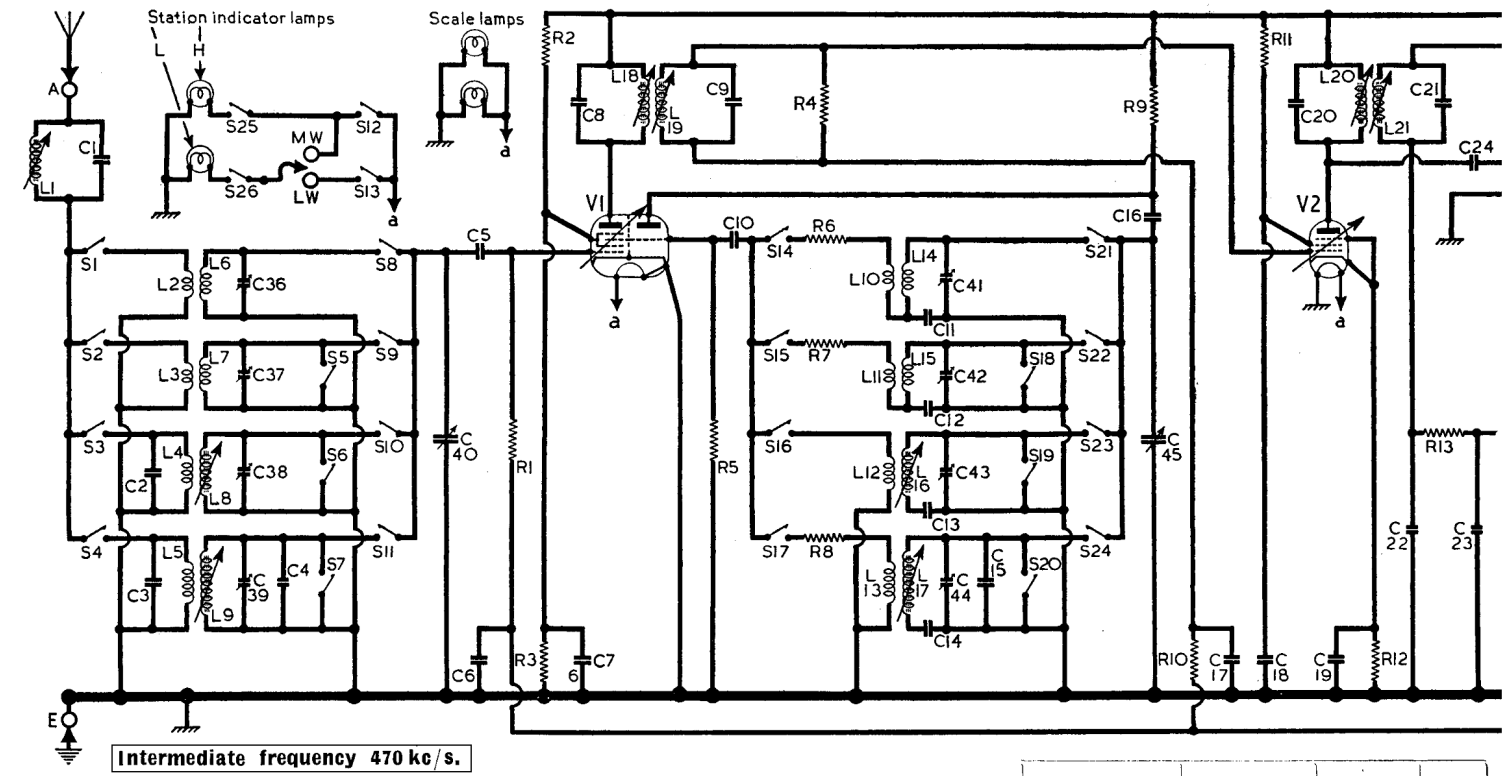
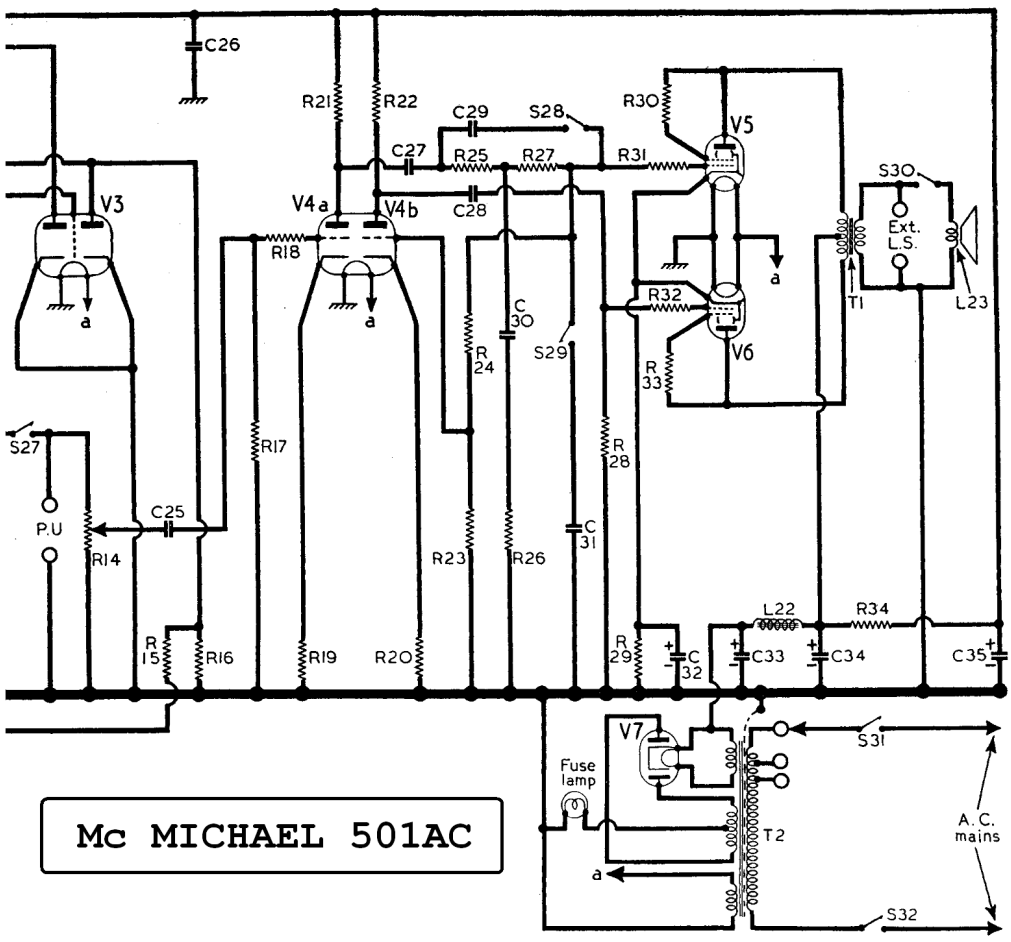


Intermediate frequency 470 kc/s.



Valve	Anode		Screen		Cath.
	V	mA	V	mA	V
V1 X78 ...	250 Oscillator 88	3·5 4·0	96	9·0	—
V2 6BA6 ...	250	9·0	122	3·2	1·4
V3 D77 ...	—	—	—	—	—
V4 B65 a...	93	2·3	—	—	3·0
V4 B65 b...	93	2·3	—	—	3·0
V5 KT61 ...	350	28·0	350	4·4	8·5
V6 KT61 ...	350	28·0	350	4·4	8·5
V7 5V4G ...	300§	—	—	—	380·0

§ A.C. each anode.

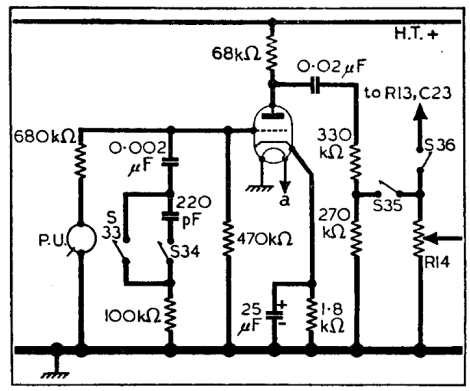
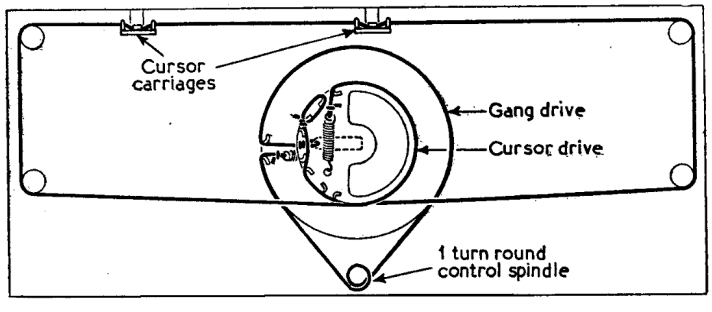


Diagram of the pick-up input circuit in the 505 autoradiogram.

Mc MICHAEL 501AC



Sketch showing the two cord drives, as seen from the rear with the gang at maximum. Each cord has its own drive drum.

DRIVE CORD REPLACEMENT

There are two separate tuning drive systems in this receiver: the gang drive, and the cursor drive. Together they require about six feet of high-grade flax fishing line, plaited and waxed. It is immaterial which cord is replaced first, but a short length of wire with a hook at one end is a useful aid in feeding the cords past obstructions.

Gang Drive.—This requires about two feet of cord, which should be run round the larger drum on the gang spindle and the control spindle as shown in our sketch below, where the two systems are drawn as seen from the rear of the chassis with the gang at maximum capacitance.

Cursor Drive.—This requires about four feet of cord, which should be run round the smaller drum on the gang spindle and the four pulleys as seen in our sketch below, where both systems are shown together as explained for the gang drive.

The cord can be slipped into the 3-point cord grips on the two cursor carriages after running round, and the carriages can then be adjusted so that the cursors cover the dots at the right-hand ends of the M.W. scales when the gang is at maximum capacitance.

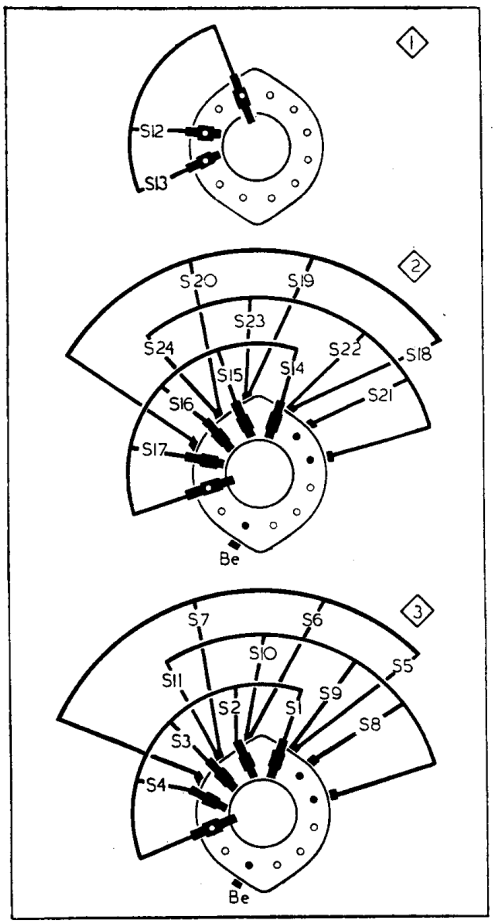
Mc MICHAEL 501AC

RESISTORS		Values	Locations
R1	V1 C.G.	1MΩ	F5
R2	V1 S.G. pot.	22kΩ	F5
R3	divider	33kΩ	F5
R4	I.F. trans. shunt	1MΩ	F6
R5	V1 osc. C.G. ...	47kΩ	F5
R6	S.W.1 stabiliser ...	47Ω	G5
R7	S.W.2 stabiliser ...	390Ω	G4
R8	L.W. stabiliser ...	680Ω	G5
R9	Osc. anode feed ...	27kΩ	F5
R10	A.G.C. decoupling	470kΩ	F6
R11	V2 S.G. feed ...	39kΩ	E6
R12	V2 G.B.	100Ω	E6
R13	I.F. stopper ...	22kΩ	E6
R14	Volume control ...	250kΩ	H4
R15	A.G.C. decoupling	1MΩ	E5
R16	A.G.C. diode load	470kΩ	E5
R17	V4a C.G.	2.2MΩ	E5
R18	V4a stopper ...	47kΩ	E5
R19	V4 cath.	1.2kΩ	E5
R20	resistors	1.2kΩ	F5
R21	V4 anode loads	68kΩ	E6
R22		68kΩ	E5
R23	V4b C.G.	33kΩ	E5
R24	A.F. coupling ...	390kΩ	E5
R25	Tone control ...	180kΩ	E5
R26		180kΩ	E5
R27		56kΩ	E4
R28	V6 C.G.	470kΩ	F5
R29	V5, V6 G.B.	150Ω	E5
R30	V5 stoppers ...	47Ω	E4
R31		47kΩ	E4
R32	V6 stoppers ...	47kΩ	F5
R33		47Ω	F4
R34	H.T. smoothing ...	3kΩ	E6

CAPACITORS		Values	Locations
C1	I.F. rejector tune...	500pF	G6
C2	M.W. aerial shunt...	250pF	F6
C3	L.W. aerial shunt...	0·001μF	G6
C4	L.W. aerial trim. ...	50pF	G5
C5	V1 C.G.	100pF	G5
C6	A.G.C. decoupling	0·1μF	E6
C7	V1 S.G. decoup. ...	0·1μF	F5
C8	1st I.F. trans. tune	125pF	C3
C9		125pF	C3
C10	V1 osc. C.G. ...	100pF	G5
C11	S.W.1 tracker ...	0·0054μF	H5
C12	S.W.2 tracker ...	0·001μF	G4
C13	M.W. tracker ...	538pF	G4
C14	L.W. tracker ...	220pF	F4
C15	L.W. osc. trim. ...	120pF	G4
C16	Osc. anode coup. ...	100pF	G5
C17	A.G.C. decoupling	0·1μF	F6
C18	V2 S.G. decoup. ...	0·1μF	E6
C19	V2 cath. by-pass ...	0·1μF	F6
C20	2nd I.F. trans. tune	125pF	D3
C21		125pF	D3
C22	I.F. by-passes ...	50pF	E6
C23		50pF	E6
C24	A.G.C. coupling ...	50pF	E5
C25	A.F. coupling ...	0·01μF	E5
C26	R.F. by-pass ...	0·1μF	F6
C27	A.F. couplings ...	0·02μF	E5
C28		0·02μF	F5
C29	one correctors ...	150pF	E4
C30		0·005μF	E5
C31		0·001μF	F4
C32*	V5, V6 cath. decoup.	25μF	E4
C33*	H.T. smoothing ...	16μF	J5
C34*		16μF	J5
C35*		4μF	F6
C36‡	S.W.1 aerial trim....	50pF	B3
C37‡	S.W.2 aerial trim....	50pF	B3
C38‡	M.W. aerial trim. ...	50pF	C3
C39‡	L.W. aerial trim. ...	50pF	C3
C40†	Aerial tuning ...	—	C2
C41‡	S.W.1 osc. trim. ...	50pF	B2
C42‡	S.W.2 osc. trim. ...	50pF	B1
C43‡	M.W. osc. trim ...	50pF	C1
C44‡	L.W. osc. trim. ...	50pF	C2
C45†	Oscillator tuning ...	—	C2

* Electrolytic. ‡ Pre-set. † Variable.

OTHER COMPONENTS		Approx. values (ohms)	Locations
L1	I.F. rejector ...	5.0	H6
L2	Aerial coupling coils	Very low	G6
L3		1.2	H5
L4		16.5	G5
L5		23.0	G6
L6	Aerial tuning coils	Very low	G6
L7		0.5	H5
L8		2.5	G5
L9		22.0	G6
L10	Oscillator reaction coils	Very low	H5
L11		1.3	H4
L12		1.6	G4
L13		4.0	G5
L14	Oscillator tuning coils	Very low	H5
L15		Very low	H4
L16		2.0	G4
L17		7.5	G5
L18	1st I.F. trans. Pri.	7.0	C3
L19	1st I.F. trans. Sec.	5.5	C3
L20	2nd I.F. trans. Pri.	5.5	D3
L21	2nd I.F. trans. Sec.	5.5	D3
L22	H.T. smoothing ...	225.0	A2
L23	Speech coil ...	2.6	—
T1	O.P.trans. Pri.	550.0	—
	O.P.trans. Sec.	0.6	
T2	Pri. total	20.0	A3
	H. T. Sec., total ...	290.0	
	Rect. htr. ...	Very low	
	6.3 v. htr. ...	Very low	
S1-24	Waveband switches	—	G5
S25, S26	Station indicators	—	B2
S27	P.U. jack switch	—	F6
S28, S29	Tone control ...	—	F4
S30	L.S. switch ...	—	E6
S31, S32	Mains sw., g'd R14	—	H4



Diagrams of the waveband switch units, drawn as seen from the rear of an inverted chassis. **Be** indicates bearer tags. The associated switch table is on the right, in col. 2.

Switch	S.W.1	S.W.2	M.W.	L.W.
S1	C	—	—	—
S2	—	C	—	—
S3	—	—	C	—
S4	—	—	—	C
S5	C	—	—	—
S6	C	C	—	—
S7	C	C	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	C	—	—
S20	C	C	C	—
S21	C	—	—	—
S22	—	C	—	—
S23	—	—	C	—
S24	—	—	—	C

CIRCUIT ALIGNMENT

All the following adjustments are easily accessible, and the chassis need not be removed from the cabinet to reach them.

I.F. Stages.—Switch set to M.W. and tune to 550 m. Connect signal generator, via a 0.01 μF capacitor in the "live" lead, to top tag on **C40**, and chassis, feed in a 470 kc/s (638.3 m) signal and adjust the cores of **L21, L20** (location reference D3) and **L19, L18** (C3), in that order, for maximum output, reducing the input as the circuits come into line to avoid A.G.C. action.

Mc/s) signal and adjust **C41** (B2), **C36** (B3) for maximum output.

S.W.2.—Switch set to S.W.2, tune to 50 m on scale, feed in a 50 m (6 Mc/s) signal and adjust **C42** (B1) **C37** (B3) for maximum output.

M.W.—Switch set to M.W., tune to 190 m on scale, feed in a 190 m (158 kc/s) signal and adjust **C43** (C1), **C38** (C3) for maximum output. Tune to 500 m on scale, feed in a 500 m (600 kc/s) signal and adjust the cores of **L16** (C1), **L8** (C3) for maximum output. Repeat these adjustments.

L.W.—Switch set to L.W., tune to 900 m on scale, feed in a 900 m (333 kc/s) signal and adjust **C44** (C2), **C39** (C3) for maximum output. Tune to 1,800 m on scale, feed in a 1,800 m (166.7 kc/s) signal and adjust the cores of **L17** (C2), **L9** (C3) for maximum output. Repeat these adjustments.

Setting Station Indicator Lamps.—First slacken the fixing screws holding the cam discs to the gang spindle, then switch to M.W., tune in the Home Service on the best frequency locally, and adjust the cam on the front disc so that the "H" lamp lights, then tighten the screw.

Before adjusting the "L" cam for the Light Programme, it must be decided whether the best results are obtained on L.W. or M.W., and the tag on the station indicator lamp adjustment panel must then be attached to the appropriate screw terminal. Then the procedure is the same as for the "H" lamp except that the rear cam disc is adjusted in this case.