

PHILCO

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PHILCO RADIO & TELEVISION CORPORATION OF GREAT BRITAIN, LTD.

Model 265.

The Model 265 is a five valve, seven stage Super-heterodyne receiver incorporating shadow tuning and designed for dual wave operation, covering the Broadcast Band of 520 to 1550 kilocycles (575 to 193 metres) and 140 to 330 kilocycles (2140 to 939 metres).

This model employs the type 6-A-7 heptode valve as combination first detector, oscillator, and first I.F. amplifier. This is also the first Automatic Volume controlled valve. A type 78E Vario-mu pentode is used as the main Intermediate Frequency amplifier and is followed by a type 75 Duo-Diode-Triode as second detector and first Audio Frequency amplifier stages, and a type 42-E three watt pentode Output stage. The power rectifier is a type 80 valve.

The Intermediate Frequency is 125 kilocycles. The power consumption is 63 watts.

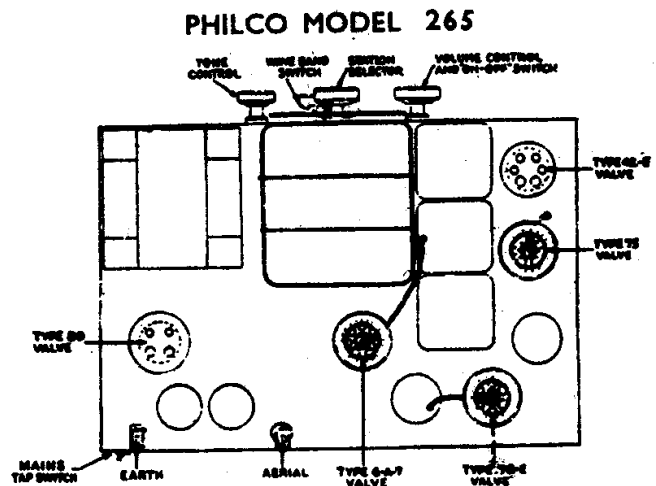


TABLE 1.

Valve Socket Data, Line Voltage 230 volts, Mains Tap Switch Set for 230-260 volt operation.

VALVE	G1—K	G2—K	G3/5—K	Sg—K	A—K	G1—Ch	G2—Ch	G3/5—Ch	Sg—Ch	A—Ch
6-A-7	— .5*	244	51	46	234	.2*	247	48	92	240
78 E	— .3*	—	—	88	235	zero	—	—	90	240
75	— .4*	—	—	—	155	— .4*	—	—	—	153
42 E	—1.2†	—	—	245	230	—1.2†	—	—	245	230

Additional data:—Volts across Output Transformer Primary 14 volts, $\pm 7\%$
Volts across Speaker Field Coil 80 volts, $\pm 7\%$

* Read with 30,000 ohm meter.

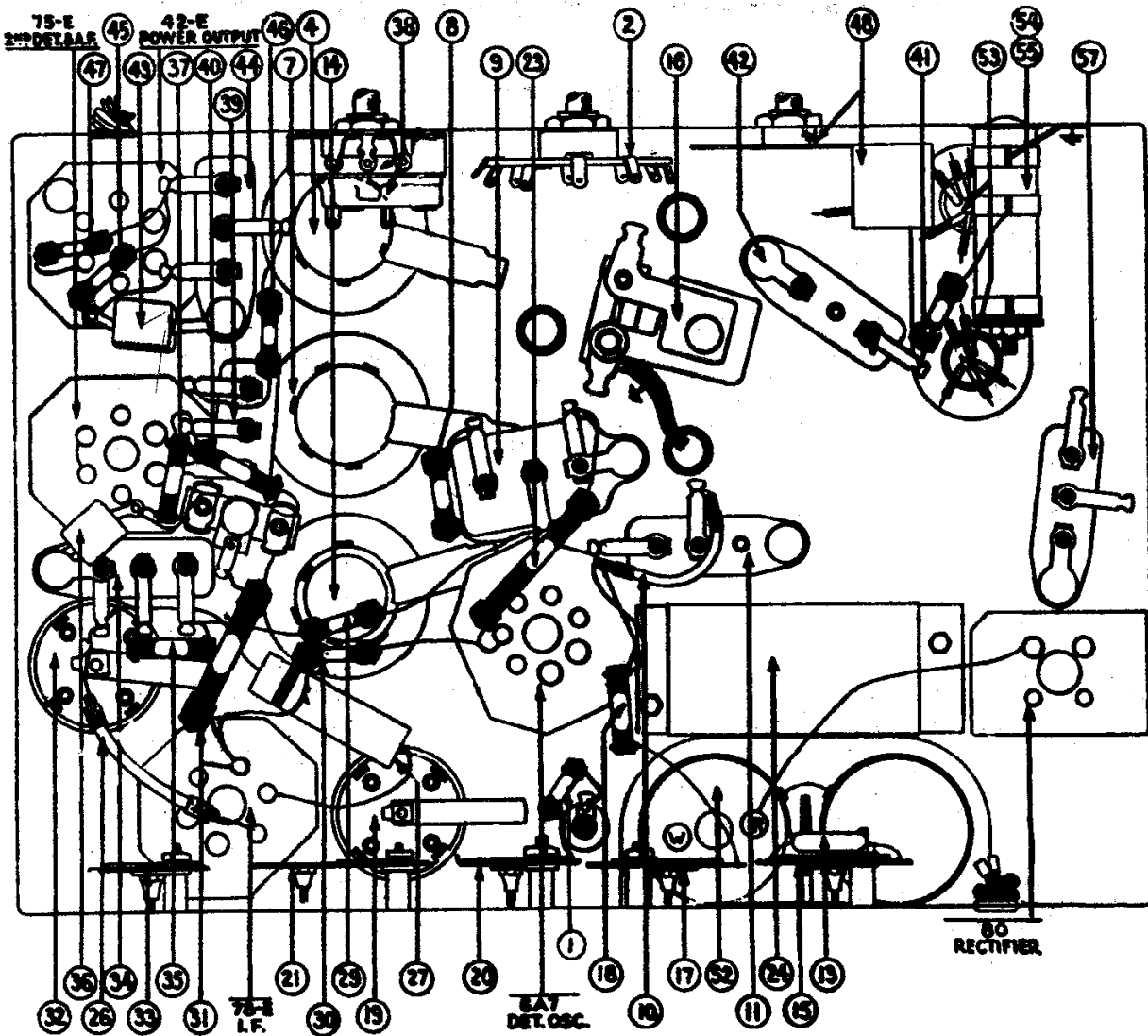
† Read with 30,000 ohm meter, read —7 volts with 300,000 ohm meter.

All above readings taken with a meter of 300,000 ohms resistance except where otherwise stated.

TABLE 2—Mains Transformer Data.

Terminal	A.C. Volts	Circuit	Colour
1	230-260	Primary (Full Primary Winding)	White—20% Black Tracer
1-A	200-230	Primary (Intermediate Tap)	Green
2	200-260 with 1 or 1A	Primary (Common)	White
3-5	6.3	Low Tension	Black —
6-7	5.0	L.T. of "80" Valve	Blue
8-10	680	H.T. (Anodes) of "80"	Yellow
4	—	Centre Tap of 3-5	Black—Yellow Tracer
9	—	Centre Tap of 8-10	Yellow—Green Tracer

FIGURE 3.



Resistor (1) is fitted between aerial terminal and grounded side of (17), not as shown.

ADJUSTMENT OF MODEL 265

The accurate adjustment of receivers is completed before shipment from the factory. Subsequent adjustments should not be undertaken unless complete instruction has been obtained in the adjustment of the compensating condensers. An accurately calibrated signal generator is essential, and the PHILCO MODEL 048 ALL-PURPOSE SET TESTER, which contains a precision signal generator, is recommended.

The Intermediate Frequency padders should be adjusted first by feeding in a 125kc. signal from the Signal Generator to the grid cap of the 6.A.7 valve, after first removing the grid clip. Make sure the Signal Generator is properly earthed to the receiver chassis, and have the output meter connected across the primary of the output transformer, using the 10 or 20 volt range. Set the receiver Volume Control at maximum, and adjust the Signal Generator to give a half-scale reading on the meter.

The I.F. padders to be adjusted are Nos. 20 and 21, first I.F., and No. 33, second I.F.

Now throw the wave-change switch to the Broadcast position, and feed in a 1,400kc. signal to the 6.A.7. control grid, and accurately tune this in on the main tuning control*; without in any way disturbing this setting, transfer the Signal Generator feed to the Aerial terminal, and replace the 6.A.7. control-grid clip. Now adjust the

trimmers Nos. 6 and 5 on the middle and forward sections of the gang condenser for peak output. Leave the Signal Generator feed connected to the aerial terminal for all remaining adjustments.

Feed in, and tune in a 600kc. signal, and adjust padder No. 15 for peak output; retune, and repad, repeating until no further gain possible.

Throw W/c switch to Long Waves, and feed in and tune in a 150kc. signal. Adjust padder No. 17 in the same manner as No. 15.

Feed in, and tune in a 300kc. signal, and adjust padder No. 16, which is located on the underside of the chassis, being accessible through a hole in the bottom of the cabinet.

Adjustments are now completed.

NOTE.—If the output meter pointer swings off the scale during any adjustment, reduce the Signal Generator attenuator to bring the reading back to half scale.

* If dial reading shows bad error, screw padder No. 12 to minimum capacity, and adjust for FIRST SIGNAL HEARD as capacity is increased, arranging for this to occur at correct dial reading.

Replacement Parts - Model 265.

No. on figures.	Description.	Part No.	No. on figures	Description.	Part No.
1	¼ watt Resistor 10,000 ohms ...	4412	41	¼ watt Resistor, 99,000 ohms ...	4411
2	Wave Band Switch ...	42-1057	42	Condenser, .09 mf.	4989-D
3	3-gang Tuning Condenser Assembly..	31-1091	43	Condenser, 250 mmf. (Yellow) ...	3082
4	First Aerial Transformer ...	32-1157	44	Condenser, .01 mf.	3903-W
5 & 6	1st and 2nd Aerial (H.F.) Trimmers	Part of 3	45	¼ watt Resistor, 70,000 ohms ...	5385
7	Second Aerial Transformer ...	32-1158	46	¼ watt Resistor, 490,000 ohms...	4517
8	¼ watt Resistor, 70,000 ohms ...	5385	47	¼ watt Resistor, 70,000 ohms ...	5385
9	Condenser, .05 Double ...	3615-AJ	48	Tone Control, 2-point ...	30-4046
10	Spaghetti Resistor, 500 ohms ...	6977	49	Output Transformer ...	32-7109
11	Condenser, .09 ...	4989-AB	50	Voice-coil and Cone Assy. (S7 Speaker) ...	36-3014
12	Oscillator Trimmer ...	Part of 3	51	Speaker Field and Cone Frame. S7	36-3114
13	Condenser, 800 mmf. ...	5878	52	Electrolytic Condenser, 8 and 8 mfd.	30-2028
14	Oscillator Transformer ...	32-1159	53	Mains Transformer, 200-230-260 v., 40-100 cycles (T Model) ...	32-7074
15	Compensating Condenser, osc. Low Frequency. Broadcast Band ...	04000-S		Mains Transformer, 100-130 v., 25-100 cycles (A Model) ...	8047
16	Compensating Condenser, osc. High Frequency. Long Wave Band ...	04000-D		Mains Transformer, 200-230 v. 50-100 cycles (E Model) ...	8048
17	Compensating Condenser, osc. Low Frequency. Long Wave Band ...	04000-S		Mains Transformer, 200-230-260 v., 25-100 cycles (D Model) ...	32-7107
18	¼ watt Resistor, 51,000 ohms ...	4518	54 & 55	Wire-wound Resistor (65—235 ohms, 65—32 ohms) ...	7998
19	First I.F. Transformer ...	32-1160	56	Mains Transformer Primary Tap Switch ...	3116
20	Compensating Condenser 1st I.F. Primary ...	04000-A	57	Shadowmeter ...	6497
21	Compensating Condenser 1st I.F. Secondary... ..	04000-A	58	Condenser, .015 mf. ...	3793-2
22	Dial Light ...	6608		Chassis Mounting Bolt ...	W-567
23	1 watt Resistor, 13,000 ohms ...	3766		Chassis Mounting Washer ...	5189
24	Filter Condenser Bank ...	30-4044		Chassis Mounting Washer ...	5058
26	Spaghetti Resistor, 300 ohms ...	33-3010		Brown Hex. Knob (1 used) ...	270-4013
27	Condenser, .1 mf. ...	30-4122		Brown Hex. Knob (3 used) ...	270-4011
29	¼ watt Resistor, 2 megohms ...	5872		Bezel ...	28-1584
30	¼ watt Resistor, 10,000 ohms ...	4412		Speaker Terminal Cover ...	36-3025
31	1 watt Resistor, 25,000 ohms ...	3656		Speaker Terminal Cover Mounting Screw (2 used)... ..	W-685
32	Second I.F. Transformer ...	32-1223		Spring Cover-Padding Condenser ...	W-775
33	Compensating Condenser, 2nd I.F. Primary ...	04000-W		Grid Clip ...	4897
34	Condenser, 250 mmf. Double ...	8317-B		Electrolytic Condenser Support ...	29-1116
35	¼ watt Resistor, 50,000 ohms ...	4518		Electrolytic Condenser Insulator ...	27-7194
36	Condenser, 110 mmf. ...	4519		Mains Cord ...	L-1636
37	¼ watt Resistor, 25,000 ohms ...	4516		Speaker Cable ...	L-1604
38	Volume Control and On-Off Switch...	33-5006		Pilot Lamp Bracket ...	38-5432
39	Condenser, .01 mf. ...	3903-AM		Valve Shield Body... ..	28-1107
40	¼ watt Resistor, 1 megohm ...	4409		Valve Shield Base ...	28-1110