FERGUSON - 3100

Resistors

R1	33kΩ	A2
R2	6·8kΩ	A1
R3	1kΩ	A1
R4	680Ω	A2
R5	150kΩ	B1
R6	56kΩ	A2
R7	680Ω	A2
R8	2·2kΩ	A2
R9	4·7kΩ	A3
R10	8·2kΩ	A2
R11	22kΩ	A2
R12	1kΩ	A3
R13	470Ω	A3
R14	5kΩ	A1
R15	330Ω	B3
R16	6·8kΩ	B3
R17	270Ω	B3
R18	18kΩ	B3
R19	820Ω	B3
R20	150kΩ	B3
R21	47Ω	B3
R22	8·2kΩ	C3
R23	8·2kΩ	C3
R24	4·7Ω	C3
R25	8·2kΩ	A1

Capacitors

C1	40pF	A1
C2	420pF	B1
C3	50pF	C1
C4	5,000pF	A2
C5	0·02μF	A1
C6	40pF	A1
C7	149pF	B1
C8	265pF	B1
C9	40pF	C1
C10	500pF	A2
C11	500pF	A2
C12	8μF	A2
C13	0·04μF	A2
C14	500pF	A2
C15	500pF	A2
C16	2μF	A2
C17	0·02μF	A3
C18	0·02μF	A3
C19	350μF	A3
C20	250pF	A3
C21	0·01μF	A3
C22	0·04μF	A3
C23	0·25μF	B3
C24	100μF	B3
C25	100μF	B3
C26	0·01μF	C3
C27	0·01μF	C3
C28	—	†
C29	10pF	B2

Coils*

L1	7·25	C1
L2	—	C1
L3	—	C1
L4	—	B1
L5	—	B1
L6	—	A2
L7	—	A2
L8	2·0	A2
L9	3·0	A2
L10	—	A2
L11	3·0	A2
L12	3·0	A2
L13	3·0	A3
L14	3·5	A3
L15	35·0	B2

Transistors

TR1	AF117	A2
TR2	AF117	A2
TR3	AF117	A3
TR4	OC71	B3
TR5	OC81D	B3
TR6‡	OC81	C3
TR7‡	OC81	C3

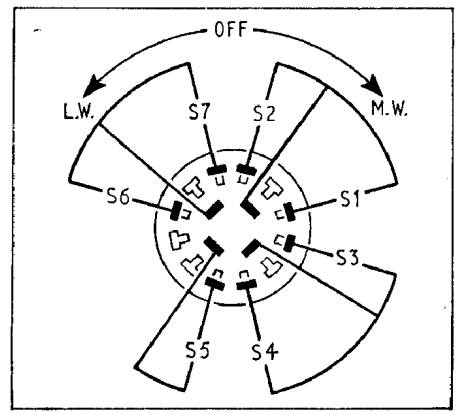
Transformers*

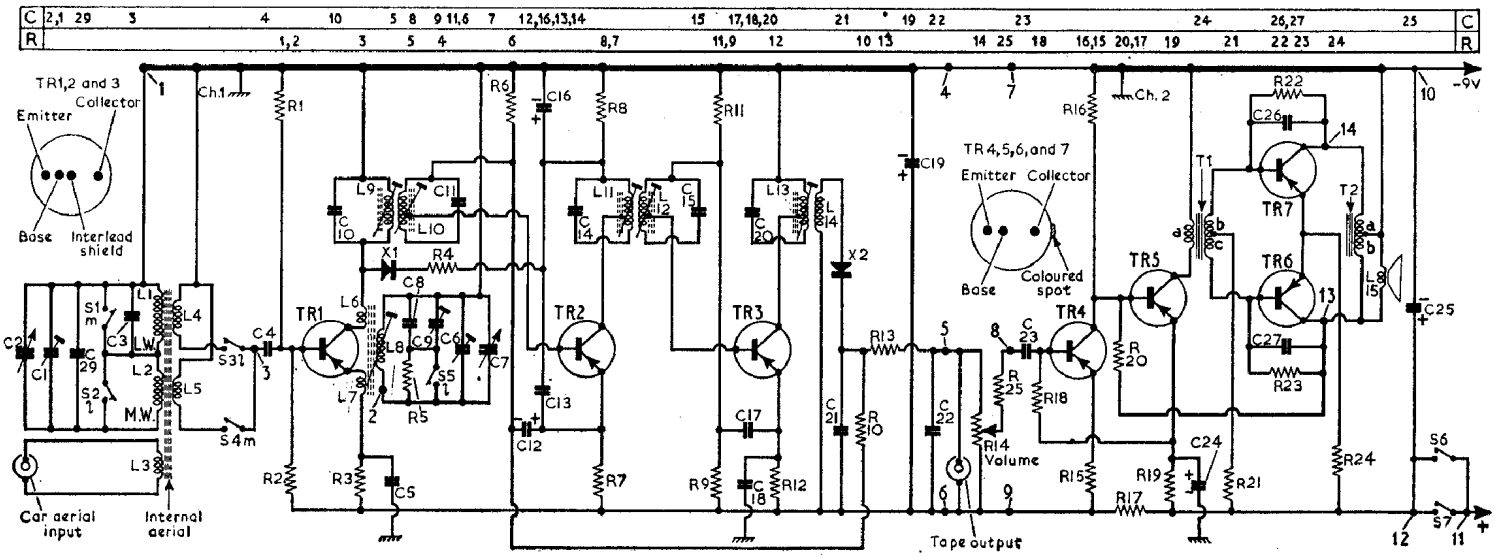
T1	a	260·0	B3
	b	55·0	
	c	55·0	
T2		4·0	B2

Miscellaneous

X1	OA79	A2
X2	OA90	A3
S1-S7	—	B1

*Approximate d.c. resistance in ohms.
†No component.
‡Matched pair.





CIRCUIT ALIGNMENT

Equipment Required.—An a.m. signal generator, 30 per cent modulated; an output meter with an impedance of 30-40Ω or an a.c. voltmeter with a suitable impedance (a model 8 Avometer would be suitable); an aerial coupling loop; a 0.1μF capacitor and a screwdriver-type trimming tool.

Alignment Notes.—If a 30-40Ω output meter is used it should be connected in place of the speaker speech coil **L15** but if an a.c. voltmeter is used as an output indicator, the speech coil should remain in circuit with the voltmeter connected across it.

The signal generator output should be adjusted throughout alignment so as to maintain the receiver output at approximately 50mW (1V a.c.) to prevent a.g.c. action. The r.f tuned circuits are interdependent and m.w. adjustments should be made first.

1.—Switch receiver to m.w. and rotate tuning gang to minimum capacitance. Turn volume control to maximum. Connect the signal generator via the 0.1μF capacitor across **C2** (location reference B1).

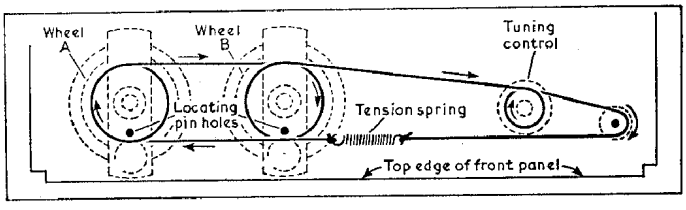
2.—Feed in a modulated 475kc/s signal and adjust **L13** (A3), **L12, L11** (A3), **L10** and **L9** (A2) in that order for maximum output. Repeat until no further improvement can be obtained.

3.—Disconnect the signal generator from the receiver and connect its output leads directly across the coupling loop. Place the loop so that it is loosely coupled to the ferrite rod aerial.

4.—Tune receiver to 200m (calibration mark on scale). Feed in a 1,500kc/s signal and adjust **C6** (B1) and **C1** (B1) for maximum output.

5.—Tune receiver to 500m (mark on scale). Feed in a 600kc/s signal and adjust **L8** (A2). Then adjust **L2** by sliding adjusting ring (D1) along the ferrite rod for maximum output.

6.—Switch to l.w. and tune receiver to 1,500m (mark on scale). Feed in a 200kc/s signal and adjust **C9** (B1) and **L1** (B1) for maximum output. **L1** is adjusted by sliding it along the ferrite rod.



Left: *Scale drive assembly as seen with the chassis inverted and the drive turned to the l.f. ends of the scales*