

Resistors

R1	18k�	C2	C9	100pF	C1
R2	5.1k�	C2	C10	12pF	C1
R3	1.5k�	C2	C11	300pF	C2
R4†	47k�	B2	C12	0.04�F	C2
R5	42k�	B1	C13	12pF	C1
R6†	220k�	B1	C14**	250pF	B1
R7	330�	B2	C15**	6.2pF	C1
R8	10k�	B1	C16	0.047�F	C1
R9	2.7k�	B1	C17	—	B2
R10	330�	B2	C18**	10pF	B1
R11†	150k�	B1	C19	—	B1
R12	4.7k�	B1	C20	0.04�F	B1
R13	1k�	B1	C21	0.04�F	B1
R14	5k�	C2	C22	10�F	B1
R15	12k�	A1	C23	0.04�F	B1
R16	5.6k�	A1	C24	0.04�F	B1
R17	220�	A2	C25	—	B1
R18	3.3k�	A1	C26	0.02�F	B1
R19	120k�	A1	C27	0.01�F	B2
R20	220�	A1	C28	4.7�F	A2
R21	68�	A2	C29	30�F	A2
R22	1.5k�	A2	C30	100�F	A1
R23	220�	A1	C31	33�F	A1
R24	0.5�	A1	C32**	0.01�F	A1
			C33**	0.01�F	A2
			C34	100�F	A1
			C35	0.04�F	B2

Capacitors

C1	5.6pF	C1
C2	12pF	C1
C3	300pF	C2
C4	12pF	C1
C5**	15pF	C1
C6	0.02�F	C2
C7	0.022�F	C1
C8**	40pF	C1

Circuit alignment

**Equipment required.** — An r.f. signal generator amplitude modulated 30 per cent at 400c/s; an audio power output meter of 8  impedance, terminated in a miniature jack plug, or alternatively an Avometer model 8, set to the 2.5V a.c. range, a 0.1 F capacitor and an r.f. coupling coil.

Connect the output meter via the earphone socket, thereby disconnecting the loudspeaker. If, however, a model 8 Avometer is to be used the output should be measured across the loudspeaker. During alignment attenuate input signal so that an audio output not greater than 50mW is maintained with the volume control at maximum. This will ensure minimum alignment error due to a.g.c. action.

1. — Switch receiver to m.w., rotate tuning gang to maximum capacitance and feed in a 475kc/s a.m. signal via a 0.1 F capacitor to the junction **C3** and common pole **S1**. Adjust **L15/L16**, **L13/L14** and **L11/L12** in that order for maximum output. Repeat these adjustments, in the same order until no further improvement can be obtained.

2. — Transfer signal generator output to r.f. coupling coil and loosely couple coil to the receiver internal aerial. Tune receiver to 500m. and feed in a 600kc/s a.m. signal. Adjust for maximum output, **L8/L10**, and **L1/L2** by sliding along ferrite rod.

Coils and transformers\*

L1	6�	C2
L2	—	C2
L3	15�	C1
L4	—	C1
L5	—	C2
L6	—	C2
L7	4�	C2
L8	2�	C2
L9	—	C2
L10	—	C2
L11	3.5�	B2
L12	—	B2
L13	3.5�	B1
L14	—	B1
L15	3.5�	B1
L16	—	B1
L17	8�	C2
T1	1-2 40�	A2
	2-3 40�	
	4-6 100�	
T2	1-2 2�	A2
	2-3 2�	
	4-6 —	

Miscellaneous

W1	1N6	B1
X1†	D22A	A1
S1-S6	—	B2
S7	—	B1
S8§	—	A2
TmS††	—	A2

\* Approximate d.c. resistance in ohms.  
† Not fitted in some receivers.  
\*\* Subject to variation in value.  
‡ Thermistor.  
§ Automatic wind switch, located in clock unit.  
†† Time switch in clock unit.

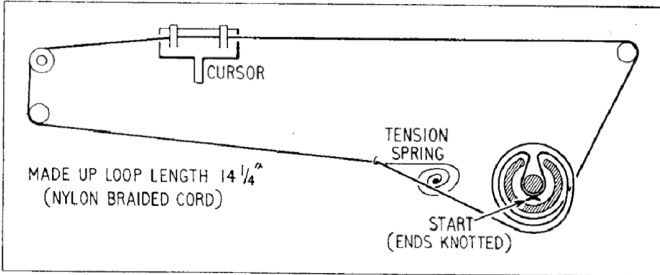
Transistor table

Transistor	Emitter (V)	Base (V)	Collector (V)
TR1 2SA466*	0.5	0.525	2.7
TR2 2SA466†	0.2	0.325	2.7
TR3 2SA466§	0.35	0.5	2.7
TR4 2SB54	0.12	0.22	0.85
TR5 2SB54	0.7	0.85	2.4
TR6 2SB56	—	0.2	3.0
TR7 2SB56	—	0.2	3.0

\* May be type 2SA470.  
† May be type 2SA49.  
§ May be type 2SA53.  
Quiescent current 16.5mA.

Transistor analysis

Transistor voltages quoted in the table overleaf were obtained from information supplied by the manufacturers. They are negative with respect to positive line, and were measured with a 20,000 /V meter under quiescent conditions.



3. — Tune receiver to 200m. and feed in a 1,500kc/s a.m. signal. Adjust **C13** and **C2** for maximum output.

4. — Repeat operations 2 and 3 for optimum results.

5. — Switch receiver to l.w., tune to 2,000m. and feed in a 150kc/s a.m. signal. Adjust for maximum output, **L6/L7** and **L3/L4** by sliding along the ferrite rod.

6. — Tune receiver to 1,000m. and feed in 250kc/s a.m. signal. Adjust **C10** and **C4** for maximum output.

7. — Repeat operations 5 and 6 for optimum results.

