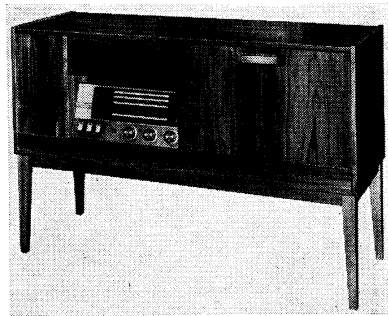


**E
R
T**
SERVICE CHART 1646



**ALBA 9907
RADIO- 3002
GRAMS 9008**

Additional copies of this chart price 1s. 6d. post free. Payment with order please to ERT, 40 Bowling Green Lane, London EC1

Model 9008 mono version with long, medium, bandspread and VHF wavebands in teak finished cabinet.

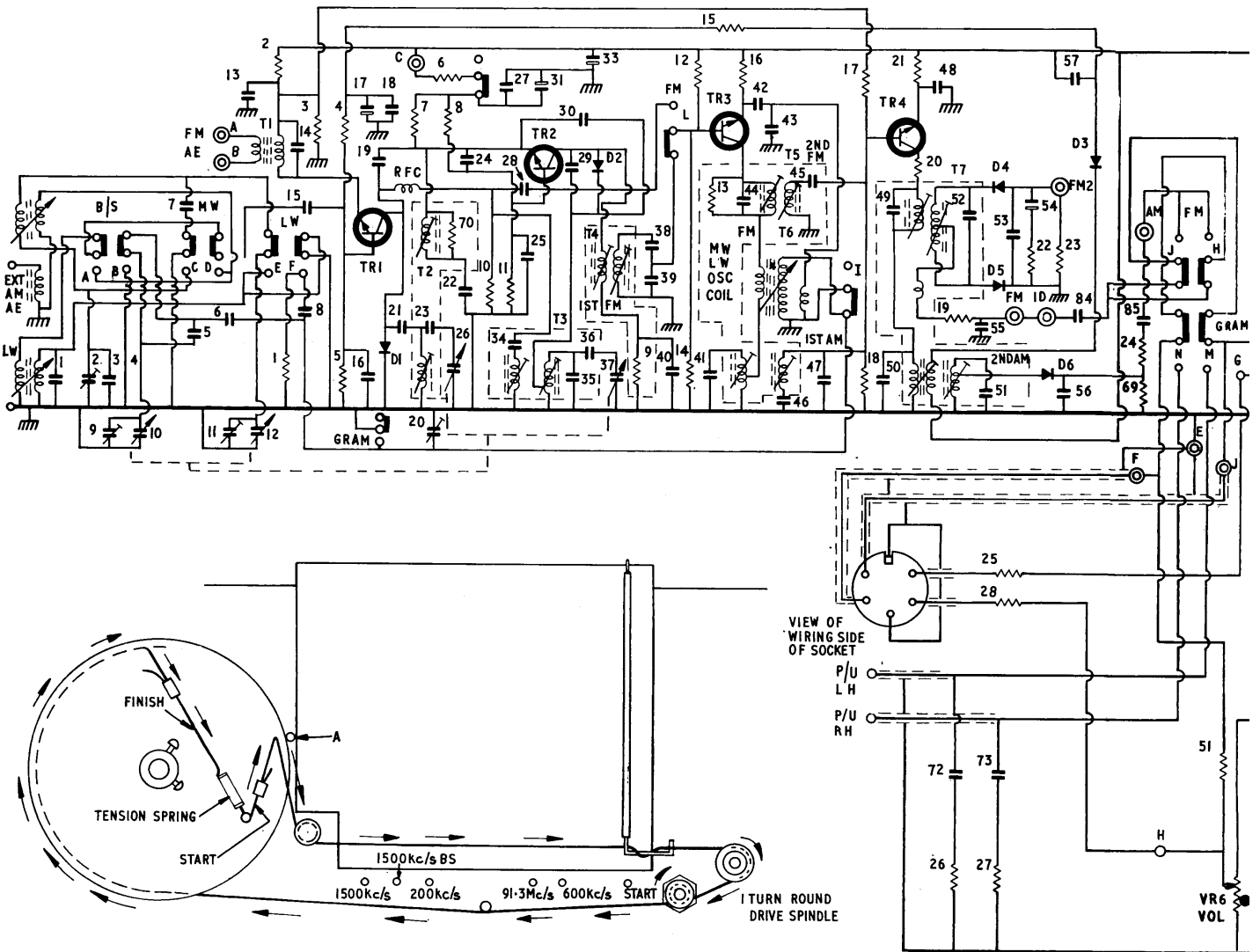
MONO and stereo radiograms with four wavebands and four-speed auto-changer, using 14 transistors in stereo versions.

Mains. 200-250V AC 50c/s.
Consumption. 50W.

Transistors. TR1 BF115, TR2 BF115, TR3 BF115, TR4 BF115, TR5 BC108,

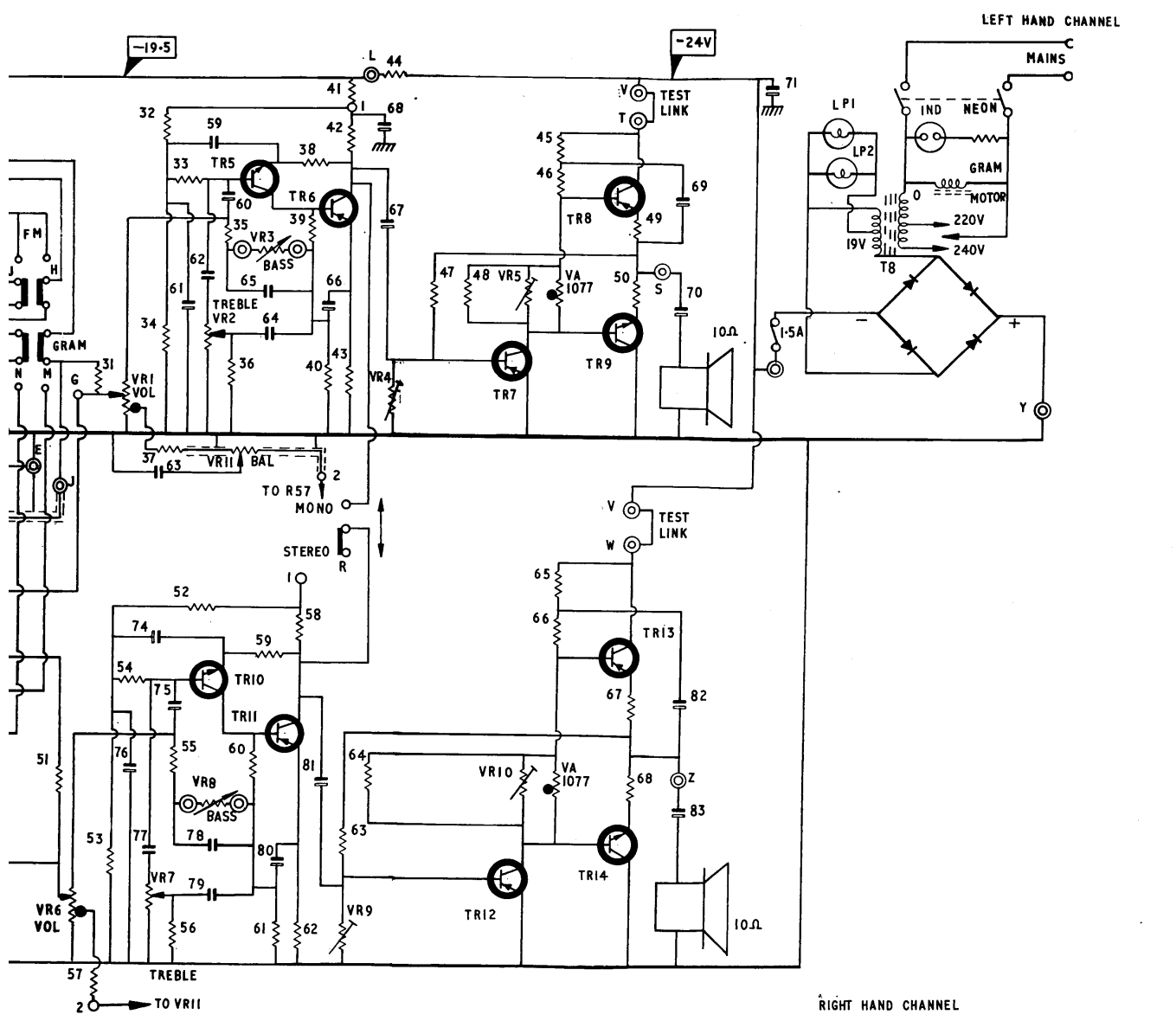
TR6 OC75, TR7 AC128, TR8 AD162, TR9 AD161, TR10 BC108, TR11 OC75, TR12 AC128, TR13 AD162, TR14 AD161.
Continued overleaf

R	2 3 4 5			7 6 8 70			10 11			9 12 14 15 16			17 18			21 20 19 26 27 22			23 25 28			24 69 57 51			VR								
C	1	2	3	9	10	7	5	11	6	13	12	14	18	19	17	16	18	21	20	19	26	27	22	23	25	28	24	69	57	51	VR		
L	T1																																

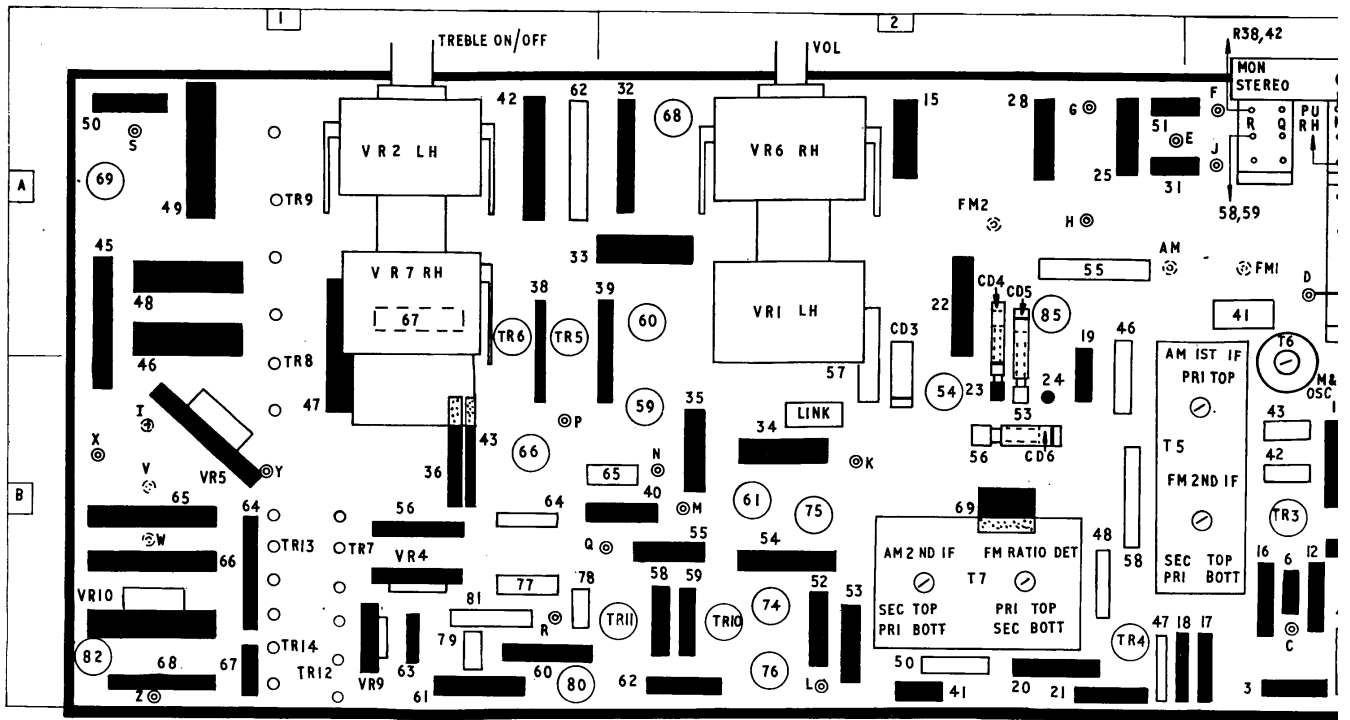


RESISTORS						CAPACITORS									
R1	100K	A3	R33	56K	A2	R64	47	B1	C23	47pF	T2	C55	330pF	A2	
R2	390	B3	R34	3K3	B2	R65	120	B1	C24	39pF	B3	C56	470pF	B2	
R3	33K	B3	R35	33K	B1	R66	270	B1	C25	1K	B3	C57	470pF	A2	
R4	8K2	A3	R36	1K	D3	R67	1	B1	C26	15pF	C4	C58	—	B2	
R5	100K	A3	R37	680	A1	R68	1	B1	C27	1KpF	B3	C59	125mF	B2	
R6	2K2	B3	R38	2K2	A1	R69	100K	B2	C28	100KpF	A3	C60	16mF	A2	
R7	680	B3	R39	2K2	A2	R70	820	—	C29	68pF	B3	C61	125mF	B2	
R8	2K7	B3	R40	68	—	—	—	—	C30	2.2pF	B3	C62	20KpF	A1	
R9	150	—	R41	680	B2	—	—	—	C31	100mF	B3	C63	220KpF	—	
R10	150	B3	R42	1K5	A1	C1	120pF	C3	C33	1200mF	C2	C64	50KpF	B1	
R11	10K	B3	R43	330	B1	C2	3-53pF	C4	C34	390pF	T3	C65	10KpF	B2	
R12	10K	B3	R44	150	D3	C3	30pF	C4	C35	8.2pF	T3	C66	125mF	B1	
R13	4K7	—	R45	120	A1	C4	61pF	A3	C36	47pF	D4	C67	16mF	A1	
R14	33K	B3	R46	270	A1	C5	50pF	A3	C37	15pF	B3	C68	200mF	A2	
R15	8K2	A2	R47	18K	A1	C6	410pF	A3	C38	220pF	B3	C69	40mF	A1	
R16	1K	B3	R48	47	A1	C7	80pF	A3	C39	1KpF	B3	C70	400mF	—	
R17	8K2	B3	R49	1	A1	C8	350pF	A3	C40	10KpF	B3	C71	5000mF	C3	
R18	100K	B2	R50	1	A2	C9	30pF	D4	C41	390pF	A3	C72	4K7pF	D3	
R19	68	B2	R51	100K	A2	C10	392pF	D4	C42	20KpF	B3	C73	4K7pF	D3	
R20	150	B2	R52	12K	B2	C11	30pF	C4	C43	1KpF	B3	C74	125mF	B2	
R21	470	B2	R53	3K3	B2	C12	392pF	C4	C44	350pF	T5	C75	16mF	B2	
R22	1K8	A2	R54	56K	B2	C13	100KpF	B3	C45	680pF	B2	C76	125mF	B2	
R23	22K	B2	R55	33K	B2	C14	30pF	B3	C46	200pF	B2	C77	20KpF	B1	
R24	47K	B2	R56	1K	B1	C15	100KpF	A3	C47	3K9pF	B2	C78	10KpF	B1	
R25	680K	A2	R57	680	D3	C16	1K	B3	C48	100KpF	B2	C79	50KpF	B1	
R26	12K	D3	R58	1K5	B2	C17	10mF	A3	C49	120pF	T7	C80	125mF	B1	
R27	12K	D3	R59	2K2	B2	C18	1KpF	A3	C50	800pF	B2	C81	16mF	B1	
R28	680K	A2	R60	2K2	B1	C19	4.7pF	B3	C51	390pF	T7	C82	40mF	B1	
R31	100K	A2	R61	68	B1	C20	1-8pF	B3	C52	47pF	T7	C83	400mF	B1	
R32	12K	A2	R62	330	B2	C21	100pF	B3	C53	330pF	B2	C84	10KpF	B1	
		A2	R63	18K	B1	C22	150pF	B3	C54	10mF	B2	C85	3KpF	A2	

59 57 51 VR6 31 54 32 VR1 33 37 34 35 VR11 VR3 VR2 36 38 39 41 42 44 VR4 64 VR9 VR10 45 VA10 77
 53 55 56 52 59 60 61 62 63 64 40 43 47 48 VR5 46 65 66 49 50 67 68
 76 77 63 74 75 78 79 61 59 62 64 80 60 65 81 66 68 69 70 82 71 83



RIGHT HAND CHANNEL



Wavebands. MW 185-580m (1620-515kc/s), LW 1090-1975m (275-152kc/s), BS 190-215m (1580-1395kc/s), VHF 86-108mc/s.

IFs. AM 470kc/s, FM 10.7mc/s.

Aerials. Internal ferrite rod for AM bands. Sockets for external AM and FM aerials.

Pilot lamps. Two 6.3V 0.3A scale lights, mains indicator neon.

Outlet. DIN 5-pin socket for tape recorder.

Fuse. 1.5A.

Output. 10W and 3W stereo, 1½W mono. See Service Notes.

Speakers. 8 x 5in. elliptic.

Record unit. BSR UA25 automatic changer.

Speeds. 16, 33, 45 and 78rpm.

Dimensions. 42 x 14½ x 25½in. high.

Manufacturer. Alba (Radio & Television) Ltd.

Service Department. Alba (Radio & Television) Ltd., Tabernacle Street, London EC2. Tel: 01-253 1322.

ALIGNMENT

Equipment required. AM/FM signal generator covering IFs, MW LW and VHF, output meter, 100KpF capacitor, 220ohm and 470ohm resistors, polystyrene cement and trimming tools.

AM IF. Switch to MW and fully close tuning gang. Inject 470kc/s 30 per cent modulated signal into TR1 base via C15. Adjust 1st and 2nd AM IFT's top and bottom cores for maximum output. Restrict output to 25mW with volume control at maximum throughout. Adjust T3 top core for minimum output.

FM IF. Switch to FM. Using 10V range of meter, connect negative lead to tag FM2 and positive lead to chassis. Inject unmodulated 10.7mc/s signal via 100KpF capacitor and 220ohm resistor in series to TR2 emitter. Adjust input level to keep output at about 3V and peak all FM IFT's for maximum output. Adjust T2 top core for minimum output. Adjust FM ratio detector secondary

(bottom core T7) to make voltage on FM1 tag half that on FM2 tag. Check that voltage between tags E and FM1 equals that between FM1 and FM2.

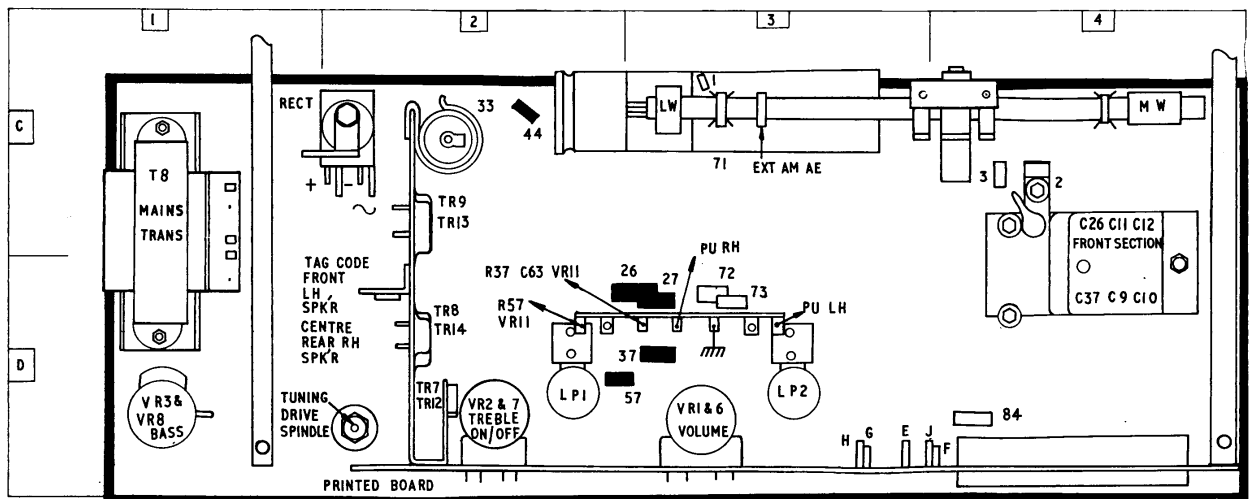
AM RF. Fully close tuning gang and check that pointer lines up with start hole on chassis. Switch set to MW and set pointer to 600kc/s hole. Set signal generator to 600c/s and connect to AM aerial socket via 470ohm resistor.

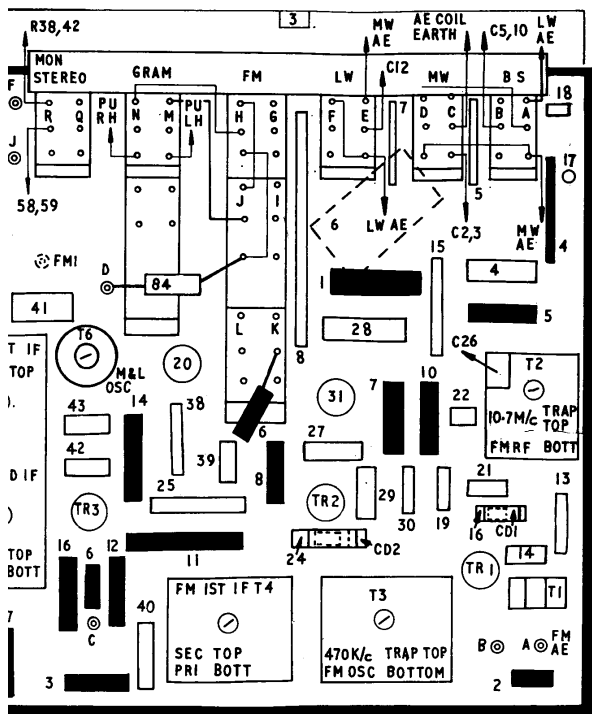
Adjust T6 core and position of MW coil on ferrite aerial for maximum output. Reseal coil in new position.

Switch set to BS and set pointer to 1500kc/s BS. Inject 1500kc/s signal and adjust trimmers C20 and C2 to obtain maximum output.

Switch set to MW and set pointer to 1500kc/s MW. Adjust gang trimmers C9 and C11 for maximum. Repeat adjustments at 600kc/s and 1500kc/s until no further improvement is obtained.

Switch to LW. Tune in Radio 2 at 200kc/s and adjust position of LW coil on ferrite aerial for maximum output.





Reseal position of coil on rod.
FM RF. Switch set to FM and set pointer to 91.3mc/s. Inject 91.3mc/s into FM aerial socket and adjust T3 and T2 bottom cores to obtain maximum output.

AUDIO ADJUSTMENT

Adjust VR4 and VR9 to give half the rail voltage at tags S and Z. Check from tag to rail and tag to chassis for equal voltages. Apply 1kc/s audio signal to volume control to give about 1V rms measured with oscilloscope across speaker output. Adjust VR5 and VR10 to just eliminate kink on centre of sine wave.

SERVICE NOTES

Three versions of the basic chassis are incorporated in models 9008 (mono), 3002 (stereo 3W output) and 9907 (stereo 10W output).

The diagrams shown relate to model 9907 and circuit differences are detailed here.

For model 3002 R50 and R68 are 2.2ohm, R49 and R67 are 2.2ohm, R45 and R65 are 180ohm, R46 and R66 are 470ohm, TR8 is AC128, TR9 is AC176, TR13 is AC128, TR14 is AC176, R48 and R64 are omitted, VR3 and VR8 are 220K fixed, C71 is 3000mF, speakers are 15ohm, neon indicator lamp omitted, mono and stereo switch becomes bass button.

For model 9008 further differences are: LH channel and balance control VR11 omitted, R41 is 1.5K, volume control tap goes to chassis via 2.7K resistor and 100KpF capacitor in series.

On some later models R36 and R56 are moved to replace C64 and C79 which are omitted, C62 and C77 are 5KpF.

Note. Voltages shown in transistor voltage table were taken with 240V input and no-signal condition on AM, unless stated otherwise, using AVO 8 meter.

TRANSISTOR VOLTAGES

No.	Type	Function	E	B	C
TR1	BF115	RF amplifier	1.75	2.3	19.5
TR2	BF115	FM mixer	9.6/19.7	10/19.7	20
TR3	BF115	FM IF amplifier/AM mixer	3.75	4.3	20
TR4	BF115	IF amplifier	2.15	2.7	19.8
TR5	BC108	AF amplifier LH channel	16.4	17.25*	18.5
TR10	BC108	AF amplifier RH channel	16.4	17.25**	18.5

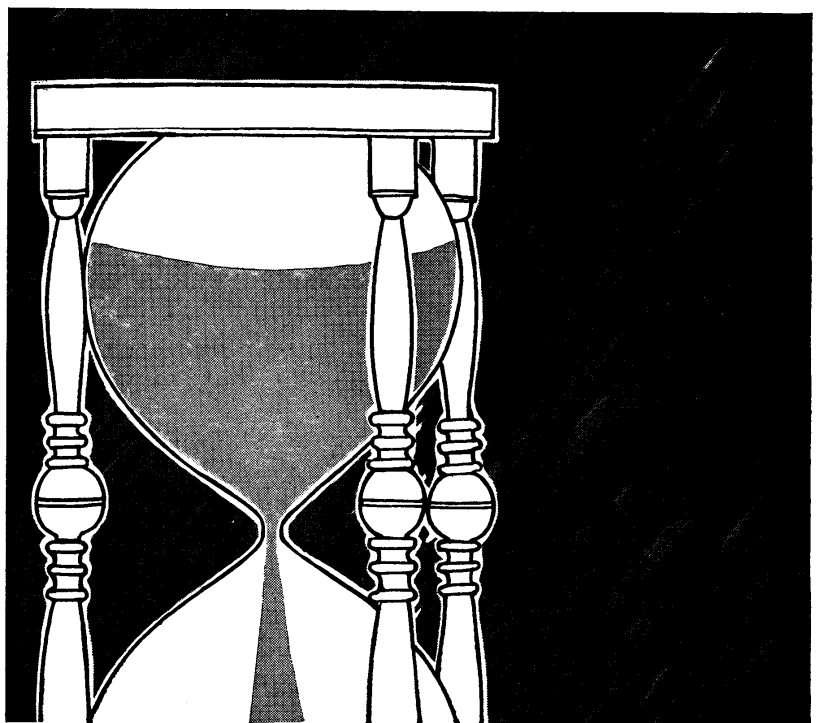
above voltages positive with respect to negative supply rail, following voltages negative with respect to chassis :

TR6	OC75	AF amplifier LH channel	1.4	1.5	5.0
TR7	AC128	driver LH channel	—	—	11.7
TR8	AD162	output LH channel	12	12.2	24
TR9	AD161	output LH channel	12	11.8	—
TR11	OC75	AF amplifier RH channel	1.4	1.5	5.0
TR12	AC128	driver RH channel	—	—	11.7
TR13	AD162	output RH channel	12	12.2	24
TR14	AD161	output RH channel	12	11.8	—

*measured at junction R32/R33.

**measured at junction R52/R54.

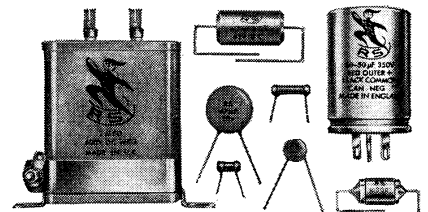
Where two figures are quoted the first is on FM the second on AM.



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