

Specifications

TYPE OF CIRCUIT: Four tube, battery operated superhetrodyne circuit, two tuning ranges, Automatic Volume Control, and Pentode Output.

TUNING RANGES: Range 1, 540 to 1720 KC.; Range 2, 5.6 to 18.0 MC.

INTERMEDIATE FREQUENCY: 470 KC.

PHILCO TUBES USED: 1-1A7G, 1st Detector and Oscillator; 1-1N5G, I. F. Amplifier; 1-1H5G, 2nd Detector, 1st Audio, and Automatic Volume Control; and 1-1A5G, Output.

AERIAL AND GROUND: Philco "Farm Radio Aerial," part No. 40-6383, is required for maximum performance. A good ground is very essential.

CABINETS: Types "B" and "XF."

BATTERIES REQUIRED: One Philco "A" Pack, part No. 41-8014, and one Philco "B" Pack, part No. 41-8015.

BATTERY DRAIN: 6.5 Ma. "B" and 200 Ma. "A." Total with no signal.

TUNING MECHANISM: Pulley and cable drive for Manual tuning. Electric Push-Button for Automatic Tuning.

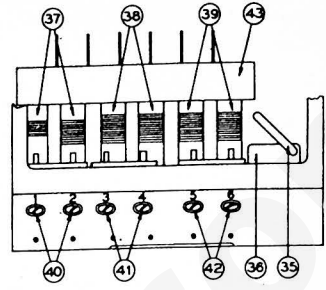


Fig. 4. Automatic Tuning Unit

Instructions for setting up and operating the electric push-button tuning will be found on page 3.

Alignment of Compensators

EQUIPMENT REQUIRED:

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

(2) Output Meter, Philco Model 027 Circuit Tester, incorporates a sensitive output meter and is recommended.

(3) Philco Fiber Handle Screw Driver, part No. 45-2610 and Fiber Wrench, part No. 3164.

OUTPUT METER: The Philco 027 Output Meter is connected to the plate and screen terminals of the 1A5G tube. Set the meter to use the 0-30 volt scale.

Operations in Order	Signal Generator			Receiver			Special Instructions
	Output Connections to Receiver	Dummy Antenna (Note A)	Dial Setting	Dial Setting	Control Settings	Adjust Compensators in Order	
1	1A7G Grid	.1 mf	470 KC	580 KC	Vol. Cont. max.	(20A) (19B) (19A)	
2	Ant. Lead (white)	400 ohms	18.0 MC	18.0 MC	Vol. Cont. max.	(6B)	See Note B
3	Ant. Lead (white)	225 mmf	1550 KC	1550 KC	Vol. Cont. max.	(9) (6A)	
4	Ant. Lead (white)	225 mmf	580 KC	580 KC	Vol. Cont. max.	(9A)	Roll gang
5	Ant. Lead (white)	225 mmf	1550 KC	1550 KC	Vol. Cont. max.	(9)	

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

NOTE B—DIAL CALIBRATION: In order to adjust the receiver correctly, the dial must be aligned to track properly with the tuning condenser. To adjust the dial proceed as follows: Turn the tuning condenser to maximum capacity (plates fully meshed). With tuning condenser in this position set the pointer horizontally across the dial.

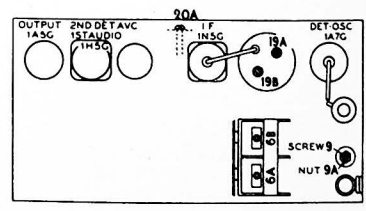


Fig. 1. Locations of Compensators

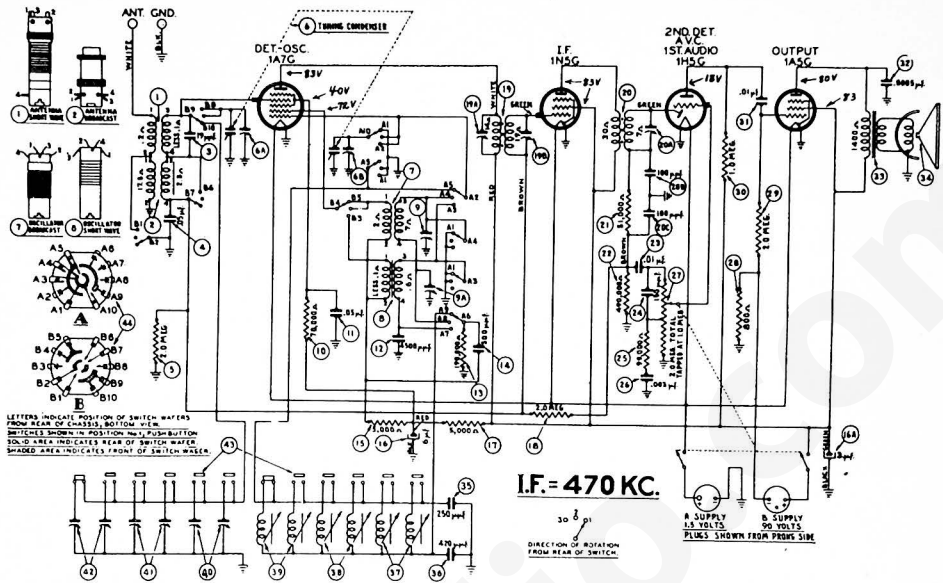


Fig. 2. Schematic Diagram

Replacement Parts Model 39-85, Code 121

Schem. No.	Description	Part No.
1	Antenna Transformer, Range 2 (Incls. No. 3)	32-3092
2	Antenna Transformer, Range 1	32-3084
3	Condenser (19 mmf) (part of No. 1)	30-1090
4	Condenser (.05 mf tubular)	30-4519
5	Resistor (2.0 megohms, 1/2 watt)	33-520339
6	Tuning Condenser Assembly	31-2300
7	Oscillator Transformer, Range 1	32-3082
8	Oscillator Transformer, Range 2	32-3085
9	Compensator (two sections)	31-6100
10	Resistor (70,000 ohms, 1/2 watt)	33-370339
11	Condenser (.05 mf tubular)	30-4444
12	Condenser (4500 mmf mica)	30-1109
13	Resistor (190,000 ohms, 1/2 watt)	33-419339
14	Condenser (500 mmf mica)	30-1114
15	Resistor (5000 ohms, 1/2 watt)	33-250339
16	Electrolytic Condenser (6 mf—3 mf)	30-2348
17	Resistor (5000 ohms, 1/2 watt)	33-250339
18	Resistor (2.0 megohms)	33-520339
19	1st I. F. Transformer Assembly	32-2841
20	2nd I. F. Transformer Assembly	32-3081
21	Resistor (51,000 ohms, 1/2 watt)	33-351339
22	Resistor (490,000 ohms, 1/2 watt)	33-449339
23	Condenser (.01 mf tubular)	30-4572
24	Condenser (150 mmf mica)	30-1033
25	Resistor (99,000 ohms, 1/2 watt)	33-399339
26	Condenser (.003 mf tubular)	30-4580
27	Volume Control and On-Off Switch	33-5288
28	Resistor (800 ohms, 1/2 watt)	33-180339
29	Resistor (2.0 megohms, 1/2 watt)	33-520339
30	Resistor (1.0 megohm, 1/2 watt)	33-510339
31	Condenser (.01 mf tubular)	30-4572
32	Condenser (.0005 mf mica)	30-1114
33	Output Transformer	32-7984
34	Cone & Voice Coil Assembly for Speaker (Part No. 36-1410)	36-4093
35	Condenser (250 mmf, silver plated mica)	30-1104
36	Condenser (420 mmf, silver plated mica)	30-1116

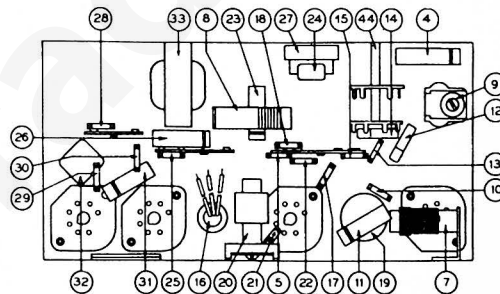


Fig. 3. Part locations, underside of chassis

Replacement Parts

CONTINUED

Schem. No.	Description	Part No.	Description	Part No.
37	Oscillator Coil Assem. (High freq. No. 1 and 2)	32-2941	Bezel Assy. (Dial)	40-6374
38	Oscillator Coil Assem. (Medium frequency No. 3 and 4)	32-2942	Cable (Battery)	41-3437
39	Oscillator Coil Assem. (Low frequency No. 5 and 6)	32-2943	Dial Assy.	31-2307
40	Compensator (two sections) (Nos. 1 and 2)	31-6244	Dial Pointer	56-1091
41	Compensator (two sections) (Nos. 3 and 4)	31-6245	Dial Drive Cord	31-2318
42	Compensator (two sections) (Nos. 5 and 6)	31-6246	Dial Drive Spring	28-8751
43	Push-Button Switch	42-1471	Dial Tuning Shaft	31-2290
44	Wave Switch	42-1466	Eseutcheon (Push-Button)	28-5561
			Knob (Push-Button)	27-4702
			Knob (Range Switch)	27-4321
			Knob (Volume & Tuning)	27-4332
			Pulley (Tuning Condenser)	28-6662
			Speaker (B Cabinet)	36-1410
			Speaker (XF Cabinet)	36-1436
			Socket (6 prong)	27-6086
			Socket (7 prong)	27-6099
			Socket (Speaker)	27-6115
			Tab Kit	40-6408