



CIRCUIT ALIGNMENT

IF Stages.—Connect the signal generator leads via a 0.1 μ F condenser to the control grid (top cap) of V1 and chassis, and turn the volume control and gang to maximum. Feed in a 456 KC/S (657.9 m) signal and adjust C30, C29, C27 and C28 in that order for maximum output.

RF and Oscillator Stages.—With the gang at maximum, adjust the pointer so that its short hand covers the dot immediately on the left-hand side of the "12 o'clock" position on the tuning scale. Connect the signal generator leads via a suitable dummy aerial to A and E sockets.

MW.—Switch set to MW, tune to 200 m on scale, feed in a 200 m (1,500 KC/S) signal, and adjust C26, C21 and C23 in that order for maximum output.

| RESISTANCES | | Values (ohms) |
|-------------|---|---------------|
| R1 | V1 pent. CG decoupling ... | 1,000,000 |
| R2 | V1 SG HT feed ... | 25,000 |
| R3 | V1 osc. CG stabiliser ... | 1,000 |
| R4 | V1 osc. CG resistance ... | 50,000 |
| R5 | V1 fixed GB resistance ... | 660 |
| R6 | V1 osc. anode HT feed ... | 50,000 |
| R7 | V2 CG decoupling ... | 1,000,000 |
| R8 | V2 SG HT feed ... | 30,000 |
| R9 | V2 fixed GB ... | 165 |
| R10 | Manual volume control; V3 signal diode load ... | 500,000 |
| R11 | V3 pent. CG resistance ... | 1,000,000 |
| R12 | V3 pent. grid stopper ... | 1,000 |
| R13 | V3 pentode GB and AVC delay resistances ... | 110 |
| R14 | V3 pent. anode stopper ... | 110 |
| R15 | V3 pent. anode stopper ... | 60 |
| R16 | V3 AVC diode load resistances ... | 250,000 |
| R17 | V3 AVC diode load resistances ... | 750,000 |
| R18 | Part tone corrector ... | 15,000 |

| OTHER COMPONENTS | | Approx. Values (ohms) |
|------------------|-------------------------------------|-----------------------|
| L1 | Aerial coupling coils ... | 1-5 |
| L2 | | 48-5 |
| L3 | | 4-7 |
| L4 | | 11-3 |
| L5 | B-P secondary loading coil ... | 1-3 |
| L6 | Band-pass secondary coils ... | 4-7 |
| L7 | | 11-3 |
| L8 | Osc. cathode coupling coil ... | 1-2 |
| L9 | Oscillator circuit tuning coils ... | 8-5 |
| L10 | 1st IF trans. ... | 4-0 |
| L11 | | 5-6 |
| L12 | 2nd IF trans. ... | 5-6 |
| L13 | | 5-6 |
| L14 | V1 pent. anode decoupling choke ... | 5-6 |
| L15 | | 5-6 |
| L16 | IF rejector choke ... | 55-0 |
| L17 | Speaker speech coil ... | 500-0 |
| L18 | Speaker field coil ... | 4-7 |
| L19 | HT smoothing choke ... | 100-0 |
| T1 | Output trans. { Pri. ... | 42-0 |
| S1-S5 | Waveband switches { Sec. ... | 400-0 |
| S6 | Tone control switch ... | 0-35 |
| S7 | Mains switch, gauged R10 ... | — |

| CONDENSERS | | Values (μ F) |
|------------|-------------------------------------|-------------------|
| C1 | Aerial isolating condenser | 0-004 |
| C2 | Earth isolating condenser | 0-1 |
| C3 | V1 pent. CG decoupling | 0-05 |
| C4 | V1 cathode by-pass ... | 0-5 |
| C5 | V1 pent. anode decoupling ... | 0-1 |
| C6 | V1 SG decoupling ... | 0-1 |
| C7 | V1 osc. CG shunt ... | 0-0002 |
| C8 | V1 osc. anode decoupling ... | 0-1 |
| C9 | V2 CG decoupling ... | 0-05 |
| C10 | V2 SG decoupling ... | 0-1 |
| C11 | V2 cathode by-pass ... | 0-1 |
| C12 | IF by-pass ... | 0-0002 |
| C13* | V3 cathode by-pass ... | 50-0 |
| C14 | Coupling to V3 AVC diode | 0-0002 |
| C15 | AF coupling to V3 pentode ... | 0-01 |
| C16 | Tone control condenser | 0-01 |
| C17 | Fixed tone corrector condensers ... | 0-001 |
| C18 | HT smoothing condenser | 0-01 |
| C19§ | Band-pass pri. tuning ... | 16-0 |
| C20† | B-P pri. MW trimmer ... | — |
| C21† | Band-pass sec. tuning ... | — |
| C22† | B-P sec. MW trimmer ... | — |
| C23† | Osc. circ. LW trimmer ... | — |
| C24† | Oscillator circuit tuning | — |
| C25† | Osc. circ. MW trimmer ... | — |
| C26† | 1st IF trans. pri. tuning | — |
| C27† | 1st IF trans. sec. tuning | — |
| C28† | 2nd IF trans. pri. tuning | — |
| C29† | 2nd IF trans. sec. tuning | — |
| C30† | — | — |

* Electrolytic. § Reversible electrolytic.
† Variable. ‡ Pre-set.

VALVE ANALYSIS

| Valve | Anode Voltage (V) | Anode Current (mA) | Screen Voltage (V) | Screen Current (mA) |
|---------------|-------------------|--------------------|--------------------|---------------------|
| V1 TP2620 | 217 | 5-1 | 155 | 1-75 |
| V2 VP1321 | 78 | 1-7 | 165 | 1-2 |
| V3 Pen DD4020 | 217 | 4-8 | 217 | 6-8 |

Should a whistle occur at about 350 m, readjust C21 and C22 until it disappears.

LW.—Switch set to LW, tune to 1,500 m on scale, feed in a 1,500 m (200 KC/S) signal, and adjust C24 for maximum output.