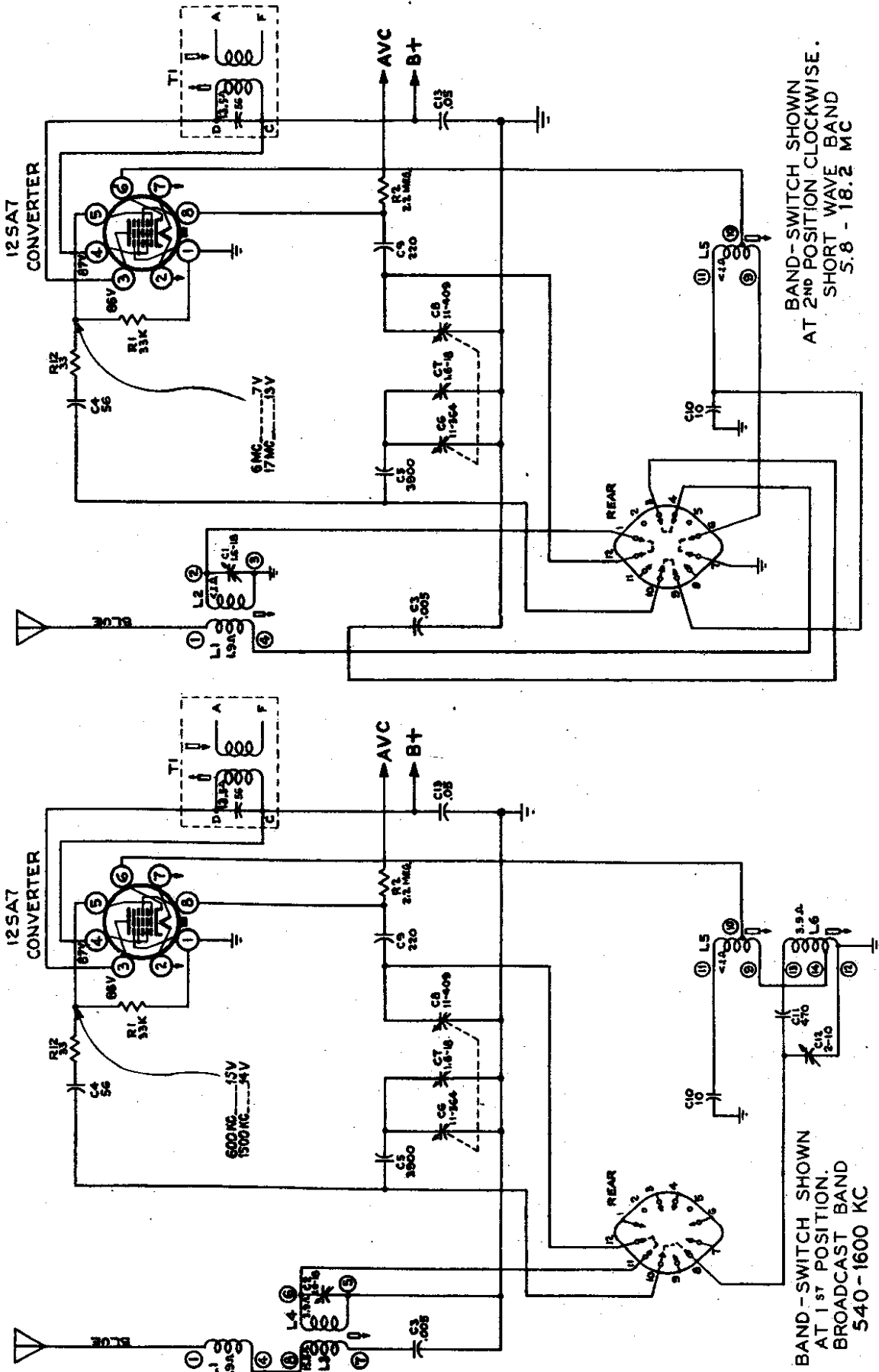


"clarified schematics"



BAND-SWITCH SHOWN AT 2ND POSITION CLOCKWISE. SHORT WAVE BAND 5.8 - 18.2 MC

BAND-SWITCH SHOWN AT 1ST POSITION. BROADCAST BAND 540 - 1600 KC

Alignment Procedure

Cathode-Ray Alignment is the preferable method. Connections for the oscilloscope are shown on the Schematic Circuit Diagram.

Output Meter Alignment.—If this method is used, connect the meter across the voice coil, and turn the receiver volume control to maximum.

***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.

Alignment.—With the gang condenser in full mesh, the pointer should be set $3\frac{3}{4}$ " from the left edge of the dial back plate. This point corresponds to the first mark on the dial scale to the left of "550" kc. on "A" band. To find any calibration point it is necessary to draw a line on the dial scale drawing through the desired freq., so that the line passes through the same reading on the top and bottom rule scales. For instance, 1300 kc. on "A" band will correspond to a dial indicator setting of $7\frac{1}{4}$ " from the LEFT EDGE of the dial back plate. Move the indicator the desired distance by turning the tuning knob. ONCE THE INDICATOR HAS BEEN SET AT FULL MESH, MOVE THE INDICATOR ONLY BY TURNING THE TUNING KNOB.

Dial Indicator Adjustment.—After the set has been aligned, replace it in the cabinet. Turn the tuning knob until the condenser is in full mesh. The indicator should now be under the first mark on the dial scale face to the left of "550" kc on "A" band. If it is not, the calibration should be rechecked.

Alignment.—The most satisfactory method of aligning or checking the short-wave range is on actual reception of short-wave stations of known frequency, by adjusting the magnetite-core oscillator coil, L5, so that these stations come in at the correct points on the dial.

In exceptional cases, when the set is being serviced in a location where the noise level is high enough to prevent reception of short-wave stations, a test-oscillator may be used for alignment, but an extremely high degree of accuracy is required in the frequency settings of the test-oscillator, as a slight error will produce inaccuracy on the band dial. The frequency settings of the test-oscillator may be checked by one or both of the following methods:

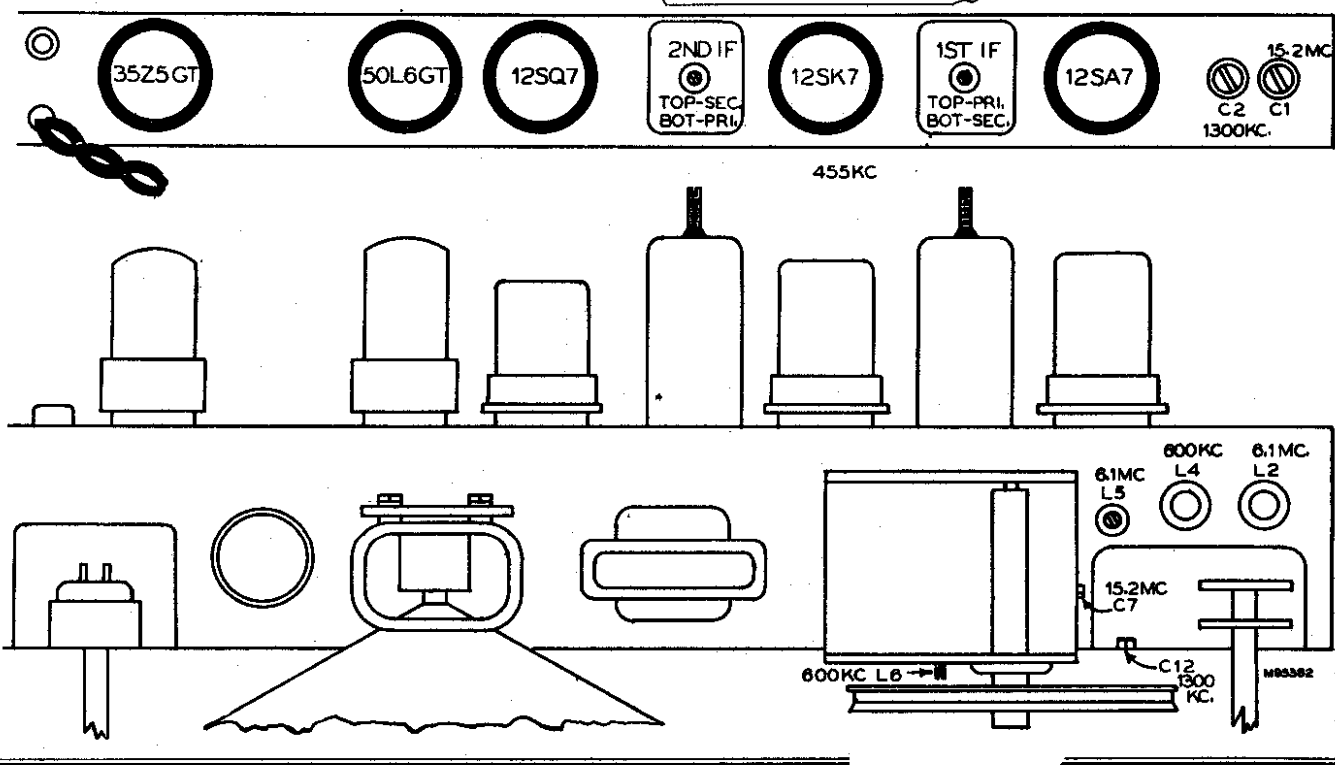
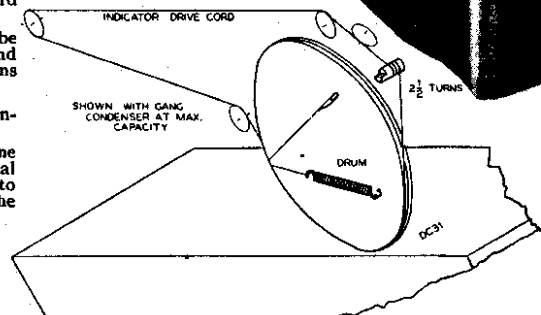
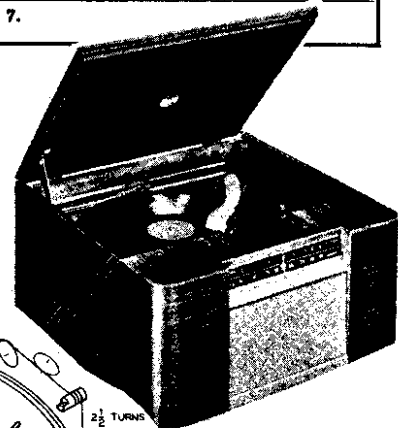
1. Determine the exact dial settings of the test-oscillator (for frequencies at or close to the specified alignment frequencies) by zero-beating the test-oscillator against short-wave stations of known frequency.
2. Use harmonics of the standard-broadcast range of a test-oscillator, first checking the frequency settings on this range by means of a crystal-controlled oscillator, or by zero-beating against standard broadcast stations.

When a test oscillator is employed for alignment, a final check should be made on actual reception of short-wave stations of known frequency, and the magnetite-core oscillator coil should be retouched so that the stations come in at the correct points on the dial.

For additional information, refer to booklet "RCA Victor Receiver Alignment."

***Caution:** This is an AC-DC type chassis with one side of the power line connected to the metal base, which is also—B. Connection from the signal generator must have a large (.1 MFD) capacitor in the ground side to prevent damage to the generator attenuator, unless the power source to the receiver is isolated from ground.

Step	Connect high side of test-osc. to—	Tune test osc. to—	Range Switch	Turn radio dial to	Adjust for max. peak output—
1	12SK7 IF grid in series with .01 mfd.	455 kc	"A"	Quiet point, low end of dial	T2—Top core T2—Bot. core
2	12SA7 IF grid in series with .01 mfd.				T1—Bot. core T1—Top core
3	Ant. lead in series with 300 Ω	15.2 mc	"C"	15.2 mc	C7—Osc. C1—Ant.
4		6.1 mc			L5—Osc. L2—Ant.
5	Repeat steps 3 and 4.				
6	Ant. lead in series with 200 mmfd.	1300 kc	"A"	1300 kc	C12—Osc. C2—Ant.
7		600 kc			L6—Osc. L4—Ant.
8	Repeat steps 6 and 7.				



TOP VIEW QU72

Replacement Parts

STOCK No.	DESCRIPTION	STOCK No.	DESCRIPTION
CHASSIS ASSEMBLIES RC 1035		PICKUP AND ARM ASSEMBLIES RMP 124	
*72277	Capacitor—Mica trimmer, dual, 1.6-18 mmf. (C1, C2)	*72284	Arm—Pickup arm shell only
70367	Capacitor—Mica trimmer, 2-10 mmf. (C12)	*72288	Arm—Pivot arm and shaft
72615	Capacitor—Mica, 10 mmf. (C10)	*72285	Base—Pickup arm mounting base
39622	Capacitor—Mica, 56 mmf. (C4)	*72289	Bracket—Pickup arm mounting bracket
39636	Capacitor—Mica, 220 mmf. (C9, C18)	*72592	Cable—Shielded pickup cable complete with pin plug
72814	Capacitor—Ceramic, 470 mmf. (C11)	39851	Crystal—Crystal cartridge
72637	Capacitor—Mica, 3900 mmf. (C5)	38452	Guard—Needle guard
*72839	Capacitor—Molded paper, .002 mfd., 400 volts (C20)	*72290	Pin—Pivot pin to hold mounting bracket to pivot arm
71699	Capacitor—Molded paper, .005 mfd., 400 volts (C3, C15, C19)	31048	Plug—Pin plug for pickup cable
*72838	Capacitor—Molded paper, .01 mfd., 400 volts (C17)	70341	Nut—Mounting nut and washer for sapphire
72815	Capacitor—Molded paper, .03 mfd., 400 volts (C21)	34311	Ring—Mounting base retaining ring
72837	Capacitor—Molded paper, .05 mfd., 400 volts (C13, C14, C16, C23)	39863	Sapphire—Sapphire and holder
72281	Capacitor—Electrolytic, comprising 1 section of 80 mfd., 150 volts, 1 section of 40 mfd., 150 volts and 1 section of 20 mfd., 25 volts (C22A, C22B, C22C)	37763	Screw—#2-56 x 1/4" screw to mount guard (2 required)
72276	Coil—Antenna coil, "A" band (L1, L2)	4388	Screw—#6-32 x 1/4" set screw to hold pivot pin
*72275	Coil—Antenna coil, "A" band (L3, L4)	*72280	Spacer—One set of spacers for pickup arm bracket
72274	Coil—Oscillator coil, "C" band (L5)	*72774	Spring—Pivot arm tension spring
*72273	Coil—Oscillator coil, "A" band (L6)	MOTOR AND TURNTABLE ASSEMBLIES Stamped 970472-1	
*72278	Condenser—Variable tuning condenser (C6, C7, C8)	39533	Clip—Retaining clip for idler wheel
38410	Control—Volume control and power switch (R4, S3)	39531	Clip—Retaining clip for turntable spindle
32634	Cord—Drive cord (approx. 49" overall length)	30870	Connector—2 prong male plug for motor cable
70384	NOTE: Before assembling, stretch to full length	*70121	Motor—117 volt 60 cycle motor complete with mounting plate and turntable
71851	Drum—Drive drum	39530	Plate—Idler wheel plate
72283	Grommet—Rubber grommet for mounting tube socket or speaker	39528	Spindle—Turntable spindle
*72544	Indicator—Station selector indicator	39534	Spring—Idler wheel tension spring
70391	Insulator—Phono input socket insulator	*72840	Turntable—Finished turntable only
11765	Lamp—Dial lamp, Mazda No. 51	39529	Wheel—Idler wheel
*72272	Plate—Dial back plate complete with drive cord pulleys	SPEAKER ASSEMBLIES 922258-2	
30868	Plug—2 contact female plug for motor cable	71058	Speaker—4" x 6" P.M. speaker complete with cone and voice coil
30870	Plug—2 prong male plug for interlock switch (P2)	NOTE: If stamping on speaker does not agree with above speaker number, order replacement parts by referring to model number of instrument, number stamped on speaker and full description of part required.	
30789	Resistor—33 ohms, 1/2 watt (R12)	MISCELLANEOUS ASSEMBLIES	
71290	Resistor—33 ohms, 1 watt (R11)	70398	Clamp—Dial clamps (1 set)
30880	Resistor—150 ohms, 1/2 watt (R9)	*72685	Decal—Control panel decal
71916	Resistor—1000 ohms, 1 watt (R10)	*72684	Decal—Trade mark decal
30685	Resistor—33,000 ohms, 1/2 watt (R1)	*72683	Dial—Glass dial scale
30787	Resistor—47,000 ohms, 1/2 watt (R5)	*72292	Knob—Control knob
30648	Resistor—470,000 ohms, 1/2 watt (R7, R8)	*72293	Mounting—One set of hardware to mount pick-up arm
30649	Resistor—2.2 megohms, 1/2 watt (R2)	30868	Plug—2 contact female plug for interlock switch (J2)
31417	Resistor—3.3 megohms, 1/2 watt (R3)	*72600	Spring—Conversion spring (60 to 50 cycle operation)
30992	Resistor—10 megohms, 1/2 watt (R6)	14270	Spring—Retaining spring for knob
*72282	Shaft—Tuning knob shaft	72245	Switch—Interlock switch, slide type D.P.D.T. (S4)
34449	Socket—Lamp socket	*72546	Transformer—Step-down transformer, 210-25 volt 50/60 cycle primary, 117 volt 50/60 cycle secondary (T4)
35787	Socket—Phono input socket		
37605	Socket—Tube socket, moided		
31319	Socket—Tube socket, wafer		
70390	Spring—Drive cord spring		
*72280	Switch—Radio-phonograph switch (S2)		
*72279	Switch—Range switch (S1)		
72545	Transformer—First I. F. transformer (T1)		
70918	Transformer—Second I. F. transformer (T2)		
72296	Transformer—Output transformer (T3)		
33726	Washer—"C" washer for tuning knob shaft		

Turntable Spindle:

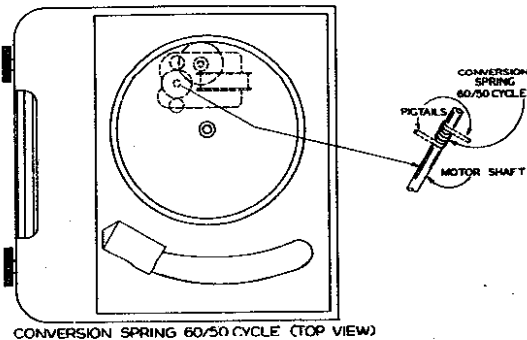
When lubrication is required, apply one or two drops of Gargoyle 600W to the bearing.

Drive Wheel:

Apply one or two drops of any good grade of S.A.E. No. 10 oil to the bearing felt.

CAUTION:

Exercise extreme care to prevent getting any oil on the rubber tire or on the motor shaft. Oil on these parts will cause slippage with resultant irregular turntable speed.



On instruments having motors stamped 970472-1, it is possible to convert these instruments to 117 volt 50 cycle operation. A conversion spring, stock number 72689, is placed over the motor shaft, as shown in the illustration, increasing the diameter of the shaft, and compensating for the decreased motor speed at 50 cycles. These springs may be supplied with pigtails to aid in installation. After the spring has been placed on the shaft, clip the pigtails so they do not interfere with the drive wheel.

REPLACEMENT OF SAPPHIRE

CAUTION: Never bend the sapphire support wire.

The nut on the sapphire holder assembly may be locked by a light cement (such as Glyptal). Extreme care should be used when loosening the nut so that the twisting motion does not break the crystal.

Remove the two screws holding the sapphire guard in place and remove guard. Remove the small nut and washer on the threaded shaft of the sapphire holder and gently push the shaft through the hole in the armature shaft until the sapphire holder assembly comes free.

Use of a drop or two of acetone will facilitate the removal of the nut and shaft if cement has been used. Do not use force as the crystal may be broken. Insert threaded shaft of replacement sapphire holder through armature shaft and replace the washer and nut. Make sure that the sapphire is in the correct position. Take hold at the lower end of the shaft with a pair of pliers while tightening the nut, being very careful so as not to strip the threads or break the crystal. Replace the sapphire guard, positioning it by means of the oversize screw slots. Make certain that the sapphire and its supporting wire are centered in the guard. Tighten the guard screws. Before using, check to see that the sapphire projects far enough (approx. .020") beyond the guard so that the guard will not strike the record. If necessary, bend the guard a little.

