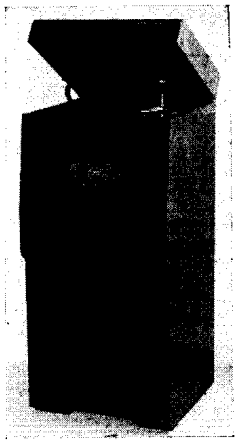
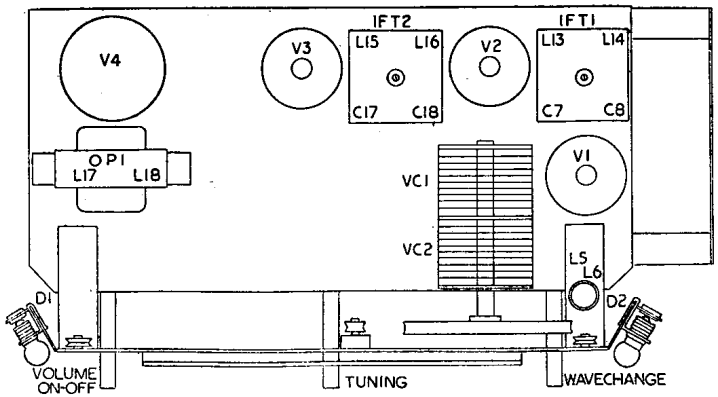
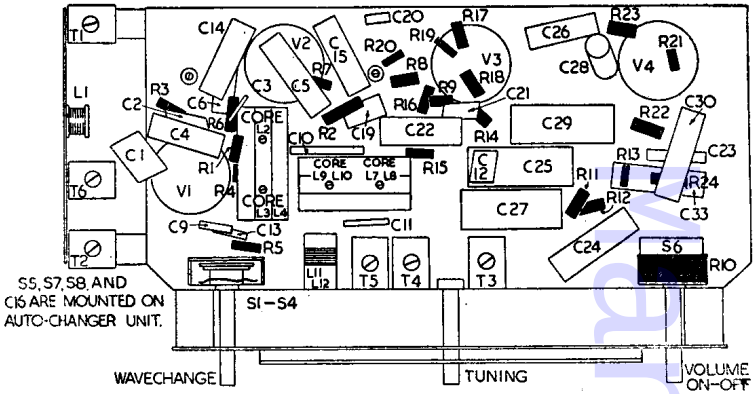
MASTERADIO RG250

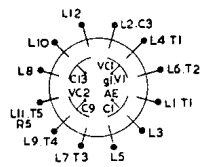


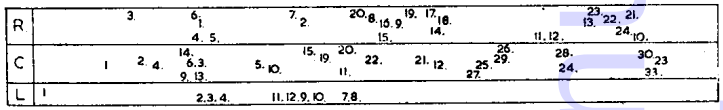
Radiogram consisting of a five-valve three-waveband superhet and a Collaro model RC500 automatic record changer fitted with high-fidelity moving-iron pickup with permanent sapphire stylus. Sockets are provided for aerial, earth, and a low-impedance extension speaker. Suitable for 200-250V 40-100c/s AC supplies. Housed in highly polished walnut veneered cabinet. Made by Masteradio, Ltd., Fitzroy Place, London, NW1.





WAVECHANGE SWITCH
(VIEWED REAR OF INVERTED CHASSIS.)





RESISTORS

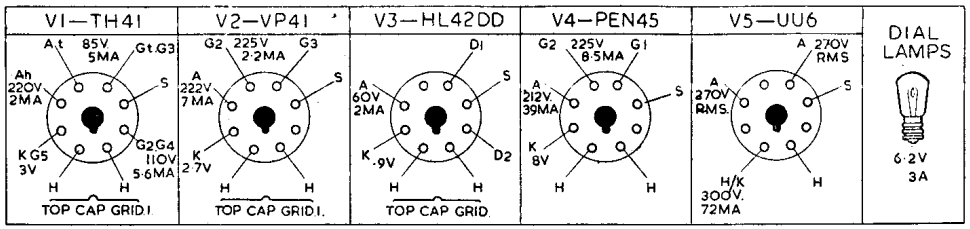
R	Ohms		Watts
1	22K	...	¼
2	22K	...	¼
3	220	...	¼
4	47K	...	¼
5	68	...	¼
6	25K	...	¼
7	220	...	¼
8	47K	...	¼
9	470K	...	¼
10	2M Pour. with SP Sw		
11	1K	...	¼
12	220K	...	¼
13	1M	...	¼
14	470	...	¼
15	27K	...	¼
16	47K	...	¼
17	470K	...	¼
18	470K	...	¼
19, 20	1M	...	¼
21	470K	...	¼
22	180	...	¼
23	10K	...	¼
24	3.3K	...	¼
25	1K	WW	6

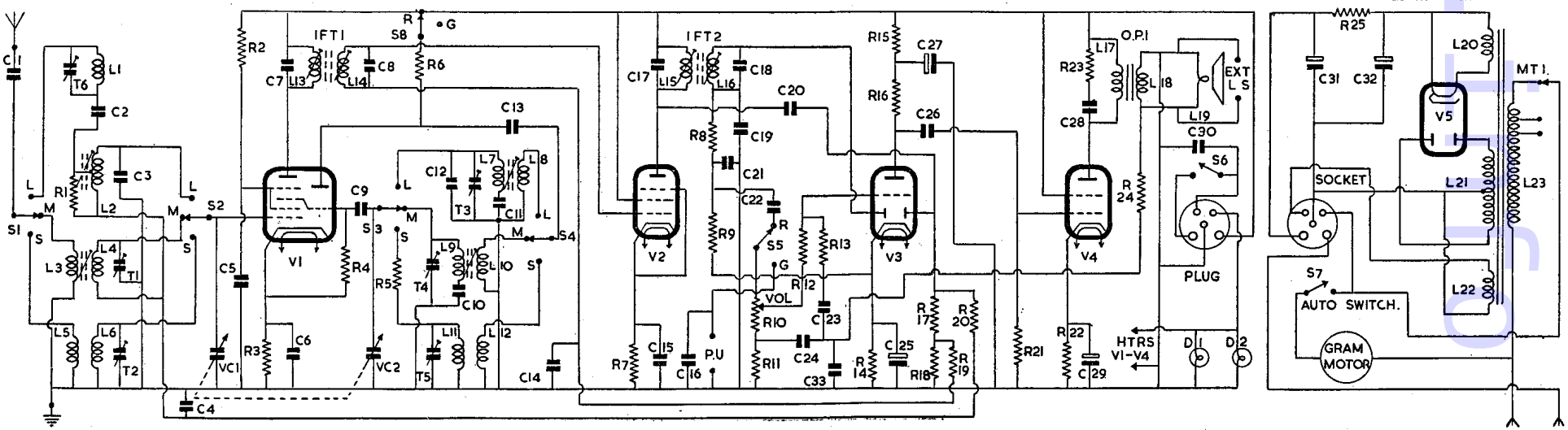
CAPACITORS

C	Capacity	Type
1	100 pF	Mica
2	150 pF	Silver Mica
3	100pF	Silver Mica
4	.05	Tubular 350V
5	.1	Tubular 350V
6	.05	Tubular 350V
7	150pF	Silver Mica
8	150pF	Silver Mica
9	100pF	Tubular Ceramic
10	600pF	Silver Mica
11	150pF	Silver Mica
12	100pF	Silver Mica
13	100pF	Tubular Ceramic
14	.05	Tubular 350V
15	.05	Tubular 350V
16	.001	Tubular 500V
17	150pF	Silver Mica
18	150pF	Silver Mica
19	150pF	Silver Mica
20	25pF	Tubular Ceramic
21	150pF	Silver Mica
22	.05	Tubular 350V
23	300pF	Moulded Mica
24	.1	Tubular 350V
25		Electrolytic 25V
26	.05	Tubular 350V
27	4	Electrolytic 350V
28	.01	Tubular 500V
29	25	Electrolytic 25V
30	.05	Tubular 350VAC
31	32	Electrolytic 275V
32	32	Electrolytic 275V
33	.1	Tubular 350V

INDUCTORS

L	Ohms
1	23
2	16 Tapped 2
3	2
4	3
5	.2
6, 12, 20, 22	Very low
7	6
8	1.5
9	1.5
10	.9
11	.25
13	12
14	12
15, 16	9
17	270
18	.5
19	2
21	450
23	25 Total





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MASTERADIO RG250

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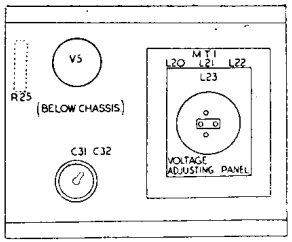

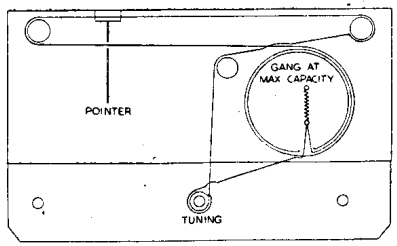

AERIAL signal is fed through C1 to S1 and thence switched on LW band, through whistle filter L1, T6, and capacitor C2 to tapping near to bottom end of LW grid tuned coil L2. On MW and SW bands aerial signal is switched by S1 direct to coupling coils L3, L5.

Oscillator is connected in a tuned-grid shunt-fed circuit. Anode load R6 is switched to HT line by S8. S8 is ganged to the separate radiogram switch mounted on the auto-changer platform, and when switched to the gram position removes the HT from anode of oscillator to prevent radio break-through.

IF amplifier operates at 465kc/s.

AF amplifier.—C22 feeds rectified signal appearing across diode load R9 to S5 which, in its radio position, passes signal to the volume control R10, and thence through stopper resistor R12 to grid of triode section of V3.

Pickup.—The signal from the high-fidelity moving-iron pickup, which is shunted by C16, is switched by S5 in its gram position to volume control R10 and thence through stopper resistor R12 to grid of triode AF amplifier section of V3.

Output stage.—C26 feeds signal to gl of pentode output valve V4. R23, C28 gives tone correction. Secondary L18 of OP1 feeds signal to an 8in. PM speaker L19. Sockets are fitted on L18 for connection of a low-impedance type extension speaker

Negative feedback.—Feedback from secondary L18 of OP1 is applied by R24, C24, C33, to R11 in bottom end of volume control circuit and by C23, R13 to grid of triode section of V3. The network is designed to provide a selective feedback so that on decrease of volume by means of adjustment of R10 a degree of bass lift is introduced to compensate for apparent bass attenuation due to lower sound volume level.

HT is provided by an indirectly heated full-wave rectifier V5. Ripple current in C32 is 110 mA approx.

Automatic record changer is a Collaro RC500, designed to play nine 10in. or nine 12in. records unmixed. It is supplied fitted with a lightweight pickup with sapphire stylus. The stylus, when used on new records or records which have not previously been played with steel needles will have a life of approximately 2,000 playings.

Replacement of sapphire.—Raise pickup tone arm and carefully remove leads from plug pins on paxolin slide-in panel just behind pickup head. Remove large screw in centre of base plate of head. Pickup head is now free to be lifted out of tone arm. Complete head assembly should be returned to Collaro, Ltd., for replacement of stylus.

Maintenance and servicing of auto-changer mechanism.—For full instructions regarding this, reference should be made to the appropriate Collaro booklet.

Removal of radio from cabinet.—Remove rear panel of cabinet and the three control knobs from front. Unsolder screened lead from tags on pick-up bracket underneath auto-changer assembly.

Unsolder lead from receiver chassis to Ext. LS panel at right-hand side of rear cabinet. Unsolder leads of auto-changer motor from tag strip mounted on receiver chassis shelf and unscrew tag strip.

Undo hexagonal nut securing Radiogram switch to auto-changer platform and remove switch with connecting leads from the platform. Unsolder aerial and earth. Unplug receiver power lead from power chassis on floor of cabinet.

Remove the four self-tapping screws securing receiver chassis to shelf and also the four bolts holding power unit to floor of cabinet.

Removal of auto-changer.—If receiver and power chassis have been removed proceed as follows: Place protecting clip over sapphire stylus. Remove screws holding lid stay to side of cabinet and in some way support lid to prevent it opening beyond the vertical position. Then remove the four wood screws one at each corner of auto-changer platform. Lifting rear edge of platform first carefully withdraw auto-changer from top of cabinet.

Removal of auto-changer only.—Remove radiogram switch from platform, unsolder lead to pick-up bracket under platform and also motor leads from tag strip on receiver shelf. Then proceed as described above.

TRIMMING INSTRUCTIONS

Apply signal as stated below	Tune receiver to	Trim for max. output
(1) 465kc/s to g1 of V1 via .01mF	—	Cores of L16, L15, L14, L13
(2) 350kc/s to AE socket via dummy aerial	Set Gang to min. capacity	T3
(3) 150 kc/s as above ...	Set Gang to max. capacity	Core L7
(4) 215 kc/s as above ...	1395 metres	Core L2
(5) 1.525 mc/s as above	Set Gang to min. capacity	T4
(6) 530 kc/s as above ...	Set Gang to max. capacity	Core L9
(7) 1.3 mc/s as above ...	230.8 metres	T1
(8) 600 kc/s as above ...	500 metres	Core L4
(9) 19.5 mc/s as above...	Set Gang to min. capacity	T5
(10) 5.8 mc/s as above...	Set Gang to max. capacity	Check to see if signal is obtained
(11) 16 mc/s as above ...	18.75 metres	T2
(12) 877 kc/s as above...	Light program. LW	T6 for minimum

CLIFTON COOKER—

from page 40

cleats. Wiring diagram is shown in Fig. 7.

Removal of plates and grill.—Remove splashplate and undo the two hob fastening screws which are accessible through opened hotcupboard door. Raise hob and place stay in position. Lift out plates and grill-boiler, keeping them level.

Removal of undercarriage.—Undo and remove the two screws (Fig. 2) on inside of top of main front frame. Lift out the two sections which form grill deflector plate runners. Rear section consisting of two long angle irons with underslung cross members can then be lifted out.

Removal of side oven elements.—Withdraw all oven fittings. Remove oven side plates (Fig. 4) by raising lower edge inwards and upwards sufficiently to allow them to be lifted off side support rails. Grasp each heater element firmly and withdraw it by pulling it towards front of cooker.

Elements can be dismantled for renewal of spiral by removing the single screw adjacent to centre plug pin and withdrawing the ceramic supports, etc., from the housing.

Removal of bottom element.—Remove right-hand side panel of cooker by undoing the two screws at rear. The bottom element is situated at bottom front corner of the oven side panel. Undo screws securing wires to the element terminals and undo screw fixing element to bottom panel.

Renewal of pilot lamp.—Pull off oven thermostat control knob. Withdraw lamp holder from clips by pulling base of holder outwards. Renew bulb with 3.5V .3A MES type. Replace holder by inserting wedge or toe on side of holder under catch and pressing inwards.

Access to wiring.—Remove lower right-hand side panel and rear panel. Side panel is held by three screws along rear flange. The rear panel is held by two screws at top and by the two inner screws on right-hand side (viewed from rear). Normally these are the only two panels that require to be removed for thermostat adjustment or switch repairs. If access is required to hot-plate or grill-boiler sockets undo nuts fastening socket plates to top flange of hot cupboard chamber. Carefully withdraw plate as far as wiring will permit.

Removal of thermostat.—Remove lower right-hand side panel. Undo screws on coupler between control knob spindle and thermostat and remove coupler. Remove the two wires connected to thermostat and loosen grub-screws holding thermostat head to seating flange. Open hotcupboard door and remove the two screws on inside of flange of top right-hand side panel and also the two screws on rear flange. Raise hob and lift top-side panel at an angle. Withdraw carefully tube and thermostat from oven. After replacing thermostat, set control knob and thermostat to 300-degree calibration before tightening screws on coupler.

General adjustments.—Hotplates and grill are positioned on height adjusting screws. Hotplates can be adjusted whilst in position from below but in the case of the grill screws are only accessible on removal of grill. Plates should be adjusted to be $\frac{1}{16}$ inch approx. above hob surface. Before closing hob, check that locking nuts are tight.

Oven side plates are each provided with two screws which should be adjusted so that side plates remain parallel to walls of oven.

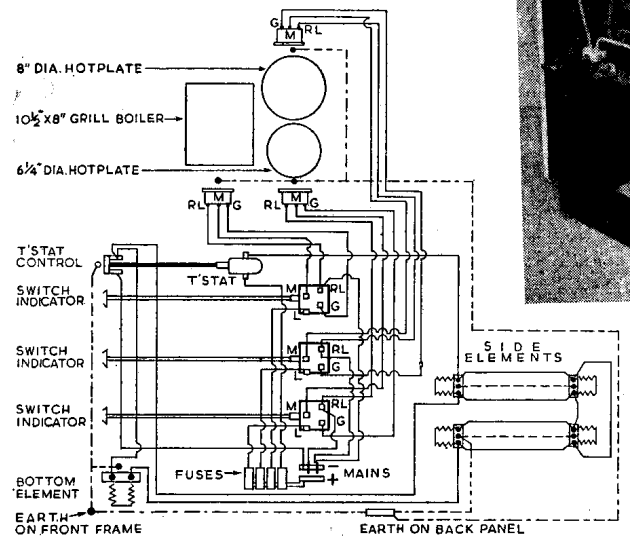

Fig. 7—The wiring diagram of the Clifton model DC3 cooker for AC supplies

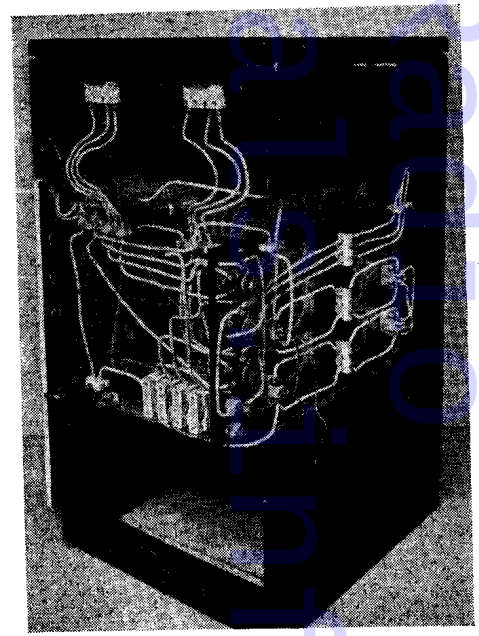

Fig. 6—With back and side panels removed, all wiring, switches and fuses are completely accessible and the general construction of the cooker can be seen