ALBA

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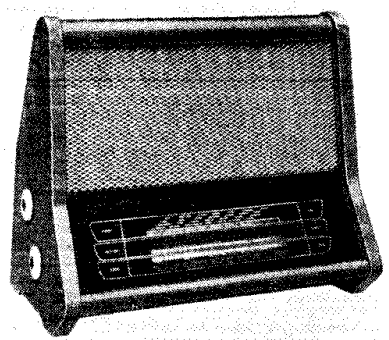
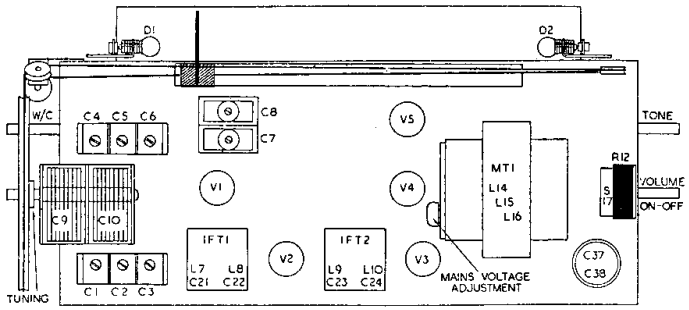
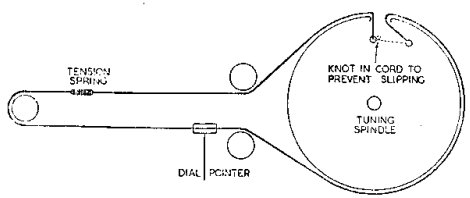
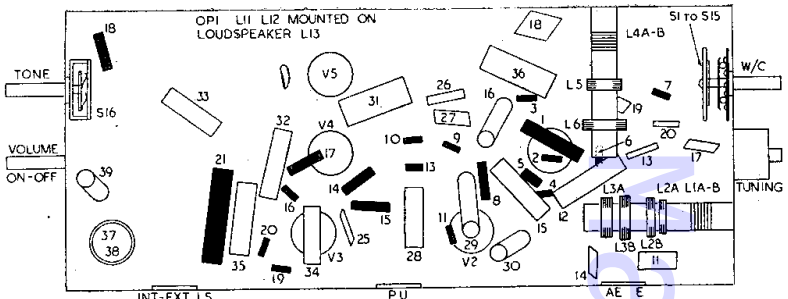


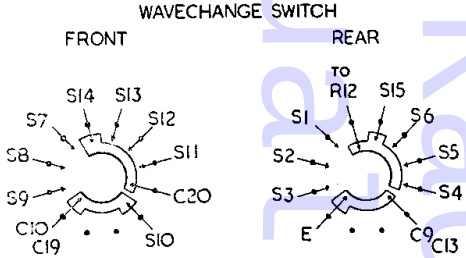
Circuit and Service notes with alignment table, see opposite.







WAVECHANGE SWITCH



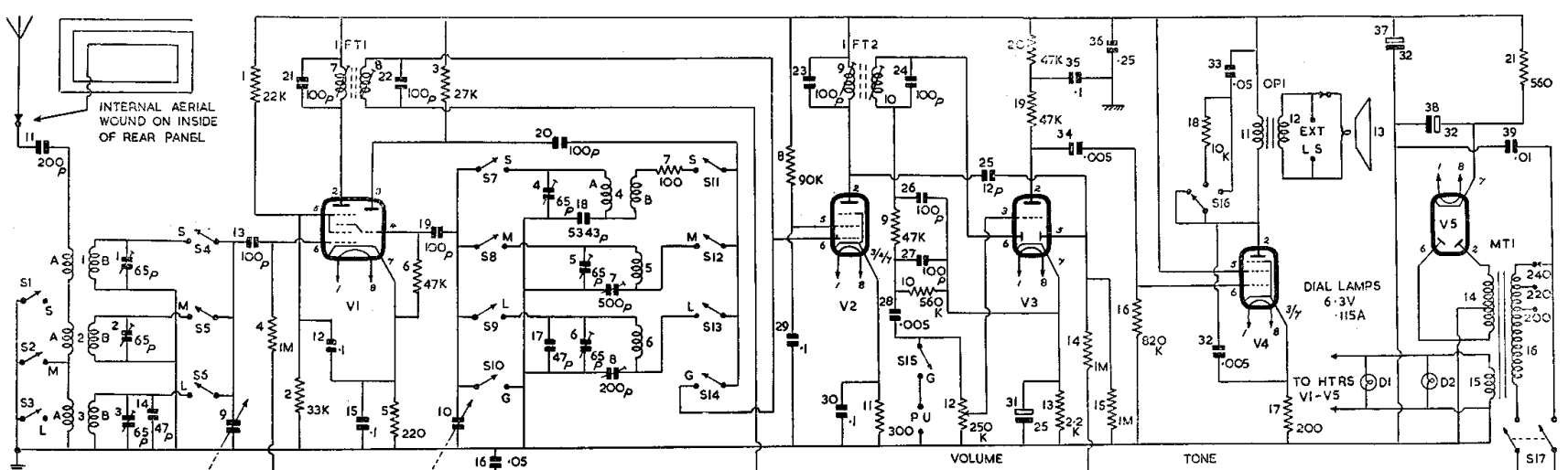
VIEWED FROM OPPOSITE SIDE OF INVERTED CHASSIS

Price £22 1*s.* (£16 13*s.* 10*d. plus* £5 7*s.* 2*d. tax*). *Date released, September,* 1953.

Five-valve three-waveband superhet covering 16-53, 190-560 *and* 800-2,000 *metres. Internal aerial wire for reception of powerful stations. Sockets for external aerial, earth, extension speaker, and high resistance type pickup. Modern style walnut veneered table cabinet. Suitable for* 200-250*V* 40-60*c/s AC. Model for* 100-120, 200 250*V* 40 60*c/s AC is available to order. Manufactured by A. J. Balcombe, Ltd., 52-58 Tabernacle Street, London, EC2.*

COMPONENT RATINGS

Capacitors
Silver Mica 350V—C11, C13, C14, C17 to C27.
Tubular 350V—C12, C15, C16, C29, C30, C33, C35, C36.
Tubular 1,000V—C28, C32, C34, C39.
Electrolytic 25V—C31.
Electrolytic 350V—C37, C38.
Resistors
¼ watt—R5.
¼ watt—R8, R14, R15, R17, R18.
1 watt—R1.
2 watt—R21.
Volume control R12 is a 250K log potentiometer with DP switch. All other resistors are 1/8th watt type.



A
G
K

Of the two figures against a component in the circuit, the upper is the code number and the lower the value.

INDUCTORS

L	*Ohms*
1A	Very low
1B	Very low
2A	1
2B	3
3A	60
3B	10
4A	Very low
4B	Very low
5	2
6	4.5
7	11
8	11
9	10.5
10	10
11	500
12	.5
13	2.75
14	650 centre tapped
15	Very low
16	37 tapped 30, 33

ALBA 3841—*Continued*

THE receiver is a straightforward five-valve superhet with triode-hexode frequency-changer V1, employing a tuned-grid shunt fed oscillator circuit, a pentode IF amplifier V2 operating at 470kc/s, a double-diode triode V3 for signal demodulation, AVC, and AF amplification, and a pentode output amplifier V4. HT is provided by an indirectly heated fullwave rectifier V5.

Aerial. The internal aerial consists of a three-turn open-end loop wound on inside of movable rear cover panel of cabinet. It plugs into aerial socket and allows reception of the more powerful stations. When good reception of distant stations is desired then a 60-75ft. outdoor aerial should be erected as high as possible.

Pickup. Sockets are provided for the connection of a high resistance magnetic or crystal type pickup. The pickup is switched by S15 to volume control R12. When wavechange switch is placed in Gram position, input grid, oscillator anode and grid of V1 are disconnected from their tuned circuits and "earthed," to prevent radio break-through while playing records.

Extension Speaker. Sockets are fitted to allow use of a 3-5 ohm extension speaker. Internal speaker may be placed inoperative by withdrawing plug from centre socket.

Tone Control is adjusted by S16 which in its Medium position connects R18 in series with C33 across primary L11 of output transformer OP1. In Low position C33 only is shunted across L11.

HT, which is provided by indirectly heated full-wave rectifier V5, is resistance-capacity smoothed by C37 and R21 and C38. Reservoir smoothing capacitor C38 should be rated to handle 100mA ripple current.

Servicing. On removal of the four push-on type control knobs, rear panel of cabinet, and the four chassis-fixing screws, the chassis may be withdrawn from cabinet and inverted to give access to components. It is not necessary to unsolder the leads from tags on OP1 on speaker.

TRIMMING INSTRUCTIONS

Apply signal as stated below	Tune Receiver to	Trim in Order stated for Max. Output
(1) 470kc/s to g1 of V1 via .01 capacitor	—	Cores L10, L9, L8, L7
(2) 18mc/s to AE socket via dummy aerial	16.67 metres	C4, C1
(3) 6mc/s, as above ...	50 metres	Adjust coiled lead attached to L4 L1. Repeat (2) and (3).
(4) 1.5mc/s, as above ...	200 metres	C5, C2
(5) 600kc/s, as above ...	600 metres	C7 whilst rocking gang. Repeat (4) and (5)
(6) 375kc/s, as above ...	800 metres	C6, C3
(7) 154kc/s, as above ...	1,949 metres	C8 whilst rocking gang. Repeat (6) and (7)

HAWKINS 'BLINK-LITE'

THIS lamp incorporates a flashing red light system as well as providing a white light beam. Physically it is very adaptable to circumstance and can be stood or hung anywhere. Among its many uses is the protection of the motorist in the event of a breakdown or a column of people marching in the road.

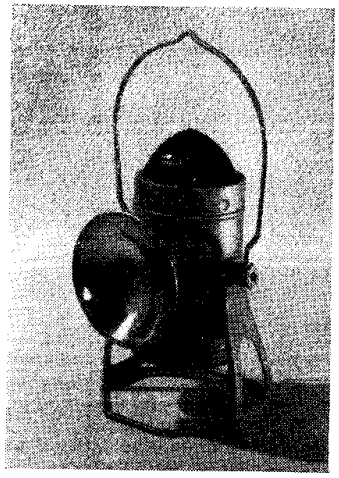
The body is of 22SWG pressed steel, pivoting about the centre on a pressed steel and wire stand. The handle is of stout wire.

A rubber gasket on flange of red glass dome, which, together with the reflector, is secured to top of battery housing by a bayonet-fitting metal ring, ensures complete water-proofing of interior. White light reflector assembly screws on to a threaded brass bush which also accommodates the bulb.

Red flashing light is controlled by a Cathodeon, a cartridge type thermal switch which clips into position on the selector switch unit assembly panel mounted in the top of battery housing.

Operating from a standard 6V dry battery and employing 5.5V .3A bulbs, the two light sources are controlled, selected and combined by a sturdy four-position rotary switch. Turned clock-wise, the sequence is as follows: white beam; white beam and red flash; red flash; off.

Replacing battery. Remove red glass dome, rubber gasket, reflector and bulb, by turning bayonet fitting metal ring. Lift metal plate marked "Pull Up." Pull out black Bakelite switch knob Lift out switch unit assembly. The battery can then be withdrawn.



A "potted" service review of the lamp made by L. G. Hawkins and Co. Ltd.

Reassemble by reversing the process.

Cathodeon, which is held by clip contacts on switch unit assembly, can be replaced easily after removal of the red glass dome, rubber gasket, reflector and bulb, secured by bayonet fitting metal ring.

White light bulb replacement is achieved by unscrewing reflector assembly in an anti-clockwise direction, and then unscrewing the bulb from brass holder in the normal manner.

FILLERY—*Continued from page 26*

loaded clips. Make a note of colour of spot showing on bearing blocks and then lift out brush. Place new belt in position over motor pulley and around pulley groove in centre of brush. Looking at the underside of the machine from the front, the belt should come from lefthand side of motor pulley and pass over top of brush, and from underside of brush to righthand side of motor pulley. Replace brush, making sure that bearing blocks are inserted with correct spot colour uppermost.

Vibrator brush height adjustment. There are four height positions on the vibrator so that as bristles wear, the vibrator can be lowered. For ease and convenience of adjustment, the edges of the rubber-cushioned bearings are coloured black, blue, green, red New machines are set with black uppermost. At the first signs of wear, remove the vibrator and give the rubber bearings a quarter-turn so that the blue is uppermost. Subsequent wear can be taken up by turning to green and then to red.

To clean polishing pads. Lambswool buffers should be washed in lukewarm (not hot) water, using a mild soap. Rinse carefully in lukewarm water to remove soap, and then squeeze out water. Lay on flat surface and form back into shape and let dry. Do not put pad on radiator or near direct heat as it will draw up and become hard. If the wool becomes matted due to washing, it can be brought back by combing to separate hairs. Buffers should be allowed to dry thoroughly before using again.

Renewal of motor brushes. These are a self-cutting carbon brush which have been designed specially for use with the moulded type commutator fitted to armature of motor used in this machine. The life of the brush is far longer than that of standard type. In the event of them wearing down to less than $\frac{3}{8}$in. they should be replaced with Morgan Crucible type Link C4.

Lubrication. Motor and brush driving wheel bearings are grease-packed ball-bearing type and should not normally require any attention.

Rollers and rear wheel bearings should occasionally be given a drop of light grade machine oil.

DISMANTLING

Removal of motor cover. Remove dustbag and place machine upside down on a suitably protected surface. Place change lever in "polish" position. Undo and remove the two slot-head screws, one adjacent to each of handle stirrup clamps. When these are removed a spacer inserted between body and motor cover will be released. Place change lever over to "clean" position and place machine right side up. Motor cover can now be withdrawn by easing it gently forwards, to disengage slots from studs, and lifting rear upwards to clear mains cable.

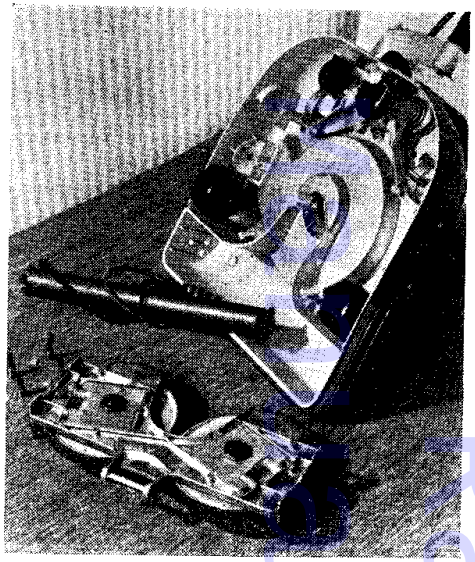


Fig. 5

With motor cover removed headlight (15W Pygmy type) can be renewed, motor brushes checked and replaced if necessary, and mains on-off switch replaced

Removal of motor and fan unit. Remove vibrator brush compartment cover and slip rubber driving belt from motor pulley. Disconnect mains cable, interference suppressor capacitor, and on-off switch leads from terminal block. Remove earthing lead of interference suppressor capacitor from under motor frame clamping nut. Finally undo and remove the four bolts, one at each corner of Bakelite end plate, which secure motor unit to top of body.

It is recommended that faulty motors be removed complete with fan and impeller and returned to Fillerys for overhaul or replacement.

Removal of brush platform. First remove polishing brushes by giving them a turn anti-clockwise. Next prise out the press-in caps covering the four pivot screws and then unscrew and remove them. Platform is now free to be withdrawn. Drive wheels can be removed by unscrewing the large hexagonal nuts on shafts. When shaft is withdrawn the two plates which form the cradles, and their springs, will be released.

Removal of rollers and rear wheels. These are retained on their spindles by spring circlips.

Removal of rear wheel cradle. Undo screw securing carpet adjuster knob to spindle and remove cam—being careful not to lose the ball and spring which locate it in its three positions. Move change lever to "clean" and raise up cradle and remove shock absorber springs below. Undo nut securing handle locking pin to release pedal shaft. Undo and remove the four screws securing each handle stirrup clamp. Wheel cradle can now be withdrawn.

Removal of handle stirrup. Removal of the stirrup clamps as in above allows pivots to be taken out and stirrup to be removed.

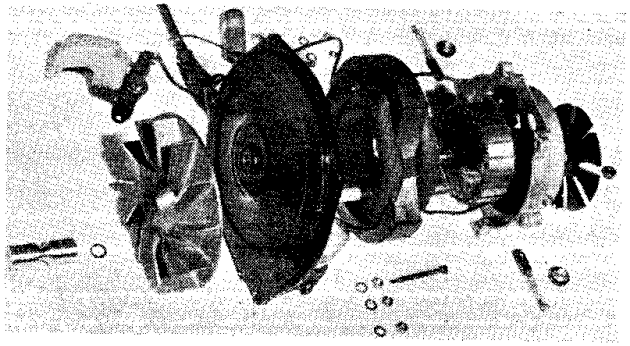


Fig. 6