

KOLSTER-BRANDES TP41

| Transistor | Emitter (V) | Base (V) | Collector (V) |
|-------------|-------------|----------|---------------|
| TR1† GET874 | 1.2 | 1.2 | 8.6 |
| TR2† GET873 | 0.75 | 0.8 | 8.6 |
| TR3† GET873 | 1.5 | 1.7 | 9.1 |
| TR4† GET113 | — | 0.1 | 4.1 |
| TR5† GET113 | 8.7 | 8.8 | 16.7 |
| TR6* GET113 | 9.1 | 9.2 | 17.8 |
| TR7* GET113 | — | 0.1 | 9.1 |

†Measured from chassis (tuning gang casing).
*Measured with respect to 18V battery positive.

Resistors

| | | |
|-----|-------|----|
| R1 | 47kΩ | C2 |
| R2 | 8.2kΩ | C1 |
| R3 | 3.9kΩ | C1 |
| R4 | 150kΩ | C2 |
| R5 | 1kΩ | C2 |
| R6 | 1.5kΩ | B2 |
| R7 | 22kΩ | B1 |
| R8 | 220Ω | C2 |
| R9 | 5kΩ | A1 |
| R10 | 1kΩ | A1 |
| R11 | 4.7kΩ | A1 |
| R12 | 820kΩ | A1 |
| R13 | — | † |
| R14 | 1kΩ | B2 |
| R15 | 2.2kΩ | A1 |
| R16 | 10kΩ | A1 |
| R17 | 2.2kΩ | A1 |
| R18 | 5kΩ | A1 |
| R19 | 470kΩ | A3 |
| R20 | 68kΩ | A2 |
| R21 | 560Ω | B2 |
| R22 | 2.7kΩ | A2 |
| R23 | 91Ω | A3 |
| R24 | 3.9kΩ | A3 |
| R25 | 91Ω | A3 |
| R26 | 3.9kΩ | A3 |
| R27 | 5Ω | A3 |
| R28 | 220Ω | B1 |

†No Component.
‡Reversible electrolytic.

| | | |
|------|------|----|
| R29 | 5Ω | A2 |
| R30 | — | † |
| R31▲ | 330Ω | B2 |

Capacitors

| | | |
|------|---------|----|
| C1 | 1,250pF | D4 |
| C2 | 115pF | D4 |
| C3 | 0.01μF | C2 |
| C4 | 250pF | B2 |
| C5 | 0.01μF | C1 |
| C6 | 365pF | D4 |
| C7 | 420pF | D4 |
| C8‡ | 16μF | C2 |
| C9 | 8μF | B1 |
| C10 | 250pF | B2 |
| C11 | 0.25μF | C2 |
| C12 | 100μF | A3 |
| C13 | 100μF | C2 |
| C14‡ | 16μF | B2 |
| C15 | 250pF | B2 |
| C16 | 0.25μF | B2 |
| C17§ | 8μF | B1 |
| C18 | 0.01μF | B1 |
| C19 | 350μF | A3 |
| C20 | 10μF | A1 |
| C21 | 0.22μF | F4 |
| C22 | 0.25μF | B2 |
| C23 | 500μF | A2 |
| C24 | 0.01μF | A3 |

| | | |
|-----|--------|----|
| C25 | 0.01μF | A3 |
| C26 | 300pF | — |
| C27 | — | D5 |
| C28 | — | D5 |
| C29 | — | D5 |
| C30 | — | D5 |
| C31 | — | B2 |

Coils

| | | |
|----|-----|----|
| L1 | — | F4 |
| L2 | — | F4 |
| L3 | — | D4 |
| L4 | — | D4 |
| L5 | — | E4 |
| L6 | — | D4 |
| L7 | — | C1 |
| L8 | 40Ω | E4 |

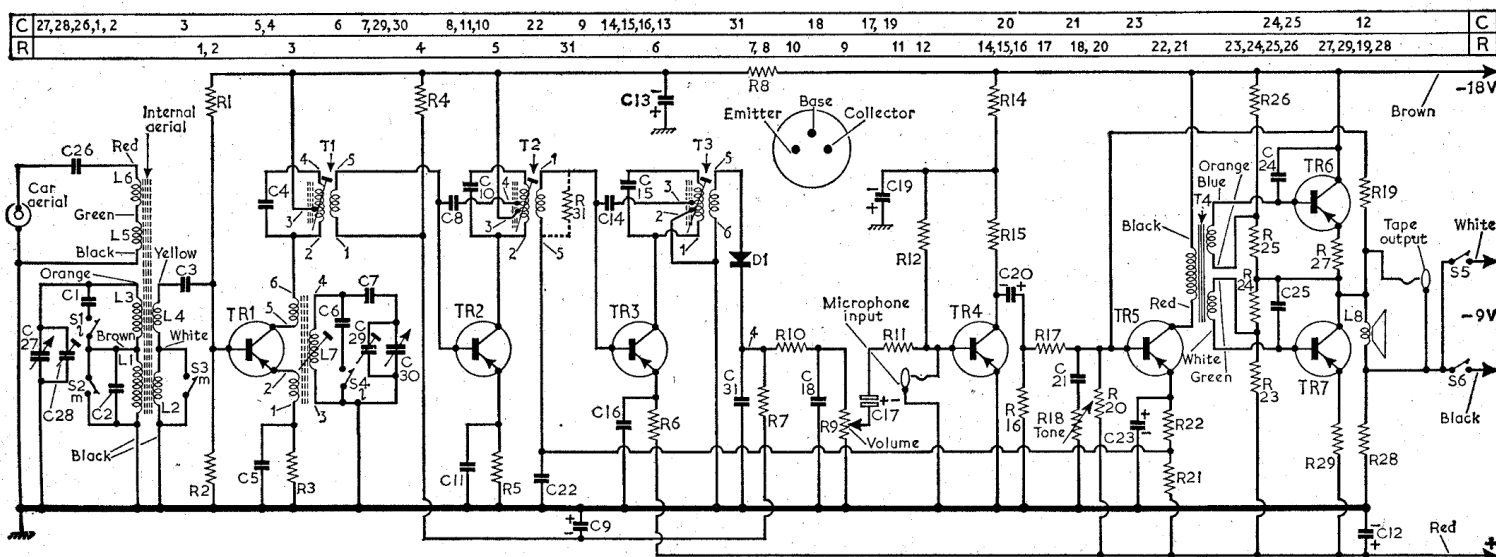
Transformers

| | |
|----|----|
| T1 | B2 |
| T2 | B2 |
| T3 | B2 |
| T4 | A2 |

Miscellaneous

| | | |
|-------|-------|----|
| D1 | CG64H | B2 |
| S1-S6 | — | E4 |

§No value given.
▲ In some receivers only.



CIRCUIT ALIGNMENT

Equipment Required.—An A.M. signal generator; a 50Ω output wattmeter; a 0.1μF capacitor; an R.F. coupling coil, constructed by winding 85 turns of enamelled copper wire on a 2in diameter former and a bladed type insulated trimming tool for adjustment of the I.F. and oscillator coil cores.

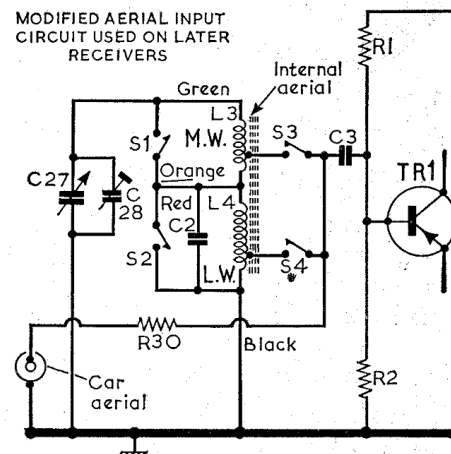
During alignment, reduce the input signal as the circuits come into line to maintain an output of about 50mW.

- 1.—Connect the output meter in place of the loudspeaker. Connect the signal generator between chassis and, via the 0.1μF capacitor, the junction L4, C3 (location reference D4). Switch to M.W. and set the tuning gang to the minimum capacitance position. Set the volume control for maximum output.
- 2.—Feed in a 470kc/s 30% modulated signal and adjust the cores of T3 (B2), T2 (B2) and T1 (B1) in that order for maximum output; readjust as necessary.
- 3.—Remove the signal generator from the junction L4, C3 and connect it across the R.F. coupling loop. Place the loop a short distance from the receiver on the same axis as the ferrite rod aerial coils.
- 4.—Set the pointer to the 500m mark on the tuning scale. Feed in a 600kc/s signal and adjust L7 (C1) and L3 (D4) for maximum output.

- 5.—Set the pointer to the 222m mark on the tuning scale. Feed in a 1,350kc/s signal and adjust C29 (D5) and C28 (D5) for maximum output.
- 6.—Switch to L.W. and set the pointer to the 1,335m mark on the tuning scale. Feed in a 225kc/s signal and adjust L1 (F4) at the same time rocking the tuning gang slightly for maximum output.
- 7.—Tune receiver to 1,700m, feed in a 176kc/s signal and compare the magnitude of the output with that obtained in operation 6. If it is more than 3dB below the output at 225kc/s, adjust L1 while rocking the tuning gang for maximum output. Repeat operations 4-7 as necessary for correct tracking and calibration.

MODIFICATIONS

A later version of this receiver has minor changes to some capacitor values and employs a modified ferrite rod aerial.



Changed capacitor values are as follows:
C6 is 244pF not 365pF; C7 is omitted.
C12 is 350μF not 100μF.
C11, C16, C22 are 0.1μF not 0.25μF.
C2 is 44pF not 115pF.

A separate diagram covering changes in the aerial input circuit is shown above. Some later receivers may have a 330Ω resistor R31 wired across the secondary winding terminals of T2.