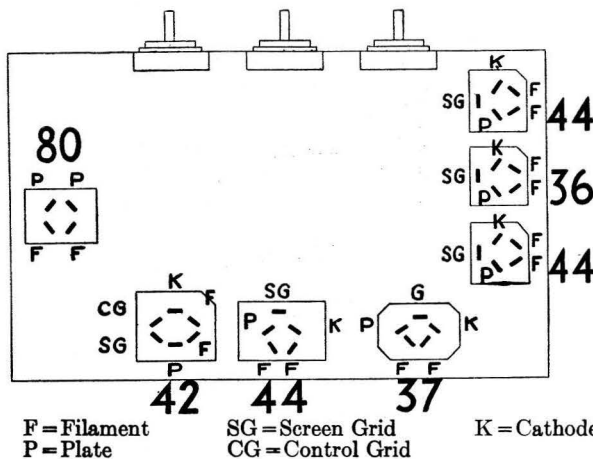


Service Bulletin—No. 128

Model 71 Series

The Philco Radio of the 71 series is a seven tube superheterodyne, employing the high efficiency 6.3 volt filament tubes, automatic volume control and pentode output. The chassis is made in two different types, one known as the 121 code, employing a single dynamic speaker, and the other known as the 221 code, employing twin dynamic speakers. These code numbers appear on the radio chassis as a part of the model number. Chassis of one code are not interchangeable with those of another. The intermediate frequency used in adjusting the superheterodyne circuit of the 71 series is 260 kilocycles. The power consumption of the various models is as follows:

Chassis	Volts	Cycles	Watts
71 -121	115	50-60	63
71 -221	115	50-60	80
71A-121	115	25-40	65
71A-221	115	25-40	85
71E-121	230	50-60	63
71E-221	230	50-60	80



F = Filament SG = Screen Grid K = Cathode
P = Plate CG = Control Grid

Fig. 1—Tube Sockets, Under Side of Chassis

CAUTION: Never connect the chassis to the power supply unless the speakers are connected and all tubes are in place.

Table 1—Tube Socket Data*—A.C. Line Voltage 115 Volts

Type	Tube	Circuit	Filament Volts—F to F	Plate Volts—P to K	Screen Grid Volts—SG to K	Control Grid Volts—CG to K	Cathode Volts—K to F
44		R. F.	6.3	245	90	4.	20
36		Det. Osc.	6.3	235	90	2.3	20
44		I. F.	6.3	255	90	.2	20
37		Det. Rect.	6.3	0	..	..	15
44		Audio	6.3	50	50	.3	20
42		Output	6.3	250	260	.2	15
80		Rectifier	5.0	365/plate	..	..	..

*All of the above readings were taken from the under side of the chassis, using test prods and leads with a suitable A.C. voltmeter for filament voltages and a high resistance multi-range D.C. voltmeter for all other readings. Volume control at maximum and station selector turned to low frequency end. Readings taken with a radio set tester and plug-in adapter will not be satisfactory.

Table 2—Power Transformer Data

Terminals	A.C. Volts	Circuit	Color
1-2	105 to 125	Primary	White
3-5	6.3	Filament	Black
6-7	5.0	Filament of 80	Light Blue
8-10	685	Plates of 80	Yellow
4	.....	Center Tap of 3-5	Black Yellow Tracer
9	.....	Center Tap of 8-10	Yellow Green Tracer

Table 3—Resistor Data

No. on Figs. 4 & 5	Power (Watts)	Resistance (Ohms)	Color		
			Body	Tip	Dot
(52)	..	185 & 245	Round	Tubular	
(24)	.5	1,000	Brown	Black	Red
(57)(58)	.5	5,000	Green	Black	Red
(48)	(Twin Speaker)	5,620	Round	Tubular	
(1)(54)	.5	10,000	Brown	Black	Orange
(59)	3.	13,000	Brown	Orange	Orange
(15)	.5	15,000	Brown	Green	Orange
(35)	.5	25,000	Red	Green	Orange
(34)	.5	70,000	Violet	Black	Orange
(27)	.5	99,000	White	White	Orange
(28)	.5	240,000	Red	Yellow	Yellow
(37)	.5	490,000	Yellow	White	Yellow
(17)(25)	.5	1,000,000	Brown	Black	Green

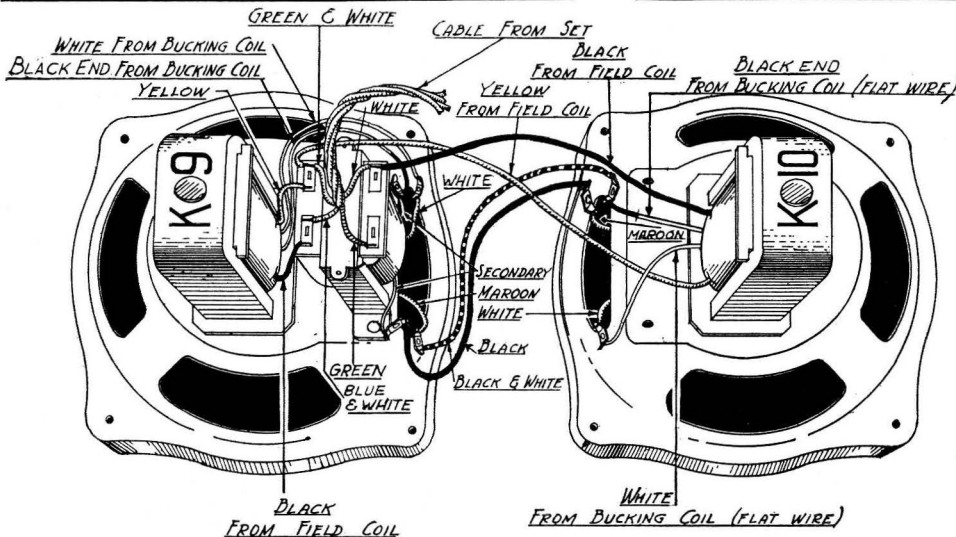


Fig. 2—Twin Speaker Connections—221 Code

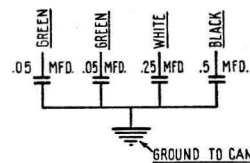


Fig. 3—Internal Connections Filter Condenser

Philco Model 71 Series

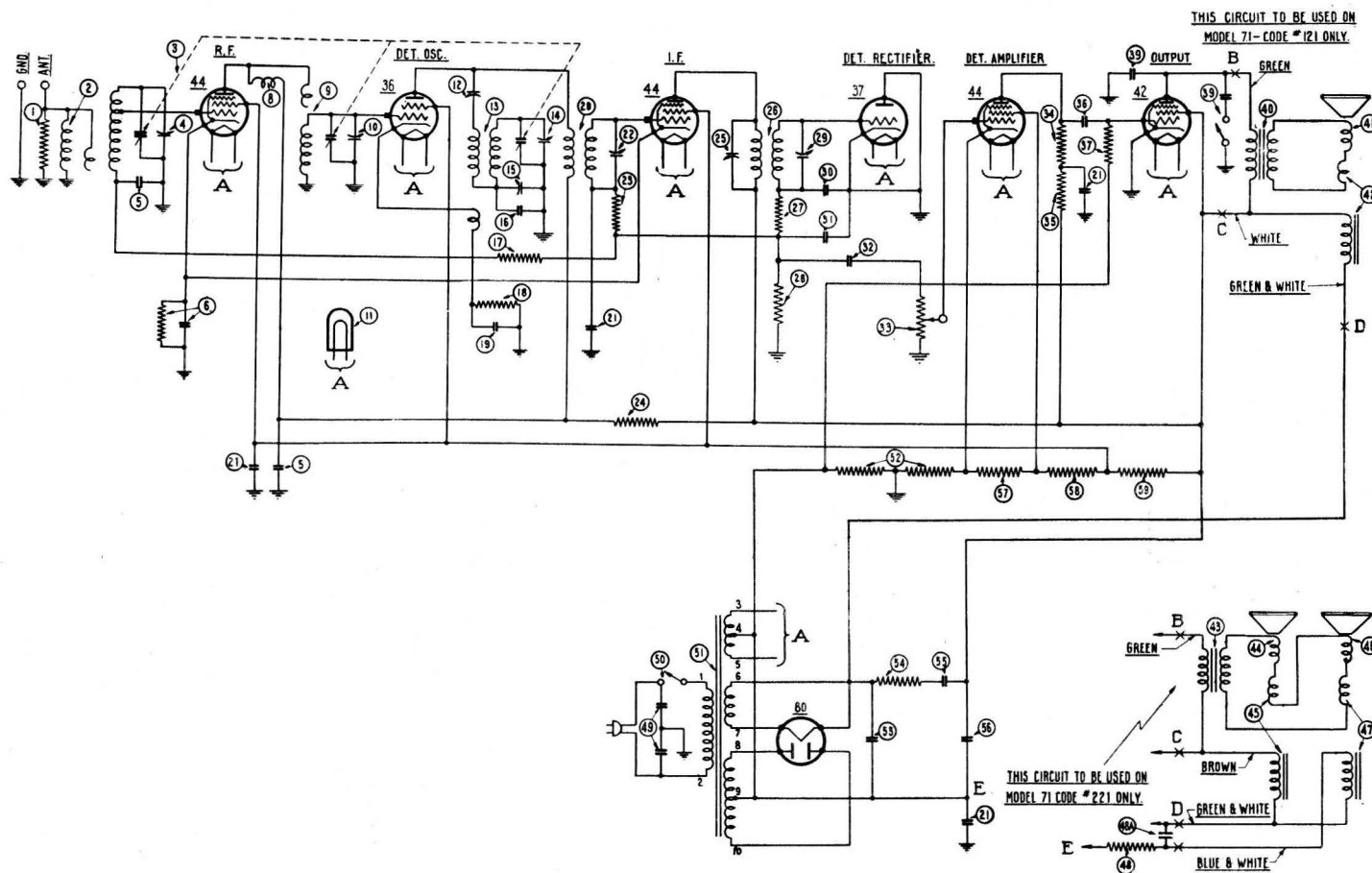


Fig. 4—Schematic Wiring Diagram

Philco Model 71 Series

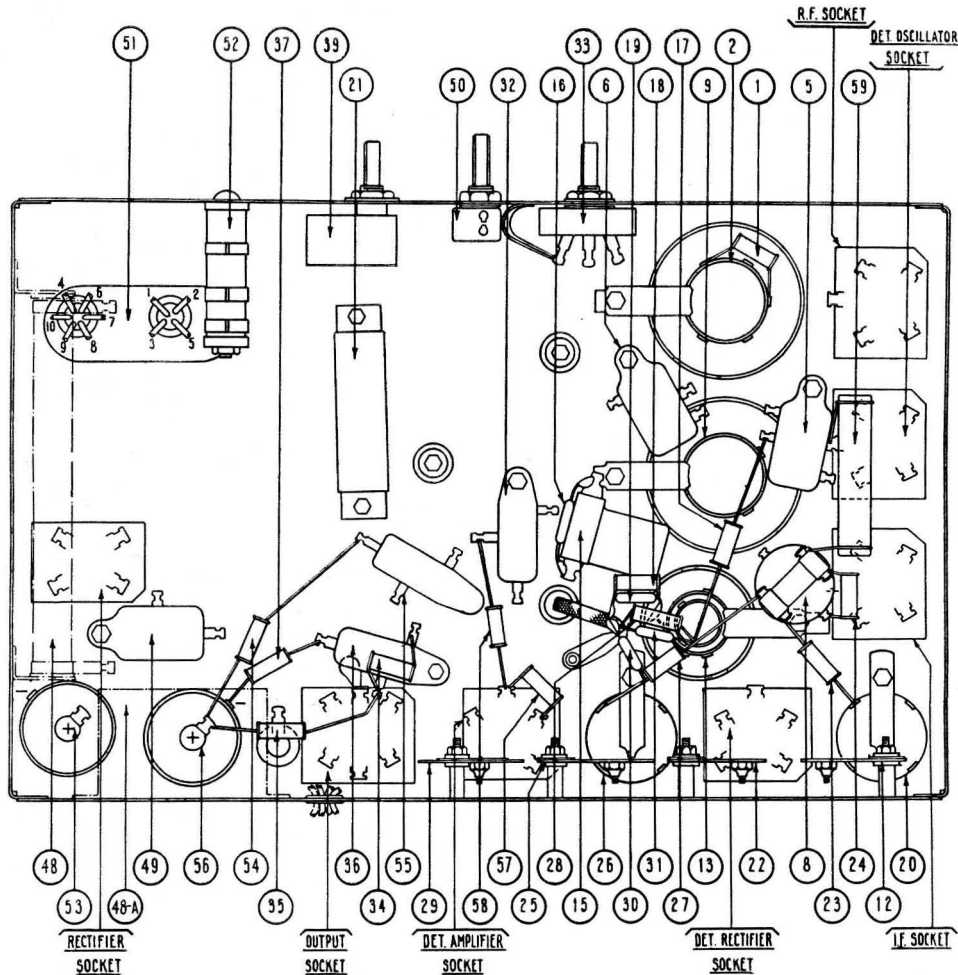


Fig. 5—Parts Diagram

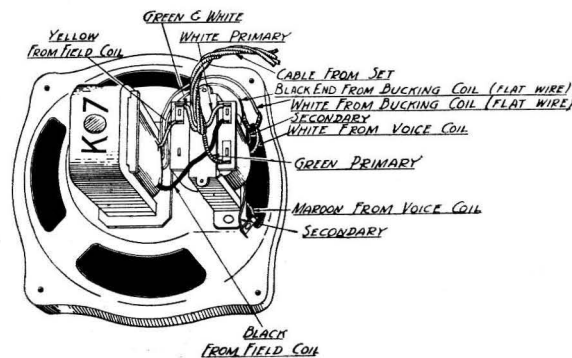


Fig. 6—Speaker Connections—121 Code

Adjustment of Model 71 Series

These receivers are accurately adjusted at the factory prior to shipment. Under normal conditions it will never be necessary to re-adjust the compensating condensers. If for any reason such adjustment should be required, it should not be attempted without first receiving the proper instruction and equipment from your distributor. The Philco Model 095 Oscillator has been especially designed for use in this work and will be found the most inexpensive and most reliable for the purpose.

Replacement Parts for Model 71 Series

① Resistor (10,000 ohms)	4412	④⑥ Voice coil and cone assembly.	02823
② R. F. Transformer	04339	④⑦ Speaker field assembled with pot	
③ Tuning Condenser (50-60 cycles)	04733	—(K-9) Twin speaker models	02762
④ Tuning Condenser (25-40 cycles)	04734	④⑧ Resistor (5620 ohms) wire wound	
⑤ Condenser (.05 Mfd. double)	3615-AF	—Twin speaker models	6451
⑥ Condenser (.09 Mfd. and 200		④⑧A Condenser (.5 Mfd.) Twin	
ohm resistor)	4989-L	Speaker Models	05150
⑧ R. F. Choke	04198	④⑨ Condenser (.015 Mfd. Double)	3793-H
⑨ Detector Transformer	04185	④⑩ On-off Switch	6498
⑩ Compensating Condenser—De-		④⑪ Power Transformer—50-60 cy-	
detector—Part of tuning con-		cles—single speaker	6454
denser assembly		Power Transformer—25-40 cy-	
⑪ Pilot Light	6608	cles—single speaker	6455
⑫ Compensating Condenser — 1st		Power Transformer—50-60 cy-	
I. F. primary	04000-M	cles—230 volts—single speaker	6456
⑬ Oscillator Coil	04186	Power Transformer—50-60 cy-	
⑭ Compensating Condenser—High		cles—twin speaker	6457
frequency—Part of tuning		Power Transformer—25-40 cy-	
condenser assembly		cles—twin speaker	6458
⑮ Compensating condenser—Low		Power Transformer—50-60 cy-	
frequency	04000-F	cles—230 volts—twin speaker	6459
⑯ Condenser (410 Mmf.) (Yellow		④⑫ Resistor—wire wound (245 ohms	
and Orange)	5120	and 185 ohms)	6452
⑰ Resistor (1,000,000 ohms)	4409	④⑬ Electrolytic Condenser (6 Mfd.)	
⑱ Resistor (15,000 ohms)	6208	(50-60 cycles) single speaker	6453
⑲ Condenser (700 Mmf.) (White		8 Mfd. (25-40 Cycles) Twin	
and Yellow)	4520	speaker	6707
⑳ First I. F. Transformer	04190	8 Mfd. Single speaker (25-40	
㉑ Filter Condenser Bank (2 —.05,		cycles)	6707
.25, .5 Mfd.)	05324	10 Mfd. twin speaker (25-40	
㉒ Compensating Condenser — 1st		cycles)	6893
I. F. secondary	04000-M	④⑭ Resistor (10,000 ohms)	4412
㉓ Resistor (1,000,000 ohms)	4409	④⑮ Condenser (.05 Mfd.)	3615-G
㉔ Resistor (1,000 ohms)	5837	④⑯ Electrolytic Condenser (6 Mfd.)	
㉕ Compensating Condenser—2nd		(50-60 cycles) single speaker	4916
I. F. primary	04000-M	8 Mfd. (50-60 cycles) Twin	
㉖ Second I. F. Transformer	04319	speaker	6706
㉗ Resistor (99,000 ohms)	4411	8 Mfd. Single speaker (25-40	
㉘ Resistor (240,000 ohms)	4410	cycles)	6706
㉙ Compensating Condenser—2nd		10 Mfd. Twin speaker (25-40	
I. F. secondary	04000-M	cycles)	5142
⑤⑩ Condenser (110 Mmf.) (Blue and		④⑰ Resistor (5,000 ohms)	5310
Golden Yellow)	4519	④⑱ Resistor (5,000 ohms)	5310
⑤⑪ Condenser (110 Mmf.) (Blue and		④⑲ Resistor (13,000 ohms)	6450
Golden Yellow)	4519	Tube Shield (small)	5387
⑤⑫ Condenser (.01 Mfd.)	3903-J	Tube Shield (large)	04735
⑤⑬ Volume Control	6499	Knob (large)	03063
⑤⑭ Resistor (70,000 ohms)	5385	Knob (medium)	03064
⑤⑮ Resistor (25,000 ohms)	4516	Knob (small)	03437
⑤⑯ Condenser (.01 Mfd.)	3903-N	Knob Spring (large)	5262
⑤⑰ Resistor (490,000 ohms)	4517	Knob Spring (small)	4147
⑤⑱ Tone Control	05153	Grid Clip	4897
④① Output Transformer — single		Four Prong Socket Assembly	5026
speaker models	2580	Five Prong Socket Assembly	4956
④② Voice Coil and Cone assembly.	02823	Six Prong Socket Assembly	6417
④③ Speaker Field and Bucking Coil		Dial Complete	04832
assembled with pot—(K-7)		Bezel	6435
single speaker models	02761	Chassis Mounting Screw	W-468
④④ Output Transformer — Twin		Mounting Washer	W-315
speaker models	2564	Rubber Washer	5189
④⑤ Voice Coil and cone assembly.	02823	Mounting Clamp	6440
④⑥ Speaker Field and Bucking Coil		Cone Retaining Ring	2600
assembled with pot—(K-10)		Tuning Condenser Drive	
Twin speaker models	02767	Cord	04834
		Spring	6508

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