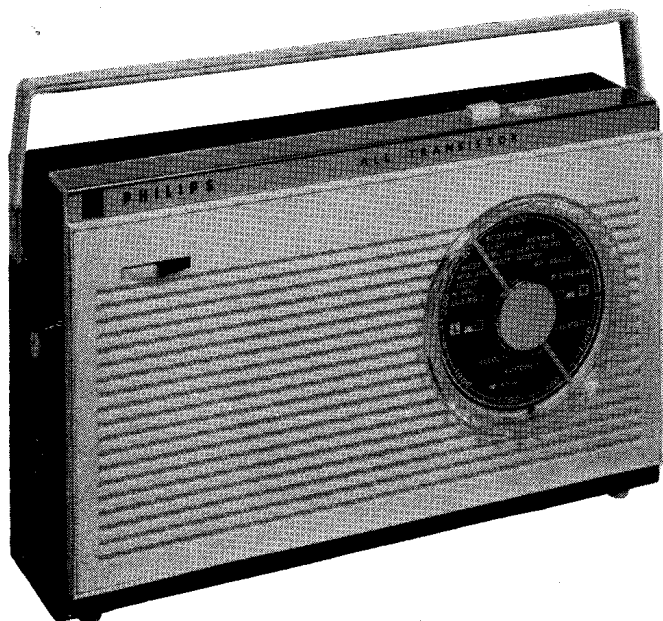

SERVICE INFORMATION FOR THE

PHILIPS

PORTABLE RECEIVER - L2G4IT



INTRODUCTION

The L2G4IT is a lightweight portable receiver, transistor operated, covering both Medium and Long wave-bands. Sockets are provided for the connection of a car radio aerial and for the earpiece accessory. The receiver is available in red or blue rexine cabinets.

TRANSISTOR/DIODE FUNCTIONS

T1	AF117	Mixer/Osc.
T2	AF117	I/F Amp.
T3	OC71	Detector
T4	OC81D	A/F Amp.
T5	OC81 }	Push-pull output
T6	OC81 }	(Matched pair)
X1	OA70	AGC Rectifier

BATTERIES

One 9V (Ever Ready PP7 or equivalent) giving approximately 150 hours use.

CONSUMPTION

With an "on load" supply of 9 volts and no signal input the current consumption should be 18mA average.

LOUDSPEAKER

4" dia. speech coil, impedance 15Ω.

OUTPUT

500mW.

WAVEBAND RANGES

M.W. 187-555 metres.

L.W. 1215-2000 metres.

CABINET DIMENSIONS

Depth 2¼". Height 7¼". Width 10¼".

WEIGHT

3¼ lb. (including batteries).

RELEASING THE CHASSIS

Place the receiver face up on a protected surface, pull off the tuning knob and release the pointer by springing apart the retaining collar with the blade of a screwdriver. Turn the set over, release the two captive screws and remove the back. Withdraw the panel retaining screws (3) and turn the chassis over towards the handle. All components are now accessible.

REPLACING THE CHASSIS

Turn the gang to max. and align the lever of the W/change control to the operating arm on the W/change switch. Turn the chassis over into position and replace the fixing screws. Place the pointer on the tuning spindle with the arms parallel to the top cabinet edge, then push it down to the lower section of the shaft.

Fit the tuning knob, battery and cabinet back.

OFFICIAL SERVICE AGENT :—

AMALGAMATED ELECTRIC SERVICES LTD.

WADDON FACTORY ESTATE

CROYDON

SURREY

Telephone CROYDON 7722

TRIMMING INSTRUCTIONS

General

- (a) Output should be observed with an output meter set for a 15 ohms load (trimming level 50 mW) and V/Control set to maximum.
- (b) When trimming the aerial circuits, couple the generator to the receiver via a turn of wire placed near the ferrite rod.
- (c) The signal generator should have an output impedance not greater than 75 ohms.

I.F. Trimming

Switch to M.W., turn gang to max. capacity and apply a modulated signal of 470 Kc/s to the alignment point, via a 470 Kpf capacitor.

Trim L12/13, L10/11 and L8/9 in that order for max. output.

M.W. Trimming

(a) Oscillator

Switch to M.W. set gang to max. and apply a signal of 537 Kc/s to the alignment point via a 470 Kpf capacitor. Trim L5/6/7 for max. output. Set generator to 1610 Kc/s turn gang to min. capacity and trim C4 for max. output. Repeat as necessary.

(b) R/F Circuits

With a signal of 623 Kc/s coupled to the aerial, tune gang for highest output reading; then adjust L3/4 for maximum output. Change the generator frequency to 1400 Kc/s and, maintaining the input position, tune gang for highest output reading, then trim C3 for maximum output.

L.W. Trimming

(a) Oscillator

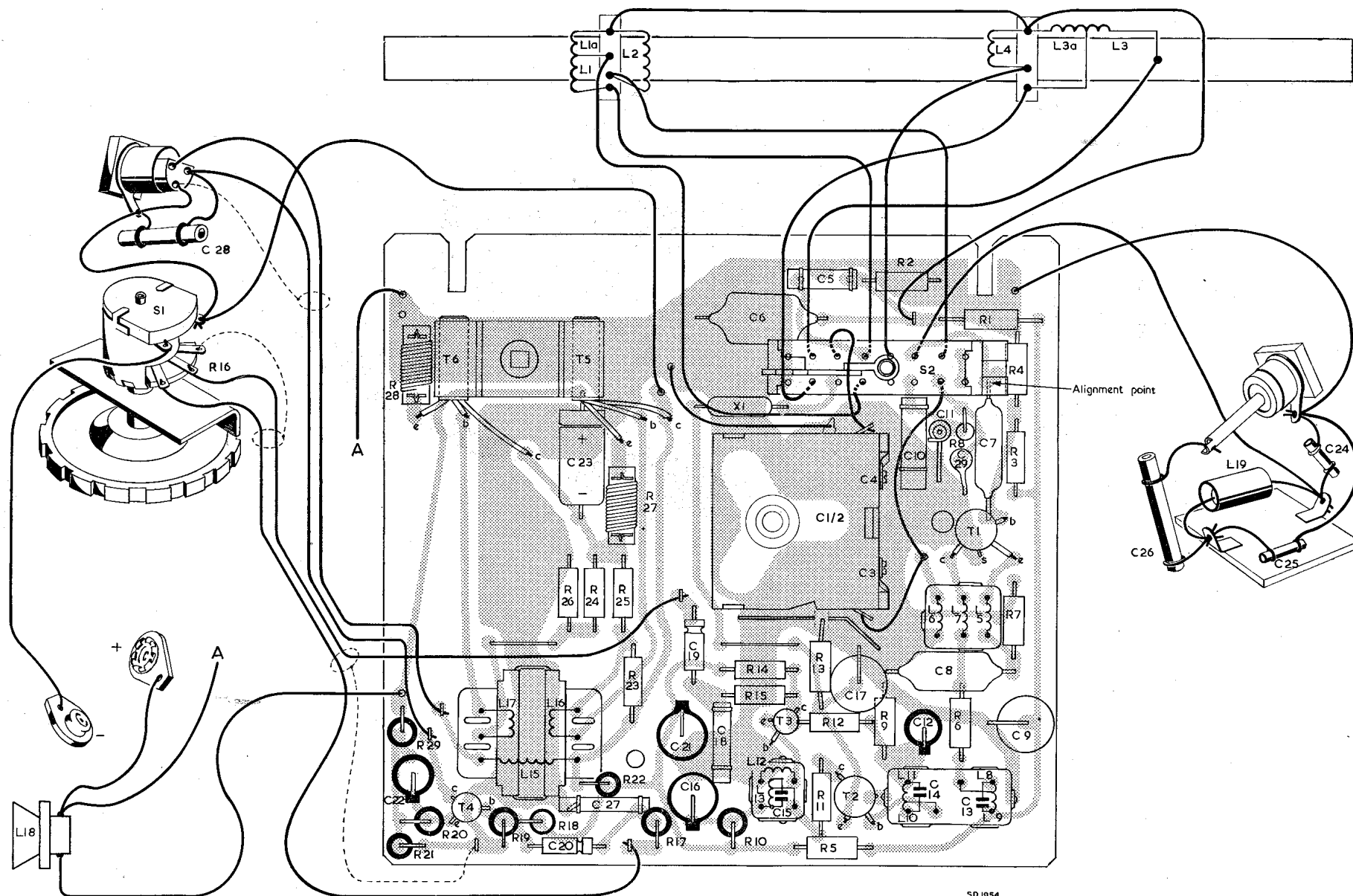
Inject a signal of 145.5 Kc/s to the alignment point via a 470 Kpf capacitor, switch to L.W. and turn gang to max. capacity. Adjust C11 for max. output.

(b) R/F Circuits

Set the generator to 180 Kc/s, connect it to the coupling coil and tune receiver for highest output reading. Adjust L1/L2 for maximum output, recheck M.W. R.F. alignment.

D.C. RES. OF COILS > 1 OHM

Coil No.	Resistance
L1	5 ohms
L1A	1.5 ohms
L3 + 3A	1.5 ohms
L15	220 ohms
L16	50 ohms
L17	50 ohms
L18	12 ohms

[illegible]

ERRATA :— Transpose " Live " Connections to Volume Control.

SD 1954

SPARE PARTS LIST

CABINET ASSEMBLY

Case Assembly—Red	Complete less backplate	...	...	HY.074.58
Case Assembly—Blue	...	...	...	HY.074.59
Grille only	...	...	...	HY.092.33
Cabinet front assembly—Moulded	...	...	...	MK.839.59
Chromium escutcheon plate	...	...	...	MK.684.04
Countersunk bolt 3 × 12 mm (10)	...	...	...	B066.AD/3×12
Station scale	...	...	...	MK.708.32
Speaker fixing nuts (2)	...	...	...	B020.ED/3
Lock washer (2)	...	...	...	B053.BD/3
Plain washer (2)	...	...	...	B050.CD/3
Backplate—Red	...	...	...	MK.841.12
Backplate—Blue	...	...	...	MK.841.11
Limited licence label	...	...	...	MK.707.29
Type label	...	...	...	MK.706.42
Special screw for backplate (2)	...	...	...	MK.962.40
Retaining washer for above (2)	...	...	...	MK.451.56
Handle assembly	...	...	...	MK.836.80
Screw for handle (2)	...	...	...	MK.838.31
Foam pad for battery 1"	...	...	...	HY.140.07
Battery label	...	...	...	MK.708.37
Feet for cabinet (4)	...	...	...	MK.910.34
Insert nut for switch lever	...	...	...	MK.927.44

CONTROL KNOBS

Volume—on/off	...	...	...	MK.857.73
Spring for above	...	...	...	MK.955.56
Tuning	...	...	...	MK.857.83
Spring for above	...	...	...	MK.990.85
Printed Panel Assembly Complete	...	...	...	MK.989.70

WAVECHANGE SWITCH ASSEMBLY

Switch assembly	...	...	...	MK.967.90
Push buttons (2)	...	...	...	MK.264.00
Springs for above (2)	...	...	...	A3.645.45
Operating lever for switch	...	...	...	MK.922.64
Spacer for above	...	...	...	B001.AC/3.1×5×4
Plain washer	...	...	...	B050.ED/3
Hexagonal nut	...	...	...	B020.ED/3
Spring	...	...	...	MK.84.08
Curved washer	...	...	...	B046.AF/5
Special Screw	...	...	...	MK.962.70

CAPACITORS

	Value	Permitted Tolerance %	
C1 } Gang	...	...	MK.211.29
C2 }	...	...	
C3 }	...	...	
C4 }	...	...	
C5 } Ceramic	56pF	1	C304.GB/D56E
C6 } Polyester	0.1μF	10	C296.AC/A100K
C7 } Polyester	8,200pF	10	C296.AC/A8K2
C8 } Polyester	18,000pF	10	C296.AC/A18K
C9 } Polyester	0.15μF	10	C296.TA/A150K
C10 } Ceramic	180pF	10	C304.GH/A180E
C11 } Trimmer	100pF	...	49.005.51/100E
C12 } Electrolytic	10μF	...	C425.AF/F10
C13 } Polystyrene	200pF	...	MK.206.87
C14 } Polystyrene	200pF	...	MK.206.87
C15 } Ceramic	91pF	1	B1.664.93
C16 } Electrolytic	160μF	...	C426.CE/D160
C17 } Polyester	0.15μF	...	C296.TA/A150K
C18 } Ceramic	3,900pF	-20+50	904/3K9
C19 } Electrolytic	3.2μF	...	C426.AN/C3.2
C20 } Electrolytic	3.2μF	...	C426.AN/C3.2
C21 } Electrolytic	160μF	...	C426.CE/D160
C22 } Electrolytic	100μF	...	C426.CE/B100
C23 } Electrolytic	160μF	...	C426.AM/D160
C24 } Ceramic	15pF	5	C304.GB/B15E
C25 } Ceramic	15pF	5	C304.GB/B15E
C26 } Ceramic	10,000pF	+50-20	904/10K
C27 } Ceramic	4,700pF	-20+50	904/4K7
C28 } Ceramic	10,000pF	-20+50	C301.GB/H10K
C29 } Ceramic	8pF	1pF	C322.BD/M8E
or C29 } Ceramic	3pF	...	C322.BD/M3E

MISCELLANEOUS

Aerial socket	...	...	...	MK.967.85
Earphone socket	...	...	...	MK.967.87
Locking ring for Aerial and Earphone sockets (2)	...	...	...	B053.ZZ/812
Solder tag for sockets (2)	...	...	...	MK.939.25
Chassis mounting pillar (2)	...	...	...	MK.605.14
Bracket for volume control	...	...	...	MK.083.38
Fixing nut for above (2)	...	...	...	B020.ED/3
Plain washer (2)	...	...	...	B050.CD/3
Lock washer (2)	...	...	...	B053.BD/3
Nut for volume control	...	...	...	MK.927.05
Battery connector—Male	...	...	...	MK.966.85
Battery connector—Female	...	...	...	MK.966.84
Mounting bush for gang (3)	...	...	...	MK.726.18
Distance piece for gang (3)	...	...	...	B001.AC/3.1×5×4
Screw for above (3)	...	...	...	B054.ED/3×8
Sleeving	...	...	...	K558.LB/Size
Heat sink	...	...	...	MK.081.42
Eyelet for above	...	...	...	MK.992.29
Rod for Aerial	...	...	...	MK.425.19
Aerial support (2)	...	...	...	MK.282.08
Fixing bush for condensers	...	...	...	MK.146.47
Pointer	...	...	...	MK.989.71
Screen lead	...	...	...	R292.KN/01GC9
Tag strip	...	...	...	MK.964.52
Special washer for printed panels	...	...	...	B.050.CR/3
Tag strip for Aerial socket components	...	...	...	MK.989.72

TRANSISTORS

T1	...	...	...	AF.117
T2	...	...	...	AF.117
T3	...	...	...	OC.71
T4	...	...	...	OC.81
T5	...	...	...	OC.81
T6	Matched pair	...	...	OC.81
X1	...	...	...	OA.70

TRANSFORMER AND COILS

L1—2	Aerial Coil—LW	...	...	MK.570.60
L3—4	Aerial Coil—MW	...	...	MK.570.59
L5—7	Oscillator Coil	...	...	MK.570.23
L8—11	1st I.F. Transformer	...	...	MK.570.24
L12—14	2nd I.F. Transformer	...	...	MK.570.27
L15—17	Driver Transformer	...	...	MK.516.37
L18	Loudspeaker	...	...	ND.2340.PZ
L19	Choke R/F	...	...	MK.550.29
Cores for L5, 8, 12 and 14	...	...	...	K5.120.00
*Earphone complete	...	...	...	AF.9110/11
Earphone only	...	...	...	EL.3593/07
Earloop	...	...	...	V3.053.88
Lead and plug assembly	...	...	...	A3.814.43
Plug only	...	...	...	HY.129.63

*This accessory is obtainable from:—
PHILIPS ELECTRICAL LTD.
CENTURY HOUSE, SHAFTESBURY AVENUE
LONDON, W.C.2.

RESISTORS

	Value (ohms)	Wattage	Permitted Tolerance %	
R1	Carbon	8,200	10	48.426.10/8K2
R2	Carbon	390	10	48.426.10/390E
R3	Carbon	33,000	10	48.426.10/33K
R4	Carbon	6,800	10	48.426.10/6K8
R5	Carbon	100	10	48.426.10/100E
R6	Carbon	390	10	48.426.10/390E
R7	Carbon	1,000	10	48.426.10/1K
R8	Carbon	68,000	10	48.426.10/68K
R9	Carbon	10,000	10	48.426.10/10K
R10	Carbon	2,200	10	48.426.10/2K2
R11	Carbon	180	10	48.426.10/180E
R12	Carbon	47,000	10	48.426.10/47K
R13	Carbon	270	10	48.426.10/270E
R14	Carbon	27,000	10	48.426.10/27K
R15	Carbon	4,700	10	48.426.10/4K7
R16	Potentiometer	50,000	Log Law	MK.812.49
R17	Carbon	470	10	48.426.10/470E
R18	Carbon	39,000	10	48.426.10/39K
R19	Carbon	18,000	10	48.426.10/18K
R20	Carbon	1,000	10	48.426.10/1K
R21	Carbon	15	10	48.426.10/15E
R22	Carbon	270	10	48.426.10/270E
R23	Carbon	1,500	5	48.426.05/1K5
R24	Carbon	1,500	5	48.426.05/1K5
R25	Carbon	82	5	48.426.05/82E
R26	Carbon	82	5	48.426.05/82E
R27	Wirewound	2.9	10	MK.792.22
R28	Wirewound	2.9	10	MK.792.22
R29	Carbon	2,200	10	48.426.10/2K2