

Philco Radio & Television Corp.

Model: 65

Chassis:

Year: Pre October 1937

Power:

Circuit:

IF:

Tubes:

Bands:

Resources

[Riders Volume 8 - CHANGES 8-2](#)

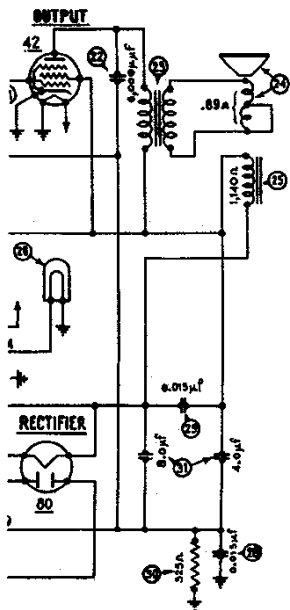
[Radio College Of Canada - PHILCO 4](#)

[Riders Volume 1 - PHILCO 1-16](#)

[Riders Volume 2 - PHILCO 2-18](#)

Philco 59

The schematic, furnished by the manufacturer and shown on page 5-30 of *Rider's Volume V*, has an error in the field coil circuit, Part No. 25. Compare



Partial schematic of Philco 59, showing correct wiring of the field coil, Part No. 25.

the partial schematic shown here with the one mentioned above and you will see the difference in the connections to the field coil.

Philco 37-33

Starting with Run No. 3, the filament wiring of the 1D5G i-f. tube was reversed, thus improving operation of the set. In Fig. 1 on page 7-16 of *Rider's Volume VII*, the left-hand filament terminal of this tube is marked "2 volts." This terminal is now grounded to the chassis.

Referring to Fig. 3 on the same page, resistor No. 8 has been removed from the r-f. terminal panel and connected directly from the oscillator grid contact on the 1D7G socket to ground. This change improved the sensitivity in the center of the broadcast band.

Philco 630

The schematic of this receiver shown on page 6-31 of *Rider's Volume VI* indicates a 1d-coil resistance of 1140 ohms. This is incorrect and should be 640 ohms. Please make this change in your Volume VI.

Philco 65

The schematic of this receiver was published on the following pages of *Rider's Volume I*: page 1-16 of the revised edition and page *459 of the early edition; and on page 1638 of the *Rider-Combination Manual*. At the time of publication the values of the parts were unobtainable and these are now given in the list below. The first column is the identifying number used on the schematic; the second column is the part number; and the third column is the value.

Schematic Number	Part Number	Value
1	3524	10,000 ohms
5	3292A	.1 mf. — 250 ohms
6	3584A	.05 mf. — 250 ohms
13	3583	.5 mf.
14	3525	32,000 ohms
21	3422	200 "
22	3526	5,000 "
23	3518	4,000 "
24	3512	2700 ohms (700,2000)
25	3528	2,000 oh.ms
26	3628	6 "
27	3292B	.05 mf. 00.250 ohms
29	2850	3200 "

Philco 645

The schematic of this set will be found on page 7-109 of *Rider's Volume VII*. Several changes have been made, as follows:

Starting with Run No. 3, the 51,000-ohm resistor, No. 16, has been removed. A 32,000-ohm resistor, ½ watt, Part No. 33-332334, has been connected from the oscillator grid of the 6A7 to the suppressor grid of the 78 r-f. tube. The 0.05-mf. condenser, No. 61, has been removed. The 25,000-ohm resistor, No. 60, has been replaced with one having a value of 240,000 ohms, ¼ watt, Part No. 33-424143.

A 0.06-mf. condenser, Part No. 30-4114, has been connected from the —C end of the B.C. resistor, No. 64, to the junction of the 1-megohm and 490,000-ohm resistors, Nos. 66 and 67.

The filament voltage of the 80 rectifier is shown as 6.3 volts in Fig. 3 on page 7-108 of *Rider's Volume VII*. This should be 5.0 volts.

Beginning with Run No. 4, the green and yellow leads of the a-f. input transformer, No. 52, were reversed to reduce hum.

Philco 651

The leads of the i-f. transformer should be separated as widely as possible from each other, in order to reduce the possibilities of i-f. oscillation.

This means, too, that the leads from one of these transformers should be as far as possible from the leads of the other.

The -B lead from the suppressor plate terminal of the 78 r-f. tube to the wiring panel mounted on the 0.05-mf. condenser, No. 72, should be run close to the baseboard and away from the wave trap coil. This should eliminate motor-boating at 540 kc.

For schematic, see page 7-111, *Rider's Volume VII*.

Philco 655

In the paragraph titled "Police" of the alignment instructions on page 7-116 of *Rider's Volume VII*, it reads that the detector trimmer No. 11 should be adjusted for maximum output. This should be trimmer No. 12 to conform with the layout of Fig. 4 at the top of the page.

In Fig. 1, the designations of the r-f. transformers on page 7-114 should be changed as follows: 15-A, oscillator, to 16; 9, antenna, to 3; and 14, detector, to 10. To correct the lead designations of the oscillator transformer, No. 16 on the schematic, change No. 3 to 7; 7 to 5; 5 to 4; and 4 to 3.

Another error in the manufacturer's data was in the tube layout shown on the top of page 7-115 of *Rider's Volume VII*. The second detector is a 75, not an 85. The designation on the schematic on this same page is correct. Please make these changes in your Volume VII.

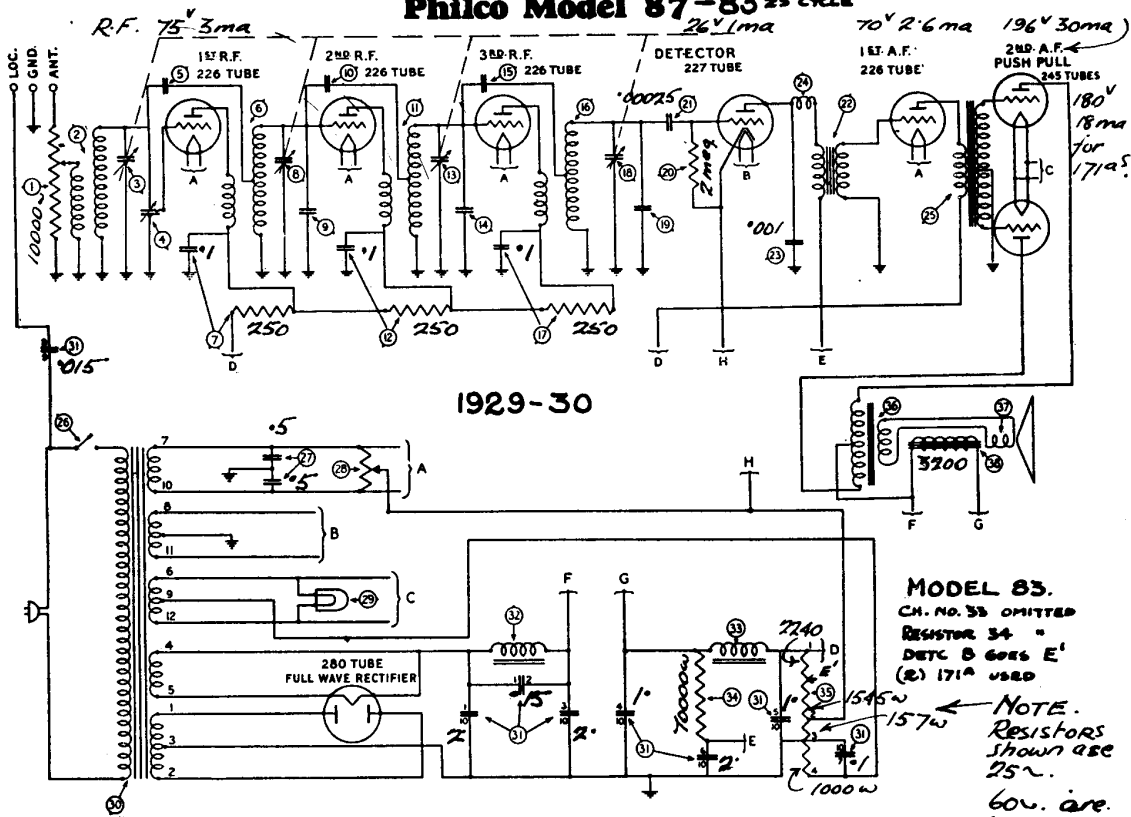
Beginning with Run No. 2, the 51,000-ohm resistor, No. 14, was removed and a 32,000-ohm resistor, Part No. 33-332334, ½ watt, was connected from the oscillator grid of the 6A7 to the suppressor of the 78 r-f. tube.

Philco I-F. Peaks

In certain localities it has been found advisable to align certain two- and three-gang Philco sets at some other i-f. peak than the one for which they were designed, i.e., 470 kc. This change has been found necessary because of some interference that is peculiar to these localities: Portland, Maine; Miami, Fla.; New Haven, Conn.; San Diego, Cal.; about one third of northern Long Island; Newark and southern New Jersey.

Therefore, if you are operating in any of these places and are bothered by code interference, align either of the two type sets mentioned above at 456 kc., 465 kc., or 480 kc. The i-f. peaks just mentioned are to be used depending on the location and type of interference.

Philco Model 87-83 25 CYCLE



Models
83-87
1929-30

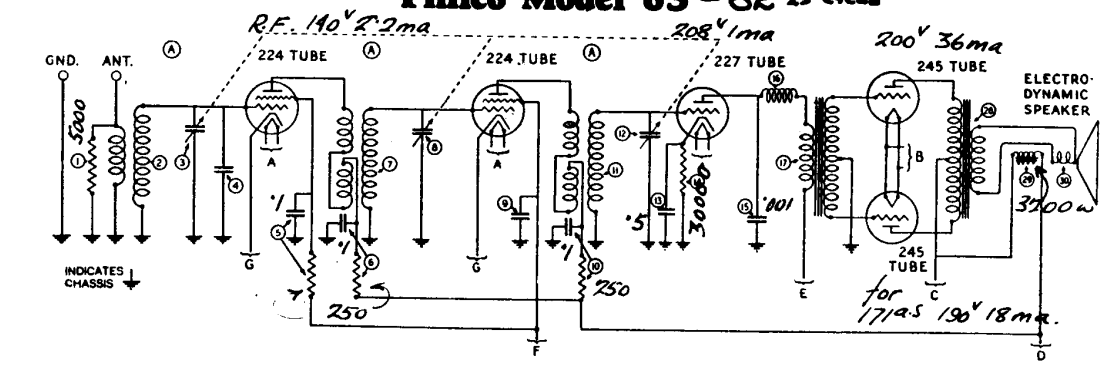
Low Boy
High Boy
De Luxe
High Boy

1929-30

MODEL 83.
CH. NO. 33 OMITTED
RESISTOR 34 =
DETC. B GOES E'
(2) 171A USED

NOTE.
RESISTORS
SHOWN ARE
25~.
60w. are.
650-157
-3785w.

Philco Model 65-62 25 CYCLE

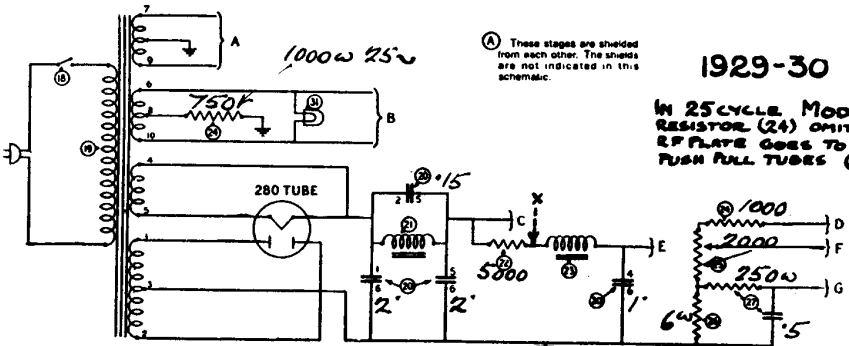


Models
62-65
1929-30

Table
Low Boy
High Boy
De Luxe
High Boy

1929-30

IN 25 CYCLE, MODEL 62
RESISTOR (24) OMITTED
RF PLATE GOES TO POINT X
PUSH PULL TUBES (2) 171A

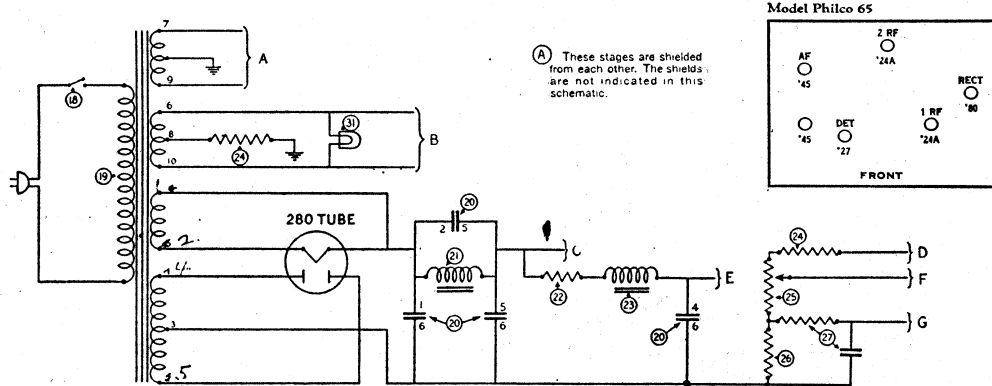
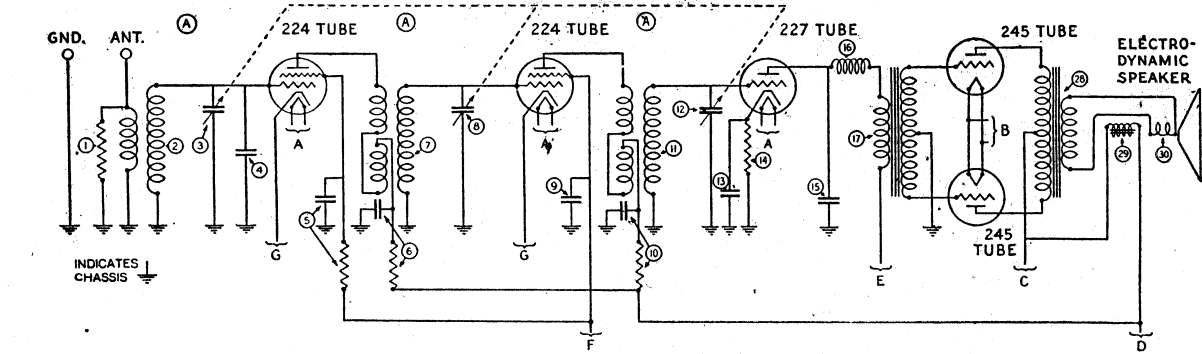


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MODEL 65

PHILCO RADIO & TELEVISION CORP.



(A) These stages are shielded from each other. The shields are not indicated in this schematic.

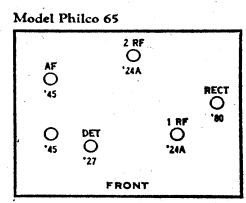


Table 8
Tube Socket Readings

TYPE TUBE	"A" Volts	"B" Volts	"B" Volts (SCREEN GRID)	"C" Volts (CONTROL GRID)	MA PLATE	CATHODE
224	2.5	150	*.2 to 75	1.5	1.5	+1.5
227	2.5	250	...	28	†.8 to 3.5	+28
245	2.5	250	...	50	32
280	5.0	350-V. A.C.	55

*The voltage varies from 75 volts with the volume control turned for full volume to .2 volts with the control turned for minimum volume.
 †When there is no signal being reproduced the detector plate current will be about .8 MA. Strong signals will cause a rise in current to 3.5 MA.

Table 9
Power Transformer Voltage [AC]

TERMINALS	A.C. VOLTS	SECONDARY
1-2	700	A.C. Supply to Plates of Rectifier Tube
3		Center Tap of Rectifier Plate Secondary
4-5	5.0	Rectifier Filament
6-10	2.5	Filament 245 Tubes
8		Center Tap of 245 Tube Secondary
7-9	2.5	Heater 224 and 227 Tubes

Green lead - Center Tap for Secondary 7-9
 Current Consumption - 125 V. A.C. 95 Watts

Table 10
D. C. Voltage Across Filter Condenser Block

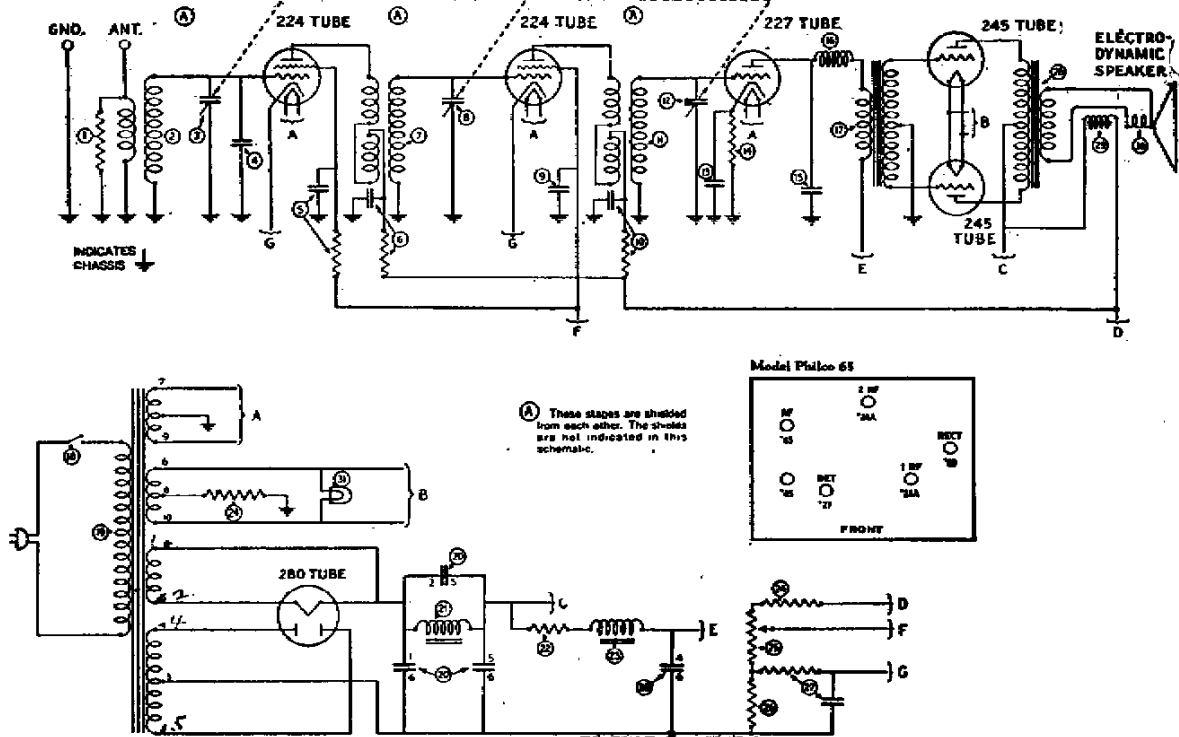
TERMINALS	D.C. VOLTS	CAPACITY	CIRCUIT
1-6	325	2.0 Mfd.	First Filter Section, Ground to 280 Filament
2-5	20	.15 Mfd.	Parallel with First Choke Coil
3			Blank Terminal for Detector Plate Resistor
4-6	280	1.0 Mfd.	Last Filter Section, Gnd. to Det. Plate Lead
5-6	305	2.0 Mfd.	2d Filter Section, Gnd. to End of First Choke

Table 11
Voltage Across Resistors

RESISTOR NUMBER	RESISTOR TERMINAL	VOLTAGE DROP	CIRCUIT
②	1-2	45-50	Grid Bias for the 245 Tubes
	3-4	75-80	Reduces B Voltage for the Screen Grid
③	1-2	4-10	Detector Plate Voltage
④	1-2	28	Detector Grid Bias
Field Coil of Speaker		135-140	Supplies Field Energy of Dynamic Speaker

MODEL 65

PHILCO RADIO & TELEVISION CORP.



These stages are shaded in each set. The circles are not indicated in this schematic.

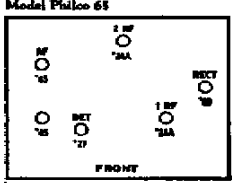


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③	1-2	4-10	Detector Plate Voltage
④	1-2	28	Detector Grid Bias
-	Field Coil of Speaker	135-140	Supplies Field Energy of Dynamic Speaker