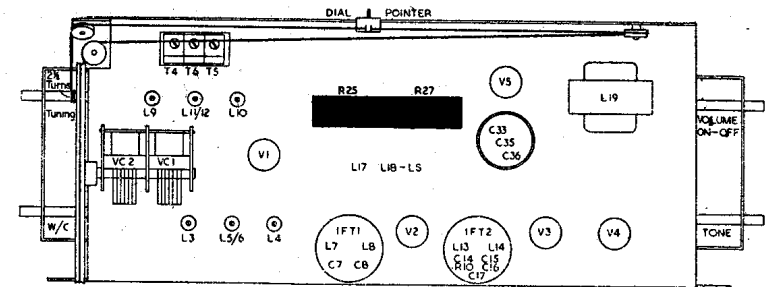
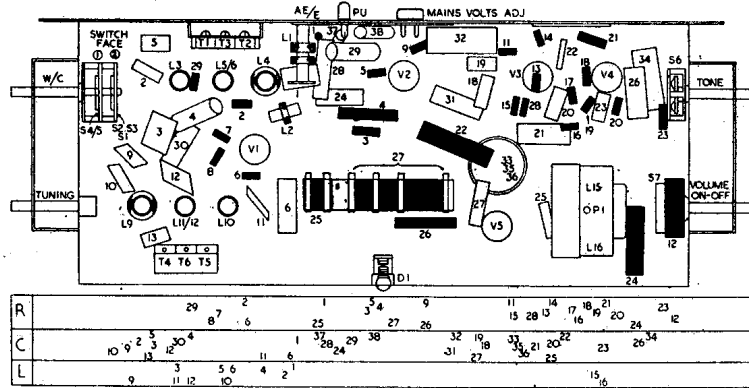
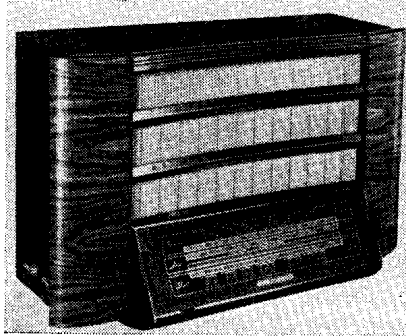


REGENTONE U25, A25

Five-valve three-waveband superhet fitted with twin 6½-in. speakers. Sockets for external aerial, earth, high-resistance magnetic or crystal pickup, and low-impedance extension speaker. Brown figured walnut table cabinet. Model U25 for 200-250V AC/DC and model A25 for 100-120, 200-250V 50-100 c/s AC. Regentone Products Ltd., Eastern Avenue, Romford, Essex.

These diagrams and tables apply to the U25; see text overleaf for differences in A25

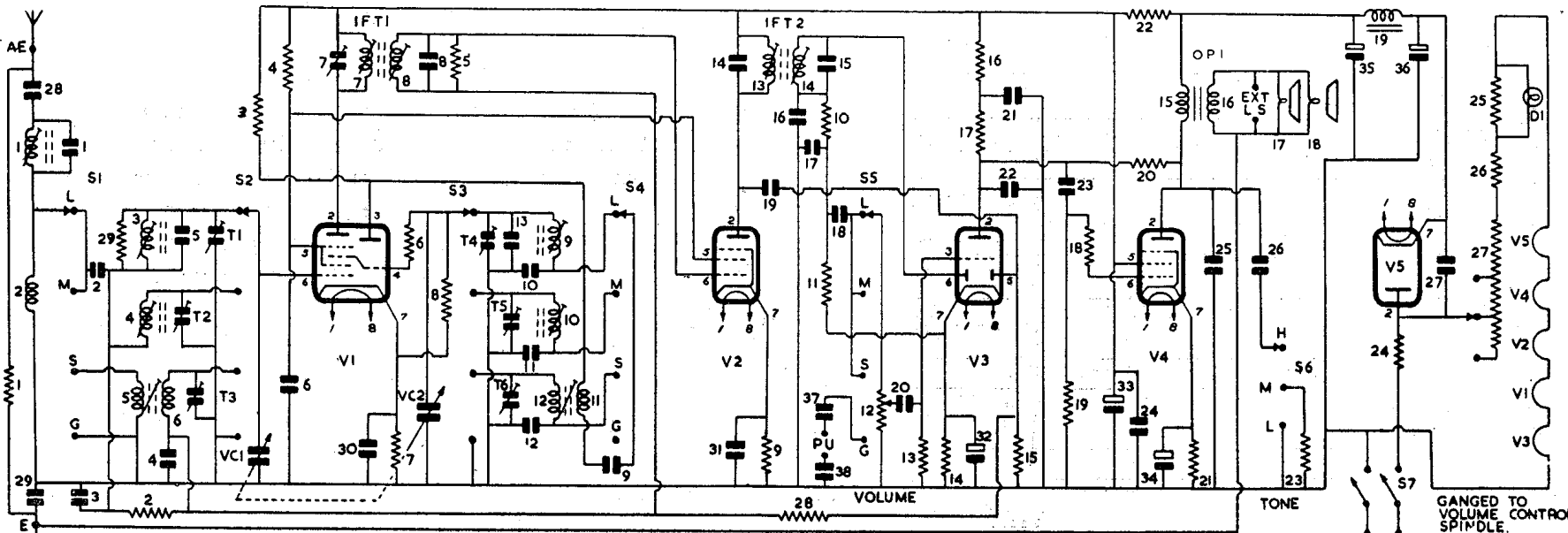
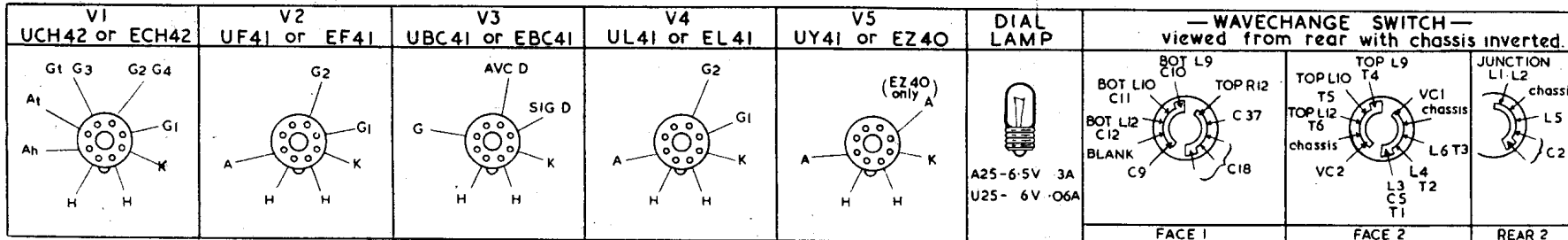


CAPACITORS

C	Capacity	Type	C	Capacity	Type	C	Capacity	Type
1	350pF	Silver Mica	14	100pF	Silver Mica	28	.01 Tubular	1000V*
2	.01	Tubular 500V	15	100pF	Silver Mica	29	.02 Tubular	1000V*
3	3750pF	Silver Mica	16	100pF	Silver Mica	30	.1	Tubular 350V*
4	.1	Tubular 350V	17	100pF	Silver Mica	31	.1	Tubular 350V*
5	50pF	Silver Mica	18	.01	Tubular 500V	32	50	Electrolytic 12V*
6	.1	Tubular 350V	19	35pF	Silver Mica	33	8	Electrolytic 350V
7	100pF	Silver Mica	20	.01	Tubular 500V	34	25	Electrolytic 25V*
8	100pF	Silver Mica	21	.1	Tubular 350V	35	32	Electrolytic 350V
9	50pF	Silver Mica	22	100pF	Silver Mica	36	16	Electrolytic 450V
10	125pF	Silver Mica	23	.01	Tubular 500V	37	.01	Tubular 1000V
11	420pF	Silver Mica	24	.1	Tubular 350V	38	.01	Tubular 1000V*
12	3750pF	Silver Mica	25	.001	Tubular 500V			
13	80pF	Silver Mica	26	.05	Tubular 500V			
			27	.01	Tubular 1000V*			

INDUCTORS

L	Ohms
1	4
2	12
3	28.5
4	2.6
5	.4
6, 12	Very low
7, 8	7.5
9	12
10	2.25
11	.5
13, 14	7.5
15	450
16	.3
17, 18	3
19	250*



RESISTORS

R	Ohms	Watts
1	1.2M	
2	100K	
3	27K	
4	33K	
5	270K	
6	100	
7	240	*
8	47K	*
9	330	*
10	47K	*
11	330K	*
12	250K	Potr. with AC switch
13	2.2M	*
14	3.9K	*
15	1.2M	*
16	47K or 100K	*
17	270K	*
18	10K	*
19	470K	*
20	2.2M	*
21	220	*
22	1K	2
23	4.7K	2*
24	100	2*
25	200	WW
26	3K Cold Thermistor*	
27	700 + 200 + 200	
	Tapped drop per .1A*	
28	1.2M	
29	100K	

*Not in A25

AERIAL signal is fed, in U25, through capacitor C28 and IF filter L1 C1 to S1 which in LW and MW positions passes signal through C2 to bottom end of grid coils L3 (LW), L4 (MW). In SW position of S1 signal is passed to coil L5.

Static drain R1 is connected between aerial and earth sockets, the latter being isolated by C29.

Grid coils L3 (LW) damped by R29, L4 (MW), L6 (SW), trimmed by T1 T2 T3 respectively, are switched by S2 to aerial tuning capacitor VC1 and to gl of triode-hexode frequency-changer V1.

AVC voltages, decoupled by R28 C4 and R2 C3, are fed through the tuned circuits, to V1 except in gram position of wave-change switch when grid is earthed to chassis.

Oscillator is connected in a tuned-grid shunt-fed circuit. The grid coils L9 (LW), L10 (MW), L12 (SW), trimmed by T4-C13 T5 T6 respectively and padded by C10 C11 C12, are switched by S3 to oscillator tuning capacitor VC2, and through stopper R6 to oscillator grid.

Anode reaction voltages are obtained across padders C10 (LW), C11 (MW) and inductively from L11 (SW) and are switched by S4 through C9 L11 to oscillator anode (at) of V1 of which R3 is load.

IF amplifier operates at 465kc/s. Secondary L8 C8 of IFT1, damped by R5, feeds signal and AVC voltages, decoupled by R28 C4, to grid of IF amplifier V2.

Signal rectifier. Secondary L14 C15 of IFT2 feeds signal to one diode of V3. R11 is load and R10 C16 C17 an IF filter.

AVC. Signal at anode of V2 is fed by C19 to second diode V3. Rectified voltage across load R15 is decoupled by R28 C4 and fed to control grids V1 V2. Bias across cathode load R14 provides delay voltage for AVC diode.

AF amplifier. Audio signal across R11 is fed by C18 to S5 which in its L, M and S position passes signal to volume control R12 and thence through C20 to grid of triode AF amplifier section of V3.

Cathode bias is by R14 C32. R17 is anode load and C22 RF by-pass. HT to anode is decoupled by R16 C21.

Pickup sockets are fitted at rear of chassis for a high-resistance magnetic or crystal pickup. Sockets are isolated from chassis by C37 C38. Pickup signal is fed to S5 which, in its gram position, passes signal to volume control R12. When wavechange switch, which is ganged to S5, is placed in gram position, aerial input, control and oscillator grids V1 are earthed to chassis, oscillator anode is disconnected from reaction circuits, and volume control R12 is disconnected from diode.

Output stage. Signal at V4 anode is coupled by OP1 to twin, parallel-connected 6 $\frac{1}{2}$ -in. pm speakers L17 L18. Sockets are fitted on secondary L16 of OP1 to allow the use of a low-impedance extension speaker. One side of L16 is connected direct to earth socket of receiver.

Fixed tone correction is by C25 and three degrees of control are provided by switch S6 with R23 C26.

Negative feedback between anode and grid V4 is by R20.

HT. On AC mains, HT is by indirectly-heated half-wave rectifier V5 fed from the mains through limiter R24. Choke-capacity smoothing is by L19 C35 C36. Reservoir smoothing capacitor C36

should be rated to handle 150mA ripple. Modulation hum is eliminated by C27.

Heaters. V1 to V5 are wired in series and obtain their current from the mains through tapped dropper R27, thermal surge limiter R26 and dial lamp D1 shunted by R25. S7, ganged to volume control spindle, is ON/OFF switch.

Model A25. Model A25 which is suitable for 100-120, 200-250V 50-100c/s AC only, differs from U25, dealt with above as follows:—

Valves are E type with 6.3V heaters fed from an LT secondary of mains input transformer. HT is provided by an indirectly-heated full-wave rectifier fed from a centre-tapped HT secondary on mains transformer. Surge limiter R24 removed.

Resistance-capacity smoothing is employed—L19 being replaced by 1K 2W resistor.

V1, V2, and AVC diode V3 are biased from junction of 100 and 51 ohm resistors in negative HT return from centre tap of HT secondary to chassis. V4 is biased by full voltage developed across potential divider. Individual cathode bias components deleted. Triode grid load V3 is increased to 10 megohms to give self-bias on C20.

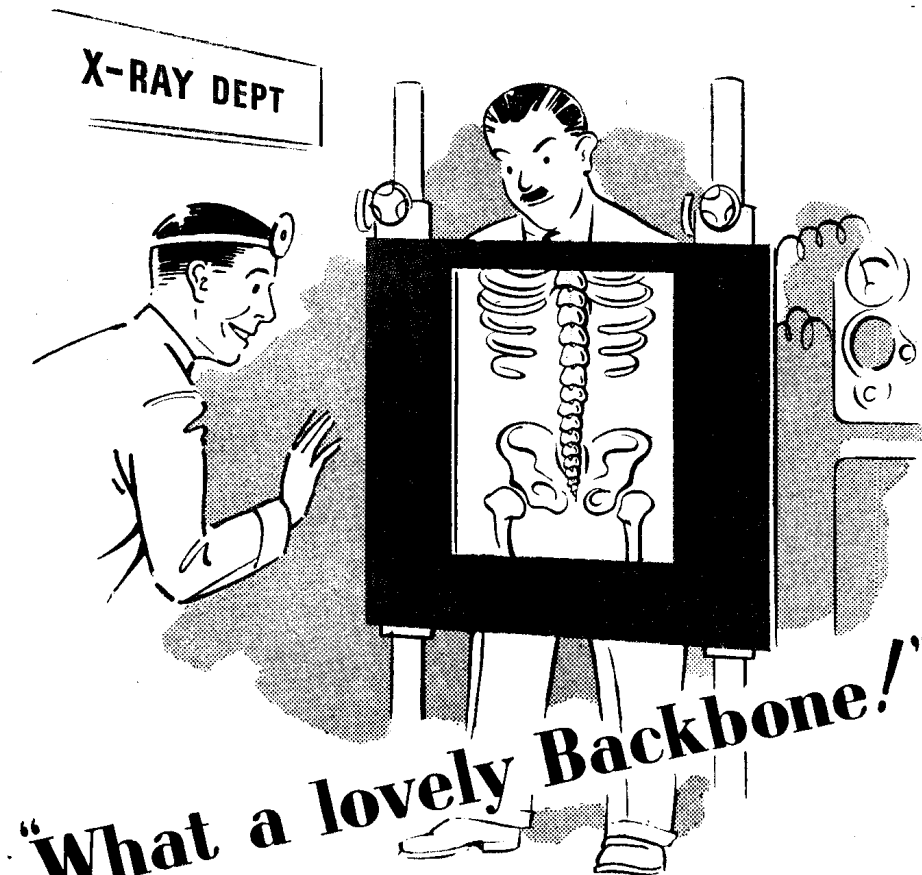
Isolating capacitors for aerial, earth and PU socket and the static drain resistor are deleted.

VALVE READINGS

V	Type	Va	Ia	Vs	Is	Vk	
1	UCH42	200	2.2	70	2.6	1.9	Oscillator anode 85V, 4mA
	ECH42	212	2.5	66	3.5	0	Oscillator anode 70V 5.5mA
2	UF41	200	4.3	70	1.3	1.9	
	EF41	212	3	66	1	0	
3	UBC41	65	.3	—	—	1	
	EBC41	60	.5	—	—	0	
4	UL41	200	40	200	7.5	11.5	
	EL41	205	22	205	3	—	
	UY41	220	—	—	—	235	Cathode current 63mA
5		RMS	—	—	—	—	Cathode current 41mA
	EZ40	255	—	—	—	270	
		RMS					

TRIMMING INSTRUCTIONS

Apply signals as stated below	Tune Receiver to	Trim in Order stated for Max. Output
(1) 465kc/s to gl of V1 via .01mF		Cores L14, L13, L8 and L7.
(2) With gang at minimum capacity check and adjust dial pointer to coincide with index mark at left hand end of scale plate.		
(3) 465kc/s to AE socket via dummy aerial		Core L1 for minimum
(4) 18mc/s as above.	18mc/s	T6 for first peak from max capacity setting and then adjust T3.
(5) 6mc/s as above	6 mc/s	Cores L11/12 : L5/6 repeat operations 4 and 5
(6) 1.5mc/s as above	200metres	T5, T2.
(7) 600Kc/s as above	500metres	Cores L10, L4 repeat operations 6 and 7.
(8) 300kc/s as above	1000metres	T4, T1.
(9) 166.7Kc/s as above	1800metres	Cores L13, L3, repeat operations 8 and 9.



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