ALBA - 3112

CAPACITORS		Values	Locations
C1	Aerial coupling ...	200pF	E4
C2	L.W. aerial trim.	100pF	E3
C3	V1 C.G.	100pF	D4
C4	V1 S.G. decoupling	0·1μF	D4
C5	1st I.F. trans. tuning	100pF	B2
C6	1st I.F. trans. tuning	100pF	B2
C7	V1 cath. by-pass	0·1μF	D4
C8	V1 osc. C.G. ...	100pF	D4
C9	A.G.C. decoupling	0·05μF	C4
C10	L.W. osc. trimmer	190pF	E3
C11	S.W. osc. tracker...	5,343pF	D4
C12	M.W. osc. tracker	600pF	E4
C13	L.W. osc. tracker	270pF	E3
C14	Osc. anode coup.	100pF	D4
C15	V2 S.G. decoupling	0·1μF	C4
C16	V2 cath. by-pass	0·1μF	C4
C17	2nd I.F. trans. tuning	100pF	B1
C18	2nd I.F. trans. tuning	100pF	B1
C19	I.F. by-passes ...	100pF	C3
C20	I.F. by-passes ...	100pF	C3
C21*	V3 cath. by-pass	25μF	D3
C22	A.G.C. coupling ...	12pF	C3
C23	P.U. isolator ...	0·25μF	C4
C24	A.F. coupling ...	0·005μF	C4
C25*	H.T. decoupling	16μF	B2
C26	A.F. coupling ...	0·005μF	C3
C27	R.F. by-pass ...	0·25μF	C3
C28	Tone corrector ...	0·005μF	—
C29*	H.T. smoothing	32μF	B2
C30*	H.T. smoothing	32μF	B2
C31	Mains R.F. by-pass	0·02μF	B2
C32‡	S.W. aerial trim.	65pF	A2
C33‡	M.W. aerial trim.	65pF	A1
C34‡	L.W. aerial trim.	65pF	A1
C35†	Aerial tuning ...	530pF§	A1
C36†	Oscillator tuning	530pF§	A1
C37‡	S.W. osc. trim. ...	65pF	A2
C38‡	M.W. osc. trim. ...	65pF	A2
C39‡	L.W. osc. trim. ...	65pF	A1

* Electrolytic. † Variable. ‡ Pre-set.
§ "Swing" value, minimum to maximum.

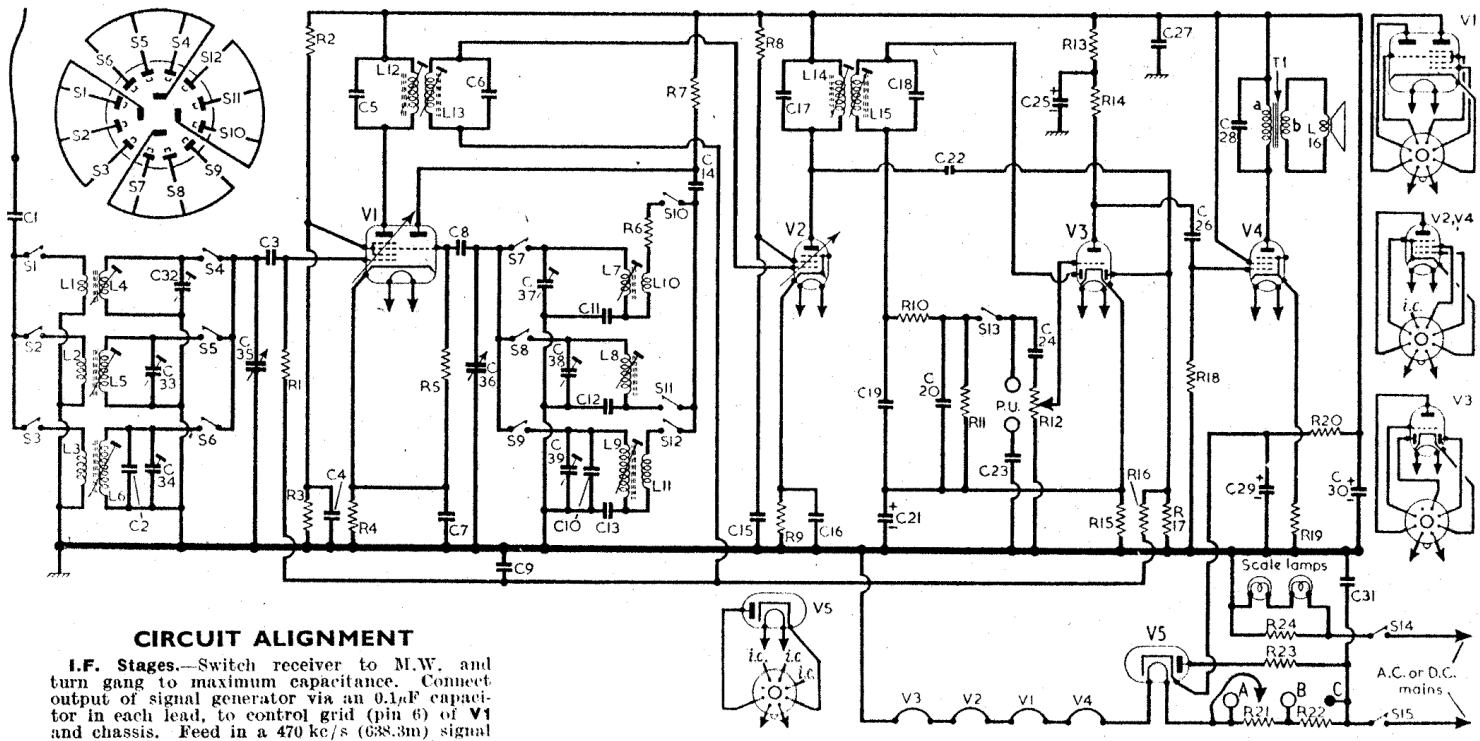
Valve	Anode V	Anode mA	Screen V	Screen mA	Cath. V
V1 UCH42	163	1·5	—		
	Oscillator 69	3·6	64	2·3	1·5
V2 UF41	163	3·6	72	1·1	1·3
V3 UBC41	115	0·7	—	—	1·2
V4 UL41	146	40·0	156	8·0	9·7
V5 UY41	200*	—	—	—	182·0†

* A.C. reading. † Total cathode current, 61mA.

RESISTORS		Values	Locations
R1	V1 C.G.	1MΩ	D4
R2	S.G. H.T. pot. divider ...	22kΩ	D3
R3	S.G. H.T. pot. divider ...	33kΩ	D4
R4	V1 G.B.	220Ω	D4
R5	V1 osc. C.G. ...	47kΩ	D4
R6	Osc. stabilizer ...	100Ω	D4
R7	Osc. anode feed ...	27kΩ	C4
R8	V2 S.G. feed ...	90kΩ	C3
R9	V2 G.B.	330Ω	C4
R10	I.F. stopper ...	47kΩ	C3
R11	Signal diode load...	560kΩ	D3
R12	Volume control ...	0·5MΩ	D4
R13	H.T. decoupling	47kΩ	D3
R14	V3 anode load ...	47kΩ	C3
R15	V3 G.B.	2·2kΩ	D3
R16	A.G.C. decoupling	1MΩ	C3
R17	A.G.C. diode load	1MΩ	C3
R18	V4 C.G.	820kΩ	D3
R19	V4 G.B.	220Ω	D3
R20	H.T. smoothing ...	500Ω	E3
R21	Heater ballast ...	250Ω	B1
R22	Heater ballast ...	965Ω	B1
R23	V5 surge limiter ...	140Ω	D3
R24	Scale lamp shunt...	100Ω	E3

Intermediate frequency 470 kc/s.

OTHER COMPONENTS		Approx. Values (ohms)	Locations
L1	Aerial coupling coils	—	E4
L2	Aerial coupling coils	1·3	E4
L3	Aerial coupling coils	45·0	E3
L4	Aerial tuning coils	—	E4
L5	Aerial tuning coils	2·8	E4
L6	Aerial tuning coils	24·0	E3
L7	Oscillator tuning coils	—	E4
L8	Oscillator tuning coils	3·8	E4
L9	Oscillator tuning coils	7·8	E3
L10	Oscillator reaction coils	—	E4
L11	Oscillator reaction coils	3·5	E3
L12	1st I.F. trans. pri.	14·0	B2
L13	1st I.F. trans. sec.	12·0	B2
L14	2nd I.F. trans. pri.	15·5	B1
L15	2nd I.F. trans. sec.	13·0	B1
L16	Speech coil ...	3·0	—
T1	O.P. trans. pri.	500·0	—
T1	O.P. trans. sec.	—	—
S1-S12	Waveband switches	—	D4
S14	Mains sw., g'd R12	—	D4
S15	Mains sw., g'd R12	—	D4



CIRCUIT ALIGNMENT

I.F. Stages.—Switch receiver to M.W. and turn gang to maximum capacitance. Connect output of signal generator via an 0.1μF capacitor in each lead, to control grid (pin 6) of **V1** and chassis. Feed in a 470 kc/s (638.3m) signal and adjust the cores of **L12** (location reference C4), **L13** (B2), **L14** (C3) and **L15** (B1) for maximum output. Repeat these adjustments until no further improvement results.

R.F. and Oscillator Stages.—Check that with the gang at minimum capacitance, the cursor is horizontal and in line with the low wavelength end of the M.W. scale. Transfer signal generator "live" lead to end of throw-out aerial lead.

S.W.—Switch receiver to S.W., tune to 50m, feed in a 50m (6 Mc/s) signal and adjust the cores of **L7** (A2) and **L4** (A2) for maximum output. Tune receiver to 16.67m calibration dot, feed in a 16.67m (18 Mc/s) signal and adjust **C37** (A2) and **C32** (A2) for maximum output.

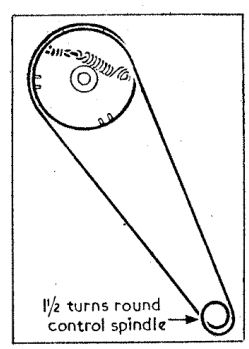
M.W.—Switch receiver to M.W., tune to 500m, feed in a 500m (600 kc/s) signal and adjust the cores of **L8** (A2) and **L5** (A2) for maximum output. Tune receiver to 200m, feed in a 200m (1,500 kc/s) signal and adjust **C38** (A2) and **C33** (A1) for maximum output.

L.W.—Switch receiver to L.W., tune to 1,949m, feed in a 1,949m (154 kc/s) signal and adjust the cores of **L9** (A1) and **L6** (A1) for maximum output. Tune receiver to 1,200m, feed in a 1,200m (250 kc/s) signal and adjust **C39** (A1) and **C34** (A1) for maximum output.

Switch Table

Switches	S.W.	M.W.	L.W.
S1	C	—	—
S2	—	C	—
S3	—	—	C
S4	C	—	—
S5	—	C	—
S6	—	—	C
S7	C	—	—
S8	—	C	—
S9	—	—	C
S10	C	—	—
S11	—	C	—
S12	—	—	C

Drive Cord Replacement.—About 20 inches of nylon-braided glass yarn is required for a new drive cord, which should be run as shown in the sketch of the tuning drive system (above) starting with the gang at minimum capacitance and running off anti-clockwise round the drum.



Above: Sketch of the tuning drive system as seen with the gang at minimum capacitance.