

EKCO BAW69

Four-valve, three-waveband, battery superhet. A local-distant switch and variable tone control are incorporated and extra loudspeaker sockets are provided for a speaker of 4 ohms impedance. Marketed by E. K. Cole, Ltd., Ekco Works, Southend-on-Sea.

SW signals are coupled to the grid circuit of V1, frequency changer, via L7 and L4, while in MW a band-pass filter circuit is employed in which L2 is the primary coil and L5 the grid coil. On LW the signal is fed via L1 to the primary coil L3 which is coupled to the LW grid coil L6. A local-distant switch S4 connects R1 across aerial and earth when required on strong transmissions. Tuning is effected by VC1 and VC2 sections of the triple ganged condenser. The oscillator section of V1 employs separately switched tuned grid coils L8 (SW), L9 (MW) and L10 (LW). These are tuned by VC3 section of the

gang and R3 and C5 are the grid leak and condenser. Anode feedback is by L11, L12 and L13, the latter two coils being shorted on SW. The LF transformer L14, L15 transfers the signals from V1 to the grid of the amplifier V2, which is a variable-mu HF pentode. A second IF transformer L16, L17 passes on the signal to the signal diode of the double-diode triode V3. R7 is the signal diode load with HF and IF filtering effected by R8, C11 and C12.

From R7 the LF signals are fed via C13 to the volume control VR1 and thence to the grid of the triode section of V3.

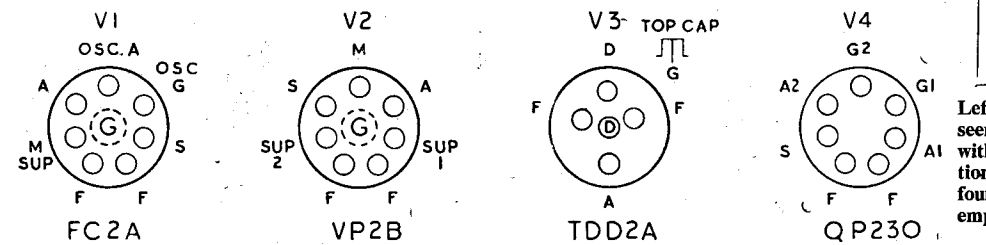
The AVC diode of V3 is fed from the anode of V2 via C10, the load resistance being R6, which is connected to the junction of R12 and R13 in the HT negative line for delay volts. From R6 AVC bias

VALVE READINGS

V	Type	Electrodes	Volts	Mas
1	FC2A Mullard	Anode	124	.31
		Osc. Anode	124	2.88
		Screen	50	.89
		Grid	124	1.17
2	VP2B Mullard	Anode	124	.32
		Screen	32	.46
3	TDD2A Mullard	Anode	80	.65
4	QP230 Mazda	Anodes (each)	122	2.45
		Common Screen	124	1.2

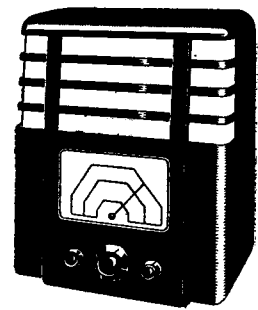
WINDINGS

L	Ohms	L	Ohms
1 + section of L3	27	12	2.25
2	2.5	13	3
3	26	14	70
4 .. .. .	.05	15	75
5	2.6	16	70
6	26	17	75
7 .. .. .	.4	18	370
8 .. .. .	.05	19 (total)	3,000
9	8.5	20 (total)	1,350
10	18	21 .. .. .	.3
11 .. .. .	.6	22	3



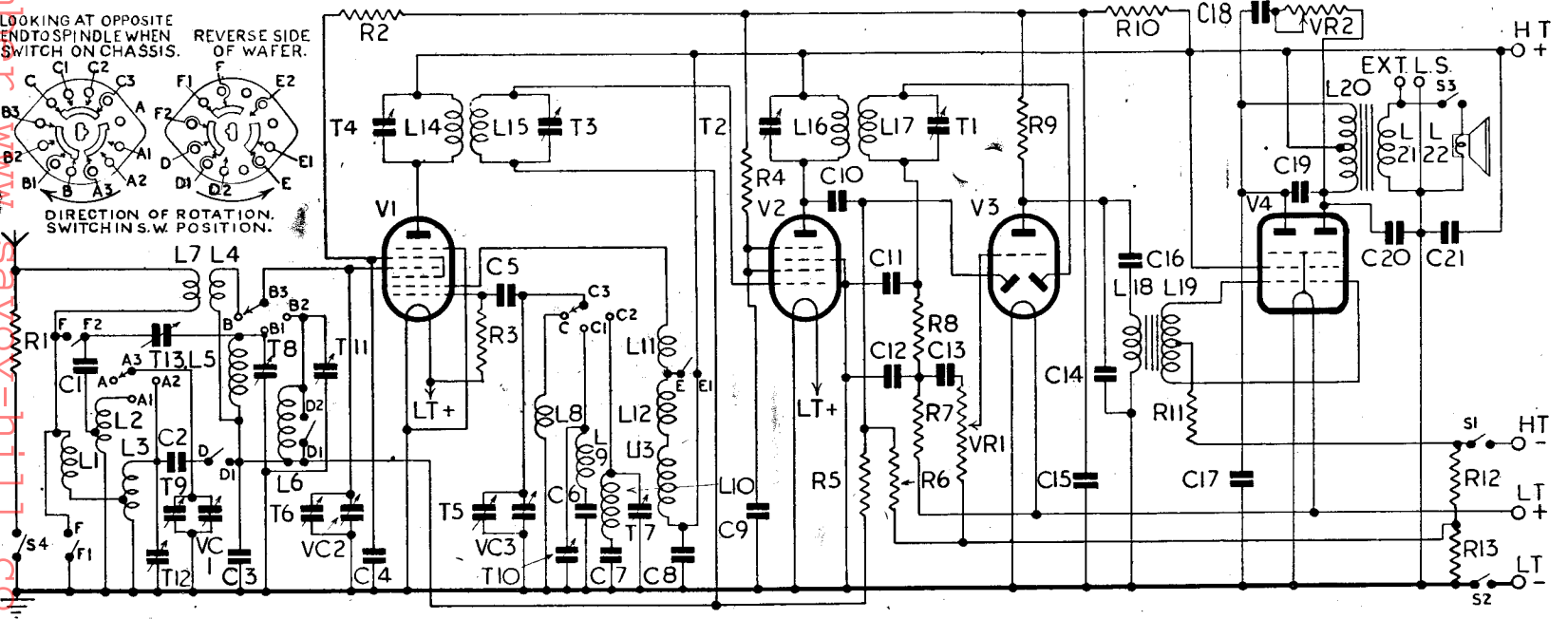
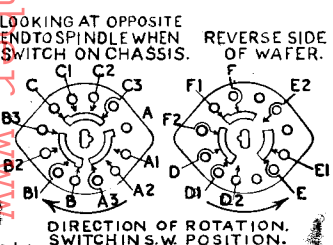
is applied to the grid circuits of V1 and V2 via decoupling components R5 and C3. The LF signals from V3 are resistance-capacity coupled by R9 and C16 to the primary L18 of the

Continued overleaf



The BAW69 has a distinctive moulded cabinet.

Left: the valve bases as seen with set inverted and with pin-electrode connections shown. Below: the four-valve superhet circuit employs quiescent push-pull output.



RESISTORS

R	Ohms
1	200
2	70,000
3	50,000
4	175,000
5	1 meg
6	750,000
7	500,000
8	75,000
9	50,000
10	6,000
11	100,000
12	750
13	75
VR1	850,000
VR2	50,000

CONDENSERS

C	Mf/ds
1	.001
2	12 mmfd.
3	.1
4	.1
5	50 mmfd
6	.002
7	.0008
8	.1
9	.1
10	15CM
11	.0002
12	.0002
13	.01
14	.0003
15	4
16	.1
17	.005
18	.01
19	.003
20	.005
21	10

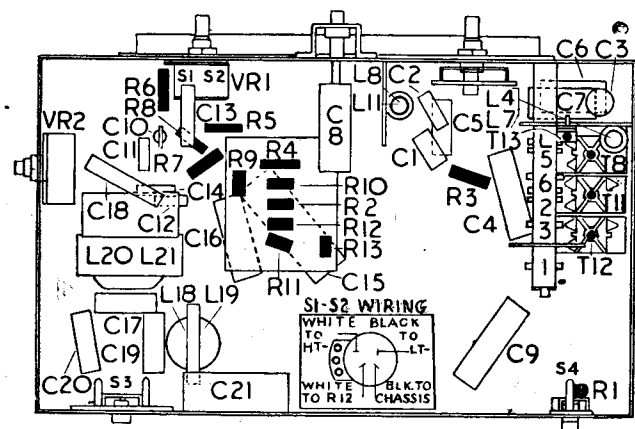
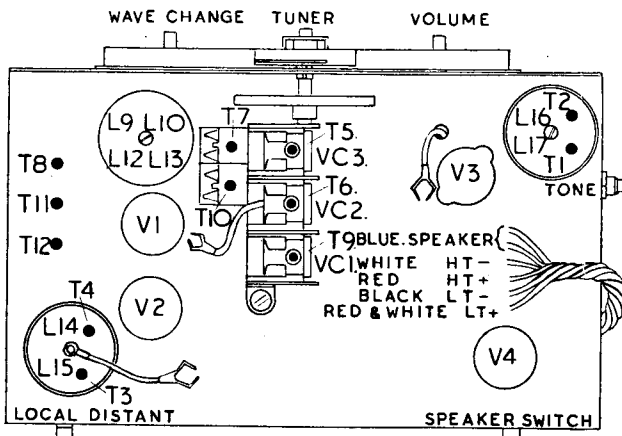
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interval transformer. C14 is the anode HF by-pass for V3.

The centre tap secondary winding L19 of the inter-valve transformer feeds the control grids of the double push-pull output pentode V4. Bias is provided by connecting the grid stopper R11 to the negative end of R12 and R13 in the HT negative line.

A push-pull output transformer L20, L21 couples the two anodes of V4 to the low impedance permanent magnet moving-coil loudspeaker, in which L22 is the speech coil. A permanent degree of tone correction



These diagrams locate the components and trimmers on the Ekco chassis, top view above and under-side layout on left. Note the inset detail of switch connections.

a signal of this wavelength. Adjust T7 for maximum output.

Tune receiver to and inject a signal of 250 m and adjust T8 and T9 for maximum output. Check calibration at 500 m.

LW Band.—Tune receiver to 1,200 m and inject a signal of this wavelength. Adjust T10, T11 and T12 for maximum output. Check calibration at 1,700 m.

Image Rejection.—Tune in image of unwanted station and adjust T13 by means of a long (10 inch) screwdriver-type trimming tool for *minimum* output.

Two Tips for HMV Sets

A HMV427 had bad instability in the first IF valve, a KTW61. The set was re-tuned and another valve tried without any better results. After further testing various resistors were tried in the grid circuit and a 50,000 ohm was found to give excellent results without in any way detracting from the good points in the receiver.

A number of HMV receivers of the 423—424 type have given trouble in the plate circuit of the DDT valve, the resistor breaking down or increasing to a very high value. In some cases, this is first apparent as a falling-off in volume. This gradually worsens and afterwards, if the plate voltage is tested, it will be found to be practically nil.

F. DAY-LEWIS.

is effected by C19 and C20 while the variable tone control comprises VR2 in series with C18 across L20.

GANGING

IF Circuits.—Switch to LW and tune receiver to 2,000 m. Adjust volume control to maximum and local-distant switch to "distant."

Inject a 126.5 kcs signal into the control grid of V1 via a .02 mfd condenser leaving the grid lead in place. Keeping the signal input low to avoid AVC action adjust T1, T2, T3 and T4 for maximum output.

SW Band.—Check calibration by seeing that pointer is horizontal on the right side of the scale level with the datum line when the gang is fully meshed; adjust if necessary.

Tune receiver to 15 mcs and inject a signal of this frequency into the aerial and earth sockets. Adjust T5 and T6 for maximum output. Two peaks will be obtainable and the one requiring the least trimmer capacity should be chosen.

MW Band.—Tune receiver to 200 m and inject

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A PERSONAL LETTER TO THE TRADE

DEAR SIR/S,

RE SERVICES RENDERED.

Having, like thousands of others, played a modest part in defeating the enemy, the business now known as A. E. Powell, Ltd., has, for the past five years, carried on with what assistance I could give when on leave. Nevertheless, we managed to maintain a steady flow of good quality, sensibly-priced Service Materials, to produce many much-needed replacement components, and to offer you considerable quantities of the so-called difficult lines.

Despite the very many difficulties we were determined to carry out our policy of Clean Trading, at the same time proving to the ever-increasing number of trade friends the aptness of our motto: "Good Service with Service Goods."

It gives me very much pleasure, therefore, to make one of my first duties, upon returning, that of personally thanking all of you, not forgetting the staff and the Trade Press, for the loyalty and co-operation shown to us during these memorable years.

We are now increasing our indoor and outdoor staff, improving our products, adding new lines, reducing prices wherever possible and generally trying to better our past efforts. If you can pay us a visit, we shall be very pleased to see you, especially men returning from the Services . . . If your visit must wait awhile, and you are not yet on our Mailing List, write us, enclosing Id. stamp, and we will send you our brand new September List to prove our remarks.

Wishing the Trade every success in the years to come.

Sincerely Yours,

(Signed) A. E. POWELL.