PHILIPS 480A

Three-valve, plus rectifier, three waveband table superhet for A.C. mains. Made by Philips Lamps, Ltd., Century House, Shaftesbury Avenue, London, W.C.2.

Circuit.—Band-pass input is used on medium and long waves and a transformer on short waves. V1 is the frequency-changer, the oscillator section using tuned grid coils with coupled reaction windings. The M.W. coil is iron cored. Trimmer-tuned I.F. transformers link V2, the I.F. amplifier, and V3, the double-diode output pentode.

The A.V.C. diode is fed from V2 anode in the usual way. The volume control, which forms part of the demodulation diode load, is also connected to a negative feed-back tone circuit associated with a special winding on the output transformer.

A full-wave rectifier, V4, is employed, a resistance (R1) being used for smoothing.

DRIVE CORD.—Viewed from front, pass end of cord through hole on drive drum and attach to tension spring.

Pass cord anti-clockwise to bottom of drum and under chassis to drive spindle. Take two turns anti-clockwise round the spindle and bring up and over the top right-hand pulley to the top left-hand pulley.

Pass cord to bottom of drum and round, and then take through hole and attach to the spring.

WARNING.—Some components are screwed to the front panel. These screws must not be too long or too short.

GANGING

I.F. CIRCUITS.—Adjust I.F. trimmers for maximum at 128 kc.

M.W. BAND.—Inject to 1,600 kc. and tune to this point on dial (187.5 metres). Adjust C18, C10 and C6 for maximum. Repeat operations.

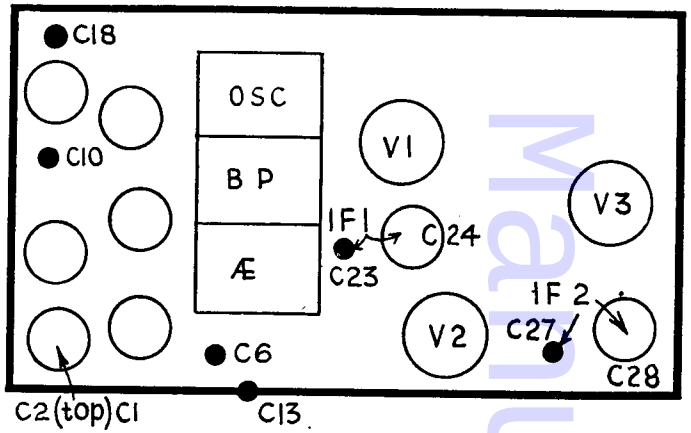
There are no adjustments for S.W. or L.W.

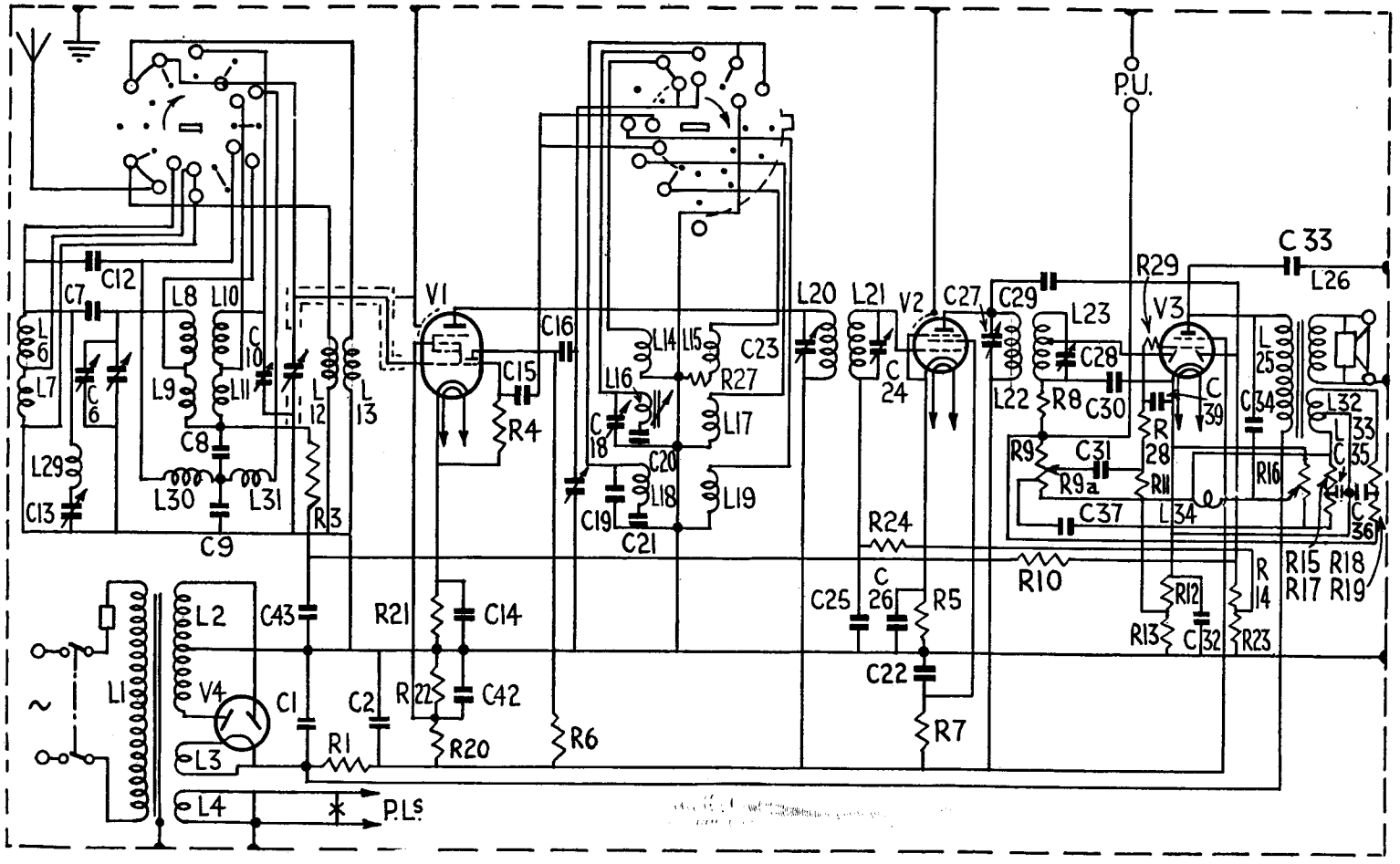
I.F. FILTER.—Inject strong 128 kc. signal to aerial sockets. Adjust C13 for *minimum*.

VALVE VOLTAGES

V	Type	Electrode	Volts	Ma.
1	ECH3	Anode	255	1.2
		Screen	70	1.8
		Osc. anode	140	4.3
		Cathode	2	7.3
2	EF9	Anode	250	5
		Screen	90	1.5
		Cathode	2.2	6.5
3	EBL1	Anode	260	32
		Screen	240	5.2
		Cathode	19	37.2
4	AZ1 (Mullard)	Cathode	300	51

Pilot lamps, types 8045D—07.





WINDINGS

L	Ohms.	L	Ohms
2	300	19	9.5
3, 4	less than .5	20	115
6	26	21	115
7	90	22	115
8	4.5	23	90
9	48	24	35
10	4.4	25	700
11	45	26	1
12	2	27	2.5
13, 14	less than .5	29	110
15	1	30	.7
16	8	31	.7
17	2.5	32	180
18	32	33	180
		34	800

RESISTANCES

R	Ohms.	R	Ohms.
1	1,800	15	1,500
3	.1 meg.	16	50,000
4	47,000	17	12,000
5	330	18	10,000
6	27,000	19	.82 meg.
7	.1 meg.	20	47,000
8	47,000	21	330
9	.65 meg.	22	33,000
9a	.05 meg.	23	.56 meg.
10	1.5 meg.	24	1.8 meg.
11	1 meg.	27	47
12	150	28	82,000
13	390	29	56
14	.56 meg.		

CONDENSERS

C	Mfds.	C	Mfds.
1	50	21	394 mmfds.
2	15	22	.047
or 1, 2	32+32	23	70–100 mmfds.
3	490 mmfds.	24	70–100 mmfds.
4	490 mmfds.	25	.047
5	490 mmfds.	26	.047
6	20 mmfds.	27	70–100 mmfds.
7	10 mmfds.	28	70–100 mmfds.
8	.012	29	8.2 mmfds.
9	.039	30	56 mmfds.
10	20 mmfds.	31	.0033
12	30 mmfds.	32	25
13	70–100 mmfds.	33	.001
14	.047	34	.0047
15	47 mmfds.	35	.033
16	470 mmfds.	36	.0056
18	20 mmfds.	37	.027
19	33 mmfds.	39	.0001
20	1,450 mmfds.	42	.047
		43	.047