

# ALBA "CLIPPER"

Four valve, plus rectifier, three waveband midget receiver for operation from A.C. or D.C. mains supplies of 200-250 volts. Made by A. J. Balcombe, Ltd., 52-58, Tabernacle Street, London, E.C.2.

**Circuit.**—The aerial input is by transformers on all three bands. There is a common primary on M. and L.W., and an iron-dust core. The primary is switched out on S.W. and the same

switch is used to short out the L.W. oscillator coil on M.W.

V1 is the frequency-changer. The oscillator section is tuned grid with coupled anode reaction windings on each band.

The two I.F. transformers have iron-cores and link up V2, the I.F. amplifier, and V3, the double diode triode. R9, C19 and C20 form an H.F. filter and the load, R10, feeds L.F. to the volume control, R11, via C18.

The triode section is biased by R14, which also provides delay for the A.V.C. diode. This is energised by C23, develops volts across R15 and controls V1 (except on S.W.) and V2.

V4, the output pentode, is capacity coupled and has two shunt tone condensers, C25, C26.

H.T. is obtained in the usual way for an A.C./D.C. set. V5 is a half-wave rectifier. The valve heaters and dial lamps are run in series with R20.

### GANGING

**I.F. Circuits.**—Inject 470 kc. to V1 grid, having shorted out the oscillator

gang section. Peak both transformers.

**S.W. Band.**—Tune to the middle of the band (16.5-50 m.) inject suitable frequency and adjust T1 and T2. Padding is fixed.

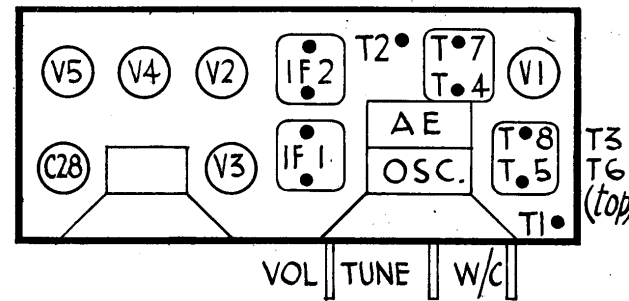
**M.W. Band.**—Tune to 250 metres, inject this wavelength and adjust T3 and T4. Tune to, and inject, 500 m. and adjust T5. Repeat operations until no further improvement is obtained.

**L.W. Band.**—Tune to, and inject, 1,300 m. Adjust T6 and T7. Tune and inject 1,900 m. and pad with T8.

### CONDENSERS

C	Mfds.	C	Mfds.
1	200 mmfds.	17	.1
2	5 mmfds.	18	.01
3	.1	19	500 mmfds.
4	.1	20	100 mmfds.
5	.05	21	2
6	250 mmfds.	22	.02
7	250 mmfds.	23	25 mmfds.
8	100 mmfds.	24	25
9	.1	25	.002
10	.0025	26	.002
13	.1	27	25
14	.06	28	16+16
15	.1	29	.05
16	100 mmfds.	30	100 mmf s

The Alba "Clipper," although a midget, is orthodox in both construction and circuit. Trimmers are accessibly situated.



### RESISTANCES

R	Ohms	R	Ohms
1	25,000	12	5,000
2	50,000	13	20,000
3	200	14	1,500
4	50,000	15	1 meg.
5	300	16	.25 meg.
6	10,000	17	50,000
7	90,000	18	170
8	300	19	100
9	50,000	20	700
10	.5 meg.	21	.1 meg.
11	.5 meg.	22	1 meg.

### VALVE READINGS

V	Type	Electrode	Volts	Ma.
1	ECH33	Anode	200	2
		Screen	100	2.2
2	EF39	Anode	210	5
		Screen	100	1.5
3	EBC33	Anode	140	2.75
4	CL33	Anode	200	53
		Screen	220	12
5	CY31	Cathode	270	—

Pilot lamps, 5.5 volts, .3 amps.

### WINDINGS

L	Ohms	L	Ohms
1	40	9	9
2	1.5	10	1.5
3	15	11	V. low
4	V. low	12	4
5	V. low	13	80
6	30	14	330
7	50	15	650
8	3		

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mostly give trouble due to bad contact. Self-cleaning types require cleaning with spirit, and the tension on the contacts tightened by gentle pressure with a screwdriver. This treatment also refers to the "blade" type of switch which is actuated by an eccentric cam on the spindle.

Rubbers for pick-ups are obtained from cycle valve rubber or motor-car inner tubes.

In some sets where a large dial lamp is fitted and cannot be replaced, use either one 5-watt mains bulb connected to the mains transformer input (with the switch suitably in circuit), or a couple of 4 or 6 volt bulbs across the heater winding on the transformer.

Keep all old parts of dismantled sets. To prevent repeat calls wasting petrol, try to repair in the client's house, except where it might make a bad impression, as in the case of a new set, where it is better to leave a set on loan. F. D. L.

