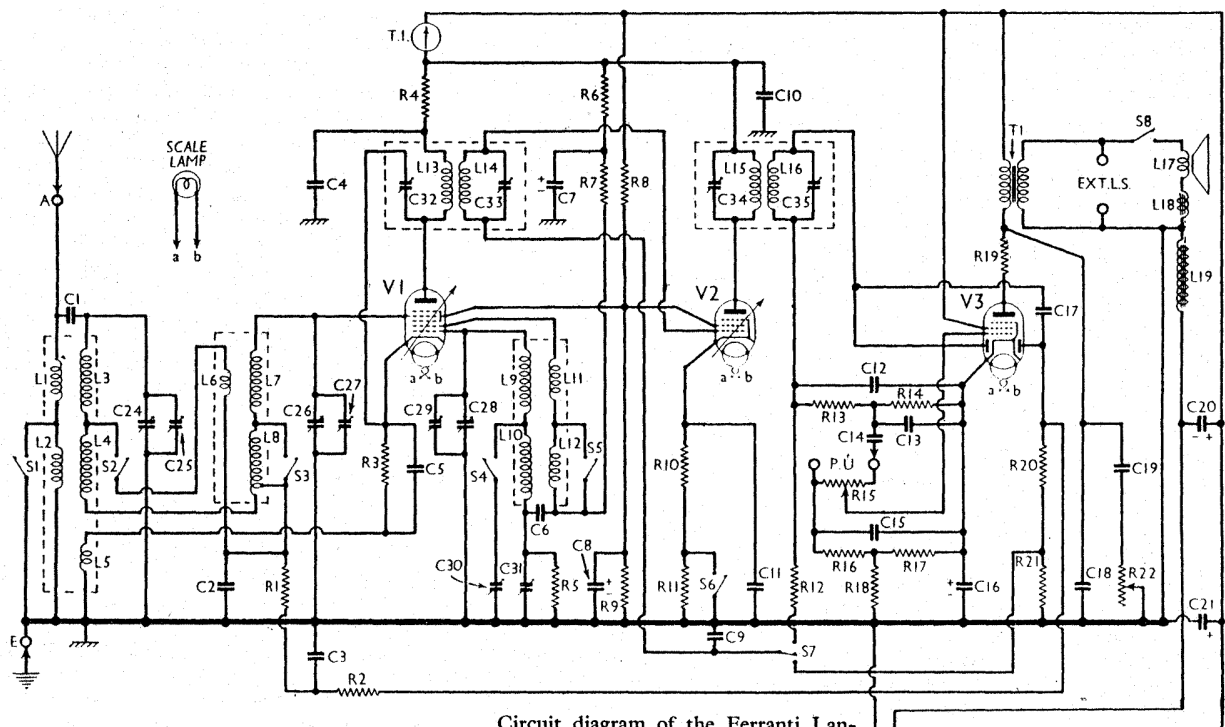


FERRANTI - NOVA



COMPONENTS AND VALUES

Condensers	Values (μF)
C1	Capacitive aerial coupling .. 0.000016
C2	Band-pass coupling .. 0.05
C3	V1 A.V.C. line decoupling .. 0.05
C4	V1 tetrode anode decoupling .. 0.1
C5	V1 cathode by-pass .. 0.05
C6	V1 oscillator anode decoupling .. 0.01
C7*	V1 and V2 S.G.'s by-pass .. 1.0
C8*	V2 C.G. decoupling .. 4.0
C9	V1 and V2 anodes decoupling .. 0.05
C10	V2 cathode by-pass .. 0.1
C11	V2 cathode by-pass .. 0.1
C12	I.F. by-passes .. 0.00015
C13	I.F. coupling to vol. control .. 0.00015
C14	V3 C.G. decoupling .. 0.02
C15	V3 cathode by-pass .. 0.25
C16*	Coupling to V3 A.V.C. diode .. 0.00015
C17	Fixed tone corrector .. 0.002
C18	Part of tone control filter .. 0.05
C19	I.F. smoothing .. 8.0
C20*	Mains H.F. by-pass .. 0.002
C21	Mains aerial coupling .. 0.002
C22	Band-pass primary tuning .. —
C23	Band-pass secondary tuning .. —
C24†	Band-pass primary trimmer .. —
C25†	Band-pass secondary trimmer .. —
C26†	Oscillator tuning .. —
C27†	Oscillator trimmer .. —
C28†	Oscillator M.W. tracker .. —
C29†	Oscillator L.W. tracker .. —
C30†	1st I.F. trans pri. tuning .. —
C31†	1st I.F. trans sec. tuning .. —
C32†	2nd I.F. trans pri. tuning .. —
C33†	2nd I.F. trans sec. tuning .. —
C34†	—
C35†	—

* Electrolytic † Variable ‡ Pre-set.

Circuit diagram of the Ferranti Lancastria receiver. The Nova circuit is similar, except that the tuning indicator is omitted, as are S6, S7, R11 and R12. See also paragraph in General Notes.

Resistances	Values (ohms)
R1	V1 tetrode C.G. decoupling .. 250,000
R2	V1 A.V.C. line decoupling .. 1,000,000
R3	V1 fixed G.B. resistance .. 300
R4	V1 tetrode anode decoupling .. 1,000
R5	V1 oscillator grid resistance .. 50,000
R6	V1 and V2 S.G.'s potential divider .. 25,000
R7	V2 fixed G.B. resistance .. 450
R8	Noise suppressor resistance .. 2,000
R9	V2 C.G. decoupling .. 250,000
R10	I.F. stopper .. 100,000
R11*	V3 signal diode load .. 500,000
R12*	Manual volume control .. 1,000,000
R13	V3 C.G. decoupling .. 100,000
R14	V3 G.B. and A.V.C. delay voltage resistances .. 140
R15	V3 anode circuit stabiliser .. 600
R16	V3 A.V.C. diode load .. 4,000,000
R17	Variable tone control .. 1,000,000
R18	—
R19	—
R20	—
R21	—
R22	—

* In Lancastria model only.

VALVE ANALYSIS

Valve voltages and currents given in the table below are those measured in our receiver when it was operating on mains of 230 V, using the 230 V tapping on the mains transformer. The volume control was at maximum and the set was tuned to the lowest wavelength on the medium band, but there was no signal input. In the case of the "Lancastria" model the noise suppressor switch should be set so that the receiver is operating at maximum sensitivity.

Voltages were measured on the 1,200 V scale of an Avometer, with chassis as negative.

Valve	Anode Volts	Anode Current (mA)	Screen Volts	Screen Current (mA)
V1 VHT4*	300	1.5	100	5.2
V2 VPT4	305	4.6	100	2.1
V3 PT4D	295	37.0	305	6.6
V4 R4	370†	—	—	—

* Osc. anode (G2) 105 V, 2.0 mA.
† Each anode, A.C.

Other Components (Cont.)	Approx. Values (ohms)
T2	Mains trans. { Pri. total .. 40.0 Heater sec. .. 0.05 Rect. fil. sec. .. 0.1 H.T. sec. total .. 650.0
T.I.*	Tuning indicator meter .. 1,200.0
Sr-S5	Waveband switches .. —
S6, S7*	Noise suppressor switches .. —
S8	Internal speaker switch .. —
S9	Mains switch, ganged R15 .. —

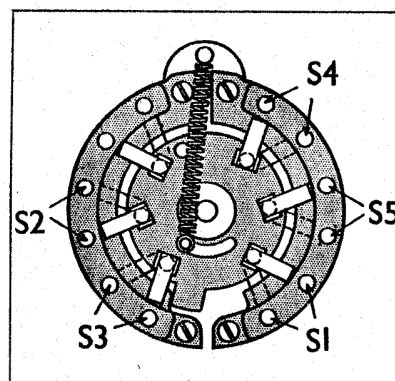
* In Lancastria model only.

GENERAL NOTES

Switches.—S1-S5 are the waveband switches, mounted in a single rotary unit, indicated in the under-chassis view. A separate diagram of this switch unit is given, on which the contacts of the five switches are shown. The diagram is drawn as seen from the rear of the chassis. All the switches are closed on the M.W. band and open on the L.W. band.

Other Components	Approx. Values (ohms)
L1	Aerial coupling coils .. 17.0
L2	—
L3	Band-pass primary coils .. 68.0
L4	—
L5	Image rejector coil .. 5.0
L6	Band-pass coupling coil .. 0.5
L7	—
L8	Band-pass secondary coils .. 0.2
L9	—
L10	Band-pass secondary coils .. 5.0
L11	—
L12	Oscillator grid tuning coils .. 41.0
L13	—
L14	Oscillator anode reaction coils .. 4.0
L15	—
L16	1st I.F. trans. { Pri. .. 25.0 Sec. .. 0.3
L17	2nd I.F. trans. { Pri. .. 1,600.0 Sec. .. 0.3
L18	Speaker speech coil .. 250.0
L19	Hunt neutralising coil .. 0.3
Tr	Speaker input trans. { Pri. .. 250.0 Sec. .. 0.3

S6 and S7 (Lancastria model only) are in a single Q.M.B. unit at the rear of the chassis, shown dotted in our under-chassis view. S8 is the internal speaker switch, of the rotary type, mounted at the rear of the speaker. S9 is the Q.M.B. mains switch, ganged with the volume control R15.



The wavechange switch unit, as seen from the rear. One set of switch contacts is not used.