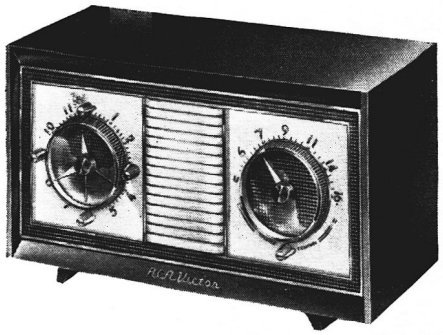
RCA VICTOR

"HIS MASTER'S VOICE"

A-C OPERATED CLOCK RADIO RECEIVER

MODEL C-505

SERVICE DATA



MODEL C-505

Electrical and Mechanical Specifications

FREQUENCY RANGES

Standard Broadcast ("A" Band) --------- 540-1,600 kc.

INTERMEDIATE FREQUENCY ----------455 kc.

TUBE COMPLEMENT

(1) RCA-12BE6 ----------1st Detector-Oscillator
(2) RCA-12BA6 ----------IF Amplifier
(3) RCA-12AV6 2nd Detector, A.V.C. and A-F Amplifier
(4) RCA-50C5 ----------Output
(5) RCA-35W4 ----------Rectifier

NOTE — Do not operate on DC Supply.

POWER SUPPLY RATINGS

105-125 volts ----------30 watts

POWER OUTPUT RATING

Undistorted ----------1.0 watt
Maximum ----------1.5 watts

LOUDSPEAKER

Type ----------4-inch Permanent-Magnet Dynamic
Voice Coil Impedance ----------3.2 ohms at 400 cycles
Tuning Drive Ratio----------Direct Drive

Operating Instructions

This instrument contains an electric clock mechanism which may be used to automatically actuate the self-contained A.C. radio. The radio may also be operated independently of the timer mechanism.

CLOCK

Plug instrument into 115V A.C. outlet. The clock will begin to operate immediately. Set to correct time by turning the "Time Set" knob located at the right hand side of the clock face.

RADIO

1. Turn "Radio" knob on clock from "OFF" to "ON" position. Adjust volume and tuning knobs as required after a 3 second warm-up. When operation of radio is no longer required, turn clock "Radio" knob to "OFF" position.
2. To have radio turned on automatically, set "Radio" knob to the "AUTO" position. Set "ALARM SET" knob to desired time. Set tuning and volume to the desired station and operating volume.
3. To start appliance automatically, set "RADIO" knob to "AUTO" position. Then set "ALARM SET" knob to the desired time.

SLUMBER SWITCH OPERATION

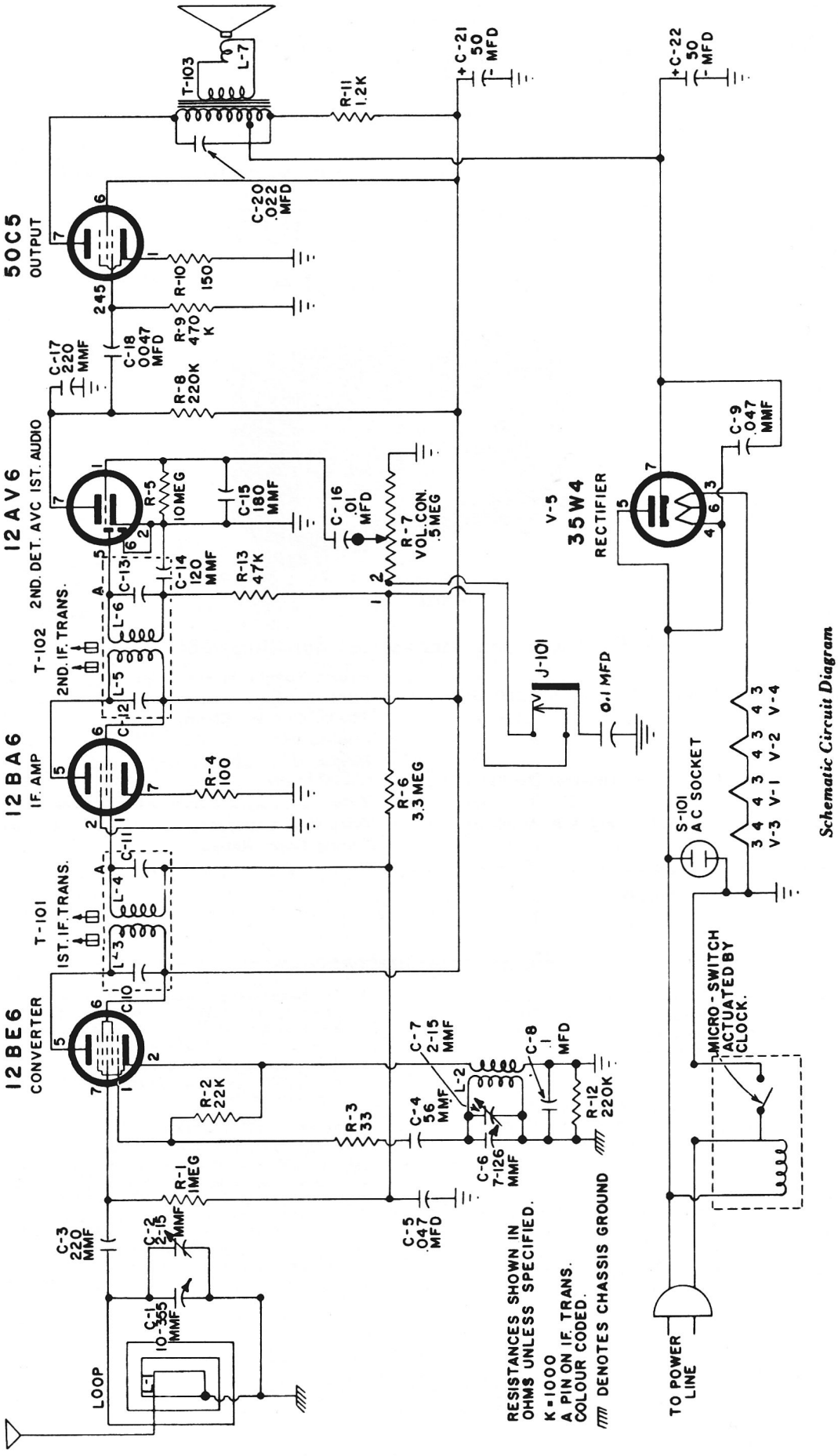
If it is desired to listen to the radio while going to sleep, the "Sleep" knob may be set to turn off the radio after an interval of from Zero (0) to Ninety (90) minutes has elapsed, even though the "Radio" knob is set at "off" or "auto", it will not turn off the radio if the "Radio" knob is set at "On". The "Sleep" knob should be set between zero (0) and ninety (90) in accordance with the number of minutes operation desired.

NOTE: Radio or Appliance must be turned off manually.

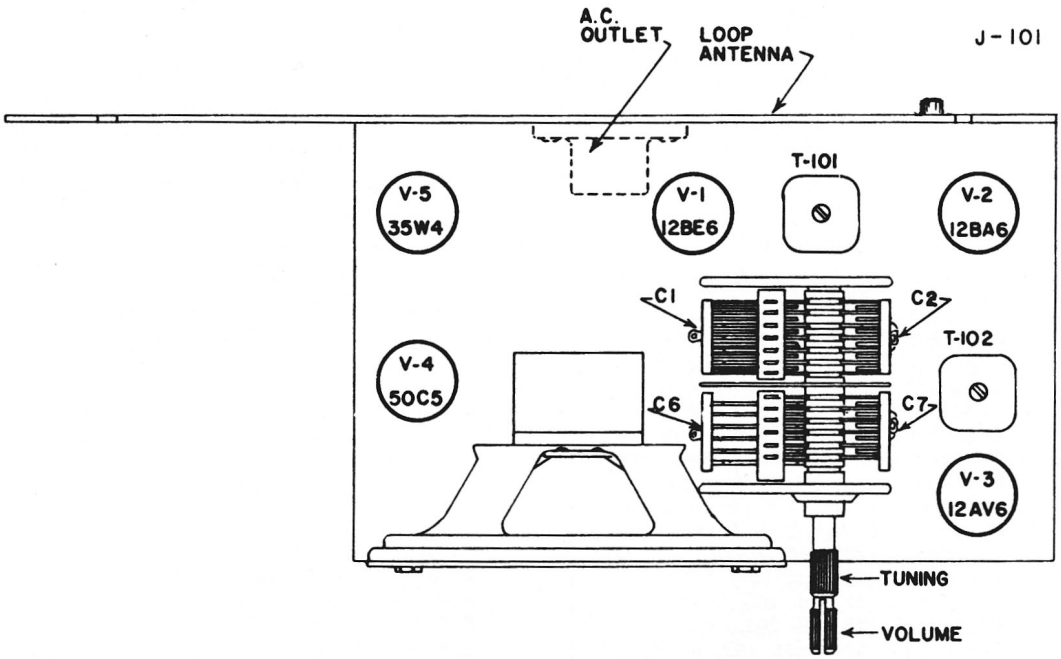
ISSUED BY

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

—1955 No. 2—



Schematic Circuit Diagram



Chassis Layout

Radio Chassis and Clock Service

RADIO CHASSIS SERVICE

For easy accessibility in servicing the chassis, the following steps should be taken:

1. Remove volume and tuning control knobs by pulling off.
2. Remove two stud fasteners and two screws located on the back cover.
3. Pull out chassis carefully as clock mechanism remains intact within the cabinet.

CLOCK SERVICE

For easy accessibility to the clock mechanism, the radio chassis should be removed first as outlined above.

1. Remove cabinet front, by unbending 6 clips inside front of cabinet.
2. With the use of pliers or small wrench remove the two hex nuts located on the bracket behind the clock. This
3. Unsolder — the three leads with the power cord making the clock mechanism free for removal.

LEAD DRESS

1. Dress all capacitors down against chassis.
2. C-15 must be located so that connection to Pin #1 of 12AV6 is short as possible and condenser butts against rim of volume control.
3. Connect outside foil of all condensers as indicated in schematic diagram.
4. Dress Filament, B+ and B– leads down against chassis.
5. Dress R-4, 12BA6 cathode resistor, down against tube center post with leads to Pin 2 and Pin 7 as short as possible.

Alignment Procedure

Before aligning the receiver, set the gang condenser for maximum capacity and then set the dial knob opposite 55 on left hand end of the dial.

When only a portion of the circuit is to be aligned select the required portion and perform all the remaining steps.

In order to obtain best results, it is advisable to align the 455 KC I.F.'s with the help of a cathode ray oscilloscope. The scope should be connected across the volume control. If this equipment is not available, use the method outlined below in the alignment chart.

NOTE: If the test-oscillator is ac/dc operated, it may be necessary to use an isolation transformer (117 v./117 v. for the receiver during alignment.)

Alignment Chart

		TEST OSCILLATOR				RECEIVER				
Order of Alignment		Connect "HI" Side To	Connect "LO" Side To	Dummy Antenna	Frequency Setting	Range Selector	Receiver Dial Setting	Circuit To Adjust	Adjust Adjustment Symbols	Notes
I.F. ALIGNMENT	1	12BA6 Pin #1	Gnd.	.1 Mfd	455 KC		"HI" End	2nd I.F. Trans.	Top & Bottom cores	Max. Out.
	2	12BE6 Pin #7	Same	Same	Same	Same	Same	1st I.F. Trans.	Top & Bottom cores	Same
S.B. ALIGNMENT	3	Radiate signal			1600 KC		1600 KC	Osc.	C-7	Same
	4	Same			1500 KC		1500 KC	Osc.	C-2	Same
	5	Repeat Steps 3 & 4.								

REPLACEMENT PARTS LIST FOR MODEL C-505

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

Symbol No.	Stock No.	Description
C-1	S-20109	Capacitor - Variable Tuning
C-2		Capacitor -
C-3		Capacitor - 220 mmf. 20%, 350V.
C-4	S-4523	Capristor - 56 mmf. 33 ohms
C-5		Capacitor - .047 mfd. 20%, 200V.
C-6		Capacitor - 7-126 mmf. Trimmer
C-7		Capacitor - 2-15 mmf. Trimmer
C-8		Capacitor - 0.1 mfd. 10%, 400V
C-9		Capacitor - .047 mfd. 20%, 400V
C-10		Capacitor - in 1st. I. F. Transformer
C-11		Capacitor - in 1st. I. F. Transformer
C-12		Capacitor - in 2nd. I. F. Transformer
C-13		Capacitor - in 2nd. I. F. Transformer
C-14		Capacitor - 120 mmf. in 2nd I. F. Trans.
C-15		Capacitor - 180 mmf. 20%, 350V.
C-16		Capacitor - .01 mfd. 20%, 200V.
C-17		Capacitor - 220 mfd. 20%, 350V.
C-18		Capacitor - .0047 mfd. 20% 400 V.
C-19		
C-20		Capacitor - .022 mfd. 10% 600V.
C-21	S-20192	Capacitor - Electrolytic 60 mfd.
C-22	S-20192	Capacitor - Electrolytic 40 mfd.
L-1		
L-2	S-20113	Coil - Oscillator Coil
R-1		Resistor - 1 megohm 20% 1/2 watt
R-2		Resistor - 22,000 ohms 20%, 1/2 watt
R-3	S-4523	Capristor - 33 ohms - 56 mmf.
R-4		Resistor - 100 ohms 20%, 1/2 watt
R-5		Resistor - 10 megohms 20% 1/2 watt
R-6		Resistor - 3.3 megohms 20% 1/2 watt
R-7	S-20114	Vol. Control - .5 megohm
R-8		Resistor - 220,000 ohms, 20%, 1/2 watt
R-9		Resistor - 470,000 ohms, 20%, 1/2 watt
R-10		Resistor - 150 ohms, 10%, 1/2 watt
R-11		Resistor - 1200 ohms, 10%, 1 watt
R-12		Resistor - 220,000 ohms 20%, 1/2 watt

Symbol No.	Stock No.	Description
S-101	S-5274	Socket - AC Socket (Appliance)
T-101	S-5682	Transformer - 1st I. F. Trans.
T-102	S-5683	Transformer - 2nd I. F. "
T-103	S-5686	Transformer - Audio Output "
		SPEAKER ASSEMBLY
	S-20099	Speaker 4" P. M. Complete with cone & voice coil ass'y (3.2 ohms at 400 cycles.)
		MISCELLANEOUS ASSEMBLY
	*S-20378	Ant. -Loop Ant.
	*S-20371	Bezel - cabinet bezel
	*S-20373	Blank - Dial Blank
	S-20100	Cabinet - Blue
	S-20101	Cabinet - Red
	S-20102	Cabinet - Yellow
	*S-20489	Cabinet - Green
	S-20104	Cabinet - Burgundy
	S-20105	Cabinet - Ivory
	S-20106	Cabinet - Brown
	S-20172	Cord - Power Cord
	*S-20374	Cover-Back cover & loop (60 cy.)
	*S-20375	Cover-Back cover & loop (25 cy.)
	*S-20370	Front - Cabinet front
	*S-20198	Knob - Vol. Control (Blk.)
	*S-20372	Knob - Tuning Knob (Dial)
	*S-20228	Mask - Cabinet Mask
	S-5661	Monogram - RCA VICTOR
	S-4465	Socket - Phono Socket
	*S-20367	Timer - 60 cycle (Clock Timer)
	*S-20368	Timer - 25 cycle (Clock Timer)
	*S-20369	Timer - 50 cycle (Clock Timer)
(*) INDICATES NEW STOCK ITEM		

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

Clock Mechanism Service

All clock mechanisms which are defective or require general repair, should be sent to the Service Depots listed with the following information:

"If the clock is within the warranty period, the dealer is to state the date of purchase by the customer, and the letter or purchase order should be marked "In Warranty"."

SERVICE DEPOTS

PLEASE REFER TO SERVICE LETTER NO. 50.16 FOR SERVICE DEPOT NEAREST TO YOUR DISTRICT