

Intermediate frequency 470kc/s

Transistor Table

| Transistor | Emitter V | Base V | Collector V |
|------------|-----------|--------|-------------|
| TR1 OC44 | 0.85 | 0.8 | 6.7 |
| TR2 OC45 | 0.5 | 0.6 | 6.7 |
| TR3 OC45 | 0.85 | 0.95 | 6.7 |
| TR4 OC81D | 0.85 | 0.9 | 6.0 |
| TR5 OC81 | 4.5 | 4.6 | 9.0 |
| TR6 OC81 | — | 0.15 | 4.5 |

Resistors

| | | |
|-----|-------|----|
| R1 | 56kΩ | B1 |
| R2 | 10kΩ | B1 |
| R3 | 3.9kΩ | B2 |
| R4 | 68kΩ | B2 |
| R5 | 680Ω | B2 |
| R6 | 22kΩ | B2 |
| R7 | 4.7kΩ | B2 |
| R8 | 1kΩ | B2 |
| R9 | 8.2kΩ | B2 |
| R10 | 330Ω | B2 |
| R11 | 5kΩ | C2 |
| R12 | 10kΩ | B2 |
| R13 | 47kΩ | B2 |
| R14 | 1kΩ | A2 |
| R15 | 680kΩ | A2 |
| R16 | 2.7kΩ | A2 |
| R17 | 100Ω | A2 |
| R18 | 2.7kΩ | A2 |
| R19 | 100Ω | A2 |
| R20 | 10kΩ | A2 |
| R21 | 15Ω | A2 |
| R22 | 1kΩ | A2 |

Capacitors

| | | |
|-----|------|----|
| C1† | — | C1 |
| C2† | — | B1 |
| C3 | 15pF | C1 |

| | | |
|------|---------|----|
| C4 | 6pF | B1 |
| C5 | 40pF | B1 |
| C6 | 15pF | B1 |
| C7 | 0.47μF | B1 |
| C8 | 0.01μF | B2 |
| C9 | 200pF | B2 |
| C10 | 250pF | B2 |
| C11 | 18pF | B2 |
| C12† | — | C2 |
| C13† | — | C1 |
| C14 | 0.047μF | B2 |
| C15 | 56pF | B2 |
| C16 | 200pF | B2 |
| C17 | 0.47μF | B2 |
| C18 | 0.47μF | B2 |
| C19 | 18pF | B2 |
| C20 | 200pF | B2 |
| C21 | 10μF | B2 |
| C22 | 0.01μF | B2 |
| C23 | 0.01μF | B2 |
| C24 | 5μF | B2 |
| C25 | 80μF | B2 |
| C26 | 64μF | A2 |
| C27 | 32μF | A2 |

Coils*

| | | |
|----|------|----|
| L1 | 2.0 | C2 |
| L2 | 10.8 | B1 |

| | | |
|-----|------|----|
| L3 | — | C1 |
| L4 | — | B2 |
| L5 | — | B2 |
| L6 | 2.5 | B2 |
| L7 | 5.25 | B2 |
| L8 | — | B2 |
| L9 | 5.25 | B2 |
| L10 | — | B2 |
| L11 | 6.2 | B2 |
| L12 | — | B2 |
| L13 | 80.0 | B1 |

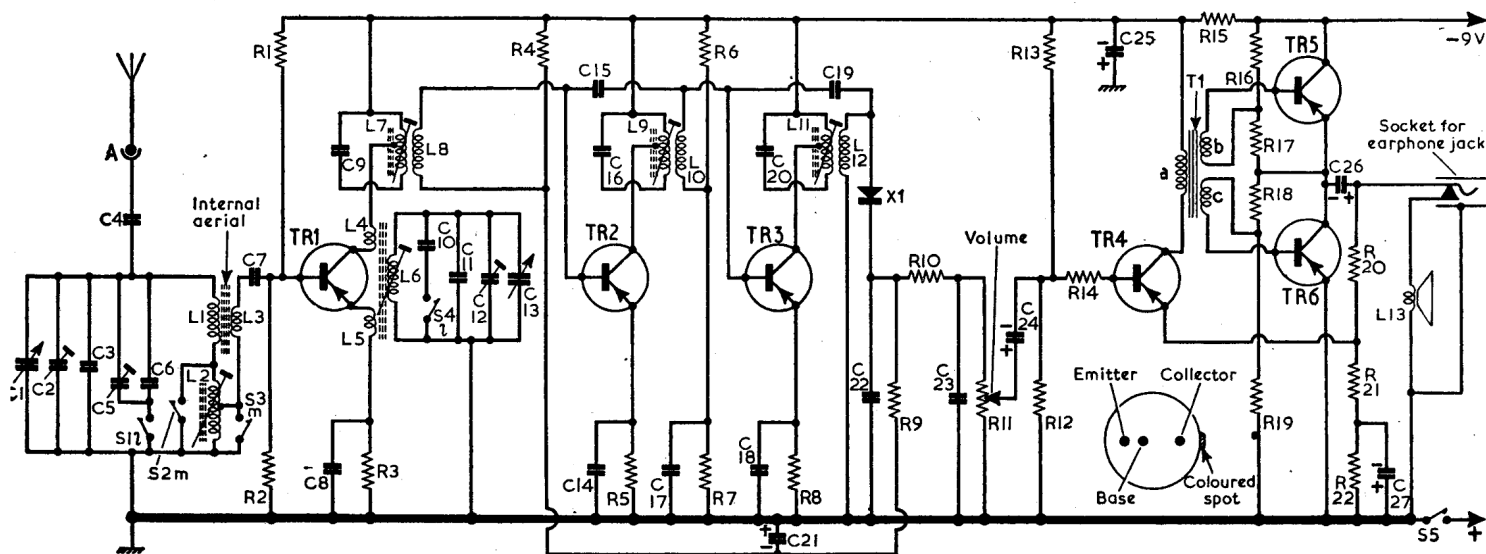
Miscellaneous*

| | | |
|-------|---------|----|
| T1 | a 600.0 | A2 |
| | b 48.0 | |
| | c 48.0 | |
| X1 | OA91 | B2 |
| S1-S4 | — | C1 |
| S5 | — | C2 |

*Approximate D.C. resistance in ohms.

†C1, C2, C12 and C13 are combined in the tuning gang unit.

‡Twisted wire.



CIRCUIT ALIGNMENT

Equipment Required.—An a.m. signal generator modulated 30 per cent at 400c/s; an audio output meter of 80Ω impedance or a 0.2V A.C. voltmeter; an 0.1μF capacitor; a non-metallic screwdriver-type trimming tool for I.F. cores and a narrow bladed type for adjustments to the core of L2.

During alignment the input should be progressively reduced so that the output is not more than 50mW (1.2V on the A.C. voltmeter) to prevent A.G.C. action.

1.—Connect audio output meter across speech coil. Connect signal generator between "chassis" (battery positive) and, via the 0.1μF capacitor, to TR1 base. A suitable convenient point to connect to TR1 base is the outer end of R2, shown in location reference B1.

Remove self-tapping screw in centre of printed panel which secures one side of speaker and swivel speaker outwards to give access to L11 (B2).

2.—Switch receiver to M.W., rotate tuning gang to maximum capacitance (fully anti-clockwise) and turn volume control to maximum. Feed in a 470kc/s signal and adjust L11, L9 and L7 (B2) for maximum output.

3.—Disconnect signal generator and place its output leads in close proximity to the ferrite rod aerial. With tuning gang still at maximum capacitance, feed in a 525kc/s signal and adjust L6 (B2) for maximum output.

4.—Rotate tuning gang to minimum capacitance (fully clockwise), feed in a 1,620kc/s signal and adjust C12 (located on underside of tuning gang in C2) for maximum output.

5.—Repeat operations 3 and 4 until balance is obtained, always finishing with operation described in paragraph No. 4.

6.—Feed in a 560kc/s signal and tune receiver to this signal. Adjust L1 (C2) for maximum output by sliding it along the ferrite rod.

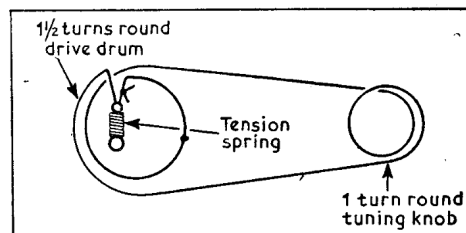
7.—Feed in a 1,450kc/s signal and tune receiver to this signal. Adjust C2 (located on underside of tuning gang in B1) for maximum output.

8.—Repeat operations 7 and 8 until no further improvement can be obtained, always finishing with operation 8.

9.—Switch receiver to L.W. Feed in a 180kc/s signal and tune receiver to this signal. Adjust L2 (B1) for maximum output. Two peaks will be obtained. The one giving the greater output is correct.

10.—Feed in a 260kc/s signal and tune receiver to this signal. Adjust C5 (B1) for maximum output.

11.—Repeat operations 9 and 10 until no further improvement can be obtained, always finishing with operation 10. Seal L2 with suitable wax.



Drive Cord Replacement.—Approximately 10in of nylon cord is required. Pull off wavelength scale disc from tuning drive drum and rotate drum to the fully anti-clockwise position. Join the nylon cord to form a loop exactly 8in circumference. Hold the knot to the tuning drum spindle by pressing with a forefinger, thread one side of the loop out of drum and make a half-turn anti-clockwise round drum.

Continue with one turn, anti-clockwise from front to rear, round boss on tuning knob and finish with one complete turn anti-clockwise round tuning drive drum. Hook small end of tension spring on cord and anchor other end over lug in drum moulding. Replace wavelength scale disc.

The diagram below illustrates assembled tuning drive.