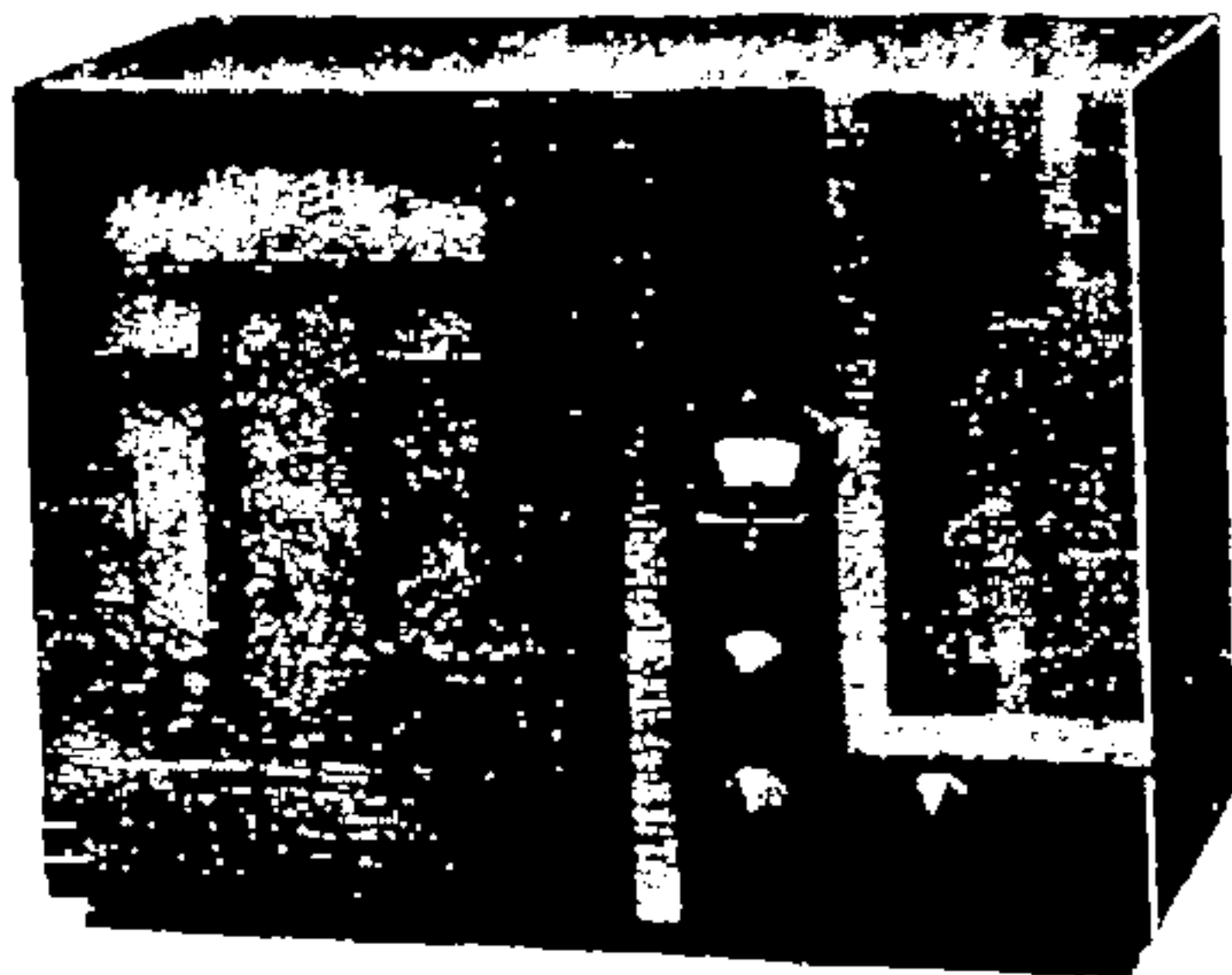


# ALBA MODEL 21 BATTERY SET



An inexpensive "straight" three employing batteries, the Alba "21" is a product of A. J. Balcombe, Ltd.

**Circuit.**—The H.F. valve SP2 met. (V1) is preceded by a tuned secondary aerial transformer. Alternative aerial tapplings are

provided by means of resistances in series with the aerial lead, and a resistance is connected between the M.W. and L.W. windings on the primary. The grid return lead is taken to chassis.

Coupling to the next valve is by tuned secondary H.F. transformer with a reaction coil. The detector valve PM1HL met. (V2) operates as a leaky grid detector with zero bias provided by having two grid leaks, one connected to L.T.- and the other to L.T.+.

The coupling to the next valve is by "straight" transformer with anode decoupling.

The output pentode PM22A (V3) is tone-compensated by a condenser between the anode and chassis.

**Special Notes.**—Battery connections: Drydex S49, H.T.+, 108 volts; G.B.—, -3 volts.

The colours are: H.T.+, brown; G.B.—, blue; H.T.—, fawn.

**Quick Tests.**—These consist of routine battery and valve tests.

**Removing Chassis.**—Remove knobs (grub screw), undo four holding screws from underneath and lift chassis out. The L.S. leads are sufficiently long to allow the chassis to stand on its side.

**General Notes.**—The construction and wiring of this set are so simple that it is a fitting subject for the beginner.

(Continued on next page.)

## VALVE READINGS

[No reaction. New battery.]

| Valve. | Type.       | Electrode.    | Volts. | Ma.  |
|--------|-------------|---------------|--------|------|
| 1      | SP2 met (7) | anode ...     | 107    | *1.8 |
|        |             | aux. grid ... | 106    |      |
| 2      | PM1HL ...   | anode ...     | 48     | 1    |
| 3      | PM22A ...   | anode ...     | 102    | 6.2  |
|        |             | aux. grid ... | 116    | 1.8  |

\* Inclusion of meter leads makes this valve unstable and a reading of 5 ma. will be recorded. Earth receiver or short-circuit A3 and E.

## ALBA MODEL 21 BATTERY SET (Continued)

The resistance R3 is mounted on the aerial coil-former (the can is easily pulled off).

Note that in the L.F. transformer the outer terminals are the ends of the secondary, while the inner ones are those of the primary.

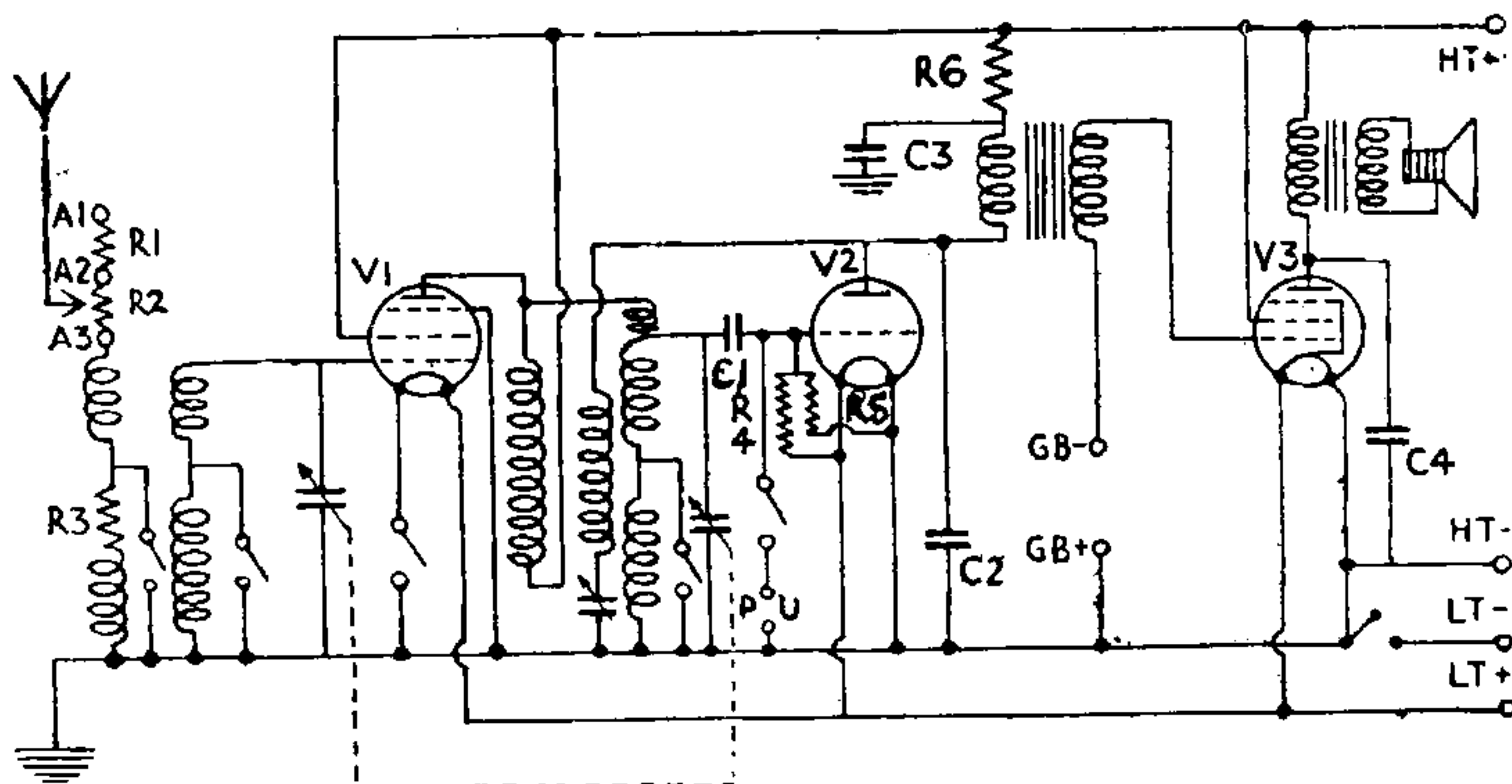
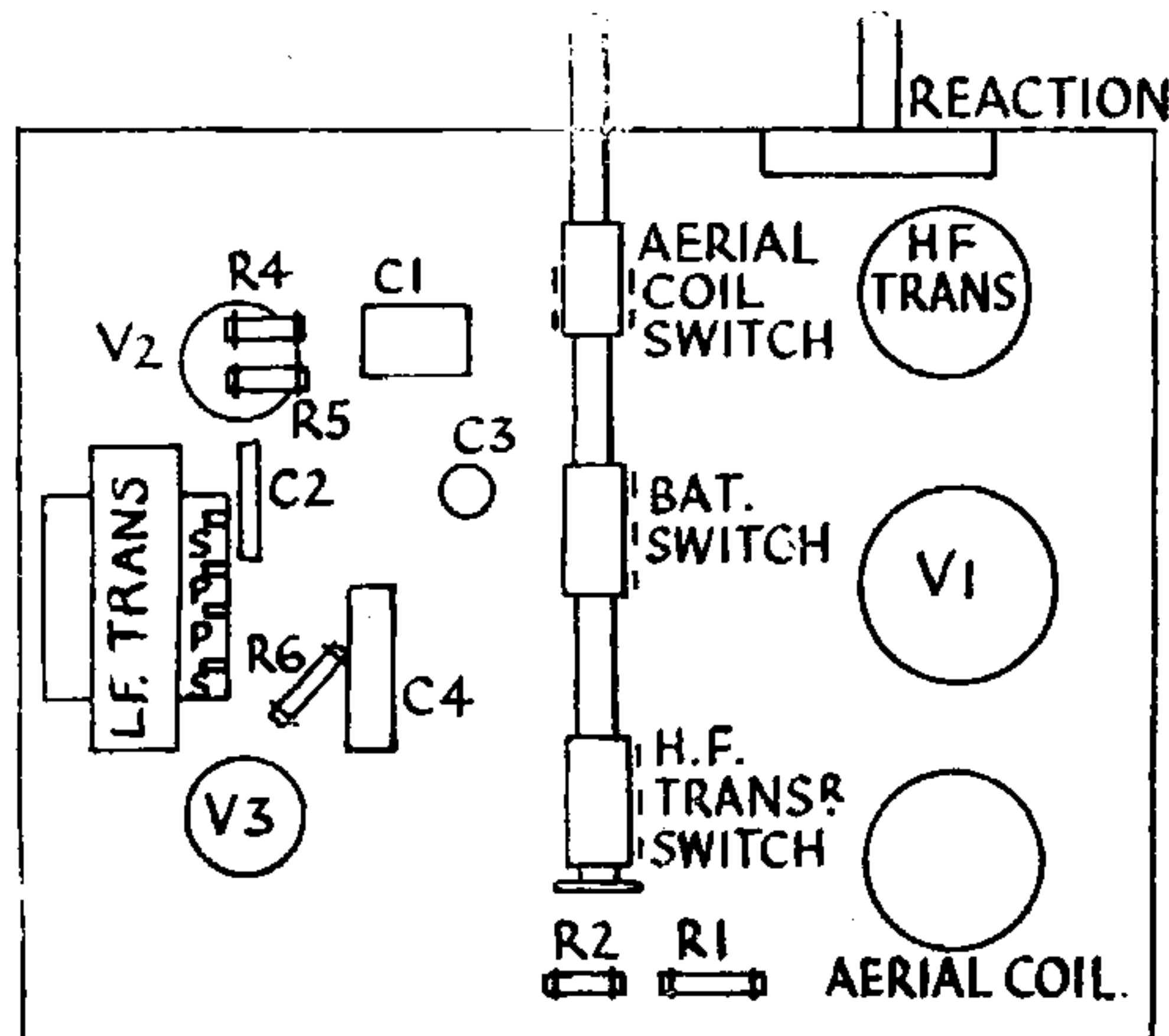
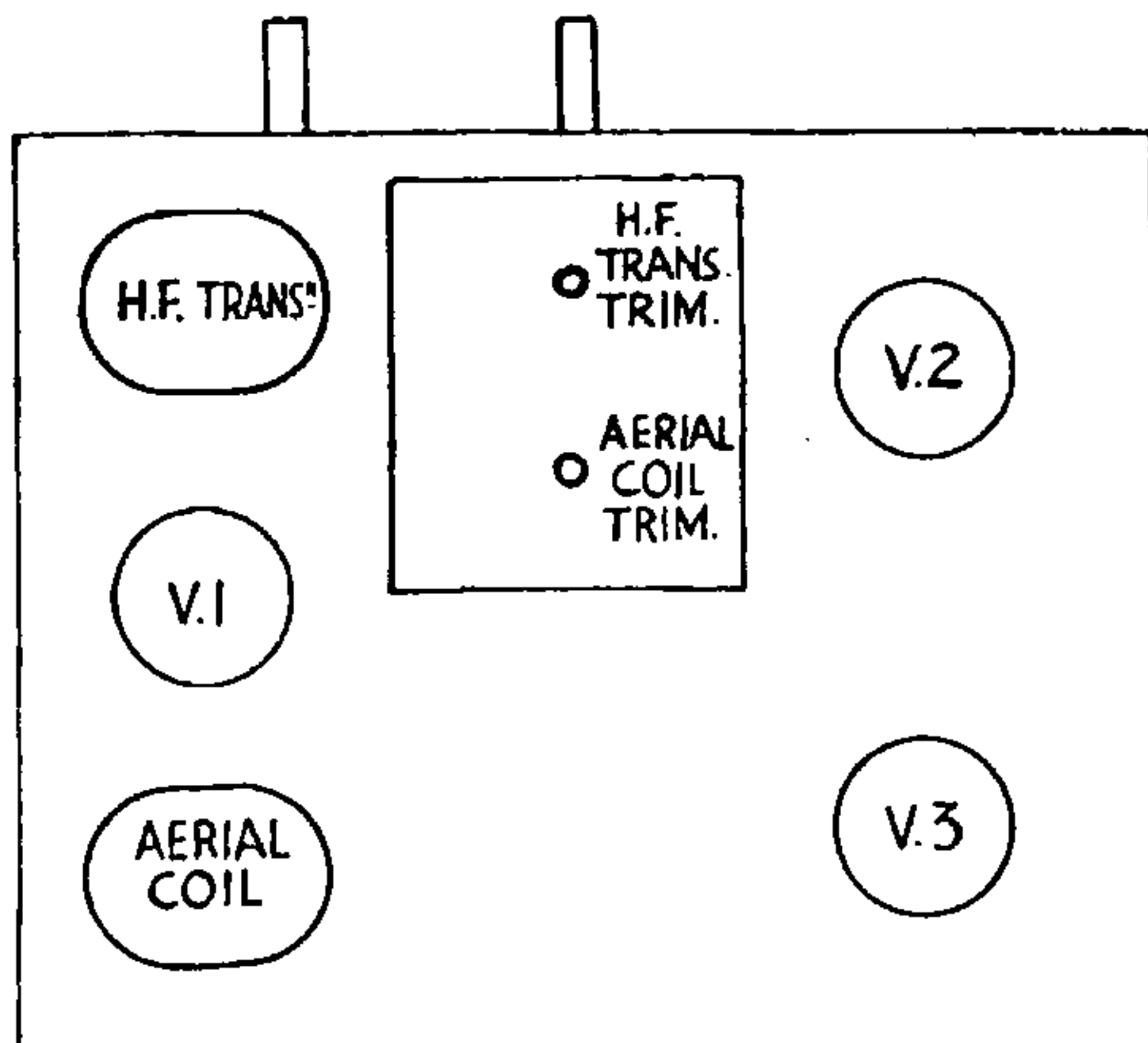
**Replacing Chassis.**—Lay chassis inside cabinet, replace holding screws and knobs.

## CONDENSERS

| C. | Purpose.                      | Mfd.  |
|----|-------------------------------|-------|
| 1  | V2 grid ... ..                | .0001 |
| 2  | V2 anode by-pass ... ..       | .0001 |
| 3  | V2 anode decoupling ... ..    | .1    |
| 4  | Tone compensating V3 anode... | .005  |

## RESISTANCES

| R. | Purpose.  | Ohms.   |
|----|---|---------|
| 1  | Series with A1 tapping... ..                        | 50,000  |
| 2  | Series with A1 and A2 tap-<br>pings.                | 25,000  |
| 3  | Between M.W. and L.W. wind-<br>ings of aerial coil. | 100,000 |
| 4  | V2 grid leak ... ..                                 | 2 meg.  |
| 5  | V2 grid leak ... ..                                 | 2 meg.  |
| 6  | V2 anode decoupling ... ..                          | 50,000  |



Above are the top (left) and underneath (right) chassis layout diagrams for the Alba model "21" receiver. The arrangement of components is logical and the receiver is a simple service proposition.

On the left is the circuit of the Alba "21" Resistances R1 and R2 used as aerial "tappings" and a double grid-leak arrangement connecting the grid of the detector to a filament centre-point are interesting features.