

PHILCO

Model 38-34, Code 125



SERVICE BULLETIN No. 295 for members of RADIO MANUFACTURERS SERVICE

A PHILCO Service Plan

SPECIFICATIONS

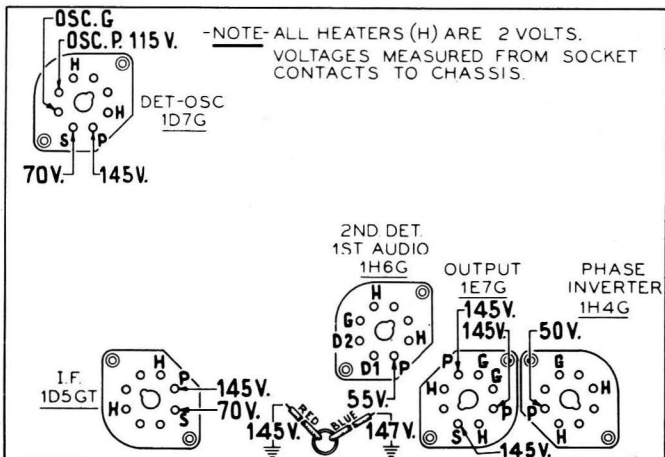


Fig. 1. Socket Voltages, Underside of Chassis

The voltages indicated by arrows were measured with a Philco 026 Circuit Tester which contains a sensitive voltmeter. Volume control at minimum.

TYPE OF CIRCUIT: A Five tube superheterodyne circuit covering standard broadcast and state police frequencies is used in this model. The receiver is operated by a 6 volt storage battery and uses a synchronous vibrator for supplying "B" voltage. The vibrator power unit in the type "B" cabinet is mounted on the chassis. In the type "F" cabinet the vibrator power unit is mounted under the chassis shelf and connected to the receiver through a cable and plug. Additional design features included in this model are: Automatic Volume Control; two point tone control and Pushpull Pentode Audio Output Circuit.

The receiver is designed to operate from a standard "L" type aerial Philco part No. 45-2428. This aerial system should be used to obtain the maximum performance from the receiver.

POWER SUPPLY: 6 volt storage battery-Philco type 116R
Current drain: 1.2 amps.

INTERMEDIATE FREQUENCY: 470 K. C.

TUNING RANGE: 530 to 1720 K. C.

OUTPUT: 1 watt

PHILCO TUBES USED: 1D7G, 1st det. osc.; 1D5GT, I.F.; 1H6G, diode, 1st audio; 1H4G, Phase inverter; 1E7G, push-pull pentode output.

SPEAKERS USED: "B" Cabinet L-3.
"F" Cabinet KR26.

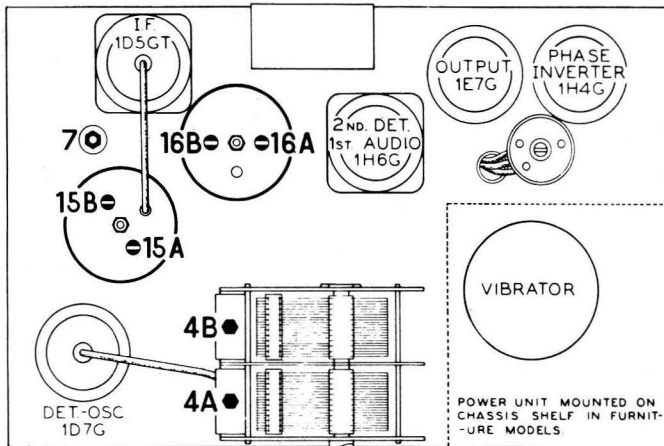


Fig. 2. Locations of Compensators

Alignment of Compensators

EQUIPMENT REQUIRED: (1) Signal Generator, having a fundamental frequency range covering the tuning and intermediate frequencies of the receiver. Philco Model 077 A.C. operated Signal Generator or Model 088, battery operated Signal Generator which have the required frequency range are the correct instruments for this purpose; (2) Output meter, Philco Model 026 circuit tester incorporates a sensitive output meter and is recommended; (3)

Philco Fibre Handle Screw Driver, Part No. 27-7059 and Fibre Wrench, Part No. 3164.

OUTPUT METER: The 026 Output Meter is connected to the plate terminals of the 1E7G tube. Adjust the meter to use the (0-30) volt scale and advance the attenuator control of the generator until a readable indication is noted on the output meter after signal is applied.

Operations In Order	Signal Generator			Receiver			Special Instructions
	Output Connections To Receiver	Dummy Antenna (Note B)	Dial Setting	Dial Setting	Control Settings	Adjust Compensators In Order	
1	Grid Cap 1D7G Det. Osc.	.1 mfd.	470 K. C.	580 K. C.	Vol. Cont. (max.)	(15B), (15A) (16B), (16A)	
2	Ant. Ter.	200 mmfd.	1500 K. C.	1500 K. C.	"	(4B), (4A)	Note C Dial Calibration
3	Ant. Ter.	200 mmfd.	580 K. C.	580 K. C.	"	(7)	Roll Tuning Condenser Note A
4	Ant. Ter.	200 mmfd.	1500 K. C.	1500 K. C.	"	(4B), (4A)	

NOTE "A"—First adjust compensator for maximum output, then vary the tuning condenser for maximum output. Now turn the compensator slightly to the right or left and again adjust tuning condenser for maximum output. This procedure of first setting the compensator and then varying the tuning condenser is continued until there is no further gain in the output meter reading.

NOTE "B"—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 "C"—**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 position (plates fully meshed).
- Holding the tuning condenser in this position, turn the dial pointer until it is parallel with the INDEX LINE. See Fig. (3). This is the correct position of pointer at the maximum capacity position.

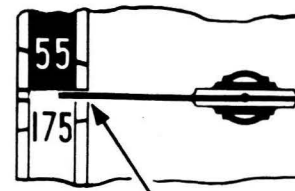


Fig. 3. Dial Calibration. Set pointer as shown

**Replacement Parts
Model 38-34, Code 125**

Schem. No.	Description	Part No.	List Price
1	Condenser (25 mmf. mica)	30-1067	\$0.20
2	Resistor (20,000 ohms, 1/2 watt)	33-320339	.20
3	Ant. Transformer	32-2212	1.60
4	Tuning Condenser Assembly	31-2100	
5	Osc. Transformer	32-2213	.70
6	Resistor (51,000 ohms, 1/2 watt)	33-351339	.20
7	Compensator	31-6186	.30
8	Condenser (.001 mf. tubular)	30-4453	.20
9	Resistor (25,000 ohms, 1/2 watt)	33-325339	.20
10	Resistor (10,000 ohms, 1/2 watt)	33-310339	.20
11	Pilot Lamp Bulb	34-2150	.22
12	Condenser (.05 mf.—.05 mf. tubular)	30-4522	.35
13	Resistor (11 ohms, 1/2 watt, wire wound)	33-1264	.20
14	Resistor (200 ohms, 1 watt wire wound)	33-1244	.20
15	1st I. F. Transformer	32-2841	2.20
16	2nd I. F. Transformer	32-2795	3.00
17	Resistor (51,000 ohms, 1/2 watt, Part of 16)	33-351339	.20
18	Condenser (.1 mf. tubular)	30-4499	.20
19	Condenser (.1 mf. tubular)	30-4499	.20
20	Resistor (1.0 meg., 1/2 watt)	30-510339	.20
21	Power Switch & Volume Control	33-5237	.20
22	Condenser (110 mmf. mica)	30-1031	.20
23	Condenser (.015 mf. tubular)	30-4358	.20
24	Resistor (2.0 meg., 1/2 watt)	33-520339	.20
25	Resistor (8.3 ohms, 1/2 watt wire wound)	33-1268	.20
26	Resistor (8.3 ohms, 1/2 watt, wire wound)	33-1268	.20
27	Condenser (250 mmf. mica)	30-1032	.25
28	Condenser (.015 mf. tubular)	30-4515	.20
29	Resistor (490,000 ohms, 1/2 watt)	33-449339	.20
30	Resistor (1.0 meg., 3 watt)	33-510339	.20
31	Resistor (160,000 ohms, 3 watt)	33-416339	.20
32	Condenser (.25 mf. tubular)	30-4446	.25
33	Resistor (32,000 ohms, 1/2 watt)	33-332339	.20
34	Bias Cell (3 used)	41-8009	.20
35	Condenser (.015 mf. bakelite)	3793SU	.35
36	Resistor (490,000 ohms, 1/2 watt)	33-449339	.20
37	Resistor (1.0 meg., 1/2 watt)	33-510339	.20
38	Condenser (.004 mf.—.004 mf. bakelite)	8324DU	.20
39	Cone Assembly (L3 Speaker)	45-2554-1	1.50
40	Output Transformer (KR26 Speaker)	32-7758	1.50
41	Cone & Voice Coil Assembly (KR26 Speaker)	36-3540	1.00
42	Condenser (4 mf.—8 mf.—Electrolytic)	30-2160	2.00
43	Choke	32-7543	1.35
44	6 volt Storage Battery	116R	
45	Condenser (250 mmf. mica)	30-1032	.25
46	Condenser (.5 mf.)	30-4296	.60
47	Choke "B"	32-1932	.25
48	Choke "A"	32-1954	.40
49	Condenser (.5 mf.)	30-4296	.60
50	Condenser (.5 mf.)	30-4296	.60
51	Condenser (.01 mf. tubular)	30-4381	.25
52	Power Transformer	32-7682	2.20
53	Vibrator	41-3222	5.25
	Bias Cell Panel Assy	38-9104	
	Cable (Speaker)	41-3326	.40
	Cable (Battery)	41-3204	1.20
	Dial Assembly	31-2107	.20
	Dial Drive Cord	31-2086	.08

Schem. No.	Description	Part No.	List Price
	Drum	29-6662	\$0.20
	Mtg. Rubber—Small (Vibrator Assembly)	27-4307	C 1.20
	Mtg. Rubber—Large (Vibrator Assembly)	3914	.02
	Mtg. Rubber—Square (Vibrator)	27-4287	.05
	Pointer (Dial)	28-5201	.20
	Shaft Assembly (Tuning)	38-9107	.15
	Shield Assembly (Vibrator)	38-8022	.25
	Socket (6 prong)	27-6086	.11
	Socket (7 prong)	27-6087	.11
	Socket Assembly (Pilot Lamp)	38-9120	
	Socket (Vibrator)	27-6036	.11
	Spring (Drive Cord)	28-8751	.05
	Speaker (KR26)	36-1353	10.00
	Speaker (L3)	36-1359	6.50
	Washer & Spacer (Mtg. Vibrator Assembly)	40-6288	
	Washer (Mtg. Vibrator unit)	5189	.03
	Bezel Window	27-5348	.20
	Bezel Throat	28-5248	.20

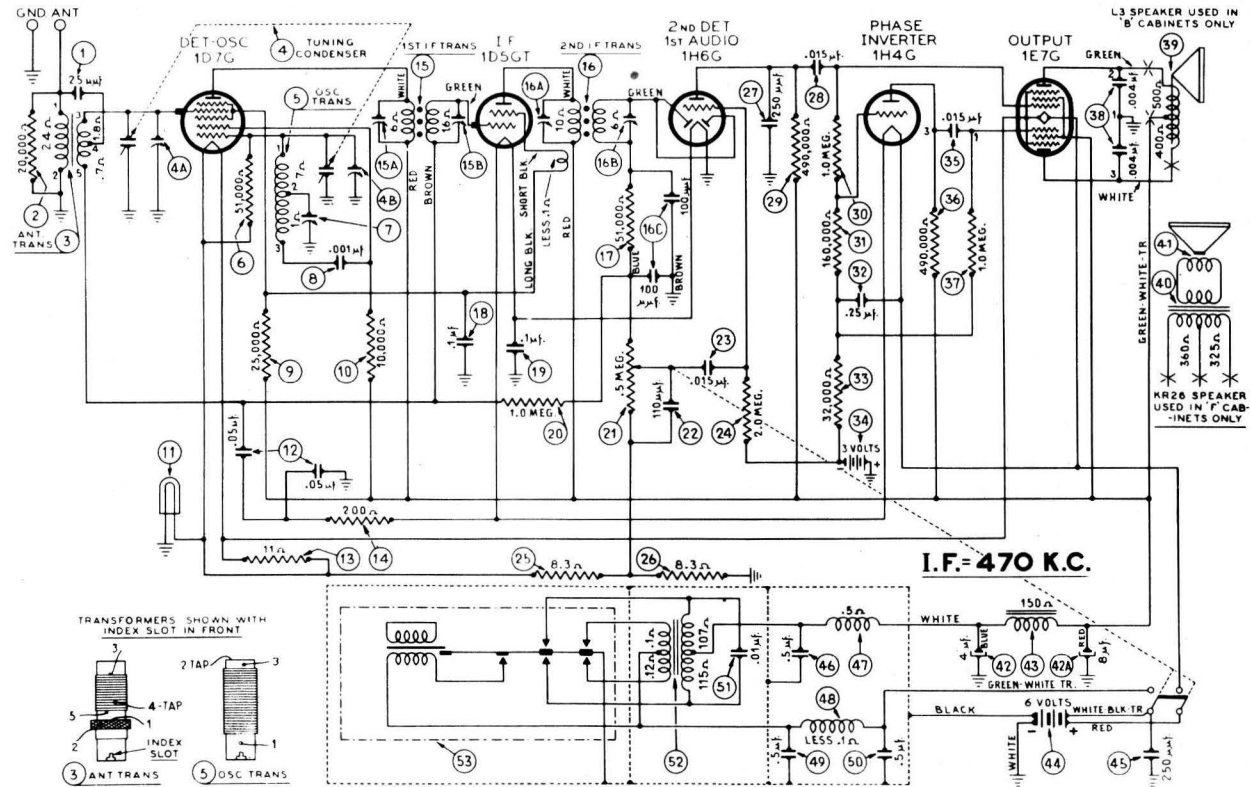


Fig. 4. Schematic Diagram—Model 38-34, Code 125

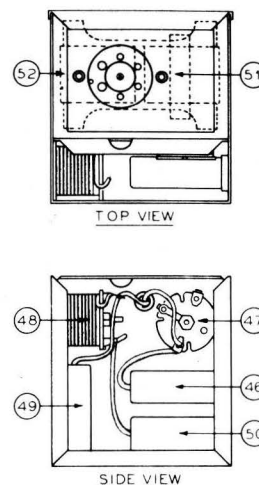


Fig. 5. Vibrator Part Locations

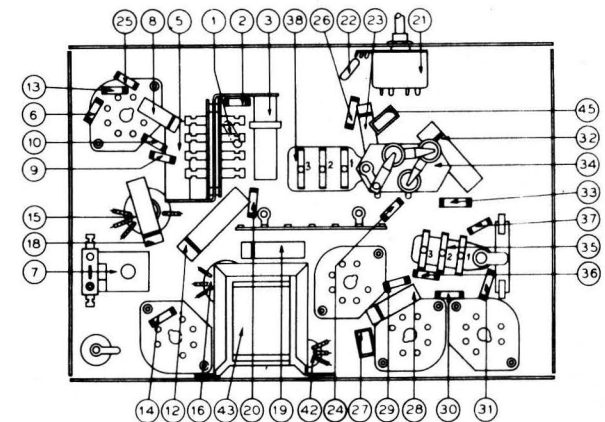


Fig. 6. Part Locations Underside of Chassis

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