

SERVICE MANUAL

SD
SOUNDESIGN

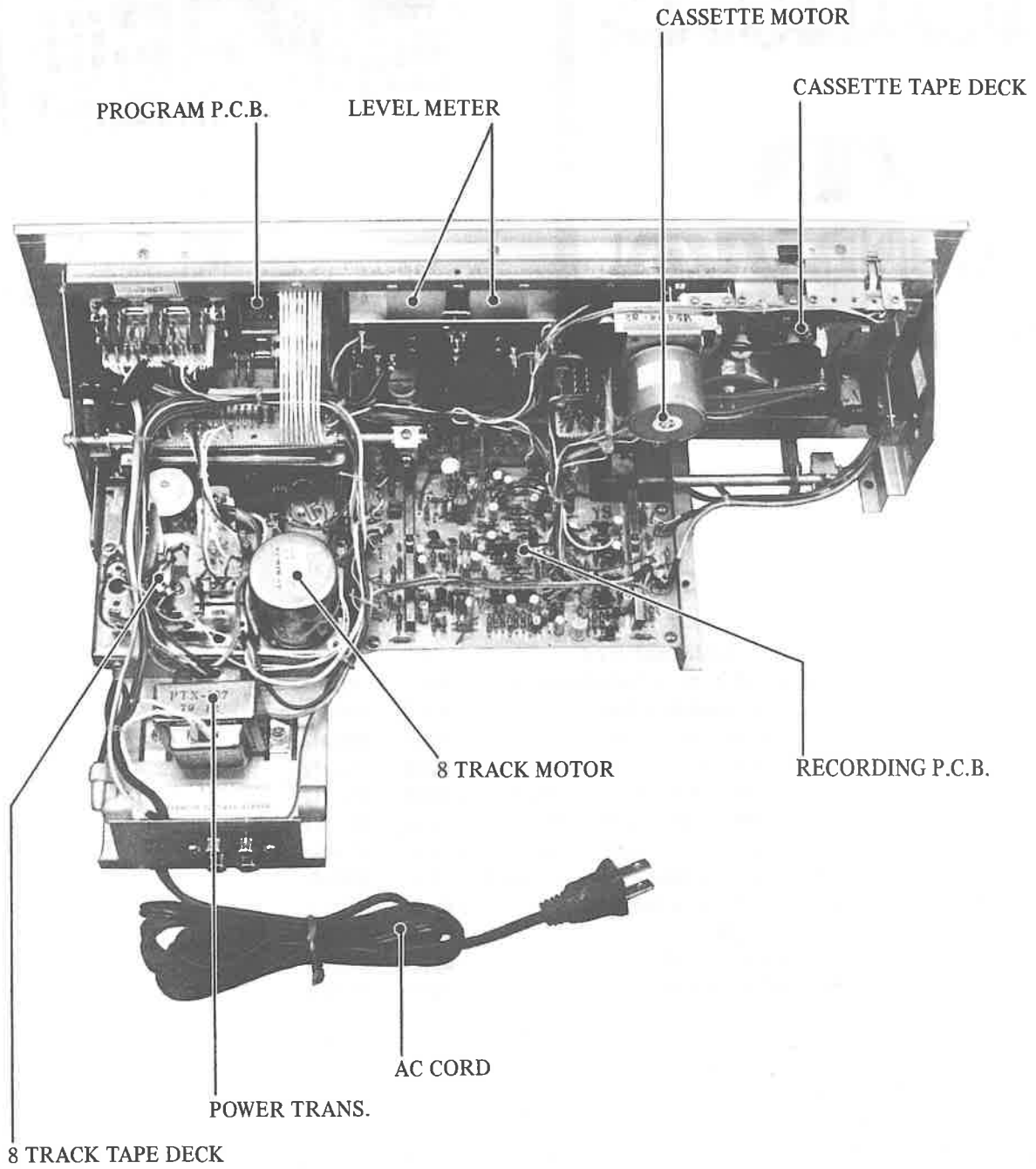


MODEL NO. 0868

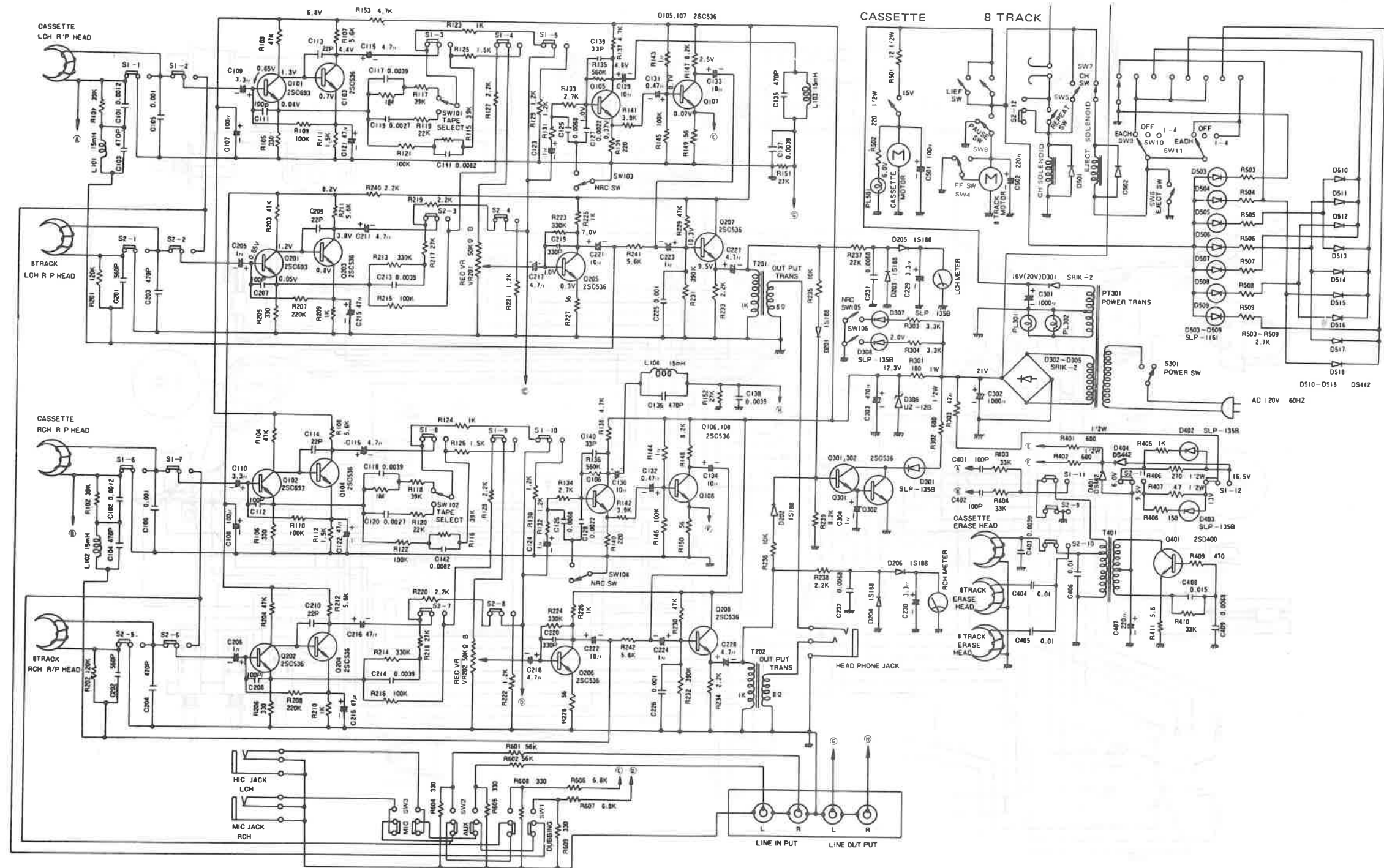
SPECIFICATIONS

Distortion at playback level	: 1.5%	@1kHz
Overall distortion at recording level	: 2%	@1kHz
S/N ratio at playback level	: 40dB	@1kHz
S/N ratio at recording level	: 40dB	@1kHz
Channel crosstalk at playback level	: 40dB	@1kHz
Channel crosstalk at recording level	: 40dB	@1kHz
Track crosstalk at recording level	: 40dB	@1kHz
Track crosstalk at recording level	: 40dB	@1kHz
Tape speed deviation at playback level	: ±1%	@3kHz
Wow and flutter at playback level	: 0.15%	@3kHz
Erase ratio at recording level	: 45dB	@1kHz
Tape output voltage	: 500mV	@1kHz
Head input overload	: 20dB	@1kHz

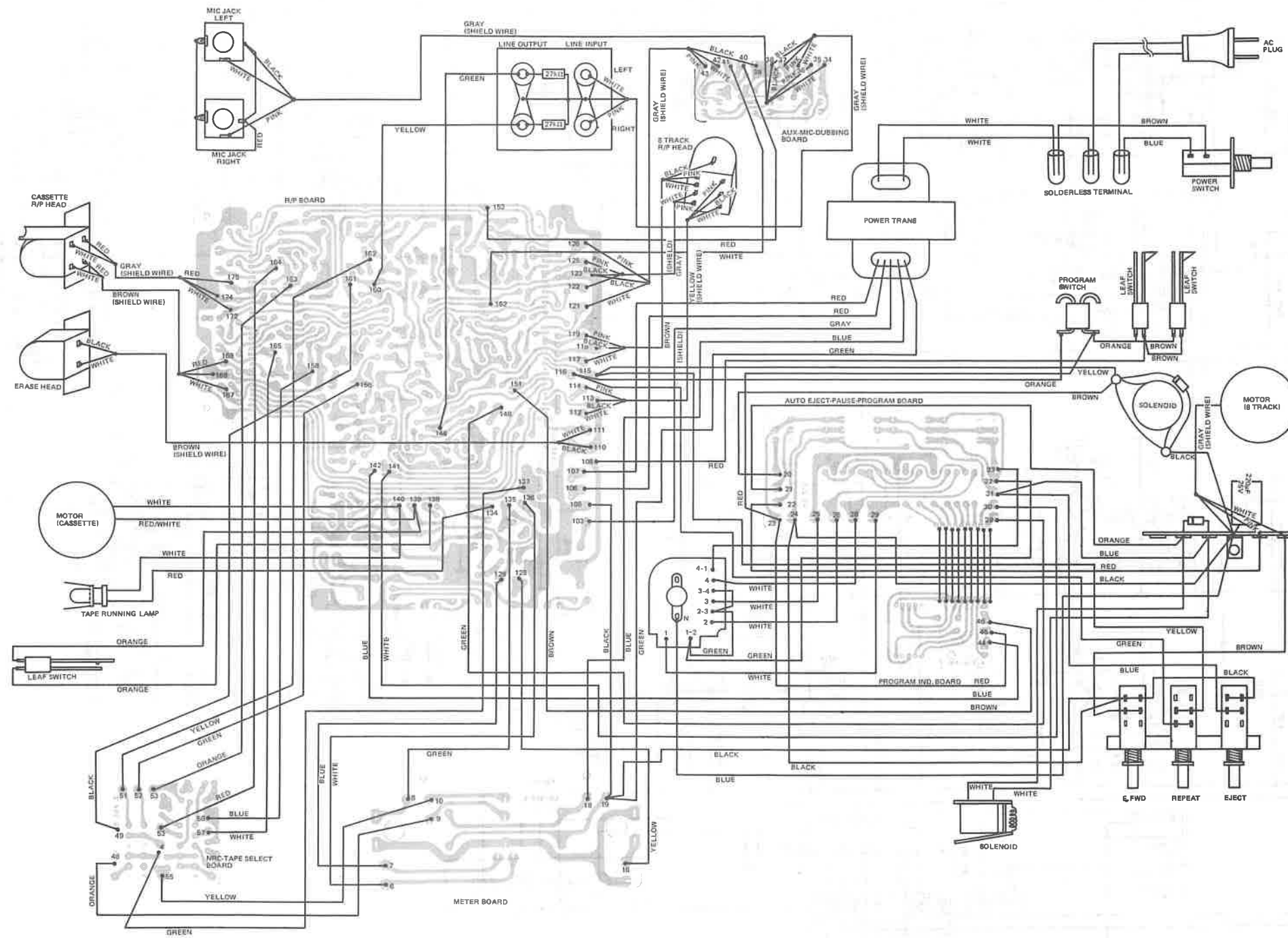
PARTS LOCATION



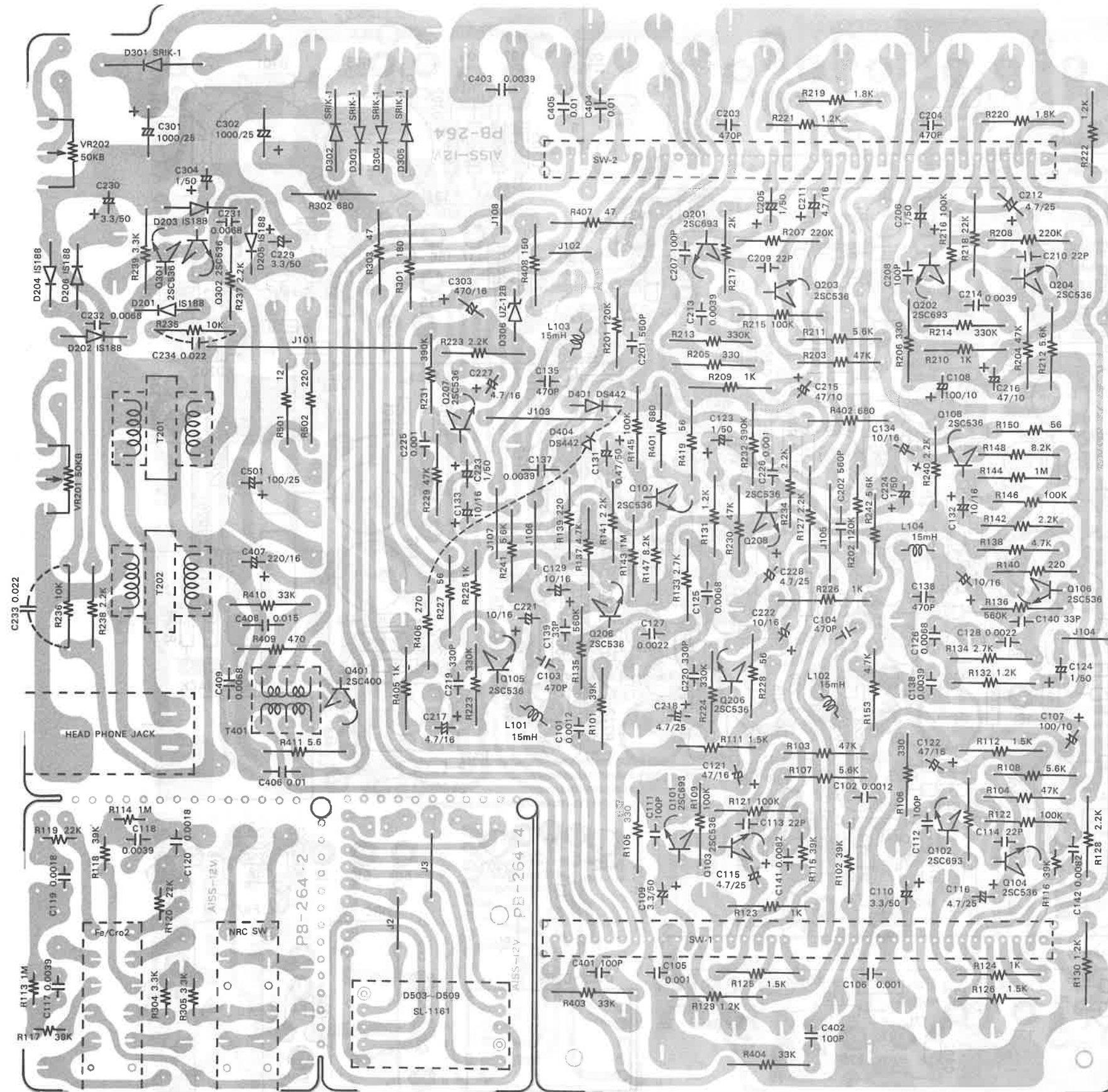
SCHEMATIC DIAGRAM



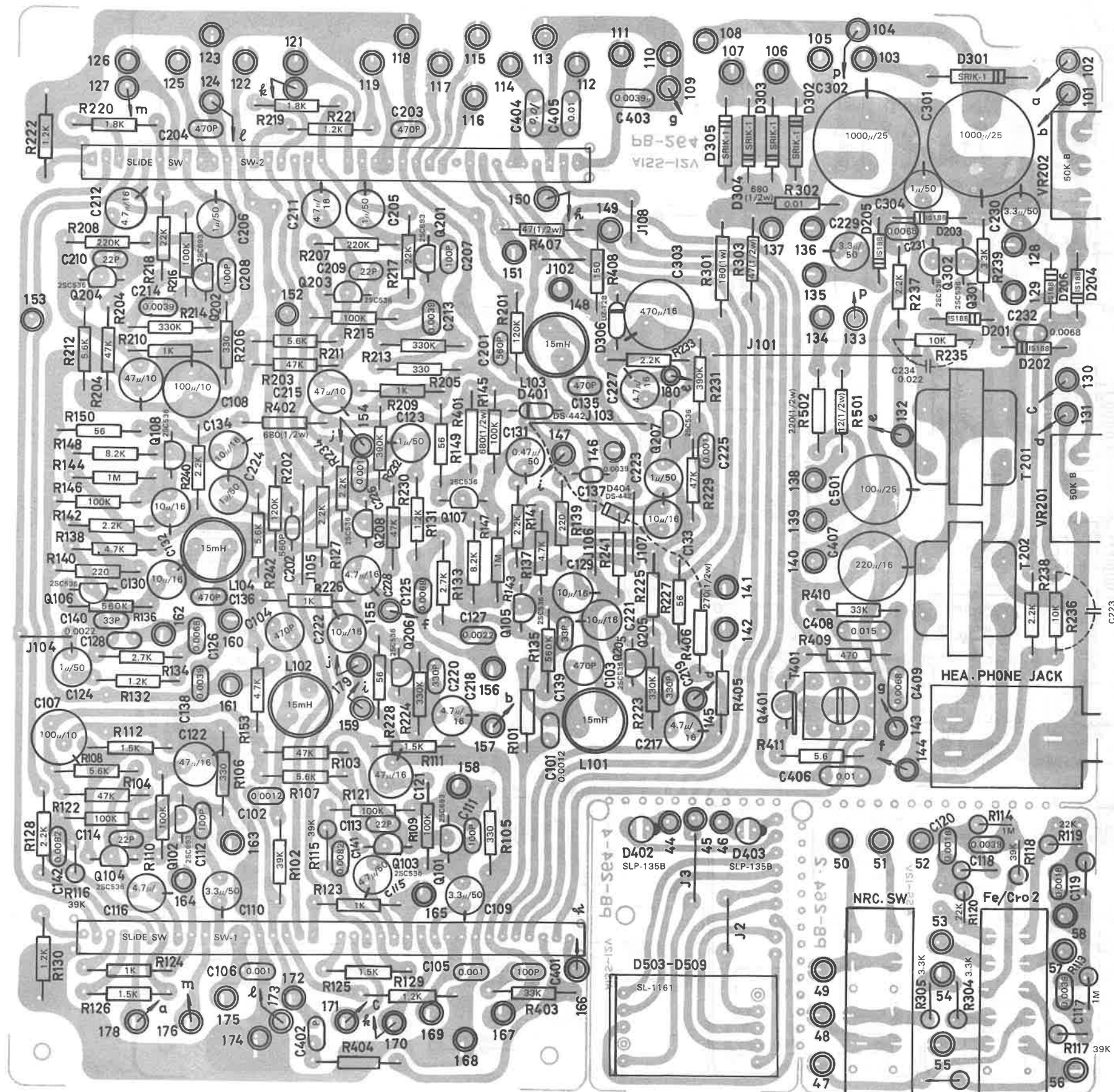
WIRING DIAGRAM



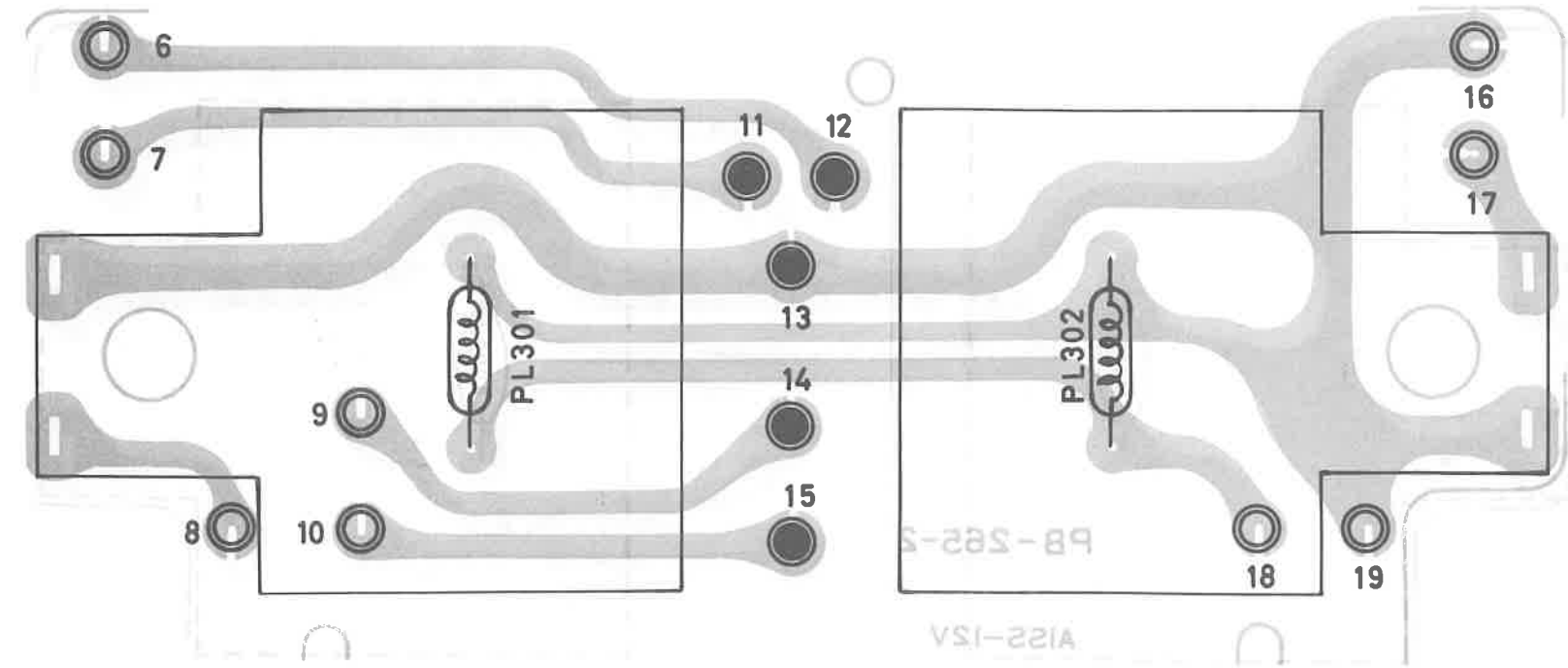
R/P BOARD P.C.B./NRC-TAPE SELECT P.C.B./8-TRACK PROGRAM IND. P.C.B.
 BOTTOM VIEW



R/P BOARD P.C.B./NRC-TAPE SELECT P.C.B./8-TRACK PROGRAM IND. P.C.B.
TOP VIEW



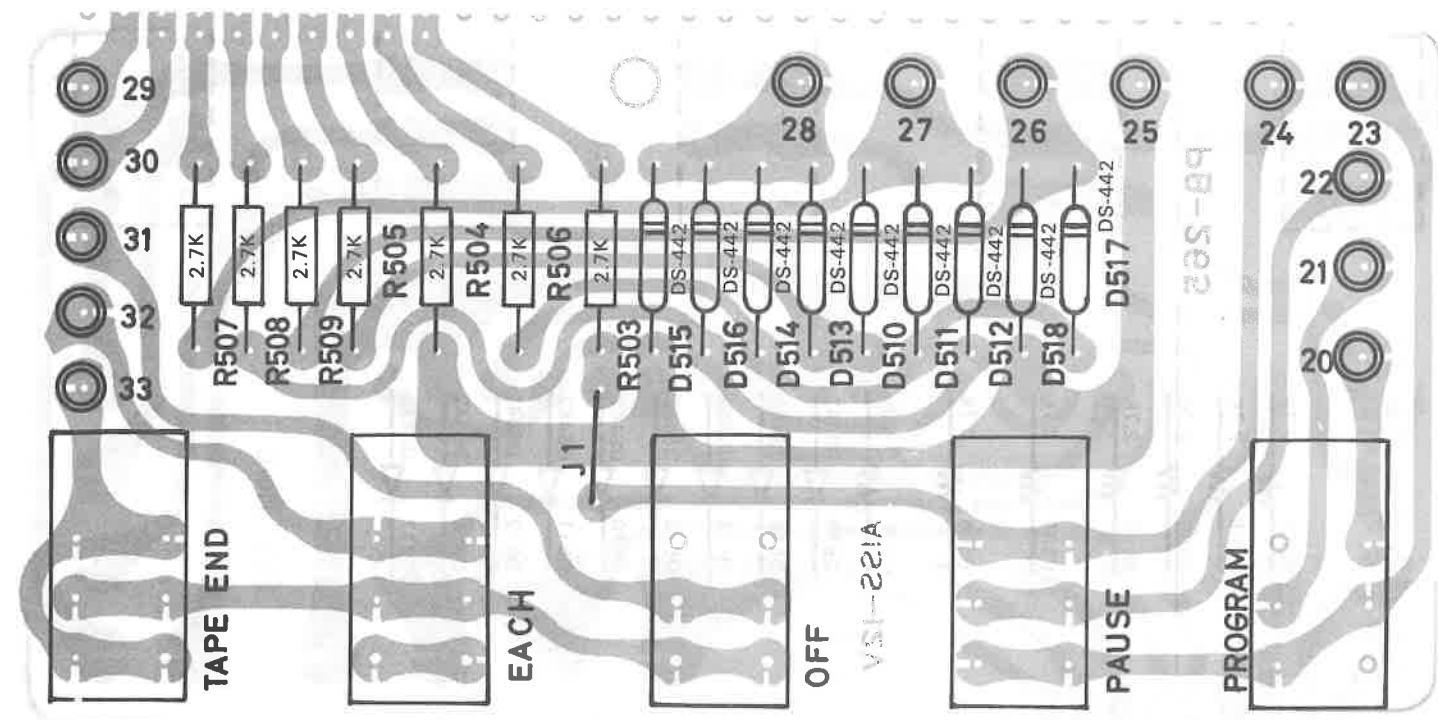
METER P.C.B. BOTTOM VIEW



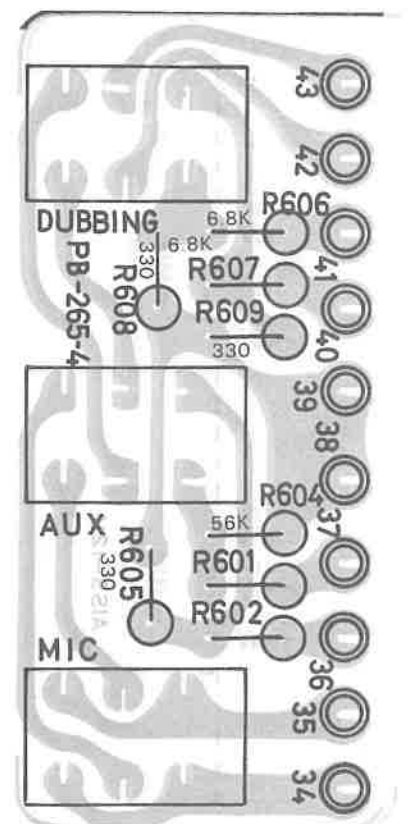
LED INDICATOR P.C.B. BOTTOM VIEW



AUTO EJECT - PAUSE - PROGRAM P.C.B. BOTTOM VIEW



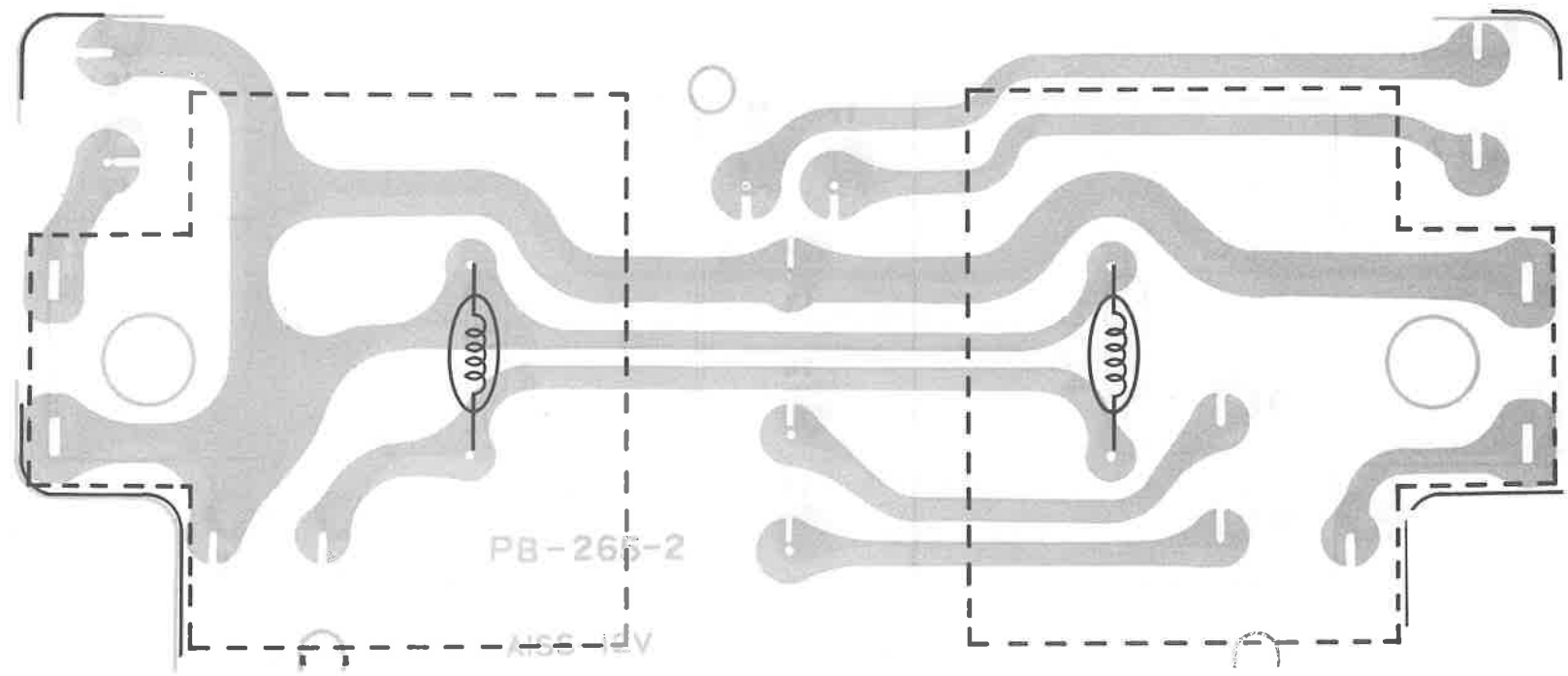
DUBBING - AUX - MIC P.C.B. BOTTOM VIEW



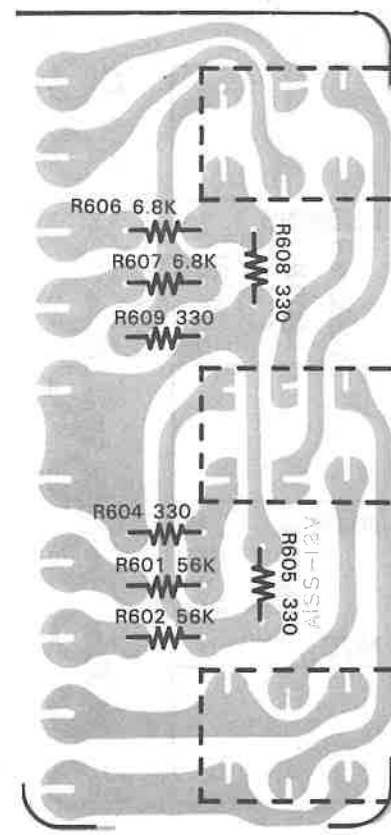
**LED INDICATOR P.C.B.
TOP VIEW**



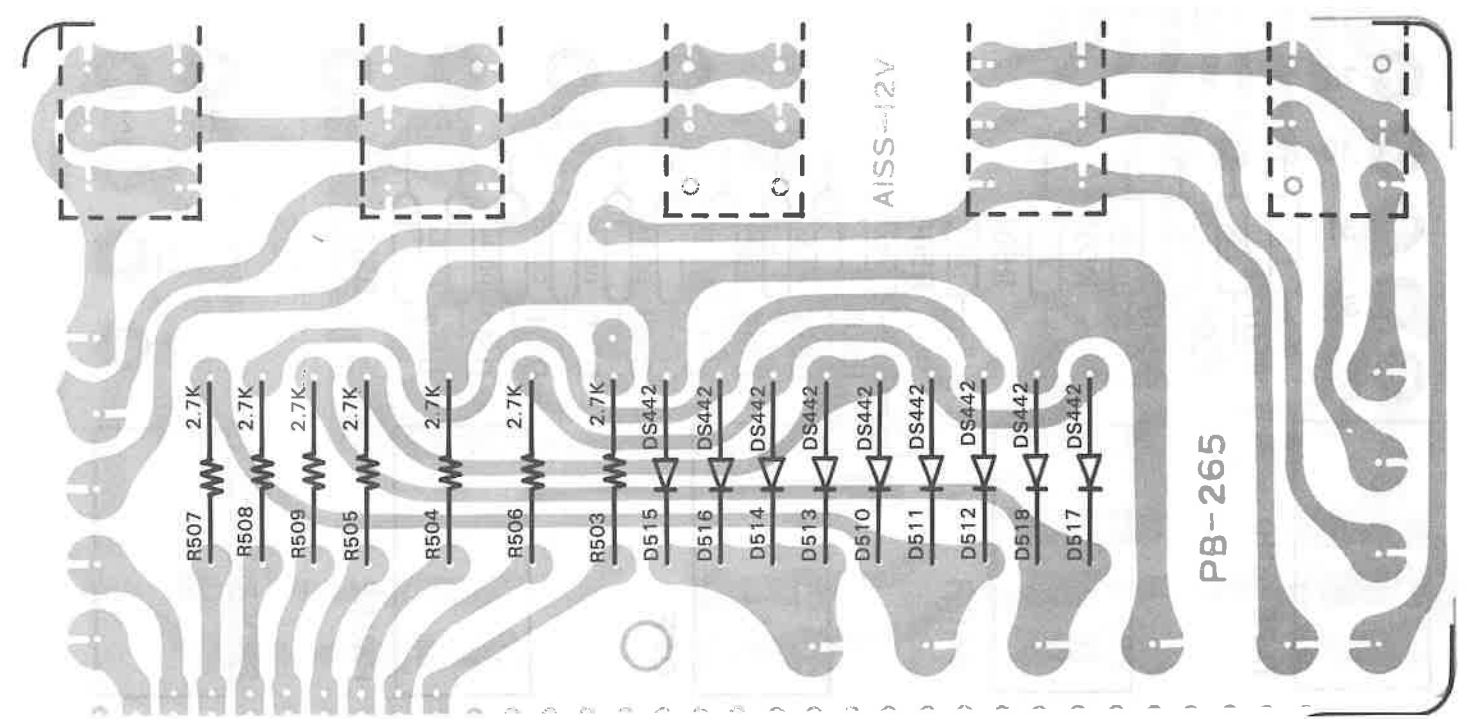
METER P.C.B. TOP VIEW



**DUBBING - AUX - MIC P.C.B.
TOP VIEW**



AUTO EJECT - PAUSE - PROGRAM P.C.B. TOP VIEW



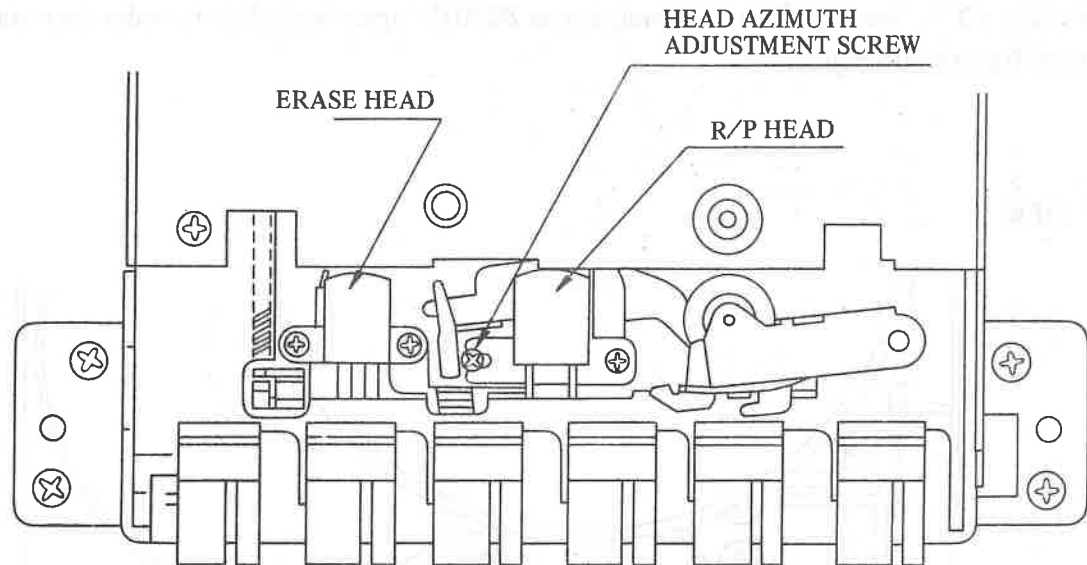
ADJUSTMENT OF CASSETTE DECK

1. Adjustment of Azimuth

Playback the test tape MTT-014 (10kHz) and adjust the head azimuth adjustment screws so as to maximize the UNE output (voltage drop with load resistors inserted) for both R and L channels and attain proper balance between the two channels. Lock these adjustment screws after the adjustment is completed.

2. Adjustments of Bias Frequency Coil

Set to recording operation and connect frequency counter to C406, 0.01 μ F in showing schematic diagram. Adjust OSC coil T401 to indicate 60 – 62 kHz.



ADJUSTMENT OF 8-TRACK TAPE DECK

HEAD AZIMUTH AND HEIGHT ADJUSTMENT BY RCA TEST CARTRIDGE #321

Before starting this adjustment, the head and all tools to be used for alignment must be demagnetized. The following equipment is required for head adjustment.

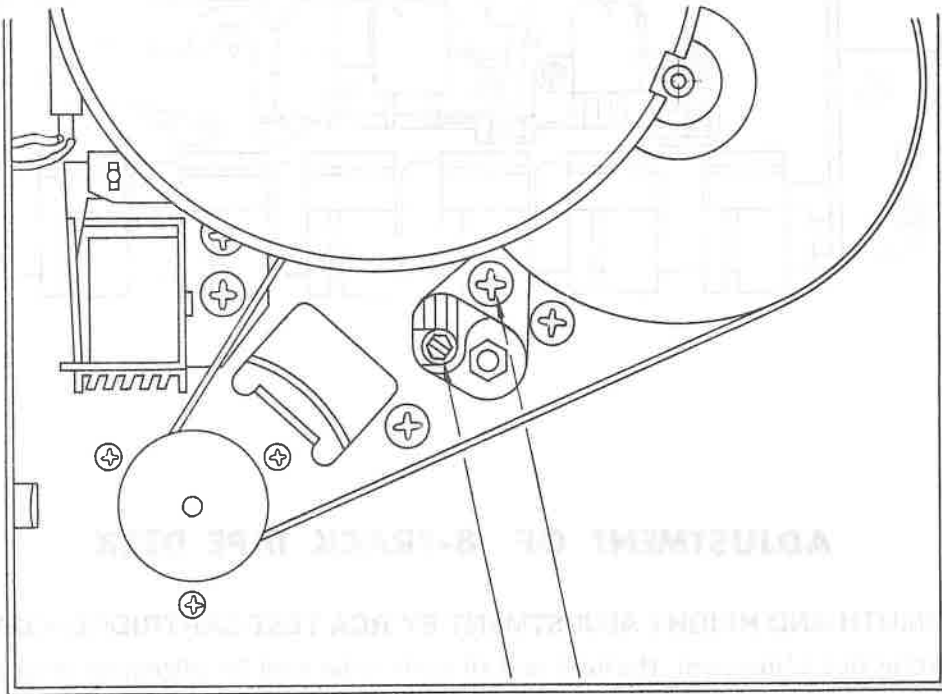
- 1) VTVM
- 2) Load resistor (8k ohms)
- 3) AC power source (AC 120V 60Hz)
- 4) Test tape cartridge RCA #321
- 5) Small screwdriver

ADJUSTMENT OF CASSETTE HEAD

1. Connect the VTVM and load resistor to individual right and left output circuits of the stereo tape player.
2. Set the channel on the head by depressing the channel select button (Track 2-6).
3. Turn the height adjusting screw back and forth to locate the position at which the meter connected to the left load shows minimum deflection.
4. After height adjustment has been completed turn the azimuth adjusting screw to locate the position at which the meter connected to the right load show maximum deflection.
5. Repeat these adjustments (Items 3 and 4) alternately, since height may change by turning the azimuth adjusting screw.
6. After all adjustment have been completed, secure lock the height adjusting and azimuth screw.

Note: A 1000Hz signal is recorded on each side above and below track 2 (left channel) of the RCA test cartridge #321. Track 6 (right channel) has an 8000Hz signal with slightly wider than standard and is used for azimuth adjustment.

BOTTOM VIEW



AZIMUTH ADJUSTING SCREW
HEAD HEIGHT ADJUSTING SCREW

SERVICE HINTS

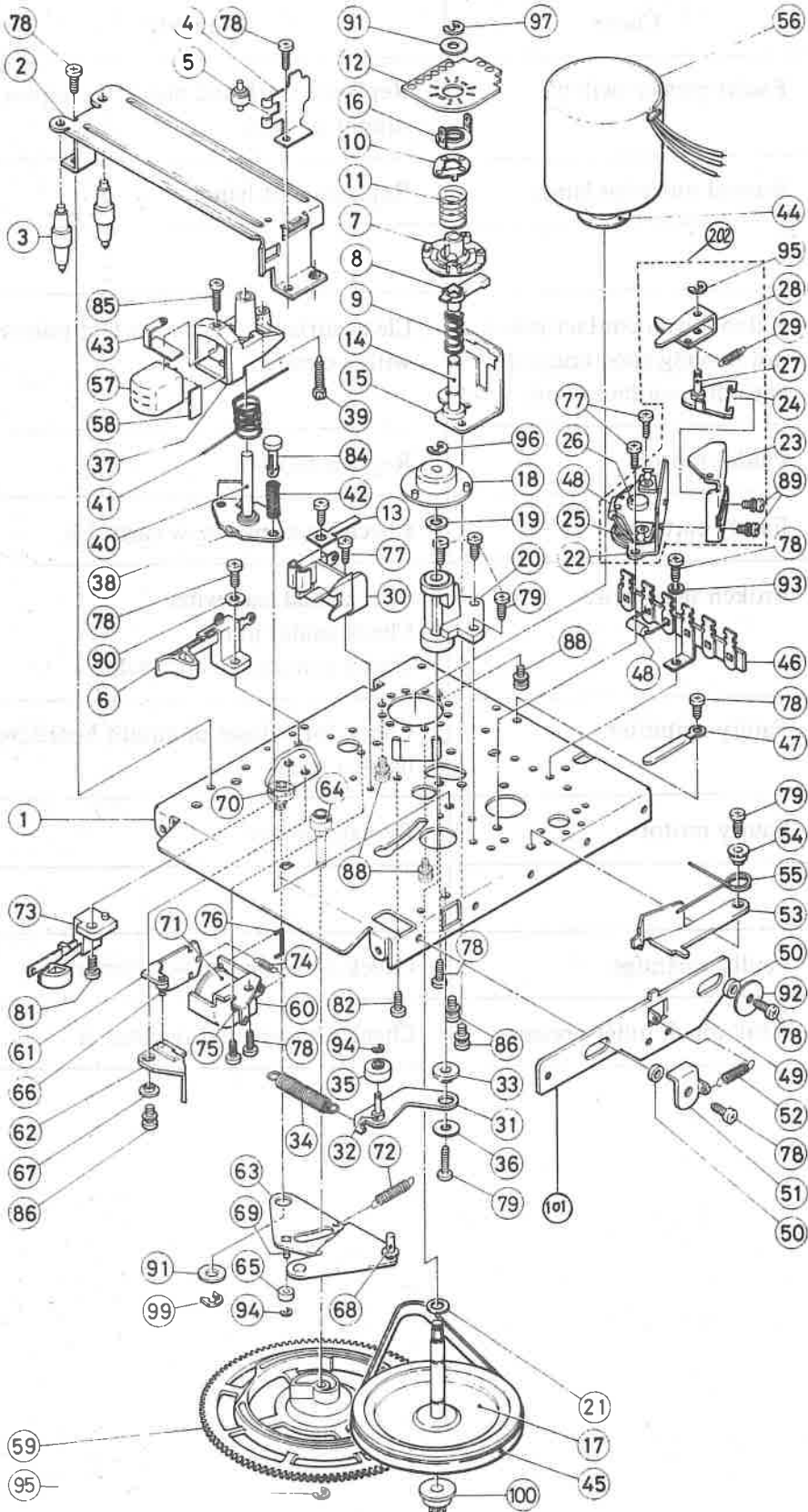
Trouble	Cause	Remedy
No power.	Faulty power switch.	Replace switch and check the power supply circuits.
Indicator lamp will not light up.	Burned out pilot lamp.	Replace pilot lamp.
	Ratchet cam contact point not making good contact with disc contact point.	Clean surface of both contact points with a cleaner.
No sound is reproduced.	Faulty motor.	Replace motor.
	Faulty cartridge.	Check by using a new cartridge.
	Broken signal wire.	Check head lead wire. Check solder joints. Check connectors and jacks.
	Faulty amplifier.	Check for voltage of circuit board by using a tester.
Tape speed is incorrect.	Faulty motor.	Replace motor.
	Faulty cartridge.	Check by using a new cartridge.
	Weak pinch roller pressure.	Check pressure and readjust it.

8 TRACK TAPE DECK EXPLODED VIEW

MAKER : TANASHIN

MODEL TN-999SRE-3

PARTS LIST



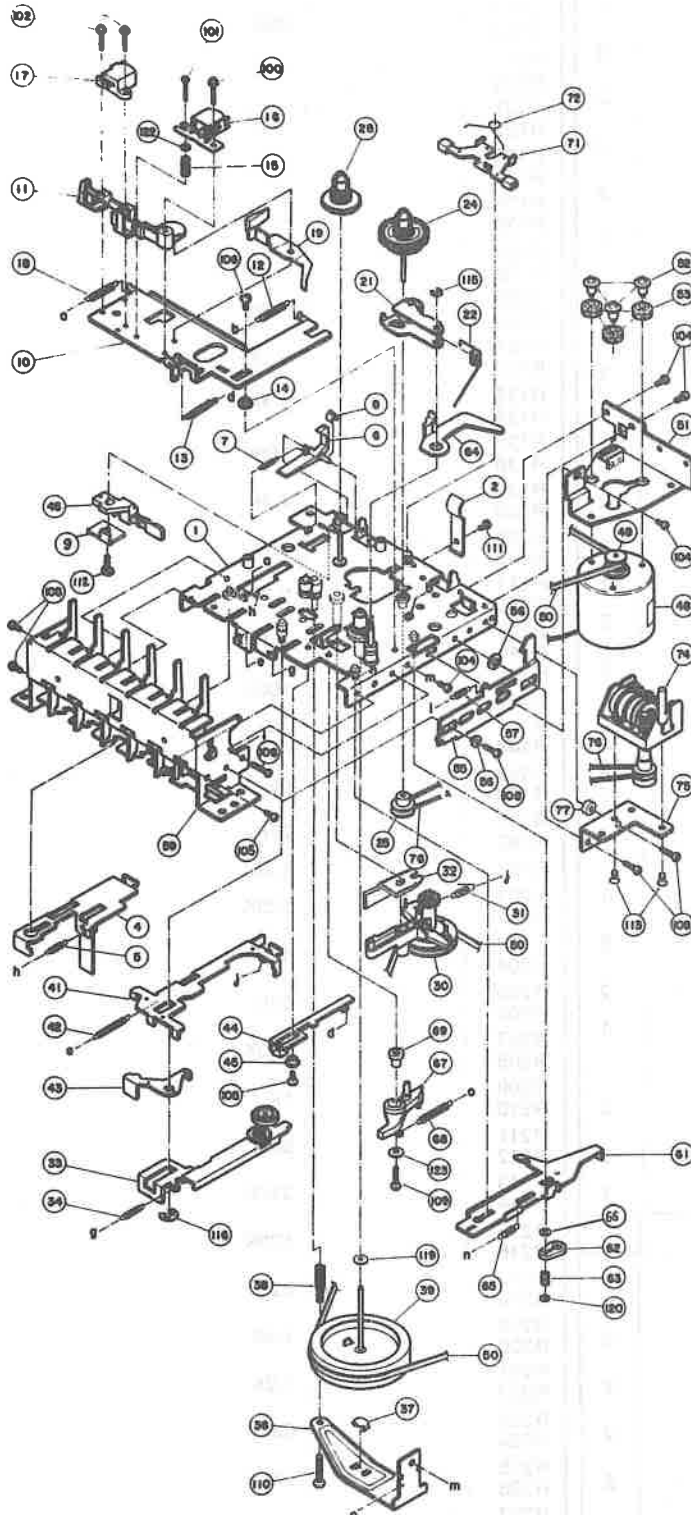
ITEM NO.	DESCRIPTION	PART NO.
1	CHASSIS	6600101
2	PACK COVER	15101028
3	PACK ROLLER	110202C
4	PACK HOLDER	5600104
5	PACK HOLD ROLLER	5600105
6	LEAF SWITCH	5600106
7	4 CAM	5600212
8	RATCHET CAM	5600213
9	CAM SPRING	090407
10	INDICATOR CONTACT	5600204
11	CONTACT SPRING	5600205
12	INDICATOR P. C. BOARD	5600216
13		
14	CAM SHAFT	1510223
15	CAM BASE	5600211
16	CONTACT PLATE	5600216
17	FLYWHEEL & CAPSTAN	5600301
18	CHANGE CAM	5600302
19	THRUST WASHER	1510303
20	FLYWHEEL METAL	5600310
21	FL WASHER	5601315
22	YOKE A	5600401
23	YOKE B	5600402
24	SWITCHING IRON	15104228
25	COIL	5600405
26	CENTER POLE	1510423
27	CHANGE LEVER SHAFT	5600408
28	CHANGE LEVER	56004078
28	CHANGE LEVER SPRING	5600408
30	TAPE GUIDE ASSEMBLY	5600500
31	PRESSURE ROLLER ARM	5600601
32	PRESSURE ROLLER SHAFT	1510602
33	ARM METAL	5600603
34	PRESSURE ROLLER ARM SPRING	5600604
35	ROLLER	110305
36	WASHER	2030606
37	HEAD HOUSING	5600801
38	HEAD BASE	5600802
39	ADJUST SCREW	1510804
40	MAIN SHAFT	1510805
41	HEAD SUPPORT SPRING	5600807
42	HEAD VERTICAL ADJUSTMENT SPRING	110608
43	EARTH PLATE	3470801
44	MOTOR PULLEY	1510910
45	BELT	5610902
46	LUG TERMINAL J2	
47	CORD CLAMP E	4680901
48	DICKE	
49	RECORD LEVER	3331204
50	RECORD LEVER COLLAR	1151206
51	SPRING HOLDER	3171206
52	KICK LEVER SPRING	431103
53	RECORD PUSH ARM	4911202
54	RECORD PUSH COLLAR	4911203
55	RECORD PUSH ARM SPRING	4911204
56	MOTOR	NAM-3A
57	HEAD	W4802A
58	TN SPACER	15109018
59	GEAR 'A'	5601301
60	YOKE	5601302
61	ARMATURE	5601303
62	STOP PLATE	5601304
63	KICK PLATE	5601305
64	GEAR SHAFT	5601306
65	GEAR ROLLER	5601307
66	ARMATURE PIN	5601308
67	STOP PLATE METAL	5601309
68	KICK PIN	5601310
69	KICK ROLLER SHAFT	5601311
70	KICK PLATE METAL	5601312
71	EJECT COIL	5601313
72	SPRING	2380406
73	LEAF SWITCH	MSW-0058
74	SPRING	2981401
75	SOLENOID SHAFT	110804
76	STAPLE NO. 3	
77	TAPPING SCREW	M3 x 5
78	TAPPING SCREW	M3 x 6
79	TAPPING SCREW	M3 x 8
80	SCREW	M3 x 4
81	SCREW	M3 x 5
82	SCREW	M3 x 6
83	SCREW	M3 x 10
84	SCREW	M3 x 12
85	SCREW	M2.8 x 8
86	TAMS SCREW	M3 x 5
87	TAMS SCREW	M3 x 8
88	TAMS SCREW	M2.8 x 4
89	TAMS SCREW	M2.8 x 5
90	WASHER	36 x 86 x 0.5t
91	WASHER	46 x 106 x 0.8t
92	WASHER	36 x 146 x 1t
93	SPRING WASHER	M3
94	E RING 1.5	
95	E RING 2.3	
96	E RING 2.0	
97	E RING 3.2	
98	NUT	M3
99	E RING BETW-3	
100	GEAR (B)	5601317
101	REC LEVER	9551201
201	4 CAM ASSEMBLY	
202	CHANNEL CHANGE SOLENOID ASSEMBLY	TN999-SOL
203	PRESSURE ROLLER ARM ASSEMBLY	
204	EJECT SOLENOID ASSEMBLY	
205	KICK PLATE ASSEMBLY	

CASSETTE TAPE DECK EXPLODED VIEW

PARTS LIST

MAKER : TANASHIN

MODEL TN-57C-68



ITEM NO.	DESCRIPTION	SUPPLIER PART NO	QTY
1	CHASSIS ASS'Y	12600191	1
2	PACK SPRING	9500102	1
3			
4	RECORD SLIDE LEVER ASS'Y	12600293	1
5	SPRING	1805029	1
6	RECORD SAFETY LEVER	9100301	1
7	SPRING	12600302	1
8	RECORD SAFETY LEVER STOPPER	2680515	1
9			
10	HEAD PANEL	12600301	1
11	HEAD BLOCK	12000302	1
12	SPRING	12000302	1
13	SPRING	12000304	1
14	COLLAR	4080411	1
15	SPRING	480408	1
16	R/P HEAD	1712701	1
17	ERASE HEAD	1712202	1
18	SPRING	12600303	1
19	SENSING PLATE ASS'Y	12001191	1
20			
21	FINCH ROLLER ASS'Y	12600401	1
22	SPRING	12600402	1
23			
24	TAKE-UP REEL ASS'Y	12600591	1
25	DRIVE PULLEY	161504	1
26			
27			
28	SUPPLY REEL ASS'Y	12600691	1
29			
30	RF CLUTCH ASS'Y	12020781	1
31	SPRING	12000709	1
32	REW SPRING	12021001	1
33	FF IDLER ARM ASS'Y	12000891	1
34	SPRING	180309	1
35			
36	FLYWHEEL HOLDER	12600801	1
37	FLYWHEEL BEARING	12000806	1
38	SPRING	12000905	1
39	FLYWHEEL CAPSTAN	12000903	1
40			
41	MAIN PLATE	12001001	1
42	SPRING	2380410	1
43	REWIND ARM	12001002	1
44	PLAY SLIDE LEVER	12601003	1
45	COLLAR	090302	1
46	LEAF SWITCH	6301401	1
47			
48	MOTOR	EG-510AD-T2	1
49	MOTOR PULLEY	97319225	1
50	MAIN BELT	12601202	1
51	MOTOR BRACKET	12601201	1
52	COLLAR SCREW (S)	12001201	3
53	MOTOR RUBBER	5880910	3
54			
55	EJECT SLIDE LEVER	12601201	1
56	COLLAR	7630706	2
57	SPRING	2681201	1
58			
59	PUSH BUTTON ASS'Y	12721491	1
60			
61	PAUSE SLIDE LEVER	12601701	1
62	PAUSE LEVER	12221702	1
63	SPRING	12221703	1
64	ARM LEVER	12221705	1
65	SPRING	12601702	1
66	COLLAR	12601703	1
67	AUTO-STOP LEVER	12601101	1
68	SPRING	1320303	1
69	COLLAR	12601102	1
70			
71	BLAKE ARM ASS'Y	12601091	1
72	SPRING	12601092	1
73			
74	COUNTER	ME-300-024	1
75	COUNTER BRANCET	16021601	1
76	COUNTER BELT	2071201	1
77	COLLAR	11891510	1
78			
79			
80			
81			
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84			
85			
86			
87			
88			
89			
90			
100	CAP SCREW (+ -) 2 x 11		1
101	SCREW (+ -) 2 x 11		1
102	CAP SCREW (+ -) 2 x 12		2
103			
104	TAPPING SCREW 2.8 x 4		4
105	TAPPING SCREW 2.8 x 5		4
106	TAPPING SCREW (BIND) 2.6 x 5		2
107			
108	TAPPING SCREW 2.6 x 8		4
109	TAPPING SCREW 2.6 x 10		1
110	SCREW 2.6 x 12		1
111	TAPPING SCREW 2.6 x 4		1
112			
113	TAPPING SCREW		2
114			
115	E RING 2.6		1
116	E RING 4		1
117			
118			
119	NYLON WASHER 2.2 x 7 x 0.5	4081120	1
120	NYLON WASHER 1.8 x 5 x 0.5	031603	1
121			
122	WASHER 2.3 x 4.3 x 0.4		1
123	WASHER 2.6 x 6 x 0.5	7041501	1

ELECTRICAL PARTS LIST.

Ref. No.	Part No.	Description	Qty.	Ref. No.	Part No.	Description	Qt
SEMI-CONDUCTORS							
Q101	2SC693 (F,G)	Transistor	2	R113		1M	2
Q102				R114			
Q103	2SC536 (G)	Transistor	2	R115		39K	2
Q104				R116			
Q105	2SC536 (F,G)	Transistor	2	R117		39K	2
Q106				R118			
Q107	2SC536 (E,F)	Transistor	2	R119		22K	2
Q108				R120			
Q201	2SC693 (F,G)	Transistor	2	R121		100K	2
Q202				R122			
Q203	2SC536 (F,G)	Transistor	2	R123		1K	2
Q204				R124			
Q205	2SC536 (F,G)	Transistor	2	R125		1.5K	2
Q206				R126			
Q207	2SC536 (E,F)	Transistor	2	R127		2.2K	2
Q208				R128			
Q301	2SC536 (F,G)	Transistor	2	R129		1.2K	2
Q302				R130			
Q401	2SD400Pz (F)	Transistor	1	R131		1.2K	2
DIODES							
D201	IS188AM	Diode	2	R132			
D202				R133		2.7K	2
D203	IS188AM	Diode	2	R134			
D204				R135		560K	2
D205	IS188AM	Diode	2	R136			
D206				R137		4.7K	2
D301	SRIK-1	Diode	1	R138			
D302	SRIK-1	Diode	2	R139		220	2
D303				R140			
D304	SRIK-1	Diode	2	R141		2.2K	2
D305				R142			
D306	UZ-12B	Zener Diode	1	R143		1M	2
D401	DS-442	Diode	1	R144			
D402	SLP-135B	LED (RED)	2	R145		100K	2
D403				R146			
D404	DS-442	Diode	1	R147		8.2K	2
D501				R148			
D502				R149		56	2
D503~	SL-1161	LED (DISPLAY)	1	R150			
D509				R151		27K	2
D510~	DS-442	Diode	9	R152		4.7K	1
D518				R153			
D307	SLP-235B	LED (GREEN)	2	R201		120K	2
D308	SLP-135B	LED (RED)	1	R202			
D309				R203		47K	2
COIL							
L101	HTX-381/0868	Bias Trap Coil 15mH	2	R204			
L102				R205		330	2
L103	HTX-381/0868	Bias Trap Coil 15mH	2	R206			
L104				R207		220K	2
T401	HTX-385/0868	Bias OSC Coil	1	R208			
RESISTORS							
		All resistors are carbon, 1/4W unless otherwise noted.		R209		1K	2
R101		39K	2	R210			
R102				R211		5.6K	2
R103		47K	2	R212			
R104				R213		330K	2
R105		330	2	R214			
R106				R215		100K	2
R107		5.6K	2	R216			
R108				R217		22K	2
R109		100K	2	R218			
R110				R219		1.8K	2
R111		1.5K	2	R220			
R112				R221		1.2K	2
				R222			
				R223		330K	2
				R224			
				R225		1K	2
				R226			
				R227		56	2
				R228			

Ref. No.	Part No.	Description	Qty.	Ref. No.	Part No.	Description	Qty.
RESISTORS				C123		1 μ F 50V Electrolytic	2
R229		47K	2	C124			
R230				C125		0.0068 μ F Mylar	2
R231		390K	2	C126			
R232				C127		0.0022 μ F Mylar	2
R233		2.2K	2	C128			
R234				C129		10 μ F 16V Electrolytic	2
R235		10K	2	C130			
R236				C131		0.47 μ F 50V Electrolytic	2
R237		2.2K	2	C132			
R238		3.3K	1	C133		10 μ F 16V Electrolytic	2
R239		2.2K	1	C134			
R240		5.6K	2	C135		470P Ceramic	2
R241				C136			
R242		180 1W Metal	1	C137		0.0039 μ F Mylar	2
R301		680 1/2W Metal	1	C138			
R302		47 1/2W Metal	1	C139		33P Ceramic	2
R303				C140			
R304		3.3K	2	C141		0.0082 μ F Mylar	2
R305				C142			
R401		680 1/2W Metal	2	C201		560PF Ceramic	2
R402				C202			
R403		33K	2	C203		470PF Ceramic	2
R404				C204			
R405		1K	1	C205		1 μ F 50V Electrolytic	2
R406		270 1/2W Metal	1	C206			
R407		47 1/2W Metal	1	C207		100P Ceramic	2
R408		150	1	C208			
R409		470	1	C209		22P Ceramic	2
R410		33K	1	C210			
R411		5.6	1	C211		4.7 μ F 16V Electrolytic	2
R501		12 1/2W Metal	1	C212			
R502		220 1/2W Metal	1	C213		0.0039 μ F Mylar	2
R503~				C214			
R509		2.7K	7	C215		47 μ F 10V Electrolytic	2
R601				C216			
R602		56K	2	C217		4.7 μ F 16V Electrolytic	2
R604				C218			
R605		330	2	C219		330P Ceramic	2
R606				C220			
R607		6.8K	2	C221		10 μ F 16V Electrolytic	2
R608				C222			
R609		330	2	C223		1 μ F 50V Electrolytic	2
CAPACITORS				C224			
C101		0.0012 μ F Mylar	2	C225		0.001 μ F Mylar	2
C102				C226			
C103		470PF Styrol	2	C227		4.7 μ F 16V Electrolytic	2
C104				C228			
C105		0.001 μ F Mylar	2	C229		3.3 μ F 50V Electrolytic	2
C106				C230			
C107		100 μ F 10V Electrolytic	2	C231		0.0068 μ F Mylar	2
C108				C232			
C109		3.3 μ F 50V Electrolytic	2	C233		0.022 μ F Mylar	2
C110				C234			
C111		100P Ceramic	2	C301		1000 μ F 25V Electrolytic	2
C112				C302			
C113		22P Ceramic	2	C303		470 μ F 16V Electrolytic	1
C114				C304		1 μ F 50V Electrolytic	1
C115		4.7 μ F 16V Electrolytic	2	C401		100P Ceramic	2
C116				C402			
C117		0.0039 μ F Mylar	2	C403		0.0039 μ F Mylar	1
C118				C404		0.01 μ F Mylar	1
C119		0.0027 μ F Mylar	2	C405		0.01 μ F Mylar	1
C120				C406		0.01 μ F Mylar	1
C121		47 μ F 10V Electrolytic	2	C407		220 μ F 16V Electrolytic	1
C122				C408		0.015 μ F Mylar	1
				C409		0.0068 μ F Mylar	1
				C501		100 μ F 25V Electrolytic	1
				C502		220 μ F 25V Electrolytic	1

Ref. No.	Part No.	Description	Q'ty
SWITCHES			
S1	SSX-280	Slide Switch (Recording) (Cassette)	1
S2	SSX-280	Slide Switch (Recording) (8 Track)	1
SW101~ SW106	SSX-278	Push Switch (NRC, Tape Select)	1
SW1~3	SSX-275	Tape Dubbing-Aux.-Mic.	1
SW4~6	SSX-276	F. FWD-REPEAT-EJECT	1
SW7~11	SSX-274	AUTO EJECT-PAUSE-PROGRAM	1
S301	SSX-277	Power Switch	
LAMPS			
PL301 PL302	EPX-363	Meter	2
PL501	EPX-368-2	Tape Running	1
JACKS AND PLUGS			
	EPX-378	Mic. Jack	1
	EPX-378	Mic. Jack	1
	EPX-375	Heac Phone Jack	1
	TEX-168	Base Connector (4P RCA)	1
OTHER			
PT301	PTX-237	Power Trans.	1
	EPX-372	AC Cord	1
	MPM-249	Cord Stopper	1
	EPX-374-1	Level Meter (Left)	1
	EPX-374-2	Level Meter (Right)	1
T201	PTX-238	Output Trans.	1
T202	PTX-238	Output Trans.	1
VR201	VRX-341	REC Level 50K	1
VR202	VRX-341	REC Level 50K	1

Ref. No.	Part No.	Part Name	No/Set
	CAW-306L/0868	Main Cabinet	1
	CFW-276/0868	Back Board	1
	MPM-495/0868	Foot	4
	CFS-319/0868	Ornament Panel	1
	CFM-329/0868	Meter cover	1
	CFM-330/0868	Program Ind. Cover	1
	CFM-324/0868	Cartridge Frame	1
	CFS-318/0868	Tape Cover	1
	CFS-313/0868	Tape Shaft	1
	PLS-388H/0868	Tape Spring	1
	MPM-435H	Push Knob Guide	1/6
	MPM-484	Push Switch Holder	14/6
	CFS-320/0868	Handle	2
	CFS-321/0868	Handle Guide	4
	MPM-439-A/0868	Push Knob (A)	1
	MPM-469J-A/0868	Program Knob	13
	MPM-469J-B/0868	Program Knob	1
	MPM-494H/0868	Rotary Knob	2
	MPM-489J-2/0868	Reset Cap	1
	MPM-488H-A/0868	Cassette Knob	5
	MPM-488H-B/0868	Cassette Knob (REC)	1
	CFM-331K/0868	Cassette Lid	1
	CFS-322J/0868	Lid Plate	1
	SCS-110/0868	Cassette Cover Screw	2
	DLS-441H/0868	Lid Spring	2
	PAW-755/0868	Lumiere Sheet	2
	PAW-700-B/0868	Tape Mirror	1
	CFS-323	Meter Plate	1
	CFS-324	Program Ind. Plate	1
	CFS-325J	Cassette Plate	1
	DLS-446	Cassette Spring (R)	1
	DLS-444#J	Cassette Spring (L)	1
	MPM-490H/0868	Counter Slit	1
	MPM-491H/0868	Indicator	1
	MPM-492H/0868	Lamp Holder	1
	MPM-493/0868	Optical Fiber	1
	MPM-168-A/0868	Lamp Holder	1
	CHS-1099H/0868	Rec. Shaft Support (B)	1
	CHS-1067L/0868	Rec. Plate Guide	1
	CHS-1105H/0868	Rec. Plate Guide	1
	DLS-442H/0868	Recording Shaft (8 Track)	1
	CHS-1068K/0868	Guide Plate	1
	DLS-293	Pulley Screw	1
	CHS-1100	Rec. Knob Shaft	1
	DLS-447	Rec. Spring	1
	CHS-1101H	Rec. Shaft Support (A)	1
	CHS-1106H	Rec. Stay	2
	CHS-1108	Guide Plate	1
	CHS-1107H/0868	Cassette Rec. Plate	1
	DLS-443H/0868	Recording Shaft (Cassette)	1