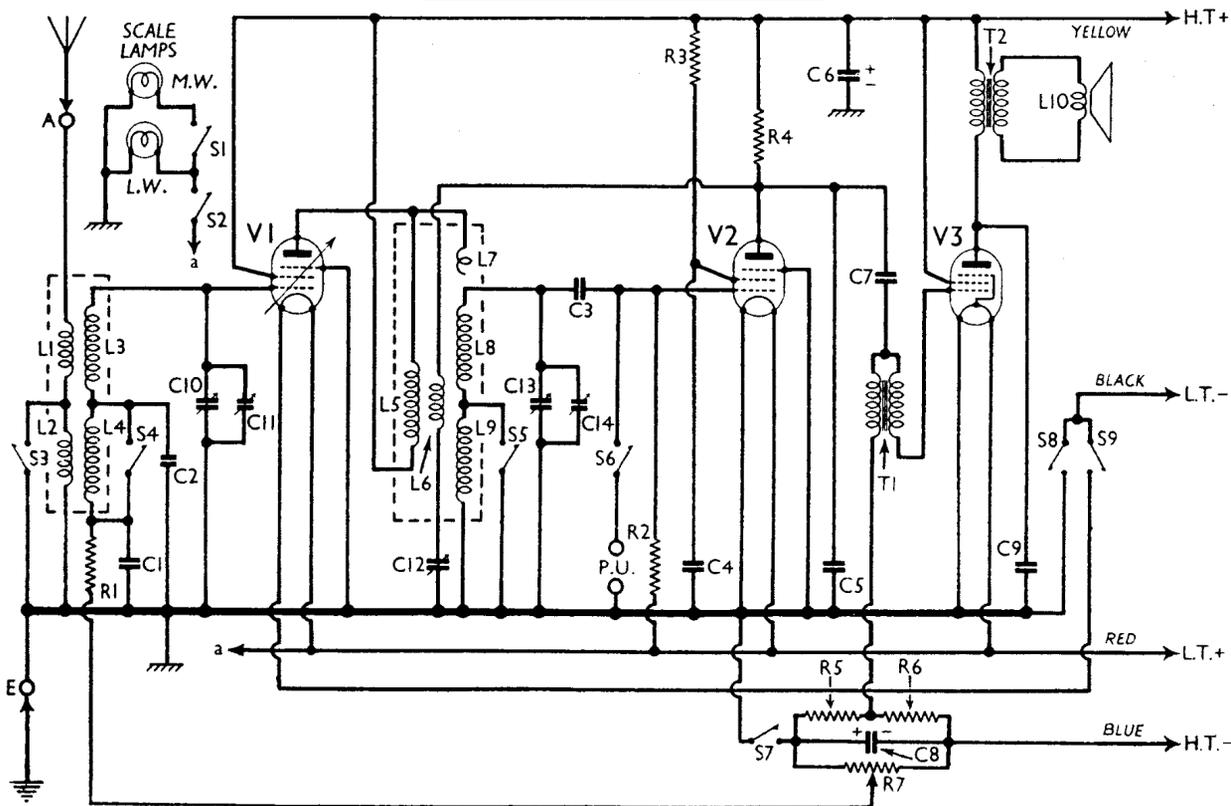


# ALBA - 212



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Circuit diagram of the Alba 212 3-valve battery receiver. The 430 radio-gramophone has a similar circuit. S2 is a master switch controlling the scale lamps. Automatic grid bias is incorporated.

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## COMPONENTS AND VALUES

Resistances		Values (ohms)
R1	V1 C.G. decoupling	5,000
R2	V2 grid leak	2,000,000
R3	V2 S.G. H.T. feed	250,000
R4	V2 anode load	100,000
R5	Automatic G.B. resistances	400
R6		1,000
R7	V1 gain control	25,000

Condensers		Values (μF)
C1	V1 C.G. decoupling	0.1
C2	Aerial circuit L.W. trimmer	Very low
C3	V2 C.G. condenser	0.0001
C4	V2 S.G. by-pass	0.1
C5	V2 anode H.F. by-pass	0.0001
C6*	H.T. reservoir	2.0
C7	L.F. coupling to T1	0.25
C8*	Auto G.B. circuit by-pass	25.0
C9	Tone corrector	0.005
C10†	Aerial circuit tuning	0.0005
C11†	Aerial circuit trimmer	—
C12†	Reaction control	0.0005
C13†	H.F. transformer tuning	0.0005
C14‡	H.F. transformer trimmer	—

\* Electrolytic. † Variable. ‡ Pre-set.

Other Components		Approx. Values (ohms)
L1	Aerial coupling coils	9.0
L2		100.0
L3	Aerial circuit tuning coils	3.5
L4		12.0
L5	H.F. transformer primary	250.0
L6	Reaction coil	6.0
L7	Small coupling	Very low
L8	H.F. transformer secondary	3.5
L9		12.0
L10	Speaker speech coil	2.0
T1	Intervalve trans. (Pri.)	900.0
	(Sec.)	1,800.0
T2	Speaker input trans. (Pri.)	700.0
	(Sec.)	0.2
S1	M.W. scale lamp switch	—
S2	"Searchlight" master switch	—
S3-S5	Waveband switches	—
S6	Gram. pick-up switch	—
S7	H.T. circuit switch	—
S8	V2, V3 L.T. switch	—
S9	V1 L.T. switch	—

## VALVE ANALYSIS

Valve voltages and currents given in the table below were measured with the receiver operating from a new H.T. battery reading 128 V and with the volume control at maximum and the reaction control at minimum. There was no signal input.

Voltages were measured on the 1,200 V scale of an Avometer, with chassis as negative.

Valve	Anode Volts	Anode Current (mA)	Screen Volts	Screen Current (mA)
V1 VP2	114	2.2	115	0.6
V2 SP2	40	0.6	45	0.2
V3 PM22A	110	4.3	115	1.3

## GENERAL NOTES

**Switches.**—The wavechange, battery and scale lamp switches S1 and S3-S9 are ganged in a single unit beneath the chassis. The contacts of the individual switches

Switch	Off	M.W.	L.W.	Gram.
S1	C	C	O	C
S3	O	C	O	O
S4	C	C	O	C
S5	O	C	O	O
S6	O	O	O	O
S7	O	C	C	C
S8	O	C	C	C
S9	O	C	C	O

are indicated in our under-chassis view. Some contacts in the unit are not used, while others are common to two switches. The table (col. 2) gives the switch positions for the various control settings, O indicating open, and C, closed.

S2 is a Q.M.B. single-pole shorting switch at the rear of the chassis, which is closed in the down position, and switches the scale lamps into circuit. It is merely provided for battery economy.

**Coils.**—The tuning coils L1-L9 are in two screened units on the chassis deck, the screens of which are easily removable.

**Scale Lamps.**—There are two of these, both of the Osram M.E.S. type, rated at 2.5 V, 0.2 A. The "L.W." lamp lights up in all positions of the switch except "off." The M.W. lamp lights up on M.W. (and Gram.) and extends the "Searchlight" from the L.W. scale to the M.W. scale.