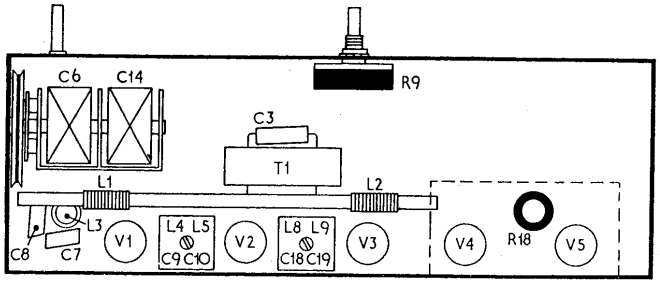
1041 'ERT' SERVICE CHART EKCO CLOCK RADIO A244

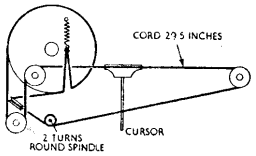


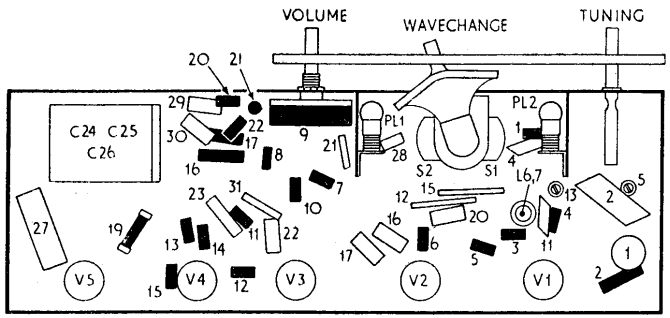
COMPONENT RATINGS

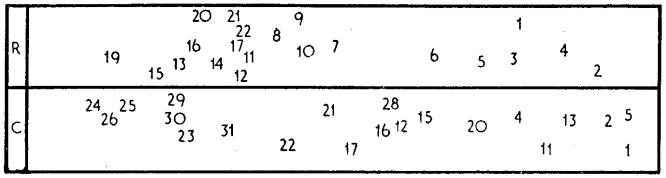
Capacitors
Ceramic disc—C1.
Protected silver mica—C2 4 7 8 11 12 15 21.
Tubular 350V—C17.
Tubular 300V AC—C3 27
Tubular 150V—C16 20 22 29 30.
Electrolytic 200V—C24 25 26.
Resistors
Carbon log type—R9.
½watt—R2 16 17.
All the rest ¼watt.

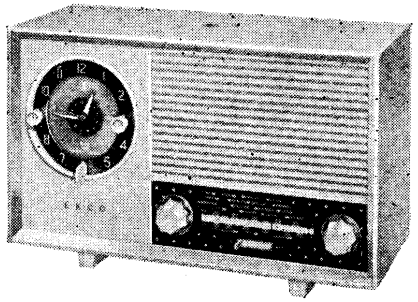
MODIFICATIONS

On earlier models C15 was 375pF, R22 was 2.2k









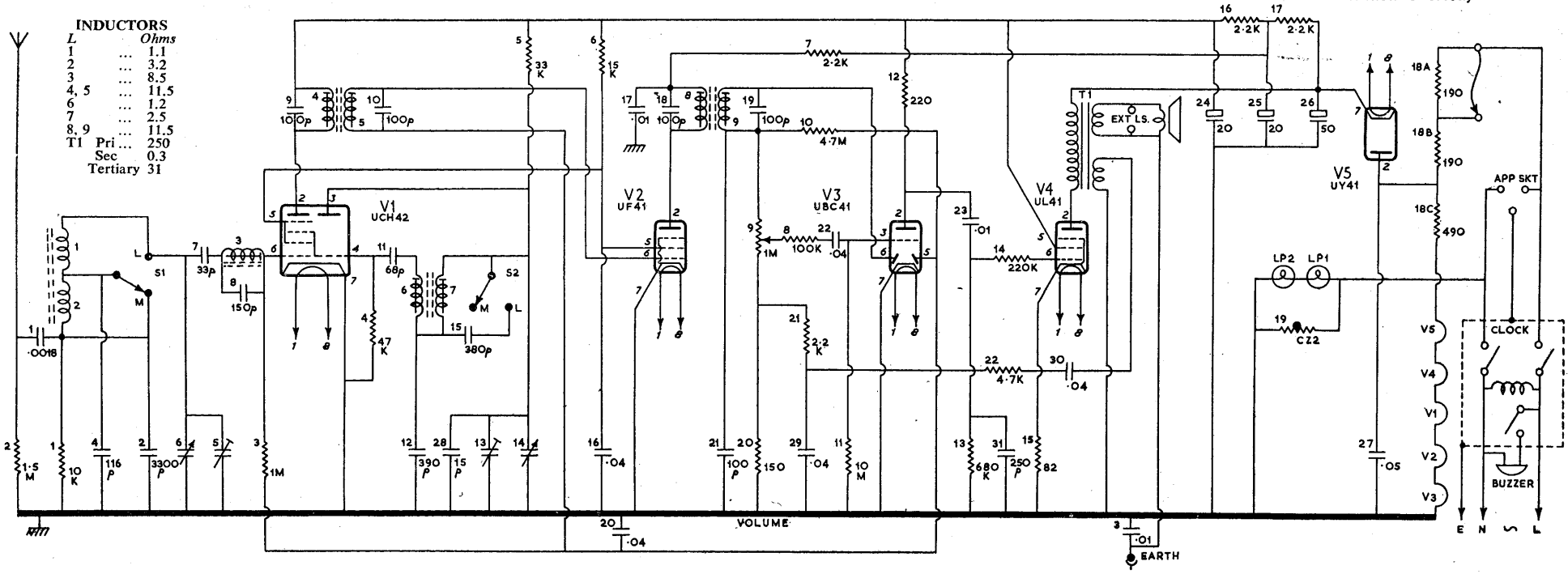
FIVE-VALVE two-waveband table model with self-starting electric clock which provides automatic time switching facilities both for radio and any domestic appliance, such as a kettle or fire, consuming not more than 1250W. Used as an alarm clock, the receiver can be set to switch itself on at any predetermined time up to 12 hours. A buzzer is also provided.

The receiver can be adjusted to play for a pre-

Continued overleaf

INDUCTORS

		Ohms
L		
1	...	1.1
2	...	3.2
3	...	8.5
4, 5	...	11.5
6	...	1.2
7	...	2.5
8, 9	...	11.5
T1 Pri	...	250
Sec		0.3
Tertiary		31



determined time, up to one hour, and then switch itself off.

Housed in moulded plastic cabinet, the receiver is manufactured by E. K. Cole, Ltd., Ekco Works, Southend-on-Sea, Essex, operates on 200-250V 50c/s AC, and was released in June, 1955, at £23 2s. inclusive of tax.

RECEIVER NOTES

Valves. Frequency changer V1 is UCH42 ; IF amplifier V2 is UF41; UBC41 provides signal rectification, AF amplification and AVC as V3; V4 is UL41 output, and half-wave rectification is by V5 UY41.

Indicator lamps. Two, rated at 10V, 200mA MES fitting.

Waveband coverage. 190-550, 1,100-1,900 metres.

Intermediate frequency. 470kc/s.

Speaker. Elliptical type, impedance 3ohms. Sockets for extension speaker.

Output. 2W.

CLOCK NOTES

Since the Smiths clock is a self-starting design it will begin to operate as soon as the radio receiver is connected to the mains. A knob for adjusting the hands is at rear.

Centre control is the master switch. In its middle position the receiver is off; turned clockwise to Manual the receiver is switched on; turned anti-clockwise to Alarm, the radio will be switched on at the time shown on the centre scale. When the radio has been switched on automatically it will stay on until the centre control is switched to " off."

Sleep control on left may be rotated clockwise so that the pointer indicates any one of the graduations 0-60 (which represent minutes). This will automatically switch on the radio provided the master control is set at either Alarm or off positions. The receiver will then operate until the number of minutes shown on the Sleep indicator have elapsed, after which it will automatically be switched off.

Alarm control on right will operate the alarm buzzer if it is pulled out, the buzzer being silenced when the control is in. Position of master control does not affect buzzer, which will operate about eight minutes later than the radio alarm switch.

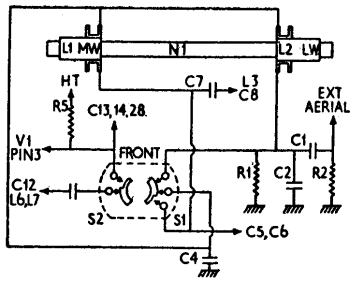
SERVICING NOTES

Clock unit. Should this develop a fault contact the nearest depot of Smiths English Clocks, Ltd., and give receiver type and serial number. Guarantee covers 12 months from date of purchase by user.

Smiths have service depots at Waterloo Road, Cricklewood, London, NW2; 153-155 Bothwell Street, Glasgow; 19 Ormeau Avenue, Belfast, N. Ireland.

Removing clock unit. Remove radio chassis (see below), unsolder the mains leads from the two insulated terminal pins adjacent to ballast resistor R18. Remove plastic back cover from clock and the four nuts securing assembly to cabinet. When clock has been withdrawn, mains cable should be disconnected from it.

Chassis removal. Remove six screws securing back cover; pull off hands setting knob, which comes away with back cover and extension spindle. Next take out the four chassis retaining



screws on base of cabinet. Withdraw chassis sufficient to release the screw through the metal clamp holding mains lead in position; after which chassis may be withdrawn to the extent of the speaker and mains leads.

Mains lead. When replacing always ensure that this lead is of the three-core type, and that the earth lead (green) is efficiently connected to the clock frame and centre pin of appliance socket.

ALIGNMENT

IF alignment. Switch to MW and tune to 550 metres. Connect an output meter, or low-range AC voltmeter, across secondary of output transformer; set volume control at maximum.

Inject a modulated 470kc/s signal at pin 6 V1, via an 0.1mF capacitor; adjust IFT2 (upper and lower) and then IFT1 (upper and lower) for maximum output.

Inject 470kc/s at aerial socket and adjust L3 (IF rejector) for minimum output.

RF alignment. Input, modulated 30 per cent at 400c/s, to aerial and earth sockets via dummy aerial.

MW. Tune to and inject 600kc/s, adjust L7 and position of L1 on Ferrite rod for maximum output.

Inject 1,400kc/s, adjust C13 and C5 for maximum output. Repeat as necessary.

LW. With 210kc/s input check calibration at this point, then adjust position of L2 on Ferrite rod for maximum output.

Pointer setting. With gang fully meshed, pointer should coincide with datum marks at right-hand end of scale. If in error, slide the pointer carriage along the cord until correct. Some tuning capacitors may slightly " overswing " the maximum capacity point; this should be checked to ensure that pointer setting at datum does coincide with maximum capacity.

VOLTAGE AND CURRENT CHECKS

Receiver should be in a quiescent condition and tuned to the LF end of the MW. DC voltages should be measured with a 20,000ohms/volt meter and AC voltages on a 1,000ohms/volt meter. The grid voltages should be taken on a DC valve voltmeter. Input 240V, 50c/s. All voltages are relative to chassis.

	Anode		*Screen*		*Cathode*		*Grid*
	V	*mA*	*V*	*mA*	*V*	*mA*	*V*
V1	87	1.1	47	1.9	0	4.4	1.25
V2	106	2.9	47	0.9	0	3.8	1.25
V3	54	0.15	—	—	0	0.15	1.3
V4	131	34	87	5.4	3.4	39.4	0
V5	167	—	—	—	141	48.5	—

Other voltages and current figures: Triode anode current of V1, 1.4mA; HT voltage at C26, 141V; HT voltage at C25, 113V; HT voltage at C24, 87V ; total consumption of set, 147mA.

Printed and Published by ODHAMS PRESS LTD., London, W.C.2