

COSSOR 62B, 63, 64B, 66, 66A, 71B, 77

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Four-valve, plus rectifier, three waveband superhet for operation from 200-250 v. A.C. supplies. Models 64B, 66 and 66A are radiograms. Made by A.C. Cossor, Ltd., Highbury Grove, London, N.5.

Circuit.—The aerial lead includes an I.F. filter, L1-C1, and the input to the first valve is by transformer coils on each of the three bands. A.V.C. is not applied on short waves.

V1 is the frequency-changer and the oscillator section is tuned grid with

separate reaction coils (L9, L11, L13) on each band. The shaped vanes of the oscillator tuning condenser provide tracking on S.W., but on the other bands the usual padders are provided. The M.W. padder, C15, is fixed and its reactance is also included in the anode circuit for feedback purposes.

The two I.F. transformers are permeability trimmed. V2 is the I.F. amplifier and V3 a double-diode triode.

The A.V.C. diode is fed by C26, and the carrier wave produces a voltage across R9, which is fed back via R8 for A.V.C. R9 is connected to a potentiometer (R22, 23, 21) for a minimum bias. The potentiometer is across the speaker field (L18) which is in the negative H.T. line, and, therefore, raises chassis and cathodes above H.T. negative.

R11, the volume control, is the signal diode load. R10, C27 and C28 form an I.F. filter. L.F. is passed by C29 to the triode section of V3, which has R13 for an oscillation stopper, R12 for grid leak, and R14 for bias. R14 and R15 together provide delay bias between cathode and A.V.C. diode anode. C31 and R17 form a tone control

across V3. Resistance-capacity coupling leads to V4, a directly-heated output triode. This has an electrical centre-point for H.T. purposes in R24, and is biased by the potentiometer across L18.

A high-impedance (3,000 ohms) extension speaker connection is provided, and C35, C36 are the usual electrolytics for smoothing. V5 is a straightforward full-wave rectifier. The mains consumption is approximately 70 watts.

When the pick-up is switched in the oscillator anode supply is cut off.

GANGING

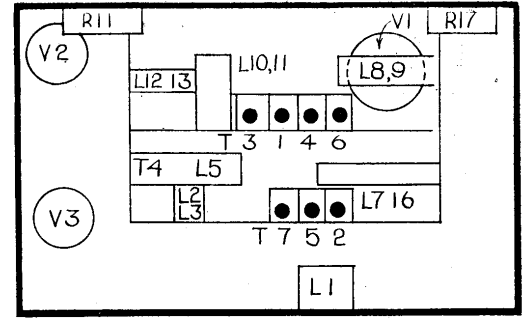
I.F. Circuits.—Short oscillating section of gang, inject modulated 465 kc. to VI signal grid and adjust cores of I.F. transformers for maximum on an output meter. Keep input low to prevent A.V.C. working.

L.W. Band.—Tune to 1,200 m. and inject 250 kc. to aerial and earth via a dummy aerial. Adjust T1 and T2 for maximum. Tune to 1,875 m., inject 160 kc. and pad with T3, while rocking gang slightly.

Repeat operations.

Continued in end column

Under-chassis layout identifying the trimmers. The power and output sections of the receiver are located on a separate small chassis.



VALVE READINGS

V.	Type.	Electrode.	Volts.	Ma.
1	41STH	Anode	252	1.3
		Screen	88	4.4
		Osc. Anode	107	5.6
		Cathode	1.5	11.3
2	MVS/Pen. B	Anode	215	4.6
		Screen	100	1.6
3	DDT	Anode	108	2.2
		Cathode	2.7	2.2
4	2P	Anode	250	45
5	431 U	Anodes	300 A.C.	—
		Cathode	335	70

Dial lamps, 6.5 v. .3 amp. M.E.S.

M.W. Band.—Tune to 214 m., inject 1,400 kc. and adjust T4 and T5. Padding is fixed.

S.W. Band.—Tune to 18 mc. and inject 18 mc. Adjust T6 and T7, rocking gang slightly.

I.F. Filter.—Inject strong 465 kc. signal, tune to top of M.W. band and adjust L1 for minimum.

WINDINGS

L.	Ohms.	L.	Ohms.
1	4.5	12	13.5
2	5	13	6.2
3	V. low	14, 15	3.7
4	25	16, 17	18.5
5	2	18	1,000
6	150	19	175
7	16.5	20	.19
8, 9	V. low	21	2
10	5.5	22	28
11	2.5	23	240

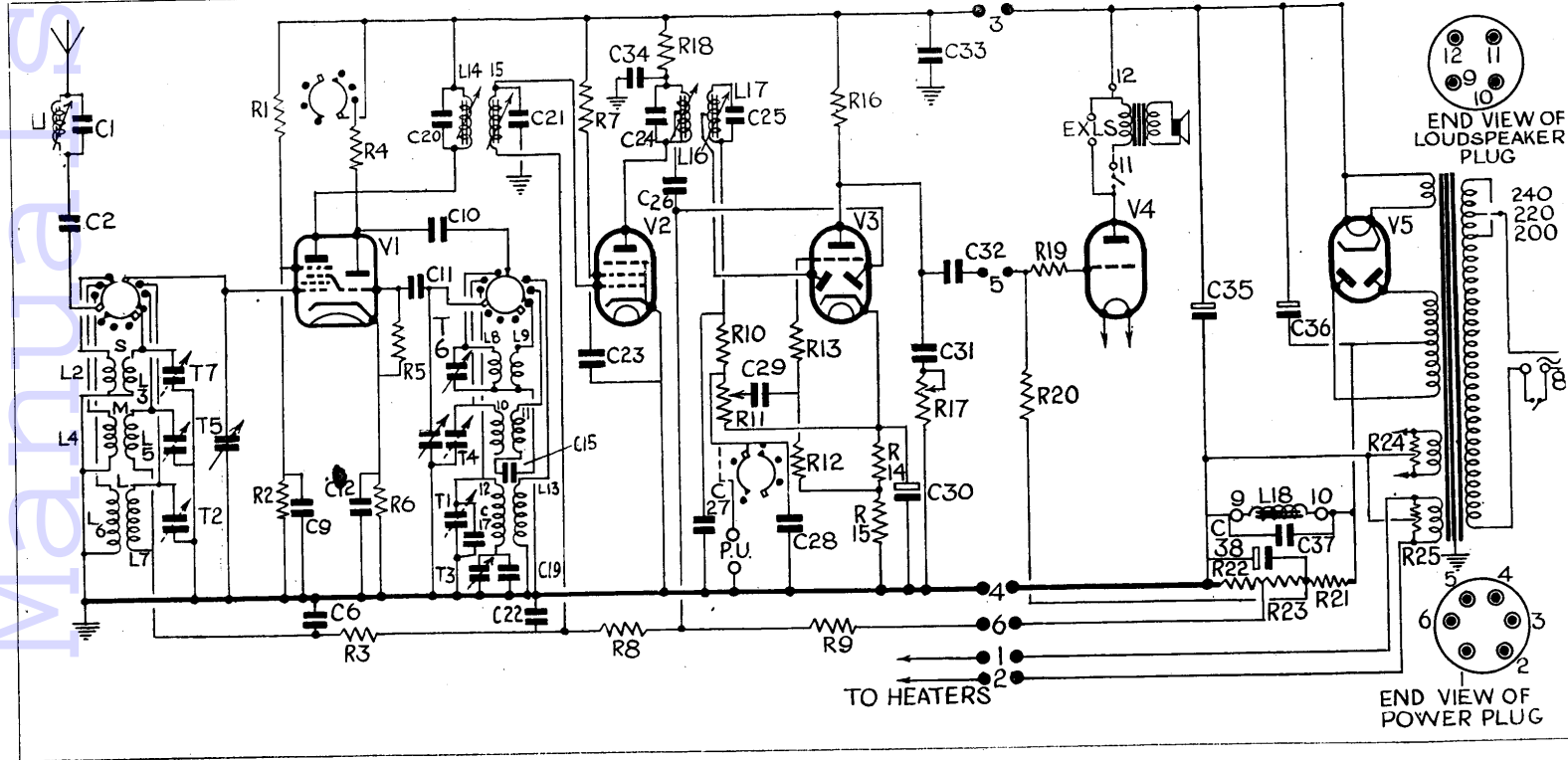
RESISTANCES

R.	Ohms.	R.	Ohms.
1	20,000	14	750
2	30,000	15	1,000
3	.5 meg.	16	50,000
4	30,000	17	.25 meg.
5	40,000	18	5,000
6	130	19	.1 meg.
7	.1 meg.	20	.5 meg.
8	3 meg.	21	.17 meg.
9	1 meg.	22	7,000
10	50,000	23	75,000
11	.5 meg.	24	25
12	2 meg.	25	25
13	.1 meg.		

CONDENSERS

C.	Mfds.	C.	Mfds.
1	225 mmfds.	25	75 mmfds.
2	.0005	26	.00005
6	.05	27	.00005
9	.05	28	.00005
10	.0005	29	.005
11	.0001	30	.50
12	.1	31	.01
15	688 mmfds.	32	.01
17	.00005	33	.1
19	.00014	34	.1
20, 21	225 mmfds.	35	8*
22	.05	36	8*
23	.05	37	.05†
24	.60 mmfds.	38	.10

* 16 mfd. in models 63, 64B, 66, and 66A.
† In models 62B, 71 and 77 only.



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