

**PHILIPS****“PHILETTE”****Model L3G9IT**

**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:** (T<sub>1</sub>) OC44; (T<sub>2</sub>) OC45; (T<sub>3</sub>) OC45; (T<sub>4</sub>) OC78D; (T<sub>5</sub>, T<sub>6</sub>) Matched pair OC78. Diode (X<sub>1</sub>) OA70.

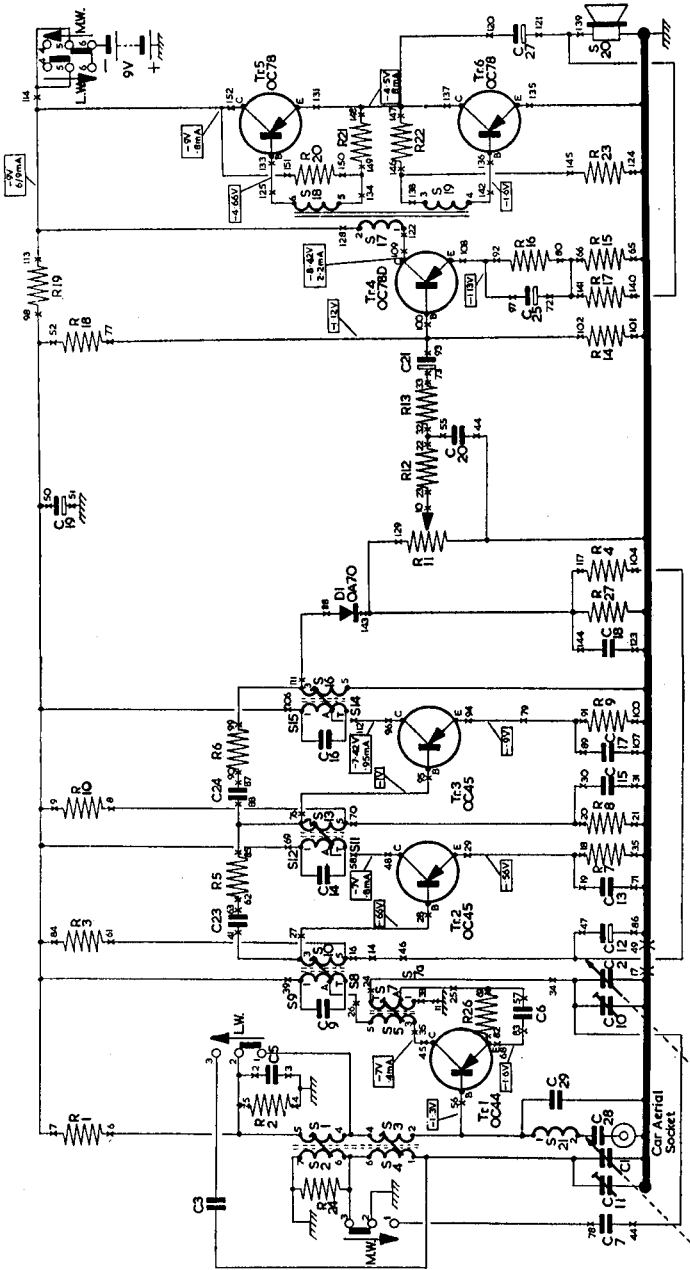
**Alignment Procedure:** With gang at maximum, adjust pointer to right-hand edge of scale trimming line, between M.W. and L.W. scale blocks. Disconnect loudspeaker and connect output meter in parallel with 30-ohm load resistor across speaker leads. Output level should be kept to 50 mW. Trimming tool 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 T<sub>1</sub> via a 0.047- $\mu$ F. capacitor connected in parallel with 2.2M resistor. Trim cores in order: S<sub>11</sub>, S<sub>14</sub>, S<sub>8</sub>, S<sub>11</sub>, S<sub>8</sub>. To adjust S<sub>14</sub> 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: S<sub>14</sub>–S<sub>16</sub> 470 kc/s.; S<sub>11</sub>–S<sub>13</sub> 472 kc/s.; S<sub>8/9</sub>–S<sub>10</sub> 468 kc/s.

**R.F.:** Turn gang to minimum, inject a 537-kc/s. signal as above and trim S<sub>7</sub>. Set gang so that pointer lines up with left-hand edge of scale trimming line, inject a 1610-kc/s. signal and adjust C<sub>10</sub>. Repeat as necessary. Inject a 640-kc/s. signal as above and tune to signal. Without altering tuning, disconnect generator from T<sub>1</sub> 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 S<sub>3</sub>/S<sub>4</sub>. Inject a 1425-kc/s. signal, tune to signal and adjust C<sub>11</sub>. Set to L.W., inject a 180-kc/s. signal to base of T<sub>1</sub> as for I.F., and tune to signal. Without altering gang, loosely couple signal as above and adjust S<sub>1</sub>/S<sub>2</sub>. 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 L3G9IT

- Capacitors.**
- C1 150 pF.
  - C2 150 pF.
  - C3 68 pF. (1%)
  - C5 10,000 pF. (350 v.)
  - C6 6,800 pF. (500 v.)
  - C7 250 pF. (1%)
  - C9 91 pF.
  - C10 2-30 pF.
  - C11 2-30 pF.
  - C12 10 (EL 50 v.)
  - C13 82,000 (125 v.)
  - C14 91 pF.
  - C15 47,000 pF. (125 v.)
  - C16 91 pF.
  - C17 82,000 pF. (125 v.)
  - C18\* 10,000 pF. (500 v.)
  - C19 100 (EL 125 v.)
  - C20 47,000 pF. (125 v.)
  - C21 1 (EL 50 v.)
  - C23 50 pF. (5%)
  - C24 R6
  - C25 100 (EL 0 v.)
  - C27 100 (EL 0 v.)
  - C28 100 pF.
  - C29 15 pF. (5%)
  - C34 18 pF. (5%)
  - C35 100 (EL 0 v.)
  - C37 100 (EL 0 v.)
  - C38 100 pF.
  - C39 15 pF. (5%)
  - C44 18 pF. (5%)
  - C45 100 (EL 0 v.)
  - C47 100 (EL 0 v.)
  - C48 100 pF.
  - C49 15 pF. (5%)
  - C54 18 pF. (5%)
  - C55 100 (EL 0 v.)
  - C57 100 (EL 0 v.)
  - C58 100 pF.
  - C59 15 pF. (5%)
  - C60 2-30 pF.
  - C61 2-30 pF.
  - C62 10 (EL 50 v.)
  - C63 82,000 (125 v.)
  - C64 91 pF.
  - C65 47,000 pF. (125 v.)
  - C66 91 pF.
  - C67 250 pF. (1%)
  - C69 91 pF.
- Resistors.**
- R1 39k
  - R2 10k
  - R3 68k
  - R4 12k
  - R5 1-2k
  - R6 3-9k
  - R7 680
  - R8 4-7k
  - R9 22k
  - R10 50k (log.)
  - R11 50k (log.)
  - R12 1k
  - R13 1-5k
  - R14 22k
  - R15 43
  - R16 470-2k
  - R17 47k
  - R18 47k
  - R19 680
  - R20 2-7k (5%)
  - R21 100 (5%)
  - R22 2-7k (5%)
  - R23 100 (5%)
  - R24 0-22M
  - R26 3-9k
  - R27 18k
  - R28 20
  - R29 20
  - R30 100
  - R31 100
  - R32 100
  - R33 100
  - R34 100
  - R35 100
  - R36 100
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  - R40 100
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  - R98 100
  - R99 100
  - R100 100

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