ALBA - C112

OTHER COMPONENTS		Approx. Values (ohms)	Location
L1	Aerial coupling coils	0·1	K10
L2		1·7	K9
L3		65·0	L10
L4	Aerial tuning coils	Very low	K10
L5		4·5	K9
L6		23·0	L10
L7	Oscillator tuning coils	Very low	N10
L8		5·6	N9
L9		13·0	N11
L10	Oscillator reaction coils	0·2	N10
L11		3·0	N9
L12		6·0	N11
L13	1st I.F. trans. Pri.	6·5	B3
L14	1st I.F. trans. Sec.	6·5	B3
L15	2nd I.F. trans. Pri.	6·5	B2
L16	2nd I.F. trans. Sec.	6·5	B2
L17	Speech coil	2·7	C1
T1	Output trans. Pri.	140·0	G5
	Output trans. Sec.	0·4	G5
S1-S11	W/band switches	—	L8
S12	Mains switch, ganged R4	—	F5

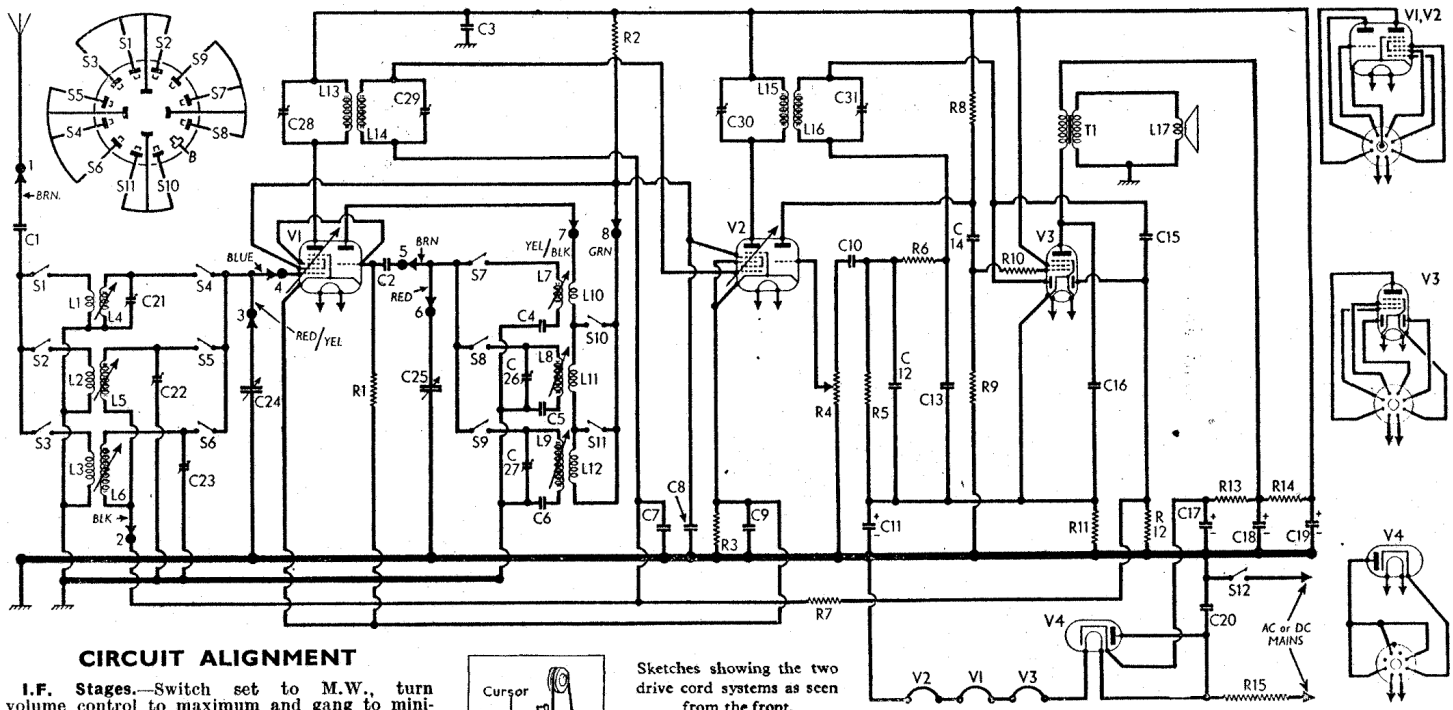
Intermediate frequency 455 kc/s.

RESISTORS		Values (ohms)	Location
R1	V1 osc. C.G.	47,000	J6
R2	H.T. feed resistor	10,000	F6
R3	V1, V2 fixed G.B.	150	G6
R4	Volume control	1,000,000	F4
R5	Signal diode load	470,000	B2
R6	I.F. stopper	47,000	B2
R7	A.V.C. decoupling	2,000,000	G6
R8	V2 triode load	47,000	G6
R9	V3 pent. C.G.	560,000	F6
R10	V3 C.G. stopper	47,000	F6
R11	V3 G.B., A.V.C. delay	150	F6
R12	A.V.C. diode load	1,000,000	G6
R13	H.T. smoothing resistors	270	E6
R14		1,000	E5
R15	Heater ballast†	680	E6

† Line cord.

CAPACITORS		Values (μF)	Location
C1	Aerial isolator	0·00025	K9
C2	V1 osc. C.G.	0·0001	J7
C3	H.T. R.F. by-pass	0·1	H5
C4	Osc. S.W. tracker	0·0039	N9
C5	Osc. M.W. tracker	0·00039	N9
C6	Osc. L.W. tracker	0·00014	M10
C7	A.V.C. decoupling	0·1	G6
C8	H.T. feed decoup.	0·1	F6
C9	V1, V2 cath. by-pass	0·25	H6
C10	A.F. coupling	0·005	E5
C11*	V3 cath. by-pass	50·0	C2
C12	I.F. by-pass	0·0001	B2
C13		0·0001	B2
C14	A.F. coupling	0·005	G6
C15	A.V.C. coupling	0·0001	G7
C16	Tone corrector	0·01	F7
C17*	H.T. smoothing capacitors	8·0	D2
C18*		16·0	D2
C19*		16·0	D2
C20	R.F. by-pass	0·01	E6
C21‡	Aerial S.W. trim.	0·00001	L9
C22‡	Aerial M.W. trim.	0·00001	N8
C23‡	Aerial L.W. trim.	0·00003	K8
C24†	Aerial tuning	0·00037	A1
C25†	Osc. tuning	0·00037	A2
C26‡	Osc. M.W. trim.	0·00001	N8
C27‡	Osc. L.W. trim.	0·00003	K8
C28‡	1st I.F. transformer tuning	0·0002	B3
C29‡		0·0002	B3
C30‡	2nd I.F. transformer tuning	0·0002	B2
C31‡		0·0002	B2

* Electrolytic. † Variable. ‡ Pre-set.



CIRCUIT ALIGNMENT

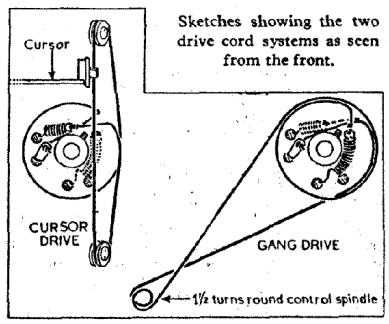
I.F. Stages.—Switch set to M.W., turn volume control to maximum and gang to minimum capacitance. Connect signal generator, via an isolating capacitor in each lead, to control grid (pin 6) of **V1** and chassis, and feed in a 455 kc/s (659.3 m) signal. Adjust **C28, C29, C30** and **C31** (chassis locations B3 and B2) for maximum output.

R.F. and Oscillator Stages.—With the gang at maximum the pointer should coincide with the 550 m calibration mark on the scale. Transfer "live" signal generator lead to receiver end of attached aerial, via a suitable dummy aerial.

M.W.—With set still switched to M.W., tune to 215 m on scale, feed in a 215 m (1,396 kc/s) signal, and adjust **C26** (I4) and **C22** (H4) for maximum output. Tune to 500 m on scale, feed in a 500 m (600 kc/s) signal, and adjust the cores of **L8** (H5) and **L5** (J5) for maximum output. Repeat these adjustments.

L.W.—Switch set to L.W., tune to 1,100 m on scale, feed in an 1,100 m (273 kc/s) signal, and adjust **C27** (J4) and **C23** (J4) for maximum output. Tune to 1,900 m on scale, feed in a 1,900 m (157.8 kc/s) signal, and adjust the cores of **L9** (H6) and **L6** (I6) for maximum output. Repeat these adjustments.

S.W.—Switch set to S.W., tune to 50 m on scale, feed in a 50 m (6.0 Mc/s) signal, and adjust the cores of **L7** (H6) and **L4** (J5) for maximum output. Tune to 16 m on scale, feed in a 16 m (18.75 Mc/s) signal, and adjust **C21** (J5) for maximum output. Repeat these adjustments.



Sketches showing the two drive cord systems as seen from the front.

DRIVE CORD REPLACEMENT

The gang drive cord is of normal thickness and should be fitted first as it goes behind the cursor drive cord, which is of thinner twine. The former is a little longer than the latter, but 18 inches is sufficient for either of them, including some spare for knotting.

Each has its own tension spring, but the fixed ends are tied to a common hooked plate. The course of each is shown separately in the sketch above, where they are viewed from the front with the gang at maximum, the drum in each case being common to both. Access is obtained to the drum by removing the scale (four countersunk-head 8BA screws).

VALVE ANALYSIS

Valve voltages and currents given in the table below are those measured in our receiver when it was operating on A.C. mains of 230 V.

Voltages were measured on the 400 V scale of a model 7 universal Avometer, chassis being the negative connection.

Valve	Anode Voltage (V)	Anode Current (mA)	Screen Voltage (V)	Screen Current (mA)
V1 UCH21	85	1·15	40	2·1
	Oscillator			
	40	1·1		
	85	1·2		
V2 UCH21	Triode		40	1·5
	40	0·7		
V3 UBL21	92	25·0	85	5·0
V4 UY21†	—	—	—	—

† Cathode to chassis, 105 v., D.C.