



PHILCO

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TYPE CIRCUIT: Five-valve Superheterodyne Unit-constructed Receiver with full delayed A.V.C. and Pentode Output (4 watts) for operation on Medium and Long wave bands. Built-in connections for Philco All-purpose Aerial—aerial selector built into and operated by the wave-change switch. Provision is made for connecting a pick-up, which may be left permanently connected to the receiver if desired, as the gramophone operation is controlled by the extreme clockwise rotation of the wave-change switch. Provision is also made for connecting an external speaker of the permanent magnet, moving coil type having an impedance of 2-3 ohms.

POWER SUPPLY: The circuit is so arranged that connection may be made to either A.C. or D.C. mains from 190-260 volts without discrimination or adjustment, and on A.C. mains the circuit is independent of periodicity between the limits of 40-100 cycles. A type 35 RE. rectifying valve is employed in the receiver and is used as a half-wave rectifier on A.C. and as a resistance on D.C.

WAVE-BANDS: COVERAGE: Two (a) Long, 150-320 Kc. (2,000-937.5 metres); (b) Medium, 530-1,750 Kc. (566-171.4 metres).

TUNING DRIVE: Geared 7-1 ratio for slow and accurate tuning. Glowing beam station indicator, new spread band 270 degrees scale, and Shadowmeter tuning device.

TONE CONTROL: This is continuously variable, enabling a fine degree of tone between brilliant and mellow to be obtained. The on-off switch is combined with this control, thus allowing a particular setting of the separate volume control to be maintained.

LOUD SPEAKER: An 8 in. diameter permanent magnet moving coil speaker employing the latest nickel-aluminium alloy is used, which gives the highest efficiency audio output, and greater bass response is obtained due to the large baffle.

INTERMEDIATE FREQUENCY: 451 Kc.

POWER CONSUMPTION: 80 watts.

TABLE 1 — VOLTAGES.

Valve socket readings to chassis taken with an 065 or 077 Philco Set Tester, using the 500, 250 and 10 volt ranges. Volume control at minimum, tone control fully brilliant, wave - change switch in M.W. position, and no aerial connected. A.C. line—230 volts, 50 cycles.

* Oscillator Anode volts: V.1 filament, 15 v. A.C.; V.2 filament, 35 v. A.C.; V.3, 4, 5, LP.1 and LP.2 filaments, each 6.3 v. A.C., measured between Pins 1 and 2 on each socket.

TABLE 2. — RESISTANCES OF COILS.

(Link on TB.2 to be in socket "B.")

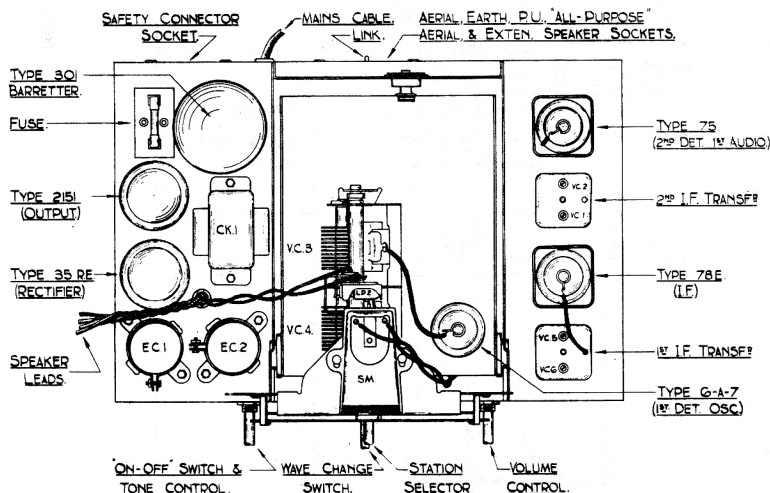
REF. NO. ..	TEST PROD 1	TEST PROD 2	RESISTANCE (Ohms)	REF. NO. ..	TEST PROD 1	TEST PROD 2	RESISTANCE (Ohms)
T.1. Primary	TB.3/4	Chassis	Sw.2. L.W. 80	T.7. Primary	V.3/3	TB.6/11	8
T.1. Primary tapping 2	TB.3/3	"	" " 10	T.7. Secondary	TB.6/3	V.5 Cap	12
T.1. Primary tapping 3	TB.2 Socket "C"	"	" " 5	T.5	V.3/6	Sw.2/2 Tag 4	Sw.2. L.W. 16.5
T.1. Secondary	TB.4/9	TB.6/3	" " 5	T.4	"	"	" M.W. 8
T.1. Secondary with T.3 in series	V.3 Cap	"	" " 25	T.6. Primary	V.5/3	TB.6/10	12
T.2. Primary	TB.3/4	Chassis	" M.W. 2 " Gram. Infinity	T.6. Secondary	TB.6/7	V.4/5	8
T.2. Primary tapping	TB.2 Socket "C"	"	" M.W. 1 " Gram. Infinity	CK.1	EC.2 Red	EC.1 Tag	150
T.2. Secondary	V.3 Cap	TB.6/3	" M.W. 5 " Gram. Infinity	T.8. Primary	"	V.1/3	240
S.M. with R.18 in parallel	TB.6/10	TB.6/11	2,000 approx.	T.8. Secondary	Output Trans.	Output Trans.	0.2*
				Speech Coil	Lead 1	Lead 2	2*

* Resistance of T.8 Secondary alone and Speech Coil alone (taken when disconnected).

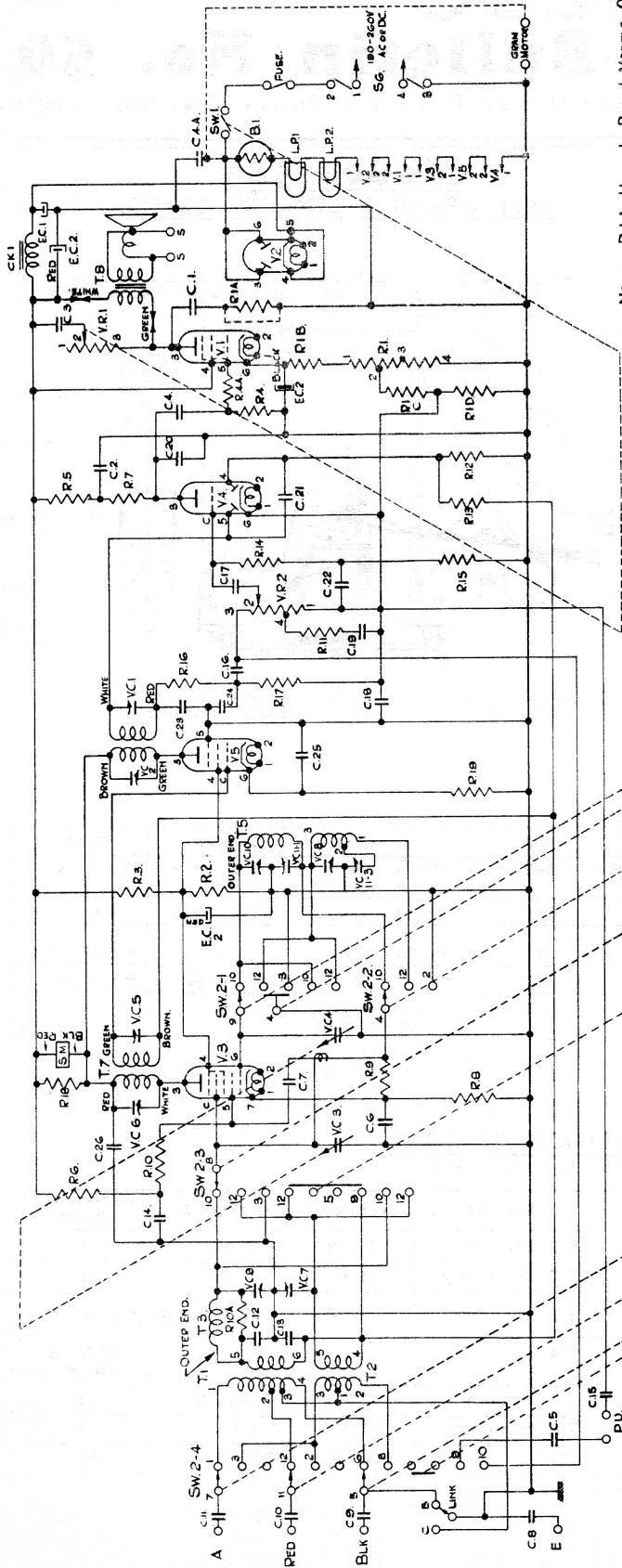
NOTE.—Reference numbers for valves should be read in conjunction with the socket numbers, e.g., V.1—S.1.

Model 583

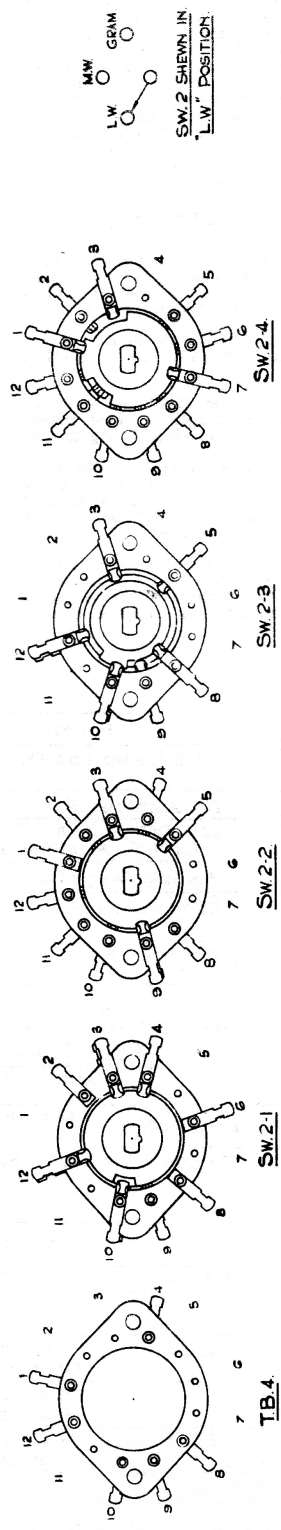
BABY GRAND & CONCERT GRAND.



TOP CHASSIS DIAGRAM.



NOTE - R.I.A. USED IN RUN | MODELS ONLY



VIEWS OF SWITCHES & TB.4 FROM FRONT.
 CHASSIS BEING UPSIDE DOWN.
 NOTE: - SPINDLE LOCATING NOTCHES AT
 BOTTOM.

SCHEMATIC DIAGRAM.

PARTS AND PRICE LIST — MODEL 583 B.G. & C.G.

REF. No.	DESCRIPTION.	PART No.	LIST PRICE.	REF. No.	DESCRIPTION.	PART No.	LIST PRICE.
T.1	L.W. Aerial Transformer, Part No. 32-2187			R.4A	½ watt Insulated Resistor, 51,000 ohms	330-2015	9
T.2	M.W. Aerial Transformer, Part No. 320-1063	Complete Unit		R.5	½ watt Insulated Resistor, 99,000 ohms	330-2012	9
T.3	Rejector Coil, Part No. 32-2188	380-5198	14 0	R.6	½ watt Insulated Resistor, 10,000 ohms	330-2014	9
SW.2-3	Wave-change Switch (Aerial Section), Part No. 42-1205			R.7	½ watt Insulated Resistor, 190,000 ohms	33-1117	9
SW.2-4				R.8	½ watt Carbon Resistor 300 ohms	330-1006	9
TB.4				R.9	½ watt Insulated Resistor, 51,000 ohms	330-2015	9
T.4	M.W. Oscillator Coil, Part No. 32-2120	Complete Unit		R.10	½ watt Insulated Resistor, 15,000 ohms	330-2016	9
T.5	L.W. Oscillator Coil, Part No. 32-2189	380-5196	9 6	R.10A	½ watt Carbon Resistor, 490,000 ohms	6097	9
SW.2-1	Wave-change Switch (Oscillator Section), Part No. 42-1206			R.11	½ watt Insulated Resistor, 51,000 ohms	330-2015	9
SW.2-2				R.12	½ watt Insulated Resistor, 1 megohm	330-2018	9
T.6	2nd I.F. Transformer and Trimmers Assembly	320-1057 (equiv. 32-1706)	5 3	R.13	½ watt Insulated Resistor, 1 megohm	330-2018	9
VC.1				R.14	½ watt Insulated Resistor, 1 megohm	330-2018	9
VC.2				R.15	½ watt Insulated Resistor, 490,000 ohms	330-2013	9
T.7	1st I.F. Transformer and Trimmers Assembly	320-1047 (equiv. 32-1705)	5 6	R.16	½ watt Insulated Resistor, 51,000 ohms	330-2015	9
VC.5				R.17	½ watt Insulated Resistor, 330,000 ohms	330-2017	9
VC.6	Output Transformer, Part No. 320-7034			R.18	½ watt Carbon Resistor, 5,000 ohms	5310	9
T.8		Speech Coil and Cone, Part No. 360-3019	Speaker complete	24 0	R.19	½ watt Carbon Resistor 400 ohms	330-1003
CK.1	Permanent Magnet	320-7030	5 3	VR.1	Tone Control 100,000 ohms	33-5167	3 6
VC.3	L.F. Smoothing Choke			SW.1	On-off Switch	33-5166	2 6
VC.4	Two-gang Condenser	31-1858	17 6	VR.2	Volume Control 2 megohms (tapped at 1 megohm)	27-6036	5
VC.7				S.1	6-Prong Valve Holder	27-6036	5
VC.9	Double Padder 30+80 mmfd. . .	31-6116	1 8	S.2	6-Prong Valve Holder	27-6037	5
VC.8	Double Padder 15+80 mmfd. . .	31-6115	1 8	S.3	7-Prong Valve Holder	27-6036	5
VC.10				S.4	6-Prong Valve Holder	27-6036	5
VC.11	Double Padder 375+600 mmfd. . .	31-6060	2 0	S.5	6-Prong Valve Holder	27-6036	5
EC.1	Electrolytic Condenser 16 mfd. . .	30-2126	4 3	S.6	Mains Safety Socket	380-5206	6
EC.2	Electrolytic Condenser, 25+4+16 mfd.	30-2156	5 3	B.1	Mains Safety Plug	380-5210	4
C.1	Tubular Condenser .03 mfd. (Run 1)	30-4025	7		Barretter Socket Assembly	380-5199	1 0
or	Tubular Condenser .001mfd. (Run 2)	30-4201	6		Fuse Panel Assembly	380-5185	4
C.2	Tubular Condenser .1 mfd.	30-4170	9	LP.1	Fuse (1 amp.)	380-5003	3
C.3	Tubular Condenser .05 mfd.	30-4123	9	LP.2	Pilot Bulb	34-2141	1 4
C.4	Moulded Condenser .015 mfd.	3793-SU	8		Pilot Bulb	34-2141	1 4
C.4A	Tubular Condenser .1 mfd.	30-4170	9		Dial Mask	270-5047	6
C.5	Tubular Condenser .01 mfd.	30-4124	8		Dial Screw	270-5036	4
C.6	Tubular Condenser .05 mfd.	30-4020	7		Dial Scale and Hub Assembly . .	380-5203	2 6
C.7	Mica Condenser 250 mmfd.	300-1014	6		Valve Shield	28-2726	2
C.8	Tubular Condenser .01 mfd.	30-4145	7		Grid Clip	28-2214	doz. 5
C.9	Tubular Condenser .01 mfd.	30-4145	7		Rubber Bush	4126	1
C.10	Tubular Condenser .01 mfd.	30-4145	7		Rubber Buffers	270-7189	1
C.11	Tubular Condenser .001 mfd.	30-4201	6		Chassis Mounting Rubbers . . .	5189	1
C.12	Tubular Condenser 0.3 mfd.	30-4025	7		Chassis Mounting Washers . . .	29-2089	doz. 2
C.13	Tubular Condenser .05 mfd.	30-4020	7		Chassis Mounting Bolts	W-1345A	1
C.14	Tubular Condenser .5 mfd.	30-4117	1 6		Mains Cable	LO-1009	1 7
C.15	Tubular Condenser .5 mfd.	30-4117	1 6		Speaker Cable	LO-1050	1 6
C.16	Tubular Condenser .01 mfd.	30-4124	6		Knob (Volume) and Spring . . .	270-4037	5
C.17	Tubular Condenser .01 mfd.	30-4124	6		Knob (Wave-change) and Spring	270-4038	5
C.18	Tubular Condenser .05 mfd.	30-4020	7		Knob (Tone) and Spring	270-4039	5
C.19	Tubular Condenser .01 mfd.	30-4124	6		Knob (Tuning) and Spring	270-4041	9
C.20	Mica Condenser 110 mmfd.	300-1020	8		Knob Spring	280-5262	doz. 2
C.21	Mica Condenser 110 mmfd.	300-1020	8		Red Wander Plug	380-5087	2
C.22	Tubular Condenser .1 mfd.	30-4122	6		Black Wander Plug	380-5015	doz. 1 6
C.23	Mica Condenser 110 mmfd.	300-1020	8	S.M.	Shadowmeter	450-2001P	6 6
C.24	Mica Condenser 110 mmfd.	300-1020	8	V.1	Type 2151 Pentode Output Valve	39-2146	13 6
C.25	Tubular Condenser .1 mfd.	30-4122	6	V.2	Type 35RE Rectifier Valve . . .	34-2160	14 0
C.26	Tubular Condenser .1 mfd.	30-4170	9	V.3	Type 6A7 Variable-mu Heptode Valve	34-2002	15 0
R.1	Candohm Wire-wound Resistor 190+35+190 ohms	33-3285	1 3	V.4	Type 75 Double Diode Triode Valve	8002	12 6
R.1A	½ watt Insulated Resistor, 15,000 ohms	330-2016	9	V.5	Type 78E Variable-mu H.F. Pentode Valve	8315-E.	12 6
R.1B	½ watt Carbon Resistor, 160 ohms ±5%	330-1022	9	B.1	Type 301 Barretter	340-9000	12 6
R.1C	½ watt Carbon Resistor, 614 ohms ±5%	330-1024	9		Bezel Escutcheon	270-4045	10
R.1D	½ watt Carbon Resistor, 82 ohms ±5%	330-1023	9		Bezel Glass	270-7217	2 6
R.2	½ watt Insulated Resistor, 51,000 ohms	330-2015	9		Bezel Spring	290-1160	1
R.3	2 watt Carbon Resistor, 25,000 ohms	33-1072	1 6				
R.4	½ watt Insulated Resistor, 490,000 ohms	330-2013	9				

MODEL 583 — RADIOGRAM.

MODEL 1583 — AUTOMATIC RADIOGRAM.

Models 583 R.G. and 1583 are five-valve Superheterodyne radio gramophone receivers employing the same circuit as Model 583 B.G. & C.G., but with the following refinements:—

MODEL 583 R.G.—Universal motor, turntable and 2,000 ohms pick-up, Type U-36 fitted.

MODEL 1583.—Automatic record changing equipment (with universal motor and 2,000 ohms pick-up) is incorporated which plays eight 9in., 10in. and 12in. records mixed in any order entirely automatically, without pre-setting. Any record may be repeated or rejected whilst the instrument is in operation should it be desired to do so, and the turntable is automatically stopped at the conclusion of the final record. A "Stop" button is also fitted which allows the machine to be stopped at any time.

GRAMOPHONE.—Operation of the gramophone is controlled by the extreme clockwise rotation of the wave-band switch, which makes change over from radio to gramophone without the possibility of radio break through.

CONTROLS.—All controls are on the motor board.

REMOVAL OF CHASSIS.—This is easily effected by loosening the bracket nuts inside the cabinet, allowing the chassis to be lowered and lifted out after the knobs have been removed.

POWER SUPPLY.—The range of universal operation is limited by reason of the gramophone motor to 200-250 volts, A.C. or D.C., and on A.C. mains the periodicity must be between 40 and 60 cycles. Separate terminals for A.C. and D.C. supplies respectively are fitted to a panel on the motor, and care must be taken to see that the correct connection has been made for the mains supply on which the receiver is to be used.

LOUD SPEAKER.—A full size (11in.) auditorium speaker is used on the Model 1583. This speaker embodies the latest principles in acoustic design and covers the entire useful range of audio frequencies.

TOP CHASSIS DIAGRAM.—Same as for Model 583 B.G. & C.G. except for addition of Motor Cable alongside Mains Cable and Barretter extension lead and plug in place of Barretter.

UNDER CHASSIS DIAGRAM.—Same as for Model 583 B.G. & C.G. except for addition of Motor Cable alongside Mains Cable.

CIRCUIT DIAGRAM.—Connections for gramophone motor shown in dotted lines on diagram.

NOTE.—In Models 583 R.G. and 1583, pins 1 and 2 and 3 and 4 respectively on the chassis safety connector socket, S6, are shorted together. Connection is then made by means of the chassis mains cable to another safety connector socket, S7 (mounted at the back of the cabinet), to which the actual mains cable is also connected. Tables 1 and 2 and Alignment Procedure are the same as for Model 583 B.G. & C.G.

TABLE 3 — PARTS AND PRICE LIST.

MODEL 583 R.G.

Remove :—

REF. NO.	DESCRIPTION.	PART NO.
	Chassis Mounting Rubbers ...	5189
	Chassis Mounting Washers ...	29-2089
	Chassis Mounting Bolts	W-1345A

Add :—

REF. NO.	DESCRIPTION.	PART NO.	LIST PRICE.
	Extruded Washer (Rubber) ...	27-4199	doz. 2 1
	Plain Washer (Rubber)	27-4198	2
	Bracket	280-7001	1 2
	Bolt (Coach type)	WB-1109	1
	Nut (Square)	WN-1109	1
or	Nut (Hexagon)	WN-1104	1
	Motor Cable	LO-1013	8
	Pick-up Cable	LO-1017	1 9
	Aerial Panel and Leads Assembly	380-5273	2 9
	Barretter Plug	380-5011	2 9
	Barretter Cable	LO-1002	1 0
	Cable Clamps	29-1644	doz. 4
	Porcelain Barretter Socket ...	270-4019	2 9
	Type U-36 A.C./D.C. Motor, Turntable and Pick-up Assembly ...	350-2011	£4 7 0
	Needle Cup (Bakelite)	270-4042	3
S.7	Mains Safety Socket	380-5206	6
	Mains Safety Socket Cable... ..	LO-1049	8

MODEL 1583.

Remove :—

REF. NO.	DESCRIPTION.	PART NO.
T.8	Output Transformer, Part No. 320-7034	Speaker
	Speech Coil and Cone, Part No. 360-3019	complete
	Permanent Magnet	360-1029
	Chassis Mounting Rubbers ...	5189
	Chassis Mounting Washers ...	29-2089
	Chassis Mounting Bolts	W-1345A

Add :—

REF. NO.	DESCRIPTION.	PART NO.	LIST PRICE.
T.8	Output Transformer, Part No. 320-7034	Speaker complete 360-1034	£1 11 0
	Speech Coil and Cone, Part No. 360-3028		
	Permanent Magnet,		
	Extruded Washer (Rubber) ...	27-4199	doz. 2 1
	Plain Washer (Rubber)	27-4198	2
	Bracket	280-7001	1 2
	Bolt (Coach type)	WB-1109	1
	Nut (Square)	WN-1109	1
or	Nut (Hexagon)	WN-1104	1
	Motor Cable	LO-1013	8
	Aerial Panel and Leads Assembly	380-5273	2 9
	Barretter Plug	380-5011	2 9
	Barretter Cable	LO-1002	1 0
	Cable Clamps	29-1644	doz. 4
	Porcelain Barretter Socket ...	270-4019	2 9
	Bridge Type Automatic Record Changer, A.C./D.C. Motor, Turntable, Needle Cups, and Pick-up and Lead Assembly	350-2013	£11 16 3
S.7	Mains Safety Socket	380-5206	6
	Mains Safety Socket Cable... ..	LO-1049	8