

RCA VICTOR 8R71, 8R74, 8R75 8R72, 8R76

CORRECT ALIGNMENT OF THE FM BAND REQUIRES THAT THE AM BAND BE ALIGNED FIRST

Alignment Indicators:

An RCA VoltOhmyst or equivalent meter is necessary for measuring developed d.c voltage during FM alignment. Connections are specified in the alignment tabulation. An output meter is also necessary to indicate minimum audio output during FM Ratio Detector alignment. Connect the output meter across the speaker voice coil.

The RCA VoltOhmyst can also be used as an AM alignment indicator, either to measure audio output or to measure a.v.c voltage.

When audio output is being measured the volume control should be turned to maximum.

Signal Generator:

For all alignment operations connect the low side of the signal generator to the receiver chassis. The output should be adjusted to provide accurate resonance indication at all times. If output measurement is used for AM alignment the output of the signal generator should be kept as low as possible to avoid a-v-c action.

The FM is alignment may be checked by means of an FM sweep generator and cathode ray oscilloscope. Connect the output from the sweep generator, which is set to 10.7 mc., to the mixer grid (6]6 Pin No. 5), low side to chassis. Disconnect the 2 mfd. capacitor C33 from the Ratio Detector circuit.

Connect the high side of the oscilloscope to the junction of R25 and R26, low side to chassis. Adjust the sweep generator and oscilloscope to obtain the response curve.

The Ratio Detector characteristic may be viewed by connecting the oscilloscope across the volume control R14. Capacitor C33 should be re-connected before checking the Ratio Detector characteristic.

AM Alignment

RANGE SWITCH IN BC POSITION

Steps	Connect high side of sig. gen. to—	Sig. gen. output	Turn radio dial to—	Adjust for peak output		
1	C3 in series with .01 mfd.	455 kc.	Quiet point at low freq. end.	AM windings.† T3 bettom core (sec.). T3 top core (pri.).		
2				AM windings.† T2 top core (sec.). T2 bottom core (pri.).		
3	"A" terminal of terminal board at rear of chassis in series with 220 mmf.	1400 . kc.	1400 kc.	C13 osc. C4 ant.		
4		600 kc.	600 kc.	L4 osc. (Rock gang.)		
5	Repeat Steps 3 and 4.					

t Use alternate loading.

Alternate loading involves the use of a 47,000 ohm resistor to load the AM plate winding while the AM grid winding of the SAME TRANSFORMER is being peaked. Then the grid winding is loaded with the resistor while the plate winding is peaked. Only one winding is loaded at any one time. Remove the 47,000 ohm resistor after T3 and T9 have been aligned. and T2 have been aligned.

Oscillator frequency is above signal frequency on both AM and FM.

FM Alignment

RANGE SWITCH IN FM POSITION — VOLUME CONTROL MAXIMUM

Steps	Connect high side of sig. gen. to—	Sig. gen. output	Turn radio dial to	Adjust for peak output		
1	Connect the d-c prohe of a VoltOhmyst to the negative lead of the 2 mfd. capacitor C33 and the common lead to chassis. Turn gang condenser to max. capacity (fully meshed).					
2	Pin 1 of 6AU6 in series with .01 mfd.	10.7 mc. modulated 30% 400 cycles AM (Approx. .05 volt).	Max. capacity (fully meshed).	T4 top core for max. d-c voltage across C33. T4 bottom core for min. audio output.*		
3	FM ant. term. in series with a 300 ohm resistor. (Remove ant. lead from "FM" term.)	10.7 mc. Adjust to provide 2 to 3 volts indi- cation on VoltOhmyst during alignment.		FM windings.†† T3 top core (sec.). T3 bottom core (pri.).		
4				FM windings.†† T2 top core (sec.). T2 bottom core (pri.).		
5		106 mc.	106 mc.	L2 osc.** C2 ant. Set C2 at max. capacity while adjusting L2.		
6		90 mc.	90 mc.	L1 ant.** (Rock gang.)		
7	Repeat Steps 5 and 6 until further adjustment does not improve callbration.					

- * Two or more points may be found which lower the audio output. At the correct point the minimum audio output is approached rapidly and is much lower than at any incorrect point.
- $\dagger\dagger$ Align T3 and T2 by means of alternate loading as explained under AM alignment. Use a 680 ohm resistor instead of a 47,000 ohm resistor and load the FM windings.
- ** L1 and L2 are adjustable by increasing or decreasing the spacing

