"TRADER" SERVICE SHEET

947

EKCO A104, U109

and Export Model A129

DESIGNED to be easily convertible from A.C. to A.C./D.C. operation, the Ekco A104 is a 4-valve (plus rectifier) 3-band superhet for operation on A.C. mains of 200-250 V, 40-100 c/s. Provision is made for the use of a self-contained frame aerial, for a gramophone pick-up, and for an external speaker. The waveband ranges are : 16-51 m, 185-570 m and 950-1,250 m.

The U109 is similar in most respects to the A104, but it incorporates a simple conversion which renders it suitable for operation from A.C. or D.C. mains of the same voltage range. The differences are fully described overleaf.

A third model, the A129, is an export version of the A104. It has a Continental tuning scale, and its mains transformer is tapped for 100-135 V mains. There is no export version of the U109.

Release dates and original prices: A104, September 1949, £18 19*s* 9*d*; *U109, October* 1949, £18 19*s* 9*d*. *Purchase tax extra.*

CIRCUIT DESCRIPTION

Frame or external aerial input to aerial coupling coils **L3** (S.W.), **L4** (M.W.) and **L5** (L.W.), via I.F. acceptor filter circuit **C1, L2,** is inductively coupled to single-tuned circuits **L6, C42** (S.W.), **L7, C42** (M.W.) and **L8, C42** (L.W.), which precede a triode-hexode valve **(V1, Mullard UCH42)** operating as frequency changer with internal coupling. In the A.C./D.C. version, isolating capacitors **C47, C48** are included in the aerial coupling circuit.

Triode oscillator grid coils **L9** (S.W.), **L10** (M.W.) and **L11** (L.W.) are tuned by **C43.** Parallel trimming by **C44** (S.W.), **C45** (M.W.) and **C46** (L.W.); series tracking by **C14** (S.W.), **C12** (M.W.), and **C13** (L.W.). Inductive reaction coupling is employed on all bands, with additional capacitative bottom coupling on S.W. due to the common impedance of tracker **C14** in anode and grid circuits. The neutralizing capacitor **C9** is in circuit only on S.W.

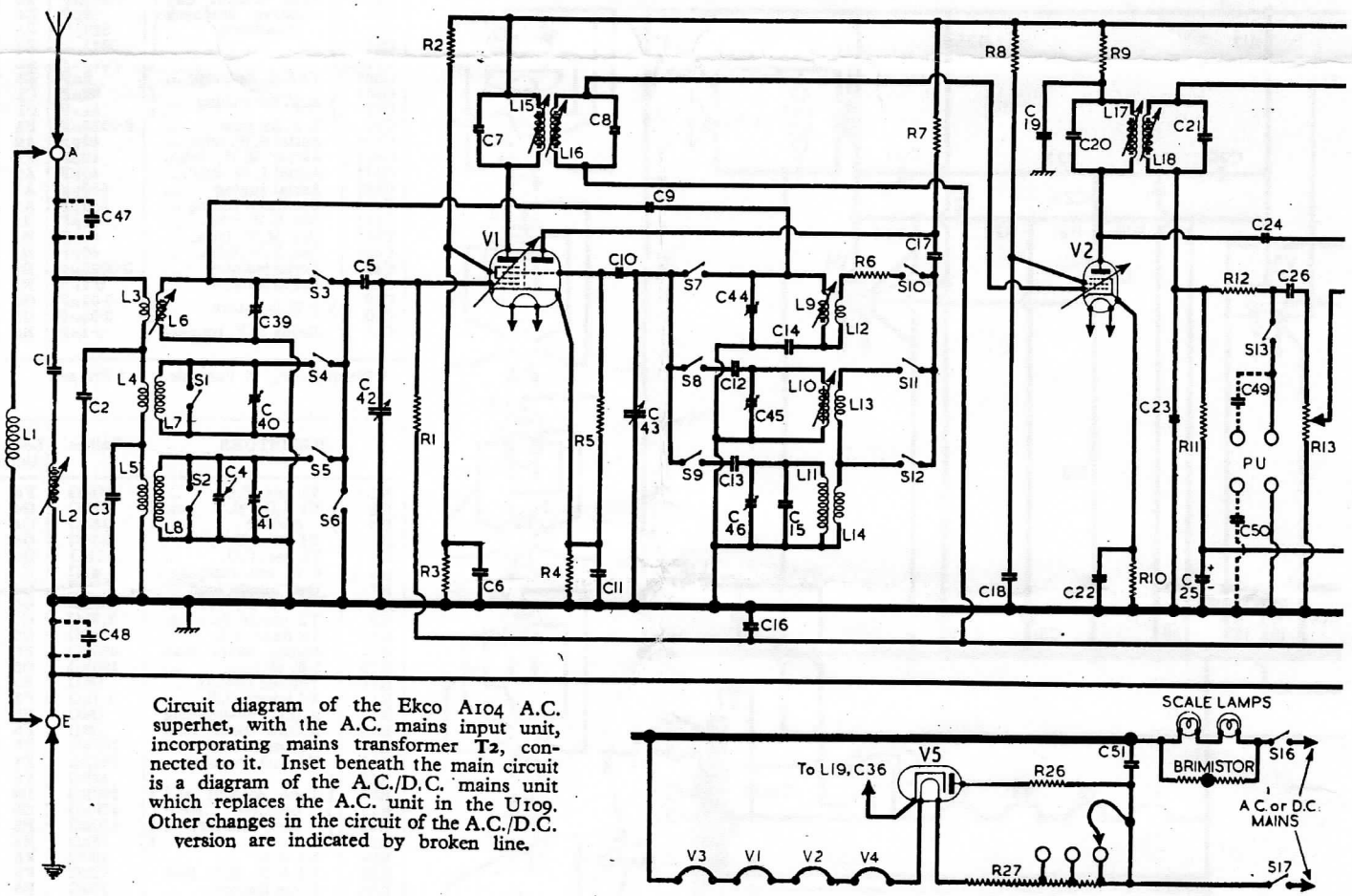
Second valve **(V2, Mullard UF41)** is a variable-mu R.F. pentode operating as intermediate frequency amplifier with tuned transformer couplings **C7, L15, L16, C8** and **C20, L17, L18, C21.**

Intermediate frequency 460 kc/s.

Diode second detector is part of double diode triode valve **(V3, Mullard UBC41).** Audio frequency component in rectified output is developed across diode load resistor **R11** and passed via A.F. coupling capacitor **C26** and manual volume control **R13** to grid of triode section, which acts as A.F. amplifier.

Provision is made for the connection of a gramophone pick-up across **C26, R13,** via switch **S13,** and in the A.C./D.C. model the P.U. sockets are isolated by capacitors **C49, C50.**

Second diode of **V3,** fed from **V2** anode via **C24,** provides D.C. potential which is developed across load resistor **R16** and fed back through decoupling circuit to F.C. and I.F. valves, giving automatic gain control. Delay voltage, together with G.B. for triode section, is obtained from the drop along **R14.**



Circuit diagram of the Ekco A104 A.C. superhet, with the A.C. mains input unit, incorporating mains transformer **T2,** connected to it. Inset beneath the main circuit is a diagram of the A.C./D.C. mains unit which replaces the A.C. unit in the U109. Other changes in the circuit of the A.C./D.C. version are indicated by broken line.