



RCA VICTOR



3-RD-4 Series—The "Daybreak"

- Model 3-RD-40—Iceberg White
- Model 3-RD-41—Iceberg White/Black Pearl
- Model 3-RD-45—Dark Green/Iceberg White
- Model 3-RD-49—Iceberg White/Shrimp

3-RD-5 Series—The "Dawnette"

- Model 3-RD-50—Black Pearl/Iceberg White
- Model 3-RD-52—Iceberg White/Starlight Blue
- Model 3-RD-54—Autumn Smoke/Espresso
- Model 3-RD-57—Iceberg White/Maple Sugar

3-RD-6 Series—The "Gloaming"

- Model 3-RD-61—Black Pearl/Iceberg White
- Model 3-RD-65—Dark Green/Iceberg White
- Model 3-RD-67—Maple Sugar/Iceberg White
- Model 3-RD-69—Mist Brown/Iceberg White

RADIO SERVICE DATA

—File: 1962 No. 11—

3-RD-4 Series
3-RD-5 Series
 Chassis No. RC-1202AC

3-RD-6 Series
 Chassis No. RC-1202AD

Circuit Board No. 962507-2

RCA SALES CORPORATION

A RADIO CORPORATION OF AMERICA SUBSIDIARY
 600 NORTH SHERMAN DRIVE
 INDIANAPOLIS 1, INDIANA

SPECIFICATIONS

TUNING RANGE..... 540-1620 kc

INTERMEDIATE FREQUENCY..... 455 kc

TUBE COMPLEMENT

- (V1) RCA 12BE6 Converter
- (V2) RCA 12BA6 IF Amplifier
- (V3) RCA 12AV6 Detector, AVC and Audio Amp
- (V4) RCA 50C5 Audio Output
- (V5) RCA 35W4 Rectifier

POWER SUPPLY RATING

107-120 volts, 60 cycles 35 watts

WEIGHT

- 3-RD-4, -5 Series Approx. 3¾ lbs.
- 3-RD-6 Series Approx. 4 lbs.

AUDIO POWER OUTPUT

Undistorted 1.0 watt
 Maximum 1.3 watt

LOUDSPEAKERS

Size and type 3" x 5" P.M.
 Voice Coil Impedance 3.2 ohm @ 400 cycles

TUNING DRIVE RATIO

3-RD-4, -5 Series 1:1 (Direct Drive)
 3-RD-6 Series 6:1 (3 turns of knob)

CABINET DIMENSIONS

	Height	Width	Depth
3-RD-4, -5 Series	7¾"	12⅛"	4⅛"
3-RD-6 Series	8⅛"	12⅜"	4⅝"

DESCRIPTION

Models of the 3-RD-4 series, 3-RD-5 series, and 3-RD-6 series are five tube (including rectifier) table style clock-radios, designed to receive the standard broadcast band from 540 kc to 1620 kc and to operate on a 107 to 120 volt 50-60 cycle or DC power source. The three model series are basically similar with the 3-RD-5 series and 3-RD-6 series having added features.

In all series the antenna, chassis, clock, and loudspeaker are mounted to the front panel section of the two-piece molded plastic cabinet, and the power line cord is secured to the hood back section. When the hood back is removed, the power cord is disconnected from the chassis by means of a safety interlock connector to guard against the possibility of a shock hazard. With the hood removed, both sides of

the chassis are readily accessible for servicing, thus eliminating the need to unmount the chassis.

A standard ferrite rod antenna is used to pick up the signal for the superhetrodyne circuitry which consists of a pentagrid converter (RF oscillator and mixer) stage, an intermediate frequency amplifier stage, a demodulator (detector) and AVC stage, an audio frequency amplifier stage,

SUPPLEMENTARY INFORMATION LISTINGS

Vol.	Issue	Subject

**3-RD-4 Series
3-RD-5 Series
3-RD-6 Series**

DESCRIPTION (continued)

and a power amplifier (output) stage. Plate and screen power is obtained from a half-wave vacuum tube rectifier circuit. 150 ma. series tubes are used in this chassis.

The electrical impulses from the output stage are converted into sound waves by a 3" x 5" P.M. loudspeaker having a voice coil impedance of 3.2 ohms at 400 cycles. A calibrated volume control is used for presetting of the sound level.

The operation of these instruments is controlled by two knobs protruding from the face of the clock timer in the 3-RD-4 series and the 3-RD-5 series, or by two levers extending from the sides of the "Levermatic" clock in the 3-RD-6 series, and provide for radio OFF, radio ON (manual), AUTOMATIC wake-up-to-music, buzzer ALARM, and SLEEP music. The wake-up-to-music (AUTO) function will automatically turn the radio on at the time at which the alarm hand has been preset. The buzzer ALARM, when used, will sound approximately seven minutes after the radio turns on. The SLEEP function may be used to turn the radio on for a predetermined period of time after which it will auto-

matically shut itself off. The AUTO and ALARM functions may be used in conjunction with the SLEEP function. The OFF, ON, AUTO and ALARM functions are controlled by the knob or lever at the right hand side of the clock and the SLEEP function is controlled by the knob or lever at the left hand side of the clock. In addition to the functions described above the 3-RD-5 series, and 3-RD-6 series provide the additional function of a DROWSE alarm. The DROWSE function is operated by a bar located between the two radio control knobs. When the buzzer sounds, depressing the DROWSE bar will silence the buzzer for a period of approximately seven minutes, after which the buzzer will again sound. At this time the DROWSE bar may again be depressed to silence the buzzer for another period of approximately seven minutes. To permanently silence the buzzer the service, or function, lever should be turned to any position except alarm. In addition to the above, the 3-RD-6 series also provides a dial pilot light which is controlled by a push-pull switch on the volume control. This instrument also features vernier tuning of the radio.

OPERATING INSTRUCTIONS

To Set Clock and Alarm Hands—Turn TIME SET knob (at back of cabinet).

To Play the Radio—Turn SERVICE knob to "ON." Turn TUNING knob to select desired station and adjust VOLUME as desired. Turn SERVICE knob to "OFF" when through listening.

For "Radio Wake-up" Operation—With SERVICE knob turned to "ON," tune in desired station and adjust volume level. Then turn SERVICE knob to "AUTO." The radio will turn itself on automatically at the time for which the alarm has been preset.

For "Radio/Buzzer Wake-up" Operation — With SERVICE knob turned to "ON," tune in the desired station and adjust volume level. Then turn SERVICE knob to "ALARM." The radio will turn itself on automatically at the time for which the alarm has been preset, and a buzzer will sound approximately 8 minutes later.

For "Sleep" Operation—Turn the SLEEP knob to the desired length of playing time (up to 60 minutes), tune in the desired station and adjust the volume level as desired. The radio will then shut itself off automatically after the preset period of time. "Sleep" operation can be used individually or in conjunction with "Wake-up" operation.

For "Drowse" Operation (1-RD-5 Series and 1-RD-6 Series)—Depress "DROWSE" lever when buzzer sounds; buzzer will be silenced

for approximately 7 minutes. When the buzzer again sounds, the "DROWSE" action may be repeated, if desired. To silence the buzzer permanently, turn the SERVICE lever to any position except "ALARM."

IMPORTANT—KEEP SERVICE KNOB AT "OFF" POSITION WHEN INSTRUMENT IS NOT IN USE.

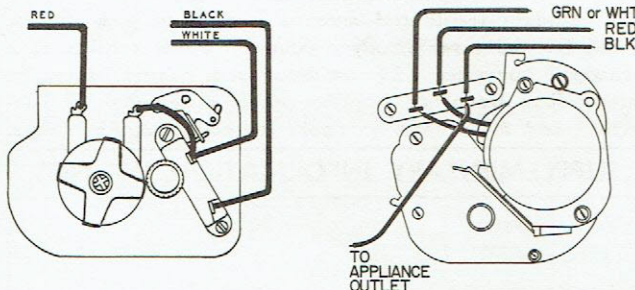
ALIGNMENT PROCEDURE

For all alignment connect low side of signal generator to common negative. Keep generator output as low as possible to avoid AVC action. Connect output indicator to voice coil terminals of loudspeaker. Set volume control to maximum.

Step	Connect high side of signal gen. to—	Set signal gen. to—	Turn radio dial to—	Adjust—for peak output
1	Pin #1 of V2 (12BA6) through .01 μ f capacitor	455 kc (Modulated)	Quiet point near 1600 kc	T2 (2nd I-F trans.)
2	Pin #7 of V1 (12BE6) through .01 μ f capacitor			T1 (1st I-F trans.), top and bottom cores
3	Repeat steps 1 and 2			
4	Short wire placed near antenna to radiate signal	1620 kc (Modulated)	1620 kc	C1-B-T (osc. trimmer)
5		1400 kc (Modulated)	1400 kc signal	C1-B-T (Ant. trimmer)
6		600 kc (Modulated)	600 kc signal (rock gang)	T3 (osc. coil)
7	Repeat steps 3, 4 and 5			

CAUTION

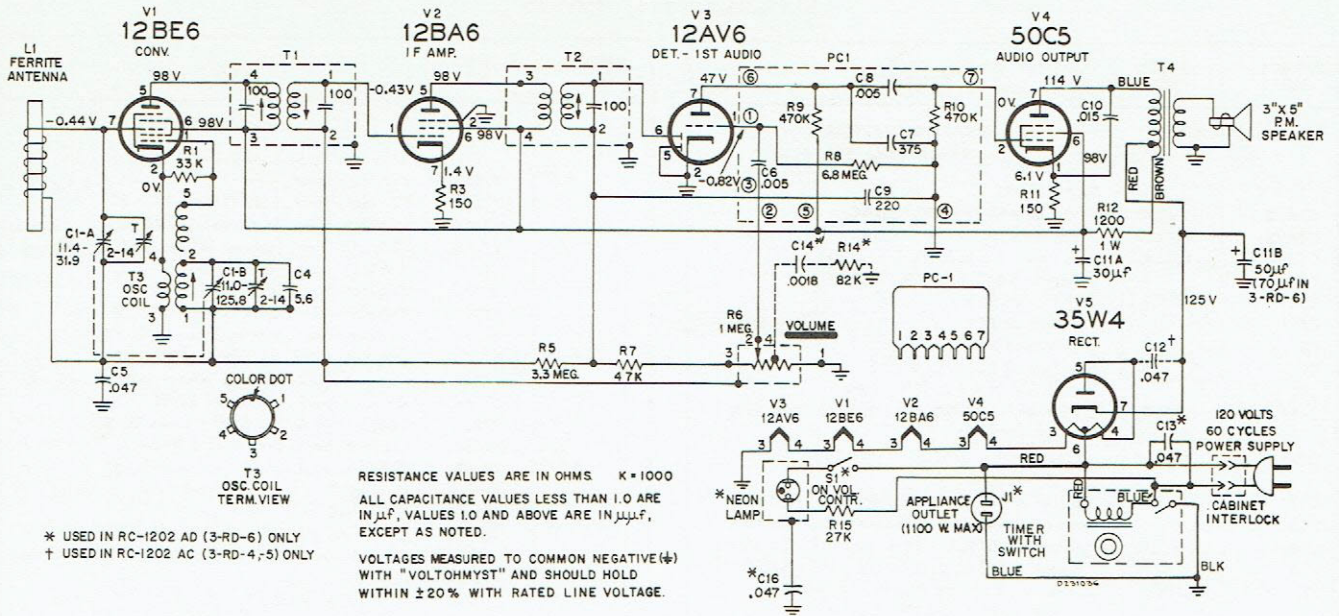
THE CHASSIS IS CONNECTED DIRECTLY TO THE POWER LINE. TO AVOID SHOCK HAZARD AN ISOLATION TRANSFORMER SHOULD BE USED DURING SERVICE WORK ON THE CHASSIS.



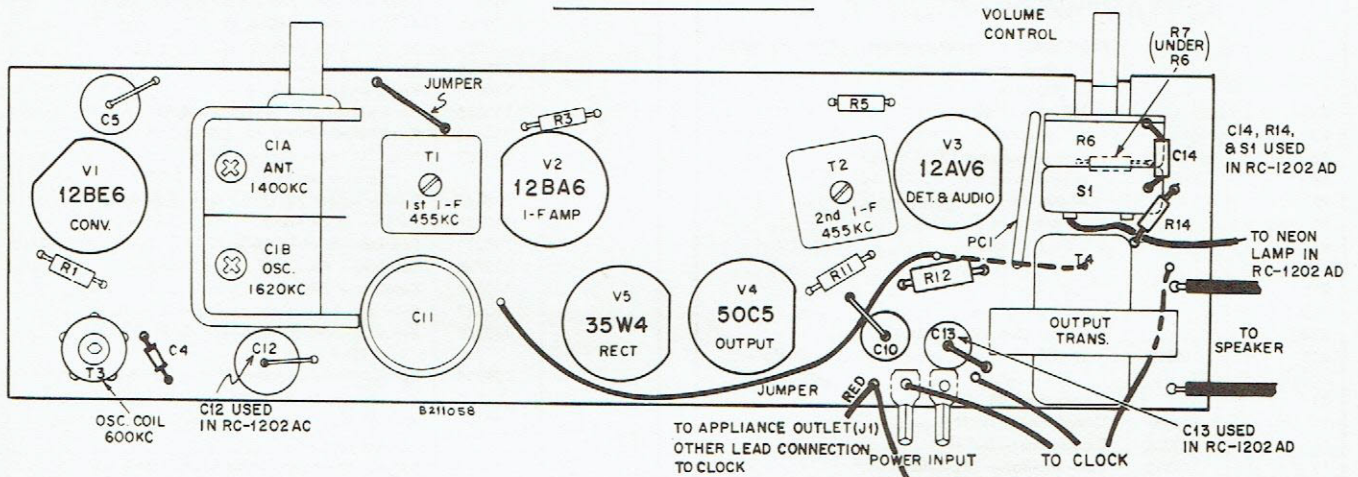
3-RD-4, -5

3-RD-6

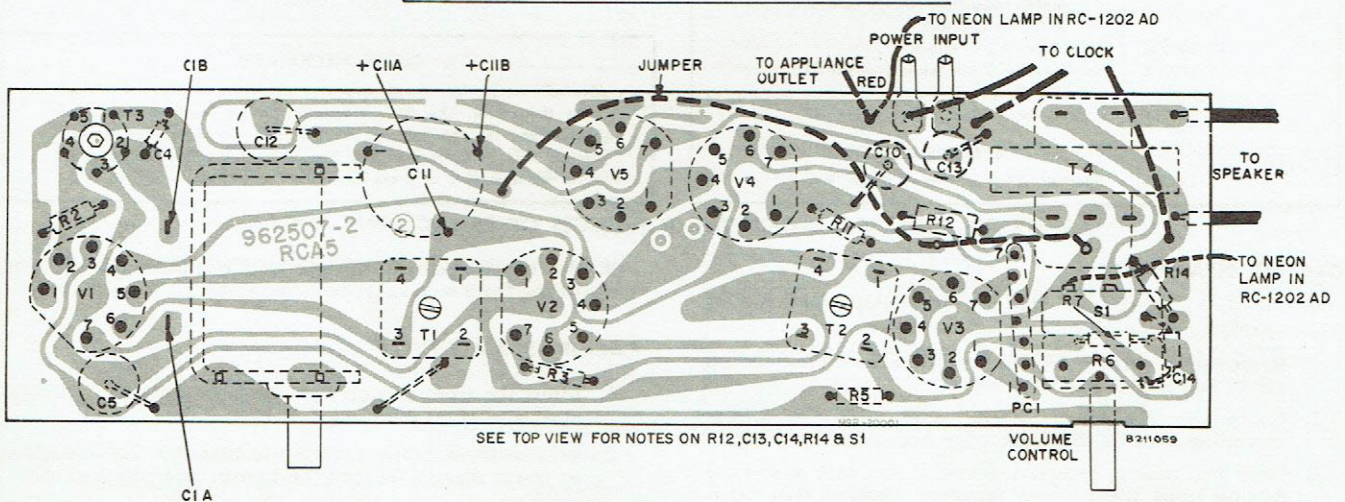
Clock Wiring Diagrams



Schematic Diagram



Chassis Layout—View from Component Side



Chassis Wiring and Components—View from Wiring Side

REPLACEMENT PARTS

SYMBOL NO.	STOCK NO.	DESCRIPTION
CHASSIS ASSEMBLY RC-1202AC, AD		
CAPACITORS:		
C1A/B	110828	Variable tuning (RC-1202AC)
C1A/B	110829	Variable tuning (RC-1202AD)
C4	103440	ceramic—5.6 μmf , $\pm 0.5 \mu\text{mf}$, 500v, N3300
C5		paper—0.047 μf , $\pm 20\%$, 400v
C6		Part of PC1
C7		Part of PC1
C8		Part of PC1
C9		Part of PC1
C10		paper—0.015 μf , $\pm 10\%$, 400v
C11A/B	110060	electrolytic—50/30 μf , + 100-0%, 150/150v (RC-1202AC)
C11A/B	110121	electrolytic—70/30 μf , + 100-10%, 150/150v (RC-1202AD)
C12		paper—0.047 μf , $\pm 20\%$, 400v (RC-1202AC)
C13		paper—0.047 μf , $\pm 20\%$, 600v (RC-1202AD)
C14		paper—0.0018 μf , $\pm 10\%$, 200v (RC-1202AD)
C16		paper—0.047 μf , $\pm 20\%$, 600v (RC-1202AD)
J1	110526	Connector—2 contact female, appliance outlet (RC-1202AD)
L1	110164	Antenna—ferrite rod (3-RA-4, -5)
L1	110127	Antenna—ferrite rod (3-RA-6)
PC1	106989	Circuit—printed (with C6, C7, C8, C9, R8, R9, R10)
RESISTORS: fixed composition, $\pm 20\%$, 1/2 watt unless otherwise specified		
R1		33,000 ohm
R3		150 ohm, $\pm 10\%$
R5		3.3 megohm
R6	110830	control—volume (RC-1202AD)
R6	110174	control—volume (RC-1202AC)
R7		47,000 ohm
R8		Part of PC1
R9		Part of PC1
R10		Part of PC1
R11		150 ohm
R12		1200 ohm, 1 w
R14		82,000 ohm (RC-1202AD)
R15	110832	27,000 ohm, with glow lamp and shield (RC-1202AD)
S1		Part of R6
T1	110057	Transformer—1st IF
T2	108008	Transformer—2nd IF
T3	110310	Coil—oscillator (RC-1202AC)
T3	110518	Coil—oscillator (RC-1202AD)
T4	110133	Transformer—audio
	110350	Circuit—chassis sub-assembly less tuning capacitor, volume control audio transformer
	103236	Connector—AC interlock
	110061	Socket—tube, 7 pin miniature—for V1, V2, V3, V5
	110709	Socket—tube, 7 pin miniature—for V4,
SPEAKER ASSEMBLY		
	110068	Speaker—3" x 5" P.M.—3.2 ohm v.c.

SYMBOL NO.	STOCK NO.	DESCRIPTION
MISCELLANEOUS		
	110527	Bar—"DROWSE", Antique White only
	Y7255	Cabinet—front, Iceberg White—3-RD-40, -41, -49
	Y7256	Cabinet—front, Dark Green—3-RD-45
	Y7258	Cabinet—front, Black Pearl—3-RD-50
	Y7259	Cabinet—front, Iceberg White—3-RD-52, -57
	Y7260	Cabinet—front, Autumn Smoke—3-RD-54
	Y7274	Cabinet—front, Black Pearl—3-RD-61
	Y7275	Cabinet—front, Dark Green—3-RD-65
	Y7276	Cabinet—front, Maple Sugar—3-RD-67
	Y7277	Cabinet—front, Mist Brown—3-RD-69
	Y7261	Cabinet—back, Iceberg White—3-RD-40, -45, -50
	Y7262	Cabinet—back, Shrimp—3-RD-49
	Y7267	Cabinet—back, Starlight Blue—3-RD-52
	Y7264	Cabinet—back, Espresso—3-RD-54
	Y7265	Cabinet—back—Maple Sugar—3-RD-57
	Y7273	Cabinet—back, Iceberg White—3-RD-6 Series
	103620	Cable—AC power cord (3-RD-4, -5)
	108235	Cable—AC power cord (3-RD-6)
	110525	Cap—drowse alarm lever nylon cap
	110784	Dial—clock—3-RD-4
	110783	Dial—clock—3-RD-5
	110823	Dial—tuning indicator—3-RD-6
	110822	Escutcheon—decorative—for controls and drowse bar—3-RD-6
	101311	Grommet—antenna mounting—3-RD-4, -5
	110785	Knob—tuning—3-RD-4, -5
	110824	Knob—tuning—3-RD-6
	110786	Knob—volume—3-RD-4, -5
	110825	Knob—volume—3-RD-6
	110383	Knob—clock functions—3-RD-4, -5
	110826	Knob—clock functions—3-RD-6
	107163	Nut—"U" type spring nut—for cabinet bottom assembly screw—3-RD-4, -5
	110787	Pointer—clock hands (1 set)—3-RD-4, -5
	110827	Pointer—clock hands (1 set)—3-RD-6
	77521	Retainer—clock—3-RD-4, -5
	110788	Retainer—"DROWSE" bar—3-RD-5
	110528	Retainer—"DROWSE" bar—3-RD-6
	110547	Retainer—knob shaft spring grip retainer
	105968	Retainer—formed wire—for clock window—3-RD-6
	109288	Spring—knob retaining spring—3-RD-4, -5, volume knob—3-RD-6
	110196	Spring—tuning indicator dial, retaining, spring—3-RD-6
	110195	Spring—tuning indicator knob, retaining, spring—3-RD-6
	110864	Spring—speaker mounting
	110382	Window—clock—3-RD-4, -5
	110523	Window—clock—3-RD-6

CLOCK MECHANISM

If clock mechanism repair becomes necessary, remove the clock from the radio. The RCA Victor Distributor in your area will advise you of the address of the nearest authorized service station for clock mechanisms. Repair facilities and replacement parts are available at these authorized service stations.

APPLY TO YOUR RCA DISTRIBUTOR FOR PRICES OF REPLACEMENT PARTS

CABINET DISASSEMBLY

DO NOT ATTEMPT TO PULL THE KNOBS OFF FROM THE FRONT.

1. Remove the three cabinet assembly screws (one at top center and two at bottom front).
2. Grasp the instrument at the sides with the fingers extending around the front edge and onto the front.
3. Hold the cabinet face down and shake with a vertical motion until the sections separate. (fingers will catch the front section)

4. Set the instrument upright and complete the removal of the front section from the hood back.

CABINET REASSEMBLY

1. Insert the front section into the hood back in a straight and parallel position.
2. Push sections firmly together feeling that lugs on chassis insert themselves into the power cord interlock plug.
3. Reinsert the three cabinet assembly screws.