SPECIFICATIONS

TYPE OF CIRCUIT: Five tube superheterodyne circuit covering standard broadcast and state police frequencies with automatic volume control; and a pentode output circuit. The receiver is designed to operate from either a 6 volt storage battery or a 115 volt 60 cycle A.C. supply. A Plug-Switch is provided on the power unit for selection of either voltage supply. Place the plug with arrow pointing toward voltage being used. With a 6 volt storage battery supply, a vibrator in conjunction with a 6X5G tube is used for supplying "B" voltage to the receiver. When using a 115 volt supply the vibrator is removed from the circuit. See schematic diagram page 2.

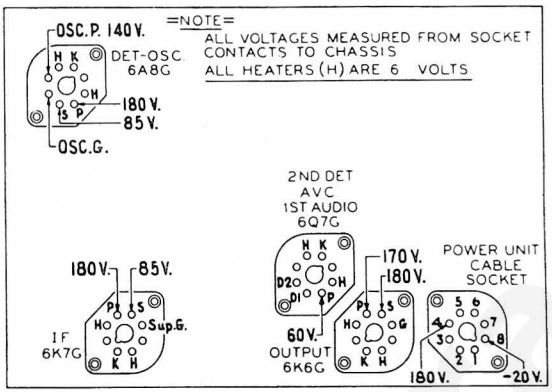

Fig. 1. Socket Voltages, Underside of Chassis

The voltages indicated by arrows were measured with a **Philco 026 Circuit Tester** which contains a sensitive voltmeter. Volume Control minimum. Storage Battery fully charged or 115 V. A.C. Power Supply.

To obtain maximum performance from the receiver, a Philco Aerial Part No. 45-2428 should be used.

POWER SUPPLY: 6 volt storage battery Philco type 116R or a 115 volt 60 cycle A.C. power supply.

INTERMEDIATE FREQUENCY: 470 K. C.

TUNING RANGE: 530 to 1720 K. C.

POWER OUTPUT: 1.5 watts

PHILCO TUBES USED: 6A8G, converter and oscillator; 6K7G, I.F.; 6Q7G, 2nd detector and 1st audio; 6K6G, output; 6X5G, rectifier.

SPEAKER USED: KR29

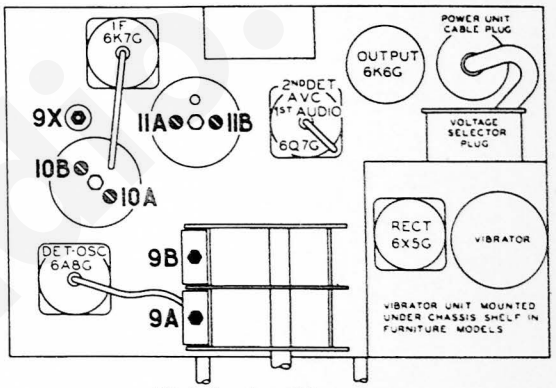

Fig. 2. Locations of Compensators

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 and cathode terminals of the 6K6G 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			RECEIVERS			Notes
	Cable Connections	Dummy Antenna Note A	Dial Freq.	Control Positions	Dial Freq.	Adjust Compensators In Order	
1	6A8G Grid	.1 mfd.	470 K. C.	Vol. Cont. (max.)	580 K. C.	(11B), (11A) (10B), (10A)	Adjust all compensators for "max." output
2	Ant. Terminal	200 mmf.	1550 K. C.	"	1500 K. C.	(9B), (9A)	See Note "B" dial Calibration
3	Ant. Terminal	200 mmf.	580 K. C.	"	580 K. C.	(9X)	Roll Tuning condenser for maximum output when adjusting compensator
4	Ant. Terminal	200 mmfd.	1500 K. C.	"	1500 K. C.	(9B), (9A)	

NOTE "A"—The Dummy Antenna is a condenser connected in series with the signal generator output lead. Use the capacity 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:

1. Turn the tuning condenser to maximum capacity position (Plates fully meshed).
2. 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.

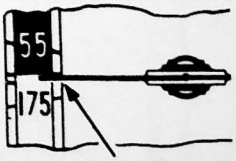

Fig. 3. Dial Calibration. Set pointer as shown

Replacement Parts
Model 38-35, Code 121

Schem. No.	Description	Part No.	List Price
1	Resistor 20,000 Ω ½ watt	33-320339	$0.20
2	Condenser 25 μμf mica	30-1067	.20
3	Ant. Transformer	32-2212	1.60
4	Condenser .05 μf., tubular	30-4518	.20
5	Resistor 51,000 Ω ½ watt	33-351339	.20
6	Osc. Transformer	32-2213	.70
7	Condenser .001 μf., tubular	30-4453	.20
8	Resistor (10,000 Ω ½ watt)	33-310339	.20
9	Tuning Condenser	31-2100	
9X	Compensator	31-6186	.30
10	1st. I. F. Transformer	32-2852	
11	2nd. I. F. Transformer	32-2854	
12	Condenser (110 μμf. mica)	30-1031	.20
13	Resistor (51,000 Ω ½ watt) (Part of 11)	33-351339	.20
14	Condenser (.05 μf. tubular	30-4444	.20
15	Resistor (25,000 Ω ½ watt)	33-325339	.20
16	Power Switch & Volume Control	33-5253	
17	Resistor (1.0 Meg. ½ watt)	33-510339	.20
18	Resistor (1.0 Meg. ½ watt)	33-510339	.20
19	Condenser (12 μf.—8 μf.)	30-2270	
20	Choke Coil	32-7038	1.15
21	Condenser (.01 μf., tubular)	30-4514	.20
22	Condenser (250 μμf. mica)	30-1032	.25
23	Condenser (.01 μf., tubular)	30-4169	.20
24	Output Transformer	32-7936	
25	Cone & Voice Coil Assembly	36-3540	1.00
26	Resistor (190,000 Ω ½ watt)	33-419339	.20
27	Resistor (490,000 Ω ½ watt)	33-449339	.20
28	Condenser (.01 μf., tubular)	30-4479	.20
29	Resistor (99,000 Ω ½ watt)	33-399339	.20
30	Condenser (.01 μf., tubular)	30-4479	.20
31	Resistor (4.0 meg., ½ watt)	33-540339	.20
32	Resistor (300 Ω, 1 watt)	33-1214	.20
33	Resistor (70 Ω, ½ watt)	33-070339	.20
34	"A" Choke	32-2269	.20
35	"A" Choke	32-2269	.20
36	Condenser (.5 mfd., tubular)	30-4229	.80
37	Condenser (.05—.05 μf., Bakelite)	3615DG	.40
38	"B" Choke	32-2836	
39	"A" Choke	32-1984	.90
40	Condenser (.02 μf., tubular)	30-4481	.20
41	Condenser (.5 μf.—Metal Housing)	30-4296	.60
42	"B" Choke (Part of 38)		
43	Condenser (.015 μf., tubular)	30-4552	
44	Power Transformer	32-7934	
45	Condenser (.02 μf., tubular)	30-4481	.20
46	Condenser (.5 mfd., tubular)	30-4551	
47	Vibrator	41-3367	
48	Voltage Selector Plug	38-9247	
49	Pilot Lamp Bulb	34-2068	.12
	Speaker KR-29	36-1379	
Bezel Window		27-5348	.20
Bezel Throat		28-5248	.20
Bracket (Dial Ass'y)		28-5225	
Cable (Battery & Vibrator)		41-3364	
Cable (Speaker)		41-3371	
Cable (Power, A. C.)		L-2778	
Cable (Vibrator F Cabinet)		41-3369	
Cable (Vibrator B Cabinet)		41-3368	
Dial & Frame Ass'y		31-2107	.20
Dial Drive Cord		31-2086	.08
Dial Drive Spring		28-8751	.05
Dial Drive Drum		28-6662	.20
Knob (Tuning)		27-4321	
Knob (Volume)		27-4332	.10
Mtg. Bolt (Chassis)		W-490	

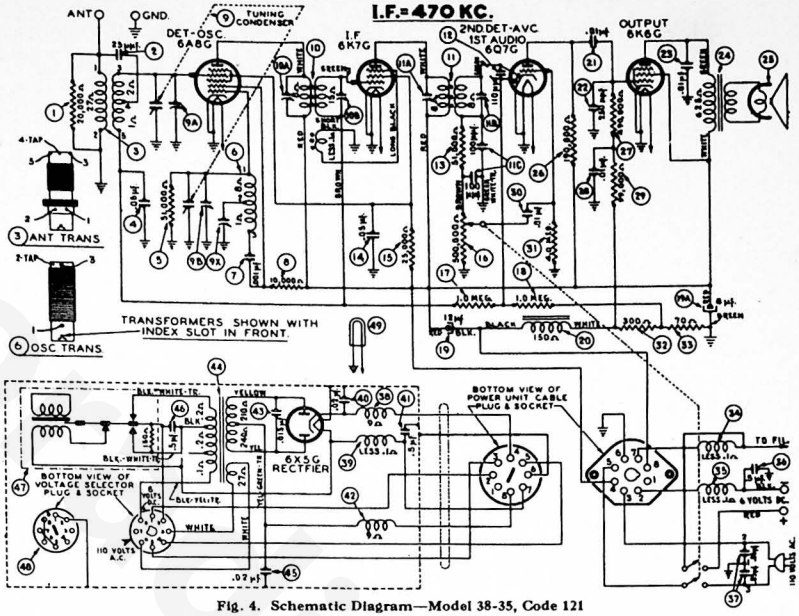

Fig. 4. Schematic Diagram—Model 38-35, Code 121

Schem. No.	Description	Part No.	List Price
Mtg. Washer-Rubber (Vibrator "B" Cabinet)		3914	
Mtg. Washer-Rubber (Vibrator "F" Cabinet)		5189	
Mtg. Washer-Rubber (Vibrator "B" Cabinet)		27-4307C	$1.20
Mtg. Washer-Rubber (Vibrator "F" Cabinet)		27-4585	
Mtg. Sleeve (Vibrator "B" Cabinet)		28-6142	
Mtg. Sleeve (Vibrator "F" Cabinet)		28-6772	
Pilot Lamp Ass'y		38-9270	
Pointer (Dial)		28-5201	.20
Rubber Sleeve (Mtg. Vibrator)		27-4637	
Shaft Tuning		38-9107	.15
Shield (Vibrator)		38-9245	
Speaker (KR29)		36-1379	
Socket (Voltage selector)		27-6054	
Socket (6 prong)		27-6086	.11
Socket (7 prong)		27-6087	.11
Socket (Rectifier)		27-6058	
Socket (Vibrator)		27-6090	
Screw (Dial Drum)		W-1400	
Screw (Mtg. Vibrator, B Cabinet)		W-410	
Screw (Mtg. Vibrator, F Cabinet)		W-767	

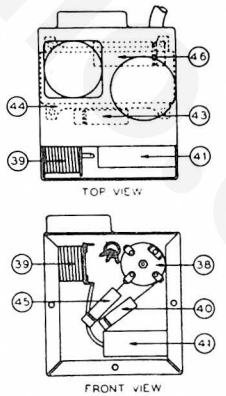

Fig. 5. Vibrator Part Locations

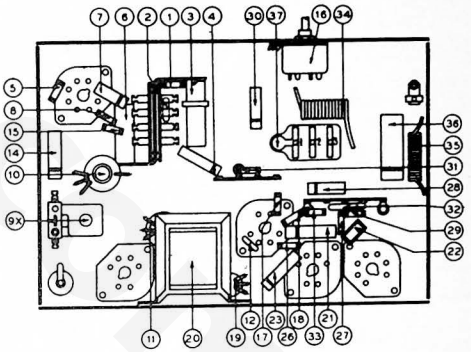

Fig. 6. Part Locations Underside of Chassis