

# EVER READY "ALL DRY" PORTABLE Model N

**General Description :** Four-valve, two-waveband, portable super-heterodyne receiver for dry battery operation.

**Power Supplies :** Ever Ready "Batrymax" B.107 H.T. battery, 90 volts. Ever Ready "Alldry" 14 L.T. battery, 1.5 volts.

**Consumption :** H.T. battery, 12.5 mA.; L.T. battery, 250 mA.

**Wavebands :** M.W. 192-535 m. (1563-560 kc/s.); L.W. 950-1850 m. (315-162 kc/s.).

**Intermediate Frequency :** 470 kc/s.

**Valves :** (V<sub>1</sub>) DK91; (V<sub>2</sub>) DF91; (V<sub>3</sub>) DAF91; (V<sub>4</sub>) DL92.

**Valve Analysis :** All voltages were taken on the 100-volt range of a multi-range instrument having a sensitivity of 1000 ohms/volt, except where otherwise stated. Volume control set to maximum under no-signal conditions.

Value	V <sub>a</sub>	V <sub>s</sub>	I <sub>a</sub>	I <sub>s</sub>	V <sub>g</sub>
V <sub>1</sub> DK91	80	40	0.5 mA.	1.5 mA.	—
V <sub>2</sub> DF91	80	47	2.3 mA.	1.0 mA.	—
V <sub>3</sub> DAF91	24 *	17.5 *	<60 μA.	<15 μA.	—
V <sub>4</sub> DL92	80	80	5.5 mA.	1.6 mA.	- 10

\* Absolute values measured on electronic voltmeter (input resistance exceeding 1000 megohms).

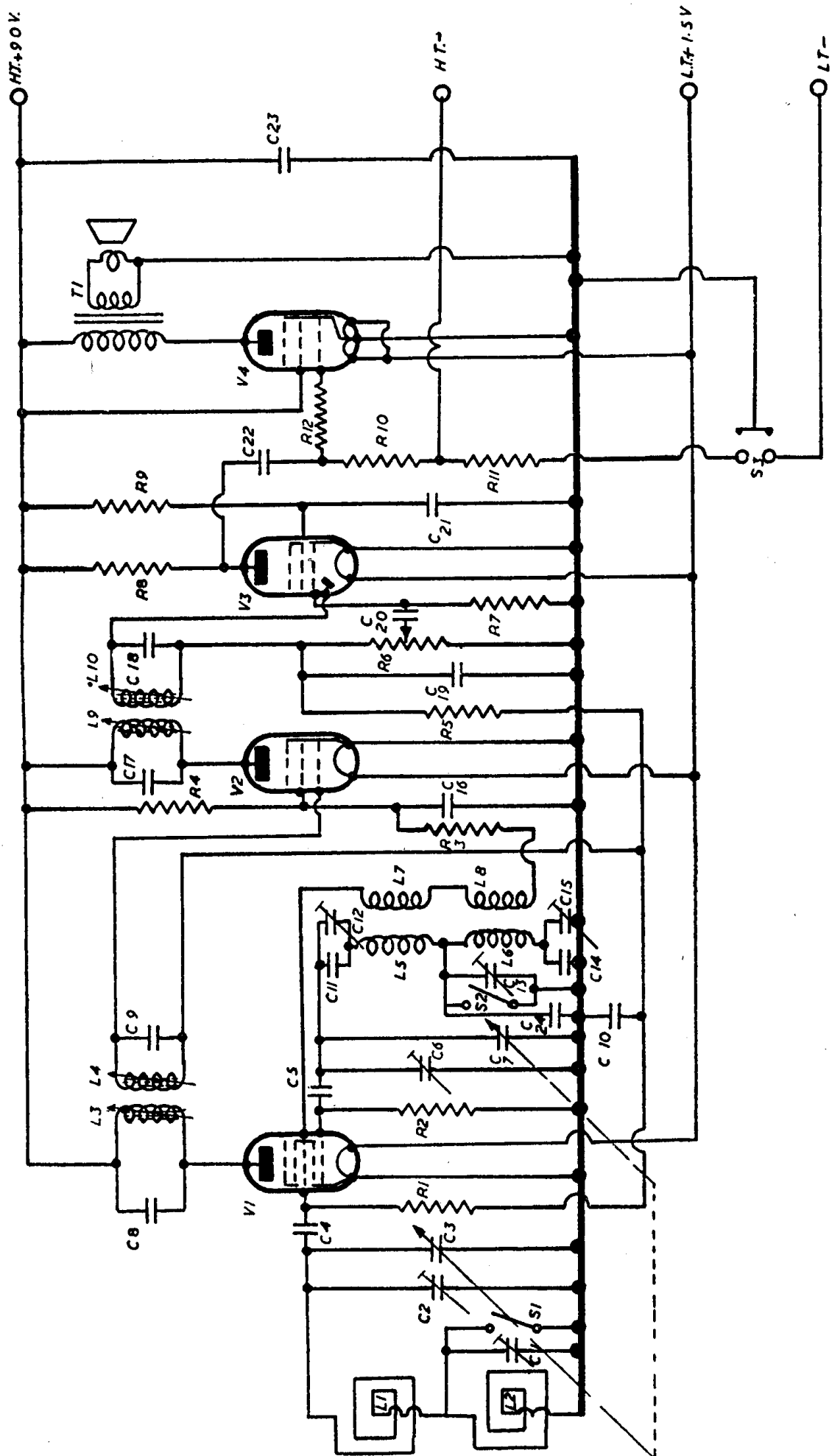
## Alignment Procedure :

**I.F.:** The receiver should rest with its lid in a horizontal position on the bench with the base of the cabinet standing upright, and the chassis and panel hinged down to rest horizontally on the lid. The batteries may be connected and allowed to stand in their normal positions in the cabinet. With volume control at maximum and output meter across the loudspeaker terminals, inject a 470-kc/s. signal between the junction of C<sub>4</sub> and C<sub>3</sub> and chassis. Adjust cores L<sub>10</sub>, L<sub>9</sub>, L<sub>4</sub> and L<sub>3</sub>, keeping signal low to avoid A.V.C. action, readjusting as necessary.

If serious detuning of the I.F. transformers has occurred, it will be necessary first to unscrew the dust cores some distance before attempting to adjust the peak. This is to ensure that when adjustments are being made, the peak may be reached as the core is being screwed in. In this case the first peak reached is the correct one.

**R.F.:** Lift the panel and chassis just sufficiently to reach the trimmers and padders, taking care that it is not raised more than is absolutely necessary in order that the aerial in the lid should not be affected.

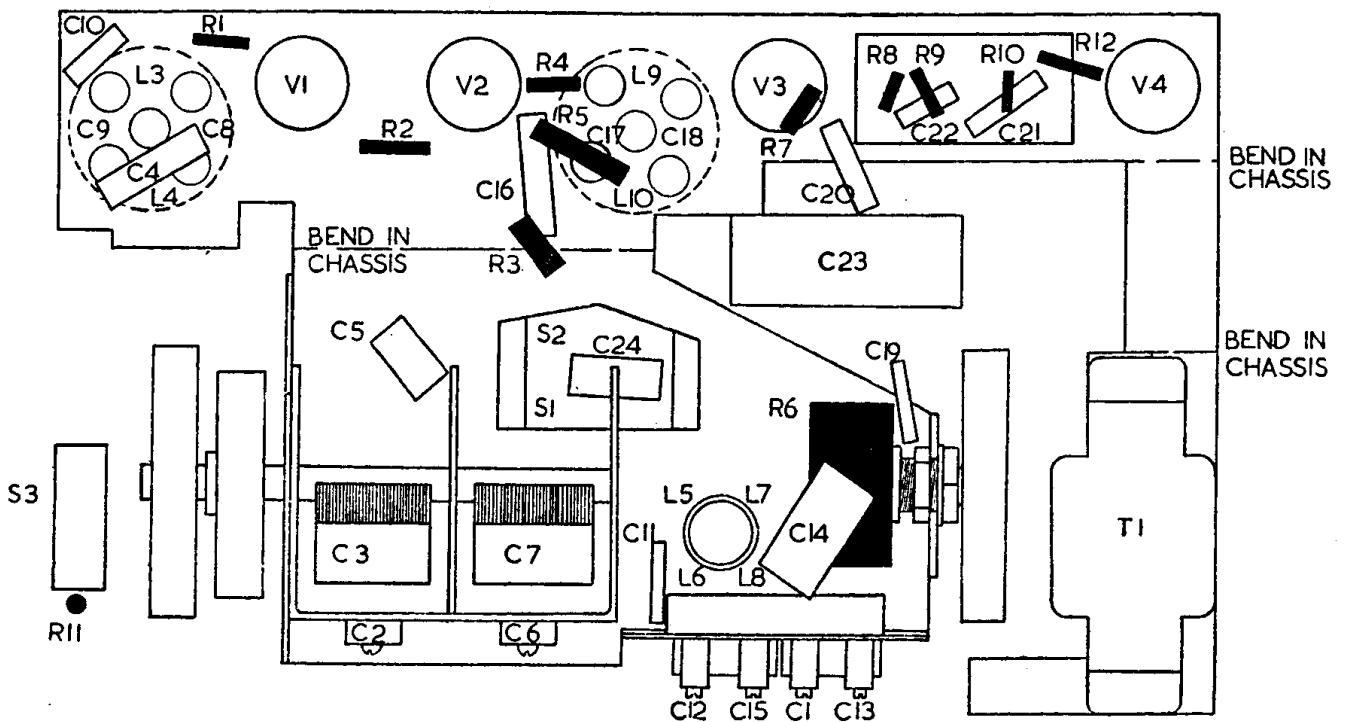
Check that the pointer coincides with the top horizontal mark on the scale (not the scale border line) when tuning knob is rotated to its maximum top position (to coincide with the maximum capacitance of the ganged capacitor). Use a suitable loop not less than 12 in. from the frame aerial.



CIRCUIT DIAGRAM—EVER READY MODEL N

Signal Generator	Receiver	Adjust
M.W. 1400 kc/s.	Calibration mark between 200 and 250 m.	C6, then C2
L.W. 600 kc/s.	500 m.	C12
176.5 kc/s.	1700 m.	C15
300 kc/s.	1000 m.	C13, then C1

Repeat operations on each band until maximum performance is obtained. When finally adjusting the padders (C12 and C15) rock the tuning gang slightly.



COMPONENT LAY-OUT—EVER READY MODEL N

**Component Values :**

Capacitors.		Resistors.		D.C. Resistances (ohms).	
C1	120 pF. max.	R1	2.2M	L1	3.5
C2	35 pF. max.	R2	100k	L2	14
C3	528 pF. Swing	R3	820 (10%)	L3	9
C4	200 pF. (150 v.)	R4	10k (10%)	L4	9
C5	100 pF. (350 v.)	R5	2.2M	L5	2
C6	35 pF. max.	R6	500k	L6	5.9
C7	528 pF. Swing	R7	4.7M	L9	9
C8	100 pF. (5%) (350 v.)	R8	1.5M	L10	9
C9	100 pF. (5%) (350 v.)	R9	6.8M	L7}	8.3
C10	0.01 (150 v.)	R10	4.7M	L8}	
C11	450 pF. (5%) (350 v.)	R11	820 (10%)		
C12	200 pF. max.	R12	2.2M		
C13	120 pF. max.				
C14	50 pF.				
C15	260 pF. max.				
C16	0.1 (150 v.)				
C17	100 pF. (5%) (350 v.)				
C18	100 pF. (5%) (350 v.)				
C19	100 pF. (350 v.)				
C20	0.01 (150 v.)				
C21	0.01 (150 v.)				
C22	0.01 (150 v.)				
C23	8 (150 v.)				
C24	50 pF. (350 v.)				