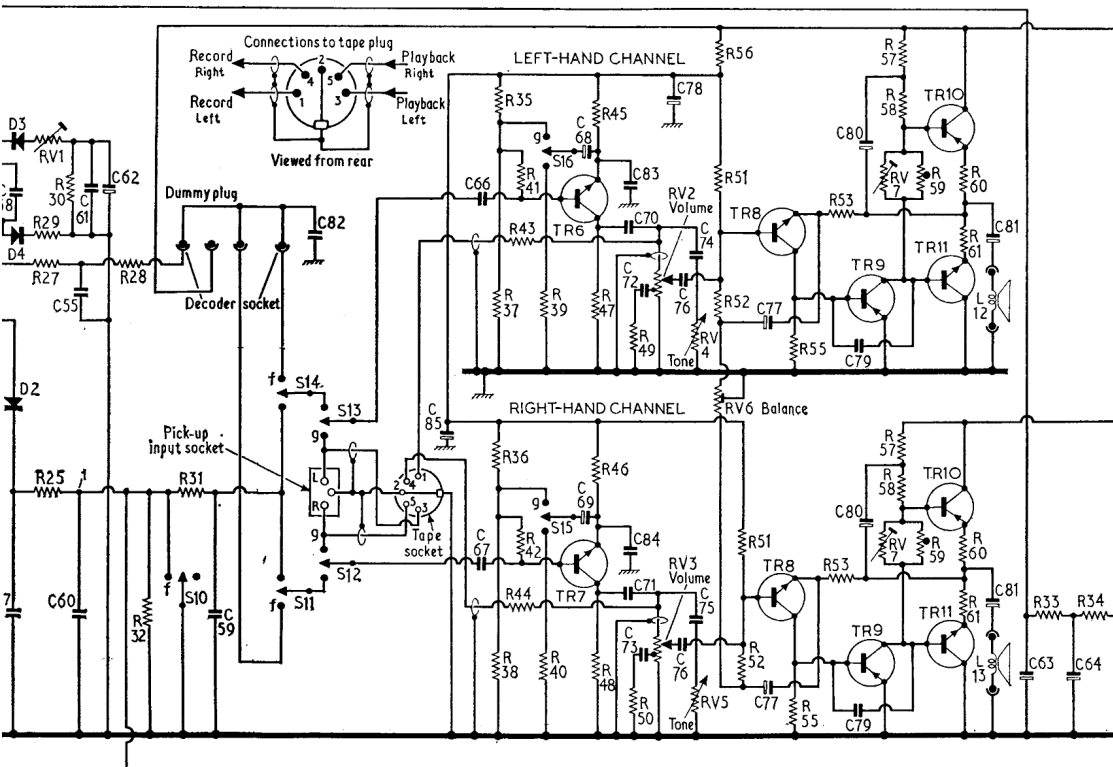
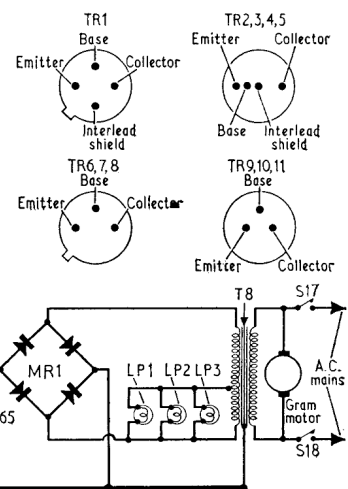


| | | | | | | | | | | | | | | |
|---|----------|----|----|----|----------|----------|----|----|----|----|----|----|----|---|
| 58 | 55,61,62 | 82 | 85 | 66 | 68 | 70,83,72 | 78 | 74 | 79 | 81 | 63 | 64 | 65 | C |
| 57 | 60 | 59 | 67 | 69 | 71,84,73 | 76 | 75 | 77 | 80 | 61 | 33 | 34 | T8 | L |
| RV1,29,30 28 31 35,37,41,43,39 45,47 49 RV4,56 51 55 53 RV7,57,59 60 61 12,13 | | | | | | | | | | | | | | |
| RV1,29,30 28 31 36,38,42,44,40 46,48 50 RV3 RV5, RV6,52 | | | | | | | | | | | | | | |

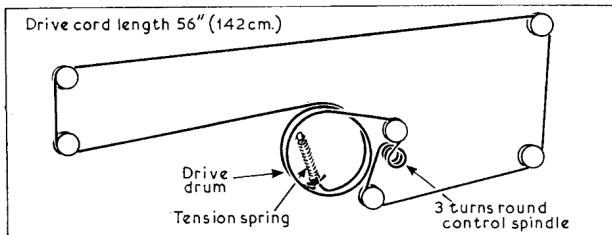
Transistor Table

| Transistor | Emitter (V) | Base (V) | Collector (V) |
|------------|-------------|----------|---------------|
| TR1 | AF178 | 1-00 | 1-30 |
| TR2 | AF115 | 1-40 | 1-60 |
| TR3 | AF115 | 1-40 | 1-70 |
| TR4 | AF116 | 0-80 | 1-20 |
| TR5 | AF116 | 0-70 | 1-00 |
| TR6 | BC108 | 12-20 | 11-00 |
| TR7 | BC108 | 12-20 | 11-00 |
| TR8 | BC108 | 10-00 | 9-40 |
| TR9 | AC128 | — | 0-15 |
| TR10 | AC128 | — | 10-00 |
| TR11 | AC176 | — | 10-00 |

EKCO - SRG601



EKCO - SRG601



Left: Sketch of drive cord assembly shown with gang at maximum.

| Resistors | | | | Resistors | | | | Resistors | | | | Resistors | | | |
|-----------|-------|----|--|-----------|-------|----|--|-----------|-------|----|--|-----------|--------|----|--|
| R1 | 560Ω | F5 | | R16 | 82kΩ | B2 | | R37 | 1.5MΩ | C1 | | R59 | VA1077 | D3 | |
| R2 | 27kΩ | F5 | | R17 | 12kΩ | B2 | | R38 | 1.5MΩ | C1 | | R60 | 2.2Ω | D3 | |
| R3 | 180Ω | F5 | | R18 | 12kΩ | B2 | | R39 | 2.7kΩ | C1 | | R61 | 2.2Ω | D3 | |
| R4 | 5.6kΩ | F5 | | R19 | 220Ω | B2 | | R40 | 2.7kΩ | B1 | | RV1 | 1kΩ | C2 | |
| R5 | 560Ω | F5 | | R20 | 680Ω | B2 | | R41 | 22kΩ | C1 | | RV2 | 250kΩ | A1 | |
| R6 | 6.8kΩ | F5 | | R21 | 12kΩ | C2 | | R42 | 22kΩ | C1 | | RV3 | 250kΩ | A1 | |
| R7 | 1.5kΩ | F5 | | R22 | 1.8kΩ | C2 | | R43 | 220kΩ | C1 | | RV4 | 250kΩ | A1 | |
| R8 | 6.8kΩ | B2 | | R23 | 330Ω | C2 | | R44 | 220kΩ | C2 | | RV5 | 50Ω | D4 | |
| R9 | 27kΩ | B2 | | R24 | 100Ω | C2 | | R45 | 22kΩ | C2 | | RV6 | 50Ω | D3 | |
| R10 | 1kΩ | B2 | | R25 | 470Ω | C2 | | R46 | 22kΩ | C2 | | RV7 | 50Ω | D3 | |
| R11 | 220Ω | B2 | | R26 | 220Ω | C2 | | R47 | 22kΩ | C1 | | | | | |
| R12 | 1kΩ | B1 | | R27 | 100Ω | C2 | | R48 | 22kΩ | C1 | | | | | |
| R13 | 47Ω | B1 | | R28 | 1.5kΩ | C2 | | R49 | 3.3kΩ | A1 | | | | | |
| R14 | 39kΩ | B2 | | R29 | 330Ω | C2 | | R50 | 3.3kΩ | A1 | | | | | |
| R15 | 100Ω | B2 | | R30 | 39kΩ | C2 | | R51 | 390kΩ | D4 | | | | | |
| | | | | R31 | 470Ω | C2 | | R52 | 390kΩ | D4 | | | | | |
| | | | | R32 | 4.7kΩ | C2 | | R53 | 1kΩ | D3 | | | | | |
| | | | | R33 | 180Ω | C1 | | R55 | 1.5kΩ | D4 | | | | | |
| | | | | R34 | 1kΩ | C1 | | R56 | 4.7kΩ | D4 | | | | | |
| | | | | R35 | 1MΩ | C2 | | R57 | 150Ω | D4 | | | | | |
| | | | | R36 | 1MΩ | C2 | | R58 | 390Ω | D4 | | | | | |

| | | | | | | | |
|-----|---------|----|--|-----|---------|----|--|
| C9 | 2.2pF | F5 | | C58 | 68pF | C2 | |
| C10 | 330pF | F5 | | C59 | 5,000pF | C2 | |
| C11 | 1,000pF | F5 | | C60 | 0.01μF | C2 | |
| C12 | 6.8pF | F5 | | C61 | 0.01μF | C2 | |
| C13 | 47pF | F5 | | C62 | 4μF | C2 | |
| C14 | 470pF | F5 | | C63 | 500μF | C2 | |
| C15 | 20pF | F5 | | C64 | 200μF | C1 | |
| C16 | — | B2 | | C65 | 3,000μF | A1 | |
| C17 | 5pF | F5 | | C66 | 0.1μF | C2 | |
| C18 | 200pF | B2 | | C67 | 0.1μF | C2 | |
| C19 | 820pF | B1 | | C68 | 10μF | C1 | |
| C20 | 12pF | B2 | | C69 | 10μF | C2 | |
| C21 | 25pF | B1 | | C70 | 0.1μF | C1 | |
| C22 | 100pF | C1 | | C71 | 0.1μF | C1 | |
| C23 | 3pF | B1 | | C72 | 0.1μF | A1 | |
| C24 | — | B2 | | C73 | 0.1μF | A1 | |
| C25 | 0.01μF | B2 | | C74 | 0.022μF | A1 | |
| C26 | 0.01μF | B2 | | C75 | 0.022μF | A1 | |
| C27 | 0.01μF | B2 | | C76 | 0.1μF | D4 | |
| C28 | 0.04μF | B2 | | C77 | 250μF | D4 | |
| C29 | 360pF | B2 | | C78 | 25μF | D4 | |
| C30 | 25pF | B2 | | C79 | 470pF | D4 | |
| C31 | 14pF | B2 | | C80 | 40μF | D4 | |
| C32 | — | B2 | | C81 | 400μF | D4 | |
| C33 | 25pF | C2 | | C82 | 0.01μF | C2 | |
| C34 | 300pF | C2 | | C83 | 1,000pF | C1 | |
| C35 | 820pF | B2 | | C84 | 1,000pF | C1 | |
| C36 | 470pF | B2 | | C85 | 25μF | C1 | |
| C37 | 2,000pF | B2 | | | | | |
| C38 | 820pF | B2 | | | | | |
| C39 | 120pF | B2 | | | | | |
| C40 | 2,000pF | B2 | | | | | |
| C41 | 10μF | B2 | | | | | |
| C42 | 0.04μF | B2 | | | | | |
| C43 | 1,000pF | B2 | | | | | |
| C44 | 120pF | B2 | | | | | |
| C45 | 2,000pF | C2 | | | | | |
| C46 | 820pF | B2 | | | | | |
| C47 | 470pF | B2 | | | | | |
| C48 | 0.04μF | C2 | | | | | |
| C49 | 0.1μF | B2 | | | | | |
| C50 | 0.1μF | C2 | | | | | |
| C51 | 0.04μF | C2 | | | | | |
| C52 | 0.01μF | C2 | | | | | |
| C53 | 820pF | C2 | | | | | |
| C54 | 220pF | C2 | | | | | |
| C55 | 1,000pF | C2 | | | | | |
| C57 | 0.01μF | C2 | | | | | |

Coils

| | | | |
|------|---|----|--|
| L1 | — | F5 | |
| L2 | — | F5 | |
| L3 | — | F5 | |
| L4 | — | F5 | |
| L5 | — | F5 | |
| L6 | — | B1 | |
| L7 | — | C1 | |
| L8 | — | B2 | |
| L11 | — | B2 | |
| L12* | — | — | |
| L13* | — | — | |

Transformers

| | | | |
|----|---|----|--|
| T1 | — | F5 | |
| T2 | — | B2 | |
| T3 | — | B2 | |
| T4 | — | B2 | |
| T5 | — | B2 | |
| T6 | — | C2 | |
| T7 | — | C2 | |
| T8 | — | C2 | |

Miscellaneous

| | | | |
|----------|-----------|----|--|
| D2 | SFD107 | C2 | |
| D3 | 1N542 | C2 | |
| D4 | 1N542 | C2 | |
| LP1 | 6.5V 0.5A | B1 | |
| LP2 | 6.5V 0.3A | — | |
| MR1 | LT119 | B1 | |
| S1-S16 | — | B1 | |
| S17, S18 | — | A1 | |

*12Ω impedance loudspeaker.

CIRCUIT ALIGNMENT

Equipment required.—An a.m./f.m. signal generator with provision for 30 per cent modulation a.m. and ± 25 -75kc/s deviation f.m., an oscilloscope; a wobbulator; an audio output meter with an impedance to match 12Ω; two 0.1μF capacitors and suitable non-ferrous trimming tools.

For alignment purposes it will be necessary to remove the chassis from the cabinet.

A.M. Circuits

- 1.—Connect the audio output meter in place of the loudspeaker and connect the output of the signal generator across L6 with a 0.1μF blocking capacitor in each lead.
- 2.—Turn volume and tone controls to maximum and check that when the gang is fully closed, the cursor lines up with the calibration marks at the i.f. end of the tuning scale.
- 3.—Switch receiver to m.w. and tune to 500m, feed in a 470kc/s signal and adjust the cores of T6, T4 and T2 in that order for maximum output.
- 4.—Remove signal generator output lead from L6 and connect it (via a suitable dummy aerial) to the external aerial socket.
- 5.—Tune receiver to 461.5m and feed in a 650kc/s signal. Adjust L8 and the position of L6 on ferrite rod for maximum output.
- 6.—Tune receiver to 200m and feed in a 1,500kc/s signal.
- 7.—Adjust C30 and C21 for maximum output.
- 8.—Repeat operations 5, 6 and 7 until no further improvement in either gain or calibration accuracy can be obtained. Seal the position of L6 on the ferrite rod.
- 9.—Switch receiver to l.w. and tune to 1,400m.
- 10.—Feed in a 214kc/s signal and adjust C33 and L7 for maximum output.
- 11.—Seal the position of L7 on the ferrite rod.

F.M. Circuits

- 1.—Connect the wobbulator output (terminated with a 75Ω resistor) via a 0.1μF capacitor to TR3 base, and connect the oscilloscope across R30. Disconnect C62, turn volume control to minimum and switch receiver to f.m., tuning to the i.f. end of the tuning scale.
- 2.—Feed in a 10.7Mc/s signal and adjust the cores of T3, T5 and T7 for maximum output consistent with symmetry and curve shape.
- 3.—Short-circuit L11 and transfer wobbulator output to external f.m. aerial socket.
- 4.—Adjust L3 and L4 for maximum output consistent with symmetry and curve shape.
- 5.—Remove short-circuit from L11 and adjust for minimum output at 10.7Mc/s.
- 6.—Reconnect C62, short-circuit L11 and transfer oscilloscope input lead to across C82 on decoder plug panel.
- 7.—Check for satisfactory "S" curve.
- 8.—Replace wobbulator with a.m./f.m. signal generator with ± 25 kc/s deviation. Turn volume and tone controls to maximum.
- 9.—Feed in an 88Mc/s signal and tune receiver to 88Mc/s, adjust L5 and L1 for maximum output and calibration accuracy.
- 10.—Tune receiver to 106Mc/s, feed in a 106Mc/s signal and adjust C15, C7 for maximum output and optimum calibration accuracy and sensitivity.
- 11.—Tune receiver to 92Mc/s. Feed in a 92Mc/s signal ± 75 kc/s deviation at a level of 10μV. Tune receiver for maximum output.
- 12.—Switch off modulation and adjust RV1 for minimum noise output.

Audio Adjustments

Quiescent Current.—To adjust the quiescent current of the output transistors, switch off the receiver and disconnect the collector lead of TR10 (AC128). Insert a model 8 Avometer switched to 100mA range between TR10 collector and supply line. Switch receiver on and adjust RV7 for a standing current of 8mA (when receiver is connected to 240V a.c. mains). Reconnect AC128 collector to supply line.

Balance.—To adjust the balance of the two amplifiers, join the pick-up inputs together and apply a 400c/s a.f. signal. Connect matched output meters (with 12Ω impedances) in place of each loudspeaker and adjust RV6 to obtain equal readings from both channels.

Below: Sketch showing details of waveband switches.

