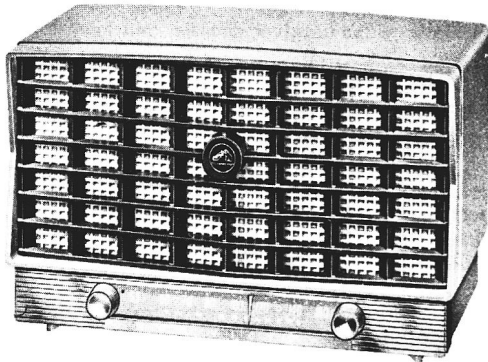




RCA VICTOR



Model X-110

AC-DC Radio Receiver

MODEL X-110

SERVICE DATA

— 1956 No. 10 —

ISSUED BY

GENERAL SERVICE DEPARTMENT
RCA VICTOR COMPANY, LTD.
MONTREAL, CANADA

ELECTRICAL AND MECHANICAL SPECIFICATIONS

TUNING RANGE540-1,600 kc

INTERMEDIATE FREQUENCY455 kc

TUBE COMPLEMENT:

- (1) RCA 12BE6Converter
- (2) RCA 12BA6I.F. Amplifier
- (3) RCA 12AV6Det.-AVC-A.F. Amp.
- (4) RCA 50C5Output
- (5) RCA 35W4Rectifier

POWER SUPPLY RATING:

115 volts d. c. or 50 to 60 cycles a. c.35 watts

LOUDSPEAKERS:

Size and typeTwo 4 in. P.M.

Voice Coil impedance3.2 ohms at 400 cycles

POWER OUTPUT:

Undistorted1.0 watts

Maximum1.5 watts

TUNING DRIVE RATIO8:1 (four turns of knob)

WEIGHT5½ lbs. net

CABINET DIMENSIONS:

Height.....7½" Width.....12½" Depth.....6¾"

DESCRIPTION

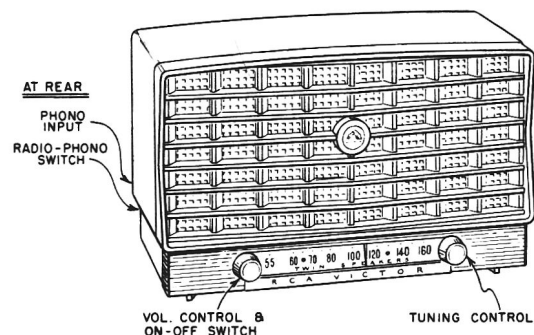
The Model X-110 is a five-tube (including rectifier) table model radio receiver designed for operation on 105 to 125 volts a.c. or d.c. power supply. It is housed in a newly designed plastic cabinet having a shadow-box grille.

The chassis uses a superheterodyne circuit with a converter, one stage of I-F amplification, a combined detector-AVC-audio amplifier stage, a beam power output stage and a half-wave rectifier. A two section variable capacitor having a cut-plate oscillator section is used for proper I-F tracking. The oscillator coil has an adjustable powdered iron core for inductance adjustment. Both I-F transformers have adjustable cores.

Two 4-inch permanent-magnet speakers are used to give a wider response and resultant pleasing tone quality.

An input receptacle for connecting a record player attachment, is located at the rear of the chassis. A slide type switch,

located at the left rear, is used to select radio or phono operation without the necessity of disconnecting the audio cable from the radio.



Controls

LEAD DRESS

1. Dress all heater leads down to chassis.
2. Dress R12 (33 ohm resistor) away from all leads.
3. Dress C11 in such manner as to prevent shorts to chassis.
4. Dress audio leads to volume control away from a.c. leads.
5. Dress PC-1 (printed circuit) away from I.F. circuits.

RADIO CHASSIS SERVICE

Tube Service—To make tubes accessible for testing, remove the four push fasteners at the rear corners holding the back panel to the cabinet. The loop antenna is located on this back panel.

Radio Chassis Service—Proceed as above, removing the volume and tuning control knobs by pulling off, and also removing the hex head screws on the underside of the cabinet. Lift off the shield on the underside of the chassis.

PHONOGRAPH OPERATION

Connect the audio output cable of a record player attachment to the phono input jack which is located on the rear chassis apron.

A slide type switch at the left rear permits selection of RADIO or PHONO operation without disconnecting the audio cable from the phono jack.

Alignment Procedure

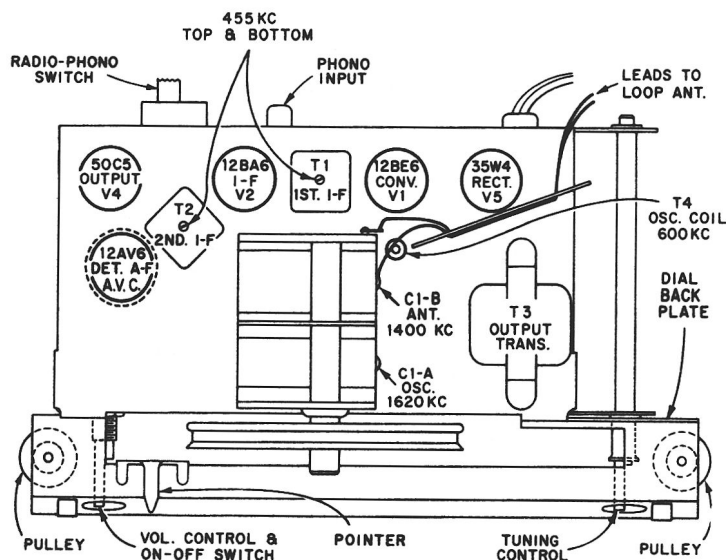
Test-Oscillator—For all alignment operations, connect the low side of the test-oscillator to the receiver chassis, and keep the oscillator output as low as possible to avoid a-v-c action.

An isolation transformer (115 v./115 v.) may be necessary for the receiver if the test-oscillator is also a.c. operated.

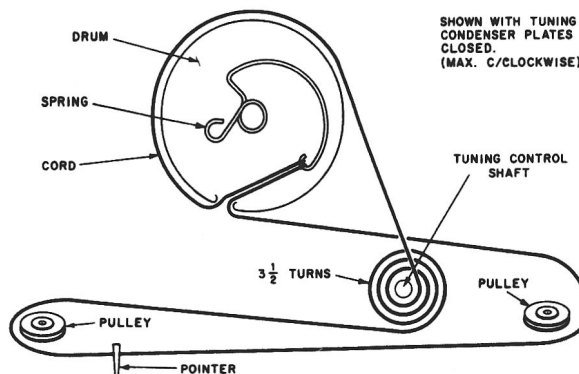
Step	Connect the high side of test-oscillator to—	Tune test-osc. to—	Turn radio dial to—	Adjust the following for max. output
1	12BA6 I-F grid through .01 mfd. capacitor	455 kc	Quiet-point 1,600 kc end of dial	T2 (top and bottom) 2nd I-F trans.
2	Stator of C1-B through .01 mfd.			T1 (top and bottom) 1st I-F trans.
3	Short wire placed near loop to radiate signal	1,620 kc	Max. clockwise	osc. trimmer C1-A
4		1,400 kc	1,400 kc signal	ant. trimmer C1-B
5		600 kc	600 kc signal	osc. coil T-4 (rock gang)
6		Repeat steps 3, 4, and 5		

IMPORTANT

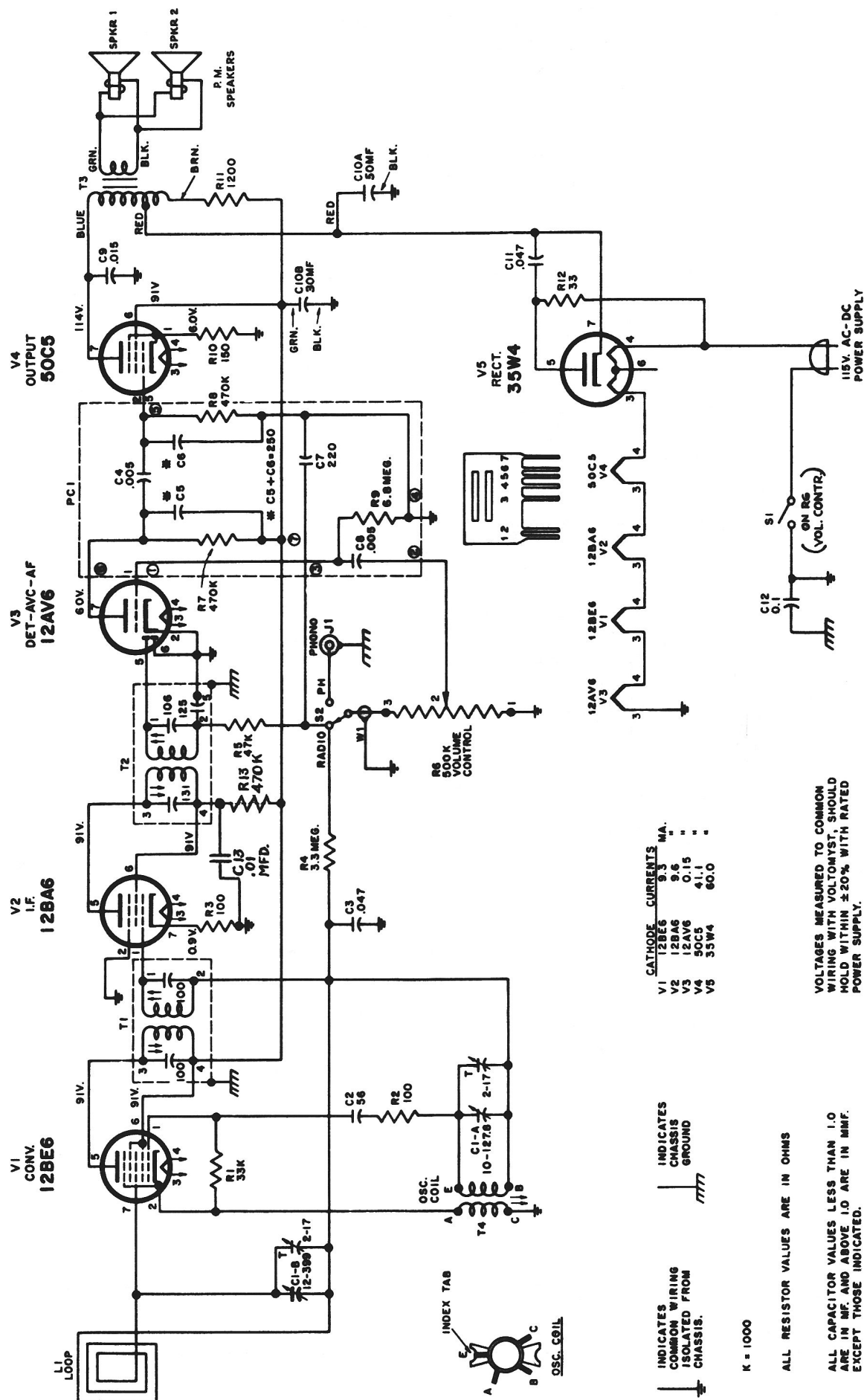
The two speakers must be connected properly in order that the speaker cones operate in unison. The left-hand terminal of one speaker must be connected to the left-hand terminal of the other speaker; likewise the right-hand terminal of the speakers must be connected to each other. Improper connections will result in distortion and low volume.



Tube and Trimmer Locations



Tuning Drive Cord



Schematic Circuit Diagram

REPLACEMENT PARTS LIST

Insist on Genuine Factory Tested Parts, which are readily identified and may be purchased from Authorized Dealers.

SYMBOL	STOCK NO.	DESCRIPTION	SYMBOL	STOCK NO.	DESCRIPTION
C1A, C1B	*S-20985	Capacitor - Tuning Capacitor	T2	S-5721	Transformer - 2nd I. F. transformer
C2	75784	Capacitor - Fixed, ceramic, 56 mmf, 20% 500 v. DC	T3	S-20986	Transformer - Audio output transformer
C3	73553	Capacitor - Fixed, paper 0.047 mf, 20% 400 v. DC	T4	S-20981	Coil - Oscillator coil
C4 to C8 Incl.		Part of PC1		70392	Cord - Power cord with two prong plug
C9	73797	Capacitor - Fixed, paper 0.015 mf, 10% 400 v. DC		S-4313	Cord - Dial cord (approx. 43 inches required)
C10A, C10B	76718	Capacitor - Electrolytic 50/30 mmf. 150 v. DC		*S-21223	Plate - Dial backplate assembly with pulleys - DARK GRAY
C11		Capacitor - Fixed, paper 0.047 mf, 10% 400 v. DC		*S-21222	Plate - Dial backplate assembly with pulleys- DARK GREEN
C12		Capacitor - Fixed, paper 0.1 mf, 10% 400 v. DC		*S-21223	Plate - Dial backplate assembly with pulleys - LIGHT GRAY
J1	S-4480	Connector - Phone input connector		*S-20983	Pointer - Station selector pointer - white with red stripe
L1	S-20962	Antenna - Loop Antenna		*S-20984	Shaft - Tuning shaft assy.
PC 1	*S-21017	Circuit - Printed circuit (includes C4, C5, C6, C6, C7, R6, R7, R9)		79263	Shield - Tube shield for V3
R1		Resistor - Fixed, composition, 33,000 ohms 20%, 1/2 w.		73117	Socket - Tube socket
R2, R3		Resistor - Fixed, composition 100 ohms 20%, 1/2 w.		76332	Spring - Dial cord tension spring
R4		Resistor - Fixed, composition 3.3 megohm 20%, 1/2 w.			SPEAKER ASSEMBLY
R5		Resistor - Fixed, composition 47,000 ohms 20%, 1/2 w.		*S-20961	Speaker - 4" P. M. speaker complete with cone and voice coil (3.2 ohms)
R6	S-20987	Control - Volume control			MISCELLANEOUS
R7 to R9 Incl.		Part of PC1		*S-20958	Cabinet - Plastic light GRAY
R10		Resistor - Fixed, composition 150 ohms 10%, 1/2 w.		*S-20959	Cabinet - Plastic light GREEN
R11		Resistor - Fixed, composition 1,200 ohms 10%, 1w.		*S-20960	Cabinet - Plastic BLACK
R12		Resistor - Fixed, composition 33 ohms 20% 1 w.		*S-20963	Escutcheon - Control panel escutcheon
S1		Part R6		37831	Fastener - Fasteners to retain loop and back cover (4 req'd)
S2	S-20455	Switch - Radio-phono selector switch		S-20457	Knob - Volume control and station selector knob - clear plastic
T1	S-5720	Transformer - 1st I. F. transformer		*S-20964	Nut speed - Nut retainer for Escutcheon (2 req'd)
				79279	Plate - Bottom chassis cover
				70425	Spring - Knob retaining spring

* Indicates New Stock Items. Only items listed under stock numbers are available as Replacement Parts.
All parts subject to change or withdrawal without notice.

ONLY ITEMS LISTED UNDER STOCK NUMBERS ARE AVAILABLE AS REPLACEMENT PARTS.
ALL PARTS SUBJECT TO CHANGE OR WITHDRAWAL WITHOUT NOTICE.