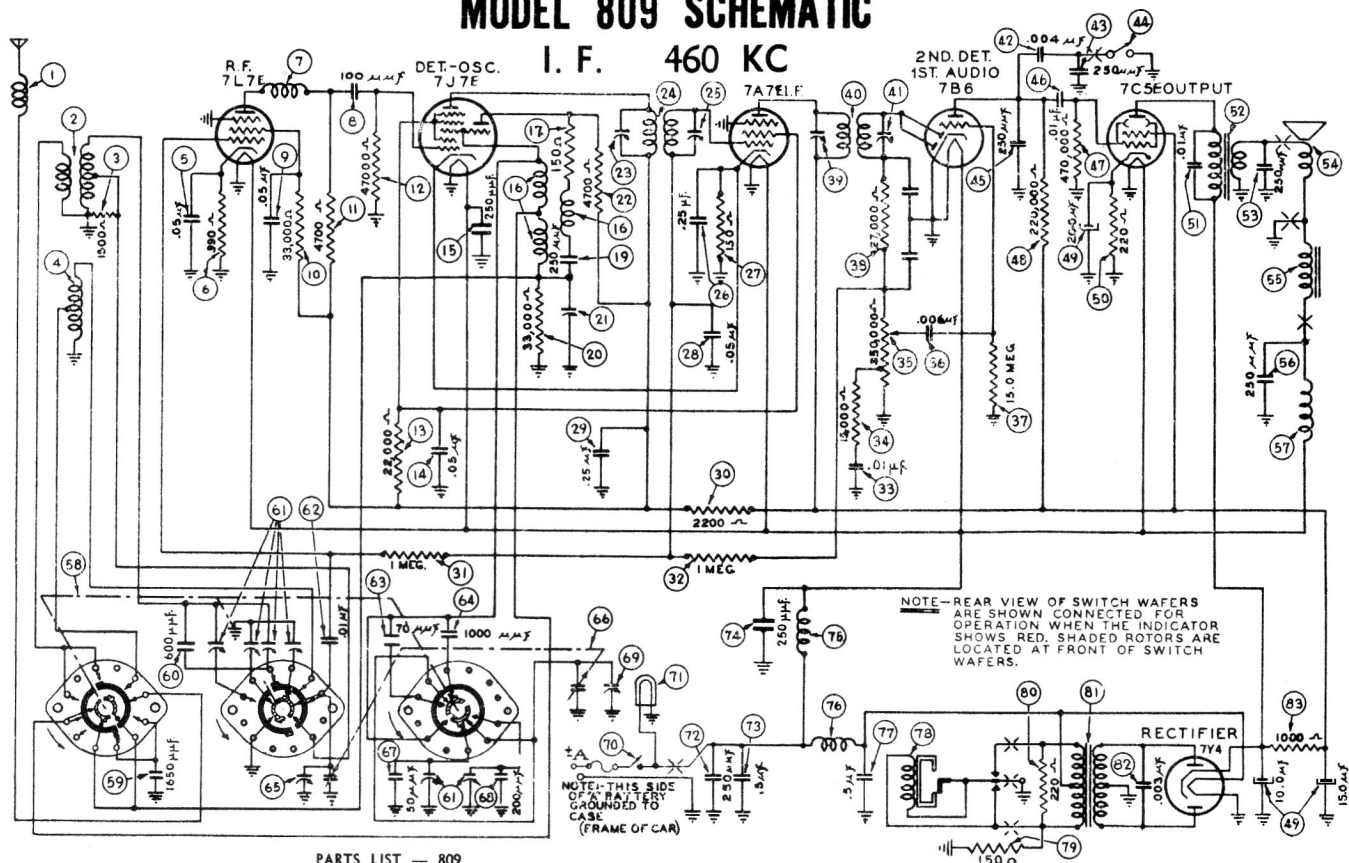




PHILCO AUTO RADIO

PHILCO MODEL 809

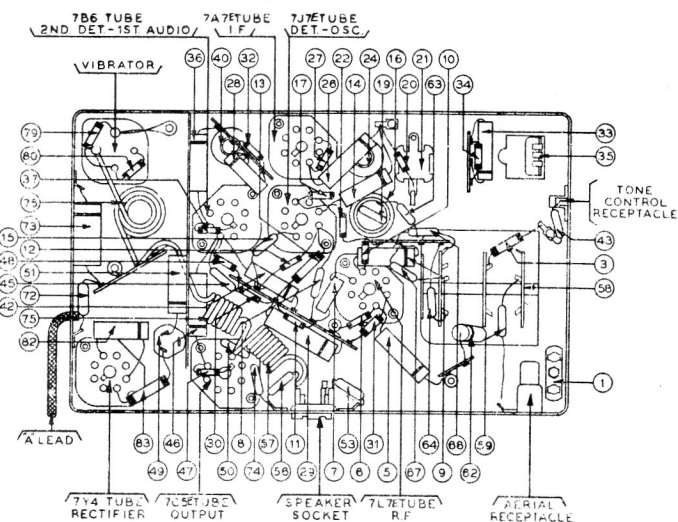
MODEL 809 SCHEMATIC



PARTS LIST — 809

No.	Description	Part No.
1.	Antenna Choke	65-0340
2.	Short Wave Antenna Transformer	65-0341
3.	Resistor (1,500 ohms 1/2 watt)	33-215344
4.	Broadcast Antenna Transformer	65-0085
5.	Condenser (.05 mf. 200 v.)	61-0101
6.	Resistor (390 ohms 1/2 watt)	33-139336
7.	R.F. Choke	65-0337
8.	Condenser (100 mmf.)	61-0055
9.	Condenser (.05 mf. 200 v.)	61-0111
10.	Resistor (33,000 ohms 1/2 watt)	33-333344
11.	Resistor (4,700 ohms 1/2 watt)	33-247344
12.	Resistor (47,000 ohms 1/2 watt)	33-347344
13.	Resistor (22,000 ohms 1 watt)	33-322444
14.	Condenser (.05 mf. 200 v.)	61-0101
15.	Condenser (250 mmf.)	61-0033
16.	Oscillator Transformer	65-0344
17.	Resistor (150 ohms 1/2 watt)	33-115344
18.	Condenser (250 mmf.)	61-0033
19.	Resistor (33,000 ohms 1/2 watt)	33-333344
20.	Low frequency padder	63-0045
21.	Resistor (4,700 ohms 1/2 watt)	33-247344
22.	Padder (Primary 1st I.F. Trans.)	65-0338
23.	First I.F. Transformer	65-0338
24.	Padder (Secondary 1st I.F. Trans.)	65-0338
25.	Condenser (.25 mf. 100 v.)	61-0112
26.	Resistor (150 ohms 1/2 watt)	33-115344
27.	Condenser (250 mmf.)	61-0111
28.	Condenser (.25 mf. 400 v.)	61-0125
29.	Resistor (220 ohms 1 watt)	33-222444
30.	Resistor (1 meg. 1/2 watt)	33-510344
31.	Resistor (1 meg. 1/2 watt)	33-510344
32.	Condenser (.01 mf. 200 v.)	61-0114
33.	Resistor (115,000 ohms 1/2 watt)	33-315344
34.	Volume Control (350,000 ohms)	67-0032-2
35.	Condenser (.008 mf. 200 v.)	61-0103
36.	Resistor (15 meg. 1/2 watt)	33-615344
37.	Resistor (27,000 ohms 1/2 watt)	33-327344
38.	Padder (Primary 2nd I.F. Trans.)	65-0320
39.	Second I.F. Transformer	65-0320

No.	Description	Part No.
41.	Padder (Secondary 2nd I.F. Trans.)	65-0320
42.	Condenser (.004 mf. 1000 volt)	61-0129
43.	Condenser (250 mmf.)	61-0033
44.	Tone Control Switch	65-0111
45.	Condenser (250 mmf.)	61-0033
46.	Condenser (.01 mf. 400 volt)	61-0100
47.	Resistor (470,000 ohms 1/2 watt)	33-447344
48.	Resistor (220,000 ohms 1/2 watt)	33-422344
49.	Filter Condenser (20 mf. 25 v.; 15 mf. 350 v.)	61-0089
50.	Resistor (220 ohms 1 watt)	33-122436
51.	Condenser (.01 mf. 1,000 volt)	61-0124
52.	Output Transformer	65-0317
53.	Condenser (250 mmf.)	61-0033
54.	Replacement Cone (For 73-0045-2 Speaker)	91-0086
55.	Field Coil (For 73-0045-3 Speaker)	91-0126
56.	Condenser (250 mmf.)	61-0033
57.	Choke	32-1644
58.	Wafer Switch	77-0567
59.	Condenser (1650 mmf.)	58-777
60.	Condenser (600 mmf.)	60-160314
61.	Padder Assembly	77-0560
62.	Condenser (.01 mf. 200 volt)	61-0110
63.	Silver Mica Condenser (70 mmf.)	61-0146
64.	Silver Mica Condenser (1,000 mmf.)	61-0079
65.	Antenna Padder (on Tuning Cond.)	63-0050
66.	Tuning Condenser	63-0050
67.	Silver Mica Condenser (50 mmf.)	61-0140
68.	Silver Mica Condenser (200 mmf.)	61-0141
69.	Oscillator Padder (on Tuning Cond.)	85-0112
70.	On-Off Switch	34-2039
71.	Pilot Lamp	61-0033
72.	Condenser (250 mmf.)	61-0033
73.	Condenser (.5 mf. 100 volt)	61-0106
74.	Condenser (250 mmf.)	61-0033
75.	"A" Choke	32-1604
76.	Vibrator Choke	65-0075
77.	Condenser (.5 mf. 100 volt)	61-0106
78.	Vibrator	83-0025
79.	Resistor (150 ohms 1/2 watt)	33-115336
80.	Resistor (220 ohms 1/2 watt)	33-122344
81.	Power Transformer	65-0318
82.	Condenser (.003 mf. 1,500 volt)	61-0115
83.	Resistor (1000 ohms 1 watt)	33-210444



No.	Description	Part No.
1.	Housing	77-053FC45
2.	Speaker Socket	55-0433
3.	Lokalt Socket	55-0575
4.	Vibrator Socket	27-6044
5.	Tube Side Cover	318-2034
6.	Wiring Side Cover	57-1345FC45
7.	Control Unit	85-0121
8.	Drive Cord	55-0935
9.	Tuning and Volume Cont. Knobs	55-0936
10.	Volume Control Shaft	57-1384
11.	Tuning Control Shaft	57-1385
12.	Dial and Cover	318-2038
13.	Push Button Shaft	57-1386
14.	Pointer	57-1403-FA3

No.	Description	Part No.
1.	Station Indicator	77-0572
2.	Hook Bolt (Radio Mounting)	57-1340FA3
3.	Nut (Radio Mounting)	W98FA3
4.	Control Mounting Bracket	57-1300FC46
5.	Control Mounting Bracket	57-1301FC45
6.	Cable Clamp	57-1429
7.	Upper Aerial Stanchion Kit	45-1438
8.	Lower Aerial Stanchion Kit	45-1437
9.	Aerial Rod (94 inch)	57-1247
10.	Aerial Lead	95-0149
11.	All Aerial Parts Used in Part No. 91-0144 Cowl Area	

MODEL 809—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 set tester or audio output meter, 45-2610 Padding screw driver.

GENERAL—VACUUM TUBE VOLTMETER. The model 028 Vacuum tube voltmeter is an extremely sensitive and accurate test instrument and is recommended for use when aligning and adjusting auto radios. Connect the negative (—) terminal of the Vacuum Tube Voltmeter to the high side (ungrounded side) of the volume control. Connect the positive (+) terminal to the radio housing.

AUDIO OUTPUT METER. If an audio output meter is used, connect the leads across the voice coil of the speaker. Use the 0-30 volt scale.

With the Radio and signal generator set up for operation at the prescribed frequency, turn the Radio volume control on full

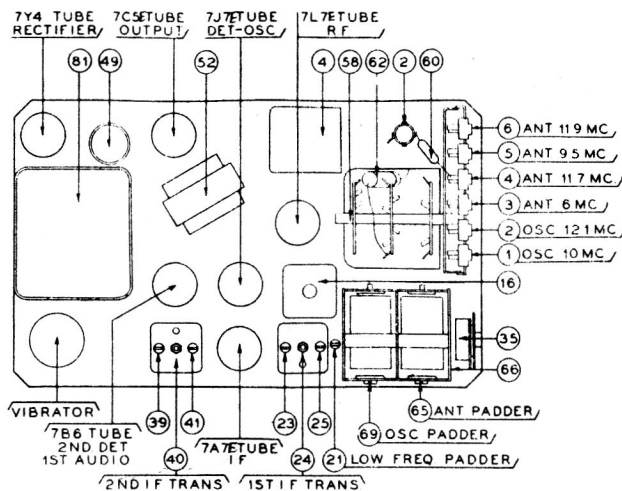


FIGURE 3

and set the signal generator attenuator so that a half scale reading is obtained on the 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.

OPERATION	SIGNAL GENERATOR		DUMMY CAPACITY	SPECIAL INSTRUCTIONS	ADJUST PADDER
	FREQUENCY	CONNECTION			
1	PUSH IN THE RIGHT HAND KNOB ON THE CONTROL UNTIL THE BLACK DOT APPEARS IN THE BAND INDICATOR WINDOW AND STATIONS CAN BE TUNED IN BY MANUAL TUNING.				
2	460 K.C.	To Aerial Receptacle on Radio	.1 Mfd.	Note 2	(41) (39) (25) (23) (41) (39) (25) (23)
3	1580 K.C.	To Aerial Receptacle on Radio	See Note 1	Note 2	(69)
4	1400 K.C.	To Aerial Receptacle on Radio	See Note 1	Set Tuning Condenser at 1400 K.C.	(65) Note 4
5	580 K.C.	To Aerial Receptacle on Radio	See Note 1	Set Tuning Condenser at 580 K.C.	(21) Note 3
6	1580 K.C.	To Aerial Receptacle on Radio	See Note 1	Note 2	(69) (65)
7	1400 K.C.	To Aerial Receptacle on Radio	See Note 1	Set Tuning Condenser at 1400 K.C.	Note 4
8	580 K.C.	To Aerial Receptacle on Radio	See Note 1	Set Tuning Condenser at 580 K.C.	(21) Note 3

INSTRUCTIONS FOR ADJUSTING SHORT WAVE PADDERS (FIGURE 3)

OPERATION	SIGNAL GENERATOR		DUMMY CAPACITY	SPECIAL INSTRUCTIONS	ADJUST PADDER
	FREQUENCY	CONNECTION			
	PUSH IN THE RIGHT HAND KNOB ON THE CONTROL UNTIL THE "RED" DOT APPEARS IN THE BAND INDICATOR WINDOW				
1	10 M.C.	To Aerial Receptacle on Radio	Note 1	Note 2	① OSC. 10 M.C.
2	9.5 M.C.	To Aerial Receptacle on Radio	Note 1	Rotate Tuning Condenser to 9.5 M.C. Signal	⑤ ANT. 9.5 M.C.
3	6 M.C.	To Aerial Receptacle on Radio	Note 1	Rotate Tuning Condenser to 6 M.C. Signal	③ ANT. 6 M.C.
	PUSH IN THE RIGHT HAND KNOB ON THE CONTROL UNTIL THE "WHITE" DOT APPEARS IN THE BAND INDICATOR WINDOW				
1	12.1 M.C.	To Aerial Receptacle on Radio	Note 1	Note 2	② OSC. 12.1 M.C.
2	11.9 M.C.	To Aerial Receptacle on Radio	Note 1	Rotate Tuning Condenser to 11.9 M.C. Signal	⑥ ANT. 11.9 M.C.
3	11.7 M.C.	To Aerial Receptacle on Radio	Note 1	Rotate Tuning Condenser to 11.7 M.C. Signal	4 ANT. 11.7 M.C.
4	OPERATIONS 2 AND 3 ARE IMPORTANT AND MUST BE REPEATED UNTIL MAXIMUM SIGNAL IS RECEIVED				

Make all adjustments for maximum reading on the output meter.

NOTE 1—Connect the aerial lead, Part No. 41-3191, to the aerial receptacle in the radio. Connect a 10 mmfd. Condenser in series between the signal generator and the aerial lead.

NOTE 2—Turn the condenser rotor plates completely out of mesh as far as they will go.

NOTE 3—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 readjust the padder for maximum output. Repeat this procedure until no further improvement is noticed.

NOTE 4—When the aerial stage adjustment is made with the Radio installed in the car, the Radio aerial lead must be connected to the car aerial in the usual manner. Connect the signal generator output lead to a wire placed near the car aerial but not connected to it.

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