Service
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Service Manual

12 V

Specifications

NUMBER OF TRACKS	4-track 2 channels
TAPE CARTRIDGE	Stereo/Monaural compact cassette
TAPE SPEED	4.75 cm/sec. (1 7/8 i.p.s.)
FREQUENCY RESPONSE	125 to 6,300 Hz
CROSSTALK	40 dB or better between adjacent tracks
	25 dB or better between left and right channels
WOW & FLUTTER	0.4% or less (WRMS)
POWER OUTPUT	3.5 watts min. RMS (at T.H.D.=10%) per channel
SPEAKER IMPEDANCE	4 ohms per channel
POWER INPUT	12-volt car battery, negative terminal to ground
Voltage	13.2 VDC
Current	Approx. 0.6 ampere (at 0.5 watt output)
	Approx. 2 amperes (at solenoid action)
TRANSISTORS & IC's	3, plus 3 IC's and 8 diodes

BLOCK DIAGRAM

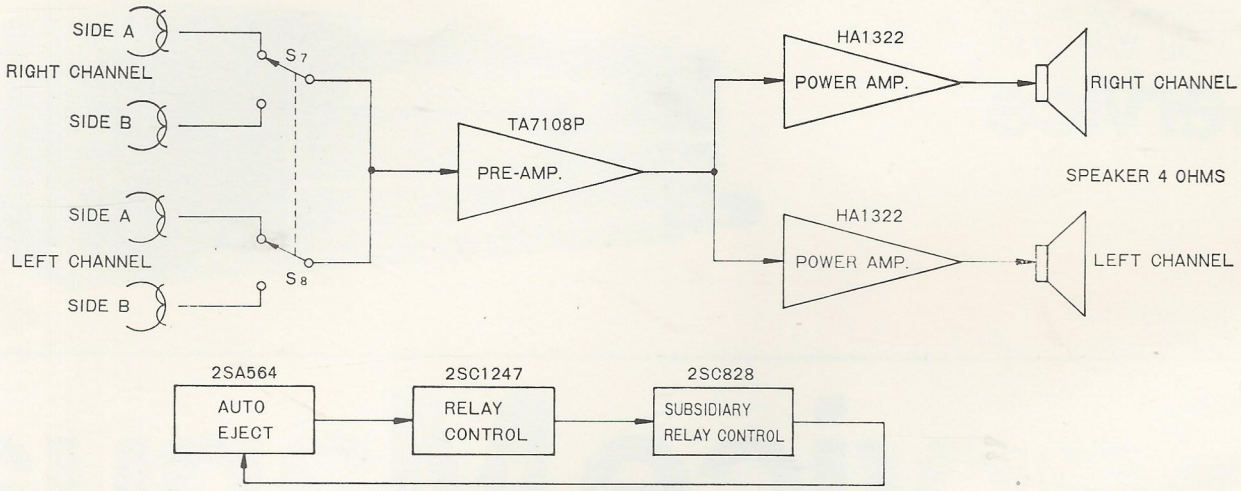

Fig. 1

PARTS LOCATION ON PC BOARD

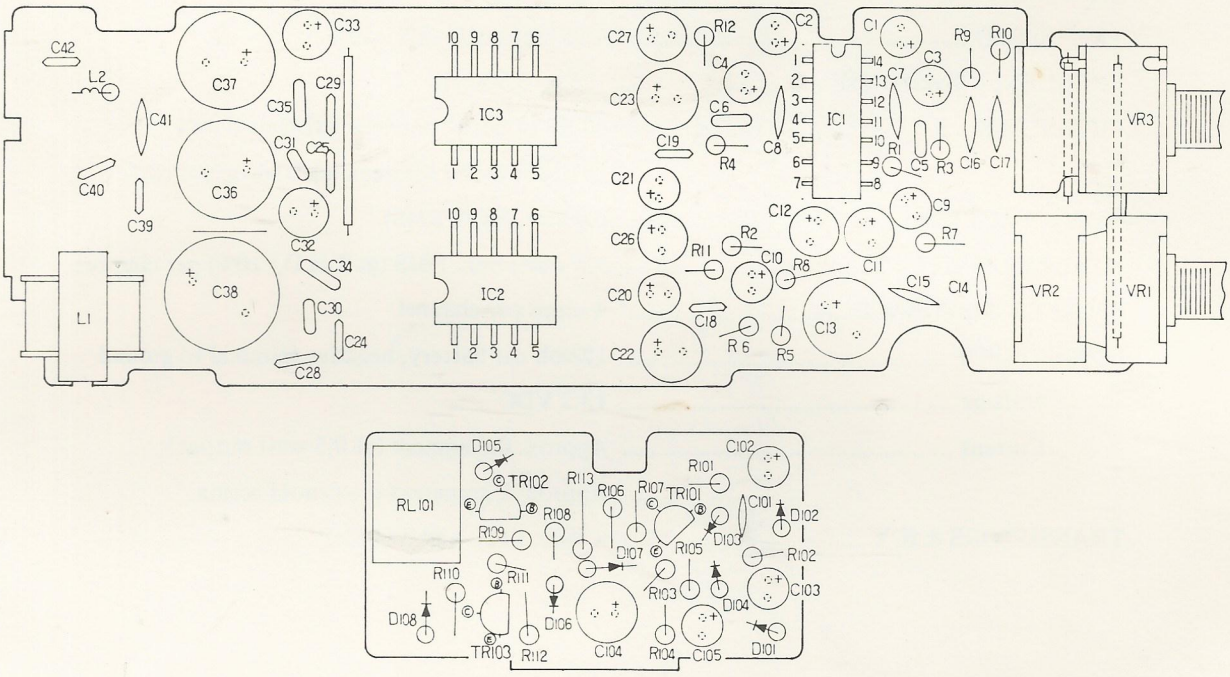

Fig. 2

SCHEMATIC

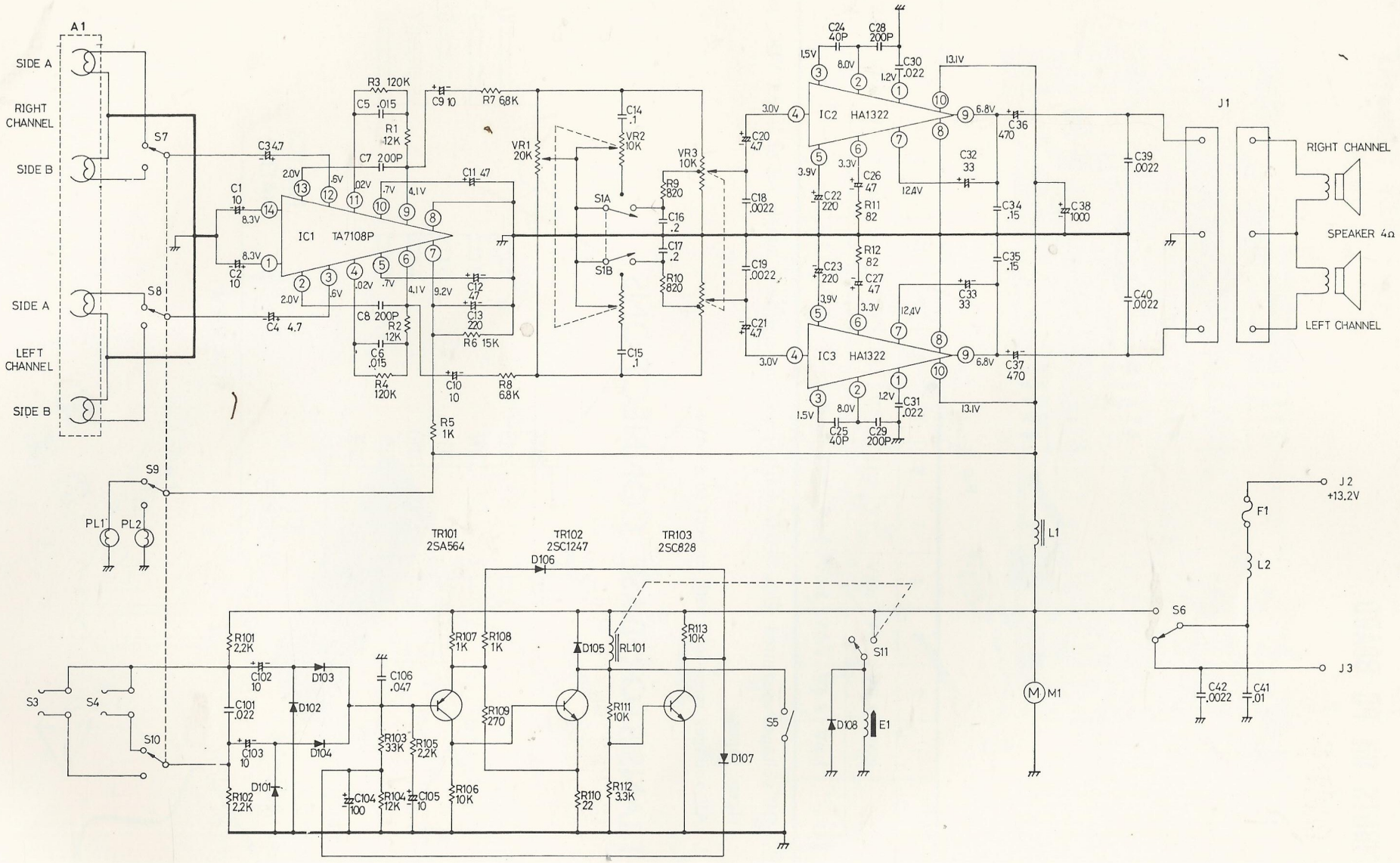

Fig. 3

NOTES: 1. All resistance in ohms, K=1,000.

2. All capacitance in μF, P=$\mu\mu$F.

3. DC voltages measured with 25,000 ohm per volt meter, power supply set at +13.2 VDC, no signal input.

CHECK POINTS ON PC BOARD

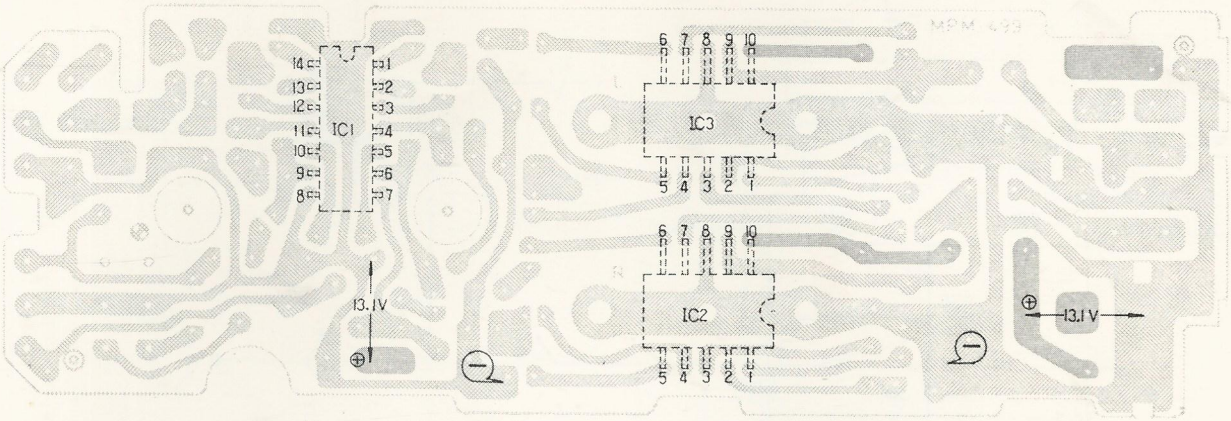

Fig. 6

IC \ Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14
IC 1	8.3V	2.0V	.6V	.02V	.7V	4.1V	9.2V	—	4.1V	.7V	.02V	.6V	2.0V	8.3V
IC 2, IC 3	1.2V	8.0V	1.5V	3.0V	3.9V	3.3V	12.4V	—	6.8V	13.1V	—	—	—	—

NOTES: 1. DC voltages measured with 25,000 ohm per volt meter, power supply set at +13.2 VDC, no signal input.

2. All voltages measured with respect to chassis.

IC & TRANSISTOR BASE CONNECTIONS

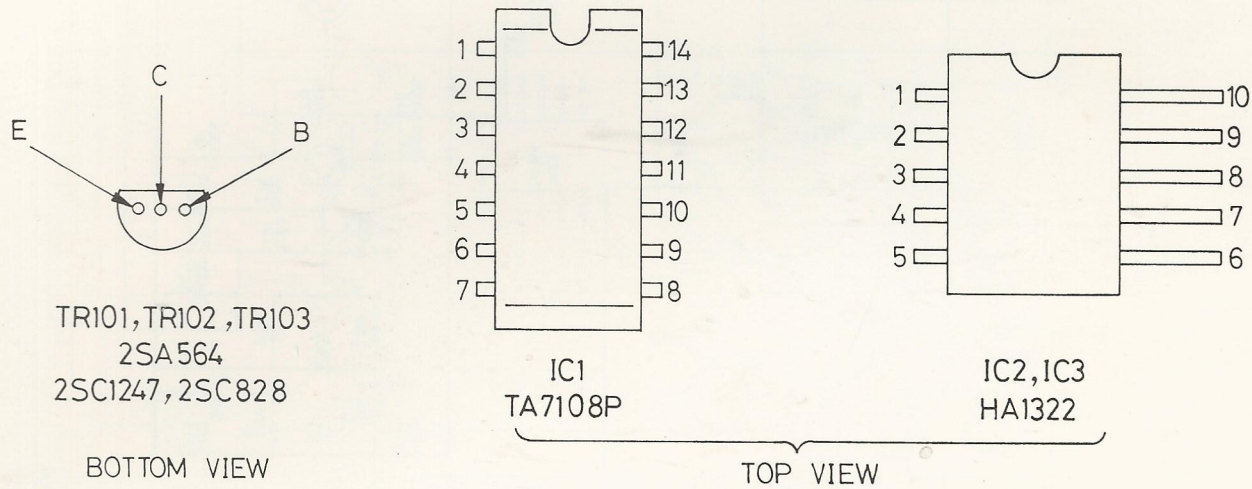

Fig. 7

REPLACEMENT PARTS LIST

Item	Description	Code No.
Styling		
5	Escutcheon	4802 459 57022
6	Knob balance control	4802 413 97137
7	Knob tone control	4802 413 37136
8	Knob volume control	4802 413 37137
9	Button, fast forward, right	4802 410 27068
10	Button, stop and eject	4802 410 27069
11	Bracket, volume control	4802 403 57145
12	Supporter, lamp, rubber	4802 325 27035
17	Door, (cartridge slot) and springs	4802 443 67043
18	Button, fast forward, left	4802 410 27071
Cassette Deck Nos. in brackets indicate the component to which the item relates.		
26	Spring (25)	4802 492 37204
27	Washer (25)	4822 532 10333
28	Spring, azimuth adjusting	4802 492 37146
29	Pinchroller Assy, right	4802 403 47018
30	Pinchroller assy, left	4802 403 47019
31	Spring (29)	4802 492 67179
32	Spring (30)	4802 492 67181
34	Spring (33)	4802 492 37147
37	Spring (36)	4802 492 37205
39	Spring (38)	4802 492 47019
40	Shaft (38)	4802 535 77066
41	Spring (97)	4802 492 67183
44	Spring (42) & (43)	4802 492 37149
46	Spring (45)	4802 492 37151
	Cassette loading assy left (48, 49, 50, 52.)	4802 403 57146
	Cassette loading assy, right (47, 49, 50, 51.)	4802 403 57147
53	Spring (47), (48)	4802 492 37206
54	Spring (47), (48)	4802 492 37207
60	Spring (57)	4802 492 47021
61	Spring (56)	4802 492 47022
64	Screw Special (47), (48)	4802 502 17045
70	Lever pinchroller changing	4802 403 27029
73	Rivet, 2 x 3mm (71), (72)	4802 535 37006
74	Spring (76)	4802 492 37208
75	Spring plunger	4802 492 47023
77	Spring (67), (70)	4802 492 67184
78	Housing (81)	4802 520 17018
79	Roller (81)	4802 535 27002
80	Screw 2 x 3mm (79)	4822 502 10908
81	Fly wheel	4802 528 67024
82	Belt (drive)	4802 358 27003
83	Pulley (motor)	4802 528 87075
84	Screw 2 x 3mm (83)	4802 502 17038
85	Roller, belt	4802 528 87065
87	Lever, left (fast forward idler)	4802 403 27017
88	Lever, right (fast forward idler)	4802 403 27018
89	Roller, (87), (88)	4802 528 77034
90	Spring (87), (88)	4802 492 37152
93	Roller (91), (92)	4802 528 77035
94	Spring (91), (92)	4802 492 37209
95	Brake (97)	4802 403 17013
96	Spring 95	4802 492 37154
97	Slip mechanism assy (99 to 108)	4802 528 27031
98	Cap (97)	4802 532 57071
101	Spring	4802 492 57033
106	Spring	4802 492 57034
Miscellaneous Parts		
	Ring "E" 1.2mm shaft	4822 530 70119
	Ring "E" 1.5mm shaft	4822 530 70121
	Ring "E" 2mm shaft	4822 530 70122
	Ring "E" 3mm shaft	4822 530 70123
	Ring "E" 4mm shaft	4822 530 70124
	Screw 2 x 4 mm	4822 502 11059
	Screw 2.6 x 3 mm	4822 502 11084
	Screw 2.6 x 4 mm	4822 502 11084
	Screw 3 x 4 mm	4822 502 11189
	Screw 3 x 6 mm	4822 502 11064
	Washer 2mm	4822 532 10331
	Washer 3mm (IC2, IC3 mount)	4822 530 80075
	Nut 3mm (IC2, IC3 mount)	4822 505 10325
	Washer	4822 532 10333
	Washer	4802 532 57075

REPLACEMENT PARTS LIST

Item	Description			Code No.
Capacitors				
C1, C2	10μF	16V	Electrolytic	4802 124 47044
C3, C4	4.7μF	25V	Electrolytic	4802 124 47034
C5, C6	.015μF	50V	Mylar	4802 121 47161
C7, C8	200 ρF	50V	Ceramic	4802 122 47077
C9, C10	10μF	16V	Electrolytic	4802 124 47044
C11, C12	47μF	6.3V	Electrolytic	4802 124 47061
C13	220μF	16V	Electrolytic	4802 124 47018
C14, C15	.1μF	12V	Ceramic	4802 122 47055
C16, C17	.2μF	12V	Ceramic	4802 122 47109
C18, C19	.0022μF	50V	Ceramic	4822 122 30114
C20, C21	4.7μF	25V	Electrolytic	4802 124 47034
C22, C23	220μF	10V	Electrolytic	4802 124 47006
C24, C25	40ρF	50V	Ceramic	4822 122 31069
C26, C27	47μF	6.3V	Electrolytic	4802 124 47061
C28, C29	200 ρF	50V	Ceramic	4822 122 30094
C30, C31	.022μF	50V	Mylar	4802 121 47163
C32, C33	33μF	10V	Electrolytic	4802 124 47013
C34, C35	.15μF 50V	50V	Mylar	4802 121 47173
C36, C37	470μF	16V	Electrolytic	4802 124 47024
C38	1000μF	16V	Electrolytic	4802 124 47051
C39, C40	.0022μF	50V	Ceramic	4822 122 30114
C41	.01μF	50V	Ceramic	4822 122 30043
C42	.0022μF	50V	Ceramic	4822 122 30114
C101	.022μF	25V	Ceramic	4802 122 47108
C102, C103	10μF	16V	Electrolytic	4802 124 47044
C105	10μF	16V	Electrolytic	4802 124 47044
C106	.047μF	25V	Ceramic	4802 122 47054
Resistors and Controls				
NOTE:	ALL RESISTORS ARE STANDARD VALUES AND TOLERANCES EXCEPT WHERE LISTED BELOW			
VR1, VR2	Bal. Control 20K ohm, tone 10K ohm			4802 102 57006
VR3, S5	Vol. Control 10K ohm.			4802 102 47047
Transistors, I.C.'s and Diodes				
TR 101	Auto. Eject. 2SA564-PQ.			4822 130 44315
TR 102	Relay control 2SC1247A-VS.			4802 130 47175
TR 103	Sub relay control 2SC828-QR.			4822 130 40965
IC 1	Pre-amp. TA 7108P.			4802 209 87036
IC2, IC3	Power amp. HA 1322.			4802 209 87062
D101-D104	Compensator ISI555.			4802 130 37033
D105	Relay spark suppressor SR1K2			4802 130 37022
D106, D107	Back current suppressor ISI555			4802 130 37033
D108	Solenoid suppressor SR1K2			4802 130 37022
Miscellaneous Electrical				
A1	Playback head.			4802 249 37005
E1	Solenoid.			4802 281 57007
F1	Fuse 3 amps.			4802 253 47006
J1	3P connector and lead assy. speaker.			4802 321 27113
J2	Fuse holder.			4802 256 47001
	Connector for J2.			4802 268 17012
J3	Terminal for lead assy.			4802 268 27005
L1	Choke filter 3mH.			4802 152 27028
L2	Choke 0.74 μH.			4802 158 17077
M1	D.C. motor			4802 361 27037
PL1, PL2	Lamp			4802 134 47068
RL 101	DC relay inc. S11.			4802 280 87005
S1	Slide switch on/off.			4802 277 27038
S3, S4	Leaf switch, auto reverse.			4802 278 97031
S6	Micro switch, radio/player change.			4802 271 37008
S7 – S10	Slide switch, program change.			4802 277 67012
Printed Circuit Board				
120	P.C. board assy main.			4802 214 37007
1212	P.C. board assy auto reverse			4802 214 37008
122	P.C. board S7–S10			4802 214 57052
123	P.C. board S1			4802 214 37009
Chassis				
1	Chassis tape deck.			4802 691 27018
2	Clamp J1, J2 and J3.			4802 401 17088

WIRING ON PC BOARD

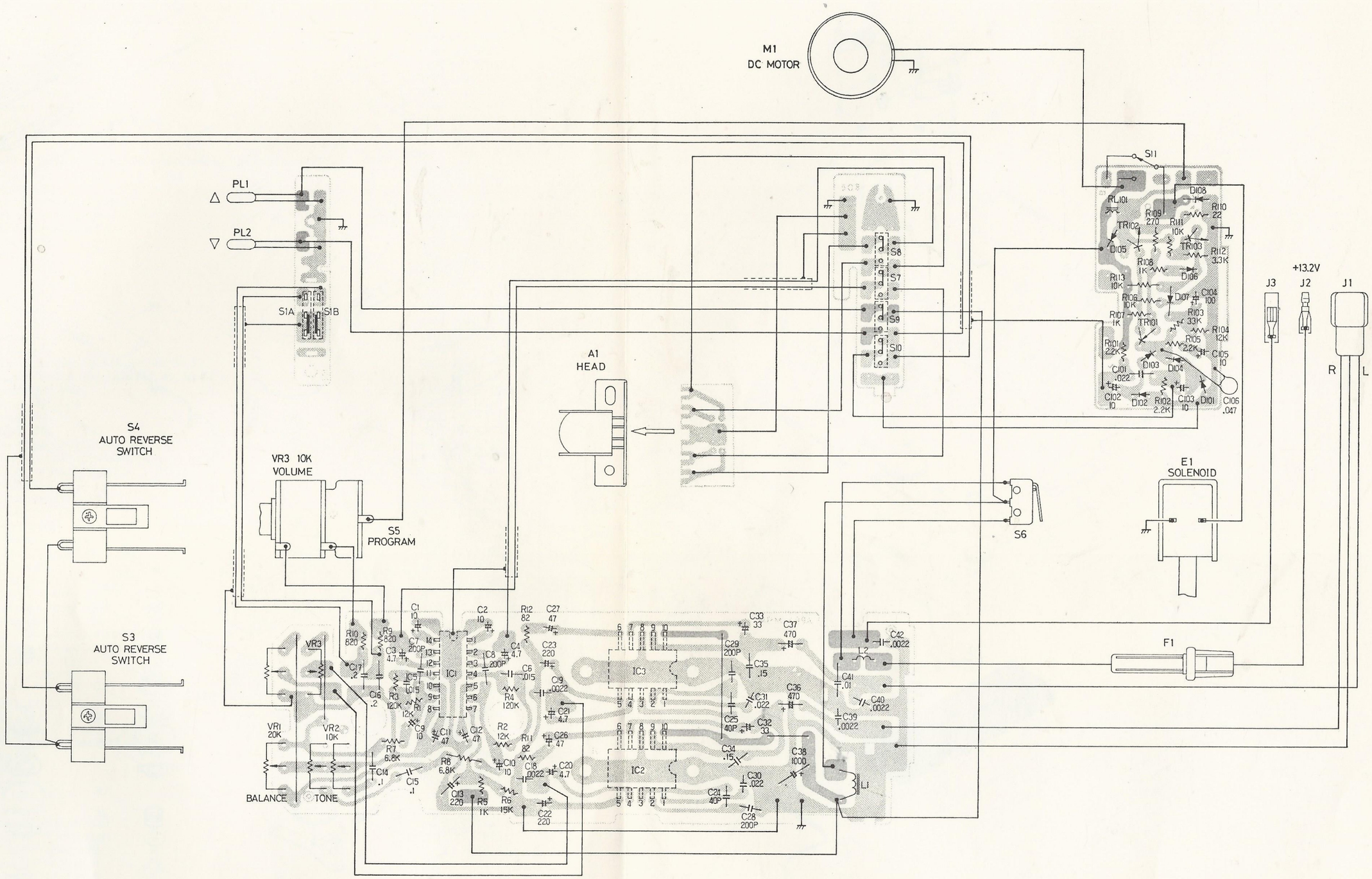

Fig. 4

NOTES: 1. All resistance in ohms, K=1,000.

2. All capacitance in μF, P=$\mu\mu$F.

3. The switches S3 and S4 are operated by the contacts in the slip mechanism (item 97 on cassette deck).

EXPLODED VIEW

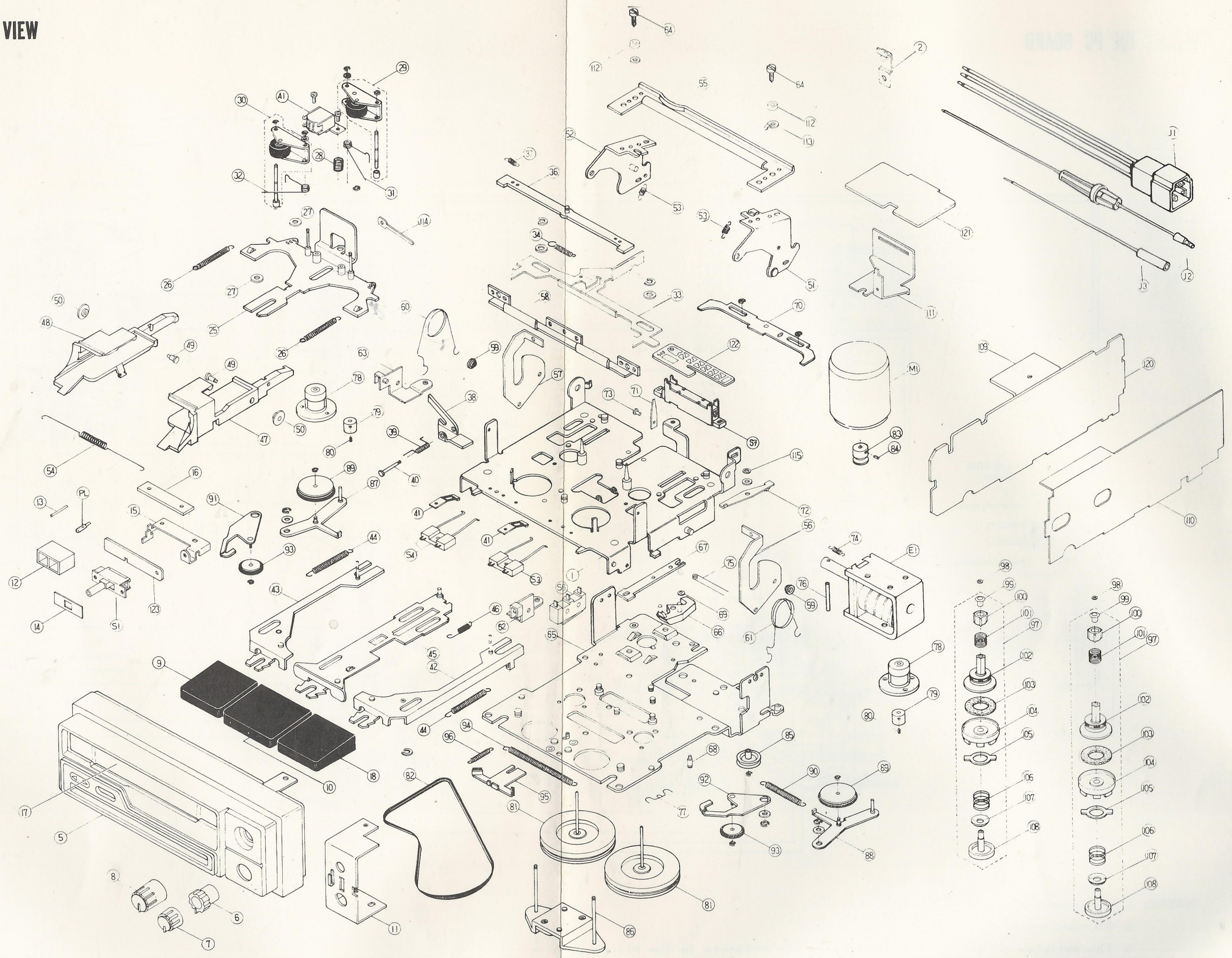

Fig. 5