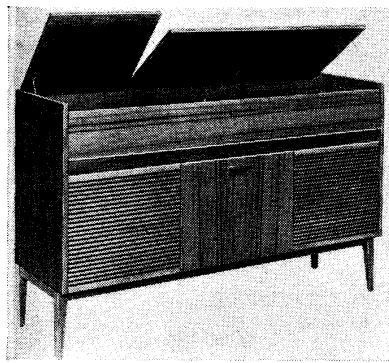


# E R T

## SERVICE CHART 1614



# DECCA 717 STEREOGRAM

**Rectifier.** Westinghouse LT123 HT rectifier.

**IFs.** AM 472kc/s, FM 10.7mc/s.

**Pilot lamps.** Two 12V 0.1A.

**Speakers.** Two 8in., 20ohms.

**Output.** 3W per channel.

**Aerials.** Internal aerials for MW, LW and VHF. Sockets for external aerials.

**Record unit.** Decca autochanger D590500.

**Cartridge.** Sonotone 19T.

**Styli.** 78 19T sapphire (coded blue), LP 19T diamond (coded green).

**Sockets.** Tape record, tape playback, mains outlet, FM aerial, AM aerial.

**Manufacturer.** Decca Radio and Television.

**Service department.** Ingate place, Queenstown Road, London SW8. Tel.: Macauley 6677.

### SERVICE NOTES

**Pickup height.** Arm should be set to clear a stack of ten records by ad-

**SOLID-STATE** stereogram covering long and medium waves and FM/VHF. It has push-button wavechange and mono/stereo selection and dual-concentric volume controls for channel balance.

**Mains.** 200-250V 50c/s.

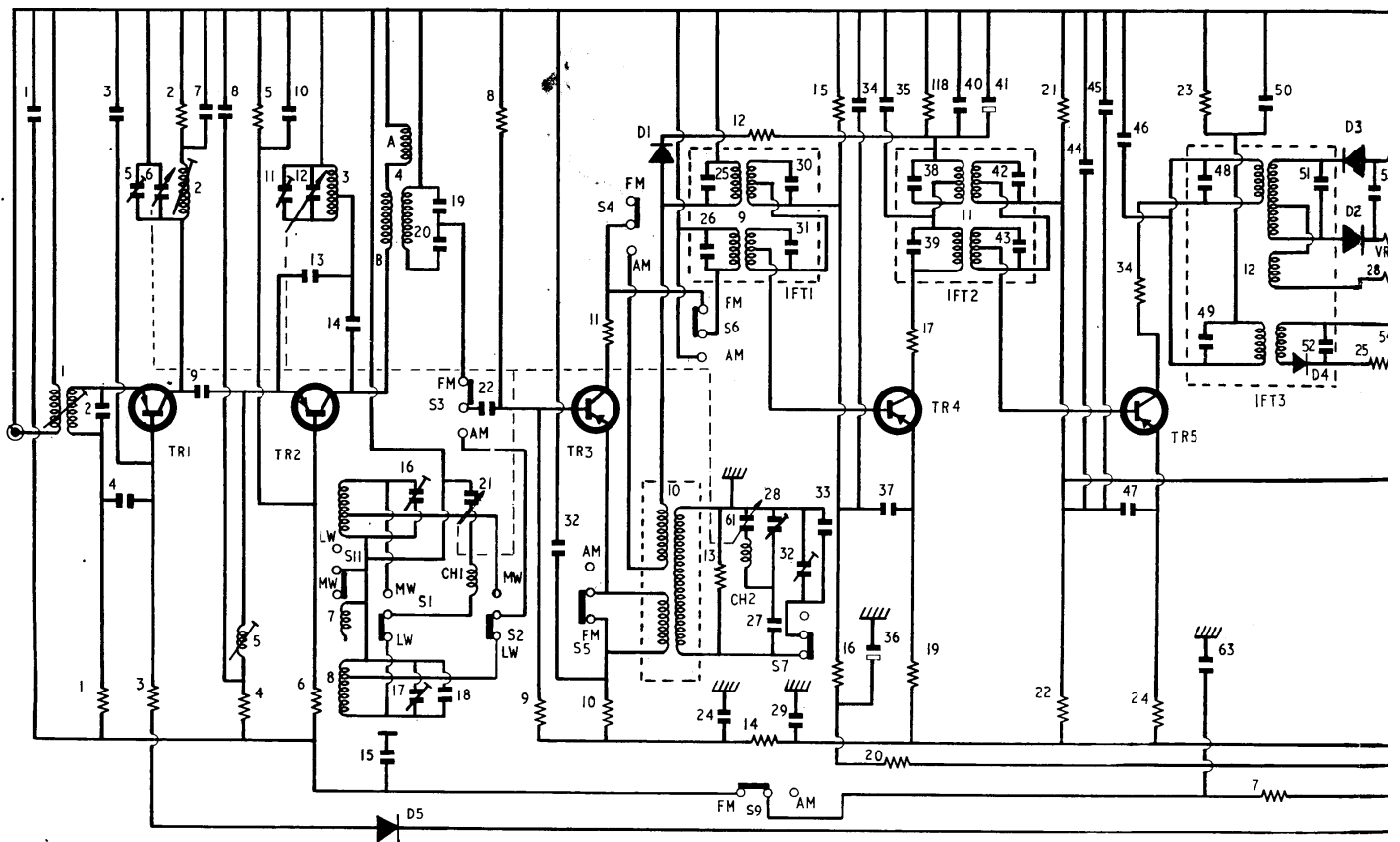
**Wavebands.** MW 187.3-571m. (1600-526kc/s), LW 1150-2006m. (261-150kc/s), VHF 87.5-101mc/s.

**Transistors.** TR1 AF180 FM RF am-

plifier, TR2 AF115 FM osc. and mixer, TR3 AF114 AM mixer and FM IF amplifier, TR4 AF114 IF amplifier, TR5 AF114 IF amplifier, TR6/TR7 AC156 preamplifiers, TR8/TR9 AC165 pre-drivers, TR10/TR13 AC166 drivers, TR11/TR12 AC168 drivers, TR14/TR15/TR16/TR17 AC177 outputs.

**Diodes.** D1 OA79 AM overload clamp, D2/D3 OA79 FM ratio detectors, D4 OA70 AM detector, D5 SFD107DC blocking diode, D6/D7/D8/D9 AA120 bias compensating diodes.

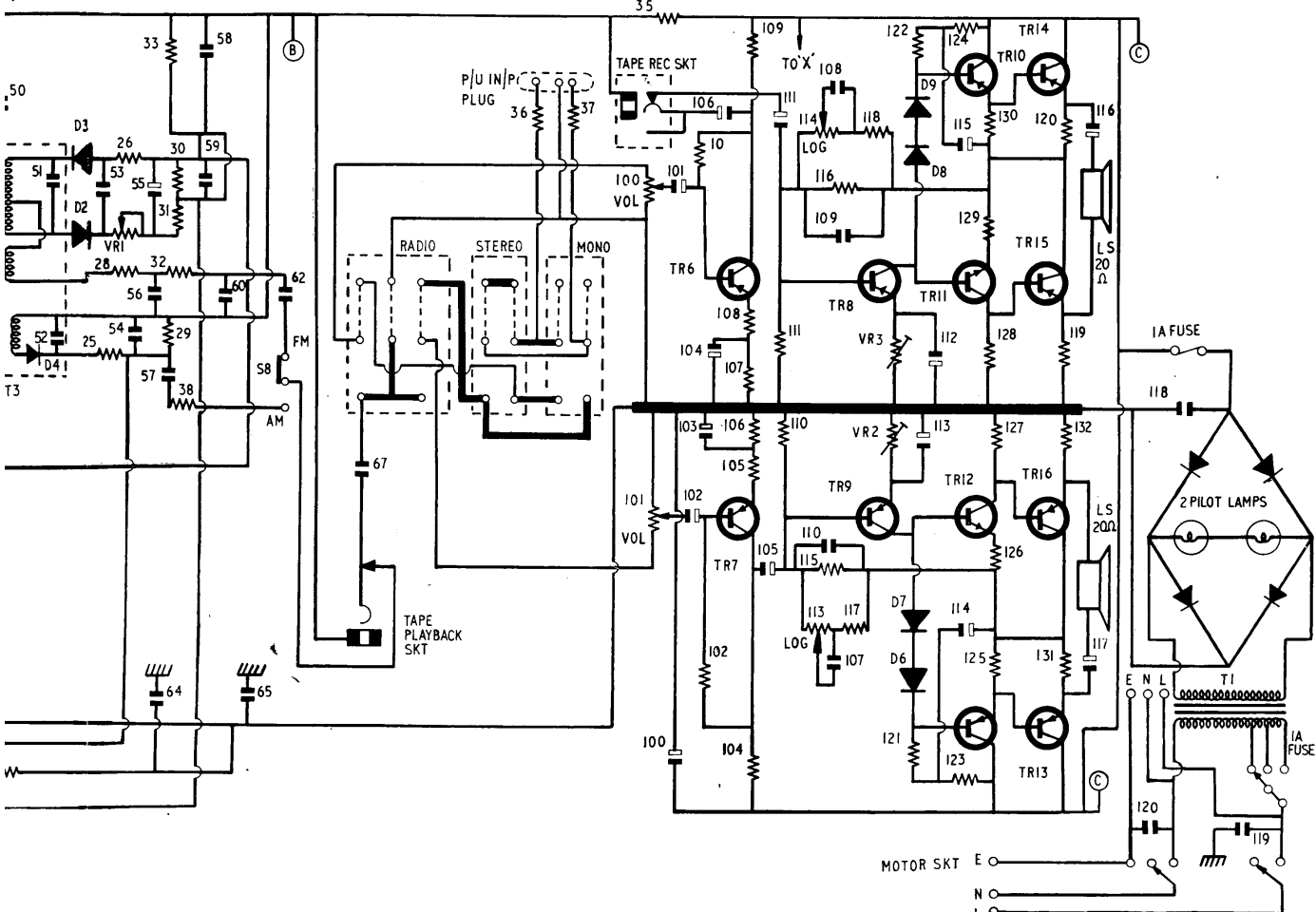
R	1	3	2	4	5	6	8	9	10	11	13	12	14	15	16	20	17	19	18	21	22	32	24	25	26	61	27	28	29	30	31	32	33	36	34	35	38	39	40	41	42	43	44	45	46	47	48	49	63	50	51	52	53	25	21	7	25	21
C	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	32	24	25	26	61	27	28	29	30	31	32	33	36	34	35	38	39	40	41	42	43	44	45	46	47	48	49	63	50	51	52	53				
L	1	2	5	3	7	8	4	CHI	10	9	CH2	11	12	14	15	16	17	19	18	20	21	22	32	24	25	26	61	27	28	29	30	31	32	33	36	34	35	38	39	40	41	42	43	44	45	46	47	48	49	63	50	51	52	53				



RESISTORS		POTENTIOMETERS		CAPACITORS		Gang			
R1	330	R105	5.6	C1	C6	238pF	C47	220KpF	D3
R2	100	R106	18	C2	C7	1KpF	C48	300pF	in IFT3
R3	1K	R107	18	C3	C8	560pF	C49	250pF	D3
R4	3K3	R108	5.6	C4	C9	5.6pF	C50	100KpF	D3
R5	10K	R109	2K2	C5	C10	1KpF	C51	50pF	in IFT3
R6	10K	R110	4K7	D1	C11	2.25pF	C52	10KpF	in IFT3
R7	47	R111	4K7	D2	C12	2.35pF	C53	1KpF	D3
R8	33K	R112	820	D2	C13	8.2pF	C54	20KpF	D3
R9	6K8	R115	220K	D2	C14	68pF	C55	10mF	D3
R10	1K	R116	220K	D2	C15	100KpF	C56	1KpF	D3
R11	220	R117	10K	C1	C16	3-30pF	C57	220KpF	D3
R12	680	R118	10K	C1	C17	3-30pF	C58	47KpF	D3
R13	330K	R119	3.3	D2	C18	35pF	C59	1KpF	D3
R14	2K2	R120	3.3	D2	C19	1KpF	C60	22KpF	C3
R15	56K	R121	6K8	D2	C20	3KpF	C61	238pF	Gang C3
R16	3K3	R122	6K8	D2	C21	238pF	C62	220KpF	C3
R17	330	R123	2K2	D2	C22	10KpF	C63	100KpF	C3
R18	1K5	R124	2K2	D2	C23	20KpF	C64	100KpF	C3
R19	470	R125	150	D2	C24	100KpF	C65	500mF	D3
R20	3K3	R126	56	D2	C25	560pF	C67	500KpF	in IFT1
R21	10K	R127	150	D1	C26	180pF	C100	650mF	in IFT1
R22	2K2	R128	150	D2	C27	190pF	C101	10mF	C3
R23	47	R129	56	D2	C28	3-30pF	C102	10mF	C3
R24	470	R130	150	D2	C29	100KpF	C103	100mF	D4
R25	390	R131	3.3	D2	C30	560pF	C104	100mF	in IFT1
R26	680	R132	3.3	D1	C31	3-30pF	C105	10mF	in IFT1
R28	82	<b>POTENTIOMETERS</b>			C32	3-30pF	C106	25mF	C3
R29	6K8	R100	25K log	C3	C33	180pF	C107	1K5pF	C1
R30	6K8	R101	25K log	C2	C34	100KpF	C108	1K5pF	C1
R31	22K	R113	250K log	C3	C35	1K5pF	C109	85pF	D2
R32	1K	R114	250K log	C2	C36	10mF	C110	85pF	D2
R33	2M2	VR1	5K lin	D3	C37	100KpF	C111	25mF	C2
R34	220	VR2	2K lin	D1	C38	300pF	C112	100mF	D3
R35	820	VR3	2K lin	D3	C39	180pF	C113	100mF	D1
R36	1M5	<b>CAPACITORS</b>			C40	1KpF	C114	30mF	D2
R37	1M5	C1	10KpF	B1	C41	2mF	C115	30mF	D2
R38	47K	C2	47pF	B1	C42	300pF	C116	500mF	D2
R102	220K	C3	1KpF	B2	C43	180pF	C117	5000mF	D2
R103	220K	C4	1KpF	B2	C44	100KpF	C118	300mF	C1
R104	2K2	C5	2-2.5pF	B2	C45	100KpF	C119	1K8pF	C1
					C46	1KpF	C120	1K8pF	C1

25	28	VRI	26	29	30	31	36	37	100	35	103	104	105	108	110	114	116	118	122	121	130	126	125	120	132	
50	51	52	53	54	55	56	57	58	59	60	62	67	100	101	102	106	107	109	111	115	113	117	VR3	VR2	124	128

T1



Electrical and Radio Trading, October 12, 1967

justing screw under pickup arm near pivot end. Anticlockwise movement increases height, clockwise decreases.

**Stylus pressure.** Correct stylus pressure is set at the factory and normally should not require altering. Increased pressure is obtained by turning adjustment screw (under pivot end of pickup arm) anticlockwise and lower pressure by turning clockwise. Adjustment should be carried out only with an efficient stylus pressure gauge.

**Setdown position.** Adjustment is provided to ensure pickup arm sets down correctly on run-in groove of record. Adjusting screw is accessible through hole in unit plate when the arm is moved inwards to a position approximately half-way from turntable rim.

If stylus set down is too far inwards, turn screw slightly clockwise. If set down is too near record edge, or off perimeter altogether, turn adjusting screw anti-clockwise.

**Turntable removal.** Press in three legs of plastic trim in centre of turntable and lift out. Remove spring and circlip. Remove turntable.

**Transistor replacement.** When soldering transistors it is essential to use a heat sink to prevent damage. Electric soldering irons should be earthed to

avoid earth currents which may damage transistors.

**Diodes AA1220.** White line on can indicates anode which is *negative* connection. Correct polarity must be observed.

## ALIGNMENT

**Equipment required.** AM/FM signal generator, output meter 20ohms, 10KpF capacitor, 1K resistor, trimming tools.

Chassis must be removed from cabinet and aligned on bench. Connect output meter in place of one speaker (or Avo 8 on low AC volts range across speaker).

**VHF/FM IF.** Set generator to 10.7mc/s (22kc/s deviation). Fully close main gang. Switch to FM. Connect generator via 10KpF to base TR3. Inject modulated signal to give low output. Peak top and bottom cores L9, L11 and L12. Repeat for maximum output.

Connect generator to aerial input. Increase signal and adjust L4 for max. output. Switch generator to AM. Adjust VR1 for minimum output. Repeat last two operations.

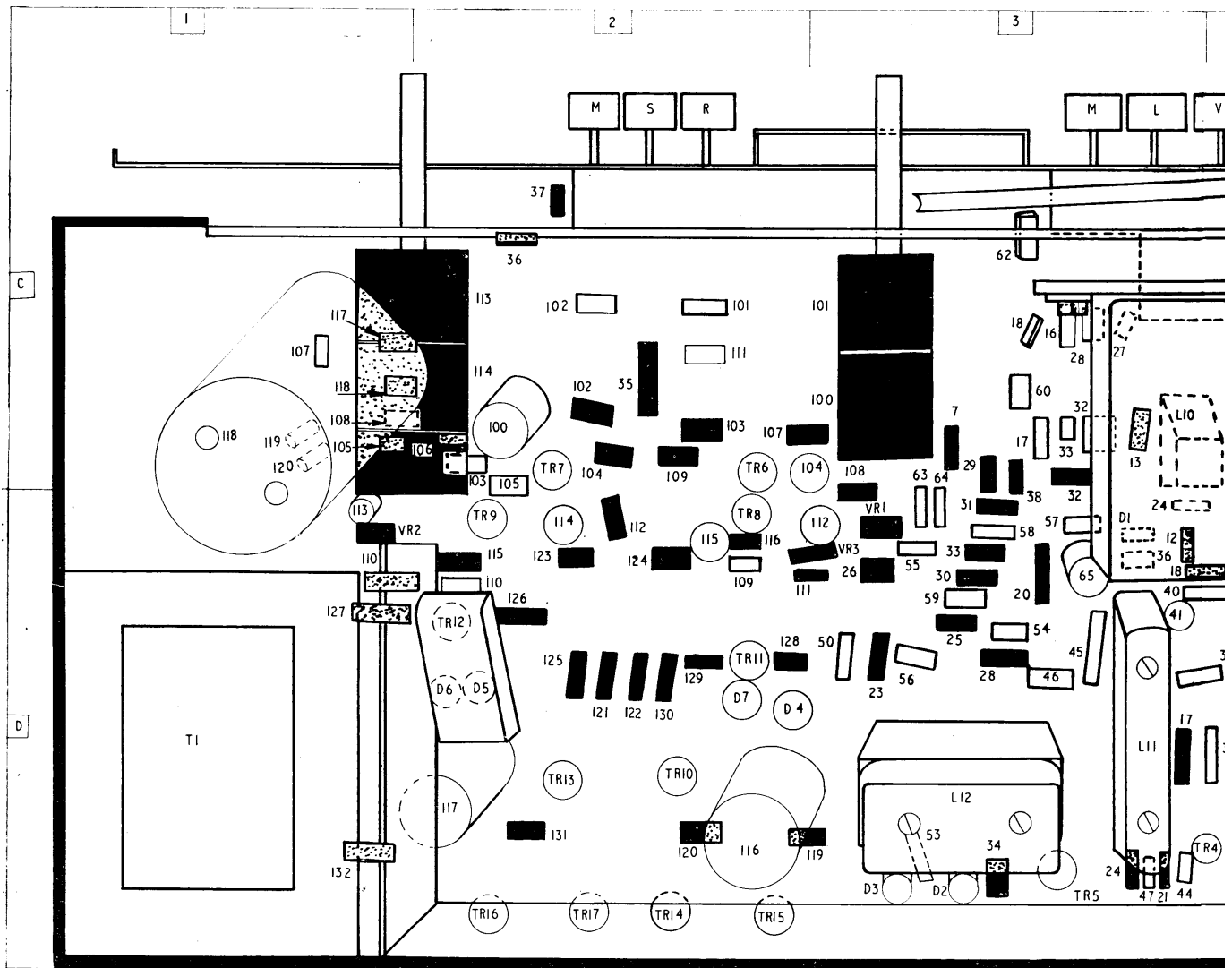
**VHF/FM RF.** Set generator to 88mc/s (22kc/s deviation). Tune set to 88mc/s. Switch to FM. Inject signal to FM aerial socket. Adjust cores L2 and L3

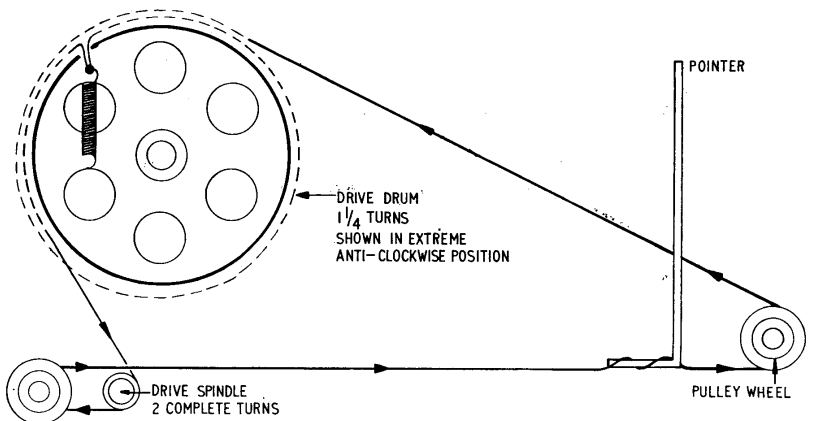
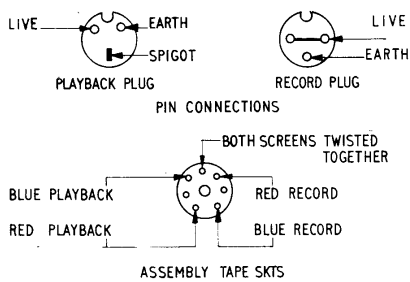
for max. output. Set generator to 100mc/s (22kc/s deviation). Tune set to 100mc/s. Adjust C11 and C5 for maximum output. Tune set to 95mc/s. Adjust core of L1 and L5 for maximum.

**AM IF.** Set generator to 472kc/s. Fully close main gang. Switch to MW. Disconnect tag lead connecting MW aerial coil to TR3 base, connect generator to lead. Peak top and bottom cores L9 and L11. Peak L12 (one core only). Repeat IF alignment for maximum output. Reconnect lead to MW coil.

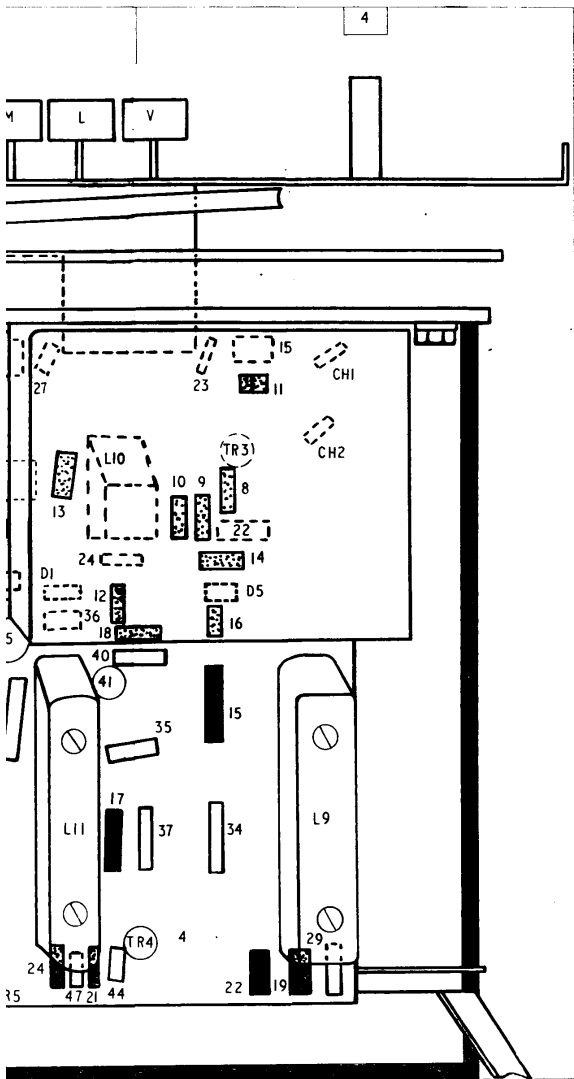
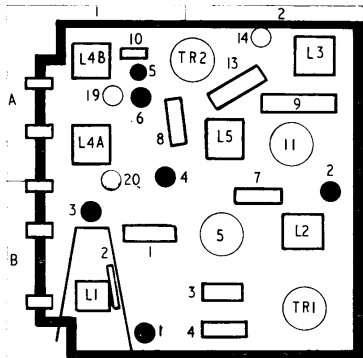
**AM RF (MW).** Tune set to 500m. Set generator to 600kc/s. and connect to AM aerial input via 1K. Adjust L10 for maximum output. Adjust position of L6 on ferrite rod for maximum. Tune set to 200m. Set generator to 1500kc/s. Adjust C28 and C16 for maximum output. Repeat operations for optimum performance.

**AM RF (LW).** Connect generator to AM input via 1K. Tune set to 1765m. Set generator to 170kc/s. Adjust LW coil (L8) on ferrite rod and oscillator trimmer C32 for maximum output. Tune set to 1250m. Set generator to 240kc/s. Adjust trimmer C17 for maximum output. Repeat until no further improvement is obtained.





Left, FM tuner printed panel component layout. Above, routing for dial drive cord



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