PHILCO . . . . RADIO SERVICE BULLETIN No. 360

RADIO MANUFACTURERS SERVICE — Your Guarantee of Best Radio Service — A PHILCO SERVICE PLAN

Models 41-260; 41-265

SPECIFICATIONS

Models 41-260 and 41-265 are seven (7) tube alternating current (A. C.) operated superheterodyne radios incorporating electric push button in addition to manual tuning — and the new Philco built-in American and overseas loop aerial system. These models are also designed to receive the sound of a television program tuned in by special type Philco Television Radios.

In general, these models are similar with the exception of the tuning ranges and cabinet design. Model 41-260 has two (2) tuning ranges covering 540 to 1720 K. C. and 9.0 to 12.0 M. C. Model 41-265 consists of three (3) tuning ranges covering 540 to 1720 K. C., 2.0 to 7.0 M. C. and 9.0 to 12 M. C.

Other features of design included in each model: Continuously variable tone control; A. V. C.; pentode audio output and a tuning band indicator.

POWER SUPPLY: 115 volts, 60 cycle A. C.

These models can also be operated on 25 cycle current. To do this it is necessary to replace the power transformer as indicated in the part list.

POWER CONSUMPTION: 45 watts.

INTERMEDIATE FREQUENCY: 455 K. C.

AUDIO OUTPUT: 2 watts.

PHILCO TUBES USED: XXL, R. F. Mixer; XXL, Oscillator; two 7B7, I. F. Amplifiers; 7C6, 2nd Detector, 1st Audio, A. V. C.; 41, Audio Output and a 84, Rectifier.

AERIAL CONNECTIONS: The built-in loop aerial system is designed to operate without an outside aerial or ground, and to give exceptionally high receiving performance of stations on standard and shortwave frequencies. Another feature is its noise-reducing characteristic. The loop can be turned to the position in which it picks up a minimum amount of interference, or to the position where best reception is obtained.

To operate the radio in steel reinforced buildings and other shielded locations, where signal strength is weak, the Philco 1941 Outdoor Aerial, Part No. 45-2817, is recommended for maximum receiving performance. The outdoor aerial can be easily connected to the radio by inserting the plug attached to the transformer unit into the socket provided at the rear of the Radio chassis. This aerial can be obtained from your local Philco distributor. A ground connection is not required with either type of installation.

CABINET DIMENSIONS:	Height	Width	Depth
Model 41-260	36¼"	24¾"	10 1/2"
Model 41-265	37½"	26⅜"	11"

PROCEDURE FOR SETTING AND OPERATING THE ELECTRIC PUSH BUTTON TUNING

The automatic tuning mechanism of each model is identical and consists of six (6) electric tuning push buttons, five (5) of the push buttons are used for selecting broadcast stations, and one as the power control (On-Off switch).

Select five of your favorite nearby broadcast stations and remove their call letters from the station call letter tab sheets supplied. Place each call letter tab in the tab space above each button which includes the frequencies of the desired stations. The frequency range of the buttons and corresponding padders is as follows:

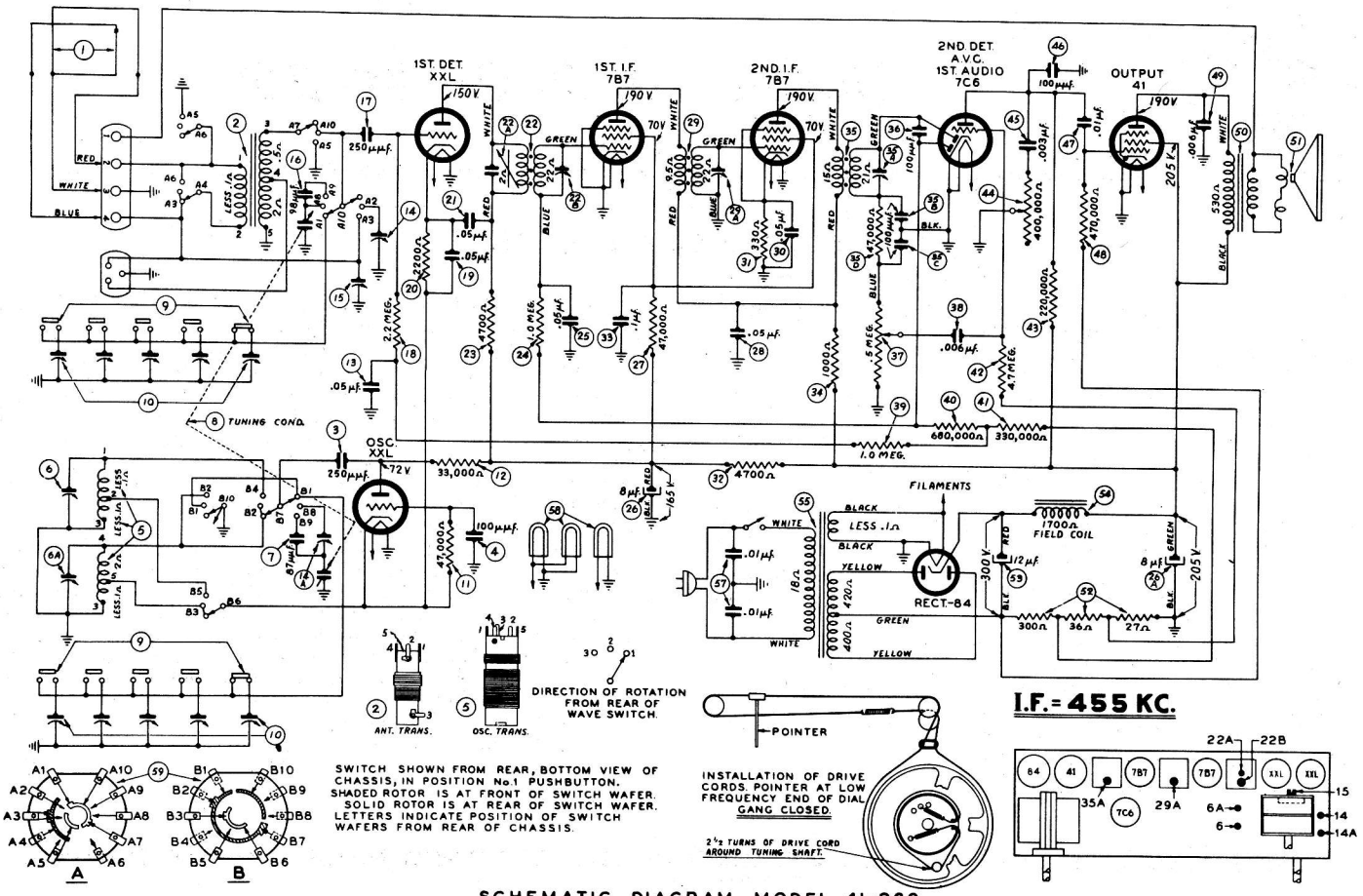
Padders (right to left from rear)	Circuit	Buttons (left to right from front)	Frequency Range
		1	On-Off Switch
1	Ant	2	540 to 980 kilocycles
2	Osc		
3	Ant	3	540 to 980 kilocycles
4	Osc		
5	Ant	4	710 to 1185 kilocycles
6	Osc		
7	Ant	5	850 to 1600 kilocycles
8	Osc		
9	Ant	6	1185 to 1720 kilocycles
10	Osc		

The second button from the left looking at the front of the cabinet corresponds to the two right-hand padder screws looking at the rear and covers the lowest frequency range.

With the "Tuning Range Selector" in broadcast position, tune in the station whose call letters appear above the second button. Then depressing the second button, tune in this station by rotating the No. 2 "OSC" screw (next to the right end of the unit looking at the rear of the chassis). (NOTE: Inherent characteristics of these padders may cause some of them to cover a lower range than required to cover the broadcast band. This may cause the radio to howl or flutter when a station button is depressed. To correct this, loosen the "ANT" padder corresponding to the depressed station button.) Turn the "OSC" screw slowly and listen carefully or the station may be passed without noticing it. After the "OSC" screw has been adjusted for maximum volume, the corresponding "ANT" screw should be adjusted for maximum. For some stations, it may be necessary to readjust the "OSC" screw after the "ANT" screw has been set. Switching the "Tuning Range Selector" from broadcast position to the automatic push button position will enable you to make sure you have the correct station tuned in. When the first station has been set, the same procedure should be followed for the remaining buttons, first tuning in the desired station by means of the Station Selector.

To tune the set with the "Push Buttons", turn "Tuning Range Selector" to push button position and press in the button which corresponds to the call letters of the desired station. The volume of the program may be controlled with the manual volume control.

The lowest frequency station push button labeled "Television" can be adjusted for reception of the sound channel of a television program received by Philco television sets. This push button may also be used in conjunction with a Philco Wireless Record Player.



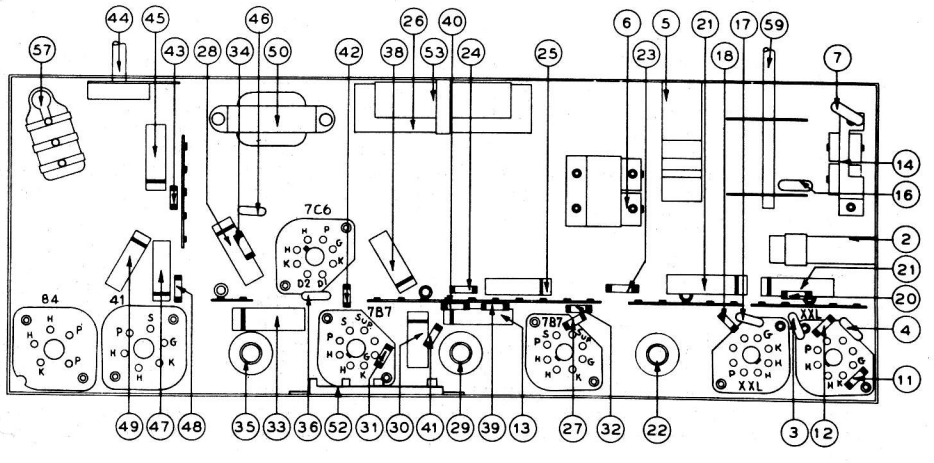
SCHEMATIC DIAGRAM MODEL 41-260

Replacement Parts — Model 41-260

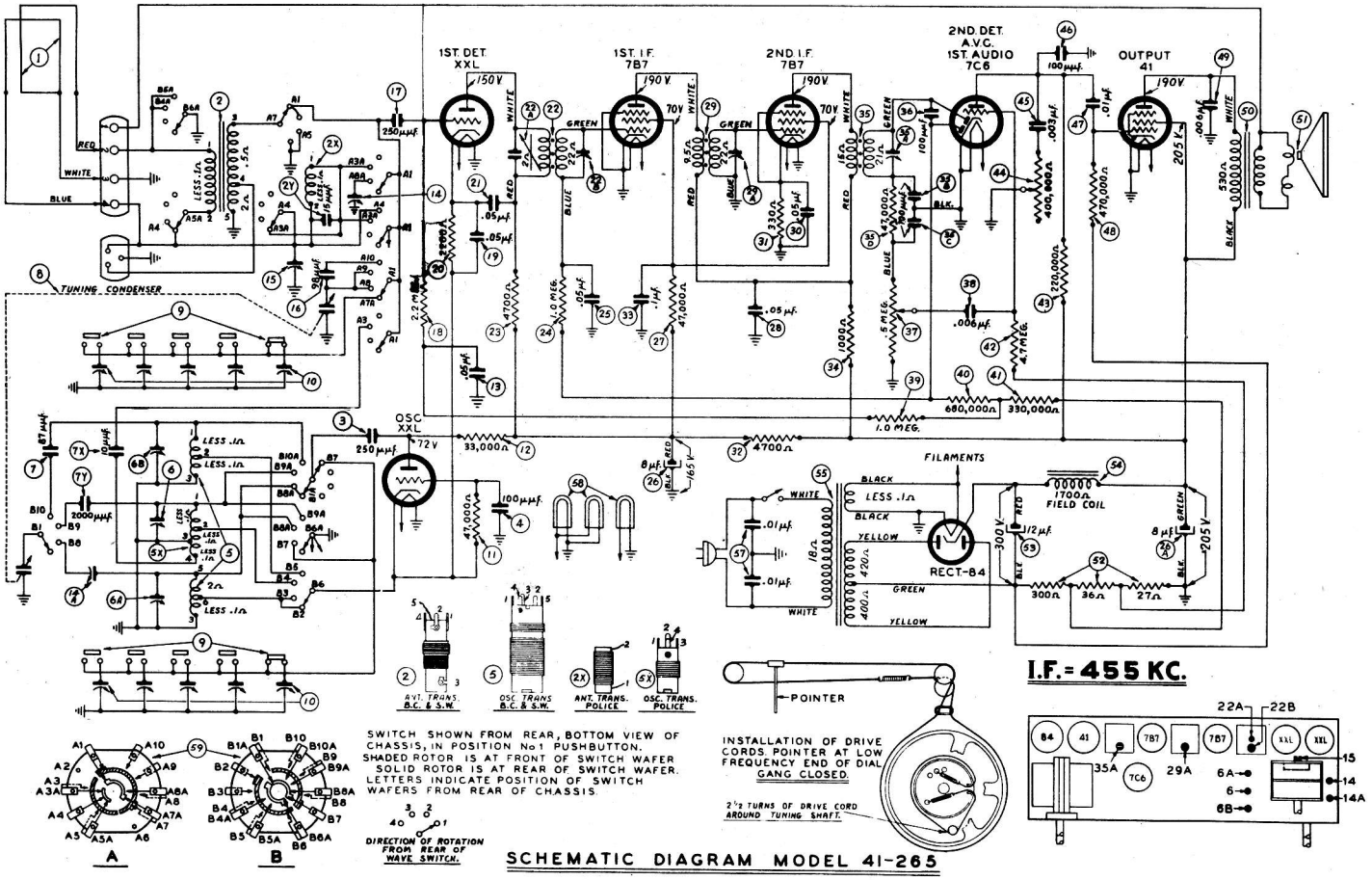
SCHE. No.	DESCRIPTION	PART No.
1	Loop Aerial	76-1081
	Sleeve (Loop Mounting)	28-2257
	Screw (Loop Mounting)	W-288
	Spring Washer	28-4186
2	Aerial Transformer	32-3505
3	Mica Condenser (250 mmfd.)	60-125157
4	Mica Condenser (100 mmfd.)	60-110157
5	Oscillator Transformer	32-3504
6	Compensator (12 M. C., Oscillator)	31-6364
6A	Compensator (1500 K. C., Oscillator)	
7	Mica Condenser (87 mmfd.)	30-1182
8	Tuning Condenser	31-2481
	Tuning Shaft	56-6086
	"C" Washer	28-2043
	Drive Drum	38-9883
	Drive Cord (Pointer)	31-2487
	Drive Cord (Tuning Condenser)	31-2400
	Sleeve (Mounting Tuning Condenser)	56-1505
	Spring (Tuning Condenser Cord)	28-8751
	Spring (Pointer Drive Cord)	28-8953
	Spring (Tuning Condenser Drive Shaft)	28-8955
	Spring	56-6088
	Screw (Mounting Condenser)	W-2000
9	Push Button and Power Switch	42-1576
	Sleeve (Mounting Switch Unit)	28-2258
	Sleeve (Mounting Push Button Switch)	28-5665
	Screw (Mounting)	W-523
10	Push Button Compensators Strip	31-6372
11	Resistor (47,000 ohms, ½ watt)	33-347339
12	Resistor (33,000 ohms, ½ watt)	33-333339
13	Condenser (.05 fd., 200 volts)	30-4519
14	Compensator (1500 K. C., Aerial)	31-6365
14A	Compensator (580 K. C., Oscillator)	
15	Compensator (12 M. C., Aerial)	31-6384
16	Mica Condenser (98 mmfd.)	30-1186
17	Mica Condenser (250 mmfd.)	60-125157
18	Resistor (2.2 megohms)	33-522339
19	Condenser (.05 mfd., 200 volts)	30-4519
20	Resistor (2200 ohms, ½ watt)	33-222339
21	Condenser (.05 mfd., 400 volts)	30-4518
22	1st I. F. Transformer	32-3501
23	Resistor (4700 ohms, ½ watt)	33-247339
24	Resistor (1 megohm)	33-510339
25	Condenser (.05 mfd., 200 volts)	30-4519
26	Electrolytic Condenser (8 mfd.)	30-2471
27	Resistor (47,000 ohms)	33-347339
28	Condenser (.05 mfd., 400 volts)	30-4518
29	2nd I. F. Transformer	32-3502
30	Condenser (.05 mfd., 200 volts)	30-4519
31	Resistor (330 ohms, ½ watt)	33-133336
32	Resistor (4700 ohms, ½ watt)	33-247339
33	Condenser (.1 mfd., 400 volts)	30-4455
34	Resistor (1000 ohms, ½ watt)	33-210339
35	3rd I. F. Transformer	32-3503
36	Mica Condenser (100 mmfd.)	60-110157
37	Volume Control (½ megohm)	33-5319
38	Condenser (.006 mfd., 400 volts)	30-4591
39	Resistor (1 megohm, ½ watt)	33-510339
40	Resistor (680,000 ohms, ½ watt)	33-468339
41	Resistor (330,000 ohms, ½ watt)	33-433339
42	Resistor (4.7 megohms, ½ watt)	33-547339
43	Resistor (220,000 ohms, ½ watt)	33-422339
44	Tone Control (400,000 ohms)	33-5404
45	Condenser (.003 mfd., 1000 volts)	30-4469
46	Mica Condenser (100 mmfd.)	60-110157
47	Condenser (.01 mfd., 400 volts)	30-4572
48	Resistor (470,000 ohms, ½ watt)	33-447339
49	Condenser (.006 mfd., 400 volts)	30-4591
50	Output Transformer	32-8116
51	Cone Assembly (for Spkr. 36-1513-14)	36-4169
52	Resistor (27, 36, 300 ohms)	33-3392
53	Electrolytic Condenser (8-12 mfd.)	30-2476
54	Field Coil (Replace Speaker 36-1513-14)	
55	Power Transformer, 115 volts, 60 cycle	32-8117
	Power Transformer, 115 volts, 25 cycle	32-8149
	Power Trans., 110 220 volts, 60 cycle	32-8094
56	Power Switch (Part of 42-1576)	
57	Power Line Condenser (.01-.01 mfd.)	3903-DG
58	Pilot Lamps	34-2064
59	Band Switch	42-1585

MISCELLANEOUS PARTS

DESCRIPTION	PART No.
Bezel (Dial)	27-4975
Bezel (Push Buttons)	27-4983
Bezel Clip (Bezel Mounting)	56-1876
Bezel Screw (Push Button Bezel)	W-2073
Cabinet	10494A
Cable (Speaker)	41-3541
Cord (Power)	L-3199
Clip (Mounting Aerial Transformer)	28-5002
Clip (Mounting Oscillator Transformer)	28-5003
Clamp (Electrolytic Condenser Mounting)	56-1452
Dial	27-5651
Dial Clip (Dial Mounting)	56-1876
Dial Screw (Clip Mounting)	W-2023
Dial Pointer	56-1856
Drive Cord (Band Indicator)	31-2488
Indicator Bracket & Spring Assem. (Dial)	76-1075
Knob (Volume Tuning)	27-4332
Knob (Push Button)	27-4824
Rubber Washer (Chassis Mounting)	27-4571
Rubber Connector (Tuning Cond. Drive)	27-4564
Rubber Corners (Chassis)	27-4596
Rubber Grommet (Push Button Sw. Mtg.)	27-4596
Speaker	36-1513
Socket Assembly (Pilot Lamp)	76-1076
Socket Assembly (Pilot Lamp)	76-1077
Socket Assembly (Pilot Lamp)	76-1078
Socket (Rectifier)	27-6035
Socket (Output Tube)	27-6036
Socket (Loktal—Oscillator Tube)	27-6129
Socket (Loktal—R. F.-I. F. Tube)	27-6131
Socket (Aerial—Three Prong)	27-6145
Tab (Off-On)	27-5660
Tab (Television)	27-5661
Tab Kit	40-6619
Terminal Panel (Loop)	38-9870
Washer (Chassis Mounting)	28-5114
Washer (Chassis Mounting)	W-1345



MODEL 41-260 — PART LOCATIONS, UNDERSIDE OF CHASSIS



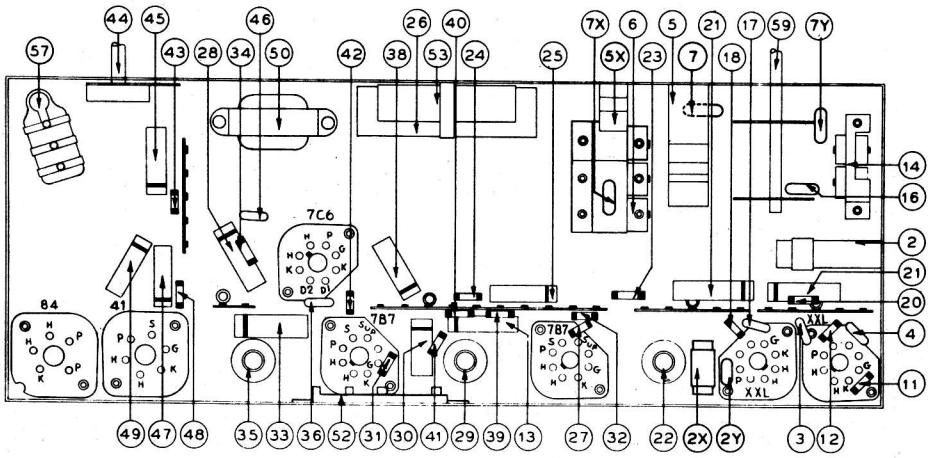
SCHEMATIC DIAGRAM MODEL 41-265

Replacement Parts — Model 41-265

SCHE. No.	DESCRIPTION	PART No.
1	Loop Aerial	76-1081
	Sleeve (Loop Mounting)	28-2257
	Screw (Loop Mounting)	W-288
	Spring Washer	28-4186
2	Aerial Transformer	32-3505
2X	Aerial Transformer (Police)	32-3515
2Y	Mica Condenser (15 mmfd.)	60-015337
3	Mica Condenser (250 mmfd.)	60-125157
4	Mica Condenser (100 mmfd.)	60-110157
5	Oscillator Transformer (Broadcast)	32-3539
5X	Oscillator Transformer (Police)	32-3516
6	Compensator (6 M. C., Oscillator)	31-6374
6A	Compensator (1500 K. C., Oscillator)	
6B	Compensator (Osc., 12 M. C., Part of 6)	
7	Mica Condenser (87 mmfd.)	30-1182
7X	Mica Condenser (10 mmfd.)	60-010137
7Y	Mica Condenser (2000 mmfd.)	60-220324
8	Tuning Condenser	31-2481
	Tuning Shaft	56-6086
	"C" Washer	28-2043
	Drive Drum	56-9883
	Drive Cord (Pointer)	31-2487
	Drive Cord (Tuning Condenser)	31-2400
	Sleeve (Mounting Tuning Condenser)	28-3806
	Spring (Tuning Condenser Cord)	28-8751
	Spring (Pointer Drive Cord)	28-8253
	Spring (Tuning Condenser Drive Shaft)	28-8955
	Screw (Mounting Condenser)	W-2002
9	Push Button and Power Switch	42-1608
	Sleeve (Mounting Switch Unit)	28-2259
	Sleeve (Mounting Push Button Switch)	28-5665
	Screw (Mounting)	W-523
10	Push Button Compensator Strip	31-6377
11	Resistor (47,000 ohms, ½ watt)	33-347339
12	Resistor (33,000 ohms, ½ watt)	33-333339
13	Condenser (.05 fd., 200 volts)	30-4519
14	Compensator (1500 K. C., Aerial)	31-6365
14A	Compensator (580 K. C., Osc., Part of 14)	
15	Compensator (12 M. C., Aerial)	31-6384
16	Mica Condenser (98 mmfd.)	30-1186
17	Mica Condenser (250 mmfd.)	60-125157
18	Resistor (2.2 megohms)	33-522339
19	Condenser (.05 mfd., 200 volts)	30-4519
20	Resistor (2200 ohms, ½ watt)	33-222339
21	Condenser (.05 mfd., 400 volts)	30-4518
22	1st I. F. Transformer	32-3465
23	Resistor (4700 ohms, ½ watt)	33-247339
24	Resistor (1 megohm)	33-510339
25	Condenser (.05 mfd., 200 volts)	30-4519
26	Electrolytic Condenser (8 mfd.)	30-2471
27	Resistor (47,000 ohms) ½ watt)	33-347339
28	Condenser (.05 mfd., 400 volts)	30-4518
29	2nd I. F. Transformer	32-3466
30	Condenser (.05 mfd., 200 volts)	30-4519
31	Resistor (330 ohms, ½ watt)	33-133336
32	Resistor (4700 ohms, ½ watt)	33-247339
33	Condenser (.1 mfd., 400 volts)	30-4455
34	Resistor (1000 ohms, ½ watt)	33-210339
35	3rd I. F. Transformer	32-3467
36	Mica Condenser (100 mmfd.)	60-110157
37	Volume Control (½ megohm)	33-5319
38	Condenser (.006 mfd., 400 volts)	30-4591
39	Resistor (1 megohm, ½ watt)	33-510339
40	Resistor (680,000 ohms, ½ watt)	33-468339
41	Resistor (330,000 ohms, ½ watt)	33-433339
42	Resistor (4.7 megohms, ½ watt)	33-547339
43	Resistor (220,000 ohms, ½ watt)	33-422339
44	Tone Control (400,000 ohms)	33-5404
45	Condenser (.003 mfd., 1000 volts)	30-4469
46	Mica Condenser (100 mmfd.)	
47	Condenser (.01 mfd., 400 volts)	30-4572
48	Resistor (470,000 ohms, ½ watt)	33-447339
49	Condenser (.006 mfd., 400 volts)	30-4591
50	Output Transformer	32-8116
51	Cone Assembly (for Spkr. 36-1513-14)	36-4169
52	Resistor (27, 36, 300 ohms)	33-3392
53	Electrolytic Condenser (8-12 mfd.)	30-2476
54	Field Coil (Replace Speaker 36-1513-14)	
55	Power Transformer, 115 volts, 60 cycle	32-8117
	Power Transformer, 115 volts, 25 cycle	32-8149
	Power Trans., 110/220 volts, 60 cycle	32-8094
56	Power Switch (Part of 9)	
57	Power Line Condenser (.01-.01 mfd.)	3903-DG
58	Pilot Lamps	34-2064
59	Band Switch	42-1599

MISCELLANEOUS PARTS

DESCRIPTION	PART No.
Bezel (Dial)	27-4975
Bezel (Push Buttons)	27-4983
Bezel Clip (Bezel Mounting)	56-1877
Bezel Screw (Push Button Bezel)	W-2073
Cabinet	10495A
Cable (Speaker)	41-3541
Cord (Power)	L-3199
Clip (Mounting Aerial Transformer)	28-5002
Clip (Mounting Oscillator Transformer)	28-5003
Clamp (Electrolytic Condenser Mounting)	56-1452
Dial	27-5614
Dial Clip (Dial Mounting)	56-1881
Dial Screw (Clip Mounting)	W-1822
Dial Pointer	56-1856
Drive Cord (Band Indicator)	31-2488
Indicator Bracket & Spring Assem. (Dial)	76-1075
Knob (Volume Tuning)	27-4332
Knob (Push Button)	27-4824
Rubber Washer (Chassis Mounting)	27-4571
Rubber Connector (Tuning Cond. Drive)	27-9432
Rubber Corners (Chassis)	27-4564
Rubber Grommet (Push Button Sw. Mtg.)	27-4596
Speaker	36-1513
Socket Assembly (Pilot Lamp)	76-1076
Socket Assembly (Pilot Lamp)	76-1077
Socket Assembly (Pilot Lamp)	76-1078
Socket (Rectifier)	27-6035
Socket (Output Tube)	27-6036
Socket (Loktal—Oscillator Tube)	27-6129
Socket (Loktal—R. F.-I. F. Tube)	27-6131
Socket (Aerial—Three Prong)	27-6145
Tab (Off-On)	27-5660
Tab (Television)	27-5661
Tab Kit	40-6619
Terminal Panel (Loop)	38-9870
Washer (Chassis Mounting)	28-5114
Washer (Chassis Mounting)	W-1345



MODEL 41-265 — PART LOCATIONS, UNDERSIDE OF CHASSIS

ALIGNMENT OF R. F. AND I. F. COMPENSATORS

The following procedure is the same for both models:

EQUIPMENT REQUIRED

1. **Signal Generator:** Covering the frequency range of the receiver, such as Philco Models 077 or 177.
2. **Aligning Indicator:** Either a vacuum tube voltmeter or an audio output meter may be used as an aligning indicator. Philco Models 027 and 028 circuit testers contain both these meters.
3. **Tools:** Philco Fiber Screw Driver, Part No. 45-2610. When using the vacuum tube voltmeter for alignment, an adaptor, Part No. 45-2767, is recommended for convenience.

CONNECTING ALIGNING INSTRUMENTS

Vacuum Tube Voltmeter: To use the vacuum tube voltmeter as an aligning indicator, make the following connections: Attach the negative (—) terminal of the voltmeter to any point in the circuit where the A. V. C. voltage can be obtained. Connect the positive (+) terminal of the vacuum tube voltmeter to the chassis.

Audio Output Meter: Terminal No. 1 is provided on the loop aerial panel for connecting one lead of the audio output meter to the voice coil of the speaker. The other lead of the meter is connected to the chassis. When using these connections, the lowest A. C. scale of the meter must be used. (0 to 10 volts).

The audio output meter can also be connected between the plate of the output tube and the ground of the chassis.

Signal Generator: When adjusting the "I. F." padders, the high side of the signal generator is connected through a .1 mfd. condenser to the antenna section of the tuning condenser. Connect the ground or low side of the generator to the chassis.

When aligning the R. F. padders a loop is made from a few turns of wire and connected to the signal generator output terminals; the signal generator is then placed close to the loop of the radio.

When adjusting the radio outside the cabinet the loop aerial should be placed in approximately the same position around or near the chassis as when assembled.

The receiver can be adjusted in the cabinet or removed from the cabinet. If adjustments are made outside the cabinet a Service Tuning Scale, Part No. 45-2825, Model 41-260; and Part No. 45-2826, Model 41-265, will be required. This scale is placed underneath the pointer on the metal dial plate.

After connecting the aligning instruments, adjust the compensators as shown in the tabulation for each model below. Locations of the compensators are shown in the schematic diagram on pages two and three. If the indicating meter pointer goes off scale when adjusting the compensator, reduce the strength of the signal from the generator.

Model 41-260

Operations in Order	SIGNAL GENERATOR		RECEIVER			SPECIAL INSTRUCTIONS
	Output Connections to Receiver	Dial Setting	Dial Setting	Control Setting	Adjust Compensators in Order	
1	Ant. Section of Tuning Cond.	455 K. C.	Tuning Cond. Closed	Vol. Max. Range Switch "Brdcst"	35A, 29A, 22A, 22B	Note A
2	Loop to Radio Loop See Sig. Gen. Above	1720 K. C.	1720 K. C.	Vol. Max. Range Switch "Brdcst"	6A	Note B
3	Loop to Radio Loop See Sig. Gen. Above	1500 K. C.	1500 K. C.	Vol. Max. Range Switch "Brdcst"	14	
4	Loop to Radio Loop See Sig. Gen. Above	580 K. C.	580 K. C.	Vol. Max. Range Switch "Brdcst"	14A	Rock Comp. to "Max." Recheck Operations Nos. 2, 3
5	Loop to Radio Loop See Sig. Gen. Above	12 M. C.	12 M. C.	Range Switch S. W.	6, 15	Note C

Model 41-265

1	Ant. Section of Tuning Cond.	455 K. C.	Tuning Cond. Closed	Vol. Max. Range Switch "Brdcst"	35A, 29A, 22A, 22B	Note A
2	Loop to Radio Loop See Sig. Gen. Above	1720 K. C.	1720 K. C.	Vol. Max. Range Switch "Brdcst"	6A	Note B
3	Loop to Radio Loop See Sig. Gen. Above	1500 K. C.	1500 K. C.	Vol. Max. Range Switch "Brdcst"	14	
4	Loop to Radio Loop See Sig. Gen. Above	580 K. C.	580 K. C.	Vol. Max. Range Switch "Brdcst"	14A	Rock Comp. to "Max." Recheck Operation No. 2
5	Loop to Radio Loop See Sig. Gen. Above	6 M. C.	6 M. C.	Range Switch Police	6	Rock Comp. to "Max."
6	Loop to Radio Loop See Sig. Gen. Above	12 M. C.	12 M. C.	Range Switch S. W.	6B, 15	Note C

NOTE A — Compensator (22A) Model 41-260, must be adjusted before (22B) Model 41-260, and should be done in the following manner: Turn 22A all the way up, then turn down selecting the first I. F. peak, then pad 22B to maximum. This procedure applies also to Model 41-265.
NOTE B — DIAL CALIBRATION: In order to adjust the receiver correctly, the dial must be aligned to track properly with the tuning condenser. To do this, proceed as follows: Turn the tuning condenser to the maximum capacity position (plates fully meshed). With the condenser in this position, set the tuning pointer on the extreme left index line at the low frequency end of the broadcast scale.
NOTE C — Tune in the first signal peak from the tight position of both padders. Roll padder (15) Model 41-260; (15) Model 41-265, slowly to maximum on the first peak.

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