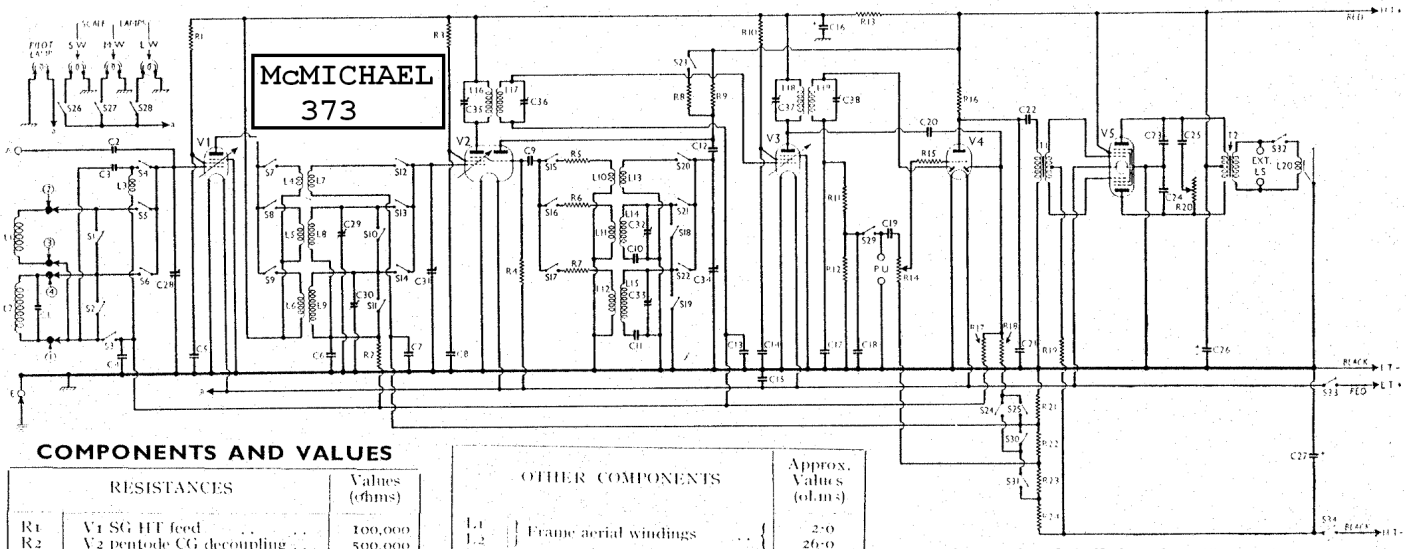


COMPONENTS AND VALUES

	RESISTANCES	Values (ohms)
R1	V1 SG HT feed	100,000
R2	V2 pentode CG decoupling	500,000
R3	V2 SG HT feed	60,000
R4	V2 osc. CG resistance	50,000
R5	Osc. SW reaction damping	20
R6	Osc. MW reaction damping	1,000
R7	Osc. LW reaction damping	1,000
R8, R9	V1 osc. anode HT feed resistances	50,000, 25,000
R10	V3 SG HT feed	100,000
R11, R12	V4 signal diode load resistances	100,000, 500,000
R13	V1, V2 pent. and V3 HT feed	5,000
R14	Manual volume control	1,000,000
R15	V4 triode grid stopper	100,000
R16	V4 triode anode load	30,000
R17	AVC line decoupling	1,000,000
R18	V4 AVC diode load	1,000,000
R19	V5 CG's *decoupling*	*100,000*
R20	Variable tone control	100,000
R21, R22, R23, R24	Automatic grid bias and AVC delay potential divider resistances	100, 20, 450, 400

	CONDENSERS	Values (μF)
C1	LW frame aerial trimmer	0·00001
C2	External aerial coupling	0·00001
C3	Frame aerial SW coupling	0·00001
C4	V1 CG decoupling	0·01
C5	V1 SG decoupling	0·1
C6	V2 pentode CG MW and LW decoupling	0·1
C7	V2 pent. CG SW decoupling	0·1
C8	V2 SG decoupling	0·1
C9	V2 osc. CG condenser	0·0002
C10	Osc. circuit MW tracker	0·00223
C11	Osc. circuit LW tracker	0·00179
C12	V2 osc. anode coupling	0·0001
C13	V3 CG decoupling	0·1
C14	V3 SG decoupling	0·1
C15	LT circuit RF by-pass	0·01
C16*	V1, V2 pent. and V3 HT reservoir	8·0
C17, C18	HF by-pass condensers	0·0001, 0·0001
C19	AF coupling to V4 triode	0·005
C20	Coupling to V4 AVC diode	0·0001
C21	V4 triode anode HF by-pass	0·0003
C22	AF coupling to T1	0·1
C23, C24	Fixed tone correctors	0·001, 0·001
C25	Part of variable tone control	0·01
C26*	HT reservoir condenser	8·0
C27*	Auto GB circuit by-pass	50·0
C28‡	SW and frame aerial tuning	—
C29‡	RF trans. sec. MW trimmer	—
C30‡	RF trans. sec. LW trimmer	—
C31†	RF transformer sec. tuning	—
C32‡	Osc. circuit MW trimmer	—
C33‡	Osc. circuit LW trimmer	—
C34†	Oscillator circuit tuning	—
C35‡	1st IF trans. pri. tuning	—
C36‡	1st IF trans. sec. tuning	—
C37‡	2nd IF trans. pri. tuning	—
C38‡	2nd IF trans. sec. tuning	—

* Electrolytic. † Variable. ‡ Pre-set.

	OTHER COMPONENTS	Approx. Values (ohms)
L1, L2	Frame aerial windings	2·0, 26·0
L3	SW aerial tuning coil	Very low
L4	RF trans. SW primary	0·3
L5	RF trans. MW primary	4·75
L6	RF trans. LW primary	5·25
L7	RF trans. SW secondary	Very low
L8	RF trans. MW secondary	2·0
L9	RF trans. LW secondary	19·5
L10	Oscillator SW reaction	7·0
L11	Oscillator MW reaction	3·0
L12	Oscillator LW reaction	5·5
L13	Osc. circuit SW tuning coil	0·25
L14	Osc. circuit MW tuning coil	2·7
L15	Osc. circuit LW tuning coil	13·0
L16, L17	1st IF trans. Pri. / Sec.	40·0, 40·0
L18, L19	2nd IF trans. Pri. / Sec.	40·0, 40·0
L20	Speaker speech coil	3·0
T1	Intervalve trans. Pri. / Sec., total	650·0, 5,000·0
T2	Speaker input trans. Pri., total / Sec.	600·0, 0·2
S1–S25	Waveband switches	—
S26–28	Scale lamps switches	—
S29	Gram pick-up jack-switch	—
S30, 31	Local/distant switches	—
S32	Internal speaker jack-switch	—
S33	LT circuit switch ganged	—
S34	HT circuit switch ganged R14	—

VALVE ANALYSIS

Valve voltages and currents given in the table below are those measured in our receiver when it was operating with a new HT battery reading 123 V on load. The receiver was tuned to the lowest wavelength on the medium band and both the volume and sensitivity controls were at maximum (the latter down), but there was no signal input.

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

Valve	Anode Voltage (V)	Anode Current (mA)	Screen Voltage (V)	Screen Current (mA)
V1 VP210	92	1·6	46	0·4
V2 TP23	92	0·5	44	0·7
	53 (Oscillator)	2·0		
V3 VP210	92	1·4	4‡	0·4
V4 HL21DD	77	0·5	—	—
V5 QP230	112†	0·9	113	1·0

† Each anode.
‡ Will vary considerably according to the meter used.

GENERAL NOTES

Switches.—**S1-S25** are the waveband, and **S26-S28** the scale lamp switches, ganged in three rotary units beneath the chassis, one being outside the front member of the chassis. These units are indicated in our under-chassis view, and are shown in detail in the diagrams in col. 3.

The table (col. 2) gives the switch positions for the three control settings, starting from fully anti-clockwise. A dash indicates *open*, and **C** *closed*.

S29 is the pick-up jack switch, at the rear of the chassis, which opens when a pick-up is inserted, and mutes radio.

S30, S31 are the local/distant switches, in a single QMB unit at the rear of the chassis. In the local (L) position, **S30** is *open* and **S31** *closed*, while in the distant (H) position, **S30** is *closed*, and **S31** *open*.

S32 is the internal speaker jack switch, at the rear of the chassis, which opens when the plug is fully inserted.

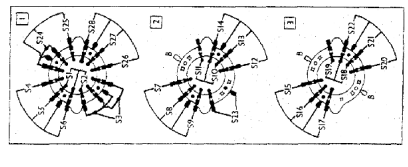
S33 and **S34** are the QMB battery circuit switches, ganged with the volume control **R14.**

Coils.—**L1** and **L2** are the MW and LW frame aerial windings. **L3,** and **L4, L7** are in two unscreened units on the chassis deck, while **L5, L6, L8, L9 ; L11, L12, L14, L15** and the IF transformers **L16, L17** and **L18, L19** are in four screened units on the chassis deck. Each of these contains two associated trimmers, reached through holes in the tops of the cans, while the last contains in addition **R11, R17, C17** and **C20.**

Scale and Pilot Lamps.—These are four Ever Ready MES types, rated at 2·0 V, 0·1 A. The pilot lamp is inside the frame aerial assembly, and is illuminated when the set is switched on. The scale lamps are switched by **S26-S28,** according to the waveband in use.

TABLE AND DIAGRAMS

Switch	SW	MW	LW
S1	C	—	—
S2	—	C	—
S3	—	C	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	C
S25	C	—	—
S26	C	—	—
S27	—	C	—
S28	—	—	C



are shown in detail in the diagrams in this col.

The table (col. 2) gives switch positions for the three control settings, starting from fully anti-clockwise. A dash indicates *open*, and **C** *closed*.

S29 is the pick-up jack switch, at the rear of the chassis, which opens when a pick-up is inserted, and mutes radio.

S30, S31 are the local/distant switches, in a single QMB unit at the rear of the chassis. In the local (L) position, **S30** is *open* and **S31** *closed*, while in the distant (H) position, **S30** is *closed*, and **S31** *open*.

S32 is the internal speaker jack switch, at the rear of the chassis, which opens when the plug is fully inserted.

S33 and **S34** are the QMB battery circuit switches, ganged with the volume control **R14.**

Coils.—**L1** and **L2** are the MW and LW frame aerial windings. **L3,** and **L4, L7** are in two unscreened units on the chassis deck, while **L5, L6, L8, L9 ; L11, L12, L14, L15** and the IF transformers **L16, L17** and **L18, L19** are in four screened units on the chassis deck. Each of these contains two associated trimmers, reached through holes in the tops of the cans, while the last contains in addition **R11, R17, C17** and **C20.**

Scale and Pilot Lamps.—These are four Ever Ready MES types, rated at 2·0 V, 0·1 A. The pilot lamp is inside the frame aerial assembly, and is illuminated when the set is switched on. The scale lamps are switched by **S26-S28,** according to the waveband in use.

TABLE AND DIAGRAMS

Switch	SW	MW	LW
S1	C	—	—
S2	—	C	—
S3	—	C	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	C
S25	C	—	—
S26	C	—	—
S27	—	C	—
S28	—	—	C