

PHILCO Model 39-36, Code 121

SPECIFICATIONS

TYPE CIRCUIT: Philco Model 39-36, code 121 is a six tube, A.C. operated superheterodyne circuit with two tuning ranges covering standard broadcast (540-1720 K.C.) and shortwave (5 M.C. to 18.0 M.C.) frequencies. In addition, the receiver employs Electric Automatic Push-Button Tuning for automatically selecting any of eight standard broadcast stations, continuously variable tone control, automatic volume control, and pentode audio output.

POWER SUPPLY: 115 V., 60 cycle A.C. 42 watts. For operation on 115V., 25 to 40 cycles, A.C. current or 220 V. 50 to 60 cycles A.C. current.

rent, different power transformers are required, and can be obtained from your distributor.

INTERMEDIATE FREQUENCY: 470 K.C.

PHILCO TUBES USED: 6A7, First Detector Oscillator, 7B, I.F. Amplifier; 37, Second Detector-A.V.C.; 76, First Audio; 41, Audio Output and 84, Rectifier.

CONTROLS: The new Philco Disc Controls are used on this model for adjusting tuning, volume, tone and frequency range.

CABINETS: Type XX.

Alignment of Compensators

EQUIPMENT REQUIRED:

- (1) Signal Generator: Philco Model 077.
- (2) Output Meter, Philco 027 Circuit Tester.
- (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 and cathode terminals of the type 41 tube. After connecting the Output Meter, adjust compensators in the order as given in tabulations below. Locations of the compensators are shown in Fig. 1.

Operations	SIGNAL GENERATOR			RECEIVER			Special Instructions
	Output Connections To Receiver	Dummy Antenna (Note A)	Dial Setting	Dial Setting	Control Settings	Adjust Compensators in Order	
1	6A7 Grid.	.1 mf.	470 K.C.	580 K.C.	Vol. Cont. Max. Range Switch (Brdst.)	(21A) (12B) (12A)	
2	Ant. Ter.	100mmf.	18.0 M.C.	18.0 M.C.	Vol. Cont. Max. Range Switch (S.W.)	(4B)	See Note B, C
8	Ant. Ter.	100mmf.	1550 K.C.	1550 K.C.	Vol. Cont. Max. Range Switch (Brdst.)	(5) (4A)	
4	Ant. Ter.	100mmf.	580 K.C.	580 K.C.	Vol. Cont. Max. Range Switch (Brdst.)	(5A)	
5	Ant. Ter.	100mmf.	1550 K.C.	1550 K.C.	Vol. Cont. Max.	(5)	

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, pro-

ceed 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 in Service Bulletin No. 385.

NOTE C—Compensators (4A) and (4B) are located on top of the tuning condenser. Compensator (4B) is the first one from the tuning drum side.

Replacement Parts

Schem. No.	Description	Part No.
1	Ant. Trans. (S.W.)	33-3927
2	Ant. Trans. (B.C.)	33-3926
3	Tubular Cond. (.03 mf.)	33-3926
4	Tuning Cond. Assy.	31-2346
5	Dust Packer Unit	33-3926
6	Oscillator Trans.	33-3926
7	Mica Cond. (.250 mmf.)	30-1032
8	Mica Cond. (.450 mmf.)	30-1039
9	Resistor (51,000 ohms) 1/2 watt	33-23539
10	Condenser (Silver Mica)—370 mmf.	30-1110
11	Condenser (Silver Mica)—370 mmf.	30-1110
12	1st I.F. Trans. Assy.	32-3120
13	Tubular Cond. (.01 mf.)	30-4455
14	Resistor (32,000 ohms) 1/2 watt	33-23539
15	Resistor (5,000 ohms) 1/2 watt	33-23539
16	Resistor (3,000 ohms) 1/2 watt	33-23539
17	Electro. Cond. (18 mf.)—250 Volts.	80-2331
18	Electro. Cond. (18 mf.)—250 Volts.	30-2370
19	Tubular Cond. (.02 mf.)	30-5119
20	Resistor (490,000 ohms) 1/2 watt	33-44939
21	2nd I.F. Trans. Assy.	32-3120
21A	Compensator Part of 21A	
21B	Condenser Part of 21A	
21C	Resistor (51,000 ohms) 1/2 watt	33-35139
22	Mica Cond. (110 mmf.)	30-1631
23	Resistor (490,000 ohms) 1/2 watt	33-44939
24	Tubular Cond. (.003 mf.)	30-4573
25	Volume Control (2 meg.)	33-5286
26	Resistor (70,900 ohms)	33-57439
27	Tubular Cond. (.002 mf.)	33-5286
28	Resistor (2.0 meg.) 1/2 watt	33-51039
29	Resistor (1.0 meg.) 1/2 watt	33-51039
30	Tubular Cond. (.015 mf.)	30-4518
31	Resistor (4.0 meg.) 1/2 watt	33-54539
32	Tone Control (50 meg.)	33-5287
33	Tubular Cond. (.05 mf.)	30-4518
34	Mica Cond. (.250 mmf.)	30-1032
35	Tubular Cond. (.01 mf.)	30-4573
36	Tubular Cond. (.003 mf.)	30-4573
37	Resistor (70,900 ohms)	33-57439
38	Resistor (.75 meg.) 1/2 watt	33-47539
39	Tubular Cond. (.003 mf.)	30-4469
40	Output Trans. for Speaker Part No. 36-1438	33-7978
41	Cone and Voice Coil Assy. for Speaker Part No. 36-1438-3	30-4689
42	Field Coil, Reproduction Speaker Part No. 36-1438-3	
43	Electro. Cond. (8 mf.—400 V.)	30-2371
44	Resistor (280 ohms)	33-12543
45	Resistor (70 ohms) 1/2 watt	33-07839
46	Power Trans. 115 V. (50 to 60 cycles)	33-7977
47	Power Trans. 115 V. (25 to 40 cycles)	30-5210
48	Bakelite Cond. (.01 mf.—01 mf.)	30-5210
49	Pilot Lamp (Dial)	34-2044
50	Pilot Lamp (Dial)	34-2044
51	Push Button Switch	42-1482
51	Compensator Assy.	31-6256
51A	Compensator No. 1 (540-1030 K.C.)	
51B	Compensator No. 2 (540-1030 K.C.)	
51C	Compensator No. 3—870-1180 K.C.	
51D	Compensator No. 4—870-1180 K.C.	
51E	Compensator No. 5—900-1470 K.C.	
51F	Compensator No. 6—900-1470 K.C.	
51G	Compensator No. 7—1170-1660 K.C.	
51H	Compensator No. 8—1170-1660 K.C.	
52	Electric Push-Button Coil Assy.	32-3931
52A	Osc. Coil No. 1—540-1030 K.C.	33-3043
52B	Osc. Coil No. 2—540-1030 K.C.	33-3043
52C	Osc. Coil No. 3—870-1180 K.C.	33-3043
52D	Osc. Coil No. 4—870-1180 K.C.	33-3043
52E	Osc. Coil No. 5—900-1470 K.C.	33-3043
52F	Osc. Coil No. 6—900-1470 K.C.	33-3041
52G	Osc. Coil No. 7—1170-1660 K.C.	33-3041
52H	Osc. Coil No. 8—1170-1660 K.C.	33-3041
53	Wave Switch	42-1478

Miscellaneous Parts

Description	Part No.
Band	36-1104
Brush and Bearing (Tuning Drum)	38-9047
Cable (Power)	L-3778
Coilsping (Tuning Condenser)	31-2381
Dial	37-5453
Dial Drive Cord	36-1828
Dial Drive Cord (Tuning)	31-2315
Dial Drive Cord (Pointer)	31-2315
Disc Control (Tuner)	37-4786
Disc Control Range Switch	37-4767
Disc Control (Tone)	37-4766
Disc Control (Volume)	37-4765
Drum (Tuning Condenser)	38-9716
Push-Buttons	37-4750
Socket (5 prong)	37-6835
Socket (6 prong)	37-6836
Socket (7 prong)	37-6837
Spring (Dial Drive Cord)	36-1438-1
Speaker	36-1438-3

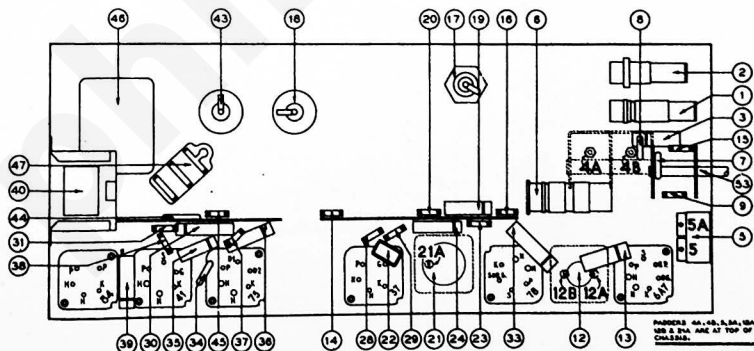


Fig. 1.—Part Locations—Underside of Chassis

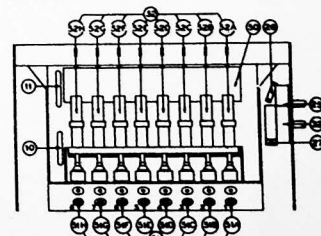
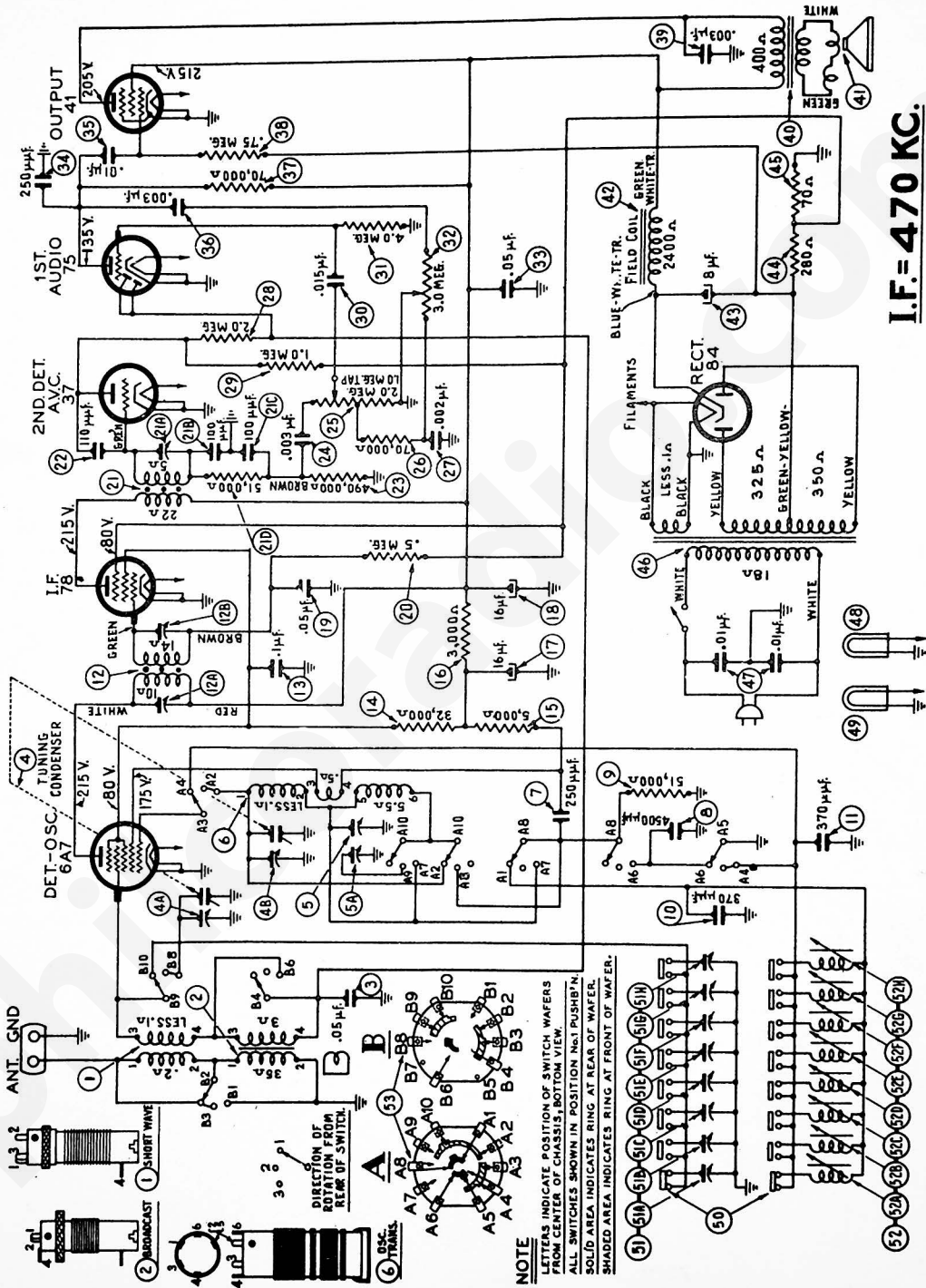


Fig. 2.—Part Locations—Push Button Unit



I.F. = 470 KC.

SCHEMATIC DIAGRAM MODEL 39-36