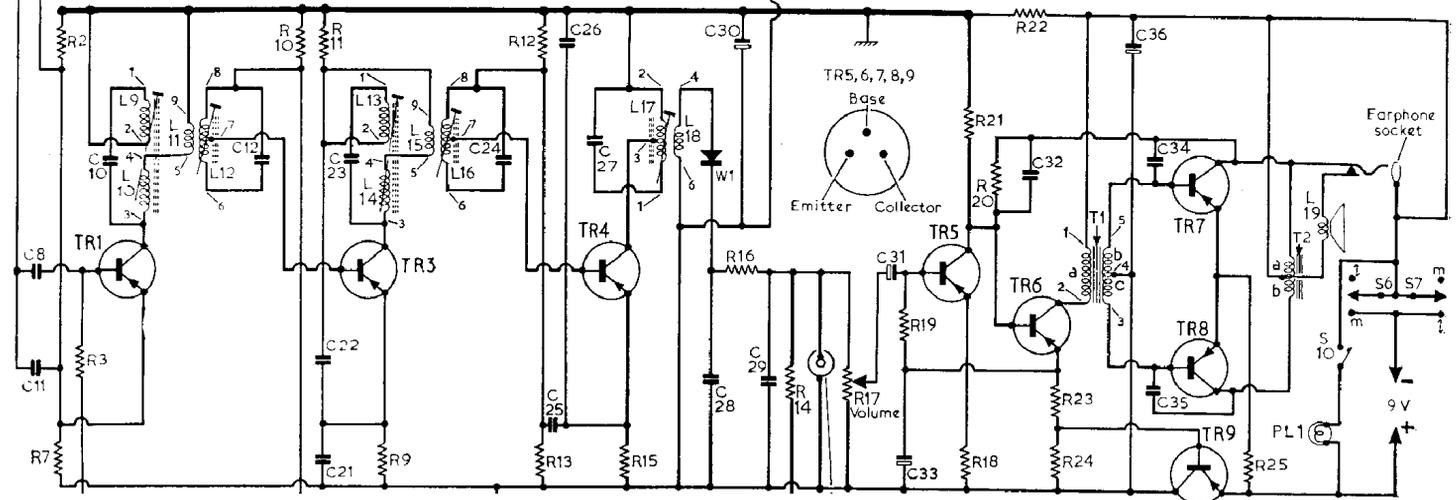


Transistor Table

Transistor	Emitter (V)	Base (V)	
TR1	AF117	0.76	0.85
TR2	AF117	1.5	1.57
TR3	AF117	0.8	0.94
TR4	AF117	1.1	1.3
TR5*	AC155	0.8	0.92
TR6*	AC113	1.45	1.56
TR7*	AC154	0.14	—
TR8*	AC154	0.14	—
TR9	AC169	—	—

*Alternative transistor types: TR5 OC71, TR9 OC81D, TR7 and TR8 OC81.



Resistors

R1	56kΩ	C7	300pF	L3	9.3
R2	22kΩ	C8	5,000pF	L4	2.6
R3	4.7kΩ	C9	0.02μF	L5	—
R4	6.8kΩ	C10	200pF	L6	2.5
R5	1.8kΩ	C11	250pF	L7	—
R6	1.5kΩ	C12	200pF	L8	—
R7	680Ω	C13	75μF	L9	3.8
R8	120kΩ	C14	0.01μF	L10	1.5
R9	680Ω	C15	0.02μF	L11	—
R10	56kΩ	C16	315pF	L12	5.8
R11	470Ω	C17	393pF	L13	3.8
R12	22kΩ	C18	25pF	L14	1.5
R13	4.7kΩ	C19	25pF	L15	—
R14	8.2kΩ	C20	315pF	L16	5.8
R15	1kΩ	C21	0.02μF	L17	5.5
R16	470kΩ	C22	0.02μF	L18	—
R17	4.7kΩ	C23	200pF	L19	35.0
R18	820Ω	C24	200pF		
R19	18kΩ	C25	5,000pF		
R20	390kΩ	C26	0.02μF		
R21	6.8kΩ	C27	180pF		
R22	180Ω	C28	0.02μF		
R23	470Ω	C29	0.02μF		
R24	12Ω	C30	150μF		
R25	4.7Ω	C31	25μF		

Capacitors

C1	393pF
C2	25pF
C3	2,000pF
C4	100pF
C5	2,000pF
C6	140pF

Coils*

L1	17.9
L2	2.7

Transformers*

T1	{ a 160.0
	{ b 35.0
	{ c 35.0
T2	{ a 1.6
	{ b 1.8

Miscellaneous

PL1	8V 0.15A
SI-S9	—
W1	0A90

*Approximate d.c. resist. in ohms.
†C32 is 47pF or 50pF some receivers.

CIRCUIT ALIGNMENT

Throughout alignment the signal input level should be adjusted to maintain an output from the receiver of 50mW with the volume control at maximum, to avoid a.g.c. action.

Equipment Required.—An a.m. signal generator modulated 30 per cent; an audio output meter with an impedance of 30-40Ω or, alternatively, a model 8 Avometer switched to its 2.5V a.c. range; an r.f. coupling loop and a 0.1μF capacitor.

- 1.—Connect the audio output meter in place of the loudspeaker across the l.s. winding of T2, or connect the Avometer (switched to its 2.5V a.c. range) in parallel with the loudspeaker. Connect the signal generator via the 0.1μF capacitor, across the tuning gang aerial section C1. Turn the volume control to maximum.
- 2.—Switch receiver to m.w. and turn the tuning gang to maximum capacitance. Feed in a 475kc/s signal, and adjust L17, L16, L13/L14, L12 and L9/L10 in that order for maximum output. Repeat in the same order until no further improvement is obtained.
- 3.—Check that with the gang at maximum, the cursor coincides with the pip at the left-hand end of the scale window. Adjust if necessary by sliding the cursor along the cord. Connect the signal generator to the r.f. coupling loop, and loosely couple the loop to the ferrite rod aerial.
- 4.—Tune receiver to 500m (marker). Feed in a 600kc/s signal and adjust L6 and L4 for maximum output.
- 5.—Tune receiver to 200m (marker). Feed in 1,500kc/s signal and adjust C18 and C2 for maximum output.
- 6.—Switch receiver to l.w. and tune to the l.w. calibration marker. Feed in a 220kc/s signal and adjust C19 and L3 for maximum output.

Note: If the loudspeaker has been removed to give easier access to coil cores, it should be replaced before the final alignment of L4, C2 and L3 because its position has

some effect on tuning. C2 and C18 adjustments are accessible through an aperture (normally covered by adhesive tape) in the underside of the case.

- 7.—Switch receiver to m.w. and depress the car press-button. Set L2 adjusting screw (cam follower) so that an equal amount of thread appears at each end of its moulded support. Connect the signal generator to the car aerial socket via a dummy aerial comprising an 18pF capacitor in series with the signal generator "live" lead followed by a 60pF capacitor across the inner and outer connections of the aerial socket.
- 8.—Feed in a 1,500kc/s signal and tune the receiver to this signal (approximately 200m) for maximum output. Adjust L2 (m.w. car aerial adjusting screw) for maximum output.
- 9.—Feed in a 600kc/s signal and tune receiver to this signal (approximately 500m). Adjust C6 for maximum output.
- 10.—Switch receiver to l.w. (and car). Feed in a 220kc/s signal and tune receiver to this signal (approximately 1,400m). Adjust L1 for maximum output.
- 11.—Repeat operations 8, 9 and 10 as necessary for maximum output and correct calibration.

After assembling the chassis in the case, C2 should be adjusted for maximum output on a radiated signal at approximately 1,500 kc/s. C6 should be finally peaked after the car aerial has been plugged in.

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