

REGENTONE AW66

Five-valve, three-band AC superhet in horizontal walnut and inlay cabinet, 21 by 12 by 10 in. Made by Regentone Products, Ltd., Town Road, Edmonton, London, N9.

CIRCUIT consists of a triode-hexode FC V1, coupled to a variable mu HF pentode IF amplifier V2. A double-diode triode V3 is used as signal rectifier, AVC and 1st LF. Output is a beam tetrode V4.

Aerial feeds through C2 to S1. R1 is a static drain across aerial and earth sockets. L1, C1 comprise an IF filter circuit. On SW and MW, aerial transformers consisting of L2, L3 (SW), and L4, L5

(MW), are used, but on LW a single tuned inductance L6 is used.

S1 connects aerial input to L2 (SW), L4 (MW) and to bottom end of L6 (LW). S2 switches the grid of V1 to tuned circuits L3 (SW), L5 (MW) and L6 (LW). VC1 is grid tuning capacitor.

AVC is fed to V1 on MW and LW only through R2 and R3. C4 is MW AVC decoupling. C3 is capacitor for bottom end aerial coupling on LW. R7, C9 provide cathode bias for V1. Screen voltage comes from R9, decoupled by C15. L11, C5, primary of IFT1, is in the hexode anode circuit of V1.

Oscillator is connected in a tuned grid circuit. S3 switches the tuning capacitor VC2 to L7 (SW), L9 (MW), and L10 (LW). T4, T5, T6 are associated trimmers and C12, C13, C14 padders. C11 is grid coupling capacitor. R6, C11 provide leak-condenser bias for oscillator grid. R5 is grid stopper. S4 switches the anode, through coupling capacitor C10, to the reaction circuit. On SW the reaction voltage is developed inductively across L8, but on MW and LW it is developed across the padding capacitors C13 and C14. S5 earths the LW coil L10 when the set is switched to MW. R4 is the oscillator anode load.

IF Amplifier operates at 465Kc. L12, C6, the secondary of IFT1, feeds the signal to V2. AVC is fed in series with L12 to grid. R17, C22 are AVC-line decoupling. Cathode bias is by R8, C16; screen voltage from R9, decoupled by C15. L13, C7, primary of IFT2, is in the anode circuit.

Detection.—L14, C8, the secondary of IFT2, feeds the signal to one of the diodes of V3. R11 is the diode load resistor. R10, C17, C19 comprise an IF filter. C18 feeds the signal to R12, the volume control, and thence to grid of triode section V3. PU sockets are fitted across R12.

AVC.—C20 applies signal to AVC diode. R16 is diode load resistor. AVC voltages are fed through R17 to grids V1 and V2. Delay voltage is obtained from cathode voltage developed across R13.

AF Amplifier.—R12 applies rectified signal to grid of triode section of V3. Cathode bias is from R13 decoupled by C25. R14 is anode load.

Output.—C21 feeds signal to V4 through R18 (grid stopper). R19 is the grid resistor. Cathode bias is from R20, decoupled by C26.

Screen voltage is direct from HT line. L15, primary of output matching transformer OPI1, is in the anode circuit of V4. R15 applies negative feedback voltage to grid V4 through C21.

C23 provides fixed tone correction; R21, C24 give variable tone control. L16, the secondary of OPI1, drives an 8-in. energised speaker. L23 is a hum-bucking coil in series with speech coil L17.

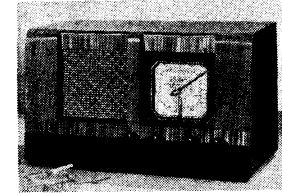
HT from an indirectly heated rectifier V5. L20, the HT secondary of MT1 (mains transformer), supplies its anodes and L19 its heater. L18, with C27 and C28, provides smoothing. L21 supplies heaters of V1—V4 and the two dial lights. L22,

INDUCTORS

L	Ohms
1	4
2	11.5
3	very low
4	4
5	3
6	24
7	very low
8	11
9	4.5
10	10
11-14	7.5
15	420
16	.5
17	1.5
18	2000
19	very low
20	500
21	very low
22	22.5 Total
23	.5

CAPACITORS

C	Mfds
1	500pF Silver Mica
2	200pF Mica
3	2700pF Silver Mica
4	.1 Tubular 350V
5	100pF Silver Mica
6	.1 Tubular 350V
7	.1 Tubular 350V
8	.1 Tubular 350V
9	.1 Tubular 350V
10	.120pF Silver Mica
11	50pF Silver Mica
12	.005 Tubular 1000V
13	350pF Silver Mica
14	150pF Silver Mica
15	.1 Tubular 350V
16	.1 Tubular 350V
17	80pF Silver Mica

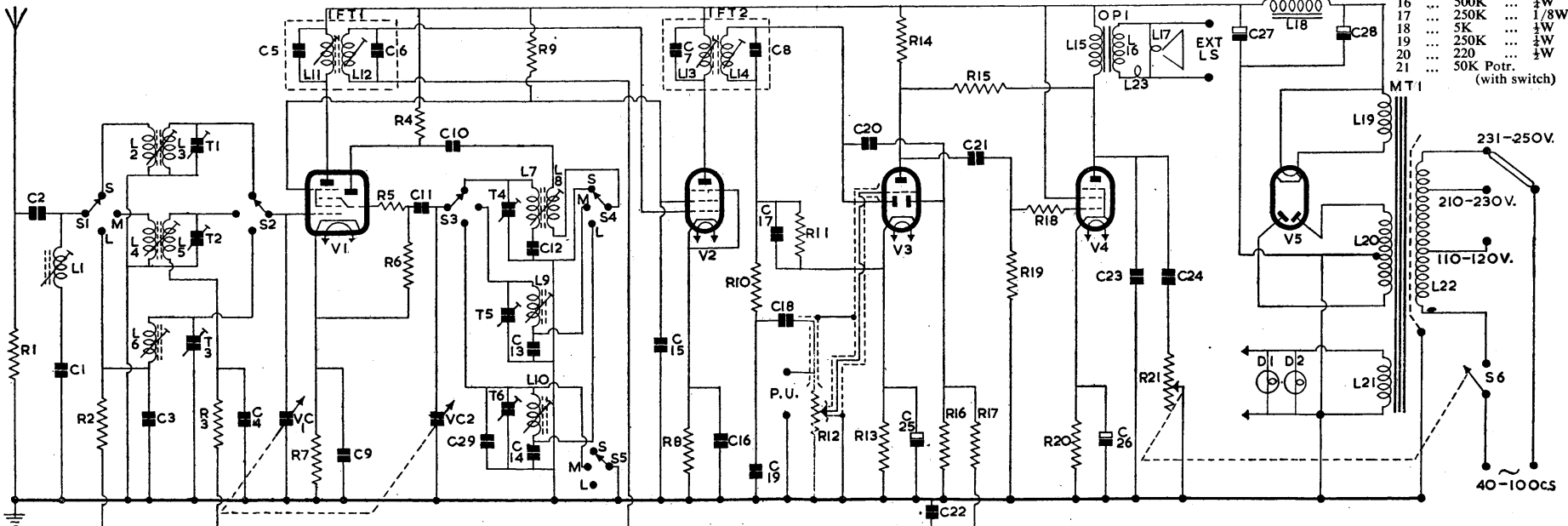
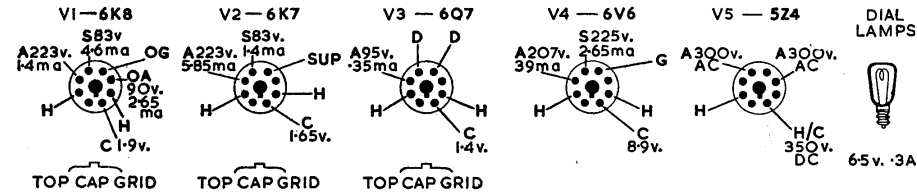


18	.01 Tubular 500V
19	200pF Mica
20	50pF Silver Mica
21	.01 Tubular 500V
22	.1 Tubular 350V
23	.005 Tubular 1000V
24	.05 Tubular 350V
25	25 Electrolytic 25V
26	8 + 16 Electrolytic
27	
28	50pF Silver Mica
29	50pF Silver Mica

RESISTORS

R	Ohms
1	47K
2	100K
3	220K
4	47K
5	100
6	47K
7	240
8	240
9	33K
10	100K
11	500K
12	250K Potr.
13	4.7K
14	220K
15	500K
16	500K
17	250K
18	5K
19	250K
20	220
21	50K Potr. (with switch)

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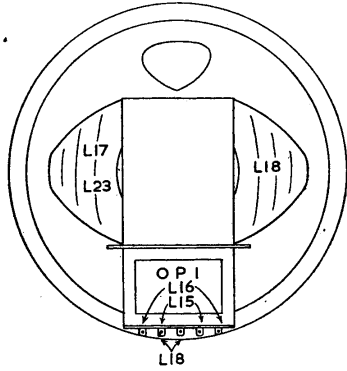


REGENTONE AW66—Contd.

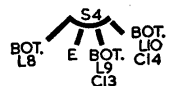
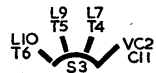
the primary of MT1, is tapped for supply voltages from 100V—130V and 200V—260V AC 40-100cs.
Chassis Removal.—Remove four control knobs; rear panel of cabinet. Undo four chassis bolts on underside of cabinet. Chassis may now be partly withdrawn from case.

Unplug LS plug from chassis. Chassis may now be entirely removed.

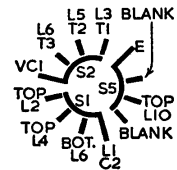
Below: Positions of OPI and associated inductances on speaker frame



WAVECHANGE SWITCH



FRONT OF WAFER

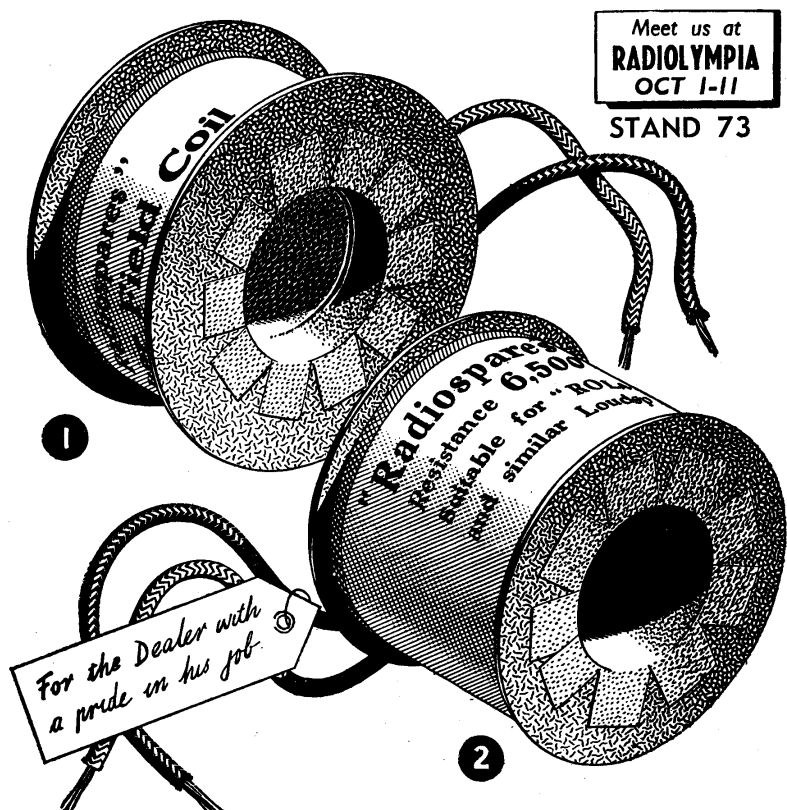
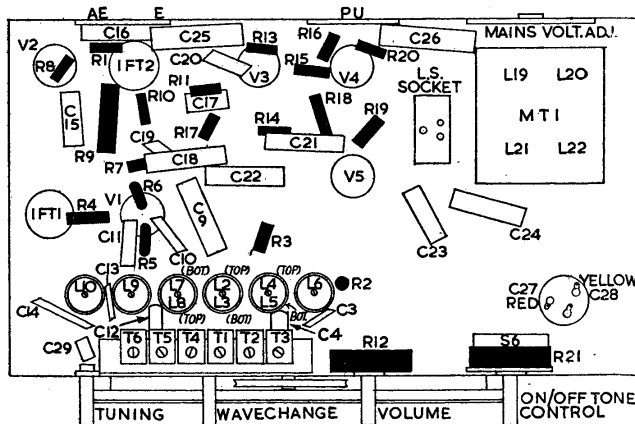
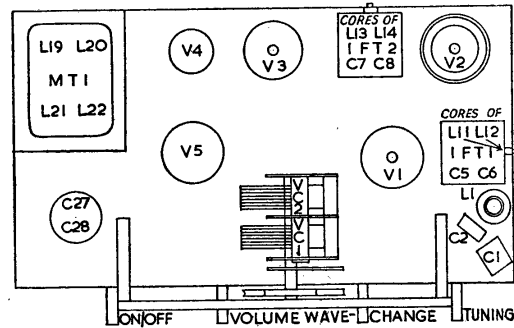


REAR OF WAFER.

Viewed from rear of inverted chassis

TRIMMING INSTRUCTIONS

Apply signal as stated below	Tune set to	Trim in order stated for max. output
1) 465 Kc to top gap V1 via .01 capacitor	Gang to minimum position on MW	Cores of L14, L13, L12, L11
2) 465 Kc to AF socket via dummy aerial		Core of L1 for MINIMUM
3) With gang at maximum position to approximately cover letter "E" top of scale		adjust dial pointer in medium at bottom of scale
4) 150 Kc to AE socket via dummy aerial	2000 metres	Cores of L10, L6
5) 300 Kc as above	1000 metres	T6, T3 and repeat (4) and (5)
6) 600 Kc as above	500 metres	Cores of L9, L5
7) 1.2 Mc as above	250 metres	T5, T2 and repeat (6) and (7)
8) 6 Mc as above	50 metres	Cores of L7, L3
9) 15 Mc as above	20 metres	T4, T1 and repeat (8) and (9)



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