RCA VICTOR MODEL D7-7

Seven-Tube, Three-Band, A-C, Radio-Phonograph

SERVICE NOTES

Electrical Specifications

FREQUENCY RANGES

Band A	540- 1,625 kc.
Band B	1,625- 5,700 kc.
Band C	5,700-18,000 kc.

ALIGNMENT FREQUENCIES

Band A	600 kc. (osc.), 1,400 kc. (osc., det., ant.)
Band B	None required
Band C	18,000 kc. (osc., det., ant.)

Intermediate Frequency ..... 460 kc

RADIOTRON COMPLEMENT

(1) RCA-6K7	Radio-Frequency Amplifier
(2) RCA-6A8	First Detector-Oscillator
(3) RCA-6K7	Intermediate Amplifier
(4) RCA-6H6	Second Detector-A.V.C.
(5) RCA-6F5	Audio Voltage Amplifier
(6) RCA-6F6	Audio Power Amplifier
(7) RCA-80	Full-Wave Rectifier

POWER SUPPLY RATINGS

Rating A-6	105-125 Volts, 60 Cycles, 105 Watts
Rating A-5	105-125 Volts, 50 Cycles, 105 Watts
Rating B-2	105-125 Volts, 25 Cycles, 110 Watts
Rating C-6	105-130/140-160/200-250 Volts, 60 Cycles, 105 Watts
Rating C-5	105-130/140-160/200-250 Volts, 50 Cycles, 105 Watts

LOUDSPEAKER

Type	12-inch Electrodynamic
Voice Coil Impedance	2¼ Ohms at 400 Cycles

POWER OUTPUT RATINGS

Undistorted	2¼ Watts
Maximum	5 Watts

PHONOGRAPH

Type	Manual
Turntable Speed	78 R.P.M.
Type of Pickup	High-Impedance Magnetic
Pickup Impedance	1,400 Ohms at 1,000 Cycles

Mechanical Specifications

Height	39¼ inches
Width	23 9/16 inches
Depth	14⅛ inches
Weight (Net)	65 pounds
Weight (Shipping)	85 pounds
Chassis Base Dimensions	13⅞ inches x 7⅝ inches x 2½ inches

General Description

The RCA Victor Model D7-7 combination instrument consists of a seven tube radio receiver and a manually operated phonograph combined in the one cabinet. An improved 12-inch dynamic loudspeaker provides excellent reproduction and readily handles the high level of sound energy obtainable from the output of this instrument.

Magic Brain

The radio receiver incorporates the Junior "Magic Brain" which is a scientifically correct co-ordination of all the parts of the r-f, oscillator, and first detector functions of a Superheterodyne Receiver. This arrangement provides greater efficiency, especially in

the short-wave ranges, as all lead lengths are kept as short as possible and all sockets and other parts are located for best possible operation.

RCA All-Metal Tubes

The new metal tubes are used in the radio receiver for amplifying and detecting purposes. These tubes make possible a greater range of stable amplification not previously attainable with corresponding glass types. Their metal envelopes form a perfect electrostatic and electromagnetic shield, precluding the former necessity for elaborate shielding by means of cans. The metal tubes are especially adaptable to the modern, extended-range receivers because of their efficient shielding and their favorable internal characteristics.

Phonograph Mechanism

The phonograph mechanism is of the manually operated type, having a synchronous motor which rotates the turntable at a speed of 78 R.P.M. The 10-inch turntable will accommodate either the 10-inch or 12-inch phonograph records. The pickup mechanism and tone arm are combined as one unit. The instrument may be purchased with any one of five ratings as specified under Electrical Specifications. *It is important that a machine of any particular rating be operated at the frequency and voltage for which it is rated.* Attempts to operate at ratings other than specified for the particular instrument will result in improper reproduction from the phonograph and may result in damage to both the phonograph motor and radio receiver. An automatic switch is provided to turn "off" the phonograph motor at the completion of record play.

Tuning Dial

The tuning dial is an illuminated semi-airplane type. Each band is distinctively marked with a separate color for each band. Positions of the range selector knob are plainly marked on the control panel with letters indicating each band position placed over color strips corresponding to the band colors on the dial. The tuning control is of the dual-ratio type which permits fast tuning through a 10-to-1 drive ratio and vernier tuning through a 50-to-1 drive ratio. The latter is especially advantageous for accurate tuning of the short-wave stations. The new shock-proof condenser mounting reduces microphonic tendencies to a minimum.

Circuit Arrangement

The conventional Superheterodyne type of circuit, consisting of an r-f stage, a combined first-detector–oscillator stage, a single i-f stage, a diode-detector automatic-volume-control stage, an audio voltage amplifier stage, an audio power output stage and a high-voltage rectifier power-supply stage, is used.

Tuned Circuits

The antenna coil system and the detector coil system each consist of a single primary and three series-connected secondary windings to provide the three ranges of tuning. The oscillator coil system is similarly wound on a single form. A range selector switch (S-1) is used for connecting the various sections of these three coil systems into the circuit to provide operation on the band desired. The coils are tuned by a variable three-section gang condenser having trimmer capacitors in shunt with each section. There are additional trimmer capacitors across the section of each coil used for Band "A." A series trimmer is also associated with the Band "A" oscillator coil.

The intermediate frequency amplifier system consists of an RCA-6K7 in a transformer-coupled circuit. This stage operates at a basic frequency of 460 kc. Each winding of both i-f transformers (input and output) is tuned by an adjustable trimmer.

Detector and A.V.C.

The modulated signal as obtained from the output of the i-f stage is detected by an RCA-6H6 twin-diode tube. The audio frequency secured by this process is transferred to the a-f system for amplification and final reproduction. The d-c voltage which results from detection of the signal is used for automatic volume control. This voltage, which develops across resistor R-8, is applied as automatic control-grid bias to the r-f, first-detector, and i-f tubes through a suitable resistance filter circuit. The second (auxiliary) diode of the RCA-6H6 is used to supply residual bias for the controlled tubes under conditions of little or no signal. This diode, under such conditions, draws current which flows through resistors R-8 and R-9, thereby maintaining the desired minimum operating bias on such tubes. On application of signal energy above a certain level, however, the auxiliary bias-diode ceases to draw current and the a.v.c. diode takes over the biasing function.

Audio System

The manual volume control consists of an acoustically tapered potentiometer in the audio circuit between the output of the detector diode and the input grid of the audio-voltage-amplifier tube. This control has a tone compensating filter connected to it so that the correct aural balance will be obtained at different volume settings.

Resistance-capacitance coupling is used between the first audio stage and the power output stage. The output of the power amplifier is transformer-coupled into the dynamic loudspeaker. High-frequency tone control is effected by a capacitor across the plate circuit of the output tube. Speech-music control is effected by a resistor connected to the compensated volume control circuit. Control of tone is obtained by means of the switch (S-2).

Rectifier

The power required for operation of this receiver is supplied through transformer T-1. This transformer has an efficient electrostatic shield between its primary

and secondary windings. This shield prevents interference which is on the power-supply circuit from entering the receiver and conversely reduces the tendency of the receiver to re-radiate into the power circuit. An RCA-80 furnishes the d-c voltages necessary for plate, screen, cathode, and grid potentials. The field winding of the loudspeaker is used as a reactor in the filter circuit from which it simultaneously receives its magnetizing current. The heaters of all Radiotrons are supplied from a low voltage (6.3 volt) winding on the power transformer. One side of this winding is at ground potential.

SERVICE DATA

The various diagrams of this bulletin contain such information as will be needed to isolate causes for defective operation when such a condition develops. Values of the resistors, capacitors, coils, etc., are indicated adjacent to the symbols signifying these parts on the diagrams. Identification titles, such as R-3, L-2, C-1, etc., are provided for reference between the diagrams and the replacement parts list. Locating of the parts in the schematic circuit is facilitated by the fact that the numerical titles increase from left to right on the diagram. The coils, reactors, and transformer windings are rated in terms of their d-c resistances only. Resistances of less than one ohm are generally omitted.

Alignment Procedure

Precise alignment is vital to the proper functioning of this receiver. There are four trimming adjustments provided in the i-f system, three in the oscillator coil system, two in the detector coil system, and two in the antenna coil system. Each of these trimmers has been accurately adjusted during manufacture and should remain properly aligned unless affected by abnormal conditions of climate or have been altered for service purposes. Incorrect alignment is usually evidenced by loss of sensitivity, improper tone quality, and poor selectivity. These indications will generally be present together.

The correct performance of the receiver can only be obtained when the alignment is performed with adequate and reliable test apparatus. The manufacturer of this instrument has a complete assortment of such service equipment available. This equipment, illustrated and described on a separate page of this booklet, may be purchased from authorized distributors and dealers.

An oscillator (signal generator) is required as a source of the specified alignment frequencies. Visual indication of the receiver output during the adjustments is necessary to enable the serviceman to obtain an accuracy of alignment which is not possible by listening to the signal. **The RCA Victor Stock No. 9595 Full-Range Oscillator and the RCA Victor Stock No. 4317 Neon Output Indicator are especially suitable and fulfill the above requirements.**

The following procedure should be followed in adjusting the various trimmer capacitors:

I-F Trimmer Adjustments

The four trimmers of the two i-f transformers are located as shown by Figure 6. Each must be aligned to a basic frequency of **460 kc.** To do this, attach the Output Indicator across the voice coil circuit or across the output transformer primary. Connect the output of the test oscillator between the control-grid of the RCA-6A8 first detector tube and chassis-ground. Tune the oscillator to **460 kc.** Advance the receiver volume control to its full-on position and adjust the receiver tuning control to a point within its range where no interference is encountered either from local broadcast stations or the heterodyne oscillator. Increase the output of the test oscillator until a slight indication is apparent on the output indicator. Then adjust the two trimmers, **C-25** and **C-26,** of the second i-f transformer to produce maximum (peak)

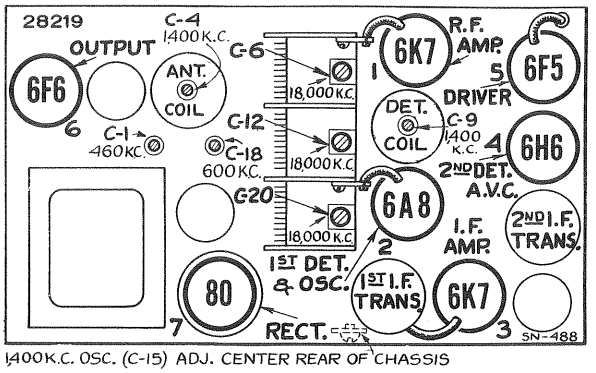


Figure 1—Radiotron and Coil Locations

indicated receiver output. Then, adjust the two trimmers, **C-23** and **C-24,** of the first i-f transformer for maximum (peak) receiver output as shown by the indicating device. During these adjustments, regulate the test oscillator output so that the indication is always as low as possible. By doing so, broadness of tuning due to a.v.c. action will be avoided. It is advisable to repeat the adjustment of all i-f trimmers a second time to assure that the inter-action between them has not disturbed the original adjustment.

R-F Trimmer Adjustments

The seven trimmers associated with the r-f, first detector, and oscillator tuned circuits have their locations shown by Figure 1. The three trimmers which are at all times directly in shunt with the variable tuning condenser necessitate that the high-frequency range (Band C) be aligned first. The range selector switch should, therefore, be turned to its Band C position for the first adjustment. The Output Indicator should be left connected to the output system. Attach the output terminals of the test oscillator to the antenna and ground terminals of the receiver.

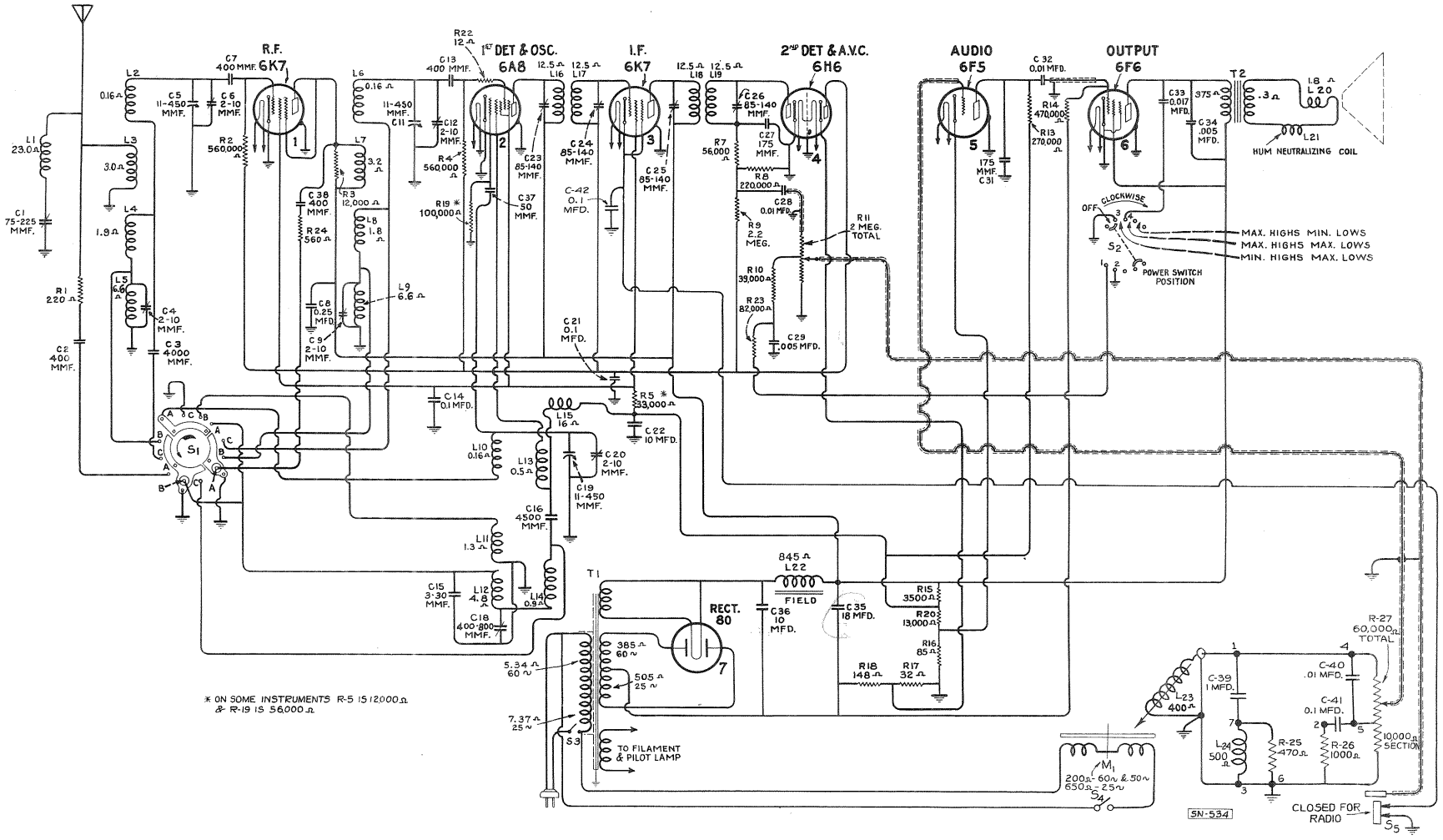


Figure 2—Schematic Circuit Diagram

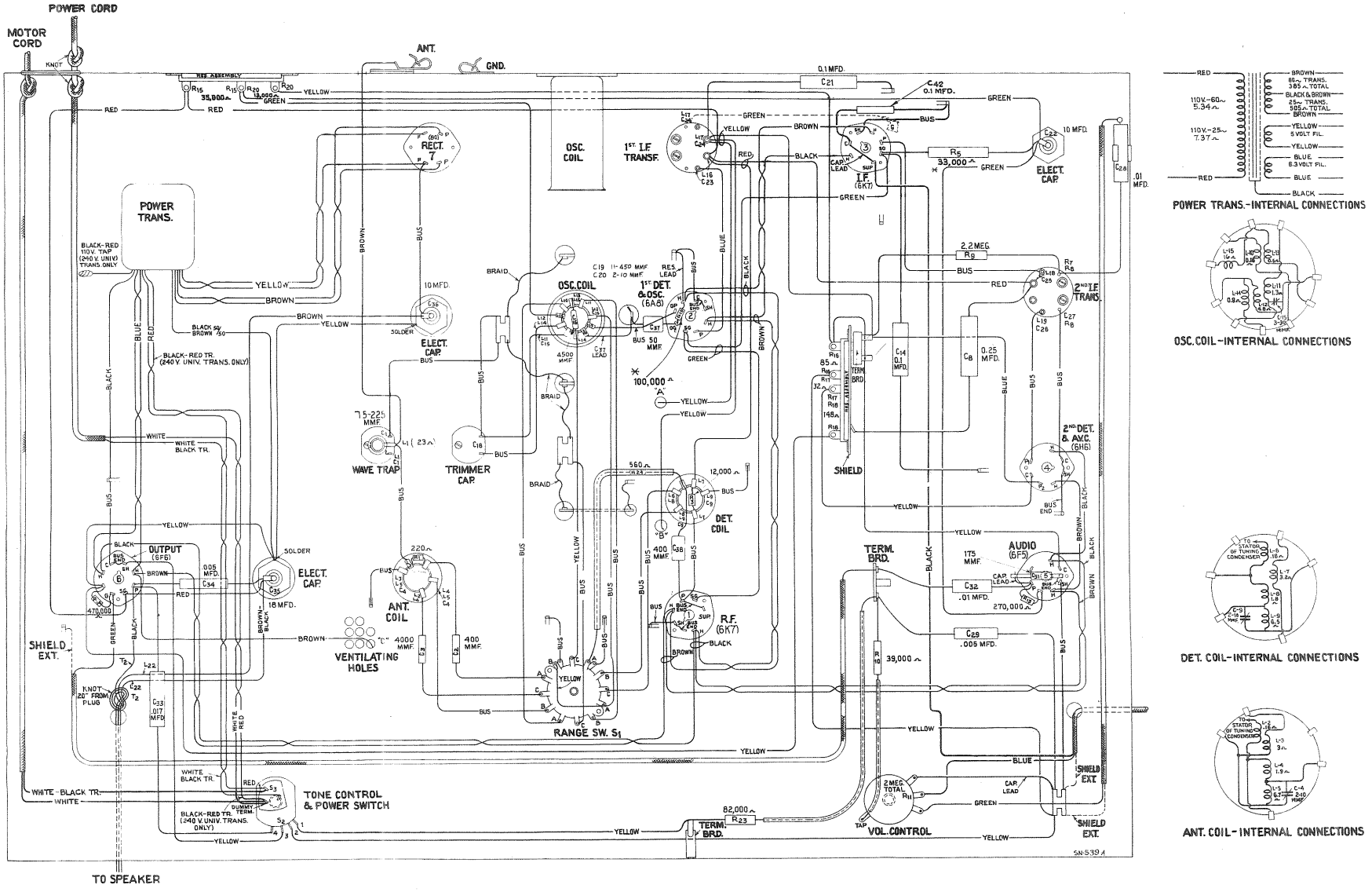


Figure 3—Chassis Wiring Diagram

Calibrate the dial by rotating the tuning control until the variable condenser plates are in their full mesh (maximum capacity) position and adjusting the dial pointer so that its end points to the ***horizontal*** graduation (530 kc.) at the low frequency end of the Band A scale.

Proceed further as follows:

(a) Adjust the test oscillator to **18,000 kc.** and set the receiver tuning control to a dial reading of **18,000 kc.**

(b) Regulate the output of the test oscillator until a slight indication is perceptible at the receiver output. Then adjust the trimmer, **C-20**, on the oscillator section of the variable condenser to the point at which it produces maximum indicated receiver output. Two points may be found, each of which produces such a maximum. The one of ***maximum trimmer capacitance*** is correct and should be used. (The oscillator will be 460 kc. below the signal frequency at this adjustment point.)

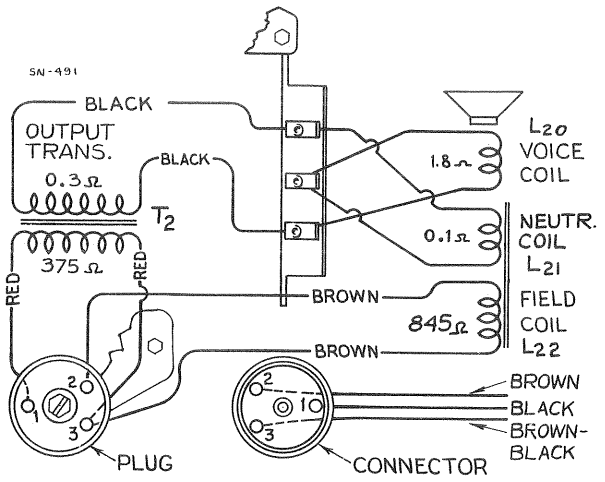


Figure 4—Loudspeaker Wiring

(c) Adjust the trimmer, **C-12**, of the detector section of the variable condenser, simultaneously rocking the receiver tuning control backward and forward through the **18,000 kc.** input signal, until maximum receiver output results from these combined operations. Rocking of the variable condenser will prevent inaccurate adjustment which would otherwise be caused by the inter-action between the heterodyne oscillator circuit and the detector tuned circuit.

(d) With the receiver tuning control set to **18,000 kc.** adjust the trimmer, **C-6**, on the antenna section of the variable condenser to the point which produces maximum (peak) indicated receiver output.

(e) Change the receiver range selector to its Band A position and set the receiver tuning control to a dial reading of **1,400 kc.** Tune the test oscillator to **1,400 kc.** and regulate its output to produce a slight indication on the receiver output indicating device.

(f) Adjust the high frequency trimmers of the Band A oscillator, detector, and antenna coils, **C-15, C-9,** and **C-4** respectively, to the points at which each produces maximum indicated receiver output.

(g) Shift the test oscillator frequency to **600 kc.** and tune the receiver to pick up this signal, disregarding the dial reading at which it is best received.

(h) Tune the low frequency trimmer, **C-18**, of the oscillator Band A coil, simultaneously rocking the tuning control of the receiver backward and forward through the signal, until maximum indicated receiver output results from these combined operations. The adjustment of **C-20, C-12,** and **C-6** should be corrected at **18,000 kc.** as in (b), (c), and (d); also **C-15, C-9,** and **C-4** should be corrected at **1,400 kc.** as in (f) to compensate for any changes caused by the adjustment of the low frequency oscillator coil trimmer.

Radiotron Socket Voltages

The voltage values indicated from the Radiotron socket contacts to chassis on Figure 6 will assist in the location of causes for faulty operation. Each value as specified should hold within ± 20% when the receiver is normally operative at its rated supply voltage. Variations in excess of this limit will usually be indicative of trouble in the basic circuits. The voltages given are actual operating values and do not allow for inaccuracies which may be caused by the loading effect of a voltmeter's internal resistance. This resistance should be duly considered for all readings. The amount of circuit resistance shunting the meter during measurement will determine the accuracy to be obtained, the error increasing as the meter resistance becomes comparable to or less than the circuit resistance. For the majority of readings, a meter having an internal resistance of 1000 ohms per volt will be satisfactory when the range used for each reading is chosen as high as possible consistent with good readability.

Universal Transformer

The special transformer used on some receivers of this type is adaptable to several ranges of voltage as given under Rating C of Electrical Specifications. Its schematic and wiring are shown by Figure 5. Terminals are provided at the top of the transformer case for changing the primary connections to suit the voltage available. Note that a 110-volt tap is brought out separately for supplying a phonograph motor.

Wave-Trap Adjustment

With the receiver in operation using its normal antenna, tune station selector to the point at which the intermediate frequency interference is most intense. Then adjust the wave trap trimmer to the point which

causes maximum suppression of the interference. This trimmer is adjusted to 460 kc. during manufacture, however, local conditions may require a readjustment, depending upon the interfering frequency.

Phonograph Mechanism

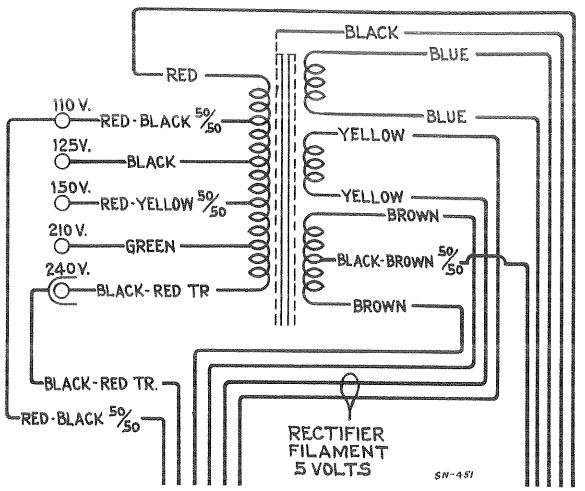
The phonograph motor is of the synchronous type and designed to be simple and foolproof. Under normal operating conditions, service difficulties should be negligible. Occasionally, however, certain adjustments may be required. These adjustments are illustrated and explained in Figure 8.

Magnetic Pickup

The pickup used in the phonograph unit is of an improved design. The horseshoe magnet is rigidly welded to the pole pieces and is irremovable. There is a centering spring attached to the armature to maintain proper adjustment and to provide a limiting effect on the movement of the armature. The frequency response is substantially uniform over a wide range. Service operations which may be necessary on the pickup are as follows:

Centering Armature

Refer to Figure 9 showing the pickup inner structure. The armature is shown in its proper relation to the magnet pole pieces, i. e., exactly centered. Whenever this centering adjustment has been disturbed it will be necessary to remove the pickup mechanism from the tone arm by removing the needle holding



Primary Resistance—10.5 ohms, Total
Secondary Resistance—330 ohms, Total

Figure 5—Universal Transformer

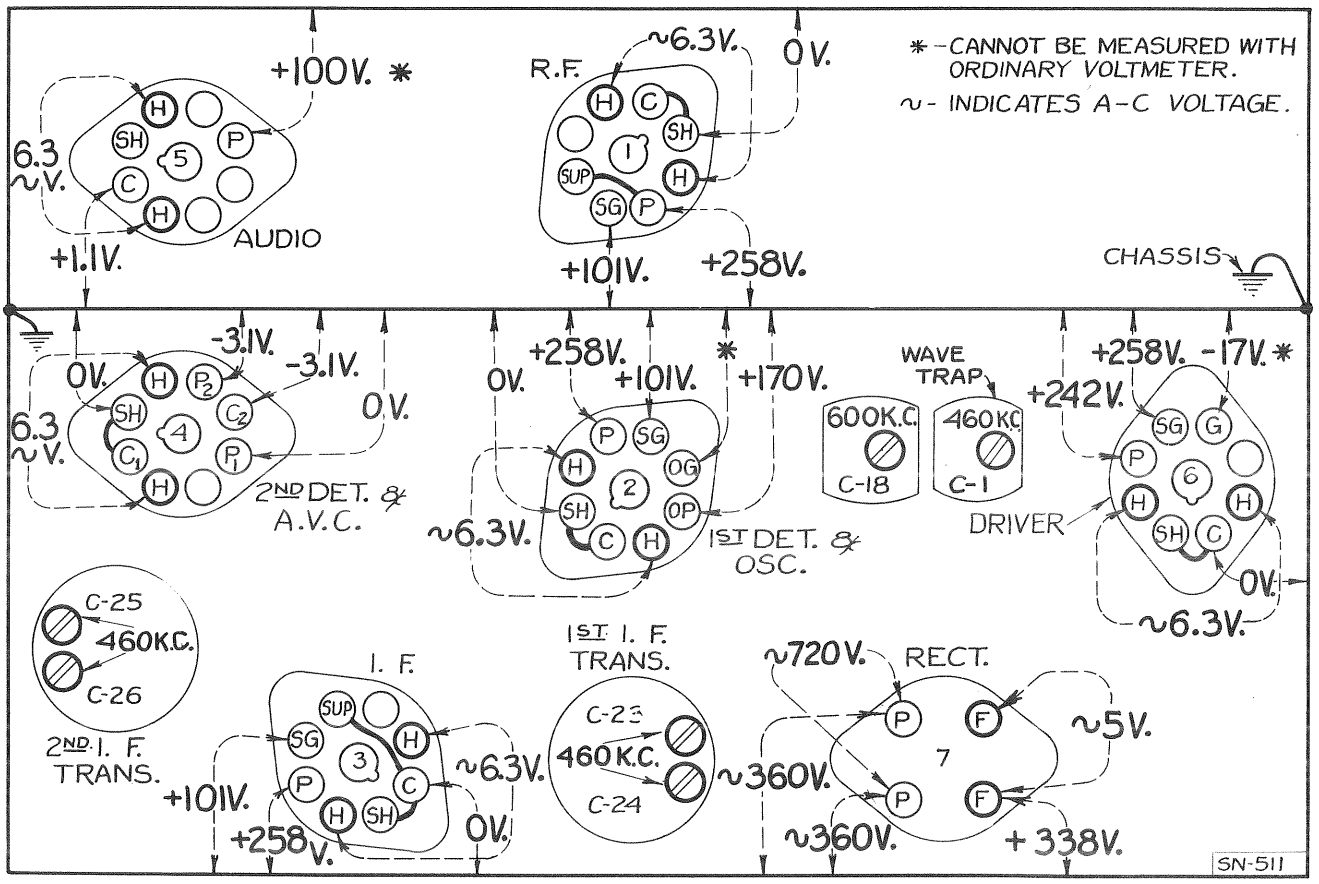


Figure 6—Radiotron Socket Voltages

Measured at 115 volts, 60 cycles—No signal input

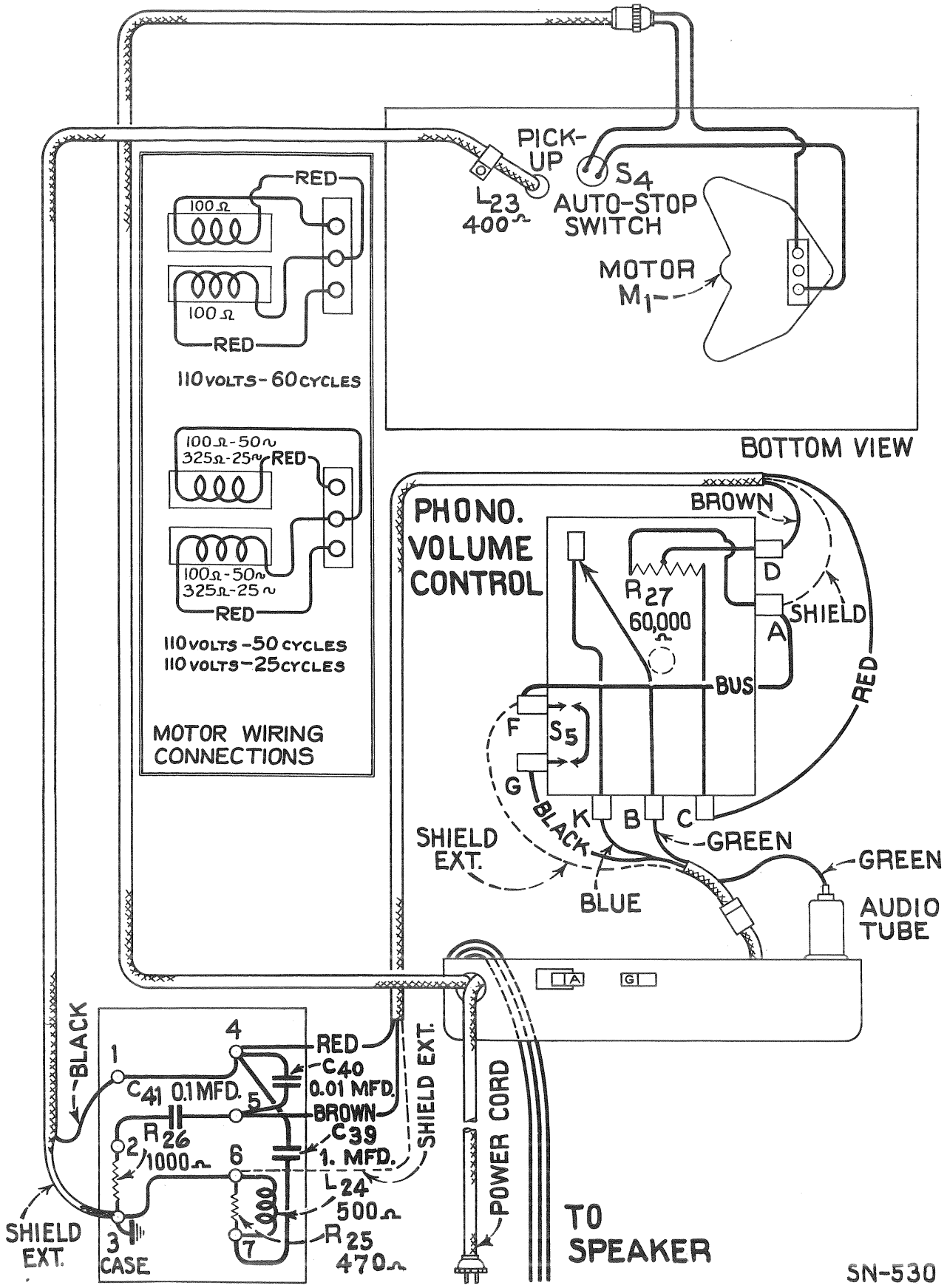


Figure 7—Assembly Wiring

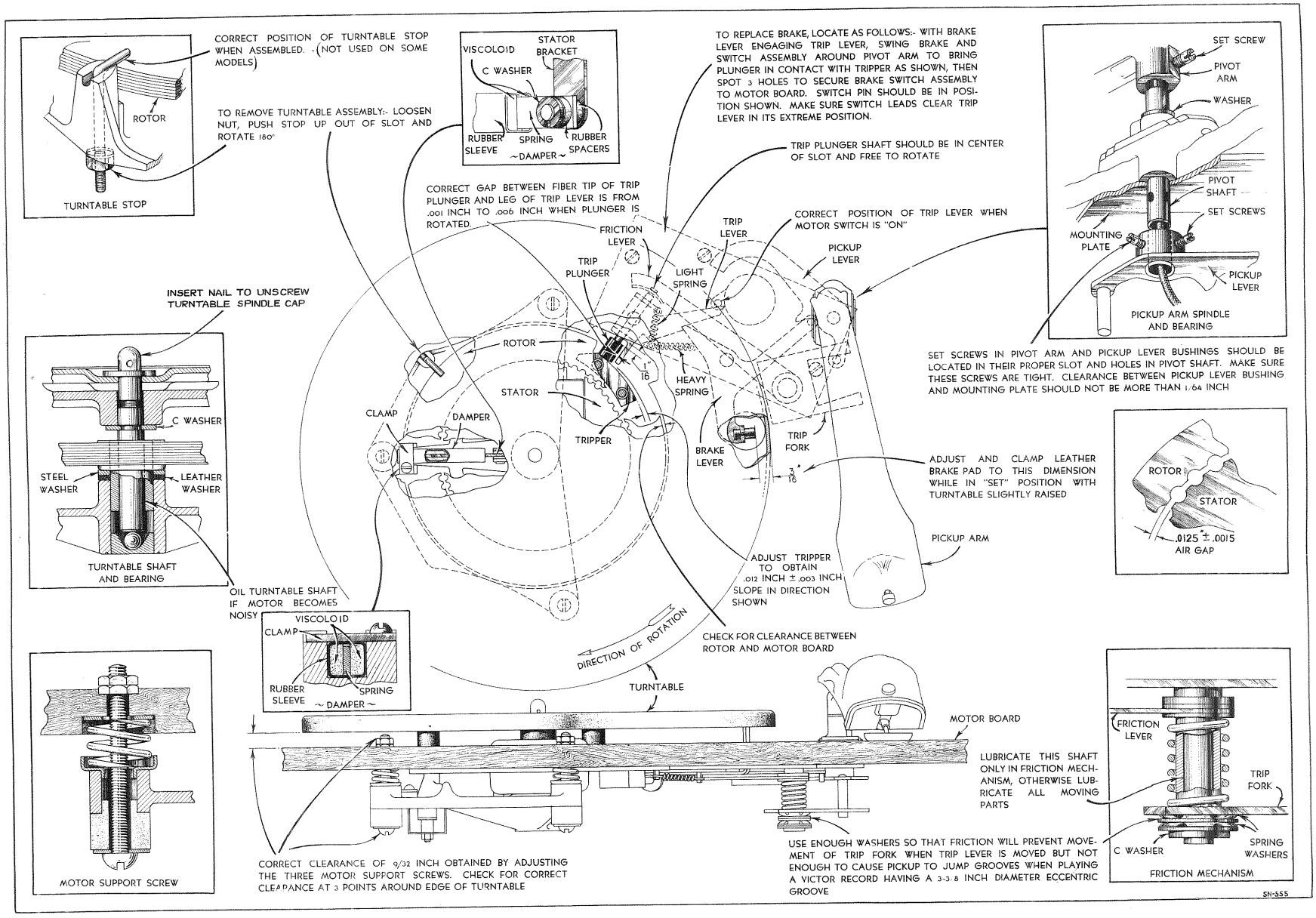


Figure 8—Motor Board Adjustments

screw and the two mounting screws from the front of the tone arm, holding the pickup assembly to keep it from dropping. Unsolder the two leads from the lugs on the terminal board at the rear of the pickup. Insert a small rod or nail into the armature needle hole and replace the needle holding screw, tightening it to hold the rod securely. If the armature clamping screws A and B have not been disturbed, screw C should be loosened which will permit the armature

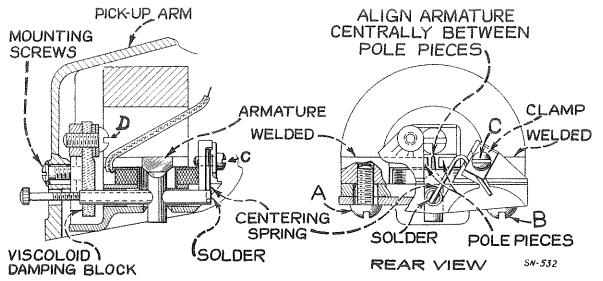


Figure 9—Details of Pickup

to be moved from side to side, the rod acting as a lever to perform this operation. The proper adjustment is obtained when the armature is moved to the extreme position on each side (the movement being limited by the armature striking the pole pieces) and then brought to the mid position between these two extremes. Screw C should then be tightened. The armature position should then be central between the pole pieces and at right angles to them. With a little practice, the correct adjustment of the armature will be obtained. The air gap between the pole pieces and the armature should be kept free from dust, filings, and other foreign material which would obstruct the movement of the pickup armature.

Damping Block

The viscoloid damping block which is attached to the front end of the armature shank serves as a mechanical filter to eliminate undesirable resonances and to cause the frequency response to be uniform. Should it be necessary to replace this damping block, the pickup mechanism should be removed from the tone arm as explained above. Then unsolder the pickup coil leads from the two lugs on the pickup terminal board and remove the terminal board mounting screw and the terminal board. Then remove screw D and the damping block from the pickup assembly. Make sure that the shaft of the armature which contacts the viscoloid is clean. Then insert the new damping block so that it occupies the same position as that of the original block, and is in correct vertical alignment with the armature. The hole in the block is somewhat smaller than the diameter of the armature in order to permit a snug fit. With the damping block properly aligned on the armature, screw D with its washer should then be replaced. Heat should be applied to the armature (viscoloid side) so that the damping block will fuse at the point of contact and become rigidly attached to the armature. A special-tip soldering iron, constructed as shown in Figure 10, will be found very useful in performing this operation. The iron should be applied only long enough to slightly melt the block, causing a small bulge on both sides.

Replacing Coil

Whenever there is defective operation due to an open or shorted pickup coil, this coil should be replaced. Remove the pickup mechanism and terminal board as described above. Remove screws A and B and the magnet assembly. Remove the bakelite coil support (with coil attached) and insert the new coil support assembly in its place, after which replace the magnet assembly and center the armature as described above, then reassemble the remainder of the unit. Only rosin core solder should be used for soldering the coil leads and pickup leads to the pickup terminal board. This same type of solder should be used when necessary for soldering the centering spring to the armature.

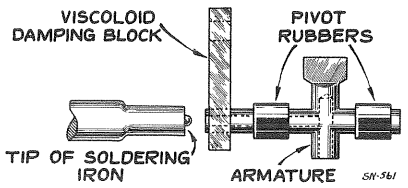


Figure 10—Special Soldering-Iron Tip

Magnetizing

Loss of magnetization will not usually occur when the pickup has received normal care due to the fact that the magnet and pole pieces are one unit and the magnetic circuit remains closed at all times. When the pickup has been mishandled, subjected to a strong a-c field, jolted, or dropped, there may be an appreciable loss of magnetic strength, in which case it will be necessary to remagnetize the entire structure. To do this, it will be necessary to first remove the pickup mechanism from the tone arm, and then remove the magnet assembly. Place the magnet assembly on the poles of a standard pickup magnetizer such as the ***RCA Stock No. 9549 Pickup Magnetizer*** and charging the magnet in accordance with the instructions accompanying the magnetizer. It is preferable to check the polarity of the pickup magnet and to remagnetize it so that the same polarity is maintained.

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	
5237	Bushing—Variable tuning condenser mounting bushing assembly—Package of 3	$0.43
11759	Cable—Two-conductor shielded cable—complete with four-contact female connector	.92
11758	Cable—Three-conductor shielded cable—complete with four-contact male connector and grid contact cap—connects phonograph volume control to chassis cable	1.04
11350	Cap—Contact cap—Package of 5	.20
11465	Capacitor—Adjustable capacitor—(C18)	.48
11289	Capacitor—50 MMfd.—(C37)	.26
5116	Capacitor—175 MMfd.—(C31)	.18
11290	Capacitor—400 MMfd.—(C2, C7, C13, C38)	.25
11401	Capacitor—4000 MMfd.—(C3)	.38
4868	Capacitor—.005 Mfd.—(C29, C34)	.20
4906	Capacitor—.017 Mfd.—(C33)	.25
11395	Capacitor—.01 Mfd.—(C28)	.18
4858	Capacitor—.01 Mfd.—(C32)	.25
11414	Capacitor—0.1 Mfd.—(C42)	.20
4839	Capacitor—0.1 Mfd.—(C14)	.28
4841	Capacitor—0.1 Mfd.—(C21)	.22
5170	Capacitor—0.25 Mfd.—(C8)	.25
11240	Capacitor—10 Mfd.—(C36)	1.08
11387	Capacitor—10 Mfd.—(C22)	.86
5212	Capacitor—18 Mfd.—(C35)	1.16
5238	Clip—Antenna terminal board with clip, insulating strip and rivets	.14
11600	Coil—Antenna coil—(L2, L3, L4, L5, C4, R1)	1.78
11601	Coil—Detector coil—(L6, L7, L8, L9, C9, R3)	1.78
11602	Coil—Oscillator coil—(L10, L11, L12, L13, L14, L15, C15, C16)	2.15
6123	Connector—Four-contact male connector for cable, Stock No. 11758	.30
4153	Connector—Four-contact female connector for cable, Stock No. 11759	.48
11385	Condenser—Three gang variable tuning condenser—(C5, C6, C11, C12, C19, C20)	5.02
11673	Dial—Station selector dial	.78
11394	Foot—Chassis foot assembly—Package of 2	.70
11396	Indicator—Station selector indicator pointer	.25
5226	Lamp—Dial lamp—Package of 5	.70
11393	Resistor—Voltage divider resistor—comprising one 3,500 ohm and one 13,000 ohm sections—(R15, R20)	.74
11329	Resistor—Voltage divider resistor—comprising one 85 ohm, one 148 ohm, one 32 ohm sections—(R16, R17, R18)	.52
11369	Resistor—12 ohms—flexible type complete with contact cap—(R22)	.22
11324	Resistor—560 ohms—Carbon type—1/4 watt—(R24)—Package of 5	1.00
3066	Resistor—12,000 ohms—Carbon type—1 watt—(R5*)—Package of 5	1.10
8072	Resistor—33,000 ohms—Carbon type—1/2 watt—(R5*)—Package of 5	1.00
11322	Resistor—39,000 ohms—Carbon type—1/4 watt—(R10)—Package of 5	1.00
11282	Resistor—56,000 ohms—Carbon type—1/10 watt—(R19*)—Package of 5	.75
11365	Resistor—82,000 ohms—Carbon type—1/4 watt—(R23)—Package of 5	1.00
3118	Resistor—100,000 ohms—Carbon type—1/4 watt—(R19*)—Package of 5	1.00
11323	Resistor—270,000 ohms—Carbon type—1/4 watt—(R13)—Package of 5	1.00
11172	Resistor—470,000 ohms—Carbon type—1/4 watt—(R14)—Package of 5	1.00
11397	Resistor—560,000 ohms—Carbon type—1/10 watt—(R2, R4)—Package of 5	.75
11626	Resistor—2.2 megohms—Carbon type—1/4 watt—(R9)—Package of 5	1.00
11603	Shield—Antenna or detector coil shield	.26
11604	Shield—Oscillator coil shield	.24
11383	Shield—Rectifier Radiotron shield	.20
11390	Shield—Intermediate frequency transformer shield	.25
11199	Socket—Dial lamp socket	.14
4794	Socket—4-contact rectifier Radiotron socket	.15
11198	Socket—7-contact 6K7—6F5—or 6H6 Radiotron socket	.15
11196	Socket—8-contact 6A8 or 6F6 Radiotron socket	.15
11386	Switch—Range switch—(S1)	1.16
11392	Switch—Tone control and power switch assembly—(S2, S3)	1.14
11388	Transformer—First intermediate frequency transformer—(L16, L17, C23, C24)	1.90
11389	Transformer—Second intermediate frequency transformer—(L18, L19, C25, C26, C27, R7, R8)	3.02
11384	Transformer—Power transformer—105-125 volts—50-60 cycles—(T1)	4.65
11725	Transformer—Power transformer—105-125 volts—25-50 cycles	6.60
11727	Transformer—Power transformer—105-130, 140-160, 195-250 volts—40-60 cycles	6.60
11391	Trap—Wave trap—(L1, C1)	1.22
11237	Volume Control—(R11)	1.20
	PICKUP AND ARM ASSEMBLY	
11731	Armature—Pickup armature	.64
11730	Cable—Pickup cable	.14
11732	Coil—Pickup coil (L23)	.60
4543	Damper—Pickup damper block complete with damper plate	.10
11728	Pickup and Arm Assembly—Complete	8.15
3811	Screw—Needle holding screw—Package of 10	.46
	MOTOR ASSEMBLY	
10194	Ball—Steel ball bearing—Package of 20	.25
11740	Base—Motor base and bearing assembly	1.45
11745	Cap—Turntable spindle cap—Package of 5	.30
11733	Coil—Stator assembly—comprising coil and laminations—105-125 volt, 60 cycle operation	2.96
11734	Coil—Stator assembly—comprising coil and laminations—105-125 volt, 50 cycle operation	3.08

The prices quoted above are subject to change without notice.

* Refer to Schematic Diagram.

REPLACEMENT PARTS—Continued

Stock No.	Description	List Price
11735	Coil—Stator assembly—comprising coil and laminations—105-125 volt, 25 cycle operation	3.08
11748	Damper—Motor damper assembly—comprising one damper, one damper plate, one screw, two rubber washers and one "C" washer	.20
11741	Motor—105-125 volts—60 cycle motor complete (MI)	11.10
11742	Motor—105-125 volts—50 cycle motor complete	11.10
11743	Motor—105-125 volts—25 cycle motor complete	11.60
11746	Tripper—Automatic brake tripper—located on rotor laminations	.16
11737	Turntable—Turntable assembly—complete with rotor laminations—60 cycle operation	4.80
11738	Turntable—Turntable assembly—complete with rotor laminations—50 cycle operation	4.80
11739	Turntable—Turntable assembly—complete with rotor laminations—25 cycle operation	5.05
4083	Washer—Leather washer—Package of 10	.20
4084	Washer—Metal washer—Package of 10	.26
	MOTOR BOARD ASSEMBLY	
11752	Brake—Automatic brake and switch—complete	2.50
11751	Bushing—Motor mounting bushing and spring assembly—comprising one bushing, one large washer, one cup washer, one spring, one small washer and two nuts	.74
4577	Connector—Two-contact male connector for power supply cable	.30
2947	Leather—Automatic brake friction leather—Package of 20	.50
11749	Lever—Brake mechanism actuating lever—fastens to pivot shaft under base of pickup arm	.28
11754	Lever—Friction lever assembly—complete	.38
11753	Plunger—Automatic brake trip plunger	.18
3261	Rest—Pickup rubber rest—Package of 5	.40
11750	Screw—No. 4-40x9/32-in. cone pointed headless set screw for brake mechanism actuating lever, Stock No. 11749—Package of 10	.22
11756	Spring—Automatic stop mechanism trip lever spring—Package of 10	.22
11757	Spring—Automatic stop mechanism brake lever spring—Package of 10	.20
11755	Switch—Automatic brake switch (S4)	.75
	REPRODUCER ASSEMBLIES	
11232	Board—Terminal board assembly with two lead wire clips	.18
11231	Bolt—Yoke and core assembly bolt and nut	.16
8060	Bracket—Output transformer mounting bracket	.14
11257	Clamp—Cone center suspension clamping nut and screw assembly—Package of 5	.25
11254	Coil—Field coil—(L22)	2.00
11233	Coil—Hum neutralizing coil—(L21)	.30
11258	Cone—Reproducer cone—(L20)—Package of 5	3.85
5118	Connector—3-contact male connector for reproducer	.25
5119	Connector—3-contact female connector plug for reproducer cable	.25
9619	Reproducer—Complete	6.05
11253	Transformer—Output transformer—(T2)	1.56
11886	Washer—spring washer used to hold speaker field coil securely—Package of 5	.20
	MISCELLANEOUS ASSEMBLIES	
11762	Box—Used needle box	.25
11764	Cable—Two-conductor shielded cable approximately 28-in. long, connects phonograph volume control to compensator pack	.56
11760	Compensator—Phonograph compensator pack—Comprising one 470 ohm and one 1,000 ohm resistors, one .01 Mfd., one 0.1 Mfd. and one 1.0 Mfd. capacitors, and one 0.25H reactor—(R25, R26, C39, C40, C41, L24)	3.85
11376	Escutcheon—Station selector escutcheon and crystal	.70
11582	Knob—Range switch knob—Package of 5	.50
11347	Knob—Volume control, power switch or phonograph volume control knob—Package of 5	.75
11610	Knob—Station selector knob assembly—comprising one large and one small knob—Package of 5	1.00
11763	Receptacle—Needle receptacle	.38
11210	Screw—Chassis mounting screw assembly—Package of 4	.28
11761	Screw—Motor board screw and finishing washer assembly—Package of 10	.28
11349	Spring—Retaining spring for knobs, Stock No. 11347, No. 11582 and small knob in Stock No. 11610—Package of 5	.15
4982	Spring—Retaining spring for large knob in Stock No. 11610—Package of 10	.26
11695	Volume Control—Phonograph volume control (R27, S5)	1.60

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—NOTES—

(1) Beat notes or heterodyning (whistles) may be encountered in some instances on these receivers due to excessive antenna capacitance. This condition may be corrected by reducing the size of the antenna or by inserting a 150 mmfd. capacitor in series with the antenna lead. This may be accomplished in the receiver by removing the brown lead which connects from the antenna terminal to the wave trap inductance L-1 and inserting the condenser between these points. Interference in the form of "beats" from a local station may frequently be remedied by tuning the antenna wave trap to that station. The wave trap will tune up to 700 kc.