

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 |

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. |

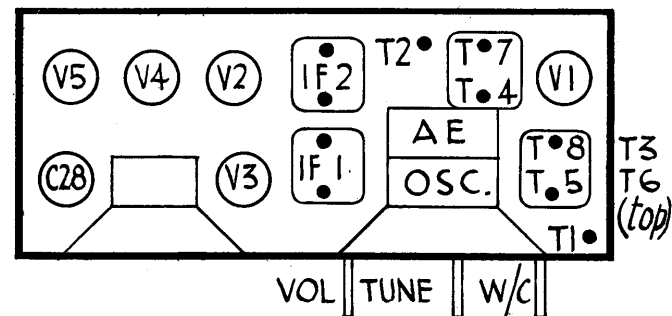
VALVE READINGS

| 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 | | |



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

