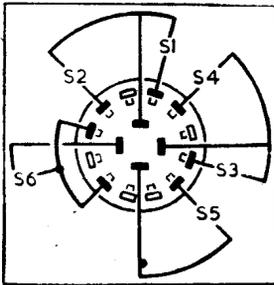


Right: Diagram of the on/off and waveband switch unit drawn as seen from the point of view indicated by the arrow in our front view illustration.



| Transistor | Emitter (V) | Base (V) | Collector (V) |
|------------|-------------|----------|---------------|
| TR1 OC44 | 1.5 | 1.43 | 7.5 |
| TR2 OC45 | 0.52 | 0.64 | 7.5 |
| TR3 OC45 | 0.9 | 1.08 | 7.5 |
| TR4 OC78D | 1.08 | 1.21 | 8.7 |
| TR5 OC78† | 0.022 | 0.18 | 9.0 |
| TR6 OC78† | 0.022 | 0.18 | 9.0 |

† Matched pair.

Resistors

| | | |
|-----|-------|----|
| R1 | 33kΩ | C2 |
| R2 | 8.2kΩ | B2 |
| R3 | 3.9kΩ | B2 |
| R4 | 82kΩ | C1 |
| R5 | 8.2kΩ | B2 |
| R6 | 560Ω | B2 |
| R7 | 1kΩ | B2 |
| R8 | 5kΩ | F3 |
| R9 | 4.7kΩ | B1 |
| R10 | 33kΩ | C1 |
| R11 | 8.2kΩ | C1 |
| R12 | 560Ω | C1 |
| R13 | 560Ω | C1 |
| R14 | 3.9kΩ | C2 |
| R15 | 82Ω | C2 |
| R16 | 5.6Ω | C2 |
| R17 | 100Ω | D4 |
| R18 | 220kΩ | C1 |

Capacitors

| | | |
|----|--------|----|
| C1 | 196pF | E3 |
| C2 | 30pF | B1 |
| C3 | 40pF | F4 |
| C4 | 0.04μF | B2 |

| | | |
|-----|--------|----|
| C5 | 0.01μF | B2 |
| C6 | 250pF | B2 |
| C7 | 160pF | B1 |
| C8 | 110pF | C1 |
| C9 | 30pF | A1 |
| C10 | 110pF | E3 |
| C11 | 10μF | D4 |
| C12 | 58pF | B2 |
| C13 | 0.1μF | E1 |
| C14 | 250pF | B1 |
| C15 | 18pF | B1 |
| C16 | 0.04μF | B2 |
| C17 | 250pF | B1 |
| C18 | 0.02μF | B1 |
| C19 | 0.02μF | E3 |
| C20 | 100μF | C2 |
| C21 | 2μF | B1 |
| C22 | 100μF | C1 |
| C23 | 0.1μF | C2 |
| C24 | 50μF | D4 |

Coils*

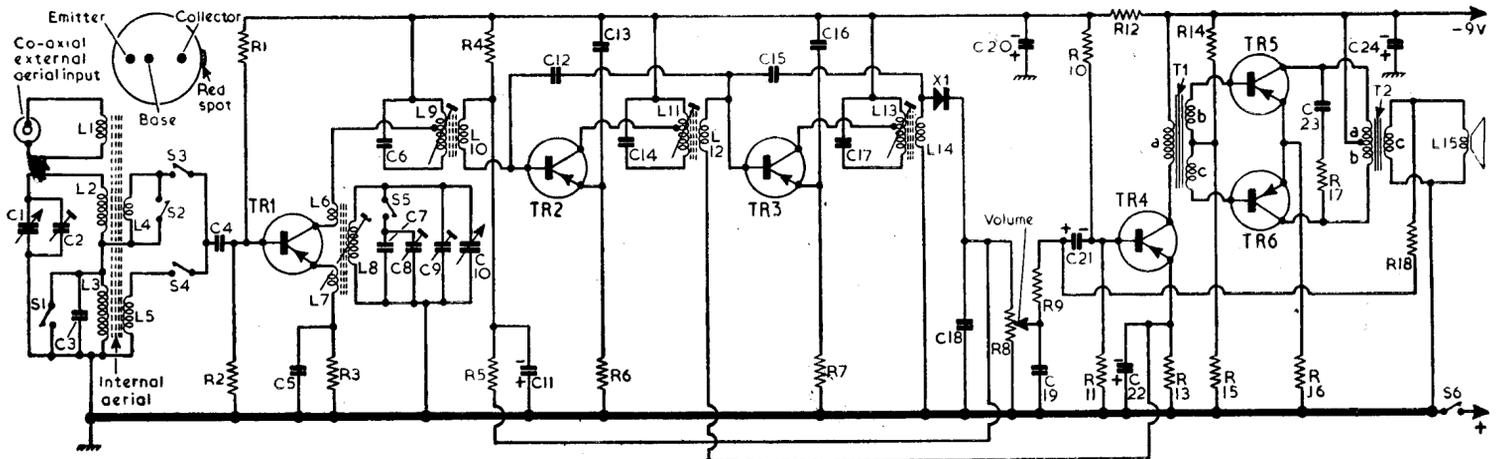
| | | |
|----|-----|----|
| L1 | 2.3 | E4 |
| L2 | 1.6 | D4 |
| L3 | 7.0 | F4 |
| L4 | — | E4 |

| | | |
|-----|-----|----|
| L5 | — | F4 |
| L6 | — | C2 |
| L7 | — | C2 |
| L8 | 2.1 | C2 |
| L9 | 4.0 | B2 |
| L10 | — | B2 |
| L11 | 4.0 | B1 |
| L12 | — | B1 |
| L13 | 4.0 | B1 |
| L14 | — | B1 |
| L15 | 3.0 | — |

Miscellaneous*

| | | | |
|-------|------|-------|----|
| T1 | a | 135.0 | C1 |
| | b | 78.0 | |
| | c | total | |
| T2 | a | 4.1 | C2 |
| | b | 4.1 | |
| | c | 0.27 | |
| X1 | OA70 | B1 | |
| S1-S6 | — | D3 | |

* Approximate D.C. resistance in ohms.



CIRCUIT ALIGNMENT

- 1.—Connect an output meter of 3Ω impedance in place of the speaker, or an A.C. voltmeter across the speaker. Connect a signal generator between chassis and the junction of S3, S4 and C4. The generator output should be maintained as low as possible at all times during the alignment operations to prevent A.G.C. action from masking the adjustment peaks.
- 2.—Switch the receiver to M.W., turn the tuning gang to minimum capacitance and the volume control fully clockwise. Feed in a modulated 470kc/s signal and adjust the cores of L13 (B1), L11, (B1) and L9 (B2) for maximum output. Repeat these adjustments until no further improvement can be obtained.

- 3.—Turn the tuning gang to maximum capacitance and check that the pointer coincides with the high wavelength ends of the tuning scales.
- 4.—Loosely couple the signal generator output to the ferrite rod aerial coils L1-L5. Tune the receiver to 500m. Feed in a 600kc/s signal and adjust the core of L8 (C2) for maximum output. Then slide the former of L2 (D4) along the ferrite rod for maximum output.
- 5.—Tune the receiver to 214m. Feed in a 1,400kc/s signal and adjust C9 (A1) and C2 (B1) for maximum output.
- 6.—Repeat operations 4 and 5.
- 7.—Switch the receiver to L.W. and tune it to 425m. Feed in a 185kc/s signal and adjust C8 (C1) for maximum output. Then slide the former of L3, L5 (F4) along the ferrite rod for maximum output.

Switches.—S1-S6 are the on/off and waveband switches, ganged in a rotary unit on the printed side of the panel. The unit is indicated in our front view illustration of the chassis (location reference D3) and a detailed sketch is shown below, where the contacts are drawn

ROBERTS - R200