PHILIPS "PHILETTE" Model L3G91T

General Description: Six-transistor, two-waveband, portable receiver with printed wiring panel. Car aerial socket. Loudspeaker impedance 30 ohms.

Power Supply: 9 volts (Types PP9, T6009, etc.). No signal consumption 6–9 mA.

Wavebands: M.W. 188–555 m.; L.W. 1177–2000 m.

Transistors: (T1) OC44; (T2) OC45; (T3) OC45; (T4) OC78D; (T5, T6) Matched pair OC78. Diode (X1) OA70.

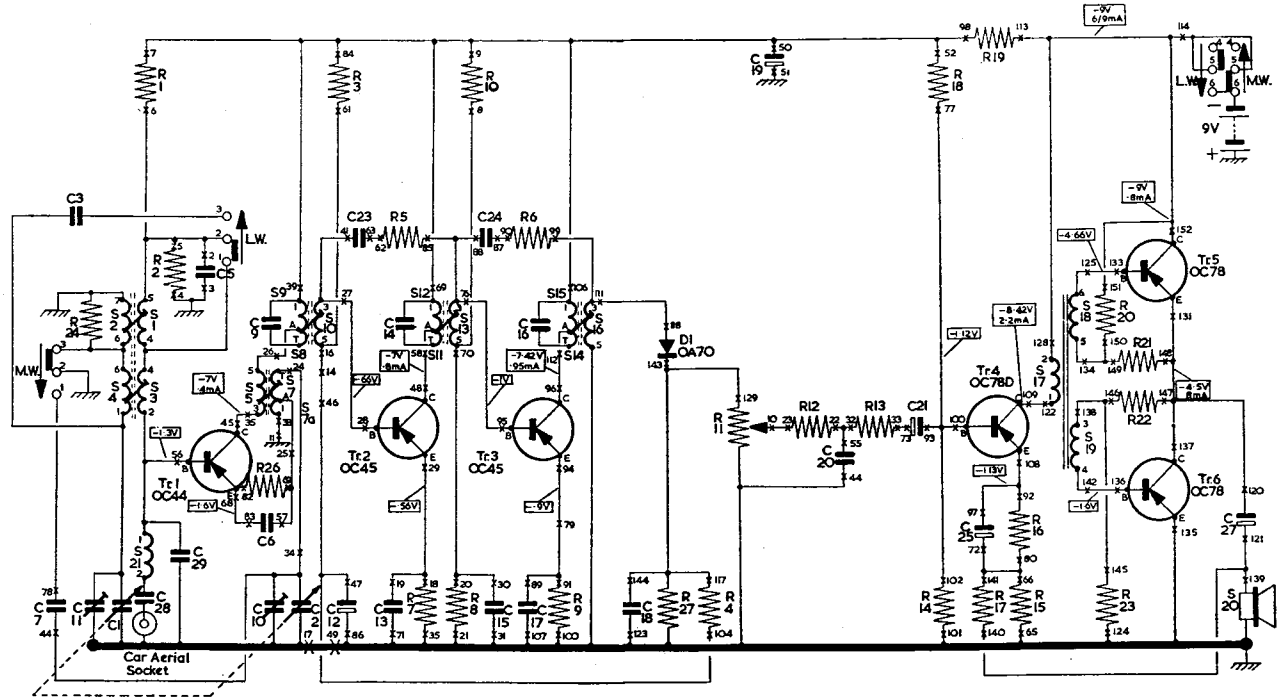
Alignment Procedure: With gang at maximum, adjust pointer to right-hand edge of scale trimming line, between M.W. and L.W. scale blocks. Disconnect loudspeaker and connect output meter in parallel with 30-ohm load resistor across speaker leads. Output level should be kept to 50 mW. Trimming tool can be made by cutting slot in No. 10 knitting needle.

I.F.: With set on M.W. and gang at minimum, inject 470 kc/s. to base of T1 via a 0·047-μF. capacitor connected in parallel with 2·2M resistor. Trim cores in order: S11, S14, S8, S11, S8. To adjust S14 metal cover must be removed. Cover should be replaced as soon as core has been adjusted. From serial no. 20,001 (red) and 70,001 (black), staggered tuning as follows: S14–S16 470 kc/s.; S11–S13 472 kc/s.; S8/9–S10 468 kc/s.

R.F.: Turn gang to minimum, inject a 537-kc/s. signal as above and trim S7. Set gang so that pointer lines up with left-hand edge of scale trimming line, inject a 1610-kc/s. signal and adjust C10. Repeat as necessary. Inject a 640-kc/s. signal as above and tune to signal. Without altering tuning, disconnect generator from T1 and loosely couple signal by clipping generator output lead on to insulation of connecting leads between M.W. and L.W. sections of internal aerial. Adjust S3/S4. Inject a 1425-kc/s. signal, tune to signal and adjust C11. Set to L.W., inject a 180-kc/s. signal to base of T1 as for I.F., and tune to signal. Without altering gang, loosely couple signal as above and adjust S1/S2. Finally repeat M.W. aerial circuit trimming.

Chassis Removal: Remove rear section of cabinet by unscrewing two ornamental fixing screws. Unsolder car radio aerial socket connections. Remove knobs (pull off), springs and station scale. Remove two long fixing pillars and bottom fixing nut. The centre section of cabinet can now be removed, and if necessary chassis separated from front section. Printed plate is held in position by two spring slips fitted to permanent magnet of loudspeaker. If panel is separated from chassis it is important to replace insulating washer fitted between loudspeaker and printed plate when re-assembling.

Servicing Notes: The usual precautions must be taken in respect of the printed panel and the transistors.



Circuit Diagram—Philips "Philette" Model L3G91T

Capacitors.

C1	196·1 pF.	C10	2–30 pF.	C17	82,000 pF. (125 v.)	C24	18 pF. (5%)	R3	68k
C2	110 pF.	C11	2–30 pF.	C18*	10,000 pF. (500 v.)	C25	100 (El. 6 v.)	R4	12k
C3	68 pF. (1%)	C12	10 (El. 50 v.)	C19	100 (El. 12 v.)	C27	100 (El. 6 v.)	R5	1·2k
C5	10,000 pF. (350 v.)	C13	82,000 (125 v.)	C20	47,000 pF. (125 v.)	C28	10 pF.	R6	3·9k
C6	6,800 pF. (500 v.)	C14	91 pF.	C21	1 (El. 50 v.)	C29	18 pF. (5%)	R7	680
C7	250 pF. (1%)	C15	47,000 pF. (125 v.)	C23	56 pF. (5%)			R8	4·7k
C9	91 pF.	C16	91 pF.			*Resistors.*		R9	1k
						R1	39k	R10	22k
						R2	10k	R11	50k (log.)

R12	1k	R20	2·7k (5%)
R13	1·5k	R21	100 (5%)
R14	12k	R22	2·7k (5%)
R15	15	R23	100 (5%)
R16	470	R24	0·22M
R17	2·2k	R26	3·9k
R18	47k	R27	18k
R19	680		

(10% unless otherwise indicated.)

* May be 4,700 pF. in early sets.