

Valve	Anode (V)	Screen (V)	Cath. (V)
V1 UCH42	162	70	1.5
V2 UF41 ...	162	80	1.5
V3 UBC41 ...	75	—	1.1
V4 UL41 ...	145	162	8.5
V5 UY41 ...	—	—	182.0

McMICHAEL - 508U

OTHER COMPONENTS		Approx. Values (ohms)	Locations
L1	Frame aerial ...	—	—
L2	Aerial coupling coils	0.2	G4
L3	Aerial tuning coils	0.3	F4
L4	Aerial tuning coils	2.5	G4
L5	Aerial tuning coils	15.0	F4
L6	Oscillator tun. coils	3.5	F4
L7	Oscillator reaction coils	7.0	F4
L8	Oscillator reaction coils	1.6	F4
L9	Oscillator reaction coils	2.6	F4
L10	1st I.F. trans. {Pri.	6.0	B2
L11	1st I.F. trans. {Sec.	6.0	B2
L12	2nd I.F. trans. {Pri.	6.0	C2
L13	2nd I.F. trans. {Sec.	6.0	C2
L14	Speech coils	2.75	A1
L15	Speech coils	2.75	C1
L16	H.T. smoothing choke ...	240.0	A2
T1	Primary ...	400.0	C1
T1	Secondary ...	0.2	C1
S1-S8	Waveband switches	—	E3
S9, S10	Mains sw. g'd R11	—	E3

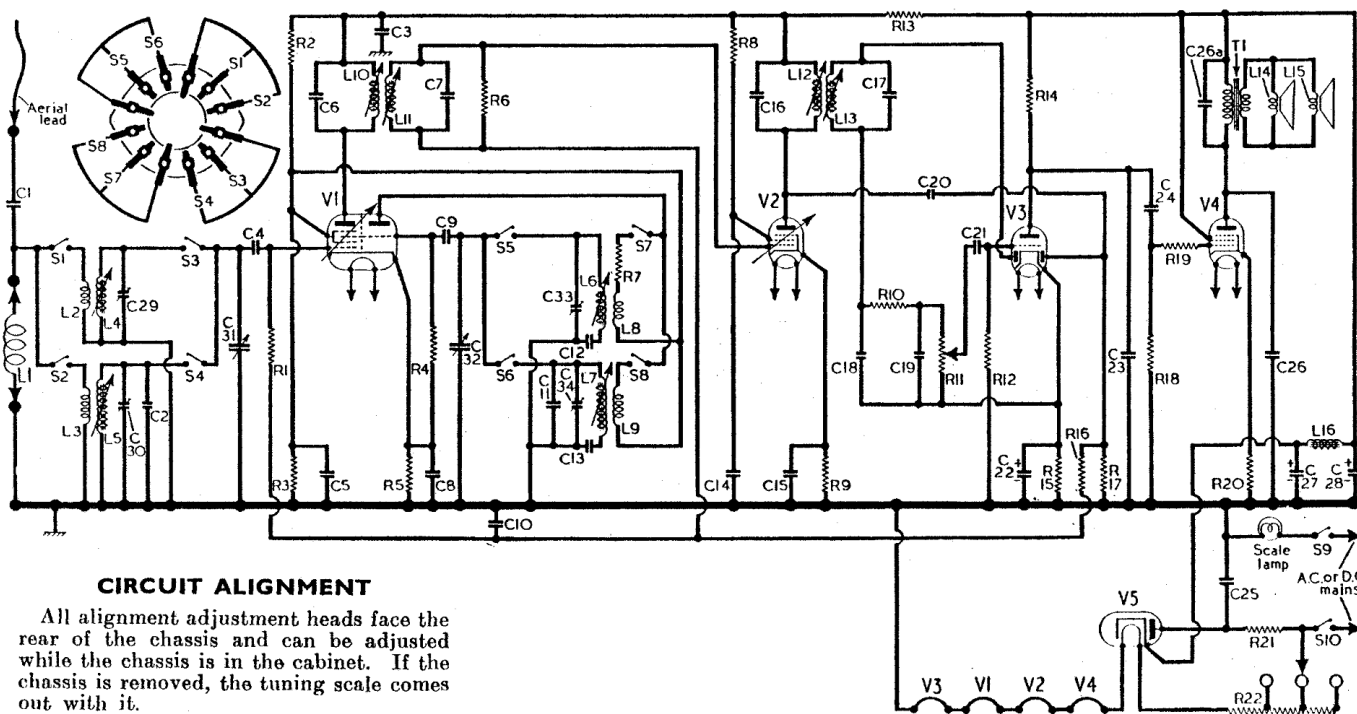
RESISTORS		Values	Locations
R1	V1 hex. C.G. ...	470kΩ	E3
R2	V1 S.G. feed poten-	12kΩ	E3
R3	tial divider	27kΩ	E3
R4	V1 osc. C.G. ...	47kΩ	F4
R5	V1 fixed G.B. ...	220Ω	E3
R6	I.F. trans. shunt ...	1MΩ	E4
R7	Reaction stabiliser	470Ω	F4
R8	V2 S.G. H.T. feed ...	47kΩ	E4
R9	V2 fixed G.B. ...	220Ω	E4
R10	I.F. stopper	27kΩ	D4
R11	Volume control	250kΩ	E3
R12	V2 triode C.G. ...	2.2MΩ	D4
R13	H.T. feed ...	*1.1kΩ	E3
R14	V3 anode load	100kΩ	D4
R15	V3 G.B. ...	2.2kΩ	D4
R16	A.G.C. decoupling	470kΩ	D4
R17	A.G.C. diode load ...	1MΩ	D4
R18	V4 C.G. ...	470kΩ	D3
R19	Grid stopper	27kΩ	D4
R20	V4 G.B. ...	150Ω	D3
R21	Surge limiter	250Ω	G4
R22	Heater ballast	†1,250Ω	A2

CAPACITORS		Values	Locations
C1	Aerial isolator ...	0.005μF	B2
C2	L.W. trimmer ...	75pF	F4
C3	R.F. by-pass ...	0.1μF	E4
C4	V1 hex. C.G. ...	100pF	F3
C5	V1 S.G. decoup. ...	0.1μF	E4
C6	1st I.F. trans. tun-	125pF	B2
C7	ing ...	125pF	B2
C8	V1 cath. by-pass ...	0.1μF	E4
C9	V1 osc. C.G. ...	100pF	F3
C10	A.G.C. line decoup.	0.1μF	E3
C11	L.W. trimmer ...	100pF	E4
C12	M.W. tracker ...	590pF	F4
C13	L.W. tracker ...	220pF	E4
C14	V2 S.G. decoup. ...	0.1μF	D4
C15	V2 cath. by-pass ...	0.1μF	E4
C16	2nd I.F. trans. tun-	125pF	C2
C17	ing ...	125pF	C2
C18	I.F. by-passes ...	75pF	D4
C19	I.F. by-passes ...	75pF	D3
C20	A.G.C. diode coup.	25pF	D4
C21	A.F. coupling ...	0.01μF	D4
C22*	V3 cath. by-pass ...	50pF	D4
C23	I.F. by-pass ...	500pF	D4
C24	A.F. coupling ...	0.01μF	D3
C25	R.F. filter ...	0.01μF	G3
C26	Tone corrector ...	0.005μF	D3
C26a	Tone corrector ...	0.01μF	C2
C27*	H.T. smoothing ...	32μF	G3
C28*	H.T. smoothing ...	32μF	G3
C29†	M.W. trimmer ...	—	F4
C30†	L.W. trimmer ...	—	F4
C31†	Aerial tuning ...	—	B1
C32†	Oscillator tuning ...	—	B1
C33†	M.W. trimmer ...	—	F4
C34†	L.W. trimmer ...	—	F4

Intermediate frequency 470 kc/s.

*Made up of two 2.2kΩ resistors in parallel.
†tapped at 850Ω + 200Ω + 200Ω from V5 heater.

* Electrolytic. † Variable. ‡ Pre-set.



CIRCUIT ALIGNMENT

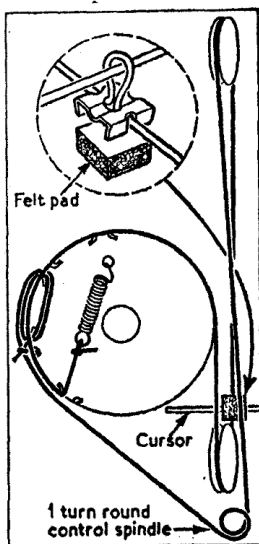
All alignment adjustment heads face the rear of the chassis and can be adjusted while the chassis is in the cabinet. If the chassis is removed, the tuning scale comes out with it.

I.F. Stages.—Connect signal generator, via a 0.1 μF capacitor, to control grid (pin 6) of V1 and chassis, and turn the gain and volume control to maximum. Feed in a 470 kc/s (638.3 m) signal, and adjust the cores of L13 and L12 (location reference C2) and L11, L10 (B2) for maximum output.

R.F. and Oscillator Stages.—With the gang at maximum capacitance, the cursor should cover the two datum dots just below the bottom of the scales. Transfer signal generator leads to A and E sockets. All adjustments are found at location reference F4.

M.W.—Switch set to M.W., tune to 190 m on scale, feed in a 190 m (1,579 kc/s) signal, and adjust C33 and C29 for maximum output. Check calibration at 500 m, and if necessary adjust the cores of L6 and L4 while feeding in a 600 kc/s signal.

L.W.—Switch set to L.W., tune to 900 m on scale, feed in a 900 m (333.4 kc/s) signal, and adjust C34 and C30 for maximum output. Check calibration at 1,800 m, and if necessary adjust the cores of L7 and L5 for maximum output while feeding in a 166.7 kc/s signal.



Sketch of the tuning drive system, as seen from the rear of the chassis, neglecting obstructions, when the gang is at maximum capacitance.

Drive Cord Replacement.—About eight feet of high-quality flax fishing line, plaited and waxed, is required for a new drive cord. It should be run as shown in the sketch in col. 2, where it is drawn as seen from the rear of the chassis when the gang is at maximum.

If a start is made by tying one end firmly round one of the peripheral sections, and taking the cord down to the control spindle, finishing up by tying off to the tension spring, the cord can be pulled against the gang stop to prevent it from slipping off. Before finally tensioning the cord, the cursor loop should be made. The method is shown inset in our sketch.