

Service Manual

PIONEER®
The Art of Entertainment

KEH-4500/X1M/UC



ORDER NO.
CRT1997

HIGH POWER CASSETTE PLAYER WITH FM/AM TUNER

KEH-4500

KEH-4550

X1M/UC

X1M/ES

NOTE:

- See the separate manual CX-631(CRT1640) for the cassette mechanism description.
- The cassette mechanism assy employed in this model is one of X-2L series
- Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "Dolby" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.
- This service manual does not describe the CD test mode.
For the operations in the CD test mode, refer to the CD player's Service Manual.

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1. SAFETY INFORMATION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.

Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

UC model

WARNING

Lead in solder used in this product is listed by the California Health and Welfare agency as a known reproductive toxicant which may cause birth defects or other reproductive harm (California Health & Safety Code, Section 25249.5). When servicing or handling circuit boards and other components which contain lead in solder, avoid unprotected skin contact with the solder. Also, when soldering do not inhale any smoke or fumes produced.

2. EXPLODED VIEWS AND PARTS LIST

2.1 PACKING

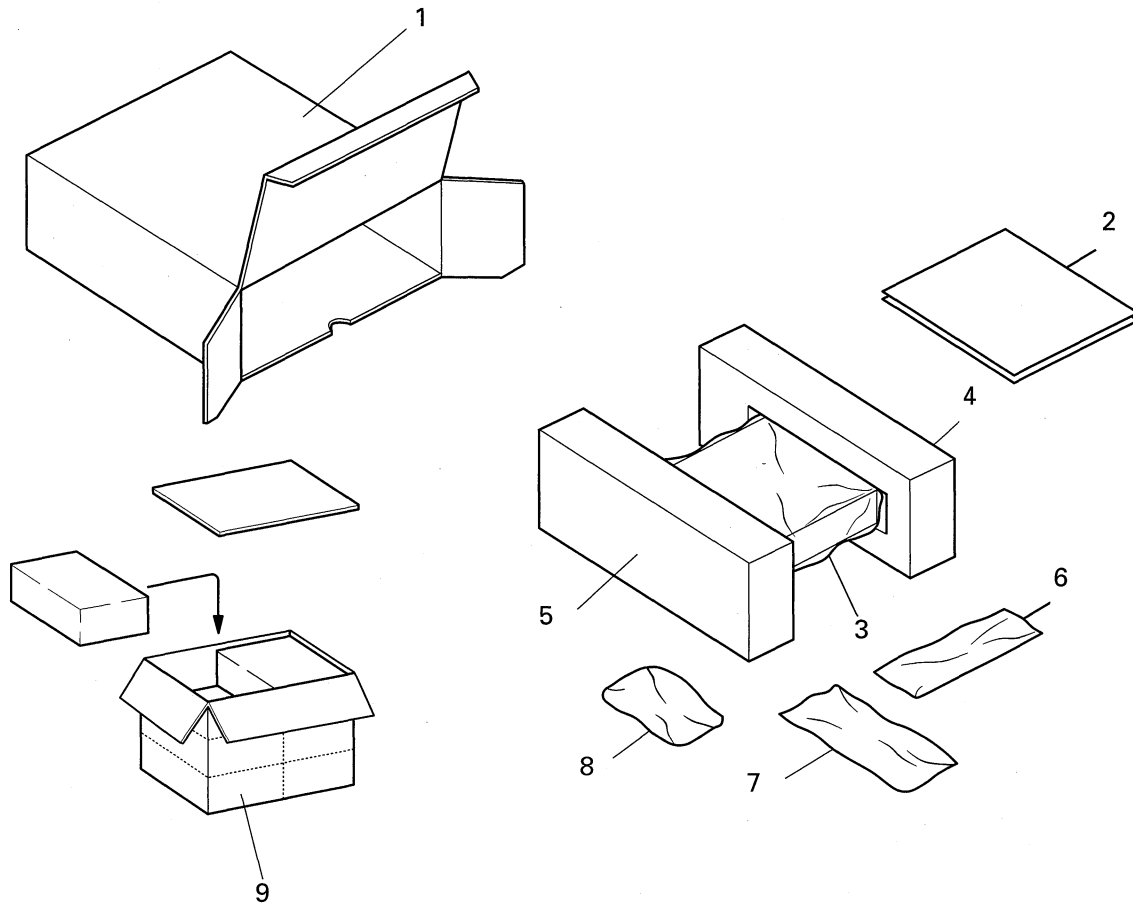


Fig. 1

NOTE:

● Parts marked by " *" are generally unavailable because they are not in our Master Spare Parts List.

● Screws adjacent to ▼ mark on the product are used for disassembly.

● **Parts List**

Mark No.	Description	Part No.	
		KEH-4500/X1M/UC	KEH-4550/X1M/ES
1	Carton	CHG3228	CHG3229
2-1	Owner's Manual	CRD2223	CRD2225
2-2	Installation Manual	CRD2224	CRD2226
* 2-3	Card	ARY1048	Not used
3	Polyethylene Bag	CEG1173	CEG-162
4	Protector	CHP1622	CHP1622
5	Protector	CHP1623	CHP1623
6	Case Assy	CXB1063	CXB1063
7	Cord Assy	CDE4849	CDE4849
8	Accessory Assy	CEA2002	CEA2002
9	Contain Box	CHL3228	CHL3229

● **Owner's Manual, Installation Manual**

Model	Part No.	Language
KEH-4500/X1M/UC	CRD2223	English, French, Spanish
	CRD2224	English, French, Spanish
KEH-4550/X1M/ES	CRD2225	English, Spanish Portuguese, Arabic
	CRD2226	English, Spanish, Portuguese, Arabic

● **Accessory Assy**

Accessory Assy CEA2002

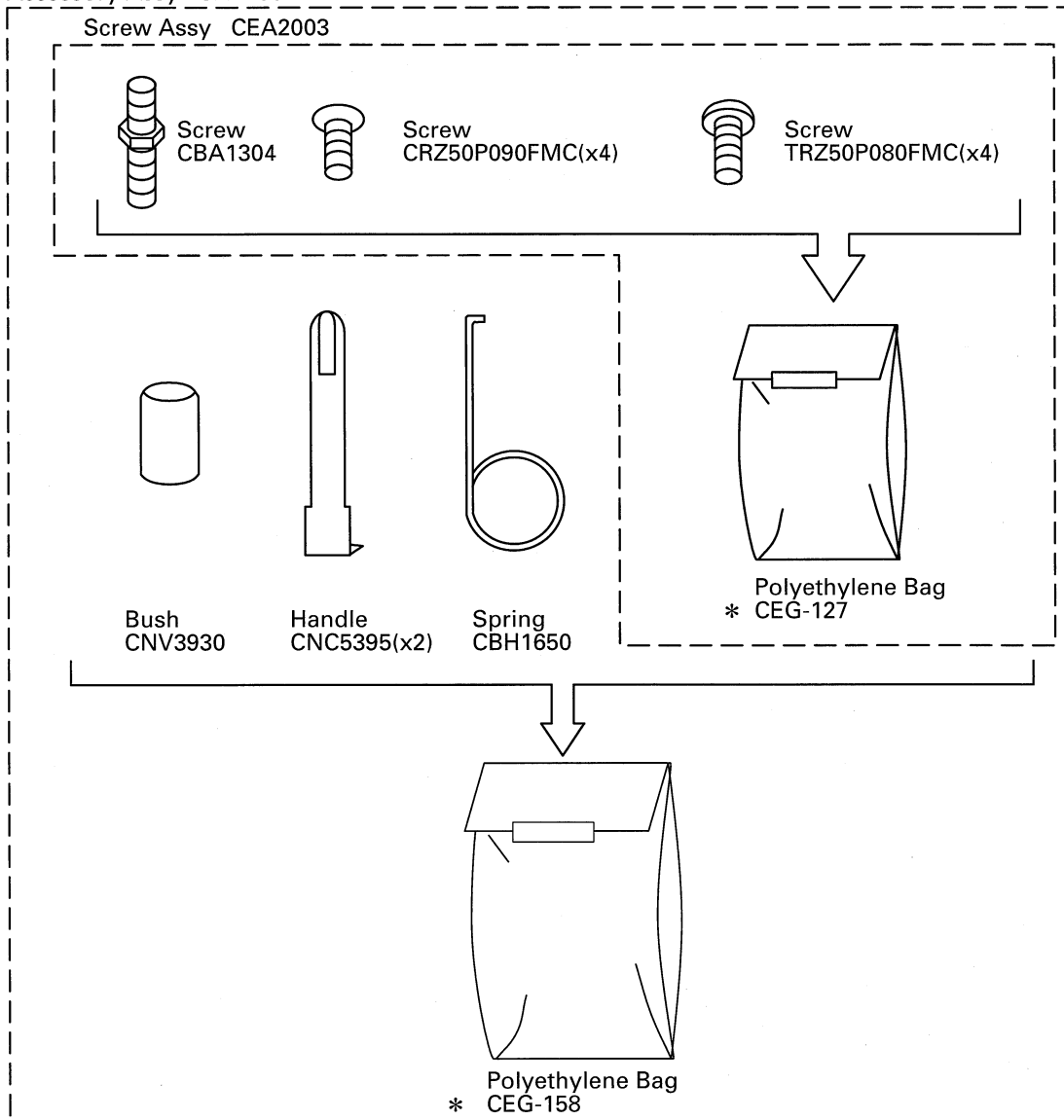


Fig. 2

2.2 EXTERIOR

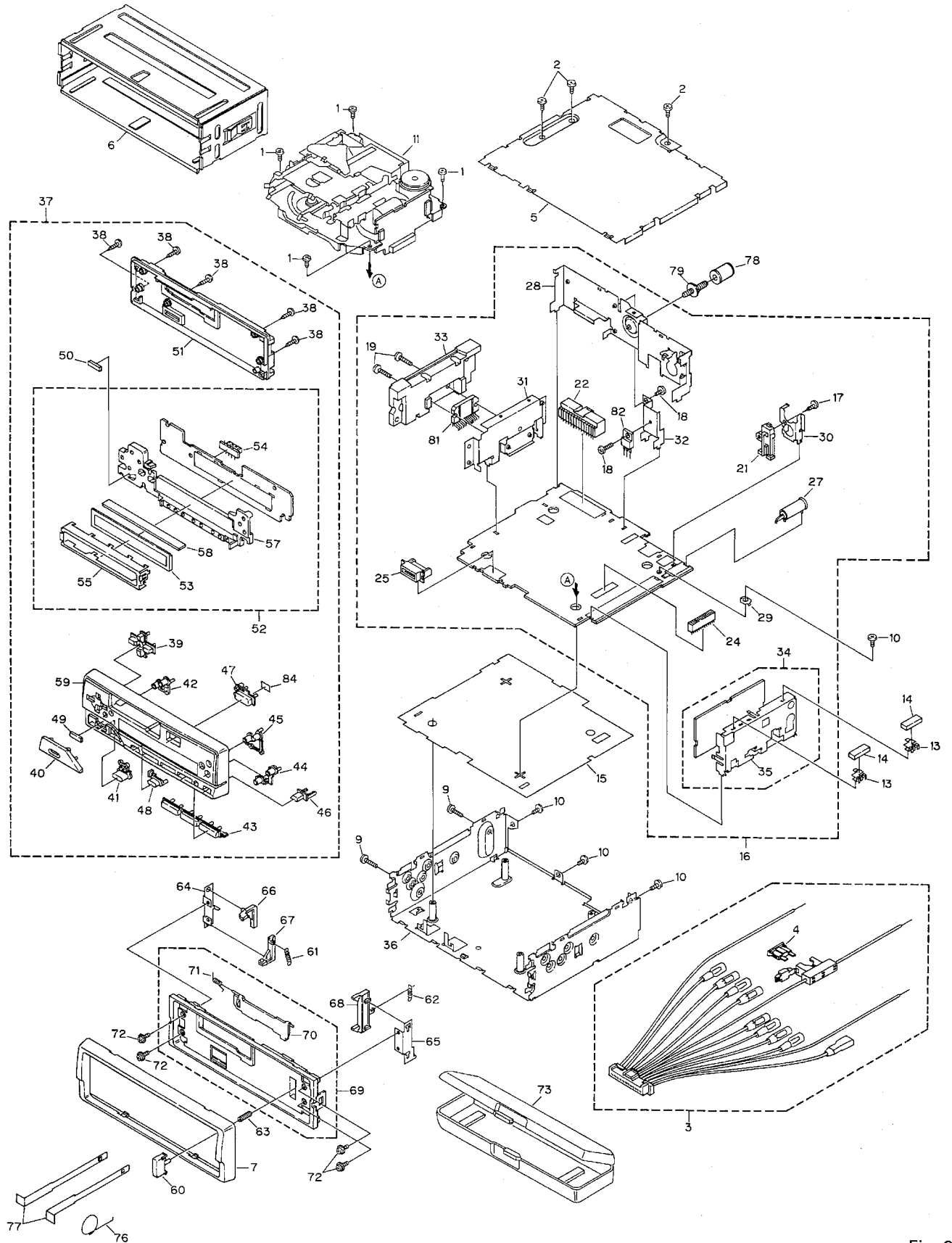


Fig. 3

● Parts List

Mark No.	Description	Part No.	
		KEH-4500/X1M/UC	KEH-4550/X1M/ES
1	Screw	BSZ26P050FMC	BSZ26P050FMC
2	Screw	BSZ30P060FMC	BSZ30P060FMC
3	Cord Assy	CDE4849	CDE4849
4	Fuse(10A)	CEK1136	CEK1136
5	Case	CNB2074	CNB2074
6	Holder	CNC6798	CNC6798
7	Panel	CNS4200	CNS4200
8	.....	
9	Screw	BMZ30P100FMC	BMZ30P100FMC
10	Screw	BSZ30P055FUC	BSZ30P055FUC
11	Cassette Mechanism Module	EXK3610	EXK3610
12	.....	
13	Holder	CNC5704	CNC5704
14	Cushion	CNM4870	CNM4870
15	Insulator	CNM5045	CNM5045
16	Tuner Amp Unit	CWM5266	CWM5267
17	Screw	BPZ26P080FMC	BPZ26P080FMC
18	Screw	BSZ26P080FMC	BSZ26P080FMC
19	Screw	BSZ26P140FMC	BSZ26P140FMC
20	.....	
21	Pin Jack(CN301)	CKB1028	CKB1028
22	Plug(CN951)	CKM1226	CKM1226
23	.....	
24	Connector(CN602)	CKS3568	CKS3568
25	Connector(CN601)	CKS3581	CKS3581
26	.....	
27	Antenna Jack(CN402)	CKX1056	CKX1056
28	Panel	CNB2105	CNB2105
29	Holder	CNC5399	CNC5399
30	Holder	CNC6531	CNC6531
31	Holder	CNC6674	CNC6674
32	Holder	CNC6845	CNC6845
33	Heat Sink	CNR1426	CNR1426
34	FM/AM Tuner Unit	CWE1417	CWE1485
35	Holder	CNC6555	CNC6555
36	Chassis Unit	CXA9858	CXA9858
37	Detach Grille Assy	CXB1056	CXB1057
38	Screw	BPZ20P120FZK	BPZ20P120FZK
39	Button	CAC4859	CAC4859
40	Button(+,-)	CAC4860	CAC4860
41	Button(SOURCE)	CAC4861	CAC4861
42	Button(FUNC,AUDIO)	CAC4862	CAC4862
43	Button(1-6)	CAC4864	CAC4864
44	Button(PGM,DISPLAY)	CAC5161	CAC5161
45	Button(LOUD,CLOCK)	CAC4866	CAC4866

Mark No.	Description	Part No.	
		KEH-4500/X1M/UC	KEH-4550/X1M/ES
46	Button(Detach)	CAC4870	CAC4870
47	Button(EJECT)	CAC4874	CAC4874
48	Button(◀▶)	CAC5130	CAC5130
49	Cushion	CNM5156	CNM5156
50	Cushion	CNM5271	CNM5271
51	Cover	CNS4194	CNS4194
52	Key Board Unit	CWM5272	CWM5272
53	LCD(LCD901)	CAW1410	CAW1410
54	Connector(CN901)	CKS3580	CKS3580
55	Holder	CNC6846	CNC6846
56	.....	
57	Lighting Conductor	CNV4762	CNV4762
58	Connector	CNV4763	CNV4763
59	Grille Unit	CXB1030	CXB1031
60	Button	CAC4836	CAC4836
61	Spring	CBH1834	CBH1834
62	Spring	CBH1835	CBH1835
63	Spring	CBH1933	CBH1933
64	Bracket	CNC6135	CNC6135
65	Bracket	CNC6791	CNC6791
66	Arm	CNV4692	CNV4692
67	Arm	CNV4693	CNV4693
68	Arm	CNV4728	CNV4728
69	Panel Unit	CXB1035	CXB1035
70	Door	CAT1836	CAT1836
71	Spring	CBH1838	CBH1838
72	Screw	IMS20P030FZK	IMS20P030FZK
73	Case Assy	CXB1063	CXB1063
74-75	.....	
76	Spring	CBH1650	CBH1650
77	Handle	CNC5395	CNC5395
78	Bush	CNV3930	CNV3930
79	Screw	CBA1304	CBA1304
80	.....	
81	IC(IC301)	TDA7384A	TDA7384A
82,83	.....	
84	Spacer	CNM5356	CNM5356

2.3 CASSETTE MECHANISM MODULE

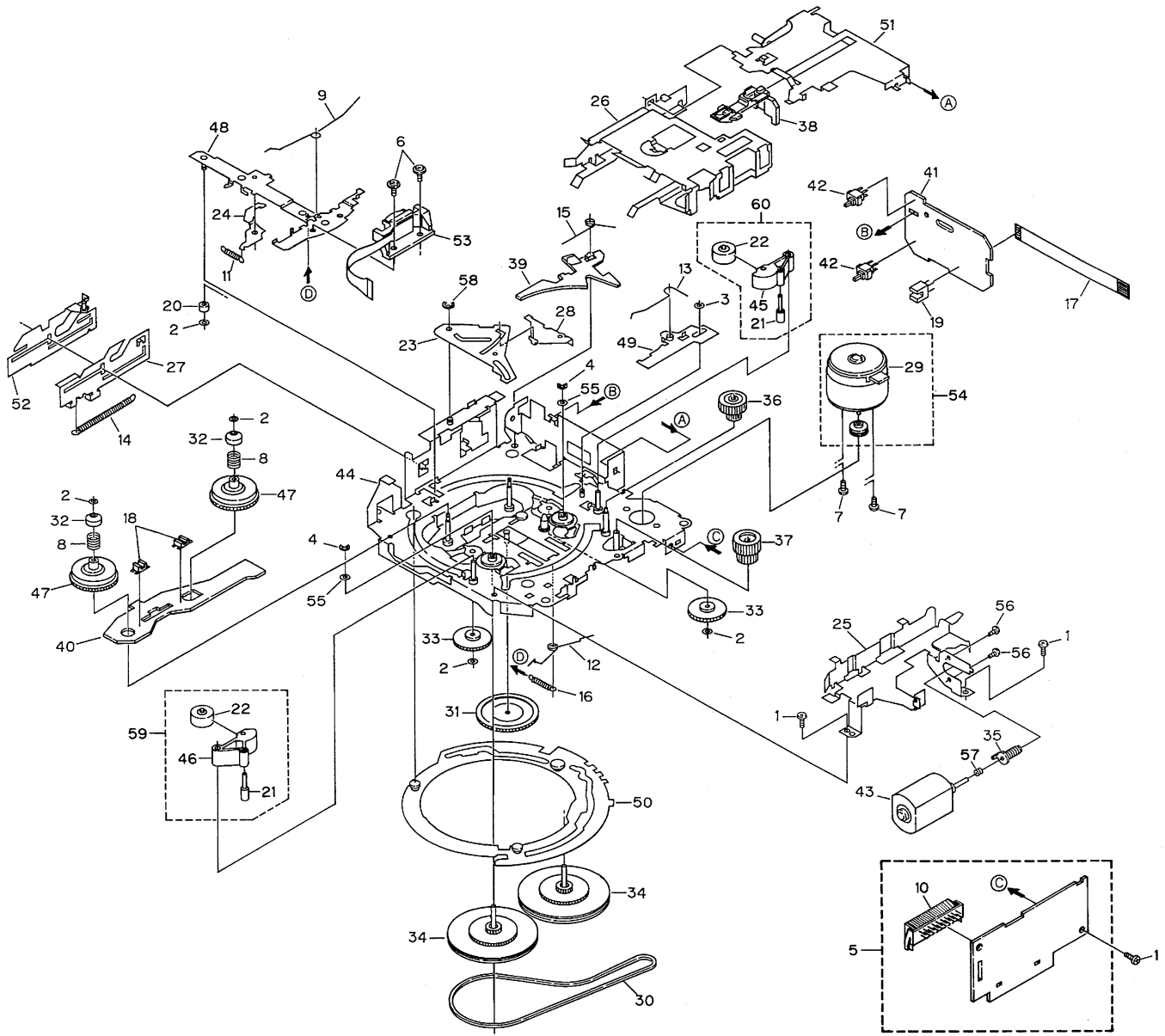


Fig. 4

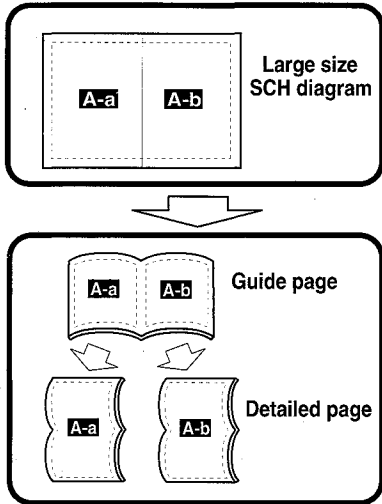
● Parts List

Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	Screw	BSZ20P040FMC	31	Gear	ENV1347
2	Washer	CBF1037	32	Collar	ENV1508
3	Washer	CBF1038	33	Gear	ENV1350
4	Washer	CBG1003	34	Flywheel	ENV1516
5	Deck Unit	EWM1010	35	Worm Gear	ENV1439
6	Screw	EBA1028	36	Worm Wheel	ENV1440
7	Screw	EBA1037	37	Gear	ENR1028
8	Spring	EBH1531	38	Lever	ENV1442
9	Spring	EBH1575	39	Arm	ENV1445
10	Plug(CN251)	CKS3540	40	Gathering P.C.Board	ENX1037
11	Spring	EBH1515	41	Gathering P.C.Board	ENX1042
12	Spring	EBH1587	42	Switch(S1,S2)	ESG1004
13	Spring	EBH1517	43	Motor Unit(M2)	EXA1485
14	Spring	EBH1518	44	Chassis Unit	EXA1455
15	Spring	EBH1519	45	Pinch Holder	ENV1485
16	Spring	EBH1537	46	Pinch Holder	ENV1486
17	Cord	EDD1020	47	Reel Unit	EXA1456
18	Photo-interrupter(EGN2,3)	EGN1006	48	Head Base Unit	EXA1457
19	Photo-interrupter(EGN1)	EGN1005	49	Lever Unit	EXA1438
20	Roller	ENR1031	50	Gear Unit	EXA1436
21	Shaft	ELA1373	51	Frame Unit	EXA1458
22	Pinch Roller	ENV1501	52	Lever Unit	EXA1439
23	Arm	ENC1396	53	Head Assy(HD1)	EXA1506
24	Arm	ENC1397	54	Motor Unit(M1)	EXA1491
25	Guide	ENC1481	55	Washer	HBF-179
26	Holder	ENC1417	56	Screw	BMZ20P022FMC
27	Lever	ENC1448	57	Spring	EBH1545
28	Arm	ENC1401	58	Washer	YE20FUC
29	Motor	EXM1028	59	Pinch Holder Unit	EXA1501
30	Belt	ENT1027	60	Pinch Holder Unit	EXA1500

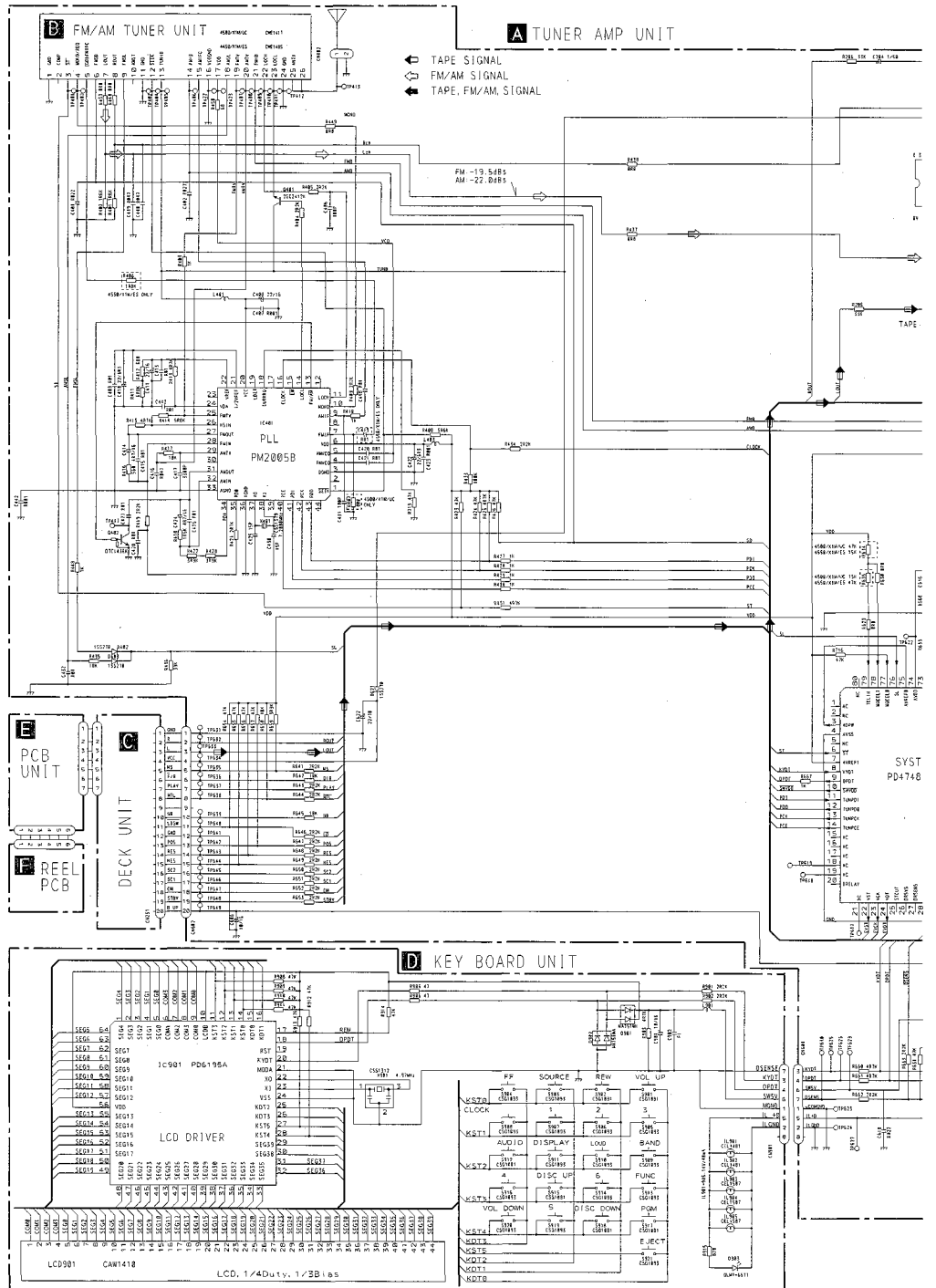
3. SCHEMATIC DIAGRAM

3.1 OVERALL CONNECTION DIAGRAM(GUIDE PAGE)

Note: When ordering service parts, be sure to refer to "EXPLODED VIEWS AND PARTS LIST" or "ELECTRICAL PARTS LIST".



A-a



A-b

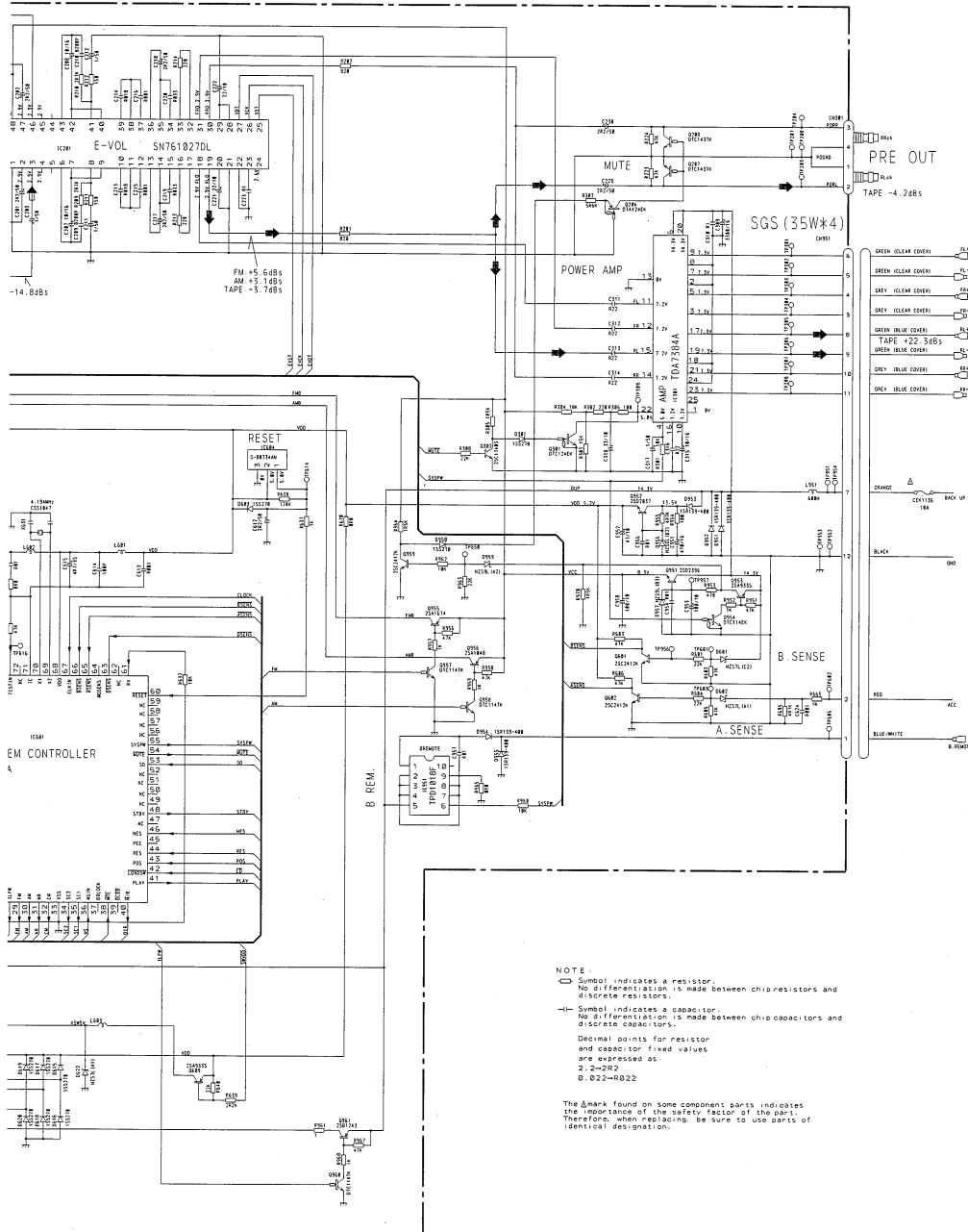
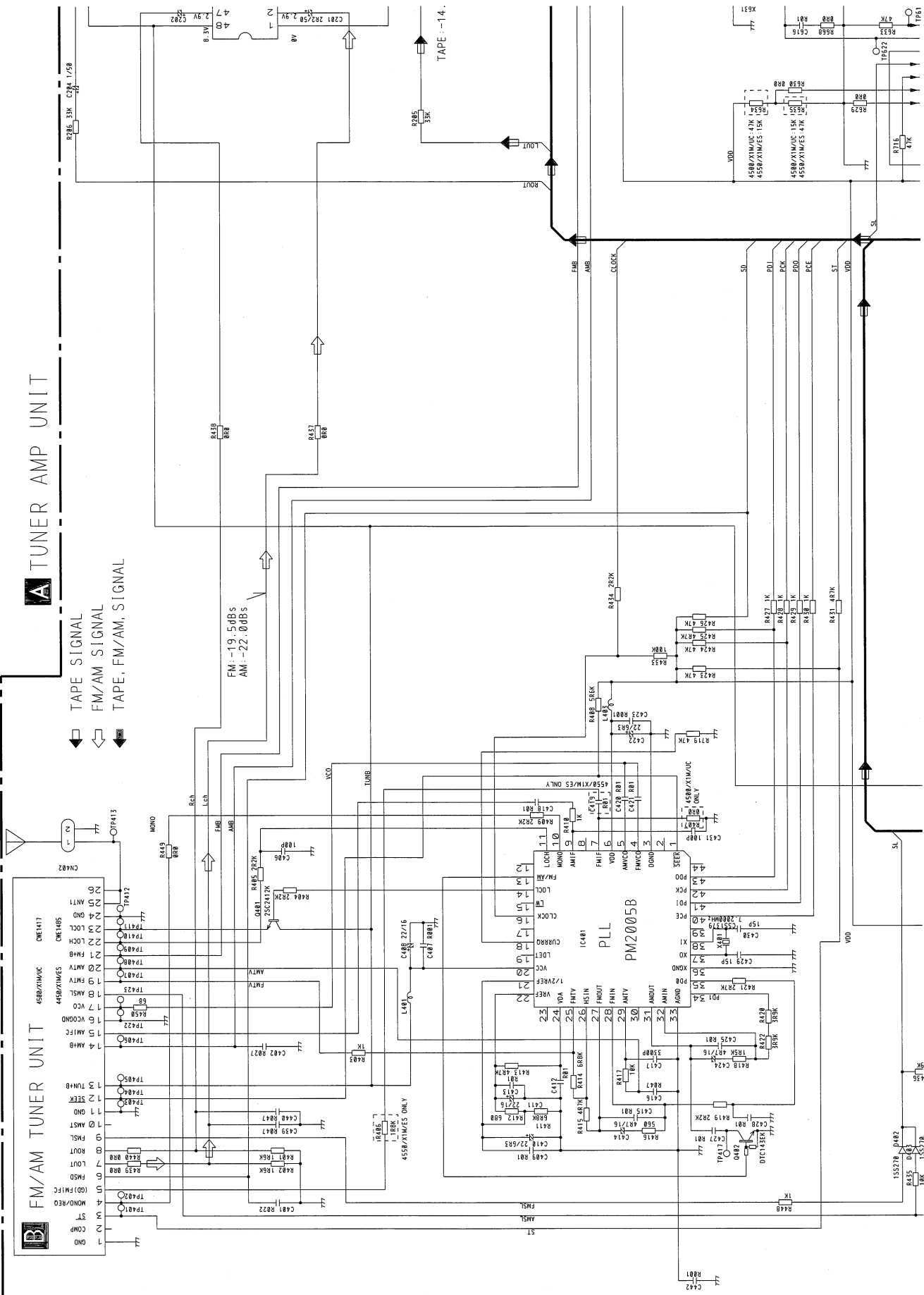


Fig. 5

A-a A-b

A TUNER AMP UNIT

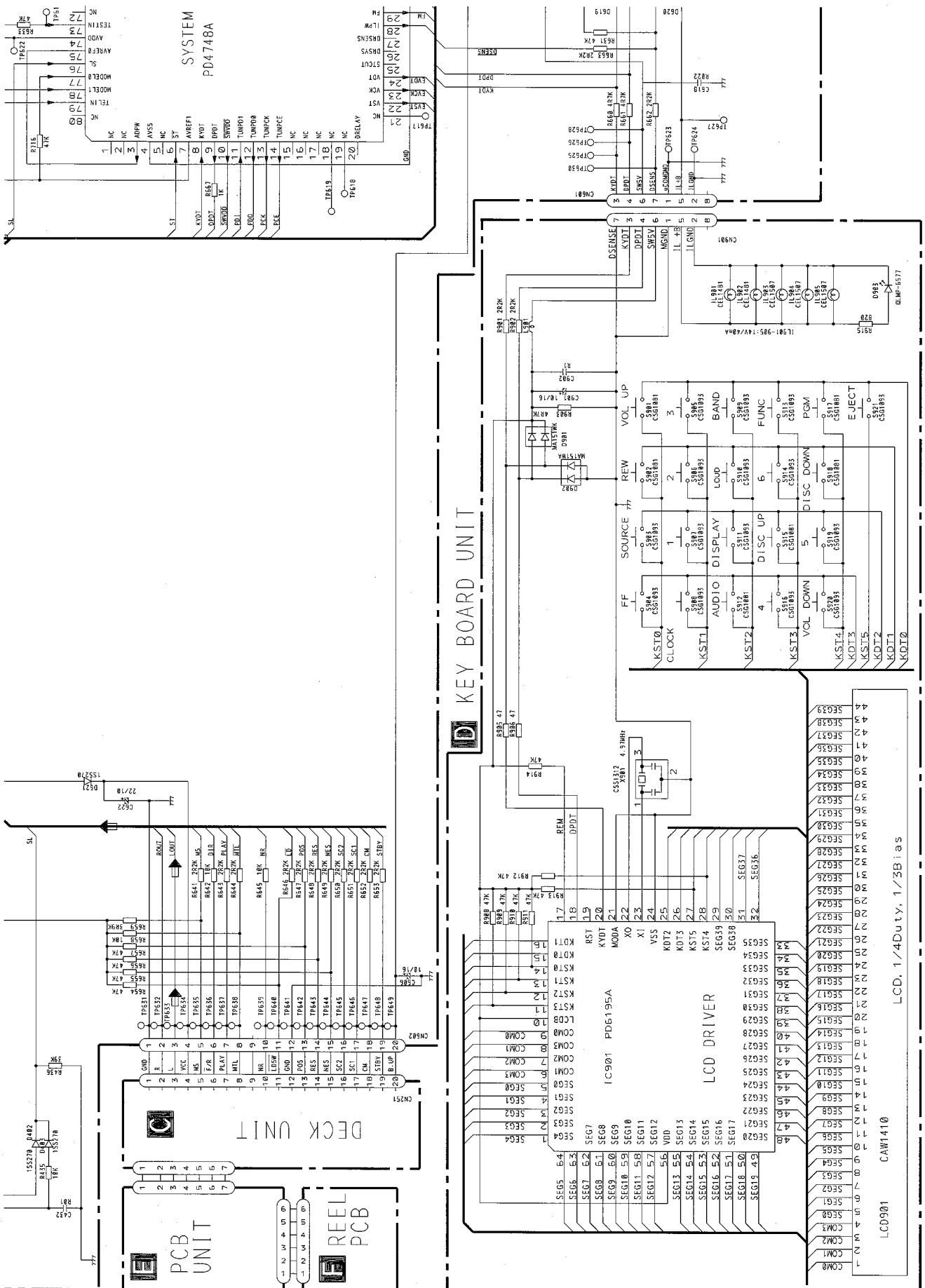
B FM/AM TUNER UNIT



TAPE SIGNAL
 FM/AM SIGNAL
 TAPE, FM/AM, SIGNAL

FM: 19.50BS
 AM: 22.00BS

TAPE -14.

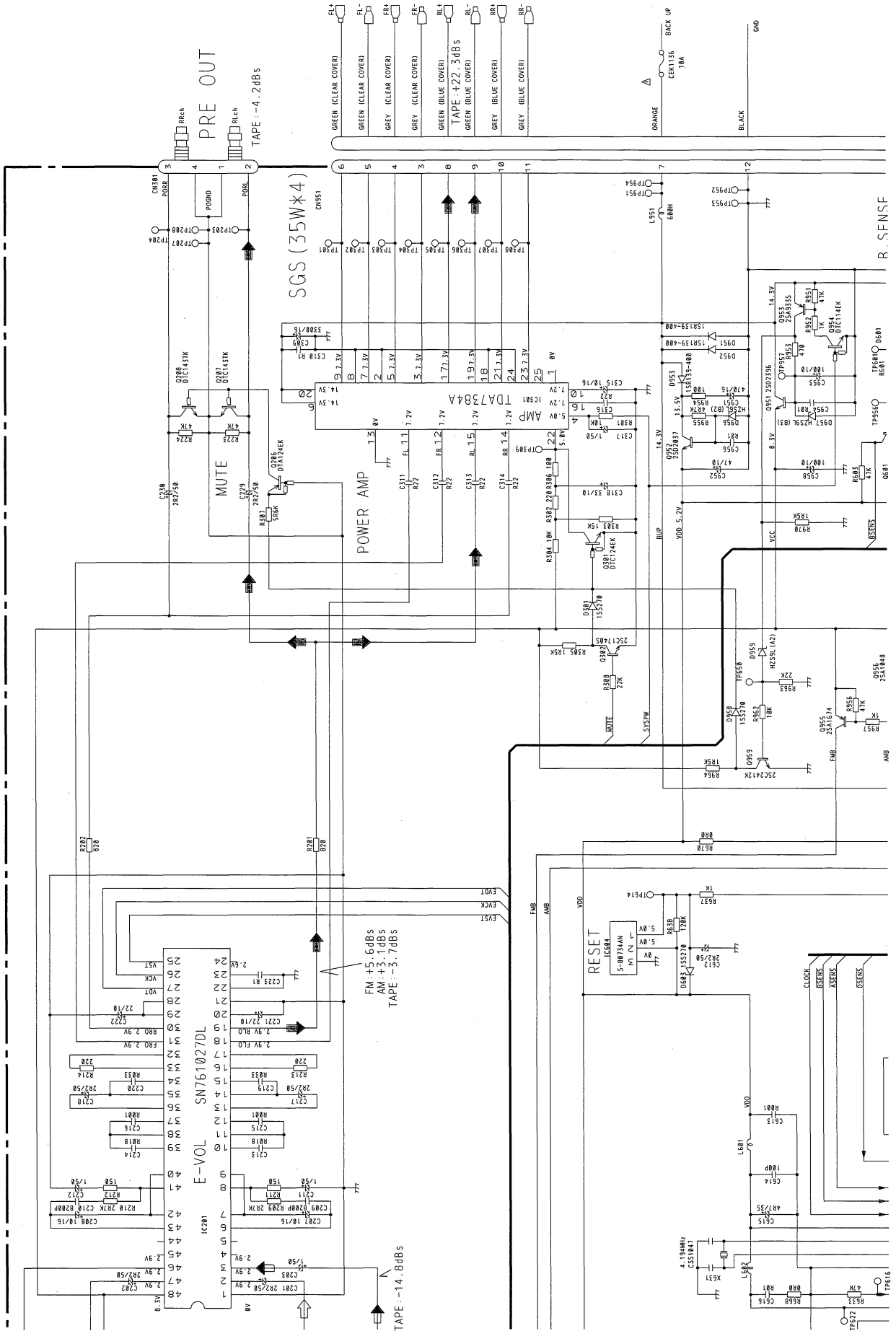


A-a A-b

Fig. 6

A-a

A-a A-b



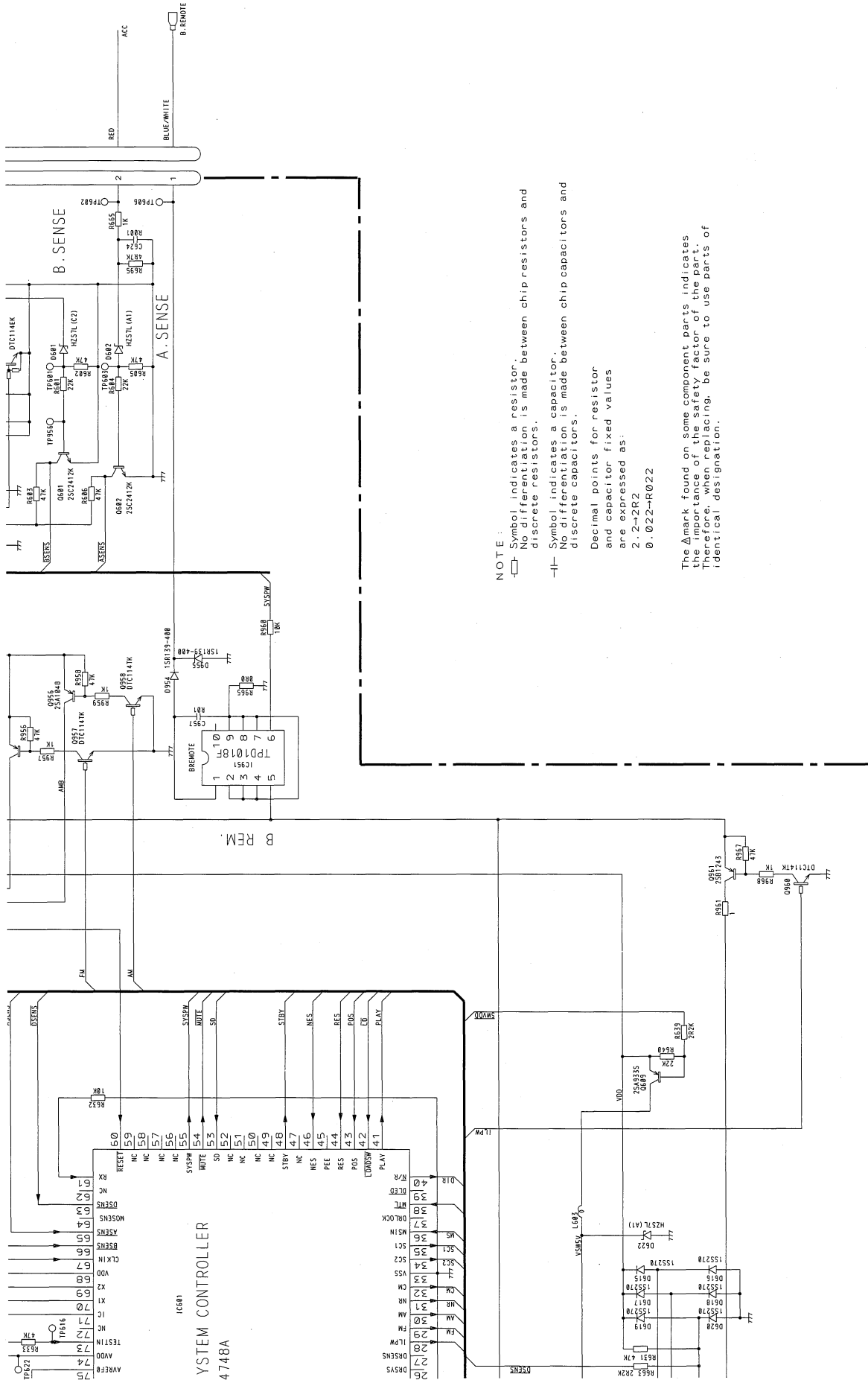
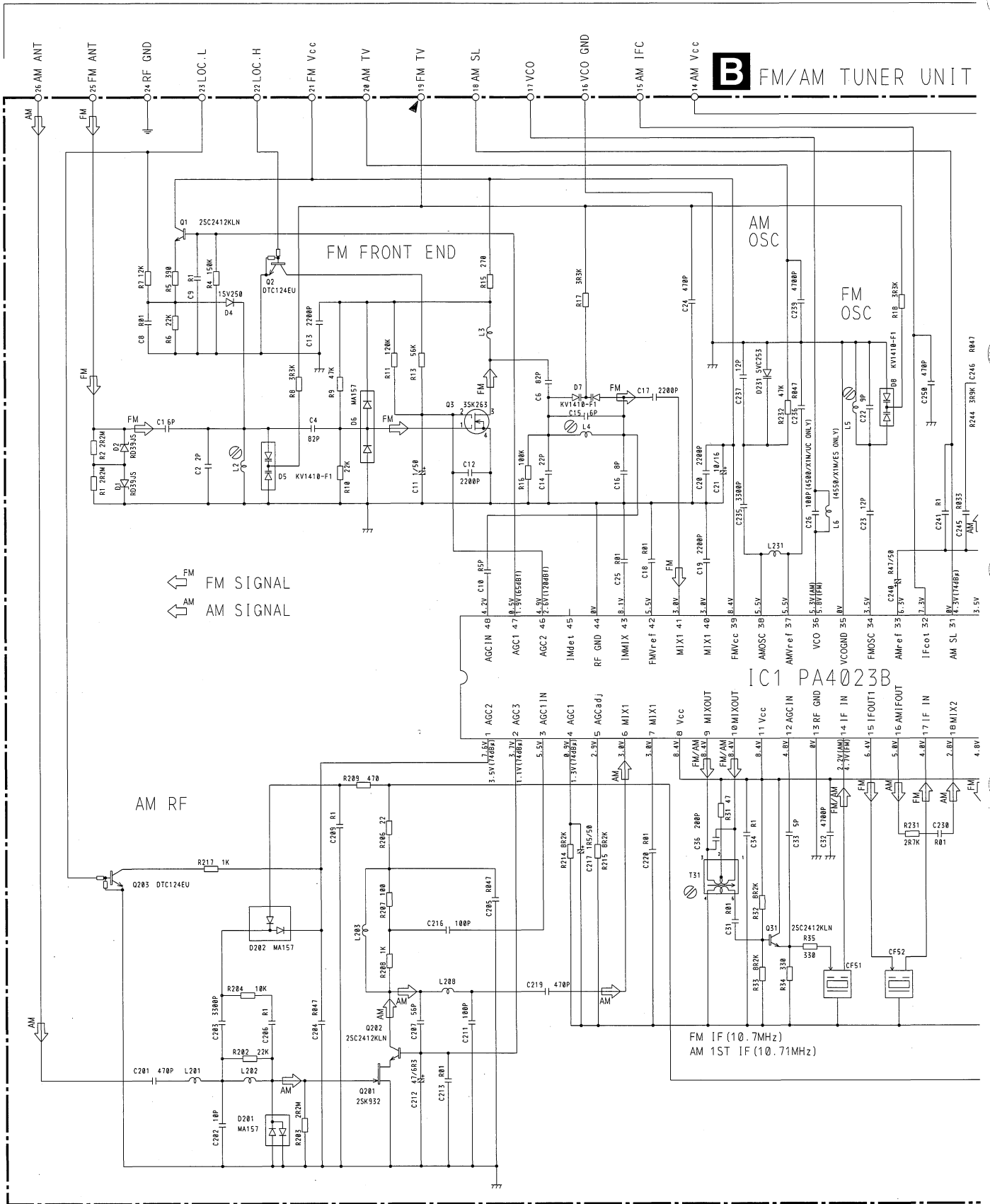


Fig. 7

3.2 FM/AM TUNER UNIT

A

B FM/AM TUNER UNIT



B

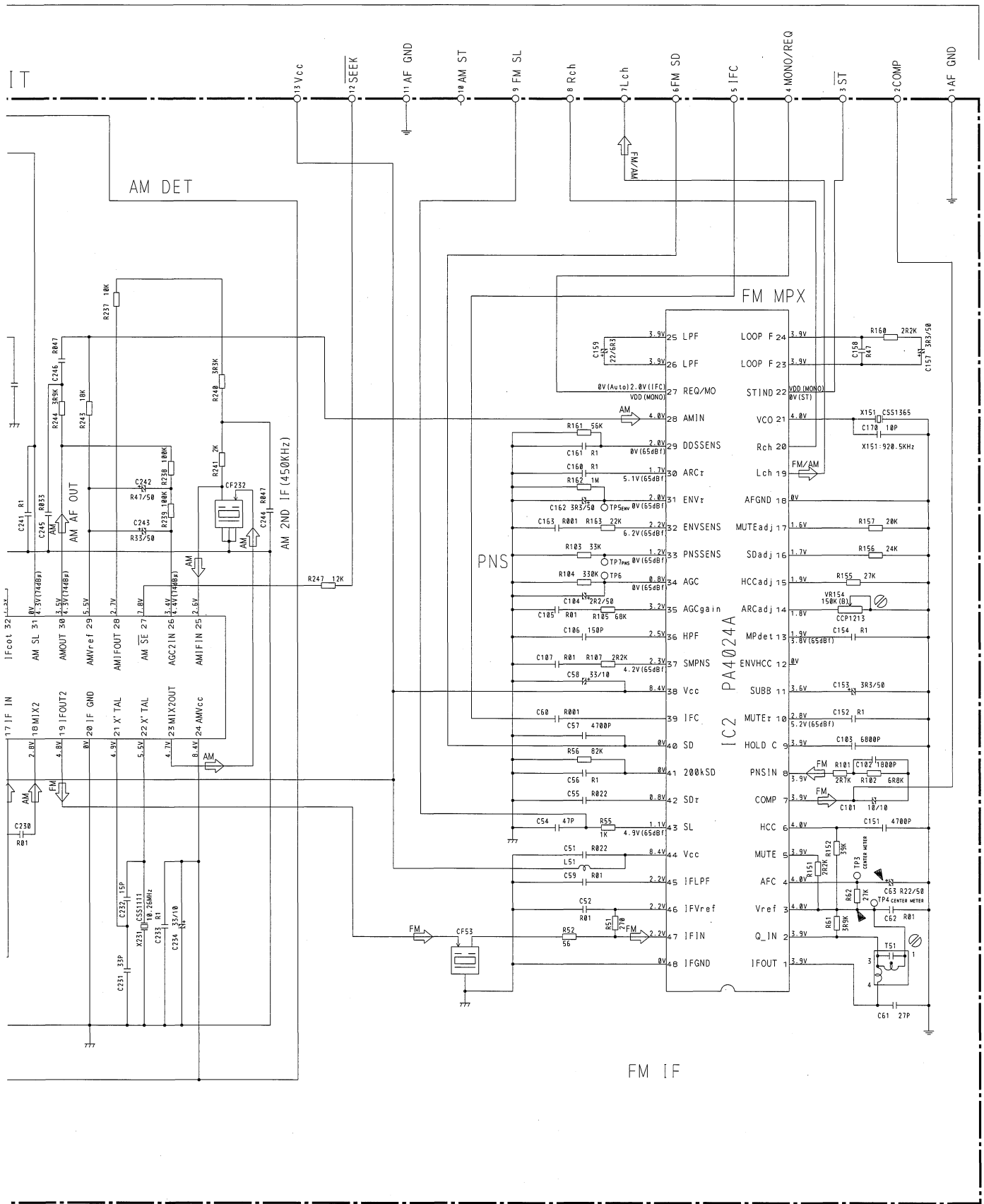
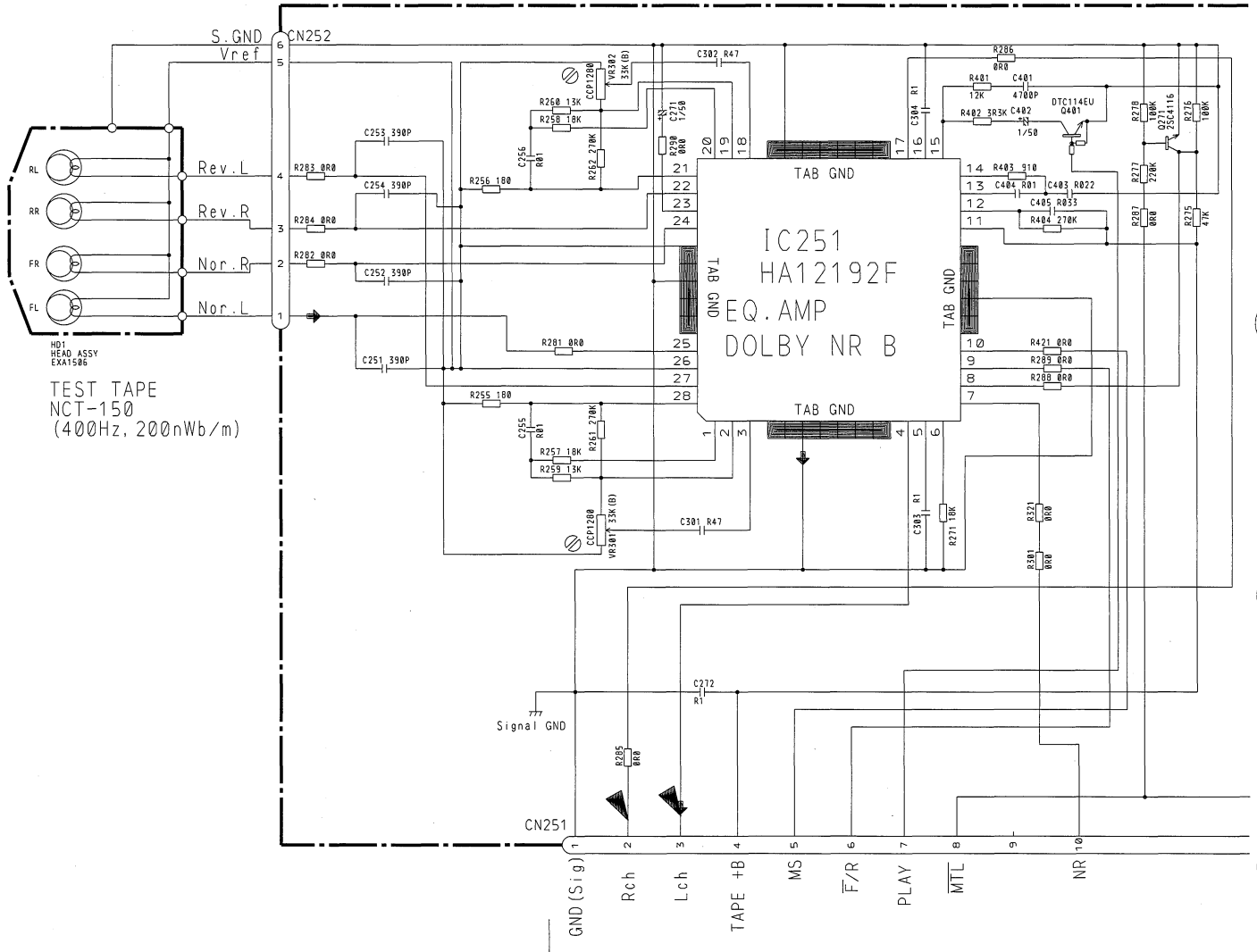


Fig. 8



3.3 CASSETTE MECHANISM MODULE

DECK UNIT



-8.24dBs (300mV) ±1dB



CN602



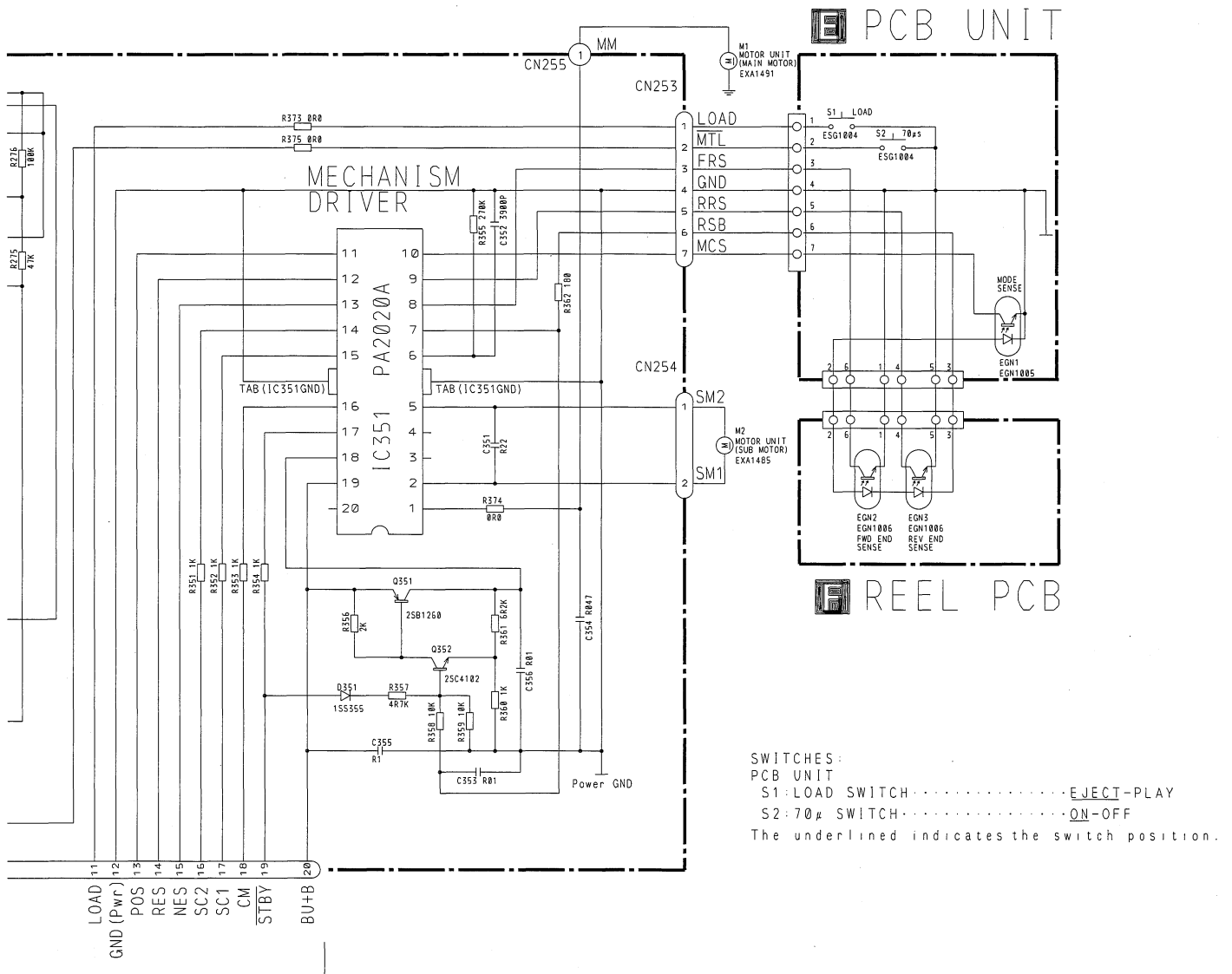


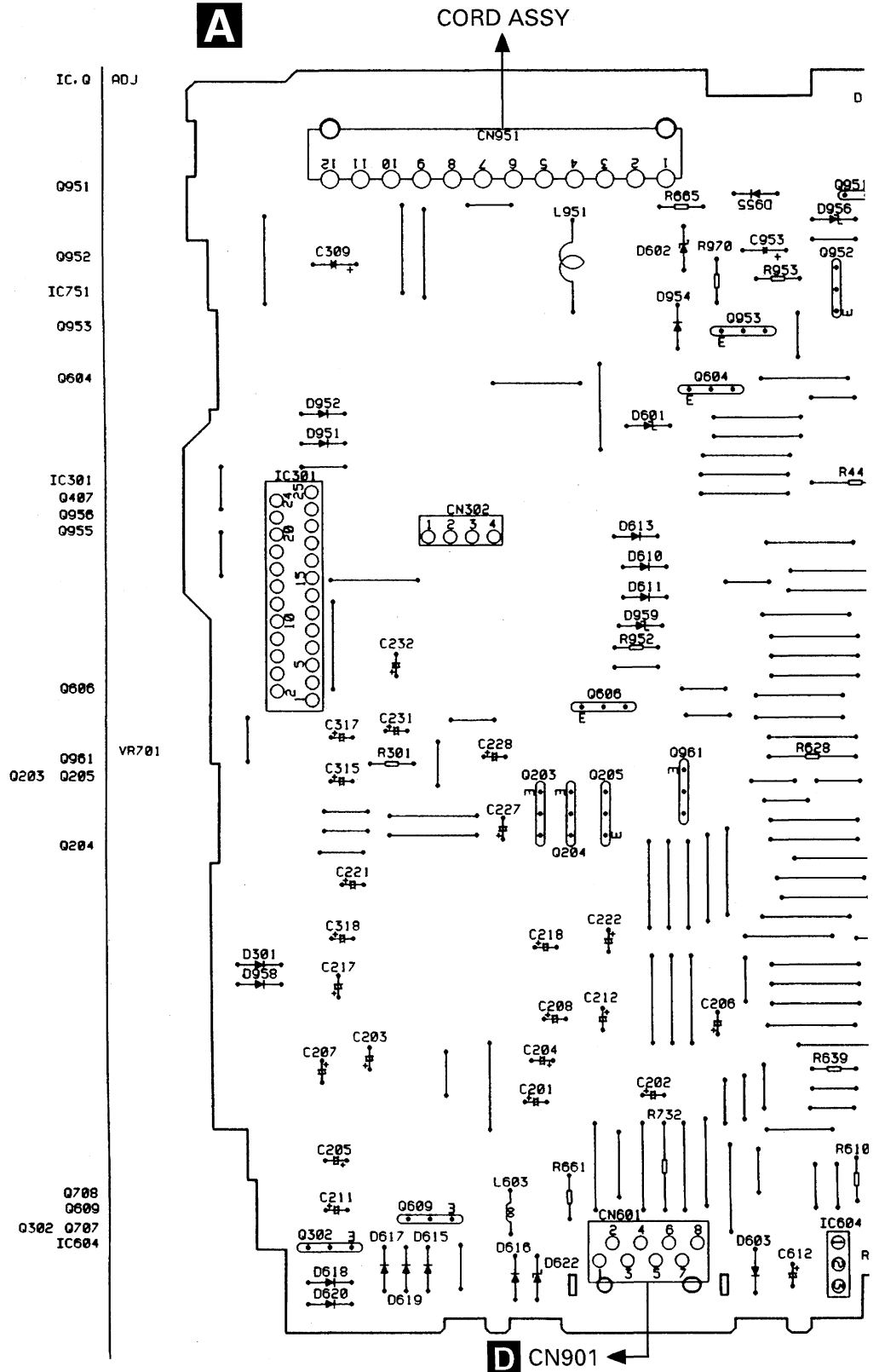
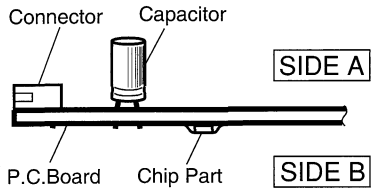
Fig. 9

4. PCB CONNECTION DIAGRAM

4.1 TUNER AMP PCB

NOTE FOR PCB DIAGRAMS

1. The parts mounted on this PCB include all necessary parts for several destination. For further information for respective destinations, be sure to check with the schematic diagram.
2. Viewpoint of PCB diagrams



SIDE A

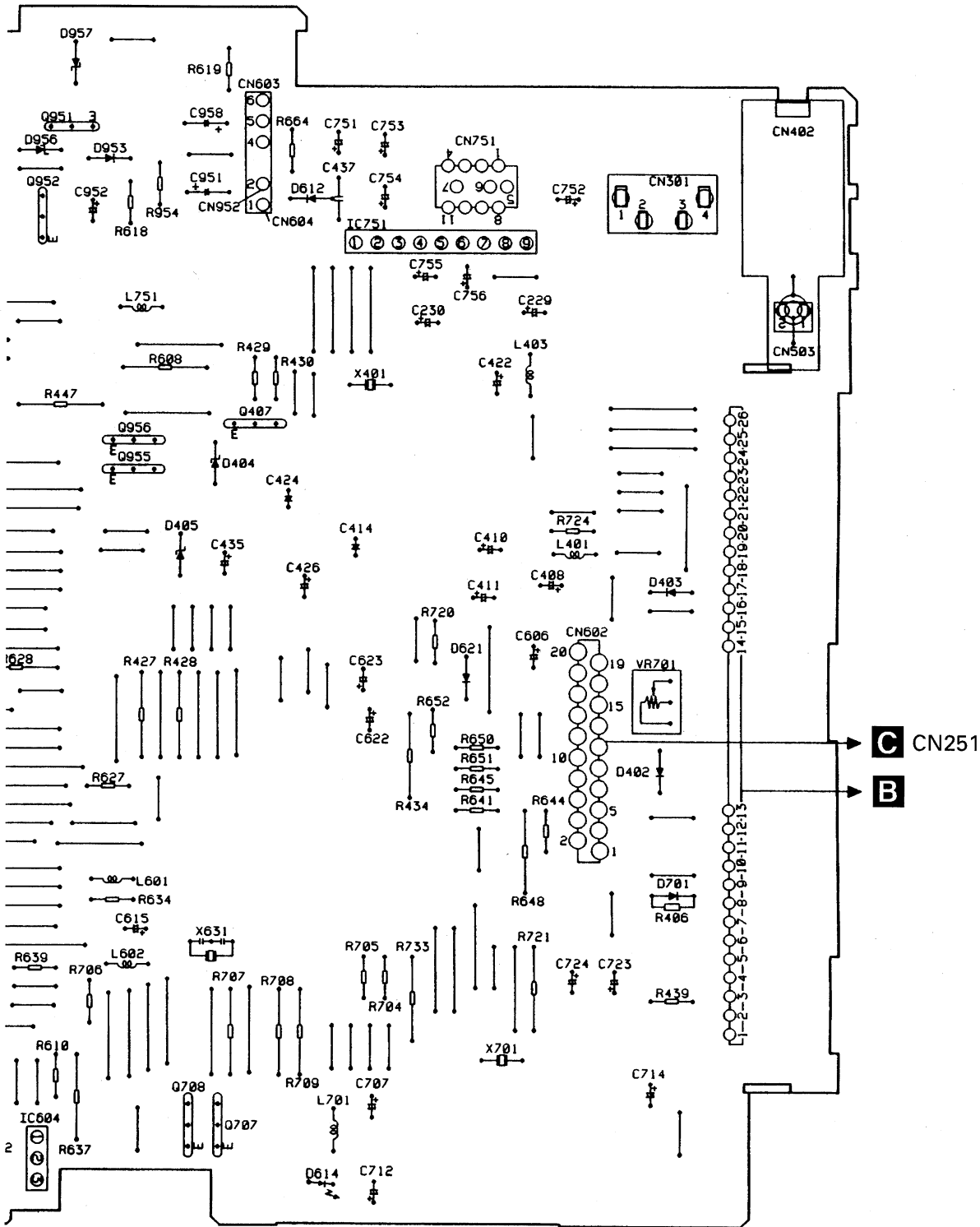
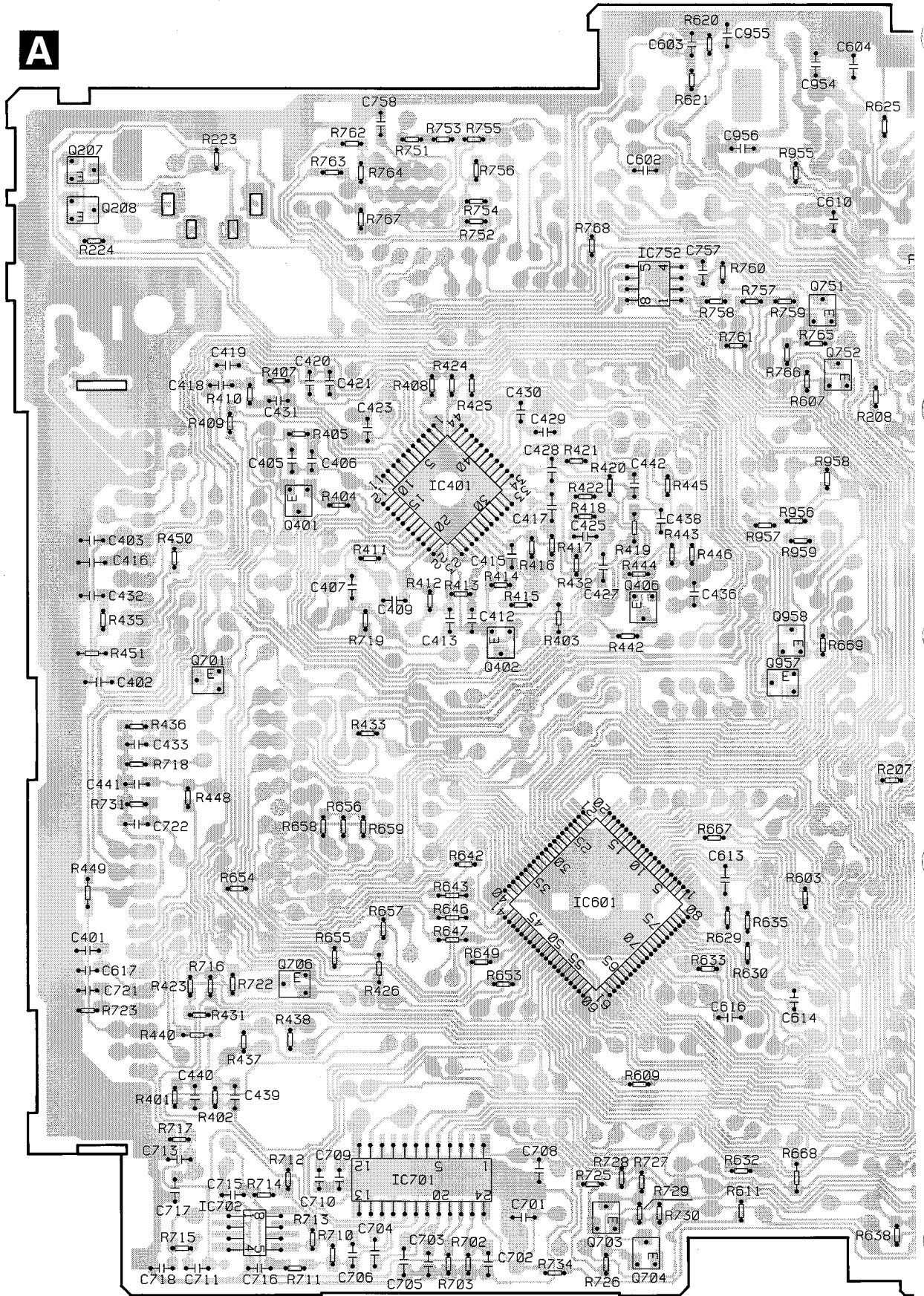


Fig. 10

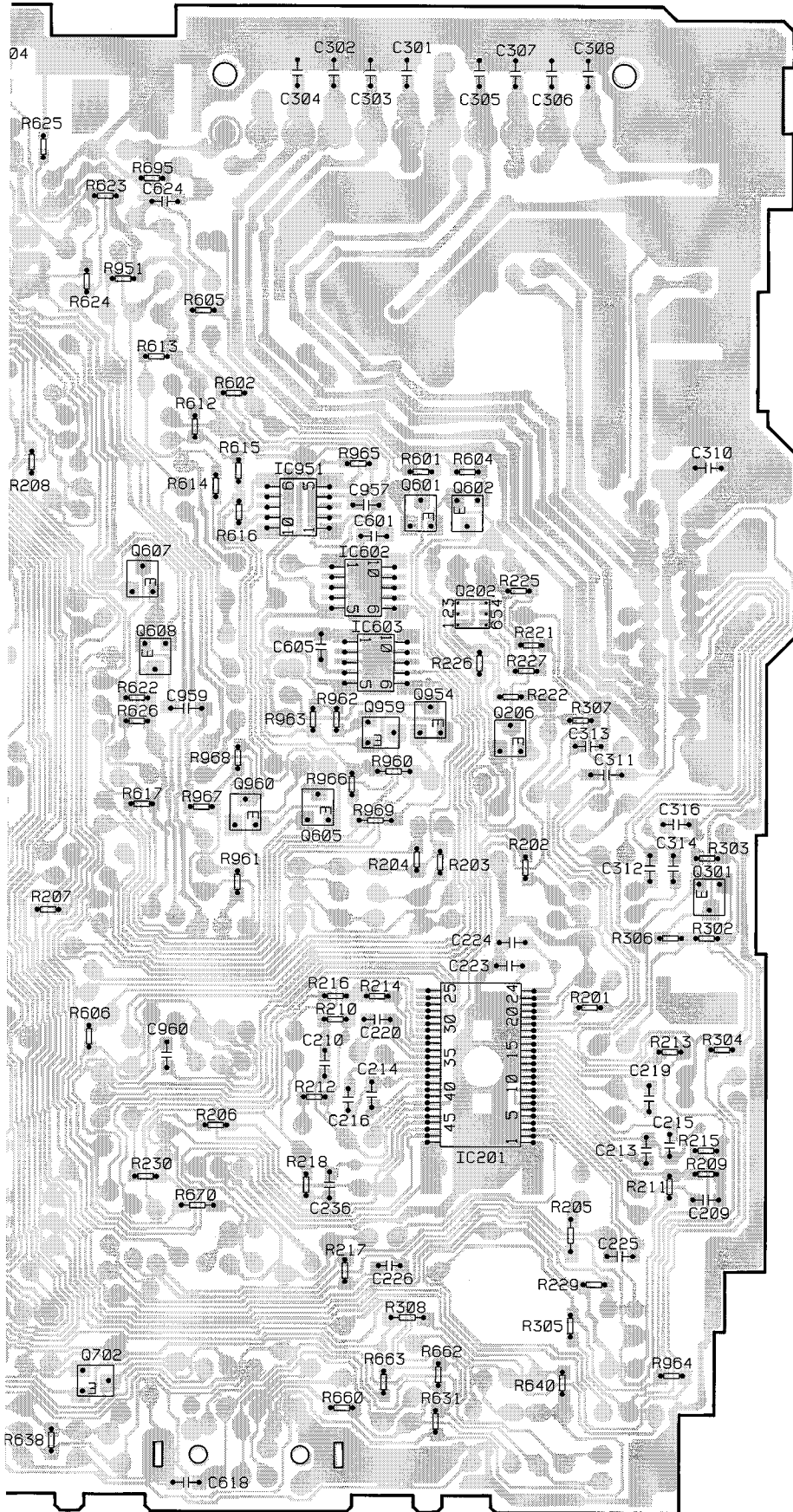
A

A



A

SIDE B



- IC. 0
- Q207
- Q208
- IC752
- Q751
- Q752
- IC951
- Q601
- Q602
- IC602
- IC401 Q607
- Q202
- Q401
- Q608
- IC603
- Q406
- Q959 Q954 Q206
- Q958
- Q701 Q957
- Q402 Q960
- Q605
- Q301
- IC601
- Q706
- IC201
- Q702
- IC701
- IC702
- Q703
- Q704

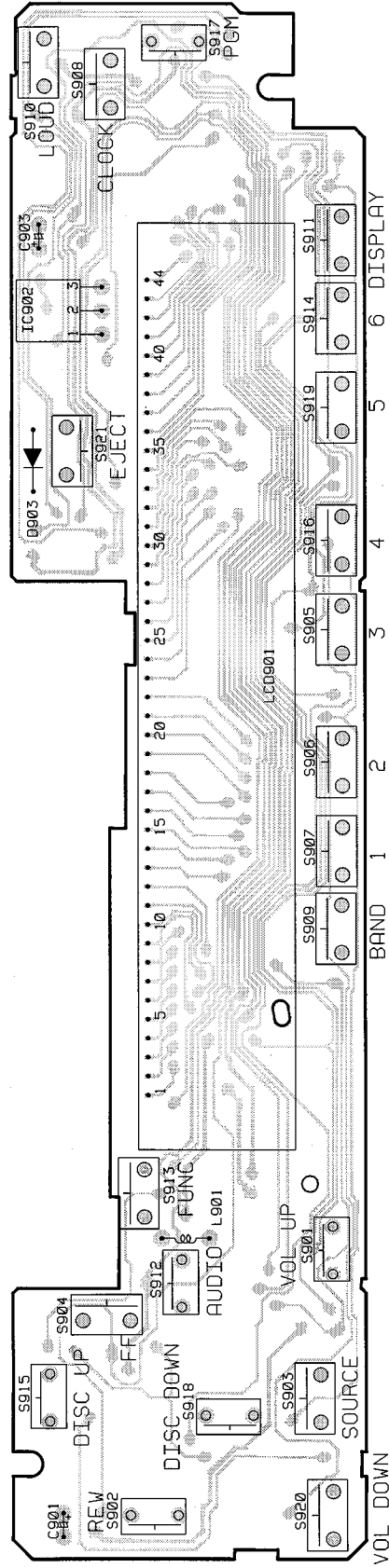
Fig. 11

4.2 KEY BOARD UNIT

IC-0

IC902

D



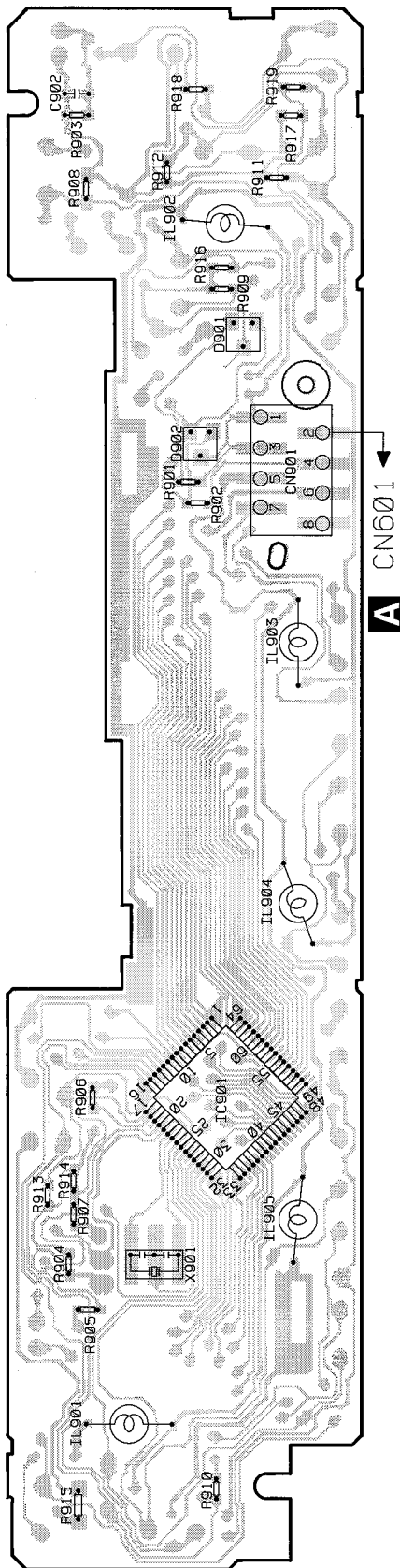
SIDE A

Fig. 12

IC.0

IC901

D



SIDE B

A CN601

Fig. 13

D

SIDE B

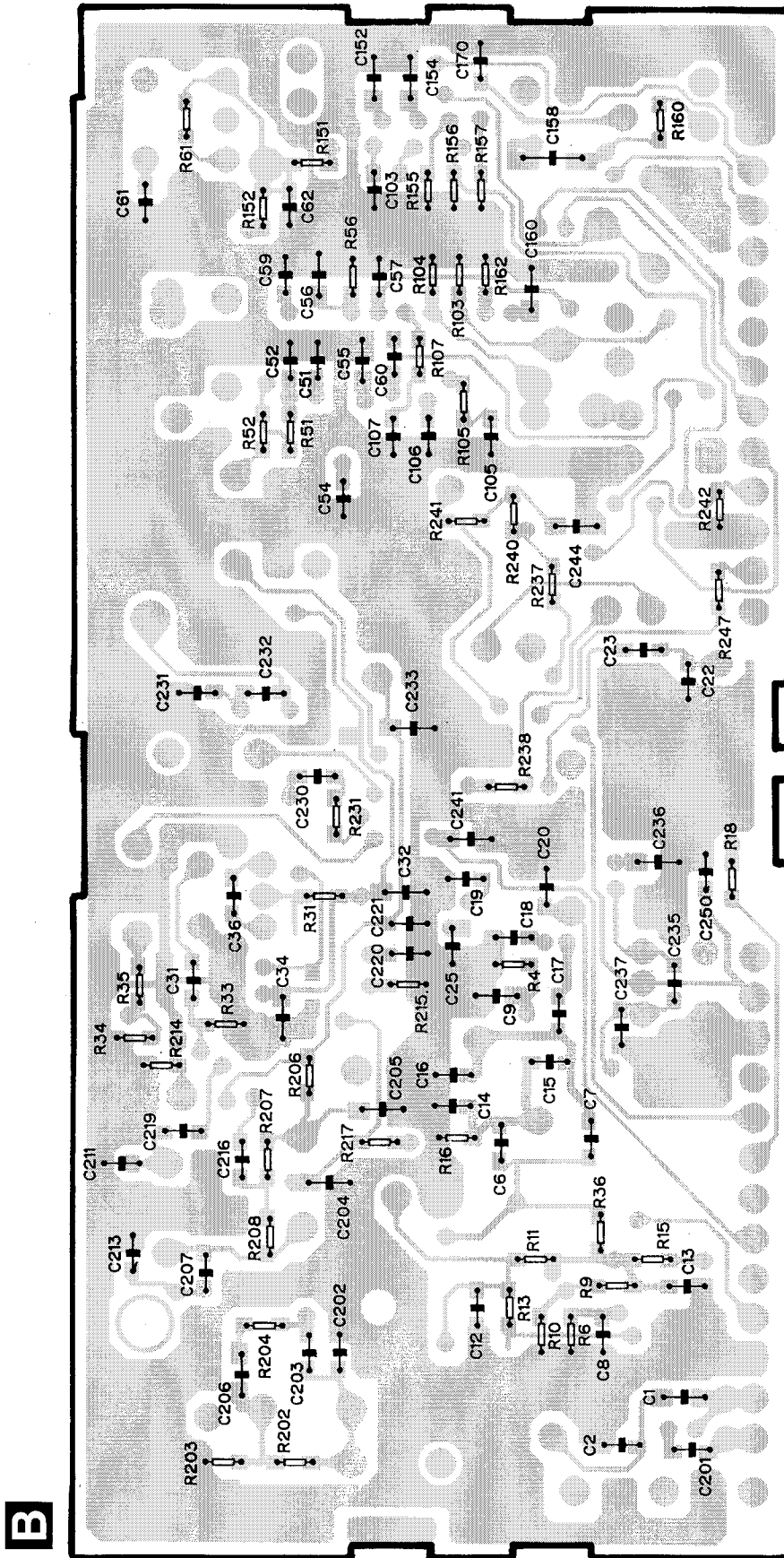


Fig. 15

B

4.4 CASSETTE MECHANISM MODULE

SIDE A

C DECK UNIT

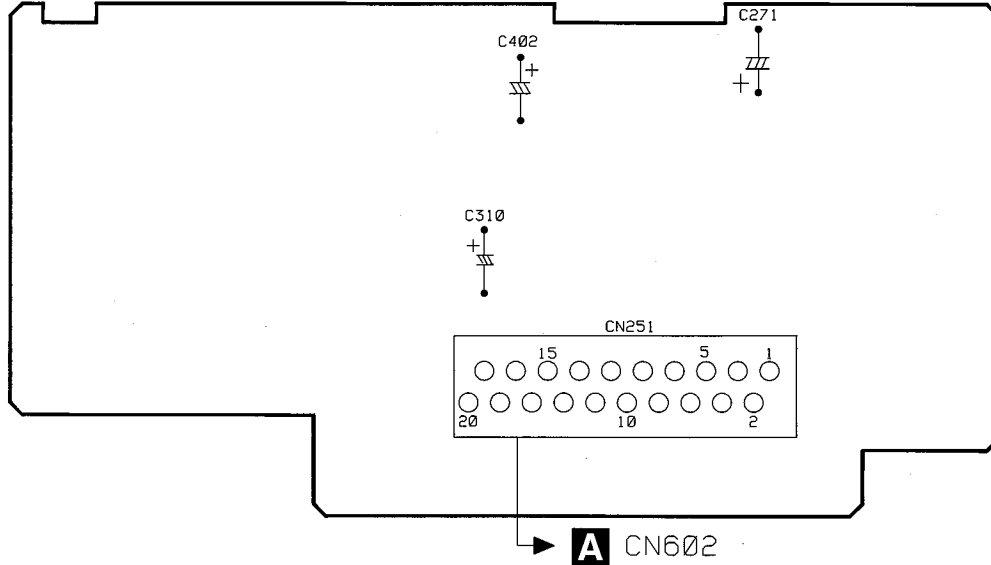


Fig. 16

SIDE B

C DECK UNIT

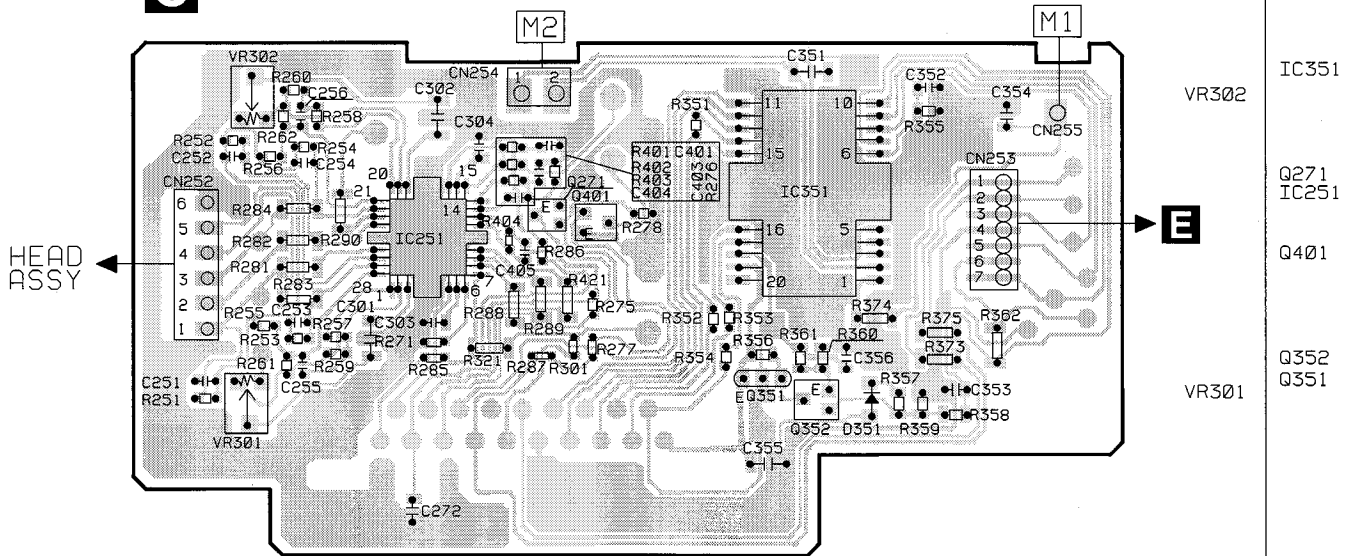


Fig. 17

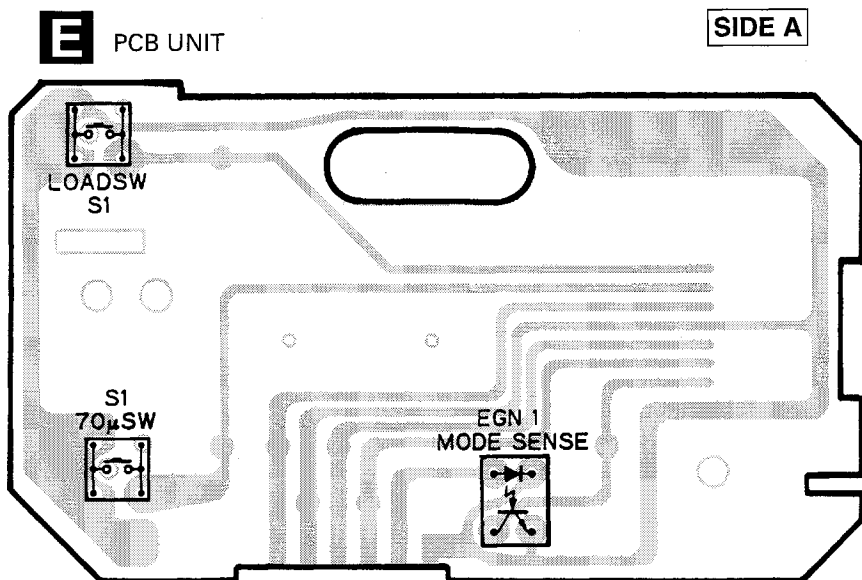


Fig. 18

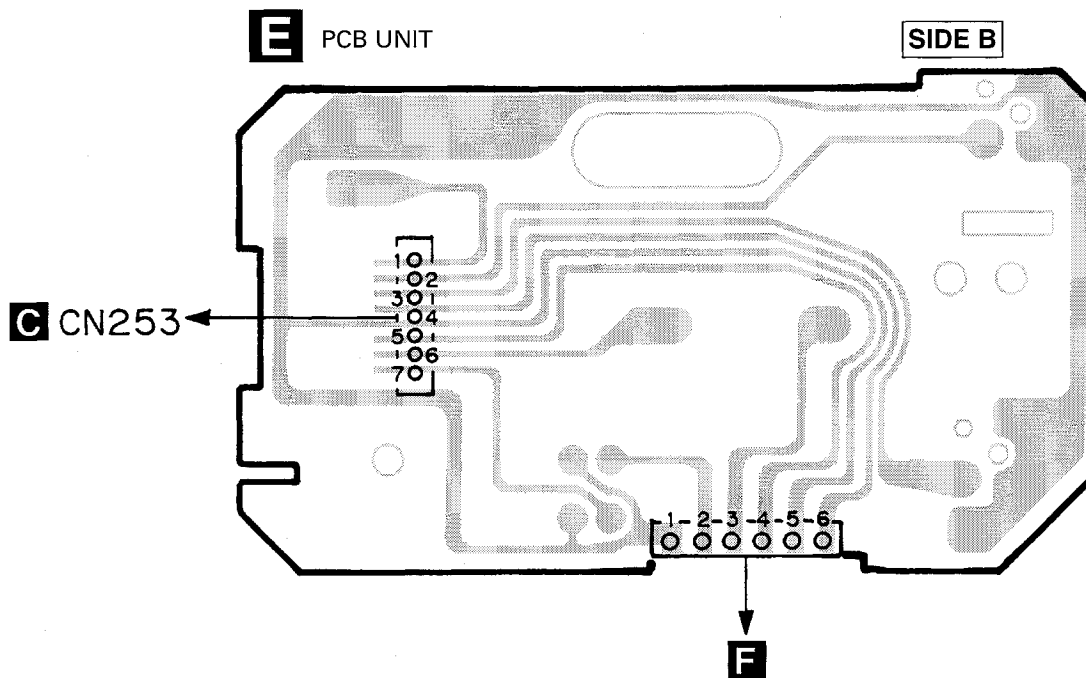


Fig. 19

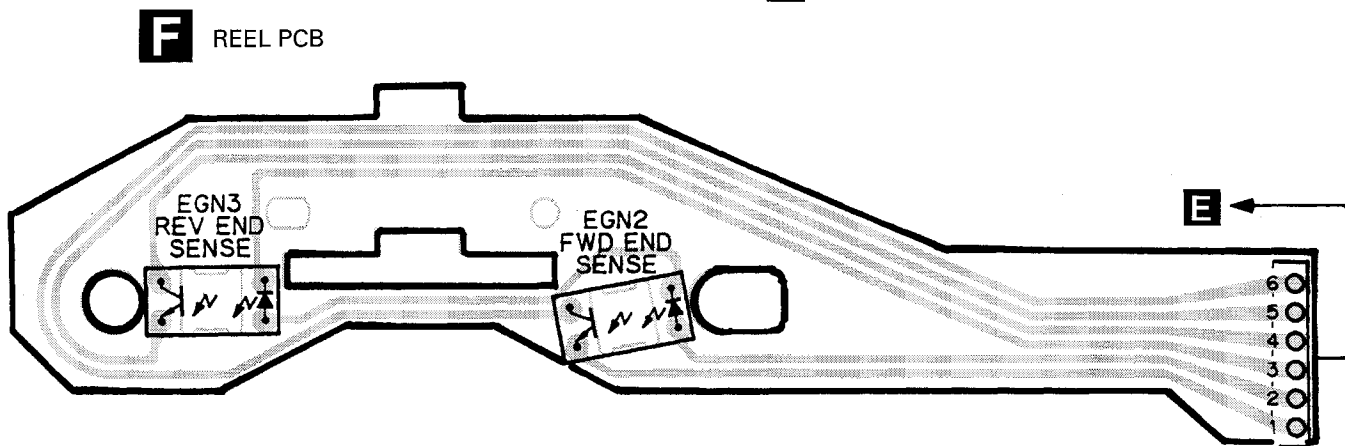


Fig. 20

5. ELECTRICAL PARTS LIST

NOTE:

- Parts whose parts numbers are omitted are subject to being not supplied.
- The part numbers shown below indicate chip components.

Chip Resistor

RS1/OSOOOJ,RS1/OOSOOOJ

Chip Capacitor (except for CQS.....)

CKS....., CCS....., CSZS.....

====Circuit Symbol & No.====Part Name	Part No.	====Circuit Symbol & No.====Part Name	Part No.
B Unit Number : CWE1417(KEH-4500/X1M/UC)		R 13	RS1/16S563J
: CWE1485(KEH-4550/X1M/ES)		R 15	RS1/16S271J
Unit Name : FM/AM Tuner Unit		R 16	RS1/16S104J
		R 17	RS1/16S332J
		R 18	RS1/16S332J
MISCELLANEOUS			
IC 1 IC	PA4023B	R 31	RS1/16S470J
IC 2 IC	PA4024A	R 32	RS1/16S822J
Q 1 Transistor	2SC2412KLN	R 33	RS1/16S822J
Q 2 Transistor	DTC124EU	R 34	RS1/16S331J
Q 3 FET	3SK263	R 35	RS1/16S331J
Q 31 Transistor	2SC2412KLN	R 51	RS1/16S271J
Q 201 FET	2SK932	R 52	RS1/16S560J
Q 202 Transistor	2SC2412KLN	R 55	RS1/16S102J
Q 203 Transistor	DTC124EU	R 56	RS1/16S823J
D 1 Diode	RD39JS	R 61	RS1/16S392J
D 2 Diode	RD39JS	R 62	RS1/16S273J
D 4 Diode	1SV250	R 101	RS1/16S272J
D 5 Diode	KV1410-F1	R 102	RS1/16S682J
D 6 Diode	MA157	R 103	RS1/16S333J
D 7 Diode	KV1410-F1	R 104	RS1/16S334J
D 8 Diode	KV1410-F1	R 105	RS1/16S683J
D 201 Diode	MA157	R 107	RS1/16S222J
D 202 Diode	MA157	R 151	RS1/16S222J
D 231 Diode	SVC253	R 152	RS1/16S393J
L 2 Coil	CTC1108	R 155	RS1/16S273J
L 3 Inductor	LCTB2R2K2125	R 156	RS1/16S243J
L 4 Coil	CTC1108	R 157	RS1/16S203J
L 5 Coil	CTC1107	R 160	RS1/16S222J
L 6 Inductor(KEH-4550/X1M/ES)	LCTBR15K1608	R 161	RS1/16S563J
L 51 Ferri-Inductor	LAU150K	R 162	RS1/16S105J
L 201 Ferri-Inductor	LAU4R7K	R 163	RS1/16S223J
L 202 Ferri-Inductor	LAU330K	R 202	RS1/16S223J
L 203 Inductor	CTF1287	R 203	RS1/16S225J
L 208 Inductor	LAU121K	R 204	RS1/16S103J
L 231 Inductor	LCTA3R3J3225	R 206	RS1/16S220J
T 31 Coil	CTE1116	R 207	RS1/16S101J
T 51 Coil	CTC1136	R 208	RS1/16S102J
CF 51 Ceramic Filter	CTF1290	R 209	RS1/16S471J
CF 52 Ceramic Filter	CTF1290	R 214	RS1/16S822J
CF 53 Ceramic Filter	CTF1290	R 215	RS1/16S822J
CF 232 Ceramic Filter	CTF1348	R 217	RS1/16S102J
X 151 Resonator 920.5kHz	CSS1365	R 231	RS1/16S272J
X 231 Crystal Resonator 10.26MHz	CSS1111	R 232	RS1/16S473J
VR 154 Semi-fixed 150kΩ(B)	CCP1213	R 237	RS1/16S103J
		R 238	RS1/16S104J
RESISTORS			
R 1	RS1/16S225J	R 239	RS1/16S104J
R 2	RS1/16S225J	R 240	RS1/16S332J
R 4	RS1/16S154J	R 241	RS1/16S202J
R 5	RS1/16S391J	R 243	RS1/16S183J
R 6	RS1/16S223J	R 244	RS1/16S392J
		R 247	RS1/16S123J
R 7	RS1/16S123J		
R 8	RS1/16S332J		
R 9	RS1/16S473J		
R 10	RS1/16S223J		
R 11	RS1/16S124J		

====Circuit Symbol & No.====Part Name	Part No.	====Circuit Symbol & No.====Part Name	Part No.
CAPACITORS			
C 1	CCSQCH6R0D50	C 207	CCSRCH560J50
C 2	CCSRCK2R0C50	C 209	CKSQYB104K16
C 4	CCSRCH820J50	C 211	CCSRCH101J50
C 6	CCSRCH820J50	C 212	CEJA470M6R3
C 8	CKSRYP103K25	C 213	CKSRYP103K25
C 9	CKSQYB104K16	C 216	CCSRCH101J50
C 10	CCSRCKR50C50	C 217	CEJA1R5M50
C 11	CEJA1R0M50	C 219	CCSRCH471J50
C 12	CKSRYP222K50	C 220	CKSRYP103K25
C 13	CKSRYP222K50	C 230	CKSRYP103K25
C 14	CCSRCH220J50	C 231	CCSRCH330J50
C 15	CCSRCH6R0D50	C 232	CCSRCH150J50
C 16	CCSRCH8R0D50	C 233	CKSQYB104K16
C 17	CKSRYP222K50	C 234	CEJA330M10
C 18	CKSRYP103K25	C 235	CKSRYP332K50
C 19	CKSRYP222K50	C 236	CKSQYB473K16
C 20	CKSRYP222K50	C 237	CCSRCH120J50
C 21	CEJA100M16	C 239	CKSRYP472K50
C 22	CCSRTH9R0D50	C 240	CEJAR47M50
C 23	CCSRTH120J50	C 241	CKSQYB104K16
C 24	CCSRCH471J50	C 242	CEJAR47M50
C 25	CKSRYP103K25	C 243	CEJAR33M50
C 26	CCSRCH101J50	C 244	CKSQYB473K16
C 31	CKSRYP103K25	C 245	CKSRYP333K16
C 32	CKSQYB472K50	C 246	CKSQYB473K16
C 33	CCSRCH5R0C50	C 250	CCSRCH471J50
C 34	CKSQYB104K16	A Unit Number : CWM5266(KEH-4500/X1M/UC) CWM5267(KEH-4550/X1M/ES)	
C 36	CCSRRH201J50	Unit Name : Tuner Amp Unit	
C 51	CKSRYP223K25	MISCELLANEOUS	
C 52	CKSRYP103K25	IC 201	IC SN761027DL
C 54	CCSRCH470J50	IC 301	IC TDA7384A
C 55	CKSQYB223K25	IC 401	IC PM2005B
C 56	CKSQYB104K16	IC 601	IC PD4748A
C 57	CKSRYP472K50	IC 604	IC S-80734AN
C 58	CEJA330M10	IC 951	IC TPD1018F
C 59	CKSRYP103K25	Q 206	Transistor DTC124EK
C 60	CKSRYP102K50	Q 207	Transistor DTC143TK
C 61	CCSRCH270J50	Q 208	Transistor DTC143TK
C 62	CKSRYP103K25	Q 301	Transistor DTC124EK
C 63	CEJAR22M50	Q 302	Transistor 2SC1740S
C 101	CEJANP100M10	Q 401	Transistor 2SC2412K
C 102	CKSRYP182K50	Q 402	Transistor DTC143EK
C 103	CKSRYPB682K25	Q 601	Transistor 2SC2412K
C 104	CEJA2R2M50	Q 602	Transistor 2SC2412K
C 105	CKSRYP103K25	Q 609	Transistor 2SA933S
C 106	CCSRCH151J50	Q 951	Transistor 2SD2396
C 107	CKSRYP103K25	Q 952	Transistor 2SD2037
C 151	CKSRYP472K50	Q 953	Transistor 2SA933S
C 152	CKSQYB104K16	Q 954	Transistor DTC114EK
C 153	CEJA3R3M50	Q 955	Transistor 2SA1674
C 154	CKSQYB104K16	Q 956	Transistor 2SA1048
C 157	CEJA3R3M50	Q 957	Transistor DTC114TK
C 158	CKSYB474K16	Q 958	Transistor DTC114TK
C 159	CEJA220M6R3	Q 959	Transistor 2SC2412K
C 160	CKSQYB104K16	Q 960	Transistor DTC114TK
C 161	CKSQYB104K16	Q 961	Transistor 2SB1243
C 162	CEJA3R3M50	D 301	Diode 1SS270
C 163	CKSRYP102K50	D 402	Diode 1SS270
C 170	CCSRCH100D50	D 403	Diode 1SS270
C 201	CCSRCH471J50	D 601	Diode HZS7L(C2)
C 202	CCSRCH100D50	D 602	Diode HZS7L(A1)
C 203	CKSRYP332K50	D 603	Diode 1SS270
C 204	CKSQYB473K16	D 615	Diode 1SS270
C 205	CKSQYB473K16	D 616	Diode 1SS270
C 206	CKSQYB104K16		

KEH-4500,4550

====Circuit Symbol & No.====Part Name	Part No.	====Circuit Symbol & No.====Part Name	Part No.
D 617 Diode	1SS270	R 421	RS1/10S272J
D 618 Diode	1SS270	R 422	RS1/10S392J
D 619 Diode	1SS270	R 423	RS1/10S473J
D 620 Diode	1SS270	R 424	RS1/10S473J
D 621 Diode	1SS270	R 425	RS1/10S472J
D 622 Diode	HZS7L(A1)	R 426	RS1/8S473J
D 951 Diode	1SR139-400	R 427	RD1/4PU102J
D 952 Diode	1SR139-400	R 428	RD1/4PU102J
D 953 Diode	1SR139-400	R 429	RD1/4PU102J
D 954 Diode	1SR139-400	R 430	RD1/4PU102J
D 955 Diode	1SR139-400	R 431	RS1/10S472J
D 956 Diode	HZS6L(B2)	R 433	RS1/10S104J
D 957 Diode	HZS9L(B3)	R 434	RD1/4PU222J
D 958 Diode	1SS270	R 435	RS1/10S103J
D 959 Diode	HZS9L(A2)	R 436	RS1/10S393J
L 401 Ferri-Inductor	LAU2R2K	R 437	RS1/10S0R0J
L 403 Ferri-Inductor	LAU2R2K	R 438	RS1/10S0R0J
L 601 Ferri-Inductor	LAU2R2K	R 439	RD1/4PU0R0J
L 602 Ferri-Inductor	LAU2R2K	R 440	RS1/8S0R0J
L 603 Ferri-Inductor	LAU2R2K	R 448	RS1/10S102J
L 951 600H	CTH1171	R 449	RS1/8S0R0J
X 401 Crystal Resonator 7.200MHz	CSS1379	R 450	RS1/10S680J
X 631 Ceramic Resonator 4.194MHz	CSS1047	R 601	RS1/10S223J
FM/AM Tuner Unit(KEH-4500/X1M/UC)	CWE1417	R 602	RS1/10S473J
FM/AM Tuner Unit(KEH-4550/X1M/ES)	CWE1485	R 603	RS1/10S473J
		R 604	RS1/10S223J
		R 605	RS1/10S473J
		R 606	RS1/10S473J
		R 629	RS1/10S0R0J
		R 630	RS1/10S0R0J
RESISTORS			
R 201	RS1/10S821J		
R 202	RS1/10S821J		
R 205	RS1/8S333J		
R 206	RS1/10S333J	R 631	RS1/10S473J
R 209	RS1/10S272J	R 632	RS1/10S103J
		R 633	RS1/10S473J
R 210	RS1/10S272J	R 634	RD1/4PU473J
R 211	RS1/10S151J		(KEH-4500/X1M/UC)
R 212	RS1/10S151J		(KEH-4550/X1M/ES)
R 213	RS1/10S221J	R 635	RS1/10S153J
R 214	RS1/10S221J		(KEH-4500/X1M/UC)
			(KEH-4550/X1M/ES)
R 223	RS1/10S473J	R 637	RS1/10S153J
R 224	RS1/10S473J	R 638	RS1/10S473J
R 301	RD1/4PU103J	R 639	RD1/4PU102J
R 302	RS1/10S221J		RS1/10S124J
R 303	RS1/10S153J	R 640	RD1/4PU222J
		R 641	RS1/10S222J
R 304	RS1/10S103J	R 642	RS1/10S103J
R 305	RS1/10S152J	R 643	RS1/8S222J
R 306	RS1/10S101J	R 644	RD1/4PU222J
R 307	RS1/10S562J	R 645	RD1/4PU103J
R 308	RS1/8S223J	R 646	RS1/8S222J
		R 647	RS1/8S222J
R 401	RS1/10S162J	R 648	RD1/4PU222J
R 402	RS1/10S162J	R 649	RS1/10S222J
R 403	RS1/8S102J		
R 404	RS1/10S222J	R 650	RD1/4PU222J
R 405	RS1/10S222J	R 651	RD1/4PU222J
		R 652	RD1/4PU222J
R 406 (KEH-4550/X1M/ES)	RD1/4PU182J	R 653	RS1/10S222J
R 407 (KEH-4500/X1M/UC)	RS1/10S0R0J	R 654	RS1/10S473J
R 408	RS1/10S562J		
R 409	RS1/10S222J	R 655	RS1/10S473J
R 410	RS1/10S102J	R 656	RS1/10S473J
		R 657	RS1/10S473J
R 411	RS1/10S682J	R 658	RS1/10S103J
R 412	RS1/10S681J	R 659	RS1/10S392J
R 413	RS1/10S472J		
R 414	RS1/10S682J	R 660	RS1/10S472J
R 415	RS1/10S472J	R 661	RD1/4PU472J
		R 662	RS1/10S222J
R 416	RS1/10S561J	R 663	RS1/10S222J
R 417	RS1/10S103J	R 665	RD1/4PU102J
R 418	RS1/10S152J		
R 419	RS1/8S222J		
R 420	RS1/10S392J		

====Circuit Symbol & No.====Part Name	Part No.	====Circuit Symbol & No.====Part Name	Part No.
R 667	RS1/10S102J	C 411	CEJA220M16
R 668	RS1/8SOR0J	C 412	CKSQYB103K25
R 670	RS1/8SOR0J	C 413	CKSQYB103K25
R 695	RS1/10S472J	C 414	CCH1250
R 716	RS1/10S473J	C 415	CKSQYB103K25
R 719	RS1/10S473J	C 416	CKLSR473K16
R 951	RS1/10S473J	C 417	CKSYB332K50
R 952	RD1/4PU102J	C 418	CKSQYB103K25
R 953	RD1/4PU471J	C 419	CKSQYB103K25
R 954	RD1/4PU101J	C 420	CKSQYB103K25
R 955	RS1/10S472J	C 421	CKSQYB103K25
R 956	RS1/10S473J	C 422	CEJA220M6R3
R 957	RS1/10S102J	C 423	CKSQYB102K50
R 958	RS1/10S473J	C 424	CCH1250
R 959	RS1/10S102J	C 425	CKSQYB103K25
R 960	RS1/8S103J	C 427	CKSYB103K50
R 961	RS1/10S1R0J	C 428	CKSQYB103K25
R 962	RS1/10S103J	C 429	CCSQCH150J50
R 963	RS1/10S223J	C 430	CCSQCH150J50
R 964	RS1/10S152J	C 431	CCSQL101J50
R 965	RS1/10S0R0J	C 432	CKSQYB103K25
R 967	RS1/10S473J	C 439	CKSQYB473K16
R 968	RS1/10S102J	C 440	CKSQYB473K16
R 970	RD1/4PU152J	C 442	CKSQYB102K50
		C 606	CEJA100M16
		C 612	CEAL2R2M50
		C 613	CKSYB102K50
		C 614	CCSQL101J50
		C 615	CEJA4R7M35
		C 616	CKSQYB103K25
		C 618	CKSQYB223K25
		C 622	CEJA220M10
		C 624	CKSQYB102K50
		C 951	CCH1183
		C 952	CEJA470M10
		C 953	CEAS101M10
		C 954	CKSQYB103K25
		C 956	CKSQYB103K25
		C 957	CKSQYB103K25
		C 958	CEAS101M10
		D Unit Number : CWM5272	
		Unit Name : Key Board Unit	
		MISCELLANEOUS	
		IC 901 IC	PD6195A
		D 901 Chip Diode	MA151WK
		D 902 Diode	MA151WA
		D 903 LED	QLMP-6577
		L 901 Ferri-Inductor	LAU101K
		X 901 Ceramic Resonator 4.97MHz	CSS1312
		S 901 Switch	CSG1081
		S 902 Switch	CSG1081
		S 903 Push Switch	CSG1093
		S 904 Push Switch	CSG1093
		S 905 Push Switch	CSG1093
		S 906 Push Switch	CSG1093
		S 907 Push Switch	CSG1093
		S 908 Push Switch	CSG1093
		S 909 Push Switch	CSG1093
		S 910 Push Switch	CSG1093
		S 911 Push Switch	CSG1093
		S 912 Switch	CSG1081
		S 913 Push Switch	CSG1093
		S 914 Push Switch	CSG1093
CAPACITORS			
C 201	CEJA2R2M50		
C 202	CEJA2R2M50		
C 203	CEJA1R0M50		
C 204	CEJA1R0M50		
C 207	CEJA100M16		
C 208	CEJA100M16		
C 209	CKSQYB822K50		
C 210	CKSQYB822K50		
C 211	CEJA1R0M50		
C 212	CEJA1R0M50		
C 213	CKSQYB183K25		
C 214	CKSQYB183K25		
C 215	CKSQYB102K50		
C 216	CKSQYB102K50		
C 217	CEJA2R2M50		
C 218	CEJA2R2M50		
C 219	CKSQYB333K25		
C 220	CKSQYB333K25		
C 221	CEJA220M10		
C 222	CEJA220M10		
C 223	CKSQYF104Z25		
C 229	CEJA2R2M50		
C 230	CEJA2R2M50		
C 309	CCH1018		
C 310	CKSQYB104K16		
C 311	CKSYB224K16		
C 312	CKSQYB224K16		
C 313	CKSQYB224K16		
C 314	CKSQYB224K16		
C 315	CEJA100M16		
C 316	CKSQYB224K16		
C 317	CEJA1R0M50		
C 318	CEJA330M10		
C 401	CKSQYB223K25		
C 402	CKSYB273K25		
C 406	CCSQL101J50		
C 407	CKSQYB102K50		
C 408	CEJA220M16		
C 409	CKSQYB103K25		
C 410	CEJA220M6R3		
			3300µF/16V

KEH-4500,4550

====Circuit Symbol & No.====Part Name	Part No.	====Circuit Symbol & No.====Part Name	Part No.
S 915 Switch	CSG1081	R 288	RS1/8S0R0J
S 916 Push Switch	CSG1093	R 289	RS1/8S0R0J
S 917 Switch	CSG1081	R 290	RS1/8S0R0J
S 918 Switch	CSG1081	R 301	RS1/16S0R0J
S 919 Push Switch	CSG1093	R 321	RS1/8S0R0J
S 920 Push Switch	CSG1093	R 351	RS1/16S102J
S 921 Push Switch	CSG1093	R 352	RS1/16S102J
IL 901 Lamp 14V 40mA	CEL1481	R 353	RS1/16S102J
IL 902 Lamp 14V 40mA	CEL1481	R 354	RS1/16S102J
IL 903 Lamp 14V 40mA	CEL1507	R 355	RS1/10S274J
IL 904 Lamp 14V 40mA	CEL1507	R 356	RS1/10S202J
IL 905 Lamp 14V 40mA	CEL1507	R 357	RS1/10S472J
LCD 901 LCD	CAW1410	R 358	RS1/10S103J
		R 359	RS1/10S103J
		R 360	RS1/10S102J
RESISTORS			
R 901	RS1/10S222J	R 361	RS1/10S622J
R 902	RS1/10S222J	R 362	RS1/8S181J
R 903	RS1/10S472J	R 373	RS1/8S0R0J
R 905	RS1/10S470J	R 374	RS1/8S0R0J
R 906	RS1/10S470J	R 375	RS1/8S0R0J
R 908	RS1/10S473J	R 401	RS1/16S123J
R 909	RS1/10S473J	R 402	RS1/16S332J
R 910	RS1/10S473J	R 403	RS1/16S911J
R 911	RS1/10S473J	R 404	RS1/16S274J
R 912	RS1/10S473J	R 421	RS1/8S0R0J
R 913	RS1/10S473J		
R 914	RS1/10S473J	CAPACITORS	
R 915	RS1/4S821J	C 251	CKSRYB391K50
		C 252	CKSRYB391K50
CAPACITORS		C 253	CKSRYB391K50
C 901	CEAL100M16	C 254	CKSRYB391K50
C 902	CKSQYF104Z25	C 255	CKSRYB103K50
		C 256	CKSRYB103K50
C Unit Number : EWM1010		C 271	CEJA1R0M50
Unit Name : Deck Unit		C 272	CKSQYB104K16
		C 301	CKSYB474K16
		C 302	CKSYB474K16
MISCELLANEOUS		C 303	CKSQYB104K16
IC 251 IC	HA12192F	C 304	CKSQYB104K16
IC 351 IC	PA2020A	C 351	CKSYB224K25
Q 271 Transistor	2SC4116	C 352	CKSQYB392K50
Q 351 Transistor	2SB1260	C 353	CKSQYB103K50
Q 352 Transistor	2SC4102		
Q 401 Transistor	DTC114EU	C 354	CKSQYB473K50
D 351 Diode	1SS355	C 355	CKSYB104K50
VR 301 Semi-fixed 33kΩ(B)	CCP1280	C 356	CKSQYB103K50
VR 302 Semi-fixed 33kΩ(B)	CCP1280	C 401	CKSRYB472K50
		C 402	CEJA1R0M50
		C 403	CKSRYB223K25
RESISTORS		C 404	CKSRYB103K50
R 255	RS1/16S181J	C 405	CKSRYB333K16
R 256	RS1/16S181J		
R 257	RS1/16S183J	E Unit Number :	
R 258	RS1/16S183J	Unit Name : PCB Unit	
R 259	RS1/16S133J	S 1 Switch (Load)	ESG1004
R 260	RS1/16S133J	S 2 Switch (70μS)	ESG1004
R 261	RS1/16S274J	EGN 1 Photo-Interrupter	EGN1005
R 262	RS1/16S274J		
R 271	RS1/16S183J	F Unit Number :	
R 275	RS1/16S473J	Unit Name : Reel PCB	
R 276	RS1/16S104J	EGN 2 Photo-Interrupter	EGN1006
R 277	RS1/16S224J	EGN 3 Photo-Interrupter	EGN1006
R 278	RS1/16S104J		
R 281	RS1/8S0R0J	Miscellaneous Parts List	
R 282	RS1/8S0R0J	M 1 Motor Unit (Main)	EXA1491
R 283	RS1/8S0R0J	M 2 Motor Unit (Sub)	EXA1485
R 284	RS1/16S0R0J	HD 1 Head Assy	EXA1506
R 285	RS1/16S0R0J		
R 286	RS1/16S0R0J		
R 287	RS1/16S0R0J		

6. ADJUSTMENT

● Connection Diagram

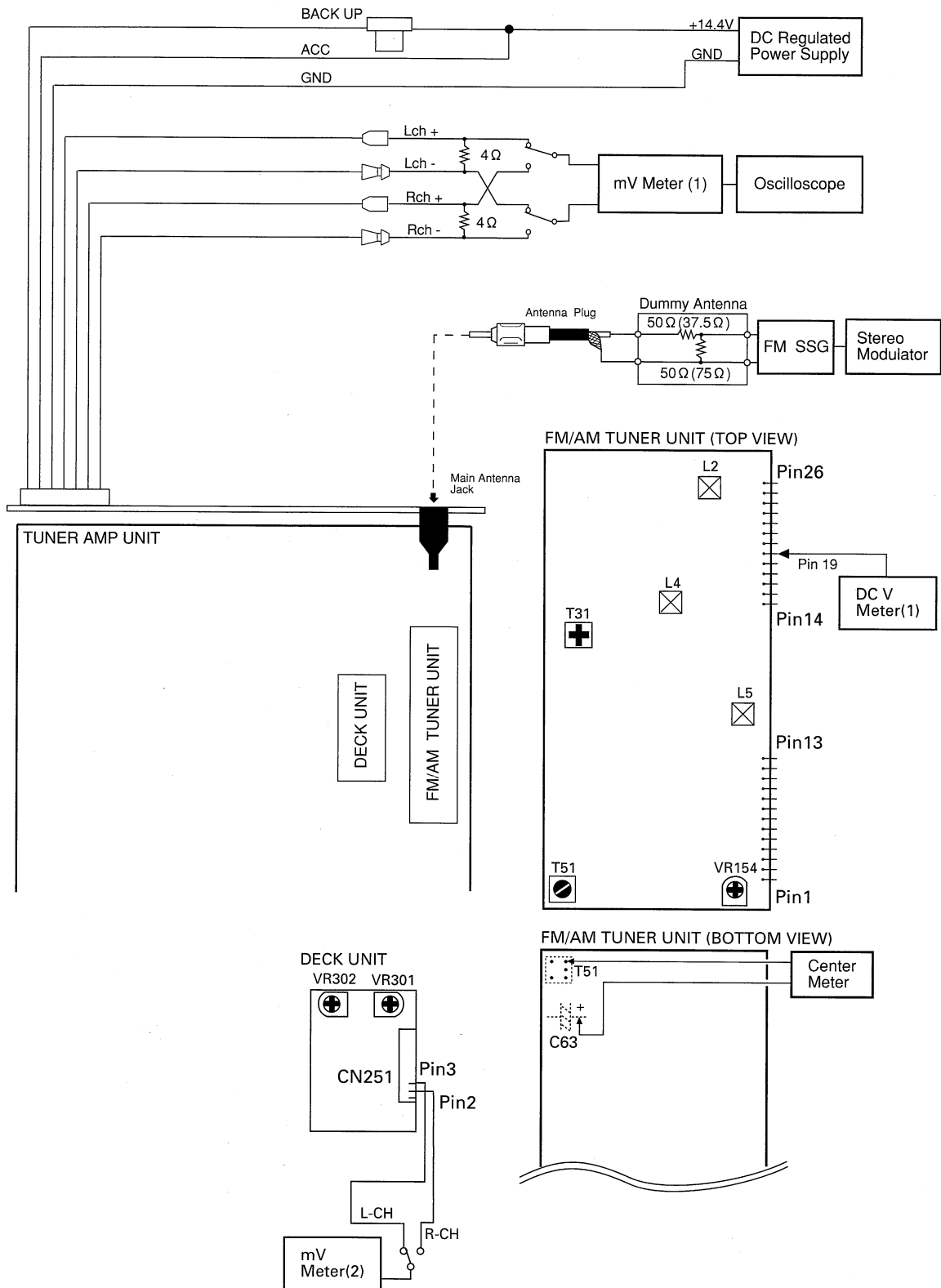


Fig. 21

KEH-4500,4550

Modulation M:MONO MOD., 400Hz 30%(22.5kHz Dev.) or 400Hz 100%(75kHz Dev.)
S:STEREO MOD., 1kHz, L or R=30%(20.25kHz+7.5kHz Dev.)

NOTE:Before proceeding to further adjustments after switching power ON, let the tuner run for ten minutes to allow the circuits to stabilize.

FM ADJUSTMENT(UC MODEL)

	No.	FM SSG		Displayed Frequency(MHz)	Adjustment Point	Adjustment Method (Switch Position)
		Frequency(MHz)	Level(dBf)			
TUN Volt	1	.....	.....	107.9	L5	DC V Meter(1) : 6V
IF	2	98.1 M	60	98.1	T51	Center Meter : 0
ANT Coil	3	98.1 M	5	98.1	L2	mV Meter(1) : Maximum
RF Coil	4	98.1 M	5	98.1	L4	mV Meter(1) : Maximum
IFT	5	98.1 M	5	98.1	T31	mV Meter(1) : Maximum (STEREO MODE)
ARC	6	98.1 S	40	98.1	VR154	mV Meter(1) : Separation 5dB (STEREO MODE)

FM ADJUSTMENT(ES MODEL)

	No.	FM SSG		Displayed Frequency(MHz)	Adjustment Point	Adjustment Method (Switch Position)
		Frequency(MHz)	Level(dBf)			
TUN Volt	1	.....	.....	108.0	L5	DC V Meter(1) : 6V
IF	2	98.1 M	60	98.1	T51	Center Meter : 0
ANT Coil	3	98.1 M	5	98.1	L2	mV Meter(1) : Maximum
RF Coil	4	98.1 M	5	98.1	L4	mV Meter(1) : Maximum
IFT	5	98.1 M	5	98.1	T31	mV Meter(1) : Maximum (STEREO MODE)
ARC	6	98.1 S	40	98.1	VR154	mV Meter(1) : Separation 5dB (STEREO MODE)

DOLBY B NR ADJUSTMENT

No.	Test Tape	Adjustment Point	Adjustment Method (Switch Position)
1	NCT-150 (400Hz,200nwb/m)	VR301(Lch),VR302(Rch)	mV Meter(2) : -8.24dB \pm 1.0dB (DOLBY NR Switch : OFF)

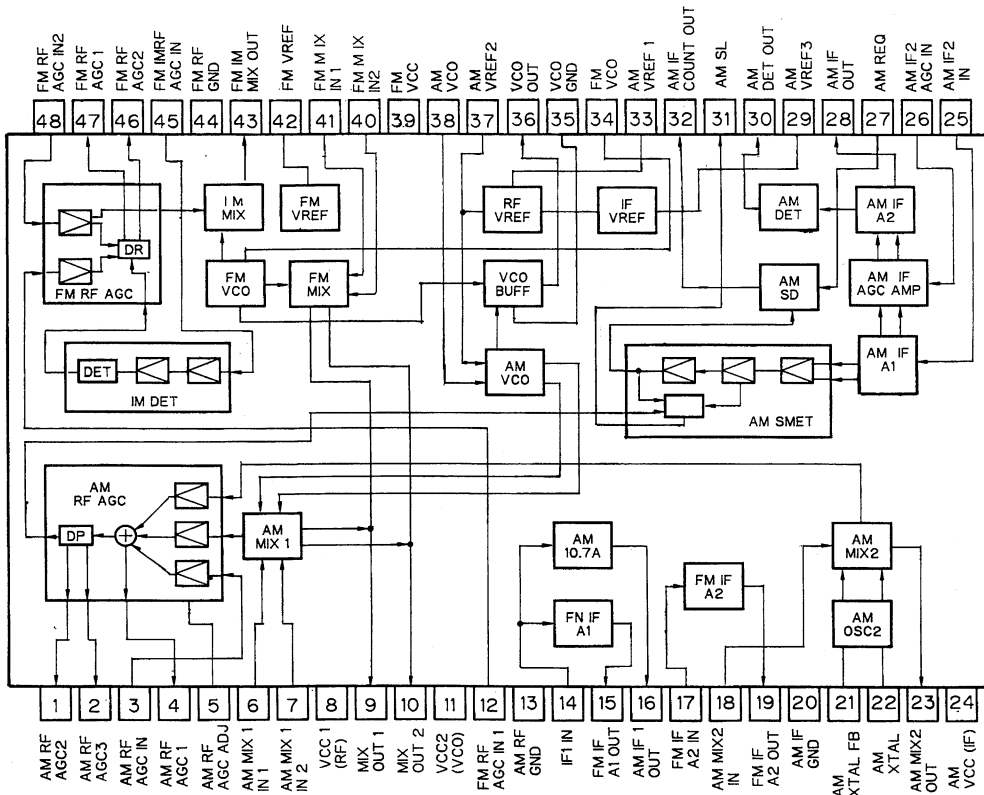
- For Repair of the Detach Grille Assy, Use the Extension-Cord Tool GGD1056.
- For Repair of the Cassette Mechanism Module, Use the Extension-Cord Tool GGD1121.

7. GENERAL INFORMATION

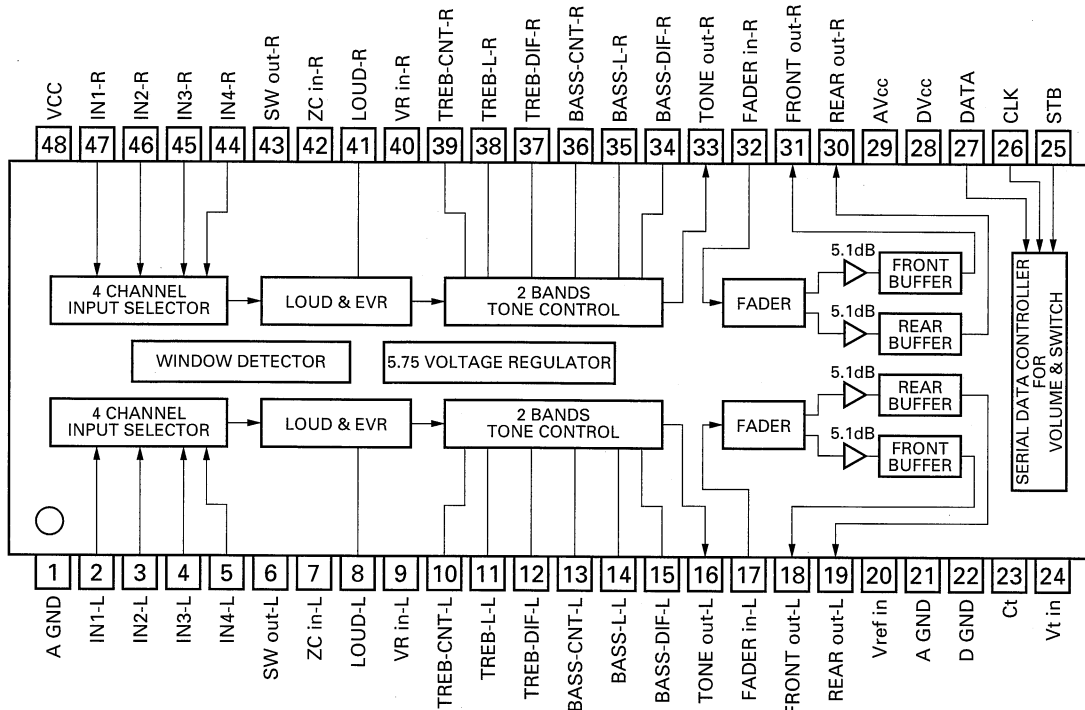
7.1 PARTS

7.1.1 IC

PA4023B



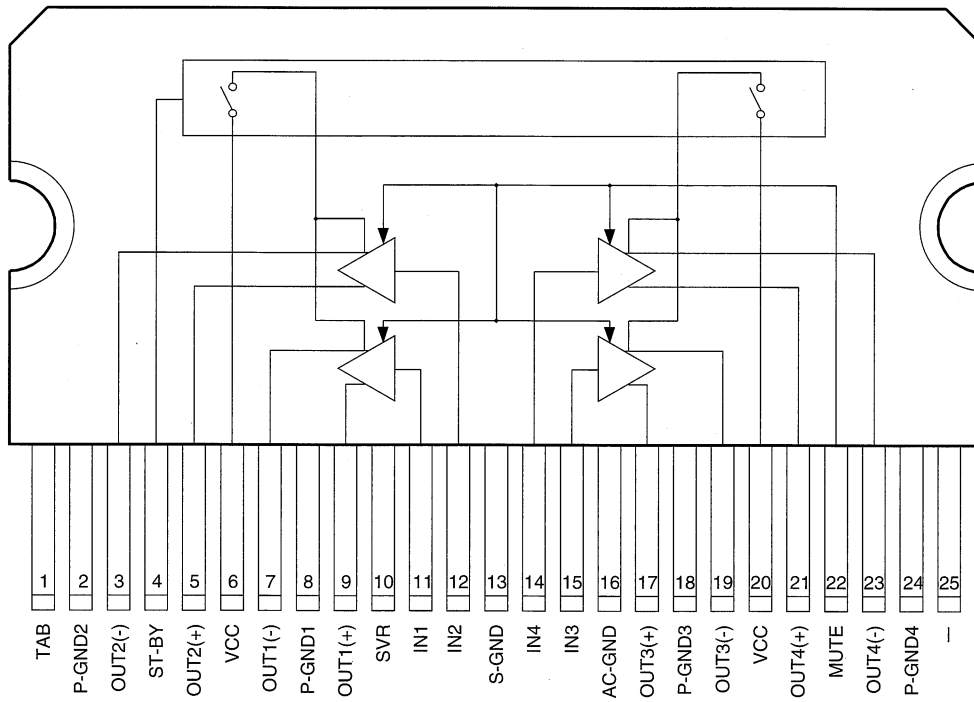
*SN761027DL



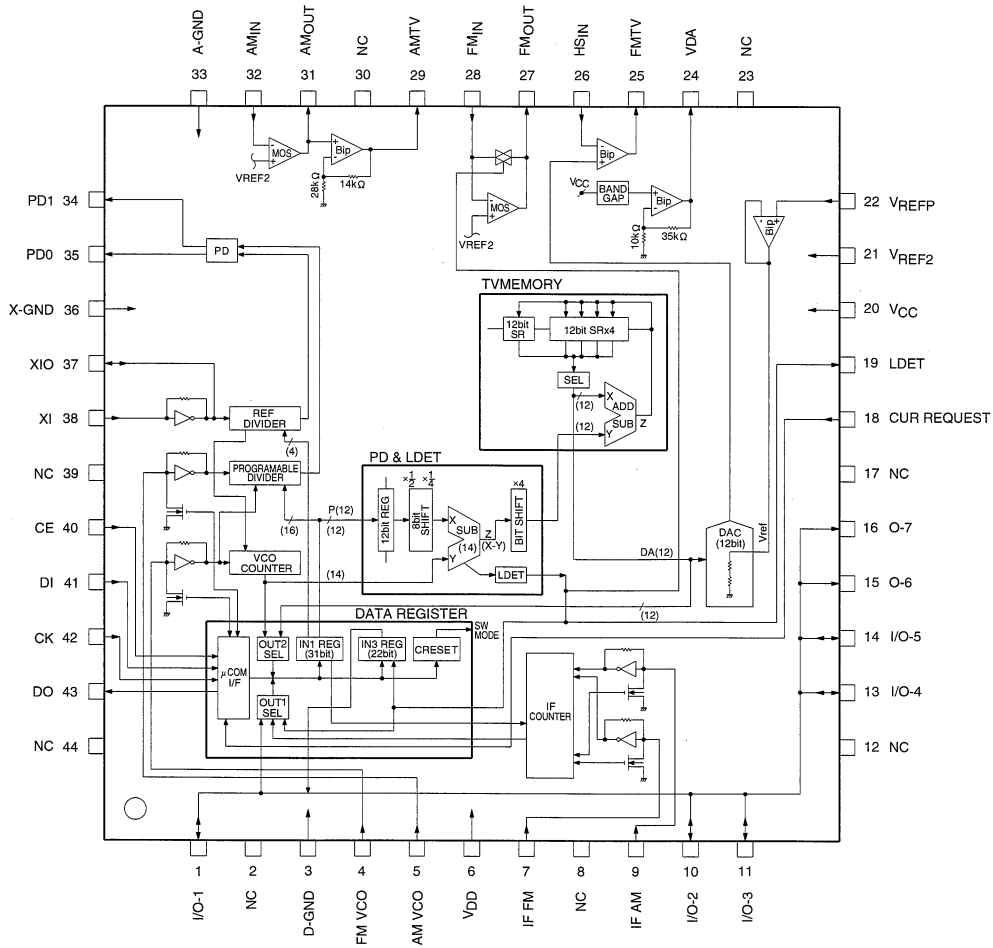
IC's marked by* are MOS type.

Be careful in handling them because they are very liable to be damaged by electrostatic induction.

TDA7384A



PM2005B

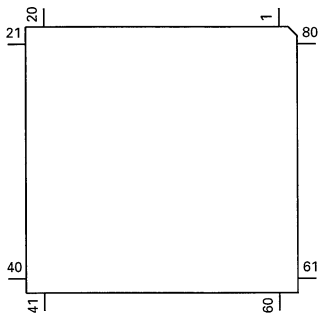


● Pin Functions (PD4748A)

Pin No.	Pin Name	I/O	Format	Function and Operation
1,2	NC			Not used
3	ADPW	O	C	Control output for analog input reference power
4	AVSS			A/D GND
5	NC			Not used
6	ST	I		FM stereo input
7	AVREF1			(D/A converter standard voltage)
8	KYDT	I		Key data input
9	DPDT	O	C	Key data output
10	SWVDD	O	C	Grille power supply control output
11	TUNPD1	I		PLL IC data input
12	TUNPD0	O	C	PLL IC data output
13	TUNPCK	O	C	PLL IC clock
14	TUNPCE	O	C	PLL IC chip enable
15,16	NC			Not used
17	TX	O	C	IP BUS data output
18,19	NC			Not used
20	DRELAY	O	C	External relay output
21	NC			Not used
22	VST	O	C	Strobe pulse output for electronic volume
23	VCK	O	C	Clock output for electronic volume
24	VDT	O	C	Data output for electronic volume
25	STCUT	O	C	Starter cut off output
26	DRSYS	O	C	Door system select output
27	DRSENS	I		Door open/close sense input
28	ILPW	O	C	Illumination power
29	FM	O	C	FM power control output
30	AM	O	C	AM power control output
31	NR	O	C	Cassette mechanism noise reduction output
32	CM	O	C	Cassette mechanism capstan motor control output
33	VSS			GND
34	SC2	O	C	Cassette mechanism sub motor control output
35	SC1	O	C	Cassette mechanism sub motor control output
36	MSIN	I		Cassette mechanism MS sense input
37	DRLOCK	I		Door lock
38	MTL	I		Cassette mechanism tape select input
39	DLED	O	N	Alarm LED output
40	N/R	O	C	Normal reverse input
41	PLAY	O	C	MS gain select output
42	LOADSW	I		Tape loading input
43	POS	I		Cassette mechanism position sense input
44	RES	I		Cassette mechanism reverse end sense input
45	PEE	O	C	Beep tone output
46	NES	I		Cassette mechanism forward end sense input
47	NC			Not used
48	STBY	O	C	Stand-by output terminal
49-52	NC			Not used
53	SD	I		SD input
54	MUTE	O	C	System mute output
55	SYSPW	O	C	System power supply control output
56-59	NC			Not used
60	RESET	I		Reset input
61	RX	I		IP BUS input
62	NC			Not used
63	DSSENS	I		Grille detach sense
64	MOSENS	I		Motion input
65	ASSENS	I		ACC power sense input

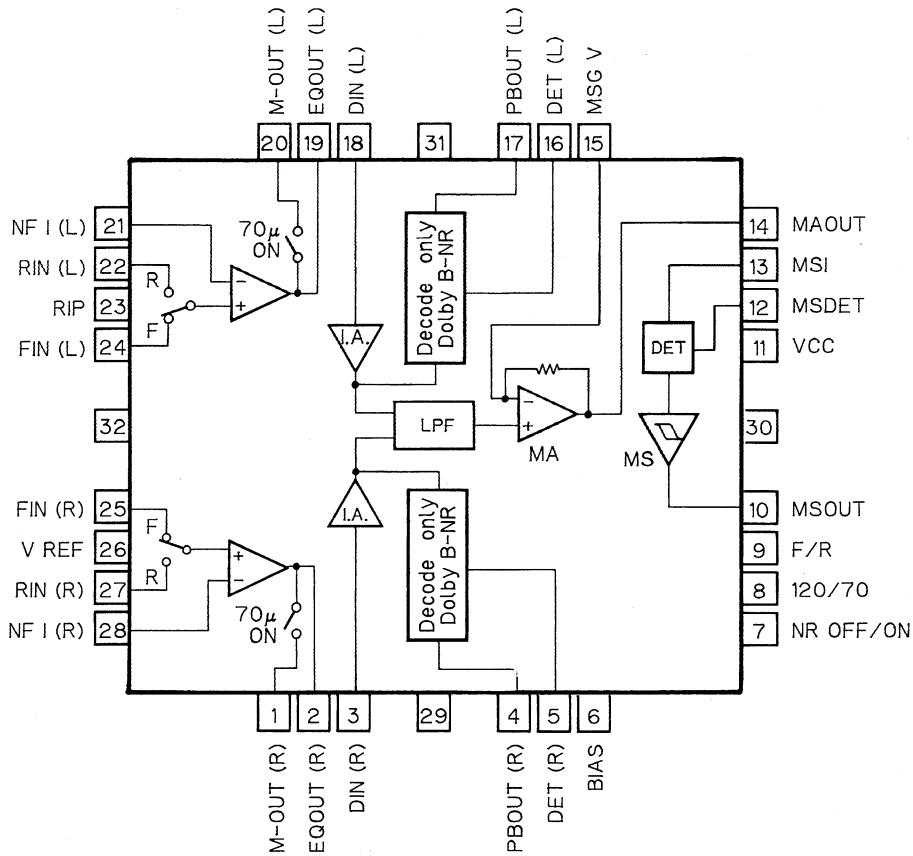
Pin No.	Pin Name	I/O	Format	Function and Operation
66	BSENS	I		Back up power sense input
67	CLKIN	I		Clock input
68	VDD			Power supply
69	X2			Crystal oscillator connection pin
70	X1			Crystal oscillator connection pin
71	IC			GND
72	NC			Not used
73	TESTIN	I		Test program mode input
74	AVDD			Positive power supply terminal for analog circuit
75	AVREF0			GND
76	SL	I		SD level input from tuner
77	MODEL0	I		Model select input
78	MODEL1	I		Model select input
79	TELIN	I		TEL mute signal input
80	NC			Not used

*PD4748A



Format	Meaning
C	C MOS
N	N channel open drain

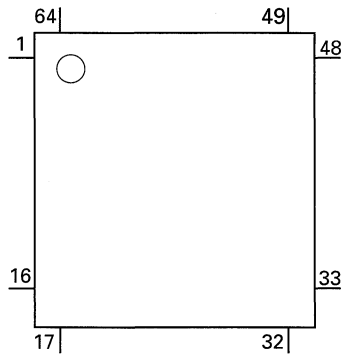
HA12192F



● Pin Functions (PD6195A)

Pin No.	Pin Name	I/O	Format	Function and Operation
1-5	SEG4-0	O		LCD segment output
6-9	COM3-0	O		LCD Common driver output
10	LCDB			LCD bias power supply
11-14	KS4-1	O	N	Key strobe output
15,16	KD0,1	I		Key data input
17	REM	I		Remote control reception
18	DPDT	I		UART input
19	RST	I		System reset
20	SO	O	C	UART output
21	KYDT			(VSS)
22	X0			Crystal oscillator connection pin
23	X1			Crystal oscillator connection pin
24	VSS			GND
25,26	KD2,3	I		Key data input
27,28	KS5,4	O	N	Key strobe output
29-55	SEG39-13	O		LCD segment output
56	VDD			Power
57-64	SEG12-5	O		LCD segment output

*PD6195A

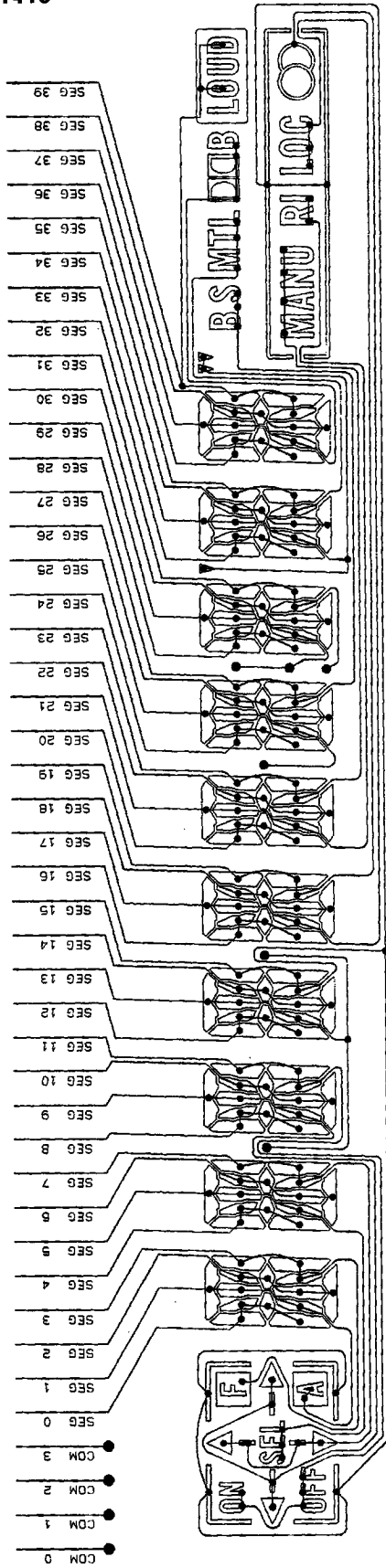


Format	Meaning
C	C MOS
N	N channel open drain

7.1.2 DISPLAY

● CAW1410

SEGMENT



COMMON

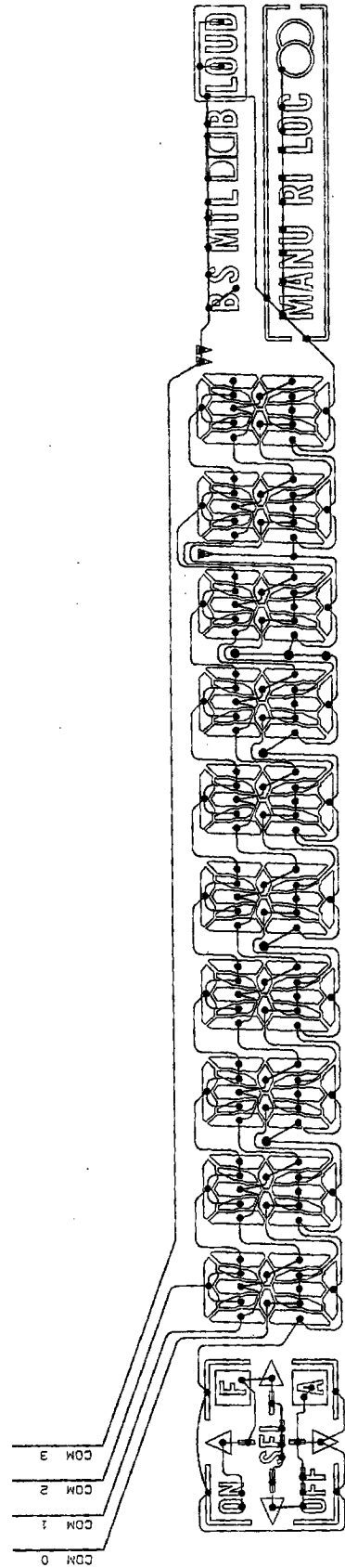
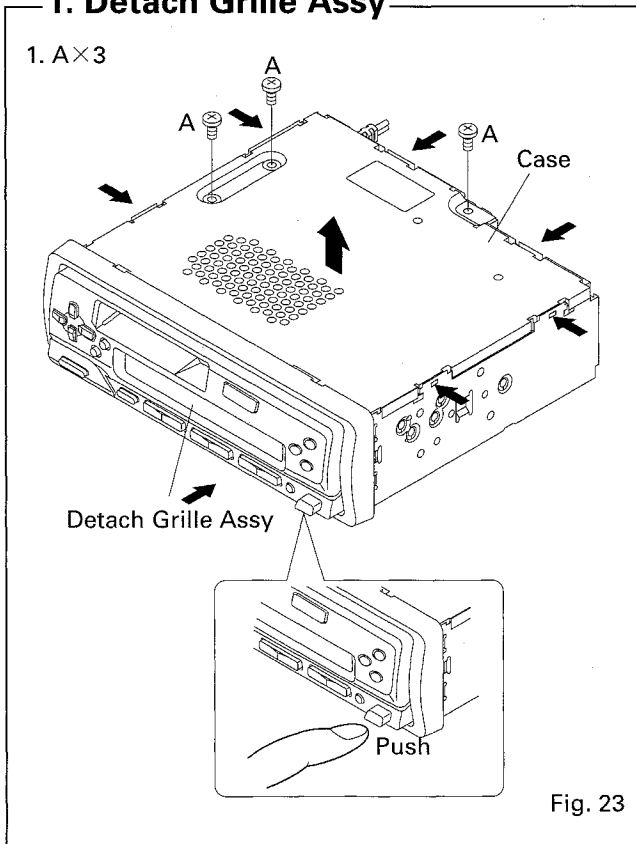


Fig. 22

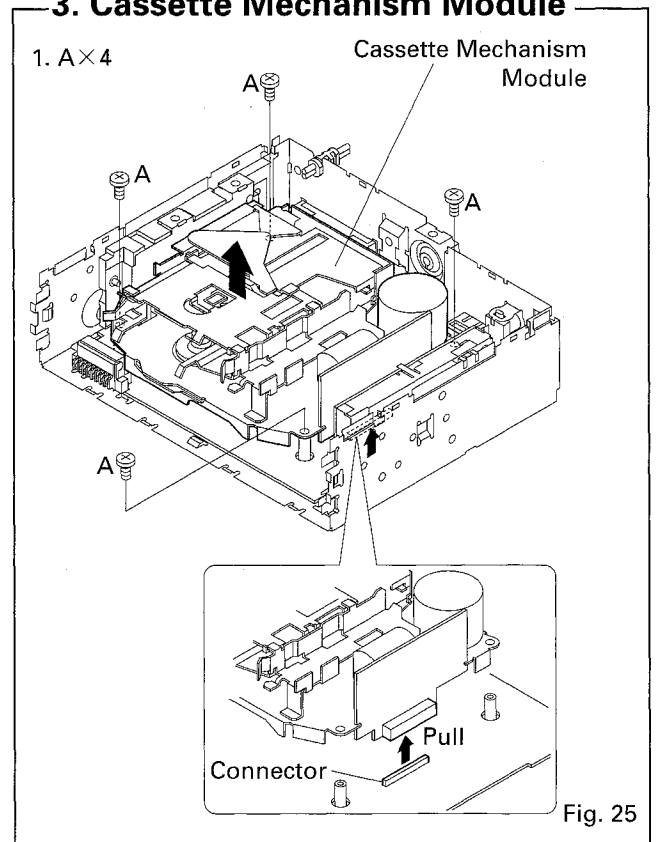
7.2 DIAGNOSIS

7.2.1 DISASSEMBLY

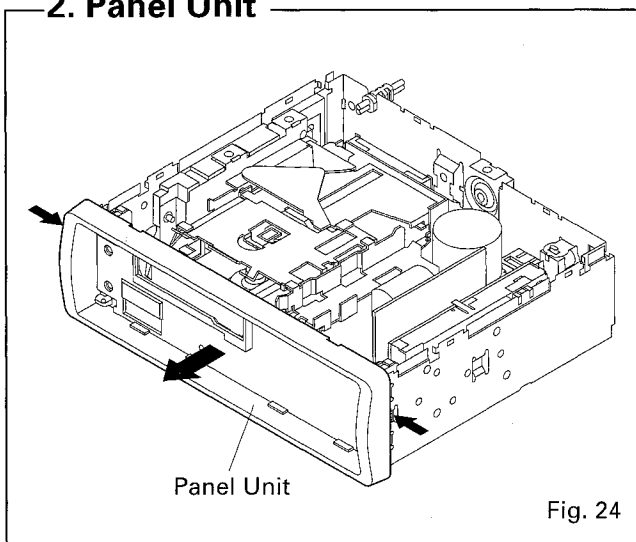
1. Detach Grille Assy



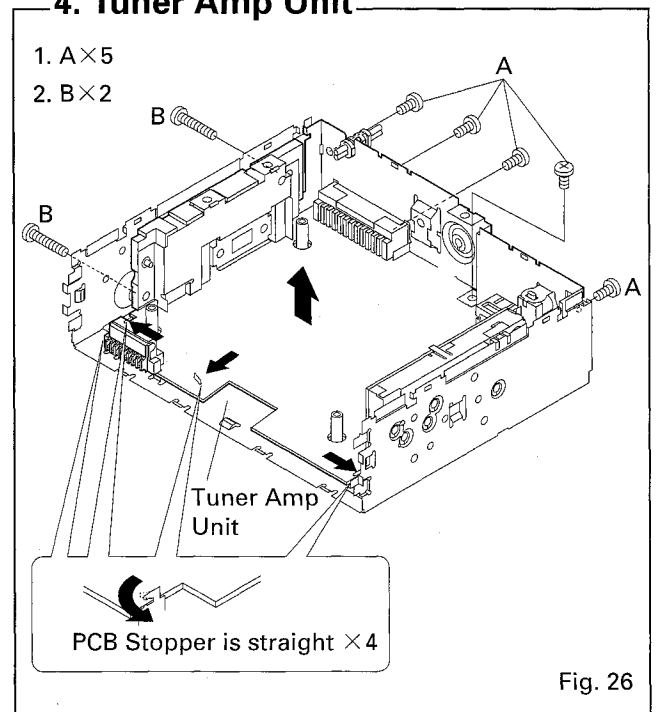
3. Cassette Mechanism Module



2. Panel Unit

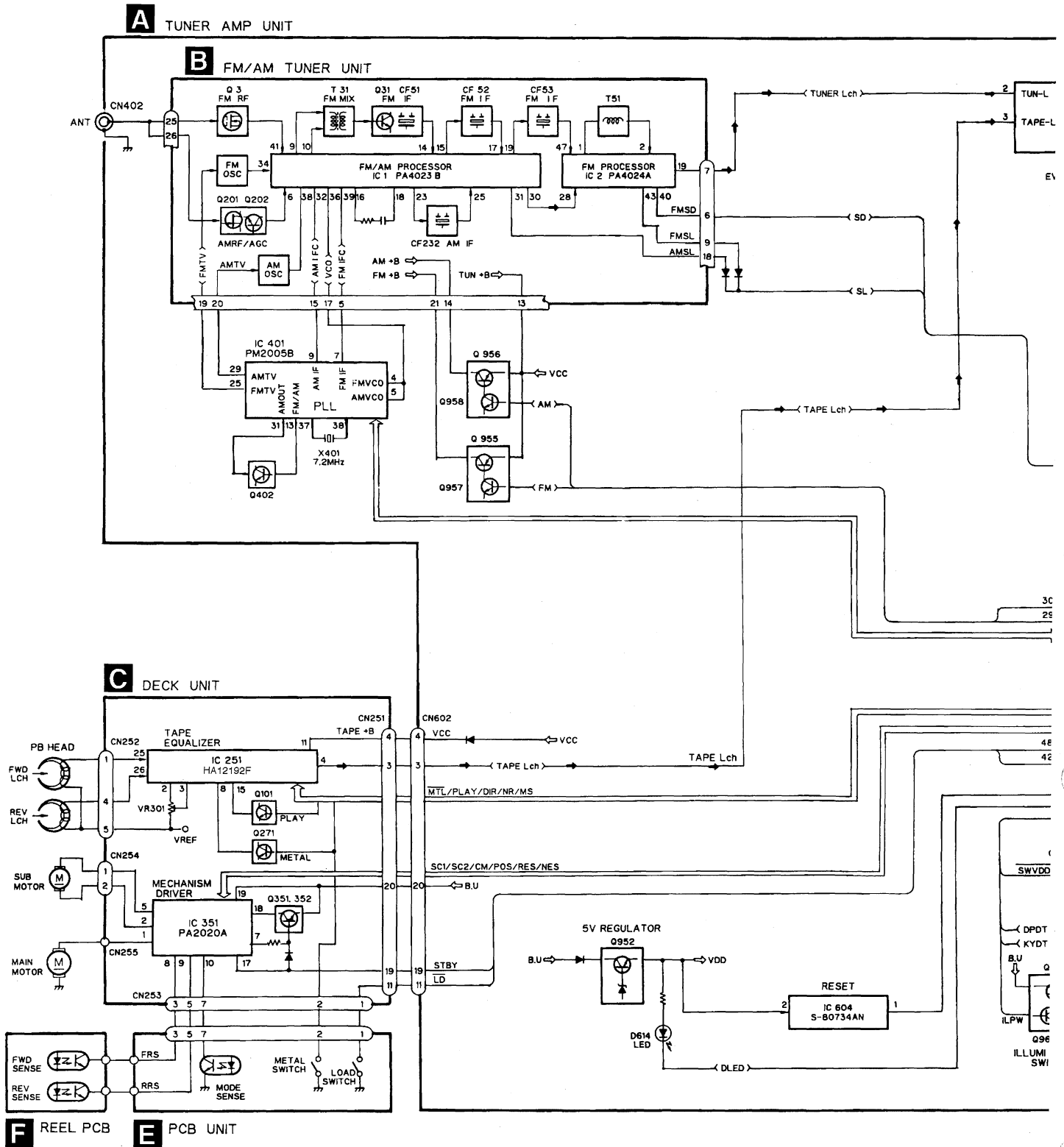


4. Tuner Amp Unit



7.3 BLOCK DIAGRAM

● KEH-4500/X1M/UC



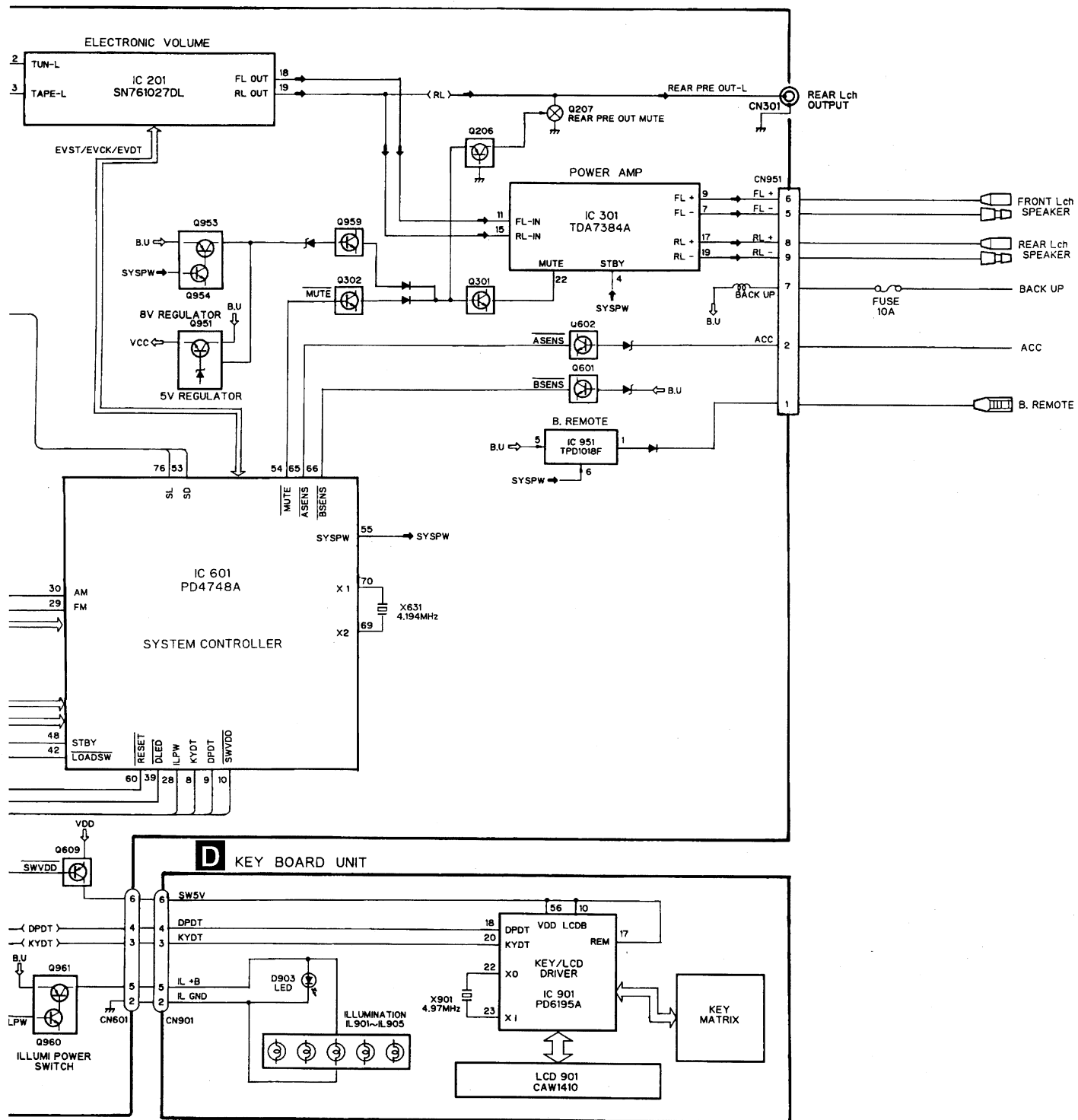


Fig. 27

8. OPERATIONS AND SPECIFICATIONS

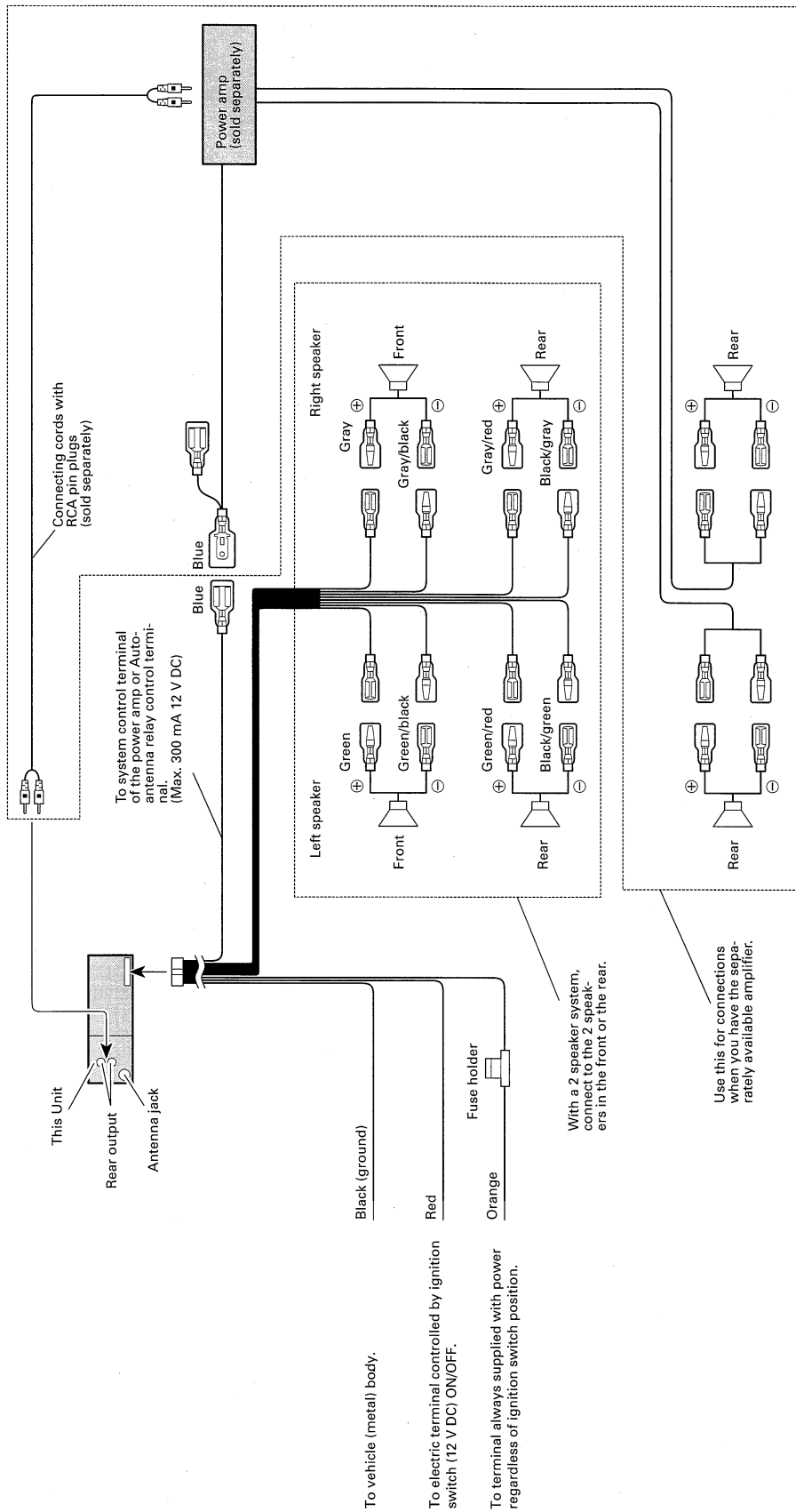
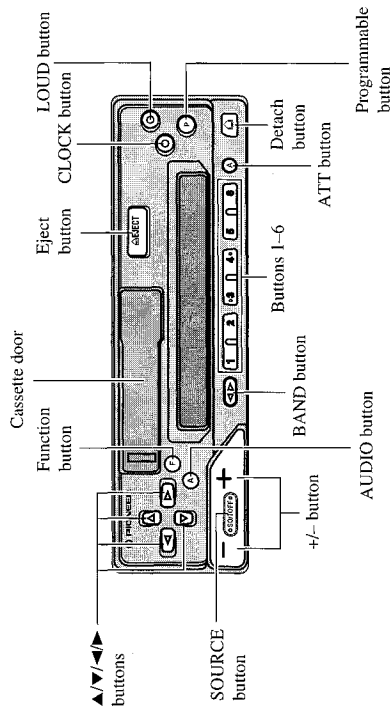


Fig. 28

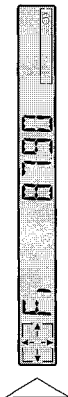
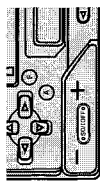
Key Finder



Basic Operation

Switching Power On

- Select the desired source (such as the tuner).



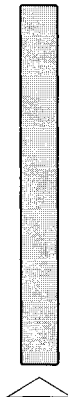
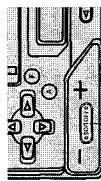
Each press of the SOURCE button selects the desired source in the following order:
Tuner → Tape

Note:

- The sound source will not change when a cassette tape is not set in this unit.

Switching Power Off

- Switch the sources OFF.

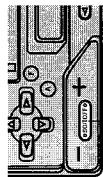


Hold for 1 second

Tuner Operation

Basic Operation of Tuner

1. Select Tuner. (See page 47.)

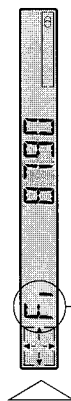
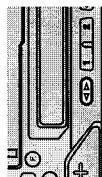


Each press changes the Source ...

Frequency appears on the display. (FM indicator lights when a stereo station is selected.)

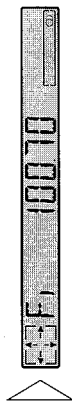
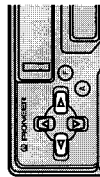


2. Select the desired band.



FM → FM → FM → AM

3. Tune the receiver to a higher or lower frequency.



This product's tuner lets you select the tuning by changing the length of the time you press the button.

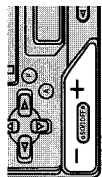
Manual Tuning (step by step)	0.3 seconds or less
Seek Tuning	0.3 – 2 seconds
Manual Tuning (continuously)	2 seconds or more

Note:

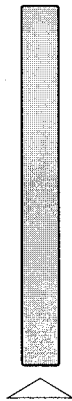
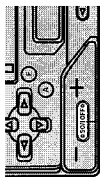
- To select a weak broadcasting station that cannot be tuned in with the Seek Tuning function, tune in with Manual Tuning.

Tuner Operation

4. Raise or lower the volume.



5. Turn the source OFF. (See page 47.)

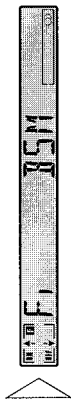
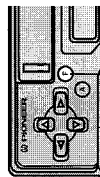


Hold for 1 second

Entering the Function Menu

In this menu you can select tuner functions.

- Select the desired mode in Function Menu.



Each press changes the Mode ...

Each press of the Function button selects the mode in the following order:

BSM → LOCAL

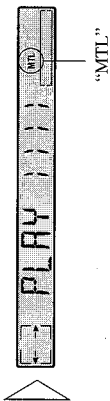
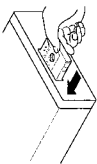
Note:

- You can cancel the Function Menu by pressing the BAND button.
- After selecting the Function Menu, if you do not perform an operation within about 30 seconds, the Function Menu is automatically canceled.

Using the Cassette Player

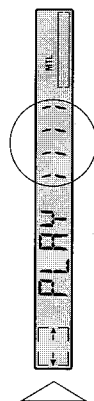
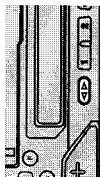
Basic Operation of Cassette Player

1. Insert the cassette tape.

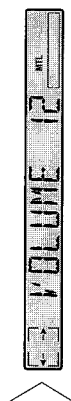
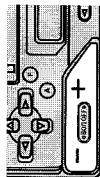


"MTL" appears on the display automatically when a metal or chrome tape is inserted. Nothing is displayed for a normal tape.

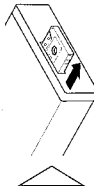
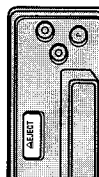
2. Switch tape playback from side A to side B, or vice versa.



3. Raise or lower the volume.



4. Remove the cassette tape.



Note:

- The Tape function can be turned ON/OFF with the cassette tape remaining in this product. (See page 47.)

Fast Forward/Rewind and Music Search

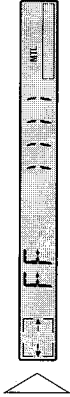
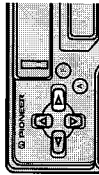
Fast Forward and Forward-Music Search

While "FF" is displayed, the system fast-forwards the cassette tape to the end of the current side.

While "F-MS" is displayed, the system winds the cassette tape forward to the beginning of the next song, then play begins from that point.

• Select the desired mode in the following order:

FF → F-MS → Normal playback



Note:

- Fast Forward (FF) and Forward-Music Search (F-MS) can be canceled by pressing the BAND button during FF or F-MS operation.

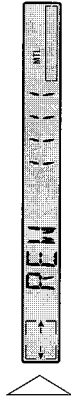
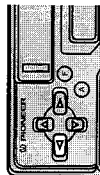
Rewind and Rewind-Music Search

While "REW" is displayed, the system rewinds the cassette tape to the beginning of the current side.

While "R-MS" is displayed, the system rewinds the cassette tape to the beginning of the current song, then play begins from that point.

• Select the desired mode in the following order:

REW → R-MS → Normal playback



Note:

- Rewind (REW) and Rewind-Music Search (R-MS) can be canceled by pressing the BAND button during the REW or R-MS operation.

Specifications

General

Power source 14.4 V DC (10.8 - 15.1 V allowable)
 Grounding system Negative type
 Max. current consumption 8.5 A
 Dimensions
 (DIN) (chassis) 178 (W) x 50 (H) x 150 (D) mm
 (nose) 177 (W) x 2 (H) x 5-7/8 (D) in.]
 [7-3/8 (W) x 2-1/4 (H) x 3/4 (D) in.]
 (D) (chassis) 178 (W) x 50 (H) x 155 (D) mm
 (nose) 170 (W) x 2 (H) x 6-1/8 (D) in.]
 [6-3/4 (W) x 1-7/8 (H) x 1/2 (D) in.]
 Weight 1.2 kg (2.6 lbs)

Amplifier

Continuous power output is 17 W per channel min. into 4 ohms, both channels driven 50 to 15,000 Hz with no more than 5% THD.
 Maximum power output 35 W x 4
 Load impedance 4 Ω (4 - 8 Ω allowable)
 Preout output level/output impedance 500 mV/1 kΩ
 Tone controls
 (Bass) (UC Model) ±12 dB (100 Hz)
 (ES Model) +8 - -16 dB (100 Hz)
 (Treble) ±12 dB (10 kHz)
 Loudness contour +10 dB (100 Hz), +7 dB (10 kHz)
 (volume: -30 dB)

Cassette player

Tape Compact cassette tape (C-30 - C-90)
 Tape speed 4.76 cm/sec. (+0.14 cm/sec., -0.05 cm/sec.)
 Fast forward/rewinding time .. Approx. 100 sec. for C-60
 Wow & flutter 0.09% (WRMS)
 Frequency response Metal: 30 - 19,000 Hz (±3 dB)
 Stereo separation 45 dB
 Signal-to-noise ratio
 Metal: Dolby B NR IN: 67 dB (HF-A network)
 Metal: Dolby NR OUT: 61 dB (HF-A network)

FM tuner

Frequency range (UC Model) 87.9 - 107.9 MHz
 (ES Model) 87.5 - 108 MHz
 Usable sensitivity
 11 dBf (1.0 μV/75 Ω, mono, S/N: 30 dB)
 50 dB quieting sensitivity 16 dBf (1.7 μV/75 Ω, mono)
 Signal-to-noise ratio 70 dB (HF-A network)
 Distortion 0.3% (at 65 dBf, 1 kHz, stereo)
 Frequency response 30 - 15,000 Hz (±3 dB)
 Stereo separation 40 dB (at 65 dBf, 1 kHz)
 Selectivity (UC Model) 70 dB (2ACA)
 Three-signal intermodulation
 (desire signal level)(UC Model) 50 dBf
 (two undesire signal level: 110 dBf)

AM tuner

Frequency range 530 - 1,710 kHz
 Usable sensitivity 18 μV (25 dB) (S/N: 20 dB)
 Selectivity 50 dB

Note:

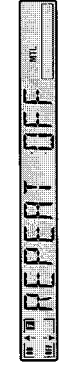
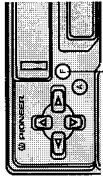
- Specifications and the design are subject to possible modification without notice due to improvements.

Using the Cassette Player

Entering the Function Menu

In this menu you can select Tape functions.

- Select the desired mode in Function Menu.



Each press changes the Mode ...

Each press of the Function button selects the mode in the following order:

REPEAT → B SKIP → RI → B NR

Note:

- You can cancel the Function Menu by pressing the BAND button.
- After selecting the Function Menu, if you do not perform an operation within about 30 seconds, the Function Menu is automatically canceled.

Radio Intercept

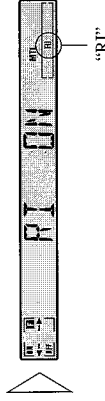
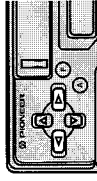
This function allows you to listen to the radio during tape fast-forwarding/rewinding.

Note:

- The radio intercept function does not work during a Music Search operation.

- Select the Radio Intercept mode in the Function Menu.

- Switch the Radio Intercept mode ON or OFF.



Note:

- Pressing the BAND button cancels the Function Menu.