Philco Radio & Television Corp.

	Model: 84	**Chassis:**	**Year:** Pre March 1934
	Power:	**Circuit:**	**IF:**
	Tubes:		
	Bands:		

Resources
Riders Volume 4 - PHILCO 4-33
Riders Volume 4 - PHILCO 4-34

PHILCO RADIO & TELEVISION CORP.

MODEL 84
Adjustment
Voltage
Parts view

Model 84

THE PHILCO RADIO MODEL 84 is a four-tube superheterodyne receiver, operating upon alternating current and designed for the reception of standard broadcast, and police stations in the two lower police bands. The frequency range is 540-1740 kilocycles. The intermediate frequency is 460 kilocycles. The power consumption is 43 watts. A Type 77 tube is used as a combination first detector and oscillator, a Type 77 as I.F. and second detector, a Type 42 as second A.F. (output), and a Type 80 as rectifier.

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

Circuit	Det. Osc.	2nd Det.	2nd A.F. (Output)	Rectifier
Type Tube	77	77	42	80
Filament Volts—F to F	6.3	6.3	6.3	5.0
Plate Volts—P to K	240	70	225	340
Screen Grid Volts—SG to K	95	23	225	...

*All the above values were obtained from the underside 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 values. The Philco Model 048 All-Purpose Set Tester is highly recommended for this use. Volume control at maximum and station selector at 540 K. C. Readings obtained with a plug-in adaptor will NOT be satisfactory

Table 2—Power Transformer Data

Terminal	A. C. Volts	Circuit	Color
1-2	120	Primary	White
3-4	6.3	Filament	Black
6-7	5.0	Filament of 80	Blue
9-10	630	Plates of 80	Yellow
5	.....	Center Tap of 3-4	Black-Yellow Tracer
8	.....	Center Tap of 9-10	Yellow-Green Tracer

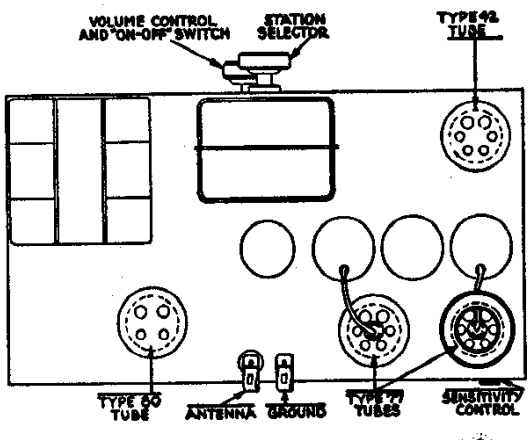

Fig. 1—Top View of Chassis

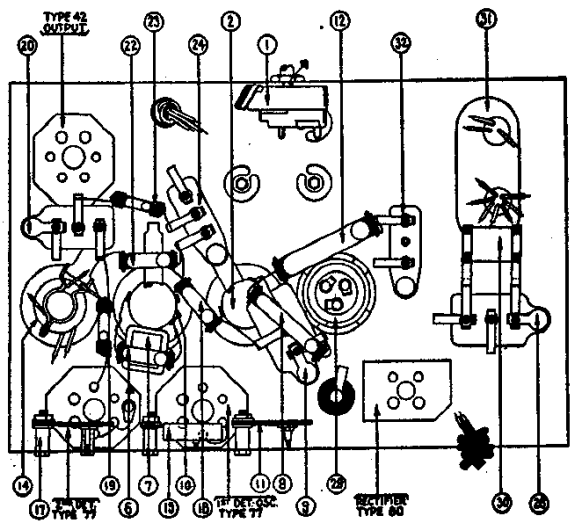

Fig. 2—Bottom View of Chassis Showing Parts

ADJUSTMENT OF MODEL 84

The receivers are accurately adjusted prior to shipment from the factory. Adjustments of the compensating condensers should *only* be undertaken with proper instructions and equipment available. Your distributor can supply both. The *Philco Model 048 All-Purpose Set Tester* is highly recommended. It contains an accurately calibrated signal generator.

The adjustment of the compensating condensers is similar to that outlined in Service Bulletin No. 120-C.

Location of the several compensating condensers can be learned through reference to Fig. 3 for their electrical location in the receiver, and to Fig. 2 for the physical location of the compensating condensers at the rear of the chassis

The I.F. primary and I.F. secondary condensers should be adjusted first. Set the signal generator at 460 KC (the I.F of Model 84) and the dial pointer at 600. Adjust I.F. condensers ⑪ and ⑲ so that maximum signal is obtained. These condensers are at rear of chassis, accessible from rear.

Next, adjust the "regeneration" condenser. This is ⑰ located at the right hand rear of chassis (facing rear). Adjustment is made by turning the fibre hex nut with either a screw driver or the special fibre wrench. The procedure is: tune in a signal at the high frequency (1500) end of the dial and turn the fibre nut clockwise until oscillation or squealing is heard. Then turn the nut half a turn back (to left). Now tune in a low frequency station, and if squealing is still heard, turn the adjusting nut half a turn back from the squealing point.

The OSC HF ⑬ and ANT compensating condensers ⑥ are adjusted last in the order mentioned. These are located on the tuning condenser gang, the ANT ⑥ being nearest the front of set. In early production sets use the fibre handle screw driver for adjustment, later production, the fibre hex wrench. In making these adjustments, set the signal generator at 1400 and the station selector at 140.

Terminal Arrangement of Tube Sockets, Viewed From Under Side of Chassis

MODEL 84
Schematic
Parts List

PHILCO RADIO & TELEVISION CORP.

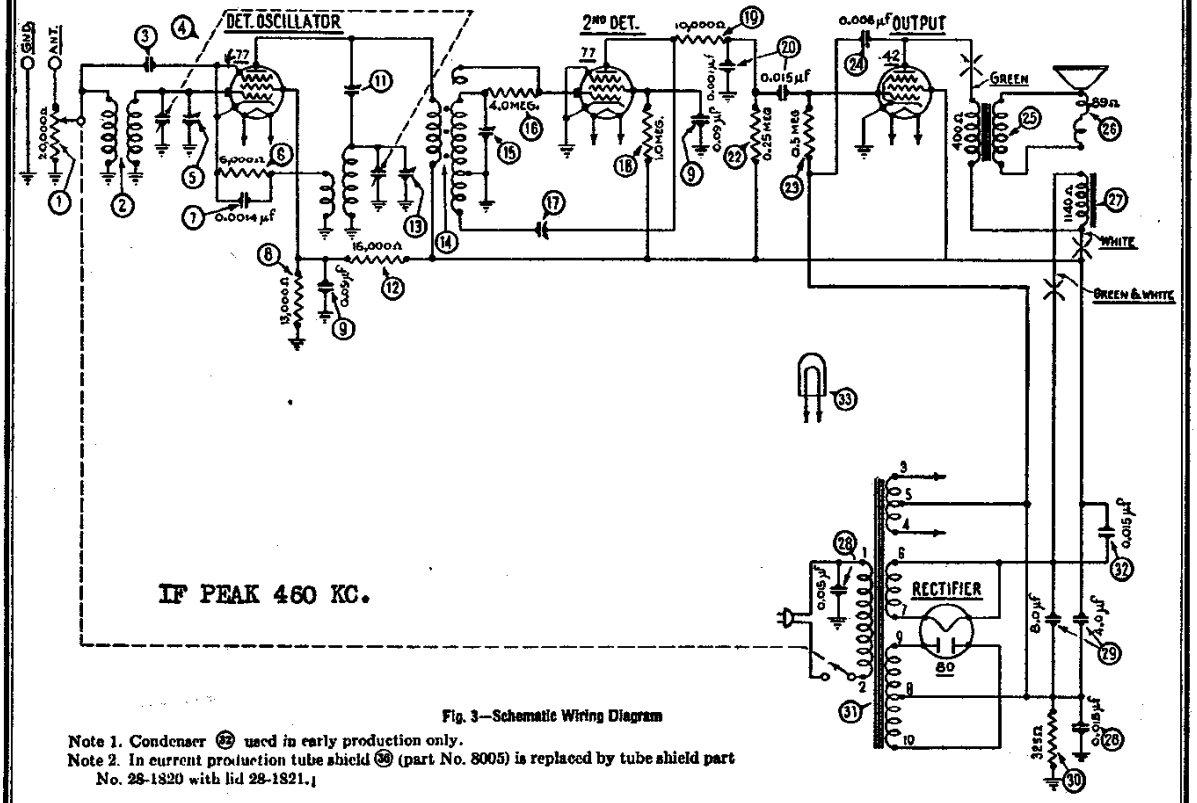

Fig. 3—Schematic Wiring Diagram

Note 1. Condenser (22) used in early production only.
Note 2. In current production tube shield (36) (part No. 8005) is replaced by tube shield part No. 28-1820 with lid 28-1821.

REPLACEMENT PARTS FOR MODEL 84

No. on Figs.	Description	Part No.	List Price
(1)	Volume control and on-off switch	33-5055	1.45
(2)	Antenna transformer	32-1310	.40
(3)	Condenser—capacity obtained by twisting ends of two leads together		
(4)	Tuning condenser assembly	31-1122	
(5)	Compensator (antenna)	Part of (4)	
(6)	Resistor (6000 ohms: Blue, Black, Red)	7352	.25
(7)	Condenser (.0014 mfd.)	7007	.35
(8)	Resistor (13000 ohms: Brown, orange, orange)	3766	.25
(9)	Condenser (double .09 .09 mfd.)	4989 AK	.40
(10)	Oscillator transformer	32-1311	.40
(11)	Compensator (I.F. primary)	04000A	.15
(12)	Resistor (16000 ohms: Brown, blue, orange)	7500	.25
(13)	Compensator (OSC HF)	Part of (4)	
(14)	I.F. transformer	32-1313	1.05
(15)	Compensator (I.F. sec.)	0-4000Y	15
(16)	Resistor (4 meg.: Yellow, black, green) inside (19)	6010	.25
(17)	Compensator (regeneration)	0-4000	.20
(18)	Resistor (1 meg: Brown, black, green)	4409	.25
(19)	Resistor (10000 ohms: Brown, black, orange)	4412	.25
(20)	Condenser (.015-.001)	7762-B	.30
(22)	Resistor (240000 ohms: Red, yellow, yellow)	4410	.25
(23)	Resistor (490000 ohms: Yellow, white, yellow)	4517	.25
(24)	Condenser .006 mfd.	7625H	.25
(25)	Output transformer	32-7019	1.25
(26)	Voice coil and cone assembly	36-3014	.60
(27)	Field coil and pot assembly	36-3243	1.60
(28)	Condenser (.015—.015)	3793AD	.40
(29)	Condenser (electrolytic—4.0—8.0 mfd.)	30-2013	1.95
(30)	Resistor (wire wound 325 ohms)	7465	.15
(31)	Power transformer	32-7180	3.60
(32)	Condenser (.015)	3793 C	.35
(33)	Pilot lamp	6G08	.11
(34)	Four prong socket	7544	.10
(35)	Six prong socket	7547	.11
(36)	Tube shield	8005	.06
(37)	Knob	27-4038	.10
(38)	Pointer	27 5007	.30 Per C
(39)	AC cord and plug	L-943A	.60
(40)	Speaker cord	L 1474	.15
(41)	Base shield plate	29 1724	.13
(42)	Chassis mounting screw	W-490	3.60 per C
(43)	Chassis mounting washer	W 315	.50 per C
(44)	Output transformer shield	36 3025	.08
(45)	Dial scale	27-5031	.15