Instructions for

RCA Victor 331

Seven-Tube Double-Range Superheterodyne Automatic Phonograph Combination

INTRODUCTION

Many new and remarkable developments have been incorporated in this beautiful combination instrument. Excellent reproduction and great volume on both radio and phonograph are made possible by a Class "B" output stage (using the new RCA-53 twin-amplifier Radiotron) and a large electrodynamic loudspeaker.

In addition to providing the usual broadcast entertainment from stations in the 540–1500 kilocycle band, the receiver can be tuned to receive stations transmitting in the range from 1500 to 2800 kilocycles. The latter range permits "listening in" to police calls, amateur radio "phone" communication, etc.—a fascinating diversion.

Vernier tuning has been accomplished by a new type ball-bearing reduction drive, insuring smooth operation and long life. Illuminated 45 degree dials, designed for maximum visibility and minimum glare, have been provided on both the station selector and the radio volume control.

The automatic two-speed phonograph mechanism is of a new type, improved in capabilities and appearance, and simplified in construction and operation. The device will play and change automatically either ten-inch or twelve-inch diameter records, of practically all standard varieties. Record changing is accomplished in a minimum interval of four seconds. Sound-proofing of the playing compartment is an innovation which successfully eliminates most of the mechanical no se incident to playing and changing of records.

INSTALLATION

Preliminary—After withdrawing the instrument from the shipping container and removing the packing framework bolted to the underside of the cabinet, take off the rear cover, which is fastened by screws at the edges.

The flexibly mounted motor board is supported for shipment by a rough wood framework, fastened by screws to the motor-board mounting rails and braced by a vertical wood prop from the floor of the cabinet. Remove this packing material. Remove also the two red hex-head bolts which pass through the mounting rails, and the two wood blocks from between the motor board and the mounting rails. The motor board should then float freely on its spring suspension.

Radiotrons—The Radiotrons are shipped installed in the sockets. Refer to the tube location diagram on the license label inside the cabinet, and *make certain:*

(a) That all tubes are in the proper sockets and pressed down firmly. *Never apply power to the instrument unless all Radiotrons are in place.*

(b) That all shields are rigidly in place over the Radiotrons shown by double circles on the diagram.

(c) That the short flexible leads shown on the diagram are attached to the top grid contacts of the proper Radiotrons as indicated, and that the spring contact caps are pressed down firmly.

NOTE—For the RCA-55 Radiotron only, the grid lead must be enclosed by the cylindrical tube shield. A slot is provided at the bottom of this shield for entrance of the lead.

Phonograph Compartment—Raise the lid of the cabinet and remove the packing material from the playing compartment. Insert the used-needle cup (packed in outfit package) in the opening provided, as shown in Figure 2. With the speed shifter set in the outward (78 R. P. M.) position, install the turntable on the motor spindle. Make sure that the spindle drive key engages the slot in the turntable hub.

NOTE—Some instruments have one or more shim washers on the motor spindle to adjust the turntable to the proper height. Do not remove any of these washers. Before mounting the turntable make sure that the washers are seated on the hub, with the drive key projecting through the slots so as to engage the turntable.

Location—The instrument should be located close to the antenna lead-in and ground connections, and near an electrical outlet.

Antenna and Ground—An antenna 25 to 75 feet long including the lead-in and ground connections, is recommended. The antenna should be well insulated from all objects, and should not be run close to or parallel with electric circuits inside or outside the building. Generally, an indoor antenna of short or medium length should be found satisfactory. An outdoor antenna of greater length may provide some increase in the receiving range, and is recommended for localities remote from broadcasting stations. When the receiver is installed in a building of metallic construction, an outdoor antenna is *required* for satisfactory results.

A *good* ground connection is essential for best performance. It should be as short and direct as possible, and preferably should be made to a cold water pipe. An approved ground clamp should be used to insure a tight and permanent connection.

Two flexible leads are provided at the rear of the receiver for connecting to the antenna and ground. Connect the *black* lead to the antenna wire or lead-in and the *yellow* lead to the ground wire. Both connections should be soldered and wrapped with insulating tape.

Power Supply—Connect the power cord to an electrical outlet supplying alternating current at the proper voltage and frequency (cycles), as specified on the license label.

Operating Test—Before replacing the rear cover of the cabinet, the instrument should be given a thorough trial operation—both radio and phonograph—in accordance with the operating instructions which follow. The instrument was, of course, in perfect operating condition when shipped from the factory. After transit, however, minor adjustments sometimes may be necessary, particularly on the automatic record-changing mechanism. It is the dealer's responsibility to make sure that the instrument functions perfectly when installed.

A diagrammatic chart giving complete instructions for ordinary adjustments of the automatic mechanism is included in the Service Data section of this booklet. Whenever possible, these adjustments should be made by the dealer from whom the instrument was purchased.

OPERATION—RADIO

The radio operating controls, located on the front panel, are shown in Figure 1. Proceed as follows:

1. Set the Transfer Switch in the counter-clockwise position, for radio reception.

2. Apply power by turning the Tone Control clockwise from the "off" position. Set this control near the middle of its range. Several seconds are required for the Radiotrons to heat before reception is possible.

3. Set the Frequency Range Switch for the band desired, as follows:

(a) *Counter-clockwise*—540–1500 kilocycle broadcast band. The dial scale reads directly in kilocycles for this band when one cipher is added to the large numerals adjacent to the graduations.

(b) *Clockwise*—1400–2800 kilocycles. Frequencies in this band are indicated approximately by the positions of the small numerals at the top of the dial (add one cipher to obtain kilocycles). The following services are included in this band:

(1) **Police Calls**—Stations operating at 1712 kilocycles, and between 2400 and 2500 kilocycles.

(2) **Amateur Radio "Phone"**—Assigned band 1900–2000 kilocycles.

(3) **Aviation Reports, Airport Beacons, Etc.**—Assigned band 2000–2400 kilocycles.

(4) **Amateur Radio "CW" (Code)**—Assigned band 1715–1900 kilocycles. Signals of this class normally are unintelligible or inaudible with this type of receiver.

NOTE—The majority of stations in the 1400–2800 kilocycle band do not offer continuous programs. Police calls are usually intermittent, at regular or irregular intervals. Strong local stations in the 540–1500 kilocycle broadcast band may be audible (sometimes at more than one point on the dial) when the Frequency Range Switch is set for 1400–2800 kilocycles.

4. Set the Radio Volume Control near "Medium" on its illuminated scale. Then turn the Station Selector slowly over the range of its dial until a station is heard. If no signal is received, advance the volume control further in a clockwise direction and again rotate the selector.

5. When a desirable station signal is heard, accurate tuning for *best* reproduction is accomplished as follows:

(a) Turn the Radio Volume Control counter-clockwise (if necessary) until the volume is at a low level.

(b) Adjust the Station Selector carefully to the position mid-way between the points where the quality becomes poor or the signal disappears.

(c) Adjust the Volume Control to obtain the desired sound level.

NOTE—The *automatic volume control* maintains the volume level substantially constant irrespective of normal fluctuations of signal strength (fading). Also, other stations with good signal strength will be received at approximately the same volume without readjustment of the volume control.

6. Adjust the Tone Control to obtain the desired tone quality, or turn it counter-clockwise to reduce noise interference.

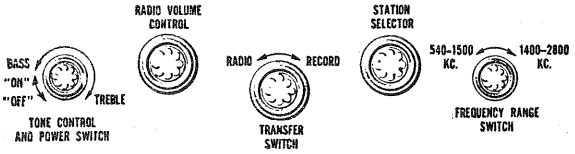

Figure 1

7. When through operating, switch off the power by turning the Tone Control knob to the extreme counter-clockwise position.

Radiotrons—Improved results may sometimes be obtained by interchanging the RCA-58 Radiotrons in their sockets. *The power should be switched off before removing any Radiotron from its socket.* Spare Radiotrons should be kept on hand.

OPERATION—PHONOGRAPH

General

Electric phonograph facilities are provided in this instrument for automatic or manual playing of either standard 78 R. P. M. (revolutions per minute) or long-playing 33⅓ R. P. M. records.

The automatic mechanism provides for playing up to approximately eight 10-inch or seven 12-inch diameter records in sequence on one side, without attention. The exact number depends on the flatness and the thickness of the records. Records having the eccentric inside groove, also most records of other types, may be played and changed automatically.

Records of any diameter up to 12 inches may be played manually, in the same manner as with the ordinary non-automatic phonograph models.

Lubrication—It is recommended that the automatic mechanism, together with the two-speed turntable and phonograph motor, be thoroughly inspected, cleaned and lubricated by a competent dealer's service man at the end of each year of operation.

Automatic Operation

Important—For proper operation of the automatic mechanism, *the instrument must be level.* If the floor is uneven, one or more legs should be blocked to level the instrument solidly. (See Note 2, paragraph 8, under "Procedure.")

CAUTION—***Never touch any part of the automatic mechanism while it is changing records.***

Procedure—Refer to Figure 2, showing the phonograph equipment. Proceed as follows:

1. Set the Transfer Switch (Figure 1) clockwise, for record reproduction.

2. Apply power by turning the Tone Control (Figure 1) clockwise from the "off" position. Set this control in the extreme clockwise position.

3. With the Motor Switch in the "off" position (Record Volume Control fully counter-clockwise), load the turntable with records, as follows:

(a) Set the Index Lever at "Manual." *Always do this before loading or unloading records.*

(b) Place the electric pickup on the rubber rest.

(c) Raise the Record Ejector arm (*very slowly*, at first, until the internal weight has rolled to the rear of the arm, then as rapidly as desired) to its upper position of rest. *Always raise the ejector arm in this manner.*

(d) Select the records to be played. *All records for one loading must be of the same size (either ten or twelve inches in diameter) and the same speed (either standard or long-playing).*

CAUTION—***Do not use thin flexible-type records for automatic operation. Transparent-faced (illustrated) records can be used, if close to standard thickness, but must not be reproduced with Tungstone needles.***

(e) Place the records, one at a time, on the turntable, ***Make sure that the first record placed on the turntable (last to be played) is flat—that is, not warped.*** The spindle should resume its normal height after each record is added. The turntable is fully loaded when the top surface of the uppermost record is nearly flush with the top of the spindle. (It should not be possible to slide off the top record without lifting its edge or depressing the spindle.)

(f) Lower the Record Ejector arm gently onto the spindle.

(g) Make certain that the record pocket (at the left of the phonograph compartment) is empty.

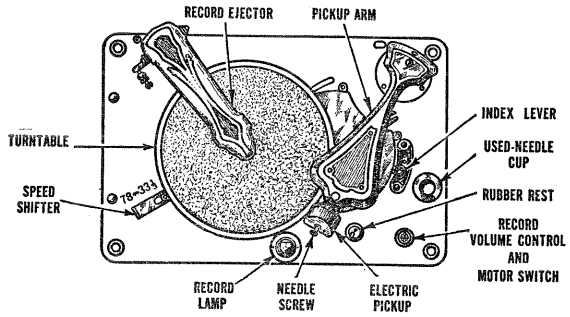

Figure 2

4. Insert a *new* needle in the pickup as far as it will go and tighten the needle screw. For long-playing (33⅓ R. P. M.) records, use *only* the *orange Chromium* needle. For standard (78 R. P. M.) records, use the latter needle, or, if preferred, either the *green Chromium* or the full volume (full tone) *Tungstone* needle.

NOTE—With care, the orange Chromium needle should play 25, the green Chromium 75 to 100, and the Tungstone 100 to 200 records. *Never re-insert in the pickup a Chromium needle which has been used (however slightly), as damage to the record grooves would result.*

5. Place the pickup needle on the smooth outer rim of the record, near the first groove. Then move the Index Lever to the position (12 or 10) corresponding to the diameter (inches) of the records on the turntable. Be careful not to move the lever *beyond* the proper index hole. Push the index pin firmly into the hole.

CAUTION—***Never attempt to move the Index Lever from the Manual position when the pickup is on the rubber rest.***

6. Start the turntable by turning the Motor Switch clockwise; then set the Speed Shifter for the speed (78 or 33⅓ R. P. M.) corresponding to the records on the turntable.

NOTE—The speed shifter should not be moved inward (from the 78 to the 33⅓ R. P. M. position) while the turntable is at rest.

7. Adjust the Record Volume Control to obtain the desired volume.

8. Close the lid to confine mechanical sounds within the playing compartment. If needle scratch (particularly noticeable on old records) is objectionably reproduced by the loudspeaker, turn the Tone Control slightly counter-clockwise. For most faithful reproduction, however, the Tone Control should be left in the fully clockwise position.

NOTE 1—When a record has been played, the ejector arm slides it off into the record pocket and the pickup moves to the outside of the next record. The records on the turntable are thus played consecutively until only one record remains on the turntable. This record will be played repeatedly until the motor is stopped by means of the Motor Switch.

NOTE 2—After a record has been played and changed, the needle is lowered automatically onto the smooth rim of the next record and is fed by gravity into the starting groove. After the instrument has been leveled with reference to the top of the cabinet, further slight compensation may be necessary, thus: (1) If the needle fails to enter the playing groove, the right-hand side of the instrument must be raised by inserting thin blocks under the front and rear legs on that side; or (2) If the needle slides over several grooves, thus failing to reproduce the beginning of the selection, the left-hand side of the instrument must be similarly raised.

9. To reject a record while playing, lift the pickup arm and move it to the extreme left. Hold the pickup lightly until it is moved by the mechanism.

10. Before reloading or when through operating, turn the Motor Switch to the "off" position, set the index lever at "Manual" and place the pickup on the rubber rest. Never leave the pickup resting on a record (or on the turntable) when not in use. Turn the power switch "off" when discontinuing operation of the instrument.

Manual Operation

Individual records can be played manually, as follows:

1. Set the Transfer Switch and Tone Control Knobs clockwise, as directed for automatic operation.

2. Make sure that the Index Lever is at "Manual," the pickup is on the rubber rest, and the Motor Switch is in the "off" position.

3. Raise the Record Ejector arm to the upper resting position. See paragraph 3 (c) under Automatic Operation.

4. Place a record on the turntable and lower the ejector arm (to permit closing lid). For needle information, see paragraph 4 under Automatic Operation.

NOTE—Ordinary steel needles (full volume or full tone) can be used with standard (78 R. P. M.) records, provided a new needle is inserted for each selection. Do not use *Tungstone* needles with thin flexible records or with transparent-faced (illustrated) records.

5. Start the turntable by turning the Motor Switch clockwise; then set the Speed Shifter for the speed corresponding to the record on the turntable. Lower the needle gently onto the smooth outer rim of the record.

6. Adjust the Record Volume Control and close the lid of the cabinet. See paragraph 8 under Automatic Operation.

7. At the completion of the record, lift the pickup arm and move it toward the right to stop the motor (motor stops automatically at the end of a record having the *eccentric* final groove). Turn the Motor Switch to the "off" position and place the pickup on the rubber rest.

8. When through operating, close the cabinet lid and turn "off" the power.

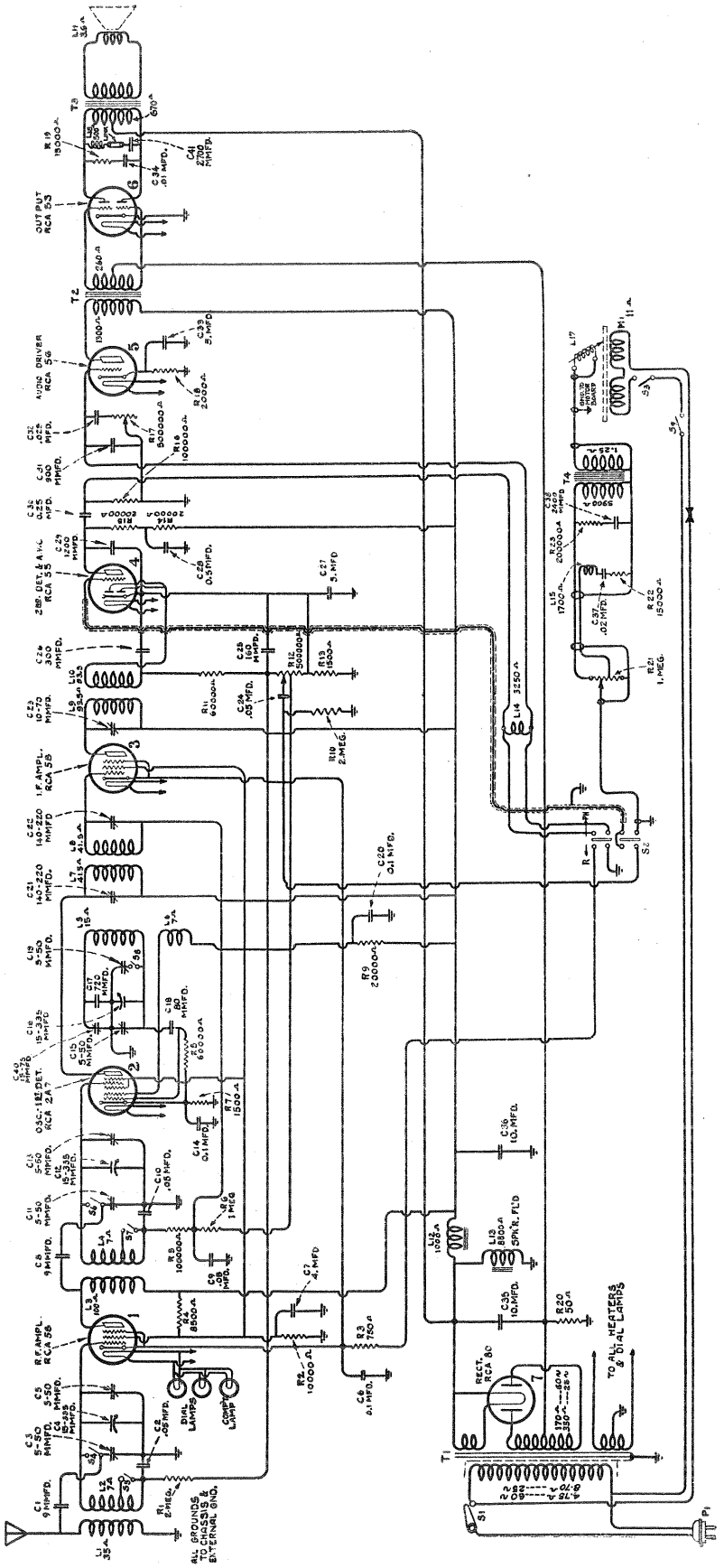

Figure A—Schematic Circuit Diagram

SERVICE DATA

Voltage Rating.....105–125 Volts
Frequency Rating.....25, 30, 40, 50, and 60 Cycles
Power Consumption.....25 Cycle–115 Watts;
30 Cycle–115 Watts; 40 Cycle–125 Watts;
50 Cycle–115 Watts; 60 Cycle–120 Watts
Number and Types of Radiotrons...2 RCA-58, 1 RCA-2A7,
1 RCA-55, 1 RCA-56, 1 RCA-53, 1 RCA-80—Total 7
Undistorted Output.....5 Watts
Frequency Range.....540 K. C. to 1200 K. C.
and 1400 K. C. to 2800 K. C.

This combination instrument utilizes the new perfected automatic record changing mechanism and a new seven-tube superheterodyne radio receiver. Excellent fidelity on both radio and record is obtained due to properly designed circuits and a Class "B" output stage. Other features of the receiver are automatic volume control, eight-inch dynamic loudspeaker, continuously variable tone control, and the inherent sensitivity, selectivity and tone quality of the Superheterodyne.

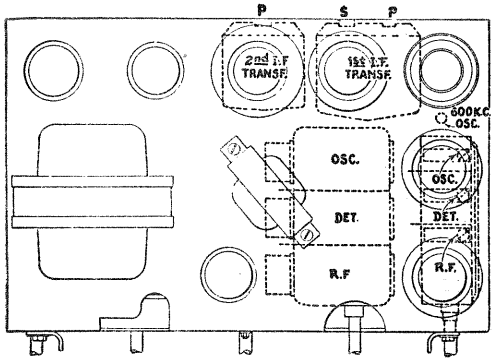

Figure B—Location of Line-Up Capacitor Screws

A special feature is a Range Switch that allows reception of signals either of the broadcast band or higher frequencies. Figure A shows the schematic circuit, Figure C the wiring diagram, and Figure D the assembly wiring. With the switch in the broadcast band position, the frequency range is from 540 to 1500 K. C. At the higher frequency position, the receiver covers the 1400 to 2800 K. C. band.

The circuit consists of an R. F. stage using Radiotron RCA-58, a combined oscillator and first detector in the RCA-2A7 tube, an intermediate stage using Radiotron RCA-58, an RCA-55 functioning a combined second detector and automatic volume control, an audio stage using an RCA-56, an output stage using RCA-53 and the RCA-80 functioning as a rectifier.

Service work in conjunction with this receiver will be similar to that of other Superheterodyne receivers incorporating a similar type automatic volume control.

I. F. Tuning Adjustments—Two transformers comprising three tuned circuits (the secondary of the second transformer is untuned) are used in the intermediate amplifier. These are tuned to 175 K. C. and the adjustment screws are accessible as shown in Figure C. Proceed as follows:

(a) Procure a modulated oscillator giving a signal at 175 K. C., a non-metallic screw driver such as Stock No. 7065 and an output meter.

(b) Short-circuit the antenna and ground leads and tune the receiver so that no signal is heard. Set the volume control at maximum and connect a ground to the chassis.

(c) Connect the oscillator output between the first detector control grid and chassis ground. Connect the output meter across the voice coil of the loudspeaker and adjust the oscillator output so that with the receiver volume control at maximum, a slight deflection is obtained in the output meter.

(d) Adjust the primary of the second, and the secondary and primary of the first I. F. transformers until a maximum deflection is obtained. Keep the oscillator output at a low value so that only a slight deflection is obtained on the output meter at all times. Go over these adjustments a second time, as there is a slight interlocking of adjustments. This completes the I. F. adjustments.

R. F. and Oscillator Adjustments—The three-gang variable capacitor and 600 K. C. trimmer screws are accessible at the bottom of the chassis. The high frequency capacitor screws are located on the Range Switch. Proceed as follows:

(a) Procure a modulated oscillator giving a signal at 600, 1400 and 2440 K. C., a non-metallic screw driver such as Stock No. 7065 and an output meter.

(b) Connect the output of the oscillator to the antenna and ground lead of the receiver. Check the dial at the extreme maximum position of the tuning capacitor. The indicator should be at the last division. Connect the output meter across the cone coil. Then set the dial at 140, the oscillator at 1400 K. C. and adjust the oscillator output so that a slight deflection is obtained when the receiver volume control is at maximum. Align all three trimmer capacitors on the variable capacitor to maximum output, keeping the oscillator output as low as possible.

(c) Set the oscillator at 600 K. C. Tune in the signal with the receiver until a maximum deflection is obtained in the output meter. Now adjust the 600 K. C. series capacitor, Figure B, until a maximum deflection is obtained in the output meter. Rock the tuning capacitor back and forth while making this adjustment, as the tuning capacitor and oscillator series capacitor adjustments interlock.

(d) Change the frequency of the oscillator to 1400 K. C. and set the dial at 1400. Again make the adjustments given under A and B.

(e) Then shift the oscillator to 2440 K. C., the Range Switch to the clockwise position and the dial to 120. The three line-up capacitors located on the Range Switch should then be adjusted for maximum output.

When making both the I. F. and R. F. adjustments, the important point to remember is that the receiver volume control must be at its maximum position and the minimum input signal necessary from the oscillator must be used.

Automatic Record Changer—The automatic record changer used in this instrument is of simple design and excellent construction. The various adjustments that may be required are shown in Figure E. A point to remember with this instrument is that it must always be level, otherwise proper operation will not be obtained.

Fidelity—A link is provided in the filter circuit connected across the plates of Radiotron RCA-53. Opening this link increases the high frequency output of the phonograph approximately 2000 cycles. The link is accessible by removing the filter unit from the cabinet.

RADIOTRON SOCKET VOLTAGES

120 Volt, A. C. Line—Volume Control at Maximum

Radiotron No.	Cathode to Control Grid, Volts	Cathode to Screen Grid, Volts	Cathode to Plate, Volts	Plate Current, M. A.	Heater Volts
RCA-58 R. F.	4.0	100	245	6.0	2.4
*RCA-2A7 Osc. Det.	4.0	100	245	5.0	2.4
RCA-58 I. F.	4.0	100	245	6.0	2.4
RCA-55 2nd Det. A. V. C.	6.0	—	100	4.0	2.4
RCA-56 Driver A F.	13.0	—	235	6.3	2.4
RCA-53 Output	4.5	—	290	12.0	2.4
RCA-80 Rectifier	600 R. M. S. Plate to Plate			88.0	5.0

* Voltages and current apply to detector portion of tube.

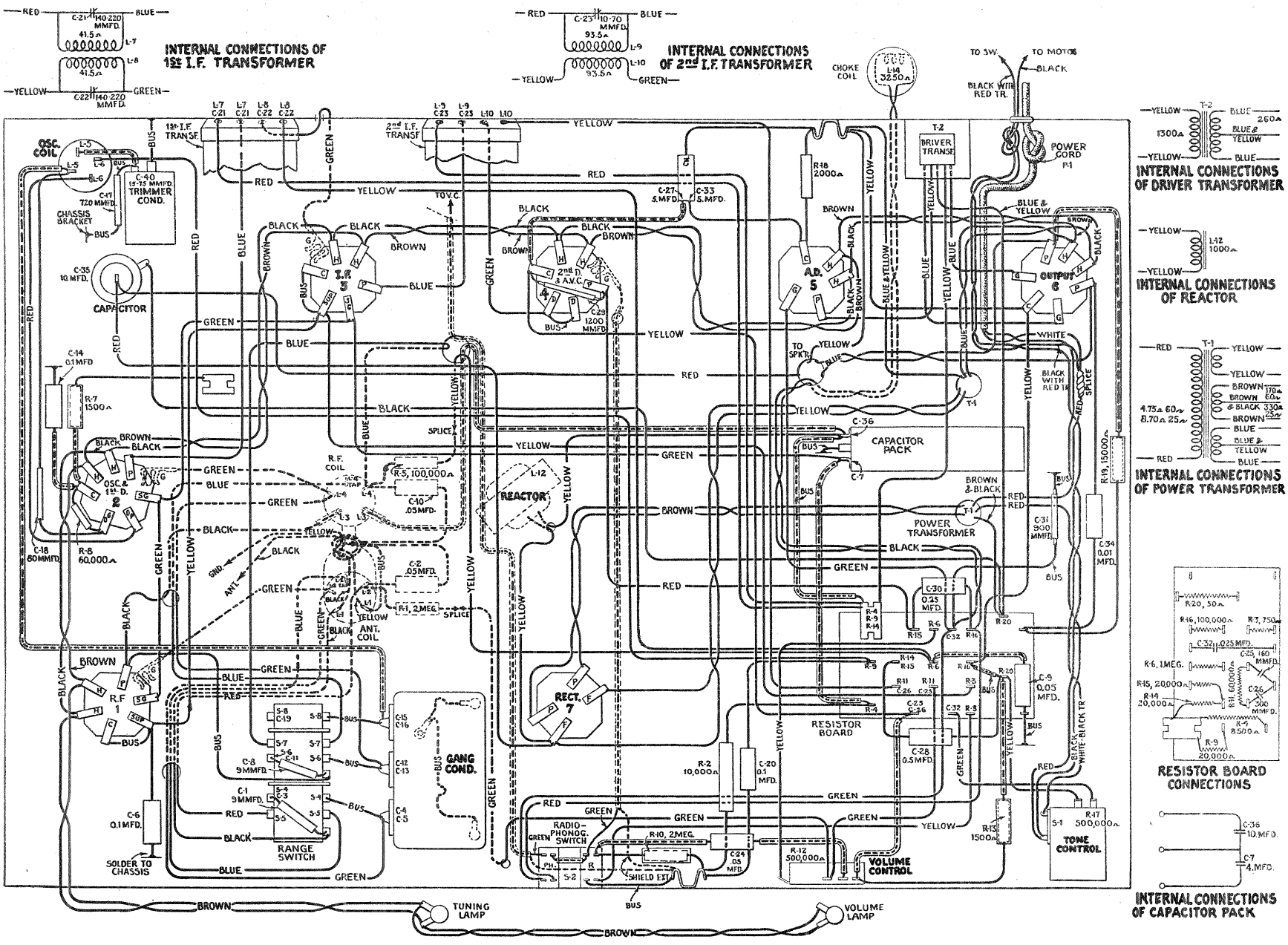

Figure C—Receiver Wiring Diagram

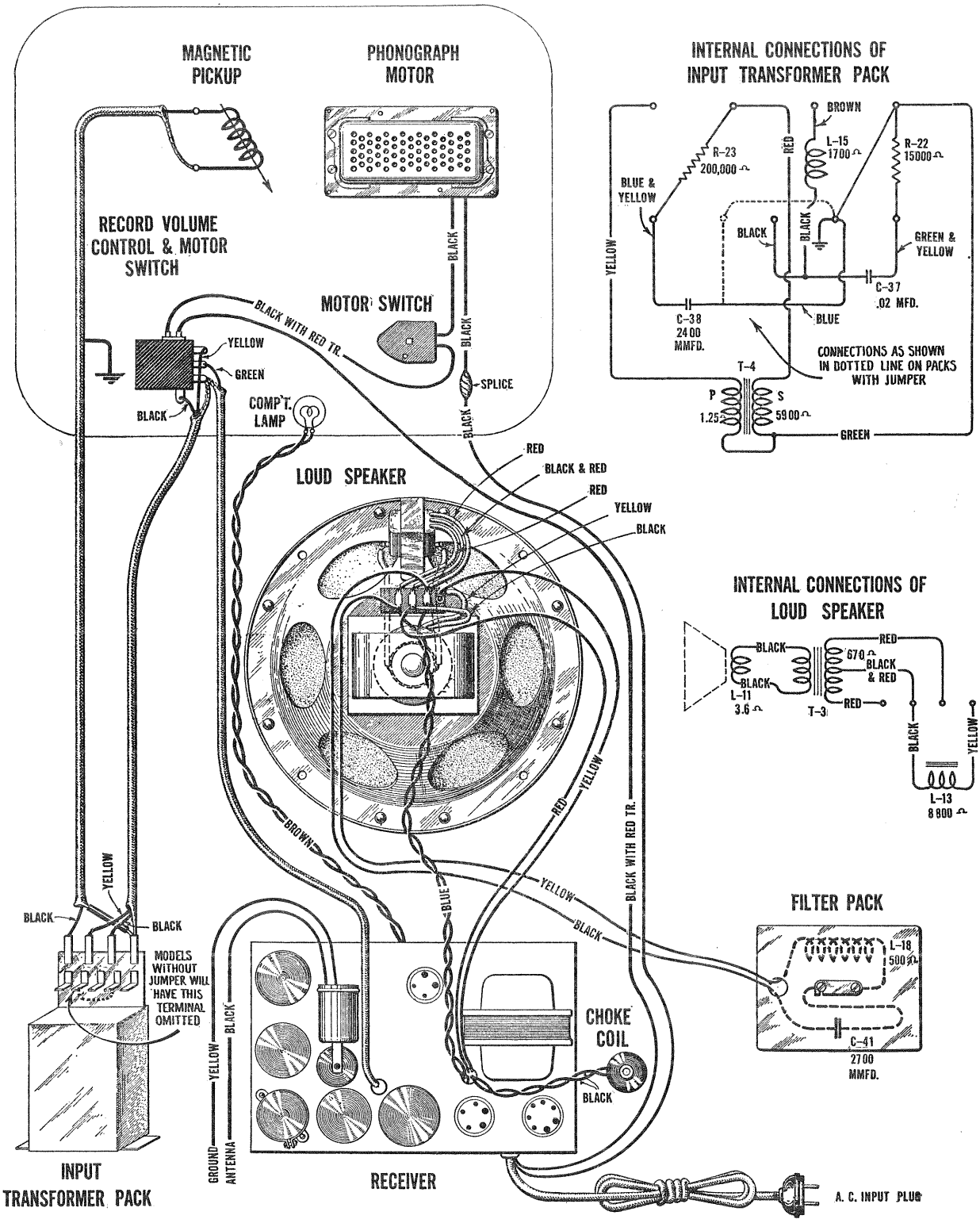

Figure D—Assembly Wiring Diagram

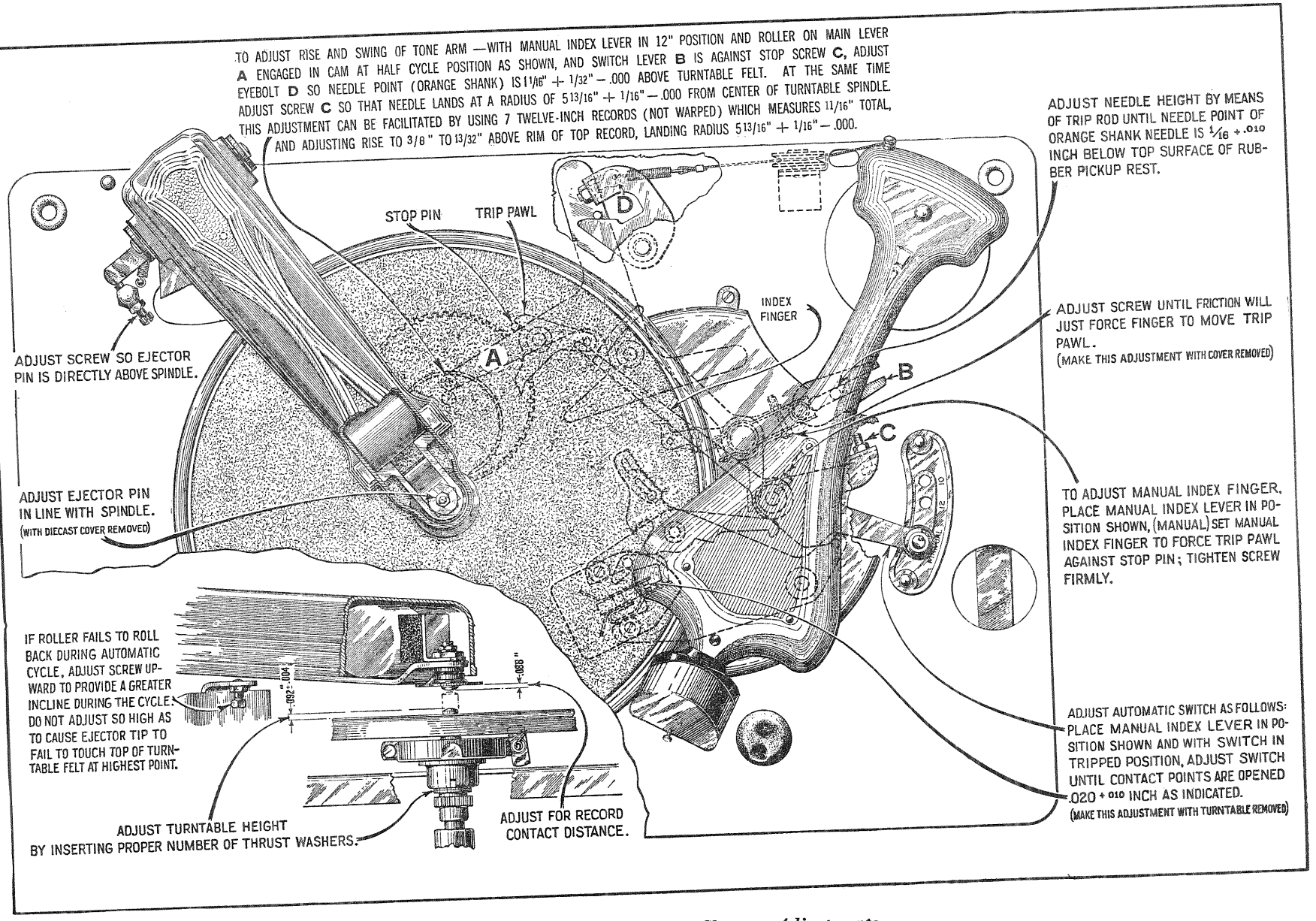

Figure E—Automatic Record Changer Adjustments

SERVICE DATA FOR MAGNETIC PICKUP

The Magnetic Pickup used in this combination instrument is of a new design with an improved frequency range. While in physical appearance it is similar to that of the older type, details of construction are considerably different. It consists essentially of a chromium steel magnet, two thin pole pieces, a mechanism support and bracket, a coil, and an armature that is damped by means of an anchored damping block.

The use of the anchored damping block eliminates any bad peaks in the frequency range. The frequency-response characteristic is substantially flat from 50 to 5,000 cycles.

Replacing Magnet Coil, Pivot Rubbers, Armature or Damping Block

In order to replace a defective coil or the hardened pivot rubbers (see Figure G), it is necessary to proceed as follows:

(a) Remove the pickup cover by removing the center holding screw and needle screw.

(b) Remove the pickup magnet and the magnet clamp by pulling them forward.

(c) Unsolder the coil leads and remove the mechanism assembly from the back plate by releasing the two mounting screws and the damping block clamping screw.

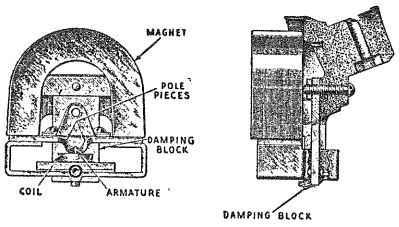

Figure F

(d) Remove screws A and B, Figure G, and then remove the mechanism assembly from the pole pieces.

(e) The coil or the front pivot rubber may now be removed and replaced. If it is desired to replace the rear pivot rubber, then the end of the armature soldered to the mechanism support must be unsoldered and the damping block removed. The rear pivot rubber now may be replaced. After putting the pivot rubbers in place a new damping block should be fastened to the armature as outlined in instructions on replacing the damping block.

(f) The mechanism should now be reassembled, except for the magnet, which must be magnetized. After being magnetized, the mechanism—with the pole pieces upward—should be placed so that the magnet may be slid from the magnetizer onto the pole pieces without breaking physical contact. After placing the pole pieces on the magnet, the entire assembly should be remagnetized thoroughly, being careful not to change the polarity obtained by the initial magnetization.

(g) After assembling to the mechanism, the entire assembly should be fastened to the back plate by means of the screws provided, making sure the damping block is securely clamped. At the same time, the metal dust cover must be placed in position.

(h) After remagnetizing, it is necessary to correctly center the armature. This may be done quite accurately by feeling its play after the needle is inserted. A little practice will quickly show which way an adjustment is necessary to have the armature centered properly. The adjustment is made by loosening screws A and B (Figure G), and sliding the mechanism slightly in relation to the pole pieces.

(i) The cover may be now replaced over the entire assembly, and the pickup returned to the tone arm.

In assembling, it may be desirable to check the armature air gap by means of a small Feeler Gauge. This air gap should be nine mils on each side of the armature. However, a little practice with the needle in place will quickly disclose whether or not the armature is centered.

Replacing the Damping Block

If it is desired to replace the damping block, it may be done in the following manner:

(a) Disassemble the pickup as described under the preceding section.

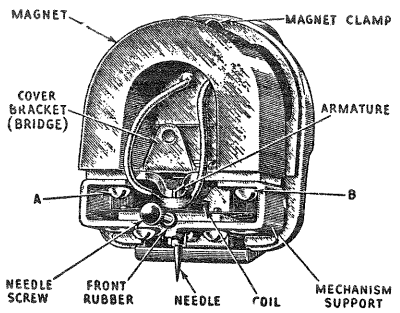

Figure G

(b) Remove the armature entirely by unsoldering it at its joint with the mechanism support.

(c) Remove the damping block from the armature and clean the bushing for holding the damping block with emery paper.

(d) Insert the armature through the new block so that it occupies the same position as that of the old. Also ascertain that the block is in correct vertical alignment with the armature. It will be noted that the hole in the damping block is somewhat smaller than the diameter of the armature. This is done so that a snug fit will be obtained.

(e) After properly locating the damping block, a soldering iron should be applied to the armature so that the block will melt slightly at its point of contact with the armature. A special tip, constructed as shown in Figure H, will prove desirable for fusing the block in place. The iron should be applied long enough to slightly melt the block and cause a small bulge on both sides, but should not be applied long enough to cause any bubbling. The pickup should then be reassembled as described in the preceding section.

Only rosin core solder should be used for soldering the coil leads in the pickup. Also rosin core solder should be satisfactory for resoldering the end of the spring in the hole in the mechanism, since both these parts have been previously tinned. In case the parts are not well tinned, it will be necessary to scrape the end of the spring and the hole in the mechanism until bright. These parts may now be tinned by using as a flux a water solution of zinc chloride (commonly called

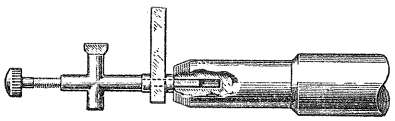

Figure H

acid flux). After tinning, dip the parts in water to wash off the acid flux and thereby prevent serious subsequent corrosion. After making sure that the pivot rubbers and damping block are properly in place, as described under (e) above, the armature may now be soldered in place in the mechanism by using rosin core solder, since the parts are now tinned. Care must be exercised to get the needle hole perfectly square with respect to the mechanism, or otherwise it will be difficult if not impossible to center the armature in the airgap as explained under (h).

REPLACEMENT PARTS

Insist on genuine factory tested parts, which are readily identified and may be purchased from authorized dealers

Stock No.	DESCRIPTION	List Price
	RECEIVER ASSEMBLIES	
2269	Capacitor—720 mmfd.	$0.75
2747	Cap—Contact cap—Package of 5	.50
3047	Resistor—1,500 ohms—Carbon type—½ watt—Pkg. of 5.	1.00
3076	Resistor—1 megohm—Carbon type—½ watt—Pkg. of 5.	1.00
3252	Resistor—100,000 ohms—Carbon type—½ watt—Pkg. of 5.	1.00
3459	Capacitor—80 mmfd.	.44
3460	Capacitor—1,200 mmfd.	.30
3526	Resistor—2,000 ohms—Carbon type—½ watt—Pkg. of 5.	1.00
3536	Capacitor—Filter capacitor—Two 5.0 mfd.	1.10
3555	Capacitor—0.1 mfd.—R. F. and I. F. Bias	.36
3572	Socket—7 contact Radiotron socket—Oscillator	.38
3584	Ring—Antenna, R. F. and oscillator coil retaining ring—Package of 5	.40
3592	Knob—Station selector, volume control, or radio-phonograph knob—Package of 5	.80
3602	Resistor—60,000 ohms—Carbon type—¼ watt—Pkg. of 5.	1.00
3615	Knob—Range switch or tone control knob—Package of 5.	.60
3616	Capacitor—300 mmfd.	.34
3622	Shield—Radiotron shield—Second detector	.36
3624	Socket—Station selector or volume control lamp socket and bracket assembly	.40
3630	Resistor—10,000 ohms—Carbon type—3 watt	.25
3634	Capacitor—160 mmfd.	.34
3640	Capacitor—0.05 mfd.	.25
3641	Capacitor—0.1 mfd.	.35
3682	Shield—Radiotron shield—Oscillator and 1st dectector	.22
3719	Socket—7 contact Radiotron socket	.30
3760	Switch—Radio-phonograph—Rotary type—Double pole—Double throw	.98
3761	Scale—Volume control dial and scale assembly	.60
3762	Screw—Chassis mounting screw and washer—Pkg. of 10	.32
3765	Capacitor—0.025 mfd.	.34
3766	Extension—Tone control, rotary switch, volume control, or range switch shaft extension	.36
3767	Extension—Station selector shaft extension	.36
3768	Screw—Set screw for shaft extension coupling—Pkg. of 10.	.35
3769	Resistor—750 ohms—Carbon type—½ watt—Package of 5.	1.00
3770	Resistor—50 ohms—Wire wound—Porcelain type	.34
3771	Resistor—8,500 ohms—Carbon type—3 watt	.25
3772	Capacitor—0.5 mfd.	.32
3783	Capacitor—9 mmfd.—Package of 2	.50
3784	Capacitor—900 mmfd.	.30
3787	Capacitor—0.01 mfd.	.30
3788	Coil—High frequency compensator choke coil	1.00
3942	Shield—Radiotron shield—Oscillator and 1st detector	.18
6188	Resistor—2 megohm—Carbon type—½ watt— Pkg. of 5.	1.00
6279	Resistor—15,000 ohms—Carbon type—½ watt—Pkg. of 5.	1.00
6282	Resistor—60,000 ohms—Carbon type—½ watt—Pkg. of 5.	1.00
6300	Socket—4 contact Radiotron socket	.35
6303	Resistor—20,000 ohms—Carbon type—½ watt—Pkg. of 5.	1.00
6471	Coil—Oscillator coil	.74
6485	Volume control with mounting nut	1.20
6527	Coil—Antenna coil	1.08
6528	Coil—R. F. coil	.94
6534	Switch—Range switch	1.25
6551	Transformer—Driver transformer	1.48
6552	Reactor—Filter reactor	1.04
6553	Transformer—First intermediate frequency transformer	1.56
6554	Transformer—Second intermediate frequency transformer.	1.64
6555	Capacitor assembly—Comprising one 10.0 mfd. and one 4.0 mfd. capacitors	1.64
6557	Scale—Dial and dial scale—Tuning capacitor	.78
6559	Tone control complete with mounting nut	1.60
6648	Capacitor—0.25 mfd.	.42
6674	Output Filter—Comprising reactor and capacitor	1.60
7062	Capacitor—Adjustable trimming capacitor	.50
7484	Socket—5 contact Radiotron socket	.35
7485	Socket—6 contact Radiotron socket	.40
7487	Shield—Radiotron shield—R. F. and I. F.	.25
7588	Condenser—3 gang variable tuning condenser	2.85
7590	Capacitor—10.0 mfd.	1.40
9026	Transformer—Power transformer 105–125 volt—50–60 cycle.	4.80
9035	Transformer—Power transformer 105–125 volt—25–40 cycle.	6.00
	MISCELLANEOUS	
3759	Receptacle—Needle receptacle with mounting screws	.50
3763	Suspension spring, washer and bolt assembly for motor board—Comprising one bolt, two cup washers, 2 springs, one "C" washer, and one cap nut	.42
3764	Nut—Cap nut for motor board suspension assembly—Package of 4	.40
6288	Knob—Phonograph volume control knob—Package of 5	1.00
6560	Volume control—Phonograph volume control	1.60
6576	Cable—Shielded two conductor cable from phonograph volume control to transformer pack	.32
6646	Socket and base assembly—For compartment lamp	.60
6647	Shade—Compartment lamp shade	.30
6649	Escutcheon—Station selector—Package of 2	.44
6650	Escutcheon—Volume control—Package of 2	.44
7632	Transformer pack—Comprising input transformer, two reactors, one 2,400 mmfd., one 300 mmfd., one 0.02 mfd. capacitors, one 200,000 ohm and one 15,000 ohm resistor—In metal container	5.45
10241	Box—Needle box with lid—Package of 2	.60
	REPRODUCER ASSEMBLIES	
6184	Board—Terminal board complete with three terminals—Package of 5	.50
6556	Transformer—Output transformer	1.50
8969	Cone—Reproducer cone—Package of 5	6.35
9434	Coil assembly—Comprising field coil, magnet and cone support	4.66

Stock No.	DESCRIPTION	List Price
	AUTOMATIC RECORD CHANGER EJECT ARM ASSEMBLIES	
2917	Washer—Spring washer—Package of 10	$0.25
3655	Retainer—Ball retainer with three ball bearings	.45
3656	Bearing—Ejector tip bearing	.48
3657	Tip—Ejector tip	.30
3658	Ball—Ball bearing—Package of 20	.30
3660	Shaft—Eject arm shaft	.40
3661	Yoke—Eject arm yoke assembly	.80
3662	Plate—Ejector plate and felt pad—Package of 5	.95
3663	Spring—Eject arm horizontal action tension spring—Package of 10	.50
3665	Screw—Eject arm adjustment screw and nut—Package of 5.	.25
3729	Roller—Counter balance roller—Located inside of eject arm.	.45
3930	Cushion—Counter balance roller stop cushion and bracket—Located inside of eject arm	.18
6575	Cover—Eject arm cover	.90
7605	Arm—Eject arm assembly complete	4.30
	MOTOR ASSEMBLIES	
9011	Motor—Motor complete 105–125 volts—60 cycles	19.72
9012	Motor—Motor complete 105–125 volts—25 cycles	24.16
9013	Motor—Motor complete 105–125 volts—40 cycles	24.16
9014	Motor—Motor complete 105–125 volts—50 cycles	19.72
9015	Rotor and shaft for 60 cycle motor	7.00
9017	Rotor and shaft for 25 cycle motor	9.00
9019	Rotor and shaft for 40 cycle motor	9.00
9021	Rotor and shaft for 50 cycle motor	7.00
	MOTOR BOARD ASSEMBLIES	
2893	Spring—Trip lever tension spring—Package of 10	.30
2897	Screw—Cable lever tension spring adjustment screw and nut—Package of 5	.50
3322	Switch—Motor switch complete	.75
3653	Spring—Phosphor bronze—Trip pawl spring—Package of 5.	.30
3654	Roller—Guide roller assembly—Comprising bracket, roller, and guide pin	.34
3666	Spring—Cable lever tension spring—Package of 10	.44
3667	Plate—Actuating plate assembly	.42
3669	Screw—Special screw for holding main lever to actuating plate—Package of 5	.25
3670	Finger—Friction finger assembly	.32
3671	Lever—Manual index lever	.45
3672	Pin—Manual index lever pin	.42
3673	Screw—Manual index lever adjustment screw and nut—Package of 5	.20
3674	Escutcheon—Engraved MANUAL 12-10	.32
3675	Lever—Trip lever assembly	.90
3676	Spring—Cam and gear tension spring—Package of 10	.52
3677	Lever—Cable lever assembly	.40
3777	Motor mounting spring, washer, and stud assembly—Comprising three upper and three lower springs, six cup washers, three spring washers, and three studs—Package of 1 set	.62
3778	Spring—Main lever and link assembly tension spring—Package of 10	.55
6502	Cam and gear assembly	1.18
6503	Pawl—Trip pawl assembly	.40
6504	Lever—Main lever and link assembly	.80
10174	Springs—Automatic brake springs—One set of four springs—Package of 2 sets of 4	.50
10184	Plate—Automatic brake latch plate—Package of 5	.40
	PICKUP AND PICKUP ARM ASSEMBLIES	
3388	Screw—Pickup needle holding screw—Package of 10	.60
3417	Armature—Pickup armature	.72
3419	Screw—Pickup cover mounting screw—Package of 10	.40
3516	Damper and bushing assembly—Located at bottom of pickup arm base—Package of 1 set	.14
3680	Rest—Pickup rest	.18
3728	Coil—Pickup coil	.50
3732	Cover—Pickup cover	.50
3733	Back—Pickup housing back	.60
3734	Cover—Pickup back cover	.30
3735	Screw assembly—Pickup mounting screw assembly comprising one screw, one nut, and one washer—Package of 10	.60
3736	Rod—Automatic brake trip rod with lock nut—Pkg. of 5.	.30
3737	Damper—Package of 5	.65
3779	Escutcheon—Pickup arm escutcheon complete with mounting rivets	.46
6542	Pickup—Pickup unit complete	4.15
6543	Arm—Pickup arm complete less escutcheon, pickup, pickup mounting screw, nut, and washer	4.00
	TURNTABLE ASSEMBLIES	
3338	Ring—Clamp ring assembly—Comprising spring, latch lever, and stud	.50
3340	Washer—Thrust washer—Package of 2	.56
3341	Pin—Groove-Pin—Package of 2	.56
3342	Spring—Latch spring—Located on clamping ring—Package of 2	.56
3344	Cover—Grease retainer cover—Package of 2	.70
3346	Bushing—Speed shifter lever bushing—Package of 4	.66
3347	Spring—Speed shifter lever spring—Package of 2	.30
3678	Sleeve—Sleeve complete with ball race	2.24
3679	Lever—Speed shifter lever with mounting screws	.50
9010	Turntable—Complete	5.50

RCA Victor Company, Inc.

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