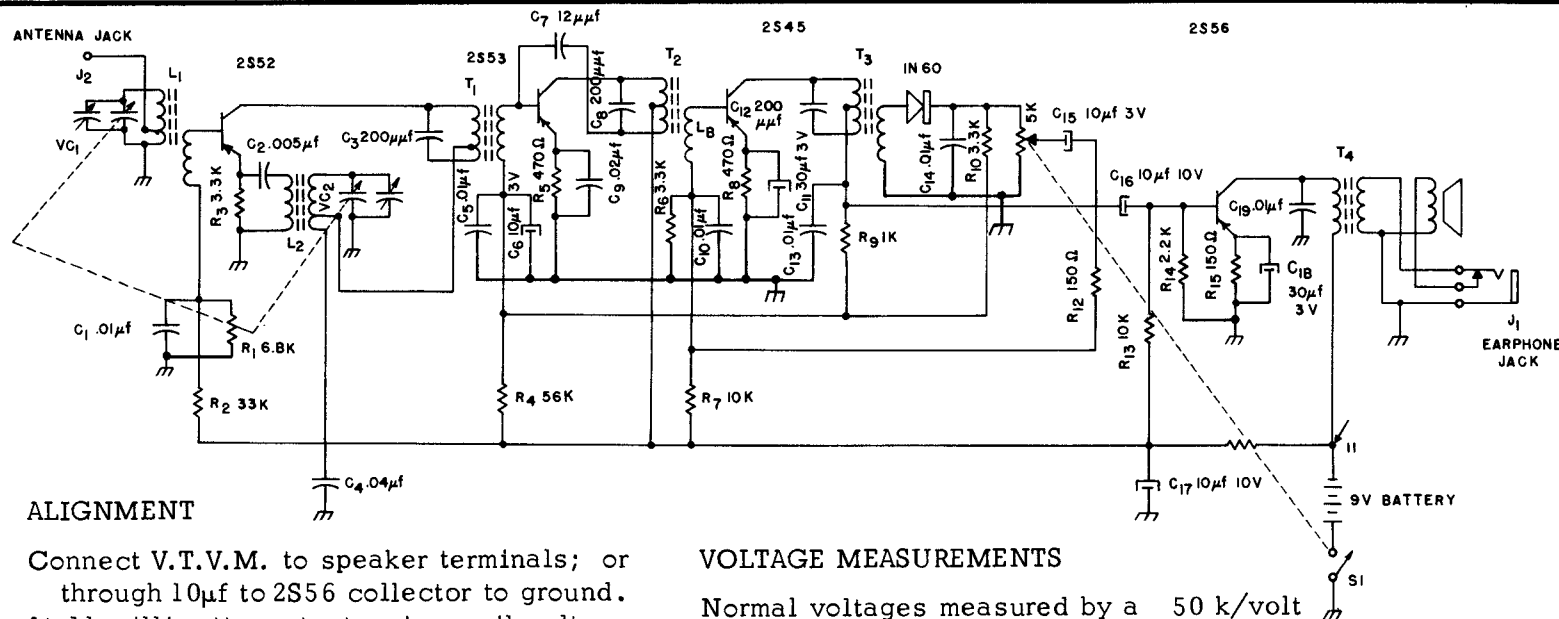


COLUMBIA

MODEL 400



ALIGNMENT

Connect V.T.V.M. to speaker terminals; or through 10 μ f to 2S56 collector to ground. At 11 milliwatts output voice coil voltage is about 0.3 volts and collector to ground voltage is about 3.7 volts. 13 milliwatts output gives about 10% distortion. This level will give a voltage reading of 0.4 volts at the voice coil. Follow alignment procedure in the table below.

VOLTAGE MEASUREMENTS

Normal voltages measured by a 50 k/volt meter and a fully charged battery in the set

	V _c	V _e	V _b	I _c
2S52	8	1.3	1.3	0.2
2S53	8	0.5	0.3	0.5
2S45	5	1.2	1.4	2.5 to 3
2S56	9	1.3	1.5	6 to 8

SERVICING

To prevent damage to transistors when replacing battery, shut off the on-off switch. Also be certain of proper polarity connection.

In measuring resistances it is advisable not to use a high voltage type ohmmeter; also connect the positive side of the ohmmeter toward the circuit ground. Complete circuit resistance, with battery disconnected, is about 500 ohms measured across the battery clips.

Alignment Procedure	1	2	3	4	5	6	7	8	9	10
Alignment Circuit	IF Transformers				Oscillator Circuit			Tuning Circuit		
Signal Connected to Generator	Between Outer Antenna Jack and Earth Potential				Test Loop					
Signal Generator Frequency	455 KC	455 KC	455 KC	455 ± 10	640 KC	1240 KC	640 & 1240	640 KC	1240 KC	640 & 1240
Dial Pointer Setting	Around 1600 KC				CD Mark (Lower)	CD Mark (Higher)	CD Mark (Both)	CD Mark (Lower)	CD Mark (Higher)	CD Mark (Both)
Adjust for Maximum Output	IFT ₃	IFT ₂	IFT ₁	Repeat Nos. 1, 2, and 3	Osc. Coil L ₂	Osc. Trimmer (Rear Section)	Repeat Nos. 5, 6	Antenna Coil	Trimmer (Front Section)	Repeat Nos. 8, 9