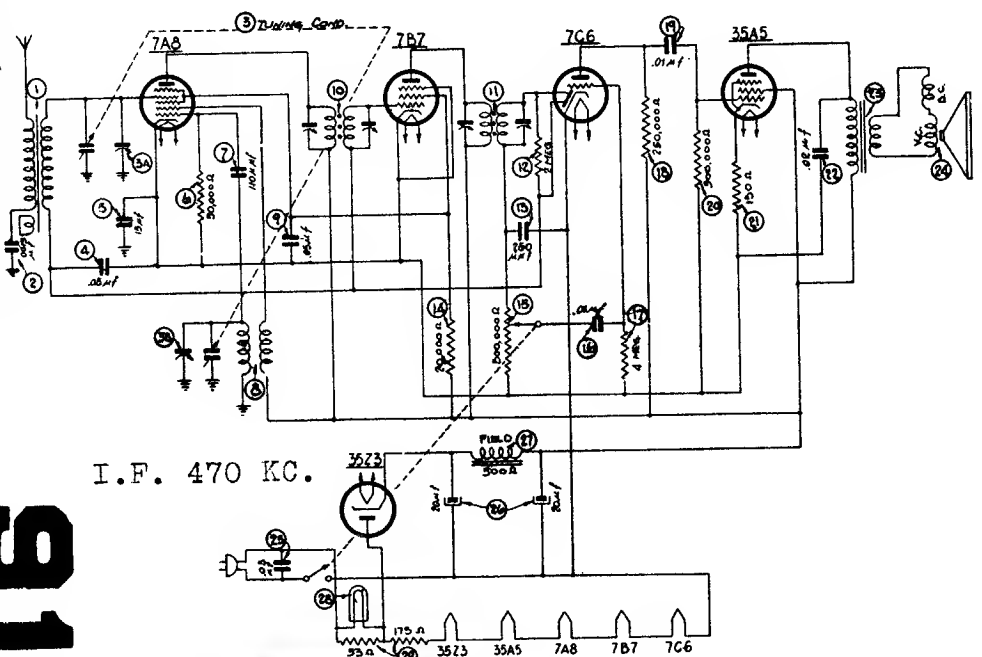
Philco Radio & Television Corp.

	Model: 39-40	**Chassis:**	**Year:** Pre August 1939
	Power:	**Circuit:**	**IF:**
	Tubes:		
	Bands:		

Resources
Beitmans 1939 91
Beitmans 1939 97
Beitmans 1939 98
Riders 10 (X) PHILCO 10-19
Riders 10 (X) PHILCO 10-20
Riders 10 (X) PHILCO 10-21

PHILCO MODEL TH-4

1	Antenna Transformer.....	17	Resistor (4 meg., 1/3 watt).....
2	Tubular Condenser(.0015 mf.,200v.	18	Resistor (250,000 ohms, 1/3 watt
3	Tuning Condenser.....	19	Tubular Condenser (.01 mf., 400v
4	Tubular Condenser (.05 mf., 400v.	20	Resistor (500,000 ohms, 1/3 watt
5	Tubular Condenser (.15 mf., 400v.	21	Resistor (130 ohms, ½ watt).....
6	Resistor (50,000 ohms, 1/3 watt).	22	Tubular Condenser (.02 mf., 400v
7	Mica Condenser (110 mmf.).....	23	Output Transformer
8	Oscillator Transformer.....		For Speaker 36-1469-1.....
9	Tubular Condenser (.05 mf., 400v.		For Speaker 36-1469-9.....
10	1st I.F. Transformer.....	24	Speaker.....
11	2nd I.F. Transformer.....	25	Tubular Condenser (.03 mf., 400v
12	Resistor (2 meg., 1/3 watt).....	26	Electrolytic Condenser(20-20mf.
13	Mica Condenser (250 mmf.).....	27	Field Coil -- Part of Speaker
14	Resistor (20,000 ohms, 1/3 watt).	28	Pilot Lamp.....
15	Volume Control 500,000 ohms).....	29	Line Resistor.....
16	Tubular Condenser (.01 mf., 200v.		



91

Setting Push-Buttons on Models: -- 39-25 39-30 39-31 39-35 39-40 39-45

Circuits	Frequency Range
1 and 2	540 to 1030 kilocycles
3 and 4	670 to 1160 kilocycles
5 and 6	900 to 1470 kilocycles
7 and 8	1170 to 1600 kilocycles

(C) Turn the receiver Tuning Range Selector to position two ("Manual Tuning") and tune the receiver to the station to be set on the first button.

(D) Plug the output leads of the Station Setter into the "High" and "Gnd" jacks, and turn the output controls to maximum. Turn the modulation control to "Modulation Off." Connect the output lead of the Station Setter to the "ANT" and "GND" terminals of the receiver and tune to the frequency of the station being received. As the indicator is slowly tuned through the frequency of the station there will be two points at which a high pitched swish will be heard, one above and one below the frequency of the station. When the indicator is on the frequency of the station, minimum high pitched swish will be heard.

(E) Set the modulation control of the Station Setter for "Modulation On." The modulated signal of the Station Setter will then be heard through the receiver.

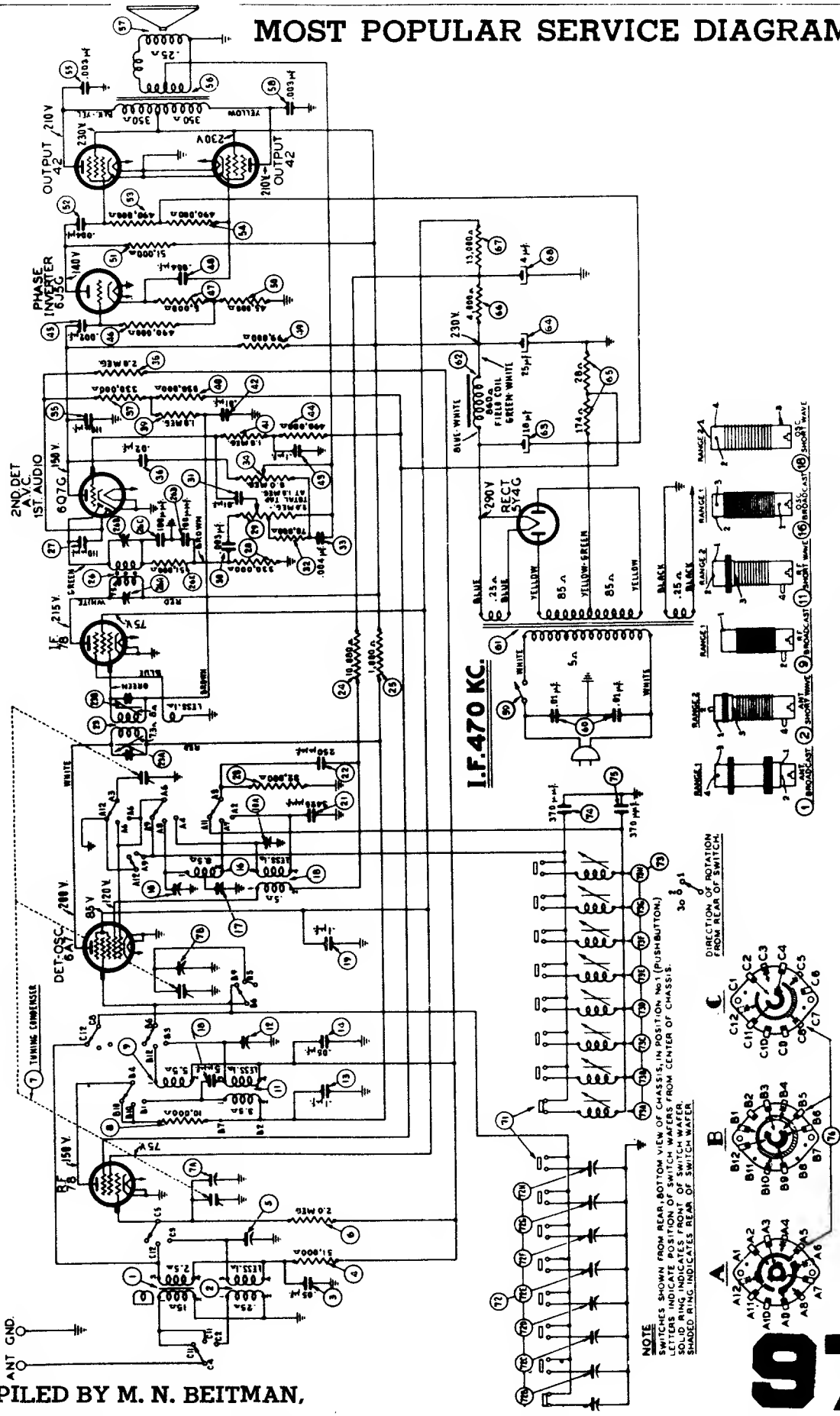
(F) Turn the receiver Tuning Range Selector to position one (Automatic Tuning) and push in the first button. Using the Part No. 45-2610 Insulated Screw Driver, turn the number 1 "OSC" screw until the modulated signal of the Station Setter is tuned in to maximum volume. Then adjust the number 1 "ANT" screw for maximum signal.

(G) Remove the output lead of the Philco Station Setter from the "ANT" terminal of the receiver and turn its indicator off the frequency of the station. The program of the desired station will then be heard on the receiver.

(H) With the volume of the receiver low, slowly turn the number 1 "OSC" back and forth until maximum output is received. Repeat the same procedure for the number 1 "ANT" screw.

After setting up the first station, the same procedure given under (C) to (H) is used for the other stations.

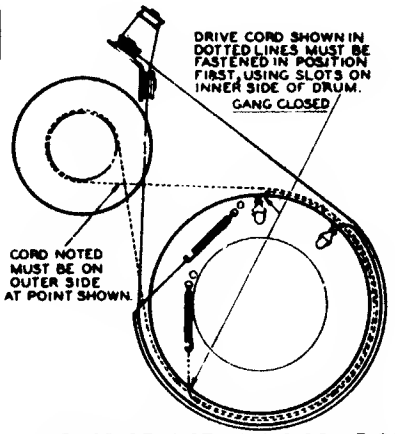
Model 39-40, Code 121



Philco Radio & Television Corp.

COMPILED BY M. N. BEITMAN.

PHILCO Model 39-40, Code 121



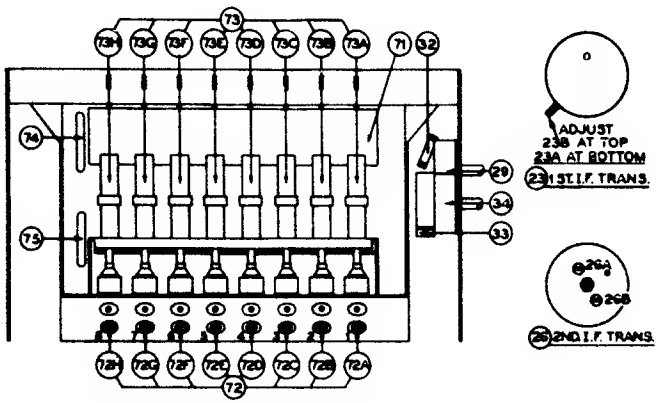
METHOD OF INSTALLING DRIVE CORDS ON TUNING CONDENSER DRUM

Operations	SIGNAL GENERATOR			RECEIVER		
	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.	580 KC.	Vol. Max. Range Switch Broadcast	26B, 26A, 23B, 23A
2	Ant. Ter.	150 mmf	1550 KC.	1550 KC.	"	15, 7B, 7A
3	Ant. Ter.	150 mmf	580 KC.	580 KC.	"	17
4	Ant. Ter.	150 mmf	1550 KC.	1550 KC.	"	15
5	Ant. Ter.	400 ohms	18.0 MC.	18.0 MC.	Range Switch S. W.	15A, 12, 5

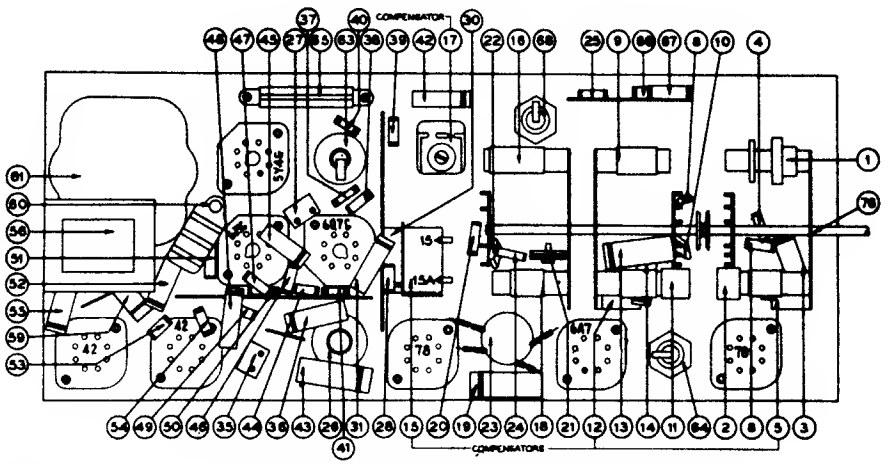
NOTE A—The "Dummy Antenna" consists of a condenser connected in series with the signal generator output lead (high side). Use the capacity as specified in each step of the above procedure.

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, 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 (7A) and (7B) are located on top of the tuning condenser. Compensator (7A) is the first one from the tuning drum side.



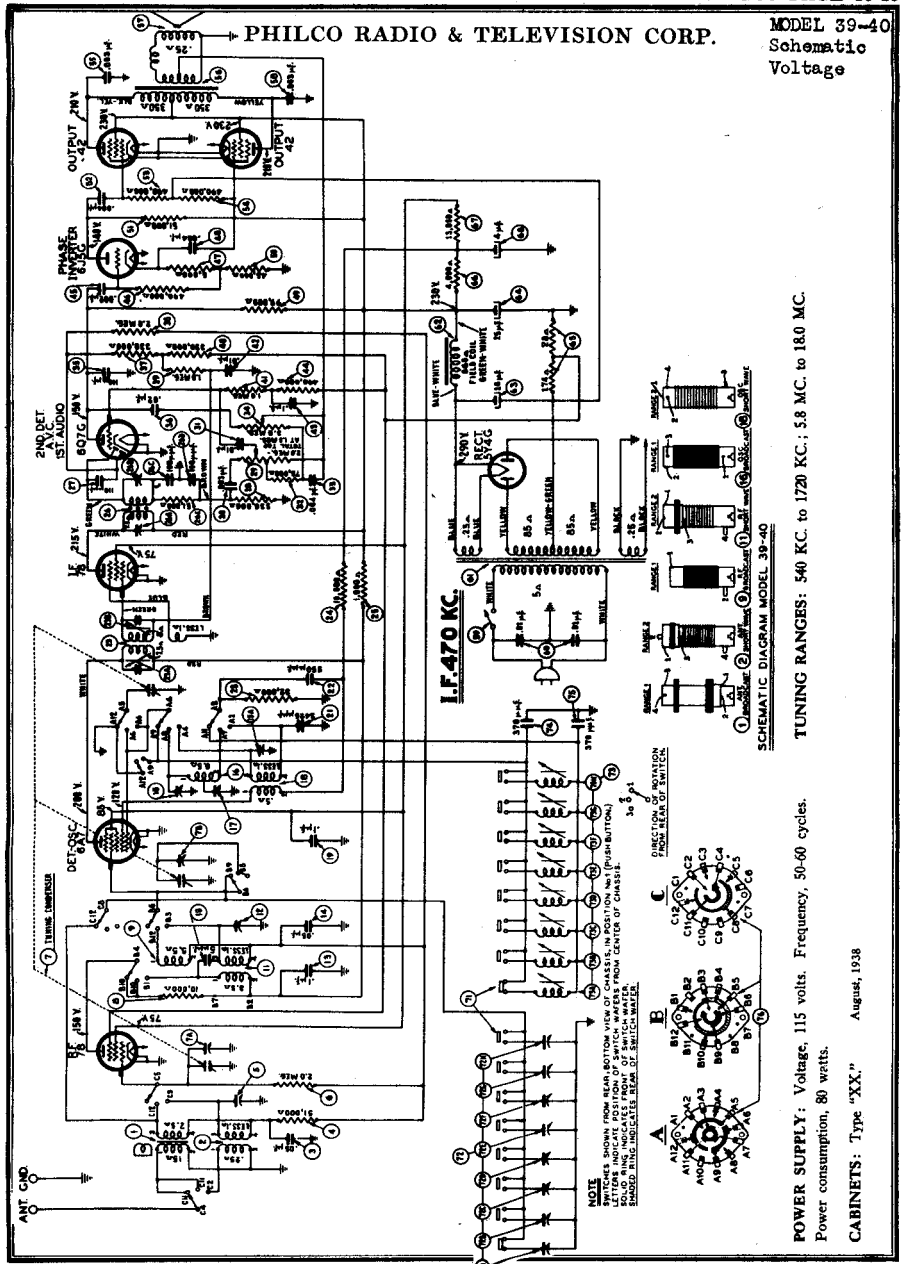
ELECTRIC AUTOMATIC PUSH BUTTON UNIT



PART LOCATIONS UNDERSIDE OF CHASSIS MODEL 39-40

PHILCO RADIO & TELEVISION CORP.

MODEL 39-40
Schematic
Voltage

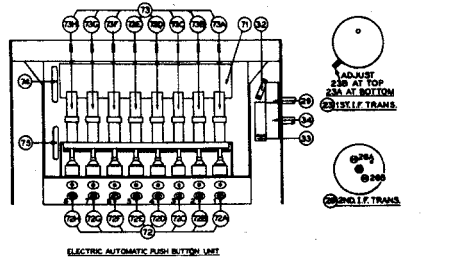


TUNING RANGES: 540 KC. to 1720 KC.; 5.8 MC. to 18.0 MC.

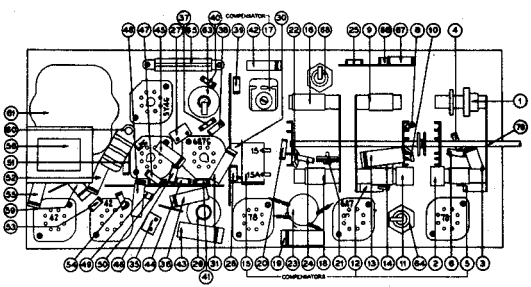
POWER SUPPLY: Voltage, 115 volts. Frequency, 50-60 cycles.
Power consumption, 80 watts.

CABINETS: Type "XX." August, 1938

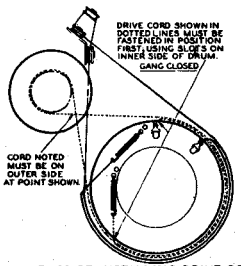
Replacement Parts
Model 39-40, Code 121



ELECTRIC AUTOMATIC PUSH BUTTON UNIT



PART LOCATIONS UNDERSIDE OF CHASSIS MODEL 39-40



CORRECT METHOD OF INSTALLING DRIVE CORDS ON TUNING CONDENSER DRUM

Schem. No.	Description	Part No.
1	Antenna Transformer (Range 1, Brdcst.)	32-3056
2	Antenna Transformer (Range 2)	32-3055
3	Condenser (.05 mf tubular)	30-4519
4	Resistor (51,000 ohms, ½ watt)	33-351339
5	Compensator (Range 2, S. W.)	31-6212
6	Resistor (2.0 megohms, ½ watt)	33-520339
7	Tuning Condenser	31-2296
8	Resistor (10,000 ohms, ½ watt)	33-310339
9	R. F. Transformer (Range 1, Brdcst.)	32-2379
10	Condenser (5 mmf mica)	30-1083
11	R. F. Transformer (Range 2, S. W.)	32-3046
12	Compensator (Range 2, S. W.)	31-6212
13	Condenser (.1 mf tubular)	30-4455
14	Condenser (.05 mf tubular)	30-4519
15	Compensator (two sections)	31-6093
16	Oscillator Transformer (Range 1, Brdcst.)	32-2120
17	Compensator	31-6230
18	Oscillator Transformer (Range 2, S. W.)	32-3051
19	Condenser (.1 mf tubular)	30-4455
20	Resistor (32,000 ohms, ½ watt)	33-332339
21	Condenser (3425 mmf mica)	31-6263
22	Condenser (250 mmf mica)	30-1032
23	1st I. F. Transformer Assembly	32-3079
24	Resistor (10,000 ohms, ½ watt)	33-310339
25	Resistor (1000 ohms, ½ watt)	33-210339
26	2nd I. F. Transformer	32-2582
27	Condenser (110 mmf mica)	30-1031
28	Resistor (330,000 ohms, ½ watt)	33-433339
29	Volume Control (2.0 megohms)	33-5286
30	Condenser (.003 mf tubular)	30-4580
31	Condenser (.01 mf tubular)	30-4581
32	Resistor (70,000 ohms, ½ watt)	33-370339
33	Condenser (.004 mf tubular)	30-4578
34	Tone Control (3.0 megohms)	33-5287
35	Condenser (110 mmf mica)	30-1031
36	Condenser (.02 mf tubular)	30-4481
37	Resistor (330,000 ohms, ½ watt)	33-433339
38	Resistor (2.0 megohms, ½ watt)	33-520339
39	Resistor (1.0 megohm, ½ watt)	33-510339
40	Resistor (330,000 ohms, ½ watt)	33-433339
41	Resistor (1.0 megohm, ½ watt)	33-510339
42	Condenser (.01 mf tubular)	30-4581
43	Condenser (.1 mf tubular)	30-4455
44	Resistor (490,000 ohms, ½ watt)	33-449339
45	Condenser (.002 mf tubular)	30-4579
46	Resistor (490,000 ohms, ½ watt)	33-449339
47	Resistor (5000 ohms, ½ watt)	33-250339
48	Condenser (.004 mf tubular)	30-4578
49	Resistor (99,000 ohms, ½ watt)	33-399339
50	Resistor (45,000 ohms, ½ watt)	33-345339
51	Resistor (51,000 ohms, ½ watt)	33-351339
52	Condenser (.004 mf tubular)	30-4578
53	Resistor (490,000 ohms, ½ watt)	33-449339
54	Resistor (490,000 ohms, ½ watt)	33-449339
55	Condenser (.003 mf tubular)	30-4469
56	Output Transformer	32-7981
57	Cone and Voice Coil Assembly for Speaker (Part No. 36-1450)	36-4089
58	Condenser (.003 mf tubular)	30-4469
59	A. C. Switch	42-1467
60	Condenser (.01 mf to .01 mf bakelite)	3903DG
61	Pwr. Trnsfrmr., 115 v., 60 cycle	32-7998
62	Field Coil, Replace Speaker	36-1450
63	Elect. Condenser (18 mf)	30-2335
64	Elect. Condenser (25 mf), 250	30-2333
65	B. C. Resistor	33-3358
66	Resistor (4000 ohms, ½ watt)	33-240339
67	Resistor (13,000 ohms, ½ watt)	33-313339
68	Elect. Condenser (4 mf), 250	30-2334
69	Pilot Lamp .. Dial	34-2064
70	Pilot Lamp	34-2064
71	Push-Button Switch	42-1462
72	Padder Strip Assem., Complete	31-6259
72A	Compensator No. 1 (540-1030 KC.)	
72B	Compensator No. 2 (540-1030 KC.)	
72C	Compensator No. 3 (670-1160 KC.)	
72D	Compensator No. 4 (670-1160 KC.)	
72E	Compensator No. 5 (900-1470 KC.)	
72F	Compensator No. 6 (900-1470 KC.)	
72G	Compensator No. 7 (1100-1600 KC.)	
72H	Compensator No. 8 (1100-1600 KC.)	
73	Coil Strip Assembly (8 coils)	32-3031
73A	Coil No. 1 (540-1030 KC.)	32-3042
73B	Coil No. 2 (540-1030 KC.)	32-3042
73C	Coil No. 3 (670-1160 KC.)	32-3042
73D	Coil No. 4 (670-1160 KC.)	32-3042
73E	Coil No. 5 (900-1470 KC.)	32-3041
73F	Coil No. 6 (900-1470 KC.)	32-3041
73G	Coil No. 7 (1100-1600 KC.)	32-3041
73H	Coil No. 8 (1100-1600 KC.)	32-3041
74	Condenser (370 mmf silver mica)	30-1110
75	Condenser (370 mmf silver mica)	30-1110
76	Wave Switch	42-1461
	Bezel	56-1104
	Bezel Gasket	27-9245
	Bearing (Drum Shaft)	56-1036
	Cable (Power)	L-2778
	Cable (Speaker)	41-3430
	Coupling (Tuning Condenser)	31-2291
	Dial (Scale)	27-5421
	Dial Clamp	56-1034
	Dial Gasket	27-9224
	Dial Gasket	27-9225
	Dial Pointer	56-1033
	Dial Drive Cord (Tuning)	31-2315
	Dial Drive Cord, Pointer	31-2316
	Dial Drive Cord Spring	31-8913
	Disc Control (Tuning)	27-4766
	Disc Control (Range Switch)	38-9702
	Disc (Tone Control)	27-4764
	Disc (Volume Control)	27-4765
	Drum Assembly (Tuning Condenser)	38-9661
	Drum Bracket and Bearing (Tuning Condenser)	38-9662
	Shaft (Control Drums)	28-6924
	Socket Assembly Dial Lamp	38-9694
	Socket Assembly Dial Lamp	38-9695
	Socket (6-prong), 78-tube	27-6036
	Socket (6-prong), Octal	27-6086
	Socket (7-prong), Octal	27-6053
	Socket (7-prong), 6A7-tube	27-6107
	Speaker	36-1450
	Tab Kit	40-6392

Miscellaneous Parts

Grommet (Mtg. Push-Button Switch)	27-4610
Grommet (Mtg. Tuning Unit Assy.)	3914
Grommet (Mtg. Tuning Unit Assy.)	3915
Nut (A. C. Switch)	W-1757
Nut (Speaker Mtg.)	W-124
Screw (Mtg. Chassis)	W-1345
Screw (Bezel)	W-1834
Washer (Speaker Mtg.)	27-7467
Washer Rubber (Mtg. Chassis)	27-4571
Washer (A. C. Switch)	W-894

MODEL 39-40
MODEL 39-45
Alignment, Tuner Data

PHILCO RADIO & TELEVISION CORP.

MODEL 39-36
Tuner Data

ADJUSTING ELECTRIC PUSH-BUTTON TUNING FOR MODELS 39-36, 39-40, AND 39-45

In order to set the Electric Push-Buttons correctly for each station, the procedure as given below should be carefully followed. Accurate adjustment of the buttons requires the use of a Philco Model 077 Station Setter and a part No. 27-7059 insulated screw driver.

(A) Select eight of the most popular stations received in the locality and remove their call letters from the call letter sheets supplied. Place the call letters in the windows above the buttons, making sure that each button covers the frequency of the station for which it is to be used. Two adjustment screws for each button are located on the rear of the push-button unit. Each set of screws is numbered and covers a frequency range as follows:

Push-Button	Frequency Range
1 and 2	540-1030 KC.
3 and 4	670-1160 KC.
5 and 6	900-1470 KC.
7 and 8	1100-1600 KC.

Looking at the front of the cabinet, the first button on the left is adjusted by set screw No. 1, the next button by set screw No. 2, and the remaining buttons in the same order.

(B) Connect the aerial and ground to the "ANT" and "GND" terminals of the receiver.

(C) Turn the receiver Tuning Range Selector to position 2 (Broadcast) and tune the receiver to the station to be set on the first button.

(D) Plug the output leads of the Station Setter into the "High" and "Gnd" jacks, and turn the output controls to maximum.

Turn the modulation control to "Modulation On." Connect the output lead of the station setter to the "ANT" and "GND" terminals of the receiver and tune to the frequency of the station being received. As the indicator is slowly tuned through the frequency of the station, there will be two points at which a whistle will be heard, one above and one below the frequency of the station. When the indicator is on the frequency of the station the whistle will be eliminated and the modulated signal of the station setter will then be clearly heard through the receiver.

(E) Turn the receiver Tuning Range Selector to position 1 (Push-Button) and press in the first button. Using the part No. 27-7059 insulated screw driver, turn the No. 1 "OSC" screw until the broadcast station identified by the station setter signal is tuned to Maximum Volume.

(F) Remove the output lead of the station setter from the "ANT" terminal of the receiver and turn the indicator of the Station Setter off the frequency of the station. The program of the desired station will then be heard in the receiver without the modulated signal.

(G) With the volume of the receiver low, slowly turn the No. 1 "OSC" screw back and forth until maximum output is received. Repeat the same procedure for the No. 1 "ANT" screw.

After setting up the first station, the same procedure given under (C) to (G) is used for the other stations.

ALIGNMENT OF MODEL 39-40

Operations	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.	580 KC.	Vol. Max. Range Switch Broadcast	26B, 26A, 23B, 23A	
2	Ant. Ter.	150 mmf	1550 KC.	1550 KC.	"	15, 7B, 7A	See Note B and C
3	Ant. Ter.	150 mmf	580 KC.	580 KC.	"	17	Roll Tuning Condenser
4	Ant. Ter.	150 mmf	1550 KC.	1550 KC.	"	15	
5	Ant. Ter.	400 ohms	18.0 MC.	18.0 MC.	Range Switch S. W.	15A, 12, 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, proceed as follows: With the tuning condenser closed (maximum capacity), set the dial pointer on the ext eme 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 (7A) and (7B) are located on top of the tuning condenser. Compensator (7A) is the first one from the tuning drum side.

ALIGNMENT OF MODEL 39-45

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.