

Instructions for Counter Demonstrator CRD-9 (A. C. Operated)

INTRODUCTION

This electric phonograph model provides high quality reproduction of phonograph records for store demonstration purposes. It is arranged for manual operation from behind the counter. Jacks are provided for connecting to an external source of audio input, such as an automatic record changer. A transfer switch permits quick change-over from the demonstrator pickup to the external source.

The volume control is equipped with a locking device for limiting the loudspeaker output to the desired maximum. This adjustment is set at the factory in accordance with the customer's specifications. The locking device can be re-adjusted by the customer to meet special conditions.

INSTALLATION

Preliminary—After withdrawing the instrument from the shipping container, remove the shipping block from the bottom of the cabinet. Then remove the corrugated support and tape holding the pickup arm. Unpack the turntable and Radiotrons from their separate containers.

Turntable—Mount the turntable on the motor spindle. Make sure that the pin on the spindle engages the slot in the turntable hub.

Radiotrons—To install the Radiotrons, slide the small door in the rear panel toward the right. The positions of the tubes in the respective sockets are shown on the rating label which can be seen through the door opening. They are, left to right, as follows: RCA-80, RCA-47, RCA-47 and RCA-30.

Power Supply—After placing the demonstrator in its desired location on the counter, connect the power cord to an electrical outlet supplying alternating current at the voltage and frequency (cycles) specified on the rating label.

OPERATION

The controls of the demonstrator are located as follows (viewing the instrument from the rear):

Power Switch—On right-hand side panel (upper switch). This switch is "on" when the knob is upward.

Motor Switch—On left-hand side panel. This switch is "on" when the knob is upward.

Transfer Switch—On right-hand side panel (lower switch) just above external input jacks. The positions of this switch are upward when using the demonstrator pickup and downward for external input.

Volume Control—On rear of cabinet, near right-hand side. Turn this control clockwise to increase the volume.

To play records on the turntable of the demonstrator, proceed as follows:

1. Set the Power Switch to the "on" position. Make sure that the Transfer Switch is set in the upward position.
2. Place a standard (78 r.p.m.) record on the turntable. Insert a needle in the pickup needle holder and tighten the needle screw. Any of the following types of needles may be used:
 - (a) RCA Victor "Tungstone"—Full Volume. This needle with care, will play from 100 to 200 records.
 - (b) RCA Victor "Chromium"—either green or orange shank. The green needle will play 75 to 100 records, and the orange needle approximately 25 records. *Never re-insert a used Chromium needle after once removed from the pickup.*

(c) RCA Victor Steel—Full Volume. A new steel needle should be inserted before playing each record.

3. Start the turntable by setting the Motor Switch to the "on" position.
4. Lower the needle onto the smooth outer rim of the record and slide it into the first groove.
5. Adjust the Volume Control to obtain the desired volume.

NOTE—If the maximum volume, obtained with the volume control in the extreme clockwise position, is insufficient to meet the requirements of a particular installation, the locking device may be re-adjusted as follows: (1) Remove volume control knob by pulling outward; (2) take off rear panel by removing screws at edges; (3) loosen lock nut holding right angled bracket which serves as stop for metal pointer on shaft; (4) turn shaft clockwise until volume is increased to desired level; (5) lock bracket in new position against pointer, by retightening lock nut; and (6) replace rear panel and knob.

6. When the record has been played, or when it is desired to interrupt the record, lift the pickup and lower it outside the turntable toward the right. Stop the turntable by setting the Motor Switch downward.
7. When operation is to be discontinued for an appreciable interval, set the Power Switch to the "off" position, downward.

NOTE—The pickup should not be left resting on a record or on the turntable when not playing.

External Input—To use the demonstrator amplifier and loudspeaker for reproduction from an external source of audio frequency input, proceed as follows:

1. Plug the two wires (which should be equipped with pin terminals) from the external source into the pin jacks located below the Transfer Switch.

NOTE—The impedance of the external input circuit should match that of the demonstrator input, which is approximately 10 ohms at 1,000 cycles.

2. Set the Power Switch to the "on" position. The Motor Switch should be in the "off" position.
3. Set the Transfer Switch in the downward position. Signals originating in the external input circuit will now be heard through the demonstrator loudspeaker.
4. Adjust the volume to the desired level by means of the demonstrator Volume Control.
5. When through operating, set the Power Switch to the "off" position.

CARE OF INSTRUMENT

Cabinet—The cabinet may be polished at necessary intervals, using any good non-abrasive lacquer polish (such as RCA Victor Cabinet Cleaner), which should be applied with a soft cloth. The motor board and pickup arm should be kept free of dust, using a slightly moist cloth if necessary.

Radiotrons—Always set the Power Switch in the "off" position before removing any Radiotron from its socket. The Radiotrons should be tested periodically by substituting a new one in place of each in succession and comparing the reproduction. If a new Radiotron shows appreciable increase in volume the old one is worn out and should be discarded.

Motor—The motor should be lubricated monthly with light oil. Two oil holes, on the top of the motor, are accessible when the turntable is removed.

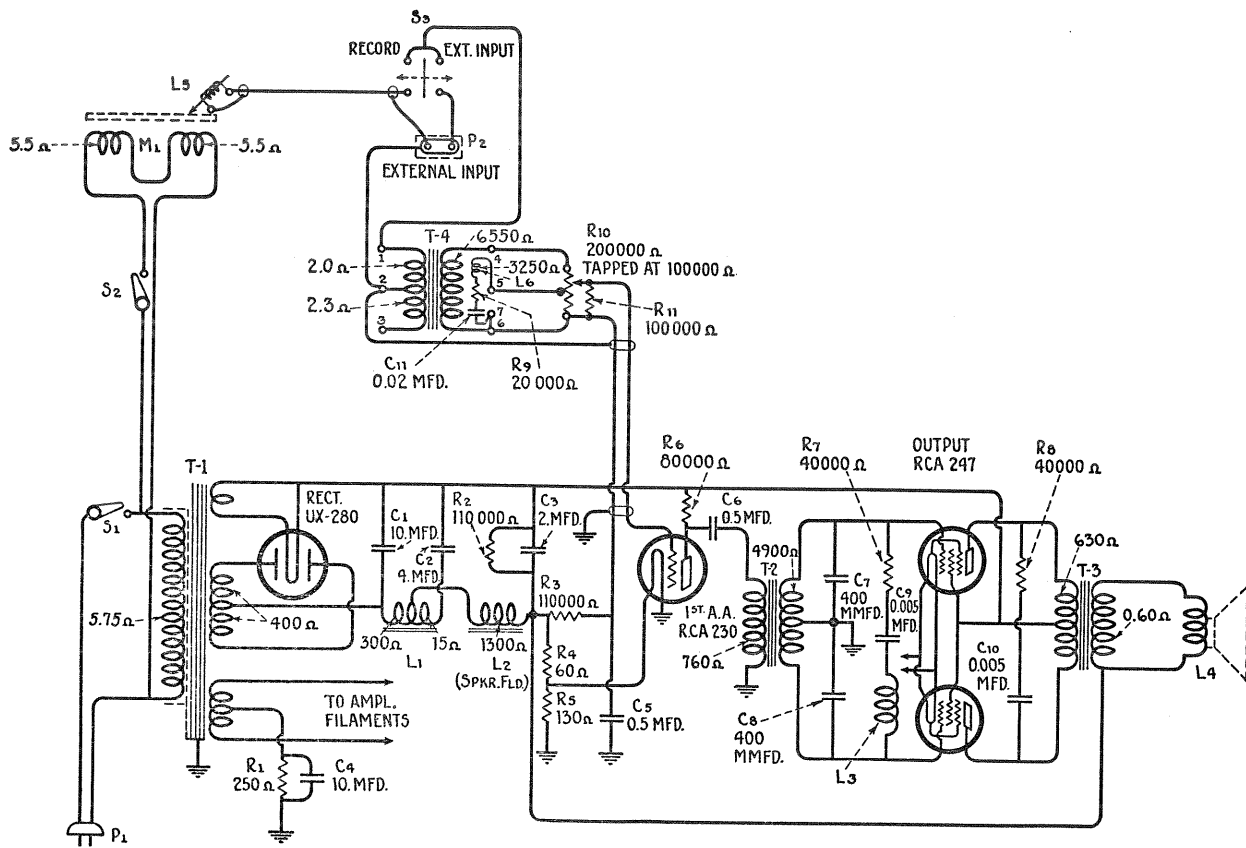


Figure A—Schematic Circuit

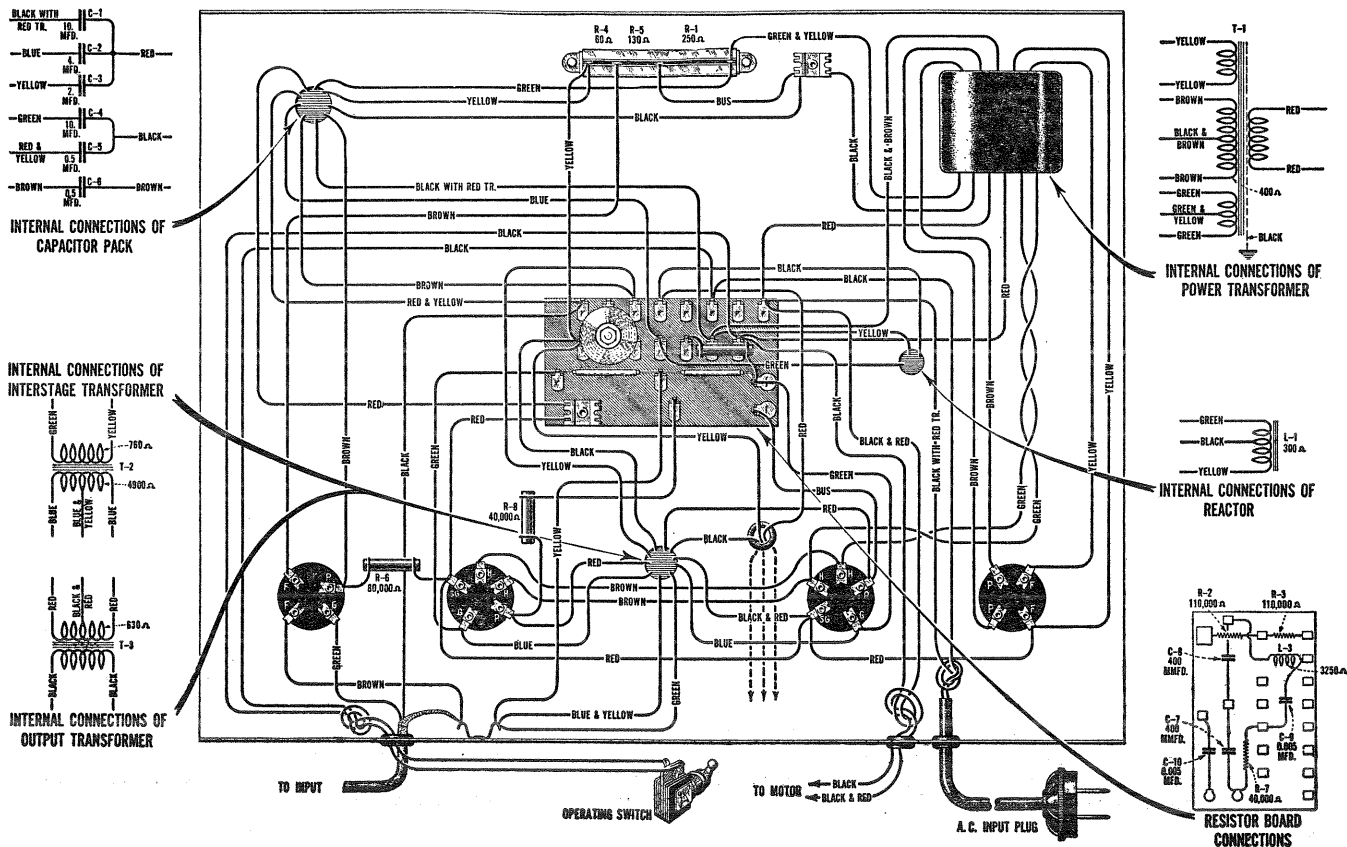


Figure B—Amplifier Wiring

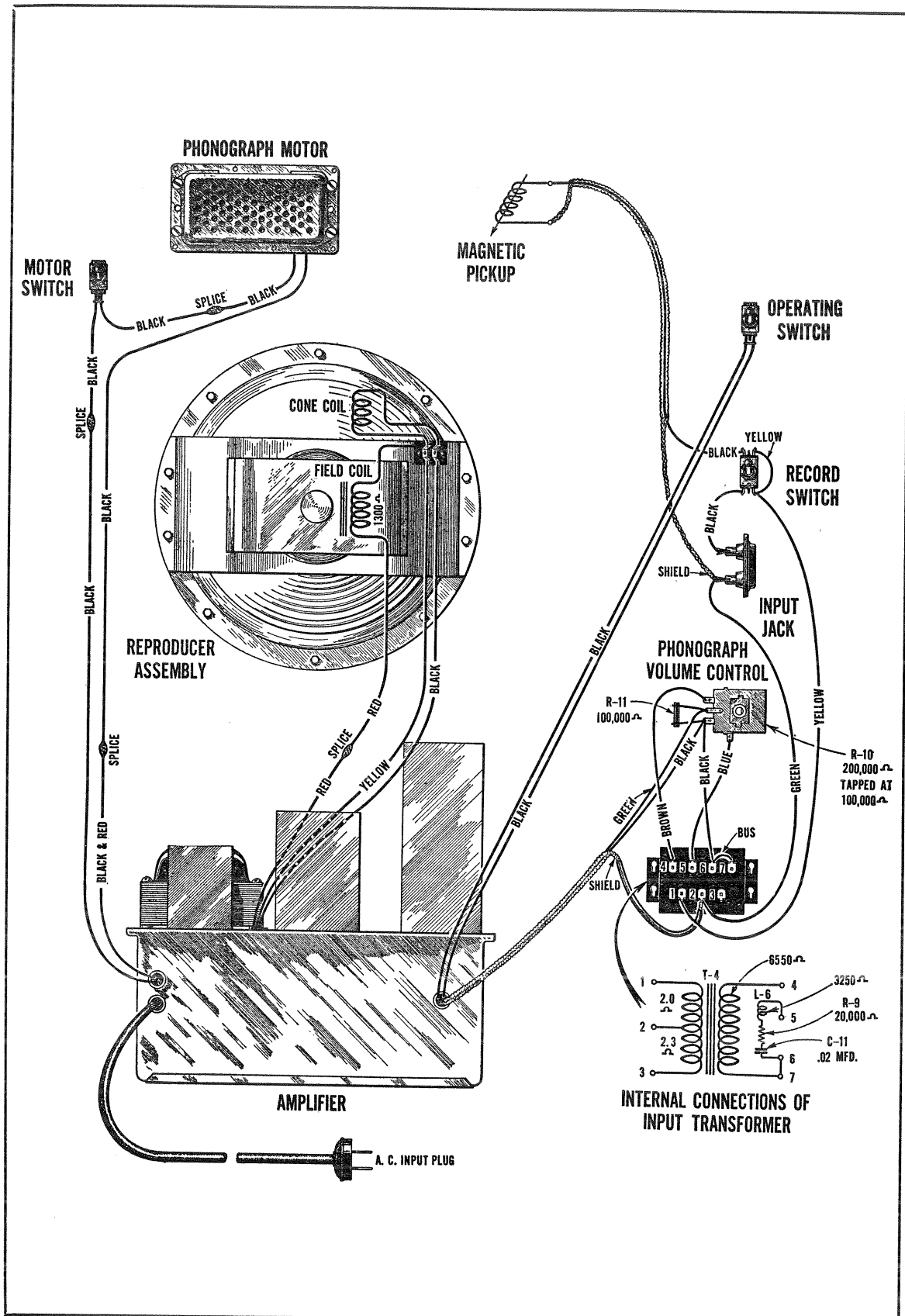


Figure C—Assembly Wiring

SERVICE DATA

Radiotron No.	Filament to Control Grid	Filament to Screen Grid	Filament to Plate	Plate Current M. A.	Filament Volts
RCA-230—A. F.	4.5	—	260	2.0	2.0
RCA-247—Pwr.	17.0	260	250	30.0	2.5
RCA-247—Pwr.	17	260	250	30.0	2.5
UX-280—Rect.	375 volts each plate—80 M. A. total current				

Stock No.	DESCRIPTION	List Price	Stock No.	DESCRIPTION	List Price
PICKUP, ARM AND TURNTABLE ASSEMBLIES			3476	Cable—Shielded two conductor cable—Approximately 13½ inches long.....	\$0.36
3385	Coil—Pickup coil.....	\$0.50	3479	Capacitor — 0.005 mfd. — Located nearest choke coil on resistor board.....	.80
3386	Cover—Pickup cover.....	.75	3481	Coil—Choke coil—Located on resistor board.....	.70
3387	Screw assembly—Pickup mounting screw assembly comprising one screw, one nut, and one washer—Package of 10.....	.60	7270	Reactor—Filter reactor.....	4.00
3388	Screw—Pickup needle holding screw—Package of 10.....	.80	7458	Resistor—Flat type—440 ohms—Tapped at 60, 130 and 250 ohms—Complete with mounting rivets.....	1.10
3389	Rod—Automatic brake trip rod with lock nut—Package of 5.....	50	7568	Transformer assembly—Comprising inter-stage and output transformer in metal container.....	4.48
3390	Escutcheon—Pickup arm escutcheon complete with mounting rivets.....	.65	7569	Capacitor pack—Comprising two 10.0 mfd., one 4.0 mfd., one 2.0 mfd. and two 0.5 mfd.....	4.68
3417	Armature—Pickup armature.....	.75	8900	Transformer—Power transformer.....	9.00
3418	Cushions—Pickup rubber cushions—Comprising one damper, two spacer cushions and one damper bushing—Package of 5 sets.....	1.25	MOTOR ASSEMBLIES		
3419	Screw—Pickup cover mounting screw—Package of 10.....	.50	3398	Motor mounting assembly—Comprising 2 cup washers, 4 springs and 1 "C" washer—One set.....	.75
6335	Pickup—Pickup unit complete.....	12.00	7389	Rotor and shaft for 105–125 volts—60 cycle motor.....	9.00
6346	Back—Pickup housing back.....	.65	8966	Motor—Motor complete—105–125 volts—60 cycles.....	18.26
7084	Cover—Suede cover for turntable.....	.50	8967	Spindle—Turntable spindle with fibre gear for 60 cycle motor.....	8.00
7530	Arm—Pickup arm complete—Less escutcheon, pickup, pickup mounting screw, nut and washer.....	6.00	MISCELLANEOUS PARTS		
8968	Turntable complete.....	2.58	2761	Jack—Twin jack with mounting screws.....	5.00
AMPLIFIER ASSEMBLIES			3101	Switch—Phonograph switch—Double pole, single throw—Toggle type—Located on upper left side of cabinet.....	1.25
2882	Socket—5 contact Radiotron socket complete with insulator.....	.50	3118	Resistor—100,000 ohms—Carbon type—¼ watt—Package of 5.....	2.00
2968	Socket—4 contact Radiotron socket complete with insulator—For Radiotron UX-280.....	.50	6288	Knob—Volume control knob—Package of 5.....	1.50
3032	Socket—4 contact Radiotron socket complete with insulator—For Radiotron RCA-230.....	.50	6292	Switch—Motor switch—Single pole, single throw—Toggle type.....	1.25
3045	Resistor—40,000 ohms—Carbon type—1 watt—Package of 5.....	2.50	6384	Volume control—Complete with mounting washer and nut.....	1.60
3085	Capacitor—400 mmfd.—Located on resistor board.....	.60	7054	Cord—Power cord.....	1.00
3099	Capacitor—0.005 mfd.—Located on resistor board.....	.75	REPRODUCER ASSEMBLIES		
3295	Resistor—110,000 ohms—Carbon type—½ watt—Package of 5.....	2.50	3483	Bolt—Reproducer mounting bolt assembly—Comprising 2 hook bolts, 2 washers, 2 lock washers and 2 nuts.....	.78
3297	Resistor—80,000 ohms—Carbon type—1 watt—Package of 5.....	2.50	6382	Transformer—Input transformer.....	3.88
3475	Switch—Phonograph and amplifier switch—Single pole, single throw—Toggle type.....	1.28	8916	Cone—Reproducer cone—Package of 5.....	15.00
			9423	Coil assembly—Comprising field coil, magnet and cone support.....	12.15

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