

### Resistors

R1	1kΩ
R2	470Ω
R3	6.8kΩ
R4	33kΩ
R5	100kΩ
R6	100kΩ
R7	12kΩ
R8	470Ω
R9	2.2kΩ
R10	4.7kΩ
R11	22kΩ
R12	390Ω
R13	680Ω
R14	470Ω
R15	820Ω
R16	47kΩ
R17	10kΩ
R18	560Ω
R19	1kΩ

### Capacitors

C1	20pF
C2	100pF
C3	20pF
C4	120pF
C5	0.01μF
C6	20pF
C7	0.01μF
C8	—
C9	0.022μF
C10	8.2pF

A1	C11	20pF
A2	C12	390pF
B1	C13	—
A1	C14	0.1μF
A1	C15	400pF
B1	C16	—
A2	C17	32μF
A1	C18	0.047μF
A2	C19	125μF
A2	C20	—
B2	C22	0.047μF
B2	C23	0.047μF
B2	C24	—
A1	C25	0.01μF
A1	C26	0.01μF
A1	C27	4μF
B2	C28	200μF
B2	C29	0.01μF
B2	C30	22pF
B2	C31	125μF

B2	C32	0.1μF
B2	C33	0.01μF
A2	C34	1,000μF
B2	C35	0.082μF

### Coils and transformers\*

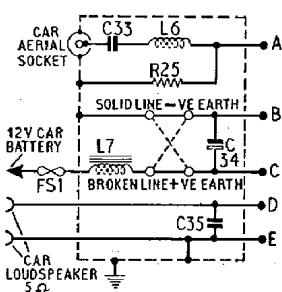
L1	[50Ω]
L2	[5Ω]
L3	[200Ω]
L4	[57Ω]
L5	[5-5Ω]
L6	—
L7	1.2Ω
L8	1.3Ω
T1	8Ω
T2	—

### Miscellaneous

S1-S9, S11, S12	A2
S10	A2
LP	14V, 0.75W
FS1	1A
D1	OA79
D2	OA70
D3	AA129

\* Approximate d.c. resistance in ohms.  
† Primary winding, each half.

EKC0  
CP937-II



### Circuit alignment

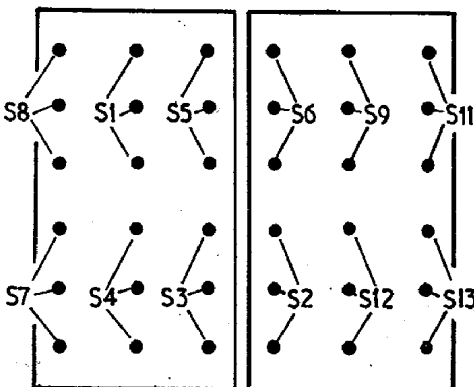
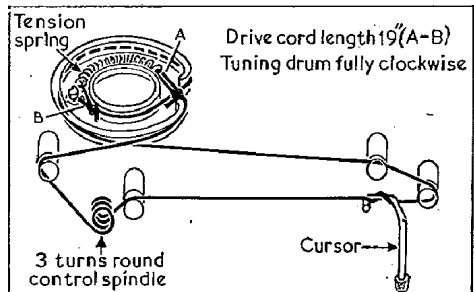
**Equipment required.** — An accurately calibrated r.f. signal generator amplitude modulated 30 per cent at 400c/s; an audio output meter of 5Ω or 8Ω impedance, or alternatively, an a.c. voltmeter (1V f.s.d.) with a 5Ω or 8Ω load resistor in parallel; an r.f. coupling loop; one each 15pF, 60pF and 0.5μF capacitors, and a 9V and 12V d.c. power supply.

**Procedure.** — Separate the receiver from its housing assembly and remove the outer case (see under 'Dismantling'). If the power supply is to be a 9V battery (9.3V), connect the battery to the normal internal battery connector. For a 12V (14.4V) power supply, switch receiver to 'Car' and connect battery to pins 'B' (—ve) and 'C' (+ve) of the five pin socket (location A1). Connect the output meter in place of the loudspeaker, and set for a load impedance of 5Ω or 8Ω as appropriate. If using an a.c. voltmeter, switch to the 1V range and shunt terminals with the 5Ω or 8Ω load resistor. Pre-set volume control to maximum and adjust signal input level during alignment to maintain a receiver output of 50mW or 0.5V. All adjustments are to be made for maximum output.

Switch receiver to m.w./portable, set tuning gang to minimum capacitance, connect output meter (8Ω) to internal loudspeaker leads (internal loudspeaker disconnected), and remove cover from T3. Connect the 0.5μF capacitor to tag 19 the signal is fed in via this capacitor for the first seven operations.

1. — Feed in a 470kc/s a.m. signal, adjust T3 and replace cover.
2. — Feed in a 472kc/s a.m. signal, and adjust T2.
3. — Feed in a 468kc/s a.m. signal, and adjust T1.
4. — Set tuning gang to maximum capacitance, and feed in a 518kc/s a.m. signal. Adjust L5.
5. — Set tuning gang to minimum capacitance less 6 deg. (cursor should bisect 'C' of Car radio, see General notes), and feed in a 1,620kc/s a.m. signal. Adjust C11.
6. — Repeat operations 4 and 5 until no further improvement is obtained.

7. — Switch receiver to l.w./portable, set tuning gang to maximum capacitance, and feed a 145kc/s a.m. signal. Adjust C15. Disconnect 0.5μF capacitor from tag 19.
8. — Loosely couple signal generator to the receiver by placing the receiver in the r.f. coupling coil, pre-set C6 to mid position, and feed in a 190kc/s a.m. signal. Tune receiver to this signal, adjust L4.
9. — Switch receiver to m.w./portable, feed in a 600kc/s a.m. signal and tune receiver to this signal. Adjust L3.
10. — Feed in a 1,500kc/s a.m. signal and tune the receiver to this signal. Adjust C6.
11. — Repeat operations 8-10 until no further improvement is obtained.
12. — For the remainder of adjustments connect a 12V car battery (14.4V d.c.) to pins 'B' and 'C' of the five pin socket, the output meter (5Ω) to pins 'D' and 'E' of the five pin socket; and feed signal in via a dummy aerial made up with the 15pF capacitor in series followed by the 60pF capacitor in shunt to pin 'A' of five pin socket. All adjustments are for maximum output as previously stated.
13. — Switch receiver to m.w./car radio, feed in a 600kc/s a.m. signal and tune receiver to this signal. Adjust L1.
14. — Feed in a 1,500kc/s a.m. signal, and tune receiver to this signal. Adjust C1.
15. — Repeat operations 13 and 14 until no further improvement is obtained.
16. — Switch receiver to l.w./car radio, feed in a 170kc/s a.m. signal, and tune receiver to this signal. Adjust L2.
17. — Feed in a 240kc/s a.m. signal and tune receiver to this signal. Adjust C3.
18. — Repeat operations 16 and 17 until no further improvement is obtained. Re-seal all cores, trimmers and aerial coils.



M.W./L.W. CAR/PORTABLE