

Electrical Specifications

Type of Circuit: Superheterodyne, with Push-Pull Pe tone Audio Output, using a vibrator unit operated by a 6 volt storage battery for supplying "B" power to the receiver.

Power Supply: 6 volt storage battery Philco Type 116-R.

Current Drain: 1.3 Amps.

Philco Tubes Used: 1D7G, Det.-Osc.; 1D5G, I.F. Amp.; 1H6G, 2nd Det. 1st Audio; 1H4G, Phase Inverter; 1E7G Output.

Frequency Range: 530—1720 K.C.

Intermediate Frequency: 470 K.C.

Speaker: Permanent Magnet Model L2B.

Aligning Compensators

To accurately adjust this receiver precision test equipment is necessary. A signal generator such as the Philco Model 088, covering from 110 to 20,000 K.C. is recommended for adjusting the various compensators at the frequencies specified. A visual indication of the receiver output is also necessary. Philco Model 025 Circuit Tester contains a sensitive output meter and is recommended for this purpose.

Philco fibre handle screw-driver No. 27-7059 and wrench Part No. 3164 complete the equipment necessary for the following adjustments. The locations of the various compensators are shown in Figs. 1 and 2.

OUTPUT METER—The 025 Output Meter is connected between one of the plate contacts of the 1E7G tube and ground. Adjust the meter to use the (0-30) volt scale.

DIAL ADJUSTMENT—The tuning condenser is set at the maximum capacity position, by turning the knob clockwise. Loosen the set screw of dial hub and set dial, with Glowing Indicator centered between the first and second index lines at the low frequency end of the scale.

INTERMEDIATE FREQUENCY CIRCUIT

1. Connect the 088 Signal Generator output lead through a 1 mfd. condenser to the grid of the 1D7G tube and the generator ground lead to the chassis. Set the generator for 470 K.C. and turn the receiver dial to approximately 580 K.C.
2. Now adjust compensators 18S, 18P, 17S, and 17P for maximum output.

RADIO FREQUENCY CIRCUIT

1. Remove the signal generator output lead from the 1D7G tube and connect it through a 200 mmfd condenser to the receiver aerial post.
2. Set the 088 Signal Generator indicator and the receiver dial to 1600 K.C.
3. Now adjust compensators 5A and 5 for maximum output.

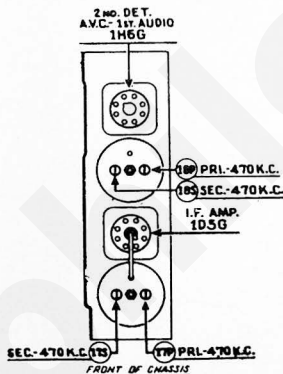


Fig. 2—I. F. Compensators

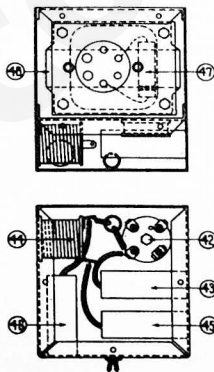


Fig. 3—Power Unit

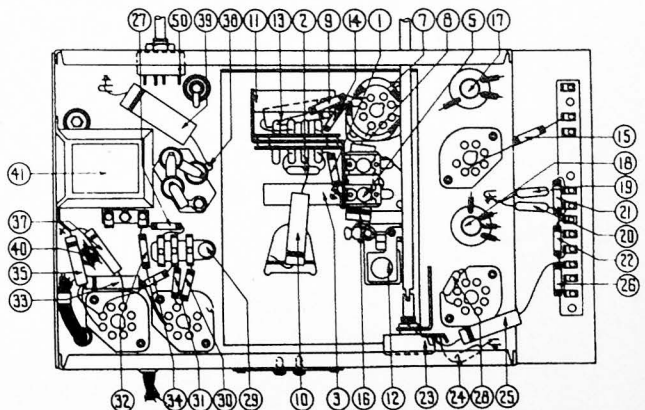


Fig. 4—Parts Locations—underside of chassis

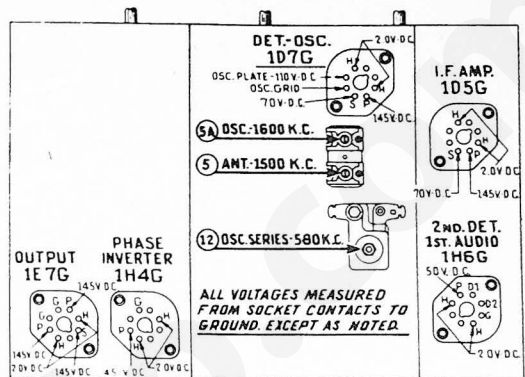


Fig. 1—Socket Voltages and R. F. Compensators

The voltages indicated by arrows were measured with a Philco 025 Circuit Tester which contains a voltmeter having a resistance of 1000 ohms per volt. Volume Control at minimum, Storage Battery fully charged.

4. The low frequency end of the tuning scale is now adjusted as follows: Set the signal generator at and turn the receiver dial to 580 K.C. Now adjust compensator 12 for maximum output, then vary the tuning condenser of the receiver for maximum output about the 580 K.C. dial mark. Now turn compensator 12 slightly to the right or left and again vary the receiver tuning condenser for maximum output. If the output reading increases, turn compensator 12 in the same direction a trifle more, and vary the tuning condenser again for maximum output. If a decrease in output is noted turn the compensator 12 in the opposite direction. This procedure of first setting the compensator and then varying the tuning condenser is continued until there is no further gain in the output reading.

5. Set the signal generator and receiver dials as given in Paragraph 2 above and adjust compensator 5A for maximum output.

6. Rotate the signal generator and receiver dials to 1500 K.C. and adjust compensator 5 for maximum output.

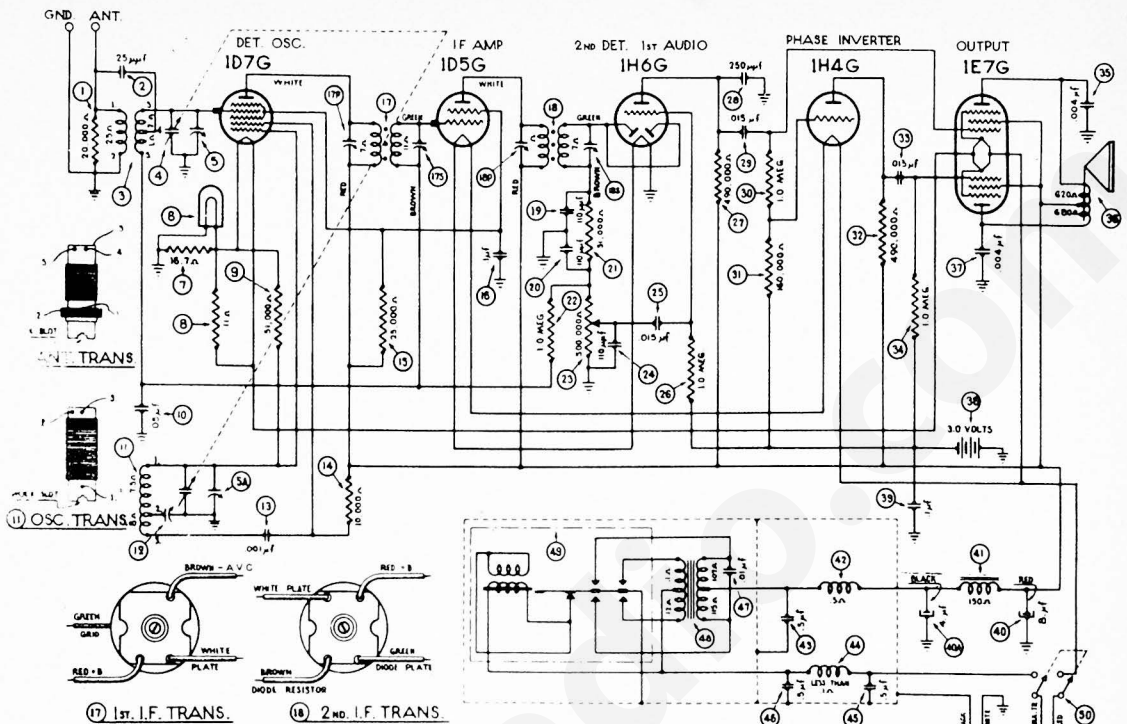


Fig. 5—Schematic Diagram

Replacement Parts—Model 37-34

Schem. No.	Description	Part No.	List Price	Schem. No.	Description	Part No.	List Price	Schem. No.	Description	Part No.	List Price
1	Resistor (20000 ohms ½ watt)	33-120339	\$0.20	32	Resistor (490000 ohms ½ watt)	33-449339	\$0.20		Shaft Retaining Clip	28-4394	.01
2	Condenser (25 mmfd. Mica)	30-1067	.20	33	Condenser (.015 mfd. tubular)	30-4226	.20		Shaft Spring	28-4117 Per C	\$0.40
3	Antenna Transformer	32-2159	1.60	34	Resistor (1 megohm ½ watt)	33-510339	.20		Mtg. Slew (R. F. Unit)	38-7275	.20
4	Tuning Condenser	31-1828	3.50	35	Condenser (.004 mfd. tubular)	30-4456	.20		Terminal Panel (R. F. Unit)	38-7703	.05
5	Compensator (Two section)	31-6145	.50	36	Cone	45-2315	1.20		Terminal Panel (I. F. Unit)	38-7703	.25
6	Pilot Lamp	34-2150	.22	37	Condenser (.004 mfd. tubular)	30-4456	.20		Terminal Panel (Antenna)	38-7871	.10
7	Resistor (16 ohms flexible)	33-3298	.20	38	Bias Cell	41-8009	.30		Socket (8 prong)	27-6058	.11
8	Resistor (11 ohms flexible)	33-3297	.20	39	Condenser (1 mfd. tubular)	30-4122	.20		Socket (7 prong)	27-6057	.11
9	Resistor (51000 ohms ½ watt)	33-351339	.20	40	Electrolytic Condenser (4-8 mfd.)	30-2160	2.00		Socket (Power Unit)	27-6036	.11
10	Condenser (.05 mfd. tubular)	30-4020	.20	41	Filter Choke	32-7543	1.35		Shield (Tube)	28-2726	.10
11	Oscillator Transformer	32-2120	1.00	42	B Filter Choke	32-1932	.25		Shield (I. F. Transformer)	38-7763	.20
12	Compensator (Osc. 580 K.C.)	040005	.35	43	Condenser (.5 mfd. metal case)	30-4296	.60		Shield Base	28-3898	.03
13	Condenser (.001 mfd. tubular)	30-4453	.20	44	"A" Choke	32-1954	.40		Shield (Vibrator)	38-8022	.25
14	Resistor (10000 ohms ½ watt)	33-310339	.20	45	Condenser (.5 mfd. metal case)	30-4296	.60		Mtg. Grommet (R. F. Unit)	27-4317	.04
15	Resistor (25000 ohms ½ watt)	33-325339	.20	46	Condenser (.5 mfd. metal case)	30-4296	.60		Mtg. Sleeve (R. F. Unit)	28-2257	.01
16	Condenser (1 mfd. tubular)	30-4122	.20	47	Condenser (.01 mfd. tubular)	30-4381	.25		Mtg. Washer (R. F. Unit)	W-4436	.60
17	1st I. F. Transformer	32-2100	1.80	48	Power Transformer	32-7682	2.20		Mtg. Screw (R. F. Unit)	W-729 Per C	.45
18	2nd I. F. Transformer	32-2102	1.80	49	Vibrator Unit	41-3222	5.25		Mtg. Plate (R. F. Coil)	28-3808	.02
19	Condenser (110 mmfd. Mica)	30-1031	.20	50	Power Switch	42-1221	.45		Mtg. Spacer (R. F. Coil)	27-8228	.01
20	Condenser (110 mmfd. Mica)	30-1031	.20						Mtg. Screw (R. F. Coil)	W-1635 Per C	.30
21	Resistor (51000 ohms ½ watt)	33-351339	.20		Vernier Drive Assembly	31-1863	.45		Mtg. Rubber Chassis	5189	.03
22	Resistor (1 megohm ½ watt)	33-510339	.20		Pilot Lamp Assembly	38-7875	.45		Mtg. Bushing (Chassis)	27-4359	.02
23	Volume Control	33-5157	1.00		Bezel Assembly	40-5987	.30		Rubber Cushion—		
24	Condenser (110 mmfd. Mica)	30-1031	.20		Dial	27-5252	.10		Vibrator Unit	27-4287	.05
25	Condenser (.015 mfd. tubular)	30-4358	.20		Hub	28-7152	.10		Battery Cable	41-3204	1.20
26	Resistor (1 megohm ½ watt)	33-510339	.20		Clamp	28-2837	.10		Speaker Cable	41-3229	.30
27	Resistor (490000 ohms ½ watt)	33-449339	.20		Set Screw	W-1506 Per C	2.00		Speaker L2B	36-1256	6.50
28	Condenser (250 mmfd. Mica)	30-1032	.25		Screen and Bracket Assembly	31-1878	.25		Baffle 6 Volt Storage (B Cabinet)	116-R	
29	Condenser (.015 mfd. tubular)	3793SU	.20		Knob Dial	27-4321	.10		Baffle and Silk Assembly (F Cabinet)	40-5935	.40
30	Resistor (1.0 megohm ½ watt)	33-510339	.20		Knob (Volume and Power)	27-4337	.10		Baffle and Silk Assembly (F Cabinet)	40-5933	.75
31	Resistor (160000 ohms ½ watt)	33-416339	.20		Volume Control Shaft	38-8058	.12				

Figures in black type indicate colored figures in Base View.

Prices Subject to Change without Notice

PHILCO PARTS & SERVICE DIVISION
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