

# PHILCO AUTO RADIO Models 921 & 922

## MODELS 921 and 922 (Run No. 2)

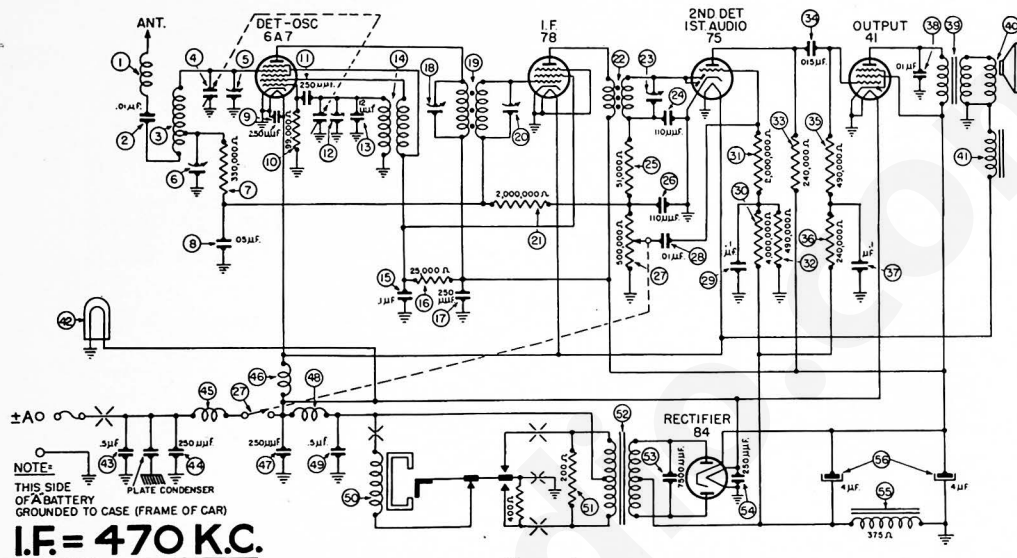


FIGURE 1

### PARTS LIST

No.	Description	Part No.
1	Antenna Choke	77-0050
2	Condenser (.01 mfd.)	33-4479
3	Antenna Transformer	32-3037
4	Tuning Condenser	31-2288
5	First Padder (on Tun. Cond.)	31-6260
6	Antenna Compensator	33-433344
7	Resistor (350,000 ohms)	33-4519
8	Condenser (.05 mfd.)	33-1032
9	Condenser (250 mmfd.)	33-399344
10	Resistor (99,000 ohms)	33-1032
11	Condenser (250 mmfd.)	33-1032
12	Second Padder (on Tun. Cond.)	31-0007
13	Condenser (12 mmfd.)	32-3025
14	Oscillator Transformer	33-4455
15	Condenser (.1 mfd.)	33-325544
16	Resistor (25,000 ohms)	33-1032
17	Condenser (250 mmfd.)	33-1032
18	Padder (Pri. 1st I.F. Trans.)	32-3074
19	First I.F. Transformer	33-520344
20	Padder (Sec. 1st I.F. Trans.)	32-3076
21	Resistor (2,000,000 ohms)	33-520344
22	Second I.F. Transformer	32-3076
23	Padder (Sec. 2nd I.F. Trans.)	33-1031
24	Condenser (110 mmfd.)	33-351344
25	Resistor (51,000 ohms)	33-1031
26	Condenser (110 mmfd.)	33-1031
27	Volume Control (500,000 ohms)	33-5278
28	and On-Off Switch	33-4479
29	Condenser (.01 mfd.)	33-4499
30	Condenser (1 mfd.)	33-540344
31	Resistor (4,000,000 ohms)	33-540344

No.	Description	Part No.
32	Resistor (2,000,000 ohms)	33-520344
33	Resistor (490,000 ohms)	33-449344
34	Resistor (240,000 ohms)	33-424344
35	Condenser (.015 mfd.)	33-40226
36	Resistor (490,000 ohms)	33-449344
37	Resistor (240,000 ohms)	33-424344
38	Condenser (.1 mfd.)	33-4499
39	Condenser (.01 mfd.)	33-4501
40	Output Transformer	32-8000
41	Cone and Voice Coil	45-2707
42	Field Coil	Not replaceable
43	Pilot Lamp	34-2064
44	Condenser (.5 mfd.)	33-4491
45	Condenser (250 mmfd.)	33-1032
46	"A" Choke	32-1644
47	Filament Choke	32-1644
48	Condenser (250 mmfd.)	33-1032
49	Vibrator Choke	32-3003
50	Condenser (.5 mfd.)	33-4565
51	Vibrator	41-3398
52	Resistor (200 ohms)	33-120344
53	Power Transformer	32-7962
54	Condenser (7500 mmfd.)	33-4567
55	Condenser (250 mmfd.)	33-1032
56	Filter Choke	32-7960
57	Filter Condenser	33-2329
58	Tuning and Volume Knob	27-4761
59	Pointer	28-5969
60	Fuse	7227
61	Fuse Insulator	27-7729
62	Glass	55-0020

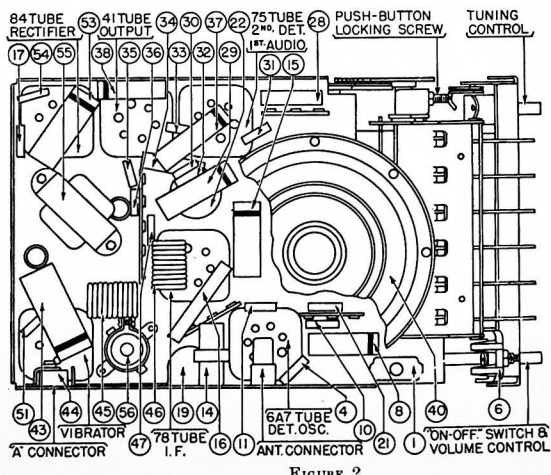


FIGURE 2

### BASE VIEW OF MODEL 922

Model 921 similar except there is no provision for automatic tuning

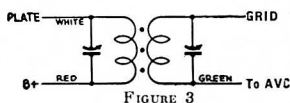
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## I. F. TRANSFORMERS AND PADDERS

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.



If replacements are ever necessary, replace the entire coil assembly, 32-3074 for the first I. F. stage and 32-3076 for the second I. F. stage. Neither the coil nor the padders will be furnished separately. Order only by the above numbers.

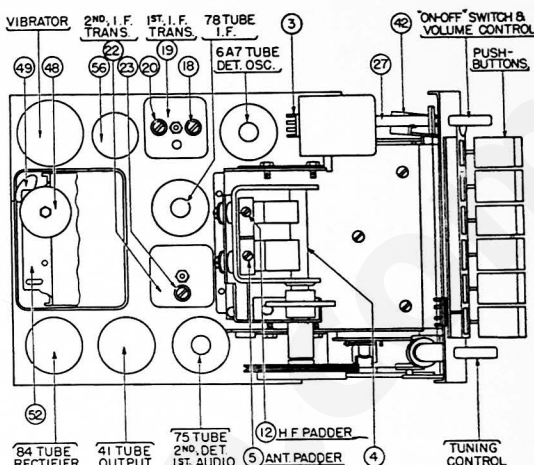


FIGURE 4

## 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 PADDERS
	FREQUENCY	CONNECTION			
1	470 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.	② ③ ④
2	1550 K.C.	To Antenna Receptacle on Radio	50 Mmfd. See Note 1	Note 2	⑫
3	1360 K.C.	To Antenna Receptacle on Radio	50 Mmfd. See Note 1	Set Tuning Condenser at 1360 K. C.	⑤ Note 3
4	590 K.C.	To Antenna Receptacle on Radio	50 Mmfd. See Note 1	Set Tuning Condenser at 590 K. C.	⑥ Antenna Compensator

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** — Turn the condenser rotor plates completely out of mesh. Use a piece of bond letterhead paper as a gauge between the heel of the rotor plates and the stator plates of the oscillator section of the tuning condenser, and turn the condenser plates in mesh until they strike the paper.

**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.