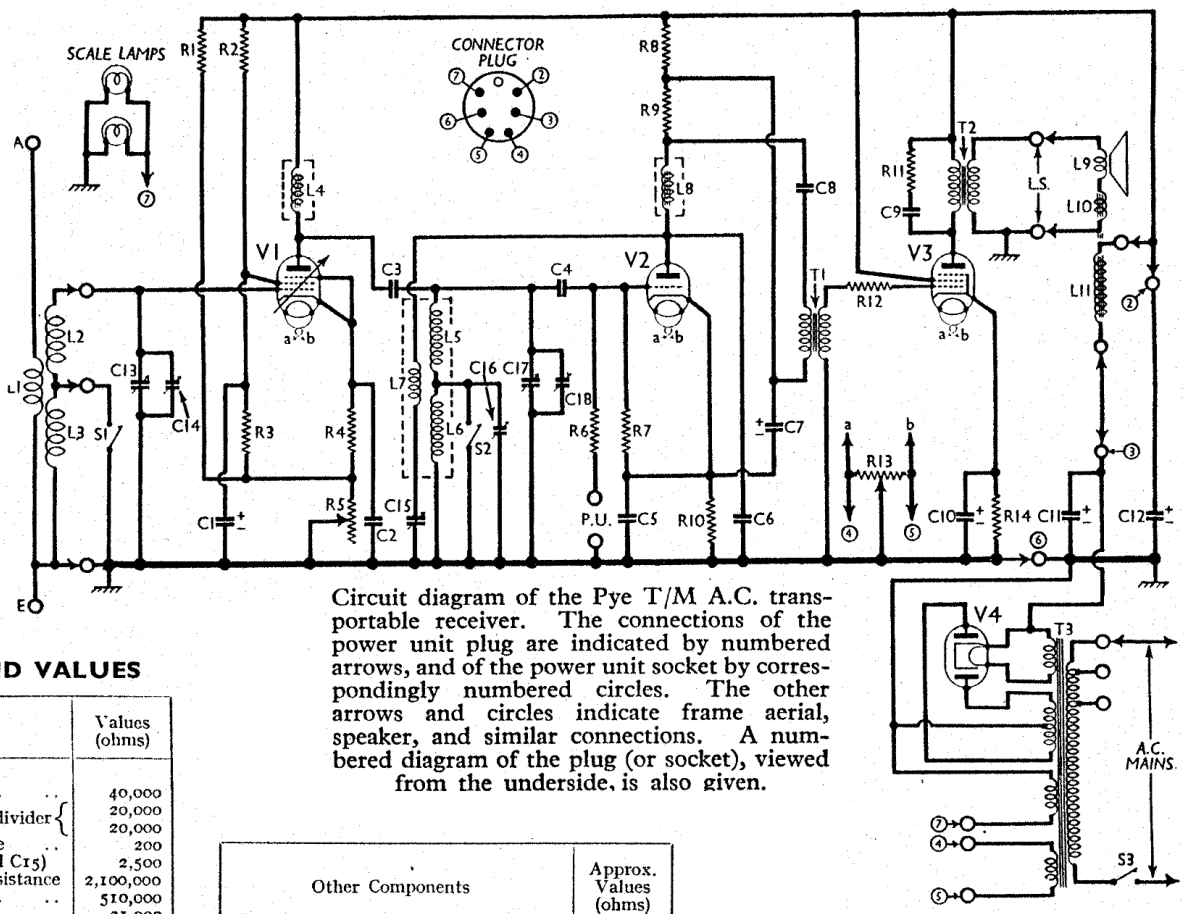
PYE T/M TRANSPORTABLE



Circuit diagram of the Pye T/M A.C. transportable receiver. The connections of the power unit plug are indicated by numbered arrows, and of the power unit socket by correspondingly numbered circles. The other arrows and circles indicate frame aerial, speaker, and similar connections. A numbered diagram of the plug (or socket), viewed from the underside, is also given.

COMPONENTS AND VALUES

	Resistances	Values (ohms)
R1	Gain control bleeder	40,000
R2	V1 S.G. H.T. potential divider	20,000
R3	V1 S.G. H.T. potential divider	20,000
R4	V1 fixed G.B. resistance	200
R5	V1 gain control (ganged C15)	2,500
R6	Gram. pick-up series resistance	2,100,000
R7	V2 grid leak	510,000
R8	V2 anode decoupling	21,000
R9	V2 anode load	41,000
R10	V2 G.B. resistance (Gram.)	800
R11	Part of tone correction filter	11,000
R12	V3 grid H.F. stopper	26,000
R13	Hum control	140
R14	V3 G.B. resistance	150

	Condensers	Values (μF)
C1*	V1 S.G. by-pass	2·0§
C2	V1 cathode by-pass	0·5
C3	H.F. coupling to L5, L6	0·00005
C4	V2 grid condenser	0·00005
C5	V2 cathode by-pass	0·1
C6	V2 anode H.F. by-pass	0·001
C7*	V2 anode decoupling	2·0
C8	L.F. coupling to T1	0·1
C9	Part of tone correction filter	0·005
C10*	V3 cathode by-pass	50·0
C11*	H.T. smoothing	8·0
C12*	H.T. smoothing	8·0
C13†	Frame aerial tuning	—
C14‡	Frame aerial trimmer	—
C15†	Reaction condenser (ganged R5)	—
C16‡	H.F. circuit L.W. trimmer	—
C17†	H.F. circuit tuning	—
C18‡	H.F. circuit main trimmer	—

* Electrolytic † Variable ‡ Pre-set
§ May be 0.5 μF paper tubular.

	Other Components	Approx. Values (ohms)
L1	External aerial coupling	0·2
L2	Frame aerial windings	1·8
L3	Frame aerial windings	20·8
L4	V1 anode H.F. choke	660·0
L5	Tuned grid H.F. coils	2·2
L6	Tuned grid H.F. coils	16·0
L7	Reaction coil	2·4
L8	V2 anode H.F. choke	660·0
L9	Speaker speech coil	2·0
L10	Hum neutralising coil	0·2
L11	Speaker field coil	3,000·0
T1	Intervalve trans. Pri.	770·0
	Intervalve trans. Sec.	1,900·0
T2	Output trans. Pri.	700·0
	Output trans. Sec.	0·3
T3	Mains trans. Pri. total	44·0
	Mains trans. Heater sec.	0·04
	Mains trans. Lamp sec.	0·35
	Mains trans. Rect. heat. sec.	0·2
	Mains trans. H.T. sec.	350·0
S1,S2,	Waveband switches	—
S3	Mains switch	—

GENERAL NOTES

Switches.—There are only two wave-change switches, **S1** and **S2**, seen in the under-chassis view. Both are *closed* on the M.W. band and *open* on the L.W. band.

S3, the mains switch, is mounted on one side of the power pack unit.

Coils.—Apart from the frame aerial, the remaining tuning coils are in a single screened unit on the chassis deck. This unit also contains the trimmer **C16**, the two small fixed condensers **C3** and **C4**, and the resistance **R7**.

The chokes **L4** and **L8** are in screened units beneath the chassis deck.

VALVE ANALYSIS

Measurements of valve voltages and currents given in the table below were made with the receiver operating on mains of 220 V, using the 216-235 V tapping. The volume control was turned so that the whole of the resistance was out of circuit (about 135 degrees towards the maximum position) and there was no signal input, the frame being disconnected and the terminals on the chassis shorted together.

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 A50N	250	4·6	100	1·9
V2 A30B	100	2·2	—	—
V3 A70C	220	35·0	250	3·8
V4 A11B	355†	—	—	—

† Each anode, A.C.

Scale Lamps.—These are two Osram M.E.S. types, rated at 4.0 V, 0.3 A. They fit into special rubber cowls, arranged so that the glass scale is illuminated by transmitted light.