

Philco Radio & Television Corp.

Model: 71 Series

Chassis:

Year: Pre June 1933

Power:

Circuit:

IF:

Tubes:

Bands:

Resources

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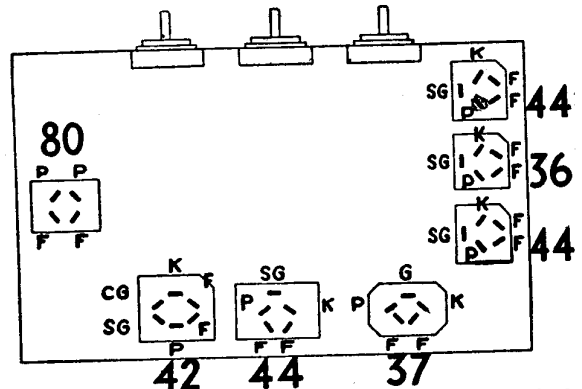
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PHILCO RADIO & TELEVISION CORP.

MODEL 71 Series
Voltage, Data

The Philco Radio of the 71 series is a seven tube super-heterodyne, 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 P = Plate SG = Screen Grid CG = Control Grid K = Cathode
Fig. 1—Tube Sockets

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	..	.3	15
44		Audio	6.3	50	..	.2	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.

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
(2)	..	185 & 245	Round	Tubular	
(2)	.5	1,000	Brown	Black	Red
(27)(28)	.5	5,000	Green	Black	Red
(4)	(Twin Speaker)	5,620	Round	Tubular	
(1)(6)	.5	10,000	Brown	Black	Orange
(9)	3.	13,000	Brown	Orange	Orange
(15)	.5	15,000	Brown	Green	Orange
(16)	.5	25,000	Red	Green	Orange
(24)	.5	(Twin Speaker) 51,000	Green	Brown	Orange
(25)	.5	70,000	Violet	Black	Orange
(27)	.5	99,000	White	White	Orange
(27)	.5	490,000	Yellow	White	Yellow
(17)(20)(23)	.5	1,000,000	Brown	Black	Green

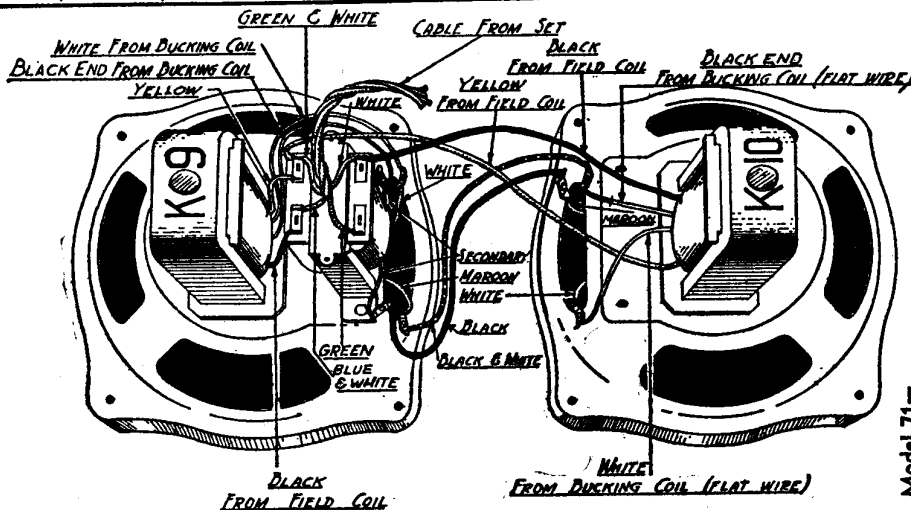
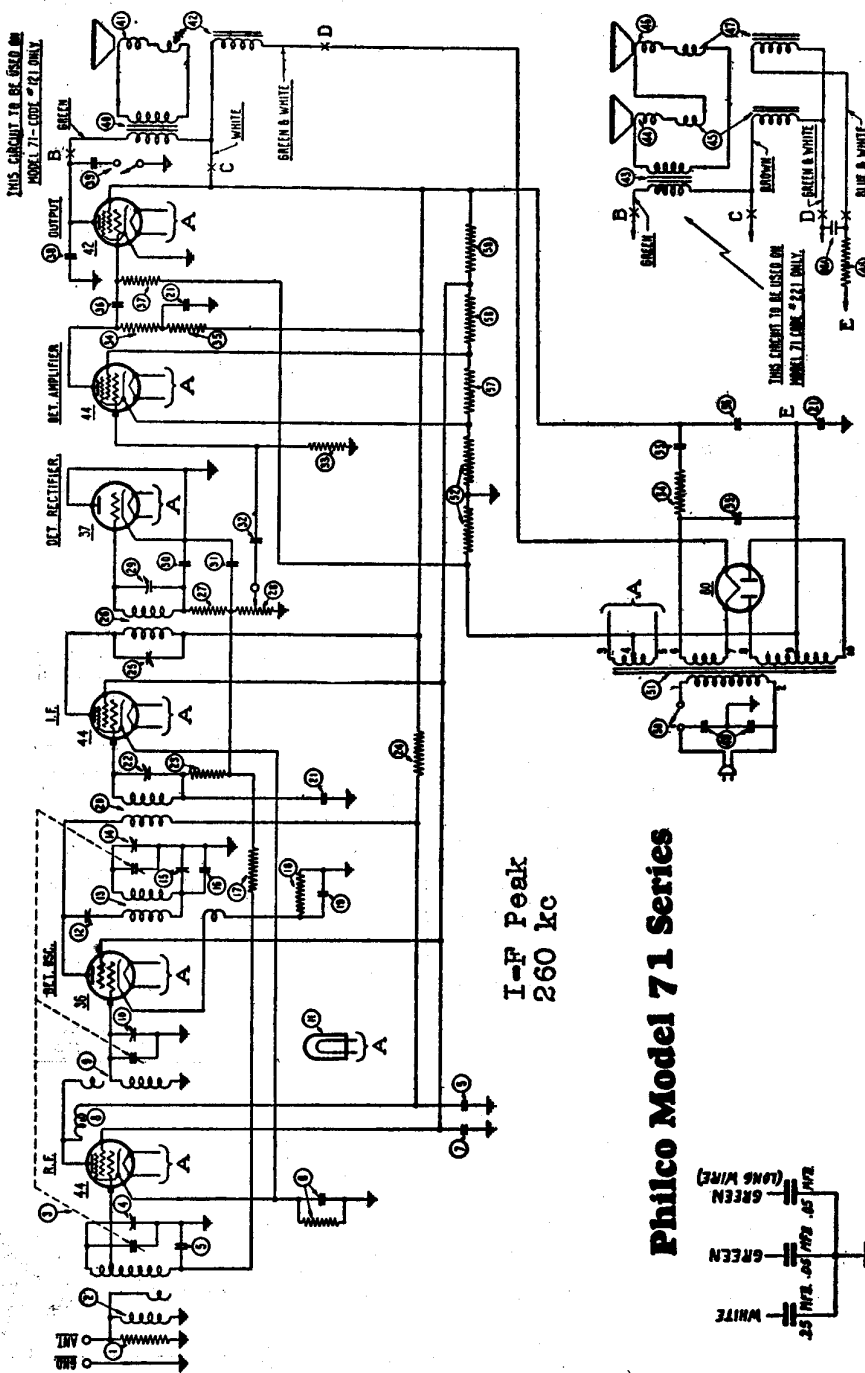


Fig. 2—Twin Speaker Connections—221 Code

Model 71—Key No. in Wiring Dia. (2)	Resistance in Ohms		Resistance in Ohms
	Primary	Secondary	
(6)	4.0
(15)	3.8
(28)	15.7
(49)	55
(47)	67
(45)	13.5 Ohms
(45)	13.5 Ohms
(47)	46.5 Ohms
(51)	18.80 Ohms
(51)	185.80 Ohms

MODEL 71 Series
Schematic

PHILCO RADIO & TELEVISION CORP.



I-F Peak
260 kc

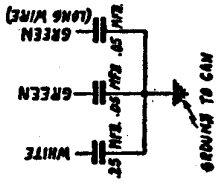
Philco Model 71 Series

Fig. 4—Schematic Wiring Diagram

Below run No. 4, unsolder top (ungrounded) connection of volume control (28) and substitute in the circuit a 240,000 ohm resistor, part 4410, one end grounded. Disconnect the condenser (2) .01 Mfd., part 3903-J, from the center tap of the volume control and from its common connection with the control grid of the detector amplifier tube and the ungrounded end of (3) resistor 1,000,000 ohms 4409. This resistor is no longer used, and can be removed. Solder one side of the condenser (2) to top of volume control and other side of condenser to ungrounded end of the volume control tube. Solder the control grid lead of the detector amplifier tube to the variable arm connection of the volume control tube.

- (2) A Condenser .25 Mfd. part 04997, change to .5 Mfd. part 05150.
- (3) Resistor 25,000 ohms 4516 used on both 121 and 1221 models.
- Dial complete, part 03031, change to part 04832.
- Add tuning condenser drive cord, part 04834 and spring 6508.

Fig. 3—Internal Connections Filter Condenser



For 25 Cycle

Model 71-121

(6 Mfd.) to 8 Mfd. 6707. Change (2) electrolytic condenser (6 Mfd.) to 8 Mfd. 6706.

Model 71-221

Use (4) power transformer 6455. Change (2) electrolytic condenser (8 Mfd.) 6707 to 10 Mfd., 6893. Change (3) electrolytic condenser (8 Mfd.) 6706 to 10 Mfd., 5142.

For 25 Cycle

Model 71-221