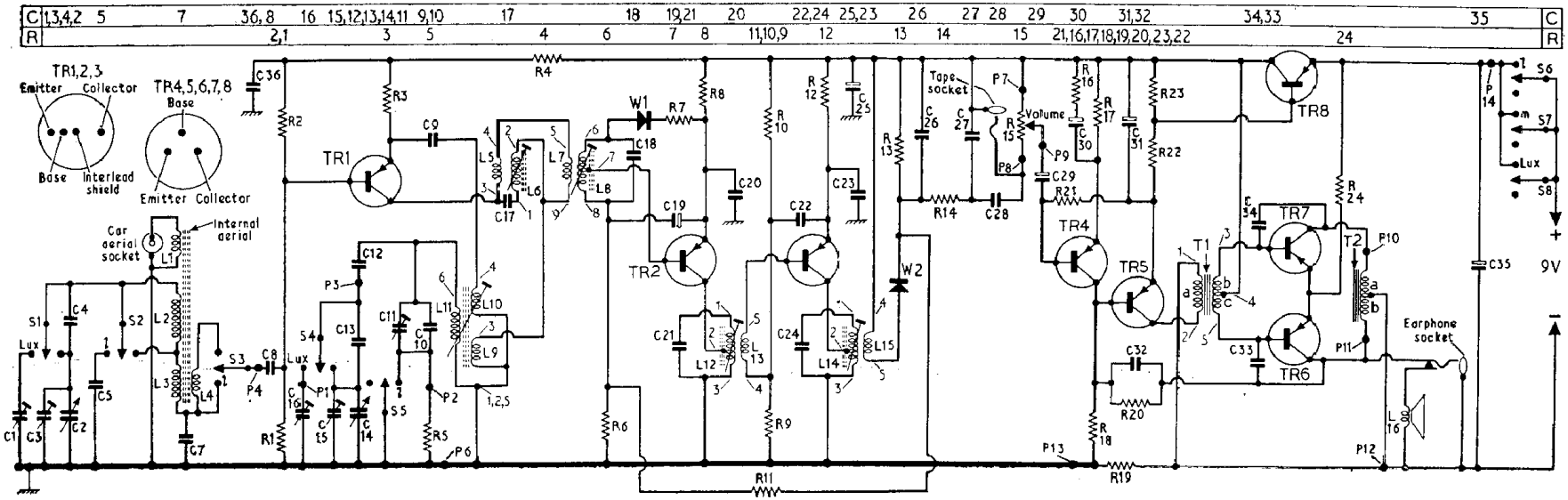
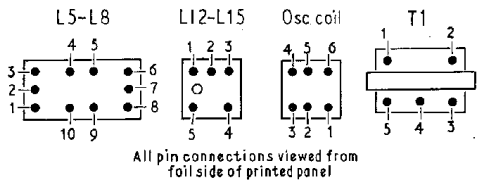


FERGUSON
3136

Transistor Table

Transistor		Emitter (V)	Base (V)	Collector (V)
TR1	AF117	1·10	1·15	7·70
TR2	AF117	0·42	0·58	8·00
TR3	AF117	1·03	1·22	8·10
TR4	AC155	0·76	0·85	1·50
TR5	AC113	1·45	1·50	8·40
TR6	AC154	0·12	0·12	9·00
TR7	AC154	0·12	0·12	9·00
TR8	AC169	—	—	—



Resistors

R1	33kΩ	B2
R2	6·8kΩ	B2
R3	1kΩ	A1
R4	220Ω	B2
R5	120kΩ	A2
R6	100kΩ	B2
R7	15kΩ	A2
R8	470Ω	A2
R9	22kΩ	B2
R10	4·7kΩ	B2
R11	8·2kΩ	A2
R12	820Ω	B2
R13	3·9kΩ	B2
R14	4·7kΩ	B2
R15	5kΩ	B1
R16	150Ω	B2
R17	820Ω	C2
R18	6·8kΩ	C2
R19	180Ω	C2
R20	390kΩ	C1
R21	18kΩ	C2
R22	470Ω	C2
R23	12Ω	B2
R24	4·7Ω	B1

Capacitors

C1	25pF	C2
C2	316pF	A1
C3	30pF	A1
C4	25pF	C2
C5	60pF	C2
C6**	2,000pF	C2
C7	2,000pF	C2
C8	5,000pF	A2
C9	0·01μF	A1
C10	230pF	A2
C11	50pF	A1
C12	2,000pF	A2
C13	28pF	C2
C14	136pF	A1
C15	30pF	A1
C16	25pF	A1
C17	200pF	B2
C18	200pF	B2
C19	75μF	A2
C20	0·02μF	A2
C21	175pF	B2
C22	0·02μF	B2
C23	0·02μF	B2
C24	175pF	B2
C25	150μF	B2
C26	0·01μF	B2
C27	0·02μF	B2
C28	0·22μF	C2
C29	8μF	C2
C30	75μF	C2
C31	25μF‡	B2
C32	56pF	B1
C33	0·01μF	B1
C34	0·01μF	C1
C35	150μF	B1
C36	0·05μF	B2

Coils*

L1	2·0	B1
L2	8·2	B1
L3	2·0	C1
L4‡‡	—	C1
L5	1·6	B2
L6	1·8	B2
L7	—	B2
L8	6·2	B2
L9	—	B1
L10	—	B1
L11	2·2	B1
L12	5·6	B2
L13	—	B2
L14	5·0	B2
L15	—	B2
L16†	—	B2

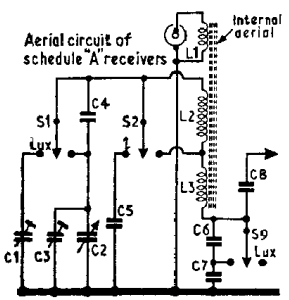
Transformers*

T1	a	160·0	C1
	b	35·0	
	c	35·0	
T2	a	1·6	C1
	b	1·8	

Miscellaneous

S1-S9	—	C2
W1	0A90	A2
W2	0A90	B2

* *Approx. d.c. resistance in ohms.*
† *35Ω impedance loudspeaker.*
‡ *May be 20μF.*
** *Only fitted in schedule "A" receivers.*
‡‡ *Not fitted in schedule "A" receivers.*



alternative aerial circuit used in Sch. A. receivers.

CIRCUIT ALIGNMENT

For alignment purposes the chassis should be removed from the case.

Equipment Required.—A signal generator covering the range 200-1,500kc/s (30 per cent modulated); an audio output meter with an impedance to match 35Ω, or a model 8 Avometer switched to 10V a.c. range; a 0.1μF isolating capacitor and suitable non ferrous trimming tools.

During alignment the signal input level should be adjusted to maintain an output of 50mW with the volume control at maximum.

1.—Switch on signal generator and allow an adequate warming up period. Connect the audio output meter in place of the loudspeaker (via the earphone socket if a suitable jack plug is available), or alternatively connect a model 8 Avometer switched to 10V a.c. range across the loudspeaker speech coil.

2.—Switch receiver to m.w. and turn gang to maximum. Connect the signal generator output via a 0.1μF capacitor to the aerial section of the tuning gang **C2**.

3.—Feed in a 475kc/s signal and adjust the cores of **L14, L12, L8** and **L6** in that order for maximum output.

4.—Repeat operation 3 until no further improvement can be obtained.

5.—Check that with gang at maximum the cursor lies immediately beneath the "W" in "LW" at the left-hand end of the tuning scale. Disconnect the signal generator output lead from **C2** and connect it to an r.f. coupling loop consisting of a few turns of insulated wire loosely wound round the ferrite rod aerial.

6.—With receiver still switched to m.w. tune to 500m and feed in a 600kc/s signal. Adjust **L11** for maximum output. Adjust **L3** (by sliding along ferrite rod) for maximum output.

7.—Tune receiver to 200m, feed in a 1,500kc/s signal and adjust **C15** and **C3** for maximum output.

8.—Repeat operations 6 and 7 until no further improvement in gain or calibration accuracy can be obtained, seal the position of **L3** on the ferrite rod.

9.—Switch receiver to "LUX", tune to 200m and feed in a 1,500kc/s signal. Adjust **C16** and **C1** for maximum output.

10.—Switch receiver to l.w. and tune to 1,500m. Feed in a 200kc/s signal and adjust **C11** and **L2** for maximum output. (Should Light programme break-through be experienced, the 220kc/s l.w. trimming marker on the scale backplate may be used.)