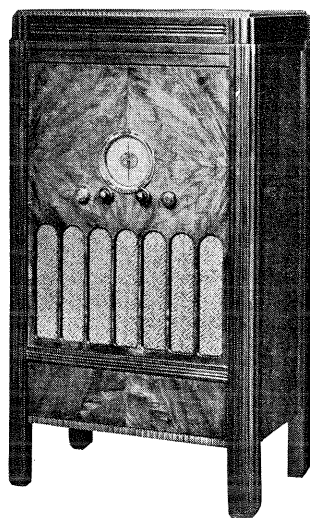


RCA Victor D. C. "Duo" Model 327

Six-Tube, 220-Volt D. C., Two-Band Radio-Phonograph

SERVICE NOTES



SERVICE DIVISION

RCA Victor Company, Inc.

Camden, N. J., U. S. A.

A RADIO CORPORATION OF AMERICA SUBSIDIARY

REPRESENTATIVES IN PRINCIPAL CITIES

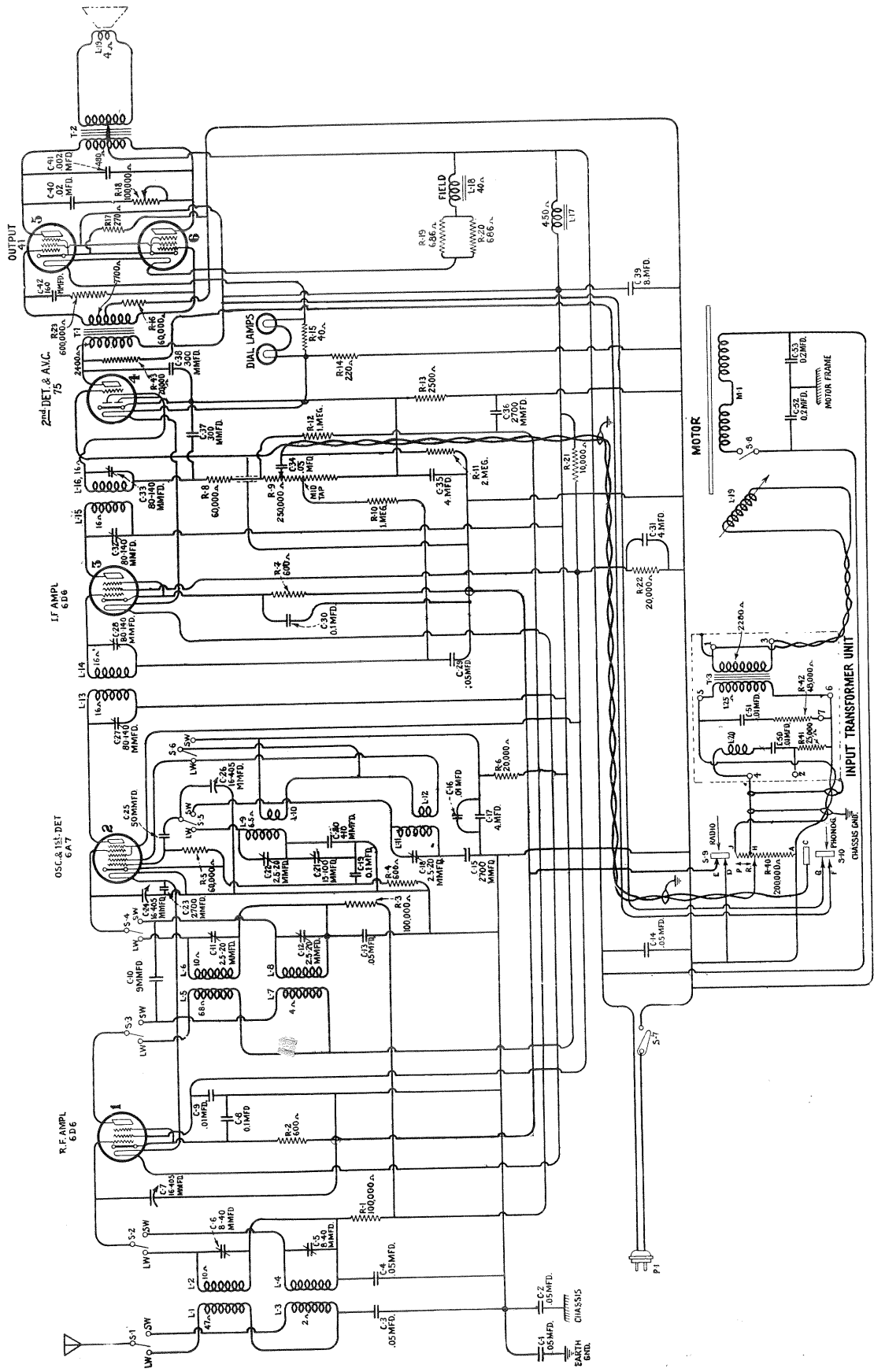


Figure 1—Schematic Circuit Diagram

RCA VICTOR MODEL 327

6-Tube, 220-Volt D. C., Two-Band Radio-Phonograph

SERVICE NOTES

ELECTRICAL SPECIFICATIONS

| | |
|---------------------------------------|---|
| Voltage Rating..... | 200-250 Volts D. C. |
| Power Consumption..... | 180 Watts Maximum |
| Number and Types of Radiotrons..... | 2 RCA-6D6, 1 RCA-6A7, 1 RCA-75, 2 RCA-41—Total, 6 |
| Tuning Ranges..... | 540 K. C.—1500 K. C. and 5400 K. C.—15,350 K. C. |
| Maximum Undistorted Power Output..... | 2.5 Watts |
| Line-up Frequencies..... | 370 K. C., 600 K. C., 1400 K. C., 15,000 K. C. |

PHYSICAL SPECIFICATIONS

| | |
|-------------|-----------|
| Height..... | 40 Inches |
| Width..... | 23 Inches |
| Depth..... | 16 Inches |

This radio-phonograph combination instrument uses a six-tube, two-band, 220-volt direct current superheterodyne chassis and the standard RCA Victor single-speed direct current motor board assembly. The receiver is designed to receive both the standard and short-wave broadcasting bands. The phonograph plays standard type (78 R. P. M.) records. Special features of the radio receiver include a double reduction vernier drive giving either a 10-1 or 50-1 ratio of speed reduction, a continuously variable tone control,

electro-dynamic type loudspeaker, automatic volume control and a high-gain push-pull power amplifier.

Excellent sensitivity, selectivity and tone quality are characteristics of this instrument. An "airplane" type dial, calibrated in frequency and showing the location of the short-wave bands, is a special feature. Small, compact size and unusual accessibility of parts are important service features. Figure 1 shows the schematic circuit, Figure 2 the chassis wiring, and Figure 3 the speaker wiring.

DESCRIPTION OF ELECTRICAL CIRCUIT

Radio Circuit

The signal enters the receiver through the antenna coupling transformer, the secondary of which is tuned and is applied to the grid of the RCA-6D6 R. F. amplifier. The output of this stage is then coupled through a tuned stage to the grid of the RCA-6A7, which is a combined first detector and oscillator. The oscillator maintains a constant frequency difference (370 K. C. higher) from the R. F. signal, with which it is combined in the first detector grid circuit. The output of the first detector is a 370 K. C. signal, which is of course the intermediate frequency.

Two sets of coils are provided for the R. F., oscillator and first detector coils for the two tuning ranges provided. A push-pull switch permits selection of the desired band.

The intermediate frequency amplifier consists of a single RCA-6D6 and two transformers, comprising four circuits, all of which are tuned.

The output of the I. F. amplifier is then applied to the RCA-75, which is the combined second detector,

automatic volume control and A. F. amplifier. The signal is applied to the diode electrodes of the tube, which act as a two-element rectifier. The direct current component of the rectified signal produces a voltage drop across resistor R-9. This voltage drop across R-9 constitutes the automatic bias voltage for the R. F., first detector and I. F. amplifier, which gives the automatic volume control action of the receiver. The volume control selects the amount of audio voltage that is applied to the RCA-75 and thereby regulates the audio output of the entire receiver.

The output of the RCA-75 is transformer coupled to the grid of the RCA-41 tubes, which constitute the output amplifier of the receiver. These are operated as a push-pull Pentode stage and give the receiver a high-gain audio amplifier (necessary for short-wave reception) and a large undistorted power output. The plate circuit of the output stage is matched to the cone coil of the reproducer by means of a step-down output transformer.

The tone control consists of a variable resistor and capacitor connected in series and placed across the plates of the output stage. Reducing the amount of resistance attenuates the high frequency response of the receiver.

The power supply is taken direct from the line. All tube heaters, the speaker field and the dial lamps are connected in series with a resistor and placed across the line. Plate and grid voltages use the same source, although suitable filters and resistors are used to properly filter the line and provide correct voltages.

Phonograph Circuit

The Phonograph facilities of this instrument are designed to produce high quality record reproduction

by utilizing the amplifier and reproducer unit of the radio receiver. A low impedance pickup unit, mounted on an inertia tone arm, is used to convert the mechanical variations of the record into electrical voltage variations. The output of the pickup is fed to the grid circuit of the RCA-75 second detector. A step-up transformer and compensated volume control is connected in the pickup circuit for adjusting the volume and maintaining the proper frequency characteristic for optimum reproduction. From the detector to the loudspeaker the pickup signal travels in the same channels as that of the audio frequency component of the radio signal.

SERVICE DATA

CAUTION—This receiver operates on 220-volt direct current without a transformer between the line and the various parts of the receiver, such as A. C. receivers use. It is therefore extremely important to use the utmost caution when operating the receiver outside of the cabinet. Also a knob must always be placed on the shaft of the main tuning capacitor, as under certain conditions the full line voltage is obtained between this point and ground.

(1) Line-Up Capacitor Adjustments

To properly align this receiver, it is essential that a modulated R. F. oscillator, such as Stock No. 9050, an output indicator (Stock No. 4317) and an alignment tool (Stock No. 4160) be available. Figure 4 shows the location of the various line-up capacitors.

I. F. Tuning Adjustments

Two transformers comprising four tuned circuits are used in the intermediate amplifier. These are tuned to 370 K. C. and the adjustment screws are accessible as shown in Figure 4. Proceed as follows:

- (a) 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 ground terminal.
- (b) Connect the test oscillator output between the first detector control grid and chassis ground, preferably through a series condenser. 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.
- (c) Adjust the secondary and primary of the first and then the second 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 R. F. line-up capacitors are located at the bottom of the coil assemblies instead of their usual

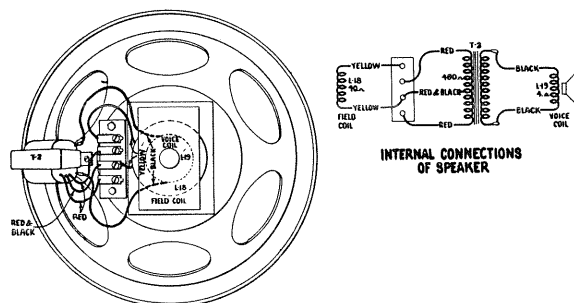


Figure 3—Loudspeaker Wiring

position on the gang capacitor. They are all accessible from the bottom of the chassis except the 600 K. C. series capacitor, which is accessible from the rear of the chassis. Proceed as follows:

- (a) Connect the output of the oscillator to the antenna and ground terminals of the receiver. Check the position of the indicator pointer when the tuning capacitor plates are fully meshed. It should be coincident with the radial line adjacent to the dial reading of 54. Then set the Test Oscillator at 1400 K. C., the dial indicator at 140 and the oscillator output so that a slight deflection will be obtained in the output meter when the volume control is at its maximum position.
- (b) With the Range Switch at the "in" position, adjust the three trimmers under the three R. F. coils, designated as L in Figure 4, until a maximum deflection is obtained in the output meter. Then shift the Test Oscillator fre-

quency to 600 K. C. The trimmer capacitor, accessible from the rear of the chassis, should now be adjusted for maximum output while rocking the main tuning capacitor back and forth through the signal. Then repeat the 1400 K. C. adjustment.

- (c) Now place the Range Switch at the "out" position, shift the Test Oscillator to 15,000 K. C. and set the dial at 150. Adjust the three trimmer capacitors designated as S in Figure 4 for maximum output, beginning with the oscillator trimmer. It will be noted that the oscillator and first detector trimmers will have two positions at which the signal will give maximum output. The position which uses the lower trimmer capacitance, obtained by tuning the screw counter-clockwise, is the proper adjustment for the oscillator, while the position that uses a higher capacitance is correct for the detector. *Both of these adjustments must be made as indicated irrespective of output.* The R. F. is merely peaked. In conjunction with the detector adjustments, it is necessary to rock the main tuning capacitor back and forth while making the adjustment. This completes the line-up adjustments.

The important points to remember are the need for using the minimum oscillator output to obtain a deflection in the output meter with the volume control at its maximum position and the manner of obtaining the proper high frequency oscillator and detector adjustments.

(2) Radiotron Socket Voltages

The following voltages are those at the various tube sockets while the receiver is in operating condition. No allowance has been made for currents drawn by the meter, and if lower resistance meters are used, such allowances must be made.

(3) Service Data on 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.

(4) Replacing Magnet Coil, Pivot Rubbers, Armature or Damping Block

In order to replace a defective coil or the hardened pivot rubbers (see Figure 8), 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.
- (d) Remove screws A and B, Figure 8, 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

RADIOTRON SOCKET VOLTAGES

220-Volt, D. C. Line—No Signal

| Radiotron No. | Cathode to B— Volts, D. C. | Screen Grid to B— Volts, D. C. | Plate to B— Volts, D. C. | Plate Current, M. A. | Heater Volts, A. C. |
|---------------------|----------------------------|--------------------------------|--------------------------|----------------------|---------------------|
| RCA-6D6 R. F. | 3.0 | 90 | 200 | 6.0 | 6.4 |
| RCA-6A7 | 1st Detector | 90 | 200 | 2.6 | 6.4 |
| | Oscillator | — | 125 | 3.3 | |
| RCA-6D6 I. F. | 3.0 | 90 | 200 | 6.0 | 6.4 |
| RCA-75 2nd Detector | 1.5 | — | 200 | 0.7 | 6.4 |
| RCA-41 Power | 13.0 | 190 | 205 | 25.0 | 6.4 |
| RCA-41 Power | 13.0 | 190 | 205 | 25.0 | 6.4 |

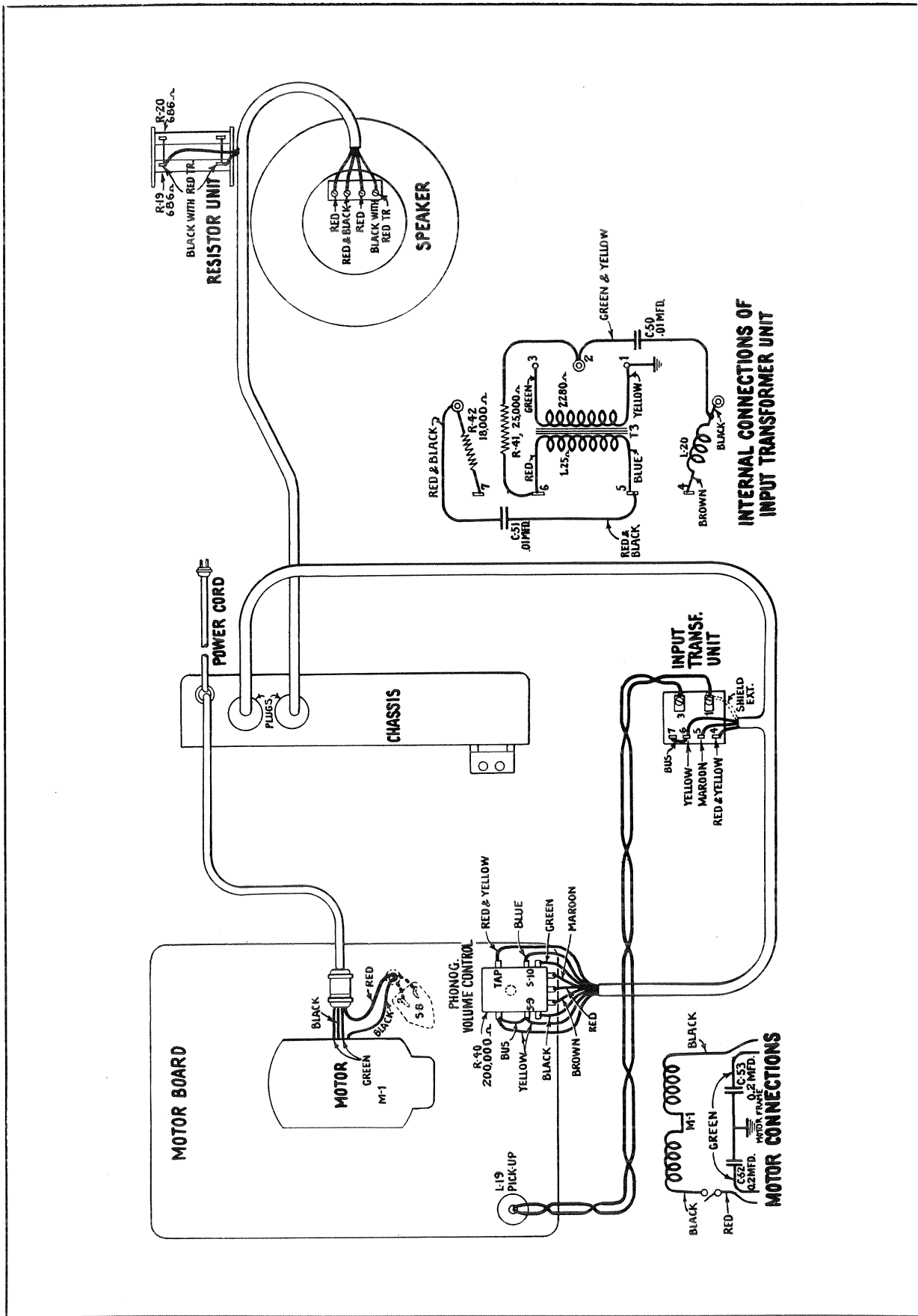


Figure 6—Assembly Wiring Diagram

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 8), and sliding the mechanism slightly in relation to the pole pieces.

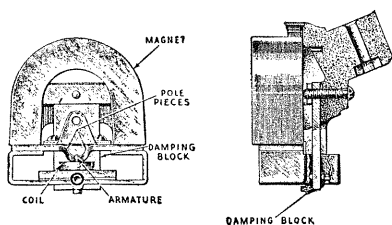


Figure 7

- (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 .009" 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.

(5) 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.
- (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.

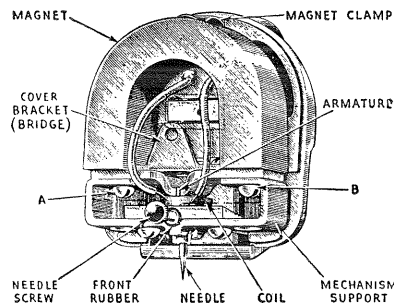


Figure 8

- (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 9, 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 acid flux). After tinning, dip the parts in water to wash off the acid flux and thereby prevent serious

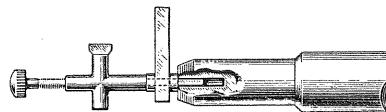


Figure 9

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 air gap 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 | Stock No. | DESCRIPTION | List Price |
|----------------------------|--|------------|------------------------------|--|------------|
| RECEIVER ASSEMBLIES | | | | | |
| 10194 | Ball—Steel ball for condenser drive assembly—Package of 20..... | \$0.25 | 6242 | Resistor — 2 megohms — Carbon type — ¼ watt (R11)—Package of 5..... | \$1.00 |
| 2747 | Cap—Contact cap—Package of 5..... | .50 | 6303 | Resistor—20,000 ohms—Carbon type—½ watt (R43)—Package of 5..... | 1.00 |
| 3938 | Capacitor—9 mmfd. (C10)..... | .25 | 4337 | Resistor—270 ohms—Carbon type—1 watt (R17)—Package of 10..... | 2.20 |
| 3849 | Capacitor—50 mmfd. (C25)..... | .30 | 6114 | Resistor — 20,000 ohms — Carbon type — 1 watt (R6, R22)—Package of 5..... | 1.10 |
| 6314 | Capacitor—160 mmfd. (C42)—Package of 5..... | 2.00 | 4339 | Resistor — 260 ohms — Porcelain type — Tapped at 220 ohms (R14, R15)..... | .52 |
| 4352 | Capacitor—300 mmfd. (C37, C38)..... | .25 | 3991 | Resistor — 10,000 ohms — Porcelain type (R21)..... | .60 |
| 4297 | Capacitor—410 mmfd. (C20)..... | .30 | 3943 | Screen—Translucent celluloid screen—For dial lamps—Package of 2..... | .18 |
| 4031 | Capacitor—2700 mmfd. (C15, C23, C36)... | .50 | 3878 | Screw—No. 4—40—⅜ headless cup point set screw for fastening station selector pointer—Package of 20..... | .25 |
| 3701 | Capacitor—0.01 mfd. (C9, C16)..... | .30 | 3768 | Screw—Square head No. 6—32—¼ set screw for condenser driver—Package of 10..... | .35 |
| 4211 | Capacitor—0.05 mfd. (C1, C2, C3, C14, C34)..... | .30 | 6704 | Shaft—Tuning condenser drive shaft assembly..... | .64 |
| 3901 | Capacitor—0.05 mfd. (C4, C13)..... | .36 | 4145 | Shield—First detector and oscillator Radiotron shield..... | .30 |
| 3888 | Capacitor—0.05 mfd. (C29)..... | .25 | 4103 | Shield—I. F. amplifier Radiotron shield..... | .20 |
| 3877 | Capacitor—0.1 mfd. (C8, C19, C30)..... | .32 | 3950 | Shield—R. F. amplifier Radiotron shield..... | .26 |
| 3796 | Capacitor—4.0 mmfd. (C35)..... | .60 | 4216 | Shield—Radiotron shield top..... | .10 |
| 6986 | Capacitor—8.0 mmfd. (C39)..... | 1.60 | 4215 | Shield—Second detector Radiotron shield..... | .15 |
| 3861 | Capacitor—Adjustable trimmer capacitor (C21)..... | .78 | 3529 | Socket—Dial lamp socket..... | .32 |
| 6985 | Capacitor — Comprising two 4.0 mmfd. capacitors (C17, C31)..... | 1.50 | 6676 | Socket—6-contact Radiotron socket..... | .40 |
| 4373 | Capacitor pack—Comprising one 0.002 mfd. and one 0.02 mfd. capacitors (C40, C41)..... | .30 | 7485 | Socket—6-contact second detector and AVC Radiotron socket..... | .40 |
| 6983 | Coil—Antenna coil (L1, L2, L3, L4, C5, C6)..... | 2.68 | 3572 | Socket—7-contact Radiotron socket..... | .38 |
| 6700 | Coil—Oscillator coil (L9, L10, L11, L12, C18, C22)..... | 2.30 | 6696 | Switch—Range switch (S1, S2, S3, S4, S5, S6)..... | 2.24 |
| 6699 | Coil—R. F. coil (L5, L6, L7, L8, C11, C12)..... | 2.44 | 6697 | Transformer—First intermediate frequency transformer (L13, L14, C27, C28)..... | 1.80 |
| 6694 | Condenser—3-gang variable tuning condenser (C7, C24, C26)..... | 3.75 | 6698 | Transformer—Second intermediate frequency transformer (L15, L16, C32, C33)..... | 1.78 |
| 6841 | Dial—Station selector dial scale—Package of 5..... | 2.74 | 6987 | Transformer pack—Audio transformer pack—Comprising one reactor and one inter-stage transformer (T1, L17)..... | 4.50 |
| 4467 | Drive—Variable tuning condenser drive assembly complete..... | 2.40 | 6705 | Tone control (R18, S7)..... | 1.20 |
| 4340 | Lamp—Dial lamp—Package of 5..... | .60 | 6695 | Volume control (R9)..... | 1.20 |
| 3906 | Mounting assembly — Variable condenser mounting assembly—Comprising 3 bushings, 3 lock-washers, 3 nuts and 3 washers—Package of 1 set..... | .28 | REPRODUCER ASSEMBLIES | | |
| 3940 | Pointer—Station selector indicator—Package of 5..... | .50 | 4600 | Cable—Reproducer cable—4-conductor with male section of connector—From receiver to resistors and reproducer..... | .60 |
| 3218 | Resistor—600 ohms—Carbon type—¼ watt (R2, R4, R7)—Package of 5..... | 1.00 | 7825 | Coil—Field coil, magnet and cone support (L18)..... | 4.38 |
| 4338 | Resistor — 2500 ohms — Carbon type — ¼ watt (R13)—Package of 10..... | 2.00 | 8969 | Cone—Reproducer cone (L19)—Package of 5..... | 6.35 |
| 3602 | Resistor—60,000 ohms—Carbon type—¼ watt (R5, R8, R16)—Package of 5..... | 1.00 | 7824 | Reproducer complete..... | 8.00 |
| 3118 | Resistor—100,000 ohms—Carbon type—¼ watt (R1, R3)—Package of 5..... | 1.00 | 4599 | Transformer—Output transformer (T2)..... | 1.34 |
| 3439 | Resistor—600,000 ohms—Carbon type—¼ watt (R23)—Package of 5..... | 1.00 | | | |
| 3033 | Resistor—1 megohm—Carbon type—¼ watt (R10, R12)—Package of 5..... | 1.00 | | | |

REPLACEMENT PARTS—Continued

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

| Stock No. | DESCRIPTION | List Price | Stock No. | DESCRIPTION | List Price |
|---------------------------|---|------------|--------------------------|---|------------|
| MOTOR ASSEMBLIES | | | TURNTABLE ASSEMBLIES | | |
| 3524 | Brush—Motor brush—Package of 2 | \$0.60 | 7084 | Cover—Turntable cover | \$0.40 |
| 3525 | Cap—Brush holder cap for motor brush— Package of 2 | .64 | 7838 | Turntable complete | 2.15 |
| 4598 | Capacitor—Motor capacitor—Two 2.0 mfd. capacitors (C52, C53) | .98 | MISCELLANEOUS ASSEMBLIES | | |
| 4596 | Escutcheon—Speed regulator escutcheon | .36 | 4677 | Bezel—Metal bezel (escutcheon) for station selector dial glass | .56 |
| 3487 | Governor assembly—Comprising friction disc, two springs and two balls—Assembled and mounted | 2.00 | 4594 | Box—Needle box | .30 |
| 3489 | Indicator pointer—Speed indicator pointer complete, with mounting screws and washers | 1.65 | 4592 | Cable—Phonograph input cable—9-conductor —From chassis to input transformer and volume control | 2.25 |
| 7823 | Motor—220—volt D. C. motor complete (M1) | 34.66 | 6614 | Glass—Station selector dial glass | .30 |
| 3488 | Pin—Governor (speed) regulator pin | .30 | 3829 | Knob—Phonograph volume control knob— Package of 5 | 1.10 |
| 4597 | Screw—Motor mounting screw assembly— Comprising four screws, four spacers, four lockwashers and four nuts | .22 | 6989 | Knob—Range switch or tone control knob— Package of 5 | .65 |
| PICKUP AND ARM ASSEMBLIES | | | 6991 | Knob—Station selector knob—Package of 5 | 1.15 |
| 7821 | Arm—Pickup arm complete, less escutcheon and pickup | 5.36 | 6990 | Knob—Volume control knob—Package of 5 | 1.15 |
| 3417 | Armature—Pickup armature | .72 | 3824 | Nut—Cap nut for motor board suspension assembly—Package of 4 | .82 |
| 6346 | Back—Pickup housing back | .45 | 9050 | Oscillator—Test oscillator 90–25,000 K. C. | 29.50† |
| 3385 | Coil—Pickup coil (L30) | .50 | 4601 | Plug—4-prong male section of connector plug for reproducer cable | .54 |
| 3386 | Cover—Pickup cover | .56 | 4602 | Plug—7-prong male section of connector plug for reproducer cable | .56 |
| 3418 | Cushions—Pickup rubber cushions—Compris- ing one damper and two spacer cushions and one damper bushing—5 sets | 1.10 | 4341 | Resistor—Porcelain type—686 ohms (R19, R20) | 2.12 |
| 3390 | Escutcheon—Pickup arm escutcheon complete with mounting rivets | .46 | 4678 | Ring—Retaining ring for dial glass—Package of 5 | .34 |
| 6335 | Pickup—Pickup unit complete | 4.00 | 4342 | Screw—Receiver mounting screw assembly— Comprising four bushings, four screws and four washers | .30 |
| 3389 | Rod—Automatic brake trip rod with lock nut —Package of 5 | .40 | 4591 | Screw assembly—Receiver chassis mounting assembly—Comprising eight cushions, four screws, four washers and four spacers | .44 |
| 3387 | Screw assembly—Pickup mounting screw as- sembly comprising one screw, one nut and one washer—10 sets | .40 | 4160 | Screwdriver—Combination insulated screw- driver and socket wrench for I. F. and R. F. adjustments | 1.00 |
| 3388 | Screw—Pickup needle holding screw—Pack- age of 10 | .60 | 4593 | Socket—4-contact socket for reproducer cable plug | .42 |
| 3419 | Screw—Pickup cover mounting screw—Pack- age of 10 | .40 | 4595 | Socket—7-contact socket for phonograph in- put cable plug | .52 |
| SWITCH ASSEMBLIES | | | 3391 | Suspension spring and washer assembly—For motor board—Comprising one bolt, one top spring, one bottom spring, two cup washers, one "C" washer and one nut | .50 |
| 3994 | Cover—Motor switch cover | .26 | 4603 | Transformer—Input transformer pack— Comprising one input transformer, one choke coil, one 18,000 ohm resistor, one 25,000 ohm resistor and two 0.01 mfd. capacitors (T3, L20, R41, R42, C50, C51) | 4.65 |
| 10184 | Plate—Automatic brake latch plate—Package of 5 | .40 | 4590 | Volume control—Phonograph volume con- trol (R40, S9, S10) | 2.18 |
| 10174 | Springs—Automatic brake springs—Package of 4 | .50 | | | |
| 6896 | Switch—Eccentric automatic switch complete | 2.50 | | | |
| 3322 | Switch—Motor switch (S8) | .75 | | | |

† Full discount not allowed.