

# MODELS 41-722 AND 41-758

## SPECIFICATIONS

### MODEL 41-722

**TYPE OF CIRCUIT:** Six (6) tube, A. C. operated super-heterodyne circuit with three tuning ranges covering standard, police and shortwave stations. Other features of design included in this model are: Phonograph connections; tuned R. F. stage; bass compensation; variable tone control; automatic volume control and a pentode audio output stage.

**TUNING RANGES:**  
540 to 1720 K. C.      2.3 to 7.1 M. C.      7.0 to 22.2 M. C.

**I. F. FREQUENCY:** 455 K. C.

**AUDIO OUTPUT:** 2 watts.

**POWER SUPPLY:** Operates on 115 or 230 volts, 50-60 cycle alternating current. To operate the receiver on either of the above voltages, move the changeover switch on the rear of the chassis to position required.

**PHILCO TUBES USED:** 7A7E, R. F. amplifier; 6J8EG, converter; 78E, I. F. amplifier; 75, 2nd detector, first audio, A. V. C.; 41, audio output and an 84, rectifier.

**AERIAL AND GROUND:** To obtain maximum sensitivity on all tuning ranges the Philco Aerial, Part No. 40-6383, is recommended. In addition the ground connections of the receiver should be connected to a cold water pipe or any other metal object that is in moist earth.

### MODEL 41-758

**TYPE OF CIRCUIT:** Eight (8) tube, A. C. operated super-heterodyne circuit with three tuning ranges covering standard, police, and shortwave stations. In addition, other features of design are: Phonograph connections; tuned R. F. stage; bass compensation; variable tone control and a pentode audio output stage.

**TUNING RANGES:**  
540 to 1720 K. C.      2.3 to 7.1 M. C.      7.0 to 22 M. C.

**I. F. RANGES:** 455 K. C.

**AUDIO OUTPUT:** 6 watts.

**POWER SUPPLY:** Operates on 115 or 230 volts, 50-60 cycle alternating current. To operate the receiver on either of the above voltages, move the changeover switch on the rear of the chassis to the position required.

**PHILCO TUBES USED:** 7A7E, R. F. amplifier; 6J8EG, converter; 78E, I. F. amplifier; 75, detector, 1st audio, A. V. C.; 76, phase inverter; two 42E, output; 80, rectifier.

**AERIAL AND GROUND:** To obtain maximum sensitivity on all tuning ranges the Philco Aerial, Part No. 40-6383, is recommended. In addition the ground connections of the receiver should be connected to a cold water pipe or any other metal object that is in moist earth.

## ALIGNING R. F. AND I. F. COMPENSATORS

### EQUIPMENT REQUIRED

1. Signal Generator, such as Philco Model 077 A. C. operated or Model 177 battery operated. These signal generators cover a frequency range from 115 to 36000 K. C.

2. Indicating Device: To obtain maximum signal strength and accurate adjustment of the padders a vacuum tube voltmeter similar to Philco Models 027 and 028 is recommended.

These instruments also contain an audio output meter which may be used as an indicating device. The method of connecting either of these instruments is listed below.

3. Aligning Tools: Fiber handle screwdriver, Philco Part No. 45-2610.

### CONNECTING ALIGNING INSTRUMENTS

**Vacuum Tube Voltmeter:** To use the vacuum tube voltmeter as an aligning indicator, it should be connected to the A. V. C. circuit as follows:

1. Connect the negative (—) terminal of the vacuum tube voltmeter through a 2 megohm resistor to any point in the circuit where the A. V. C. voltage can be measured.

2. Connect the positive (+) terminal to the chassis ground terminal.

**Audio Output Meter:** If this type of meter is used as an

aligning indicator, it should be connected to the plate and screen terminals of the 6K6EG tube. Adjust the meter for the 0 to 30 volt A. C. scale.

After connecting the aligning meter, adjust the compensators in the order as shown in the tabulation below. Locations of the compensators are shown in the schematic diagrams.

If the output meter pointer goes off scale when adjusting the compensators, reduce the strength of the signal from the generator.

Opera- tions in Order	SIGNAL GENERATOR			RECEIVER				SPECIAL INSTRUCTIONS
	Leads to Receiver	Dummy Aerial Note A	Dial Setting	Dial Setting	Control Settings	Adjust Compensators for Maximum Signal		
						Model 41-722	Model 41-758	
1	Grid 6J8EG	.1 mfd.	455 K. C.	580 K. C.	Range Sw. Brdcast. Volume "Max."	27A, 27B, 34A, 34B	35A, 35B, 36A, 36B	
2	Aerial Lead	400 ohms	21 M. C.	21 M. C.	Range Switch "S. W. 2"	24, 70B, 70A	25, 80B, 80A	Note B, C
3	Aerial Lead	400 ohms	6.0 M. C.	6.0 M. C.	Range Switch "S. W. 1"	17A	18A	Roll Gang
4	Aerial Lead	200 mmfd.	1500 K. C.	1500 K. C.	Range Switch "Broadcast"	17	18	Roll Gang
5	Aerial Lead	200 mmfd.	580 K. C.	580 K. C.	Range Switch "Broadcast"	18	22	Roll Gang

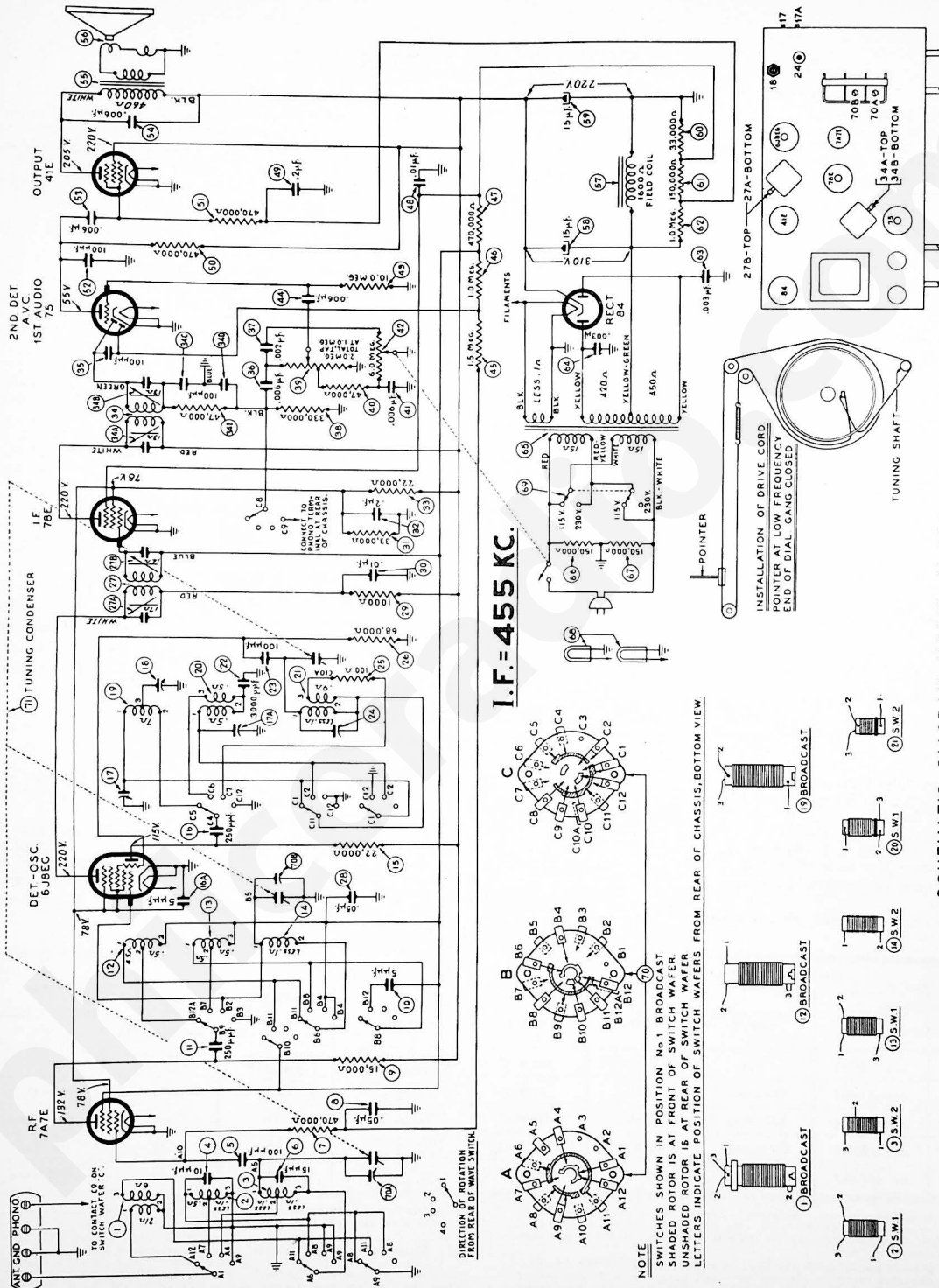
**NOTE A**—The "Dummy Antenna" consists of a condenser or resistance connected in series with the signal generator output lead (high side). Use the capacity or resistance as specified in each step of the above procedure.

**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 first mark on the left edge (low frequency end) of the broadcast scale.

**NOTE C**—When adjusting compensator (24) Model 41-722 and (25) Model 41-758 be sure to tune in the fundamental signal (21 M. C.) instead of the image signal. If the compensator is correctly adjusted, the image signal will be found by turning dial 910 K. C. below the fundamental signal, which will be 20.090 M. C.

# MODELS 41-722 AND 41-758 (CONTINUED)



**SCHEMATIC DIAGRAM MODEL 41-722**

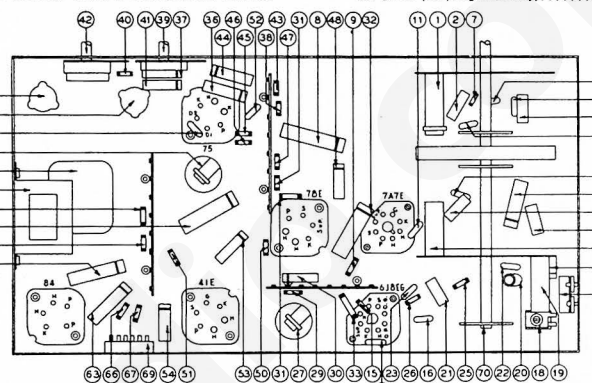
**SEE PAGE 170 FOR REPLACEMENT PARTS**



# MODELS 41-722 AND 41-758 (CONTINUED)

## Replacement Parts — Model 41-722

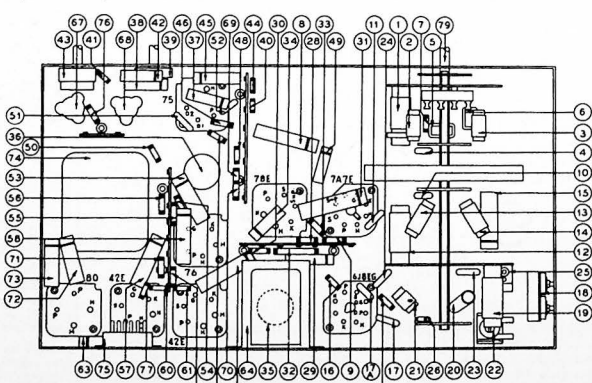
SCH. No.	DESCRIPTION	PART No.	SCH. No.	DESCRIPTION	PART No.	SCH. No.	DESCRIPTION	PART No.	
1	Antenna Transformer (Broadcast)	32-3422	64	Tubular Condenser (.003 mfd.)	30-4608		Knob (Tuning)	27-4862	
2	Antenna Transformer (S. W. 1)	32-3419	65	Power Trans. (115-230 V., 50-60 cycles)	32-8108		Knob (Tone Control)	27-4872	
3	Antenna Transformer (S. W. 2)	32-3415	66	Power Trans. (115 V., 25 cycles)	32-8030		Knob (Volume and Wave Switch)	27-4322	
4	Mica Condenser (.001 mfd.)	60-1010457	67	Resistor (150,000 ohms, 1/2 watt)	33-415339		Pointer	56-1276	
5	Mica Condenser (100 mmfd.)	60-110457	68	Resistor (150,000 ohms, 1/2 watt)	33-415339		Rubber Disc (Coupling Assembly)	27-6044	
6	Mica Condenser (15 mmfd.)	60-015337	69	Pilot Lamps	34-2061E		Rubber Bands (Dial Gasket)	27-4987	
7	Resistor (470,000 ohms, 1/2 watt)	33-447339	70	Voltage Change Switch	42-1569		Socket (5 prong, type 84 tube)	27-6036	
8	Tubular Condenser (.05 mfd.)	30-4609	71	Wave Switch	42-1564		Socket (6 prg., type 78E, 41E, 75 tubes)	27-6036	
9	Resistor (15,000 ohms, 1 watt)	33-315439	72	Tuning Condenser Assembly	31-2444		Socket (loktal, type 7A7E tube)	27-6131	
10	Mica Condenser (5 mmfd.)	60-125457					Station Card Shield	27-5437	
11	Mica Condenser (250 mmfd.)	60-1010457					Spring (Drive Cord)	26-8757	
12	R. F. Transformer (Broadcast)	32-3417	<b>MISCELLANEOUS PARTS</b>					Shield (7A7E tube)	56-1566
13	R. F. Transformer (S. W. 1)	32-3420		Cable and Plug (Power Supply)	L-3246		Station Card Holder	56-1273	
14	R. F. Transformer (S. W. 2)	32-3416		Special Export A. C. Plug	L-1367		Speaker	36-1452-2	
15	Resistor (22,000 ohms, 1/2 watt)	33-322339		Cabinet	10459A		Tuning Drum and Shaft	31-2452	
16	Mica Condenser (250 mmfd.)	60-125457		Clip (Coil Mounting)	28-5002		Vernier Drive	31-2451	
16A	Mica Condenser (5 mmfd.)	60-005357		Dial	27-5583		Arm and Hub (Coupling Assembly)	76-1041	
17	Compensator (2 sections)	31-6260		Drive Cord Assembly	31-2458		Set Screw (Coupling Assembly)	W-2008	
18	Compensator	31-6260		Knob (Tuning)	27-4330				
19	Oscillator Transformer (Broadcast)	32-3421							
20	Oscillator Transformer (S. W. 1)	32-3418							
21	Oscillator Transformer (S. W. 2)	32-3418							
22	Mica Condenser (3000 mmfd.)	60-230124							
23	Mica Condenser (100 mmfd.)	60-110457							
24	Compensator	31-6245							
25	Resistor (100 ohms, 1/2 watt)	33-110339							
27	Resistor (68,000 ohms, 1/2 watt)	33-368339							
28	Resistor (1,000 ohms, 1/2 watt)	33-4242							
29	Tubular Condenser (.05 mfd.)	30-4609							
30	Tubular Condenser (.01 mfd.)	33-110339							
31	Resistor (33,000 ohms, 1/2 watt)	33-4572							
32	Tubular Condenser (.2 mfd.)	30-4587							
33	Resistor (330,000 ohms, 1/2 watt)	33-333339							
34	1st I. F. Transformer Assembly	30-2429							
34E	Resistor (47,000 ohms, 1/2 watt)	33-347339							
35	Mica Condenser (100 mmfd.)	60-110457							
36	Tubular Condenser (.006 mfd.)	30-4591							
37	Tubular Condenser (.002 mfd.)	33-333339							
38	Resistor (330,000 ohms, 1/2 watt)	33-433339							
39	Volume Control (2.0 meg.)	33-5339							
40	Resistor (47,000 ohms, 1/2 watt)	33-347339							
41	Tubular Condenser (.006 mfd.)	30-4591							
42	Tone Control (8.0 meg.)	33-5339							
43	Resistor (10.0 meg., 1/2 watt)	33-610339							
44	Tubular Condenser (.006 mfd.)	30-4591							
45	Resistor (4.3 meg., 1/2 watt)	33-513339							
46	Resistor (11.0 meg., 1/2 watt)	33-513339							
47	Resistor (470,000 ohms, 1/2 watt)	33-447339							
48	Tubular Condenser (.01 mfd.)	30-4572							
49	Tubular Condenser (.2 mfd.)	33-473339							
50	Resistor (470,000 ohms, 1/2 watt)	33-447339							
51	Resistor (470,000 ohms, 1/2 watt)	33-447339							
52	Mica Condenser (100 mmfd.)	60-110457							
53	Tubular Condenser (.006 mfd.)	30-4591							
54	Tubular Condenser (.006 mfd.)	30-4591							
55	Output Transformer	32-8110							
56	Cone and Voice Coil Assembly (Speaker Part No. 36-1452-2)	36-4103							
57	Field Coil (Replace Spr. No. 36-1452-2)	36-1452-2							
58	Electrolytic Condenser (15 mfd., 350 V.)	30-2464							
59	Electrolytic Condenser (40 mfd., 450 V.)	30-2445							
60	Resistor (33,000 ohms, 1/2 watt)	33-333339							
61	Resistor (33,000 ohms, 1/2 watt)	33-333339							
62	Resistor (150,000 ohms, 1/2 watt)	33-510339							
63	Resistor (1.0 meg., 1/2 watt)	33-510339							
64	Resistor (.003 mfd.)	30-4608							



MODEL 41-722 — PART LOCATIONS, UNDERSIDE OF CHASSIS.

## Replacement Parts — Model 41-758

SCH. No.	DESCRIPTION	PART No.	SCH. No.	DESCRIPTION	PART No.	*SCH. No.	DESCRIPTION	PART No.
1	Antenna Transformer (Broadcast)	32-3422	64	Electrolytic Cond. (15 mfd., 450 V.)	30-2465		Knob (Tuning)	27-4330
2	Antenna Transformer (S. W. 1)	32-3419	65	Electrolytic Cond. (40 mfd., 450 V.)	30-2445		Knob (Tuning)	27-4862
3	Antenna Transformer (S. W. 2)	32-3415	66	Resistor (33,000 ohms, 1/2 watt)	33-333339		Knob (Volume and Wave Switch)	27-4322
4	Mica Condenser (.001 mfd.)	60-1010337	67	Resistor (150,000 ohms, 1/2 watt)	33-415339		Knob (Tone Control)	27-4872
5	Mica Condenser (100 mmfd.)	60-110457	68	Resistor (1.0 meg., 1/2 watt)	33-510339		Pointer	56-1276
6	Mica Condenser (15 mmfd.)	60-015337	69	Tubular Condenser (.003 mfd.)	30-4608		Socket (type 80 tube)	27-6044
7	Resistor (470,000 ohms, 1/2 watt)	33-447339	70	Tubular Condenser (.003 mfd.)	30-4608		Socket (type 78E, 42E and 75 tubes)	27-6036
8	Resistor (15,000 ohms, 1 watt)	33-315439	71	Voltage Change Switch	42-1569		Socket (octal, type 6JRE6 tube)	27-6058
9	Mica Condenser (250 mmfd.)	60-1010457	72	Power Trans. (115-230 V., 50-60 cycles)	32-8109		Socket (loktal, type 7A7E tube)	27-6131
10	Mica Condenser (5 mmfd.)	60-125457	73	Wave Switch	42-1564		Speaker	36-1453
11	Mica Condenser (250 mmfd.)	60-1010457	74	Resistor (150,000 ohms, 1/2 watt)	33-415339		Spring (Coil Mounting)	28-5002
12	R. F. Transformer (Broadcast)	32-3417	75	Pilot Lamps	34-2064E		Station Card Holder	28-8751
13	R. F. Transformer (S. W. 1)	32-3420	76	Tuning Condenser Assembly	31-2444		Rubber Disc (Coupling Assembly)	27-6184
14	R. F. Transformer (S. W. 2)	32-3416					Tube Shield (7A7E Tube)	56-1566
15	Resistor (22,000 ohms, 1/2 watt)	33-322339					Tube Shield Base	26-2726
16	Mica Condenser (250 mmfd.)	60-125457					Arm and Hub (Coupling Assembly)	76-1041
17	Mica Condenser (5 mmfd.)	60-005357					Tuning Drum and Shaft	31-2452
18	Compensator (Brocast. & W. 1)	31-6262					Vernier Drive	31-2451
19	Oscillator Transformer (Broadcast)	32-3421						
20	Oscillator Transformer (S. W. 1)	32-3418						
21	Oscillator Transformer (S. W. 2)	32-3418						
22	Compensator (Broadcast Tracker)	31-6260						
23	Mica Condenser (3000 mmfd.)	60-230124						
24	Mica Condenser (100 mmfd.)	60-110457						
25	Compensator	31-6245						
26	Resistor (100 ohms, 1/2 watt)	33-110339						
27	Resistor (68,000 ohms, 1/2 watt)	33-368339						
28	Resistor (1,000 ohms, 1/2 watt)	33-4242						
29	Tubular Condenser (.05 mfd.)	30-4572						
30	Resistor (33,000 ohms, 1/2 watt)	33-333339						
31	Tubular Condenser (.2 mfd.)	30-4594						
32	Resistor (330,000 ohms, 1/2 watt)	33-333339						
33	Resistor (330,000 ohms, 1/2 watt)	33-333339						
34	Tubular Condenser (.05 mfd.)	30-4594						
35	1st I. F. Transformer Assembly	30-2429						
36	2nd I. F. Transformer Assembly	30-2430						
37	Tubular Condenser (.002 mfd.)	30-4579						
38	Tubular Condenser (.002 mfd.)	30-4579						
39	Volume Control (2.0 meg.)	33-5339						
40	Resistor (47,000 ohms, 1/2 watt)	33-347339						
41	Tubular Condenser (.01 mfd.)	30-4572						
42	Tone Control (8.0 meg.)	33-5339						
43	Resistor (10.0 meg., 1/2 watt)	33-610339						
44	Tubular Condenser (.006 mfd.)	30-4591						
45	Resistor (4.3 meg., 1/2 watt)	33-513339						
46	Resistor (11.0 meg., 1/2 watt)	33-513339						
47	Resistor (470,000 ohms, 1/2 watt)	33-447339						
48	Tubular Condenser (.01 mfd.)	30-4572						
49	Tubular Condenser (.2 mfd.)	33-473339						
50	Resistor (470,000 ohms, 1/2 watt)	33-447339						
51	Mica Condenser (100 mmfd.)	60-110457						
52	Mica Condenser (250 mmfd.)	60-125457						
53	Tubular Condenser (.006 mfd.)	30-4591						
54	Tubular Condenser (.006 mfd.)	30-4591						
55	Output Transformer	32-8110						
56	Cone and Voice Coil Assembly (Speaker Part No. 36-1453)	36-4104						
57	Field Coil (Replace Spr. No. 36-1453)	36-1453						



MODEL 41-758 — PART LOCATIONS, UNDERSIDE OF CHASSIS.