

# Victor Model 7-2 (Alhambra II)

# Victor Model 9-1 (Florenza)

## RADIO PANEL TEST FOR ALHAMBRA II (7-2) and FLORENZA (9-1)

The six tube Radiola used in these instruments utilizes the well known superheterodyne principle.

In case of failure to operate or poor operation:

1. Eliminate the possibility of defective tubes by replacing each tube with a tested Radiotron. When the defective tube is located the set will resume normal operation.

2. Check the batteries (or battery eliminator if one is used) to determine that proper voltages are being delivered. Note:—A noisy B battery can be located by a constant fluctuation of the pointer on the meter.

3. Insert a pair of ear phones in the first stage jack. If reception comes through, there is no trouble at this point.

4. Insert phones in output jack. If there is no reception:

- (a) UX-120 may be defective.
- (b) Output transformer may be open.

5. If reception is obtained at this point but there is no sound through the speaker unit:

- (a) The speaker unit may be defective.
- (b) The phone jack may not be making proper contact.

6. Check Radio-Victrola valve to see that it is opening and closing the full amount. This can be determined by a sharp click at both ends of the arc.

7. If there is no reception when phones are plugged in first stage jack, remove all tubes and make the following tests:

Using preferably a double scale voltmeter 0-7.5 0-150 volts (a Weston Type 301 meter was used in these tests and the readings will vary if any other type meter is used).

- (a) Place battery switch in radio position.
- (b) Turn battery setting rheostat to 5.
- (c) Turn volume control rheostat to 10.
- (d) With the test leads attached to the lower scale, the reading between the large holes of each socket should be  $4\frac{1}{2}$  volts with new A batteries.

8. If there is no reading:

- (a) Check between contacts —A+C and +A—B) on the terminal strip. If there is a  $4\frac{1}{2}$  volt reading at this point:—
- (b) Check contacts in filament switch.
- (c) Check contacts on battery setting rheostat.
- (d) Remove two bolts securing catacomb to spring cushions.
- (e) Drop catacomb out of place and tighten all screw connections.
- (f) Test all soldered connections.
- (g) Replace catacomb.
- (h) Reading should now be  $4\frac{1}{2}$  volts at the large contacts in the tube sockets.

NOTE—If filament polarity of No. 4 socket is reversed from that shown in Fig. 1, the A battery leads should be reversed at the terminal comb. Poor tone quality will otherwise result if A supply is incorrectly connected. The positive side of the voltmeter pin jacks should be on the right looking down on the top of the panel.

9. If reading is obtained only in large contacts of No. 3 socket.

- (a) Check external wiring of connection between battery setting control and volume control.

10. If reading is obtained in all sockets except No. 3.

- (a) Check external wiring of volume control rheostat.

11. Failure to obtain filament reading in any of the other sockets would indicate an open circuit in the catacomb. If all external connections have been checked, the catacomb should be replaced.

12. Next test grid circuit (indicated as G in Fig. 1) still using low scale of meter.

- (a) Insert positive meter test lead in any negative (—) filament contact.
- (b) Insert negative meter test lead in all contacts marked "G" in Fig. 1. The readings will indicate as follows:

	O. K.	Defective	
G 1	4	0	
G 2	4.5	0	Difficulty may be due to an open oscillator coil external to the catacomb.
G 3	3.3	0	
G 4	0		Any deflection of meter, the catacomb is defective.
G 5	.3	0	
G 6	1.7	0	

If the readings show up a defect, the catacomb should be replaced.

13. Test plate circuits (indicated as P Fig. 1) now using the high scale of the meter.

- (a) Insert the negative meter test lead in any (+) filament contact.
- (b) Insert the positive meter test lead in all contacts marked "P" in Fig. 1. The readings will indicate as follows:

	O. K.	Defective	
P 1	90	0	
P 2	90	0	Before assuming that the catacomb is defective on a 0 reading in this socket, check the external wiring through the oscillator coil.
P 3	90	0	
P 4	10 to 20	0	
P 5	82	0	Check external wiring connections of first stage jack before assuming that open circuit is in the catacomb.
P 6	130	0	A 0 reading might indicate an open circuit in the wiring to the output transformer or in the transformer itself. This transformer is the one to which the loud speaker leads are connected.

14. If all the above tests check O. K. and the difficulty still remains:

- (a) Remove outside loop lead when testing a Florenza or the outside antenna coil lead when testing an Alhambra II. Connect the meter for lower scale reading. Place the meter in series with this lead and A+ connection on terminal strip. The reading should be  $4\frac{1}{2}$ . If 0, either the coil or loop is open, depending on which instrument is being tested. If O. K. continue the test.
- (b) Disconnect the terminal strip.
- (c) Remove set from cabinet.
- (d) Connect a  $4\frac{1}{2}$  volt "C" battery in series with one of the meter test leads.

- (e) Test between rotor and stationary plates of left hand condenser when facing under side of panel. If no meter deflection, look for a broken wire or loose connection between condenser and oscillator coil terminals.
- (f) Test from stationary plates of right hand condenser and No. 1 contact of the terminal strip. If no reading, check for a broken wire or loose connections between these points.
- (g) Test from rotor plates of right hand condenser and No. 7 contact of the terminal strip. If no reading, check for a broken wire or loose connections between these points.
- \*\* (h) Test between connections 1 and 7. If a reading is obtained, the plates of the right hand condenser are short circuited. This may be caused by foreign material between the plates or from mechanical alignment. If the difficulty is not overcome after these exhaustive tests, it becomes a problem for your Distributor.

\*\*Note—Terminals No. 1 and No. 7 referred to can be located counting on the terminal strip closest to the panel from the end opposite the filament switch.

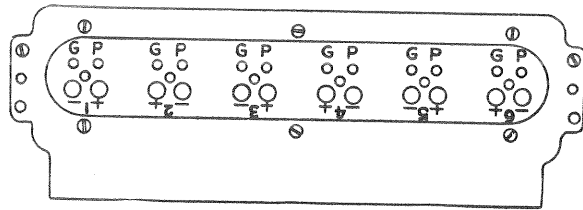


Figure 1

Standing at the front of the instrument looking down in the tube compartment, the top of the catacomb will appear as above.

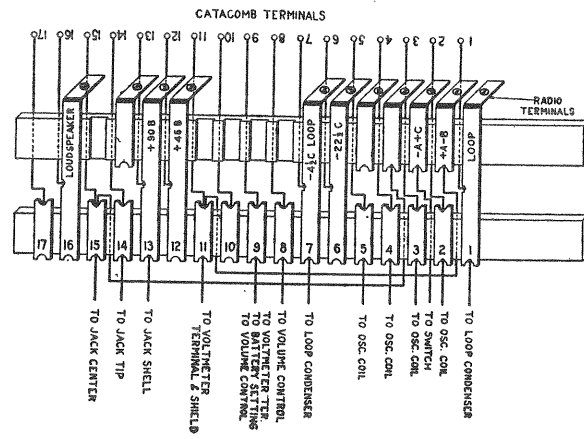
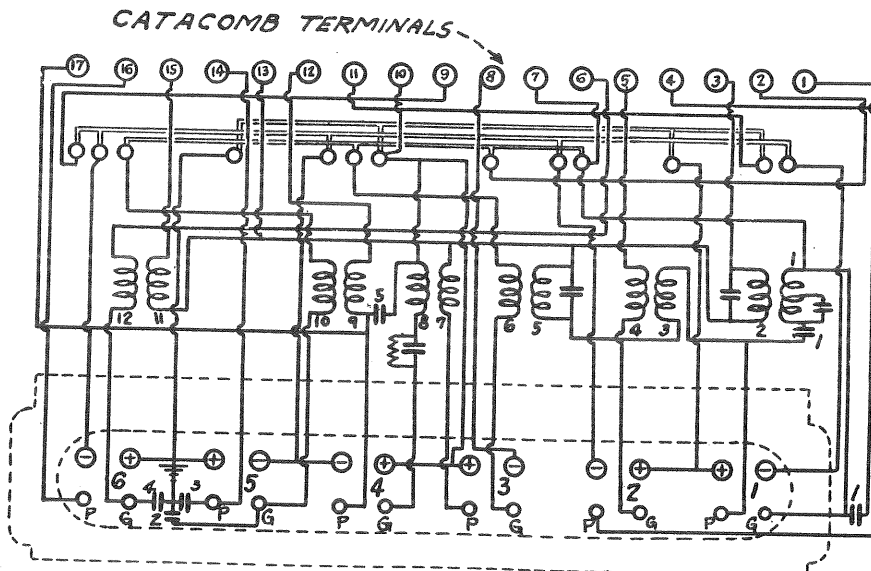
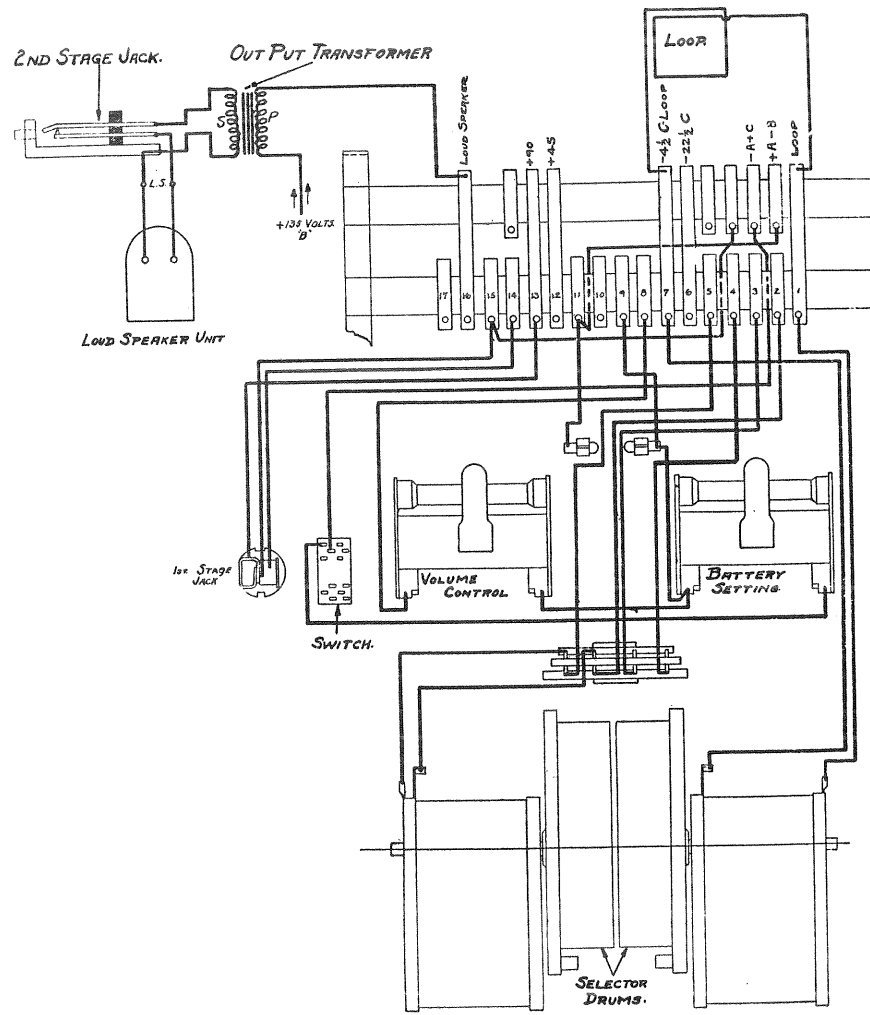


Figure 2



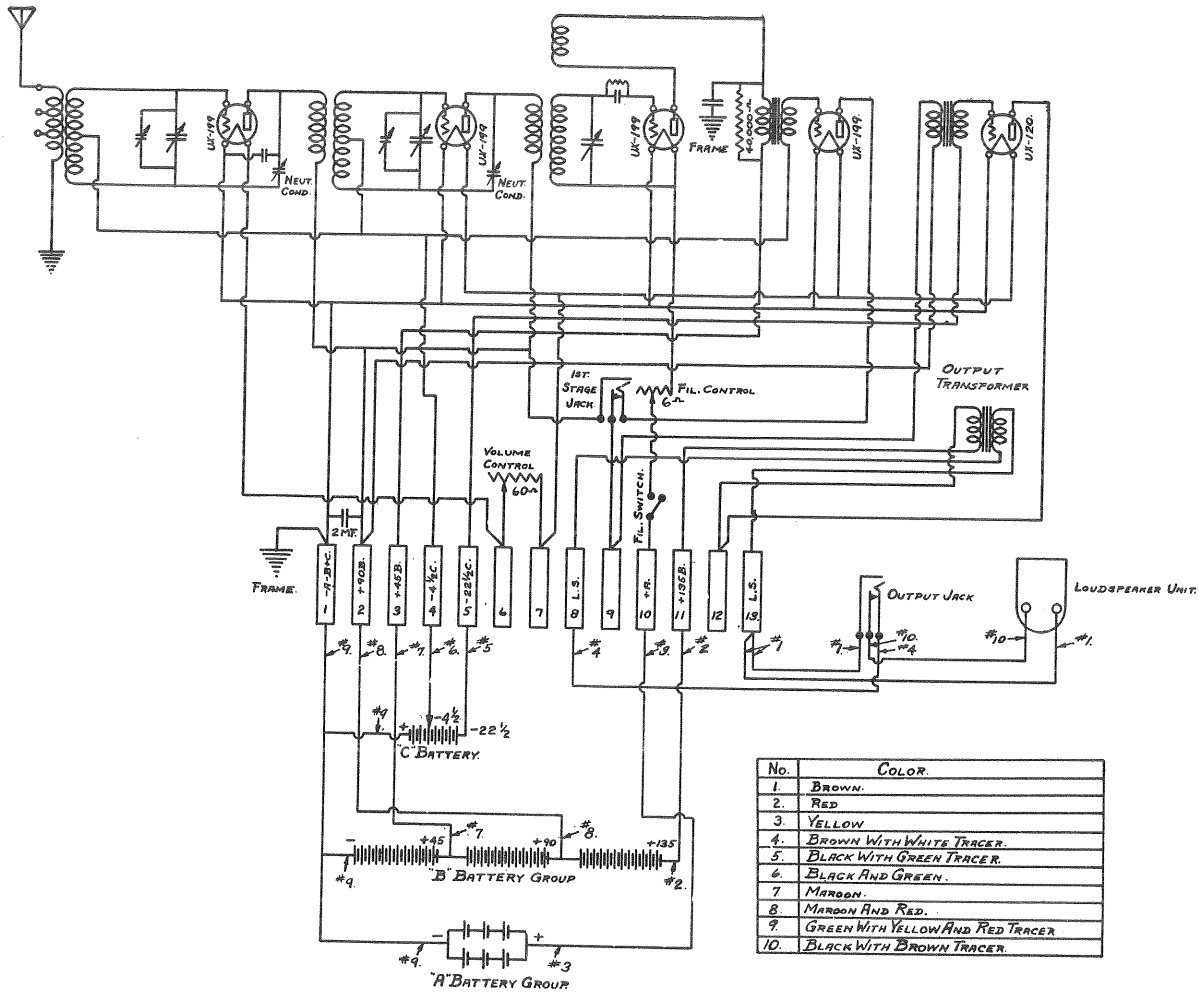
Radiola 25 Catacomb Continuity Diagram for Alhambra II (7-2) and Fiorenza (9-1) Instruments



Wiring Diagram for Alhambra II and Florenza

# Victor Model 7-3

# Victor Model 7-30



Wiring Diagram for Models 7-3, 7-30, and R-20

IF THE TROUBLE HAS NOT BEEN FOUND TO LIE IN THE BATTERIES OR TUBES, THE FOLLOWING TESTS TO LOCALIZE THE TROUBLE IN THE SET ITSELF SHOULD BE MADE WITH TUBES REMOVED AND BATTERIES CONNECTED.

1. Using a low scale of meter with positive lead inserted in any — socket contact, insert negative lead in each "G" contact as shown in Fig. 2. The following table illustrates the results that should be obtained.

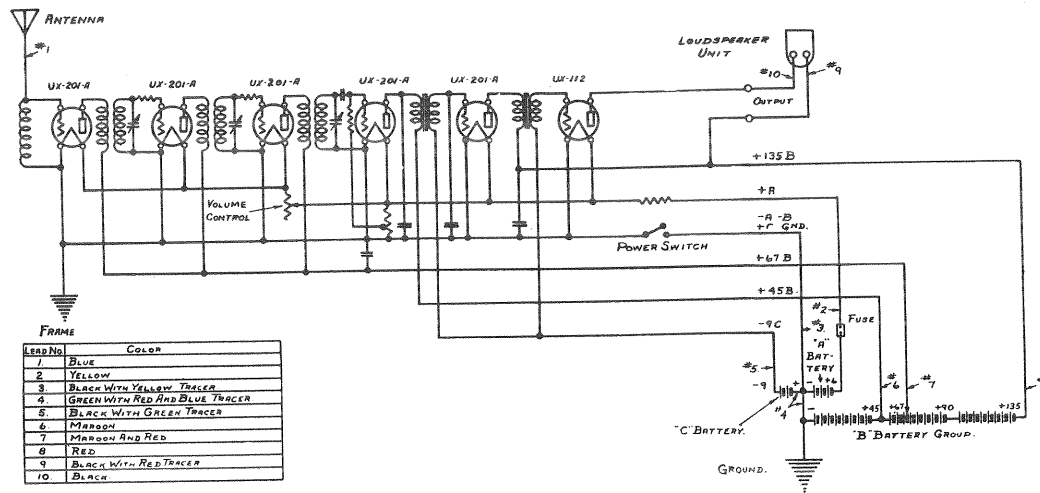
Normal	Faulty	Fault
G-1—4½	0	Open coil or broken wire.
G-2—4½	0	Open coil or broken wire.
G-3—1½	0	Open AF transformer or broken wire.
G-4— .3	0	Open AF transformer or broken wire.
G-5—0	Reversed	Short circuited grid condenser.

2. Using a high scale meter with negative lead inserted in any socket contact, insert positive lead in each P contact as shown in Fig. 2. The following are results that should be obtained:

Normal	Faulty	Fault
P-1—90	0	Open Coil or broken wire.
P-2—90	0	Open Coil or broken wire.
P-3—110	0	Open output transformer or broken wire.
P-4—85	0	Open audio transformer or broken wire.
*P-5—35 to 40	0	Open audio transformer or open tickler coil, or open tickler lead or broken wire.
	45	Short circuited by-pass condenser.

NEUTRALIZING PROCEDURE SAME AS SHOWN UNDER VICTOR MODEL 7-1

# Victor Model 7-10



Wiring Diagram for Victor Radiola 16  
(Used in Model 7-10)

## VICTOR RADIOLA 16 (AS USED IN MODEL 7-10)

The Radiola used in combination with the Orthophonic Victrola in the model 7-10 is a six-tube battery operated tuned radio frequency receiver of the inside or outside antenna type, employing three stages of radio frequency amplification, a detector, and two stages of audio amplification. The UX-112-A power tube is used in the last stage of audio amplification. The Radiotrons UX-201-A are used in all the other stages and in the detector.

Most of the common causes of trouble can be located and corrected by the tests given below. In making the tests the use of a Weston Radio Set Tester is recommended. If this is not available, a high resistance voltmeter of reliable manufacture, having two scales (0-7.5 and 0-150 volts), should be used. The meter should be equipped with flexible insulated leads.

1. Test "A," "B" and "C" batteries or battery eliminator if used.
2. Test all cable connections to the batteries.
3. Test loudspeaker unit.
4. Test tubes.

If the Weston Radio Set Tester is used, the tube tests can be made in the regular manner by placing the plug in socket No. 1, Fig. 1. If the set tester is not available, the low scale of the voltmeter can be used, the procedure being as follows:

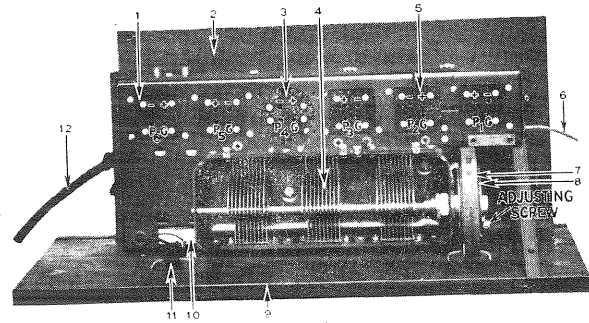


Fig 1

- a. Remove Radiotrons from all sockets except the one to the extreme right. Filament regulation in this socket can be obtained by means of the Volume Control.
- b. Place the two leads connected to the low scale of the voltmeter in the two filament socket contacts of Radiotron Socket No. 2 marked "+" and "-" as shown in Fig. 1; regulate the voltage to 5 volts.
- c. Remove the +67½B lead from the battery terminal, and connect this lead to the 7.5 terminal of the meter; connect from the + terminal of the meter to the +67½B on the "B" battery.
- d. Note the deflection of the meter when the latter is connected as described above, and compare this deflection with that given by a tube which is known to be good. The amount of deflection depends on (1) the meter used, (2) the condition of the "B" batteries, and (3) the condition of the tube under test. (1) and (2) remaining unchanged, a comparative indication of the condition of the various tubes can be obtained; in general a high deflection indicates a good tube, and a low deflection indicates a poor tube.
- e. All Radiotrons may be tested in the same manner. The UX-112-A will ordinarily give a higher reading than the UX-201-A.