PYE PS

Four-valve, plus rectifier, three wave-band A.C. mains superhet in table, console and radiogram forms. Push-buttons for five stations.

Circuit.—The aerial is connected to two primary coils coupled to the three tuned input coils. On M.W. extra coupling is obtained through C4 and on L.W. through C5. First three buttons in the circuit are S., M. and L. band switches. The five others give pre-set stations, the appropriate M. or L.W. windings being tuned by C10–C14.

V1 is a triode-hexode frequency changer with a tuned anode oscillator circuit, five permeability-tuned coils being provided for the push-button stations. To help understanding the oscillator circuit: L6 and L7 form the M.W. coil; L8 is the L.W. coil; and L9, L10 the S.W.; C25, M.W. pad; C26, L.W. pad; C22, S.W.pad.

Permeability-tuned I.F. transformers couple V2, the I.F. amplifier, and V3 a double-diode-triode. A.V.C. delay bias is provided by R18+R19, and bias for V3 grid by R19 alone.

Resistance-capacity coupling circuit to V4, the output valve, includes R24, a tone control. Another tone circuit, R27, C46 is across the valve, and R28 is a balancing resistance across the hum coil in the speaker.

V5, the full-wave rectifier, and the smoothing arrangements are conventional.

P.U. sockets are provided; the pilot lamps are 6v. .5 amp. M.E.S.; an extension speaker should have an impedance of 2-4 ohms. Mains consumption, 70 watts.

GANGING

I.F. CIRCUITS: Adjust at 465 kc. (set tuned to 500 m.).

S.W. BAND: Adjust C3 and C6 at 15 m.

M.W. BAND: Adjust C24 and C8 at 200 m.

L.W. BAND: Adjust C26 at 1,800 m., and C7 at 1,300 m. Pad with C26 a 1,800 m. rocking gang.

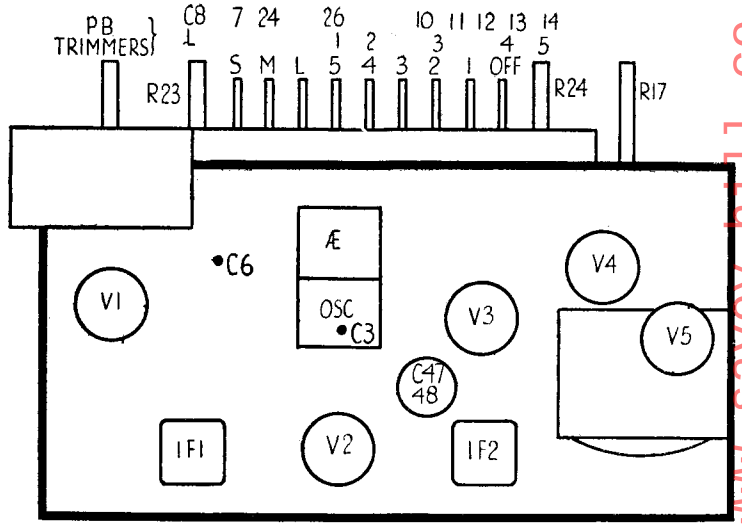
BUTTON ADJUSTMENT

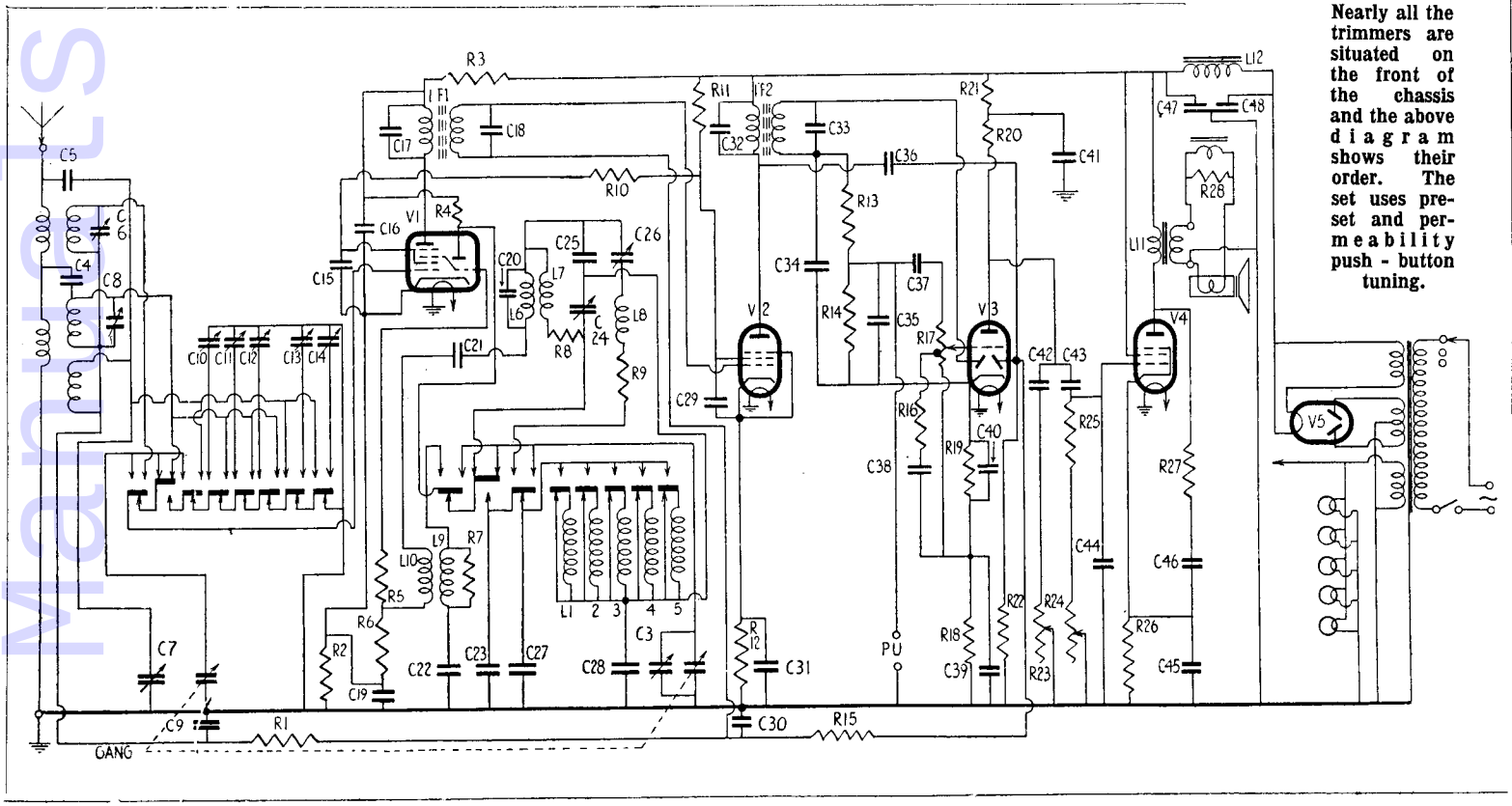
Wave-ranges and trimmers of the push-buttons are:—

Button	Range (m.)	Osc.	Aerial
1	1,150–2,000	L5	C14
2	1,150–2,000	L4	C13
3	270–560	L3	C12
4	250–530	L2	C11
5	200–330	L1	C10

VALVE READINGS

V.	*Type.*	*Electrode.*	*Volts.*	*Ma.*
1	TH4B	Anode	237	1.4
		Screen	81	4.8
		Osc. anode	167	7
		Cathode	2.1	13.2
2	VP4B	Anode	255	8.3
		Screen	177	2.9
		Cathode	1.7	11.2
	TDD4	Anode	104	1.9
		Cathode	9	1.9
4	Pen B4	Anode	235	64
		Screen	255	6.5
		Cathode	10.6	70.5
	DW4/350 (*All Mullard*)	Anodes	350 A.C.	—
		Cathode	360	97





Nearly all the trimmers are situated on the front of the chassis and the above diagram shows their order. The set uses pre-set and permeability push-button tuning.

RESISTANCES

R.	*Ohms.*	*R.*	*Ohms.*
1	1 meg.	15	1 meg.
2	150	16	33,000
3	2,200	17	1 meg.
4	10,000	18	3,300
5	150	19	1,500
6	47,000	20	47,000
7	10,000	21	22,000
8	22	22	1 meg.
9	50	23	.25 meg.
10	20,000	24	1 meg.
11	10,000	25	10,000
12	150	26	150
13	100,000	27	5,000
14	250,000	28	—

CONDENSERS

C.	*Mfds.*	*C.*	*Mfds.*
4	5 mmfds.	31	.1
5	1 ,,	32	130 mmfds.
9	.05	33	140 ,,
15	.1	34	100 ,,
16	.1	35	100 ,,
17	130 mmfds.	36	20 ,,
18	140 ,,	37	.005
19	.1	38	.01
20	.001	39	20
21	.0002	40	20
22	.005	42	.05
23	90 mmfds.	43	.01
25	630 ,,	44	.0005
27	410 ,,	45	.5
28	2,000 ,,	46	.005
29	.1	47	16
30	.05	48	16

WINDINGS

L.	*Ohms.*	*L.*	*Ohms.*
1	6	I.F. windings	7.5
2+3	2.2	11	260
4+5	5.4	12	1,00