

SPECIFICATIONS

Model 105 is a combination Phonograph and Electric Automatic Tuning Radio Receiver. The phonograph is designed to play 10 or 12 inch standard records (78 R. P. M.) and consists of a semi-automatically operated crystal pickup and Turntable Motor.

The radio receiver consists of a five tube A. C. operated superheterodyne circuit, covering standard broadcast frequencies (530 to 1720 K. C.) with Automatic Volume Control and Pentode Audio Output. In addition to being manually tuned, there are six Electric Automatic Push Buttons. Five push buttons are used for selecting any one of five stations and one for changing to manual tuning. The procedure for adjusting the push buttons for reception of stations will be found in the instructions supplied with each receiver.

INTERMEDIATE FREQUENCY: 470 K. C.

PHILCO TUBES USED: 6A7, First Detector Oscillator; 78, I. F. Amplifier; 75, Second Detector, A. V. C., First Audio; 41, Audio Output and 84, Rectifier.

POWER SUPPLY: 115 V., 60 cycle A. C.

POWER CONSUMPTION: 57 watts.

AUDIO OUTPUT: One (1) watt.

ALIGNMENT OF COMPENSATORS

EQUIPMENT REQUIRED:

(1) Signal Generator; Philco Model 077 Signal Generator which has a fundamental frequency range from 115 to 36,000 K. C. is the correct instrument for this purpose.

(2) Output Meter, Philco Models 027 and 028 Vacuum Tube Voltmeter and Circuit Testers incorporates a sensitive output meter and are recommended.

(3) Philco Fiber Handle Screw Driver, Part No. 27 - 7059, and Fiber Wrench, Part No. 3164.

OUTPUT METER: The Philco 027 or 028 Output Meter is connected to the plate and screen terminals of the type 41 tube and adjusted for the 0 to 30 V. A. C. scales. The Vacuum Tube Voltmeter can also be used as an aligning indicator by connecting the negative terminal to the grid of the 6A7 tube through a 1 megohm resistor. The positive terminal is connected to the chassis. After connecting the output meter, adjust the compensators in the order as shown in the tabulation below. Locations of the compensators are shown on Fig. 2. If the output meter pointer goes off scale when adjusting the compensators, reduce the strength of the signal from the generator.

Operations in Order	SIGNAL GENERATOR				RECEIVER		SPECIAL INSTRUCTIONS
	Output Connections to Receiver	Dummy Antenna Note A	Dial Setting	Dial Setting	Control Setting	Adjust Compensators in Order	
1	6A7	.1 mf.	470 K. C.	580 K. C.	Vol. Cont. Max.	11A, 7B, 7A	Adjust for max. output
2	Ant. Lead	100 mf.	1550 K. C.	1550 K. C.	Vol. Cont. Max.	3B, 3A	Adjust for max. output. Note A, B

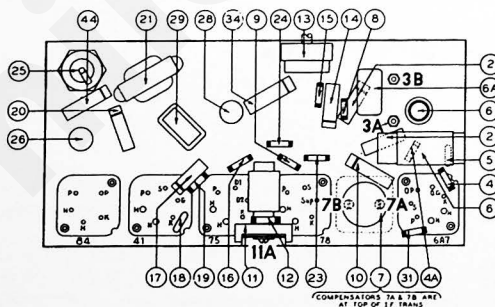
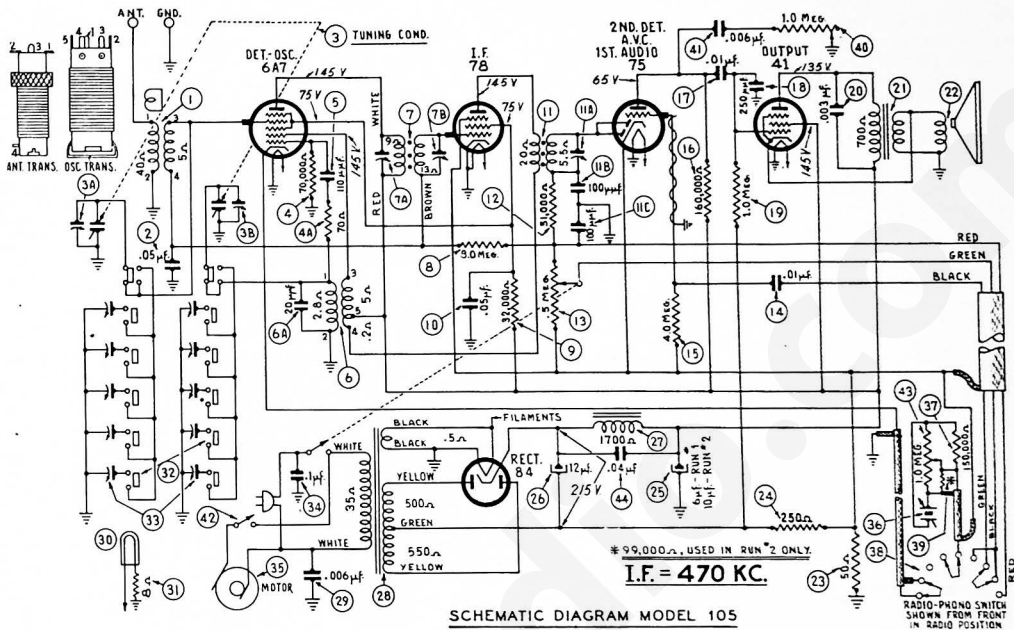


Fig. 1

PART LOCATIONS — UNDERSIDE OF CHASSIS

NOTE A — The "Dummy Antenna" consists of a condenser connected in series with the signal generator output lead (high side). Use the capacity as specified in each step of the above procedure.

NOTE B — DIAL CALIBRATION: With the tuning condenser in "maximum capacity" position (plates fully meshed), set the dial pointer between the two horizontal lines at the low frequency end of the scale (550 K. C.).



SCHEMATIC DIAGRAM MODEL 105

Fig. 2

REPLACEMENT PARTS

Sche. No.	Description	Part No.	Sche. No.	Description	Part No.	Sche. No.	Description	Part No.
1	Ant. Trans.	32-3039	26	Electrolytic Cond. (12 mfd., 300 V.)	30-2404	37	Clip (Mtg. Osc. Coil)	28-5003
2	Tubular Cond. (.05 mfd.)	30-4519	27	Field Coil			Dial	27-5440
3	Tuning Cond.	31-2338		{ Replace Speaker Part No. 36-1440, Run #1 }			Drive Cord Assy.	31-2347
4	Resistor (70,000 ohms, 1/2 watt)	33-370339		{ Replace Speaker Part No. 36-1473, Run #2 }			Drive Drum	28-6662
4A	Resistor (70 ohms, 1/2 watt)	33-070339	28	Power Trans. (115 V., 50-60 cycles)	32-7979		Knob Assy. (Tuning & Volume)	27-4632
5	Mica Cond. (110 mmfd.)	30-1031	29	Condenser (.006 mfd., moulded)	30-4423		Knob (Tone Control)	27-4827
6	Osc. Trans.	32-2122	30	Pilot Lamp	34-2064		Knob (Radio Phono Switch)	27-4828
6A	Mica Cond. (20 mmfd., silver cap)	30-1123	31	Pilot Lamp Resistor (8 ohms, 1/2 watt)	33-980331		Knob (Push Button)	27-4823
7	1st I. F. Trans. Assy.	32-3121	32	Push Button Switch	42-1477		Manual Tab	27-5460
8	Resistor (3.0 meg., 1/2 watt)	33-530339	33	Padder Strip Assy.	31-6290		Needle Screw	218-1047
9	Resistor (32,000 ohms, 1/2 watt)	33-332339	34	Crystal Pickup complete with mtg. parts	35-2027		Screw Motor Mtg.	W-599
10	Tubular Cond. (.05 mfd.)	30-4444	34	Tubular Cond. (.1 mfd.)	30-4122		Shaft (Tuning Knob)	56-6016
11	2nd I. F. Trans. Assy.	32-2674	35	Phono Motor	35-1158		Sleeve (Motor Mtg.)	28-5274
12	Resistor (51,000 ohms, 1/2 watt)	33-351339	36	Crystal Pickup without mtg. parts	35-2031		Spring (Drive Cord)	28-8751
13	Volume Control (.5 meg.)	33-5254		Crystal Pickup complete with mtg. parts	35-2027		Spring (Push Button)	56-1408
14	Tubular Cond. (.01 mfd.)	30-4479	37	Resistor (150,000 ohms, 1/2 watt)	33-415339		Socket (5 prong)	27-6035
15	Resistor (4.0 meg., 1/2 watt)	33-540339	38	Radio Phono Switch	42-1502		Socket (6 prong)	27-6036
16	Resistor (160,000 ohms, 1/2 watt)	33-416339	39	Resistor (99,000 ohms, 1/2 watt)	33-399339		Socket (7 prong)	27-6099
17	Tubular Cond. (.01 mfd.)	30-4572		used in Run 2 only			Speaker (Run #1)	36-1440
18	Mica Cond. (250 mmfd.)	30-1032	40	Tone Control (1.0 meg.)	33-5320		Speaker (Run #2)	36-1473
19	Resistor (1.0 meg., 1/2 watt)	33-510339	41	Tubular Cond. (.006 mfd.)	30-4591		Turntable	315-1007
20	Tubular Cond. (.003 mfd.)	30-4582	42	Motor Switch	42-1498		Washer (rubber coupling, turntable shaft)	315-1002
21	Output Trans.	32-7980	43	Motor Volume Control (1.0 meg.)	33-5323		Washer (metal coupling, turntable shaft)	315-1003
22	Cone & Voice Coil Assy. { Run #1 Speaker No. 36-1440-3 }	36-4086	44	Tubular Cond. (.04 mfd.)	30-4119		Washer (rubber, motor mtg., top)	3915
	{ Run #2 Speaker No. 36-1473 }	36-4120		Bezel Assembly	56-1305		Washer (rubber, motor mtg., bottom)	27-4818
23	Resistor (50 ohms, 1/2 watt)	33-050339		Bezel Clamp	28-5153		Washer ("C" type Tuning Shaft)	28-2043
24	Resistor (250 ohms, 1/2 watt)	33-125339		Cable (Power)	L-3193			
25	Electrolytic Cond. { Run #1, 6 mfd., 450 V. }	30-2265		Cabinet	10384-A			
	{ Run #2, 10 mfd., 450 V. }	30-2091		Clip (Mtg. Ant. Coil)	28-5002			