Philco Radio & Television Corp.

	Model: 18, Code 124	**Chassis:**	**Year:** Pre October 1934
	Power:	**Circuit:**	**IF:**
	Tubes:		
	Bands:		

Resources

- Riders Volume 5 - PHILCO 5-9
- Riders Volume 5 - PHILCO 5-10

PHILCO RADIO & TELEV. CORP.

MODEL 18 (Code 124)
Alignment, Voltage
Parts List

Model 18 (Code 124)

Model 18 (code 124) is an eight-tube superheterodyne receiver, for operation on alternating current (A.C.) The range of receivable frequencies is from 530 to 1720 kilocycles which includes standard broadcasts and police stations on the first (lowest) police band. The tubes used are: Type 78 R.F.; type 6A7 detector-oscillator; type 78 I.F.; type 75 2d detector, 1st A.F.; type 42 driver; two type 42 output tubes, and type 80 rectifier. The intermediate frequency is 260 kilocycles.

Adjusting Compensating Condensers

The adjustment of the compensating or padding condensers in Model 18 (124) requires an accurate signal generator, such as the Philco Model 024, an output meter, and a special insulated hex wrench. The adjustments are made as follows:

1. I. F. (Intermediate Frequency). Remove the grid clip from the cap on the 6A7 tube and attach the shielded antenna lead from the signal generator to the grid cap of the 6A7. Set the switch of the signal generator at 260 K. C. (the I. F. of Model 18) and the dial of the set at 550. Turn on the set and signal generator. Adjust each of the three I. F. compensating condensers in turn to give maximum reading in the output meter (connected to primary of output transformer). If the needle on the meter goes off scale, turn down the attenuator adjustment on the signal generator. See Fig. 4 for locations of the I. F. compensating condensers. The first and 2d I. F. primary condensers (21) and (28) are accessible through the two holes in the chassis sub-base directly over them. The 1st I. F. secondary (24) is accessible from the rear.

2. ANT. H. F., DET., and OSC. H. F. CONDENSERS (5), (10), and (12).) These are located on top of the tuning condenser assembly and adjusted from above. (5) is mounted on the section nearest front of set. Replace the grid cap clip on the 6A7 and connect the antenna lead of signal generator direct to antenna post of set for these adjustments. Set signal generator at 1500 and dial of set at 1500.

3. OSC., L. F.—This adjustment (15) is made from rear of chassis (see Fig. 4). Set Signal Generator and dial of set at 600. The tuning condenser assembly should be "rocked" while this adjustment is being made.

Replacement Parts for Model 18 (Code 124)

No. on Figs.	Description	Part No.	List Price
(1)	Resistor (10,000 ohms) (Brown-Black-Orange)	33-1000	$0.25
(2)	Resistor (70,000 ohms) (Violet-Black-Orange)	5385	.25
(3)	Antenna Transformer	32-1396	.60
(4)	Tuning Condenser Assembly	31-1196	5.00
(5)	Compensating Condenser (Ant.)	Part of (4)	....
(6)	Condenser (.05 Twin—Bakelite Block)	3615AM	.40
(7)	Resistor (200 ohms Flexible Wire-wound)	7217	.20
(8)	Condenser (.09 Twin-Bakelite Block)	4989AC	.40
(9)	Detector Transformer	32-1397	.50
(10)	Compensating Condenser (Det.)	Part of (4)	....
(11)	Resistor (50,000 ohms) (Green-Brown-Orange)	4518	.25
(12)	Compensating Condenser (Osc. H. F.)	Part of (4)	....
(13)	Oscillator Transformer	32-1398	.45
(14)	Condenser (.00011 Mfd. Mica)	4519	.35
(15)	Compensating Condenser (Osc. L. F.)	04000R	.45
(16)	Resistor (20,000 ohms) (Red-Black-Orange)	6650	.25
(17)	Resistor (20,000 ohms) (Red-Black-Orange)	6650	.25
(18)	Condenser (Double: .05—.15 Bakelite Block)	6287M	.40
(19)	Resistor (2 Meg.) (Red-Black-Green)	5872	.25
(20)	Condenser (.05 Mfd. Bakelite Block)	3615AA	.35
(21)	Compensating Condenser (1st I. F. Pri.)	04000M	.20
(22)	Resistor (2500 ohms) (Red-Green-Red)	7775	.25
(23)	1st I. F. Transformer	32-1288	.55
(24)	Compensating Condenser (1st I. F. Secondary)	04000X	.20
(25)	Compensating Condenser (2d I. F. Primary)	04000A	.15
(26)	2d I. F. Transformer	32-1258	.55
(27)	Condenser (.00011 Mfd. Twin-Bakelite Block)	8035-K	$0.25
(28)	Resistor (.1 Meg. White-White-Orange)	4411	.25
(29)	Condenser (.05 Mfd. Tubular Paper)	30-4020	.35
(30)	Volume Control (350,000 ohms Tapped at 75,000)	33-5069	1.00
(31)	Resistor (.25 Meg.) (Red-Yellow-Yellow)	4410	.25
(32)	Condenser (.01 Mfd. Bakelite Block)	3903-Z	.25
(33)	Resistor (1. Meg.) (Brown-Black-Green)	4400	.25
(34)	Resistor (.5 Meg.) (Yellow-White-Yellow)	4517	.25
(35)	Resistor (10,000 ohms) (Brown-Black-Orange)	4412	.25
(36)	Shadowmeter	45-2028	2.50
(37)	Condenser (.00011 Mica)	4519	.35
(38)	Condenser (.09 Mfd.) (Bakelite Block)	4989-N	.35
(39)	Resistor (50,000 ohms) (Green-Brown-Orange)	4518	.25
(40)	Condenser (Electrolytic—1, 1, 2 Mfd.)	30-2029	1.20
(41)	Resistor (.1 Meg.) (White-White-Orange)	4411	.25
(42)	Resistor (.5 Meg.) (Yellow-White-Yellow)	4517	.25
(43)	Condenser (.015 Mfd. Bakelite)	3793AB	.35
(44)	Condenser (.006 Mfd. Tubular Paper)	30-4024	.40
(45)	Input (Audio) Transformer	32-7114	2.00
(46)	Resistor (10,000 ohms) (Brown-Black-Orange)	3524	.25
(47)	Condenser (.01 Mfd. Bakelite Block)	3903-P	.25
(48)	Output Transformer	32-7078	1.40
(49)	Voice Coil and Cone Assembly H-13	02625	.80
	Voice Coil and Cone Assembly K-17	36-3159	.50
(50)	Field Coil and Pot. Assembly	36-3104	2.70
(51)	Resistor (B) (6500 ohms Wire-wound)	33-3033	.30
(52)	Resistor (Voltage Divider—9.5, 112, 84 ohms Wire-wound)	33-3034	$0.20
(53)	Tone Control	30-4073	.75
(54)	Condensers (in Tone Control)	Inside (53)	....
(55)	Resistor (32,000 ohms) (Orange-Red-Orange)	33-1026	.35
(56)	Resistor (50,000 ohms) (Green-Brown-Orange)	4518	.25
(57)	Condenser (Twin .015 Mfd. Bakelite Block)	3793-R	.40
(58)	Power Transformer	32-7111	5.75
(59)	Condenser (Electrolytic 8 and 10 Mfd.)	30-2045	1.95
(60)	Condenser (Electrolytic 8 Mfd.)	30-2025	2.00
(61)	Condenser (.25 Mfd. Bakelite Block)	6287-N	.40
(62)	Filter Choke	32-7115	1.80
(63)	On-Off Switch	42-1064	.40
(64)	Pilot Lamp (Station Selector)	6608	.11
(65)	Pilot Lamp (Shadowmeter)	Part of (36)	....
(66)	Resistor (2900 ohms) (Red-White-Red)	5309	.25
	A. C. Cord and Plug Assembly	L-943A	.60
	Tube Shield	28-1107	.10
	4 Prong Socket	7544	.10
	6 Prong Socket	7547	.11
	7 Prong Socket	27-6005	.11
	Speaker Socket	4957	.10
	Knob (Large)	27-4051	.10
	Knob (Small)	27-4052	.10
	Chassis Mfg. Screw	W-1345-A	2.75C
	Chassis Mfg. Washer	29-2089	.35C
	Chassis Mfg. Foot (Rubber)	27-4116	.05
	Chassis Mfg. Foot Plate	27-7497	.35C
	Dial Assembly	31-1207	.50
	Dial Scale	27-5049	.25

Tube Socket Voltages

Circuit	R. F.	Det. Osc.	I. F.	1st A. F.	Driver	Output (Class "A")		Rectifier
Type Tube	78	6A7	78	75	42	42	42	80
Filament (F-F)	6.3	6.3	6.3	6.3	6.3	6.3	6.3	5.0
Plate (P-K)	210	210	210	120	205	280	280	350
Screen Grid (SG-K) (6A7)	80	..	80	..	200	300	300	..
G1-K	..	35	..	..	..	..	..	..
G2-K	..	130	..	..	..	..	..	..
Cathode (K-F)	2.8	2.8	5.3	0	0	0	0	..

All the above values were obtained from the underside of the chassis, using test prods and leads with an 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 520 K. C. Readings obtained with a plug-in adaptor will NOT be satisfactory.

MODEL 18 (Code 124)
Schematic
Socket Layout
Chassis Layout

PHILCO RADIO & TELEV. CORP.

June, 1934

I.F. = 260 KC.

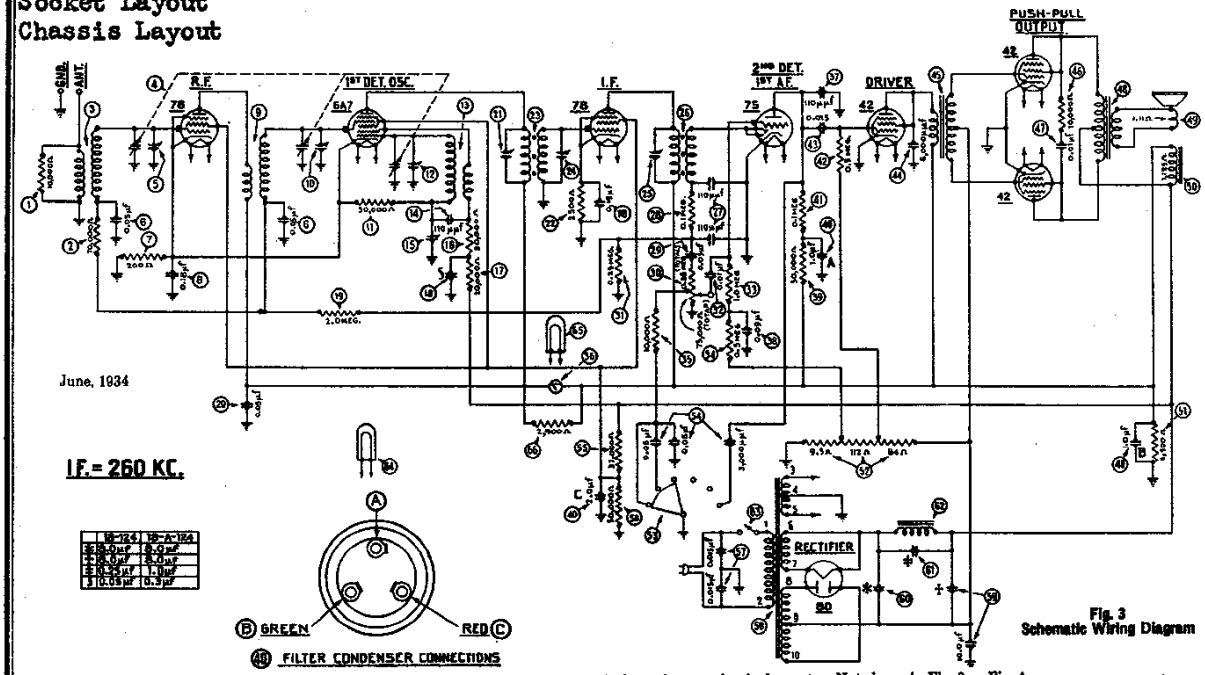

Fig. 3
Schematic Wiring Diagram

NOTE: A resistor No. 5309 (2900 ohms) (red-white-red) is used, shunted across the shadowmeter. Not shown in Fig. 3 or Fig. 4.

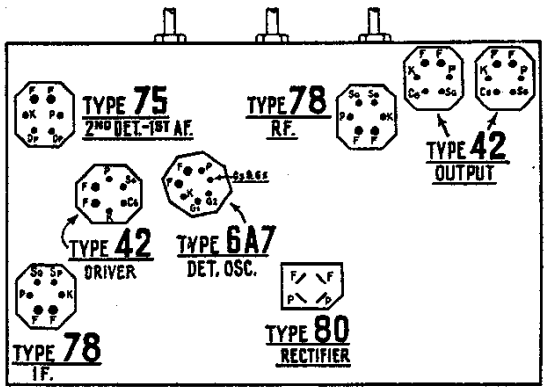

Fig. 1—Socket Layout (Underneath)

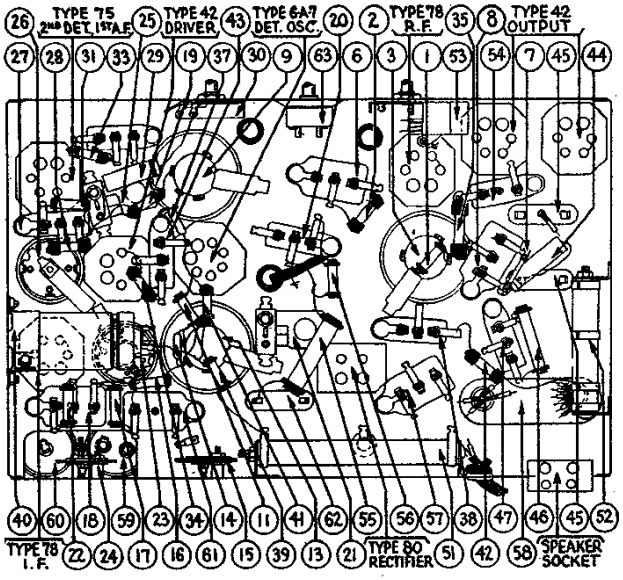

Fig. 4—Bottom View of Chassis Showing Parts

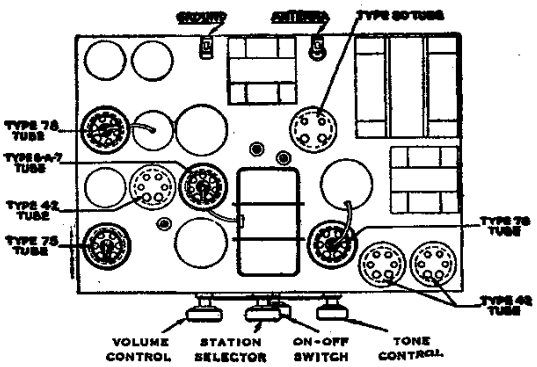

Fig. 2—Top View of Chassis

Power Transformer Data

Terminal	A. C. Volts	Circuit	Color
1-2	105-125	Primary	White
3-5	6.3	Filament	Black
6-7	5.0	Filament of 80	Blue
8-10	760	Plates of 80	Yellow
4	....	Center Tap of 3-5	Black—Yellow Tracer
9	....	Center Tap of 8-10	Yellow—Green Tracer