being determined by the setting of the switch mounted to the right of the SHORTS indicator. Tube testing data * * * of the cover.

4. SHORTS TEST.

* * * * *

c. Determine the type * * * of the instrument. If the tube is marked with Signal Corps nomenclature, use the table in section V of this manual or the table on the back of the first card in the tester to determine the commercial equivalent.

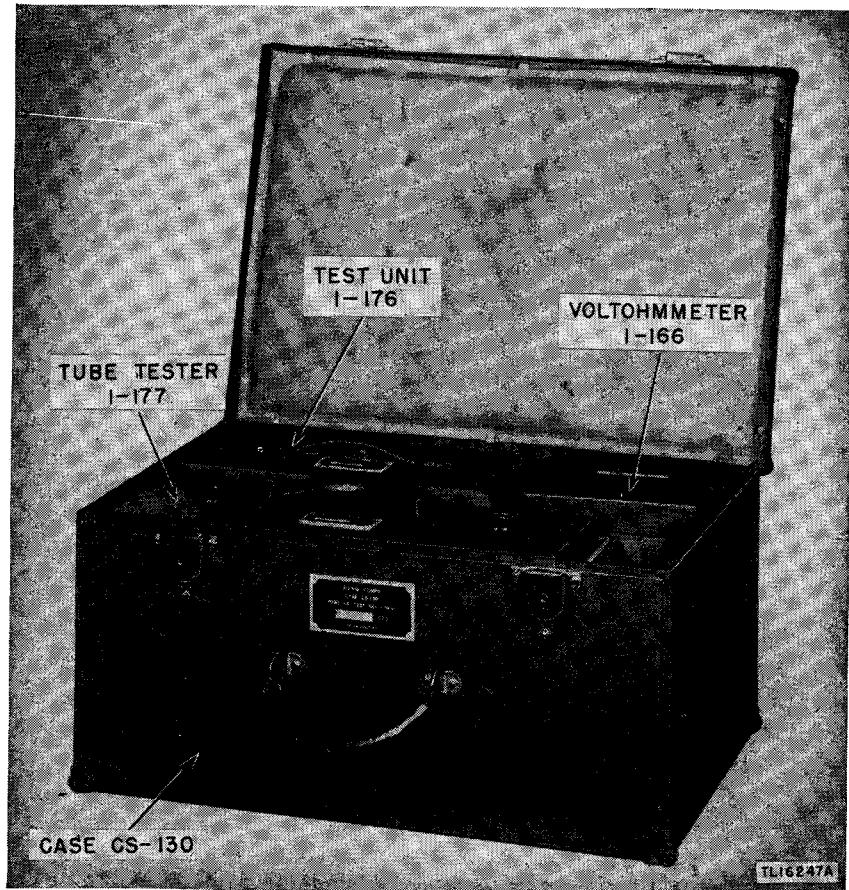


Figure 1.2.—Test Set I-56-K.

* * * * *

g. Insert the tube * * * headed Socket Letter. If the column headed Notations of the tube test data indicates the use of Adapter M-418* plug the adapter into the octal socket of the tester, and the tube into the adapter. Connect the left-hand lead to the left-hand plate pin and the right-hand lead to the right-hand plate pin. Proceed with the test in the normal manner.

* * * * *

7. GAS TEST.

* * * * *

*Adapter, Tube Socket: Signal Corps Adapter M-418. Signal Corps Stock No. 2Z299-418.

a. Carry out the shorts test procedure given in paragraph 4, then set the **SHORT-TUBE TEST** switch to **TUBE TEST**. If dealing with * * * or to rectifiers.

* * * * *

e. While holding down * * * free from gas.

NOTE: If the pointer cannot be brought down to 100 microohms by adjusting potentiometer R with the GAS NO. 1 button pressed, set R at 82, note the position of the pointer, and press GAS NO. 2 button to see if the pointer moves upward more than one scale division. In some cases * * * period of time.

12. GENERAL. Individual circuits of * * * for unauthorized repairs.

NOTE (Added): The complete schematic diagram of Tube Tester I-177 appears in figure 13. Some tube testers are provided with a power transformer having a single primary winding designed to function only from 105- to 125-volt a-c source. Others have a power transformer with a two-section primary which may be connected in series for 210- to 250-volt a-c operation, or in parallel for 105- to 125-volt a-c operation.

SECTION IV MAINTENANCE

NOTE (Superseded): Failure or unsatisfactory performance of equipment used by Army Ground Forces and Army Service Forces will be reported on WD AGO Form 468 (Unsatisfactory Equipment Report); by Army Air Forces, on Army Air Forces Form 54 (Unsatisfactory Report). If either form is not available, prepare letter containing the data elicited by the sample form shown in figure 8.1 without reproducing copies of the form.

26. (Superseded) PREVENTIVE MAINTENANCE TECHNIQUES.

a. *Meaning of Preventive Maintenance.* Preventive maintenance is a systematic series of operations performed at regular intervals on equipment, when turned off, to eliminate major break-downs, unwanted interruptions in service, and to keep equipment operating at top efficiency. To understand what is meant by preventive maintenance, it is necessary to distinguish between preventive maintenance, trouble shooting, and repair. The prime function of preventive maintenance is to *prevent break-downs* and, therefore, the need for

WAR DEPARTMENT UNSATISFACTORY EQUIPMENT REPORT							
FOR	TECHNICAL SERVICE Signal Corps	MATERIEL	DATE 1 Feb 45				
FROM	ORGANIZATION 175 Signal Repair Co	STATION	APO 110				
TO	NEXT SUPERIOR HEADQUARTERS Supply Sec, Hq Fourth Army Sig Sv	TECHNICAL SERVICE Signal Corps					
COMPLETE MAJOR ITEM							
NOMENCLATURE Radio Transmitter BC-123-A		TYPE Ground, vehicular	MODEL A				
MANUFACTURER American Radio Corp		U. S. A. REG. NO. Order No. 1234-Phila-45	SERIAL NO. 12345	DATE RECEIVED 5 Jan 45			
EQUIPMENT WITH WHICH USED (if applicable) Radio Set SCR-456-A in Tank, Medium, M4							
DEFECTIVE COMPONENT—DESCRIPTION AND CAUSE OF TROUBLE							
PART NO. Sig C	Type Capacitor C20; fixed;	MANUFACTURER American Radio Corp	DATE INSTALLED When manufactured				
Stk No. 3B47-2	1-mf; 500 vdcm	DESCRIPTION OF FAILURE AND PROBABLE CAUSE (If additional space is required, use back of form)					
Capacitor C20 shorts out due to humid operating conditions							
DATE OF INITIAL TROUBLE 15 Jan 45	TOTAL TIME INSTALLED —	TOTAL PERIOD OF OPERATION BEFORE FAILURE YEARS MONTHS DAYS HOURS MILES ROUNDS					
REASONABLE DESCRIPTION OF UNUSUAL SERVICE CONDITIONS AND ANY REMEDIAL ACTION TAKEN Operation in tropics; heavy rainfall. Was replaced and set given moistureproofing and fungiproofing treatment, 20 Jan 45.							
TRAINING OR SKILL OF USING PERSONNEL POOR PAIN GOOD X		RECOMMENDATIONS (If additional space is required, use back of form) Substitute capacitor designed for tropical operation					
ORIGINATING OFFICER <i>E. A. Wilson</i>							
TYPED NAME, GRADE, AND ORGANIZATION E. A. Wilson, 1st Lt, Sig C 175 Signal Repair Co				SIGNATURE			
FIRST ENDORSEMENT							
TO CHIEF	TECHNICAL SERVICE	OFFICE					
NAME, GRADE, AND STATION		STATION	DATE				
INSTRUCTIONS							
<p>1. It is imperative that the chief of technical service concerned be advised at the earliest practical moment of any constructional, design, or operational defect in material. This form is designed to facilitate such reports and to provide a uniform method of submitting the required data.</p> <p>2. This form will be used for reporting manufacturing, design, or operational defects in material, petroleum fuels, lubricants, and preserving materials with a view to eliminating and correcting such defects and for use in recommending modifications of material.</p> <p>3. This form will not be used for reporting failure, related material defects or malfunctions of material resulting from fair wear-and-tear or accidental damage nor for the replacement, repair or the issue of parts or equipment. (It does not replace currently authorized operational or performance records.)</p> <p>4. Reports of material defects and accidents in varying quantities will continue to be submitted as directed in AR 70-10 (change No. 3).</p> <p>5. It will not be practicable or desirable in all cases to fill all blank spaces of the report. However, the report should be as complete as possible in order to enable necessary corrective action. Additional pertinent information not provided in the blank spaces should be submitted as addenda to the form. Photographs, sketches, or other illustrative material are highly desirable.</p> <p>6. When cause arises where it is necessary to communicate with a chief of service in order to assure safety to personnel, more expeditious means of communication are authorized. This form should be used to confirm reports made by more expeditious means.</p> <p>7. This form will be made out in triplicate by using a service organization. Two copies will be forwarded direct to the technical service; one copy will be forwarded through command channels.</p> <p>8. Necessity for using this form will be determined by the using or service troops.</p>							
W. D. A. G. O. Form No. 468 20 August 1944				This form supersedes W. D. A. G. O. Form No. 468, 1 December 1943, which may be used until existing stocks are exhausted.			
G. G. GOVERNMENT PURCHASE OFFICE 10-43400-1							
TL19589C							

Figure 8.1. WD AGO Form 468, with sample entries.

repair. On the other hand, the prime function of trouble shooting and repair is to locate and correct *existing* defects. The importance of preventive maintenance cannot be overemphasized. The entire system of communications depends upon the readiness and operating efficiency of each item of equipment when it is needed. In a similar manner, the test equipment by which this condition of readiness in

communications equipment is realized must be kept in excellent operating condition at all times.

NOTE: The operations in paragraphs 26.1 and 26.2 are user maintenance.

b. Description of Preventive Maintenance Techniques.

(1) GENERAL. Most of the electrical parts used in Tube Tester I-177 require routine preventive maintenance. This preventive maintenance varies. Some require a different kind of maintenance than others. Some require more, some less. Definite and specific instructions must be followed. Hit-or-miss techniques cannot be applied. This chapter contains specific instructions to guide personnel assigned to perform the six basic maintenance operations: Feel, Inspect, Tighten, Clean, Adjust, and Lubricate. Throughout this chapter the lettering system for the six operations will be as follows:

F—Feel*
I—Inspect
T—Tighten
C—Clean
A—Adjust
L—Lubricate

The first two operations show if the other four are needed. Selection of operations is based on a knowledge of field needs. For example, dust encountered on dirt roads during cross-country travel filters into equipment no matter how much care is taken to prevent it. Rapid changes in weather (such as heavy rain followed by blistering heat), excessive dampness, snow, and ice tend to cause corrosion of exposed surfaces and parts. Without frequent inspections and the necessary tightening, cleaning, and lubricating operations, equipment becomes undependable and subject to break-down when it is needed most.

(2) FEEL*. The feel operation is used most often to check rotating machinery such as dynamotors, blower motors, and drive motors, also to determine whether electrical connections and bushings are overheated. Feeling will show the need for lubrication or the existence of other defects requiring correction. The maintenance man *must* become familiar with the normal operating temperatures of motors, transformers, and other parts to recognize signs of overheating.

NOTE: It is important to perform the feel operation as soon as possible after shut-down and always before any other maintenance is done.

*The Feel operation does not apply to Tube Tester I-177.

(3) INSPECT. Inspection is the most important operation in preventive maintenance. A careless observer will overlook evidences of minor trouble. Although these defects may not at the moment interfere with performance of the equipment, invaluable time and effort can be saved if they are corrected *before* they lead to major and costly break-downs. To be able to recognize the signs of a defective set, make every effort to become thoroughly familiar with indications of *normal* functioning. Inspection consists of *carefully* observing all parts of the equipment, noticing their color, placement, state of cleanliness, etc. Inspect for the following conditions:

(a) Overheating, as indicated by discoloration, blistering, or bulging of the parts or surface of the container; leakage of insulating compounds; and oxidation of metal contact surfaces.

(b) Placement, by observing that all leads and cabling are in their original positions.

(c) Cleanliness, by carefully examining all recesses in the units for accumulation of dust, especially between connecting terminals and binding posts. Parts, connections, and joints should be free of dust, corrosion, and other matter. In tropical and high-humidity areas, look for fungus growth and mildew.

(d) Tightness, by testing any connection or mounting which appears to be loose.

(4) TIGHTEN, CLEAN, AND ADJUST. These operations explain themselves. Specific procedures to be followed in performing them are given wherever necessary throughout paragraph 26.1.

CAUTION: Screws, bolts, and nuts should not be tightened carelessly. Fittings tightened beyond the pressure for which they are designed will be damaged or broken.

Whenever a loose connection is tightened, it should be moisture-proofed and fungiproofed again by applying the varnish with a small brush. See paragraph 27 for details of moistureproofing and fungiproofing.

(5) LUBRICATE. Lubrication refers to the application of grease or oil to the bearings of motors or rotating shafts. It may also mean the application of a light oil to door hinges or other sliding surfaces on the equipment.

26.1. ITEMIZED PREVENTIVE MAINTENANCE (Added).

a. Introduction. For ease and efficiency of performance, preventive maintenance on Tube Tester I-177 will be broken down into operations that can be performed at different time intervals. In this section the preventive maintenance work to be performed on the tube tester at the specified time intervals is broken down into units

of work called items. The general techniques involved and the application of the FITCAL operations in performing preventive maintenance on individual parts are discussed in this paragraph. When performing preventive maintenance, refer to *c* through *f* below. Perform all work with the power removed from the equipment. After preventive maintenance has been performed on a given day, put the equipment into operation and check it for satisfactory performance.

b. Preventive Maintenance Tools and Materials. The following materials will be needed in performing preventive maintenance: common hand tools, #0000 sandpaper, Solvent, Dry-cleaning.

NOTE: Gasoline will not be used as a cleaning fluid for any purpose. Solvent, Dry-cleaning, is available as a cleaning fluid through established supply channels. Oil, Fuel, Diesel, may be used for cleaning purposes when dry-cleaning solvent (SD) is not at hand. Carbon tetrachloride will be used as a cleaning fluid only in the following cases: where inflammable solvents cannot be used because of the fire hazard, and for cleaning electrical contacts including relay contacts, plugs, commutators, etc.

c. Item 1, Exterior of Case.

- (1) INSPECT (I). Inspect for general cleanliness and condition of protective coating of paint. See that the hinges, the snap fastener, and the carrying handle are firmly secured to the case.
- (2) TIGHTEN (T). If the hinges, the snap fastener, or the carrying handle are loose and cannot be tightened by the using personnel, return the tube tester to a higher echelon as soon as possible; otherwise, damage to controls on the panel may result.
- (3) CLEAN (C). Do not allow dust, grease, mud, etc., to accumulate on the case. The tester contains small sliding contact switches and a delicately pivoted meter; thus, every effort must be made to keep the instrument free of foreign matter.
- (4) LUBRICATE (L). Apply a light coat of oil to the hinge pins and pivots of the snap fastener. *If the equipment is used in an extremely dusty location omit this operation.*

d. Item 2, Panel.

- (1) INSPECT (I). Check the tube sockets and pin jacks for proper tension of contact surfaces. Check all switches for smooth and positive action. (See CAUTION, par. 21, before doing any work on the equipment.) Check neon lamp and fuse lamp for tightness. See that all parts mounted on the panel are secure.
- (2) TIGHTEN (T). Loose parts which can be tightened from the outside are to be taken care of by using personnel, otherwise the work is to be done by a higher echelon.

(3) CLEAN (C). Remove all dirt and grease from the panel and cover with a dry cloth or, if necessary, a cloth dampened with dry-cleaning solvent (SD).

e. Item 3, Meter.

(1) INSPECT (I). Check the glass cover for cracks or looseness. Since dust and moisture may enter through a defective glass, the accuracy and efficiency of the meter may be seriously affected.

(2) CLEAN (C). Clean the glass and case with a dry cloth or, if necessary, one *slightly* dampened with dry-cleaning solvent (SD).

(3) ADJUST (A). The meter in Tube Tester I-177 should indicate zero when the tester is not connected to the line or when the POWER ON-OFF switch is in the OFF position. The procedure for setting a meter to zero is not difficult. The tool required is the thinnest bladed screw driver available. Before deciding that a meter needs readjusting, tap the meter case *lightly* with the tip of one finger. This will help the meter to overcome the slight friction existing at the bearings which may prevent an otherwise normal unit from coming to rest at zero. If readjustment is needed, insert the tip of the screw driver in the slotted screw head located below the meter glass and *slowly* turn the adjusting screw until the pointer is at zero. Lightly tap the meter case again and view the meter face and pointer *full on* and not from either side. Avoid turning the screw too far, because the needle may be bent or the hairspring damaged.

f. Item 4, Cords.

(1) INSPECT (I). Inspect the length of the a-c cord and the short leads for cracked or worn insulation. Check a-c plug to see that the prongs are secure and clean. Check clips for cleanliness and proper tension.

(2) TIGHTEN (T). Any loose connections should be tightened.

(3) CLEAN (C). Corroded connections should be cleaned before tightening. Clips and prongs may be cleaned with #0000 sandpaper. Sand only enough to remove the corrosion.

26.2. PREVENTIVE MAINTENANCE CHECK LIST. The following check list is a summary of the preventive maintenance operations to be performed on Tube Tester I-177. The time intervals shown on the check list may be reduced at any time by the local commander. For best performance of the equipment, perform operations at least as frequently as called for in the check list. Operations are indicated by the letters of the word FITCAL. For example, if the letters ITCA appear in the "Operations" column, the item to be treated must be inspected (I), tightened (T), cleaned (C), and adjusted (A).

Item No.	Operations	Item	When performed			
			Before operation	Daily	Weekly	Monthly
1	ITC	Outside of case		X		
1	L	Outside of case				X
2	ITC	Panel		X		
3	A	Meter	X			
3	IC	Meter		X		
4	ITC	Cords			X	

Note: X indicates when operations are to be performed.

F Feel*	I Inspect	T Tighten	C Clean	A Adjust	L Lubricate
------------	--------------	--------------	------------	-------------	----------------

27. MOISTUREPROOFING AND FUNGIPROOFING.

*	*	*	*	*	*
---	---	---	---	---	---

c. Step-by-step Instructions.

*	*	*	*	*	*
---	---	---	---	---	---

(5) VARNISHING.

(a) Apply three coats of moistureproofing and fungiproofing varnish (**Lacquer, Fungus-resistant, Signal Corps stock No. 6G1005.3, or equal**) to all equipment to be treated, including inside of cases, allowing a 15- to 20-minute drying period after each coat.

*	*	*	*	*	*
---	---	---	---	---	---

(6) REASSEMBLY.

*	*	*	*	*	*
---	---	---	---	---	---

(c) (Superseded.) Mark the letters MFP and the date of treatment on the case, just above the nameplate.

EXAMPLE: MFP—30 May 45.

*	*	*	*	*	*
---	---	---	---	---	---

e. *Moistureproofing and Fungiproofing After Repair* (Added). If, during repair, the coating of protective varnish has been punctured or broken, and if complete treatment is not needed to reseal the equipment, apply a brush coat to the affected part. Be sure the break is completely sealed.

On figure 12.3, delete the tube-base diagrams for 8BH and 8BO.

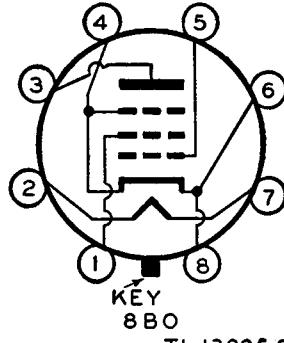
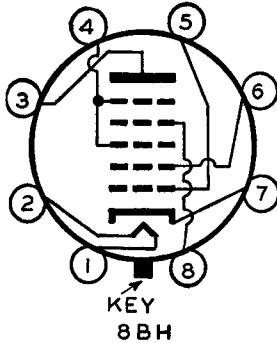
Figure 12.3. Tube-base diagrams, 7AT to 8BU except 8BH and 8BO.

31. TUBE TEST DATA.

NOTE 1: A star (★) appearing * * * for that purpose.

NOTE 2 (Added): The values listed in the MUT. COND. column

*The Feel operation does not apply to Tube Tester I-177.



TL 12805-S

Figure 12.4—Tube-base diagrams, 8BH and 8BO.

of this tube test data differ from those appearing in Specification JAN-1A because the voltages applied to the tube under test are not the same as the voltages applied for mutual conductance values under Specification JAN-1A. *Disregard MUT. COND. values when checking tube quality.*

Tube Type	Socket Letter	Select. A	Select. B	Fil. Volts	Potent. L	Potent. R	Mut. Cond.	Press	Notations
* 0C3/VR- 105	G	7	1	Off	30	0	*	Gas No. 1	Shorts on 4-5
0D3/VR- *	G	7	1	Off	30	0	*	Gas No. *	Shorts on 4-5 *
150 3B7/1291	F	6	6	2.5	35	25		1 Diode	Shorts on 4-5 Plate No. 1 Reads in Green
3B7/1291	F	1	6	2.5	35	25		Diode	Shorts on 4-5 Plate No. 2 Reads in Green
3B24	A	7	1	2.5	5	0		Rect. Std.	Shorts on 4-5
3D6/1299	F	6	2	2.5	55	30	2000	Ampl. Ampl.	Shorts on 1 Plate No. 1 Use Adapter M-418
3E29	E	7	2	12.6	70	14		Ampl.	Plate No. 2 Use Adapter M-418
3Q4	H	4	6	2.5	40	82		Press diode	Short on 3-4-5 But Reads in Green *
* 6AC7	E	4	2	6.3	40	24		Ampl.	*
* 6AG5	K	1	9	6.3	53	22		Ampl.	Shorts on 4-5 *
6AK5	K	1	9	6.3	44	23		Ampl.	Shorts on 4-5
6AL5	K	9	2	6.3	60	0		Diode	Shorts on 2-3
6AL5	K	4	2	6.3	60	0		Diode	Shorts on 2-3 *
6AS6	K	1	9	6.3	42	15		Ampl.	*
*	*	*	*	*	*	*	*		

<i>Tube Type</i>	<i>Socket Letter</i>	<i>Select. A</i>	<i>Select. B</i>	<i>Fil. Volts</i>	<i>Potent. L</i>	<i>Mut. Cond.</i>	<i>Press</i>	<i>Notations</i>
7F7	F	12	5	6.3	50	0	1600	Ampl.
7F7	F	2	9	6.3	50	0	1600	Ampl.
7F8	E	12	5	6.3	72	0		Adapter No. 2 described below
7F8	E	2	9	6.3	72	0		Adapter No. 2 described below
*	*	*	*	*	*	*	*	*
12AH7GT	E	11	9	12.6	60	35	2000	Press Gas No. 1
12AH7GT	E	7	9	12.6	60	35	2000	Press Gas No. 1
*	*	*	*	*	*	*	*	*
12L8GT	E	11	6	12.6	58	15		Ampl.
12L8GT	E	8	8	12.6	58	15		Ampl.
*	*	*	*	*	*	*	*	Plate No. 1 (Use Adapter No. 1 De- scribed Be- low)
12SF5	E	7	4	12.6	62	13	1600	Ampl.
*	*	*	*	*	*	*	*	*
12SL7	G	10	4	12.6	49	0	1400	Ampl.
12SL7	G	4	1	12.6	49	0	1400	Ampl.
*	*	*	*	*	*	*	*	Plate No. 2
117P7GT	E	8	10	117	70	25	4000	Ampl.
117P7GT	E	4	3	117	40	0		Rect. Std
*	*	*	*	*	*	*	*	Also Press 117N7 but. Shorts on 2-3
811	A	9	4	6.3	17	15	700	Ampl.
*	*	*	*	*	*	*	*	*
829/829B	E	7	2	12.6	70	14		Ampl.
829/829B	E	4	2	12.6	70	14		Ampl.
832	E	7	2	12.6	67	14	3000	Ampl.
832	E	4	2	12.6	67	14	3000	Ampl.
*	*	*	*	*	*	*	*	*
885	B	1	6	2.5	40	*		Rect. Std. Strikes be- tween 60-65 on R
*	*	*	*	*	*	*	*	*
1006	A	2	7	1.5	68	0		OZ4 Button

<i>Tube Type</i>	<i>Socket Letter</i>	<i>Select. A</i>	<i>Select. B</i>	<i>Fil. Volts</i>	<i>Potent. L</i>	<i>Mut. Cond.</i>	<i>Press</i>	<i>Notations</i>
1006	A	3	7	1.5	68	0	OZ4 Button	*
*	*	*	*	*	*	*		*
1291	F	6	6	2.5	35	25	Diode	Short on 4-5 Reads in Green, Plt. No. 1
1291	F	1	6	2.5	35	25	Diode	Shorts on 4-5 Reads in Green, Plt. No. 2
*	*	*	*	*	*	*		*
1299	F	6	2	2.5	55	30	2000	Ampl.
								Short on 1

31.1 CONSTRUCTION OF ADAPTER NO. 1 (Added). Adapter No. 1 for use in testing Tube Type 12L8GT can be fabricated from an octal (8-pin) socket and an octal (8-pin) plug or tube base. (Adapter No. 2 is used when testing Tube Type 7F8. This is fabricated from an octal (8-pin) socket and an octal plug or tube base). Connections made between socket lugs and plug pins in each case are indicated in the table below:

Socket lug No.	Plug pin No.	
	Adapter No. 1	Adapter No. 2
1	5	4
2	1	2
3	4	3
4	3	8
5	8	1
6	2	6
7	7	7
8	6	5

32. MAINTENANCE PARTS LIST FOR TUBE TESTER I-177.

NOTE: (Superseded) This list is for reference only. When ordering parts, refer to paragraph 33.

* * * * *

33. MAINTENANCE PARTS FOR TUBE TESTER I-177 (Added).

The following information was compiled on 22 June 1945. The appropriate pamphlets of the ASF Signal Supply Catalog for Tube Tester I-177 are:

Organizational Spare Parts

SIG 7-I-56

Higher Echelon Spare Parts

SIG 8-I-177

For an index of available catalog pamphlets see the latest issue of ASF Signal Supply Catalog SIG 2.

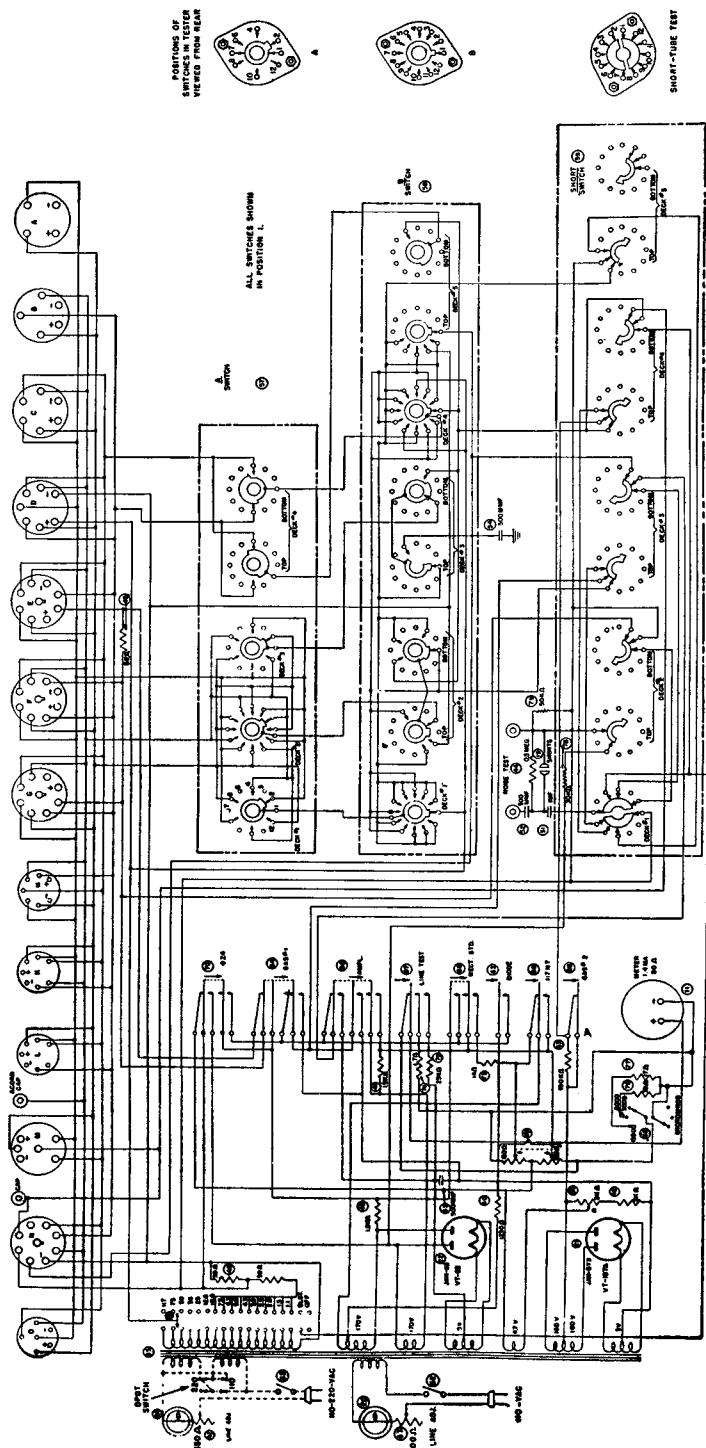


Figure 13. Tube Tester I-177, schematic diagram.

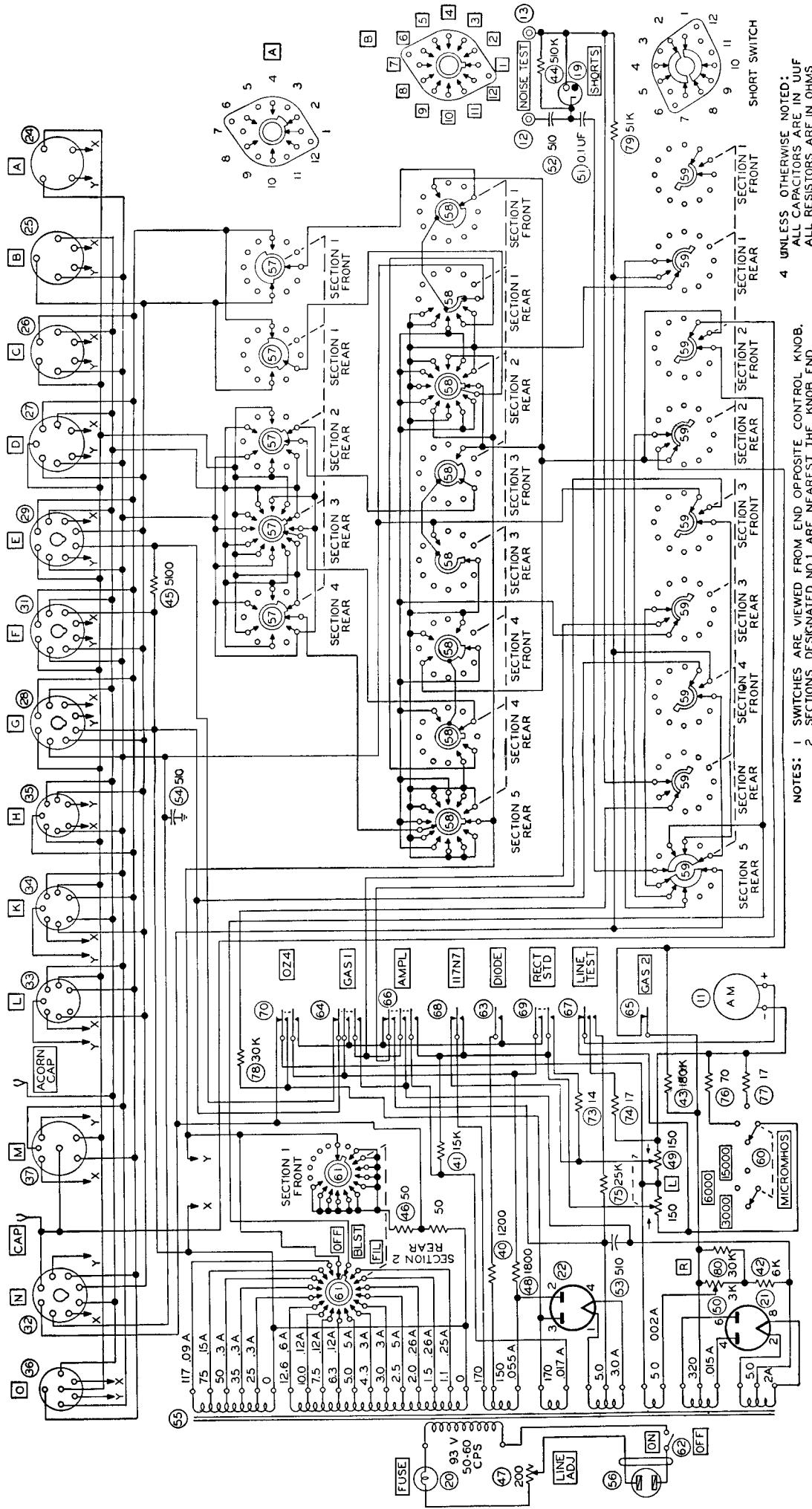


Figure 13.2 (Added) Schematic diagram of Tube Tester I-177-B.

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EDWARD F. WITSELL

Major General

Acting the Adjutant General

G. C. MARSHALL

Chief of Staff

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Refer to FM 21-6 for explanation of distribution formula.

C 3, TM 11-2627
TO 16-40 I 177-5

TECHNICAL MANUAL
TUBE TESTERS I-177, I-177-A, AND I-177-B

CHANGE }
No. 3 }

DEPARTMENT OF THE ARMY
WASHINGTON 25, D. C., 5 March 1954

TM 11-2627, 3 August 1944, is changed as follows:
The title of the manual is changed to read—**TUBE TESTERS I-177, I-177-A, AND I-177-B**

SECTION I
DESCRIPTION

Note 1. Tube Tester I-177-A * * * in this change.

Note 2. (Added) Tube Tester I-177-B is similar to Tube Testers I-177 and I-177-A except for the following: On the I-177-B, the two latches on the carrying case are of the spring-loaded type with retainer bracket. The tube clamps are of the overhead type, which fit style ST-16 and T-9 tubes. The tube cap test leads are fitted with improved type insulated clips. The power cable connector (U-120/U) is detachable.

10. Testing Pilot Lamps

* * * * *

d. On Tube Testers I-177, I-177-A, and I-177-B, hold the lamp in the center of socket D after adjusting the line voltage. If the lamp lights with normal brilliancy, the lamp is good; if it does not light the lamp is bad.

32. Maintenance Parts List for Tube Tester I-177

Rescinded

33. Maintenance Parts for Tube Tester I-177

Rescinded

Appendix

(As added by C 2)

Rescinded

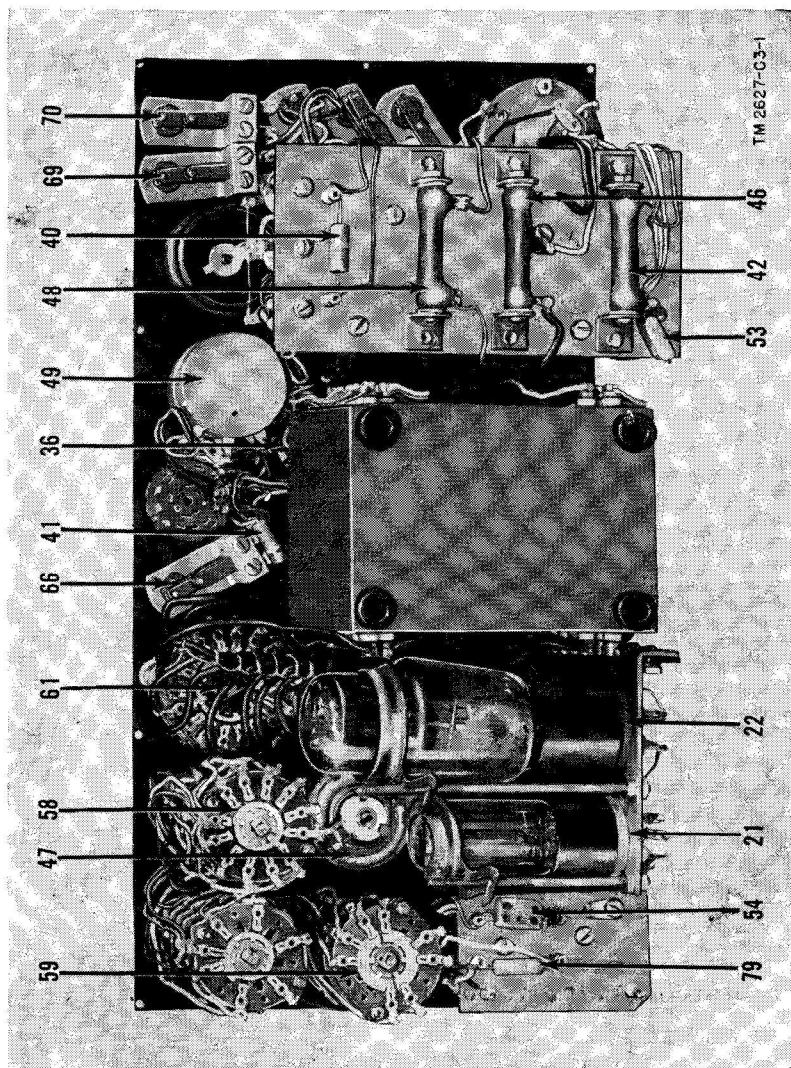


Figure 9.4 (Added) Bottom view of chassis of Tube Tester I-177-B.

- 21 Electron tube 5Y3GT
- 22 Electron tube 83
- 36 Tube socket O
- 40 Resistor, 1,200 ohms
- 41 Resistor, 15,000 ohms
- 42 Resistor, 6,000 ohms
- 46 Resistor, 100 ohms
- 47 Resistor, LINE ADJ rheostat, 200 ohms
- 48 Resistor, 1,800 ohms
- 49 Resistor, L potentiometer, 2 sections, 150 ohms each section
- 53 Capacitor, 510 $\mu\mu f$
- 54 Capacitor, 510 $\mu\mu f$
- 58 Switch B
- 59 Switch, SHORTS
- 61 Switch, FIL
- 66 Switch, AMPL TEST
- 69 Switch, RECTIFIER TEST STD
- 70 Switch, RECTIFIER TEST OZ4
- 79 Resistor, 51,000 ohms

Figure 9.4—Continued

TM 2827-0-3-2

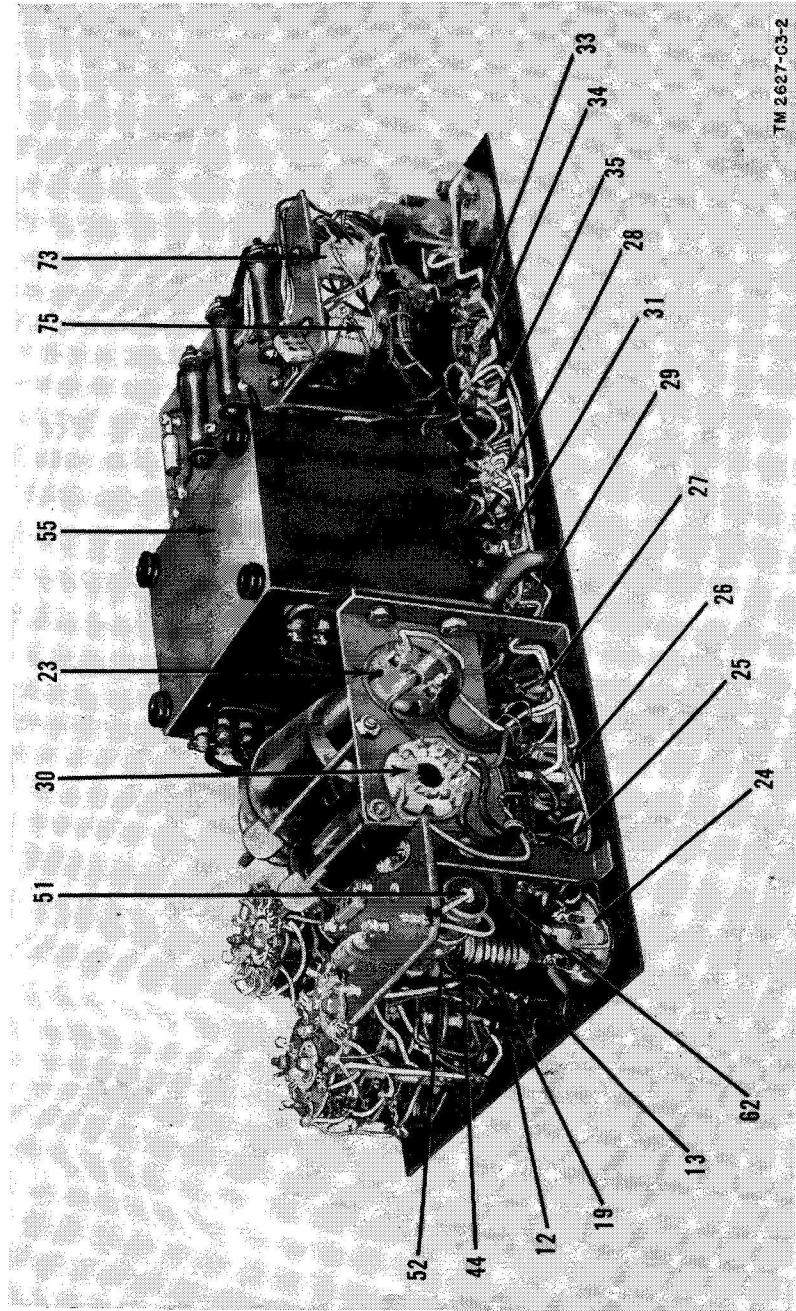


Figure 9.5 (Added) Bottom left view of chassis of Tube Tester I-177-B.

- 12 Binding post, NOISE TEST
- 13 Binding post, NOISE TEST
- 19 Indicator lamp, SHORTS
- 23 Tube socket, 4 contacts
- 24 Tube socket A
- 25 Tube socket B
- 26 Tube socket C
- 27 Tube socket D
- 28 Tube socket G
- 29 Tube socket E
- 30 Tube socket, 8 contacts
- 31 Tube socket F
- 33 Tube socket L
- 34 Tube socket K
- 35 Tube socket H
- 44 Resistor, 510,000 ohms
- 51 Capacitor, 100,000 $\mu\mu$ f
- 52 Capacitor, 510 $\mu\mu$ f
- 55 Power transformer
- 62 Switch, ON-OFF
- 73 Resistor, 14 ohms
- 75 Resistor, 25,000 ohms

Figure 9.5—Continued

TM 2827-C3-3

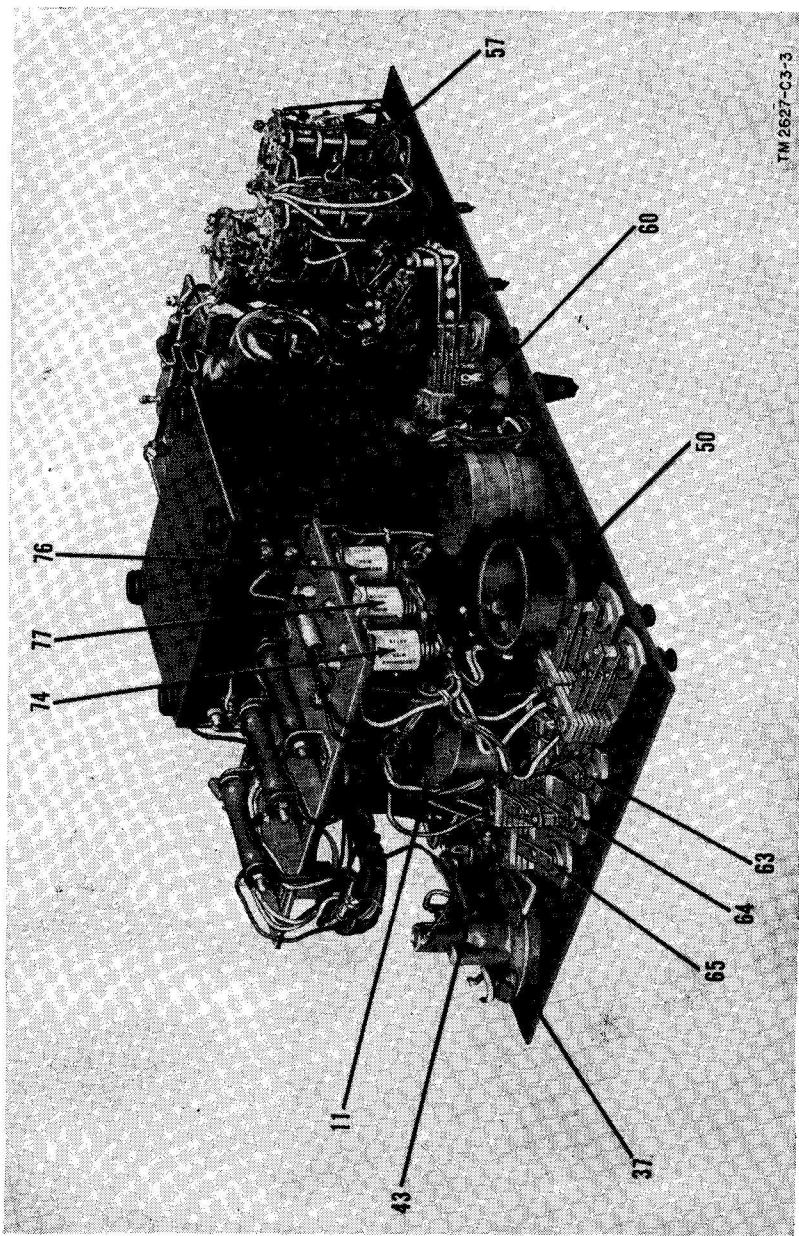


Figure 9.6 (Added) Bottom right view of chassis of Tube Tester I-177-B.

- 11 Meter
- 37 Tube socket M
- 43 Resistor, 180,000 ohms
- 50 Resistor, R potentiometer, 3,000 ohms
- 57 Switch A
- 60 Switch, MICROMHOS
- 63 Switch, DIODE TEST
- 64 Switch, GAS NO. 1
- 65 Switch, GAS NO. 2
- 74 Resistor, 17 ohms
- 76 Resistor, 70 ohms
- 77 Resistor, 17 ohms

Figure 9.6—Continued

BY ORDER OF THE SECRETARY OF THE ARMY:

M. B. RIDGWAY,
General, United States Army,
Chief of Staff.

OFFICIAL:

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Major General, United States Army,
The Adjutant General.

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Tech Svc (1) ; Tech Svc Bd (1) ; AFF Bd (ea Svc Test Sec) (1) ; AFF (5) ; AA Comd (2) ; OS Maj Comd (5) ; Base Comd (5) ; MDW (2) ; Log Comd (5) ; A (5) ; CHQ (2) ; FT (2) ; Sch (5) except 11 (25) ; Gen Dep (2) ; Dep 11 (20) except Sig Sec, Gen Dep (10) ; Tng Div (2) ; POE (2) , OSD (2) ; Lab 11 (5) ; Mil Dist (1) ; Field Maint Shops 11 (3) ; Mil Mis (2) ; Two (2) copies to each of the following T/O&E's: 5-415A; 5-500A; AA-AC; 9-500A AA-AC; 11-107; 11-127; 11-128; 11-500A, GA-GP, KA, KB, KC; 11-587; 11-592; 11-597; 12-17; 19-55A; 19-56A; 19-57A; 19-500A AA-AC; 32-500A AA-AC; 55-68; 55-116.

NG: Same as Active Army except one copy to each unit.

USAR: None.

For explanation of distribution formula, see SR 310-90-1.

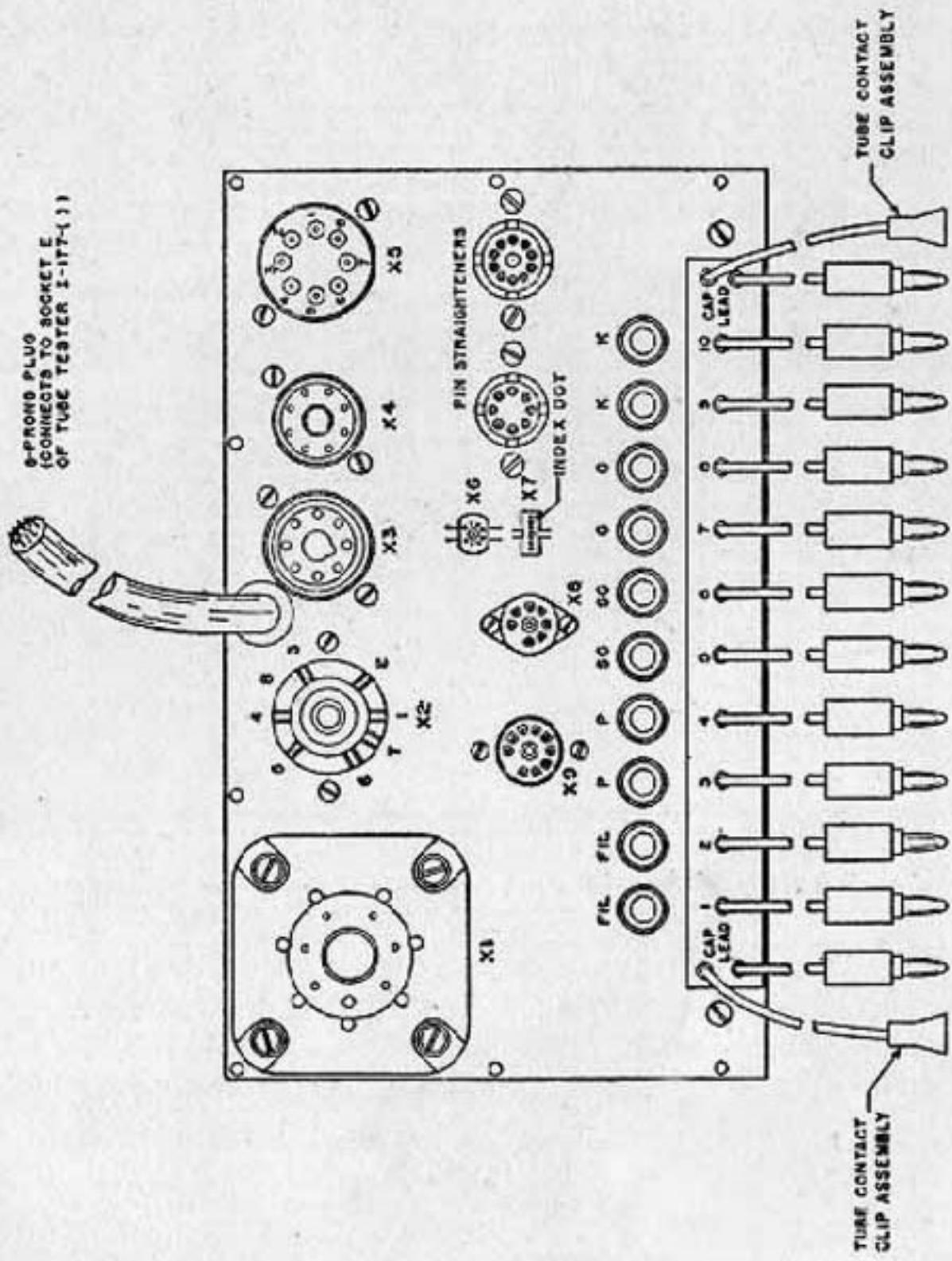


Figure 1. Tube Socket Adapter Kit MX-949/U, panel diagram.

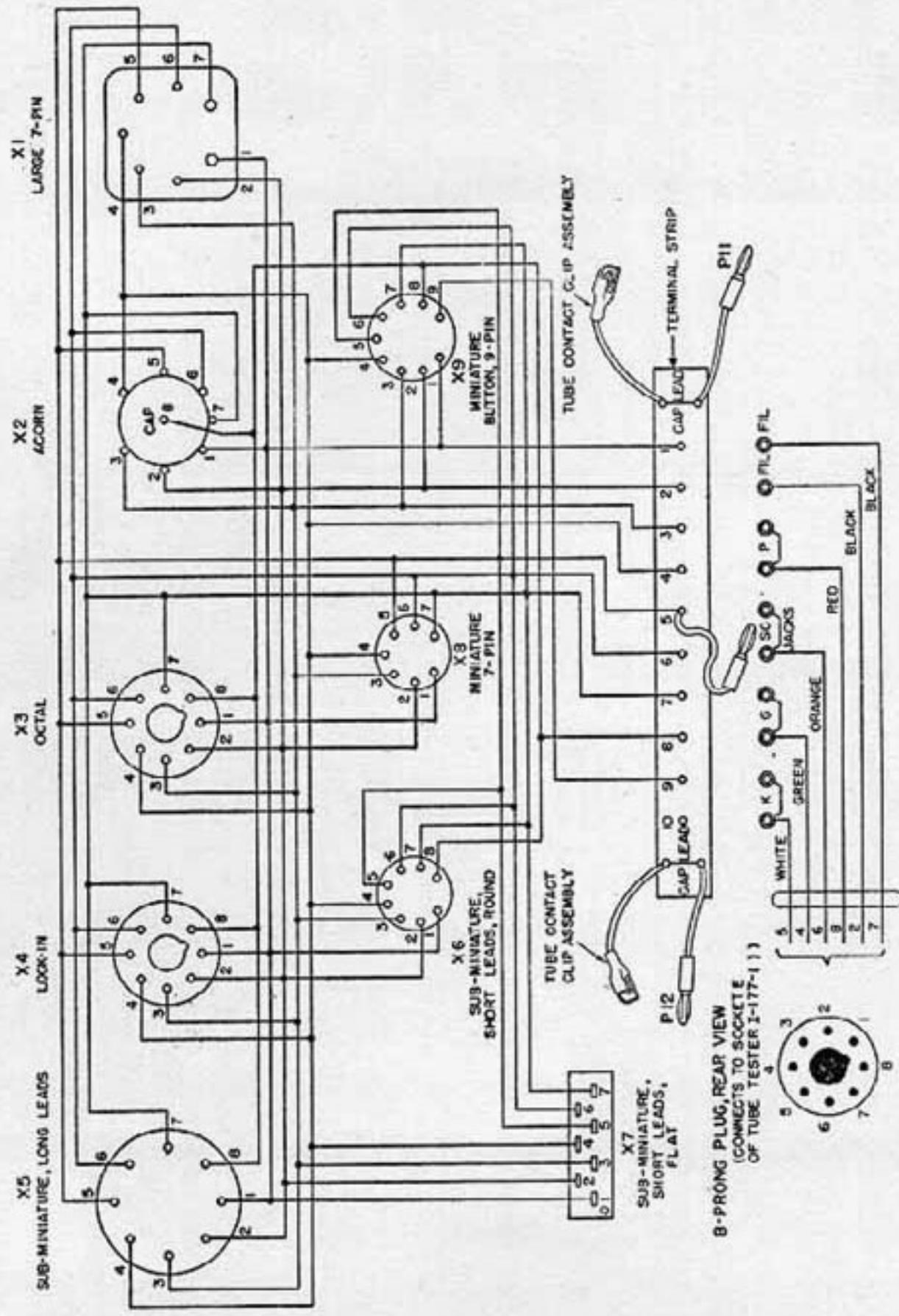


Figure 2. Tube Socket Adapter Kit MX-949/U, wiring diagram.

**TUBE TEST DATA FOR USE WITH THE TUBE TESTERS I-177, I-177-A, AND I-177-B AND TUBE SOCKET
ADAPTER KITS MX-949/A and MX-949A/U. See below for other models.**

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beta 1.08 July 5, 2002

This is a freely available file and my contribution to the hobby. If you paid for it, you got burned! In addition, if I catch some looser trying to SELL my free product or parts of it, I'll nuke their ass good. I've got enough hidden identifiers in the data to not make it worth their time. This is a FREE product, period!

There are errors in the original Govt. manuals and the Hickok manuals that I compiled into this file. In addition, I may or may nor have made a few errors myself. As a result, I take **NO responsibility for any errors, incorrect data or omitted data contained within or missing from this file. Use this data at your own risk...**

This document is organized into eight "pages" or sheets. The first is this cover that your reading. The second is the general instructions for operating the I-177 series tube tester without and with the MX-949 series adapter kit. The third contains the information on various socket adapters that were used with the I-177 series before the adoption of the MX-949. The fourth is the cross index of the old Army VT numbers and standard commercial tube numbers. The fifth contains the tube tester settings data for using the I-177 series tube tester **WITHOUT** the MX-949 adapter. Sheet six contains tester settings data for use **WITH** the MX-949 series adapter kits and Sheet 7 contains ballast tube test settings data for use **WITHOUT** the MX-949 series adapter. Sheet 8 is a "shorts" list that allows you to determine which tube elements are shorted by looking at a chart.

I have the drawn on the following I-177 related publications as the basis for this project:

TM 11-2627 (August 3, 1944)
TM 11-2627 Change 1, also known as T.O. 16-40-I-177-5 (October 24, 1945)
TM 11-2627 Change 2, also known as T.O. 16-40-I-177-5 (August 1, 1949)
TM 11-2627 Temporary Supplement (March 18, 1952)
TM 11-2627 Change 3, also known as T.O. 16-40-I-177-5 (March 5, 1954)

Hickok Tube Data Book for AC-51-AC51X-T53-510X-530 (11-1943)
Undated 16 Page Settings Data Book from 1944 Contract I-177 Tester
TB 11-2627-2 (October 30, 1946)
TB 11-2627-2 (April 7, 1949)
TB 11-2627-2 (June 11, 1951)
TB 11-2627-2, also knwn as T.O. 16-40I 177-6 (October 16, 1952)
I-177 Data Book from Bigelow Electronics (July 18, 1954)
Hickok Data Book 3200-16 (April 1955 reprint)
TB 11-2627-2 Change 5, also known as TO 33AA21-1-3 (March 19, 1957)
T.O. 33AA21-1-4 (May 20, 1955) June 1958 reprint/re-issue

In addition, the ballast tube data, shorts data, and a some of the tube settings information came from:

Hickok Manual for the 510X circa 1938
Hickok Manual for the 530B circa 1943
Hickok Manual for the 560 circa 1943

The following materials were used for adding listings for tube numbers not listed in any of the other materials and for verification of data:

Armed Forces Cross Index of Electron Tube Types (August 1950)
General Electric Tube Manual 14
Military settings data for the TV-2, TV-3, and TV-7 series testers.
Raytheon Tube Manual 1937
RCA Tube Manuals RC-10 , RC-11 , RC-13 , RC-23 , RC-29 , TT-3 , TT-4 , TT-5
Sylvania Tube Manuals 1943 , 1947 , 1955

An interesting thing that may come in handy to certain people, is that the settings data between the I-177 series military tube tester and the Hickok commercial models AC-51, 51X, T53, 510X, 530, 531, 540, 550X, 560, 560SPL, and KS9237 appear to be interchangeable within the socket differences of the testers. I don't have access to any of these models so I'm not 100% sure that the data will freely interchange between these and/or other models but it looks like it should come close. Verify it for yourself before you try it though by comparing the socket numbers used and settings between this data and any existing data that you have. You're totally on your own as far as this is concerned, so if you blow a 45 or your tester or put an eye out or something, don't come bitching to me that I owe you an eye, a tube, tester, etc.

I would really like to hear from any of you that have had positive results with interchanging the data with other models and will update this file to reflect those results...

Surely there are other manuals containing data that I didn't include because I didn't have access to them. Please contact me if you other data and I'll include it in a later edition. All I need is a clear scan or photocopy of them, not the originals. Thanks!

I can be contacted either by email either of the two addresses listed below, or via conventional mail at the following address. If you have copies of additional data for me to add or if you just want to drop a few of bucks in the mail to me for the untold hundreds of hours of labor that went into this project, use the following address:

Nolan E. Lee
Post Office Box 860
Sun, Louisiana 70463-0860
United States of America

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General Instructions for operating the I-177 series tube tester, both without and with the MX-949 series adapter kit.

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TM 11-2627 and it's various changes and supplements should be consulted on the safe use of the I-177 series tube tester and the MX-949 series adapter. This file is no substitute for the original manual. Get one!

Preliminary Instructions. Before handling Tube Tester I-177, read the operating instructions carefully. This is a delicate electrical instrument containing a meter and parts that can easily be damaged by mishandling. Pay particular attention to the notices. It also uses voltages sufficient to **KILL** you. If you don't know what you're doing, get help from someone that does. Remember, it's old and a lot can go wrong in that period of time. Be alert and be careful and stay alive...

CAUTION: After testing tubes, **always** set all controls to off or saftey positions as indicated in the following table. Tubes may be burned out if inserted in test sockets before the controls have been properly set.

Control	Saftey Position
POWER	OFF
SHORT-TUBE TEST	1
LINE ADJUSTMENT	Extreme counterclockwise
A	1
B	1
FIL	OFF
MICROMHOS	15000
L	80
R	80

SHORTS TEST.

- Make sure that all controls are in the saftey positions, listed above.
- Plug the power cord of the tester into a suitable a-c power outlet (105 to 125 volts).
- Determine the type number of the tube to be tested and locate this type number in the column headed **Tube Type** on either the loose-leaf test data cards fastened inside the cover of the instrument or on Table II or Table III of this file.
- Set selector switch A to the number indicated in column **A**.
- Set selector switch B to the number indicated in column **B**.
- Set selector switch FIL to the number indicated in the column headed either **Fil. Volts** or **Filament Volts**.
- Insert the tube in the socket indicated in the column headed **Socket Letter**.

- NOTE:** When inserting or removing a loctal or acorn tube from a socket, handle the tube as gently as possible. Tube pins pass directly through the glass seals and excessive force will crack the glass. A slight sideways pressure applied to a loctal tube will release the lock and permit easy removal of the tube from the socket.
- If the tube has a top cap, attach the clip of the CAP lead to the cap. For acorn tubes, use the ACORN CAP lead and clip. For tubes having a star in the **Notations** column (such as some listings for the 807, 871, etc.) connect the plate top cap of the tube to the upper left contact of the 6-pin socket C with the 12-inch lead having a clip and banana plug. For some tube listings, other instructions may be present in the **Notations** column that may direct you to connect the 12-inch lead to other locations. **ALWAYS** read and pay attention to the **Notations** column bubba.
 - Set the POWER switch to the ON position.
 - To adjust the line voltage, press and hold down the LINE TEST button and turn the LINE ADJUSTMENT knob until the meter pointer is exactly at the LINE TEST position (at 1,500, not at the ? on the scale); then release the LINE TEST button.

- After allowing at least 30 seconds for the tube to warm up, turn the SHORT-TUBE TEST switch slowly from position 1 to positions 2, 3, 4, and 5 successively while tapping on the tube with a finger and watching the SHORTS neon lamp. If the lamp continuously or glows during tapping in any of the five positions, the tube contains shorted electrodes and should be discarded without further testing (to prevent damage to the meter) unless and exception is noted in the **Notations** column. Disregard a momentary flash of the neon lamp while this switch is being turned from one position to the next, since this is due to the charging of a capacitor in the lamp circuit.

NOTE: Before discarding the tube, refer to the **Notations** column of the test data for the listing of that tube to see if the tube being tested normally appears to be shorted on certain posititons of the switch. Thus, for the 1LN5, the notation "Shorts on 4 and 5" in the **Notations** column means that the neon lamp will normally glow at positions 4 and 5 for good tubes. This tube has no shorts if the neon lamp stays out for positions 1, 2, and 3.

- NOTE:** Tapping on certain tubes will damage them. Pay particular attention to the **Notations** column comments.
- On tubes having several sections, the shorts test need to be made only once.

QUALITY TEST.

- a. Test the tube for shorts by following the complete procedure listed above. If the tube is shorted, discard it without making further tests.
- b. If the tube is not shorted, turn the SHORT-TUBE TEST switch to the TUBE TEST position. Do not change any of the other controls used for the shorts test.
- c. Set potentiometer L to the number indicated in column **L** on the test data.
- d. Set potentiometer R to the number indicated in column **R**.
- e. Set the MICROMHOS range switch at 3,000.
- f. Press the button indicated in the **Press** column of the test data, and read the meter on the RED-GREEN scale.
- g. Normally, if the pointer stops in the GREEN sector the tube is good; if in the RED sector, the tube is defective and should be discarded. If the pointer stops in the ? sector, the tube is usable for a few more hours but should be replaced soon. For tubes in the **Notations** column having a note such as "OK over 160" (for example, type 40), read the meter on the 0-3,000 micromhos scales. Tubes reading higher than the value given in the **Notations** column are good. Good diode sections may read in the portion of the RED scale marked DIODES O.K. Only diodes reading to the left of this section (to the left of A in REPLACE on the scale) should be considered defective.
CAUTION: Do not press the red AMPL.TEST button while testing rectifier tubes. When testing small diodes, do not press either the AMPL.TEST or a RECTIFIER TEST button, because the high voltage would damage the delicate cathode. Press only the DIODE TEST button as called for in the test data.
- h. If a tube is listed two or more times in the test data, it has two or more sections requiring individual tests, or has two input grids (for example, 6A8 pentagrid converter) requiring separate dynamic tests.
- i. **Remove the tube from the socket after the first test is completed.** Then repeat the quality test for each additional listing in turn. The shorts test should be made **only** for the first listing, however The tube sectioned covered by a listing is identified in the **Notations** column in the test data.

MEASURING MUTUAL CONDUCTANCE. This procedure gives a mutual conductance reading in micromhos for an amplifier tube or amplifier section, instead of a RED-GREEN reading.

- a. Test the amplifier section or section for shorts by following the complete procedure given above. If it is shorted, discard it without making further tests.
- b. If the tube is not shorted, turn the SHORT-TUBE TEST switch to the TUBE TEST position. Do not change any of the other controls used for the shorts test.
- c. Set the potentiometer L at GM (replaces 60 on the dial).
- d. Set the potentiometer R to the number indicated in column **R** on the test data.
- e. Set the MICROMHOS range switch to an appropriate range for measuring the value listed for Mut.Cond. in the **Notations** column of the test data.
- f. Press the button called for in the **Press** column, and read the meter on the scale to which the MICROMHOS switch is set. This reading is the mutual conductance of the tube in micromhos under the element voltage conditions provided by the tube tester.
- g. If a tube is listed two or more times in the test data, remove the tube from its socket after the first test. Then repeat all of the tests except the shorts test for the next listing as if testing another tube.

GAS TEST. This procedure determines whether or not an amplifier tube contains too much gas.

- a. Carry out the shorts test procedure given above. If dealing with a multisection tube, the shorts test and the gas test must be made on an amplifier section. The gas test does not apply to diode sections or to rectifiers.
- b. Set potentiometer L at GM (replaces 60 on dial).
- c. Set the MICROMHOS range switch at 3000.
- d. Hold down GAS NO.1 button and adjust potentiometer R until the meter reads 100 micromhos on the 0-3000 scale.
- e. While holding down GAS NO.1 button, press GAS NO.2 button. If the pointer moves upward more than one scale division, the tube contains too much gas for satisfactory operation. If the pointer movement is less than one scale division, the tube can be considered sufficiently free from gas.

NOTE: If the pointer cannot be brought down to 100 micromhos by adjusting the potentiometer R with the GAS NO.1 button pressed, set R at 82, note the position of the pointer, and press GAS NO.2 button to see if the pointer moves upward more than one scale division. In some cases it may be necessary to let the tube warm up for a few minutes before making the gas test, since the tubes may develop gas only after filament current has been on for a period of time.

NOISE TEST. This procedure detects intermittent contacts between tube electrodes during the shorts test, even though the shorts are too brief to be detected by the neon shorts lamp.

- a. After completing the conventional shorts test explained above, connect the NOISE TEST jacks on the panel of the I-177 tube tester to the antenna and ground terminals of a radio receiver.
 - b. With the radio receiver turned on, with the volume advanced, and with the tube tester still set as in **SHORTS TEST** section k. above, tap the tube while turning the SHORT-TUBE TEST switch slowly from position 1 to 5. Loud static noises coming from the loudspeaker of the radio receiver indicate shorts between electrodes, and mean that the tube is bad.
- NOTE:** This procedure was developed long before solid state receivers. There's no way in hell, even if the blocking capacitor in the tube tester IS good, that I'd use a solid state receiver for this test. It's not worth the risk.

TESTING CATHODE-RAY INDICATOR TUBES. Since the function of these tubes is to indicate rather than amplify, conventional mutual conductance or quality tests cannot be made. Test data is therefore given only for the purpose of checking the functioning of the eye. No shorts tests are made. The meter and controls L, R, and MICROMHOS are not used in this test. The procedure checks only the opening and closing action of the eye.

- a. Turn on the tube tester and adjust the line voltage as outlined above.
- b. Set the FIL switch at the correct filament voltage (2.5 for the 2E5 tube and 6.3 for type types starting with 6).
- c. For the 2E5, 6AB5, 6E5, 6G5, 6H5, 6N5, and 6U5 tubes, set selector switch A at 12, set selector switch B at 3, and press the red AMPL.TEST button. The eye should open. Release the button, set selector switch B at 2, and again press the red AMPL.TEST button. The eye should now close if the tube is good.
- d. For 6AD6 and 6AF6 tubes, set selector switch B at 8, set selector switch A at 2, and press the red AMPL.TEST button. Eye No.1 should open and eye No.2 should close. Release the button, set selector switch A at 3 and again press the AMPL.TEST button. Eye No.2 should open and eye No.1 should close if the tube is good.

USING THE MX-949 AND MX-949A ADAPTERS WITH THE I-177 SERIES TUBE TESTER.

a. Adjustment of the tube tester.

- (1.) Set selector switch A to 4.
- (2.) Set selector switch B to 2.
- (3.) Set all other switches to OFF or safety positions as either described above or in TM 11-2627.
- (4.) Plug the power cable assembly into a suitable a-c (alternating current) power outlet (105-125 volts, 60 cycles); set the power switch on the ON position.
- (5.) Depress the line test button and turn the LINE ADJUSTMENT control until the meter needle points to the LINE TEST or to the line test value indicated in the **Notations** column of Table III for the tube type under test.

b. Adjustments on the Tube Socket Adapter Kit MX-949 or MX-949A

- (1.) Disconnect all plugs from receptacles.
- (2.) Insert the 8-prong octal plug into socket E of the tube tester.
- (3.) Determine the type number in the column headed **Tube Type** of Table III.
- (4.) Set selector switch FIL of tube tester to the number in the column headed **Fil Volts**.
- (5.) Make the patch cord connections for the type to be tested.
- (6.) Insert the tube in the socket indicated in the column headed **Socket Number** in Table III.

c. Test.

- (1.) Test for shorts by **slowly** rotating the SHORTS test switch from TUBE TEST position to position 1 and then back to TUBE TEST position.
- (2.) Set potentiometer L of the tube tester to the number indicated in the **Potentiometer L** column of Table III.
- (3.) Set potentiometer R of the tube tester to the number indicated in the **Potentiometer R** column of Table III.
- (4.) Set the MICROMHOS range switch at 3000 except as indicated otherwise in the **Notations** column.
- (5.) Press the tube tester button indicated in the **Press** column of Table III.
- (6.) Good tubes will give a meter indication in the GREEN sector, except as indicated in the **Notations** column. The readings on tubes designated as "OK over ____" will be read on the 3000 scale independent of the settings of the MICROMHOS range switch.

NOTE: The LINE TEST adjustment should be repeated immediately before making either the SHORTS test or the QUALITY test. This means that the tube has already been placed in the proper socket and that all settings and/or connections have been made.

TUBE TEST DATA FOR USE WITH THE TUBE TESTERS I-177, I-177-A, AND I-177-B

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beta 1.08 July 5, 2002

This page deals with the various tube socket adapters that are used for testing some types of tubes with the I-177 series of tube tester. In the event that you have the MX-949 series tube socket adapter kit, you shouldn't need any of the adapters that I've outlined the construction and use of below. The information on the adapters appears to have been dropped from all of the later issue Technical Manuals after the MX-949 series adapter kit was adopted. Since the actual tube testers themselves are a lot more common than the adapter kit, I'm hoping that this may be of help to someone. They're listed below.:

Adapter M-418: This was an early adapter used for testing the 829/829B/832 tubes. I have yet to find a pinout or diagram of it, sorry. If you have one, I'd love to get some details on it from you.

Adapter #1 (for testing 12L8GT) may be fabricated by interconnecting an 8-pin octal socket and an 8-pin octal plug (or tube base) in the following manner:

Socket	Plug
Lug #1	Pin #5
Lug #2	Pin #1
Lug #3	Pin #4
Lug #4	Pin #3
Lug #5	Pin #8
Lug #6	Pin #2
Lug #7	Pin #7
Lug #8	Pin #6

Adapter #2 (for testing 7F8) may be fabricated by interconnecting an 8-pin octal socket and an 8-pin octal plug (or tube base) in the following manner:

Socket	Plug
Lug #1	Pin #4
Lug #2	Pin #2
Lug #3	Pin #3
Lug #4	Pin #8
Lug #5	Pin #1
Lug #6	Pin #6
Lug #7	Pin #7
Lug #8	Pin #5

Adapter #3 (for testing 6AR6) may be fabricated by interconnecting an 8-pin octal socket and an 8-pin octal plug (or tube base) in the following manner:

Socket	Plug
Lug #1	Pin #8
Lug #2	No Connection
Lug #3	Pin #3
Lug #4	No Connection
Lug #5	Pin #4
Lug #6	Pin #2
Lug #7	Pin #5
Lug #8	Pin #7

Adapter #4 (for testing 3Q4) may be fabricated by interconnecting a 7-pin miniature socket and an 8-pin octal plug (or tube base) in the following manner:

Socket	Plug
Lug #1	Pin #2
Lug #2	Pin #8
Lug #3	Pin #4
Lug #4	Pin #6
Lug #5	No Connection
Lug #6	No Connection
Lug #7	Pin #7

Adapter #5 (for testing 12AT7 and 12AU7 #1 triode section) may be fabricated by interconnecting a 9-pin noval socket and an 8-pin octal plug (or tube base) in the following manner:

Socket	Plug
Lug #1	No Connection
Lug #2	No Connection
Lug #3	No Connection
Lug #4	Pin #2
Lug #5	Pin #7
Lug #6	Pin #8
Lug #7	Pin #4
Lug #8	Pin #5
Lug #9	No Connection

Adapter #6 (for testing 12AT7 and 12AU7 #2 triode section) may be fabricated by interconnecting a 9-pin noval socket and an 8-pin octal plug (or tube base) in the following manner:

Socket	Plug
Lug #1	Pin #8
Lug #2	Pin #4
Lug #3	Pin #5
Lug #4	Pin #2
Lug #5	Pin #7
Lug #6	No Connection
Lug #7	No Connection
Lug #8	No Connection
Lug #9	No Connection

Adapter #7 (for testing 12SW7, triode section only) may be fabricated by interconnecting an 8-pin octal socket and an 8-pin octal plug (or tube base) in the following manner:

Socket	Plug
Lug #1	No Connection
Lug #2	Pin #4
Lug #3	Pin #5
Lug #4	No Connection
Lug #5	No Connection
Lug #6	Pin #8
Lug #7	Pin #2
Lug #8	Pin #7

End of Sheet!

TABLE 1 CROSS INDEX OF ARMY VT NUMBERS AND COMMERCIAL NUMBERS

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VT-1 THRU VT-93A	VT-94 THRU VT-174	VT-175 THRU VT-289
VT-1 WE-203A	VT-94 6J5	VT-175 1613
VT-2 WE-205B	VT-94A 6J5G	VT-176 6AB7 / 1853
VT-3 WE- "P"	VT-94B 6J5 Spcl.Slect.	VT-177 1LH4
VT-4A WE-211A	VT-94C 6J5G Spcl.Sel.	VT-178 1LC6
VT-4B Commercial 211	VT-94D 6J5GT	VT-179 1LN5
VT-4C JAN 211	VT-95 2A3	VT-180* 3LF4
VT-5 WE-215A	VT-96 6N7	VT-181 7Z4
VT-6 212A	VT-96B 6N7 Spcl. Selec.	VT-182 3B7 / 1291
VT-7 WX-12	VT-97 5W4	VT-183 1R4 / 1294
VT-8 UV-204	VT-98 6U5 / 6G5	VT-184 VR90-30
VT-10 GE- "P"	VT-99 6F8G	VT-185 3D6 / 1299
VT-11 GE- "G"	VT-100 807	VT-186 Special Tube
VT-12 GE- "T"	VT-100A 807 Modified	VT-187 575A
VT-13 (obs)	VT-101 837	VT-188 7E6
VT-14 (obs)	VT-102 Canceled	VT-189 7F7
VT-16 (obs)	VT-103 6SQ7	VT-190 7H7
VT-17 860	VT-104 12SQ7	VT-191 316A
VT-18 GE- "U"	VT-105 6SC7	VT-192 7A4
VT-19 861	VT-106 803	VT-193 7C7
VT-20 (obs)	VT-107 6V6	VT-194 7J7
VT-21 (obs)	VT-107A 6V6GT	VT-195 1005
VT-22 204A	VT-107B 6V6G	VT-196 6W5G
VT-23 (obs)	VT-108 450TH	VT-197A 5Y3GT/G
VT-24 864	VT-109 2051	VT-198A 6G6G
VT-25 10	VT-111 5BP4, 1802P4	VT-199 6SS7
VT-25A 10 Special	VT-112 6AC7, 1852	VT-200 VR-105-30
VT-26 22	VT-114 5T4	VT-201 25L6
VT-27 30	VT-115 6L6	VT-201C 25L6GT
VT-28 24, 24A	VT-115A 6L6G	VT-202 9002
VT-29 27	VT-116 6SJ7	VT-203 9003
VT-30 01-A	VT-116A 6SJ7GT	VT-204 HK24G
VT-31 31	VT-116B 6SJ7Y	VT-205 6ST7
VT-32 (obs)	VT-117 6SK7	VT-206A 5V4G
VT-33 33	VT-117A 6SK7GT	VT-207 12AH7GT
VT-34 207	VT-118 832	VT-208 7B8
VT-35 35/51	VT-119 2X2 / 879	VT-209 12SG7
VT-36 36	VT-120 954	VT-210 1S4
VT-37 37	VT-121 955	VT-211 6SG7
VT-38 38	VT-122 530	VT-212 958
VT-39 869	VT-123 RCA A-5586 superceded by VT-128	VT-213A 6L5G
VT-39A 869A		VT-214 12H6
VT-40 40	VT-124 1A5GT	VT-215 6E5
VT-41 851	VT-125 1C5GT	VT-216 816
VT-42 872	VT-126 6X5	VT-217 811
VT-42A 872A (spec.fil)	VT-126A 6X5G	VT-218 100TH
VT-43 845	VT-126B 6X5GT	VT-219 Canceled
VT-44 32	VT-127 Special Tube	VT-220 250TH
VT-45 45	VT-127A Special Tube	VT-221 3Q5GT
VT-46 866	VT-128 1630 / A-5588	VT-222 884
VT-46A 866A	VT-129 304TL	VT-223 1H5GT
VT-47 47	VT-130 250TL	VT-224 RK-34
VT-48 41	VT-131 12SK7	VT-225 307A
VT-49 39/44	VT-132 12K8 Special	VT-226 3EP1 / 1806P1

VT-50	50	VT-133	12SR7	VT-227	7184
VT-51	841	VT-134	12A6	VT-228	8012
VT-52	45 Special	VT-135	12J5GT	VT-229	6SL7GT
VT-53	canceled, super- seded by VT-42A	VT-135A	12J5	VT-230	350A
VT-54	34	VT-136	1625	VT-231	6SN7GT
VT-55	865	VT-137	1626	VT-232	E-1148
VT-56	56	VT-138	1629	VT-233	6SR7
VT-57	57	VT-139	VR150-30	VT-234	HY-114B
VT-58	58	VT-140*	1628	VT-235	HY-615
VT-60	850	VT-141	531	VT-236	836
VT-62	801, 801A	VT-142	WE-39DY1	VT-237	957
VT-63	46	VT-143	805	VT-238	956
VT-64	800	VT-144	813	VT-239	1LE3
VT-65	6C5	VT-145	5Z3	VT-240	710A
VT-65A	6C5G	VT-146	1N5GT	VT-241	7E5 / 1201
VT-66	6F6	VT-147	1A7GT	VT-243	7C4 / 1203A
VT-66A	6F6G	VT-148	1D8GT	VT-244	5U4G
VT-67	30 Special	VT-149	3A8GT	VT-245	2050
VT-68	6B7	VT-150	6SA7	VT-246	918
VT-69	6D6	VT-150A	6SA7GT	VT-247	6AG7
VT-70	6F7	VT-151	6A8G	VT-248	1808P1
VT-72	842	VT-151B	6A8GT	VT-249	1006
VT-73	843	VT-152	6K6GT	VT-250	EF50
VT-74	5Z4	VT-152A	6K6G	VT-251	441
VT-75	75	VT-153	12C8 Special	VT-252	923
VT-76	76	VT-154	814	VT-254	304TH
VT-77	77	VT-155	Special Tube	VT-255	705A
VT-78	78	VT-156	Special Tube	VT-256	ZP486
VT-80	80	VT-157	Special Tube	VT-257	K-7
VT-83	83	VT-158	Special Tube	VT-259	829
VT-84	84 / 6Z4	VT-159	Special Tube	VT-260	VR75-30
VT-86	6K7	VT-160	Special Tube	VT-264	3Q4
VT-86A	6K7G	VT-161	12SA7	VT-266	1616
VT-86B	6K7GT	VT-162	12SJ7	VT-267	578
VT-87	6L7	VT-163	6C8G	VT-268	12SC7
VT-87A	6L7G	VT-164	1619	VT-269	717A
VT-88	6R7	VT-165	1624	VT-277	417
VT-88A	6R7G	VT-166	371A	VT-279	GY-2
VT-88B	6R7GT	VT-167	6K8	VT-280*	C7063
VT-89	89	VT-167A	6K8G	VT-281*	HY-145ZT
VT-90	6H6	VT-168A	6Y6G	VT-282	ZG489
VT-90A	6H6GT	VT-169	12C8	VT-283*	QF-206
VT-91	6J7	VT-170	1E5-GP	VT-284*	QF-197
VT-91A	6J7GT	VT-171	1R5	VT-285*	QF-200C
VT-92	6Q7	VT-171A	Loctal equivalent of 1R5	VT-286	832A
VT-92A*	6Q7G	VT-172	1S5	VT-287	815
VT-93	6B8	VT-173	1T4	VT-288	12SH7
VT-93A	6B8G	VT-174	3S4	VT-289	12SL7GT

*Indicates that VT number has been canceled.

(obs) Indicates the tube is obsolete.

This chart was created using data from TB 11-2627-2 dated October 30th of 1946.

TABLE II. TUBE TEST DATA FOR USE WITH THE TUBE TESTERS I-177, I-177-A, AND I-177-B

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Note A: The plate cap of the tube under test should be connected to the upper left contact of the 6-pin (C) socket. A 12-inch lead with clip and banana plug is provided for this purpose.

Note B: Connect the plate cap (nearest the operator) to the upper left contact of the 6-pin (C) socket; use the lead provided. Connect the grid lead to the remaining cap on the tube.

Note C: Set the MICROMHOS switch at 6000 when testing this section if the tube tester bears either Order No. 27613-Phila-44-52 or 52346-Phila-45-10 on the nomenclature plate.

Note D: This test is only a partial indication of a good tube. A complete test is only possible when using equipment.

Note E: **Do not tap on this tube when testing for short because damage to the tube may result.**

Note F: The Mutual Conductance values listed are averages for new tubes and only for a guide.

Tube Type	Selector Switch A	Selector Switch B	Filament	Potentiometers L	Potentiometers R	Socket Letter	Press	Notations	Data Source
00A	2	10	5.0	23	27	A	AMPL	Mut. Cond. 666.	TB 11-2627-2 10/16/52
01A	2	10	5.0	26	39	A	AMPL	Mut. Cond. 725.	TB 11-2627-2 10/16/52
0A2	4	4	OFF	0	0	H	GAS No. 1	OK over 200. Shorts on 4 and 5. 5. See note D.	TB 11-2627-2 10/16/52
0A2	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 C5 3/19/57
0A3	7	1	OFF	50	0	G	GAS No. 1	Shorts on 4 and 5. See note D.	TB 11-2627-2 10/16/52
0A4G	10	2	OFF	50	0	E	0Z4	See note D.	Hickok 3200-16 4/55
0B2	4	4	OFF	30	0	H	GAS No. 1	OK over 200. Shorts on 4 and 5. 5. See note D.	TB 11-2627-2 10/16/52
0B2	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 C5 3/19/57
0B3	7	1	OFF	30	0	G	GAS No. 1	Shorts on 4 and 5. See note D.	TB 11-2627-2 C5 3/19/57
0C3	7	1	OFF	30	0	G	GAS No. 1	Shorts on 4 and 5. See note D.	TB 11-2627-2 10/16/52
0D3	7	1	OFF	30	0	G	GAS No. 1	Shorts on 4 and 5. See note D.	TB 11-2627-2 10/16/52
0Y4	8	4	BLST	70	0	E	0Z4	Shorts on 1, 2, 3, and 4.	Hickok 3200-16 4/55
0Z4	4	8	OFF	0	0	E	NOTHING	Check for shorts.	TB 11-2627-2 10/16/52
0Z4	2	9	OFF	60	0	E	0Z4		TB 11-2627-2 10/16/52
0Z4	10	2	OFF	60	0	E	0Z4		TB 11-2627-2 10/16/52

Tube Type	Selector Switch		Filament		Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B	L	R	L	R					
OZ4A	4	8	OFF	0	0	E	NOTHING		Check for shorts.		TB 11-2627-2 10/16/52
OZ4A	2	9	OFF	60	0	E	0Z4		See note D.		TB 11-2627-2 10/16/52
OZ4A	10	2	OFF	60	0	E	0Z4		See note D.		TB 11-2627-2 10/16/52
OZ4G	4	8	OFF	0	0	E	NOTHING		Check for shorts.		TB 11-2627-2 10/16/52
OZ4G	2	9	OFF	64	0	E	0Z4		See note D.		TB 11-2627-2 10/16/52
OZ4G	10	2	OFF	64	0	E	0Z4		See note D.		TB 11-2627-2 10/16/52
DE1	1	6	2.5	40	34	B	AMPL	Mut.Cond.1000.	Nolan		
RE1	2	7	5.0	35	0	A	RECTIFIER STD.		See note D.	Hickok 3200-16 4/55	
RE1	3	7	5.0	35	0	A	RECTIFIER STD.		See note D.	Hickok 3200-16 4/55	
RE2	2	7	7.5	33	0	A	RECTIFIER STD.		See note D.	Hickok 3200-16 4/55	
1A3	10	5	1.5	0	0	H	DIODE,also rectifier 117N7	May show shorts on 2,3,4, and 5.		TB 11-2627-2 10/16/52	
1A4	2	5	2.0	27	24	A	AMPL	Mut.Cond.750.		Hickok 3200-16 4/55	
1A4P	2	5	2.0	27	24	A	AMPL			TB 11-2627-2 10/16/52	
1A5GT/G	8	5	1.5	32	35	E	AMPL	Mut.Cond.800. See note E.		TB 11-2627-2 10/16/52	
1A6	1	5	2.0	0	29	C	AMPL	Mut.Cond.500. See note D.		TB 11-2627-2 10/16/52	
1A6	9	7	2.0	60	29	C	AMPL	Mut.Cond.150. OK over 120.		TB 11-2627-2 10/16/52	
1A7GT/G	7	7	1.5	32	20	E	AMPL	Mut.Cond.800.	Pent.Section. See Note D.	Hickok 3200-16 4/55	
1A7GT/G	12	7	1.5	60	38	E	AMPL	Mut.Cond.300. Osc.Sect. OK over 240 on 3000 scale. See notes D and E.		Hickok 3200-16 4/55	
1AB5	6	2	1.1	28	20	F	AMPL	Short on 1.		TB 11-2627-2 10/16/52	
1AD4	>	>	>	>	>	>	>	See table III for testing with MX-949*.		TB 11-2627-2 10/16/52	
1AE4	>	>	>	>	>	>	>	See table III for testing with MX-949*.		TB 11-2627-2 10/16/52	
1AF4	2	5	1.5	23	21	H	AMPL	Mut.Cond. 700. Shorts on 4 and 5.		Hickok 3200-16 4/55	
1AF5	5	6	1.5	0	19	H	AMPL	Mut.Cond. 500. Pent. Section		Hickok 3200-16 4/55	
1AF5	3	8	1.5	0	0	H	DIODE	Diode Section		Hickok 3200-16 4/55	

Tube Type	Selector Switch		Filament	Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B		L	R			>	>	
1AH4	>	>	>	>	>					See table III for testing with MX-949*.
1B3GT	7	1	1.1	0	0	E	RECTIFIER STD.			TB 11-2627-2 10/16/52
1B3GT / 8016	7	1	1.1	0	0	E	RECTIFIER STD.	OK over 300. See note D.		TB 11-2627-2 10/16/52
1B4	2	5	2.0	18	29	A	AMPL	Mut. Cond. 640.	Hickok 3200-16 4/55	
1B4P	2	5	2.0	18	29	A	AMPL		TB 11-2627-2 10/16/52	
1B5	7	8	2.0	60	23	C	AMPL	Mut. Cond. 475. OK over 380	TB 11-2627-2 10/16/52	
1B5	10	8	2.0	0	0	C	DIODE		TB 11-2627-2 10/16/52	
1B5	12	3	2.0	0	0	C	DIODE		TB 11-2627-2 10/16/52	
1B5 / 25S	7	8	2.0	60	23	C	AMPL	OK over 380	TB 11-2627-2 10/16/52	
1B5 / 25S	10	8	2.0	0	0	C	DIODE		TB 11-2627-2 10/16/52	
1B5 / 25S	12	3	2.0	0	0	C	DIODE		TB 11-2627-2 10/16/52	
1B7G	7	7	1.5	32	20	E	AMPL	Mut. Cond. 800. Pent. Section.	Hickok 3200-16 4/55	
1B7G	12	7	1.5	60	38	E	AMPL	Mut. Cond. 300. Osc. Sect. OK over 240 on 3000 scale..	TB 11-2627-2 10/16/52	
1C	4	5	2.5	40	0	A	RECTIFIER STD.	See note D.	Nolan	
1C	1	5	2.5	40	0	A	RECTIFIER STD.	See note D.	Nolan	
EL1C	4	5	2.5	40	0	A	RECTIFIER STD.	See note D.	Nolan	
EL1C	1	5	2.5	40	0	A	RECTIFIER STD.	See note D.	Nolan	
1C5GT/G	8	5	1.5	55	36	E	AMPL	Mut. Cond. 1550. See note E.	TB 11-2627-2 10/16/52	
1C6	1	5	2.0	20	24	C	AMPL	Mut. Cond. 650. See note D.	Hickok 3200-16 4/55	
1C6	9	7	2.0	60	41	C	AMPL	Mut. Cond. 300. Osc. Sect. OK over 240 on 3000 scale. See note D.	Hickok 3200-16 4/55	
1C7G	2	5	2.0	20	24	E	AMPL	Mut. Cond. 650. See note D.	Hickok 3200-16 4/55	
1C7G	12	7	2.0	60	41	E	AMPL	Mut. Cond. 300. Osc. Sect. OK over 240 on 3000 scale. See note D.	Hickok 3200-16 4/55	
1C8	>	>	>	>	>	>	>			See table III for testing with MX-949*.
										TB 11-2627-2 10/16/52

Tube Type	Selector Switch		Filament	Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B		L	R					
1C21	10	2	OFF	0	0	E	DIODE	Meter indication is optained when FIL control is switched to 50. See note D.	TB 11-2627-2 10/16/52	
1D5G	2	5	2.0	27	24	E	AMPL	Mut.Cond. 750.	Hickok 3200-16 4/55	
1D5GP	2	5	2.0	27	24	E	AMPL		TB 11-2627-2 10/16/52	
1D7G	2	5	2.0	0	29	E	AMPL	Mut.Cond.750. See note D.	TB 11-2627-2 10/16/52	
1D7G	12	7	2.0	60	35	E	AMPL	Mut.Cond.200. OK over 160. See note D.	TB 11-2627-2 10/16/52	
1D8GT	8	5	1.5	35	41	E	AMPL	Mut.Cond.925.	TB 11-2627-2 10/16/52	
1D8GT	11	5	1.5	11	9	E	AMPL	Mut.Cond.575.	TB 11-2627-2 10/16/52	
1D8GT	5	1	1.5	0	0	E	DIODE		TB 11-2627-2 10/16/52	
1E4G	7	5	1.5	32	30	E	AMPL	Mut.Cond.825.	TB 11-2627-2 10/16/52	
1E5G	2	5	2.0	18	29	E	AMPL	Mut.Cond.640.	Hickok 3200-16 4/55	
1E5GP	2	5	2.0	35	29	E	AMPL		TB 11-2627-2 10/16/52	
1E7G	8	8	2.0	45	17	E	AMPL	Mut.Cond.1150.	TB 11-2627-2 10/16/52	
1E7G	11	6	2.0	45	17	E	AMPL	Mut.Cond.1150.	TB 11-2627-2 10/16/52	
1F4	1	5	2.0	51	19	B	AMPL	Mut.Cond.1400.	TB 11-2627-2 10/16/52	
1F5G	8	5	2.0	51	19	E	AMPL	Mut.Cond.1400.	TB 11-2627-2 10/16/52	
1F6	1	7	2.0	20	21	C	AMPL	Mut.Cond.650.	TB 11-2627-2 10/16/52	
1F6	11	1	2.0	0	0	C	DIODE	OK over 500.	TB 11-2627-2 10/16/52	
1F6	5	5	2.0	0	0	C	DIODE	OK over 500.	TB 11-2627-2 10/16/52	
1F7G	1	5	2.0	20	21	E	AMPL	Mut.Cond.650.	TB 11-2627-2 10/16/52	
1F7G	4	5	2.0	0	0	E	DIODE		TB 11-2627-2 10/16/52	
1F7G	7	1	2.0	0	0	E	DIODE		TB 11-2627-2 10/16/52	
1G4GT/G	7	5	1.5	33	40	E	AMPL	Mut.Cond.825. See note E.	TB 11-2627-2 10/16/52	
1G5G	8	5	2.0	54	30	E	AMPL	Mut.Cond.1500.	TB 11-2627-2 10/16/52	
1G6GT/G	2	9	1.5	22	13	E	AMPL	Mut.Cond.675. Plate #1.	TB 11-2627-2 10/16/52	
1G6GT/G	12	5	1.5	22	13	E	AMPL	Mut.Cond.675. Plate #2. See note E.	TB 11-2627-2 10/16/52	
1H4G	7	5	2.0	36	33	E	AMPL	Mut.Cond.900.	TB 11-2627-2 10/16/52	
1H5GT/G	8	5	1.5	60	13	E	AMPL	Mut.Cond.275. OK over 220 on 3000 scale. See note E.	Hickok 3200-16 4/55	
1H5GT/G	8	1	1.5	0	0	E	DIODE		Hickok 3200-16 4/55	
1H6G	7	8	2.0	60	23	E	AMPL	Mut.Cond.475. OK over 380.	Hickok 3200-16 4/55	
1H6G	10	3	2.0	0	0	E	DIODE		Hickok 3200-16 4/55	
1H6G	10	8	2.0	0	0	E	DIODE		Hickok 3200-16 4/55	
1J5G	8	5	2.0	37	37	E	AMPL	Mut.Cond.950.	TB 11-2627-2 10/16/52	

Tube Type	Selector Switch		Filament		Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B	L	R	L	R					
1J6G	8	8	2.0	42	12	E	AMPL	Mut. Cond. 1000.	TB 11-2627-2 10/16/52		
1J6G	11	6	2.0	42	12	E	AMPL	Mut. Cond. 1000.	TB 11-2627-2 10/16/52		
1L4	1	7	1.5	43	16	H	AMPL	Mut. Cond. 1025. Shorts on 4 and 5. See note E.	TB 11-2627-2 10/16/52		
1L6	1	5	1.5	32	18	H	AMPL	Mut. Cond. 825. Pentode Section	Hickok 3200-16 4/55		
1L6	10	5	1.5	60	33	H	AMPL	Osc. Section. OK above 240.	Hickok 3200-16 4/55		
1LA4	6	2	1.5	32	35	F	AMPL	Mut. Cond. 800. See note E.	TB 11-2627-2 10/16/52		
1LA6	6	3	1.5	32	20	F	AMPL	Pentode Section. Mut. Cond. 800. See notes D and E.	Hickok 3200-16 4/55		
1LA6	2	8	1.5	60	38	F	AMPL	Osc. Sect. Mut. Cond. 300. OK over 240. See notes D and E.	Hickok 3200-16 4/55		
1LB4	6	2	1.5	38	42	F	AMPL	Mut. Cond. 925. See note E.	TB 11-2627-2 10/16/52		
1LB6	6	4	1.5	60	0	F	AMPL	Mut. Cond. 100. Hept. Section. OK above 80.	Hickok 3200-16 4/55		
1LB6	1	8	1.5	45	16	F	AMPL	Mut. Cond. 1500. Osc. Section	Hickok 3200-16 4/55		
1LC5	6	2	1.5	30	24	F	AMPL	Mut. Cond. 775. Shorts on 4 and 5.	TB 11-2627-2 10/16/52		
1LC6	6	3	1.5	41	19	F	AMPL	Mut. Cond. 1000. See note D.	TB 11-2627-2 10/16/52		
1LC6	2	8	1.5	10	19	F	AMPL	Mut. Cond. 550. See note D.	TB 11-2627-2 10/16/52		
1LD5	6	2	1.5	14	23	F	AMPL	Mut. Cond. 600. See note E.	TB 11-2627-2 10/16/52		
1LD5	4	9	1.5	0	0	F	DIODE		TB 11-2627-2 10/16/52		
1LE3	5	2	1.5	49	22	F	AMPL	Mut. Cond. 1300. See note E.	TB 11-2627-2 10/16/52		
1LF3	5	2	1.5	49	22	F	AMPL	Mut. Cond. 1200.	TB 11-2627-2 10/16/52		
1LG5	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52		
1LH4	6	3	1.5	60	13	F	AMPL	Osc. Sect. Mut. Cond. 275. Ok over 220. See note E.	Hickok 3200-16 4/55		
1LH4	10	10	1.5	0	0	F	DIODE		Hickok 3200-16 4/55		
1LN5	6	2	1.5	28	9	F	AMPL	Mut. Cond. 750. Shorts on 4 and 5. See note E.	TB 11-2627-2 10/16/52		
1N5GT/G	8	5	1.5	28	9	E	AMPL	Mut. Cond. 750.	TB 11-2627-2 10/16/52		
1N6G	8	5	1.5	31	35	E	AMPL	Mut. Cond. 800.	TB 11-2627-2 10/16/52		
1P5GT/G	8	5	1.5	31	9	E	AMPL	Mut. Cond. 800. See note E.	TB 11-2627-2 10/16/52		
1Q5GT/G	8	5	1.5	61	30	E	AMPL	Mut. Cond. 2100. See note E.	TB 11-2627-2 10/16/52		

Tube Type	Selector Switch		Filament	Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B		L	R					
1Q6	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	
1R4	10	5	1.5	0	0	F	DIODE		TB 11-2627-2 10/16/52	
1R5	7	7	1.5	19	29	H	AMPL	Mut.Cond.600. Shorts on 4 and 5. See note D.	TB 11-2627-2 C1 10/5/53	
1R5	1	7	1.5	0	25	H	AMPL	Mut.Cond.500. See notes D and E.	TB 11-2627-2 C1 10/5/53	
1S4	8	6	1.5	0	0	H	DIODE	Ok over 200. See note E. Shorts on 1, 4, and 5.	TB 11-2627-2 4/7/49	
1S4	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	
1S5	6	6	1.5	9	28	H	AMPL	Mut.Cond.525. See note E.	TB 11-2627-2 10/16/52	
1S5	3	6	1.5	0	0	H	DIODE		TB 11-2627-2 10/16/52	
1S6	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	
1SA6GT	3	4	1.5	39	19	E	AMPL	Mut.Cond.950.	TB 11-2627-2 10/16/52	
1SB6GT	2	5	1.5	20	22	E	AMPL	Mut.Cond.650.	TB 11-2627-2 10/16/52	
1T4	1	7	1.5	28	28	H	AMPL	Mut.Cond.750. Shorts on 4 and 5. See note E.	TB 11-2627-2 10/16/52	
1T5GT	8	5	1.5	46	37	E	AMPL	Mut.Cond.1150. See note E.	TB 11-2627-2 10/16/52	
1U4	2	5	1.5	35	12	H	AMPL	Shorts on 4 and 5. See note E.	TB 11-2627-2 10/16/52	
1U5	2	5	1.5	9	28	H	AMPL	Mut.Cond.525. See note E.	TB 11-2627-2 10/16/52	
1U5	8	1	1.5	0	0	H	DIODE		TB 11-2627-2 10/16/52	
1U6	1	5	1.5	32	18	H	AMPL	Mut.Cond.825. Pentode Section	Hickok 3200-16 4/55	
1V	1	5	6.3	40	0	A	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
1V5	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	
1W4	2	5	1.5	40	37	H	AMPL	Mut.Cond.925.	Hickok 3200-16 4/55	
1W5	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	
1Z2	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	
HA2	9	7	6.3	59	18	M	AMPL	Mut.Cond.1900. See note D.	Nolan	
H2-10	7	1	2.5	0	0	A	RECTIFIER STD.	OK over 1000. See notes A and D.	Nolan	

Tube Type	Selector Switch		Filament	Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B		L	R					
KR2	1	5	2.5	40	0	A	RECTIFIER STD.			Hickok 3200-16 4/55
ZA2	6	7	6.3	44	17	M	AMPL	Mut. Cond. 1100.	Nolan	
2A3	2	10	2.5	67	55	A	AMPL	Mut. Cond. 3000.	TB 11-2627-2 10/16/52	
2A3H	2	10	2.5	67	55	A	AMPL	Mut. Cond. 3000.	TB 11-2627-2 10/16/52	
2A4G	7	5	2.5	36	80	E	RECTIFIER STD.	Good tubes strikes between 35 and 45 on R when this control is rotated counterclockwise. See note D.	TB 11-2627-2 10/16/52	
2A5	8	5	2.5	60	24	C	AMPL	Mut. Cond. 2000.	TB 11-2627-2 10/16/52	
2A6	7	6	2.5	28	9	C	AMPL	Mut. Cond. 750. Triode Sect.	Hickok 3200-16 4/55	
2A6	10	6	2.5	0	0	C	DIODE	Mut. Cond. 750. Triode Sect.	Hickok 3200-16 4/55	
2A6	10	3	2.5	0	0	C	DIODE	Mut. Cond. 750. Triode Sect.	Hickok 3200-16 4/55	
2A7	7	6	2.5	41	18	D	AMPL	Mut. Cond. 1000. See note D.	TB 11-2627-2 10/16/52	
2A7	10	6	2.5	60	25	D	AMPL	Mut. Cond. 400. Good over 320. See Note D.	TB 11-2627-2 10/16/52	
2B4	1	6	2.5	40	80	B	RECTIFIER STD.	Good tubes strikes between 45 and 55 on R when this control is rotated counterclockwise. See note D.	TB 11-2627-2 10/16/52	
2B6	3	2	2.5	15	30	D	AMPL	Mut. Cond. 600.	TB 11-2627-2 10/16/52	
2B6	7	6	2.5	64	12	D	AMPL	Mut. Cond. 2500. Shorts on 3.	TB 11-2627-2 10/16/52	
2B7	7	6	2.5	41	25	D	AMPL	Mut. Cond. 1000.	TB 11-2627-2 10/16/52	
2B7	10	6	2.5	0	0	D	DIODE	Mut. Cond. 1000.	TB 11-2627-2 10/16/52	
2B7	10	3	2.5	0	0	D	DIODE	Mut. Cond. 1000.	TB 11-2627-2 10/16/52	
2B21	7	1	2.5	0	0	A	RECTIFIER STD.	OK over 1000. See notes A and D.	Nolan	
2B23	7	5	6.3	66	0	E	0Z4	See note D.	TB 11-2627-2 10/16/52	
2B26	2	7	2.5	40	0	A	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
2C4	11	9	2.5	40	80	H	RECTIFIER STD.	Tube strikes at approximately 60 on R when this control is rotated counterclockwise. See note D.	TB 11-2627-2 10/16/52	

Tube Type	Selector Switch		Filament	Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B		L	R					
2C21	10	3	6.3	51	14	D	AMPL	Mut. Cond. 1350. Plate #1.	TB 11-2627-2 10/16/52	
2C21	3	3	6.3	51	14	D	AMPL	Mut. Cond. 1350. Plate #2.	TB 11-2627-2 10/16/52	
2C22	7	2	6.3	67	11	E	AMPL	Mut. Cond. 3000. See note B.	TB 11-2627-2 10/16/52	
2C23	2	10	7.5	50	32	A	AMPL	Mut. Cond. 1250. Nolan		
2C26	7	2	6.3	54	15	E	AMPL	Mut. Cond. 1500. See note A.	TB 11-2627-2 10/16/52	
2C26A	7	2	6.3	54	15	E	AMPL	See note A.	TB 11-2627-2 10/16/52	
2C34	1	5	6.3	50	30	D	AMPL	Connect right plate cap to upper right contact on A socket with lead provided.		
2C34	7	5	6.3	50	30	D	AMPL	Connect left plate cap to upper right contact on A socket with lead provided.	TB 11-2627-2 10/16/52	
2C45	2	10	7.5	62	30	A	AMPL	Mut. Cond. 2200.	Hickok 3200-16 4/55	
2C50	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	
2C51	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	
2C52	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	
2C53	9	5	6.3	0	0	E	AMPL	Connect plate cap to upper center contact on D socket with lead provided. OK over 900. See note D.		
2D21	4	8	6.3	40	80	K	RECTIFIER STD.	Good tube strikes between 25 and 30 on R when this control is rotated counterclockwise. Shorts on 2 and 3. See note D.	TB 11-2627-2 10/16/52	
2E5	12	3	2.5	0	0	C	AMPL	Eye open.	Nolan	
2E5	12	2	2.5	0	0	C	AMPL	Eye closed.	Nolan	
2E22	12	1	6.3	71	0	B	AMPL	Mut. Cond. 4000. See note A.	TB 11-2627-2 10/16/52	
2E24	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	
2E25	8	5	6.3	67	0	E	AMPL	Mut. Cond. 3000. Connect cap to upper right-hand contact of B socket with lead provided.	TB 11-2627-2 10/16/52	
2E26	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	

Tube Type	Selector Switch		Filament	Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B		L	R					
2E30	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	
2E31	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	
2E32	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	
2E35	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	
2E41	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	
2G5	12	3	6.3	0	0	C	AMPL	Eye open.	Nolan	
2G5	12	2	6.3	0	0	C	AMPL	Eye closed.	Nolan	
G2S	7	7	2.5	25	0	B	RECTIFIER	Plate Number 1.	Hickok 3200-16 4/55	
G2S	5	1	2.5	25	0	B	RECTIFIER	Plate Number 2.	Hickok 3200-16 4/55	
2V3G	7	1	2.5	0	0	E	RECTIFIER	OK over 500. See notes A and D.	TB 11-2627-2 10/16/52	
2W3	4	11	2.5	33	0	E	RECTIFIER	See note D.	TB 11-2627-2 10/16/52	
2X2	7	1	2.5	0	0	A	RECTIFIER	OK over 1000. See notes A and D.	TB 11-2627-2 10/16/52	
2X2A	7	1	2.5	0	0	A	RECTIFIER	OK over 1000. See notes A and D.	TB 11-2627-2 10/16/52	
2Z2	2	7	2.5	35	0	A	RECTIFIER	See note D.	TB 11-2627-2 10/16/52	
3A4	10	2	2.5	40	0	H	DIODE	Shorts on 2, 3, 4, and 5. See note E.	TB 11-2627-2 4/7/49	
3A4	11	2	1.5	0	82	H	DIODE	Shorts on 3, 4, and 5.	Hickok 3200-16 4/55	
3A4	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	
3A5	8	8	3.0	60	12	H	AMPL	Mut.Cond.2000. Shorts on 4 and 5. See note E.	TB 11-2627-2 10/16/52	
3A5	6	2	3.0	60	18	H	AMPL	Mut.Cond.2000. Shorts on 4 and 5.	TB 11-2627-2 10/16/52	
3A8GT	8	5	2.5	28	10	E	AMPL	Mut.Cond.750. Shorts on 1. See note E.	Hickok 3200-16 4/55	
3A8GT	11	5	2.5	0	0	E	AMPL	Mut.Cond.500.OK over 400.	Hickok 3200-16 4/55	
3A8GT	5	1	2.5	0	0	E	DIODE		Hickok 3200-16 4/55	

Tube Type	Selector Switch		Filament		Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B	L	R	L	R					
3AL5	12	2	3.0	50	0	K	DIODE	Diode Section 1. Short on 2.			Hickok 3200-16 4/55
3AL5	1	1	3.0	50	0	K	DIODE	Diode Section 2. Short on 2.			Hickok 3200-16 4/55
3AU6	1	9	3.0	62	16	K	AMPL	Mut. Cond. 2300.			Hickok 3200-16 4/55
3AV6	12	2	3.0	50	10	K	AMPL	Mut. Cond. 1250. Triode Section.			Nolan
3AV6	3	8	3.0	0	0	K	DIODE	Diode No. 1			Nolan
3AV6	2	8	3.0	0	0	K	DIODE	Diode No. 2			Nolan
3AV6	>	>	>	>	>	>		See table III for testing with MX-949*.			Nolan
3B4	>	>	>	>	>	>		See table III for testing with MX-949*.			TB 11-2627-2 10/16/52
3B5GT	8	5	2.5	54	49	E	AMPL	Mut. Cond. 1500. Shorts on 4 and 5.			TB 11-2627-2 10/16/52
3B7	6	6	2.5	35	25	F	DIODE	Shorts on 4 and 5. Plate No. 1. Reads in Green Sector			TB 11-2627-2 4/7/49
3B7	1	6	2.5	35	25	F	DIODE	Shorts on 4 and 5. Plate No. 2. Reads in Green Sector			TB 11-2627-2 4/7/49
3B7	>	>	>	>	>	>		See table III for testing with MX-949*.			TB 11-2627-2 10/16/52
3B22	4	5	2.5	40	0	A	RECTIFIER STD.	See note D.			TB 11-2627-2 10/16/52
3B22	1	5	2.5	40	0	A	RECTIFIER STD.	See note D.			TB 11-2627-2 10/16/52
3B23	10	4	2.5	55	0	A	DIODE	Connect tube cap nearest operator. See notes A and D.			TB 11-2627-2 10/16/52
3B23	10	4	2.5	55	0	A	DIODE	Connect tube cap away from operator. See notes A and D.			TB 11-2627-2 10/16/52
3B24	7	1	2.5	5	0	A	RECTIFIER STD.	Shorts on 4 and 5. See notes A and D.			TB 11-2627-2 10/16/52
3B26	7	2	2.5	20	0	E	DIODE	See notes A and D.			TB 11-2627-2 10/16/52
3B28	7	1	2.5	40	0	A	RECTIFIER STD.	See notes A and D.			TB 11-2627-2 10/16/52
3B29	7	2	2.5	20	0	A	DIODE	See notes A and D.			TB 11-2627-2 10/16/52
3BA6	7	9	3.0	70	0	K	AMPL	Mut. Cond. 4300.			Hickok 3200-16 4/55
3BC5	7	9	3.0	55	19	K	AMPL	Mut. Cond. 1600. Shorts on 4 and 5.			Hickok 3200-16 4/55
3BE6	7	9	3.0	55	23	K	AMPL	Mut. Cond. 1600.			Nolan

Tube Type	Selector Switch		Filament	Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B		L	R					
3BN6	10	4	3.0	0	0	K	AMPL	Mut. Cond. 500.	Hickok 3200-16 4/55	
3BN6	>	>	>	>	>	>	>	See table III for testing with MX-949*.	Nolan	
3BY6	4	9	3.0	47	28	K	AMPL	Mut. Cond. 1200.	Hickok 3200-16 4/55	
3BZ6	1	9	3.0	64	17	K	AMPL	Mut. Cond. 2500.	Hickok 3200-16 4/55	
3C23	9	2	3.0	40	80	A	RECTIFIER STD.	Tube strikes at approximately 26 when R control is rotated counterclockwise. See notes A and D.	TB 11-2627-2 10/16/52	
3C24	3	2	6.3	30	20	A	AMPL	Connect top terminal of tube under test to upper contact of 5 pin (B) socket. Use separate lead provided. Connect side terminal of tube under test to cap lead. See note D.	TB 11-2627-2 C5 3/19/57	
3CB6	1	9	3.0	62	18	K	AMPL	Mut. Cond. 2200.	Hickok 3200-16 4/55	
3CF6	1	9	3.0	62	18	K	AMPL	Mut. Cond. 2200.	Nolan	
3CS6	4	9	3.0	30	33	K	AMPL	Mut. Cond. 800.	Hickok 3200-16 4/55	
3D6	6	2	2.5	61	30	F	AMPL	Mut. Cond. 2100. Shorts on 1. See note E.	TB 11-2627-2 10/16/52	
3E6	6	2	3.0	55	16	F	AMPL	Mut. Cond. 1600. Shorts on 4 and 5.	TB 11-2627-2 10/16/52	
3E29	7	2	12.6	70	14	E	AMPL	Plate No. 1. Use Adapter M-418.	TM 11-2627 C1 10/24/45	
3E29	4	2	12.6	70	14	E	AMPL	Plate No. 2. Use Adapter M-418.	TM 11-2627 C1 10/24/45	
3E29	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	
3LE4	6	2	2.5	45	45	F	AMPL	Mut. Cond. 1100. Short on 1.	Hickok 3200-16 4/55	
3LF4	6	2	3.0	62	20	F	AMPL	Mut. Cond. 1500. Shorts on 1. See note E.	TB 11-2627-2 10/16/52	
3Q4	4	2	3.0	50	35	E	AMPL	Mut. Cond. 850. See note E. Use adapter #4.	TB 11-2627-2 4/7/49	
3Q4	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	
3Q5GT/G	8	5	3.0	58	31	E	AMPL	Mut. Cond. 1800. Shorts on 4 and 5. See note E.	TB 11-2627-2 10/16/52	

Tube Type	Selector Switch		Filament	Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B		L	R					
3S4	4	6	3.0	31	0	H	DIODE	Mut. Cond.750. Shorts on 3, 4, and 5. See note E.	TB 11-2627-2 4/7/49	
3S4	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	
3V4	1	7	3.0	56	28	H	AMPL	Mut. Cond.1650. Shorts on 4 and 5. See note E.	TB 11-2627-2 10/16/52	
4A6G	2	9	3.0	41	0	E	AMPL	Mut. Cond.1000. Plate #1.	TB 11-2627-2 10/16/52	
4A6G	12	5	3.0	41	13	E	AMPL	Mut. cond.1000. Plate #2.	TB 11-2627-2 10/16/52	
4AU6	1	9	4.3	62	16	K	AMPL	Mut. Cond.2300.	Nolan	
4AV6	12	2	4.3	50	10	K	AMPL	Mut. Cond.1250. Triode Section.	Nolan	
4AV6	3	8	4.3	0	0	K	DIODE	Diode No. 1	Nolan	
4AV6	2	8	4.3	0	0	K	DIODE	Diode No. 2	Nolan	
4AV6	>	>	>	>	>	>	>	See table III for testing with MX-949*.	Nolan	
4BN6	10	4	4.3	0	0	K	AMPL	Mut. Cond.500.	Nolan	
4BN6	>	>	>	>	>	>	>	See table III for testing with MX-949*.	Nolan	
4BZ6	1	9	4.3	64	17	K	AMPL	Mut. Cond.2500.	Nolan	
4CB6	1	9	4.3	62	18	K	AMPL	Mut. Cond.2200.	Nolan	
4CS6	4	9	4.3	30	33	K	AMPL	Mut. Cond.800.	Nolan	
4DE6	1	9	4.3	62	18	K	AMPL	Mut. Cond.2200.	Nolan	
G4S	7	7	2.5	25	0	B	RECTIFIER STD.	Plate Number 1.	Hickok 3200-16 4/55	
G4S	5	1	2.5	25	0	B	RECTIFIER STD.	Plate Number 2.	Hickok 3200-16 4/55	
KR5	1	5	6.3	60	23	B	AMPL	Mut. Cond.2000.	Hickok 3200-16 4/55	
5A6	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	
5AQ5	8	5	5.0	70	17	L	AMPL	Mut. Cond.3700.	Hickok 3200-16 4/55	

Tube Type	Selector Switch		Filament	Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B		L	R					
5AU4	4	11	5.0	40	0	E	RECTIFIER STD.	Plate No. 1.	Hickok 3200-16 4/55	
5AU4	5	11	5.0	40	0	E	RECTIFIER STD.	Plate No. 2.	Hickok 3200-16 4/55	
5AW4	4	11	5.0	40	0	E	RECTIFIER STD.	Plate No. 1.	Hickok 3200-16 4/55	
5AW4	5	11	5.0	40	0	E	RECTIFIER STD.	Plate No. 2.	Hickok 3200-16 4/55	
5AX4	4	11	5.0	40	0	E	RECTIFIER STD.	Plate No. 1.	Hickok 3200-16 4/55	
5AX4	5	11	5.0	40	0	E	RECTIFIER STD.	Plate No. 2.	Hickok 3200-16 4/55	
5AZ4	11	9	5.0	40	0	E	RECTIFIER STD.	Plate No. 1.	Hickok 3200-16 4/55	
5AZ4	10	9	5.0	40	0	E	RECTIFIER STD.	Plate No. 2.	Hickok 3200-16 4/55	
5J6	1	2	5.0	72	0	K	AMPL	Mut. Cond. 5000. Triode No. 1.	Hickok 3200-16 4/55	
5J6	11	8	5.0	72	0	K	AMPL	Mut. Cond. 5000. Triode No. 2.	Hickok 3200-16 4/55	
5R4GY	4	11	5.0	40	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
5R4GY	5	11	5.0	40	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
5T4	4	11	5.0	40	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
5T4	5	11	5.0	40	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
5U4G	4	11	5.0	40	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
5U4G	5	11	5.0	40	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
5V4G	4	11	5.0	40	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
5V4G	5	11	5.0	40	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
5V6	8	5	5.0	67	25	E	AMPL	Mut. Cond. 3000.	Hickok 3200-16 4/55	
5W4GT/G	4	11	5.0	33	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
5W4GT/G	5	11	5.0	33	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	

Tube Type	Selector Switch		Filament	Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B		L	R					
5X3	2	7	5.0	26	0	E	RECTIFIER STD.	Plate No. 1.	Hickok 3200-16 4/55	
5X3	3	7	5.0	26	0	E	RECTIFIER STD.	Plate No. 2.	Hickok 3200-16 4/55	
5X4G	7	9	5.0	40	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
5X4G	12	4	5.0	40	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
5Y3GT/G	4	11	5.0	40	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
5Y3GT/G	5	11	5.0	40	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
5Y4G	7	9	5.0	35	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
5Y4G	12	4	5.0	35	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
5Z3	2	7	5.0	40	0	A	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
5Z3	3	7	5.0	40	0	A	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
5Z4GT/G	4	11	5.0	40	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
5Z4GT/G	5	11	5.0	40	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
6A3	2	10	6.3	67	55	A	AMPL	Mut. Cond. 3000.	TB 11-2627-2 10/16/52	
6A4	1	5	6.3	60	23	B	AMPL	Mut. Cond. 3000.	TB 11-2627-2 10/16/52	
6A4/LA	1	5	6.3	60	23	B	AMPL	Mut. Cont. 3000.	TB 11-2627-2 10/16/52	
6A5G	7	5	6.3	67	55	E	AMPL	Mut. Cond. 3000. Shorts on 4 and 5	TB 11-2627-2 10/16/52	
6A6	1	5	6.3	53	10	D	AMPL	Mut. Cond. 1500.	TB 11-2627-2 10/16/52	
6A6	12	5	6.3	53	10	D	AMPL	Mut. Cond. 1500.	TB 11-2627-2 10/16/52	
6A7	7	6	6.3	41	18	D	AMPL	Mut. Cond. 1000. See note D.	TB 11-2627-2 10/16/52	
6A7	10	6	6.3	60	25	D	AMPL	Mut. Cond. 400. OK over 320. See note D.	TB 11-2627-2 10/16/52	
6A8	7	7	6.3	41	18	E	AMPL	Mut. Cond. 1000. See note D.	TB 11-2627-2 10/16/52	
6A8	12	7	6.3	60	30	E	AMPL	Mut. Cond. 300. OK over 240. See note D.	TB 11-2627-2 10/16/52	
6AB4	11	9	6.3	70	8	K	AMPL	Mut. Cond. 4000.	Hickok 3200-16 4/55	

Tube Type	Selector Switch		Filament	Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B		L	R			>	>	
6AB4	>	>	>	>	>	C	AMPL	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	
6AB5	12	3	6.3	0	0	C	AMPL	Eye open.	TB 11-2627-2 10/16/52	
6AB5	12	2	6.3	0	0	C	AMPL	Eye closed.	TB 11-2627-2 10/16/52	
6AB6G	8	5	6.3	53	0	E	AMPL	Mut. Cond. 1450.	TB 11-2627-2 10/16/52	
6AB7	4	2	6.3	69	8	E	AMPL	Mut. Cond. 3500.	TB 11-2627-2 10/16/52	
6AC5GT/G	8	5	6.3	40	0	E	AMPL	Mut. Cond. 1000.	TB 11-2627-2 10/16/52	
6AC6G	8	5	6.3	63	0	E	AMPL	Mut. Cond. 2400.	TB 11-2627-2 10/16/52	
6AC7	4	2	6.3	71	10	E	AMPL	Mut. Cond. 3500.	Hickok 3200-16 4/55	
6AD5	7	5	6.3	43	10	E	AMPL	Mut. Cond. 1000.	Hickok 3200-16 4/55	
6AD6G	2	8	6.3	0	0	E	AMPL	Eye No. 1 open. Eye No. 2 closed.	TB 11-2627-2 10/16/52	
6AD6G	3	8	6.3	0	0	E	AMPL	Eye no. 2 open. Eye No. 1 closed.	TB 11-2627-2 10/16/52	
6AD7G	8	5	6.3	60	24	E	AMPL	Mut. Cond. 2000.	TB 11-2627-2 10/16/52	
6AD7G	5	5	6.3	60	65	E	DIODE	Mut. Cond. 325. OK over 260.	TB 11-2627-2 10/16/52	
6AE5	7	5	6.3	47	56	E	AMPL	Mut. Cond. 1200.	TB 11-2627-2 10/16/52	
6AE6G	7	5	6.3	34	0	E	AMPL	Mut. Cond. 850.	TB 11-2627-2 10/16/52	
6AE6G	10	5	6.3	28	0	E	AMPL	Mut. Cond. 750.	TB 11-2627-2 10/16/52	
6AE7GT	1	8	6.3	54	27	E	AMPL	Mut. Cond. 1500.	TB 11-2627-2 10/16/52	
6AE7GT	8	8	6.3	54	27	E	AMPL	Mut. Cond. 1500.	TB 11-2627-2 10/16/52	
6AF5G	8	5	6.3	53	42	E	AMPL	Mut. Cond. 1500.	TB 11-2627-2 10/16/52	
6AF6G	2	8	6.3	0	0	E	AMPL	Eye No. 1 open. Eye No. 2 closed.	TB 11-2627-2 10/16/52	
6AF6G	3	8	6.3	0	0	E	AMPL	Eye No. 2 open. Eye No. 1 closed.	TB 11-2627-2 10/16/52	
6AG5	1	9	6.3	67	0	K	AMPL	Mut. Cond. 3000. Shorts on 4 and 5	Hickok 3200-16 4/55	
6AG5	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	
6AG7	4	2	6.3	72	15	E	AMPL	Mut. Cond. 5000.	TB 11-2627-2 10/16/52	
6AH6	7	9	6.3	68	15	K	AMPL	Mut. Cond. 5000.	TB 11-2627-2 10/16/52	

Tube Type	Selector Switch		Filament	Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B		L	R					
6AH7GT	7	9	6.3	60	35	E	Gas No. 1	Mut. Cond. 2000. Shorts on 2 and 3.	TB 11-2627-2 10/16/52	
6AH7GT	11	9	6.3	60	35	E	Gas No. 1	Mut. Cond. 2000. Shorts on 3, 4, and 5.	TB 11-2627-2 10/16/52	
6AJ5	1	9	6.3	65	22	K	AMPL	Mut. Cond. 2750. Shorts on 4 and 5.	Hickok 3200-16 4/55	
6AJ5	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	
6AK5	1	9	6.3	55	20	K	AMPL	Mut. Cond. 1500. Shorts on 4 and 5.	Hickok 3200-16 4/55	
6AK5	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	
6AK6	1	9	6.3	66	24	K	AMPL	Mut. Cond. 2100.	TB 11-2627-2 10/16/52	
6AL5	9	2	6.3	60	0	K	DIODE	Shorts on 2 and 3.	TB 11-2627-2 10/16/52	
6AL5	4	2	6.3	60	0	K	DIODE	Shorts on 2 and 3.	TB 11-2627-2 10/16/52	
6AL6G	8	5	6.3	73	19	E	AMPL	Mut. Cond. 5000. Connect cap of tube to upper center contact of 5 pin (B) socket. Use special lead provided.	TB 11-2627-2 10/16/52	
6AL7	1	8	6.3	60	VARY	E	AMPL	Potentiometer R controls left pattern.	TB 11-2627-2 10/16/52	
6AL7	2	8	6.3	60	VARY	E	AMPL	Potentiometer R controls right pattern.	TB 11-2627-2 10/16/52	
6AL7	7	7	6.3	60	VARY	E	AMPL	Potentiometer R controls both patterns.	TB 11-2627-2 10/16/52	
6AN5	1	9	6.3	75	9	K	AMPL	Mut. Cond. 8000. Shorts on 4 and 5.	Hickok 3200-16 4/55	
6AN5	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	
6AN6	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	
6AQ5	8	5	6.3	70	17	L	AMPL	Mut. Cond. 3700.	TB 11-2627-2 10/16/52	
6AQ6	12	2	6.3	45	5	K	AMPL	Mut. Cond. 1150.	TB 11-2627-2 10/16/52	
6AQ6	4	8	6.3	0	82	K	DIODE		TB 11-2627-2 10/16/52	
6AQ6	1	8	6.3	0	82	K	DIODE		TB 11-2627-2 10/16/52	

Tube Type	Selector Switch		Filament	Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B		L	R					
6AQ7	9	2	6.3	40	0	G	AMPL	Mut. Cond. 1000. Triode Section.	Hickok 3200-16 4/55	
6AQ7	2	8	6.3	0	0	G	DIODE	Diode Section.	Hickok 3200-16 4/55	
6AQ7	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	
6AR5	1	9	6.3	48	35	K	AMPL	Mut. Cond. 1600.	TB 11-2627-2 10/16/52	
6AR6	8	5	6.3	71	36	E	AMPL	Use Adapter # 3.	TB 11-2627-2 10/30/46	
6AR6	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	
6AS6	1	9	6.3	42	15	K	AMPL	Mut. Cond. 1750.	TB 11-2627-2 10/16/52	
6AS7G	>	>	6.3	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	
6AT6	11	4	6.3	47	15	K	AMPL	Mut. Cond. 1200.	TB 11-2627-2 10/16/52	
6AT6	4	8	6.3	0	0	K	DIODE		TB 11-2627-2 10/16/52	
6AT6	1	8	6.3	0	0	K	DIODE		TB 11-2627-2 10/16/52	
6AU4	12	4	6.3	40	0	G	RECTIFIER STD.		Hickok 3200-16 4/55	
6AU6	1	9	6.3	62	16	K	AMPL	Mut. Cond. 2300.	Hickok 3200-16 4/55	
6AU6	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	
6AV6	12	2	6.3	50	10	K	AMPL	Mut. Cond. 1250. Triode Section.	Hickok 3200-16 4/55	
6AV6	3	8	6.3	0	0	K	DIODE	Diode No. 1	Hickok 3200-16 4/55	
6AV6	2	8	6.3	0	0	K	DIODE	Diode No. 2	Hickok 3200-16 4/55	
6AV6	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	
6AX4	7	1	6.3	40	0	G	RECTIFIER STD.		Hickok 3200-16 4/55	
6AX5	2	9	6.3	33	0	E	RECTIFIER STD.	Plate No. 1.	Hickok 3200-16 4/55	
6AX5	10	2	6.3	33	0	E	RECTIFIER STD.	Plate No. 2.	Hickok 3200-16 4/55	
6AX6	7	2	6.3	40	0	E	RECTIFIER STD.	Plate No. 1.	Hickok 3200-16 4/55	
6AX6	8	7	6.3	40	0	E	RECTIFIER STD.	Plate No. 2.	Hickok 3200-16 4/55	
6B4G	7	5	6.3	67	55	E	AMPL	Mut. Cond. 3000.	TB 11-2627-2 10/16/52	
6B5	8	5	6.3	52	0	C	AMPL	Mut. Cond. 1500.	TB 11-2627-2 10/16/52	
6B6	7	5	6.3	28	9	E	AMPL	Mut. Cond. 750.	Hickok 3200-16 4/55	

Tube Type	Selector Switch		Filament		Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B	L	R	L	R					
6B6	10	5	6.3	0	0	E	DIODE				Hickok 3200-16 4/55
6B6	10	2	6.3	0	0	E	DIODE				Hickok 3200-16 4/55
6B6G	>	>	>	>	>	>	>	>	See table III for testing with MX-949*.		TB 11-2627-2 10/16/52
6B7	7	6	6.3	41	25	D	AMPL	Mut. Cond. 1000.	TB 11-2627-2 10/16/52		
6B7	10	6	6.3	0	0	D	DIODE		TB 11-2627-2 10/16/52		
6B7	10	3	6.3	0	0	D	DIODE		TB 11-2627-2 10/16/52		
6B8	7	5	6.3	42	25	E	AMPL	Mut. Cond. 1000. Pent. Sect.	Hickok 3200-16 4/55		
6B8	10	5	6.3	0	0	E	DIODE		Hickok 3200-16 4/55		
6B8	10	2	6.3	0	0	E	DIODE		Hickok 3200-16 4/55		
6B8	>	>	>	>	>	>	>	>	See table III for testing with MX-949*.		TB 11-2627-2 10/16/52
6B8G	>	>	>	>	>	>	>	>	See table III for testing with MX-949*.		TB 11-2627-2 10/16/52
6BA6	7	9	6.3	70	0	K	AMPL	Mut. Cond. 4300.	TB 11-2627-2 10/16/52		
6BC5	7	9	6.3	55	19	K	AMPL	Mut. Cond. 1600. Shorts on 4 and 5.	Hickok 3200-16 4/55		
6BD6	7	9	6.3	49	22	K	AMPL	Mut. Cond. 2000.	TB 11-2627-2 10/16/52		
6BE6	7	9	6.3	55	23	K	AMPL	Mut. Cond. 1600.	T.O. 33AA21-1-4 5/20/55		
6BF5	8	5	6.3	60	40	L	AMPL	Ok over 1200.	TB 11-2627-2 10/16/52		
6BF6	11	2	6.3	59	20	K	AMPL	Mut. Cond. 1900.	Hickok 3200-16 4/55		
6BF6	4	8	6.3	0	0	K	DIODE	Diode No. 1.	Hickok 3200-16 4/55		
6BF6	1	8	6.3	0	0	K	DIODE	Diode No. 2.	Hickok 3200-16 4/55		
6BF6	>	>	>	>	>	>	>	See table III for testing with MX-949*.		TB 11-2627-2 10/16/52	
6BG6G	9	6	6.3	44	12	E	AMPL	Set MICROMHOS switch to 15,000. Connect cap of tube to upper right-hand contact of 6 pin (C) socket. Use special lead provided.			
6BH6	1	9	6.3	60	12	A	AMPL	Mut. Cond. 2000.	TB 11-2627-2 10/16/52		Hickok 3200-16 4/55
6BH6	>	>	>	>	>	>	>	See table III for testing with MX-949*.		TB 11-2627-2 10/16/52	
6BJ6	7	9	6.3	70	10	K	AMPL	Mut. Cond. 3800.	TB 11-2627-2 10/16/52		
6BK6	11	2	6.3	47	5	K	AMPL	Mut. Cond. 1250.	Hickok 3200-16 4/55		
6BK6	9	10	6.3	40	0	K	DIODE	Diode No. 1.	Hickok 3200-16 4/55		
6BK6	8	10	6.3	40	0	K	DIODE	Diode No. 2.	Hickok 3200-16 4/55		
6BL7	4	1	6.3	70	26	G	AMPL	Mut. Cond. 4000. Shorts on 2 and 3. Triode No. 1.	Hickok 3200-16 4/55		

Tube Type	Selector Switch		Filament		Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B	L	R	L	R					
6BL7	10	4	6.3	70	26	G	AMPL	Mut. Cond. 4000. Shorts on 2 and 3. Triode No. 2.	Mut. Cond. 4000.	Hickok 3200-16 4/55	
6BN6	10	4	6.3	0	0	K	AMPL	Mut. Cond. 500.	Mut. Cond. 500.	Hickok 3200-16 4/55	
6BN6	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52		
6BQ6	8	5	6.3	71	41	E	AMPL	Mut. Cond. 4500. Connect cap to upper right contact of 4-pin socket.	Hickok 3200-16 4/55		
6BY5	7	2	6.3	40	0	E	RECTIFIER STD.	Plate No. 1. Shorts on 1, 4, and 5.	Plate No. 1.	Hickok 3200-16 4/55	
6BY5	3	9	6.3	40	0	E	RECTIFIER STD.	Plate No. 2.	Plate No. 2.	Hickok 3200-16 4/55	
6BY6	4	9	6.3	47	28	K	AMPL	Mut. Cond. 1200.	Mut. Cond. 1200.	Hickok 3200-16 4/55	
6BZ6	1	9	6.3	64	17	K	AMPL	Mut. Cond. 2500.	Mut. Cond. 2500.	Hickok 3200-16 4/55	
6C4	2	9	6.3	67	20	L	AMPL	Mut. Cond. 2200. See note D.	TB 11-2627-2 10/16/52		
6C5	7	5	6.3	60	17	E	AMPL	Mut. Cond. 2000.	TB 11-2627-2 10/16/52		
6C6	1	7	6.3	49	17	C	AMPL	Mut. Cond. 1225.	TB 11-2627-2 10/16/52		
6C7	7	6	6.3	49	24	D	AMPL	Mut. Cond. 1250.	TB 11-2627-2 10/16/52		
6C7	10	6	6.3	0	0	D	DIODE	Mut. Cond. 2000.	TB 11-2627-2 10/16/52		
6C7	10	3	6.3	0	0	D	DIODE	Mut. Cond. 1225.	TB 11-2627-2 10/16/52		
6C8G	8	7	6.3	42	14	E	AMPL	Mut. Cond. 1000. No. 1. Plate	TB 11-2627-2 10/16/52		
6C8G	11	7	6.3	42	14	E	AMPL	Mut. Cond. 1000. No. 2. Plate	TB 11-2627-2 10/16/52		
6CB6	1	9	6.3	62	18	K	AMPL	Mut. Cond. 2200.	Hickok 3200-16 4/55		
6CD6	9	6	6.3	74	34	E	AMPL	Mut. Cond. 6500. Connect top cap to upper right contact of 6-pin socket.	Hickok 3200-16 4/55		
6CF6	1	9	6.3	62	18	K	AMPL	Mut. Cond. 2200.	Mut. Cond. 2200.	Hickok 3200-16 4/55	
6CR6	7	7	6.3	60	18	K	AMPL	Mut. Cond. 1950.	Mut. Cond. 1950.	Hickok 3200-16 4/55	
6CR6	5	1	6.3	0	18	K	DIODE	Diode Section	Diode Section	Hickok 3200-16 4/55	
6CS6	4	9	6.3	30	33	K	AMPL	Mut. Cond. 800.	Mut. Cond. 800.	Hickok 3200-16 4/55	
6CU6	8	5	6.3	71	41	E	AMPL	Mut. Cond. 4500. Connect cap to upper right contact of 4-pin socket.	Hickok 3200-16 4/55		
6D4	11	2	6.3	40	80	K	RECTIFIER STD.	Strikes between 56 and 64 on R when this control is rotated counterclockwise. See note D.	TB 11-2627-2 10/16/52		
6D5	7	5	6.3	60	47	E	AMPL	Mut. Cond. 2000.	TB 11-2627-2 10/16/52		
6D6	1	7	6.3	56	17	C	AMPL	Mut. Cond. 1600.	Mut. Cond. 1600.	TB 11-2627-2 10/16/52	

Tube Type	Selector Switch		Filament		Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B	L	R	L	R					
6D7	7	6	6.3	4.8	20	D	AMPL		Mut. Cond. 1225.		TB 11-2627-2 10/16/52
6D8G	7	7	6.3	41	22	E	AMPL		Mut. Cond. 1000. See note D.		TB 11-2627-2 10/16/52
6D8G	12	7	6.3	60	20	E	AMPL		Mut. Cond. 300. OK over 240. See note D.		TB 11-2627-2 10/16/52
6DB6	4	9	6.3	53	17	K	AMPL		Mut. Cond. 1500.		Hickok 3200-16 4/55
6DC6	7	9	6.3	64	21	K	AMPL		Mut. Cond. 2500.		Hickok 3200-16 4/55
6DE6	1	9	6.3	62	18	K	AMPL		Mut. Cond. 2200.		Hickok 3200-16 4/55
6E5	12	3	6.3	0	0	C	AMPL		Eye open.		TB 11-2627-2 10/16/52
6E5	12	2	6.3	0	0	C	AMPL		Eye closed.		TB 11-2627-2 10/16/52
6E6	1	5	6.3	52	23	D	AMPL		Mut. Cond. 1400.		TB 11-2627-2 10/16/52
6E6	12	5	6.3	52	23	D	AMPL		Mut. Cond. 1400.		TB 11-2627-2 10/16/52
6E7	7	6	6.3	55	20	D	AMPL		Mut. Cond. 1500.		TB 11-2627-2 10/16/52
6F4	>	>	>	>	>	>			See table III for testing with MX-949*.		TB 11-2627-2 10/16/52
6F5	10	5	6.3	43	10	E	AMPL		Mut. Cond. 1000.		TB 11-2627-2 10/16/52
6F6GT/G	8	5	6.3	60	24	E	AMPL		Mut. Cond. 2000.		TB 11-2627-2 10/16/52
6F7	7	6	6.3	45	23	D	AMPL		Mut. Cond. 1100.		TB 11-2627-2 10/16/52
6F7	10	6	6.3	60	23	D	AMPL		Mut. Cond. 450. OK over 360.		TB 11-2627-2 10/16/52
6F8G	8	7	6.3	60	13	E	AMPL		Mut. Cond. 2000. Plate No. 1.		TB 11-2627-2 10/16/52
6F8G	11	7	6.3	60	13	E	AMPL		Mut. Cond. 2000. Plate No. 2.		TB 11-2627-2 10/16/52
6G5	12	3	6.3	0	0	C	AMPL		Eye open.		TB 11-2627-2 10/30/46
6G5	12	2	6.3	0	0	C	AMPL		Mut. Cond. 2100.		TB 11-2627-2 10/16/52
6G6G	8	5	6.3	61	19	E	AMPL		Eye closed.		TB 11-2627-2 10/16/52
6H46T	4	8	6.3	50	0	E	DIODE				TB 11-2627-2 10/16/52
6H6	7	2	6.3	50	0	E	DIODE				TB 11-2627-2 10/16/52
6H6	7	5	6.3	50	0	E	DIODE				TB 11-2627-2 10/16/52
6J4	8	4	6.3	74	0	L	AMPL		Mut. Cond. 6000. Short on 3.		Hickok 3200-16 4/55
6J4	>	>	>	>	>	>			See table III for testing with MX-949*.		TB 11-2627-2 10/16/52
6J5GT/G	7	5	6.3	60	24	E	AMPL		Mut. Cond. 2000.		TB 11-2627-2 10/16/52
6J6	1	2	6.3	69	11	K	AMPL		Mut. Cond. 5000. See note D.		TB 11-2627-2 10/16/52
6J6	11	8	6.3	69	11	K	AMPL		Mut. Cond. 5000. See note D.		TB 11-2627-2 10/16/52
6J7	1	9	6.3	48	18	E	AMPL		Mut. Cond. 1225.		TB 11-2627-2 10/16/52
6J8G	8	5	6.3	41	15	E	AMPL		Mut. Cond. 1000. See note D.		TB 11-2627-2 10/16/52
6J8G	11	5	6.3	0	25	E	AMPL		Mut. Cond. 500. See note D.		TB 11-2627-2 10/16/52
6K4	>	>	>	>	>	>			See table III for testing with MX-949*.		TB 11-2627-2 10/16/52
6K5GT/G	7	5	6.3	40	17	E	AMPL		Mut. Cond. 1000.		TB 11-2627-2 10/16/52
6K6GT/G	8	5	6.3	55	28	E	AMPL		Mut. Cond. 1600.		Hickok 3200-16 4/55

Tube Type	Selector Switch		Filament		Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B	L	R	L	R					
6K7	8	5	6.3	54	16	E	AMPL	Mut. Cond. 1450.	TB 11-2627-2 10/16/52		
6K8	8	5	6.3	41	9	E	AMPL	Mut. Cond. 1000. See note D.	TB 11-2627-2 10/16/52		
6K8	11	5	6.3	63	9	E	AMPL	Mut. Cond. 2400. See note D.	TB 11-2627-2 10/16/52		
6L5G	7	5	6.3	56	22	E	AMPL	Mut. Cond. 1500.	TB 11-2627-2 10/16/52		
6L6	8	5	6.3	63	20	E	AMPL	Mut. Cond. 5000. Set MICROMHOS switch to 6000.	TB 11-2627-2 C1 10/5/53		
6L7	1	9	6.3	20	19	E	AMPL	Mut. Cond. 650. See note D.	TB 11-2627-2 10/16/52		
6L7	8	5	6.3	20	22	E	AMPL	Mut. Cond. 650. See note D.	TB 11-2627-2 10/16/52		
6N4	7	5	6.3	71	17	L	AMPL		TB 11-2627-2 10/16/52		
6N5	12	3	6.3	0	0	C	AMPL	Eye open.	TB 11-2627-2 10/16/52		
6N5	12	2	6.3	0	0	C	AMPL	Eye closed.	TB 11-2627-2 10/16/52		
6N6G	8	5	6.3	52	0	E	AMPL	Mut. Cond. 1500.	TB 11-2627-2 10/16/52		
6N7	2	9	6.3	53	10	E	AMPL	Mut. Cond. 1500.	TB 11-2627-2 10/16/52		
6N7	12	5	6.3	53	10	E	AMPL	Mut. Cond. 1500.	TB 11-2627-2 10/16/52		
6P5GT/G	7	5	6.3	53	24	E	AMPL	Mut. Cond. 1450.	TB 11-2627-2 10/16/52		
6P7G	3	12	6.3	45	23	E	AMPL	Mut. Cond. 1100.	TB 11-2627-2 10/16/52		
6P7G	6	12	6.3	60	23	E	AMPL	Mut. Cond. 450. OK over 360.	TB 11-2627-2 10/16/52		
6Q5G	7	5	6.3	40	80	E	RECTIFIER STD.	Good tube indicates between 40 and 50 when R is rotated counterclockwise. See note D.	TB 11-2627-2 10/16/52		
6Q6G	7	5	6.3	40	14	E	AMPL	Mut. Cond. 1000.	TB 11-2627-2 10/16/52		
6Q6G	7	2	6.3	0	0	E	DIODE		TB 11-2627-2 10/16/52		
6Q7	7	5	6.3	33	14	E	AMPL	Mut. Cond. 800.	TB 11-2627-2 10/16/52		
6Q7	10	5	6.3	0	0	E	DIODE		TB 11-2627-2 10/16/52		
6Q7	10	2	6.3	0	0	E	DIODE		TB 11-2627-2 10/16/52		
6R7GT/G	7	5	6.3	60	17	E	AMPL	Mut. Cond. 1900.	TB 11-2627-2 10/16/52		
6R7GT/G	10	5	6.3	0	0	E	DIODE		TB 11-2627-2 10/16/52		
6R7GT/G	10	2	6.3	0	0	E	DIODE		TB 11-2627-2 10/16/52		

Tube Type	Selector Switch		Filament	Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B		L	R					
6S7	8	5	6.3	57	22	E	AMPL	Mut. Cond. 1750.	TB 11-2627-2 10/16/52	
6S7G	8	5	6.3	57	22	E	AMPL	Mut. Cond. 1750.	TB 11-2627-2 10/16/52	
6S8	5	9	6.3	36	8	G	AMPL	Mut. Cond. 900. Triode Section	Hickok 3200-16 4/55	
6S8	2	9	6.3	0	0	G	DIODE	Diode No.1.	Hickok 3200-16 4/55	
6S8	3	9	6.3	0	0	G	DIODE	Diode No.2.	Hickok 3200-16 4/55	
6S8	1	2	6.3	0	0	G	DIODE AND 117N7	Diode No.3.	Hickok 3200-16 4/55	
6SA7GT/G	1	7	6.3	28	17	E	AMPL	Mut. Cond. 750. See note D.	TB 11-2627-2 10/16/52	
6SA7GT/G	7	7	6.3	28	17	E	AMPL	Mut. Cond. 750. See note D.	TB 11-2627-2 10/16/52	
6SB7	1	7	6.3	52	13	E	AMPL	Mut. Cond. 750. See note D.	TB 11-2627-2 10/16/52	
6SB7	7	7	6.3	60	33	E	AMPL	Mut. Cond. 300. OK over 240. See note D.	TB 11-2627-2 10/16/52	
6SC7	10	3	6.3	42	0	G	AMPL	Mut. Cond. 1000.	TB 11-2627-2 10/16/52	
6SC7	1	3	6.3	42	0	G	AMPL	Mut. Cond. 1000.	TB 11-2627-2 10/16/52	
6SD7GT	4	2	6.3	64	13	E	AMPL	Mut. Cond. 2500.	TB 11-2627-2 10/16/52	
6SF5	7	4	6.3	56	13	E	AMPL	Mut. Cond. 1000.	TB 11-2627-2 10/16/52	
6SF7	6	7	6.3	60	0	G	AMPL	Mut. Cond. 2000.	Hickok 3200-16 4/55	
6SF7	8	1	6.3	0	0	G	DIODE	Mut. Cond. 2000.	Hickok 3200-16 4/55	
6SG7	4	2	6.3	68	10	E	AMPL	Mut. Cond. 3300.	TB 11-2627-2 10/16/52	
6SH7	4	2	6.3	69	0	E	AMPL	Mut. Cond. 3400.	TB 11-2627-2 10/16/52	
6S17	4	2	6.3	56	18	E	AMPL	Mut. Cond. 1575	TB 11-2627-2 10/16/52	
6SK7GT/G	4	2	6.3	59	18	E	AMPL	Mut. Cond. 1900.	TB 11-2627-2 10/16/52	
6SL7GT	4	1	6.3	53	0	G	AMPL	Mut. Cond. 1400. Shorts on 2 and 3.	Nolan	
6SL7GT	10	4	6.3	53	0	G	AMPL	Mut. Cond. 1400. Shorts on 2 and 3.	Nolan	
6SL7GT	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	
6SN7GT	4	1	6.3	56	24	G	AMPL	Mut. Cond. 1650. Shorts on 2 and 3.	Hickok 3200-16 4/55	
6SN7GT	10	4	6.3	56	24	G	AMPL	Mut. Cond. 1650. Shorts on 2 and 3.	Hickok 3200-16 4/55	
6SQ7	6	6	6.3	42	0	G	AMPL	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	
6SQ7	3	7	6.3	0	0	G	DIODE	Mut. Cond. 1000.	TB 11-2627-2 10/16/52	
6SQ7	7	1	6.3	0	0	G	DIODE	TB 11-2627-2 10/16/52		

Tube Type	Selector Switch		Filament	Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B		L	R					
6SR7	6	6	6.3	59	15	G	AMPL	Mut. Cond. 1900.	Triode Section	Hickok 3200-16 4/55
6SR7	3	7	6.3	0	0	G	DIODE	Diode No. 1.		Hickok 3200-16 4/55
6SR7	7	1	6.3	0	0	G	DIODE	Diode No. 2.		Hickok 3200-16 4/55
6SR7	>	>	>	>	>	>	>	See table III for testing with MX-949*.		TB 11-2627-2 10/16/52
6SS7	4	2	6.3	58	16	E	AMPL	Mut. Cond. 1850.		TB 11-2627-2 10/16/52
6ST7	6	7	6.3	59	12	G	AMPL	Mut. Cond. 1000.		TB 11-2627-2 10/16/52
6ST7	3	7	6.3	0	0	G	DIODE	Diode #1.		TB 11-2627-2 10/16/52
6ST7	7	1	6.3	0	0	G	DIODE	Diode #2.		TB 11-2627-2 10/16/52
6SU7	>	>	>	>	>	>	>	See table III for testing with MX-949*.		TB 11-2627-2 10/16/52
6SV7	6	7	6.3	61	9	G	AMPL	Mut. Cond. 2100.	Pentode Section	Hickok 3200-16 4/55
6SV7	8	1	6.3	40	0	G	DIODE	Mut. Cond. 1200.	Triode Section.	Hickok 3200-16 4/55
6SZ7	6	7	6.3	45	5	G	AMPL	Mut. Cond. 1200.	Triode Section.	Hickok 3200-16 4/55
6SZ7	8	1	6.3	0	0	G	DIODE	Diode No. 1.		Hickok 3200-16 4/55
6SZ7	3	6	6.3	0	0	G	DIODE	Diode No. 2.		Hickok 3200-16 4/55
6T7G	7	5	6.3	40	14	E	AMPL	Mut. Cond. 1000.		TB 11-2627-2 10/16/52
6T7G	10	5	6.3	0	0	E	DIODE	Diode #1.		TB 11-2627-2 10/16/52
6T7G	10	2	6.3	0	0	E	DIODE	Diode #2.		TB 11-2627-2 10/16/52
6U4	12	3	6.3	40	0	G	RECTIFIER STD.			Hickok 3200-16 4/55
6U5	12	3	6.3	0	0	C	AMPL	Eye open.		TB 11-2627-2 10/16/52
6U5	12	2	6.3	0	0	C	AMPL	Eye closed.		TB 11-2627-2 10/16/52
6U5/6G5	12	3	6.3	0	0	C	AMPL	Eye open.		TB 11-2627-2 10/16/52
6U5/6G5	12	2	6.3	0	0	C	AMPL	Eye closed.		TB 11-2627-2 10/16/52
6U66T	8	5	6.3	73	27	E	AMPL	Mut. Cond. 6200.		TB 11-2627-2 10/16/52
6U7G	8	5	6.3	56	17	E	AMPL	Mut. Cond. 1600.		TB 11-2627-2 10/16/52
6V6GT/G	8	5	6.3	67	25	E	AMPL	Mut. Cond. 3000.		TB 11-2627-2 10/16/52
6V7G	7	5	6.3	40	32	E	AMPL	Mut. Cond. 975.		TB 11-2627-2 10/16/52
6V7G	10	5	6.3	0	0	E	DIODE	Diode #1.		TB 11-2627-2 10/16/52
6V7G	10	2	6.3	0	0	E	DIODE	Diode #2.		TB 11-2627-2 10/16/52
6W4	12	4	6.3	40	0	G	RECTIFIER STD.	See note D.		Hickok 3200-16 4/55

Tube Type	Selector Switch		Filament	Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B		L	R					
6W5G	2	9	6.3	40	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
6W5G	10	2	6.3	40	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
6W6GT	8	5	6.3	67	46	E	AMPL	Mut. Cond. 3000.	TB 11-2627-2 10/16/52	
6W7G	1	9	6.3	41	20	E	AMPL	Mut. Cond. 1000.	TB 11-2627-2 10/16/52	
6X4	3	5	6.3	35	0	K	RECTIFIER STD.	Plate No. 1. See note D.	TB 11-2627-2 10/16/52	
6X4	6	5	6.3	35	0	K	RECTIFIER STD.	Plate No. 2. See note D.	TB 11-2627-2 10/16/52	
6X5GT/G	2	9	6.3	40	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
6X5GT/G	10	2	6.3	40	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
6Y5	9	8	6.3	40	0	C	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
6Y5	12	8	6.3	40	0	C	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
6Y6G	8	5	6.3	60	42	E	AMPL	Set MICROMHOS switch at 6000.	TB 11-2627-2 C1 10/5/53	
6Y7G	2	9	6.3	39	12	E	AMPL	Mut. Cond. 1000.	TB 11-2627-2 10/16/52	
6Y7G	12	5	6.3	39	12	E	AMPL	Mut. Cond. 1000.	TB 11-2627-2 10/16/52	
6Z3	1	5	6.3	40	0	A	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
6Z4	7	7	6.3	40	0	B	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
6Z4	5	1	6.3	40	0	B	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
6Z5	9	12	6.3	40	0	C	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
6Z5	12	12	6.3	40	0	C	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
6Z7G	2	9	6.3	45	9	E	AMPL	Mut. Cond. 1200.	TB 11-2627-2 10/16/52	
6Z7G	12	5	6.3	45	9	E	AMPL	Mut. Cond. 1200.	TB 11-2627-2 10/16/52	
6ZY5G	7	2	6.3	40	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
6ZY5G	7	5	6.3	40	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
PJ-7	2	8	5.0	25	12	A	AMPL	Mut. Cond. 750.	Hickok 3200-16 4/55	

Tube Type	Selector Switch		Filament		Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B	L	R	L	R					
7A4	6	2	6.3	6.6	14	F	AMPL	Mut. Cond. 2600.	TB 11-2627-2 10/16/52		
7A5	6	2	6.3	7.1	23	F	AMPL	Mut. Cond. 6000.	TB 11-2627-2 10/16/52		
7A6	8	5	6.3	40	0	F	DIODE	Shorts on 1, 4, and 5.	TB 11-2627-2 10/16/52		
7A6	11	5	6.3	40	0	F	DIODE		TB 11-2627-2 10/16/52		
7A7	6	2	6.3	58	22	F	AMPL	Mut. Cond. 1750.	TB 11-2627-2 10/16/52		
7A8	5	3	6.3	41	20	F	AMPL	Mut. Cond. 1000. See note D.	TB 11-2627-2 10/16/52		
7A8	8	10	6.3	0	21	F	AMPL	Mut. Cond. 500. See note D.	TB 11-2627-2 10/16/52		
7AB7	3	9	6.3	58	0	N	AMPL	Shorts on 4 and 5.	TB 11-2627-2 4/7/49		
7AB7	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52		
7AD7	5	4	6.3	74	8	F	AMPL	Mut. Cond. 6200.	Hickok 3200-16 4/55		
7AF7	12	5	6.3	64	0	F	AMPL	Mut. Cond. 2600.	TB 11-2627-2 10/16/52		
7AF7	2	9	6.3	64	0	F	AMPL	Mut. Cond. 2600. Shorts on 1, 4, and 5.	TB 11-2627-2 10/16/52		
7AG7	6	2	6.3	67	0	F	AMPL	Mut. Cond. 3000.	TB 11-2627-2 10/16/52		
7AH7	5	4	6.3	68	0	F	AMPL	Mut. Cond. 3300.	Hickok 3200-16 4/55		
7AJ7	5	4	6.3	62	7	F	AMPL	Mut. Cond. 2275.	Hickok 3200-16 4/55		
7AK7	5	4	6.3	77	0	F	AMPL	Mut. Cond. 3200.	Hickok 3200-16 4/55		
7B4	6	2	6.3	43	10	F	AMPL	Mut. Cond. 1000.	TB 11-2627-2 10/16/52		
7B5	6	2	6.3	56	28	F	AMPL	Mut. Cond. 1600.	TB 11-2627-2 10/16/52		
7B6	2	3	6.3	28	9	F	AMPL	Mut. Cond. 750. Shorts on 1, 4, and 5.	TB 11-2627-2 10/16/52		
7B6	8	3	6.3	0	0	F	DIODE	Shorts on 1, 4, and 5.	TB 11-2627-2 10/16/52		
7B6	6	10	6.3	0	0	F	DIODE	Shorts on 1, 4, and 5.	TB 11-2627-2 10/16/52		
7B7	5	4	6.3	57	22	F	AMPL	Mut. Cond. 1700.	TB 11-2627-2 10/16/52		
7B8	5	3	6.3	40	22	F	AMPL	Mut. Cond. 1000.	TB 11-2627-2 10/16/52		
7B8	8	10	6.3	0	15	F	AMPL	Mut. Cond. 500.	TB 11-2627-2 10/16/52		
7C4	9	5	6.3	25	0	F	DIODE		TB 11-2627-2 10/16/52		
7C4	9	5	6.3	25	0	F	DIODE		TB 11-2627-2 10/16/52		
7C5	6	2	6.3	67	25	F	AMPL	Mut. Cond. 3000.	TB 11-2627-2 10/16/52		
7C6	2	3	6.3	15	8	F	AMPL	Mut. Cond. 600. Shorts on 1, 4, and 5.	TB 11-2627-2 10/16/52		
7C6	8	3	6.3	0	0	F	DIODE		TB 11-2627-2 10/16/52		
7C6	6	10	6.3	0	0	F	DIODE		TB 11-2627-2 10/16/52		
7C7	6	2	6.3	49	18	F	AMPL	Mut. Cond. 1300.	TB 11-2627-2 10/16/52		

Tube Type	Selector Switch		Filament		Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B	L	R	L	R					
7E5	12	4	6.3	67	0	N	AMPL		Shorts on 1, 2, and 5.	TB 11-2627-2 4/7/49	
7E5	>	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	
7E6	2	3	6.3	59	15	F	AMPL	Mut.Cond.1900. Shorts on 1, 4, and 5.	Hickok 3200-16 4/55		
7E6	8	3	6.3	0	0	F	DIODE	Shorts on 1, 4, and 5.	Hickok 3200-16 4/55		
7E6	12	10	6.3	0	0	F	DIODE	Shorts on 1, 4, and 5.	Hickok 3200-16 4/55		
7E6	>	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	
7E7	6	3	6.3	49	18	F	AMPL	Mut.Cond.1300.	TB 11-2627-2 10/16/52		
7E7	1	8	6.3	0	0	F	DIODE		TB 11-2627-2 10/16/52		
7E7	4	8	6.3	0	0	F	DIODE		TB 11-2627-2 10/16/52		
7F7	2	9	6.3	56	0	F	AMPL	Mut.Cond.1600. Plate #1. Shorts on 1, 4, and 5.	Hickok 3200-16 4/55		
7F7	12	5	6.3	56	0	F	AMPL	Mut.Cond.1600. Plate #2.	Hickok 3200-16 4/55		
7F8	11	6	6.3	56	20	E	AMPL	Use adapter #2.	TB 11-2627-2 4/7/49		
7F8	8	8	6.3	56	20	E	AMPL	Use adapter #2.	TB 11-2627-2 4/7/49		
7F8	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52		
7G7	5	4	6.3	60	15	F	AMPL	Mut.Cond.2000.	TB 11-2627-2 10/16/52		
7G8	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52		
7H7	6	2	6.3	67	0	F	AMPL	Mut.Cond.3000.	TB 11-2627-2 10/16/52		
7J7	6	3	6.3	31	15	F	AMPL	Mut.Cond.800. See note D.	TB 11-2627-2 10/16/52		
7J7	2	8	6.3	42	15	F	AMPL	Mut.Cond.1000. See note D.	TB 11-2627-2 10/16/52		
7K7	2	8	6.3	41	0	F	AMPL	Mut.Cond.1000. Shorts on 1, 4, and 5.	TM 11-2627 8/3/44		
7K7	9	2	6.3	0	0	F	DIODE		TM 11-2627 8/3/44		
7K7	5	9	6.3	0	0	F	DIODE		TM 11-2627 8/3/44		
7K7	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52		
7L7	6	2	6.3	60	10	F	AMPL	Mut.Cond.2000.	TB 11-2627-2 10/16/52		
7N7	2	9	6.3	60	13	F	AMPL	Mut.Cond.2000. Shorts on 1, 4, and 5.	TB 11-2627-2 10/16/52		
7N7	12	5	6.3	60	13	F	AMPL	Mut.Cond.2000.	TB 11-2627-2 10/16/52		
7Q7	6	2	6.3	33	17	F	AMPL	Mut.Cond.800. See note D.	TB 11-2627-2 10/16/52		

Tube Type	Selector Switch		Filament		Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B	L	R	L	R					
7R7	6	3	6.3	6.7	8	F	AMPL	Mut. Cond. 3000.	TB 11-2627-2 10/16/52		
7R7	1	8	6.3	0	0	F	DIODE		TB 11-2627-2 10/16/52		
7R7	4	8	6.3	0	0	F	DIODE		TB 11-2627-2 10/16/52		
7S7	6	3	6.3	53	15	F	AMPL	Mut. Cond. 1500. See note D.	TB 11-2627-2 10/16/52		
7S7	2	8	6.3	53	0	F	AMPL	Mut. Cond. 1500. See note D.	TB 11-2627-2 10/16/52		
7T7	6	2	6.3	69	0	F	AMPL	Mut. Cond. 3400.	Hickok 3200-16 4/55		
7V7	6	2	6.3	70	5	F	AMPL	Mut. Cond. 4000.	Hickok 3200-16 4/55		
7W7	6	2	6.3	67	9	F	AMPL	Mut. Cond. 3000. Shorts on 1, 4, and 5.	TB 11-2627-2 10/16/52		
7X6	6	9	6.3	40	0	F	RECTIFIER STD.	Plate No. 1.	Hickok 3200-16 4/55		
7X6	1	9	6.3	40	0	F	RECTIFIER STD.	Plate No. 2.	Hickok 3200-16 4/55		
7X7	1	2	6.3	30	0	F	AMPL	Mut. Cond. 700. Shorts on 1, 4, and 5.	TB 11-2627-2 10/16/52		
7X7	12	8	6.3	0	0	F	DIODE		TB 11-2627-2 10/16/52		
7X7	7	3	6.3	0	0	F	DIODE		TB 11-2627-2 10/16/52		
7Y4	1	6	6.3	40	0	F	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52		
7Y4	6	6	6.3	40	0	F	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52		
7Z4	1	6	6.3	40	0	F	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52		
7Z4	6	6	6.3	40	0	F	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52		
PJ-8	2	10	5.0	49	21	A	AMPL	Mut. Cond. 1300	Hickok 3200-16 4/55		
D-10	7	2	6.3	54	15	E	AMPL	Mut. Cond. 1500. See note A.	Nolan		
10	2	10	7.5	50	32	A	AMPL	Mut. Cond. 1250.	TB 11-2627-2 10/16/52		
10Y	2	10	7.5	50	32	A	AMPL	(AKA 10 Special)	TB 11-2627-2 10/16/52		
WD11	2	10	1.5	60	35	A	AMPL	Mut. Cond. 425. MICROMHOS only. OK over 340 on 3000 Scale	Hickok 3200-16 4/55		
GU12 (Brit.)	7	1	2.5	40	0	A	RECTIFIER STD.	See notes A and D.	Nolan		
WX12	2	10	1.5	60	36	A	AMPL	Mut. Cond. 425. MICROMHOS only. OK over 340 on 3000 Scale	Hickok 3200-16 4/55		
12A	2	10	5.0	57	36	A	AMPL	Mut. Cond. 1650.	TB 11-2627-2 10/16/52		
12A5	1	12	6.3	0	0	D	NOTHING	Check for shorts	TB 11-2627-2 10/16/52		

Tube Type	Selector Switch		Filament		Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B	L	R	L	R					
12A5	2	10	12.6	58	42	D	AMPL	Mut Cond. 1800.	TB 11-2627-2 10/16/52		
12A6	8	5	12.6	67	10	E	AMPL	Mut Cond. 3000.	TB 11-2627-2 10/16/52		
12A7	7	6	12.6	39	39	D	AMPL	Mut Cond. 975.	TB 11-2627-2 10/16/52		
12A7	7	3	12.6	40	0	D	RECTIFIER STD.		TB 11-2627-2 10/16/52		
12A8GT	7	7	12.6	41	18	E	AMPL	Mut Cond. 1000. See note D.	TB 11-2627-2 10/16/52		
12A8GT	12	7	12.6	60	30	E	AMPL	Mut cond. 300. OK over 240. See note D.	TB 11-2627-2 10/16/52		
12AH7GT	11	7	12.6	50	19	G	AMPL	Mut Cond. 2000.	TB 11-2627-2 4/7/49		
12AH7GT	7	10	12.6	50	19	G	AMPL	Mut Cond. 2000.	TB 11-2627-2 4/7/49		
12AH7GT	>	>	>	>	>	>		See table III for testing with MX-949*.	TB 11-2627-2 10/16/52		
12AL5	9	2	12.6	60	0	K	DIODE		TB 11-2627-2 10/16/52		
12AL5	4	2	12.6	60	0	K	DIODE		TB 11-2627-2 10/16/52		
12AQ5	8	5	12.6	70	17	L	AMPL	Mut Cond. 3700.	Hickok 3200-16 4/55		
12AT6	11	4	12.6	47	15	K	AMPL	Mut Cond. 1200.	TB 11-2627-2 10/16/52		
12AT6	4	8	12.6	0	0	K	DIODE		TB 11-2627-2 10/16/52		
12AT6	1	8	12.6	0	0	K	DIODE		TB 11-2627-2 10/16/52		
12AT7	4	2	12.6	15	25	E	AMPL	Use adapter #5 for triode #1.	TB 11-2627-2 4/7/49		
12AT7	4	2	12.6	15	25	E	AMPL	Use adapter #6 for triode #2.	TB 11-2627-2 4/7/49		
12AU6	>	>	>	>	>	>		See table III for testing with MX-949*.	TB 11-2627-2 10/16/52		
12AU6	7	9	12.6	63	12	K	AMPL	Mut Cond. 2300.	Hickok 3200-16 4/55		
12AU7	>	>	>	>	>	>		See table III for testing with MX-949*.	TB 11-2627-2 10/16/52		
12AU7	4	2	12.6	60	25	E	AMPL	Use adapter #5 for triode #1.	TB 11-2627-2 4/7/49		
12AU7	>	>	>	>	>	>		See table III for testing with MX-949*.	TB 11-2627-2 10/16/52		
12AV6	12	2	12.6	50	10	K	AMPL	Mut Cond. 1250. Triode Section	Hickok 3200-16 4/55		
12AV6	3	8	12.6	0	0	K	DIODE	Diode No. 1.	Hickok 3200-16 4/55		
12AV6	2	8	12.6	0	0	K	DIODE	Diode No. 2.	Hickok 3200-16 4/55		

Tube Type	Selector Switch		Filament	Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B		L	R					
12AV6	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	
12AV7	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	
12AW6	1	9	12.6	67	0	K	AMPL	Mut. Cond. 3000.	Hickok 3200-16 4/55	
12AX4	7	1	12.6	40	0	G	RECTIFIER STD.		Hickok 3200-16 4/55	
12AX7	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	
12AY7	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	Nolan
12B7	6	2	12.6	59	18	F	AMPL	Mut. Cond. 1900.	TB 11-2627-2 10/16/52	
12B8GT	7	7	12.6	0	0	E	NOTHING	Test for shorts.	TB 11-2627-2 10/16/52	
12B8GT	1	7	12.6	58	18	E	AMPL	Pentode Section. Mut. Cond. 1800.	TB 11-2627-2 10/16/52	
12B8GT	11	1	12.6	60	0	E	AMPL	Triode Section. Mut. Cond. 2000.	TB 11-2627-2 10/16/52	
12BA6	7	9	12.6	70	0	K	AMPL	Mut. Cond. 4300.	TB 11-2627-2 10/16/52	
12BD6	1	9	12.6	60	33	K	AMPL	Mut. Cond. 2000.	Hickok 3200-16 4/55	
12BE6	8	5	12.6	52	9	K	AMPL	Mut. Cond. 1425.	TB 11-2627-2 10/16/52	
12BE6	7	9	12.6	55	23	K	AMPL	Mut. Cond. 1600.	TB 11-2627-2 10/16/52	
12BF6	11	2	12.6	59	20	K	AMPL	Mut. Cond. 1900.	Hickok 3200-16 4/55	
12BF6	4	8	12.6	0	0	K	DIODE	Diode No.1.	Hickok 3200-16 4/55	
12BF6	1	8	12.6	0	0	K	DIODE	Diode No.2.	Hickok 3200-16 4/55	
12BK6	11	2	12.6	47	5	K	AMPL	Mut. Cond. 1250.	Hickok 3200-16 4/55	
12BK6	9	10	12.6	40	0	K	DIODE	Diode No.1.	Hickok 3200-16 4/55	
12BK6	8	10	12.6	40	0	K	DIODE	Diode No.2.	Hickok 3200-16 4/55	
12BN6	10	4	12.6	0	0	K	AMPL	Mut. Cond. 500.	Hickok 3200-16 4/55	
12BQ6	8	5	12.6	71	41	E	AMPL	Mut. Cond. 4500. Connect cap to upper right contact of 4-pin socket	Hickok 3200-16 4/55	
12BZ6	1	9	12.6	64	17	K	AMPL	Mut. Cond. 2500.	Nolan	

Tube Type	Selector Switch		Filament	Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B		L	R					
12C8	7	5	12.6	45	20	E	AMPL	Mut. Cond. 1150. Pentode Section.	Hickok 3200-16 4/55	
12C8	10	5	12.6	0	0	E	DIODE	Diode #1.	Hickok 3200-16 4/55	
12C8	10	2	12.6	0	0	E	DIODE	Diode #2.	Hickok 3200-16 4/55	
12CR6	7	7	12.6	60	18	K	AMPL	Mut. Cond. 1950.	Nolan	
12CR6	5	1	12.6	0	18	K	DIODE	Diode Section	Nolan	
12CS6	4	9	12.6	30	33	K	AMPL	Mut. Cond. 800.	Nolan	
12CU6	8	5	12.6	71	41	E	AMPL	Mut. Cond. 4500. Connect cap to upper right contact of 4-pin socket	Hickok 3200-16 4/55	
12F5GT	10	5	12.6	41	10	E	AMPL	Mut. Cond. 1000.	TB 11-2627-2 10/16/52	
12G4	8	9	12.6	60	23	L	AMPL	Mut. Cond. 2000.	Hickok 3200-16 4/55	
12H6	7	2	12.6	50	0	E	DIODE	TB 11-2627-2 10/16/52		
12H6	7	5	12.6	50	0	E	DIODE	TB 11-2627-2 10/16/52		
12J5GT	7	5	12.6	60	24	E	AMPL	Mut. Cond. 2000.	TB 11-2627-2 10/16/52	
12J7GT	1	9	12.6	48	18	E	AMPL	Mut. Cond. 1225.	TB 11-2627-2 10/16/52	
12K7GT/G	8	5	12.6	54	20	E	AMPL	Mut. Cond. 1450.	TB 11-2627-2 10/16/52	
12k8	8	5	12.6	41	9	E	AMPL	Mut. Cond. 1000. Hexode Section. See note D.	TB 11-2627-2 10/16/52	
12k8	11	5	12.6	63	9	E	AMPL	Mut. Cond. 2400. Triode Section. See note D.	TB 11-2627-2 10/16/52	
12L6	8	5	12.6	74	25	E	AMPL	Mut. Cond. 7500.	Hickok 3200-16 4/55	
12L8GT	11	6	12.6	58	15	E	AMPL	Use adapter #1.	TB 11-2627-2 4/7/49	
12L8GT	8	8	12.6	58	15	E	AMPL	Use adapter #1.	TB 11-2627-2 4/7/49	
12L8GT	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	
12Q7GT/G	7	5	12.6	33	14	E	AMPL	Mut. Cond. 800.	TB 11-2627-2 10/16/52	
12Q7GT/G	10	5	12.6	0	0	E	DIODE	Mut. Cond. 750. See note D.	TB 11-2627-2 10/16/52	
12Q7GT/G	10	2	12.6	0	0	E	DIODE	Mut. Cond. 1000.	TB 11-2627-2 10/16/52	
12SA7GT/G	1	7	12.6	28	17	E	AMPL	Mut. Cond. 750. See note D.	TB 11-2627-2 10/16/52	
12SA7GT/G	7	7	12.6	28	17	E	AMPL	Mut. Cond. 750. See note D.	TB 11-2627-2 10/16/52	
12SC7	10	3	12.6	42	0	G	AMPL	Mut. Cond. 1000.	TB 11-2627-2 10/16/52	
12SC7	1	3	12.6	42	0	G	AMPL	Mut. Cond. 1000.	TB 11-2627-2 10/16/52	
12SF5	7	2	12.6	40	13	G	AMPL	Mut. Cond. 1000.	TB 11-2627-2 10/16/52	
12SF7	6	7	12.6	60	0	G	AMPL	Mut. Cond. 2000.	Hickok 3200-16 4/55	
12SF7	8	1	12.6	0	0	G	DIODE	Hickok 3200-16 4/55		
12SG7	4	2	12.6	68	10	E	AMPL	Mut. Cond. 3300.	TB 11-2627-2 10/16/52	
12SH7	4	2	12.6	69	0	E	AMPL	Mut. Cond. 3400.	TB 11-2627-2 10/16/52	
12SJ7	4	2	12.6	56	18	E	AMPL	Mut. Cond. 1575.	TB 11-2627-2 10/16/52	

Tube Type	Selector Switch		Filament	Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B		L	R					
12SK7GT/G	4	2	12.6	59	18	E	AMPL	Mut. Cond. 1900.	TB 11-2627-2 10/16/52	
12SL7GT	4	1	12.6	53	0	G	AMPL	Mut. Cond. 1400. Shorts on 2 and 3.	Hickok 3200-16 4/55	
12SL7GT	10	4	12.6	53	0	G	AMPL	Mut. Cond. 1400. Shorts on 2 and 3.	Hickok 3200-16 4/55	
12SL7GT	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	
12SN7GT	4	1	12.6	67	0	G	AMPL	Mut. Cond. 3000. Shorts on 2 and 3.	Hickok 3200-16 4/55	
12SN7GT	10	4	12.6	67	0	G	AMPL	Mut. Cond. 3000. Shorts on 2 and 3.	Hickok 3200-16 4/55	
12SN7GT	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	
12SQ7GT/G	6	6	12.6	42	0	G	AMPL	Mut. Cond. 1125.	TB 11-2627-2 10/16/52	
12SQ7GT/G	3	7	12.6	0	0	G	DIODE		TB 11-2627-2 10/16/52	
12SQ7GT/G	7	1	12.6	0	0	G	DIODE		TB 11-2627-2 10/16/52	
12SR7	6	6	12.6	59	15	G	AMPL	Mut. Cond. 1900.	TB 11-2627-2 4/7/49	
12SR7	3	7	12.6	0	0	G	DIODE		TB 11-2627-2 4/7/49	
12SR7	7	1	12.6	0	0	G	DIODE		TB 11-2627-2 4/7/49	
12SR7	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	
12SW7	4	2	12.6	59	15	E	AMPL	Use adapter # 7 to test triode section only.	TB 11-2627-2 4/7/49	
12SW7	3	7	12.6	0	0	G	DIODE		TB 11-2627-2 4/7/49	
12SW7	7	1	12.6	0	0	G	DIODE		TB 11-2627-2 4/7/49	
12SW7	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	
12SX7	4	1	12.6	67	0	G	AMPL	May show shorts on 2 and 3.	TB 11-2627-2 10/16/52	
12SX7	10	4	12.6	67	0	G	AMPL	Shorts on 2 and 3.	TB 11-2627-2 10/16/52	
12SY7	1	7	12.6	28	17	E	AMPL	Mut. Cond. 750. See note D.	TB 11-2627-2 10/16/52	
12SY7	7	7	12.6	28	17	E	AMPL	Mut. Cond. 750. See note D.	TB 11-2627-2 10/16/52	
12V6	8	5	12.6	67	25	E	AMPL	Mut. Cond. 3000.	Hickok 3200-16 4/55	
12W6	8	5	12.6	74	25	E	AMPL	Mut. Cond. 7500.	Hickok 3200-16 4/55	
12X4	3	5	12.6	35	0	K	RECTIFIER STD.	Plate No.1.	Hickok 3200-16 4/55	
12X4	6	5	12.6	35	0	K	RECTIFIER STD.	Plate No.2.	Hickok 3200-16 4/55	
12Z3	1	5	12.6	40	0	A	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	

Tube Type	Selector Switch		Filament		Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B	L	R	L	R					
12Z5	6	1	6.3	40	0	D	NOTHING		Check for shorts.		TB 11-2627-2 10/16/52
12Z5	1	8	12.6	40	0	D	RECTIFIER STD.		See note D.		TB 11-2627-2 10/16/52
12Z5	12	8	12.6	40	0	D	RECTIFIER STD.		See note D.		TB 11-2627-2 10/16/52
14	7	6	12.6	42	20	B	AMPL				Hickok 3200-16 4/55
14A4	6	2	12.6	66	14	F	AMPL		Mut. Cond. 1000.		TB 11-2627-2 10/16/52
14A5	6	2	12.6	60	15	F	AMPL		Mut. Cond. 2600.		TB 11-2627-2 10/16/52
14A7	6	2	12.6	59	18	F	AMPL		Set MICROMHOS switch to 6000. OK over 800.		TB 11-2627-2 10/16/52
14AF7	12	5	12.6	64	0	F	AMPL		Mut. Cond. 1900.		TB 11-2627-2 10/16/52
14AF7	2	9	12.6	64	0	F	AMPL		Mut. Cond. 2500. Shorts on 1, 4, and 5.		TB 11-2627-2 10/16/52
14B6	2	3	12.6	44	0	F	AMPL		Mut. Cond. 1100. Shorts on 1, 4, and 5. See note D.		TB 11-2627-2 10/16/52
14B6	8	3	12.6	0	0	F	DIODE		Shorts on 1, 4, and 5. See note D.		TB 11-2627-2 10/16/52
14B6	12	10	12.6	0	0	F	DIODE		Shorts on 1, 4, and 5. See note D.		TB 11-2627-2 10/16/52
14B8	5	3	12.6	40	22	F	AMPL		Mut. Cond. 1000.		TB 11-2627-2 10/16/52
14B8	8	10	12.6	0	15	F	AMPL		Mut. Cond. 500.		TB 11-2627-2 10/16/52
14C5	6	2	12.6	69	19	F	AMPL		Mut. Cond. 3700.		TB 11-2627-2 10/16/52
14C7	6	2	12.6	63	9	F	AMPL		Mut. Cond. 2275		TB 11-2627-2 10/16/52
14E6	2	3	12.6	58	10	F	AMPL		Mut. Cond. 1800. Shorts on 1, 4, and 5.		Hickok 3200-16 4/55
14E6	8	3	12.6	0	0	F	DIODE		Diode No.1.		Hickok 3200-16 4/55
14E6	6	10	12.6	0	0	F	DIODE		Diode No.2.		Hickok 3200-16 4/55
14E6	>	>	>	>	>	>			See table III for testing with MX-949*.		TB 11-2627-2 10/16/52
14E7	6	3	12.6	49	18	F	AMPL		Mut. Cond. 1300.		TB 11-2627-2 10/16/52
14E7	1	8	12.6	0	0	F	DIODE				TB 11-2627-2 10/16/52
14E7	4	8	12.6	0	0	F	DIODE				TB 11-2627-2 10/16/52
14F7	2	9	12.6	56	0	F	AMPL		Mut. Cond. 1600. Shorts on 1, 4, and 5.		TB 11-2627-2 10/16/52
14F7	12	5	12.6	56	0	F	AMPL		Mut. Cond. 1600.		TB 11-2627-2 10/16/52
14F8	>	>	>	>	>	>			See table III for testing with MX-949*.		TB 11-2627-2 10/16/52
14H7	6	2	12.6	67	0	F	AMPL		Mut. Cond. 3000.		Hickok 3200-16 4/55
14J7	6	3	12.6	31	15	F	AMPL		Mut. Cond. 800. See note D.		TB 11-2627-2 10/16/52

Tube Type	Selector Switch		Filament		Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B	L	R	L	R					
14J7	2	8	12.6	42	15	F	AMPL	Mut.Cond.1000. See note D.	TB 11-2627-2 10/16/52		
14N7	2	9	12.6	60	13	F	AMPL	Mut.Cond.3000. Triode #1. Shorts on 1, 4, and 5.	Hickok 3200-16 4/55		
14N7	12	5	12.6	60	13	F	AMPL	Mut.Cond.3000. Triode #2.	Hickok 3200-16 4/55		
14Q7	6	2	12.6	31	14	F	AMPL	Mut.Cond.800. See note D.	TB 11-2627-2 10/16/52		
14R7	6	3	12.6	67	8	F	AMPL	Mut.Cond.3000.	TB 11-2627-2 10/16/52		
14R7	1	8	12.6	0	0	F	DIODE		TB 11-2627-2 10/16/52		
14R7	4	8	12.6	0	0	F	DIODE		TB 11-2627-2 10/16/52		
14S7	6	3	12.6	53	15	F	AMPL	Mut.Cond.1500. See note D.	TB 11-2627-2 10/16/52		
14S7	2	8	12.6	53	0	F	AMPL	Mut.Cond.1500. See note D.	TB 11-2627-2 10/16/52		
14V7	6	2	12.6	70	5	F	AMPL	Mut.Cond.4000.	Hickok 3200-16 4/55		
14W7	6	2	12.6	67	9	F	AMPL	Mut.Cond.3000. Shorts on 1, 4, and 5.	TB 11-2627-2 10/16/52		
14X7	2	3	12.6	30	0	F	AMPL	Mut.Cond.900. Shorts on 1, 4, and 5.	Hickok 3200-16 4/55		
14X7	8	3	12.6	45	0	F	DIODE	Diode No.1.	Hickok 3200-16 4/55		
14X7	6	10	12.6	45	0	F	DIODE	Diode No.2.	Hickok 3200-16 4/55		
14Y4	1	6	12.6	40	0	F	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52		
14Y4	6	6	12.6	40	0	F	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52		
14Z3	1	5	12.6	40	0	A	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52		
15	7	6	2.0	16	18	B	AMPL	Mut.Cond.625.	TB 11-2627-2 10/16/52		
17	1	6	12.6	40	34	A	AMPL	Mut.Cond.1000.	Hickok 3200-16 4/55		
VC17	11	2	6.3	40	80	K	RECTIFIER STD.	Strikes between 56 and 64 on R when this control is rotated counterclockwise. See note D.	Nolan		
18	8	5	12.6	57	28	C	AMPL	Mut.Cond.1750.	Hickok 3200-16 4/55		

Tube Type	Selector Switch		Filament	Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B		L	R					
CV18 (Brit.)	1	5	6.3	50	30	D	AMPL	Connect right plate cap to upper right contact on A socket with lead provided.	Nolan	
CV18 (Brit.)	7	5	6.3	50	30	D	AMPL	Connect left plate cap to upper right contact on A socket with lead provided.	Nolan	
19	8	8	2.0	42	12	C	AMPL	Mut.Cond.1000.	TB 11-2627-2 10/16/52	
19	11	6	2.0	42	12	C	AMPL	Mut.Cond.1000.	TB 11-2627-2 10/16/52	
20	2	10	3.0	0	68	A	AMPL	Mut.Cond.525.	Hickok 3200-16 4/55	
KR20	8	8	2.5	2	30	C	AMPL	Mut.Cond.500. No.1 Grid	Hickok 3200-16 4/55	
KR20	8	6	2.5	2	30	C	AMPL	Mut.Cond.500. No.2 Grid	Hickok 3200-16 4/55	
RK20A	4	7	7.5	64	0	B	AMPL	Mut.Cond.2500. Connect plate cap to upper right contact of 6-pin socket	Hickok 3200-16 4/55	
KR22	8	8	6.3	2	30	C	AMPL	Mut.Cond.500. No.1 Grid	Hickok 3200-16 4/55	
KR22	8	6	6.3	2	30	C	AMPL	Mut.Cond.500. No.2 Grid	Hickok 3200-16 4/55	
RK-22	10	4	2.5	55	0	A	DIODE	Connect tube cap nearest operator. See notes A and D.	Nolan	
RK-22	10	4	2.5	55	0	A	DIODE	Connect tube cap away from operator. See notes A and D.	Nolan	
22	2	5	3.0	0	37	A	AMPL	Mut.Cond.500.	TB 11-2627-2 10/16/52	
24	7	6	2.5	42	10	B	AMPL	Mut.Cond.1000.	TB 11-2627-2 10/16/52	
24A	7	6	2.5	42	10	B	AMPL	Mut.Cond.1000.	TB 11-2627-2 10/16/52	
24G	7	6	2.5	42	10	B	AMPL	T.O. 33AA21-1 4.5/20/55		
HK24G	3	2	6.3	30	20	A	AMPL	Connect top terminal of tube under test to upper contact of 5 pin (B) socket. Use separate lead provided. Connect side terminal of tube under test to cap lead. See note D.	Nolan	
D25	8	5	6.3	67	0	E	AMPL	Mut.Cond.3000. Connect cap to upper right-hand contact of B socket with lead provided.	Nolan	
KR25	8	5	2.5	57	28	C	AMPL	Mut.Cond.1750.	Hickok 3200-16 4/55	
VT25A	2	10	6.3	60	25	A	AMPL	Mut.Cond.2000.	TB 11-2627-2 10/16/52	

Tube Type	Selector Switch		Filament		Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B	L	R	L	R					
25A6GT/G	8	5	25.0	62	35	E	AMPL		Mut.Cond.2300.		TB 11-2627-2 10/16/52
25A7GT/G	11	5	25.0	40	0	E	NOTHING		Check for shorts.		TB 11-2627-2 10/16/52
25A7GT/G	11	5	25.0	40	0	E	RECTIFIER STD.		See note D.		TB 11-2627-2 10/16/52
25A7GT/G	8	5	25.0	58	35	E	AMPL		Mut.Cond.1800. Shorts on 1, 4, and 5.		TB 11-2627-2 10/16/52
25AC5G	7	5	25.0	52	0	E	AMPL		Mut.Cond.1500.		TB 11-2627-2 10/16/52
25AX4	7	1	25.0	40	0	G	RECTIFIER STD.		Nolan		
25B5	8	5	25.0	64	0	C	AMPL		Mut.Cond.2500.		TB 11-2627-2 10/16/52
25B6	8	5	25.0	71	43	E	AMPL		Mut.Cond.4000.		TB 11-2627-2 10/16/52
25B8GT	1	7	25.0	60	18	E	AMPL		Pentode Section.		TB 11-2627-2 10/16/52
25B8GT	11	1	25.0	54	8	E	AMPL		Mut.Cond.2000.		TB 11-2627-2 10/16/52
25BQ6	8	5	25.0	71	41	E	AMPL		Triode Section.		TB 11-2627-2 10/16/52
25C6G	8	5	25.0	74	36	E	AMPL		Mut.Cond.1500.		
25CD6	9	6	25.0	74	34	E	AMPL		Mut.Cond.4500. Connect plate cap to upper right contact of 4-pin socket.		Hickok 3200-16 4/55
25CU6	8	5	25.0	71	41	E	AMPL		Mut.Cond.6500. Connect cap to upper right contact of 6-pin socket.		TB 11-2627-2 10/16/52
25D8G	8	5	25.0	59	15	E	AMPL		Mut.Cond.4500. Connect cap to upper right contact of 4-pin socket.		Hickok 3200-16 4/55
25D8G	11	5	25.0	45	0	E	AMPL		Mut.Cond.1900.		TB 11-2627-2 10/16/52
25D8G	5	1	25.0	0	0	E	DIODE		Mut.Cond.1100.		TB 11-2627-2 10/16/52
25L6GT/G	8	5	25.0	75	15	E	AMPL		Mut.Cond.8000.		TB 11-2627-2 10/16/52
25N6G	8	5	25.0	64	0	E	AMPL		Mut.Cond.2500.		TB 11-2627-2 10/16/52
25S	7	8	2.0	60	23	C	AMPL		OK over 380		Nolan
25S	10	8	2.0	0	0	C	DIODE				Nolan
25S	12	3	2.0	0	0	C	DIODE				Nolan
25T	2	10	6.3	41	0	A	AMPL		Mut.Cond.1000. Connect cap to plate contact of 5-pin socket.		Hickok 3200-16 4/55
25W4	12	4	25.0	40	0	G	RECTIFIER STD.				Hickok 3200-16 4/55
25W6	8	5	25.0	67	46	E	AMPL		Mut.Cond.3000.		Hickok 3200-16 4/55

Tube Type	Selector Switch		Filament	Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B		L	R					
25X6	7	2	25.0	40	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
25X6	7	5	25.0	40	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
25Y5	7	8	25.0	40	0	C	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
25Y5	12	8	25.0	40	0	C	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
25Z3	1	5	25.0	40	0	A	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
25Z4	7	2	25.0	35	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
25Z5	7	8	25.0	40	0	C	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
25Z5	12	8	25.0	40	0	C	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
25Z5MG	7	2	25.0	40	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
25Z5MG	7	5	25.0	40	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
25Z6GT/G	7	2	25.0	40	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
25Z6GT/G	7	5	25.0	40	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
26	2	10	1.5	46	35	A	AMPL	Mut. Cond. 1150.	TB 11-2627-2 10/16/52	
26A6	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	
26A7	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	
26C6	11	2	25.0	57	9	K	AMPL	Mut. Cond. 1700. Triode Section	Hickok 3200-16 4/55	
26C6	7	10	25.0	0	0	K	DIODE	Diode No.1.	Hickok 3200-16 4/55	
26C6	3	8	25.0	0	0	K	DIODE	Diode No.2.	Hickok 3200-16 4/55	
26C6	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	
26D6	8	5	25.0	55	15	K	AMPL	Mut. Cond. 1600. Ampl. Section.	Hickok 3200-16 4/55	
26D6	7	9	25.0	52	9	K	AMPL	Mut. Cond. 1425. Osc. Section	Hickok 3200-16 4/55	

Tube Type	Selector Switch		Filament	Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B		L	R					
26E6	8	5	25.0	74	36	E	AMPL	Mut. Cond. 6000. Read in good scale.	T.O. 33AA21-1-4 5/20/55	
26E6WG	8	5	25.0	60	42	E	AMPL	Allow 60 seconds warm-up time. Set MICROMHOS switch at 6000.	TB 11-2627-2 C5 3/19/57	
26Z5	>	>	>	>	>	K	DIODE	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	
D27	9	2	6.3	60	0	K	DIODE	Shorts on 2 and 3.	Nolan	
D27	4	2	6.3	60	0	K	DIODE	Shorts on 2 and 3.	Nolan	
27	1	6	2.5	40	34	B	AMPL	Mut. Cond. 1000.	TB 11-2627-2 10/16/52	
27HM	1	6	2.5	53	29	B	AMPL	Mut. Cond. 1450.	Hickok 3200-16 4/55	
27 Special	1	6	2.5	40	34	B	AMPL	Mut. Cond. 1000.	Unknown Origin Photocopy.	
D28	12	2	6.3	45	5	K	AMPL	Mut. Cond. 1150.	Nolan	
D28	4	8	6.3	0	82	K	DIODE		Nolan	
KR28	7	7	6.3	40	0	B	RECTIFIER STD.	Plate No.1.	Hickok 3200-16 4/55	
KR28	5	1	6.3	40	0	B	RECTIFIER STD.	Plate No.2.	Hickok 3200-16 4/55	
28D7	8	1	25.0	60	12	F	AMPL	Mut. Cond. 2000. Plate #1	TB 11-2627-2 10/16/52	
28D7	3	6	25.0	60	12	F	AMPL	Mut. Cond. 2000. Plate #2.	TB 11-2627-2 10/16/52	
29	8	8	2.5	0	19	C	AMPL	Mut. Cond. 500. No. 1. Grid.	Hickok 3200-16 4/55	
29	8	6	2.5	0	19	C	AMPL	Mut. Cond. 500. No. 2. Grid.	Hickok 3200-16 4/55	
HD30	>	>	>	>	>	E	NOTHING	See table III for testing with MX-949*.	Nolan	
30	2	10	2.0	36	33	A	AMPL	Mut. Cond. 900.	TB 11-2627-2 10/16/52	
30 Special	2	10	2.0	43	30	A	AMPL	Mut. Cond. 1025.	TM 11-2627 8/3/44	
31	2	10	2.0	35	53	A	AMPL	Mut. Cond. 925.	TB 11-2627-2 10/16/52	
32	2	5	2.0	19	30	A	AMPL	Mut. Cond. 640.	TB 11-2627-2 10/16/52	
32L7GT	11	5	35.0	0	0	E	NOTHING	Test for shorts.	TB 11-2627-2 10/16/52	
32L7GT	8	5	35.0	71	18	E	AMPL	Mut. Cond. 4800.	TB 11-2627-2 10/16/52	
32L7GT	11	5	35.0	40	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
RY32 (Russian)	7	2	12.6	67	14	E	AMPL	Mut. Cond. ~3000. Plate No.1. Use adapter M-418	Nolan	
RY32 (Russian)	4	2	12.6	67	14	E	AMPL	Mut. Cond. ~3000. Plate No.2. Use adapter M-418	Nolan	
RY32 (Russian)	>	>	>	>	>			See table III.	Nolan	
33	1	5	2.0	50	29	B	AMPL	Mut. Cond. 1450.	TB 11-2627-2 10/16/52	

Tube Type	Selector Switch		Filament		Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B	L	R	L	R					
RK33	3	3	6.3	42	28	D	AMPL	Mut. Cond. 1000.	TB 11-2627-2 10/16/52		
RK33	9	3	6.3	42	28	D	AMPL	Mut. Cond. 1000.	TB 11-2627-2 10/16/52		
34	2	5	2.0	14	27	A	AMPL	Mut. Cond. 600.	TB 11-2627-2 10/16/52		
RK34	1	5	6.3	50	30	D	AMPL	Connect right plate cap to upper right contact on A socket with lead provided.	Nolan		
RK34	7	5	6.3	50	30	D	AMPL	Connect left plate cap to upper right contact on A socket with lead provided.	Nolan		
35	7	6	2.5	42	20	B	AMPL	Mut. Cond. 1020.	TB 11-2627-2 10/16/52		
35A5	6	2	35.0	74	27	F	AMPL	Mut. Cond. 5900.	TB 11-2627-2 10/16/52		
35B5	8	5	35.0	70	28	L	AMPL	Mut. Cond. 4500.	Hickok 3200-16 4/55		
35B5	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52		
35C5	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52		
35L6GT/G	8	5	35.0	71	32	E	AMPL	Mut. Cond. 5800.	TB 11-2627-2 10/16/52		
35S	7	6	2.5	42	20	B	AMPL	Mut. Cond. 1020.	Hickok 3200-16 4/55		
35W4	1	5	BLST	0	0	L	NOTHING	Shorts on 1, 2, 3, 4, and 5.	TB 11-2627-2 10/16/52		
35W4	1	5	35.0	40	0	L	RECTIFIER STD.	Shorts on 4 and 5. See note D.	TB 11-2627-2 10/16/52		
35Y4	3	4	BLST	0	0	F	NOTHING	Shorts on 1, 2, 3, 4, and 5.	TB 11-2627-2 10/16/52		
35Y4	1	1	35.0	40	0	F	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52		
35Z3	1	1	35.0	35	0	F	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52		
35Z4GT/G	10	2	35.0	40	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52		
35Z5GT/G	1	3	BLST	40	0	E	NOTHING	Shorts on 1, 2, 3, 4, and 5.	TB 11-2627-2 10/16/52		
35Z6G	7	2	35.0	40	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52		
35Z6G	7	5	35.0	40	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52		
36	7	6	6.3	43	20	B	AMPL	Mut. Cond. 1050.	TB 11-2627-2 10/16/52		
37	1	6	6.3	36	34	B	AMPL	Mut. Cond. 900.	TB 11-2627-2 10/16/52		

Tube Type	Selector Switch		Filament		Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B	L	R	L	R					
38	7	6	6.3	4.1	32	B	AMPL	Mut. Cond. 1050.	TB 11-2627-2 10/16/52		
38MG	8	5	6.3	4.1	32	?	AMPL	Mut. Cond. 1050.	Hickok 3200-16 4/55		
39/44	7	6	6.3	4.1	23	B	AMPL	Mut. Cond. 1000.	TB 11-2627-2 10/16/52		
40	2	10	5.0	6.0	26	A	AMPL	Mut. Cond. 200. OK over 160.	TB 11-2627-2 10/16/52		
40Z5/45Z5GT	11	1	35.0	40	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52		
40Z5/45Z5GT	1	3	BLST	40	0	E	RECTIFIER STD.	Shorts on 1, 2, 3, 4, and 5. See note D.	TB 11-2627-2 10/16/52		
41	8	5	6.3	5.5	28	C	AMPL	Mut. Cond. 1600.	TB 11-2627-2 10/16/52		
42	8	5	6.3	6.0	24	C	AMPL	Mut. Cond. 2000.	TB 11-2627-2 10/16/52		
RK43	2	10	1.5	3.6	17	C	AMPL	Mut. Cond. 900. Plate No. 1.	Hickok 3200-16 4/55		
RK43	12	6	1.5	3.6	17	C	AMPL	Mut. Cond. 900. Plate No. 2.	Hickok 3200-16 4/55		
43	8	5	25.0	62	35	C	AMPL	Mut. Cond. 2300.	TB 11-2627-2 10/16/52		
43MG	8	5	25.0	62	35	E	AMPL	Mut. Cond. 2300.	Hickok 3200-16 4/55		
45	2	10	2.5	5.9	50	A	AMPL	Mut. Cond. 1850.	TB 11-2627-2 10/16/52		
45Z3	10	2	35.0	40	0	H	117N7 AND RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52		
45Z5GT	11	1	35.0	40	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52		
45Z5GT	1	3	BLST	40	0	E	NOTHING	Shorts on 1, 2, 3, 4, and 5.	TB 11-2627-2 10/16/52		
46	1	5	2.5	6.0	25	B	AMPL	Mut. Cond. 2000.	TB 11-2627-2 10/16/52		
47	1	5	2.5	6.0	18	B	AMPL	Mut. Cond. 2000.	TB 11-2627-2 10/16/52		
48	8	5	25.0	60	48	C	AMPL	Mut. Cond. 2000.	TB 11-2627-2 10/16/52		
49	1	5	2.0	4.5	40	B	AMPL	Mut. Cond. 1125.	TB 11-2627-2 10/16/52		
50	2	10	7.5	53	50	A	AMPL	Mut. Cond. 1500.	TB 11-2627-2 10/16/52		
50A5	6	2	50.0	74	25	F	AMPL	Mut. Cond. 7500.	TB 11-2627-2 10/16/52		
50B5	8	5	50.0	74	19	L	AMPL	Mut. Cond. 7500.	Hickok 3200-16 4/55		
50B5	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52		
50C5	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52		
50C6	8	5	50.0	74	36	E	AMPL	Mut. Cond. 7000.	TB 11-2627-2 10/16/52		
50L6GT	8	5	50.0	74	25	E	AMPL	Mut. Cond. 7500.	TB 11-2627-2 10/16/52		

Tube Type	Selector Switch		Filament	Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B		L	R					
50X6	6	9	50.0	40	0	F	RECTIFIER STD.			Hickok 3200-16 4/55
50X6	1	9	50.0	40	0	F	RECTIFIER STD.			Hickok 3200-16 4/55
50Y6GT/G	7	2	50.0	40	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
50Y6GT/G	7	5	50.0	40	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
50Y7	7	2	50.0	45	0	E	RECTIFIER STD.	Shorts on 2, 3, 4, and 5. Plate No.1.		Hickok 3200-16 4/55
50Y7	7	5	50.0	45	0	E	RECTIFIER STD.	Shorts on 2, 3, 4, and 5. Plate No.2.		Hickok 3200-16 4/55
50Z7G	7	6	50.0	40	0	E	RECTIFIER STD.	Shorts on 4 and 5. See note D.	TB 11-2627-2 10/16/52	
50Z7G	10	2	50.0	40	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
HD51	4	4	OFF	0	0	H	GAS No. 1	OK over 200. Shorts on 4 and 5. See note D.		Nolan
HD51	>	>	>	>	>	>	>	See table III for testing with MX-949*.		Nolan
51	7	6	2.5	42	20	B	AMPL	Mut. Cond. 1020.	TB 11-2627-2 10/16/52	
51S	7	6	2.5	42	20	B	AMPL	Mut. Cond. 1020.	TB 11-2627-2 10/16/52	
HD52	4	4	OFF	30	0	H	GAS No. 1	OK over 200. Shorts on 4 and 5. See note D.		Nolan
HD52	>	>	>	>	>	>	>	See table III for testing with MX-949*.		Nolan
52	1	5	6.3	63	27	B	AMPL	Mut. Cond. 2400.	TB 11-2627-2 10/16/52	
53	1	5	2.5	53	10	D	AMPL	Mut. Cond. 1500.	TB 11-2627-2 10/16/52	
53	12	5	2.5	53	10	D	AMPL	Mut. Cond. 1500.	TB 11-2627-2 10/16/52	
VR53 (Brit.)	8	5	6.3	54	16	E	AMPL	Mut. Cond. 1450.		Nolan
55	7	6	2.5	40	32	C	AMPL	Mut. Cond. 975.	TB 11-2627-2 10/16/52	
55	10	6	2.5	0	0	C	DIODE	OK over 500.	TB 11-2627-2 10/16/52	
55	10	3	2.5	0	0	C	DIODE	OK over 500.	TB 11-2627-2 10/16/52	
VR55 (Brit.)	7	5	6.3	60	17	E	AMPL	Mut. Cond. 1900.		Nolan
VR55 (Brit.)	10	5	6.3	0	0	E	DIODE			Nolan
VR55 (Brit.)	10	2	6.3	0	0	E	DIODE			Nolan
56	1	6	2.5	53	26	B	AMPL	Mut. Cond. 1450.	TB 11-2627-2 10/16/52	
VR57 (Brit.)	1	9	6.3	48	18	E	AMPL	Mut. Cond. 1225.		Nolan
57	2	5	2.5	48	17	C	AMPL	Mut. Cond. 1225.		TB 11-2627-2 10/16/52

Tube Type	Selector Switch		Filament		Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B	L	R	L	R					
57A	2	5	6.3	4.8	17	C	AMPL	Mut. Cond. 1225.	TB 11-2627-2 10/16/52		
57AS	2	5	6.3	48	17	C	AMPL	Mut. Cond. 1225.		Unknown Origin Photocopy.	
VR57 (Brit.)	7	7	6.3	41	22	E	AMPL	Mut. Cond. 1000. See note D.			
VR57 (Brit.)	12	7	6.3	60	20	E	AMPL	Mut. Cond. 300. OK over 240. See note D.		Nolan	
57S	2	5	2.5	48	17	C	AMPL	Mut. Cond. 1225.		Unknown Origin Photocopy.	
58	2	5	2.5	54	20	C	AMPL	Mut. Cond. 1450.	TB 11-2627-2 10/16/52		
58A/58AS	2	5	6.3	54	20	C	AMPL	Mut. Cond. 1450.	TB 11-2627-2 10/16/52		
HD59	>	>	>	>	>	>	>	>		See table III for testing with MX-949*.	Nolan
59	8	8	2.5	60	18	D	AMPL	Mut. Cond. 2000.		TB 11-2627-2 10/16/52	
DF62	>	>	>	>	>	>	>	>		See table III for testing with MX-949*.	Nolan
DH63 (Brit.)	7	5	6.3	33	14	E	AMPL	Mut. Cond. 800.			Nolan
DH63 (Brit.)	10	5	6.3	0	0	E	DIODE				Nolan
DH63 (Brit.)	10	2	6.3	0	0	E	DIODE				Nolan
KT63	8	5	6.3	60	24	E	AMPL	Mut. Cond. 2000.			Nolan
64/64A	7	6	6.3	42	26	B	AMPL	Mut. Cond. 1050.		Hickok 3200-16 4/55	
65/65A	7	6	6.3	41	23	B	AMPL	Mut. Cond. 1000.		Hickok 3200-16 4/55	
KT66	8	5	6.3	74	18	E	AMPL	Mut. Cond. 6300.		Hickok 3200-16 4/55	
VR-67 (Brit.)	7	5	6.3	60	24	E	AMPL	Mut. Cond. 2000.			Nolan
VT67	2	10	2.0	43	30	A	AMPL	Mut. Cond. 1025.		TB 11-2627-2 10/16/52	
67/67A	1	6	6.3	40	34	B	AMPL	Mut. Cond. 1000.		Hickok 3200-16 4/55	
68/68A	7	6	6.3	41	32	B	AMPL	Mut. Cond. 1050.		Hickok 3200-16 4/55	
NR68 (Brit.)	7	5	6.3	33	14	E	AMPL	Mut. Cond. 800.		Nolan	
NR68 (Brit.)	10	5	6.3	0	0	E	DIODE			Nolan	
NR68 (Brit.)	10	2	6.3	0	0	E	DIODE			Nolan	
HY69	4	7	6.3	70	27	B	AMPL	Mut. Cond. 3500. Connect plate to top contact of 7-pin socket.		Hickok 3200-16 4/55	
69	8	8	6.3	0	19	B	AMPL	Mut. Cond. 500. No. 1. Grid.		Hickok 3200-16 4/55	
69	8	6	6.3	0	19	B	AMPL	Mut. Cond. 500. No. 2. Grid.		Hickok 3200-16 4/55	
TS-70	12	1	6.3	71	0	B	AMPL	Mut. Cond. 4000. See note A.		Nolan	
DT-70	12	1	6.3	71	0	B	AMPL	Mut. Cond. 4000. See note A.		Nolan	

Tube Type	Selector Switch		Filament	Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B		L	R					
70	8	8	6.3	60	25	C	AMPL	Mut. Cond. 300. MICROMHOS only. OK over 240 on 3000 scale.	Hickok 3200-16 4/55	
70	8	6	6.3	60	25	C	AMPL	Mut. Cond. 300. MICROMHOS only. OK over 240 on 3000 scale.	Hickok 3200-16 4/55	
70A7GT	8	5	75.0	71	17	E	AMPL	Mut. Cond. 5800. Shorts on 1, 4, and 5.	TB 11-2627-2 10/16/52	
70A7GT	11	5	75.0	0	0	E	DIODE	OK over 300.	TB 11-2627-2 10/16/52	
70L7GT	6	12	75.0	71	34	E	NOTHING	Check for shorts.	TB 11-2627-2 10/16/52	
70L7GT	7	7	75.0	71	34	E	AMPL	Mut. Cond. 5000.	TB 11-2627-2 10/16/52	
70L7GT	5	1	75.0	40	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
71A	2	10	5.0	56	60	A	AMPL	Mut. Cond. 1650.	TB 11-2627-2 10/16/52	
72	7	1	2.5	10	0	A	RECTIFIER STD.	See notes A and D.	TB 11-2627-2 10/16/52	
VR75-30	7	1	OFF	50	0	G	GAS	No. 1 Shorts on 4 and 5. See note D.	Nolan	
75	7	6	6.3	28	9	C	AMPL	Mut. Cond. 750.	TB 11-2627-2 10/16/52	
75	10	6	6.3	0	0	C	DIODE		TB 11-2627-2 10/16/52	
75	10	3	6.3	0	0	C	DIODE		TB 11-2627-2 10/16/52	
75MG	9	5	6.3	28	9	E	AMPL	Mut. Cond. 750.	TB 11-2627-2 10/16/52	
75MG	12	2	6.3	0	0	E	DIODE		TB 11-2627-2 10/16/52	
75MG	12	5	6.3	0	0	E	DIODE		TB 11-2627-2 10/16/52	
76	1	6	6.3	53	24	B	AMPL	Mut. Cond. 1450.	TB 11-2627-2 10/16/52	
77	2	5	6.3	48	17	C	AMPL	Mut. Cond. 1225.	TB 11-2627-2 10/16/52	
78	2	5	6.3	54	20	C	AMPL	Mut. Cond. 1450.	TB 11-2627-2 10/16/52	
NR78 (Brit.)	7	5	6.3	60	17	E	AMPL	Mut. Cond. 2000.	Nolan	
NR78A (Brit.)	7	5	6.3	60	24	E	AMPL	Mut. Cond. 2000.	Nolan	
79	2	10	6.3	39	12	C	AMPL	Mut. Cond. 1000.	TB 11-2627-2 10/16/52	
79	5	10	6.3	39	12	C	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
80	2	7	5.0	35	0	A	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
80	3	7	5.0	35	0	A	RECTIFIER STD.			

Tube Type	Selector Switch		Filament	Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B		L	R					
80M	2	7	5.0	40	0	A	RECTIFIER STD.			560 Hickok Roll Chart
80M	3	7	5.0	40	0	A	RECTIFIER STD.			560 Hickok Roll Chart
81	2	7	7.5	33	0	A	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
NR81 (Brit.)	8	5	6.3	54	16	E	AMPL	Mut. Cond. 1450.	Nolan	
E82CC	4	2	12.6	60	25	E	AMPL	Use adapter #5 for triode #1.	Nolan	
E82CC	4	2	12.6	60	25	E	AMPL	Use adapter #6 for triode #2.	Nolan	
E82CC	>	>	>	>	>	>	>	See table III for testing with MX-949*.	Nolan	
82	2	7	2.5	40	0	A	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
82	3	7	2.5	40	0	A	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
82V	2	7	2.5	40	0	A	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
82V	3	7	2.5	40	0	A	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
E83CC	>	>	>	>	>	>	>	See table III for testing with MX-949*.	Nolan	
ECC83	>	>	>	>	>	>	>	See table III for testing with MX-949*.	Nolan	
83	2	7	5.0	40	0	A	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
83	3	7	5.0	40	0	A	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
83V	2	7	5.0	40	0	A	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
83V	3	7	5.0	40	0	A	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
G84	2	7	2.5	40	0	A	RECTIFIER STD.	Hickok 3200-16 4/55		
84	7	7	6.3	40	0	B	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	

Tube Type	Selector Switch		Filament	Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B		L	R					
84	5	1	6.3	40	0	B	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
85	7	6	6.3	40	32	C	AMPL	Mut. Cond. 975.	TB 11-2627-2 10/16/52	
85	10	6	6.3	0	0	C	DIODE		TB 11-2627-2 10/16/52	
85	10	3	6.3	0	0	C	DIODE		TB 11-2627-2 10/16/52	
85A	7	6	6.3	49	24	C	AMPL	Mut. Cond. 1250. Ampl. Section.	Hickok 3200-16 4/55	
85A	10	6	6.3	0	0	C	DIODE	No. 1 Diode.	Hickok 3200-16 4/55	
85A	10	3	6.3	0	0	C	DIODE	No. 2 Diode.	Hickok 3200-16 4/55	
87	2	5	6.3	48	20	?	AMPL	Mut. Cond. 1225.	Hickok 3200-16 4/55	
88	2	5	6.3	56	19	A	AMPL	Mut. Cond. 1600.	Hickok 3200-16 4/55	
89	2	5	6.3	54	30	C	AMPL	Mut. Cond. 1550.	TB 11-2627-2 10/16/52	
89Y	2	5	6.3	54	30	C	AMPL	Mut. Cond. 1550.	TB 11-2627-2 10/16/52	
E90Z	3	5	6.3	35	0	K	RECTIFIER STD.	Plate No. 1. See note D.	Nolan	
E90Z	6	5	6.3	35	0	K	RECTIFIER STD.	Plate No. 2. See note D.	Nolan	
EC90	2	9	6.3	67	20	L	AMPL	Mut. Cond. 2200. See note D.	Nolan	
VR90-30	7	1	OFF	30	0	G	GAS No. 1	Shorts on 4 and 5. See note D.	Nolan	
90	8	8	2.5	2	30	C	AMPL	Mut. Cond. 500. No. 1. Grid.	Hickok 3200-16 4/55	
90	8	6	2.5	2	30	C	AMPL	Mut. Cond. 500. No. 2. Grid.	Hickok 3200-16 4/55	
EAA91	9	2	6.3	60	0	K	DIODE	Shorts on 2 and 3.	Nolan	
EAA91	4	2	6.3	60	0	K	DIODE	Shorts on 2 and 3.	Nolan	
ECC91	1	2	6.3	69	11	K	AMPL	Mut. Cond. 5000. See note D.	Nolan	
ECC91	11	8	6.3	69	11	K	AMPL	Mut. Cond. 5000. See note D.	Nolan	
92	8	8	6.3	2	30	C	AMPL	Mut. Cond. 500. No. 1 Grid.	Hickok 3200-16 4/55	
92	8	6	6.3	2	30	C	AMPL	Mut. Cond. 500. No. 2. Grid.	Hickok 3200-16 4/55	
95	8	5	2.5	57	28	C	AMPL	Mut. Cond. 1750.	Hickok 3200-16 4/55	
96	1	5	12.6	40	0	A	RECTIFIER STD.		Hickok 3200-16 4/55	
98	7	7	6.3	40	0	B	RECTIFIER STD.	Plate Number 1.	Hickok 3200-16 4/55	
98	5	1	6.3	40	0	B	RECTIFIER STD.	Plate Number 2.	Hickok 3200-16 4/55	
99	2	10	3.0	60	45	A	AMPL	Mut. Cond. 425. OK over 340.	TB 11-2627-2 10/16/52	
100-A Boonton	7	6	2.5	28	9	C	AMPL	Mut. Cond. 750. Triode Sect.	Nolan	
100-A Boonton	10	6	2.5	0	0	C	DIODE	Diode #1.	Nolan	
100-A Boonton	10	3	2.5	0	0	C	DIODE	Diode #2.	Nolan	

Tube Type	Selector Switch		Filament		Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B	L	R	L	R					
100-C Boonton	7	6	2.5	2.8	9	C	AMPL	Mut.Cond.750.Triode Sect.	Nolan		
100-C Boonton	10	6	2.5	0	0	C	DIODE	Diode #1.	Nolan		
100-C Boonton	10	3	2.5	0	0	C	DIODE	Diode #2.	Nolan		
101D	2	10	4.3	39	25	A	AMPL	Insert tube in socket with pin on base away from operator.	TB 11-2627-2 10/16/52		
101F	2	10	4.3	41	26	A	AMPL	Insert tube in socket with pin on base away from operator.	TB 11-2627-2 10/16/52		
101FA	2	10	4.3	60	35	A	AMPL	Minimum value of 1100.	TB 1671-4 12/26/42 (560)		
101J	2	10	4.3	41	26	A	AMPL	Insert tube in socket with pin on base away from operator.	TB 1671-4 12/26/42 (560)		
102-A Boonton	2	10	2.5	59	50	A	AMPL	Mut.Cond.1850.	Nolan		
102D	2	10	2.0	40	23	A	AMPL	Minimum value of 360.	TB 1671-4 12/26/42 (560)		
102E	2	10	2.0	40	23	A	AMPL	Minimum value of 360.	TB 1671-4 12/26/42 (560)		
102F	2	10	2.0	40	23	A	AMPL	Minimum value of 430.	TB 1671-4 12/26/42 (560)		
102G	2	10	2.0	40	23	A	AMPL	Minimum value of 360.	TB 1671-4 12/26/42 (560)		
104D	2	10	4.3	60	60	A	AMPL	Minimum value of 830.	TB 1671-4 12/26/42 (560)		
VR105-30	7	1	OFF	30	0	G	GAS No. 1	Shorts on 4 and 5. See note D.	Nolan		
112A	2	10	5.0	57	36	A	AMPL	Mut.Cond.1650.	TB 11-2627-2 10/16/52		
HY113	7	5	1.5	0	40	O	AMPL	Mut.Cond.500.	TB 11-2627-2 10/16/52		
114B	7	5	1.5	43	25	F	AMPL	See Note D. Connect right cap to upper right contact of A socket with lead provided. Connect grid lead to left cap.	TB 11-2627-2 4/7/49		
HY114B	10	5	1.5	43	15	E	AMPL	Mut.Cond.1100.Connect grid to upper left contact of 6-pin socket. Connect plate to upper right contact of 6-pin socket.	Hickok 3200-16 4/55		
HY115	7	5	1.5	60	32	O	AMPL	Mut.cond.370.OK over 290.	TB 11-2627-2 10/16/52		
117L7/M7GT	2	8	117.0	72	30	E	AMPL	Mut.Cond.6000.Shorts on 1, 4, and 5.	TB 11-2627-2 10/16/52		
117L7/M7GT	5	8	117.0	40	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52		
117M7/GT	2	8	117.0	73	28	E	AMPL	Mut.Cond.6000. Shorts on 1, 4, and 5.	TB 11-2627-2 10/16/52		
117M7/GT	5	8	117.0	40	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52		
117N7GT	8	10	117.0	74	25	E	AMPL	Mut.Cond.7000.	TB 11-2627-2 10/16/52		

Tube Type	Selector Switch		Filament	Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B		L	R					
117N7GT	4	3	117.0	40	0	E	117N7 AND RECTIFIER STD.	Shorts on 2 and 3. See note D.	TB 11-2627-2 10/16/52	
117P7GT	8	10	117.0	70	25	E	AMPL	Mut. Cond. 4000.	TB 11-2627-2 10/16/52	
117P7GT	4	3	117.0	40	0	E	117N7 AND RECTIFIER STD.	Shorts on 2 and 3. See note D.	TB 11-2627-2 10/16/52	
117Z3	2	6	117.0	41	0	L	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
117Z4GT	10	2	117.0	40	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
117Z6GT/G	2	7	117.0	75	0	E	GAS No. 1.	See note D.	TB 11-2627-2 10/16/52	
117Z6GT/G	10	2	117.0	75	0	E	GAS No. 1.	Early tubes show shorts on 1 and 3; late tubes show shorts on 3. See note D.	TB 11-2627-2 10/16/52	
HY123	7	5	1.5	0	45	?	AMPL	Mut. Cond. 370. OK over 290.	560 Hickok Roll Chart	
HY125	7	5	1.5	60	45	O	AMPL	Mut. Cond. 450. OK over 360.	TB 11-2627-2 10/16/52	
HY145	7	5	1.5	60	32	O	AMPL	Mut. Cond. 370. OK over 290.	TB 11-2627-2 10/16/52	
VTR150-30	7	1	OFF	30	0	G	GAS No. 1	Shorts on 4 and 5. See note D.	Nolan	
DT153	2	5	1.5	35	12	H	AMPL	Shorts on 4 and 5. See note E.	Nolan	
VT153	7	5	12.6	45	20	E	AMPL		TB 11-2627-2 10/16/52	
VT153	10	5	12.6	0	0	E	DIODE		TB 11-2627-2 10/16/52	
VT153	10	2	12.6	0	0	E	DIODE		TB 11-2627-2 10/16/52	
HY155	7	5	1.5	60	45	O	AMPL	Mut. Cond. 450. OK over 360.	TB 11-2627-2 10/16/52	
C171	2	10	3.0	38	68	A	AMPL	Mut. Cond. 1000.	Hickok 3200-16 4/55	
181	2	10	3.0	38	68	A	AMPL	Mut. Cond. 1000.	Hickok 3200-16 4/55	
C182	2	10	5.0	38	68	A	AMPL	Mut. Cond. 1000.	Hickok 3200-16 4/55	
C182A	2	10	5.0	53	65	A	AMPL	Mut. Cond. 1500.	Hickok 3200-16 4/55	
182B	2	10	5.0	53	48	A	AMPL	Mut. Cond. 1500.	Hickok 3200-16 4/55	
183	2	10	5.0	50	65	A	AMPL	Mut. Cond. 1350.	Hickok 3200-16 4/55	
205D	2	10	5.0	60	28	A	AMPL	Use Alden No. 978WEB Adapter. Mut. Cond. 1200.	TB 1671-4 12/26/42 (560)	
205E	2	10	5.0	60	28	A	AMPL	Use Alden No. 978WEB Adapter. Mut. Cond. 1200.	TB 1671-4 12/26/42 (560)	

Tube Type	Selector Switch		Filament	Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B		L	R					
215A	2	10	1.1	60	45	A	AMPL	Use Alden No.972 Adapter. Minimum value of 320.		TB 1671-4 12/26/42 (560)
231D	2	10	3.0	19	15	A	AMPL	TB 11-2627-2 10/16/52		
239A	2	10	1.1	60	40	A	AMPL	TB 1671-4 12/26/42 (560) Minimum value of 320.		TB 1671-4 12/26/42 (560)
244A	1	6	2.0	43	10	B	AMPL	TB 11-2627-2 10/16/52		
245A	7	6	2.0	60	35	B	AMPL	TB 1671-4 12/26/42 (560) Minimum Value of 525.		TB 1671-4 12/26/42 (560)
247A	1	6	2.0	60	28	B	AMPL	TB 1671-4 12/26/42 (560) Minimum Value of 400.		TB 1671-4 12/26/42 (560)
257	1	5	5.0	49	41	A	AMPL	Mut. Cond. 1250. Hickok 3200-16 4/55		
257A	2	5	3.0	0	40	A	AMPL	Attach clip of cap lead to the top cap of the tube under test. OK over 200.		TB 11-2627-2 10/16/52
259A	7	6	2.0	28	26	B	AMPL	TB 11-2627-2 10/16/52		
259B	7	6	2.0	28	26	B	AMPL	Nolan		
262A	2	6	10.0	15	25	A	AMPL	Nolan		
262B	2	6	10.0	15	25	A	AMPL	TB 11-2627-2 10/16/52		
271A	1	6	5.0	60	30	AMPL	TB 1671-4 12/26/42 (560) Minimum Value of 1580.		TB 1671-4 12/26/42 (560)	
272A	1	6	10.0	46	26	B	AMPL	TB 11-2627-2 10/16/52		
274A	3	7	5.0	35	0	A	RECTIFIER STD.	See note D.		TB 11-2627-2 10/16/52
274A	2	7	5.0	35	0	A	RECTIFIER STD.	See note D.		TB 11-2627-2 10/16/52
274B	5	11	5.0	35	0	E	RECTIFIER STD.	See note D.		TB 11-2627-2 10/16/52
274B	4	11	5.0	35	0	E	RECTIFIER STD.	See note D.		TB 11-2627-2 10/16/52
DT275	>	>	>	>	>	>	>	See table III for testing with MX-949*.		Nolan
275A	2	10	5.0	54	70	A	AMPL	TB 11-2627-2 10/16/52		
283A	7	6	2.0	49	10	B	AMPL	TB 11-2627-2 10/16/52		
285A	7	6	2.0	60	30	B	AMPL	TB 1671-4 12/26/42 (560) Set MICROMHOS switch at 6000. OK over 1600.		TB 11-2627-2 10/16/52
293A	8	5	10.0	43	31	C	AMPL	See note A.		
300B	2	8	5.0	60	48	A	AMPL	TB 11-2627-2 10/16/52		
307A	12	1	5.0	69	30	B	AMPL	TB 11-2627-2 10/16/52		
310A	2	5	10.0	50	16	C	AMPL	TB 11-2627-2 10/16/52		
310B	2	5	10.0	44	20	C	AMPL	TB 11-2627-2 10/16/52		
311A	7	6	10.0	61	33	B	AMPL	TB 11-2627-2 10/16/52		

Tube Type	Selector Switch		Filament	Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B		L	R					
313C	2	10	50.0	0	0	A	DIODE	Good tube gives meter reading. May read in red sector. See note D.	TB 11-2627-2 10/16/52	
313CC	2	10	50.0	0	0	A	DIODE	Good tube gives meter reading. May read in red sector. See note D.	TB 11-2627-2 10/16/52	
313CD	2	10	50.0	0	0	A	DIODE	Good tube gives meter reading. May read in red sector. See note D.	TB 11-2627-2 10/16/52	
328A	8	5	7.5	54	16	C	AMPL		TB 11-2627-2 10/16/52	
329A	7	6	7.5	62	33	B	AMPL		TB 11-2627-2 10/16/52	
SD329F	>	>	>	>	>	>	>	See table III for testing with MX-949*.	Nolan	
336A	8	5	10.0	60	20	C	AMPL	Allow tube 60 seconds to warm up. Set MICROMHOS switch at 6000. OK over 750.	TB 11-2627-2 10/16/52	
337A	2	5	10.0	50	16	C	AMPL	Tube strikes at approximately 35 on R when this control is turned counterclockwise. See note D.	TB 11-2627-2 10/16/52	
338A	1	6	10.0	40	80	B	RECTIFIER STD.			
339A	12	1	5.0	60	45	B	AMPL	Set MICROMHOS switch to 6000. OK over 1250. See notes A and D.	TB 11-2627-2 10/16/52	
345A	4	3	6.3	40	0	B	RECTIFIER STD.	Allow tube 60 seconds to warm up. See note D.	TB 11-2627-2 10/16/52	
345A	7	7	6.3	40	0	B	RECTIFIER STD.	Allow tube 60 seconds to warm up. See note D.	TB 11-2627-2 10/16/52	
348A	1	9	6.3	48	18	E	AMPL		TB 11-2627-2 10/16/52	
349A	8	5	6.3	67	30	E	AMPL		TB 11-2627-2 10/16/52	
350A	12	1	6.3	73	27	B	AMPL	See note A.	TB 11-2627-2 10/16/52	
350B	8	5	6.3	73	27	E	AMPL		TB 11-2627-2 10/16/52	
352A	7	6	10.0	28	20	C	AMPL		TB 11-2627-2 10/16/52	
352A	10	6	10.0	0	0	C	DIODE		TB 11-2627-2 10/16/52	
352A	10	3	10.0	0	0	C	DIODE		TB 11-2627-2 10/16/52	
C373	2	10	3.0	42	41	?	AMPL	Mut. Cond. 1000.	Hickok 3200-16 4/55	
381A	>	>	>	>	>	>	>	See table III.	TB 11-2627-2 10/16/52	
385A	>	>	>	>	>	>	>	See table III.	TB 11-2627-2 10/16/52	

Tube Type	Selector Switch		Filament	Potentiometers		Socket Letter	Press	Notations	Data Source
	A	B		L	R				
393A	2	10	3.0	40	80	E	RECTIFIER STD.	Connect plate cap to upper right contact of A socket. Good tube strikes between 30 and 35 on R when this control is rotated counterclockwise. See note D. Shorts on 1, 2, 3, 4, and 4.	TB 11-2627-2 10/16/52
394A	2	10	2.5	40	80	E	RECTIFIER STD.	Connect plate cap to upper right contact of A socket. Good tube strikes between 30 and 35 on R when this control is rotated counterclockwise. See note D.	TB 11-2627-2 10/16/52
WE396A	>	>	>	>	>	>	>	See table III for testing with MX-949*.	Nolan
401	2	10	3.0	42	41	A	AMPL	Mut. Cond. 1000.	Hickok 3200-16 4/55
401A Deforest	2	10	5.0	26	39	A	AMPL	Mut. Cond. 725.	Nolan
403	2	10	3.0	46	72	A	AMPL	Mut. Cond. 1200.	Hickok 3200-16 4/55
403A	1	9	6.3	55	20	K	AMPL	Mut. Cond. 1500. Shorts on 4 and 5.	Hickok 3200-16 4/55
482A	2	10	5.0	50	65	A	AMPL	Mut. Cond. 1500.	Hickok 3200-16 4/55
482B	2	10	5.0	58	57	A	AMPL	Mut. Cond. 1500.	Hickok 3200-16 4/55
483	2	10	5.0	50	65	A	AMPL	Mut. Cond. 1350.	Hickok 3200-16 4/55
484	1	6	3.0	49	30	B	AMPL	Mut. Cond. 1300.	Hickok 3200-16 4/55
484A	1	6	3.0	49	30	B	AMPL	Mut. Cond. 1300.	Hickok 3200-16 4/55
485	1	6	3.0	49	30	B	AMPL	Mut. Cond. 1300.	Hickok 3200-16 4/55
486	1	6	3.0	60	35	B	AMPL	Mut. Cond. 450. MICROMHOS only. OK over 360 on 3000 scale.	Hickok 3200-16 4/55
501-A Boonton	7	6	2.5	28	9	C	AMPL	Mut. Cond. 750. Triode Sect.	Nolan
501-A Boonton	10	6	2.5	0	0	C	DIODE	Diode #1.	Nolan
501-A Boonton	10	3	2.5	0	0	C	DIODE	Diode #2.	Nolan
CK502AX	>	>	>	>	>	>	>	See table III for testing with MX-949*.	Nolan

Tube Type	Selector Switch		Filament	Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B		L	R			?	RECTIFIER STD.	
GL502A	7	5	6.3	45	See Notation				Strikes at 26 on R.	Hickok 3200-16 4/55
CK503AX	>	>	>	>	>			>	See table III.	TB 11-2627-2 10/16/52
CK506AX	>	>	>	>	>			>	See table III.	TB 11-2627-2 10/16/52
CK512AX	>	>	>	>	>			>	See table III.	TB 11-2627-2 10/16/52
535-B Boonton	7	6	2.5	28	9	C	AMPL	Mut.Cond.750. Triode Sect.	Nolan	
535-B Boonton	10	6	2.5	0	0	C	DIODE	Diode #1.	Nolan	
535-B Boonton	10	3	2.5	0	0	C	DIODE	Diode #2.	Nolan	
536-B Boonton	2	10	2.5	59	50	A	AMPL	Mut.Cond.1850.	Nolan	
551	7	6	2.5	42	20	?	AMPL	Mut.Cond.1020.	Hickok 3200-16 4/55	
CK551AX	>	>	>	>	>			>	See table III for testing with MX-949*.	Nolan
CK553AX	>	>	>	>	>			>	See table III for testing with MX-949*.	Nolan
CK553AY	>	>	>	>	>			>	See table III for testing with MX-949*.	Nolan
585	2	10	7.5	53	50	A	AMPL	Mut.Cond.1500.	Hickok 3200-16 4/55	
586	2	10	7.5	53	50	A	AMPL	Mut.Cond.1500.	Hickok 3200-16 4/55	
CK611	7	5	6.3	71	17	L	AMPL	Mut.Cond.8000. Shorts on 4 and 5.	Nolan	
CK612	1	9	6.3	75	9	K	AMPL	Mut.Cond.8000. Shorts on 4 and 5.	Nolan	
CK612	>	>	>	>	>			>	See table III for testing with MX-949*.	Nolan
R612G	7	1	2.5	0	0	A	RECTIFIER STD.	OK over 1000. See notes A and D.	Nolan	
615	7	5	6.3	36	25	E	AMPL	Connect right cap to upper right contact on A socket with lead provided. Connect grid lead to left cap.	TB 11-2627-2 10/16/52	
629	1	6	2.5	40	See Notation	?	RECTIFIER STD.	Strikes at 32 on R.	Hickok 3200-16 4/55	
SC651	3	9	6.3	58	0	N	AMPL	Shorts on 4 and 5.	Nolan	
SC651	>	>	>	>	>			>	See table III for testing with MX-949*.	Nolan
C686	1	6	3.0	60	35	?	AMPL	Mut.Cond.450. MICROMHOS only. OK over 360 on 3000 scale.	Hickok 3200-16 4/55	

Tube Type	Selector Switch		Filament	Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B		L	R					
SD706	>	>	>	>	>	>	>	See table III for testing with MX-949*.	Nolan	
713A	4	2	6.3	42	24	E	AMPL	See note A.	TB 11-2627-2 10/16/52	
717A	4	2	6.3	44	23	E	AMPL	Mut. Cond. 3500.	TB 11-2627-2 10/16/52	
WE731A	1	9	6.3	55	20	K	AMPL	Mut. Cond. 1500. Shorts on 4 and 5.	Nolan	
WE731A	>	>	>	>	>	>	>	See table III for testing with MX-949*.	Nolan	
ECC801S	4	2	12.6	15	25	E	AMPL	Use adapter #5 for triode #1.	Nolan	
ECC801S	4	2	12.6	15	25	E	AMPL	Use adapter #6 for triode #2.	Nolan	
ECC801S	>	>	>	>	>	>	>	See table III for testing with MX-949*.	Nolan	
801A	2	10	7.5	53	0	A	AMPL	Mut. Cond. 1500.	TB 11-2627-2 10/16/52	
ECC802S	4	2	12.6	60	25	E	AMPL	Use adapter #5 for triode #1.	Nolan	
ECC802S	4	2	12.6	60	25	E	AMPL	Use adapter #6 for triode #2.	Nolan	
ECC802S	>	>	>	>	>	>	>	See table III for testing with MX-949*.	Nolan	
802	10	3	6.3	60	18	D	AMPL	Mut. Cond. 2000. See note A.	TB 11-2627-2 10/16/52	
ECC803S	>	>	>	>	>	>	>	See table III for testing with MX-949*.	Nolan	
807	12	1	6.3	70	27	B	AMPL	Mut. Cond. 3500. Connect plate to top left contact of 6 pin socket.	Hickok 3200-16 4/55	
809	8	8	6.3	56	0	A	AMPL	Mut. Cond. 1700. Connect plate cap to right center contact of B socket with lead provided. See note D.	T.O. 33AA21-1-4 5/20/55	
811	3	2	6.3	50	0	A	AMPL	Mut. Cond. 1400. Connect cap to upper contact of 5 pin (B) socket. Use special lead provided.	TB 11-2627-2 10/16/52	
812	9	2	6.3	59	0	A	AMPL	Mut. Cond. 2200. See note A.	TB 11-2627-2 10/16/52	

Tube Type	Selector Switch		Filament	Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B		L	R					
816	7	1	2.5	20	0	A	RECTIFIER STD.	See notes A and D.	TB 11-2627-2 10/16/52	
829/829B	7	2	12.6	70	14	E	AMPL	Plate No.1. Use adapter M-418.	TM 11-2627 C1 10/24/45	
829/829B	4	2	12.6	70	14	E	AMPL	Plate No.2. Use adapter M-418	TB 11-2627 C1 10/24/45	
829/829B	>	>	>	>	>	>	>	See table III.	TB 11-2627-2 10/16/52	
832/832A	7	2	12.6	67	14	E	AMPL	Mut. Cond. 3000. Plate No.1. Use adapter M-418	TB 11-2627-2 10/30/46	
832/832A	4	2	12.6	67	14	E	AMPL	Mut. Cond. 3000. Plate No.2. Use adapter M-418	TB 11-2627-2 10/30/46	
832/832B	>	>	>	>	>	>	>	See table III.	TB 11-2627-2 10/16/52	
834	10	2	7.5	57	0	A	AMPL	Mut. Cond. 1800. Far cap = Plate. Near cap = grid. See note A.	Hickok 3200-16 4/55	
SD834	>	>	>	>	>	>	>	See table III for testing with MX-949*.	Nolan	
836	7	1	3.0	30	0	A	RECTIFIER STD.	See notes A and D. OK over STD. 1500.	T.O. 33AA21-1-4 5/20/55	
837	10	3	12.6	71	0	D	AMPL	See note A.	TB 11-2627-2 10/16/52	
840	4	7	2.0	60	20	B	AMPL	Mut. Cond. 400. Connect plate cap to top contact of 7-pin socket. OK over 320.	Hickok 3200-16 4/55	
841	2	10	7.5	42	0	A	AMPL	Mut. Cond. 350. OK over 280 on 3000 scale.	Hickok 3200-16 4/55	
842	2	10	7.5	46	50	A	AMPL	Mut. Cond. 1150.	TB 11-2627-2 10/16/52	
843	1	6	2.5	56	10	B	AMPL	Mut. Cond. 1625.	TB 11-2627-2 10/16/52	
S856	4	4	OFF	0	0	H	GAS No. 1	OK over 200. Shorts on 4 and 5. See note D.	Nolan	
S856	>	>	>	>	>	>	>	See table III for testing with MX-949*.	Nolan	

Tube Type	Selector Switch		Filament	Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B		L	R					
S860	4	4	OFF	30	0	H	GAS No. 1	OK over 200. Shorts on 4 and 5. See note D.	Nolan	Hickok 3200-16 4/55
S860	>	>	>	>	>	>	>	See table III for testing with MX-949*.	Nolan	Hickok 3200-16 4/55
P861	7	7	6.3	40	0	B	RECTIFIER STD.			
P861	5	1	6.3	40	0	B	RECTIFIER STD.			
864	2	10	1.1	18	37	A	AMPL	Mut. Cond. 650.	TB 11-2627-2 10/16/52	
865	10	4	7.5	16	28	A	AMPL	Mut. Cond. 625. See note A.	TB 11-2627-2 10/16/52	
866A/866	7	1	2.5	40	0	A	RECTIFIER STD.	See notes A and D.	TB 11-2627-2 10/16/52	
866Jr.	2	7	2.5	40	0	A	RECTIFIER STD.			
871	7	1	2.5	20	0	A	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
874	4	5	OFF	30	0	A	GAS No.1.	See note D.	TB 11-2627-2 10/16/52	
878	5	12	2.5	0	0	A	RECTIFIER STD.	Connect plate cap to left hand contact of 5-pin socket.	Hickok 3200-16 4/55	
879	7	1	2.5	0	0	A	RECTIFIER STD.	OK over 1000. See note D.	TB 11-2627-2 10/16/52	
884	1	6	6.3	40	80	E	RECTIFIER STD.	Good tube strikes between 55 and 65 on R when this control is rotated counterclockwise. See note D.	TB 11-2627-2 C5 3/19/57	
885							RECTIFIER STD.	Good tube strikes between 55 and 65 on R when this control is rotated clockwise. See note D.	TB 11-2627-2 10/16/52	
EAA901S	9	2	6.3	60	0	K	DIODE	Shorts on 2 and 3.	Nolan	
EAA901S	4	2	6.3	60	0	K	DIODE	Shorts on 2 and 3.	Nolan	
950	1	5	2.0	37	37	B	AMPL	Mut. Cond. 950.	TB 11-2627-2 10/16/52	
951	2	5	2.0	18	29	A	AMPL	Mut. Cond. 640.	TB 11-2627-2 10/16/52	
954	6	7	6.3	44	17	M	AMPL	Mut. Cond. 1100.	TB 11-2627-2 10/16/52	
955	9	7	6.3	59	18	M	AMPL	Mut. Cond. 1900. See note D.	TB 11-2627-2 10/16/52	
956	6	7	6.3	53	14	M	AMPL	Mut. Cond. 1500.	TB 11-2627-2 10/16/52	

Tube Type	Selector Switch		Filament	Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B		L	R					
957	9	7	1.1	19	23	M	AMPL	Mut.Cond.650. Shorts on 4 and 5. See note D.	TB 11-2627-2 10/16/52	
958	9	7	1.1	32	34	M	AMPL	Mut.Cond.1200. Shorts on 4 and 5. See note D.	TB 11-2627-2 10/16/52	
958A	9	7	1.1	32	34	M	AMPL	Mut.Cond.600. Shorts on 4 and 5.	TB 11-2627-2 10/16/52	
959	6	7	1.1	10	30	M	AMPL	Mut.Cond.1500. Grid 1.	TB 11-2627-2 10/16/52	
FM1000	3	6	6.3	53	10	F	AMPL	Mut.Cond.1500. Grid 2.	TB 11-2627-2 10/16/52	
FM1000	10	10	6.3	53	10	F	AMPL	Mut.Cond.1500. Grid 3.	TB 11-2627-2 10/16/52	
1003	4	8	OFF	0	0	E	NOTHING	Check for shorts.	TB 11-2627-2 10/30/46	
1003	2	9	OFF	60	0	E	0Z4	See note D.	TB 11-2627-2 10/30/46	
1003	10	2	OFF	60	0	E	0Z4	See note D.	TB 11-2627-2 10/30/46	
1005	1	12	6.3	68	0	G	0Z4	See note D.	TB 11-2627-2 10/16/52	
1005	12	1	OFF	68	0	G	0Z4	See note D.	TB 11-2627-2 10/16/52	
1006	2	7	1.5	68	0	A	0Z4	See note D.	TB 11-2627-2 10/16/52	
1006	3	7	1.5	68	0	A	0Z4	See note D.	TB 11-2627-2 10/16/52	
1007	8	2	1.1	62	0	E	0Z4	Shorts on 4 and 5.	TB 11-2627-2 10/16/52	
1007	8	3	OFF	62	0	E	0Z4	Shorts on 4 and 5.	TB 11-2627-2 10/16/52	
R1045	>	>	>	>	>	>	>	See table III for testing with MX-949*.	Nolan	
E1148	7	2	6.3	62	10	?	AMPL	Mut.Cond.2200.Upper cap = plate. Lower cap = grid.	Hickok 3200-16 4/55	
M1060	9	5	6.3	0	0	E	AMPL	Connect plate cap to upper center contact on D socket with lead provided. OK over 900. See note D.	Nolan	
1201	12	4	6.3	67	0	N	AMPL	Shorts on 1, 2, and 5.	TB 11-2627-2 10/16/52	
1201	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	
1203 / 1203A	9	5	6.3	25	0	F	DIODE	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	
1204	3	9	6.3	58	0	N	AMPL	Shorts on 4 and 5.	TB 11-2627-2 10/16/52	
1204	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52	
1206	>	>	>	>	>	>	>	See table III for testing with MX-949*.	Nolan	
1221	1	7	6.3	49	17	C	AMPL	Mut.Cond.1225.	1943 Sylvania Manual	
1231	5	4	6.3	71	10	F	AMPL	Mut.Cond.4000.	TB 11-2627-2 10/16/52	
1232	5	4	6.3	60	15	F	AMPL	Mut.Cond.2000.	TB 11-2627-2 10/16/52	

Tube Type	Selector Switch		Filament	Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B		L	R					
1237	1	6	2.5	32	0	?	DIODE	Plate No. 1. Shorts on 1, 2, 3, 4, and 5.	Hickok 3200-16 4/55	
1237	6	6	2.5	32	0	?	DIODE	Plate No.1. Shorts on 1, 2, 3, 4, and 5.	Hickok 3200-16 4/55	
HY1269	12	1	12.6	70	24	B?	AMPL	Mut. Cond.4000. See note A. Shorts on 2 and 5.	Hickok 3200-16 4/55	
1273	6	2	6.3	63	9	F	AMPL	Mut. Cond.2275.	Hickok 3200-16 4/55	
1274	10	2	6.3	35	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
1274	2	9	6.3	35	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
1280	6	2	12.6	63	9	F	AMPL	Mut. Cond.2275.	Hickok 3200-16 4/55	
1282	6	2	6.3	67	9	F	AMPL	Mut. Cond.3000. Shorts on 1, 4, and 5.	Nolan	
1284	6	2	12.6	60	23	F	AMPL	Mut. Cond.2000.	TB 11-2627-2 10/16/52	
1285	8	5	25.0	72	31	F	AMPL	Mut. Cond.5800.	TB 11-2627-2 10/16/52	
1291	6	6	2.5	35	25	F	DIODE	Shorts on 4 and 5. Reads in Green. Plate 1.	TM 11-2627 C1 10/24/45	
1291	1	6	2.5	35	25	F	DIODE	Shorts on 4 and 5. Reads in Green. Plate 2.	TM 11-2627 C1 10/24/45	
1291	>	>	>	>	>	>	>	See table III.	TB 11-2627-2 10/16/52	
1293	6	2	1.5	50	25	F	AMPL	Mut. Cond.1300. See note D.	TB 11-2627-2 10/16/52	
1294	10	5	1.5	0	0	F	DIODE	Mut. Cond.1300. See note D.	TB 11-2627-2 10/16/52	
1299	6	2	2.5	61	30	F	AMPL	Mut. Cond.2100. Short on 1. See note E.	TB 11-2627-2 10/16/52	
1602	2	10	7.5	50	32	A	AMPL	Mut. Cond.1250.	Nolan	
1603	1	7	6.3	49	17	C	AMPL	TB 11-2627-2 10/16/52		
1609	1	5	1.5	26	18	B	AMPL	Mut. Cond.725.	TB 11-2627-2 10/16/52	
1611	8	5	6.3	60	24	E	AMPL	TB 11-2627-2 10/16/52		
1612	1	9	6.3	20	19	E	AMPL	Mut. Cond.650. See note D.	TB 11-2627-2 10/16/52	
1612	8	5	6.3	20	22	E	AMPL	Mut. Cond.650. See note D.	TB 11-2627-2 10/16/52	
1613	8	5	6.3	60	24	E	AMPL	Mut. Cond.2250.	TB 11-2627-2 10/16/52	
1614	8	5	6.3	73	20	E	AMPL	TB 11-2627-2 10/16/52		
1616	7	1	2.5	35	0	A	RECTIFIER STD.	See notes A and D.	TB 11-2627-2 10/16/52	
1619	8	5	2.5	69	24	E	AMPL	Mut. Cond.3400.	TB 11-2627-2 10/16/52	
1620	1	9	6.3	48	18	E	AMPL	Mut. Cond.1225.	TB 11-2627-2 10/16/52	
1621	8	5	6.3	60	24	E	AMPL	Mut. Cond.2000.	TB 11-2627-2 10/16/52	
1622	8	5	6.3	73	20	E	AMPL	Mut. Cond.5000.	TB 11-2627-2 10/16/52	

Tube Type	Selector Switch		Filament	Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B		L	R					
1623	12	1	6.3	61	0	A	AMPL	Mut. Cond. 2200. See note A.	Hickok 3200-16 4/55	
1624	12	1	2.5	71	14	B	AMPL	Mut. Cond. 4000. See note A.	TB 11-2627-2 10/16/52	
1625	4	3	12.6	0	56	D	AMPL	Mut. Cond. 3800. Special cap lead to right center contact of 6 pin (C) socket. OK over 500.	TB 11-2627-2 10/16/52	
1626	8	5	12.6	61	43	E	AMPL	Mut. Cond. 2100. See note D.	TB 11-2627-2 10/16/52	
1629	4	8	12.6	0	0	E	AMPL	Eye open.	TB 11-2627-2 10/16/52	
1629	4	9	12.6	0	0	E	AMPL	Eye closed.	TB 11-2627-2 10/16/52	
1631	8	5	12.6	73	19	E	AMPL	Mut. Cond. 5000.	TB 11-2627-2 10/16/52	
1632	8	5	12.6	75	15	E	AMPL	Mut. Cond. 8000.	TB 11-2627-2 10/16/52	
1633	4	1	25.0	75	0	G	AMPL	Mut. Cond. 8500.	TB 11-2627-2 10/16/52	
1633	10	4	25.0	69	0	G	AMPL	Mut. Cond. 3400. Shorts on 2 and 3.	TB 11-2627-2 10/16/52	
1634	10	3	12.6	42	0	G	AMPL	Mut. Cond. 1000.	TB 11-2627-2 10/16/52	
1634	1	3	12.6	42	0	G	AMPL	Mut. Cond. 1000.	TB 11-2627-2 10/16/52	
1635	12	5	6.3	35	0	E	AMPL	Mut. Cond. 850.	TB 11-2627-2 10/16/52	
1635	2	9	6.3	35	0	E	AMPL	Mut. Cond. 850.	TB 11-2627-2 10/16/52	
								Connect clip lead to right plate cap. Left plate cap of tube under test should be connected to the upper left contact of the 6-pin (C) socket. A 12-inch lead with clip and banna plug is provided for that purpose. See note D.	TB 11-2627-2 10/16/52	
1641	7	1	5.0	40	0	A	RECTIFIER STD.	Connect clip lead to left plate cap. Right plate cap of tube under test should be connected to the upper left contact of the 6-pin (C) socket. A 12-inch lead with clip and banna plug is provided for that purpose. See note D.	TB 11-2627-2 10/16/52	
1641	7	1	5.0	40	0	A	RECTIFIER STD.	See table III.	TB 11-2627-2 10/16/52	
1659	7	6	2.5	28	9	C	AMPL	Mut. Cond. 750. Triode Sect.. Nolan	Mut. Cond. 750. Triode Sect.. Nolan	

Tube Type	Selector Switch		Filament	Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B		L	R					
1659	10	6	2.5	0	0	C	DIODE	Diode #1.	Nolan	
1659	10	3	2.5	0	0	C	DIODE	Diode #2.	Nolan	
CK1800	>	>	>	>	>	>	>	See table III for testing with MX-949*.	Nolan	
1851	8	5	6.3	71	10	E	AMPL	Mut. Cond. 4000.	TB 11-2627-2 10/16/52	
1852	4	2	6.3	71	10	E	AMPL	Mut. Cond. 3500.	Hickok 3200-16 4/55	
1853	4	2	6.3	71	10	E	AMPL	Mut. Cond. 3500.	TB 11-2627-2 10/16/52	
2050	8	5	6.3	40	80	E	RECTIFIER STD.	Good tubes strike between 30 and 35 on R when this control is rotated counterclockwise. See note D.	TB 11-2627-2 10/16/52	
2051	8	5	6.3	40	80	E	RECTIFIER STD.	Good tubes strike between 30 and 35 on R when this control is rotated counterclockwise. See note D.	TB 11-2627-2 10/16/52	
A2209	8	4	6.3	74	0	L	AMPL	Mut. Cond. 6000. Short on 3.	Nolan	
A2209	>	>	>	>	>	>	>	See table III for testing with MX-949*.	Nolan	
A2227	>	>	>	>	>	>	>	See table III for testing with MX-949*.	Nolan	
A4273B	4	1	6.3	56	24	G	AMPL	Mut. Cond. 1650. Shorts on 2 and 3.	Nolan	
A4273B	10	4	6.3	56	24	G	AMPL	Mut. Cond. 1650. Shorts on 2 and 3.	Nolan	
A4273B	>	>	>	>	>	>	>	See table III for testing with MX-949*.	Nolan	
A4375A	12	2	6.3	45	5	K	AMPL	Mut. Cond. 1150.	Nolan	
A4375A	4	8	6.3	0	82	K	DIODE		Nolan	
A4434	1	2	6.3	69	11	K	AMPL	Mut. Cond. 5000. See note D.	Nolan	
A4434	11	8	6.3	69	11	K	AMPL	Mut. Cond. 5000. See note D.	Nolan	

Tube Type	Selector Switch		Filament		Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B	L	R	L	R					
A-4442	11	2	6.3	59	20	K	AMPL	Mut Cond. 1900.	Nolan		
A-4442	4	8	6.3	0	0	K	DIODE	Diode No. 1.	Nolan		
A-4442	1	8	6.3	0	0	K	DIODE	Diode No. 2.	Nolan		
A-4442	>	>	>	>	>	>	>	See table III for testing with MX-949*.	Nolan		
A4450	8	5	6.3	70	17	L	AMPL	Mut Cond. 3700.	Nolan		
A4475	>	>	6.3	>	>	>	>	See table III for testing with MX-949*.	Nolan		
A4498	4	2	12.6	60	25	E	AMPL	Use adapter #5 for triode #1.	Nolan		
A4498	4	2	12.6	60	25	E	AMPL	Use adapter #6 for triode #2.	Nolan		
A4498	>	>	>	>	>	>	>	See table III for testing with MX-949*.	Nolan		
A4524A	1	9	6.3	60	12	A	AMPL	Mut Cond. 2000.	Nolan		
A4524A	>	>	>	>	>	>	>	See table III for testing with MX-949*.	Nolan		
5517	10	2	OFF	64	0	H	0Z4	Connect plate cap of tube to upper left contact of 6-pin (C) socket. Use special lead provided. Shorts on 4 and 5.	TB 11-2627-2 10/16/52		
5556	2	10	5.0	49	21	A	AMPL	Mut Cond. 1300.	Hickok 3200-16 4/55		
A5581A	1	7	6.3	52	13	E	AMPL	Mut Cond. 750. See note D.	Nolan		
A5581A	7	7	6.3	60	33	E	AMPL	Mut Cond. 300. OK over 240.	See note D.		
5610	8	10	6.3	70	22	L	AMPL	Mut Cond. 4000.	Hickok 3200-16 4/55		
5633 / SN944	>	>	>	>	>	>	>	See table III.	TB 11-2627-2 10/16/52		
5634 / SD828E	>	>	>	>	>	>	>	See table III.	TB 11-2627-2 10/16/52		
5635 / SN955B	&	&	&	&	&	&	&	See table III.	TB 11-2627-2 10/16/52		
5636 / SN1007B	&	&	&	&	&	&	&	See table III.	TB 11-2627-2 10/16/52		
5637 / SD917A	&	&	&	&	&	&	&	See table III.	TB 11-2627-2 10/16/52		
5638 / SD828A	&	&	&	&	&	&	&	See table III.	TB 11-2627-2 10/16/52		
5640 / SN947C	&	&	&	&	&	&	&	See table III.	TB 11-2627-2 10/16/52		
5641 / SN977C	&	&	&	&	&	&	&	See table III.	TB 11-2627-2 10/16/52		
5643	&	&	&	&	&	&	&	See table III.	TB 11-2627-2 10/16/52		
5645	&	&	&	&	&	&	&	See table III.	TB 11-2627-2 10/16/52		
5646	&	&	&	&	&	&	&	See table III.	TB 11-2627-2 10/16/52		

Tube Type	Selector Switch		Filament	Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B		L	R					
5647 / SN978B	>	>	>	>	>	>	>	See table III.	TB 11-2627-2 10/16/52	
5651	>	>	>	>	>	>	>	See table III.	TB 11-2627-2 10/16/52	
5654	1	9	6.3	55	20	K	AMPL	Mut. Cond. 1500. Shorts on 4 and 5.	Nolan	
5654	>	>	>	>	>	>	>	See table III.	TB 11-2627-2 10/16/52	
5656	>	>	>	>	>	>	>	See table III.	TB 11-2627-2 10/16/52	
5663	12	2	6.3	40	80	K	RECTIFIER STD.	Tube strikes at approximately 25 on R when this control is turned counter clockwise. See note D.	TB 11-2627-2 10/16/52	
5670	>	>	>	>	>	>	>	See table III.	TB 11-2627-2 10/16/52	
5672	&	&	&	&	&	&	&	See table III.	TB 11-2627-2 10/16/52	
5676 / CK556AX	&	&	&	&	&	&	&	See table III.	TB 11-2627-2 10/16/52	
5677 / CK568AX	&	&	&	&	&	&	&	See table III.	TB 11-2627-2 10/16/52	
5678 / CK569AX	>	>	>	>	>	>	>	See table III.	TB 11-2627-2 10/16/52	
5679	8	5	6.3	40	0	F	DIODE	Diode No.1. Shorts on 1, 2, 3, 4, and 5.	Hickok 3200-16 4/55	
5679	11	5	6.3	40	0	F	DIODE	Diode No.2. Shorts on 2, 3, 4, and 5.	Hickok 3200-16 4/55	
5687	>	>	>	>	>	>	>	See table III.	TB 11-2627-2 10/16/52	
5691	4	1	6.3	36	0	G	AMPL	Mut. Cond. 900. Triode No.1. Shorts on 2 and 3.	Hickok 3200-16 4/55	
5691	10	4	6.3	53	0	G	AMPL	Mut. Cond. 1400. Triode No.2. Shorts on 2 and 3.	Hickok 3200-16 4/55	
5692	4	1	6.3	56	24	G	AMPL	Mut. Cond. 1650. Triode No.1. Shorts on 2 and 3.	Hickok 3200-16 4/55	
5692	10	4	6.3	56	24	G	AMPL	Mut. Cond. 1650. Triode No.2. Shorts on 2 and 3.	Hickok 3200-16 4/55	
5694	2	9	6.3	60	0	E	AMPL	Mut. Cond. 2000. Triode No.1. Shorts on 4 and 5.	Hickok 3200-16 4/55	
5694	12	5	6.3	60	0	E	AMPL	Mut. Cond. 2000. Triode No.2. Shorts on 1, 4, and 5.	Hickok 3200-16 4/55	
5696	>	>	>	>	>	>	>	See table III.	TB 11-2627-2 10/16/52	
5702	>	>	>	>	>	>	>	See table III.	TB 11-2627-2 10/16/52	
5703	>	>	>	>	>	>	>	See table III.	TB 11-2627-2 10/16/52	
5704	>	>	>	>	>	>	>	See table III.	TB 11-2627-2 10/16/52	
5725	1	9	6.3	42	15	K	AMPL	TB 11-2627-2 10/16/52		
5726	9	2	6.3	60	0	K	DIODE	Shorts on 2 and 3.	TB 11-2627-2 10/16/52	
5726	4	2	6.3	60	0	K	DIODE	Shorts on 2 and 3.	TB 11-2627-2 10/16/52	

Tube Type	Selector Switch		Filament	Potentiometers		Socket Letter	Press	Notations	Data Source
	A	B		L	R				
5729	4	8	6.3	40	80	K	RECTIFIER STD.	Good tube strikes between 25 and 30 on R when this control is rotated counterclockwise. Shorts on 2 and 3. See note D.	Nolan
5731	9	6	6.3	52	24	M	AMPL	Mut. Cond. 1500.	Hickok 3200-16 4/55
5732	8	5	6.3	54	16	E	AMPL	Mut. Cond. 1450.	Hickok 3200-16 4/55
5742	2	8	5.0	25	12	A	AMPL	Mut. Cond. 750.	Hickok 3200-16 4/55
5744	>	>	>	>	>	>	>	See table III.	TB 11-2627-2 10/16/52
5749	7	9	6.3	70	0	K	AMPL		TB 11-2627-2 10/16/52
5750	7	9	6.3	55	23	K	AMPL	Mut. Cond. 1600.	T.O. 33AA21-1-4 5/20/55
5751	>	>	>	>	>	>	>	See table III.	TB 11-2627-2 10/16/52
5783	>	>	>	>	>	>	>	See table III.	TB 11-2627-2 10/16/52
5787	>	>	>	>	>	>	>	See table III.	TB 11-2627-2 10/16/52
5812	7	9	6.3	70	38	K	AMPL	Mut. Cond. 4300. Shorts on 4 and 5.	Hickok 3200-16 4/55
5814	4	2	12.6	60	25	E	AMPL	Use adapter #5 for Triode #1.	TB 11-2627-2 4/7/49
5814	4	2	12.6	60	25	E	AMPL	Use adapter #6 for Triode #2.	TB 11-2627-2 4/7/49
5814	>	>	>	>	>	>	>	See table III for testing with MX-949*.	TB 11-2627-2 10/16/52
5824	8	5	25.0	71	43	E	AMPL	Mut. Cond. 4000.	Nolan
CK5829	>	>	>	>	>	>	>	See table III.	TB 11-2627-2 10/16/52
5839	7	2	25.0	35	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 C5 3/19/57
5839	7	5	25.0	35	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 C5 3/19/57
5844	1	2	6.3	66	13	K	AMPL	Mut. Cond. 3000. Triode No. 1.	Hickok 3200-16 4/55
5844	11	8	6.3	66	13	K	AMPL	Mut. Cond. 3000. Triode No. 2.	Hickok 3200-16 4/55

Tube Type	Selector Switch		Filament	Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B		L	R					
5852	8	5	6.3	40	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
5852	10	2	6.3	40	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
5854	>	>	>	>	>	>	>	See table III.	TB 11-2627-2 10/16/52	
5881	8	5	6.3	63	20	E	AMPL	Mut. Cond. 5000. Set MICROMHOS switch to 6000.	Nolan	
5896	>	>	>	>	>	>	>	See table III.	TB 11-2627-2 10/16/52	
5903	>	>	>	>	>	>	>	See table III.	TB 11-2627-2 10/16/52	
5930	2	10	2.5	57	55	A	AMPL	TB 11-2627-2 C5 3/19/57		
5931	4	11	5.0	40	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
5931	5	11	5.0	40	0	E	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
5932	8	5	6.3	63	20	E	AMPL	Set MICROMHOS switch at 6000.	TB 11-2627-2 C5 3/19/57	
5933	1	6	6.3	0	56	B	AMPL	Special cap lead to right center of 6 pin (C) socket. OK over 500.	TB 11-2627-2 C5 3/19/57	
5961	1	7	6.3	28	17	E	AMPL	Mut. Cond. 750. See note D.	Nolan	
5961	7	7	6.3	28	17	E	AMPL	Mut. Cond. 750. See note D.	Nolan	
5992	8	5	6.3	67	25	E	AMPL	Mut. Cond. 3000.	Hickok 3220-16 4/55	
6005	8	5	6.3	70	17	L	AMPL		T.O. 33AA21-1-4 5/20/55	
6006	4	2	6.3	68	10	E	AMPL	Mut. Cond. 3300.	Nolan	
6012	7	2	6.3	62	See Notation	E	GAS No. 1.	Strikes at 29 on R.	Hickok 3220-16 4/55	
6057	>	>	>	>	>	>	>	See table III for testing with MX-949*.	Nolan	
6060	4	2	12.6	15	25	E	AMPL	Use adapter #5 for triode #1.	Nolan	
6060	4	2	12.6	15	25	E	AMPL	Use adapter #6 for triode #2.	Nolan	
6060	>	>	>	>	>	>	>	See table III for testing with MX-949*.	Nolan	

Tube Type	Selector Switch		Filament	Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B		L	R					
6063	3	5	6.3	35	0	K	RECTIFIER STD.	Plate No. 1. See note D.	Nolan	
6063	6	5	6.3	35	0	K	RECTIFIER STD.	Plate No. 2. See note D.	Nolan	
6066	11	4	6.3	47	15	K	AMPL	Mut. Cond. 1200.	Nolan	
6066	4	8	6.3	0	0	K	DIODE		Nolan	
6066	1	8	6.3	0	0	K	DIODE		Nolan	
6067	4	2	12.6	60	25	E	AMPL	Use adapter #5 for triode #1.	Nolan	
6067	4	2	12.6	60	25	E	AMPL	Use adapter #6 for triode #2.	Nolan	
6067	>	>	>	>	>	>	>	See table III for testing with MX-949*.	Nolan	
6072	>	>	>	>	>	>	>	See table III for testing with MX-949*.	Nolan	
6073	4	4	OFF	0	0	H	GAS No. 1	OK over 200. Shorts on 4 and 5. See note D.	Nolan	
6073	>	>	>	>	>	>	>	See table III for testing with MX-949*.	Nolan	
6074	4	4	OFF	30	0	H	GAS No. 1	OK over 200. Shorts on 4 and 5. See note D.	Nolan	
6074	>	>	>	>	>	>	>	See table III for testing with MX-949*.	Nolan	
6080	1	7	6.3	28	17	E	AMPL	Mut. Cond. 750. See note D.	Nolan	
6080	7	7	6.3	28	17	E	AMPL	Mut. Cond. 750. See note D.	Nolan	
6080	>	>	>	>	>	>	>	See table III for testing with MX-949*.	Nolan	
6087	4	11	5.0	30	0	E	RECTIFIER STD.	Plate No. 1.	Hickok 3200-16 4/55	
6087	5	11	5.0	30	0	E	RECTIFIER STD.	Plate No. 2.	Hickok 3200-16 4/55	
6095	8	5	6.3	70	17	L	AMPL	Mut. Cond. 1500. Shorts on 4 and 5.	T.O. 33AA21-14 5/20/55	
6096	1	9	6.3	55	20	K	AMPL	See table III for testing with MX-949*.	Nolan	
6096	>	>	>	>	>	>	>		T.O. 33AA21-14 5/20/55	

Tube Type	Selector Switch		Filament		Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B	L	R	L	R					
6097	9	2	6.3	60	0	K	DIODE		Shorts on 2 and 3.		T.O. 33AA21-1-4 5/20/55
6097	4	2	6.3	60	0	K	DIODE		Shorts on 2 and 3.		T.O. 33AA21-1-4 5/20/55
6098	8	5	6.3	71	36	E	AMPL		Use Adapter # 3.		Nolan
6098	>	>	>	>	>	>		>	See table III for testing with MX-949*.		T.O. 33AA21-1-4 5/20/55
6099	1	2	6.3	69	11	K	AMPL	Mut.Cond.5000. See note D.		Nolan	
6099	11	8	6.3	69	11	K	AMPL	Mut.Cond.5000. See note D.		Nolan	
6100	2	9	6.3	67	20	L	AMPL	See note D.	T.O. 33AA21-1-4 5/20/55		
6101	1	2	6.3	69	11	K	AMPL	See note D.	T.O. 33AA21-1-4 5/20/55		
6101	11	8	6.3	69	11	K	AMPL	See note D.	T.O. 33AA21-1-4 5/20/55		
6113	4	1	6.3	36	0	G	AMPL	Mut.Cond.900.		Nolan	
6113	10	4	6.3	53	0	G	AMPL	Mut.Cond.1400. Shorts on 2 and 3.		Nolan	
6113	>	>	>	>	>	>			See table III for testing with MX-949*.		Nolan
6134	4	2	6.3	71	10	E	AMPL	Mut.Cond.3500.	Hickok 3200-16 4/55		
6135	2	9	6.3	62	28	L	AMPL	Mut.Cond.2200.	Hickok 3200-16 4/55		
6136	1	9	6.3	62	18	K	AMPL	Mut.Cond.2300	Hickok 3200-16 4/55		
6136	>	>	>	>	>	>			See table III for testing with MX-949*.		Nolan
6137	4	2	6.3	59	18	E	AMPL	Mut.Cond.1900.		Nolan	
6145	5	4	6.3	74	8	F	AMPL			Nolan	
R-6175B	4	11	5.0	40	0	E	RECTIFIER STD.	See note D.		Nolan	
R-6175B	5	11	5.0	40	0	E	RECTIFIER STD.	See note D.		Nolan	
6185	>	>	>	>	>	>		>	See table III for testing with MX-949*.		Nolan
6186	1	9	6.3	67	0	K	AMPL	Mut.Cond.3000. Shorts on 4 and 5.		Nolan	
6186	>	>	>	>	>	>		>	See table III for testing with MX-949*.		Nolan
6187	1	9	6.3	42	15	K	AMPL		See table III for testing with MX-949*.		Nolan
6188	>	>	>	>	>	>		>		Nolan	
6189	4	2	12.6	60	25	E	AMPL	Use adapter #5 for triode #1.		Nolan	

Tube Type	Selector Switch		Filament	Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B		L	R					
6189	4	2	12.6	60	25	E	AMPL	Use adapter #6 for triode #2.	Nolan	
6189	>	>	>	>	>	>	>	See table III for testing with MX-949*.	Nolan	
R-6200	4	8	6.3	40	80	K	RECTIFIER STD.	Good tube strikes between 25 and 30 on R when this control is rotated counterclockwise. Shorts on 2 and 3. See note D.	Nolan	
6201	4	2	12.6	15	25	E	AMPL	Use adapter #5 for triode #1.	Nolan	
6201	>	>	>	>	>	>	>	See table III for testing with MX-949*.	T.O. 33AA21-1-4 5/20/55	
6202	3	5	6.3	33	0	K	RECTIFIER STD.	Plate No.1.	Hickok 3200-16 4/55	
6202	6	5	6.3	33	0	K	RECTIFIER STD.	Plate No.2.	Hickok 3200-16 4/55	
6265	1	9	6.3	60	12	K	AMPL	Mut. Cond. 2000.	Hickok 3200-16 4/55	
R-6269	9	2	6.3	60	0	K	DIODE	Shorts on 2 and 3.	Nolan	
R-6269	4	2	6.3	60	0	K	DIODE	Shorts on 2 and 3.	Nolan	
R6272	2	9	6.3	33	0	E	RECTIFIER STD.	Plate No. 1.	Nolan	
R6272	10	2	6.3	33	0	E	RECTIFIER STD.	Plate No. 2.	Nolan	
R6277	3	5	6.3	35	0	K	RECTIFIER STD.	Plate # 1. See note D.	Nolan	
R6277	6	5	6.3	35	0	K	RECTIFIER STD.	Plate # 2. See note D.	Nolan	
6485	7	9	6.3	68	15	K	AMPL	Mut. Cond. 5000.	Nolan	
6626	4	4	OFF	0	0	H	GAS No. 1	OK over 200. Shorts on 4 and 5. See note D.	Nolan	
6626	>	>	>	>	>	>	>	See table III for testing with MX-949*.	Nolan	
6627	4	4	OFF	30	0	H	GAS No. 1	OK over 200. Shorts on 4 and 5. See note D.	Nolan	

Tube Type	Selector Switch		Filament	Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B		L	R			>	>	
6627	>	>	>	>	>	K	AMPL	See table III for testing with MX-949*.		Nolan
6660	7	9	6.3	70	0	K	AMPL	Mut. Cond.4300.	Nolan	Nolan
6661	1	9	6.3	60	12	A	AMPL	Mut. Cond.2000.	Nolan	Nolan
6661	>	>	>	>	>	K	AMPL	See table III for testing with MX-949*.		Nolan
6662	7	9	6.3	70	10	K	DIODE	Mut. Cond.3800.	Nolan	Nolan
6663	9	2	6.3	60	0	K	DIODE	Shorts on 2 and 3.	Nolan	Nolan
6663	4	2	6.3	60	0	K	DIODE	Shorts on 2 and 3.	Nolan	Nolan
6664	11	9	6.3	70	8	K	AMPL	Mut. Cond.4000.	Nolan	Nolan
6664	>	>	>	>	>	K	AMPL	See table III for testing with MX-949*.		Nolan
6669	8	5	6.3	70	17	L	AMPL	Mut. Cond.3700.	Nolan	Nolan
6670	4	2	12.6	60	25	E	AMPL	Use adapter #5 for triode #1.		Nolan
6670	4	2	12.6	60	25	E	AMPL	Use adapter #6 for triode #2.		Nolan
6670	>	>	>	>	>	K	AMPL	See table III for testing with MX-949*.		Nolan
6671	4	2	12.6	15	25	E	AMPL	Use adapter #5 for triode #1.		Nolan
6671	4	2	12.6	15	25	E	AMPL	Use adapter #6 for triode #2.		Nolan
6671	>	>	>	>	>	K	AMPL	See table III for testing with MX-949*.		Nolan
6676	1	9	6.3	62	18	K	AMPL	Mut. Cond.2200.	Nolan	Nolan
6679	4	2	12.6	15	25	E	AMPL	Use adapter #5 for triode #1.		Nolan
6679	4	2	12.6	15	25	E	AMPL	Use adapter #6 for triode #2.		Nolan
6679	>	>	>	>	>	K	AMPL	See table III for testing with MX-949*.		Nolan
6680	4	2	12.6	60	25	E	AMPL	Use adapter #5 for triode #1.		Nolan

Tube Type	Selector Switch		Filament	Potentiometers		Socket Letter	Press	Notations	Data Source
	A	B		L	R				
6680	4	2	12.6	60	25	E	AMPL	Use adapter #6 for triode #2.	Nolan
6680	>	>	>	>	>	>	>	See table III for testing with MX-949*.	Nolan
6681	>	>	>	>	>	>	>	See table III for testing with MX-949*.	Nolan
7000	1	9	6.3	48	18	E	AMPL	Mut. Cond. 1225.	Nolan
7025	&	&	&	>	&	>	>	See table III for testing with MX-949*.	Nolan

Tube Type	Selector Switch		Filament	Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B		L	R					
7055	9	2	12.6	60	0	K	DIODE			Nolan
7055	4	2	12.6	60	0	K	DIODE			Nolan
7056	1	9	12.6	62	18	K	AMPL	Mut. Cond. 2200.		Nolan
7058	>	>	>	>	>	>	>	See table III for testing with MX-949*.		Nolan
7193	7	2	12.6	57	25	E	AMPL	Mut. Cond. 3000.	TB 11-2627-2 10/16/52	
7316	4	2	12.6	60	25	E	AMPL	Use adapter #5 for triode #1.		Nolan
7316	4	2	12.6	60	25	E	AMPL	Use adapter #6 for triode #2.		Nolan
7316	>	>	>	>	>	>	>	See table III for testing with MX-949*.		Nolan
7489	4	2	12.6	60	25	E	AMPL	Use adapter #5 for triode #1.		Nolan
7489	4	2	12.6	60	25	E	AMPL	Use adapter #6 for triode #2.		Nolan
7489	>	>	>	>	>	>	>	See table III for testing with MX-949*.		Nolan
7494	>	>	>	>	>	>	>	See table III for testing with MX-949*.		Nolan
7543	12	2	6.3	50	10	K	AMPL	Mut. Cond. 1250. Triode Section.		Nolan
7543	3	8	6.3	0	0	K	DIODE	Diode No. 1		Nolan
7543	2	8	6.3	0	0	K	DIODE	Diode No. 2		Nolan
7543	>	>	>	>	>	>	>	See table III for testing with MX-949*.		Nolan
7693	1	9	6.3	60	12	A	AMPL	Mut. Cond. 2000.		Nolan
7693	>	>	>	>	>	>	>	See table III for testing with MX-949*.		Nolan
7694	7	9	6.3	70	10	K	AMPL	Mut. Cond. 3800.		Nolan
7700	1	7	6.3	49	17	C	AMPL	Mut. Cond. 1225.		Nolan

Tube Type	Selector Switch		Filament	Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B		L	R					
7728	4	2	12.6	15	25	E	AMPL	Use adapter #5 for triode #1.		Nolan
7728	4	2	12.6	15	25	E	AMPL	Use adapter #6 for triode #2.		Nolan
7728	>	>	>	>	>	>	>	See table III for testing with MX-949*.		Nolan
7729	>	>	>	>	>	>	>	See table III for testing with MX-949*.		Nolan
7730	4	2	12.6	60	25	E	AMPL	Use adapter #5 for triode #1.		Nolan
7730	4	2	12.6	60	25	E	AMPL	Use adapter #6 for triode #2.		Nolan
7730	>	>	>	>	>	>	>	See table III for testing with MX-949*.		Nolan
7732	1	9	6.3	62	18	K	AMPL	Mut. Cond. 2200.		Nolan
7752	1	9	6.3	42	15	K	AMPL	Mut. Cond. 1750.		Nolan
7755	1	9	6.3	65	22	K	AMPL	Mut. Cond. 2750. Shorts on 4 and 5.		Nolan
7755	>	>	>	>	>	>	>	See table III for testing with MX-949*.		Nolan
7756	8	5	6.3	71	36	E	AMPL	Use Adapter # 3.		Nolan
7756	>	>	>	>	>	>	>	See table III for testing with MX-949*.		Nolan
7758	8	5	6.3	71	36	E	AMPL	Use Adapter # 3.		Nolan
7758	>	>	>	>	>	>	>	See table III for testing with MX-949*.		Nolan
8016	7	1	1.1	0	0	E	RECTIFIER STD.	Shorts on 3, 4, and 5. OK over 200. See notes A and D.		TB 11-2627-2 10/16/52
8020	7	1	5.0	6	0	A	RECTIFIER STD.	See notes A and D.		TB 11-2627-2 10/16/52
8425	1	9	6.3	62	16	K	AMPL	Mut. Cond. 2300.		Nolan
8425	>	>	>	>	>	>	>	See table III for testing with MX-949*.		Nolan
8426	7	9	12.6	63	12	K	AMPL	Mut. Cond. 2300.		Nolan
8426	>	>	>	>	>	>	>	See table III for testing with MX-949*.		Nolan

Tube Type	Selector Switch		Filament		Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B	L	R	L	R					
8532	8	4	6.3	74	0	L	AMPL	Mut. Cond. 6000. Short on 3.	Nolan		
8532	>	>	>	>	>	>	>	See table III for testing with MX-949*.	Nolan		
9001	1	9	6.3	44	17	K	AMPL	Mut. Cond. 1100. Shorts on 4 and 5.	TM 11-2627 8/3/44		
9001	>	>	>	>	>	>	>	See table III.	TB 11-2627-2 10/16/52		
9002	2	9	6.3	59	18	L	AMPL	Mut. Cond. 1900. Shorts on 4 and 5.	TM 11-2627 8/3/44		
9002	>	>	>	>	>	>	>	See table III.	TB 11-2627-2 10/16/52		
9003	1	9	6.3	54	14	K	AMPL	Mut. Cond. 1500. Shorts on 4 and 5.	TM 11-2627 8/3/44		
9003	>	>	>	>	>	>	>	See table III.	TB 11-2627-2 10/16/52		
9004	9	12	6.3	44	0	M	DIODE	Good tube reads in green sector.	TB 11-2627-2 10/16/52		
9005	9	1	3.0	20	0	M	DIODE	Shorts on 2, 3, 4, and 5. Good tube reads in green sector.	TB 11-2627-2 10/16/52		
9006	2	9	6.3	20	0	L	DIODE	Shorts on 4 and 5.	TB 11-2627-2 10/16/52		
A30870	7	5	6.3	60	24	E	AMPL	Mut. Cond. 2000.	Nolan		
38001	2	10	5.0	26	39	A	AMPL	Mut. Cond. 725.	TB 11-2627-2 10/16/52		
38112	2	10	5.0	57	36	A	AMPL	Mut. Cond. 1650.	TB 11-2627-2 10/16/52		
38019	8	8	2.0	42	12	C	AMPL	Mut. Cond. 1000.	TB 11-2627-2 10/16/52		
38019	11	6	2.0	42	12	C	AMPL	Mut. Cond. 1000.	TB 11-2627-2 10/16/52		
38022	2	5	3.0	0	37	A	AMPL	Mut. Cond. 500.	TB 11-2627-2 10/16/52		
38024	7	6	2.5	42	10	B	AMPL	Mut. Cond. 1000.	TB 11-2627-2 10/16/52		
38027	1	6	2.5	40	34	B	AMPL	Mut. Cond. 1000.	TB 11-2627-2 10/16/52		
38030	2	10	2.0	36	33	A	AMPL	Mut. Cond. 900.	TB 11-2627-2 10/16/52		
38031	2	10	2.0	35	53	A	AMPL	Mut. Cond. 925.	TB 11-2627-2 10/16/52		
38032	2	5	2.0	19	30	A	AMPL	Mut. Cond. 640.	TB 11-2627-2 10/16/52		
38032A	2	5	2.0	18	29	A	AMPL		TB 11-2627-2 10/16/52		
38033	1	5	2.0	50	29	B	AMPL	Mut. Cond. 1450.	TB 11-2627-2 10/16/52		
38034	2	5	2.0	14	27	A	AMPL	Mut. Cond. 600.	TB 11-2627-2 10/16/52		
38035	7	6	2.5	42	20	B	AMPL	Mut. Cond. 1020.	TB 11-2627-2 10/16/52		
38036	7	6	6.3	43	20	B	AMPL	Mut. Cond. 1050.	TB 11-2627-2 10/16/52		
38037	1	6	6.3	36	34	B	AMPL	Mut. Cond. 900.	TB 11-2627-2 10/16/52		
38038	7	6	6.3	41	32	B	AMPL	Mut. Cond. 1050.	TB 11-2627-2 10/16/52		
38039	7	6	6.3	41	23	B	AMPL	Mut. Cond. 1000.	TB 11-2627-2 10/16/52		
38040	2	10	5.0	60	26	A	AMPL	Mut. Cond. 200. OK over 160.	TB 11-2627-2 10/16/52		
38041	8	5	6.3	55	28	C	AMPL	Mut. Cond. 1600.	TB 11-2627-2 10/16/52		

Tube Type	Selector Switch		Filament	Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B		L	R					
38042	8	5	6.3	60	24	C	AMPL	Mut. Cond. 2000.	TB 11-2627-2 10/16/52	
38045	2	10	2.5	59	50	A	AMPL	Mut. Cond. 1850.	TB 11-2627-2 10/16/52	
38047	1	5	2.5	60	18	B	AMPL	Mut. Cond. 2000.	TB 11-2627-2 10/16/52	
38050	2	10	7.5	53	50	A	AMPL	Mut. Cond. 1500.	TB 11-2627-2 10/16/52	
38053	12	5	2.5	53	10	D	AMPL	Mut. Cond. 1500.	TB 11-2627-2 10/16/52	
38056	1	6	2.5	53	26	B	AMPL	Mut. Cond. 1450.	TB 11-2627-2 10/16/52	
38057	2	5	2.5	48	17	C	AMPL	Mut. Cond. 1225.	TB 11-2627-2 10/16/52	
38058	2	5	2.5	54	20	C	AMPL	Mut. Cond. 1450.	TB 11-2627-2 10/16/52	
38059	8	8	2.5	60	18	D	AMPL	Mut. Cond. 2000.	TB 11-2627-2 10/16/52	
38064	2	10	1.1	18	37	A	AMPL	Mut. Cond. 650.	TB 11-2627-2 10/16/52	
38071	2	10	5.0	56	60	A	AMPL	Mut. Cond. 1650.	TB 11-2627-2 10/16/52	
38075	7	6	6.3	28	9	C	AMPL	Mut. Cond. 750.	TB 11-2627-2 10/16/52	
38075	10	6	6.3	0	0	C	DIODE	Diode #1.	TB 11-2627-2 10/16/52	
38075	10	3	6.3	0	0	C	DIODE	Diode #2.	TB 11-2627-2 10/16/52	
38076	1	6	6.3	53	24	B	AMPL	Mut. Cond. 1450.	TB 11-2627-2 10/16/52	
38077	2	5	6.3	48	17	C	AMPL	Mut. Cond. 1225.	TB 11-2627-2 10/16/52	
38078	2	5	6.3	54	20	C	AMPL	Mut. Cond. 1450.	TB 11-2627-2 10/16/52	
38085	7	6	6.3	40	32	C	AMPL	Mut. Cond. 975.	TB 11-2627-2 10/16/52	
38085	10	6	6.3	0	0	C	DIODE	Diode #1.	TB 11-2627-2 10/16/52	
38085	10	3	6.3	0	0	C	DIODE	Diode #2.	TB 11-2627-2 10/16/52	
38089	2	5	6.3	54	30	C	AMPL	Mut. Cond. 1550.	TB 11-2627-2 10/16/52	
38102	2	10	5.0	57	36	A	AMPL		Nolan	
38110	2	10	7.5	50	32	A	AMPL	Mut. Cond. 1250.	TB 11-2627-2 10/16/52	
38142	2	10	7.5	62	30	A	AMPL	Mut. Cond. 2200.	TB 11-2627-2 10/16/52	
38143	1	6	2.5	56	10	B	AMPL	Mut. Cond. 1625.	TB 11-2627-2 10/16/52	
38165	10	4	7.5	16	28	A	AMPL	Mut. Cond. 625. See note A.	TB 11-2627-2 10/16/52	
38166A	7	1	2.5	40	0	A	RECTIFIER STD.	See notes A and D.	TB 11-2627-2 10/16/52	
38171	7	1	2.5	20	0	A	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
38180	2	7	5.0	35	0	A	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
38180	3	7	5.0	35	0	A	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
38181	2	7	7.5	33	0	A	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
38182	2	7	2.5	40	0	A	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	

Tube Type	Selector Switch		Filament	Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B		L	R					
38182	3	7	2.5	40	0	A	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
38183	2	7	5.0	40	0	A	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
38183	3	7	5.0	40	0	A	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
38184	7	7	6.3	40	0	B	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
38184	5	1	6.3	40	0	B	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
38205	7	1	OFF	30	0	G	GAS No. 1	Shorts on 4 and 5. See note D.	TB 11-2627-2 10/16/52	
38213	2	10	2.5	67	55	A	AMPL	Mut. Cond. 3000.	TB 11-2627-2 10/16/52	
38215	8	5	2.5	60	24	C	AMPL	Mut. Cond. 2000.	TB 11-2627-2 10/16/52	
38227	7	6	2.5	41	25	D	AMPL	Mut. Cond. 1000.	TB 11-2627-2 10/16/52	
38227	10	6	2.5	0	0	D	DIODE	Diode #1.	TB 11-2627-2 10/16/52	
38227	10	3	2.5	0	0	D	DIODE	Diode #2.	TB 11-2627-2 10/16/52	
38233	3	3	6.3	42	28	D	AMPL	Mut. Cond. 1000.	TB 11-2627-2 10/16/52	
38233	9	3	6.3	42	28	D	AMPL	Mut. Cond. 1000.	TB 11-2627-2 10/16/52	
38236	1	5	2.0	20	24	C	AMPL	Mut. Cond. 650. See note D.	Hickok 3200-16 4/55	
38236	9	7	2.0	60	41	C	AMPL	Mut. Cond. 300. Osc. Sect. OK over 240 on 3000 scale. See note D.	Hickok 3200-16 4/55	
38250	7	1	OFF	30	0	G	GAS No. 1	Shorts on 4 and 5. See note D.	TB 11-2627-2 10/16/52	
38255	7	8	25.0	40	0	C	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
38255	12	8	25.0	40	0	C	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
38266A	7	1	3.0	30	0	A	RECTIFIER STD.	See notes A and D. OK over 1500.	T.O. 33AA21-1-4 5/20/55	
38267	7	1	2.5	35	0	A	RECTIFIER STD.	See notes A and D.	TB 11-2627-2 10/16/52	
38274	4	5	OFF	30	0	A	GAS No. 1.	See note D.	TB 11-2627-2 10/16/52	
38275	7	1	OFF	50	0	G	GAS No. 1	Shorts on 4 and 5. See note D.	TB 11-2627-2 10/16/52	
38290	7	1	OFF	30	0	G	GAS No. 1	Shorts on 4 and 5. See note D.	TB 11-2627-2 C5 3/19/57	

Tube Type	Selector Switch		Filament	Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B		L	R					
38405	1	5	2.5	40	0	A	RECTIFIER STD.	See note D.	Nolan	
38565J	7	5	6.3	60	24	E	AMPL	Mut. Cond. 2000.	TB 11-2627-2 10/16/52	
38566H	7	2	6.3	50	0	E	DIODE		TB 11-2627-2 10/16/52	
38566H	7	5	6.3	50	0	E	DIODE		TB 11-2627-2 10/16/52	
38567K	8	5	6.3	54	16	E	AMPL	Mut. Cond. 1450.	TB 11-2627-2 10/16/52	
38567R	7	5	6.3	60	17	E	AMPL	Mut. Cond. 1900.	TB 11-2627-2 10/16/52	
38567R	10	5	6.3	0	0	E	DIODE		TB 11-2627-2 10/16/52	
38567R	10	2	6.3	0	0	E	DIODE		TB 11-2627-2 10/16/52	
38568K	8	5	6.3	41	9	E	AMPL	Mut. Cond. 1000. See note D.	TB 11-2627-2 10/16/52	
38568K	11	5	6.3	63	9	E	AMPL	Mut. Cond. 2400. See note D.	TB 11-2627-2 10/16/52	
38593	2	7	5.0	40	0	A	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
38593	3	7	5.0	40	0	A	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52	
38616	1	5	6.3	53	10	D	AMPL	Mut. Cond. 1500.	TB 11-2627-2 10/16/52	
38616	12	5	6.3	53	10	D	AMPL	Mut. Cond. 1500.	TB 11-2627-2 10/16/52	
38617	7	6	6.3	41	18	D	AMPL	Mut. Cond. 1000. See note D.	TB 11-2627-2 10/16/52	
38617	10	6	6.3	60	25	D	AMPL	Mut. Cond. 400. OK over 320. See note D.	TB 11-2627-2 10/16/52	
38627	7	6	6.3	41	25	D	AMPL	Mut. Cond. 1000.	TB 11-2627-2 10/16/52	
38627	10	6	6.3	0	0	D	DIODE		TB 11-2627-2 10/16/52	
38627	10	3	6.3	0	0	D	DIODE		TB 11-2627-2 10/16/52	
38636	1	7	6.3	49	17	C	AMPL	Mut. Cond. 1225.	TB 11-2627-2 10/16/52	
38646	1	7	6.3	56	17	C	AMPL	Mut. Cond. 1600.	TB 11-2627-2 10/16/52	
38655	12	3	6.3	0	0	C	AMPL	Eye open.	TB 11-2627-2 10/16/52	
38655	12	2	6.3	0	0	C	AMPL	Eye closed.	TB 11-2627-2 10/16/52	
38667	7	6	6.3	45	23	D	AMPL	Mut. Cond. 1100.	TB 11-2627-2 10/16/52	
38667	10	6	6.3	60	23	D	AMPL	Mut. Cond. 450. OK over 360.	TB 11-2627-2 10/16/52	
38717E	8	8	2.0	45	17	E	AMPL	Mut. Cond. 1150.	TB 11-2627-2 10/16/52	
38717E	11	6	2.0	45	17	E	AMPL	Mut. Cond. 1150.	TB 11-2627-2 10/16/52	
38765J	7	5	6.3	60	24	E	AMPL	Mut. Cond. 2000.	TB 11-2627-2 10/16/52	
38766Y	8	5	6.3	60	42	E	AMPL	Set MICROMHOS switch at 6000.	TB 11-2627-2 C1 10/5/53	
38768F	8	7	6.3	60	13	E	AMPL	Mut. Cond. 2000. Plate No. 1.	TB 11-2627-2 10/16/52	
38768F	11	7	6.3	60	13	E	AMPL	Mut. Cond. 2000. Plate No. 2.	TB 11-2627-2 10/16/52	
38807	12	1	6.3	70	27	B	AMPL	Mut. Cond. 3500. Connect plate to top left contact of 6 pin socket.	Hickok 3200-16 4/55	

Tube Type	Selector Switch		Filament		Potentiometers		Socket Letter	Press	Notations		Data Source
	A	B	L	R	L	R					
38837	10	3	12.6	71	0	D	AMPL		See note A.		TB 11-2627-2 10/16/52
38842	2	10	7.5	46	50	A	AMPL		Mut. Cond. 1150.		TB 11-2627-2 10/16/52
38853	4	2	6.3	71	10	E	AMPL		Mut. Cond. 3500.		TB 11-2627-2 10/16/52
38884	1	6	6.3	40	80	E	RECTIFIER STD.		Good tube strikes between 55 and 65 on R when this control is rotated counterclockwise. See note D.		TB 11-2627-2 C5 3/19/57
38954	6	7	6.3	44	17	M	AMPL		Mut. Cond. 1100.		TB 11-2627-2 10/16/52
38955	9	7	6.3	59	18	M	AMPL		Mut. Cond. 1900. See note D.		TB 11-2627-2 10/16/52
38956	6	7	6.3	53	14	M	AMPL		Mut. Cond. 1500.		TB 11-2627-2 10/16/52
38959	6	7	1.1	10	30	M	AMPL		Mut. Cond. 600. Shorts on 4 and 5.		TB 11-2627-2 10/16/52
38968	9	7	1.1	32	34	M	AMPL		Mut. Cond. 1200. Shorts on 4 and 5. See note D.		TB 11-2627-2 10/16/52
D86326	2	10	4.3	39	25	A	AMPL		Insert tube in socket with pin on base away from operator.	Nolan	
D86327	2	10	4.3	60	60	A	AMPL		Minimum value of 830.		TB 1671-4 12/26/42 (560)
AD	1	5	6.3	40	0	A	RECTIFIER STD.		See note D.	Hickok 3200-16 4/55	
AF	2	7	2.5	40	0	A	RECTIFIER STD.		See note D.	Hickok 3200-16 4/55	
AF	3	7	2.5	40	0	A	RECTIFIER STD.		See note D.	Hickok 3200-16 4/55	
AG	2	7	5.0	40	0	A	RECTIFIER STD.		See note D.	Hickok 3200-16 4/55	
AG	3	7	5.0	40	0	A	RECTIFIER STD.		See note D.	Hickok 3200-16 4/55	
GA	1	5	5.0	60	16	?	AMPL		Mut. Cond. 2000.	Hickok 3200-16 4/55	
LA	1	5	6.3	60	23	B	AMPL		Mut. Cond. 2000.	Hickok 3200-16 4/55	
PZ	1	5	2.5	60	18	B	AMPL		Mut. Cond. 2000.	Hickok 3200-16 4/55	
PZH	8	8	2.5	63	25	C	AMPL		Mut. Cond. 2400.	Hickok 3200-16 4/55	
WUN-A	8	8	2.5	11	37	?	AMPL		Mut. Cond. 600. Grid #1.	560 Hickok Roll Chart	
WUN-A	8	6	2.5	11	37	?	AMPL		Mut. Cond. 600. Grid #2.	560 Hickok Roll Chart	
XXB	2	10	2.5	30	30	F	AMPL			TB 11-2627-2 10/16/52	
XXB	12	6	2.5	31	60	F	AMPL		OK over 320.	TB 11-2627-2 10/16/52	
XXD	12	5	12.6	64	0	F	AMPL		Mut. Cond. 2500. Shorts on 1, 4, and 5.	TB 11-2627-2 10/16/52	
XXD	2	9	12.6	64	0	F	AMPL		Mut. Cond. 2500.	TB 11-2627-2 10/16/52	

Tube Type	Selector Switch		Filament	Potentiometers		Socket Letter	Press	Notations	Data Source
	A	B		L	R				
XXFM	1	2	6.3	30	0	F	AMPL	Shorts on 1, 4, and 5.	TB 11-2627-2 10/16/52
XXFM	12	8	6.3	0	0	F	DIODE		TB 11-2627-2 10/16/52
XXFM	7	3	6.3	0	0	F	DIODE		TB 11-2627-2 10/16/52
XXL	6	2	6.3	67	0	F	AMPL	Mut. Cond. 3000.	TB 11-2627-2 10/16/52

TABLE III. TUBE TEST DATA FOR USE WITH THE TUBE TESTER I-177(*) AND TUBE SOCKET ADAPTER KIT MX-949(*)

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beta 1.08 July 5, 2002

Note A: The plate cap of the tube under test should be connected to the upper left contact of the 6-pin (C) socket. A 12-inch lead with clip and banana plug is provided for this purpose.

Note B: Connect the plate cap (nearest the operator) to the upper left contact of the 6-pin (C) socket; use the lead provided. Connect the grid lead to the remaining cap on the tube.

Note C: Set the MICROMHOS switch at 6000 when testing this section if the tube tester bears either Order No. 27613-Phila-44-52 or 52346-Phila-45-10 on the nomenclature plate.

Note D: This test is only a partial indication of a good tube. A complete test is only possible when using equipment.

Note E: **Do not tap on these tubes when testing for shots because damage to the tube may result.**

Note F: The Mutual Conductance values listed are averages for new tubes and only for a guide.

Tube Type	Filament Voltage	Potentiometers L R	Patch Cord Connection Plug to Receptacle	Socket Number	Press	Notations	Data Source
0A2	0	32 0	2 to K	X8	GAS No.1.	OK over 500. See note D.	TB 11-2627-2 C5 3/19/57
0B2	0	30 0	2 to P	X8	GAS No.1.	OK over 600. See note D.	TB 11-2627-2 C5 3/19/57
1AD4	1.5	55 20	1 to P	X5 OR X6 if short leads.	AMPL	Set LINE TEST to 1250.	TB 11-2627-2 10/16/52
1AE4	1.1	40 21	2 to SC	X8	AMPL	OK over 850	TB 11-2627-2 10/16/52
1AH4	1.1	0 20	6 to G	7 FIL			
						Red dot indicates pin No.1. Set MICROMHOS switch to 6000. OK over 700. See note D.	TB 11-2627-2 10/16/52

Tube Type	Filament Voltage	Potentiometers L R	Patch Cord Connection	Socket Number	Press	Notations	Data Source
			Plug to Receptacle				
1C8	1.1	0	40	2 4 5 to 6 7 8	K FIL FIL P SC G	X5 OR X6 if short leads. AMPL	Converter Section. OK over 350. See note D. TB 11-2627-2 10/16/52
1C8	1.1	0	60	4 5 6 7 8	FIL FIL P P K	X5 OR X6 if short leads. AMPL	Oscillator Section. OK over 950 See note D. TB 11-2627-2 10/16/52
1LG5	1.5	0	28	1 2 3 5 6	FIL P SC FIL G	X4 AMPL	TB 11-2627-2 10/16/52
1Q6	1.1	5	25	2 4 5 7 8	G FIL to FIL P SC	X5 OR X6 if short leads. AMPL	Press LINE TEST button and rotate LINE ADJUSTMENT control until meter indicates 1800 instead of LINE TEST. TB 11-2627-2 10/16/52
1Q6	1.1	0	0	4 5 6	FIL to FIL P	X5 OR X6 if short leads. DIODE	Press LINE TEST button and rotate LINE ADJUSTMENT control until meter indicates 1800 instead of LINE TEST. TB 11-2627-2 10/16/52
1S4	1.5	50	45	1 2 3 4 7	FIL P G SC FIL	X8 AMPL	See note E. TB 11-2627-2 10/16/52

Tube Type	Filament Voltage	Potentiometers L R	Patch Cord Connection	Socket Number	Press	Notations	Data Source
1S6	1.1	5 25	1 P 3 G 4 to FIL 5 FIL 8 SC	X5 OR X6 if short leads.	AMPL	Press LINE TEST button and rotate LINE ADJUSTMENT control until meter indicates 1800 instead of LINE TEST.	TB 11-2627-2 10/16/52
1S6	1.1	0 0	4 FIL 5 to FIL 6 P	X5 OR X6 if short leads.	DIODE	Press LINE TEST button and rotate LINE ADJUSTMENT control until meter indicates 1800 instead of LINE TEST.	TB 11-2627-2 10/16/52
1V5	1.1	0 24	2 G 4 FIL 5 to FIL 7 P 8 SC	X5	AMPL	OK over 440. See note D.	TB 11-2627-2 10/16/52
1W5	1.1	0 28	2 G 4 FIL 5 to FIL 7 P 8 SC	X5 OR X6 if short leads.	AMPL	Press LINE TEST button and rotate LINE ADJUSTMENT control until meter indicates 1800 instead of LINE TEST.	TB 11-2627-2 10/16/52
1Z2	1.1	0 0	1 FIL 2 to FIL CAP PLATE	X8	RECTIFIER STD.	Press LINE TEST button and rotate LINE ADJUSTMENT control until meter indicates 1800 instead of LINE TEST. OK OVER 500. See note D.	TB 11-2627-2 10/16/52
2C50	12.6	48 39	1 K 4 G 5 P 6 to K 7 FIL 8 FIL	X3	AMPL	Section No.1.	TB 11-2627-2 10/16/52
2C50	12.6	48 39	1 G 2 P 3 to K 4 FIL 7 FIL 8 FIL	X3	AMPL	Section No.2.	TB 11-2627-2 10/16/52

Tube Type	Filament Voltage	Potentiometers L R	Patch Cord Connection	Socket Number	Press	Notations	Data Source
			Plug to Receptacle				
2C51	6.3	64	22 2 3 to G	X9	AMPL	Section No.1.	TB 11-2627-2 C5 3/19/57
2C51	6.3	64	22 7 to G	X9	AMPL	Section No.2.	TB 11-2627-2 10/16/52
2C52	12.6	15	20 4 to G	X3	AMPL	Section No.1	TB 11-2627-2 10/16/52
2C52	12.6	15	20 3 to K	X3	AMPL	Section No.2	TB 11-2627-2 10/16/52
2E24	6.3	48	30 1 to K	X3	AMPL	Shorts on 4 and 5. Set MICROMHOS switch to 6000.	TB 11-2627-2 C1 10/5/53
2E26	6.3	54	35 2 to G	X3	AMPL	Shorts on 4 and 5. Set MICROMHOS switch to 6000.	TB 11-2627-2 C1 10/5/53

Tube Type	Filament Voltage	Potentiometers L R	Patch Cord Connection	Socket Number	Press	Notations	Data Source
			Plug to Receptacle				
2E30	6.3	52	1 to FIL 2 to P 3 to SC 4 to G 5 to FIL 6 to G 7 to FIL	X8	AMPL	Shorts on 4 and 5. Set MICROMHOS switch to 6000.	TB 11-2627-2 C1 10/5/53
2E31	1.1	10	1 to P 2 to SC 3 to FIL 4 to G 5 to FIL	X5 OR X7 if short leads.	AMPL	Press LINE TEST button and rotate LINE ADJUSTMENT control until meter indicates 1800 instead of LINE TEST. Red dot on tube indicates No.1 lead.	TB 11-2627-2 10/16/52
2E32	1.1	10	1 to P 2 to SC 3 to FIL 4 to G 5 to FIL	X5 OR X7 if short leads.	AMPL	Press LINE TEST button and rotate LINE ADJUSTMENT control until meter indicates 1800 instead of LINE TEST. Red dot on tube indicates No.1 lead.	TB 11-2627-2 10/16/52
2E35	1.1	0	1 to P 2 to SC 3 to FIL 4 to G 5 to FIL	X5	AMPL	Red dot indicates pin No.1. Depress AMPL only momentarily. Good tube reads on green.	TB 11-2627-2 10/16/52
2E41	1.1	10	1 to P 2 to SC 3 to FIL 4 to G 5 to FIL 6 to FIL	X5 OR X7 if short leads.	AMPL	Pentode section. Press LINE TEST button and rotate LINE ADJUSTMENT control until meter indicates 1800 instead of LINE TEST. Red dot on tube indicates No.1 lead.	TB 11-2627-2 10/16/52
2E41	1.1	0	1 to P 2 to SC 3 to FIL 4 to G 5 to FIL 6 to FIL	X5 OR X7 if short leads.	DIODE	Diode section. Press LINE TEST button and rotate LINE ADJUSTMENT control until meter indicates 1800 instead of LINE TEST.	TB 11-2627-2 10/16/52

Tube Type	Filament Voltage	Potentiometers L R	Patch Cord Connection	Socket Number	Press	Notations	Data Source
			Plug to Receptacle				
3A4	3.0	60	39	1 2 3 4 to G 6 7 FIL G	FIL P SC X8	AMPL	See note E. TB 11-2627-2 10/16/52
3AU6	3.0	45	20	1 2 3 4 to FIL 5 6 7 K SC P	X8	AMPL	Nolan
3AV6	3.0	53	10	1 2 3 4 to FIL 7 K FIL P	X8	AMPL	Triode section. Nolan
3AV6	3.0	0	0	1 2 3 4 to FIL 6 K FIL P	X8	DIODE	Diode No.1. Nolan
3AV6	3.0	0	0	1 2 3 4 to FIL 5 K FIL P	X8	DIODE	Diode No.2. Nolan
3B4	3.0	54	50	1 2 3 4 to G 5 6 7 FIL K P	X8	AMPL	TB 11-2627-2 10/16/52
3B7	2.5	40	25	1 2 6 7 to G P FIL X4	X4	AMPL	Triode No.1. See Notes D and E. TB 11-2627-2 C1 10/5/53
3B7	2.5	40	25	1 2 3 8 to G FIL X4	X4	AMPL	Triode No.2. See Notes D and E. TB 11-2627-2 C1 10/5/53

Tube Type	Filament Voltage	Potentiometers L R	Patch Cord Connection	Socket Number	Press	Notations	Data Source
			Plug to Receptacle				
3BN6	3.0	10 0	1 K 2 G 3 FIL 4 to FIL 5 SC 6 K 7 P	X8	AMPL	Limiter grid.	Nolan
3BN6	3.0	25 0	1 K 2 K 3 FIL 4 to FIL 5 SC 6 G 7 P	X8	AMPL	Quadrature grid.	Nolan
3C33	12.6	60 32	1 FIL 4 K 5 to P 6 G 7 FIL	X1	AMPL	Section No.1. Set MICROMHOS switch to 15,000. See note D.	TB 11-2627-2 C5 3/19/57
3C33	12.6	60 32	1 FIL 2 G 3 to P 4 K 7 FIL	X1	AMPL	Section No.2. Set MICROMHOS switch to 15,000. See note D.	TB 11-2627-2 C5 3/19/57
3E29	12.6	65 24	1 FIL 2 G 3 SC 4 to K 6 G 7 FIL	X1	AMPL	Section No.1. Use tube contact assembly to make plate connection. See note D.	TB 11-2627-2 10/16/52
			Top lead of tube nearest operator to P.				
3E29	12.6	65 24	1 FIL 2 G 3 SC 4 to 4 6 G 7 FIL	X1	AMPL	Section No.2. Use tube contact assembly to make plate connection. See note D.	TB 11-2627-2 10/16/52
			Top lead away from operator to P.				

Tube Type	Filament Voltage	Potentiometers L	Potentiometers R	Patch Cord Connection	Receptacle	Socket Number	Press	Notations	Data Source
3Q4GT/G	2.5	62	20	1 FIL 2 P 3 G 4 to SC 6 P 7 FIL	X8	AMPL		See note E.	TB 11-2627-2 10/16/52
3S4	3.0	50	45	1 FIL 2 P 3 to G 4 SC 7 FIL	X8	AMPL		See note E.	TB 11-2627-2 10/16/52
4AU6	4.3	45	20	1 G 2 K 3 FIL 4 to FIL 5 P 6 SC 7 K	X8	AMPL			Nolan
4AV6	4.3	53	10	1 G 2 K 3 to FIL 4 FIL 7 P	X8	AMPL		Triode section.	Nolan
4AV6	4.3	0	0	2 K 3 to FIL 4 FIL 6 P 7 K	X8	DIODE		Diode No. 1.	Nolan
4AV6	4.3	0	0	2 K 3 to FIL 4 FIL 5 P	X8	DIODE		Diode No. 2.	Nolan

Tube Type	Filament Voltage	Potentiometers L	Potentiometers R	Patch Cord Connection	Socket Number	Press	Notations	Data Source
				Plug to Receptacle				
4BN6	4.3	10	0	1 to FIL 2 to SC 3 to K 4 to P	X8	AMPL	Limiter grid.	Nolan
4BN6	4.3	25	0	1 to K 2 to K 3 to FIL 4 to SC 5 to G 6 to P	X8	AMPL	Quadrature grid.	Nolan
5A6	5.0	55	32	1 to P 3 to K 4 to FIL 5 to SC 6 to G 7 to K 8 to P	X9	AMPL	Shorts on 4 and 5.	TB 11-2627-2 10/16/52
6AB4	6.3	72	11	1 to P 3 to FIL 4 to SC 5 to G 6 to K 7 to K	X8	AMPL		TB 11-2627-2 10/16/52
6AG5	6.3	59	15	1 to G 2 to K 3 to FIL 4 to P 5 to SC 6 to K 7 to K	X8	AMPL		TB 11-2627-2 10/16/52
6AJ5	6.3	71	21	1 to G 2 to K 3 to FIL 4 to P 5 to SC 6 to K 7 to K	X8	AMPL		TB 11-2627-2 10/16/52

Tube Type	Filament Voltage	Potentiometers L R	Patch Cord Connection	Socket Number	Press	Notations	Data Source
			Plug to Receptacle				
6AK5	6.3	53	23	1 G 2 K 3 FIL 4 to FIL 5 P 6 SC 7 K	X8	AMPL	TB 11-2627-2 10/16/52
6AK6	6.3	59	24	1 G 2 K 3 FIL 4 to FIL 5 P 6 SC 7 K	X8	AMPL	TB 11-2627-2 C5 3/19/57
6AN5	6.3	65	16	1 G 2 K 3 FIL 4 to FIL 5 P 6 SC 7 K	X8	AMPL	Reads in green sector. Set MICROMHOS switch at 6000.
6AN6	6.3	40	0	1 FIL 2 to P 3 K 4 FIL 5 K 6 FIL 7 K	X8	DIODE	See note D.
6AN6	6.3	40	0	1 FIL 2 to P 3 K 4 FIL 5 K 6 FIL 7 K	X8	DIODE	See note D.
6AN6	6.3	40	0	1 FIL 2 to P 3 K 4 FIL 5 K 6 FIL 7 K	X8	DIODE	See note D.
6AN6	6.3	40	0	1 FIL 2 to P 3 K 4 FIL 5 K 6 FIL 7 K	X8	DIODE	See note D.

Tube Type	Filament Voltage	Potentiometers L	Potentiometers R	Patch Cord Connection	Receptacle	Socket Number	Press	Notations	Data Source
6AQ7	6.3	0	22	4 5 6 7 8	G P K FIL FIL	X3	AMPL	Triode. OK over 1100. See note D.	TB 11-2627-2 10/16/52
6AQ7	6.3	0	0	1 2 3 7 8	K K FIL FIL	X3	DIODE	Diode No.1.	TB 11-2627-2 10/16/52
6AQ7	6.3	0	0	1 2 3 7 8	K K P FIL	X3	DIODE	Diode No.2.	TB 11-2627-2 10/16/52
6AR6	6.3	71	36	1 3 5 6 7 8	K P SC FIL G FIL	X3	AMPL		TB 11-2627-2 10/16/52
6AS5	6.3	72	33	1 2 3 4 5 6 7	K G FIL FIL P SC P	X8	AMPL		T.O. 33AA21-1-4 5/20/55
6AS7G	6.3	70	82	4 5 6 7 8	G P K FIL FIL	X3	AMPL	Triode No.1. Depress AMPL TEST switch only momentarily.	TB 11-2627-2 10/16/52
6AS7G	6.3	70	82	1 2 3 7 8	G P K FIL FIL	X3	AMPL	Depress AMPL TEST switch only momentarily.	TB 11-2627-2 10/16/52

Tube Type	Filament Voltage	Potentiometers L	Potentiometers R	Patch Cord Connection	Receptacle	Socket Number	Press	Notations	Data Source
6AT6	6.3	0	22	1 G 2 K 3 to FIL 4 FIL 7 P	X8	AMPL		Triode Section.	TB 11-2627-2 C1 10/5/53
6AT6	6.3	0	0	2 K 3 to FIL 4 FIL 6 P	X8	DIODE		Diode No.1.	TB 11-2627-2 C1 10/5/53
6AU6	6.3	0	0	2 K 3 to FIL 4 FIL 5 P	X8	DIODE		Diode No.2.	TB 11-2627-2 C1 10/5/53
6AU6	6.3	45	20	1 G 2 K 3 to FIL 4 FIL 5 P	X8	AMPL			TB 11-2627-2 10/16/52
6AV6	6.3	53	10	1 G 2 K 3 to FIL 4 FIL 7 P	X8	AMPL		Triode section.	TB 11-2627-2 10/16/52
6AV6	6.3	0	0	2 K 3 to FIL 4 FIL 6 P	X8	DIODE		Diode No.1.	TB 11-2627-2 10/16/52
6AV6	6.3	0	0	2 K 3 to FIL 4 FIL 5 P	X8	DIODE		Diode No.2.	TB 11-2627-2 10/16/52

Tube Type	Filament Voltage	Potentiometers L	Potentiometers R	Patch Cord Connection	Receptacle	Socket Number	Press	Notations	Data Source
6B6G	6.3	30	12	2 3 7 8 CAP	FIL P FIL K G	X3	AMPL	Triode. Connect clip lead to top of tube	TB 11-2627-2 10/16/52
6B6G	6.3	0	0	4 to 7 8 CAP	FIL P to FIL K	X3	DIODE	Diode No.1.	TB 11-2627-2 10/16/52
6B6G	6.3	0	0	5 to 7 8 CAP	FIL P to FIL K	X3	DIODE	Diode No.2.	TB 11-2627-2 10/16/52
6B8	6.3	49	20	6 to 3 7 8 CAP	SC P FIL K G	X3	AMPL	Pentode Section	TB 11-2627-2 10/16/52
6B8	6.3	0	0	5 to 7 8 CAP	FIL P FIL K G	X3	DIODE	Diode No.1.	TB 11-2627-2 10/16/52
6B8	6.3	0	0	2 4 7 8 CAP	FIL P FIL K G	X3	DIODE	Diode No.2.	TB 11-2627-2 10/16/52

Tube Type	Filament Voltage	Potentiometers L	Potentiometers R	Patch Cord Connection	Receptacle	Socket Number	Press	Notations	Data Source
6B8G	6.3	43	20	2 3 6 7 8 CAP	FIL P SC to FIL K G	X3	AMPL	Pentode Section	TB 11-2627-2 10/16/52
6B8G	6.3	0	0	2 5 to 8	FIL P FIL K	X3	DIODE	Diode No.1.	TB 11-2627-2 10/16/52
6B8G	6.3	0	0	2 4 to 7	FIL P FIL K	X3	DIODE	Diode No.2.	TB 11-2627-2 10/16/52
6BA7	6.3	60	16	1 3 4 5 to 6 7 9	SC K FIL FIL K G P	X9	AMPL	Amplifier Section. OK over 500. See note D.	TB 11-2627-2 C1 10/5/53
6BA7	6.3	25	25	1 2 3 4 to 5 6 9	SC G K FIL FIL K P	X9	AMPL	OK over 500. See note D.	TB 11-2627-2 C1 10/5/53
6BF6	6.3	50	23	1 2 3 4 to 7	G K FIL FIL P	X8	AMPL	Triode	TB 11-2627-2 10/16/52
6BF6	6.3	0	0	2 3 4 6 to 7 K FIL FIL P	K FIL FIL P	X8	DIODE	Diode No.1.	TB 11-2627-2 10/16/52
6BF6	6.3	0	0	2 3 4 6 to 7 K FIL FIL P	K FIL FIL P	X8	DIODE	Diode No.2.	TB 11-2627-2 10/16/52

Tube Type	Filament Voltage	Potentiometers L	Potentiometers R	Patch Cord Connection	Receptacle	Socket Number	Press	Notations	Data Source
6BF7	6.3	54	25	3 5 6 7 8	FIL K FIL G P	X5	AMPL	Section No.1.	TB 11-2627-2 C5 3/19/57
6BF7	6.3	54	25	1 2 3 4 6	P G FIL K FIL	X5	AMPL	Section No.2.	TB 11-2627-2 C5 3/19/57
6BH6	6.3	58	15	1 2 3 4 5 6 7	G K FIL FIL P SC K	X8	AMPL		TB 11-2627-2 10/16/52
6BN6	6.3	10	0	1 2 3 4 5 6 7	K G FIL FIL SC K P	X8	AMPL	Limiter grid.	TB 11-2627-2 10/16/52
6BN6	6.3	25	0	1 2 3 4 5 6 7	K G FIL FIL SC G P	X8	AMPL	Quadrature grid.	TB 11-2627-2 10/16/52
6F4	6.3	63	29	1 2 3 6 7	FIL G P FIL K	X2	AMPL	Set. MICROMHOS switch to 6000.	TB 11-2627-2 C1 10/5/53
6J4	6.3	60	20	1 2 3 4 7	G K FIL FIL P	X8	AMPL	Set. MICROMHOS switch to 6000. Reads OK over 800.	TB 11-2627-2 10/16/52

Tube Type	Filament Voltage	Potentiometers L R	Patch Cord Connection	Socket Number	Press	Notations	Data Source
			Plug to Receptacle				
6K4	6.3	60	35	1 P 2 G 3 to FIL 4 FIL 5 K	X5 or X6 if short leads.	AMPL	Green arrow on tube indicates No. 1 lead. See note D. TB 11-2627-2 10/16/52
6SL7GT	6.3	34	13	1 K 4 G 5 P 6 K 7 FIL 8 FIL	X3	AMPL	Section No.1. TB 11-2627-2 10/16/52
6SL7GT	6.3	34	13	1 G 2 P 3 to K 4 K 7 FIL 8 FIL	X3	AMPL	Section No.2. TB 11-2627-2 10/16/52
6SN7GT	6.3	56	24	1 K 4 G 5 P 6 to K 7 FIL 8 FIL	X3	AMPL	Section No.1. See note D. TB 11-2627-2 10/16/52
6SN7GT	6.3	56	24	1 G 2 P 3 to K 4 K 7 FIL 8 FIL	X3	AMPL	Section No.2. See note D. TB 11-2627-2 10/16/52

Tube Type	Filament Voltage	Potentiometers L	Potentiometers R	Patch Cord Connection	Socket Number	Press	Notations	Data Source
				Plug to Receptacle				
6SQ7	6.3	42	0	1 2 3 to P	K G K	X3 AMPL	Triode section.	TB 11-2627-2 C5 3/19/57
6SQ7	6.3	0	0	4 to FIL	X3	DIODE	Diode No.1.	TB 11-2627-2 C5 3/19/57
6SQ7	6.3	0	0	5 to FIL	X3	DIODE	Diode No.2.	TB 11-2627-2 C5 3/19/57
6SR7	6.3	53	25	6 to FIL	X3	AMPL	Triode	TB 11-2627-2 10/16/52
6SR7	6.3	0	0	7 to FIL	X3	DIODE	Diode No.1.	TB 11-2627-2 10/16/52
6SR7	6.3	0	0	8 to FIL	X3	DIODE	Diode No.2.	TB 11-2627-2 10/16/52
6SU7	6.3	32	13	5 to K	X3 AMPL	Section No.1.		TB 11-2627-2 C5 3/19/57
6SU7	6.3	32	13	6 7 8 to K	X3 AMPL	Section No.2.		TB 11-2627-2 C5 3/19/57

Tube Type	Filament Voltage	Potentiometers L R	Patch Cord Connection	Socket Number	Press	Notations	Data Source
			Plug to Receptacle				
7AB7	6.3	58 0	1 SC 2 FIL 3 P 4 to K 5 G 6 K 7 FIL	X4	AMPL		TB 11-2627-2 10/16/52
7E5	6.3	67 0	1 G 2 FIL 3 P 4 to K 5 G 6 K 7 P 8 FIL	X4	AMPL	See Note D.	TB 11-2627-2 C1 10/5/53
7E6	6.3	47 25	1 FIL 2 P 3 to K 4 FIL 5 G 6 FIL 7 G 8 FIL	X4	AMPL	Triode section.	TB 11-2627-2 10/16/52
7E6	6.3	0 0	1 FIL 2 P 3 to K 4 FIL 5 G 6 FIL 7 G 8 FIL	X4	DIODE	Diode No.1.	TB 11-2627-2 10/16/52
7E6	6.3	0 0	1 FIL 2 P 3 to K 4 FIL 5 G 6 FIL 7 G 8 FIL	X4	DIODE	Diode No.2.	TB 11-2627-2 10/16/52
7F8	6.3	62 20	1 K 2 FIL 3 P 4 to K 5 G 6 FIL 7 G 8 FIL	X4	AMPL	Section No.1. See note D.	TB 11-2627-2 10/16/52
7F8	6.3	60 20	1 G 2 FIL 3 P 4 to K 5 G 6 FIL 7 K 8 K	X4	AMPL	Section No.2. See note D.	TB 11-2627-2 10/16/52

Tube Type	Filament Voltage	Potentiometers L R	Patch Cord Connection	Socket Number	Press	Notations	Data Source
			Plug to Receptacle				
7G8	6.3	0	27	1 FIL 3 SC 4 G 5 to G 6 K 7 P 8 FIL	X5	AMPL	Section No.1. OK OVER 1050. See note D.
7K7	6.3	0	27	1 FIL 2 P 3 SC 4 to G 5 G 6 K 7 FIL 8 FIL	X5	AMPL	Section No.2. OK OVER 1050. See note D.
7K7	6.3	0	20	1 FIL 2 K 3 to P 4 G	X4	AMPL	Triode section.
7K7	6.3	0	0	1 FIL 2 K 3 to P 4 G	X4	AMPL	TB 11-2627-2 10/16/52
7K7	6.3	0	0	1 FIL 2 K 3 to P 4 G	X4	AMPL	TB 11-2627-2 10/16/52
12AH7GT	12.6	57	25	1 K 2 K 3 to G 4 K 5 to P 6 FIL 7 FIL 8 FIL	X3	AMPL	Section No.1.
12AH7GT	12.6	57	25	1 G 2 K 3 to P 4 K 5 to FIL 6 FIL 7 FIL 8 FIL	X3	AMPL	Section No.2.

Tube Type	Filament Voltage	Potentiometers L	Potentiometers R	Patch Cord Connection	Socket Number	Press	Notations	Data Source
				Plug to Receptacle				
12AT6	12.6	0	22	1 G 2 K 3 to FIL 4 FIL 7 P	X8	AMPL	Triode section.	TB 11-2627-2 C1 10/5/53
12AT6	12.6	0	0	2 K 3 to FIL 4 FIL 6 P	X8	DIODE	Diode No.1.	TB 11-2627-2 C1 10/5/53
12AT6	12.6	0	0	2 K 3 to FIL 4 FIL 5 P	X8	DIODE	Diode No.2.	TB 11-2627-2 C1 10/5/53
12AT7	12.6	63	18	4 FIL 5 to P 6 7 G 8 K	X9	AMPL	Section No.1.	T.O. 33AA21-1-4 5/20/55
12AT7	12.6	63	18	1 P 2 G 3 to K 4 FIL 5 FIL	X9	AMPL	Section No.2.	T.O. 33AA21-1-4 5/20/55
12AU6	12.6	45	20	1 G 2 K 3 FIL 4 to FIL 5 P 6 SC 7 K	X8	AMPL		TB 11-2627-2 10/16/52
12AU7	12.6	54	25	4 FIL 5 FIL 6 to P 7 G 8 K	X9	AMPL	Section No.1.	TB 11-2627-2 10/16/52
12AU7	12.6	54	25	1 P 2 G 3 to K 4 FIL 5 FIL	X9	AMPL	Section No.2.	TB 11-2627-2 10/16/52

Tube Type	Filament Voltage	Potentiometers L R	Patch Cord Connection	Socket Number	Press	Notations	Data Source
			Plug to Receptacle				
12AV6	12.6	53 10	1 G 2 K 3 to FIL 4 FIL 7 P	X8	AMPL	Triode section.	TB 11-2627-2 10/16/52
12AV6	12.6	0 0	2 K 3 to FIL 4 FIL 6 P	X8	DIODE	Diode No.1.	TB 11-2627-2 10/16/52
12AV6	12.6	0 0	2 K 3 to FIL 4 FIL 5 P	X8	DIODE	Diode No.2.	TB 11-2627-2 10/16/52
12AV7	12.6	60 15	4 FIL 5 FIL 6 to P 7 G 8 K	X9	AMPL	Section No.1. Shorts on 4 and 5. Set MICROMHOS switch to 15000. OK over 400.	TB 11-2627-2 10/16/52
12AV7	12.6	60 15	1 P 2 G 3 to FIL 4 FIL 5 FIL 9 K	X9	AMPL	Section No.2. Shorts on 4 and 5. Set MICROMHOS switch to 15000. OK over 400.	TB 11-2627-2 10/16/52
12AX7	12.6	0 19	4 FIL 5 FIL 6 to P 7 G 8 K	X9	AMPL	Section No.1.	TB 11-2627-2 10/16/52
12AX7	12.6	0 19	1 P 2 G 3 to K 4 FIL 5 FIL	X9	AMPL	Section No.2.	TB 11-2627-2 10/16/52

Tube Type	Filament Voltage	Potentiometers L	Potentiometers R	Patch Cord Connection	Receptacle	Socket Number	Press	Notations	Data Source
12AY7	12.6	10	24	4 5 6 7 8	FIL FIL P G K	X9	AMPL	Section No.1.	T.O. 33AA21-1-4 5/20/55
12AY7	12.6	10	24	1 2 3 4 5	P G to K FIL FIL	X9	AMPL	Section No.2.	T.O. 33AA21-1-4 5/20/55
12BH7	12.6	63	30	4 5 6 7 8	FIL FIL P G K	X9	AMPL	Section No.1.	T.O. 33AA21-1-4 5/20/55
12BH7	12.6	63	30	1 2 3 4 5	P G to K FIL FIL	X9	AMPL	Section No.2.	T.O. 33AA21-1-4 5/20/55
12L8GT	12.6	58	15	1 2 3 4 5	G K SC FIL FIL	X4	AMPL	Section No.1.	TB 11-2627-2 10/16/52
12L8GT	12.6	58	15	1 2 3 4 5 6 7	K P G to P SC FIL FIL	X4	AMPL	Section No.2.	TB 11-2627-2 10/16/52

Tube Type	Filament Voltage	Potentiometers L R	Patch Cord Connection	Socket Number	Press	Notations	Data Source
			Plug to Receptacle				
12SL7	12.6	34	13	1 2 3 4 to K 7 FIL 8	G P K X3	AMPL	Section No.1. TB 11-2627-2 10/16/52
12SL7	12.6	34	13	1 4 5 6 to K 7 FIL 8	G P K X3	AMPL	Section No.2. TB 11-2627-2 10/16/52
12SN7	12.6	56	24	1 4 5 6 to K 7 FIL 8	G P K X3	AMPL	Section No.1. See note D. TB 11-2627-2 C1 10/5/53
12SN7	12.6	56	24	1 2 3 4 to K 7 FIL 8	G P K X3	AMPL	Section No.2. See note D. TB 11-2627-2 C1 10/5/53
12SQ7	12.6	42	0	3 6 7 8	K P FIL FIL	X3	AMPL Triode section. TB 11-2627-2 C5 3/19/57
12SQ7	12.6	0	0	4 7 8	K P FIL FIL	X3	DIODE Diode No.1. TB 11-2627-2 C5 3/19/57
12SQ7	12.6	0	0	5 7 8	K P FIL FIL	X3	DIODE Diode No.2. TB 11-2627-2 C5 3/19/57

Tube Type	Filament Voltage	Potentiometers L R	Patch Cord Connection	Socket Number	Press	Notations	Data Source
			Plug to Receptacle				
12SR7	12.6	53	25	2 3 K P FIL FIL	X3	AMPL	Triode section. TB 11-2627-2 10/16/52
12SR7	12.6	0	0	5 to 7 FIL FIL	X3	DIODE	Diode No.1. TB 11-2627-2 10/16/52
12SR7	12.6	0	0	4 to 7 FIL FIL	X3	DIODE	Diode No.2. TB 11-2627-2 10/16/52
12SW7	12.6	56	23	2 3 K P FIL FIL	X3	AMPL	Triode section. TB 11-2627-2 10/16/52
12SW7	12/6	20	0	3 5 to 7 FIL FIL	X3	DIODE	Diode No.1. OK over 800. TB 11-2627-2 10/16/52
12SW7	12.6	20	0	4 7 FIL FIL	X3	DIODE	Diode No.2. OK. Over 800. TB 11-2627-2 10/16/52
14E6	12.6	47	25	1 2 3 to 7 FIL FIL	X4	AMPL	Triode section. TB 11-2627-2 10/16/52
14E6	12.6	0	0	6 to 7 K P FIL FIL	X4	DIODE	Diode No.1. TB 11-2627-2 10/16/52
14E6	12.6	0	0	5 to 7 K P FIL FIL	X4	DIODE	Diode No.2. TB 11-2627-2 10/16/52

Tube Type	Filament Voltage	Potentiometers L R	Patch Cord Connection	Socket Number	Press	Notations	Data Source
			Plug to Receptacle				
14F8	12.6	60	20	1 K 2 FIL 5 K 6 P 7 FIL 8 G	X4	AMPL	Section No.1. See note D. TB 11-2627-2 C1 10/5/53
14F8	12.6	60	20	1 G 2 FIL 3 P 4 to K 7 FIL 8 K	X4	AMPL	Section No.2. See note D. TB 11-2627-2 C1 10/5/53
26A6	25.0	60	9	1 G 2 K 3 FIL 4 to FIL 5 P 6 SC 7 K	X8	AMPL	Set the MICROMHOS switch at 6000. Allow 60 seconds warm-up time. OK over 1250. See note D. TB 11-2627-2 10/16/52
26A7	25.0	60	10	1 G 2 K 6 to FIL 7 P 8 K	X3	GAS No.1.	Section No.1. Allow 60 seconds warm-up time. Set the MICROMHOS switch at 6000. OK over 1000. See note D. TB 11-2627-2 10/16/52
26A7	25.0	60	10	2 K 3 G 4 to P 6 FIL 7 FIL	X3	GAS No.1.	Section No.2. Allow 60 seconds warm-up time. Set the MICROMHOS switch at 6000. OK over 1000. See note D. TB 11-2627-2 10/16/52

Tube Type		Filament Voltage	Potentiometers		Patch Cord Connection		Socket Number	Press	Notations	Data Source
			L	R	Plug to Receptacle					
26C6	25.0	60	18		1 2 3 4 7	G K FIL FIL P	X8	AMPL	Triode Section. Allow 60 seconds warm-up time. OK over 1200. See note D.	TB 11-2627-2 10/16/52
26C6	25.0	0	0		1 2 3 4 6	G K FIL FIL P	X8	DIODE	Diode No. 1.	TB 11-2627-2 10/16/52
26C6	25.0	0	0		1 2 3 4 5	G K FIL FIL P	X8	DIODE	Diode No. 2.	TB 11-2627-2 10/16/52
26Z5	25.0	60	0		1 3 4 5	K P FIL FIL	X9	DIODE	Diode No. 1.	TB 11-2627-2 10/16/52
26Z5	25.0	60	0		4 5 6 8	FIL FIL P K	X9	DIODE	Diode No. 2.	TB 11-2627-2 10/16/52
HD30	3.0	54	50	4	1 2 3 5 6 7	SC K G FIL FIL P	X8	AMPL	Nolan	
RY32 (Russian) Plate #1	12.6	52	30	4 6 7	2 3 4 6 7	G SC K G FIL	X1	AMPL	Use tube contact clip assembly to make plate connection. See note D.	Nolan
					Top lead of tube nearest operator to P.					
RY32 (Russian) Plate #2	12.6	52	30	6	1 2 3 4 6	FIL G SC K G	X1	AMPL	Use tube contact clip assembly to make plate connection. See note D.	Nolan

Tube Type	Filament Voltage	Potentiometers L R	Patch Cord Connection	Socket Number	Press	Notations	Data Source
			Plug to Receptacle				
			7 FIL				
35B5	35.0	63	32 Top lead of tube away from operator to P. 4 to FIL 5 P 6 SC 7 G	X8 AMPL	Set the MICROMHOS switch at 6000.		TB 11-2627-2 10/16/52

Tube Type	Filament Voltage	Potentiometers L R	Patch Cord Connection	Socket Number	Press	Notations	Data Source
			Plug to Receptacle				
35C5	35.0	63	32 to 4	1 K 2 G 3 FIL 4 to FIL 5 G 6 SC 7 P	X8 AMPL	Set MICROMHOS switch to 6000.	TB 11-2627-2 10/16/52
50B5	50.0	65	32 to 4	1 G 2 K 3 FIL 4 to FIL 5 P 6 SC 7 G	X8 AMPL	Set MICROMHOS switch to 6000.	TB 11-2627-2 10/16/52
50C5	50.0	65	32 to 4	1 K 2 G 3 FIL 4 to FIL 5 G 6 SC 7 P	X8 AMPL	Set the MICROMHOS switch at 6000.	TB 11-2627-2 10/16/52
HD51	0	32	0	2 to 5	X8 GAS No.1.	OK over 500. See note D.	Nolan
HD59	6.3	52	25 to 4	1 G 2 K 3 FIL 4 to FIL 5 P 6 SC 7 K	X8 AMPL	Shorts on 4 and 5. Set MICROMHOS switch to 6000.	Nolan
DF62	1.5	55	20 to 3	1 P 2 SC 3 to FIL 4 G 5 FIL 6 K	X5 OR X6 if short leads. AMPL	Set LINE TEST to 1250.	Nolan
E82CC	12.6	54	25 to 6	4 FIL 5 G 6 to P 7 G 8 K	X9 AMPL	Section No.1.	Nolan
				1 P 2 G			

Tube Type	Filament Voltage	Potentiometers L	Potentiometers R	Patch Cord Connection	Receptacle	Socket Number	Press	Notations	Data Source
E82CC	12.6	54	25	3 to K	FIL	X9	AMPL	Section No.2.	Nolan
E83CC	12.6	0	19	4 to K	FIL				
E83CC	12.6	0	19	5 to P	FIL	X9	AMPL	Section No.1.	Nolan
ECC83	12.6	0	19	6 to G	K				
ECC83	12.6	0	19	7 to P	G				
ECC83	12.6	0	19	8 to G	P				
ECC83	12.6	0	19	3 to K	FIL	X9	AMPL	Section No.2.	Nolan
ECC83	12.6	0	19	4 to K	FIL				
ECC83	12.6	0	19	5 to P	FIL				
ECC83	12.6	0	19	6 to G	K				
ECC83	12.6	0	19	7 to G	P				
ECC83	12.6	0	19	8 to K	G				
DT275	5.0	55	32	1 to P	FIL	X9	AMPL	Shorts on 4 and 5.	Nolan
DT275	5.0	55	32	2 to K	FIL				
DT275	5.0	55	32	3 to K	K				
DT275	5.0	55	32	4 to G	SC				
DT275	5.0	55	32	5 to G	G				
DT275	5.0	55	32	6 to G	P				
DT275	5.0	55	32	7 to K	G				
DT275	5.0	55	32	8 to K	K				

Tube Type	Filament Voltage	Potentiometers L R	Patch Cord Connection	Receptacle	Socket Number	Press	Notations	Data Source	
SD329F	1.1	0	28	2 4 5 7 8	G FIL FIL P SC	AMPL	Press LINE TEST button and rotate LINE ADJUSTMENT control until meter indicates 1800 instead of LINE TEST.	Nolan	
381A	6.3	48	0	1 2 to 5 8	K FIL P FIL	X3	DIODE	TB 11-2627-2 10/16/52	
383A	6.3	60	23	1 2 4 6 8	K FIL G P FIL	X3	AMPL	Set the MICROMHOS switch at 6000 OK over 900.	TB 11-2627-2 C5 3/19/57
385A	6.3	48	22	1 2 3 5 7 8 CAP	K FIL SC G K FIL P	X3	AMPL	TB 11-2627-2 10/16/52	
WE396A	6.3	64	22	1 2 3 4 9	FIL K G P FIL	X9	AMPL	Section No.1.	Nolan
WE396A	6.3	64	22	1 6 7 8 9	FIL P G K FIL	X9	AMPL	Section No.2.	Nolan
CK502AX	1.1	0	18	1 2 3 4 5	P SC FIL G FIL	X5	AMPL	Red dot indicates pin No.1. Depress AMP _L only momentarily. Good tube reads on green.	Nolan
CK503AX	1.1	17	30	1 2 3 4 5	P SC FIL G FIL	X5 or X7 if short leads	AMPL	Depress AMP _L TEST switch only momentarily. Red dot on tube indicates No.1 lead.	TB 11-2627-2 10/16/52
				1	P			Press LINE TEST button and	

Tube Type	Filament Voltage	Potentiometers L R	Patch Cord Connection	Socket Number	Press	Notations	Data Source
CK506AX	1.1	10	48 to FIL G FIL	2 SC X5 or X7 if short leads	AMPL	rotate LINE ADJUSTMENT control until meter indicates 1800 instead of LINE TEST. Depress AMPL. TEST only momentarily. Red dot on tube indicates No.1 lead.	TB 11-2627-2 10/16/52
CK512AX	1.1	0	31 3 4 5	1 P SC to FIL G FIL	X5 or X7 if short leads	Press LINE TEST button and rotate LINE ADJUSTMENT control until meter indicates 1000 instead of LINE TEST. Depress AMPL. TEST only momentarily. Red dot on tube indicates No.1 lead. OK over 250.	TB 11-2627-2 10/16/52
CK551AX	1.1	10	30 4 5 6	1 P SC to FIL G FIL	X5 OR X7 if short leads.	Pentode section. Press LINE TEST button and rotate LINE ADJUSTMENT control until meter indicates 1800 instead of LINE TEST. Red dot on tube indicates No.1 lead.	Nolan
CK551AX	1.1	0	0 4 6	3 P to FIL FIL	X5 OR X7 if short leads.	Diode section. Press LINE TEST button and rotate LINE ADJUSTMENT control until meter indicates 1800 instead of LINE TEST.	Nolan
CK553AX	1.1	10	30 3 4 5	1 P SC to FIL G FIL	X5 OR X7 if short leads.	Press LINE TEST button and rotate LINE ADJUSTMENT control until meter indicates 1800 instead of LINE TEST. Red dot on tube indicates No.1 lead.	Nolan

Tube Type	Filament Voltage	Potentiometers L R	Patch Cord Connection	Socket Number	Press	Notations	Data Source
			Plug to Receptacle				
CK553AY	1.1	10	1 P 2 SC 3 to FIL 4 G 5 FIL	X5 OR X7 if short leads.	AMPL	Press LINE TEST button and rotate LINE ADJUSTMENT control until meter indicates 1800 instead of LINE TEST. Red dot on tube indicates No.1 lead.	Nolan
CK612	6.3	65	16 to 3 FIL 4 P 5 SC 6 K 7 K	X8	AMPL	Reads in green sector. Set MICROMHOS switch at 6000.	Nolan
SC651	6.3	58	0 to 4 SC 5 FIL 6 P 7 K	X4	AMPL		Nolan
WE731A	6.3	53	23 to 4 SC 5 FIL 6 P 7 K	X8	AMPL		Nolan
SD706	6.3	0	27 to 5 SC 6 G 7 P 8 FIL	X5	AMPL	Section No.1. OK over 1050. See note D.	Nolan
SD706	6.3	0	27 to 4 SC 5 G 6 G 7 K 8 FIL 4 FIL	X5	AMPL	Section No.2. OK over 1050. See note D.	Nolan

Tube Type	Filament Voltage	Potentiometers L R	Patch Cord Connection	Socket Number	Press	Notations	Data Source
			Plug to Receptacle				
ECC801S	12.6	63	18 5 to FIL	X9	AMPL	Section No.1.	Nolan
			6 to P				
			7 to G				
			8 to K				
ECC801S	12.6	63	18 1 to P	X9	AMPL	Section No.2.	Nolan
			2 to G				
			3 to K				
			4 to FIL				
ECC802S	12.6	54	25 4 to FIL	X9	AMPL	Section No.1.	Nolan
			5 to P				
			6 to G				
			7 to K				
ECC802S	12.6	54	25 8 to P	X9	AMPL	Section No.2.	Nolan
			1 to G				
			2 to K				
			3 to FIL				
ECC803S	12.6	0	19 5 to FIL	X9	AMPL	Section No.1.	Nolan
			6 to P				
			7 to G				
			8 to K				
ECC803S	12.6	0	19 1 to P	X9	AMPL	Section No.2.	Nolan
			2 to G				
			3 to K				
			4 to FIL				
815 Section No.1.	12.6	60	18 5 to FIL	X3	AMPL	Connect P to left cap on tube. Set MICROMHOS switch at 6000. OK over 1250. See note D.	TB 11-2627-2 C5 3/19/57
			6 to SC				
			7 to G				
			8 to FIL				
815 Section No.2.	12.6	60	18 1 to G	X3	AMPL	Connect P to right cap on tube. Set MICROMHOS switch at 6000. OK over 1250. See note D.	TB 11-2627-2 C5 3/19/57
			2 to SC				
			3 to K				
			4 to K				
			6 to K				
			8 to FIL				
			1 to G				
			2 to G				

Tube Type	Filament Voltage	Potentiometers L R	Patch Cord Connection	Socket Number	Press	Notations	Data Source
			Plug to Receptacle				
829B Section Number 1.	12.6	65	24	3 to SC 4 G 6 G 7 FIL	X1	AMPL	Use tube contact clip assembly to make plate connection. See note D. TB 11-2627-2 10/16/52
			Top lead of tube away from operator to P.				
829B Section Number 2.	12.6	65	24	1 FIL 2 G 3 SC 4 K 6 G 7 FIL	X1	AMPL	Use tube contact clip assembly to make plate connection. See note D. TB 11-2627-2 10/16/52
			Top lead of tube nearest operator to P.				

Tube Type	Filament Voltage	Potentiometers L R	Patch Cord Connection	Socket Number	Press	Notations	Data Source
			Plug to Receptacle				
832A Section Number 1.	12.6	52	30	X1	AMPL	Use tube contact clip assembly to make plate connection. See note D.	TB 11-2627-2 10/16/52
			Top lead of tube nearest operator to P.				
832A Section Number 2.	12.6	52	30	X1	AMPL	Use tube contact clip assembly to make plate connection. See note D.	TB 11-2627-2 10/16/52
			Top lead of tube away from operator to P.				
SD834	6.3	60	35	X5 or X6 if short leads.	AMPL	Green arrow on tube indicates No. 1 lead. See note D.	Nolan
S856	0	32	0	X8	GAS No.1.	OK over 500. See note D.	Nolan
R1045	1.1	0	0	X8	RECTIFIER STD.	Press LINE TEST button and rotate LINE ADJUSTMENT control until meter indicates 1800 instead of LINE TEST. OK OVER 500. See note D.	Nolan
1201	6.3	67	0	X4	AMPL	See note D.	TB 11-2627-2 10/16/52

Tube Type	Filament Voltage	Potentiometers L R	Patch Cord Connection	Receptacle	Socket Number	Press	Notations	Data Source
1204	6.3	58 0	1 SC 2 FIL 3 P 4 to K 5 G 6 K 7 FIL	X4	AMPL			TB 11-2627-2 10/16/52
1206	6.3	0	1 SC 3 SC 4 G 5 to G 6 K 7 P 8 FIL	X5	AMPL	Section No.1. OK over 1050. See note D.	Nolan	
1206	6.3	0	1 FIL 2 P 3 SC 4 to G 5 G 6 K 7 FIL 8 FIL	X5	AMPL	Section No.2. OK over 1050. See note D.	Nolan	
1291, Triode No.1	2.5	40	25 6 to G 7 P 8 FIL	X4	AMPL	See Note E.		TB 11-2627-2 10/16/52
1291, Triode No.2	2.5	40	25 2 to P 3 G 8 FIL	X4	AMPL	See Note E.		TB 11-2627-2 10/16/52

Tube Type	Filament Voltage	Potentiometers L	Potentiometers R	Patch Cord Connection	Socket Number	Press	Notations	Data Source
				Plug to Receptacle				
1644, Section No.1.	12.6	58	15	1 to G 2 K 3 K 5 to SC 6 FIL 7 FIL 8 P	X4	AMPL		TB 11-2627-2 10/16/52
1644, Section No.2.	12.6	58	15	1 K 2 K 3 G 4 to P 5 SC 6 FIL 7 FIL	X4	AMPL		TB 11-2627-2 10/16/52
CK1800	12.6	48	39	1 K 4 G 5 to P 6 K 7 FIL 8 FIL	X3	AMPL	Section No.1.	Nolan
CK1800	12.6	48	39	1 G 2 P 3 K 4 to K 5 FIL 6 FIL 7 FIL 8 FIL	X3	AMPL	Section No.2.	Nolan
A2209	6.3	60	20	1 G 2 K 3 to FIL 4 FIL 7 P	X8	AMPL	Set. MICROMHOS switch to 6000. Reads OK over 800.	Nolan
A2227	6.3	63	29	1 FIL 2 G 3 to P 6 FIL 7 K	X2	AMPL	Set. MICROMHOS switch to 6000.	Nolan

Tube Type	Filament Voltage	Potentiometers L R	Patch Cord Connection	Socket Number	Press	Notations	Data Source
			Plug to Receptacle				
A4273B	6.3	56	24	1 4 5 to K 6 7 8	K G P X3	AMPL	Section No.1. See note D. Nolan
A4273B	6.3	56	24	1 2 3 to K 4 7 8	K P X3	AMPL	Section No.2. See note D. Nolan
A-4442	6.3	50	23	1 2 3 to K 4 7 8	G K FIL FIL P	X8	AMPL
A-4442	6.3	0	0	1 2 3 to K 4 6	K FIL FIL P	X8	Triode Nolan
A-4442	6.3	0	0	1 2 3 to K 4 5	K FIL FIL P	X8	Diode Nolan
A-4442	6.3	70	82	1 2 3 to K 7 8	G P FIL FIL	X8	Diode Nolan
A4475	6.3	70	82	1 2 3 to K 7 8	G P FIL FIL	X3	Triode No.1. Depress AMPL TEST switch only momentarily. Nolan
A4475	6.3	70	82	1 2 3 to K 7 8	G P FIL FIL	X3	Depress AMPL TEST switch only momentarily. Nolan

Tube Type	Filament Voltage	Potentiometers L R	Patch Cord Connection	Socket Number	Press	Notations	Data Source
			Plug to Receptacle				
A4498	12.6	54	25	4 5 6 7 8	FIL FIL to P G K	X9	AMPL Section No.1. Nolan
A4498	12.6	54	25	1 2 3 4 5	P G to K FIL FIL	X9	AMPL Section No.2. Nolan
A4524A	6.3	58	15	1 2 3 4 5 6 7	G K FIL FIL P SC K	X8	AMPL Nolan
5591	6.3	60	19	1 2 3 4 5 6 7	G K FIL FIL P SC K	X8	AMPL TB 11-2627-2 C5 3/19/57
5633 / SN972	6.3	44	23	1 2 3 4 5 6	K G to FIL SC FIL	X5 or X6 if short leads	AMPL Green arrow on tube indicates No. 1 lead. TB 11-2627-2 10/16/52
					Top lead of tube to P.		
5634 / SD828E	6.3	54	25	1 2 3 4 5 6	K K G to FIL SC FIL	X5 OR X6 if short leads	AMPL Green arrow on tube indicates No. 1 lead. TB 11-2627-2 10/16/52
					Top lead of tube to P.		

Tube Type	Filament Voltage	Potentiometers L R	Patch Cord Connection	Socket Number	Press	Notations	Data Source
			Plug to Receptacle				
5635 / SN955B, Section No.1.	6.3	53 25	1 G 3 FIL 6 FIL 7 P 8 K	X5 or X6 if short leads	AMPL		TB 11-2627-2 10/16/52
5635 / SN955B, Section No.2.	6.3	53 25	2 G 3 FIL 5 to P 6 FIL 8 K	X5 or X6 if short leads	AMPL		TB 11-2627-2 10/16/52
5636 / SN1007B	6.3	20 50	1 G 2 K 3 FIL 4 to K 5 P 6 FIL 7 SC	X5 or X6 if short leads.	AMPL	Depress AMPL TEST switch only momentarily.	TB 11-2627-2 10/16/52
5637 / SD917A	6.3	15 24	1 P 2 G 3 to FIL 4 FIL 5 K	X5 or X6 if short leads.	AMPL	Green arrow on tube indicates No. 1 lead.	TB 11-2627-2 10/16/52
5638 / SD828A	6.3	38 24	1 P 2 K 3 to G 4 FIL 5 SC 6 FIL	X5 or X6 if short leads.	AMPL	Green arrow on tube indicates No. 1 lead.	TB 11-2627-2 10/16/52
5639	6.3	55 21	1 G 3 FIL 4 K 5 to P 6 FIL 7 SC	X5	AMPL	Set MICROMHOS switch at 6000.	TB 11-2627-2 C5 3/19/57
5640 / SN947D	6.3	72 40	1 G 2 K 3 to FIL 5 P 6 FIL 7 SC	X5 or X6 if short leads.	AMPL		TB 11-2627-2 10/16/52

Tube Type	Filament Voltage	Potentiometers L R	Patch Cord Connection	Socket Number	Press	Notations	Data Source
			Plug to Receptacle				
5641 / SN954B	6.3	40 0	2 P 3 FIL 5 K 6 FIL	X5 or X6 if short leads.	RECTIFIER STD.	See note D.	TB 11-2627-2 10/16/52
5642	1.1	10 0	1 to FIL 2 CAP P	X5	RECTIFIER STD.	See note D.	TB 11-2627-2 C5 3/19/57
5643	6.3	40 80	1 P 2 SC 3 FIL 4 to K 5 K 6 FIL 7 G	X5 or X6 if short leads.	RECTIFIER STD.	Shorts on 2 and 3. Tube strikes at approximately 31 on R when this control is rotated counterclockwise.	TB 11-2627-2 10/16/52
5645 / SN957A	6.3	15 33	1 P 2 K 3 to FIL 4 G	X5 or X6 if short leads.	AMPL	Green arrow on tube indicates No. 1 lead.	TB 11-2627-2 10/16/52
5646 / SN1006	6.3	0 24	1 P 2 K 3 to FIL 4 G 5 FIL	X5 or X6 if short leads.	AMPL	Depress AMPL TEST switch only momentarily. Green arrow indicates No.1 lead.	TB 11-2627-2 10/16/52
5647 / SN946B	6.3	40 0	1 P 2 FIL 3 to K 4 K	X5 or X7 if short leads	RECTIFIER STD.	Lead No.1 on tube is blue, Lead No.4 on tube is yellow. See note D.	TB 11-2627-2 10/16/52
5651	OFF	50 0	1 P 2 K 3 to P 5 K	X8	GAS No.1.	OK over 800. Depress GAS No.1 button until reading has stabilized. See note D.	TB 11-2627-2 10/16/52
5654 / 6AK5W	6.3	53 23	1 G 2 K 3 FIL 4 to P 5 P 6 SC 7 K	X8	AMPL	Do NOT perform gas test.	TB 11-2627-2 C5 3/19/57

Tube Type	Filament Voltage	Potentiometers L	Potentiometers R	Patch Cord Connection	Socket Number	Press	Notations	Data Source
				Plug to Receptacle				
5656, Section No.1.	6.3	72	17	1 SC 2 G 4 FIL 5 to FIL 6 K 8 P	X9	AMPL		TB 11-2627-2 10/16/52
5656, Section No.2.	6.3	72	17	1 SC 3 G 4 FIL 5 to FIL 6 K 7 P	X9	AMPL		TB 11-2627-2 10/16/52
5670, Section No.1.	6.3	64	22	1 FIL 2 to G 3 P 4 FIL 9 P	X9	AMPL		TB 11-2627-2 10/16/52
5670, Section No.2.	6.3	64	22	1 FIL 6 P 7 to G 8 K 9 FIL	X9	AMPL		TB 11-2627-2 10/16/52
5672	1.1	0	48	1 P 2 SC 3 to FIL 4 G 5 FIL	X5	AMPL	OK over 600. Depress push button only momentarily.	TB 11-2627-2 10/16/52
5676 / CK56AX	1.1	36	33	1 P 2 FIL 3 to G 4 FIL	X5 or X7 if short leads	AMPL	Press LINE TEST button and rotate LINE ADJUSTMENT control until meter indicates 1800 instead of LINE TEST. Red dot on tube indicates No.1 lead.	TB 11-2627-2 10/16/52
5677 / CK56AX	1.1	10	32	1 P 2 FIL 3 to G 4 FIL	X5 or X7 if short leads	AMPL	Press LINE TEST button and rotate LINE ADJUSTMENT control until meter indicates 1800 instead of LINE TEST. Red dot on tube indicates No.1 lead.	TB 11-2627-2 10/16/52
				1 P			Dross LINE TEST button and	

Tube Type	Filament Voltage	Potentiometers L R	Patch Cord Connection	Socket Number	Press	Notations	Data Source
5678 / CK56AX	1.1	10	25	2 SC 3 to FIL 4 G 5 FIL	X5 or X AMPL	rotate LINE ADJUSTMENT control until meter indicates 1800 instead of LINE TEST. Red dot on tube indicates No.1 lead.	TB 11-2627-2 10/16/52
5686	6.3	60	30	1 K 2 G 3 K 4 to FIL 5 FIL 6 SC 7 P 8 SC 9	X9 AMPL		T.O. 33AA21-1-4 5/20/55
5687, Section No.1.	12.6	70	30	4 FIL 5 to K 6 G 7 P 8	X9 AMPL		TB 11-2627-2 10/16/52
5687, Section No.2.	12.6	70	30	1 P 2 G 3 to K 4 FIL 5 FIL 6 P 7 K 8	X9 AMPL		TB 11-2627-2 10/16/52
5691	6.3	34	13	1 K 2 G 3 P 4 to K 5 FIL 6 K 7 FIL 8	X3 AMPL	Section Number 1.	T.O. 33AA21-1-4 5/20/55
5691	6.3	34	13	1 G 2 P 3 K 4 to K 5 FIL 6 K 7 FIL 8	X3 AMPL	Section Number 2.	T.O. 33AA21-1-4 5/20/55

Tube Type	Filament Voltage	Potentiometers L R	Patch Cord Connection	Socket Number	Press	Notations	Data Source	
			Plug to Receptacle					
5692	6.3	56	24	1 4 5 to K 6 7 FIL 8 FIL G P K K FIL 7 FIL G K 2 3 4 to K FIL 8 FIL 1 2 3 4 to K FIL 5 SC 6 P	X3	AMPL	Section Number 1.	T.O. 33AA21-1-4 5/20/55
5692	6.3	56	24	1 2 3 4 to K FIL 7 FIL G K 2 3 4 to K FIL 8 FIL 1 2 3 4 to K FIL 5 SC 6 P	X3	AMPL	Section Number 2.	T.O. 33AA21-1-4 5/20/55
5696	6.3	40	80	1 2 3 4 to K FIL 5 SC 6 P	X8	RECTIFIER STD.	Tube strikes at approximately 25 on R when this control is rotated counterclockwise. See note D.	TB 11-2627-2 10/16/52
5702	6.3	56	22	1 2 3 4 to K FIL 5 K 6 K 7 G P SC FIL FIL K K G	X5 or X7 if short leads	AMPL	See note D.	TB 11-2627-2 10/16/52
5703 / CK608CX	6.3	73	15	1 3 4 to K 5 6 K P FIL FIL G K 4 K 1 2 3 to K FIL K G 1 3 5 to K FIL 6 P	X5 or X7 if short leads	AMPL	Red dot on tube indicates lean No.1.	TB 11-2627-2 10/16/52
5704 / CK606BX	6.3	40	0	1 2 3 4 to K FIL K G 1 3 5 to K FIL K FIL 8 P	X5 or X7 if short leads	RECTIFIER STD.	Red dot on tube indicates lean No.1 See note D.	TB 11-2627-2 10/16/52
5718	6.3	62	20	1 3 5 6 to K FIL P	X5 or X7 if short leads.	AMPL	The tube is OK if a meter reading of 600 micromhos or over on the 3000 micromhos scale	TB 11-2627-2 C5 3/19/57

Tube Type	Filament Voltage	Potentiometers L R	Patch Cord Connection	Socket Number	Press	Notations	Data Source
			Plug to Receptacle				
5719	6.3	28	22	1 G 3 FIL 5 to K 6 FIL 8 P	X5 or X7 if short leads or X6 on some models.	AMPL	TB 11-2627-2 C5 3/19/57
5744 / CK619CX	6.3	40	22	1 P 2 FIL 3 FIL 4 G	X5 or X6 if short leads.	AMPL	TB 11-2627-2 10/16/52
5751, Section No.1.	12.6	5	22	4 FIL 5 to P 6 to K 7 G 8 K	X9	AMPL	T.O. 33AA21-1-4 5/20/55
5751, Section No.2.	12.6	5	22	1 P 2 G 3 to K 4 FIL 5 FIL	X9	AMPL	T.O. 33AA21-1-4 5/20/55
5755	12.6	25	11	4 FIL 5 to G 6 to K 7 P 8 P	X9	AMPL	Section Number 1.
5755	12.6	25	11	1 P 2 K 3 to G 4 FIL 5 FIL	X9	AMPL	TB 11-2627-2 C5 3/19/57
5763	6.3	58	21	1 P 2 K 3 G 4 FIL 5 to SC 6 K 7 G 8 G 9 G	X9	AMPL	TB 11-2627-2 C5 3/19/57

Tube Type	Filament Voltage	Potentiometers L R	Patch Cord Connection	Socket Number	Press	Notations	Data Source
5783	OFF	50 0	1 to K 2 to P 3 to K	X5 or X7 if short leads	GAS No.1.	OK over 800. Depress GAS No.1 button until tube has stabilized. See note D. Red dot on tube indicates No.1 lead.	TB 11-2627-2 10/16/52
5784	6.3	58 15	1 to SC 2 to FIL 3 to K 5 to K 6 to K 7 to G	X5	AMPL		TB 11-2627-2 C5 3/19/57
5787	OFF	40 0	1 to K 3 to P 5 to K	X5 or X7 if short leads	GAS No.1.	Pins No.2 and 4 may be missing from tube. Red dot indicates lead No.1. See note D.	TB 11-2627-2 10/16/52
5814	12.6	54 25	4 to FIL 5 to FIL 6 to P 7 to G 8 to K	X9	AMPL		TB 11-2627-2 C5 3/19/57
5814	12.6	54 25	1 to P 2 to G 3 to K 4 to FIL	X9	AMPL		TB 11-2627-2 10/16/52
CK5829, Section No.1.	6.3	60 0	1 to P 2 to K 3 to FIL 5 to FIL	X5 or X7 if short leads.	DIODE	Red dot indicates lead No.1.	TB 11-2627-2 10/16/52
CK5829, Section No.2.	6.3	60 0	3 to FIL 5 to FIL 6 to P 7 to K	X5 or X7 if short leads.	DIODE	Red dot indicates lead No.1.	TB 11-2627-2 10/16/52
5840 / SD996B	6.3	0 32	4 to K 5 to P 6 to FIL 7 to SC 8 to K 1 to P	X5 or X7 if short leads. X6 on some models	AMPL	OK over 400. See note D.	TB 11-2627-2 C5 3/19/57

Tube Type	Filament Voltage	Potentiometers L R	Patch Cord Connection	Socket Number	Press	Notations	Data Source
			Plug to Receptacle				
5842 / 417A	6.3	0	30	3 4 6 8 9 P	FIL to K G FIL P	X9 AMPL	OK over 500. See note D. TB 11-2627-2 C5 3/19/57
5845	4.3	0	0	1 3 4 5 6	FIL to FIL P K	X8 0Z4	OK if over 500 micromhos on 3000 micromhos scale. See note D. T.O. 33AA21-1-4 5/20/55
5851	2.5	39	35	1 3 6 7 8	FIL P SC FIL G	X5 or X7 if short leads. X6 on some models P	TB 11-2627-2 C5 3/19/57
5854	1.1	17	30	1 2 3 4 5	SC FIL G FIL	X5 or X7 if short leads. AMPL	Depress AMPL TEST switch only momentarily. Red dot on tube indicates lead No.1. TB 11-2627-2 10/16/52
5875	1.1	15	25	1 2 3 4 5	P SC FIL G FIL	X5 AMPL	Press LINE TEST button and rotate LINE ADJUSTMENT control until meter indicates 1800 instead of LINE TEST. Red dot on tube indicates No.1 lead. TB 11-2627-2 C5 3/19/57
5896, Diode No.1.	6.3	50	0	3 5 6 7 P	FIL to FIL K FIL P	X5 DIODE	TB 11-2627-2 10/16/52
5896, Diode No.2.	6.3	50	0	1 2 3 6 P	K to FIL FIL G FIL P	X5 DIODE	TB 11-2627-2 10/16/52
5897	6.3	0	34	1 3 5 6 8	FIL to K FIL P G	X5 or X7 if short leads. AMPL	The tube is OK if a meter reading of 600 micromhos or over on the 3000 micromhos scale T.O. 33AA21-1-4 5/20/55
				1 3	FIL		

Tube Type	Filament Voltage	Potentiometers L R	Patch Cord Connection	Receptacle	Socket Number	Press	Notations	Data Source
5898	6.3	36	20	5 to K 6 FIL 8 P	X6 on some models.	AMPL		T.O. 33AA21-1-4 5/20/55
5899	6.3	0	3	1 G 3 FIL 4 K 5 to P 6 FIL 7 SC 8 K	X5 or X7 if short leads or X6 on some models.	AMPL	OK over 600. See Note D.	TB 11-2627-2 C5 3/19/57
5900	6.3	65	8	1 G 2 K 3 FIL 4 to K 5 P 6 FIL 7 SC 8	X5 or X7 if short leads or X6 on some models.	AMPL		T.O. 33AA21-1-4 5/20/55
5901	6.3	48	25	1 G 2 K 3 FIL 5 to P 6 FIL 7 SC	X5 or X7 if short leads. X6 on some models	AMPL		T.O. 33AA21-1-4 5/20/55
5902	6.3	40	55	1 G 3 FIL 4 K 5 to P 6 FIL 7 SC 8 K	X5 or X7 if short leads. X6 on some models	AMPL		TB 11-2627-2 C5 3/19/57
5903, Diode No.1.	25.0	50	0	5 to 6 3 FIL 7 K 1 P 2 K 3 to FIL 6 FIL	X5	DIODE		TB 11-2627-2 10/16/52
5903, Diode No.2.	25.0	50	0	2 to 3 1 K 3 to FIL 6 FIL	X5	DIODE		TB 11-2627-2 10/16/52

Tube Type	Filament Voltage	Potentiometers L R	Patch Cord Connection	Socket Number	Press	Notations	Data Source
			Plug to Receptacle				
5904	25.0	20	40	1 G 3 FIL 5 to K 6 FIL 8 P	X5 or X7 if short leads.	AMPL	OK over 300. See note D. TB 11-2627-2 C5 3/19/57
5905	25.0	0	33	1 G 2 K 3 FIL 4 to K 5 P 6 FIL 7 SC	X5	AMPL	OK over 1000. See note D. TB 11-2627-2 C5 3/19/57
5907	25.0	0	35	1 G 2 K 3 FIL 4 to K 5 P 6 FIL 7 SC	X5	AMPL	OK over 1000. See note D. TB 11-2627-2 C5 3/19/57
5908	25.0	0	38	1 G 2 K 3 FIL 4 to K 5 P 6 FIL 7 SC	X5	AMPL	OK over 600. See note D. TB 11-2627-2 C5 3/19/57
5947 / TT-2	6.3	29	0	1 FIL 4 to P 5 FIL 6 to K 7 FIL 8 G	X3	DIODE	T.O. 33AA21-1-4 5/20/55
5961	6.3	70	82	1 G 2 P 3 to K 4 FIL 5 G 6 P 7 FIL 8 G	X3	AMPL	Triode No.1. Depress AMPL TEST switch only momentarily. Nolan
5961	6.3	70	82	1 G 2 P 3 to K 4 FIL 5 G 6 P 7 FIL 8 G	X3	AMPL	Depress AMPL TEST switch only momentarily. Nolan

Tube Type	Filament Voltage	Potentiometers L R	Patch Cord Connection		Socket Number	Press	Notations	Data Source
5998 / 421A Section No.1.	6.3	55	50	4 5 to P K FIL FIL	X3	AMPL	Set MICROMHOS switch at 15,000.	TB 11-2627-2 C5 3/19/57
5998 / 421A Section No.2.	6.3	55	50	1 2 to P K FIL FIL	X3	AMPL	Set MICROMHOS switch at 15,000.	TB 11-2627-2 C5 3/19/57
6021 Section No.1.	6.3	60	23	3 5 6 to FIL G P	X5 or X7 if short leads.	AMPL	Settings for I-177-B tube checker.	T.O. 33AA21-1-4 5/20/55
6021 Section No.2.	6.3	60	23	1 2 3 to FIL G P	X5 or X7 if short leads.	AMPL	Settings for I-177-B tube checker.	T.O. 33AA21-1-4 5/20/55
6021 Subminiature Section No.1.	6.3	55	30	4 6 to FIL G P	X5 or X7 if short leads.	AMPL	Settings for I-177-B tube checker.	T.O. 33AA21-1-4 5/20/55
6021 Subminiature Section No.2.	6.3	55	30	1 2 3 4 to FIL G P	X5 or X7 if short leads.	AMPL	Settings for I-177-B tube checker.	T.O. 33AA21-1-4 5/20/55
6050	1.1	36	33	1 2 3 4 to FIL G FIL	X5 or X7 if short leads.	AMPL	Press LINE TEST button and rotate LINE ADJUSTMENT control until meter indicates 1800 instead of LINE TEST. Red dot on tube indicates No.1 lead.	T.O. 33AA21-1-4 5/20/55

Tube Type	Filament Voltage	Potentiometers L	Potentiometers R	Patch Cord Connection	Receptacle	Socket Number	Press	Notations	Data Source
6057	12.6	0	19	4 5 6 7 8	FIL FIL to P G K	X9	AMPL	Section No.1.	Nolan
6057	12.6	0	19	1 2 3 4 5	P G to K FIL FIL	X9	AMPL	Section No.2.	Nolan
6060	12.6	63	18	4 5 6 7 8	FIL FIL to P G K	X9	AMPL	Section No.1.	Nolan
6060	12.6	63	18	1 2 3 4 5	P G to K FIL FIL	X9	AMPL	Section No.2.	Nolan
6066	6.3	0	22	2 3 4 7	K G to FIL FIL P	X8	AMPL	Triode Section.	Nolan
6066	6.3	0	0	2 3 4 6 7	K FIL FIL P K	X8	DIODE	Diode No.1.	Nolan
6066	6.3	0	0	2 3 4 5	K FIL FIL P	X8	DIODE	Diode No.2.	Nolan

Tube Type	Filament Voltage	Potentiometers L R	Patch Cord Connection	Receptacle	Socket Number	Press	Notations	Data Source
6067	12.6	54 25	4 5 6 7 8	FIL FIL P G K	X9	AMPL	Section No.1.	Nolan
6067	12.6	54 25	1 2 3 4 5	P G K FIL FIL	X9	AMPL	Section No.2.	Nolan
6072	12.6	10 24	4 5 6 7 8	FIL FIL P G K	X9	AMPL	Section No.1.	Nolan
6072	12.6	10 24	1 2 3 4 5	P G K FIL FIL	X9	AMPL	Section No.2.	Nolan
6073	0	32 0	2 5	to K P	X8	GAS No.1.	OK over 500. See note D.	Nolan
6074	0	30 0	2 5	to K P	X8	GAS No.1.	OK over 600. See note D.	Nolan
6080	6.3	70 82	4 5 6 7 8	G P to K FIL FIL	X3	AMPL	Triode No.1. Depress AMPL TEST switch only momentarily.	Nolan
6080	6.3	70 82	1 2 3 7 8	G P to K FIL FIL	X3	AMPL	Depress AMPL TEST switch only momentarily.	Nolan

Tube Type	Filament Voltage	Potentiometers L R	Patch Cord Connection	Socket Number	Press	Notations	Data Source
			Plug to Receptacle				
6088 / CK522AX	1.1	0	1 2 to 4 5	P SC FIL G FIL	X5	AMPL	Press LINE TEST button and rotate LINE ADJUSTMENT control until meter indicates 17.00 instead of LINE TEST. Red dot on tube indicates No.1 lead. OK over 350. See note D.
6096	6.3	53	23 4 to 5 6	K K FIL P SC	X8	AMPL	T.O. 33AA21-1-4 5/20/55
6098	6.3	71	36 5 6 7 8	K K P SC FIL G FIL	X3	AMPL	T.O. 33AA21-1-4 5/20/55
6105	6.3	48	25 3 to 5 6	G K FIL P FIL	X5 or X7 if short leads. X6 on some models	AMPL	T.O. 33AA21-1-4 5/20/55
6113	6.3	34	13 5 6 7 8	K K FIL FIL FIL	X3	AMPL	Nolan Section No.1.
6113	6.3	34	13 3 4 7 8	G P K FIL FIL	X3	AMPL	Nolan Section No.2.

Tube Type	Filament Voltage	Potentiometers L R	Patch Cord Connection	Socket Number	Press	Notations	Data Source
			Plug to Receptacle				
6136	6.3	45	20 to 4	1 G 2 K 3 FIL 4 P 5 SC	X8	AMPL	Nolan
6147	2.5	50	29 to 6	1 FIL 2 SC 3 P 4 FIL 5 G	X5 or X7 if short leads. X6 on some models	AMPL	T.O. 33AA21-1-4 5/20/55
6185	6.3	64	22 to 3	1 FIL 2 K 3 G 4 P 5 FIL	X9	AMPL	Nolan
6185	6.3	64	22 to 7	1 FIL 2 P 3 G 4 K 5 FIL	X9	AMPL	Section No.1.
6186	6.3	59	15 to 4	1 G 2 K 3 FIL 4 P 5 SC	X8	AMPL	Nolan
6188	6.3	32	13 to 5	1 K 2 G 3 P 4 K 5 FIL	X3	AMPL	Section No.1.
6188	6.3	32	13 to 4	1 G 2 K 3 P 4 K 5 FIL	X3	AMPL	Section No.2.

Tube Type	Filament Voltage	Potentiometers L	Potentiometers R	Patch Cord Connection	Receptacle	Socket Number	Press	Notations	Data Source
6189	12.6	54	25	6 to P	X9	AMPL	Section No.1.	Nolan	
6189	12.6	54	25	7 G 8 K					
6201	12.6	63	18	1 P 2 G 3 FIL 4 FIL 5 FIL	X9	AMPL	Section No.2.	Nolan	
6201	12.6	63	18	6 to P 7 G 8 K	X9	AMPL	Section No.1.	T.O. 33AA21-1-4 5/20/55	
6201	12.6	63	18	1 P 2 G 3 to K 4 FIL 5 FIL	X9	AMPL	Section No.2.	T.O. 33AA21-1-4 5/20/55	

Tube Type	Filament Voltage	Potentiometers L	Potentiometers R	Patch Cord Connection	Receptacle	Socket Number	Press	Notations	Data Source
6206	6.3	65	8	1 2 3 4 5 6 7	G K FIL to K P FIL SC	X5 or X7 if short leads or X6 on some models.	AMPL		T.O. 33AA21-1-4 5/20/55
6626	0	32	0	2 5	to K P	X8	GAS No.1.	OK over 500. See note D.	Nolan
6627	0	30	0	2 5	to K P	X8	GAS No.1.	OK over 600. See note D.	Nolan
6661	6.3	58	15	1 2 3 4 5 6 7	G K FIL P SC K	X8	AMPL		Nolan
6664	6.3	72	11	1 3 4 6 7	P FIL FIL G	X8	AMPL		Nolan
6670	12.6	54	25	4 5 6 7 8	FIL P G K	X9	AMPL	Section No.1.	Nolan
6670	12.6	54	25	1 2 3 4 5	P G K FIL FIL	X9	AMPL	Section No.2.	Nolan

Tube Type	Filament Voltage	Potentiometers L R	Patch Cord Connection	Socket Number	Press	Notations	Data Source
			Plug to Receptacle				
6671	12.6	63	18	4 5 6 7 8	X9	AMPL	Section No.1. Nolan
6671	12.6	63	18	1 2 3 4 5	X9	AMPL	Section No.2. Nolan
6679	12.6	63	18	4 5 6 7 8	X9	AMPL	Section No.1. Nolan
6679	12.6	63	18	1 2 3 4 5	X9	AMPL	Section No.2. Nolan
6680	12.6	54	25	6 7 8	X9	AMPL	Section No.1. Nolan
6680	12.6	54	25	1 2 3 4 5	X9	AMPL	Section No.2. Nolan
6681	12.6	0	19	6 7 8	X9	AMPL	Section No.1. Nolan
6681	12.6	0	19	1 2 3 4 5	X9	AMPL	Section No.2. Nolan

Tube Type	Filament Voltage	Potentiometers L R	Patch Cord Connection	Socket Number	Press	Notations	Data Source
			Plug to Receptacle				
7025	12.6	0	19	4 5 6 7 8	X9	AMPL	Section No.1. Nolan
7025	12.6	0	19	1 2 3 4 5	X9	AMPL	Section No.2. Nolan
7058	12.6	0	19	4 5 6 7 8	X9	AMPL	Section No.1. Nolan
7058	12.6	0	19	1 2 3 4 5	X9	AMPL	Section No.2. Nolan
7316	12.6	54	25	6 7 8	X9	AMPL	Section No.1. Nolan
7316	12.6	54	25	1 2 3 4 5	X9	AMPL	Section No.2. Nolan
7489	12.6	54	25	4 5 6 7 8	X9	AMPL	Section No.1. Nolan
7489	12.6	54	25	1 2 3 4 5	X9	AMPL	Section No.2. Nolan

Tube Type	Filament Voltage	Potentiometers L	Potentiometers R	Patch Cord Connection	Receptacle	Socket Number	Press	Notations	Data Source
7494	12.6	0	19	4 5 6 7 8	FIL FIL P G K	X9	AMPL	Section No.1.	Nolan
7494	12.6	0	19	1 2 3 4 5	P G K FIL FIL	X9	AMPL	Section No.2.	Nolan
7543	6.3	53	10	1 2 3 4	G K FIL FIL	X8	AMPL	Triode section.	Nolan
7543	6.3	0	0	2 3 4	K FIL FIL	X8	DIODE	Diode No.1.	Nolan
7543	6.3	0	0	6 7 8 9 10	P P P P P	X8	DIODE	Diode No.2.	Nolan
7693	6.3	58	15	1 2 3 4 5 6 7	G K FIL FIL P SC K	X8	AMPL		Nolan
7728	12.6	63	18	4 5 6 7 8 9 10	FIL FIL P G K P G	X9	AMPL	Section No.1.	Nolan
7728	12.6	63	18	2 3 4 5	K FIL FIL FIL	X9	AMPL	Section No.2.	Nolan

Tube Type	Filament Voltage	Potentiometers L R	Patch Cord Connection	Socket Number	Press	Notations	Data Source
			Plug to Receptacle				
7729	12.6	0	19	4 5 6 7 8	FIL FIL P G K	X9	AMPL Section No.1. Nolan
7729	12.6	0	19	1 2 3 4 5	P G K FIL FIL	X9	AMPL Section No.2. Nolan
7755	6.3	71	21	1 2 3 4 5 6 7	G K FIL FIL P SC K	X8	AMPL Nolan
7756	6.3	71	36	1 2 3 4 5 6 7 8	K K P SC FIL G FIL G	X3	AMPL Nolan
7758	6.3	71	36	1 2 3 4 5 6 7 8	K K P SC FIL G FIL G	X3	AMPL Nolan
8425	6.3	45	20	1 2 3 4 5 6 7	G K FIL P SC K	X8	AMPL Nolan

Tube Type	Filament Voltage	Potentiometers L	Potentiometers R	Patch Cord Connection	Receptacle	Socket Number	Press	Notations	Data Source
8426	12.6	45	20	1 2 3 4 5 6 7	G K FIL to FIL P SC K	X8	AMPL		Nolan
8532	6.3	60	20	1 2 3 4 7	G K FIL to FIL P	X8	AMPL	Set. MICROMHOS switch to 6000. Reads OK over 800.	Nolan
9001	6.3	44	17	1 2 3 4 5 6	G K FIL to FIL P SC	X8	AMPL		TB 11-2627-2 10/16/52
9002	6.3	63	18	1 2 3 4 5 6 7	P K FIL to FIL P G K	X8	AMPL		TB 11-2627-2 10/16/52
9003	6.3	54	14	1 2 3 4 5 6 7	G K FIL to FIL P SC K	X8	AMPL		TB 11-2627-2 10/16/52

WHEW! End of Sheet!

TABLE IV BALLAST TUBE TEST DATA FOR USE WITH THE TUBE TESTERS I-177, I-177-A, AND I-177-B

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beta 1.08 July 5, 2002

In the chart below, an "X" in one of the "Short Switch" columns means that the neon short lamp should light in that particular position when the "A" and "B" selectors are set for the ballast tube number being tested if the element is good.

Some ballast tubes contain several sections and require changing the positions of the "A" and "B" selectors to test the entire ballast tube. The M17HG is an such an example. It contains three sections and all need to be tested.

ALWAYS set the filament voltage switch to the Ballast (BLST) position and DO NOT set the Short Test switch to the TUBE TEST position!

Ballast Tube Type	Selector Switch A	Selector Switch B	Filament	Short Switch Position					Data Source
				1	2	3	4	5	
1A1	1	1	BLST	X	X	X	X	X	1938 Hickok 510X Manual.
1B1	1	1	BLST	X	X	X	X	X	1938 Hickok 510X Manual.
1C1	1	1	BLST	X	X	X	X	X	1938 Hickok 510X Manual.
1E1	1	1	BLST	X	X	X	X	X	1938 Hickok 510X Manual.
1F1	1	1	BLST	X	X	X	X	X	1938 Hickok 510X Manual.
1G1	1	1	BLST	X	X	X	X	X	1938 Hickok 510X Manual.
1J1	1	1	BLST	X	X	X	X	X	1938 Hickok 510X Manual.
1K1	1	1	BLST	X	X	X	X	X	1938 Hickok 510X Manual.
1L1	1	1	BLST	X	X	X	X	X	1938 Hickok 510X Manual.
1N1	1	1	BLST	X	X	X	X	X	1938 Hickok 510X Manual.
1P1	1	1	BLST	X	X	X	X	X	1938 Hickok 510X Manual.
1Q1	1	1	BLST	X	X	X	X	X	1938 Hickok 510X Manual.
1R1G	1	1	BLST	X	X	X	X	X	1938 Hickok 510X Manual.
1S1G	1	1	BLST	X	X	X	X	X	1938 Hickok 510X Manual.
1T1G	1	1	BLST	X	X	X	X	X	1938 Hickok 510X Manual.
1U1G	1	1	BLST	X	X	X	X	X	1938 Hickok 510X Manual.
1V1	1	1	BLST	X	X	X	X	X	1938 Hickok 510X Manual.
1Y1	1	1	BLST	X	X	X	X	X	1938 Hickok 510X Manual.
1Z1	1	1	BLST	X	X	X	X	X	1938 Hickok 510X Manual.
2	1	1	BLST	X	X	X	X	X	1938 Hickok 510X Manual.
2UR224	3	1	BLST	X	X	X	X	X	1938 Hickok 510X Manual.
2LR212	2	12	BLST	X	X	X	X	X	1938 Hickok 510X Manual.
3	3	2	BLST	X	X	X	X	X	1938 Hickok 510X Manual.
3	1	1	BLST	X	X	X	X	X	1938 Hickok 510X Manual.

Ballast Tube Type	Selector Switch A	Selector Switch B	Filament	Short Switch Position				Data Source
				1	2	3	4	
03G	1	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
4-5	1	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
4A1	1	2	BLST	X	X	X	X	TB 11-2627-2 10/16/1952
6-6AA	1	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
6-133	1	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
7-8-9	1	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
10A	1	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
10AG	1	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
10AB	1	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
K17B	3	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
BM17C	3	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
M17C	3	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
	4	4	BLST	X	X	X	X	
M17H	5	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
	7	12	BLST	X	X	X	X	
	4	4	BLST	X	X	X	X	1938 Hickok 510X Manual.
M17HG	5	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
	7	12	BLST	X	X	X	X	
K23B	3	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
KX23B	3	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
K23C	3	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
30A	1	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
K30A	1	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
KX30C	3	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
K30D	3	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
	3	12	BLST	X	X	X	X	
	4	4	BLST	X	X	X	X	1938 Hickok 510X Manual.
M30H	5	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
	7	12	BLST	X	X	X	X	
33A	1	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
33AG	1	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
K34B	3	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
36A	1	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
KX36A	1	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
BK36B	3	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
K36B	3	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
L36B	3	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
BM-36C	3	1	BLST	X	X	X	X	1938 Hickok 510X Manual.

Ballast Tube Type	Selector Switch A	Selector Switch B	Filament	Short Switch Position				Data Source
				1	2	3	4	
M36C	3	1	BLST	X	X	X	X	X
KX36C	3	1	BLST	X	X	X	X	X
L36C	3	1	BLST	X	X	X	X	X
36D	3	1	BLST	X	X	X	X	X
L36D	3	12	BLST	X	X	X	X	X
L36DJ	4	2	BLST	X	X	X	X	X
K36H	5	1	BLST	X	X	X	X	X
M36H	4	4	BLST	X	X	X	X	X
M36HG	5	1	BLST	X	X	X	X	X
L40S1	2	1	BLST	X	X	X	X	X
L40S2	2	1	BLST	X	X	X	X	X
42A	1	1	BLST	X	X	X	X	X
42A1	1	1	BLST	X	X	X	X	X
42A2	7	1	BLST	X	X	X	X	X
42B2	7	1	BLST	X	X	X	X	X
K42B	3	1	BLST	X	X	X	X	X
L42B	3	1	BLST	X	X	X	X	X
KX42B	3	1	BLST	X	X	X	X	X
LX42B	3	1	BLST	X	X	X	X	X
L42BX	3	1	BLST	X	X	X	X	X
M42B	3	1	BLST	X	X	X	X	X
K42C	3	1	BLST	X	X	X	X	X
KX42C	3	1	BLST	X	X	X	X	X
L42C	3	1	BLST	X	X	X	X	X

Ballast Tube Type	Selector Switch B	Filament	Short Switch Position				Data Source
			1	2	3	4	
M42C	3	1	BLST	X	X	X	X
BK42D	3	1	BLST	X	X	X	X
K42D	3	1	BLST	X	X	X	X
L42D	3	1	BLST	X	X	X	X
LX42D	3	12	BLST	X	X	X	X
LX42D	1	2	BLST	X	X	X	X
LX42DX	1	7	BLST	X	X	X	X
K42E	3	1	BLST	X	X	X	X
L42E	3	1	BLST	X	X	X	X
L42F	1	2	BLST	X	X	X	X
42HA	4	4	BLST	X	X	X	X
42HA	5	1	BLST	X	X	X	X
K42HJ	7	12	BLST	X	X	X	X
K42HJ	4	4	BLST	X	X	X	X
M42H	5	1	BLST	X	X	X	X
M42HG	7	12	BLST	X	X	X	X
L42SI	2	1	BLST	X	X	X	X
L42SI	3	12	BLST	X	X	X	X
L42SI	4	4	BLST	X	X	X	X
49A	1	1	BLST	X	X	X	X
KX49A	3	1	BLST	X	X	X	X
49AJ	1	1	BLST	X	X	X	X
K49AJ	1	1	BLST	X	X	X	X
49A1	1	1	BLST	X	X	X	X
49A2	7	1	BLST	X	X	X	X
49B2	7	1	BLST	X	X	X	X
K49B	3	1	BLST	X	X	X	X
L49B	3	1	BLST	X	X	X	X

Ballast Tube Type	Selector Switch A	Selector Switch B	Filament	Short Switch Position				Data Source
				1	2	3	4	
BM49B	3	1	BLST	X	X	X	X	X
KX49B	3	1	BLST	X	X	X	X	X
KZ49B	1	1	BLST	X	X	X	X	X
LX49B	3	1	BLST	X	X	X	X	X
M49B	3	1	BLST	X	X	X	X	X
K49BJ	7	1	BLST	X	X	X	X	X
K49BJ	8	12	BLST	X	X	X	X	X
L49BJ	7	1	BLST	X	X	X	X	X
L49BJ	8	12	BLST	X	X	X	X	X
BK49C	3	1	BLST	X	X	X	X	X
BM49C	3	1	BLST	X	X	X	X	X
K49C	3	1	BLST	X	X	X	X	X
L49C	3	1	BLST	X	X	X	X	X
KZ49C	1	1	BLST	X	X	X	X	X
LX49C	3	1	BLST	X	X	X	X	X
M49C	3	1	BLST	X	X	X	X	X
BK49D	3	1	BLST	X	X	X	X	X
K49D	3	12	BLST	X	X	X	X	X
K49D	3	12	BLST	X	X	X	X	X
L49D	3	12	BLST	X	X	X	X	X
L49DJ	4	2	BLST	X	X	X	X	X
L49DJ	7	5	BLST	X	X	X	X	X
K49E	8	12	BLST	X	X	X	X	X
K49E	3	1	BLST	X	X	X	X	X
L49E	3	1	BLST	X	X	X	X	X
L49F	1	2	BLST	X	X	X	X	X
M49H	4	4	BLST	X	X	X	X	X
M49H	5	1	BLST	X	X	X	X	X
M49HG	7	12	BLST	X	X	X	X	X
M49HG	4	4	BLST	X	X	X	X	X
L49S2	5	1	BLST	X	X	X	X	X
L49S2	2	1	BLST	X	X	X	X	X
L49S2	3	12	BLST	X	X	X	X	X
L49S2	4	4	BLST	X	X	X	X	X
L49S2	2	1	BLST	X	X	X	X	X

Ballast Tube Type	Selector Switch A	Selector Switch B	Filament	Short Switch Position				Data Source
				1	2	3	4	
L49S3	3	12	BLST	X	X	X	X	X
	4	4		X	X	X	X	1938 Hickok 510X Manual.
50A2	3	1	BLST	X	X	X	X	X
				X	X	X	X	1938 Hickok 510X Manual.
50A2MG	1	1	BLST	X	X	X	X	X
				X	X	X	X	1938 Hickok 510X Manual.
50B2	1	1	BLST	X	X	X	X	X
				X	X	X	X	1938 Hickok 510X Manual.
50X3	1	1	BLST	X	X	X	X	X
				X	X	X	X	1938 Hickok 510X Manual.
K52H	4	4	BLST	X	X	X	X	X
	5	1		X	X	X	X	1938 Hickok 510X Manual.
M52H	7	12		X	X	X	X	X
				X	X	X	X	1938 Hickok 510X Manual.
K54B	3	1	BLST	X	X	X	X	X
				X	X	X	X	1938 Hickok 510X Manual.
55A	1	1	BLST			X	X	X
						X	X	1938 Hickok 510X Manual.
K55A	1	1	BLST			X	X	X
						X	X	1938 Hickok 510X Manual.
KX55A	1	1	BLST	X	X	X	X	X
				X	X	X	X	1938 Hickok 510X Manual.
55A1	1	1	BLST			X	X	X
						X	X	1938 Hickok 510X Manual.
55A2	7	1	BLST	X	X	X	X	X
				X	X	X	X	1938 Hickok 510X Manual.
55B	3	1	BLST	X	X	X	X	X
				X	X	X	X	1938 Hickok 510X Manual.
55B2	7	1	BLST	X	X	X	X	X
				X	X	X	X	1938 Hickok 510X Manual.
K55B	3	1	BLST	X	X	X	X	X
				X	X	X	X	1938 Hickok 510X Manual.
BM55B	3	1	BLST	X	X	X	X	X
				X	X	X	X	1938 Hickok 510X Manual.
L55BG	3	1	BLST	X	X	X	X	X
				X	X	X	X	1938 Hickok 510X Manual.
LX55B	3	1	BLST	X	X	X	X	X
				X	X	X	X	1938 Hickok 510X Manual.
M55B	3	1	BLST	X	X	X	X	X
				X	X	X	X	1938 Hickok 510X Manual.
K55C	3	1	BLST	X	X	X	X	X
				X	X	X	X	1938 Hickok 510X Manual.
KX55C	3	1	BLST	X	X	X	X	X
				X	X	X	X	1938 Hickok 510X Manual.
L55C	3	1	BLST	X	X	X	X	X
				X	X	X	X	1938 Hickok 510X Manual.
K55CP	1	11	BLST	X	X	X	X	X
		9		X	X	X	X	1938 Hickok 510X Manual.
K55D	3	1	BLST	X	X	X	X	X
		12		X	X	X	X	1938 Hickok 510X Manual.
L55D	3	1	BLST	X	X	X	X	X
		12		X	X	X	X	1938 Hickok 510X Manual.
L55E	3	1	BLST	X	X	X	X	X
				X	X	X	X	1938 Hickok 510X Manual.
M55E	3	1	BLST	X	X	X	X	X
		2	BLST	X	X	X	X	1938 Hickok 510X Manual.
BL55F	1	2	BLST	X	X	X	X	X

Ballast Tube Type	Selector Switch A	Selector Switch B	Filament	Short Switch Position				Data Source
				1	2	3	4	
L55F	1	2	BLST	X	X	X	X	1938 Hickok 510X Manual.
M55F	1	2	BLST	X	X	X	X	1938 Hickok 510X Manual.
K55H	4	4	BLST	X	X	X	X	
	5	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
	7	12	BLST	X	X	X	X	
M55H	5	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
	7	12	BLST	X	X	X	X	
M55HG	4	4	BLST	X	X	X	X	
	5	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
	7	12	BLST	X	X	X	X	
L55S1	2	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
	3	12	BLST	X	X	X	X	
	3	4	BLST	X	X	X	X	1938 Hickok 510X Manual.
L55S2	2	1	BLST	X	X	X	X	
	3	12	BLST	X	X	X	X	1938 Hickok 510X Manual.
	3	4	BLST	X	X	X	X	
60R30G	3	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
64.23	1	1	BLST					1938 Hickok 510X Manual.
67A	1	1	BLST					1938 Hickok 510X Manual.
K67B	3	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
L67B	3	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
L73B	3	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
K74B	3	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
L74B	3	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
CX74C	3	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
K79B	3	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
80A	1	1	BLST					1938 Hickok 510X Manual.
K80B	3	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
M80B	3	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
KX80B	3	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
L80B	3	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
K80C	3	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
K80F	1	2	BLST	X	X	X	X	1938 Hickok 510X Manual.
KX87B	3	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
LX87B	3	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
L90B	3	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
K90F	1	2	BLST	X	X	X	X	1938 Hickok 510X Manual.

Ballast Tube Type	Selector Switch A	Selector Switch B	Filament	Short Switch Position				Data Source
				1	2	3	4	
M90F	1	2	BLST	X	X	X	X	1938 Hickok 510X Manual.
K92F	1	2	BLST	X	X	X	X	1938 Hickok 510X Manual.
M92F	1	2	BLST	X	X	X	X	1938 Hickok 510X Manual.
92A	1	1	BLST			X	X	1938 Hickok 510X Manual.
L92B	3	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
95K2	3	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
L99D	3	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
100R8	3	12	BLST	X	X	X	X	1938 Hickok 510X Manual.
120R	1	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
120R8	3	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
135K1	3	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
135K1A	7	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
140L4	3	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
140L44	1	2	BLST	X	X	X	X	1938 Hickok 510X Manual.
140L8	3	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
140R	1	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
140R4	3	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
140R44	1	2	BLST	X	X	X	X	1938 Hickok 510X Manual.
140R8	3	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
165L4	3	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
165L8	3	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
165R	1	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
165R4	3	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
165R8	3	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
165L44	1	2	BLST	X	X	X	X	1938 Hickok 510X Manual.
165R44	1	2	BLST	X	X	X	X	1938 Hickok 510X Manual.
185L4	3	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
185L8	3	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
185L44	1	2	BLST	X	X	X	X	1938 Hickok 510X Manual.
185R	1	1	BLST	X	X	X	X	1938 Hickok 510X Manual.
185R4	3	1	BLST	X	X	X	X	1938 Hickok 510X Manual.

Ballast Tube Type	Selector Switch A	Selector Switch B	Filament	Short Switch Position				Data Source
				1	2	3	4	
185R8	3	1	BLST	X	X	X	X	X
185R44	1	2	BLST	X	X	X	X	X
185R44	1	7	BLST	X	X	X	X	X
200R	1	1	BLST	X	X	X	X	X
250R	1	1	BLST	X	X	X	X	X
250R8	3	1	BLST	X	X	X	X	X
290L4	3	1	BLST	X	X	X	X	X
300R4	3	1	BLST	X	X	X	X	X
320R4	3	1	BLST	X	X	X	X	X
340	1	1	BLST	X	X	X	X	X
808-1	7	1	BLST	X	X	X	X	X
808-1	8	12	BLST	X	X	X	X	X
E14980	3	1	BLST	X	X	X	X	X
3613	3	1	BLST	X	X	X	X	X
3334	3	12	BLST	X	X	X	X	X
3334A	3	1	BLST	X	X	X	X	X
3334A	3	12	BLST	X	X	X	X	X
W43357	3	1	BLST	X	X	X	X	X
W45788	3	1	BLST	X	X	X	X	X
8593	3	1	BLST	X	X	X	X	X
8598	3	1	BLST	X	X	X	X	X
8601	3	1	BLST	X	X	X	X	X
8664	3	1	BLST	X	X	X	X	X
3CR241	3	1	BLST	X	X	X	X	X
3ER248	4	2	BLST	X	X	X	X	X
3ER248	7	5	BLST	X	X	X	X	X
3ER248	8	12	BLST	X	X	X	X	X

End of List!

"SHORTS" DATA FOR USE WITH THE TUBE TESTERS I-177, I-177-A, AND I-177-B

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beta 1.08 July 5, 2002

This little chart will enable you to determine which tube elements of the tube being tested are shorted to which other elements. If there is an "X" in a particular column, it means that the neon "shorts" lamp is lit when the SHORTS switch in in that position and the tube is set to the correct settings as outlined in the settings data..

Kind of Short	Shorts Test Switch Position				
	1	2	3	4	5
Filament to Cathode			X	X	X
Filament to Grid			X	X	X
Filament to Plate	X	X	X		
Filament to Screen	X	X	X	X	X
Cathode to Grid		X			
Grid to Plate	X	X	X	X	X
Grid to Screen	X	X			
Plate to Screen	X	X	X	X	X
Cap to Filament	X	X	X		
Cap to Grid	X	X			X
Cap to Cathode	X	X	X	X	X
Cap to Screen	X				
Cap to Plate			X		
Shell to Filament	X				
Shell to Plate		X	X		
Shell to Grid	X		X	X	X
Shell to Screen	X	X	X	X	X
Shell to Cathode	X			X	X
Shell to Cap		X	X	X	X

End of Chart!