

Resistors								
R1	56kΩ	A2	C4	0.04μF	A2	L4	11.2	D3
R2	10kΩ	A2	C5	0.01μF	B2	L5	—	D3
R3	3.3kΩ	B2	C6	250pF	B2	L6	—	B2
R4	68kΩ	B2	C7	286pF	A2	L7	—	B2
R5	8.2kΩ	B2	C8	229pF	A2	L8	—	A2
R6	680Ω	B2	C9	25pF	A2	L9	—	B2
R7	4.7kΩ	B2	C10	200pF	A1	L10	—	B2
R8	22kΩ	B2	C11	80pF	A1	L11	—	C2
R9	4.7kΩ	C2	C12	8μF	B2	L12	—	C2
R10	1kΩ	C2	C13	0.04μF	B2	L13	—	C2
R11	390Ω	A2	C14	250pF	C2	L14	—	C2
R12	470Ω	C2	C15	175pF	C2	L15	3.0	—
R13	2.2kΩ	B2	C16	0.04μF	C2			
R14	68kΩ	B2	C17	0.1μF	C2			
R15	22kΩ	C1	C18	250pF	C2			
R16	680Ω	C1	C19	60pF	C2			
R17	1MΩ	B1	C20	0.03μF	C2			
R18	1kΩ	C1	C21	0.03μF	C2			
R19	4.7kΩ	C1	C22	100μF	B1			
R20	91Ω	C2	C23	8μF	B1			
R21	100Ω	B1	C24	100μF	C1			
R22	4.7Ω	B1	C25	100μF	C1			
R23	4.7kΩ	B2	C26	0.25μF	A1			
RV1	5kΩ	A1	C27	0.04μF	B2			
			C28	0.04μF	B2			
Capacitors			Coils*					
C1	344pF	A2	L1	—	D3			
C2	25pF	A2	L2	1.4	E3			
C3	82pF	D3	L3	—	E3			

Transistor Table			
Transistor	Emitter (V)	Base (V)	Collector (V)
VT1 NKT 152	0.90	0.85	6.4
VT2 NKT 153/35	0.65	0.70	7.2
VT3 NKT 154/35	0.95	1.0	7.2
VT4 NKT 254	1.4	1.4	8.8
VT5 NKT 251	—	0.15	9.0
VT6 NKT 251	—	0.15	9.0

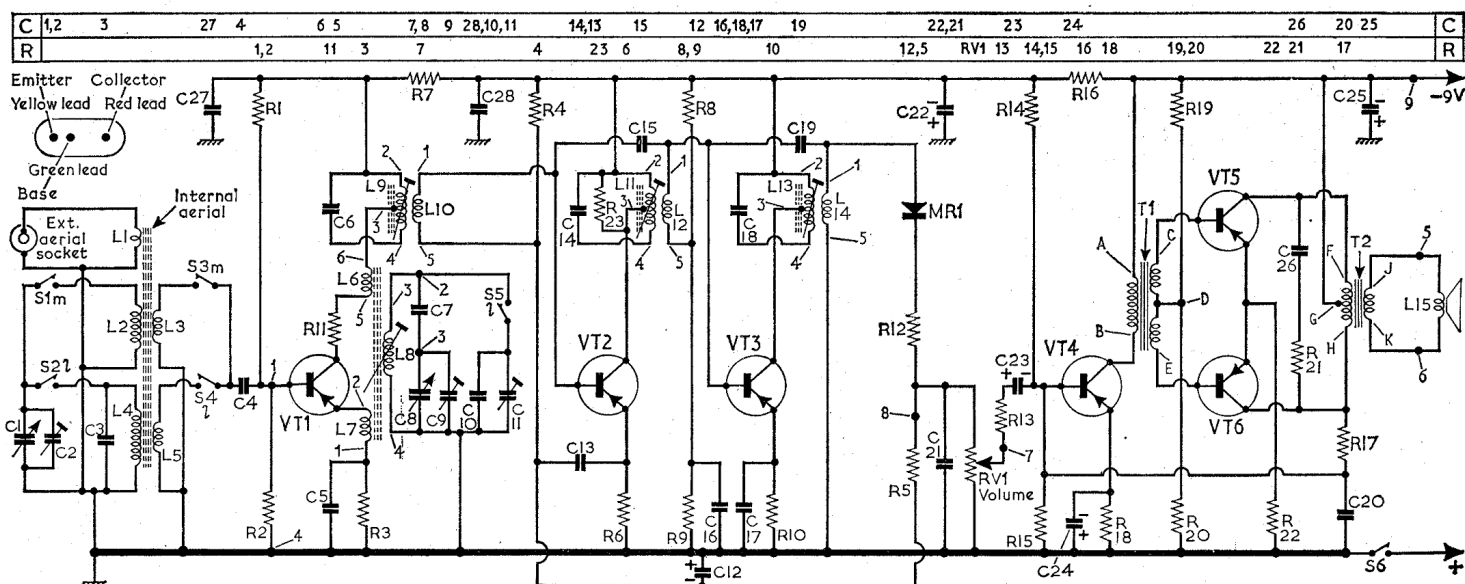
#### Transformers\*

T1	Pri	153.0	C1
	Sec	37.0	
T2	Pri	3.6	B1
	Sec	0.22	

#### Miscellaneous

MR1	NKT155	C2
S1-S5	—	A1
S6	—	A2

\*Approximate D.C. resistance in ohms.  
§In some receivers only.



### CIRCUIT ALIGNMENT

**Equipment Required.**—A signal generator with a 30 per cent modulated output at 1,000c/s or 400c/s; an output meter or a 0-5V A.C. voltmeter; an R.F. coupling coil; two 0.1μF capacitors and a bladed type insulated trimming tool.

- 1.—Connect the output meter in place of the loudspeaker, or the 0-5 A.C. voltmeter across the loudspeaker speech coil. Set the volume control to maximum output.
- 2.—Switch receiver to M.W. and tune to a quiet spot around 450m. Insert a 0.1μF capacitor in each generator lead and connect the generator across L3.
- 3.—Feed in a 470kc/s signal and adjust the generator for an output of 50mW in the output meter (0.5V on the A.C. voltmeter). adjust the cores of L13 (location reference D3), L11 (D3) and L9 (E3) in that order for maximum output. Repeat as necessary.
- 4.—Disconnect the signal generator and output meter and replace the printed panel in the case. Fit the tuning knob so that with the gang fully meshed, the datum marks line up with the studs on the case.

- 5.—Connect the signal generator output leads to the R.F. coupling coil and place the coil at a distance of approximately 12in from the centre of ferrite rod, coaxial with the rod on the L2 side. Connect the output meter at the panel end of the loudspeaker leads.

Note: The oscillator coil L8 can be adjusted through the foil side of the printed panel and capacitors C2 and C9 through the escutcheon aperture. C2 is the upper adjustment.

- 6.—Tune receiver to 500m. Feed in a 500kc/s signal and adjust L8 (A2) and L2 (E3) for maximum output.
- 7.—Tune to 200m, feed in a 1,500kc/s signal and adjust C9 for maximum output. Tune to 214.3m, feed in 1,400kc/s signal and adjust C2 for maximum output.
- 8.—Repeat operations 6 and 7 until no further improvement can be obtained.
- 9.—Switch receiver to L.W. and tune to 1,400m. Feed in a 214.3kc/s signal and adjust C11 (A1) and L4 (D3) for maximum output.

Where it is not convenient to use the coupling loop method of signal injection (the preferred method), the external aerial socket may be used although this may introduce an error at the H.F. end of the M.W. band.

INVICTA - 322