

INVICTA STATION MASTER

OTHER COMPONENTS		Approx. Values (ohms)	Loca- tions
L1	Aerial coupling coils	—	F3
L2		40-0	F3
L3		260-0	F3
L4		—	F3
L5	Aerial tuning coils	2-4	F3
L6		18-0	F3
L7		—	F3
L8	Osc. tuning coils ...	2-3	F3
L9		5-0	F3
L10	Osc. reaction coils	—	F3
L11		0-6	F3
L12	1st I.F. trans. {Pri.	10-0	A2
L13		10-0	A2
L14	2nd I.F. trans. {Pri.	10-0	B2
L15		10-0	B2
L16	Speech coil ...	1-7	—
T1	Primary ...	220-0	E3
	Secondary ...	—	—
	Primary, total ...	32-0	—
T2	H.T. sec., total ...	600-0	C2
	Rect. htr., total ...	—	—
S1—	Waveband switches	—	G3
S24	Mains sw., g'd R12	—	D3
S25	—	—	—

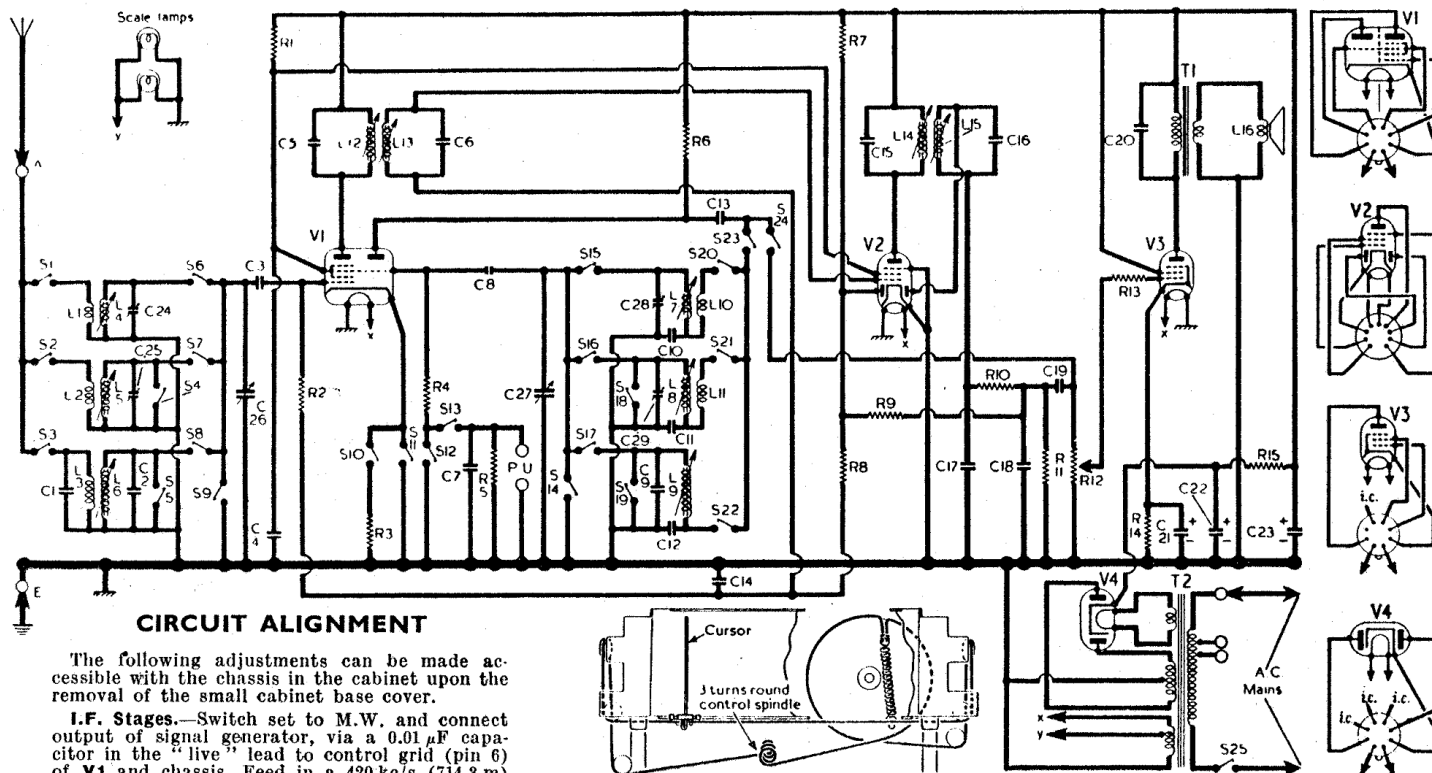
Valves	Anode		Screen		Cath.
	V	mA	V	mA	
V1 ECH42	203-0 Oscillator 170-0	1-3 6-5	60-0	3-0	3-6*
V2 EBF80	230-0	3-7	60-0	1-0	—
V3 EL41	220-0	34-0	230-0	4-7	6-4
V4 EZ40	260-0†	—	—	—	320-0

* Measured on Gram. † A.C. volts, each anode.

RESISTORS		Values	Loca- tions
R1	V1, V2 S.G. feed ...	47kΩ	F4
R2	V1 hex. C.G. ...	680Ω	G4
R3	V1 G.B. ...	330Ω	G3
R4	V1 osc. C.G. ...	47kΩ	G4
R5	P.U. shunt ...	680kΩ	E4
R6	V1 osc. anode feed ...	10kΩ	G4
R7	V2 diode feed ...	22MΩ	F4
R8	A.G.C. decoup. ...	1MΩ	F4
R9		680kΩ	F4
R10	I.F. stopper ...	47kΩ	F4
R11	Diode load ...	270kΩ	F4
R12	Volume control ...	1MΩ	D3
R13	V3 C.G. stopper ...	47kΩ	D3
R14	V3 G.B. ...	180Ω	D3
R15	H.T. smoothing ...	1-5kΩ	D3

CAPACITORS		Values	Loca- tions
C1	L.W. aerial shunt	100pF	F3
C2	L.W. aerial trim...	110pF	F3
C3	V1 hex C.G. ...	100pF	G3
C4	V1, V2 S.G. decoup.	0-03μF	G4
C5	1st I.F. trans	125pF	A2
C6	tuning ...	125pF	A2
C7	P.U. shunt ...	0-002μF	E4
C8	V1 osc. C.G. ...	60pF	G3
C9	L.W. osc. trim. ...	150pF	F3
C10	S.W. osc. tracker...	0-005μF	F3
C11	M.W. osc. tracker	500pF	F3
C12	L.W. osc. tracker	220pF	F3
C13	Osc. anode coup.	0-01μF	G4
C14	A.G.C. decoup. ...	0-05μF	G4
C15	2nd I.F. trans.	125pF	B2
C16	tuning ...	125pF	B2
C17	I.F. by-passes ...	100pF	F4
C18	—	100pF	F4
C19	A.F. coupling ...	0-002μF	F4
C20	Tone corrector ...	0-002μF	E3
C21*	V3 cath. by-pass	25μF	C2
C22*	H.T. smoothing ...	32μF	C2
C23*		32μF	C2
C24†	S.W. aerial trim.	50pF	F3
C25†	M.W. aerial trim.	50pF	F3
C26†	Aerial tuning ...	—	A1
C27†	Oscillator tuning	—	A1
C28†	S.W. osc. trim. ...	50pF	F3
C29†	M.W. osc. trim. ...	50pF	F3

* Electrolytic. † Variable. ‡ Pre-set.



CIRCUIT ALIGNMENT

The following adjustments can be made accessible with the chassis in the cabinet upon the removal of the small cabinet base cover.

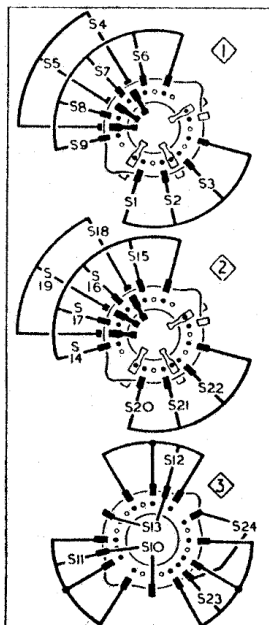
I.F. Stages.—Switch set to M.W. and connect output of signal generator, via a 0.01μF capacitor in the "live" lead to control grid (pin 6) of V1 and chassis. Feed in a 420 kc/s (714.3 m) signal and adjust the cores of L15 (location reference B2), L14 (F4), L13 (A2) and L12 (G4) for maximum output, reducing the input as the circuits come into line to avoid A.G.C. effects.

R.F. and Oscillator Stages.—All the following adjustments should be made with the chassis in the cabinet, as the tuning scale is fixed to the cabinet. Transfer signal generator leads, via a suitable dummy aerial, to A and E sockets.

S.W.—Switch set to S.W., tune to 15m, feed in a 15m (20 Mc/s) signal and adjust C28, C24 (F3) for maximum output. Tune to 37.5m, feed in a 37.5m (8 Mc/s) signal and adjust the cores of L7, L4 (F3) for maximum output.

M.W.—Switch set to M.W., tune to 200m, feed in a 200m (1.5 Mc/s) signal and adjust C29, C25 (F3) for maximum output. Tune to 500m, feed in a 500m (600 kc/s) signal and adjust the cores of L8, L5 (F3) for maximum output.

L.W.—Switch set to L.W., tune to 1,500m, feed in a 1,500m (200 kc/s) signal and adjust the cores of L9, L6 (F3) for maximum output.



Diagrams of the three waveband switch units, drawn as seen when viewed from the rear of an inverted chassis. The associated switch table appears in col. 3.

Switch Table

Switch	S.W.	M.W.	L.W.	Gram
S1	C	—	—	—
S2	—	C	—	—
S3	—	—	C	—
S4	C	—	—	—
S5	—	C	—	—
S6	C	—	—	—
S7	—	C	—	—
S8	—	—	C	—
S9	—	—	—	C
S10	—	—	—	C
S11	C	—	—	—
S12	C	—	—	—
S13	—	C	—	—
S14	—	—	C	—
S15	C	—	—	—
S16	—	C	—	—
S17	—	—	C	—
S18	C	—	—	—
S19	—	C	—	—
S20	C	—	—	—
S21	—	C	—	—
S22	—	—	C	—
S23	C	—	—	—
S24	—	—	—	C