

SPECIFICATIONS

TYPE OF CIRCUIT: A. C. operated; superheterodyne circuit with three tuning ranges, covering standard broadcast (540 KC. to 1720 KC.)—police broadcast (1.7 MC. to 5.9 MC.) and short-wave (5.8 MC. to 18.0 MC.) frequencies; Electric Push-Button tuning; Automatic Volume Control; and push-pull pentode output.

The receiver is designed to operate from a "Philco Safety Aerial," part No. 40-6371. This aerial system should be used to obtain maximum performance from the receiver.

POWER SUPPLY: Voltage, 115 volts. Frequency, 50-60 cycles. Power consumption, 85 watts.

INTERMEDIATE FREQUENCY: 470 KC.

TUNING RANGES: 540 KC. to 1720 KC.; 1.7 MC. to 5.9 MC.; 5.8 MC. to 18.0 MC.

PHILCO TUBES USED: 1-78, R. F.; 1-6A7, 1st detector and oscillator; 1-78, I. F.; 1-6J5G, 2nd detector, Automatic Volume Control; 1-6K5G, 1st audio; 1-6J5G, phase inverter; 2-42, push-pull output; and 1-5Y4G, rectifier.

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

CABINETS: Type "XX."

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

Alignment of Compensators

EQUIPMENT REQUIRED:

(1) Signal Generator; 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. 27-7059 and Fiber Wrench, part No. 3164.

OUTPUT METER: The Philco 027 Output Meter is connected to the plate terminals of the type 42 tubes and adjusted for the 0 to 30 V. A. C. scale. After connecting the output meter, adjust the compensators in the order as shown in the tabulation below. Locations of the compensators are shown on page 3. If the output meter pointer goes off scale when adjusting the compensators, reduce the strength of the signal from the generator.

Operation	SIGNAL GENERATOR			RECEIVER			Special Instructions
	Output Connections to Receiver	Dummy Antenna (Note A)	Dial Setting	Dial Setting	Control Setting	Adjust Compensators to Max. Reading	
1	6A7	.1 mf	470 KC.	470 KC.	Vol. Max. Range Switch Broadcast	30B, 30A, 27B, 27A	
2	Antenna	150 mmf	1550 KC.	1550 KC.	"	21, 8B, 8A	See Note B and C
3	Antenna	150 mmf	580 KC.	580 KC.	"	22	Roll Tuning Condenser
4	Antenna	150 mmf	1550 KC.	1550 KC.	"	21	
5	Antenna	400 ohms	5.0 MC.	5.0 MC.	Range Switch Police	21A	
6	Antenna	400 ohms	18.0 MC.	18.0 MC.	Range Switch S. W.	21B, 14, 4	

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: 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: With the tuning condenser closed (maximum

capacity), set the dial pointer on the extreme left index line at the low frequency end of the broadcast scale. The arrangement of the drive cable is shown on page 3.

NOTE C—Compensators (8A) and (8B) are located on top of the tuning condenser. Compensator (8A) is the first one from the tuning drum side.

MODEL 39-45, CODE 121 PRODUCTION CHANGES

In some early receivers the electrolytic condenser (72) was a 25 mfd. condenser part no. 30-2219 instead of the 18 mfd. condenser part no. 30-2335 as shown in the parts list above.

When replacing condenser, part no. 30-2335 can be used.

Replacement Parts Model 39-45, Code 121

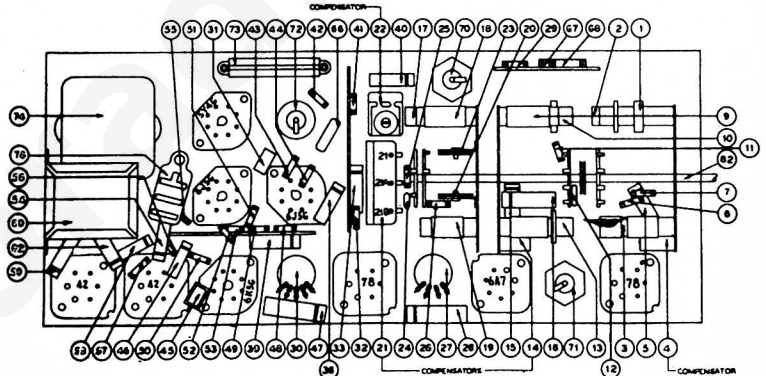
Schem. No.	Description	Part No.
1	Ant. Trans. (Range 1), B. C.	32-3056
2	Ant. Trans. (Range 2), Police	32-3053
3	Ant. Trans. (Range 3), S. W.	32-3055
4	Ant. Compensator (Range 3)	31-6212
5	Tubular Cond. (.05 mf)	30-4519
6	Resistor (51,000 ohms)	33-351339
7	Resistor (2.0 megohms)	33-520339
8	Tuning Cond.	31-2296
9	R. F. Trans. (Range 1), B. C.	32-2379
10	R. F. Trans. (Range 2), Police	32-3054
11	Mica Cond. (8000 ohms)	33-280339
12	Mica Cond. (5 mmf)	30-1083
13	R. F. Trans. (Range 3), S. W.	32-3046
14	R. F. Compensator (Range 3)	31-6212
15	Tubular Cond. (.05 mf)	30-4519
16	Tubular Cond. (.1 mf)	30-4455
17	Osc. Trans. (Range 1), B. C.	32-2129
18	Osc. Trans. (Range 2), Police	32-3052
19	Osc. Trans. (Range 3), S. W.	32-3051
20	Tracking Condenser, Semifixed (3425 mmf)	31-6263
21	Osc. Compensator (Broadcast)	31-6266
21A	Osc. Compensator (Police, Part of 21)	31-6266
21B	Osc. Compensator (s.w. part of 21)	31-6230
22	Osc. Compensator	31-6230
23	Tracking Condenser, Semifixed (1230 mmf)	31-6262
24	Mica Cond. (250 mmf)	30-1032
25	Resistor (32,000 ohms)	33-332339
26	Tubular Cond. (.1 mf)	30-4455
27	1st I. F. Trans. Assy.	32-3050
28	Resistor (10,000 ohms)	33-310339
29	Resistor (1000 ohms)	33-210339
30	2nd I. F. Trans. Assy.	32-2582
31	Mica Cond. (110 mmf)	30-1031
32	Resistor (330,000 ohms)	33-433339
33	Tubular Cond. (.03 mf)	30-4580
34	Resistor (70,000 ohms)	33-370339
35	Volume Control	33-5286
36	Tubular Cond. (.01 mf)	30-4169
37	Tubular Cond. (.004 mf)	30-4578
38	Tone Control	33-5287
39	Tubular Cond. (.02 mf)	30-4481
40	Tubular Cond. (.01 mf)	30-4169
41	Resistor (1.0 megohm)	33-510339
42	Resistor (330,000 ohms)	33-433339
43	Resistor (330,000 ohms)	33-433339
44	Resistor (2.0 megohms)	33-520339
45	Mica Cond. (110 mmf)	30-1031
46	Tubular Cond. (.002 mf)	30-4579
47	Tubular Cond. (.1 mf)	30-4455
48	Resistor (1.0 megohm)	33-510339
49	Resistor (490,000 ohms)	33-449339
50	Resistor (99,000 ohms)	33-399339
51	Resistor (490,000 ohms)	33-449339
52	Resistor (5000 ohms)	33-250339
53	Resistor (45,000 ohms)	33-345339
54	Tubular Cond. (.004 mf)	30-4578
55	Resistor (51,000 ohms)	33-351339
56	Resistor (490,000 ohms)	33-449339
57	Resistor (490,000 ohms)	33-449339
58	Tubular Cond. (.004 mf)	30-4578
59	Tubular Cond. (.003 mf)	30-4469
60	Output Trans.	32-7981
61	Cone and Voice Coil Assy. for Speaker (Part No. 36-1450)	36-4089
62	Tubular Cond. (.003 mf)	30-4469
63	Pilot Lamp Dial	34-2210
64	Pilot Lamp	34-2210
65	Pilot Lamp Power	34-2210
66	Resistor (16 ohms)	33-016431
67	Resistor (13,400 ohms)	33-313439
68	Resistor (4000 ohms)	33-240339
69	Field Coil, Replace Speaker (Part No. 36-1450)	36-4089
70	Electrolytic Cond. (4 mf)	30-2334

Schem. No.	Description	Part No.
71	Electrolytic Cond. (25 mf)	30-2333
72	Electrolytic Cond. (18 mf)	30-2335
73	B. C. Resistor	33-3358
74	Power Trans. (115v., 60 cycle)	32-7998
75	A. C. Switch	42-1467
76	Bakelite Cond. (.01 to .01 mfd)	3903JGDG
77	Silver Mica Cond. (370 mmf)	30-1110
78	Silver Mica Cond. (370 mmf)	30-1110
79	Push-Button Switch	42-1462
80	Push-Button Osc. Trans. Assy. (8 coils)	32-3031
80A	Coil No. 1 (540-1030 KC.)	32-3042
80B	Coil No. 2 (540-1030 KC.)	32-3042
80C	Coil No. 3 (670-1160 KC.)	32-3042
80D	Coil No. 4 (670-1160 KC.)	32-3042
80E	Coil No. 5 (900-1470 KC.)	32-3041

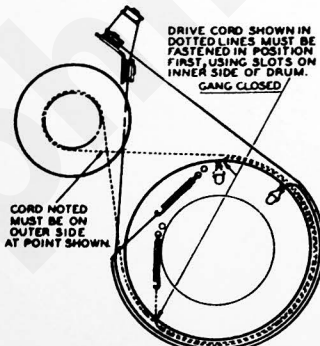
Schem. No.	Description	Part No.
80F	Coil No. 6 (900-1470 KC.)	32-3041
80G	Coil No. 7 (1100-1600 KC.)	32-3041
80H	Coil No. 8 (1100-1600 KC.)	32-3041
81	Padder Strip	31-6259
81A	Comp. No. 1 (540-1030 KC.)	32-3041
81B	Comp. No. 2 (540-1030 KC.)	32-3041
81C	Comp. No. 3 (670-1160 KC.)	32-3041
81D	Comp. No. 4 (670-1160 KC.)	32-3041
81E	Comp. No. 5 (900-1470 KC.)	32-3041
81F	Comp. No. 6 (900-1470 KC.)	32-3041
81G	Comp. No. 7 (1100-1600 KC.)	32-3041
81H	Comp. No. 8 (1100-1600 KC.)	32-3041
82	Wave Switch	42-1451

Miscellaneous Parts

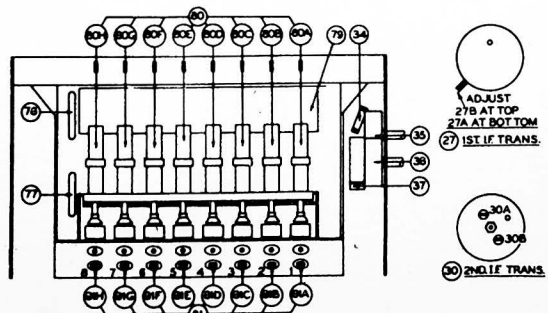
Bezel	56-1092	Shaft Control Drums	28-6924
Bezel Gasket	27-9245	Socket Assembly Dial Lamp	38-9694
Bearing (Drum Shaft)	56-1036	Socket Assembly Dial Lamp	38-9695
Cable (Power)	L-2778	Socket Pilot Lamp	38-9696
Cable (Speaker)	41-3430	Socket (6-prong) (78-tube)	27-6036
Coupling (Tuning Condenser)	31-2291	Socket (6-prong) (Octal)	27-6086
Dial (Scale)	27-5404	Socket (7-prong) (Octal)	27-6053
Dial Clamp	56-1034	Socket (7-prong) (6A7-tube)	27-6107
Dial Gasket	27-9224	Speaker	36-1450
Dial Gasket	27-9225	Tab Kit	40-6392
Dial Pointer	56-1033	Mounting Parts	
Dial Drive Cord. (Tuning)	31-2315	Grommet (Mtg. Push-Button Switch)	27-4610
Dial Drive Cord. Pointer	31-2316	(Mtg. Tuning Unit Assy.)	3914
Dial Drive Cord Spring	28-8913	(Mtg. Tuning Unit Assy.)	3915
Disc Control (Tuning)	27-4766	Nut (A. C. Switch)	W-1757
Disc Control (Range Switch)	38-9202	Nut (Speaker Mtg.)	W-124
Disc (Tone Control)	27-4764	Screw (Mtg. Chassis)	W-1345
Disc (Volume Control)	27-4765	Screw (Bezel)	W-1834
Drum Assembly (Tuning Condenser)	38-9661	Washer (Speaker Mtg.)	27-7467
Drum-Bracket and Bearing (Tuning Condenser)	38-9662	Washer Rubber (Mtg. Chassis)	27-4571
		Washer (A. C. Switch)	W-894



PART LOCATIONS UNDERSIDE OF CHASSIS MODEL 39-45



CORRECT METHOD OF INSTALLING DRIVE CORDS ON TUNING CONDENSER DRUM



ELECTRIC AUTOMATIC PUSH BUTTON UNIT