

PHILCO

REG. U. S. PAT. OFF.

Service Bulletin — No. 108

Model 4 Short Wave Converter

Model 4 Receivers are for operation on 115 volt, 50-60 cycle AC lines

Table 1—Tube Socket Readings—Line Voltage—115 volts

Tube		Filament Volts	Plate Volts	Screen Grid Volts	Control Grid Volts	Cathode Volts
Type	Circuit					
27	Oscillator	2.4	110	..	.1	0
24	Detector	2.4	25	25	.3	0
80	Rectifier	5.0	170/170

NOTE: The above voltage readings were taken from the socket terminals on the underside of the chassis, using a Weston multi-range voltmeter, 1000 ohms per volt. The radio set tester cannot be used either for voltage or plate current readings because of the effect of the long leads through the set tester cord.

Table 2—Power Transformer Voltages

Terminals	A. C. Volts		Color
1—2	105—125	Primary	White
3—5	2.5	Filament of 24 and 27	Black
6—7	5.0	Filament of 80	Light Blue
8—10	340	Plates of 80	Yellow
4	...	Center Tap of 3—5	Black with Yellow Tracer
9	...	Center Tap of 8—10	Yellow with Green Tracer

Table 3—Condenser Data

Nos. on Figs. 1 and 2	Capacity Mfd.	Container
(20)	.00011	Blue and Golden Yellow
(12)	.0008	Green and Orange
(10)	.00125	Blue and Orange
(2)	.05	Black Bakelite Container
(29) (30)	6.	Electrolytic

Table 4—Resistor Data

Nos. on Figs. 1 and 2	Power (Watts)	Resistance (Ohms)	COLOR		
			Body	Tip	Dot
(32)		4750 } 4750 }	Long Tubular		
(4)	1.	13000	Brown	Orange	Orange
(22)	1.	99000	White	White	Orange
(9)	.5	240,000	Red	Yellow	Yellow
(19)	.5	2 Megohms	Red	Black	Green

MODEL 4

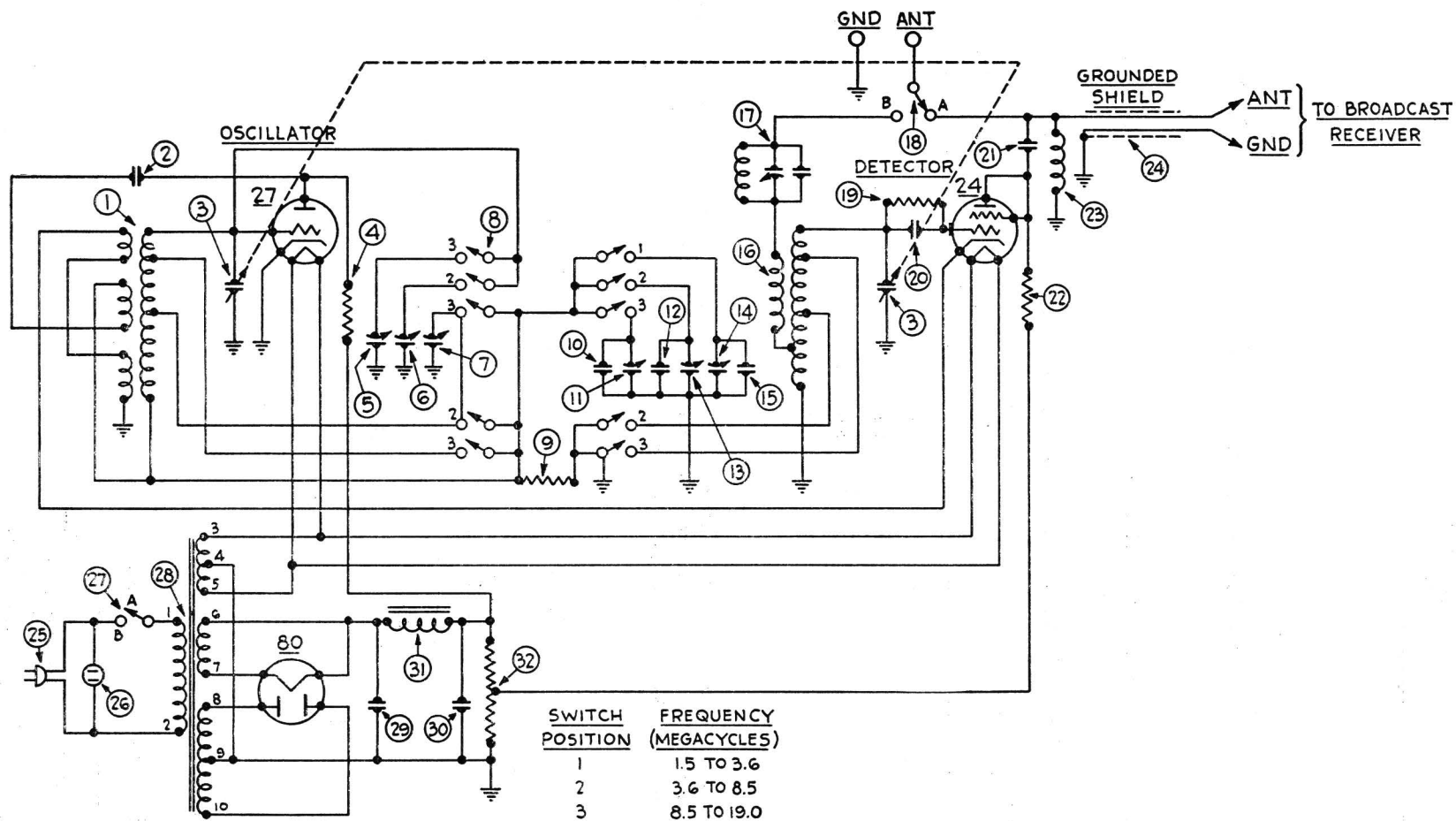


Fig. 1

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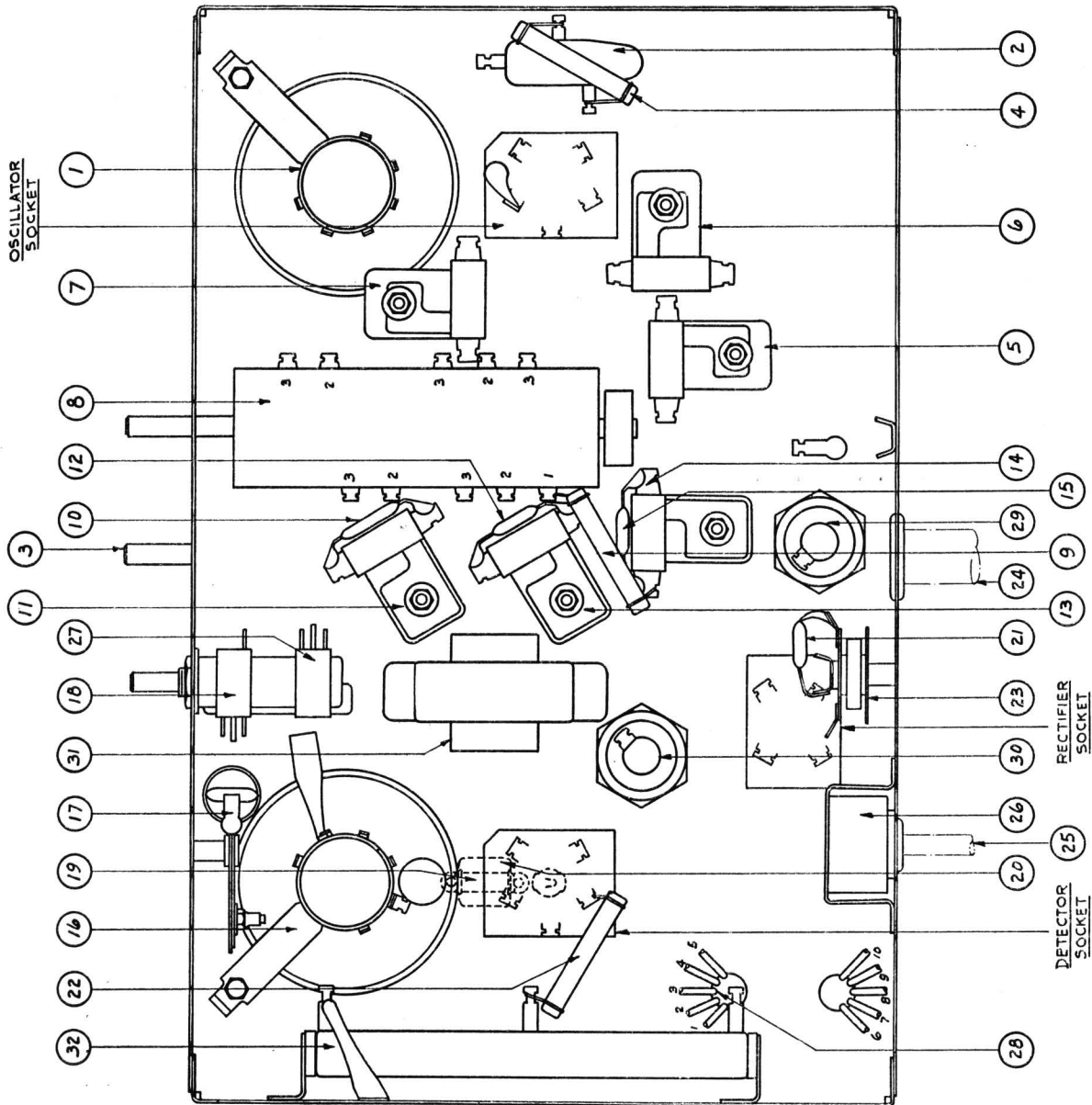


Fig. 2

ADJUSTMENT OF MODEL 4

The short wave converter is accurately adjusted at the Factory prior to shipment. Under no circumstances are the compensating condensers to be adjusted in the field. The adjustment is extremely critical and requires special oscillator equipment which all Philco Distributors have. If the receiver requires adjustment, it should be returned to the Distributor's Service Department.

**REPLACEMENT PARTS PHILCO SHORT WAVE CONVERTER
MODEL 4**

No. on Figs. 1 and 2	Description	Part No.	No. on Figs. 1 and 2	Description	Part No.
①	Oscillator Coil	03733*	⑰	Frequency filter	03662
②	By-pass condenser (.05 mfd.)	3615-M	⑱	Antenna switch (assembled with 27)	5796
③	Gang condenser	03692	⑲	Resistor (2 Megohms) assembled with (20)	03879
④	Resistor (13,000 ohms)	3766	⑳	Condenser (110 mmf.) assembled with (19)	03879
⑤	Compensating condenser (19 MC end of top scale)	04000-E	㉑	Condenser (250 mmf.)	3082
⑥	Compensating condenser (8.5 MC end of center scale)	04000-E	㉒	Resistor (99,000 ohms)	3767
⑦	Compensating condenser (3.6 MC end of bottom scale)	04000-E	㉓	R. F. choke	03103
⑧	Frequency control switch	03751	㉔	Shielded cable	L-1278
⑨	Resistor (240,000 ohms)	3768	㉕	Power cord and plug	L-943-A
⑩	Condenser (1250 mmf.)	5886	㉖	Outlet receptacle	5439
⑪	Compensating condenser (8.5 MC end of top scale)	04000-F	㉗	"On-Off" switch (assembled with 18)	5796
⑫	Condenser (800 mmf.)	5878	㉘	Power transformer—50-60 cycles	5785
⑬	Compensating condenser (3.6 MC end of center scale)	04000-F		25-40 cycles	5786
⑭	Compensating condenser (1.5 MC end of bottom scale)	04000-F	㉙	Electrolytic condenser (6 mfd.)	4916
⑮	Condenser (250 mmf.)	3082	㉚	Electrolytic condenser (6 mfd.)	4916
⑯	Detector transformer	03731	㉛	Filter choke (50-60 cycles)	4951
				Filter choke (25-40 cycles)	5930
				50-60 cycles)	
				Resistor (two 32,000 ohms, 25-40 cycles)	3525
				Bezel	5175
				Cabinet	40600

*Includes matched oscillator coil and detector transformer.

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