

# PHILCO AUTO RADIO Model 920

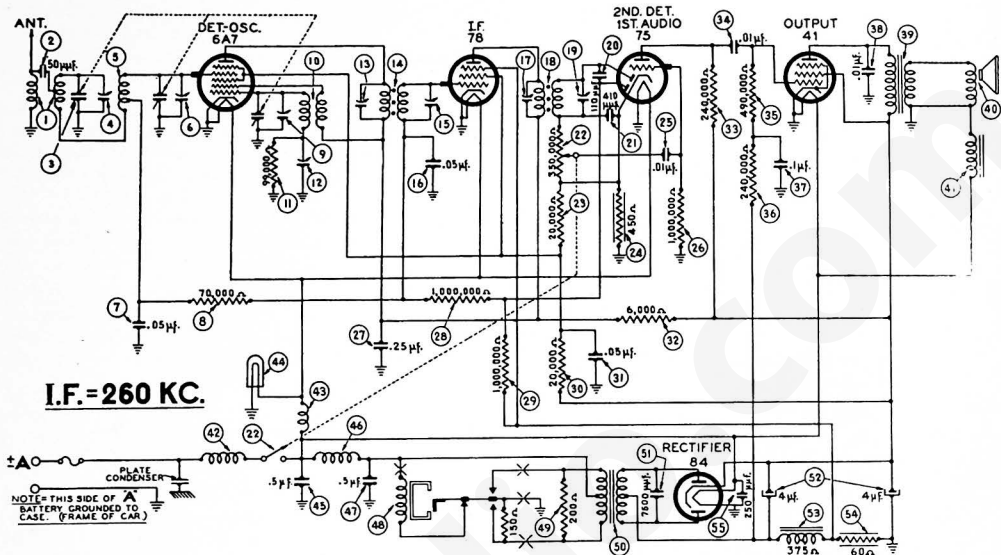


FIGURE 1

## MODEL 920 PARTS LIST

No.	Description	Part No.	No.	Description	Part No.
1	Antenna Transformer	32-2988	29	Output Transformer	32-7061
2	Condenser (50 mmfd.)	30-1101	30	Cone & Voice Coil Assembly	45-1344
3	Tuning Condenser	31-2224	31	Field Coil	32-9484
4	First Padder (on Tun. Cond.)		32	"A" Choke	32-1644
5	R. F. Transformer	32-2986	33	Filament Choke	32-1644
6	Second Padder (on Tun. Cond.)		34	Pilot Lamp	34-2064
7	Condenser (.05 mfd.)	30-4020	35	Condenser (.5 mfd.)	30-4551
8	Resistor (70,000 ohms)	33-370344	36	Vibrator Choke	32-3003
9	Third Padder (on Tun. Cond.)		37	Condenser (.5 mfd.)	30-4565
10	Oscillator Transformer	32-2987	38	Vibrator	41-3398
11	Resistor (99,000 ohms)	33-399344	39	Resistor (200 ohms)	33-120314
12	Low Frequency Padder	31-9252	40	Power Transformer	32-9462
13	Padder (Pri. 1st I. F. Trans.)		41	Condenser (7,500 mmfd.)	30-4567
14	First I. F. Transformer	32-2994	42	Filter Condenser (4.4 mfd.)	30-2311
15	Padder (Sec. 1st I. F. Trans.)		43	Filter Choke	32-7860
16	Condenser (.05 mfd.)	30-4020	44	Resistor (60 ohms)	33-060331
17	Padder (Pri. 2nd I. F. Trans.)		45	Condenser (250 mmfd.)	30-1032
18	Second I. F. Transformer	32-2995	46	Tuning & Volume Knob	27-4737
19	Padder (Sec. 2nd I. F. Trans.)		47	Pointer	28-5781
20	Condenser (110 mmfd.)	30-1031	48	Dial & Bracket Assembly	42-5844
21	Condenser (410 mmfd.)	30-1089	49	Glass	27-9107
22	Volume Control & Switch Assm.		50	Bezels	28-5764
23	(350,000 ohms)	33-5269	51	Housing Cover	38-9505
24	Resistor (20,000 ohms)	33-320344	52	Four Prong Socket	27-6044
25	Resistor (450 ohms)	33-145341	53	Five Prong Socket	27-6035
26	Condenser (.01 mfd.)	30-4479	54	Six Prong Socket	27-6036
27	Resistor (1,000,000 ohms)	33-510344	55	Seven Prong Socket	27-6037
28	Condenser (.25 mfd.)	30-4448	56	Fuse	7227
29	Resistor (1,000,000 ohms)	33-510344	57	Fuse Insulator	27-7229
30	Resistor (1,000,000 ohms)	33-510344	58	Carriage Bolt	W-1983
31	Resistor (20,000 ohms)	33-320447	59	Radio Mtg. Bolt	W-1984
32	Condenser (.05 mfd.)	30-4569	60	Radio Mtg. Nut	W-55
33	Resistor (6,000 ohms)	33-260344	61	Radio Mtg. Nut	W-1687
34	Resistor (240,000 ohms)	33-424344	62	Distributor Resistor	33-1196
35	Condenser (.01 mfd.)	30-4145	63	Interference Condenser	30-4007
36	Resistor (490,000 ohms)	33-449344	64	Set Mounting Bracket	
37	Resistor (240,000 ohms)	33-424344	65	(short)	28-5853
38	Condenser (1 mfd.)	30-4499	66	Set Mounting Bracket	
39	Condenser (.01 mfd.)	30-4381	67	(long)	28-5744

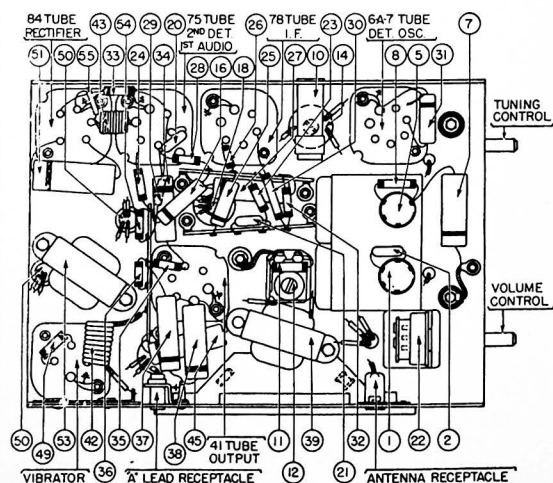


FIGURE 2

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## I. F. TRANSFORMERS AND PADDERS

The I. F. transformers are assembled complete with padding condensers.

Both the primary and the secondary padders are placed side by side in the top of the transformer shield can. The adjusting screws are accessible thru the holes in the top of the shield. (See Figure 4).

The coil windings terminate in leads instead of terminals or lugs. The color scheme of the leads is given in Figure 3.

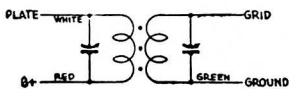


FIGURE 3

If replacements are ever necessary, replace the entire coil assembly, 32-2994 for the first I. F. stage and 32-2995 for the second I. F. stage. Neither the coil nor the padders will be furnished separately. Order only by the above numbers.

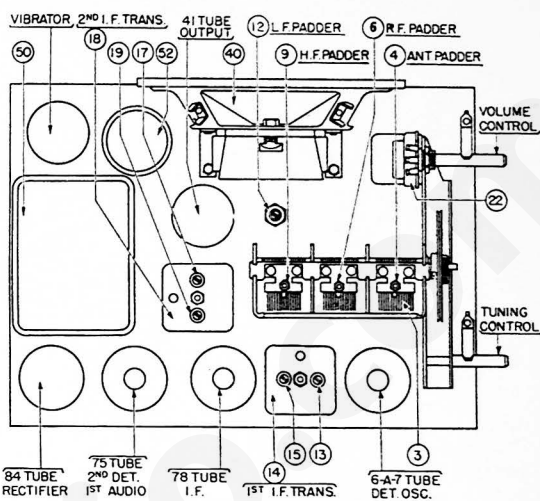


FIGURE 4

## MODEL 920 ADJUSTMENTS

All padding adjustments are carefully made at the factory and ordinarily no readjustments are necessary. However, when readjustments are required, the procedure given below must be followed in detail.

**Equipment** — Storage Battery (fully charged) or a 6 volt power pack. Signal Generator such as Philco Models 077 or 177. Vacuum Tube Voltmeter and Circuit Tester, Philco Model 027. In addition a padding screw driver, Philco Part No. 45-2610.

**General** — The output meter must be connected by means of an adapter to the plate of the type 41 output tube and to the Radio chassis.

With the Radio and signal generator set up for operation at the prescribed frequency, turn the Radio volume control on full and set the signal generator attenuator so that a half scale reading is obtained on the output meter. The signal in the speaker should be audible but not loud.

The shielding on the signal generator output lead must be connected to the Radio housing.

OPERATION	SIGNAL GENERATOR		DUMMY CAPACITY	SPECIAL INSTRUCTIONS	ADJUST PADDER
	FREQUENCY	CONNECTION			
1	260 K. C.	To grid of 6A7 Tube	.1 Mfd. Condenser in Series with Generator Lead	No Antenna Connection	17, 18, 15, 17
2	1550 K. C.	To Antenna Receptacle on Radio	50 Mmfd. See Note 1	Turn Tuning Condenser Plates Out of Mesh as Far as They Will Go.	9, 6, 4
3	580 K. C.	To Antenna Receptacle on Radio	50 Mmfd. See Note 1	Set Tuning Condenser at 580 K. C.	Note 2, 12
4	1550 K. C.	To Antenna Receptacle on Radio	50 Mmfd. See Note 1	Turn Tuning Condenser Plates Out of Mesh as Far as They Will Go.	9
5	1400 K. C.	To Antenna Receptacle on Radio	50 Mmfd. See Note 1	Set Tuning Condenser at 1400 K. C.	6, 4, Note 3

Make all adjustments for maximum reading on the output meter.

**NOTE 1** — Connect the antenna lead, Part No. 41-3191, to the antenna receptacle in the radio. Connect a 50 Mmfd. Condenser in series between the signal generator and the antenna lead.

**NOTE 2** — Rock the tuning condenser while adjusting the low frequency padder. Tune the condenser to the signal and adjust the padder for maximum output. Rotate the tuning condenser back and forth slightly for maximum output. Then re-adjust the padder for maximum output. Repeat this procedure until no further improvement is noticed.

**NOTE 3** — When the antenna stage adjustment is made with the Radio installed in the car, the Radio antenna lead must be connected to the car antenna in the usual manner. Connect the signal generator output lead to a wire placed near the car antenna but not connected to it.