PHILCO TRANSITONE
SERVICE BROADCAST

JUNE, 1939

MODEL C933 PHILCO AUTO RADIO

MODEL C-933 SCHEMATIC

I.F. = 470KC

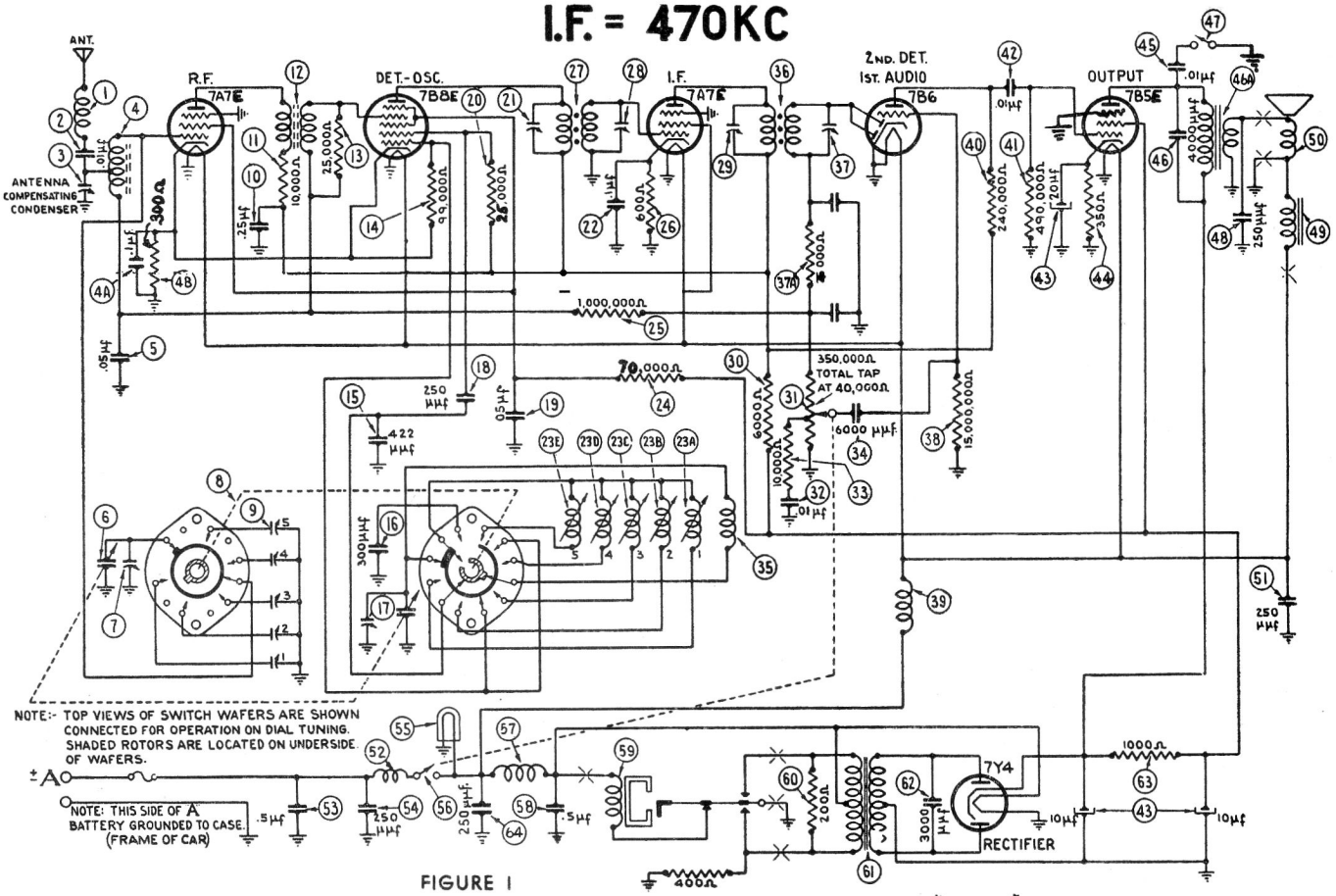

FIGURE 1

PARTS LIST

No.	Description	Part No.
1	Antenna Choke	65-0184
2	Condenser (.01 mfd.)	61-0014
3	Ant. Compensator	Part of 9
4	Antenna Transformer	65-0156
4a	Condenser (.01 mfd.)	30-4499
4b	Resistor (300 ohms)	33-130431
5	Condenser (.05 mfd.)	30-4444
6	Tuning Condenser	63-0024
7	First Pad. (on Tun. Cond.)	
8	Wafer Switch	412-1024
9	Antenna Padder Assy.	77-0286
10	Condenser (.25 mfd.)	30-4446
11	Resistor (10,000 ohms)	33-310344
12	R.F. Transformer	65-0155
13	Resistor (25,000 ohms)	33-325344
14	Resistor (99,000 ohms)	33-399344
15	Silver Mica Condenser (422 mmfd.)	61-0066
16	Silver Mica Condenser (300 mmfd.)	61-0003
17	Second Padder (on Tun. Cond.)	
18	Condenser (250 mmfd.)	30-1038
19	Condenser (.05 mfd.)	30-4444
20	Resistor (25,000 ohms)	33-325344
21	Padder (Pri. 1st I.F. Trans.)	
22	Condenser (.1 mfd.)	30-4499
23a	Oscillator Trans. (1)	65-0169
23b	Oscillator Trans. (2)	65-0170
23c	Oscillator Trans. (3)	65-0171
23d	Oscillator Trans. (4)	65-0172
23e	Oscillator Trans. (5)	65-0173
24	Resistor (70,000 ohms	33-370344
25	Resistor (1,000,000 ohms)	33-510344
26	Resistor (600 ohms)	33-160431
27	First I.F. Transformer	65-0160
28	Padder (Sec. 1st I.F. Trans.)	
29	Padder (Pri. 2nd I.F. Trans.)	
30	Resistor (6,000 ohms)	33-260344
31	Volume Control (350,000 ohms) and On-Off Switch	67-0019
32	Condenser (.01 mfd.)	61-0014
33	Resistor (10,000 ohms)	33-310344
34	Cond. (6,000 mmfd.)	30-4467
35	Oscillator Transformer (Dial)	65-0165
36	Second I.F. Trans.	65-0161
37	Padder (Sec. 2nd I.F. Trans.)	
37a	Resistor (25,000 ohms)	33-325344
38	Resistor (15,000,000 ohms)	33-615344
39	Filament Choke	65-0201
40	Resistor (240,000 ohms)	33-424344
41	Resistor (490,000 ohms)	33-449344
42	Condenser (.01 mfd.)	30-4124
43	Filter Condenser (10—10—20 mfd.)	61-0028
44	Resistor (350 ohms)	33-135341
45	Condenser (.01 mfd.)	30-4381
46	Cond. (4,000 mmfd.)	30-4185
46a	Output Transformer	65-0162
47	Tone Control Switch	42-1406
48	Condenser (250 mmfd.)	61-0033
49	Field Coil	Not Replaceable
50	Cone Kit	
	For 73-0024-3 Speaker	91-0068
	For 73-0024-2 Speaker	91-0028
	For 73-0025-2 Speaker	91-0065
51	Condenser (250 mmfd.)	61-0033
52	"A" Choke	65-0037
53	Condenser (.5 mfd.)	30-4565
54	Condenser (250 mmfd.)	61-0033
55	Pilot Lamp	34-2040
56	On-Off Switch and Volume Control	67-0019
57	Vibrator Choke	65-0075
58	Condenser (.5 mfd.)	30-4565
59	Vibrator	83-0017

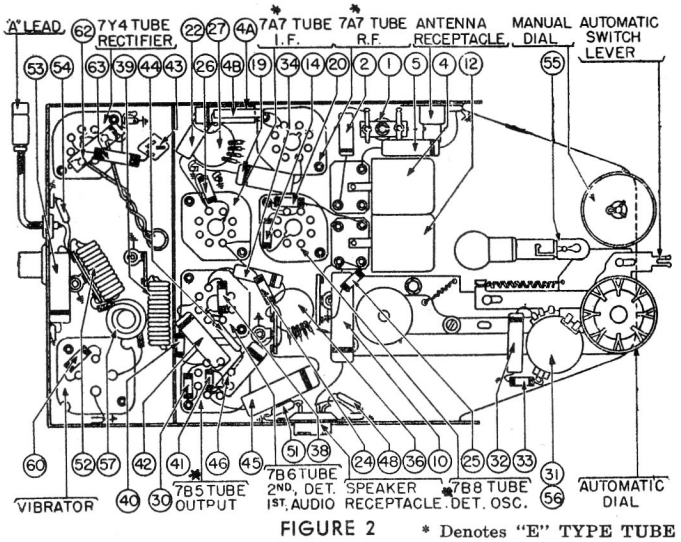

FIGURE 2 * Denotes "E" TYPE TUBE

No.	Description	Part No.
60	Resistor (200 ohms)	33-120341
61	Power Transformer	65-0159
62	Cond. (3,000 mmfd.)	61-0059
63	Resistor (1,000 ohms)	33-210444
64	Condenser (250 mmfd.)	61-0033
	Dial Disc. & Drum Assy.	77-0323
	Station Indicator Dial	318-1395
	Dial Tabs	79-0343
	Push Button Knob	55-0474
	Loktal Socket	27-6130
	4 Prong Socket	27-6044
	Back Strap	28-5998FA3
	Front Bracket	57-0753FC36
	Fuse	45-2559
	Fuse Lead	77-0235
	Interference Condenser	30-4007
	Distributor Resistor	33-1196

MODEL C933
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 — Fully charged heavy duty storage battery or 6-volt power pack, 177 Philco Signal Generator, 028 Philco vacuum tube voltmeter and circuit tester and a 27-7159 Padding screw driver.

General — The vacuum tube voltmeter can be used as a "wireless" output meter as a convenient method for obtaining maximum output reading. Solder one end of a piece of wire to a strip of phosphor bronze approximately 1" wide, 6" long and .02" thick. Coil this strip so that it can be slipped over the top of the type 7B5E output tube, and make a fairly tight contact. Connect the other end of the wire to the "high" terminal of the vacuum tube voltmeter. Then connect a wire from the radio chassis to the "plus" terminal of the vacuum tube voltmeter.

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 generator output lead must be connected to the Radio housing.

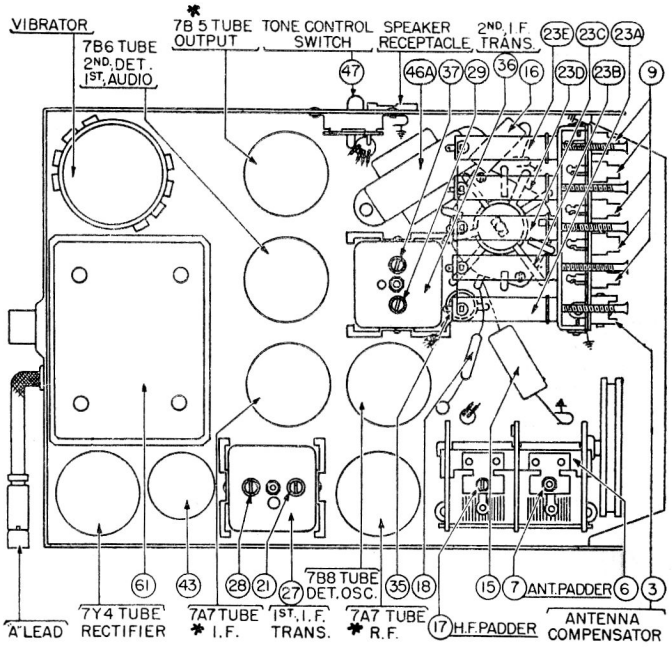

FIGURE 3 *DENOTES "E" TYPE TUBE

OPERATION	SIGNAL GENERATOR Frequency	SIGNAL GENERATOR CONNECTION	DUMMY CAPACITY	SPECIAL INSTRUCTIONS	Adjust Padder
1	Press the Automatic Station Selector button until "DIAL" appears in the window and stations can be tuned in by Manual Tuning.				
2	470 K.C.	To Antenna Receptacle on Radio	30 Mmfd. See Note 1	Turn Tuning Condenser Plates Out of Mesh as Far as They Will Go.	(37) (29) (28) (21)
3	1580 K.C.	To Antenna Receptacle on Radio	30 Mmfd. See Note 1	Set Tuning Condenser at 1580 K.C.	(17)
4	1500 K.C.	To Antenna Receptacle on Radio	30 Mmfd. See Note 1	Set Tuning Condenser at 1500 K.C.	(7) Note 2

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 30 Mmfd. Condenser in series between the signal generator and the antenna lead.

NOTE 2—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. Also adjust the antenna compensator (3) for maximum on a weak signal at approximately 1400 K.C.

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