

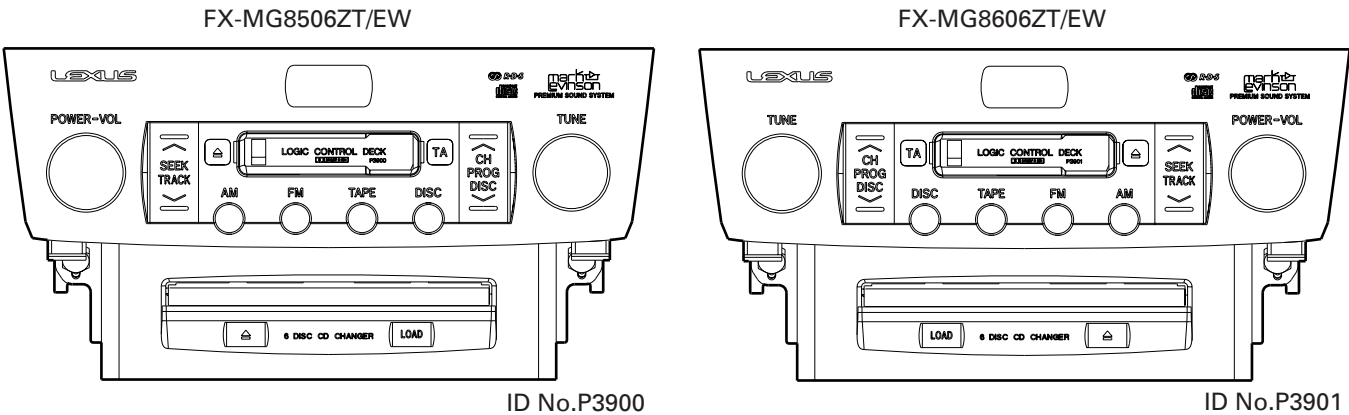
Service Manual

Pioneer
TOYOTA

ORDER NO.
CRT2548

LEXUS LS430 **AUDIO SYSTEM** **HEAD UNIT**

VEHICLE	DESTINATION	PRODUCED AFTER	TOYOTA PART No.	ID No.	PIONEER MODEL No.
LEXUS LS430	EUROPE	August 2000	86120-50610	P3900	FX-MG8506ZT/EW
LEXUS LS430	EUROPE	August 2000	86120-50770	P3900	FX-MG8506ZT-91/EW
LEXUS LS430	UNITED KINGDOM	August 2000	86120-50620	P3901	FX-MG8606ZT/EW
LEXUS LS430	UNITED KINGDOM	August 2000	86120-50780	P3901	FX-MG8606ZT-91/EW



● This service manual should be used together with the following manual(s):

Model No.	Order No.	Mech. Module	Remarks
CX-631	CRT1640	2L	Cassette Mech. Module:Mech.Description, Disassembly
CX-890	CRT2376	G1	CD Mech. Module:Circuit Description, Mech.Description, Disassembly

● Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"Dolby" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.

● Supplementary model is identical to the original except for the addition of following items.

Description	Part No.	
	FX-MG8506ZT-91/EW	FX-MG8606ZT-91/EW
Polyethylene Bag	CEG1026	CEG1026
Carton	CHA4120	CHA4120
Contain Box	CHL4120	CHL4121
Protector(TOP)	CHP2319	CHP2319
Protector(BOTTOM)	CHP2320	CHP2320

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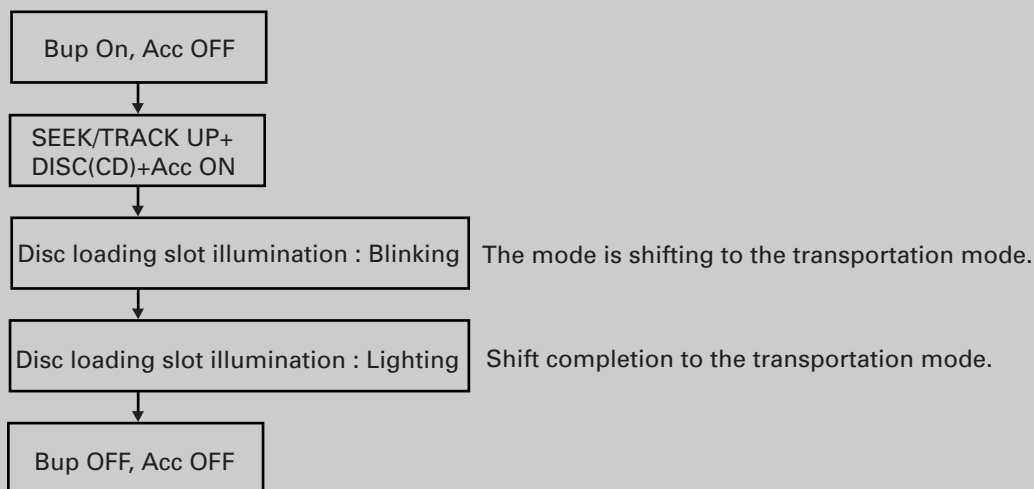
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● CD Player Service Precautions

1. For pickup unit(CXX1313) handling, please refer to "Disassembly"(see page 84).
During replacement, handling precautions shall be taken to prevent an electrostatic discharge(protection by a short pin).
2. During disassembly, be sure to turn the power off since an internal IC might be destroyed when a connector is plugged or unplugged.
3. Please checking the grating after changing the service pickup unit(see page 73).

● When the Repair is Complete

When the repair is complete, make the CD mechanism ready for transportation



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.

1. Safety Precautions for those who Service this Unit.

- When checking or adjusting the emitting power of the laser diode exercise caution in order to get safe, reliable results.

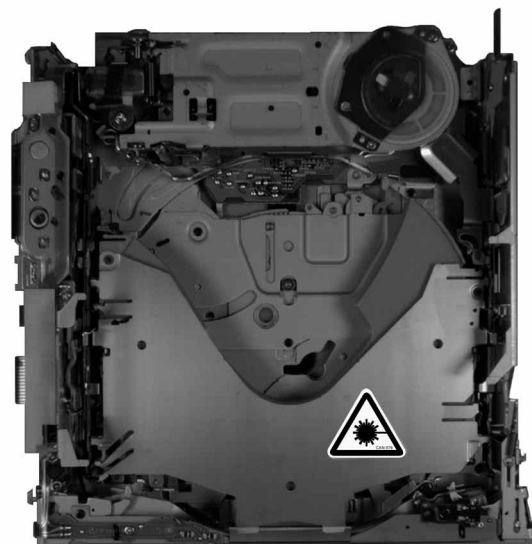
Caution:

1. During repair or tests, minimum distance of 13cm from the focus lens must be kept.
2. During repair or tests, do not view laser beam for 10 seconds or longer.

2. A "CLASS 1 LASER PRODUCT" label is affixed to the bottom of the player.



3. The triangular label is attached to the mechanism unit holder.



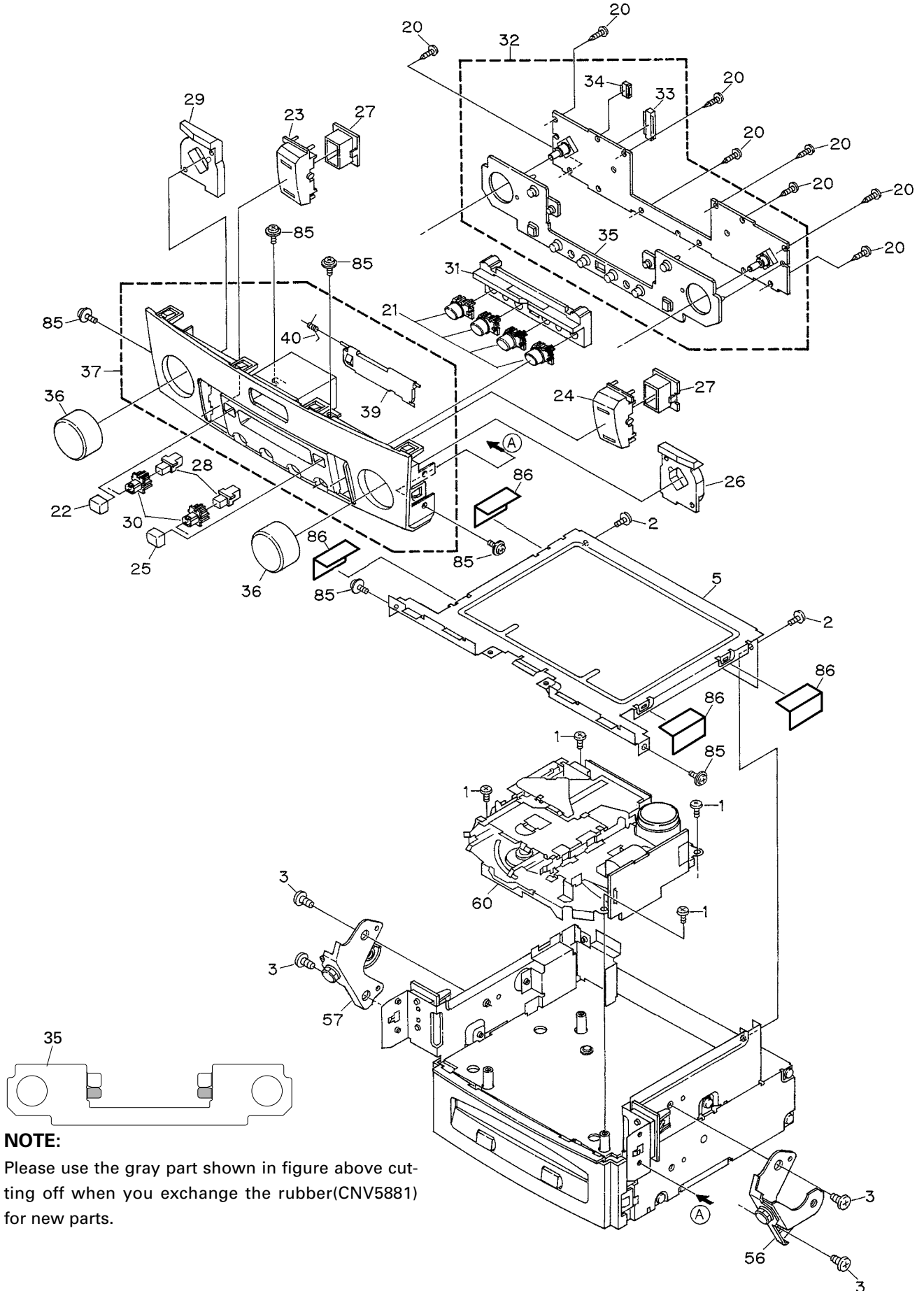
4. Specifications of Laser Diode

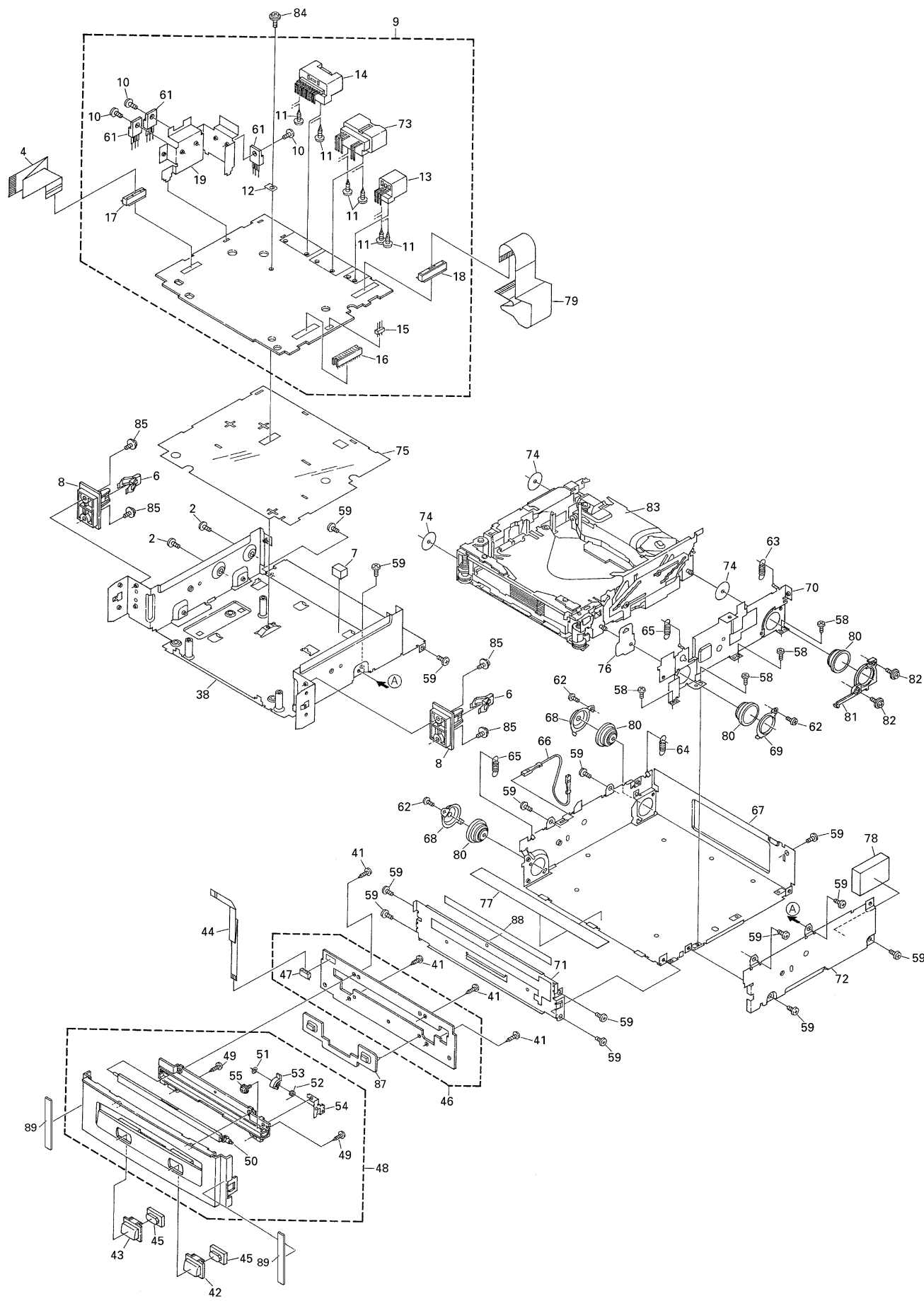
Specifications of laser radiation fields to which human access is possible during service.

Wavelength = 800 nanometers

2. EXPLODED VIEWS AND PARTS LIST

2.1 EXTERIOR(FX-MG8506ZT/EW,FX-MG8506ZT-91/EW)





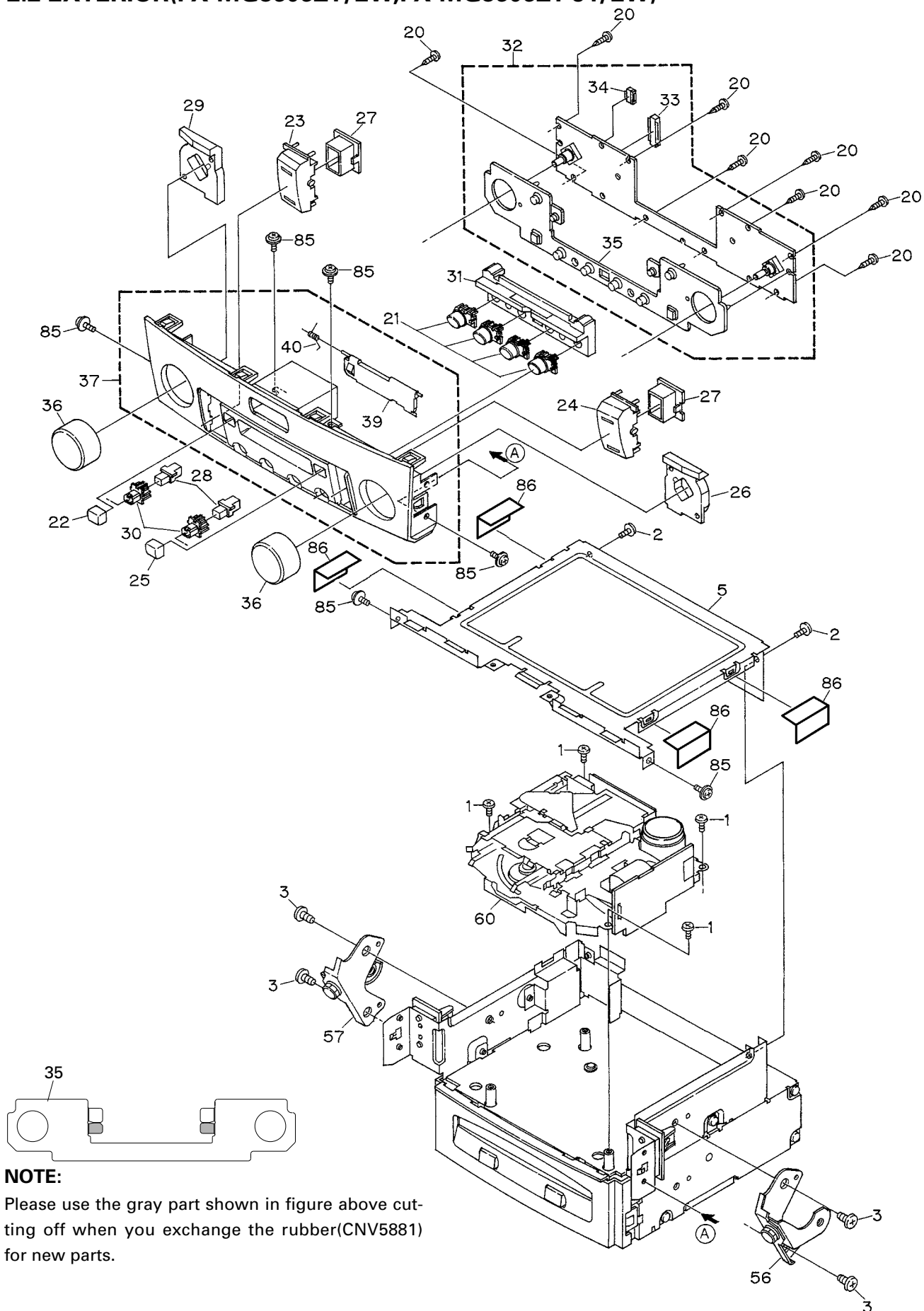
NOTE:

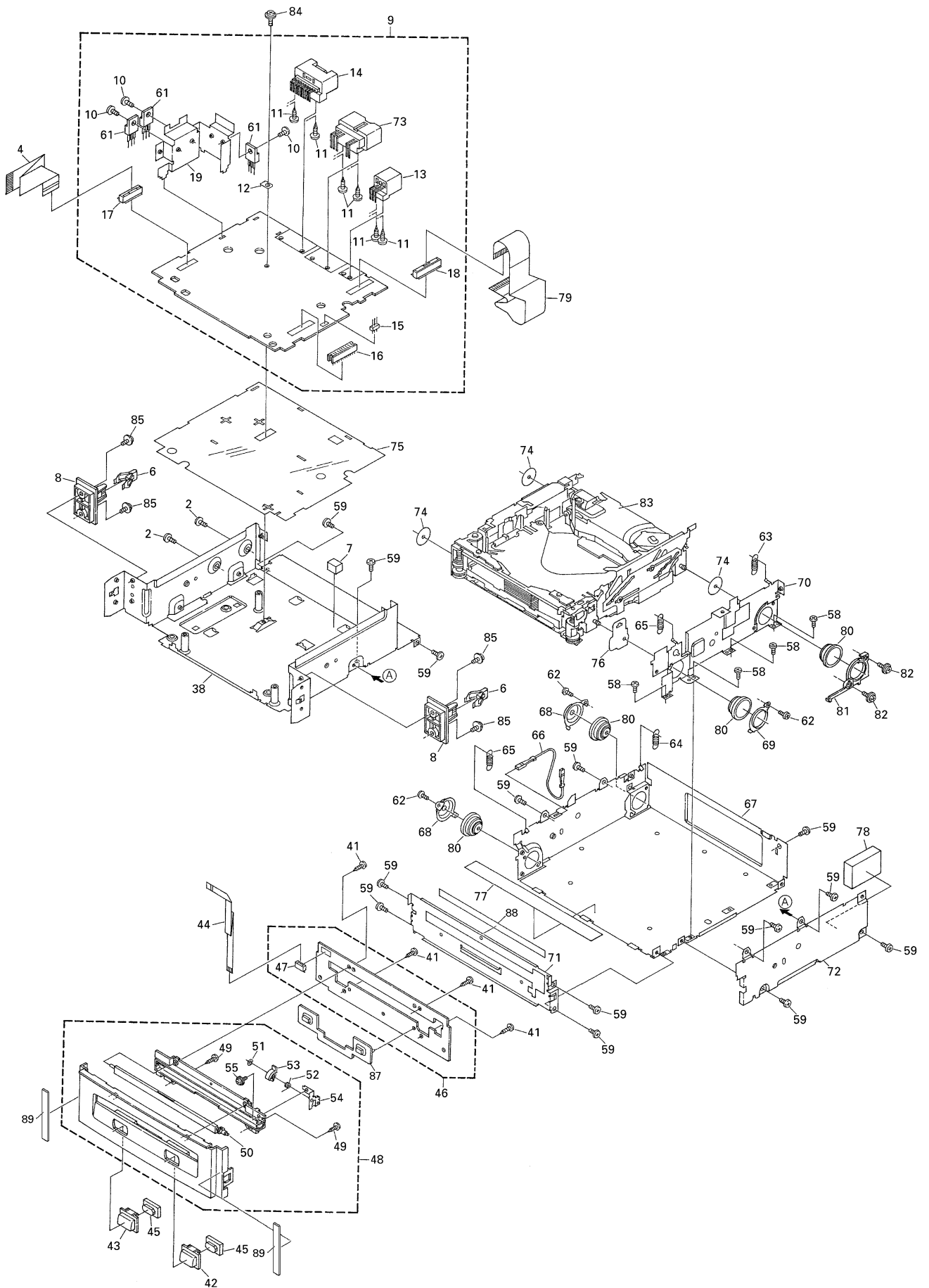
- Parts marked by "*" are generally unavailable because they are not in our Master Spare Parts List.
- Screws adjacent to ∇ mark on the product are used for disassembly.

● EXTERIOR SECTION PARTS LIST

Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	Screw	BMZ26P040FMC	45	Lighting Conductor	CNV6638
2	Screw	BMZ26P050FMC	46	SW Unit	CWM6872
3	Screw (FX-MG8506ZT/EW)	BMZ50P080FMC	47	Connector(CN905)	CKS4354
4	Connector	CDE6172	48	Grille Unit	CXB6927
5	Case	CNB2541	49	Screw	BPZ20P080FMC
6	90468-04191	CNC9048	50	Door	CAT2151
7	Cushion	CNM6917	51	Washer	CBF1037
8	Guide	CNV6044	52	Spring	CBH2339
9	Main Unit	CWM6848	53	Gear	CNV6116
10	Screw	BMZ30P060FMC	54	Bracket Unit	CXB5254
11	Screw(M3x6)	CBA1393	55	Screw	IMS20P030FMC
12	Terminal(CN806)	CKF1059	56	86208-50010 (FX-MG8506ZT/EW)	CXB6031
13	Connector(CN802)	CKM1315	57	86207-50010 (FX-MG8506ZT/EW)	CXB6032
14	Connector(CN801)	CKM1322	58	Screw	BMZ20P020FMC
15	Plug(CN303)	CKS-291	59	Screw	BMZ26P030FMC
16	Connector(CN301)	CKS3568	60	Cassette Mechanism Module	EXK3885
17	Connector(CN804)	CKS3751	61	Transistor(Q809,811,812)	2SB1185
18	Connector(CN701)	CKS3930	62	Screw(M2x2)	CBA1250
19	Holder	CNC8163	63	Spring	CBH2361
20	Screw	BPZ20P080FMC	64	Spring	CBH2365
21	Button(MODE)	CAC5958	65	Spring Unit	CXB6850
22	Button(EJECT)	CAC5960	66	Connector	CDE6302
23	Button(SEEK)	CAC6356	67	Chassis	CNA2131
24	Button(CH)	CAC6357	68	Holder	CNC7477
25	Button(TA)	CAC6351	69	Holder	CNC7826
* 26	Lighting Conductor Unit	CXB6916	70	Holder	CNC8160
27	Holder Unit	CXB6898	71	Holder	CNC8161
28	Lighting Conductor	CNV5683	72	Holder	CNC8162
29	Lighting Conductor Unit	CXB6915	73	Connector(CN803)	CKM1065
30	Holder	CNV6039	74	Sheet	CNM5981
31	Lighting Conductor Unit	CXB6899	75	Insulator	CNM7141
32	Keyboard Unit	CWM6860	76	Sheet	CNM6318
33	Connector(CN902)	CKS3751	77	Insulator	CNM6410
34	Connector(CN903)	CKS4354	78	Cushion	CNM6927
35	Rubber	CNV5881	79	PCB	CNP5399
36	Knob Unit	CXB3551	80	Damper	CNV5120
37	Grille Unit	CXB6893	81	Holder	CNV5543
38	Chassis Unit	CXB3549	82	Screw	IMS20P040FMC
39	Door	CAT2103	83	Mechanism Assy(Service)	CXX1430
40	Spring	CBH2427	84	Screw	ISS26P050FMC
41	Screw	BPZ20P080FMC	85	Screw	ISS26P060FMC
42	Button(LOAD)	CAC5968	* 86	Seal	CNM5714
43	Button(EJECT)	CAC5969	87	Rubber	CNV6596
44	Connector	CDE6293	88	Spacer	CNM7140
			89	Spacer	CNM7179

2.2 EXTERIOR(FX-MG8606ZT/EW,FX-MG8606ZT-91/EW)

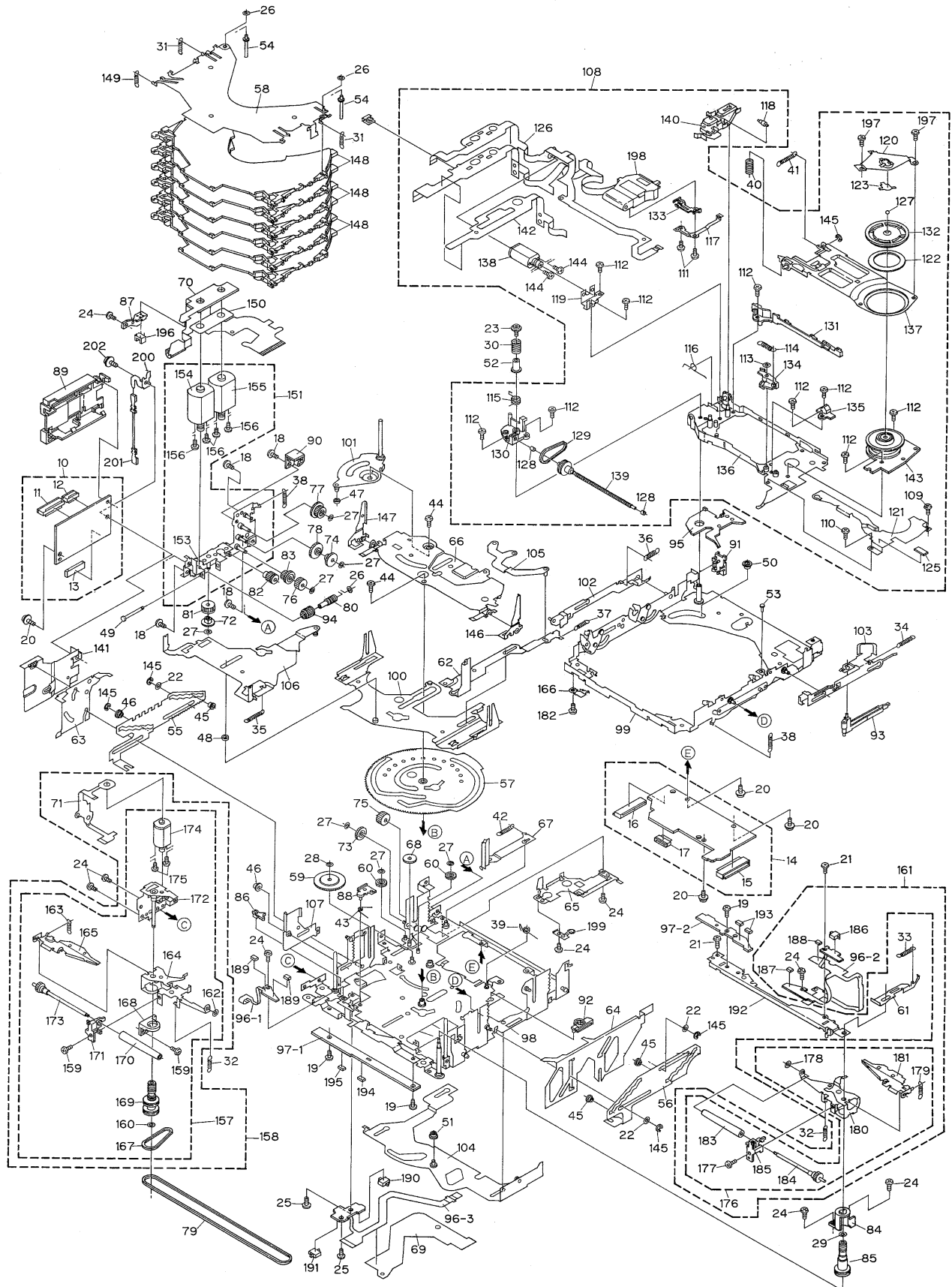




● EXTERIOR SECTION PARTS LIST

Mark No.	Description	Part No.	Mark No.	Description	Part No.
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2	Screw	BMZ26P050FMC	46	SW Unit	CWM6872
3	Screw	BMZ50P080FMC	47	Connector(CN905)	CKS4354
	(FX-MG8606ZT/EW)		48	Grille Unit	CXB6927
4	Connector	CDE6172	49	Screw	BPZ20P080FMC
5	Case	CNB2541	50	Door	CAT2151
6	90468-04191	CNC9048	51	Washer	CBF1037
7	Cushion	CNM6917	52	Spring	CBH2339
8	Guide	CNV6044	53	Gear	CNV6116
9	Main Unit	CWM6849	54	Bracket Unit	CXB5254
10	Screw	BMZ30P060FMC	55	Screw	IMS20P030FMC
11	Screw(M3x6)	CBA1393	56	86208-50010	CXB6031
12	Terminal(CN806)	CKF1059		(FX-MG8606ZT/EW)	
13	Connector(CN802)	CKM1315	57	86207-50010	CXB6032
14	Connector(CN801)	CKM1322		(FX-MG8606ZT/EW)	
15	Plug(CN303)	CKS-291	58	Screw	BMZ20P020FMC
16	Connector(CN301)	CKS3568	59	Screw	BMZ26P030FMC
17	Connector(CN804)	CKS3751	60	Cassette Mechanism Module	EXK3885
18	Connector(CN701)	CKS3930	61	Transistor(Q809,811,812)	2SB1185
19	Holder	CNC8163	62	Screw(M2x2)	CBA1250
20	Screw	BPZ20P080FMC	63	Spring	CBH2361
21	Button(MODE)	CAC5958	64	Spring	CBH2365
22	Button(TA)	CAC6351	65	Spring Unit	CXB6509
23	Button(CH)	CAC5961	66	Connector	CDE6302
24	Button(SEEK)	CAC5962	67	Chassis	CNA2131
25	Button(EJECT)	CAC5960	68	Holder	CNC7477
* 26	Lighting Conductor Unit	CXB6916	69	Holder	CNC7826
27	Holder Unit	CXB6898	70	Holder	CNC8160
28	Lighting Conductor	CNV5683	71	Holder	CNC8161
29	Lighting Conductor Unit	CXB6915	72	Holder	CNC8162
30	Holder	CNV6039	73	Connector(CN803)	CKM1065
31	Lighting Conductor Unit	CXB6899	74	Sheet	CNM5981
32	Keyboard Unit	CWM6859	75	Insulator	CNM6127
33	Connector(CN902)	CKS3751	76	Sheet	CNM6318
34	Connector(CN903)	CKS4354	77	Insulator	CNM6410
35	Rubber	CNV5881	78	Cushion	CNM6927
36	Knob Unit	CXB3551	79	PCB	CNP5399
37	Grille Unit	CXB6891	80	Damper	CNV5120
38	Chassis Unit	CXB3549	81	Holder	CNV5543
39	Door	CAT2101	82	Screw	IMS20P040FMC
40	Spring	CBH2427	83	Mechanism Assy(Service)	CXX1430
41	Screw	BPZ20P080FMC	84	Screw	ISS26P050FMC
42	Button(EJECT)	CAC5969	85	Screw	ISS26P060FMC
43	Button(LOAD)	CAC5968	* 86	Seal	CNM5714
44	Connector	CDE6293	87	Rubber	CNV6596
			88	Spacer	CNM7140
			89	Spacer	CNM7179

2.3 CD MECHANISM

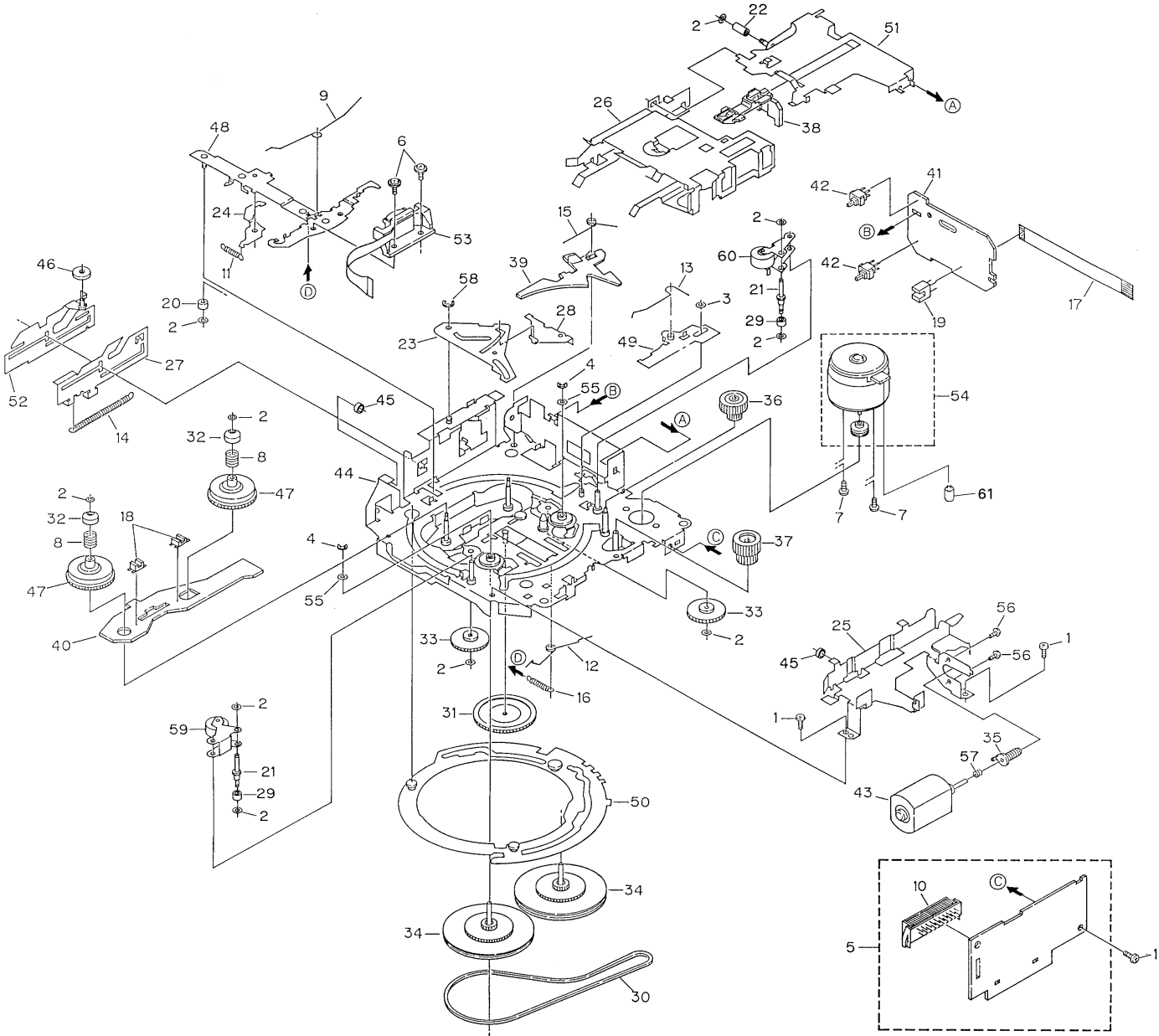


● CD MECHANISM SECTION PARTS LIST

Mark No.	Description	Part No.	Mark No.	Description	Part No.
1-9	●●●●●		57	Cam	CNC8774
10	CD Core Unit(Servo Unit)	CWX2421	* 58	Holder	CNC7235
11	Connector(CN101)	CKS2764	59	Gear	CNC7236
12	Connector(CN301)	CKS3966	60	Gear	CNC8883
13	Connector(CN201)	CKS3991	61	Lever	CNC7243
14	CD Core Unit(STS Unit)	CWX2422	62	Lever	CNC7244
15	Connector(CN701)	CKS3989	63	Lever	CNC7245
16	Connector(CN801)	CKS3989	64	Lever	CXB4944
17	Connector(CN802)	CKS4054	65	Cover	CNC7441
18	Screw	CBA1037	66	Holder Unit	CXB4946
19	Screw	CBA1041	67	Lever	CNC9088
20	Screw	CBA1076	68	Gear	CNC8140
21	Screw	CBA1250	69	Sheet	CNM6840
22	Washer	CBA1512	70	PCB	CNP5764
23	Screw	CBA1452	71	PCB	CNP6010
24	Screw	CBA1453	72	Gear	CNR1479
25	Screw	CBA1479	73	Gear	CNR1481
26	Washer	CBF1037	74	Gear	CNR1495
27	Washer	CBF1038	75	Gear	CNR1501
28	Washer	CBF1039	76	Gear	CNR1502
29	Washer	CBF1064	77	Gear	CNR1540
30	Spring	CBH2007	78	Gear	CNR1541
31	Spring	CBH2271	79	Belt	CNT1080
32	Spring	CBH2274	80	Worm Gear	CNV5046
33	Spring	CBH2014	81	Gear	CNV5047
34	Spring	CBH2015	82	Gear	CNV5048
35	Spring	CBH2016	83	Gear	CNV5049
36	Spring	CBH2017	84	Holder	CNV5056
37	Spring	CBH2290	85	Pulley	CNV5058
38	Spring	CBH2366	86	Arm	CNV5061
39	Spring	CBH2064	87	Spacer	CNV5066
40	Spring	CBH2195	88	Arm	CNV5189
41	Spring	CBH2196	89	Cover	CNV5207
42	Spring	CBH2224	90	Cover	CNV5424
43	Spring	CBH2250	91	Cover	CNV5425
44	Screw	CBA1082	92	Lever	CNV5427
45	Roller	CLA3154	93	Arm	CNV5491
46	Roller	CLA3157	94	Gear	CNV5519
47	Roller	CLA3159	95	Holder	CNV5648
48	Roller	CLA3160	96	Composite PCB	CNX3327
49	Shaft	CLA3179	97	Composite PCB	CNX2989
50	Spacer	CLA3194	98	Chassis Unit	CXB5940
51	Roller	CLA3248	99	Frame Unit	CXB5806
52	Bush	CLA3353	100	Lever Unit	CXB6026
* 53	Shaft	CLA3469	101	Arm Unit	CXB2704
54	Shaft	CLA3693	102	Lever Unit	CXB2708
55	Steer	CNC7215	103	Lever Unit	CXB2709
56	Steer	CNC7216			

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	104	Lever Unit	CXB4949	*	154	Motor Unit(M1 Cam Gear)	CXB6929
	105	Arm Unit	CXB2712	*	155	Motor Unit(M3 ELV)	CXB3175
	106	Lever Unit	CXB4948		156	Screw	JFZ20P025FMC
	107	Lever Unit	CXB2714		157	Loading Arm L Assy	CXB3171
	108	Carriage Mechanism Unit(G1)	CXB4941		158	Loading Arm L Assy(Service)	CXX1415
	109	Screw	CBA1041		159	Screw	CBA1453
	110	Screw	CBA1250		160	Washer	CBF1038
	111	Screw	CBA1362		161	Loading Arm R Assy(Service)	CXX1457
	112	Screw	CBA1471		162	Washer	CBF1074
	113	Washer	CBF1038		163	Spring	CBH2136
	114	Spring	CBH2008	*	164	Arm	CNC7241
	115	Spring	CBH2009	*	165	Arm	CXB4449
	116	Spring	CBH2010		166	Holder	CBL1508
	117	Spring	CBL1335		167	Belt	CNT1079
	118	Roller	CLA3913		168	Holder	CNV5055
*	119	Bracket	CNC7228		169	Pulley	CNV5057
	120	Guide Unit	CXB4417		170	Roller	CNV6209
	121	Cover	CNC7628		171	Guide	CNV5125
	122	Sheet	CNM6414	*	172	Bracket Unit	CXB5937
	123	Sheet	CNM5378		173	Roller Gear Unit	CXB3176
	124	•••••		*	174	Motor Unit(M2 LOAD)	CXB3177
	125	Sheet	CNM5827		175	Screw	JFZ14P020FMC
	126	PCB	CNP4978		176	Loading Arm R Assy	CXB5839
	127	Ball	CNR1189		177	Screw	CBA1453
	128	Bearing	CNR1423		178	Washer	CBF1074
	129	Belt	CNT1079		179	Spring	CBH2136
	130	Holder	CNV5037	*	180	Arm	CNC7242
	131	Guide	CNV5040	*	181	Arm	CXB5822
	132	Clamper	CNV5042		182	Screw	JFZ20P014FMC
	133	Rack	CNV5111		183	Roller	CNV6209
	134	Arm	CNV5579		184	Roller Gear Unit	CXB3176
	135	Holder	CNV5759		185	Guide	CNV5126
*	136	Chassis	CXB6025		186	Switch(S885 MAX DETECT)	CSN1052
	137	Arm Unit	CXB2705		187	LED(D883)	CL202IRXTU
	138	Motor Unit(M4 CARRIAGE)	CXB3178		188	Photo-transistor(Q881)	CPT230SCTD
	139	Screw Unit	CXB3179		189	LED(D891,892)	CL202IRXTU
	140	Lever Unit	CXB4450		190	Switch(S887 CLAMP)	CSN1051
	141	Bracket	CNC8584		191	Switch(S886 ELV HOME)	CSN1052
	142	Spacer	CNM6345		192	Bracket Unit	CXB6086
	143	Motor(M5 SPINDLE)	CXM1120		193	Photo-transistor(Q851,852)	CPT230SCTD
	144	Screw	JFZ14P020FZK		194	Resistor(R856)	RS1/8S911J
	145	Washer	YE15FUC		195	Resistor(R857)	RS1/8S821J
	146	Arm Unit	CXB6052		196	Photo-interrupter(Q1)	RPI-221
	147	Arm Unit	CXB6053		197	Screw	CBA1387
	148	Tray Assy	CXB4307		198	Pickup Unit(Service)(P8)	CXX1313
	149	Spring	CBH2269		199	Spring	CBL1467
	150	Sheet	CNM7109		200	Bracket	CNC8902
	151	Cam Motor Assy	CXB6928		201	Connector	CDE6302
	152	•••••			202	Screw	CBA1015
*	153	Bracket Unit	CXB5201				

2.4 CASSETTE MECHANISM MODULE

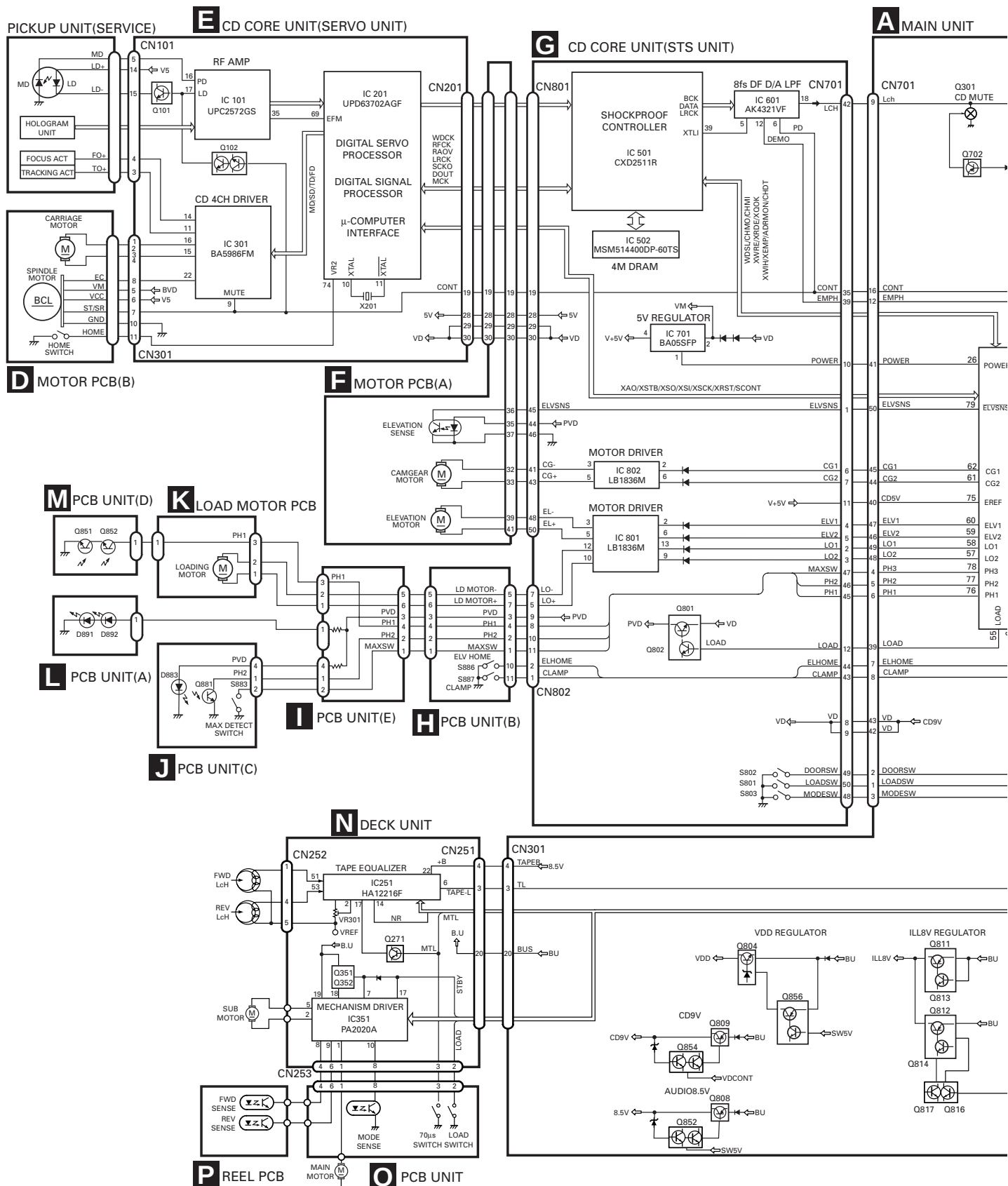


● CASSETTE MECHANISM MODULE SECTION PARTS LIST

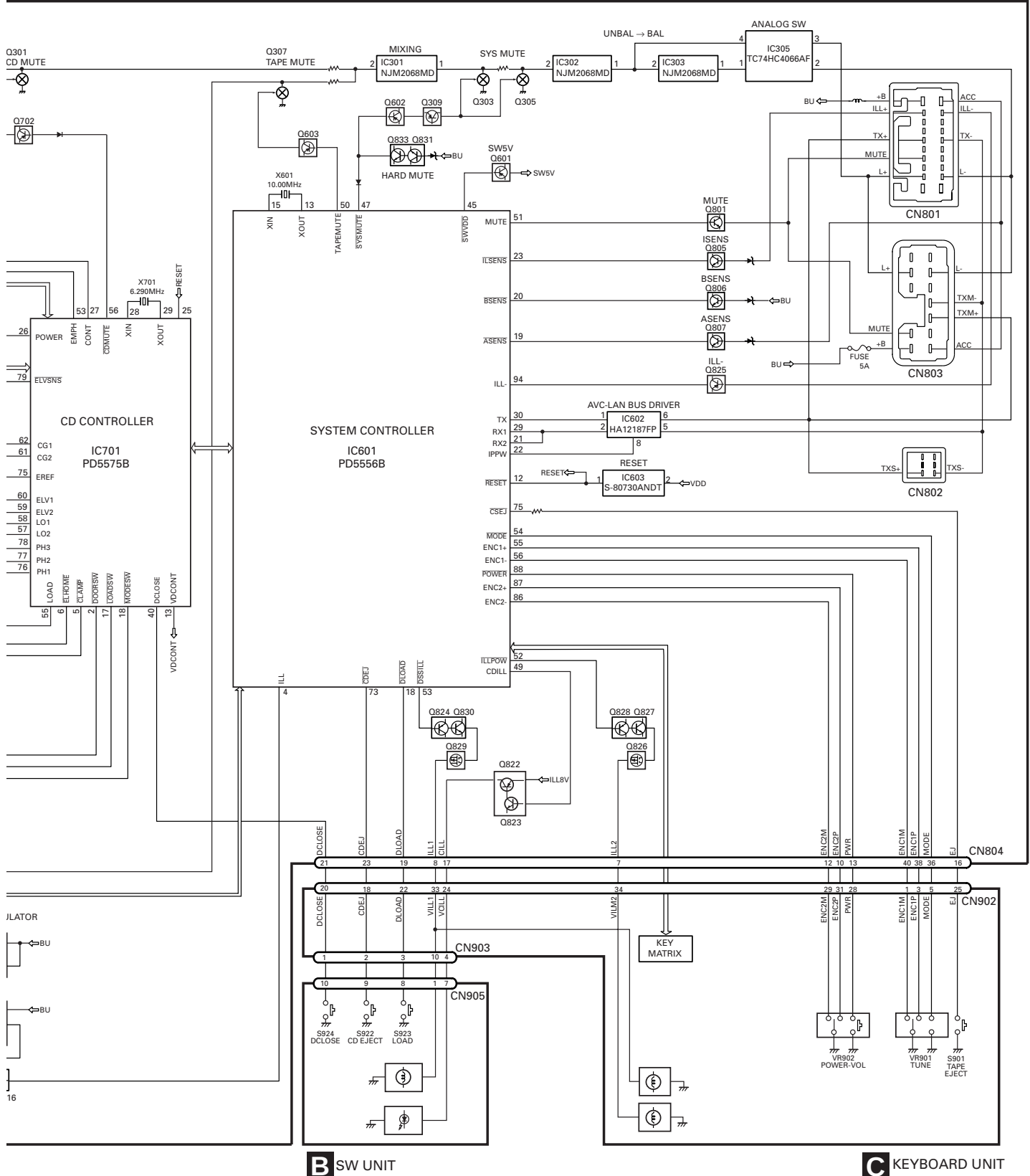
Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	Screw	BSZ20P040FMC	31	Gear	ENV1347
2	Washer	CBF1037	32	Collar	ENV1508
3	Washer	CBF1038	33	Gear	ENV1350
4	Washer	CBG1003	34	Flywheel	ENV1500
5	Deck Unit	EWM1027	35	Worm Gear	ENV1439
6	Screw(M2x5)	EBA1028	36	Worm Wheel	ENV1440
7	Screw(M2x2.5)	EBA1037	37	Gear	ENR1037
8	Spring	EBH1531	38	Lever	ENV1533
9	Spring	EBH1589	39	Arm	ENV1525
10	Connector(CN251)	CKS3540	40	Gathering PCB	ENX1037
11	Spring	EBH1515	41	Gathering PCB	ENX1060
12	Spring	EBH1587	42	Switch(S1)(S2)	ESG1004
13	Spring	EBH1517	43	Motor Unit(M2)(SUB)	EXA1382
14	Spring	EBH1518	44	Chassis Unit	EXA1559
15	Spring	EBH1519	45	Tube	ENM1039
16	Spring	EBH1537	46	Roller	ENR1027
17	Cord	EDD1027	47	Reel Unit	EXA1560
18	Photo-interrupter(EGN2,3)	EGN1006	48	Head Base Unit	EXA1434
19	Photo-interrupter(EGN1)	EGN1005	49	Lever Unit	EXA1578
20	Roller	ENR1031	50	Gear Unit	EXA1545
21	Shaft	ELA1362	51	Frame Unit	EXA1476
22	Roller	ELA1348	52	Lever Unit	EXA1439
23	Arm	ENC1490	53	Head Assy(HD1)	EXA1594
24	Arm	ENC1397	54	Motor Unit(M1)(MAIN)	EXA1499
25	Guide	ENC1519	55	Washer	HBF-179
26	Holder	ENC1516	56	Screw	JGZ20P025FNI
27	Lever	ENC1448	57	Spring	EBH1545
28	Arm	ENC1488	58	Washer	YE20FUC
29	Roller	ENR1023	59	Pinch Roller Unit	EXA1533
30	Belt	ENT1027	60	Pinch Roller Unit	EXA1532
			61	Capacitor(C1)	CEAL4R7M35

3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

3.1 BLOCK DIAGRAM(FX-MG8506ZT/EW)



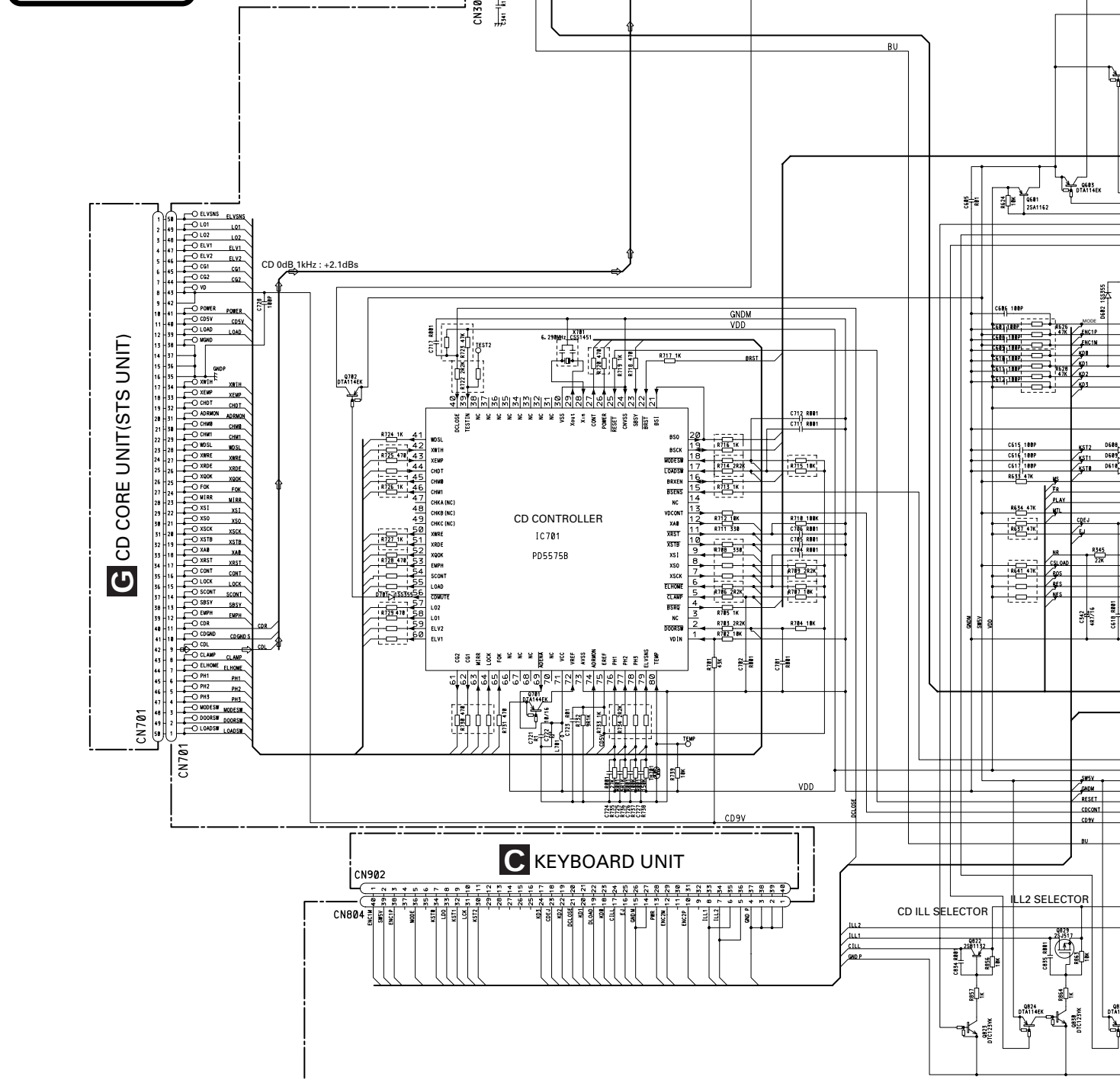
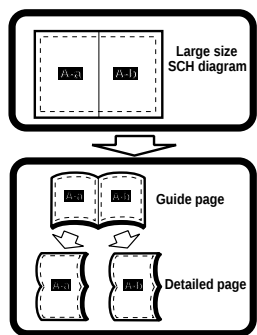
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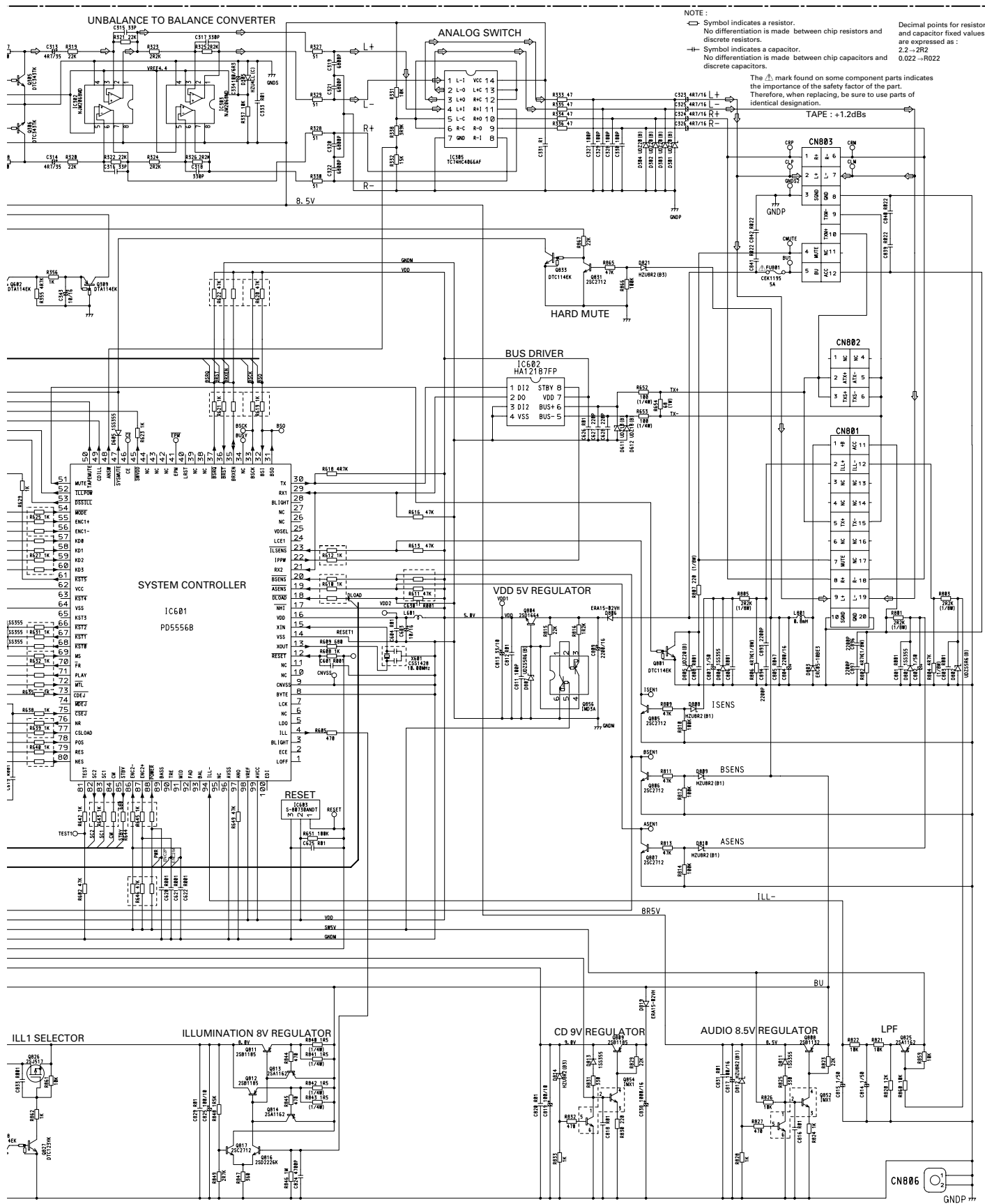
FX-MG8506ZT,MG8506ZT-91,MG8606ZT,MG8606ZT-91

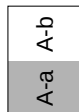
3.2 OVERALL CONNECTION DIAGRAM(GUIDE PAGE)(FX-MG8506ZT/EW)

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

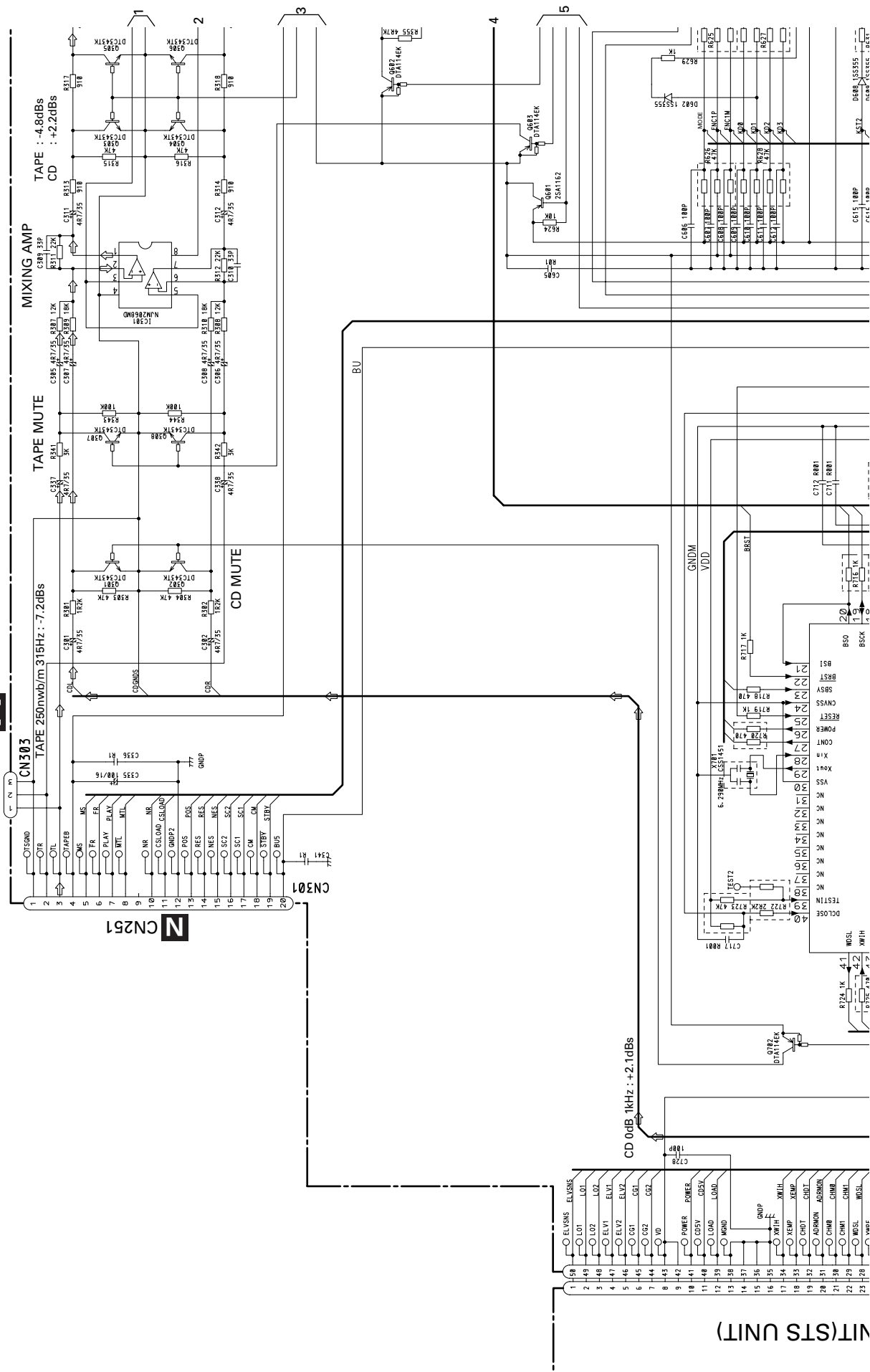


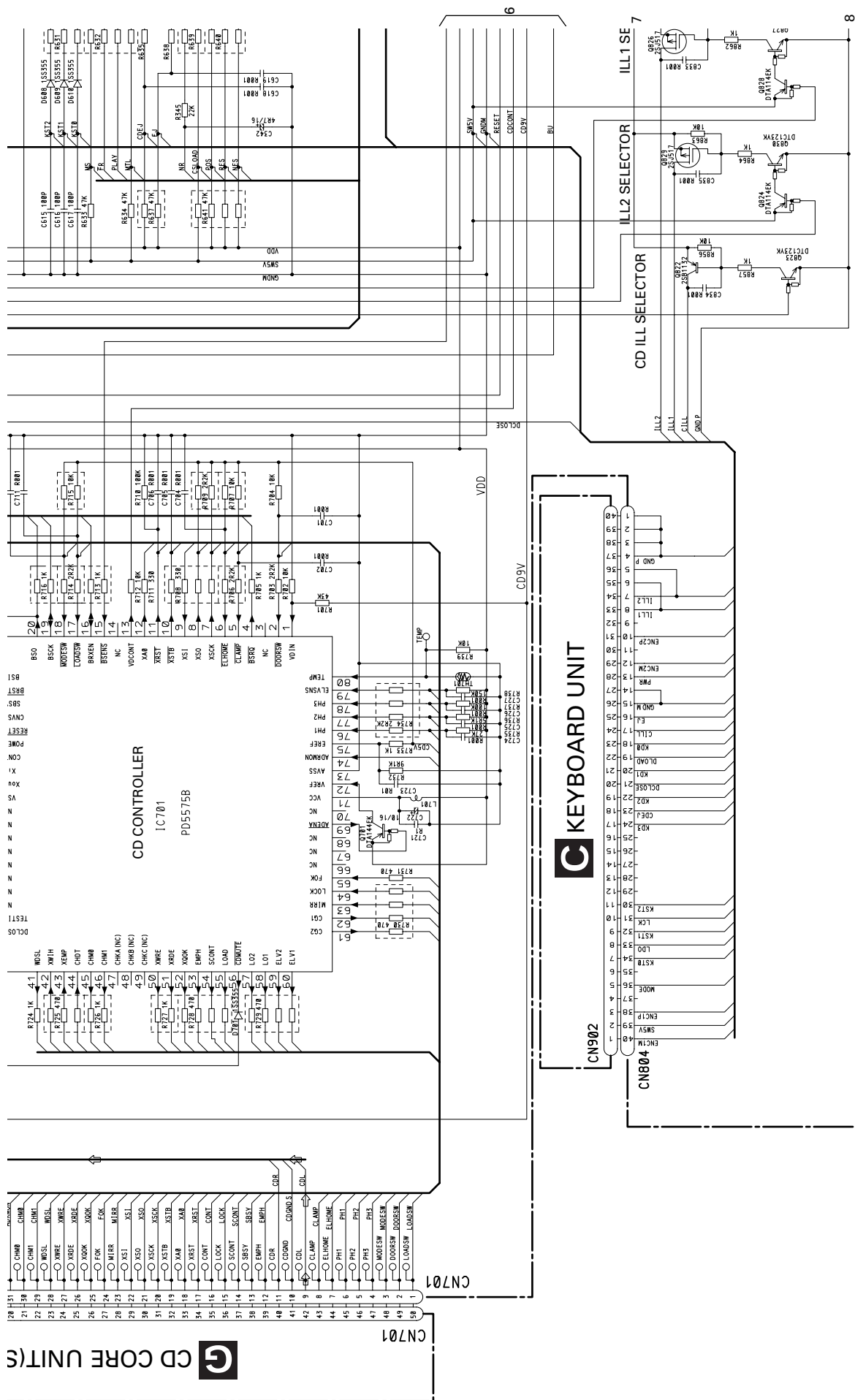
A-b

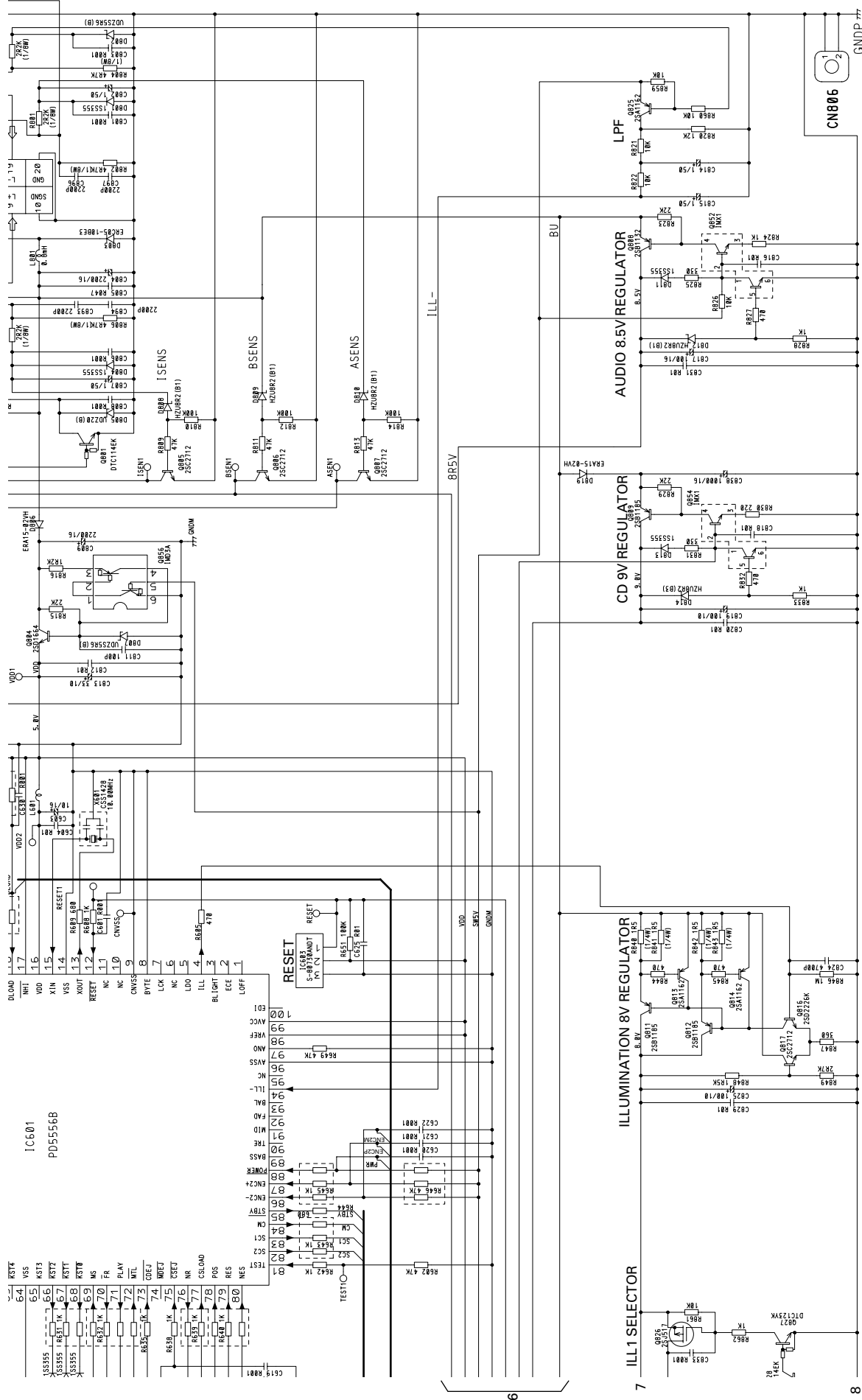




A MAIN UNIT


$$(LIN \cup STS) \cap LIN$$





A-a A-b

A

B

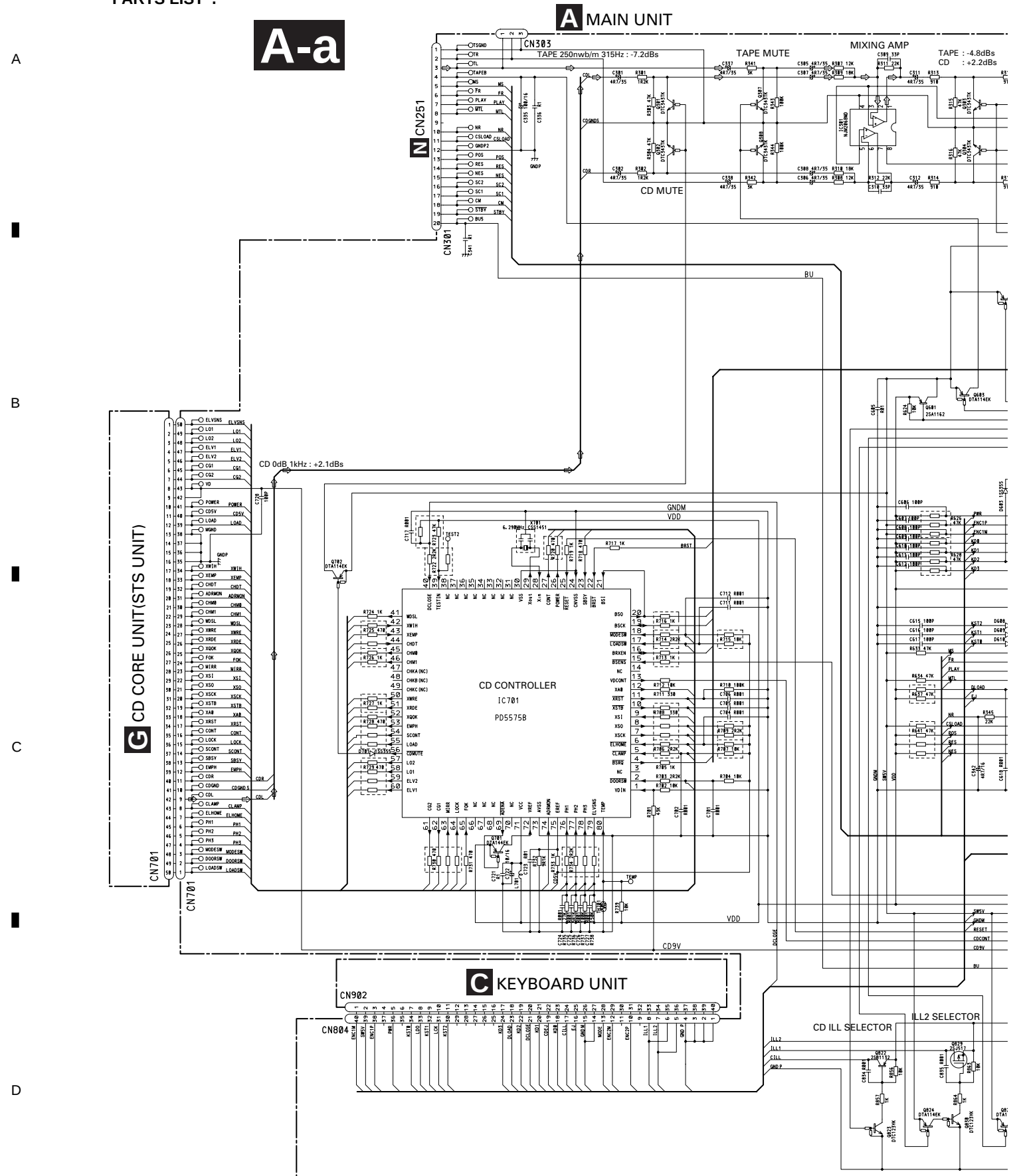
C

D

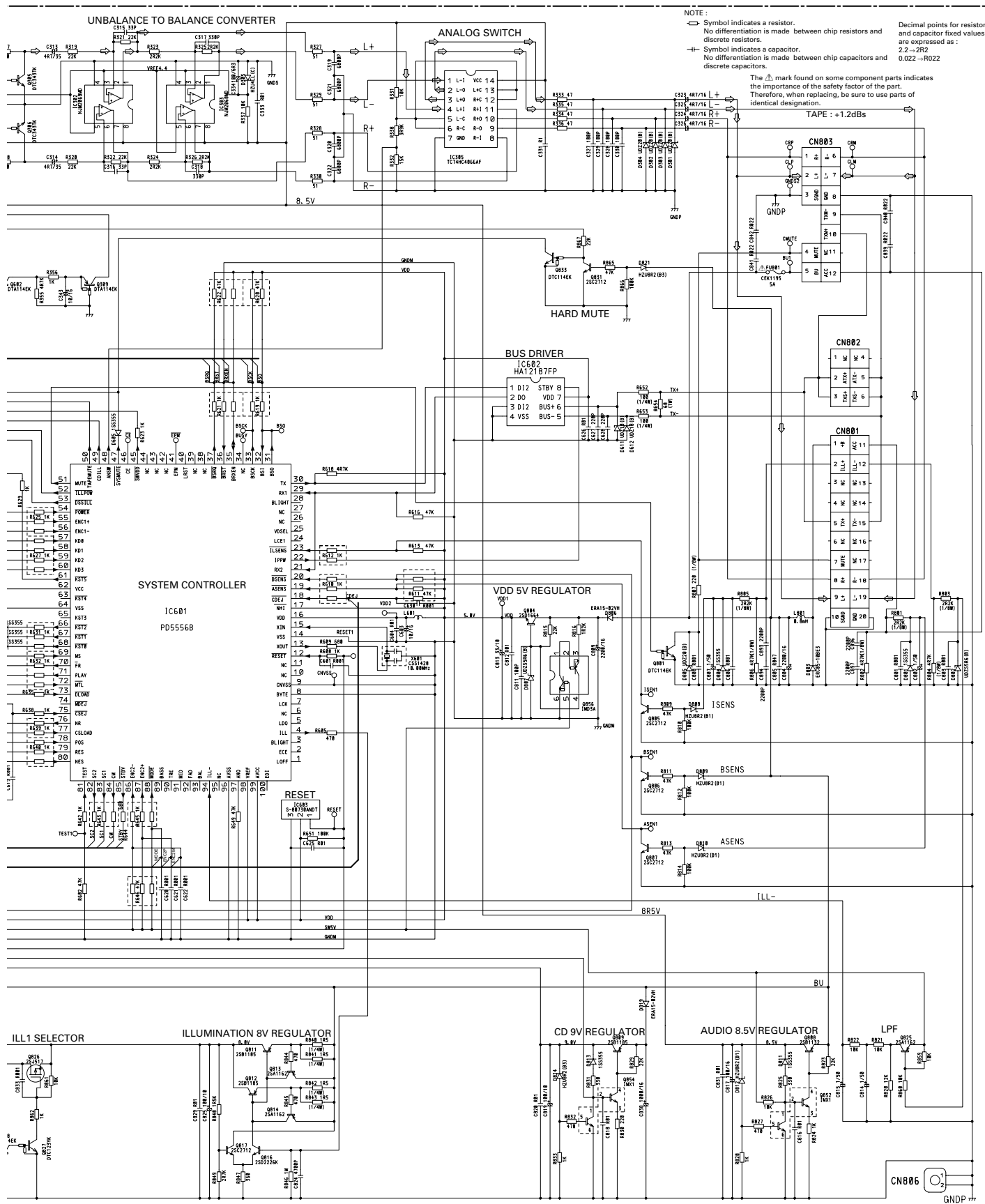
A-b

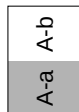
3.3 OVERALL CONNECTION DIAGRAM(GUIDE PAGE)(FX-MG8606ZT/EW)

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

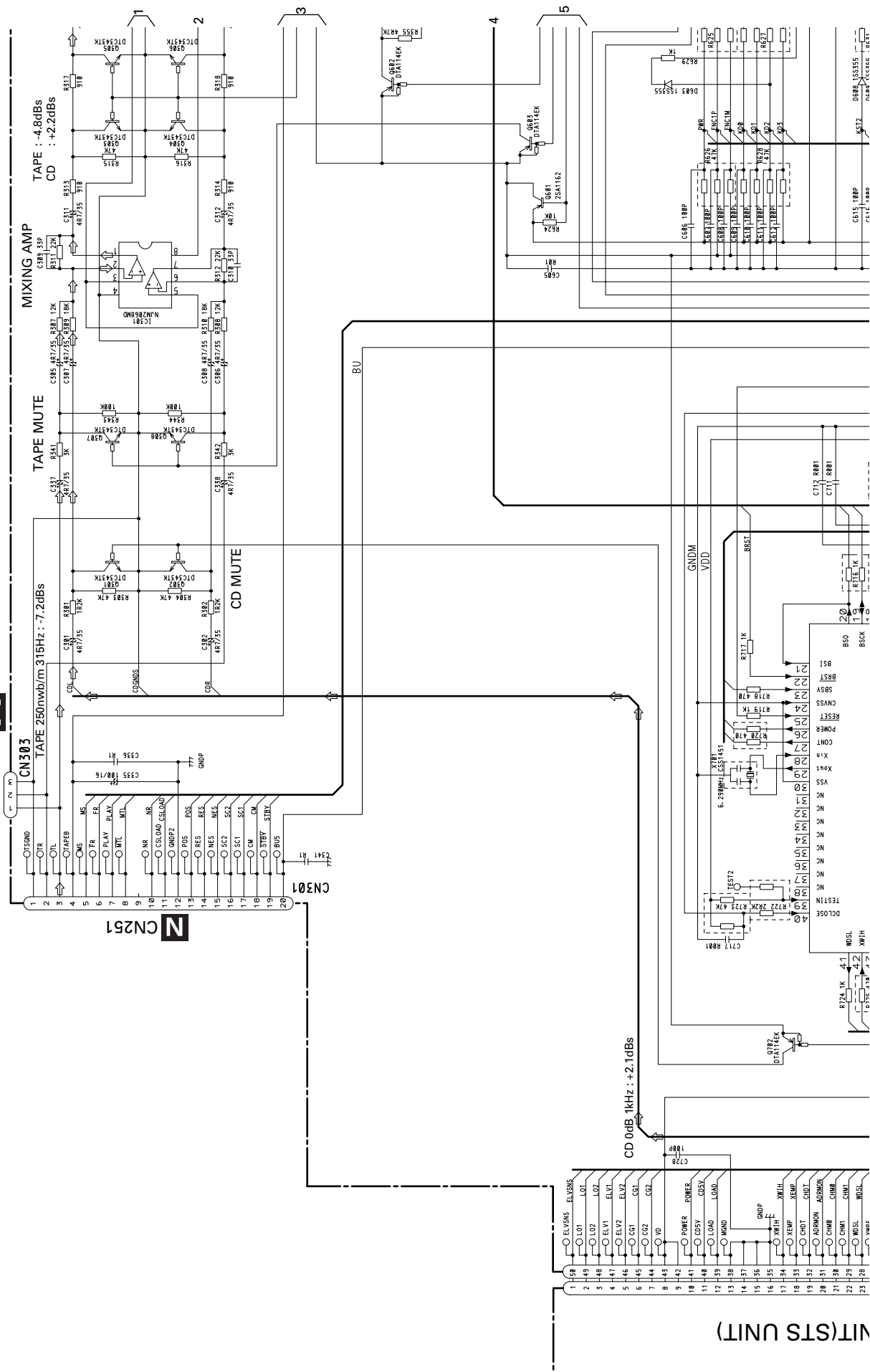


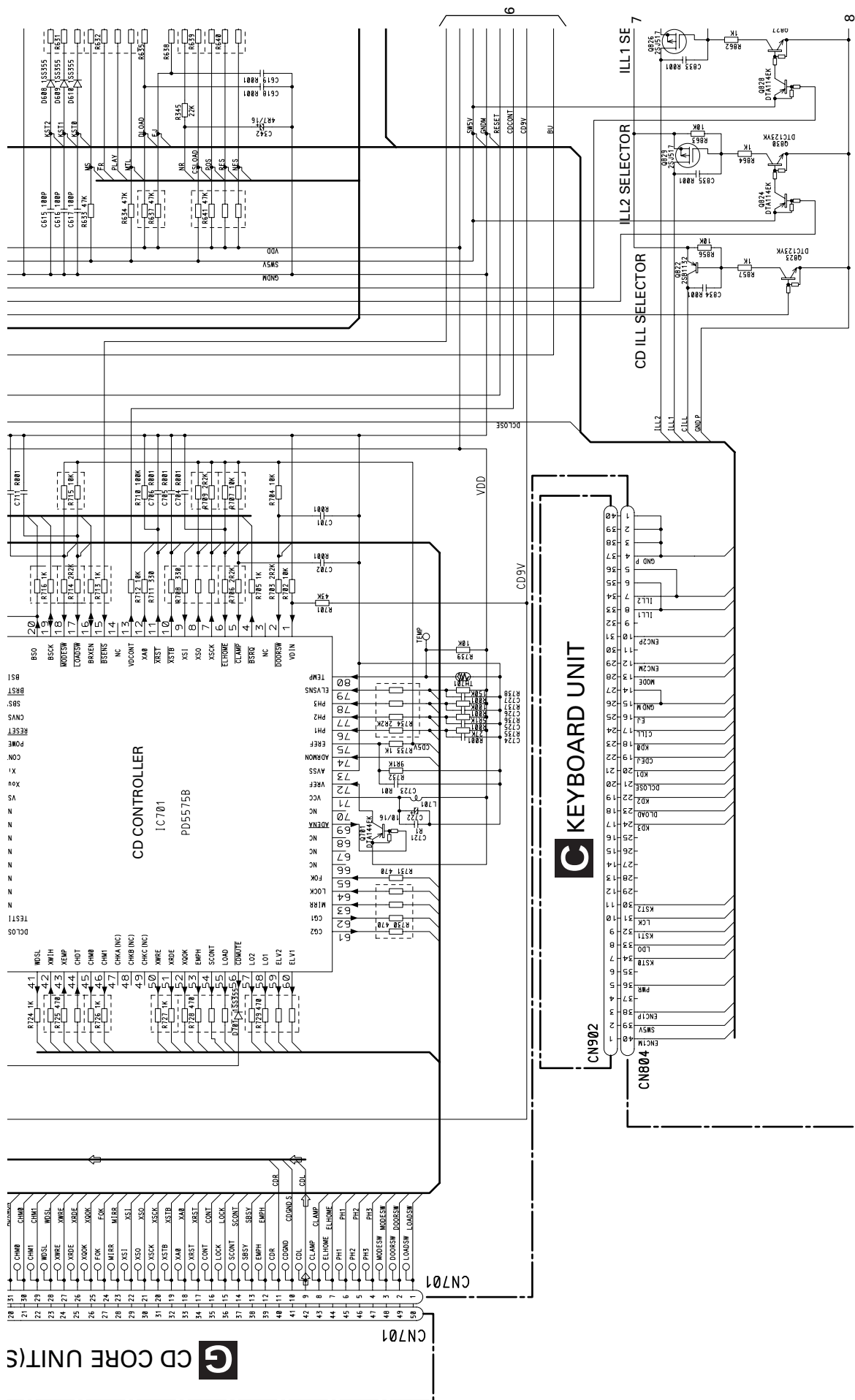
A-b





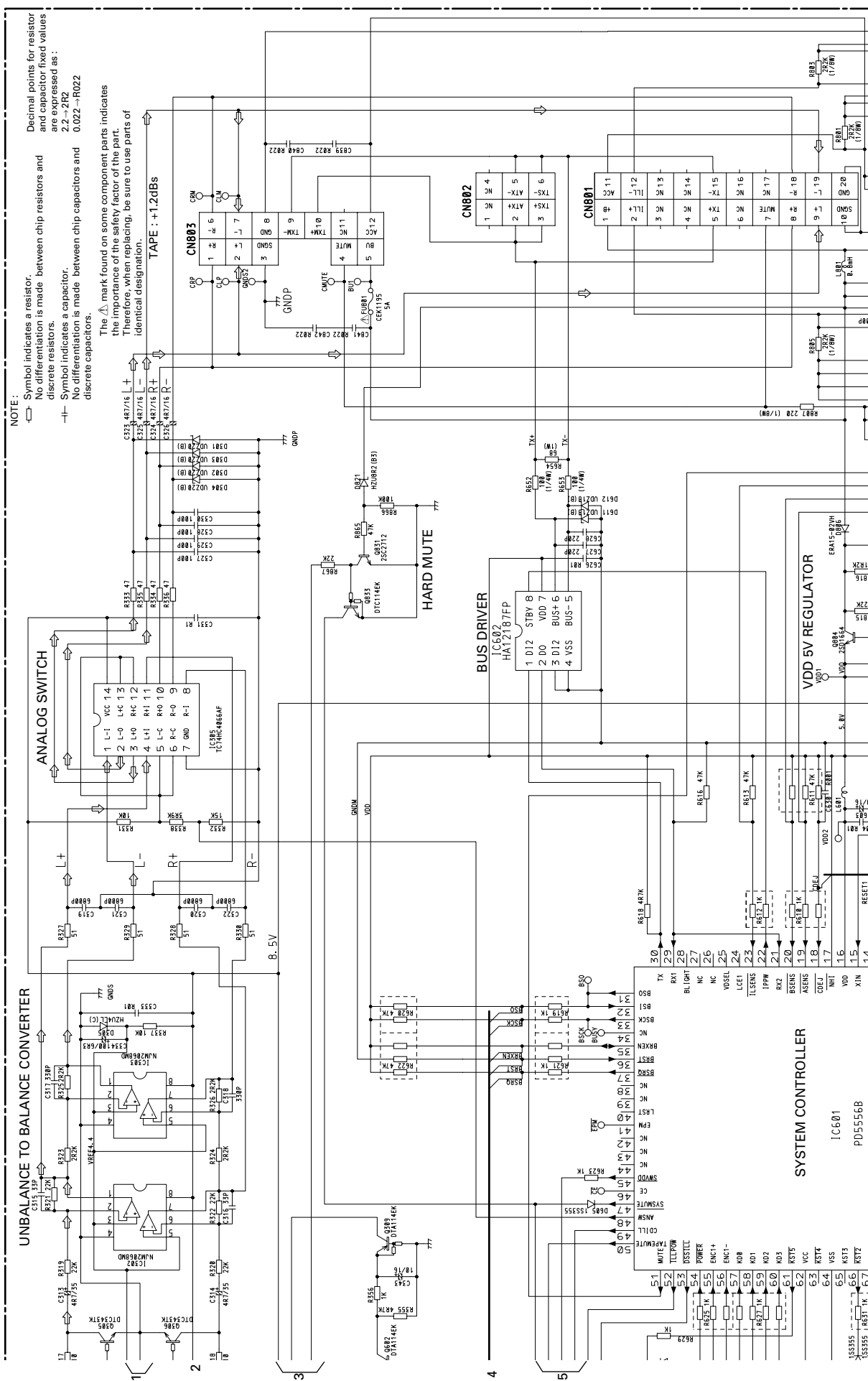
A MAIN UNIT

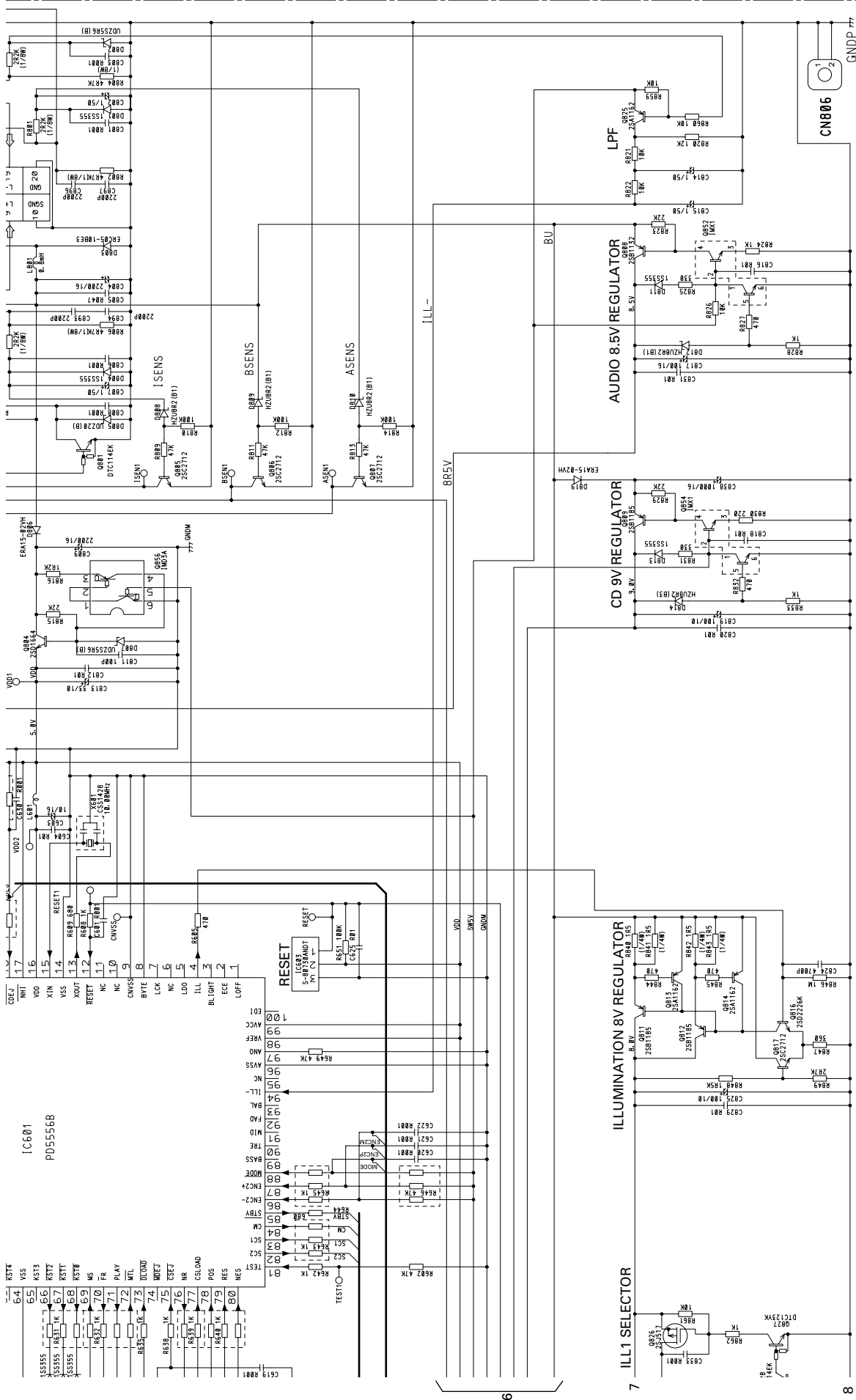

$$(LIN \cup STS)LIN$$



A-a A-b

A-a A-b



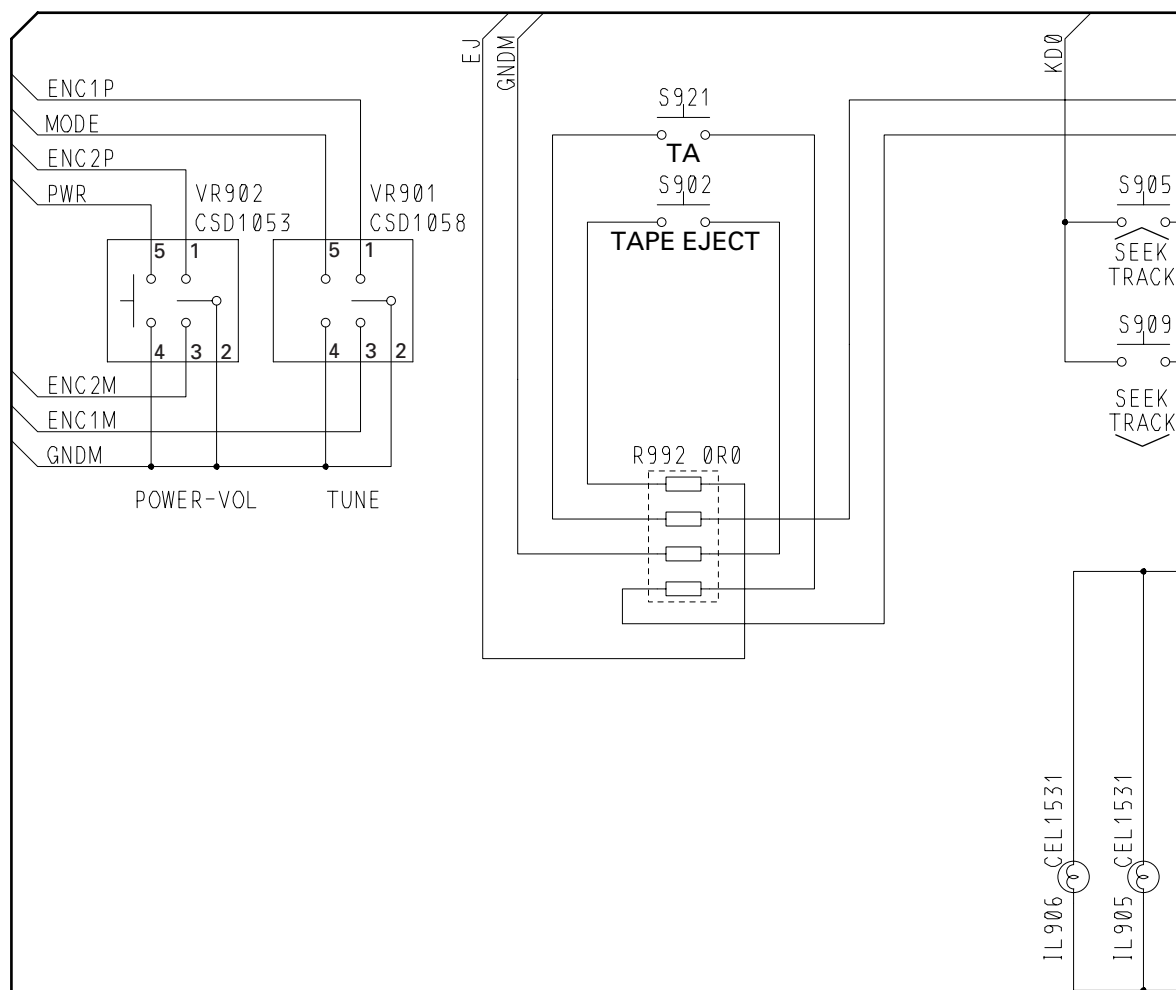
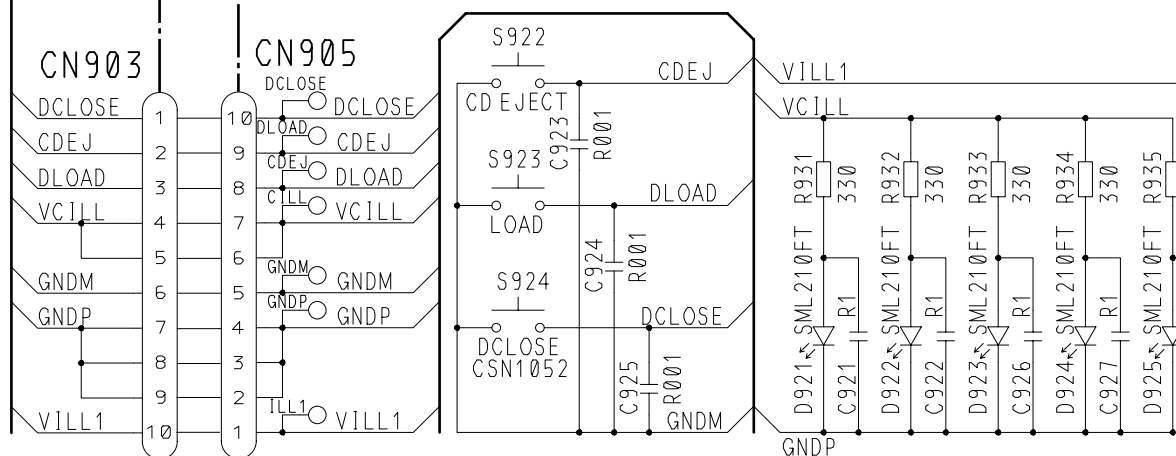


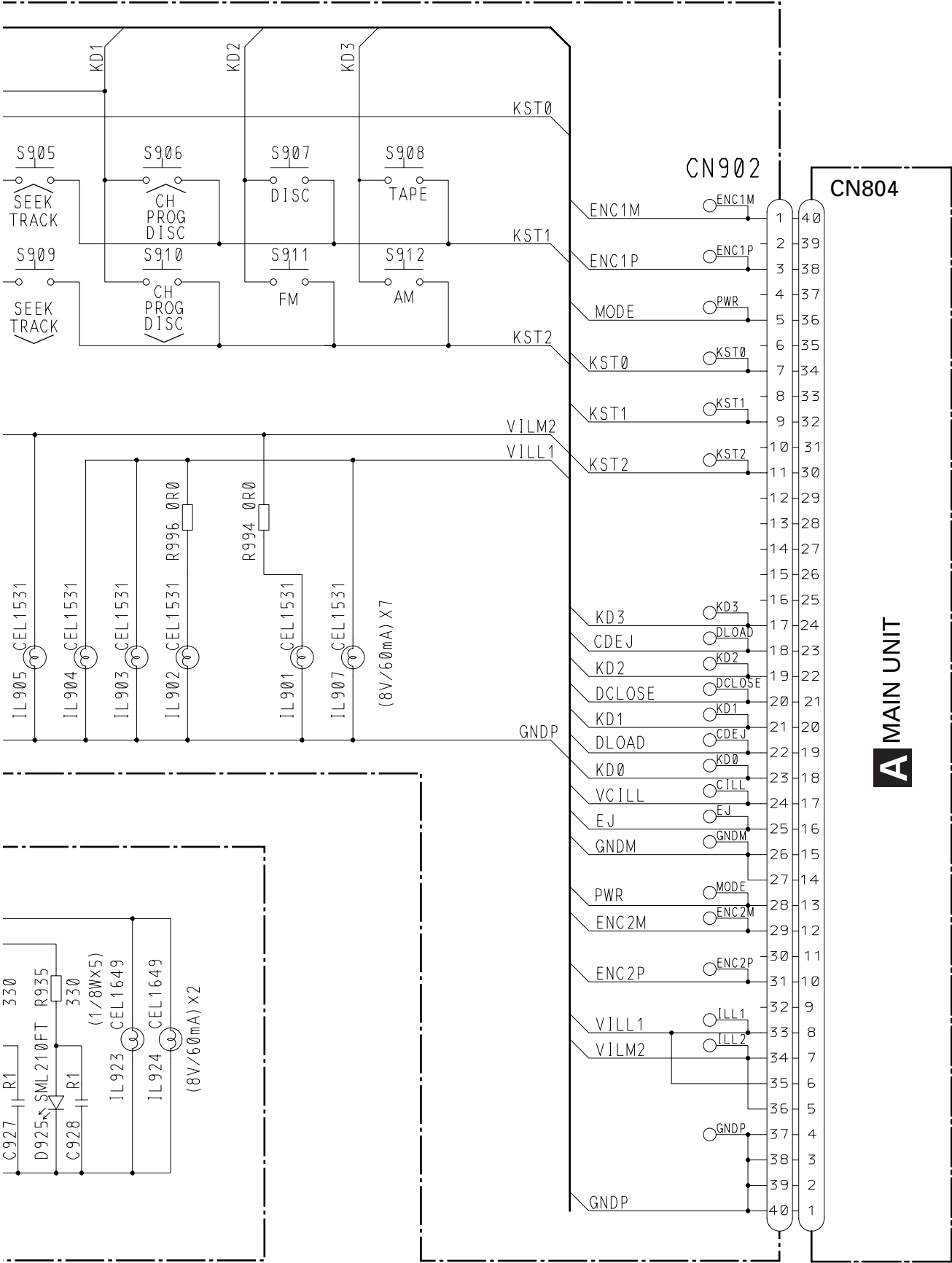
A-a A-b

A-b

FX-MG8506ZT, MG8506ZT-91, MG8606ZT, MG8606ZT-91

3.4 SW UNIT, KEYBOARD UNIT (FX-MG8506ZT/EW)

C KEYBOARD UNIT**B** SW UNIT

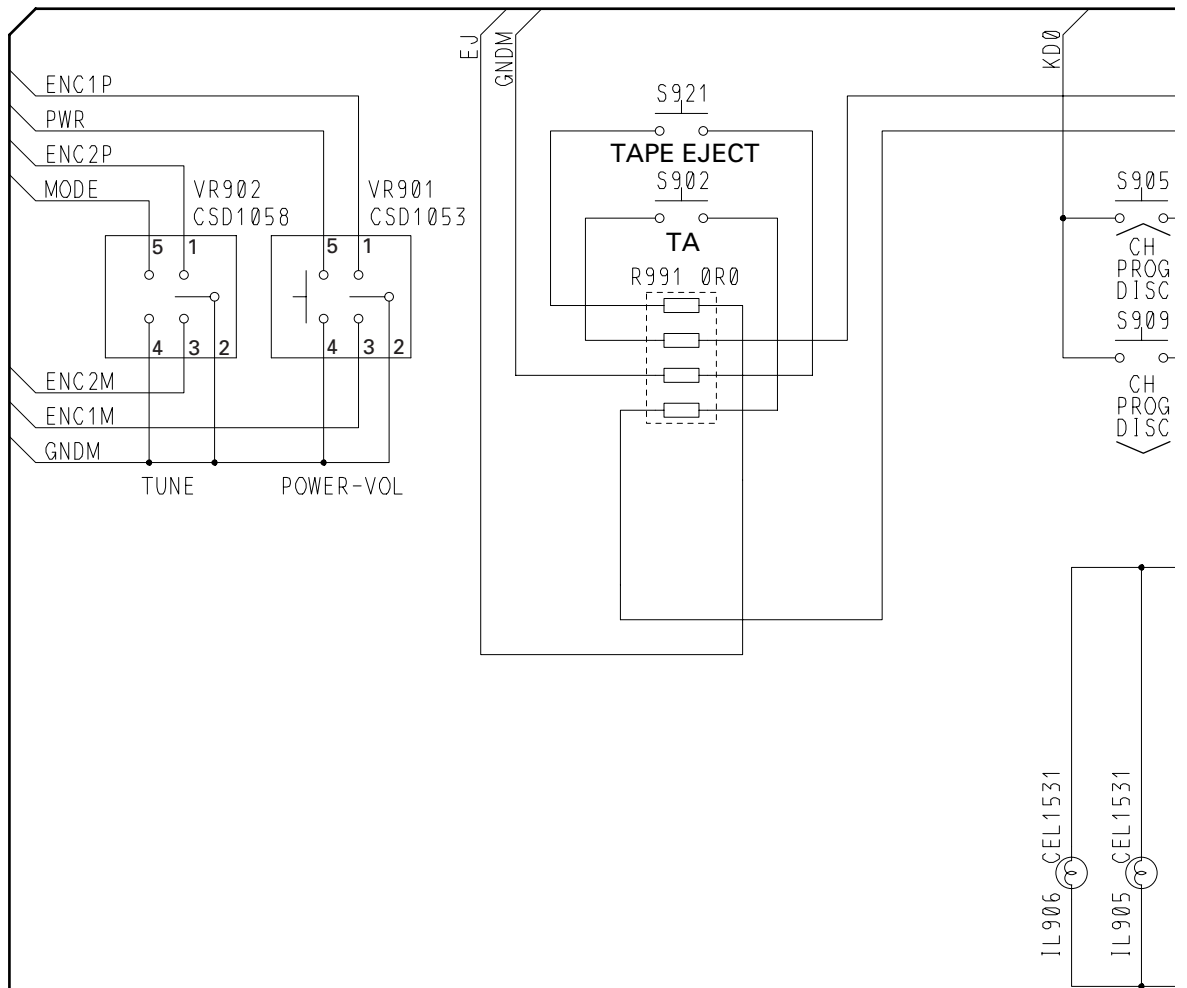


A MAIN UNIT

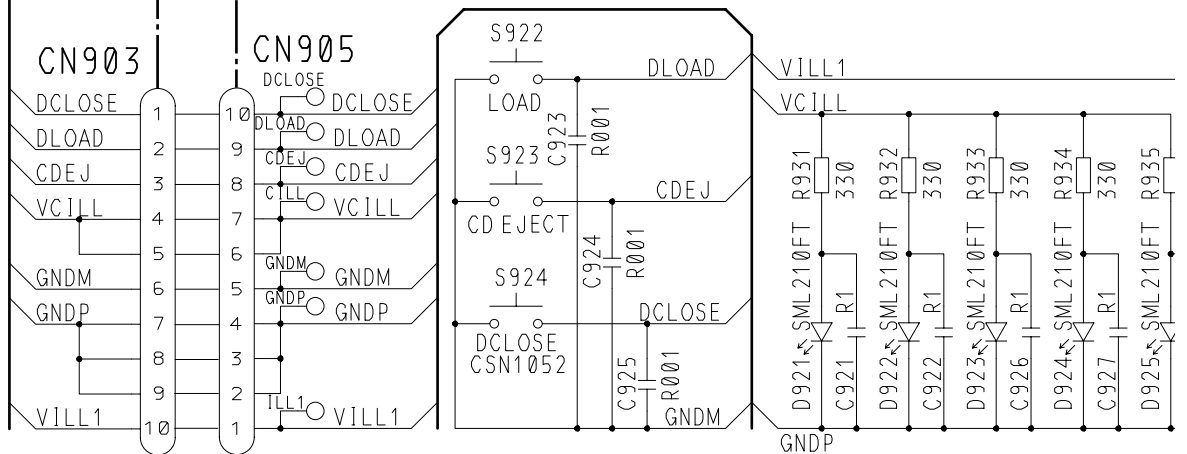
1 2 3 4

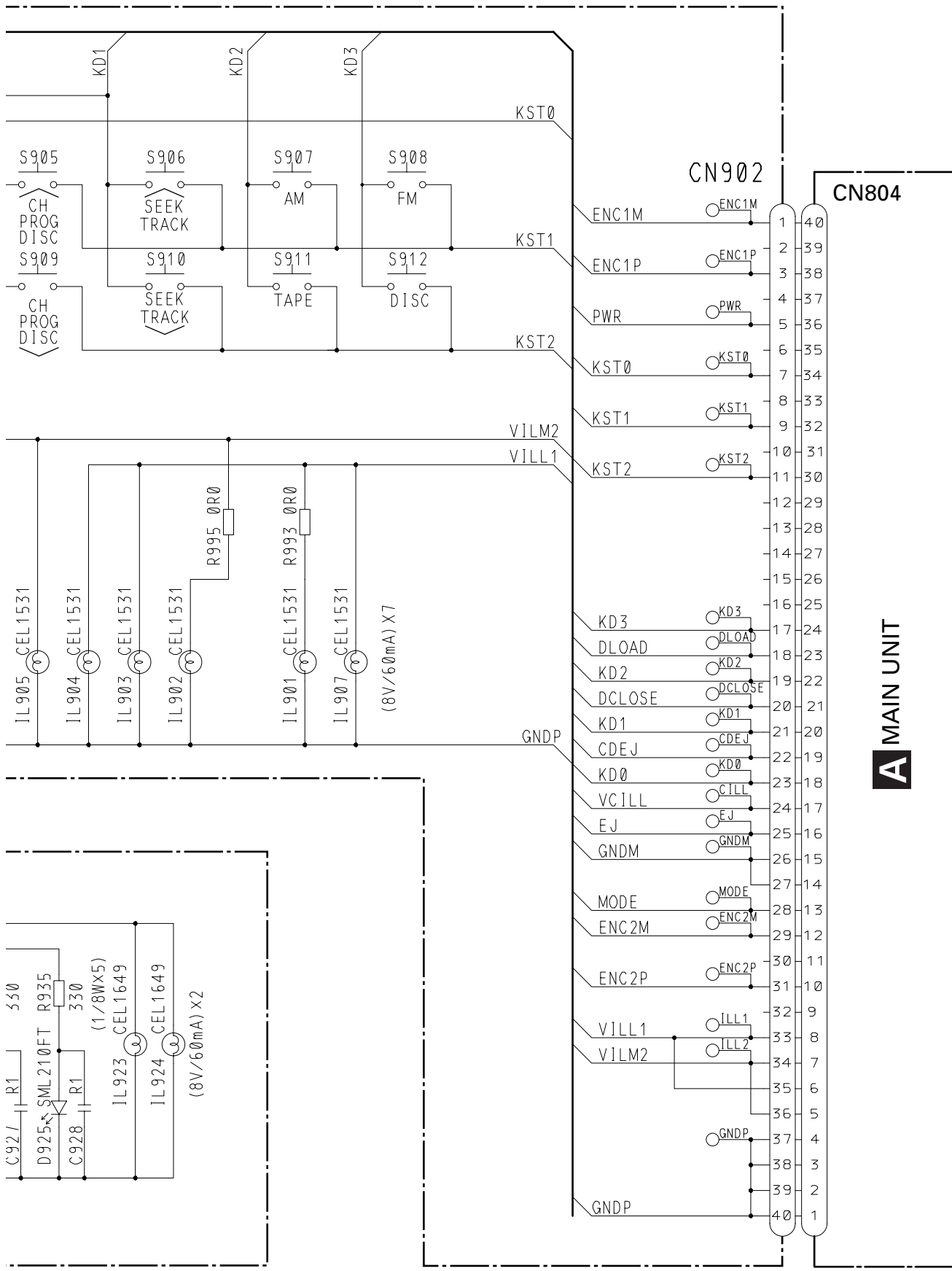
FX-MG8506ZT, MG8506ZT-91, MG8606ZT, MG8606ZT-91
3.5 SW UNIT, KEYBOARD UNIT (FX-MG8606ZT/EW)

C **KEYBOARD UNIT**

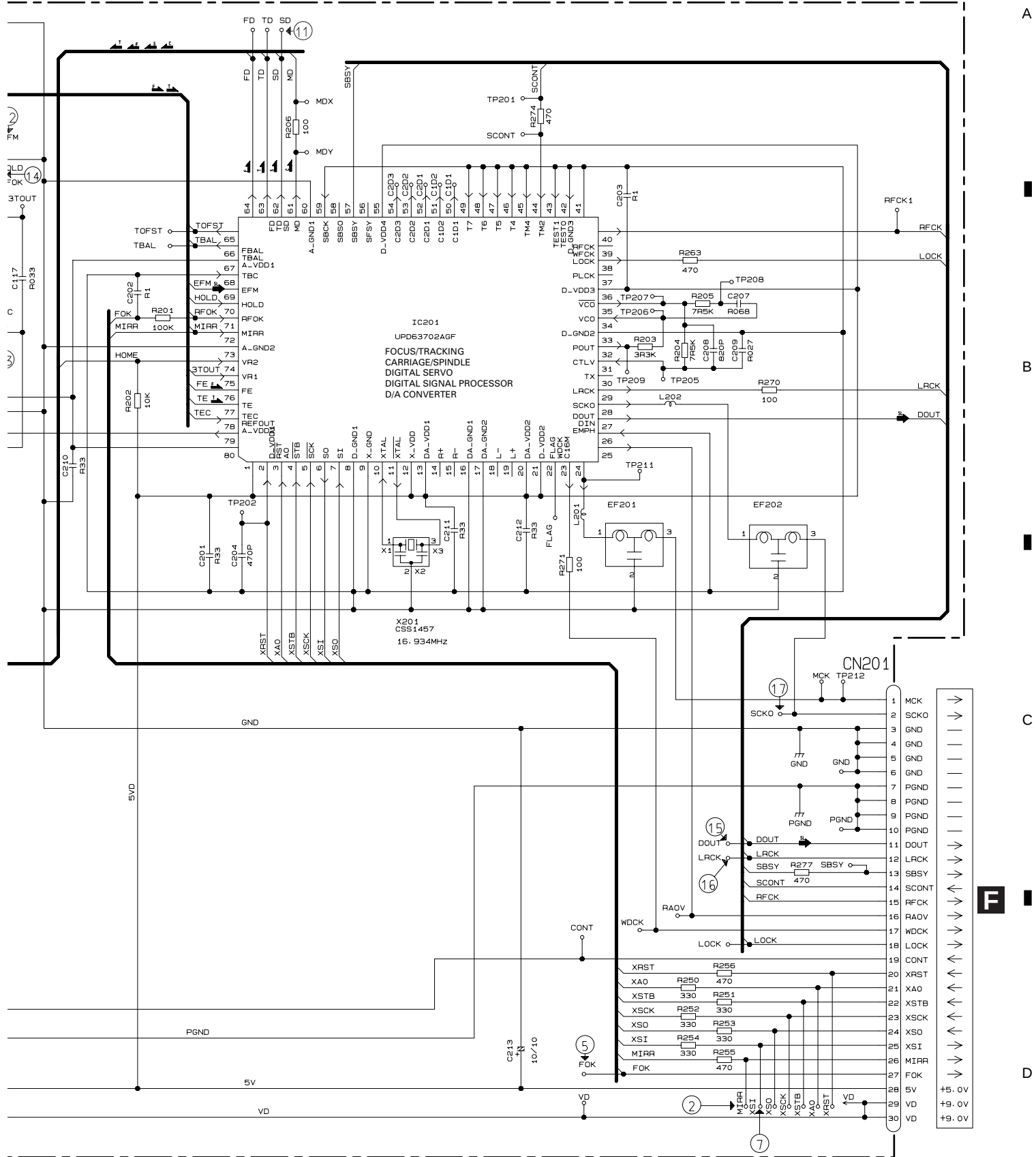


B **SW UNIT**





A MAIN UNIT



3.7 CD CORE UNIT(STS UNIT)

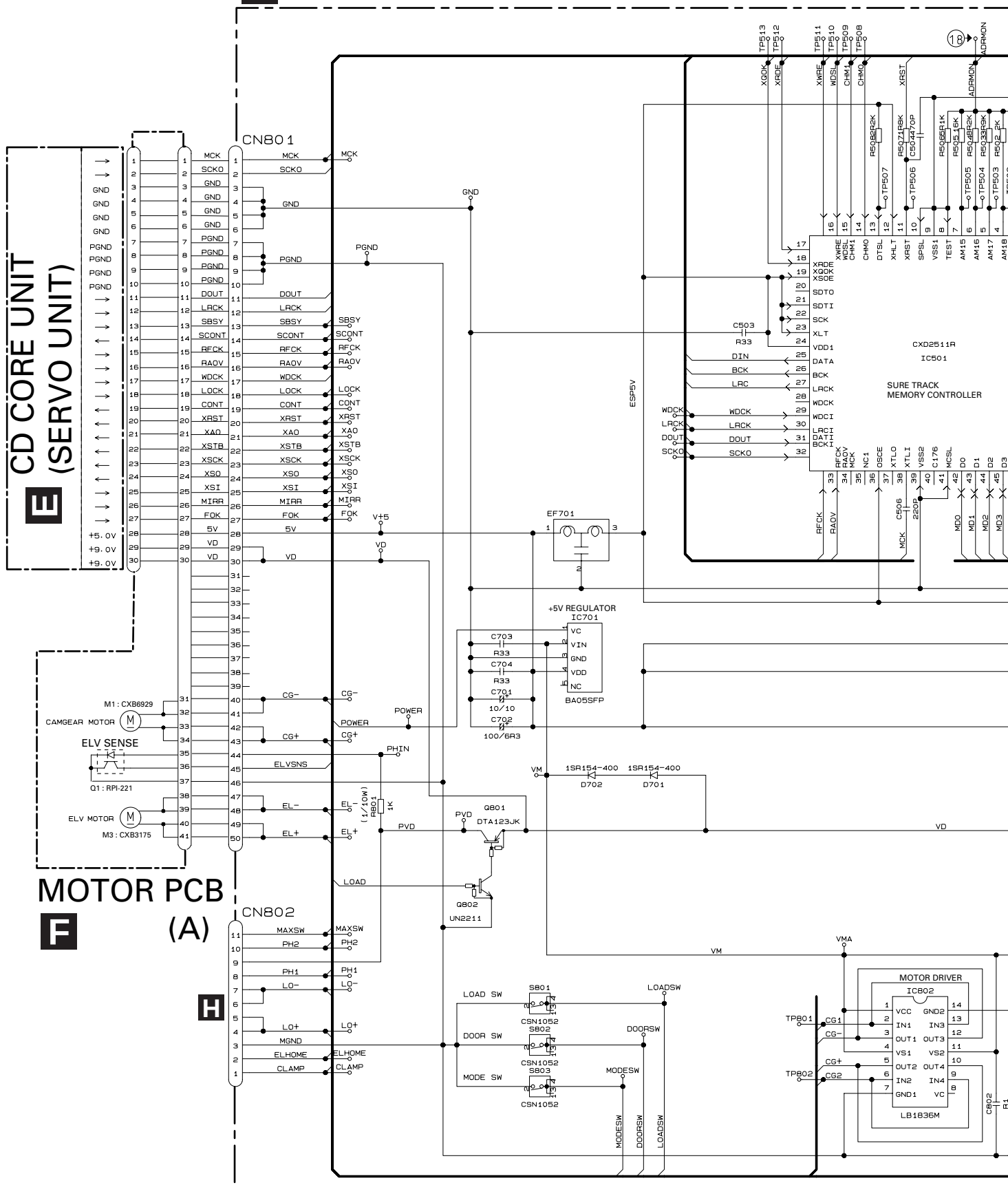
G CD CORE UNIT(STS UNIT)

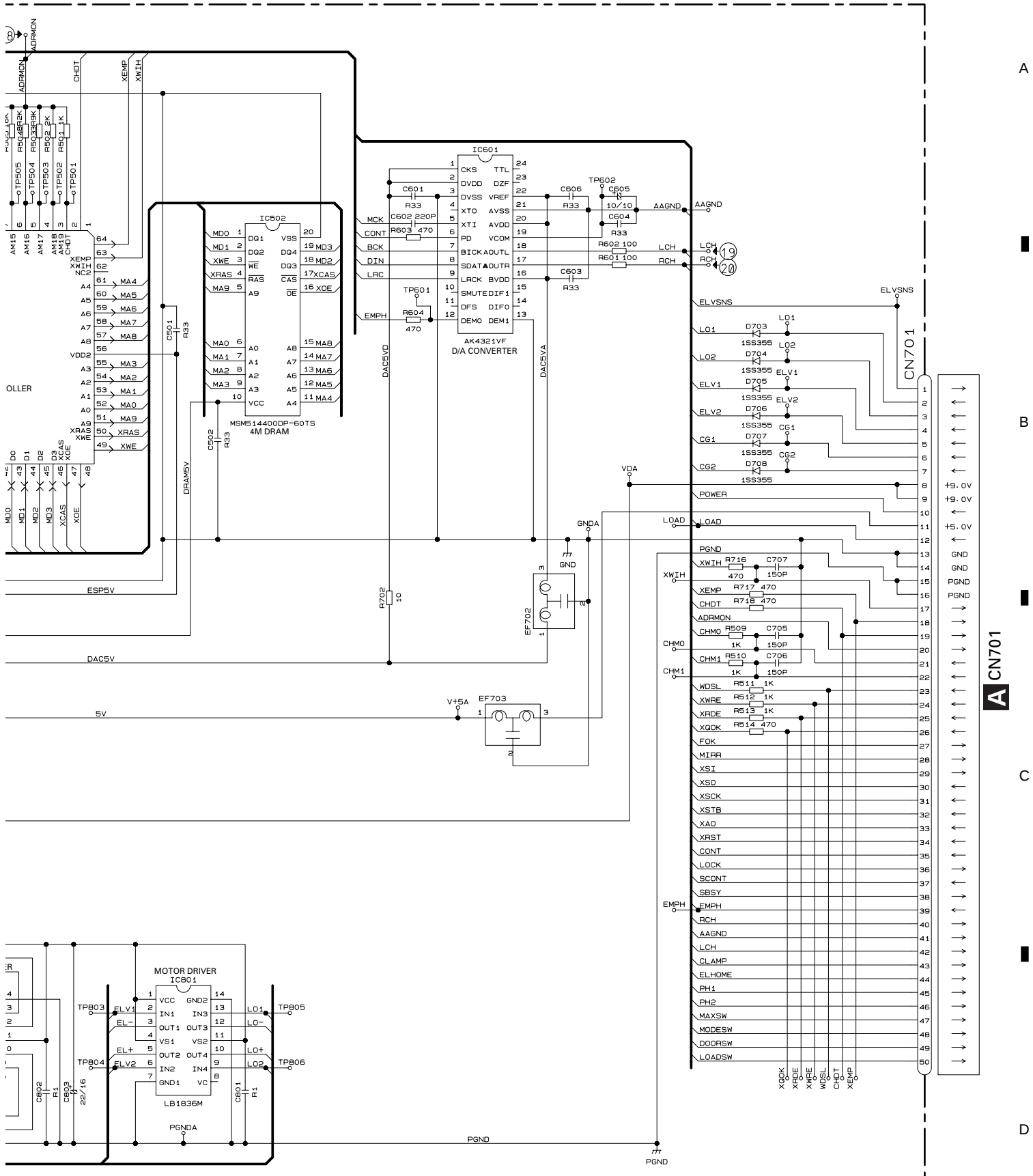
A

B

C

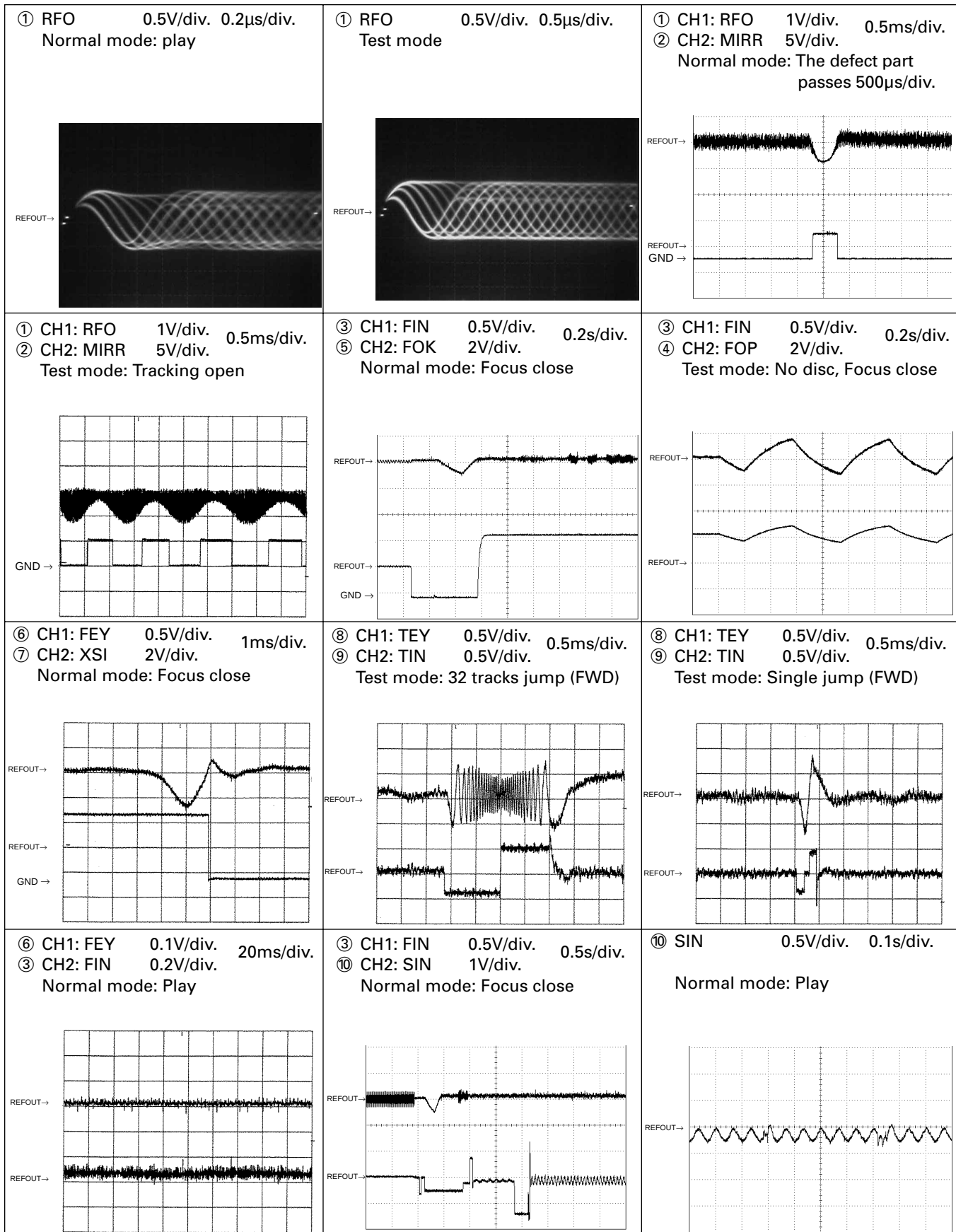
D

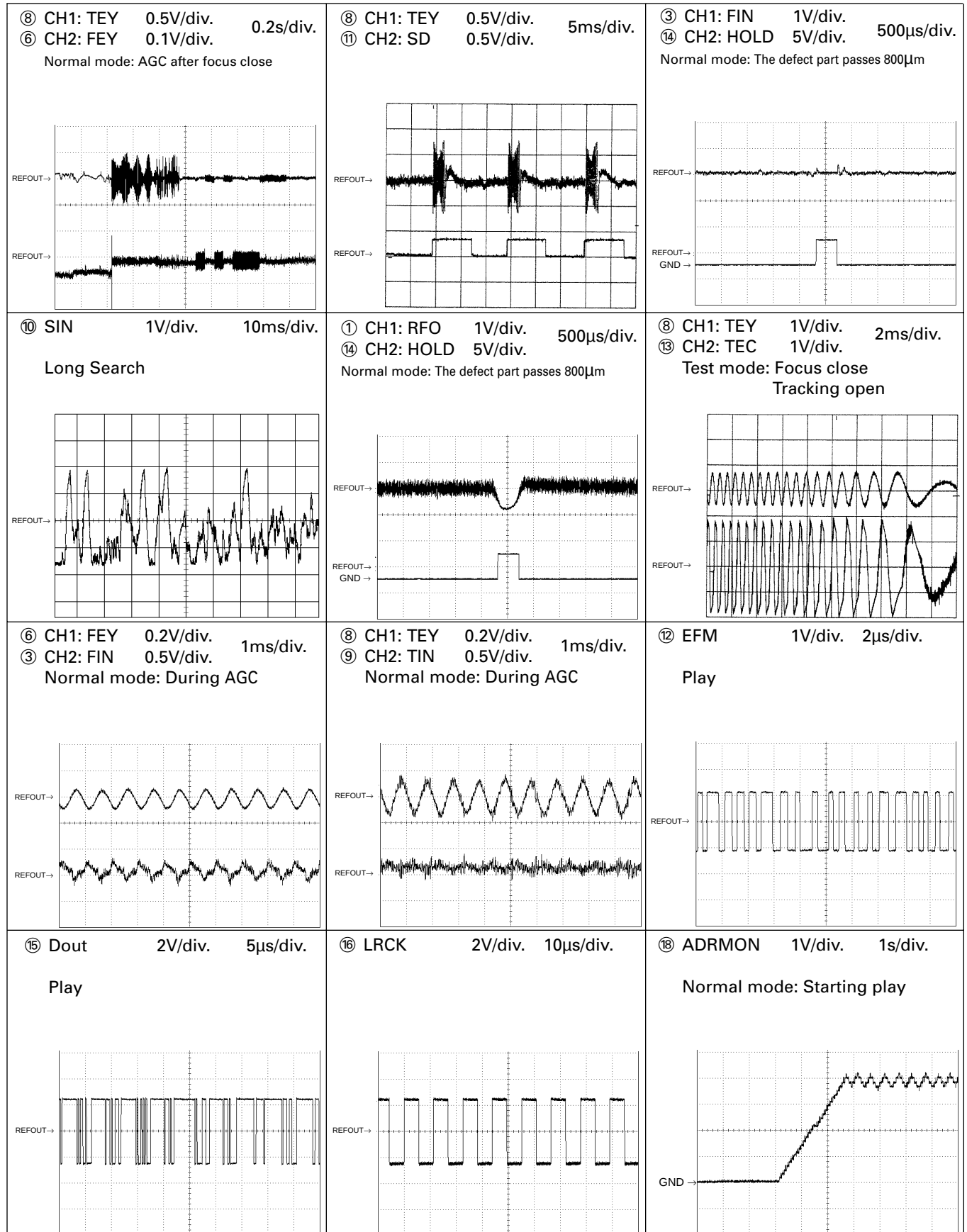




Note: 1. The encircled numbers denote measuring pointes in the circuit diagram.
2. Reference voltage
REFOUT: 2.5V

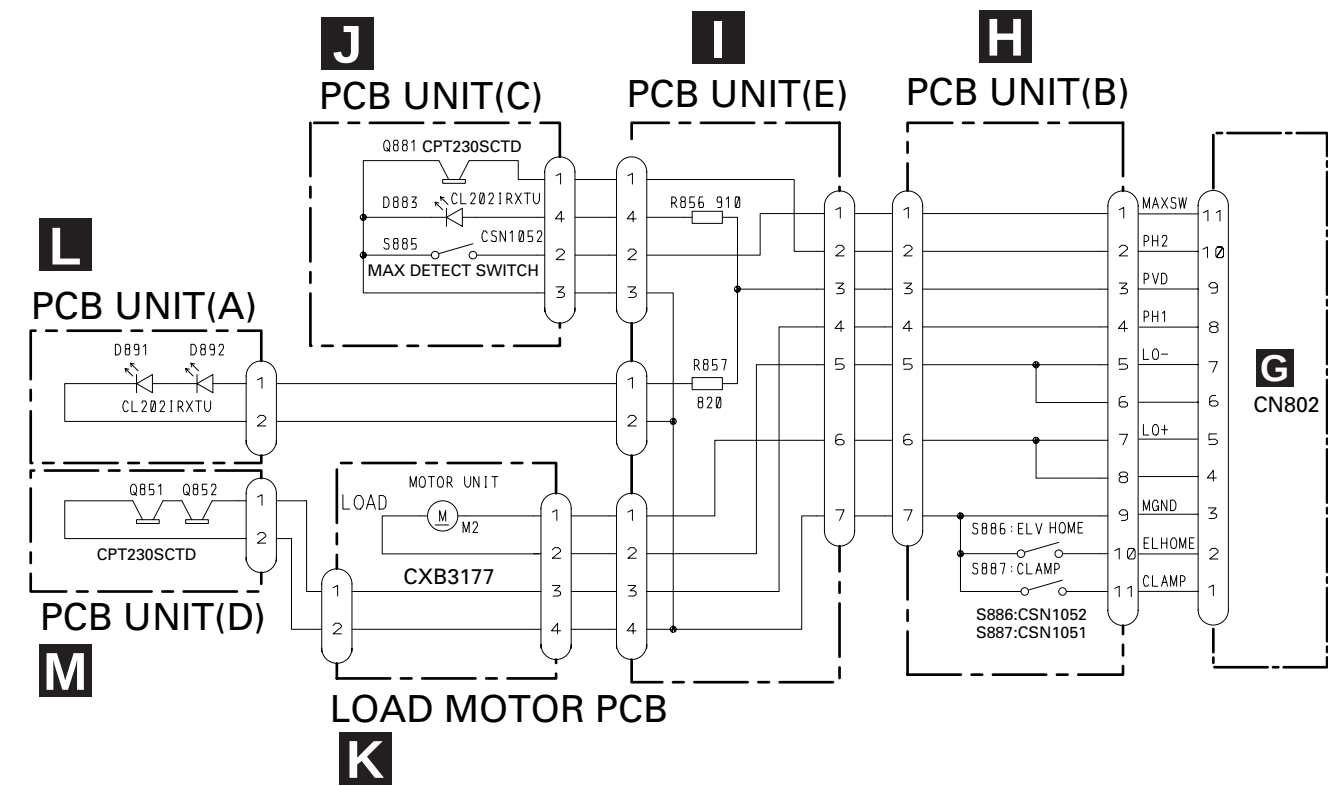
● Waveforms

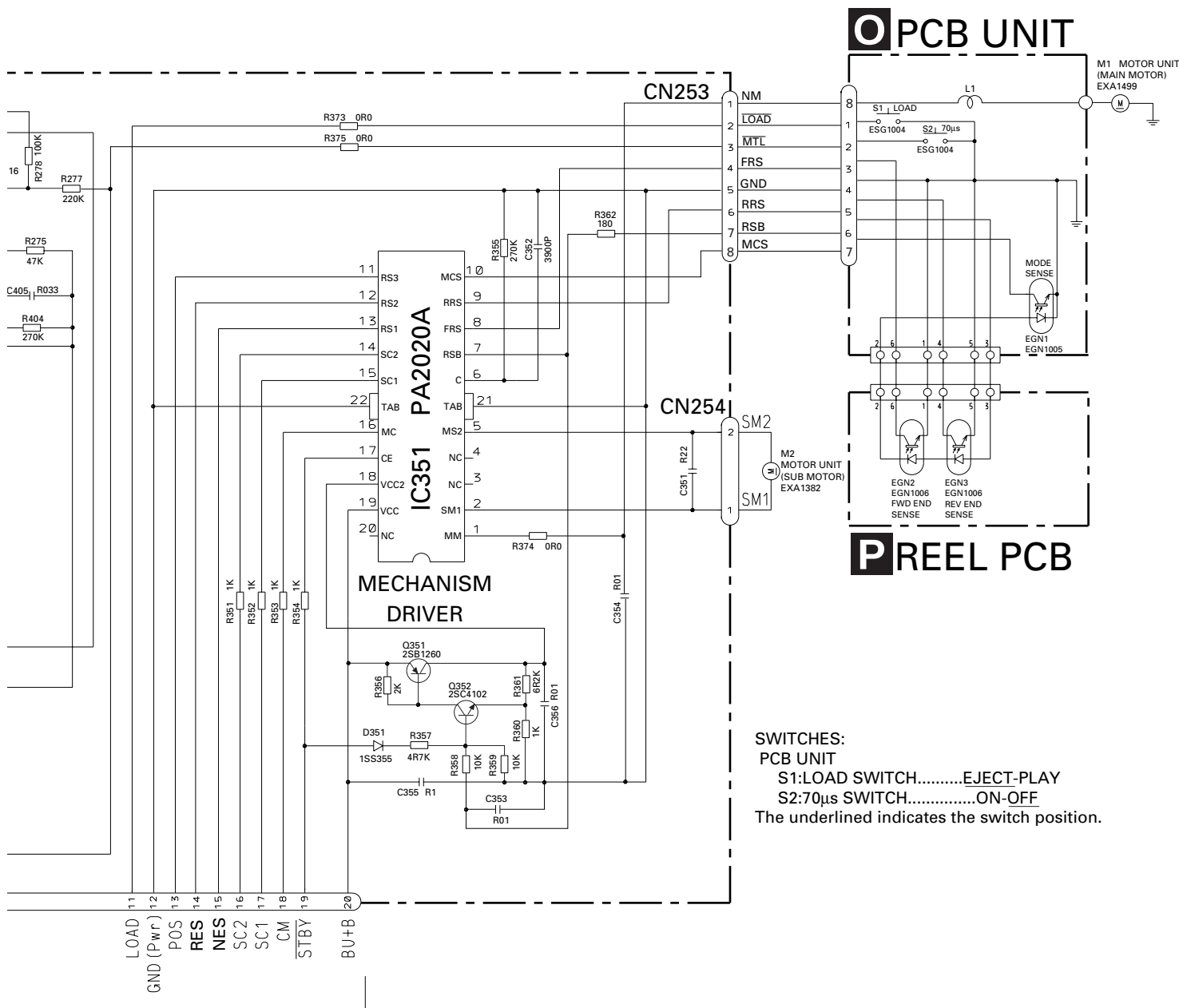




⑧ CH1: TEY 0.5V/div. 5ms/div. ⑨ CH2: TIN 0.5V/div. Test mode: 100 tracks jump(FWD)	⑧ CH1: TEY 0.5V/div. 10ms/div. ⑨ CH2: TIN 0.5V/div. Normal mode: Play	⑰ SCKO 2V/div. 500ns/div. Play
⑳ CH1: RCH 2V/div. 200μs/div. ㉑ CH2: LCH 2V/div. Normal mode: PLAY (0dB,1kHz)		

3.8 PCB UNIT(A,B,C,D,E), LOAD MOTOR PCB





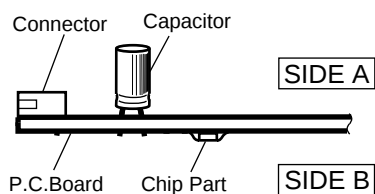
4. PCB CONNECTION DIAGRAM

4.1 MAIN UNIT

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



A MAIN UNIT

IC, Q
Q810 Q809

Q811

Q813

Q801

Q814

Q702

Q812

Q301

IC301

Q308

Q302

Q307

IC305

Q854

Q855

Q603

Q857

Q807

Q805

Q305

Q303

Q852

IC302

Q309

IC303

Q304

Q808

Q306

Q825

Q816

Q817

Q831

Q833

Q804

Q806

Q856

IC602

Q701

IC605

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Q828

Q826

IC701

Q824

IC601

Q829

Q830

Q601

Q823

Q822

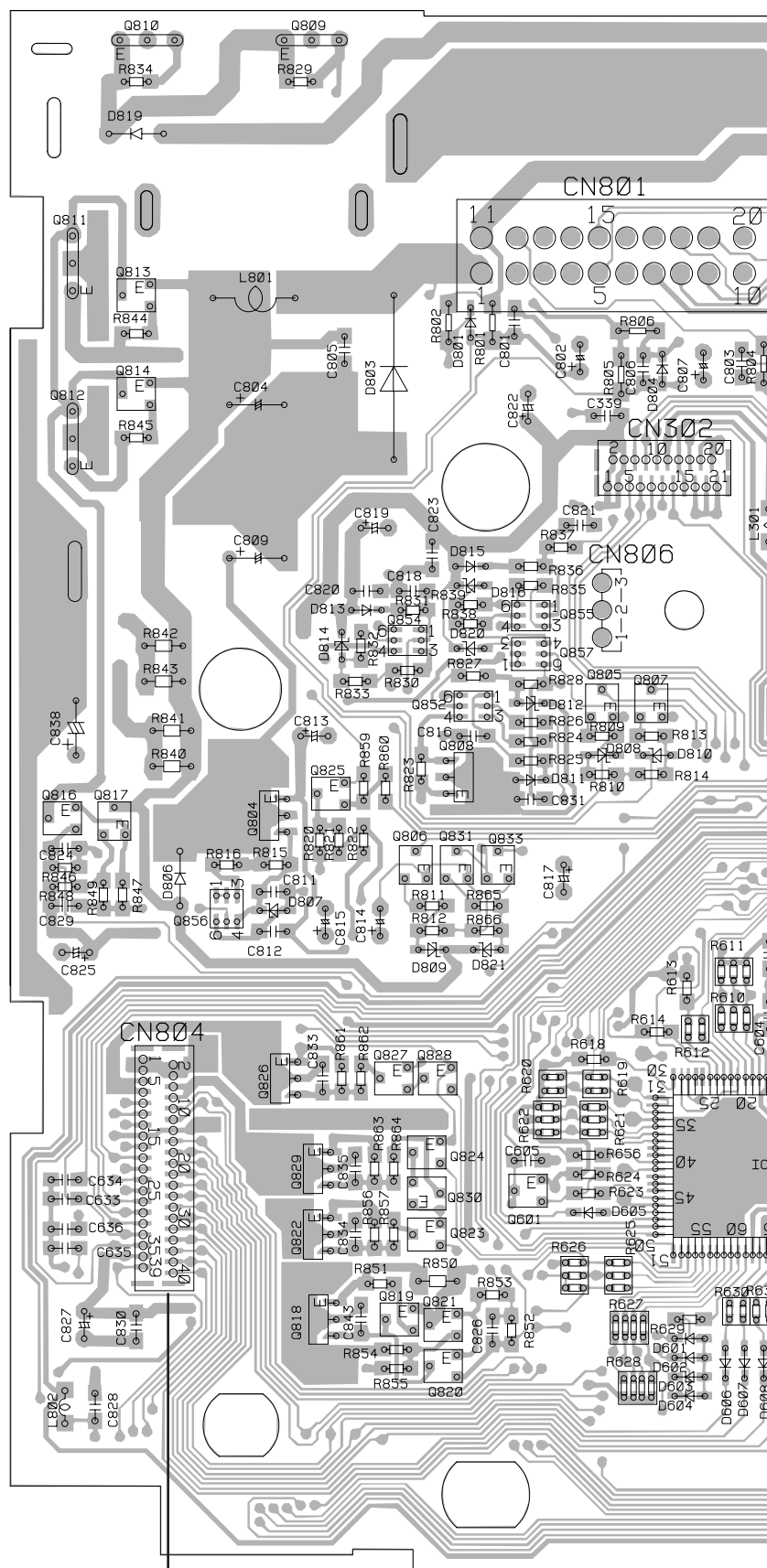
Q819

Q821

Q818

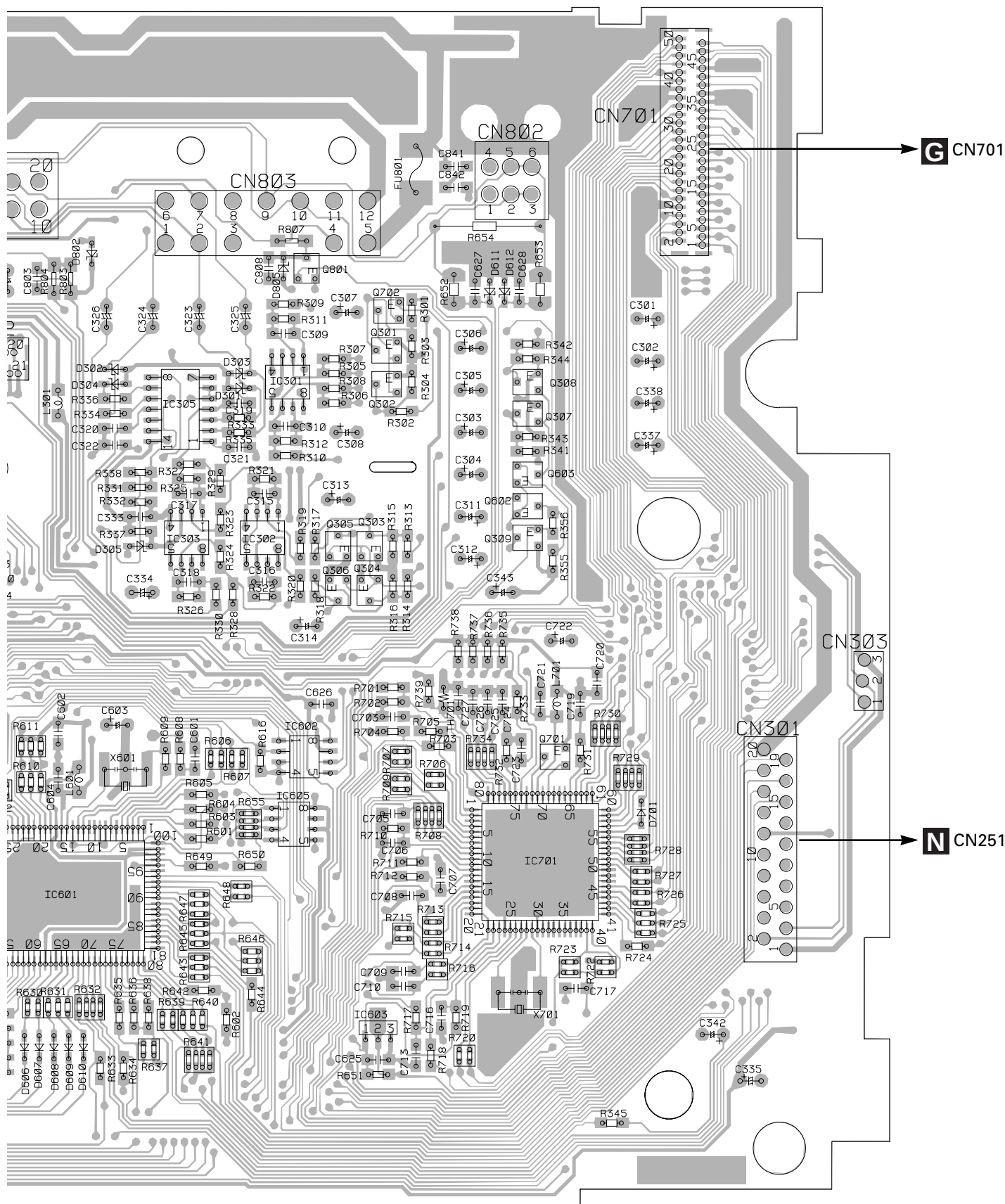
IC603

Q820



C CN902

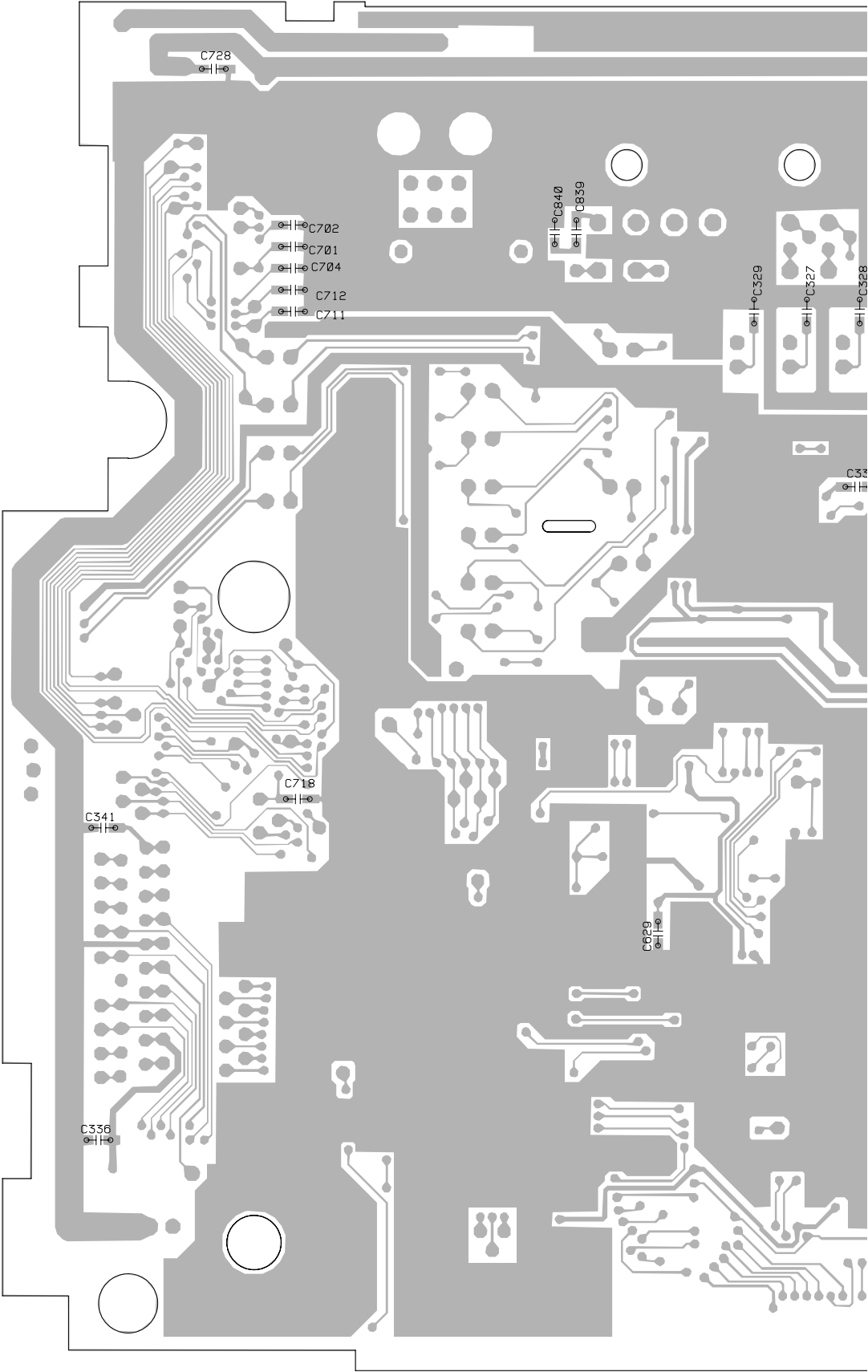
SIDE A



FRONT

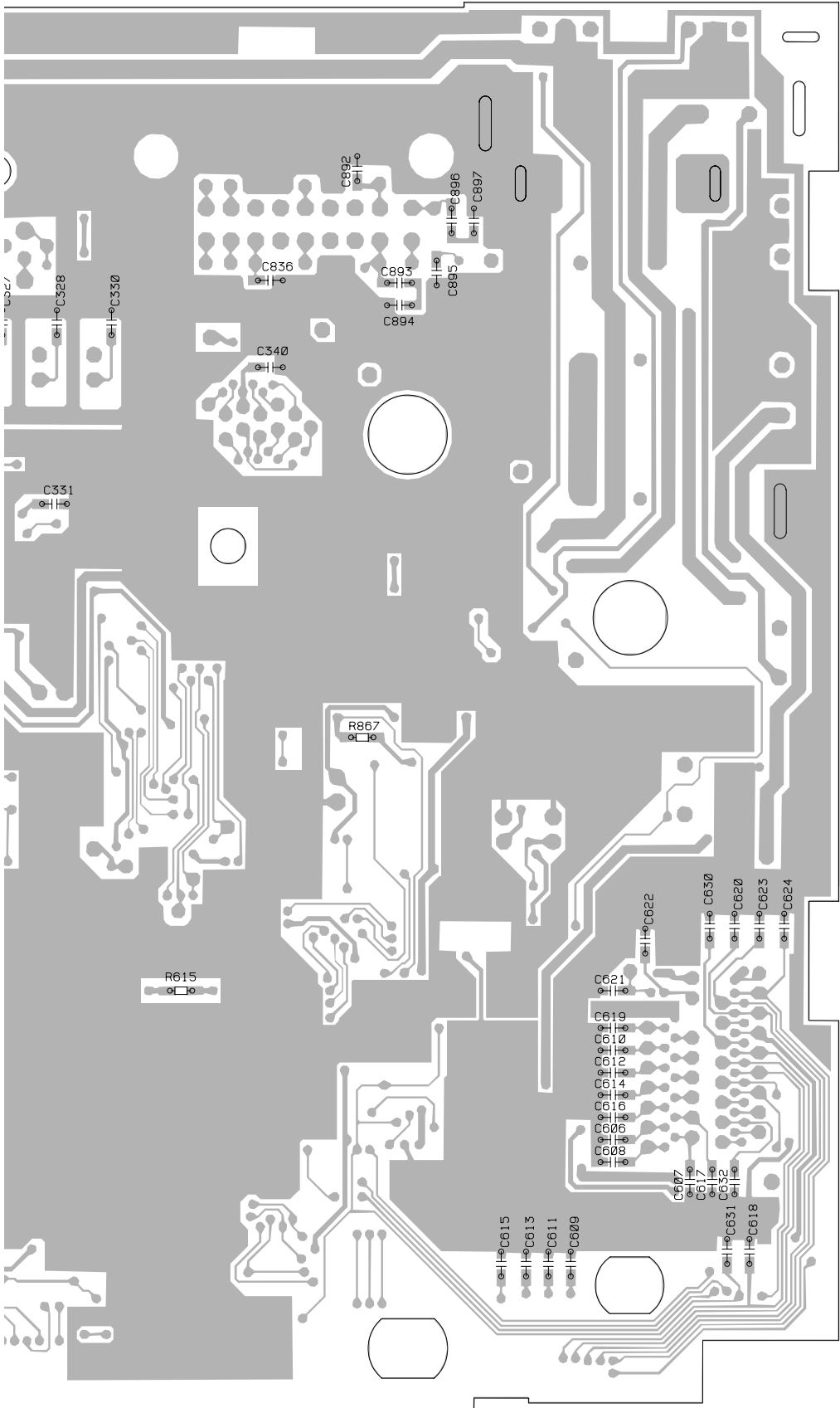
A

A MAIN UNIT



FRONT

SIDE B



A

B

C

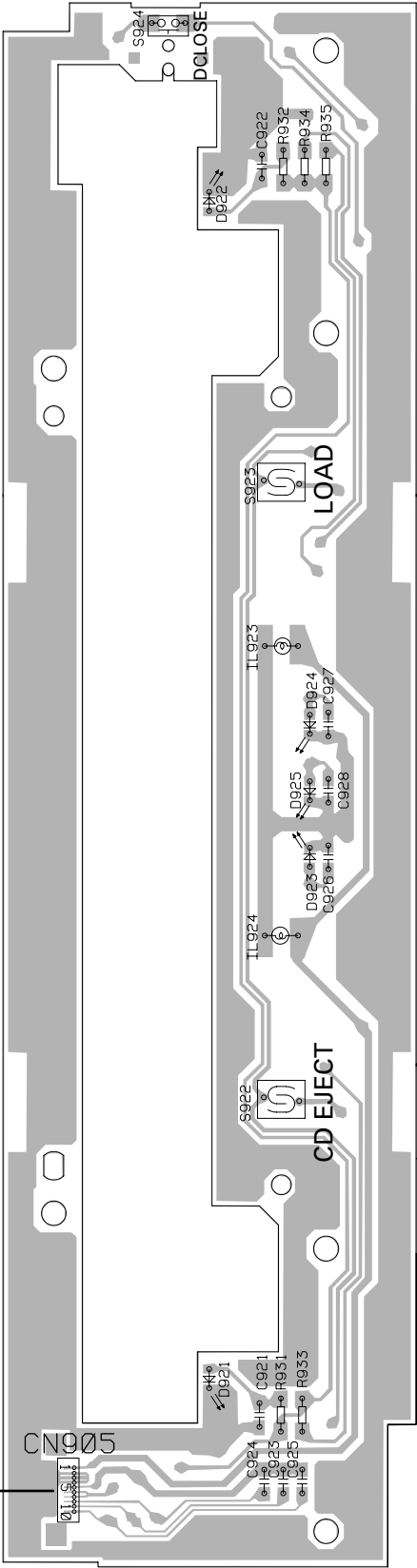
D

T

C CN903

SW UNIT(FX-MG8506ZT/EW)

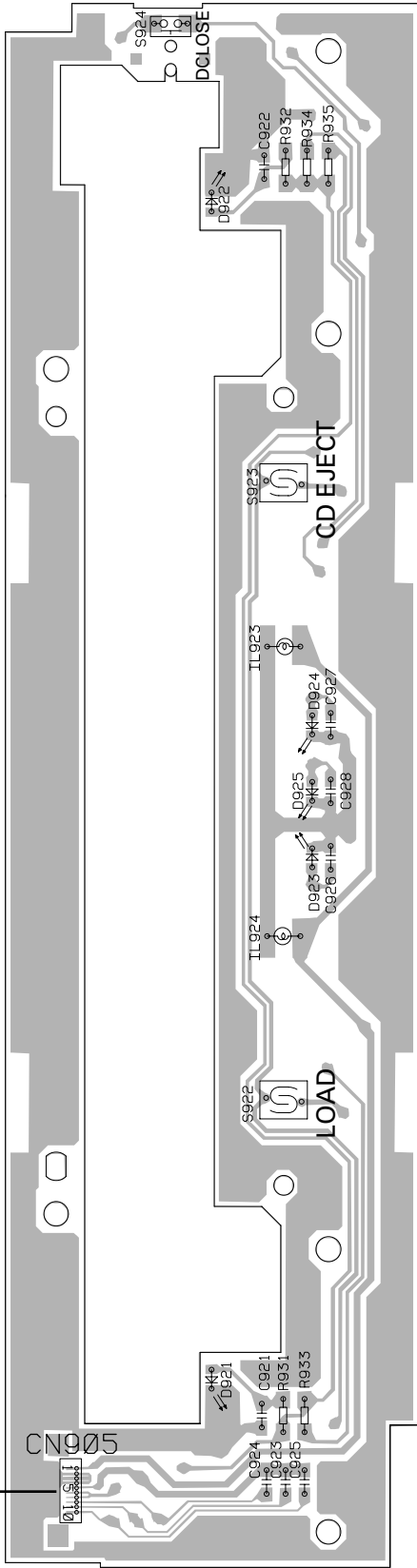
B



C CN903

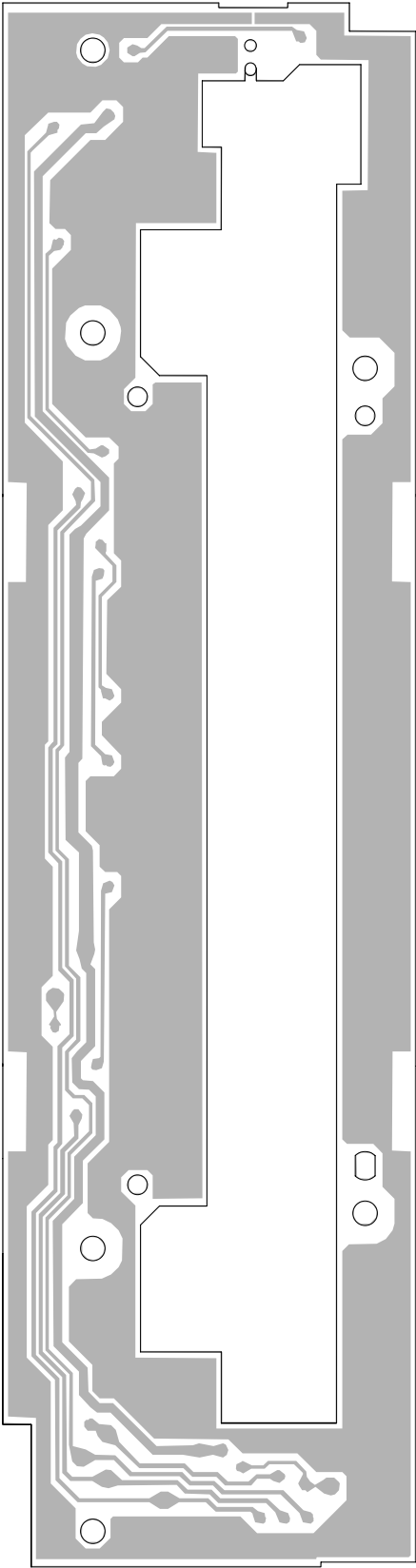
SW UNIT(FX-MG8606ZT/EW)

B



SIDE A

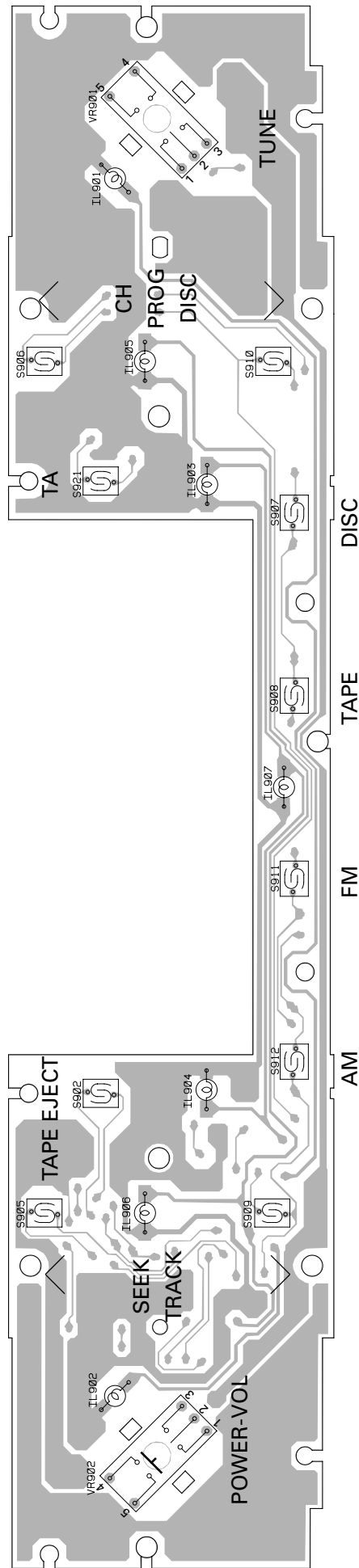
SIDE B



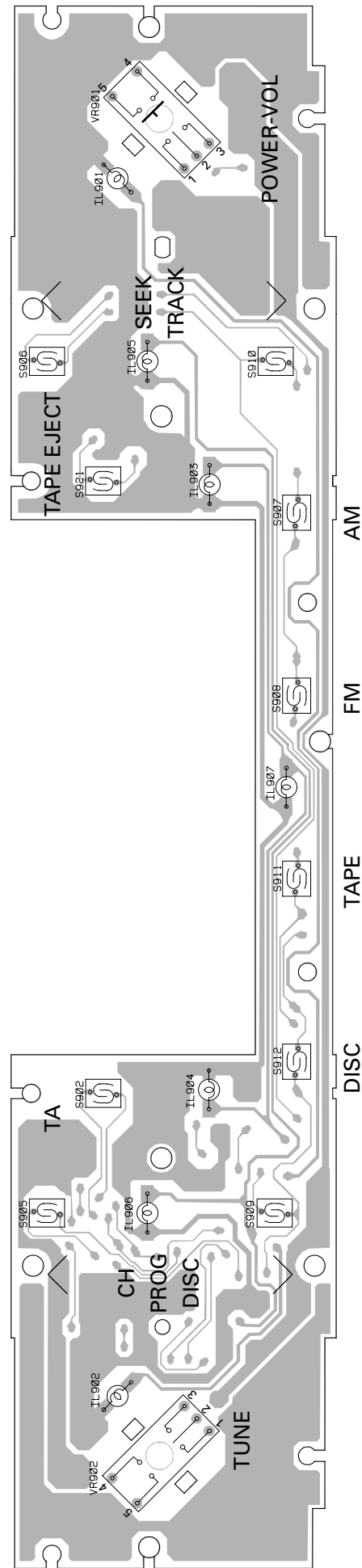
B SW UNIT

4.3 KEYBOARD UNIT

C KEYBOARD UNIT(FX-MG8506ZT/EW)



C KEYBOARD UNIT(FX-MG8606ZT/EW)

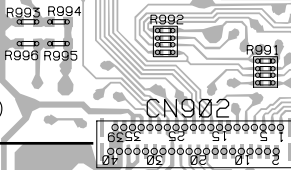


SIDE B

KEYBOARD UNIT

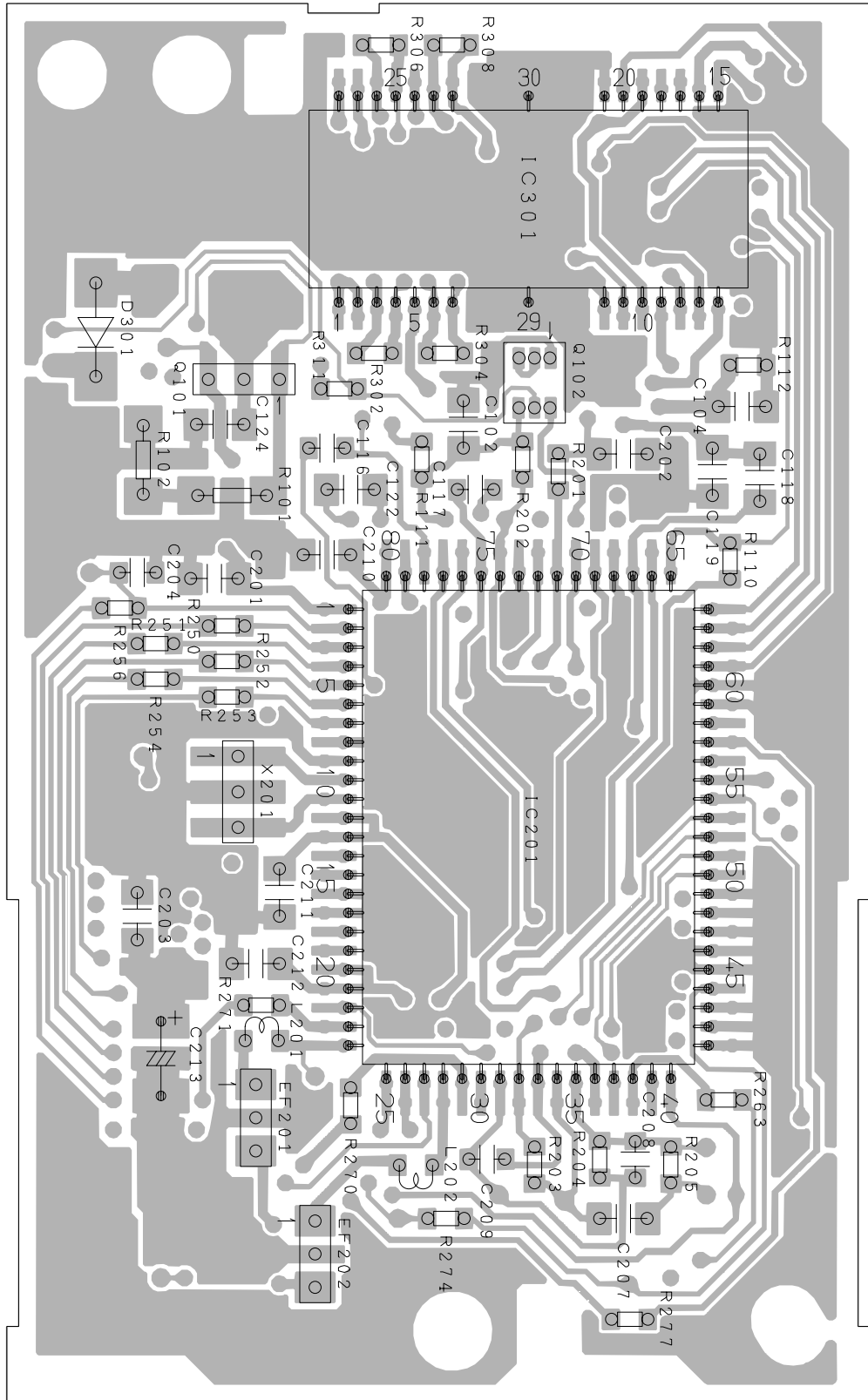
A CN804

B CN905



A

Q102
IC201
IC301



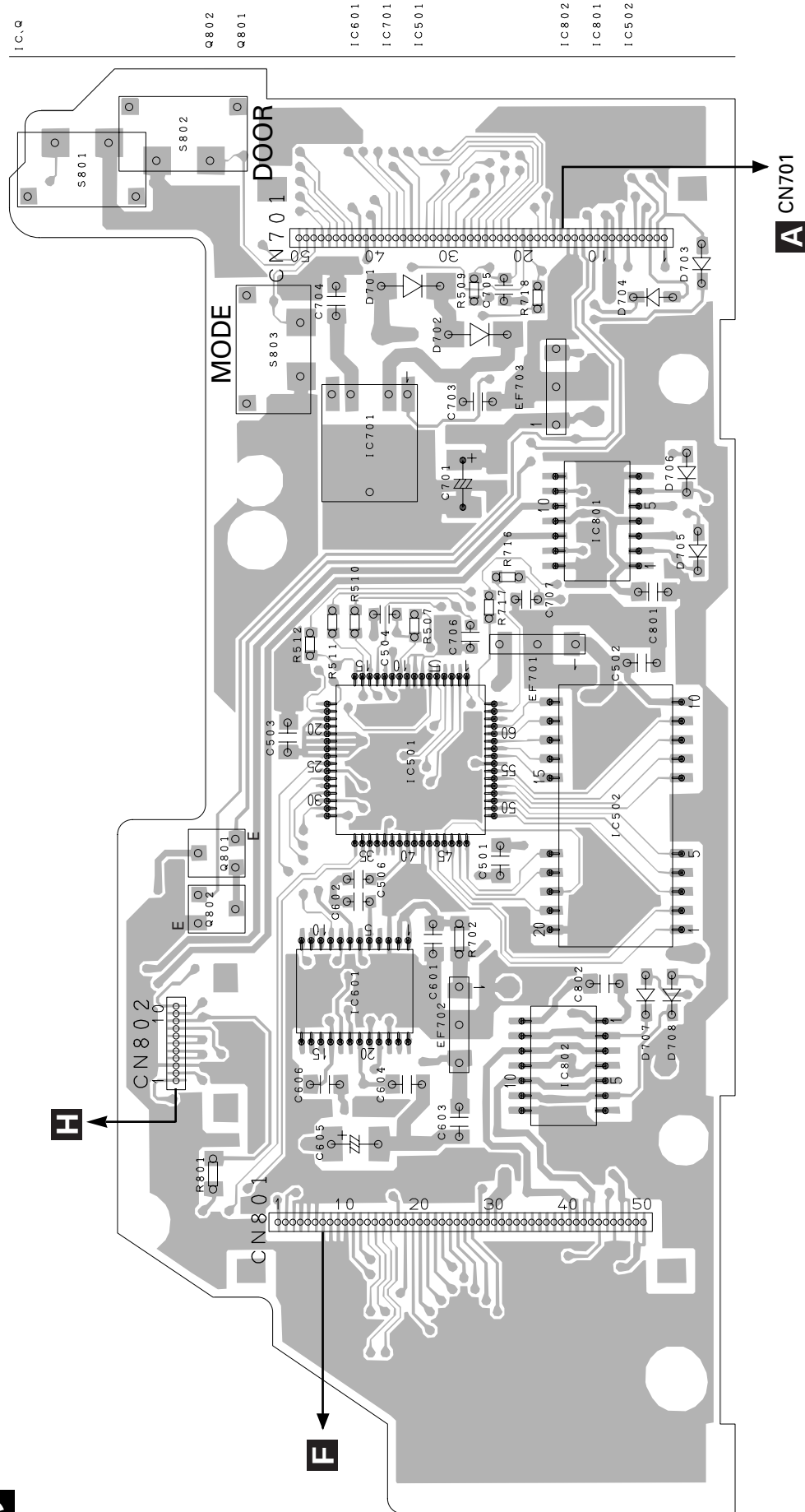
1 2 3 4

FX-MG8506ZT,MG8506ZT-91,MG8606ZT,MG8606ZT-91

4.5 CD CORE UNIT(STS UNIT)

G CD CORE UNIT(STS UNIT)

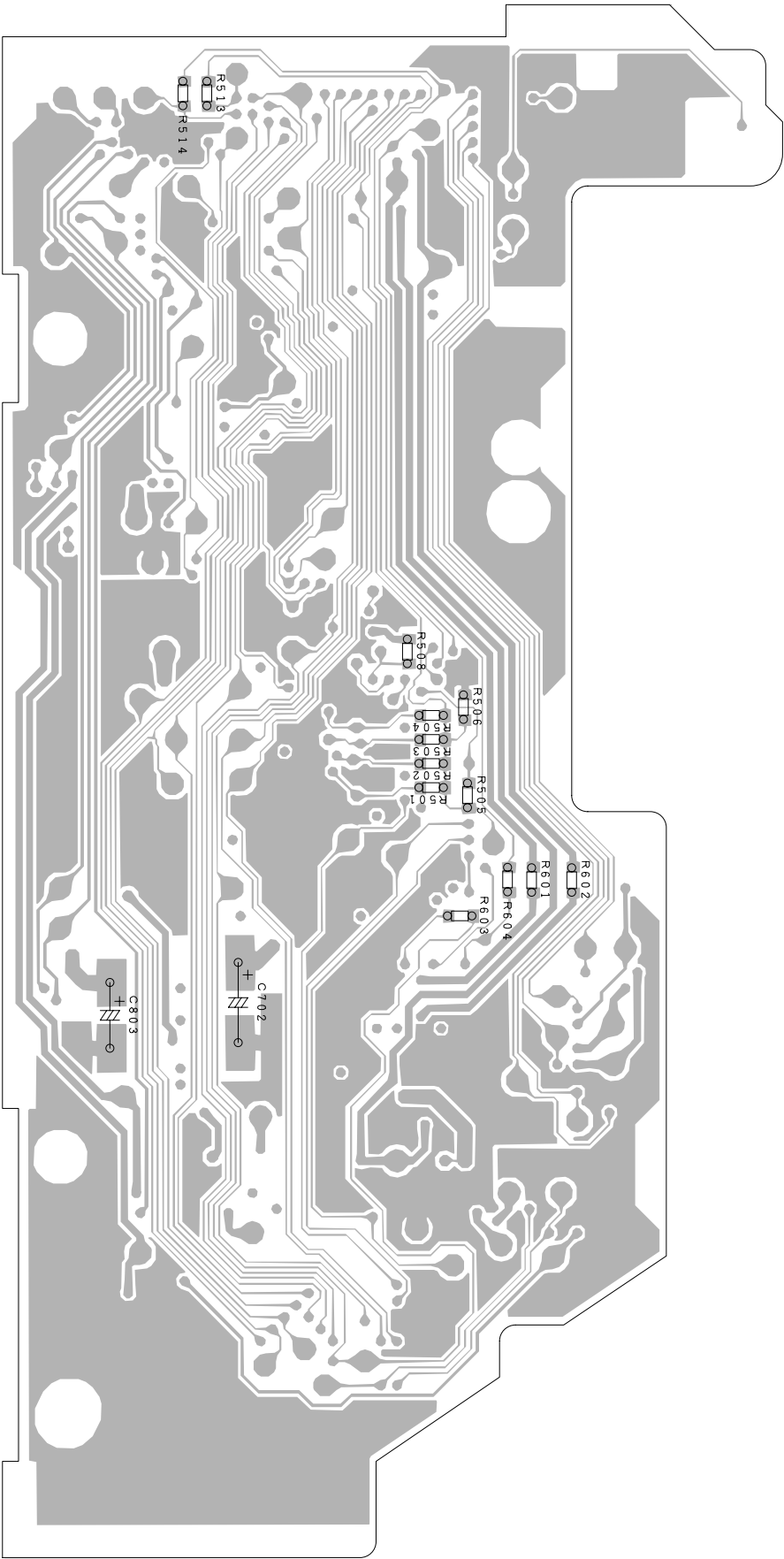
SIDE A





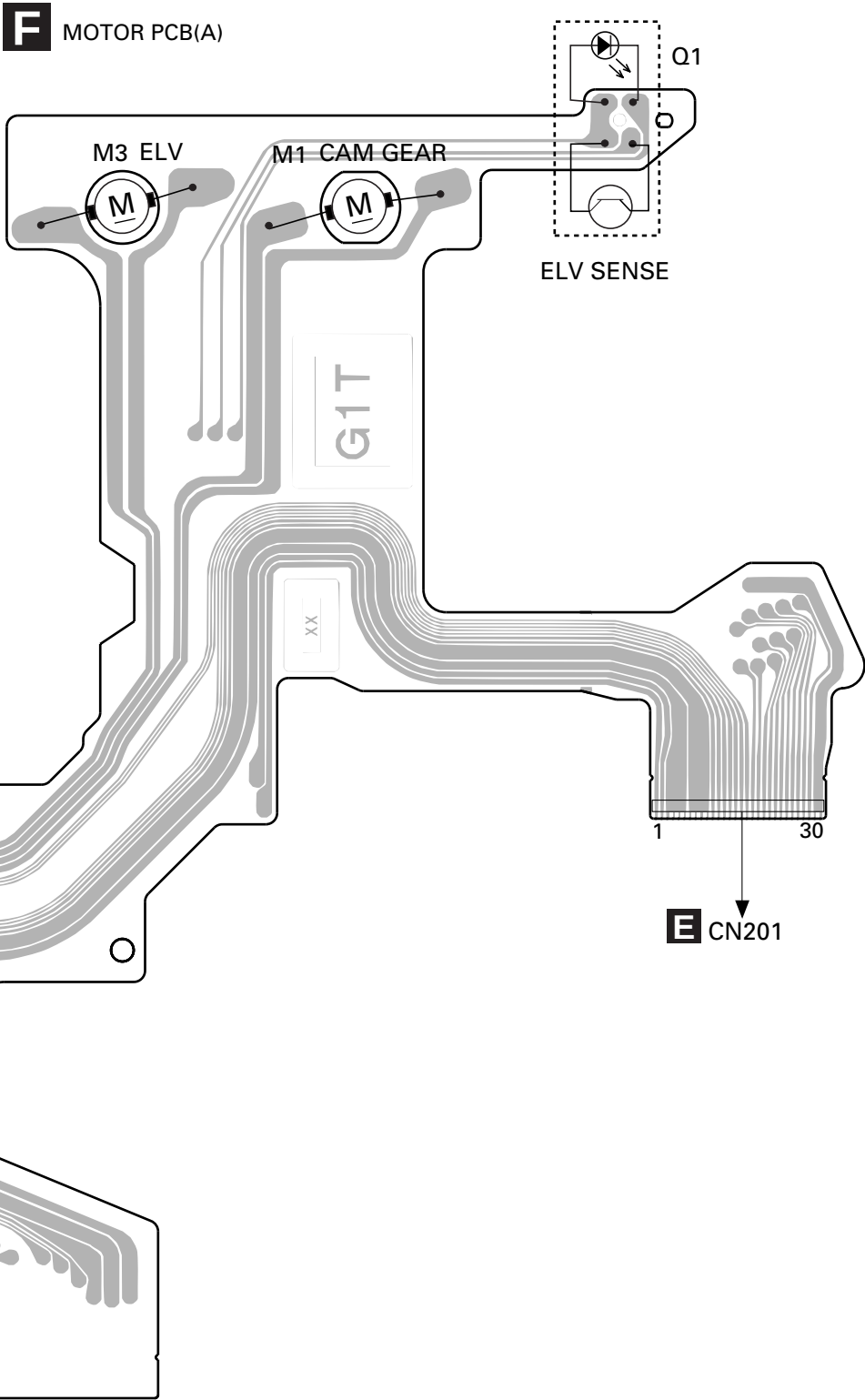
CD CORE UNIT(STS UNIT)

SIDE B



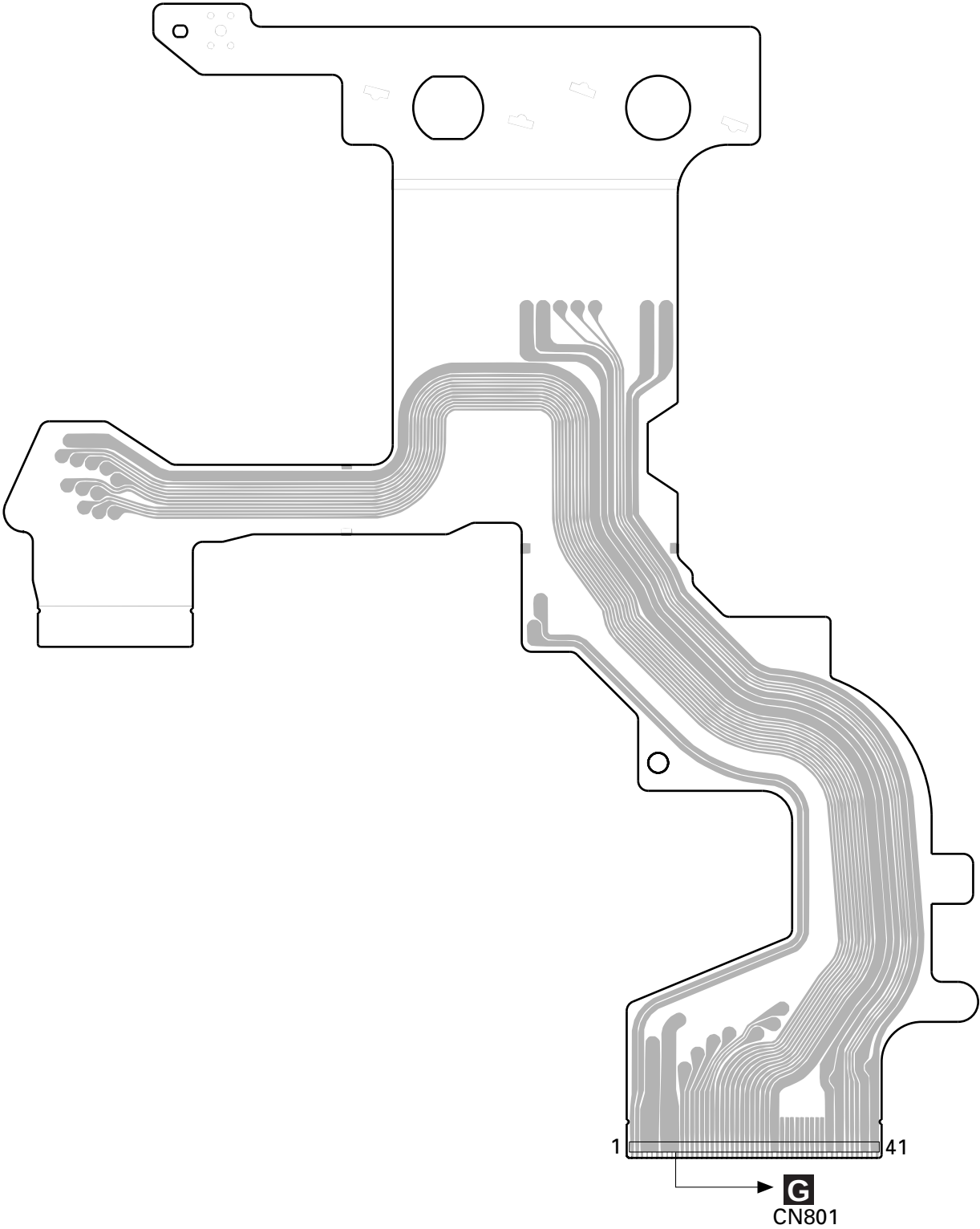
4.6 MOTOR PCB(A)

SIDE A



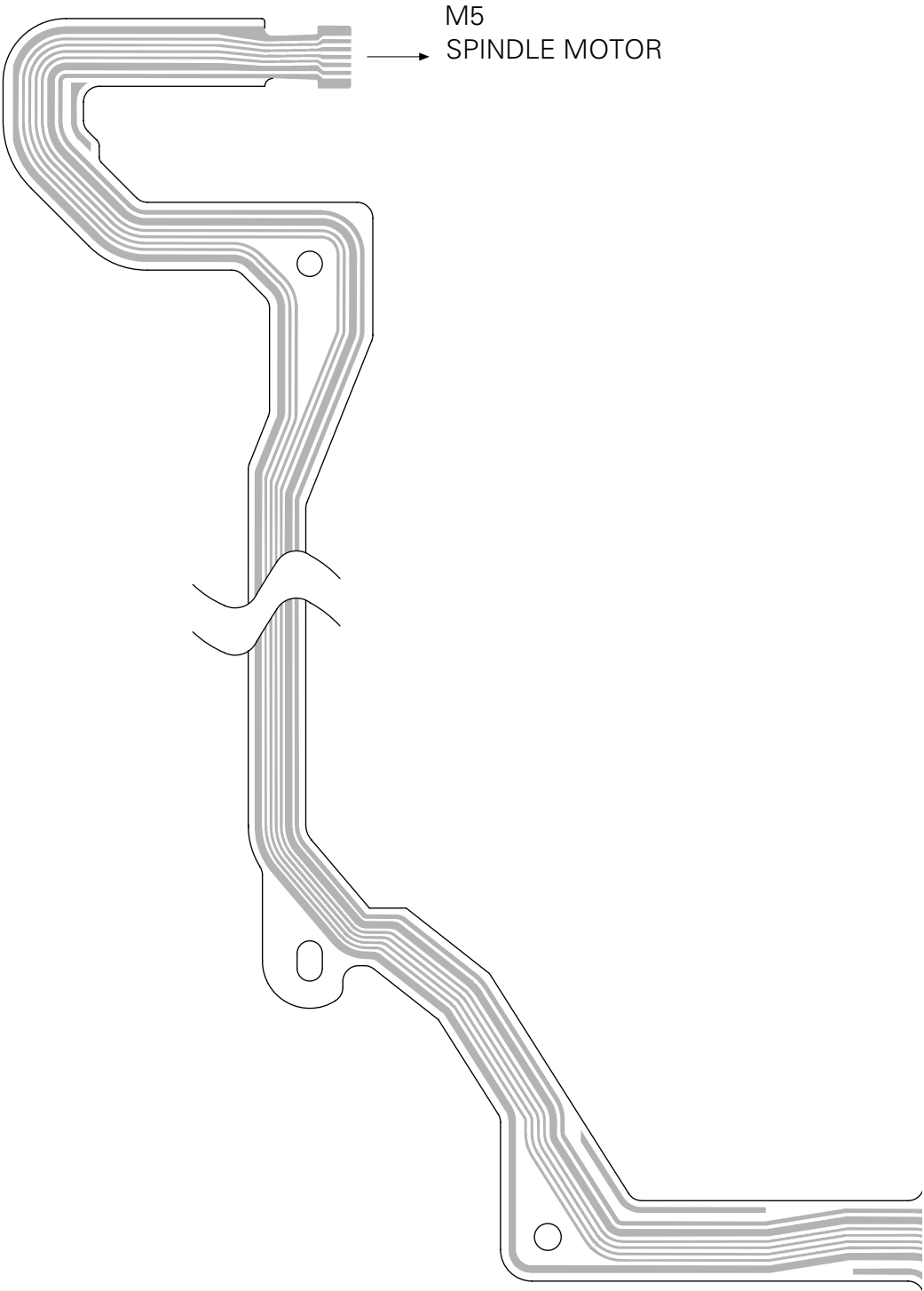
SIDE B

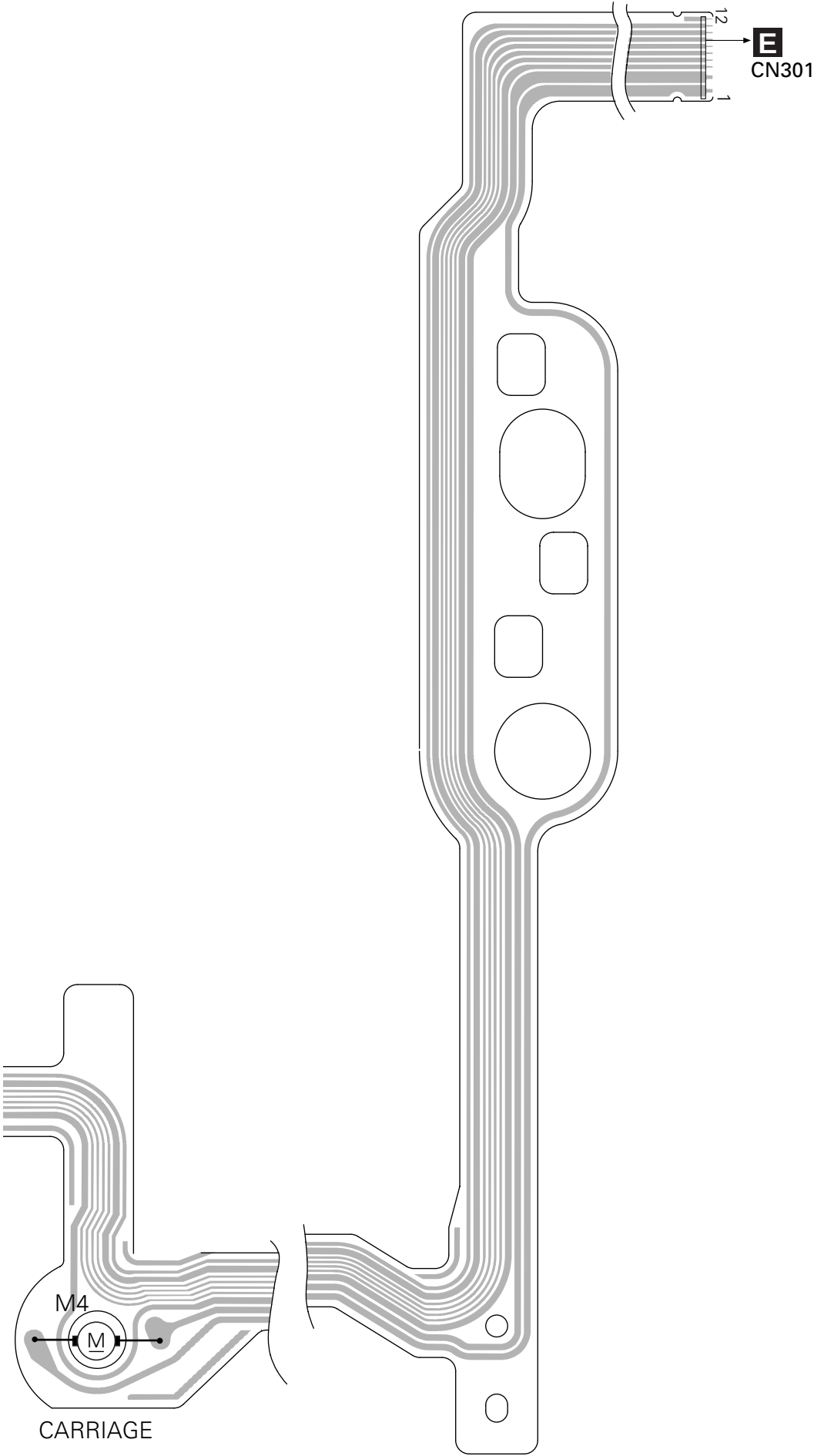
F MOTOR PCB(A)



4.7 MOTOR PCB(B)

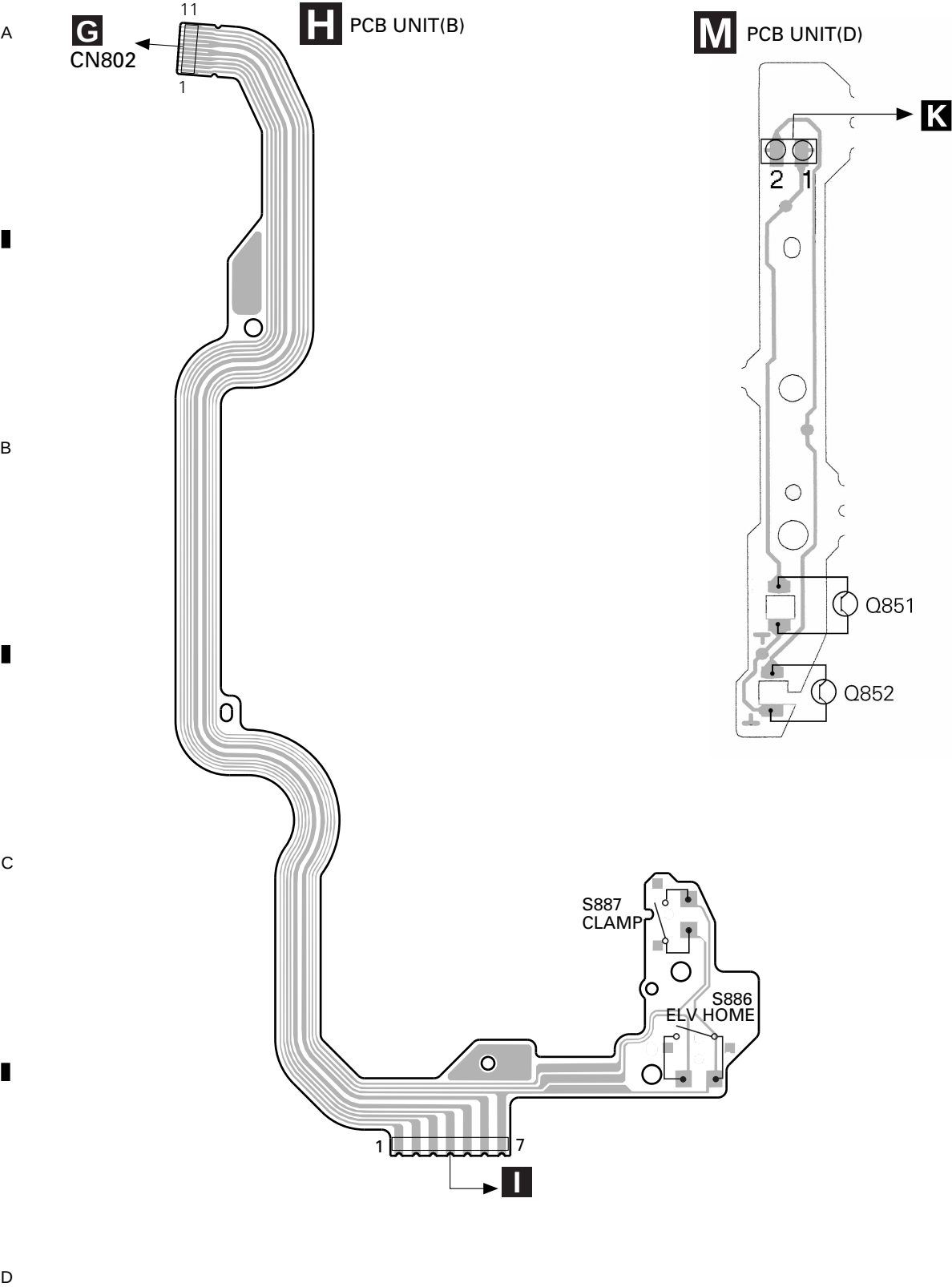
D MOTOR PCB(B)





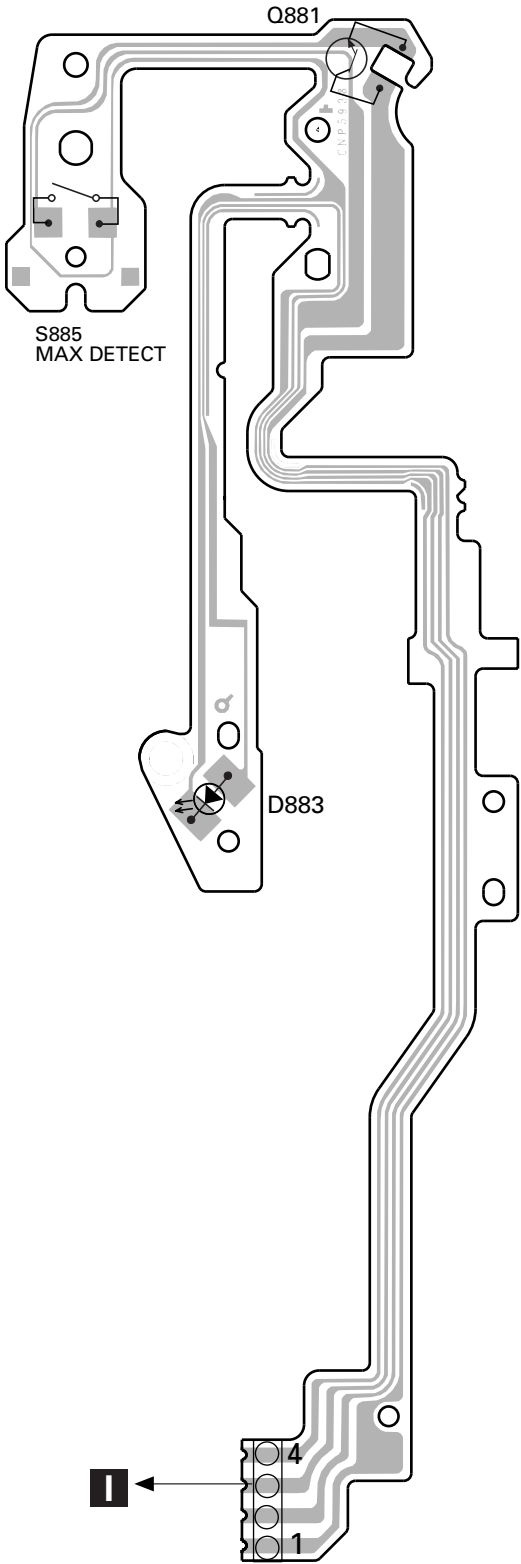
4.8 PCB UNIT(B)

4.9 PCB UNIT(D)



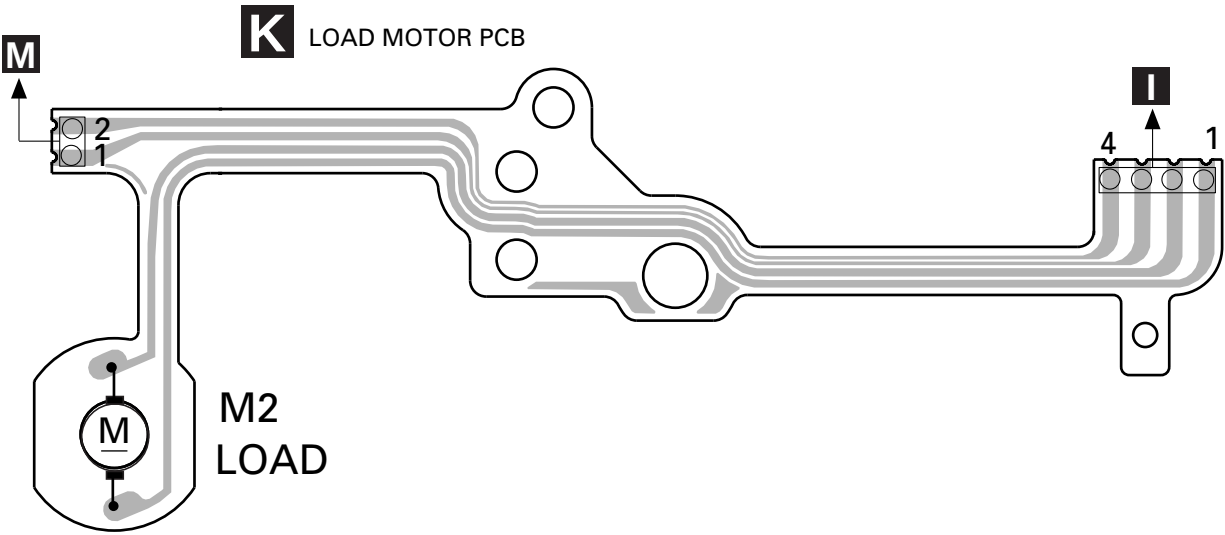
4.10 PCB UNIT(C)

J PCB UNIT(C)



4.11 LOAD MOTOR PCB

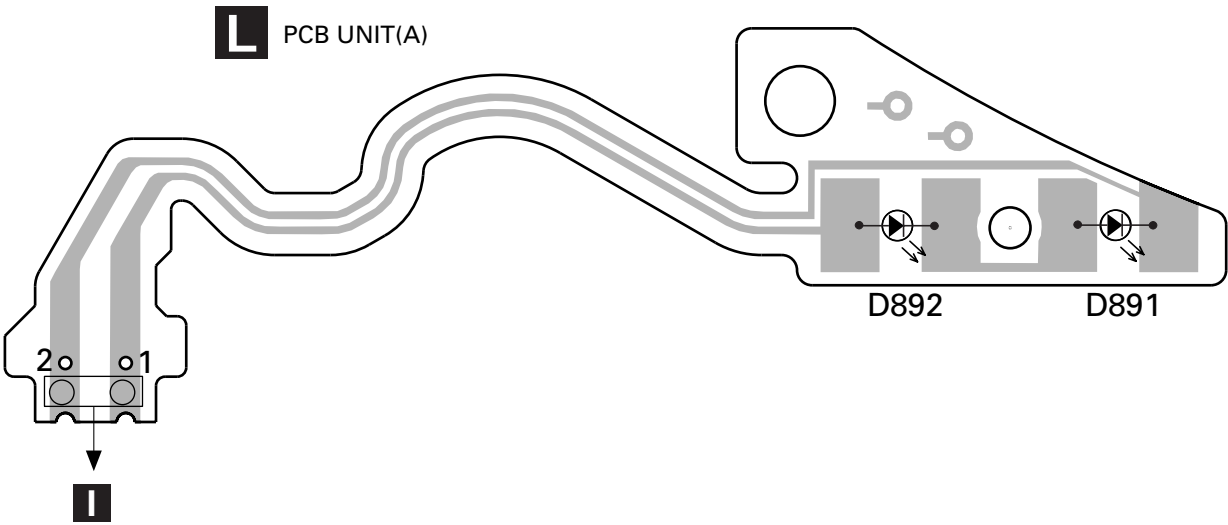
A



B

4.12 PCB UNIT(A)

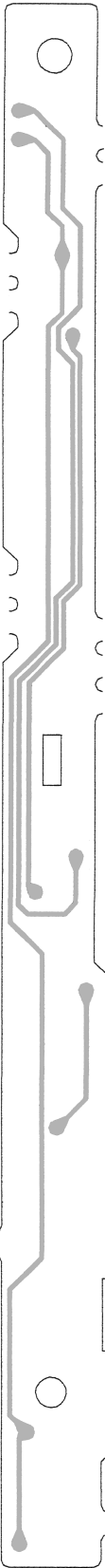
C



D

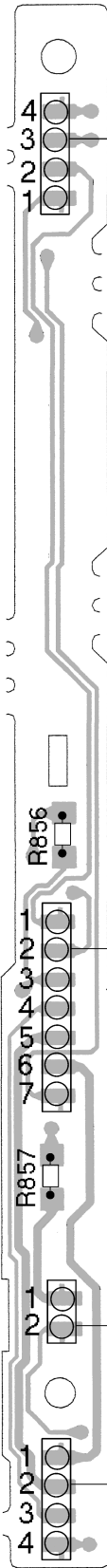
4.13 PCB UNIT(E)

PCB UNIT(E)



SIDE A

PCB UNIT(E)



SIDE B

J

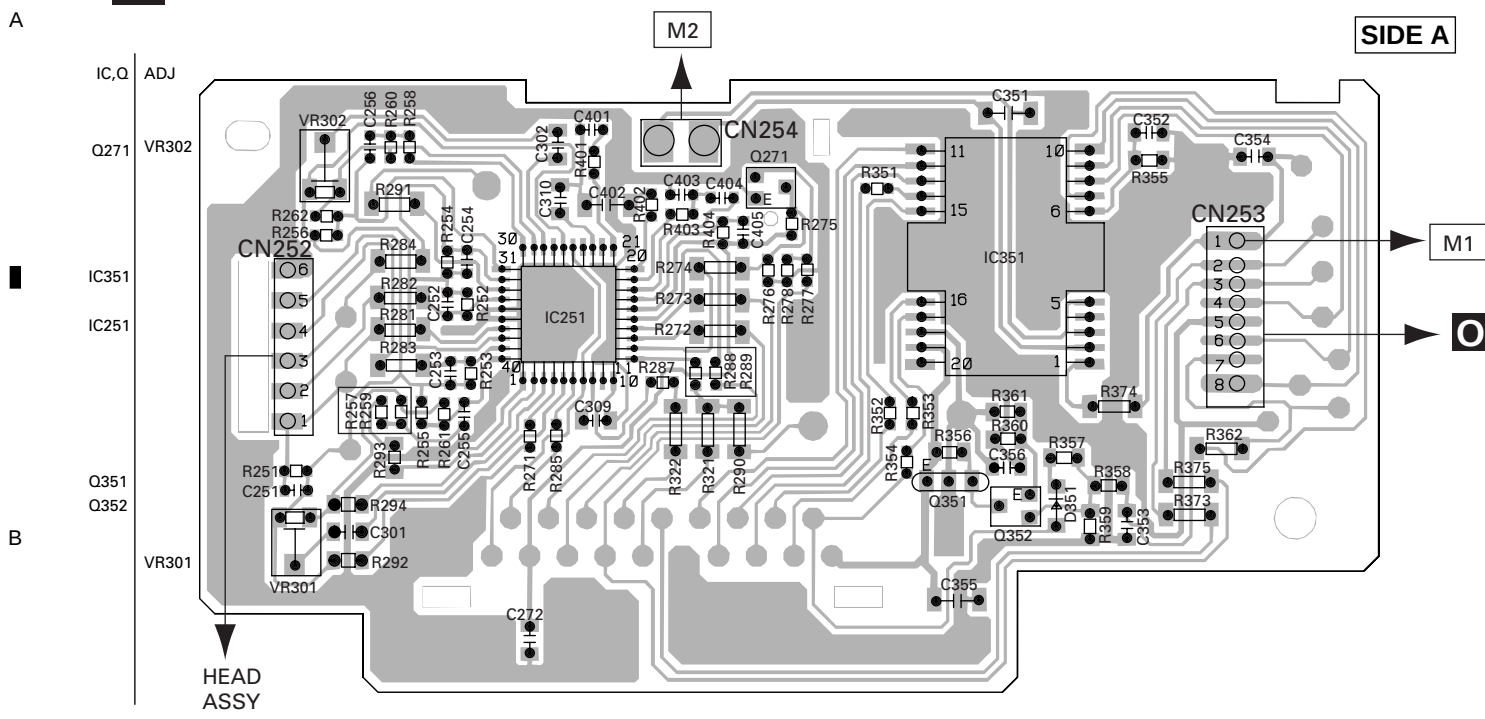
H

L

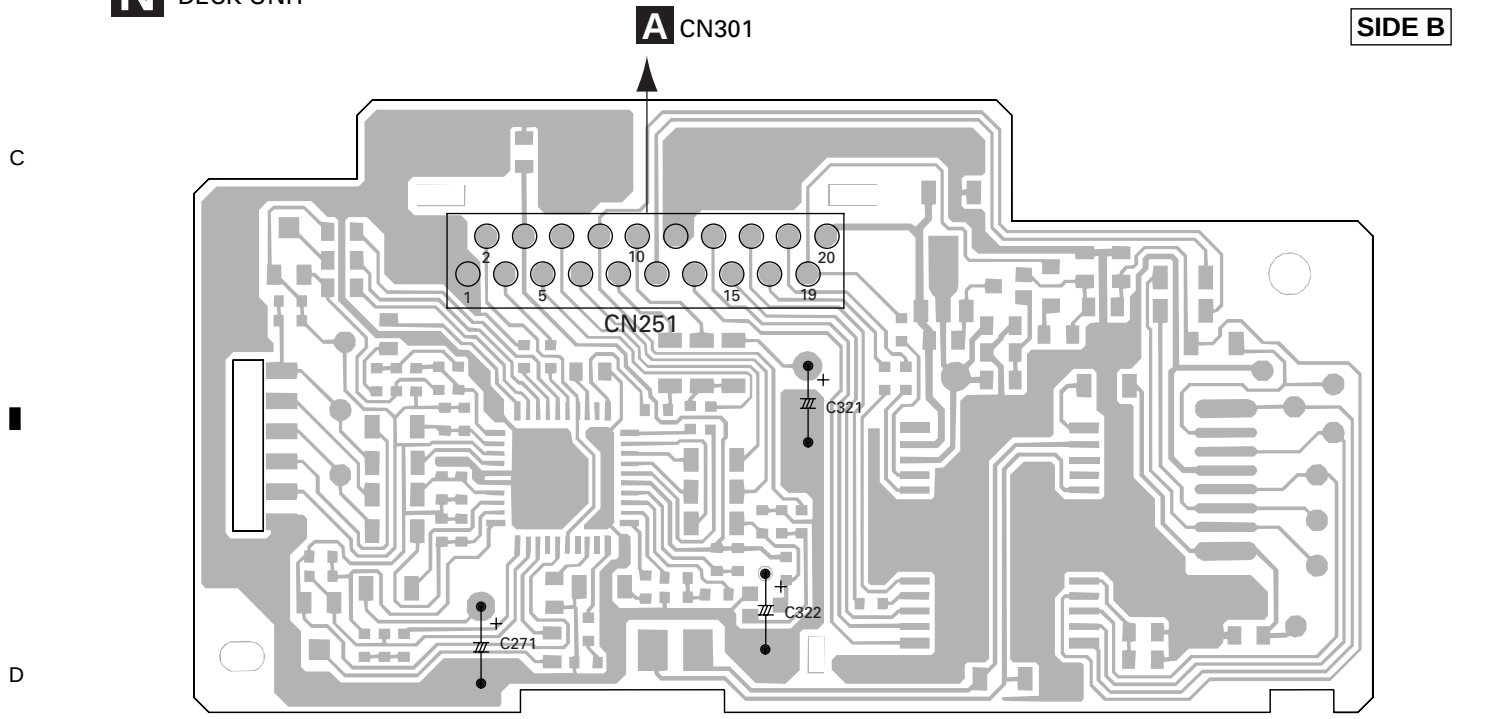
K

4.14 DECK UNIT

N DECK UNIT



N DECK UNIT

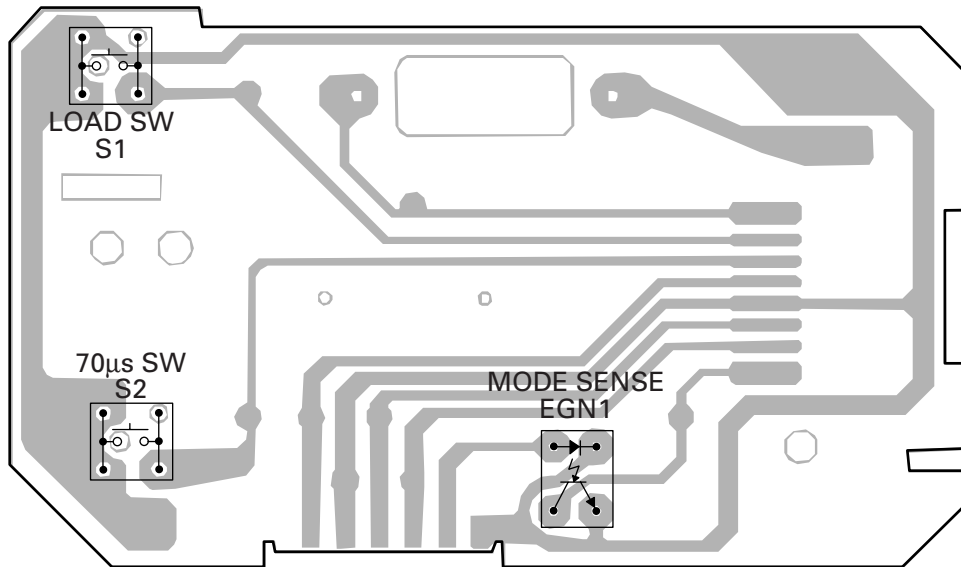


4.15 PCB UNIT

FX-MG8506ZT, MG8506ZT-91, MG8606ZT, MG8606ZT-91

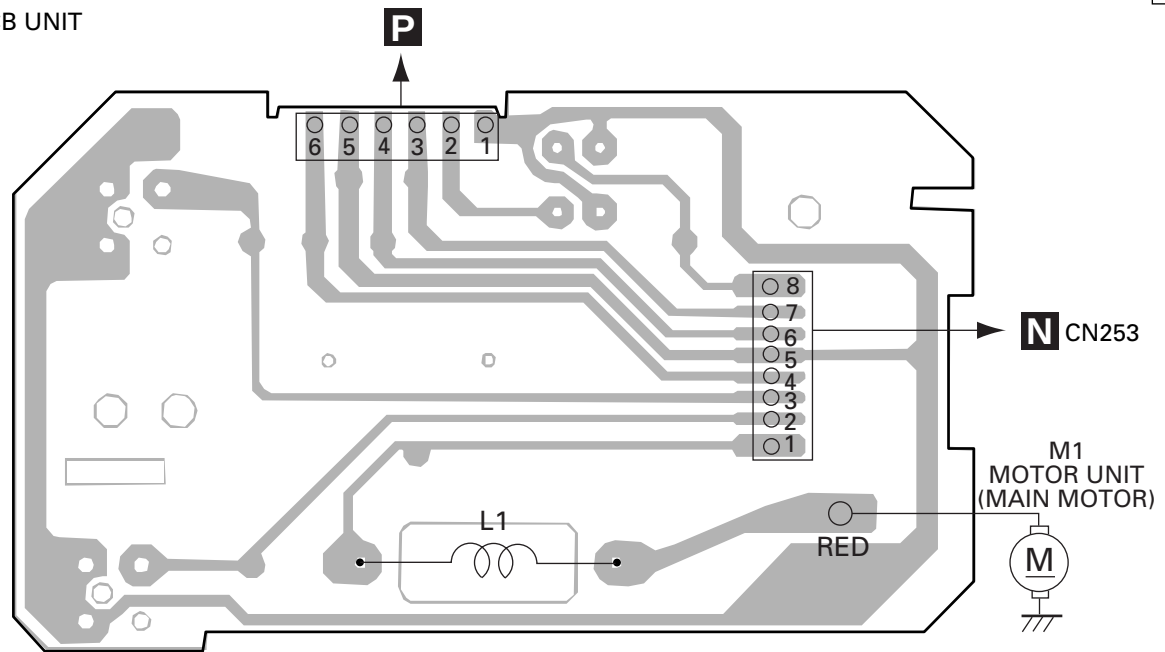
O PCB UNIT

SIDE A



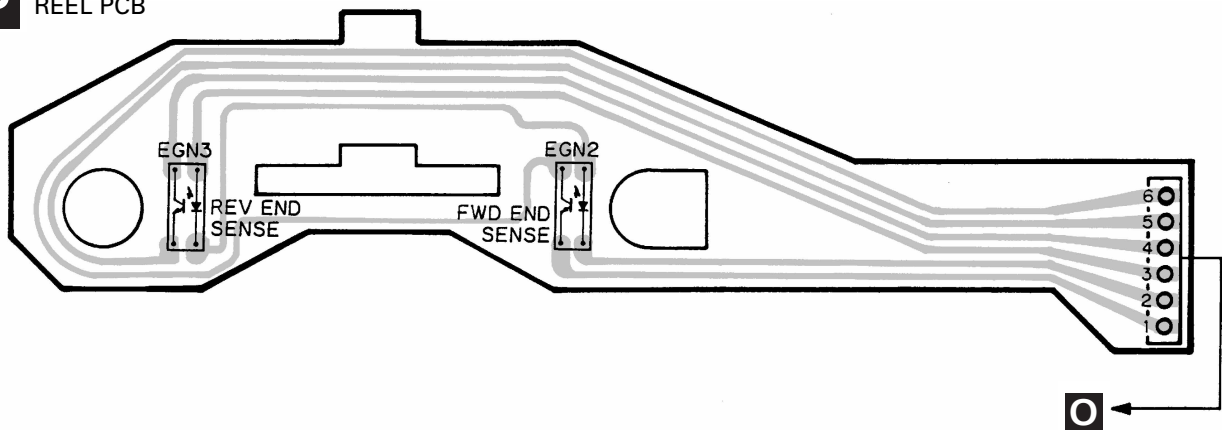
O PCB UNIT

SIDE B



4.16 REEL PCB

P REEL PCB



O P

5. ELECTRICAL PARTS LIST

NOTES:

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

Chip Resistor

RS1/○S○○○○J,RS1/○○S○○○○J

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

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

====Circuit Symbol and No.====Part Name	Part No.	====Circuit Symbol and No.====Part Name	Part No.
A Unit Number : CWM6848(FX-MG8506ZT/EW)		D 302 Diode	UDZ20(B)
Unit Number : CWM6849(FX-MG8606ZT/EW)		D 303 Diode	UDZ20(B)
Unit Name : Main Unit		D 304 Diode	UDZ20(B)
		D 305 Diode	HZU4LL(C)
		D 602 Diode(FX-MG8506ZT/EW)	1SS355
MISCELLANEOUS		D 603 Diode(FX-MG8606ZT/EW)	1SS355
IC 301 IC	NJM2068MD	D 605 Diode	1SS355
IC 302 IC	NJM2068MD	D 608 Diode	1SS355
IC 303 IC	NJM2068MD	D 609 Diode	1SS355
IC 305 IC	TC74HC4066AF	D 610 Diode	1SS355
IC 601 IC	PD5556B		
IC 602 IC	HA12187FP	D 611 Diode	UDZ18(B)
IC 603 IC	S-80730ANDT	D 612 Diode	UDZ18(B)
IC 701 IC	PD5575B	D 701 Diode	1SS355
Q 301 Transistor	DTC343TK	D 801 Diode	1SS355
Q 302 Transistor	DTC343TK	D 802 Diode	UDZS5R6(B)
Q 303 Transistor	DTC343TK	D 803 Diode	ERC05-10BE3
Q 304 Transistor	DTC343TK	D 804 Diode	1SS355
Q 305 Transistor	DTC343TK	D 805 Diode	UDZ20(B)
Q 306 Transistor	DTC343TK	D 806 Diode	ERA15-02VH
Q 307 Transistor	DTC343TK	D 807 Diode	UDZS5R6(B)
Q 308 Transistor	DTC343TK	D 808 Diode	HZU8R2(B1)
Q 309 Transistor	DTA114EK	D 809 Diode	HZU8R2(B1)
Q 601 Transistor	2SA1162	D 810 Diode	HZU8R2(B1)
Q 602 Transistor	DTA114EK	D 811 Diode	1SS355
Q 603 Transistor	DTA114EK	D 812 Diode	HZU8R2(B1)
Q 701 Transistor	DTA144EK	D 813 Diode	1SS355
Q 702 Transistor	DTA114EK	D 814 Diode	HZU8R2(B3)
Q 801 Transistor	DTC114EK	D 819 Diode	ERA15-02VH
Q 804 Transistor	2SD1664	D 821 Diode	HZU8R2(B3)
Q 805 Chip Transistor	2SC2712	L 601 Inductor	LCTB4R7K3216
Q 806 Chip Transistor	2SC2712	L 701 Inductor	LCTB4R7K3216
Q 807 Chip Transistor	2SC2712	L 801 Choke Coil 0.8mH	CTH1239
Q 808 Transistor	2SB1132	TH 701 Thermistor	CCX1037
Q 809 Transistor	2SB1185	X 601 Radiator 10.00MHz	CSS1428
Q 811 Transistor	2SB1185	X 701 Radiator 6.290MHz	CSS1451
Q 812 Transistor	2SB1185	FU 801 Fuse 5A	CEK1195
Q 813 Transistor	2SA1162		
Q 814 Transistor	2SA1162		
Q 816 Transistor	2SD2226K		
Q 817 Chip Transistor	2SC2712		
Q 822 Transistor	2SB1132		
Q 823 Transistor	DTC123YK		
Q 824 Transistor	DTA114EK		
Q 825 Transistor	2SA1162		
Q 826 FET	2SJ517		
Q 827 Transistor	DTC123YK		
Q 828 Transistor	DTA114EK		
Q 829 FET	2SJ517		
Q 830 Transistor	DTC123YK		
Q 831 Chip Transistor	2SC2712		
Q 833 Transistor	DTC114EK		
Q 852 Transistor	IMX1		
Q 854 Transistor	IMX1		
Q 856 Transistor	IMD3A		
D 301 Diode	UDZ20(B)		

FX-MG8506ZT,MG8506ZT-91,MG8606ZT,MG8606ZT-91

====Circuit Symbol and No.==Part Name	Part No.	====Circuit Symbol and No.==Part Name	Part No.
R 318	RS1/10S911J	R 651	RS1/10S104J
R 319	RS1/10S223J	R 652	RS1/4S101J
R 320	RS1/10S223J	R 653	RS1/4S101J
R 321	RS1/10S223J	R 654	RS1PMF680J
R 322	RS1/10S223J	R 701	RS1/10S433J
R 323	RS1/10S222J	R 702	RS1/10S103J
R 324	RS1/10S222J	R 703	RS1/10S222J
R 325	RS1/10S222J	R 704	RS1/10S103J
R 326	RS1/10S222J	R 705	RS1/10S102J
R 327	RS1/10S510J	R 706	RA2CQ222J
R 328	RS1/10S510J	R 707	RA2CQ103J
R 329	RS1/10S510J	R 708	CCN1116
R 330	RS1/10S510J	R 709	RA2CQ222J
R 331	RS1/10S103J	R 710	RS1/10S104J
R 332	RS1/10S153J	R 711	RS1/10S331J
R 333	RS1/10S470J	R 712	RS1/10S103J
R 334	RS1/10S470J	R 713	RA2CQ102J
R 335	RS1/10S470J	R 714	RA2CQ222J
R 336	RS1/10S470J	R 715	RA2CQ103J
R 337	RS1/10S103J	R 716	RA2CQ102J
R 338	RS1/10S392J	R 717	RS1/10S102J
R 341	RS1/10S302J	R 718	RS1/10S471J
R 342	RS1/10S302J	R 719	RS1/10S102J
R 343	RS1/10S104J	R 720	RA2CQ471J
R 344	RS1/10S104J	R 722	RA2CQ222J
R 345	RS1/10S223J	R 723	RA2CQ473J
R 355	RS1/10S472J	R 724	RS1/10S102J
R 356	RS1/10S102J	R 725	RA3C471J
R 602	RS1/10S473J	R 726	RA2CQ102J
R 605	RS1/10S471J	R 727	RA2CQ102J
R 608	RS1/10S102J	R 728	CCN1117
R 609	RS1/10S681J	R 729	CCN1117
R 610	RA3C102J	R 730	CCN1117
R 611	RA3C473J	R 731	RS1/10S471J
R 612	RA2CQ102J	R 732	RS1/10S912J
R 613	RS1/10S473J	R 733	RS1/10S102J
R 616	RS1/10S473J	R 734	CCN1121
R 618	RS1/10S472J	R 735	RS1/10S273J
R 619	RA2CQ102J	R 736	RS1/10S512J
R 620	RA2CQ473J	R 737	RS1/10S104J
R 621	RA3C102J	R 738	RS1/10S154J
R 622	RA3C473J	R 739	RS1/10S103J
R 623	RS1/10S102J	R 801	RS1/8S222J
R 624	RS1/10S103J	R 802	RS1/8S472J
R 625	RA3C102J	R 803	RS1/8S222J
R 626	RA3C473J	R 804	RS1/8S472J
R 627	CCN1120	R 805	RS1/8S222J
R 628	CCN1131	R 806	RS1/8S472J
R 629	RS1/10S102J	R 807	RS1/8S221J
R 631	RA3C102J	R 809	RS1/10S473J
R 632	CCN1120	R 810	RS1/10S104J
R 633	RS1/10S473J	R 811	RS1/10S473J
R 634	RS1/10S473J	R 812	RS1/10S104J
R 635	RS1/10S102J	R 813	RS1/10S473J
R 637	RA2CQ473J	R 814	RS1/10S104J
R 638	RS1/10S102J	R 815	RS1/10S223J
R 639	RA2CQ102J	R 816	RS1/10S122J
R 640	RA3C102J	R 820	RS1/10S123J
R 641	CCN1131	R 821	RS1/10S103J
R 642	RS1/10S102J	R 822	RS1/10S103J
R 643	RA3C102J	R 823	RS1/10S223J
R 644	RS1/10S681J	R 824	RS1/10S102J
R 645	RA3C102J	R 825	RS1/10S331J
R 646	RA3C473J	R 826	RS1/10S103J
R 649	RS1/10S473J	R 827	RS1/10S471J

FX-MG8506ZT,MG8506ZT-91,MG8606ZT,MG8606ZT-91

====Circuit Symbol and No.===Part Name	Part No.	====Circuit Symbol and No.===Part Name	Part No.
R 828	RS1/10S102J	C 604	CKSQYB103K50
R 829	RS1/10S223J	C 605	CKSQYB103K50
R 830	RS1/10S221J	C 606	CCSQCH101J50
R 831	RS1/10S331J	C 607	CCSQCH101J50
R 832	RS1/10S471J	C 608	CCSQCH101J50
R 833	RS1/10S102J	C 609	CCSQCH101J50
R 840	RS1/4S1R5J	C 610	CCSQCH101J50
R 841	RS1/4S1R5J	C 611	CCSQCH101J50
R 842	RS1/4S1R5J	C 612	CCSQCH101J50
R 843	RS1/4S1R5J	C 615	CCSQCH101J50
R 844	RS1/10S471J	C 616	CCSQCH101J50
R 845	RS1/10S471J	C 617	CCSQCH101J50
R 846	RS1/10S105J	C 618	CCSQCH102J50
R 847	RS1/10S361J	C 619	CCSQCH102J50
R 848	RS1/10S1501D	C 620	CCSQCH102J50
R 849	RS1/10S2701D	C 621	CCSQCH102J50
R 856	RS1/10S103J	C 622	CCSQCH102J50
R 857	RS1/10S102J	C 625	CKSQYB103K50
R 859	RS1/10S103J	C 626	CKSQYB103K50
R 860	RS1/10S103J	C 627	CKSQYB221K50
R 861	RS1/10S103J	C 628	CKSQYB221K50
R 862	RS1/10S102J	C 630	CKSQYB102K50
R 863	RS1/10S103J	C 701	CKSQYB102K50
R 864	RS1/10S102J	C 702	CKSQYB102K50
R 865	RS1/10S473J	C 704	CKSQYB102K50
R 866	RS1/10S104J	C 705	CKSQYB102K50
R 867	RS1/10S223J	C 706	CKSQYB102K50
CAPACITORS		C 711	CKSQYB102K50
C 301 4.7μF/35V	CCH1016	C 712	CKSQYB102K50
C 302 4.7μF/35V	CCH1016	C 717	CKSQYB102K50
C 305 4.7μF/35V	CCH1016	C 721	CKSQYB104K50
C 306 4.7μF/35V	CCH1016	C 722	CEAL100M16
C 307 4.7μF/35V	CCH1016	C 723	CKSQYB103K50
		C 724	CKSQYB102K50
		C 725	CKSQYB102K50
C 308 4.7μF/35V	CCH1016	C 726	CKSQYB102K50
C 309	CCSQCH330J50	C 727	CKSQYB102K50
C 310	CCSQCH330J50	C 728	CCSQCH101J50
C 311 4.7μF/35V	CCH1016	C 801	CKSQYB102K50
C 312 4.7μF/35V	CCH1016	C 802	CEAL1R0M50
C 313 4.7μF/35V	CCH1016	C 803	CKSQYB102K50
C 314 4.7μF/35V	CCH1016	C 804	CCH1186
C 315	CCSQCH330J50	C 805	CKSQYB473K50
C 316	CCSQCH330J50	C 806	CKSQYB102K50
C 317	CKSQYB331K50	C 807	CEAL1R0M50
C 318	CKSQYB331K50	C 808	CKSQYB102K50
C 319	CKSQYB682K50	C 809	CCH1186
C 320	CKSQYB682K50	C 811	CCSQCH101J50
C 321	CKSQYB682K50	C 812	CKSQYB103K50
C 322	CKSQYB682K50	C 813	CEJA330M10
C 323	CEALNP4R7M16	C 814	CEAL1R0M50
C 324	CEALNP4R7M16	C 815	CEAL1R0M50
C 325	CEALNP4R7M16	C 816	CKSQYB103K50
C 326	CEALNP4R7M16	C 817	CEJA101M16
C 327	CCSQCH101J50	C 818	CKSQYB103K50
C 328	CCSQCH101J50	C 819	CCH1282
C 329	CCSQCH101J50	C 820	CKSQYB103K50
C 330	CCSQCH101J50	C 824	CKSQYB472K50
C 331	CKSQYB104K50	C 825	CCH1282
C 333	CKSQYB103K50	C 829	CKSQYB103K50
C 334	CEJA101M6R3	C 831	CKSQYB103K50
C 335	CEJA101M16	C 833	CKSQYB102K50
C 336	CKSQYB104K50	C 834	CKSQYB102K50
C 337 4.7μF/35V	CCH1016	C 835	CKSQYB102K50
C 338 4.7μF/35V	CCH1016	C 838	CEAT102M16
C 341	CKSQYB104K50	C 839	CKSQYB223K50
C 342	CEAL4R7M16	C 840	CKSQYB223K50
C 343	CEAL100M16	C 841	CKSQYB223K50
C 601	CKSQYB102K50	C 842	CKSQYB223K50
C 603	CEAL100M16	C 893	CKSQYB222K50

====Circuit Symbol and No.==Part Name

Part No.

C 894
C 896
C 897

CKSQYB222K50
CKSQYB222K50
CKSQYB222K50

B Unit Number : CWM6872
Unit Name : SW Unit

MISCELLANEOUS

D 921 LED
D 922 LED
D 923 LED
D 924 LED
D 925 LED

S 924 Switch(DC/CLOSE)
IL 923 Lamp 8V 60mA
IL 924 Lamp 8V 60mA

SML210FT
SML210FT
SML210FT
SML210FT
SML210FT

CSN1052
CEL1649
CEL1649

RESISTORS

R 931
R 932
R 933
R 934
R 935

RS1/8S331J
RS1/8S331J
RS1/8S331J
RS1/8S331J
RS1/8S331J

CAPACITORS

C 921
C 922
C 923
C 924
C 925

CKSQYB104K25
CKSQYB104K25
CKSQYB102K50
CKSQYB102K50
CKSQYB102K50

C 926
C 927
C 928

CKSQYB104K25
CKSQYB104K25
CKSQYB104K25

C Unit Number : CWM6860(FX-MG8506ZT/EW)
Unit Name : Keyboard Unit

MISCELLANEOUS

IL 901 Lamp 8V 60mA
IL 902 Lamp 8V 60mA
IL 903 Lamp 8V 60mA
IL 904 Lamp 8V 60mA
IL 905 Lamp 8V 60mA

CEL1531
CEL1531
CEL1531
CEL1531
CEL1531

IL 906 Lamp 8V 60mA
IL 907 Lamp 8V 60mA
VR 901 Switch
VR 902 Encoder

CEL1531
CEL1531
CSD1058
CSD1053

RESISTORS

R 992 0Ω
R 994
R 996

CCN1110
RS1/10S0R0J
RS1/10S0R0J

C Unit Number : CWM6859(FX-MG8606ZT/EW)
Unit Name : Keyboard Unit

MISCELLANEOUS

IL 901 Lamp 8V 60mA
IL 902 Lamp 8V 60mA
IL 903 Lamp 8V 60mA
IL 904 Lamp 8V 60mA
IL 905 Lamp 8V 60mA

CEL1531
CEL1531
CEL1531
CEL1531
CEL1531

IL 906 Lamp 8V 60mA
IL 907 Lamp 8V 60mA
VR 901 Encoder
VR 902 Switch

CEL1531
CEL1531
CSD1053
CSD1058

RESISTORS

R 991 0Ω
R 993
R 995

CCN1110
RS1/10S0R0J
RS1/10S0R0J

====Circuit Symbol and No.==Part Name

Part No.

E Unit Number : CWX2421
Unit Name : CD Core Unit(Servo Unit)

MISCELLANEOUS

IC 101 IC
IC 201 IC
IC 301 IC
Q 101 Transistor
Q 102 Transistor

UPC2572GS
UPD63702AGF
BA5986FM
2SD1664
UMD2N

D 301 Diode
L 201 Inductor
L 202 Inductor
X 201 Ceramic Resonator 16.934MHz
EF 201 Filter

1SR154-400
LCYBR15J1608
LCYBR15J1608
CSS1457
CCG1076

EF 202 Filter

CCG1076

RESISTORS

R 101
R 102
R 104
R 105
R 106

RS1/8S100J
RS1/8S120J
RS1/16S822J
RS1/16S682J
RS1/16S183J

R 107
R 108
R 109
R 110
R 111

RS1/16S822J
RS1/16S333J
RS1/16S683J
RS1/16S134J
RS1/16S273J

R 112
R 113
R 114
R 115
R 116

RS1/16S222J
RS1/16S103J
RS1/16S103J
RS1/16S102J
RS1/16S163J

R 117
R 120
R 121
R 201
R 202

RS1/16S163J
RS1/16S101J
RS1/16S101J
RS1/16S104J
RS1/16S103J

R 203
R 204
R 205
R 206
R 250

RS1/16S332J
RS1/16S752J
RS1/16S752J
RS1/16S101J
RS1/16S331J

R 251
R 252
R 253
R 254
R 255

RS1/16S331J
RS1/16S331J
RS1/16S331J
RS1/16S331J
RS1/16S471J

R 256
R 263
R 270
R 271
R 274

RS1/16S471J
RS1/16S471J
RS1/16S101J
RS1/16S101J
RS1/16S471J

R 277
R 301
R 302
R 303
R 304

RS1/16S471J
RS1/16S103J
RS1/16S153J
RS1/16S103J
RS1/16S273J

R 305
R 306
R 307
R 308
R 309

RS1/16S103J
RS1/16S752J
RS1/16S103J
RS1/16S103J
RS1/16S471J

R 311

RS1/16S471J

FX-MG8506ZT,MG8506ZT-91,MG8606ZT,MG8606ZT-91

====Circuit Symbol and No.====Part Name	Part No.	====Circuit Symbol and No.====Part Name	Part No.
CAPACITORS		RESISTORS	
C 101	CEV101M6R3	R 501	RS1/16S102J
C 102	CKSQYB104K16	R 502	RS1/16S202J
C 103	CEV470M6R3	R 503	RS1/16S392J
C 104	CKSQYB334K16	R 504	RS1/16S822J
C 105	CCSRCH240J50	R 505	RS1/16S163J
C 106	CKSRYB222K50	R 506	RS1/16S512J
C 107	CEV4R7M35	R 507	RS1/16S182J
C 108	CKSRYB273K25	R 508	RS1/16S222J
C 109	CCSRCH101J50	R 509	RS1/16S102J
C 110	CKSQYB104K16	R 510	RS1/16S102J
C 111	CKSRYB332K50	R 511	RS1/16S102J
C 112	CKSQYB473K16	R 512	RS1/16S102J
C 113	CKSRYB103K25	R 513	RS1/16S102J
C 114	CKSRYB391K50	R 514	RS1/16S471J
C 115	CCSRCH121J50	R 601	RS1/16S101J
C 116	CKSRYB682K50	R 602	RS1/16S101J
C 117	CKSRYB333K16	R 603	RS1/16S471J
C 118	CKSQYB334K16	R 604	RS1/16S471J
C 119	CKSQYB334K16	R 702	RS1/10S100J
C 120	CKSQYB334K16	R 716	RS1/16S471J
C 121	CKSQYB334K16	R 717	RS1/16S471J
C 122	CKSQYB104K16	R 718	RS1/16S471J
C 123	CKSRYB472K50	R 801	RS1/10S102J
C 124	CKSQYB104K16	CAPACITORS	
C 125	CCSRCH5R0C50	C 501	CKSQYB334K16
C 126	CKSRYB153K25	C 502	CKSQYB334K16
C 127	CKSRYB102K50	C 503	CKSQYB334K16
C 201	CKSQYB334K16	C 504	CCSRCH471J50
C 202	CKSQYB104K16	C 506	CCSRCH221J50
C 203	CKSQYB104K16	C 601	CKSQYB334K16
C 204	CKSRYB471K50	C 602	CCSRCH221J50
C 207	CKSQYB683K16	C 603	CKSQYB334K16
C 208	CKSRYB821K50	C 604	CKSQYB334K16
C 209	CKSRYB273K25	C 605	CSZSR100M10
C 210	CKSQYB334K16	C 606	CKSQYB334K16
C 211	CKSQYB334K16	C 701	CCH1349
C 212	CKSQYB334K16	C 702	CEVL101M6R3
C 213	CCH1349	C 703	CKSQYB334K16
C 301	CEV101M10	C 704	CKSQYB334K16
C 302	CEV101M10	C 705	CCSRCH151J50
 Unit Number : CWX2422 Unit Name : CD Core Unit(STS Unit)		C 706	CCSRCH151J50
		C 707	CCSRCH151J50
		C 801	CKSQYB104K25
		C 802	CKSQYB104K25
		C 803	CEVL220M16
		 Unit Number : Unit Name : PCB Unit(A)	
		D 891	Chip LED
		D 892	Chip LED
		 Unit Number : Unit Name : PCB Unit(B)	
		S 886	Spring Switch(ELV Home)
MISCELLANEOUS		S 887	Spring Switch(Clamp)
IC 501	IC	 Unit Number : Unit Name : PCB Unit(C)	
IC 502	IC		
IC 601	IC		
IC 701	IC		
IC 801	IC		
IC 802	IC		
Q 801	Transistor		
Q 802	Transistor		
D 701	Diode		
D 702	Diode		
D 703	Diode	Q 881	Photo-transistor
D 704	Diode	D 883	Chip LED
D 705	Diode	S 885	Spring Switch(MAX DETECT)
D 706	Diode	CPT230SCTD	
D 707	Diode	CL202IRXTU	
D 708	Diode	CSN1052	
S 801	Spring Switch(LOAD)		
S 802	Spring Switch(DOOR)		
S 803	Spring Switch(MODE)		
EF 701	Filter		
EF 702	Filter		
EF 703	Filter		

====Circuit Symbol and No.===Part Name

Part No.

M Unit Number :
Unit Name : PCB Unit(D)

Q	851	Photo-transistor	CPT230SCTD
Q	852	Photo-transistor	CPT230SCTD

I Unit Number :
Unit Name : PCB Unit(E)

R	856		RS1/8S911J
R	857		RS1/8S821J

F Unit Number :
Unit Name : Motor PCB(A)

Q	1	Photo-interrupter	RPI-221
M	1	Motor Unit(Cam Gear)	CXB6929
M	3	Motor Unit(ELV)	CXB3175

D Unit Number :
Unit Name : Motor PCB(B)

M	4	Motor Unit(Carriage)	CXB3178
M	5	Motor(Spindle)	CXM1120

K Unit Number :
Unit Name : Load Motor PCB

M	2	Motor Unit(Load)	CXB3177
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N Unit Number : EWM1027
Unit Name : Deck Unit

MISCELLANEOUS

IC	251	IC	HA12216F
IC	351	IC	PA2020A
Q	271	Transistor	2SC4116
Q	351	Transistor	2SB1260
Q	352	Transistor	2SC4102
D	351	Diode	1SS355
VR	301	Semi-fixed 33kΩ(B)	CCP1280
VR	302	Semi-fixed 33kΩ(B)	CCP1280

RESISTORS

R	255	RS1/16S181J
R	256	RS1/16S181J
R	257	RS1/16S183J
R	258	RS1/16S183J
R	259	RS1/16S133J
R	260	RS1/16S133J
R	261	RS1/16S274J
R	262	RS1/16S274J
R	271	RS1/16S183J
R	272	RS1/8S0R0J
R	273	RS1/8S0R0J
R	274	RS1/8S0R0J
R	275	RS1/16S473J
R	276	RS1/16S104J
R	277	RS1/16S224J
R	278	RS1/16S104J
R	281	RS1/8S0R0J
R	282	RS1/8S0R0J
R	283	RS1/8S0R0J
R	284	RS1/8S0R0J
R	285	RS1/16S0R0J
R	288	RS1/16S0R0J
R	289	RS1/16S0R0J
R	291	RS1/8S0R0J
R	292	RS1/10S0R0J

====Circuit Symbol and No.===Part Name

Part No.

R	293	RS1/10S0R0J
R	294	RS1/10S0R0J
R	321	RS1/8S0R0J
R	351	RS1/16S102J
R	352	RS1/16S102J

R	353	RS1/16S102J
R	354	RS1/16S102J
R	355	RS1/10S274J
R	356	RS1/10S202J
R	357	RS1/10S472J

R	358	RS1/10S103J
R	359	RS1/10S103J
R	360	RS1/10S102J
R	361	RS1/10S622J
R	362	RS1/8S181J

R	373	RS1/8S0R0J
R	374	RS1/8S0R0J
R	375	RS1/8S0R0J
R	401	RS1/16S123J
R	402	RS1/16S332J

R	403	RS1/16S911J
R	404	RS1/16S274J

CAPACITORS

C	251	CKSRYB391K50
C	252	CKSRYB391K50
C	253	CKSRYB391K50
C	254	CKSRYB391K50
C	255	CKSRYB103K50

C	256	CKSRYB103K50
C	271	CEJA1R0M50
C	272	CKSQYB104K16
C	301	CKSQYB104K16
C	302	CKSQYB104K16

C	309	CKSQYB104K16
C	310	CKSQYB104K16
C	351	CKSYB224K25
C	352	CKSQYB392K50
C	353	CKSQYB103K50

C	354	CKSQYB103K50
C	355	CKSYB104K50
C	356	CKSQYB103K50
C	401	CKSRYB472K50
C	402	CKSYB334K25

C	403	CKSRYB223K25
C	404	CKSRYB103K50
C	405	CKSRYB333K16

O Unit Number :
Unit Name : PCB Unit

L	1	Inductor	ETH0002
S	1	Switch (LOAD)	ESG1004
S	2	Switch (70μs)	ESG1004
EGN	1	Photo-Interrupter	EGN1005

P Unit Number :
Unit Name : Reel PCB

EGN	2	Photo-Interrupter	EGN1006
EGN	3	Photo-Interrupter	EGN1006

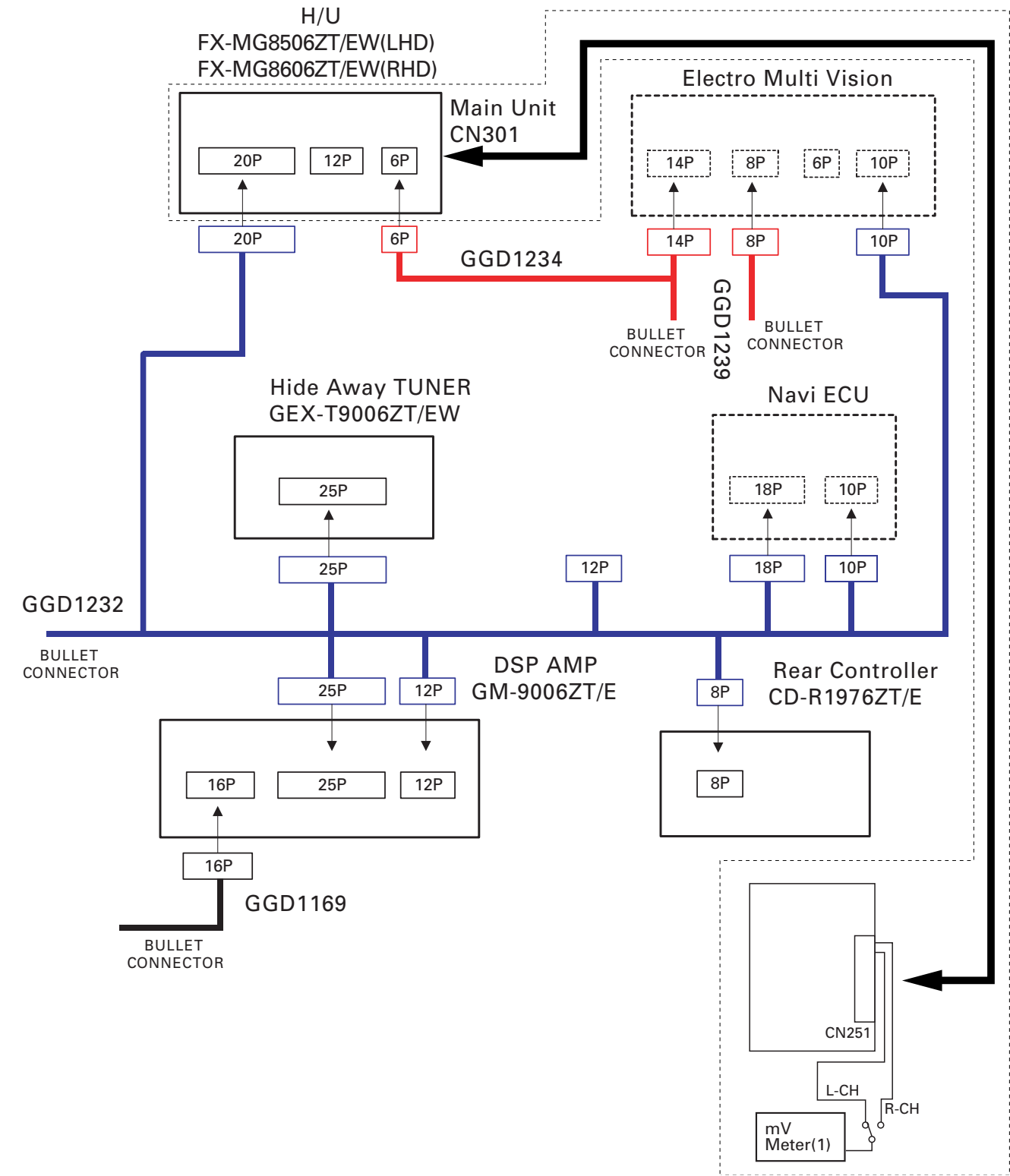
Miscellaneous Parts List

		Pickup Unit(Service)(P8)	CXX1313
C	1		CEAL4R7M35
M	1	Motor Unit (Main)	EXA1499
M	2	Motor Unit (Sub)	EXA1382
HD	1	Head Assy	EXA1594

6. ADJUSTMENT

6.1 CASSETTE SECTION

● Connection Diagram



DOLBY NR ADJUSTMENT

No.	Test Tape	Adjustment Point	Adjustment Method (Switch Position)
1	NCT-150 (400Hz,200nwb/m)	VR301(Lch),VR302(Rch)	mV Meter(1) : -8.24dBm(300mV)±1dB (DOLBY NR Switch : OFF)

6.2 CHECKING THE GRATING AFTER CHANGING THE PICKUP UNIT

• Note :

The grating angle of the PU unit cannot be adjusted after the PU unit is changed. The PU unit in the CD mechanism module is adjusted on the production line to match the CD mechanism module and is thus the best adjusted PU unit for the CD mechanism module. Changing the PU unit is thus best considered as a last resort. However, if the PU unit must be changed, the grating should be checked using the procedure below.

• Purpose :

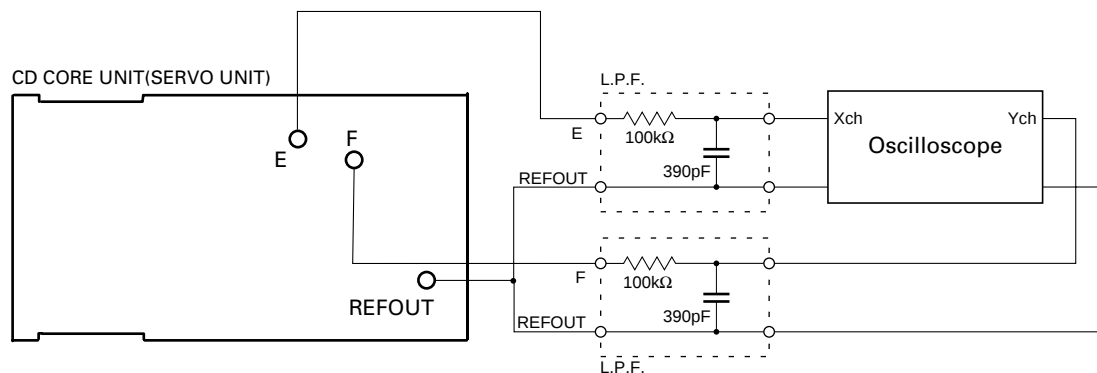
To check that the grating is within an acceptable range when the PU unit is changed.

• Symptoms of Mal-adjustment :

If the grating is off by a large amount symptoms such as being unable to close tracking, being unable to perform track search operations, or taking a long time for track searching.

• Method :

- | | |
|-----------------------|----------------------------|
| • Measuring Equipment | • Oscilloscope, Two L.P.F. |
| • Measuring Points | • E, F, REFOUT |
| • Disc | • ABEX TCD-784 |
| • Mode | • TEST MODE |



• Checking Procedure

1. In test mode, load the disc and switch the 5V regulator on.
2. Using the SEEK UP and SEEK DOWN buttons, move the PU unit to the innermost track.
3. Press key **5** to close focus, the display should read "91". Press key **3** to implement the tracking balance adjustment the display should now read "81". Press key **5 4** 4 times. The display will change, returning to "81" on the fourth press.
4. As shown in the diagram above, monitor the LPF outputs using the oscilloscope and check that the phase difference is within 75° . Refer to the photographs supplied to determine the phase angle.
5. If the phase difference is determined to be greater than 75° try changing the PU unit to see if there is any improvement. If, after trying this a number of times, the grating angle does not become less than 75° then the mechanism should be judged to be at fault.

• Note

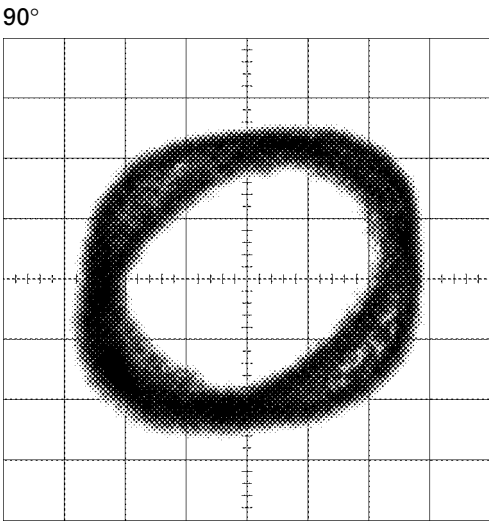
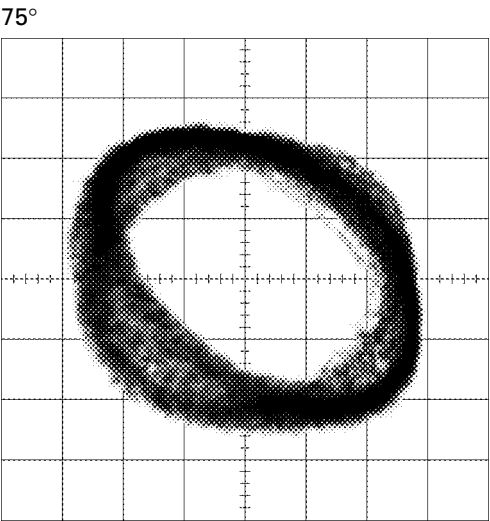
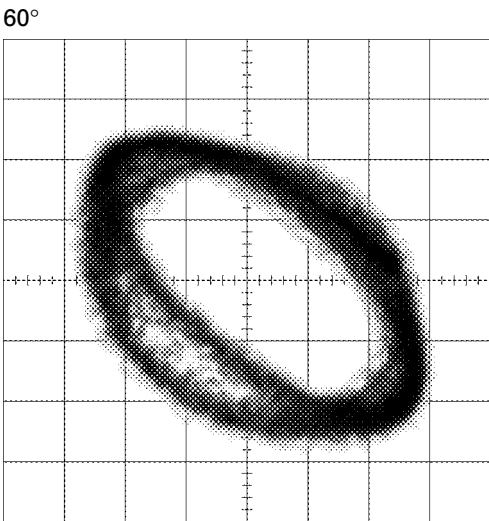
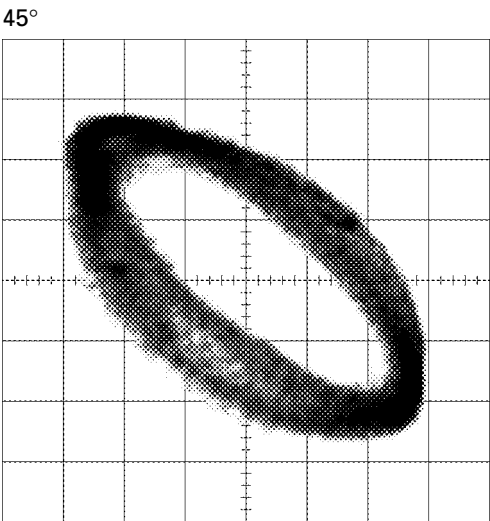
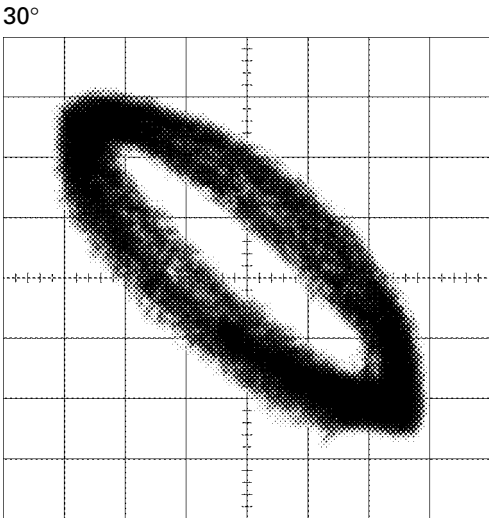
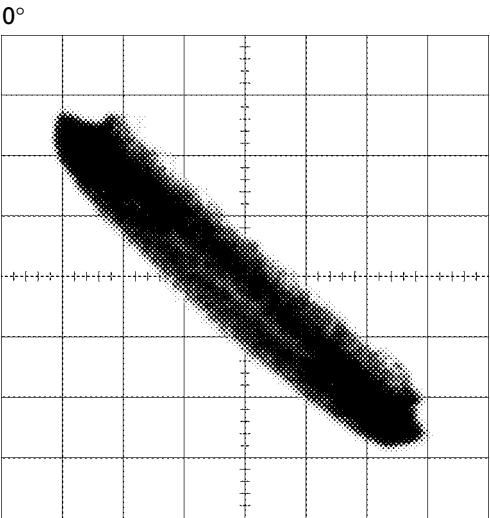
Because of eccentricity in the disc and a slight misalignment of the clamping center the grating waveform may be seen to "wobble" (the phase difference changes as the disc rotates). The angle specified above indicates the average angle.

• Hint

Reloading the disc changes the clamp position and may decrease the "wobble".

Grating waveform

Ech → Xch 20mV/div, AC
Fch → Ych 20mV/div, AC



7. GENERAL INFORMATION

7.1 DIAGNOSIS

7.1.1 TEST MODE

● CD Test Mode

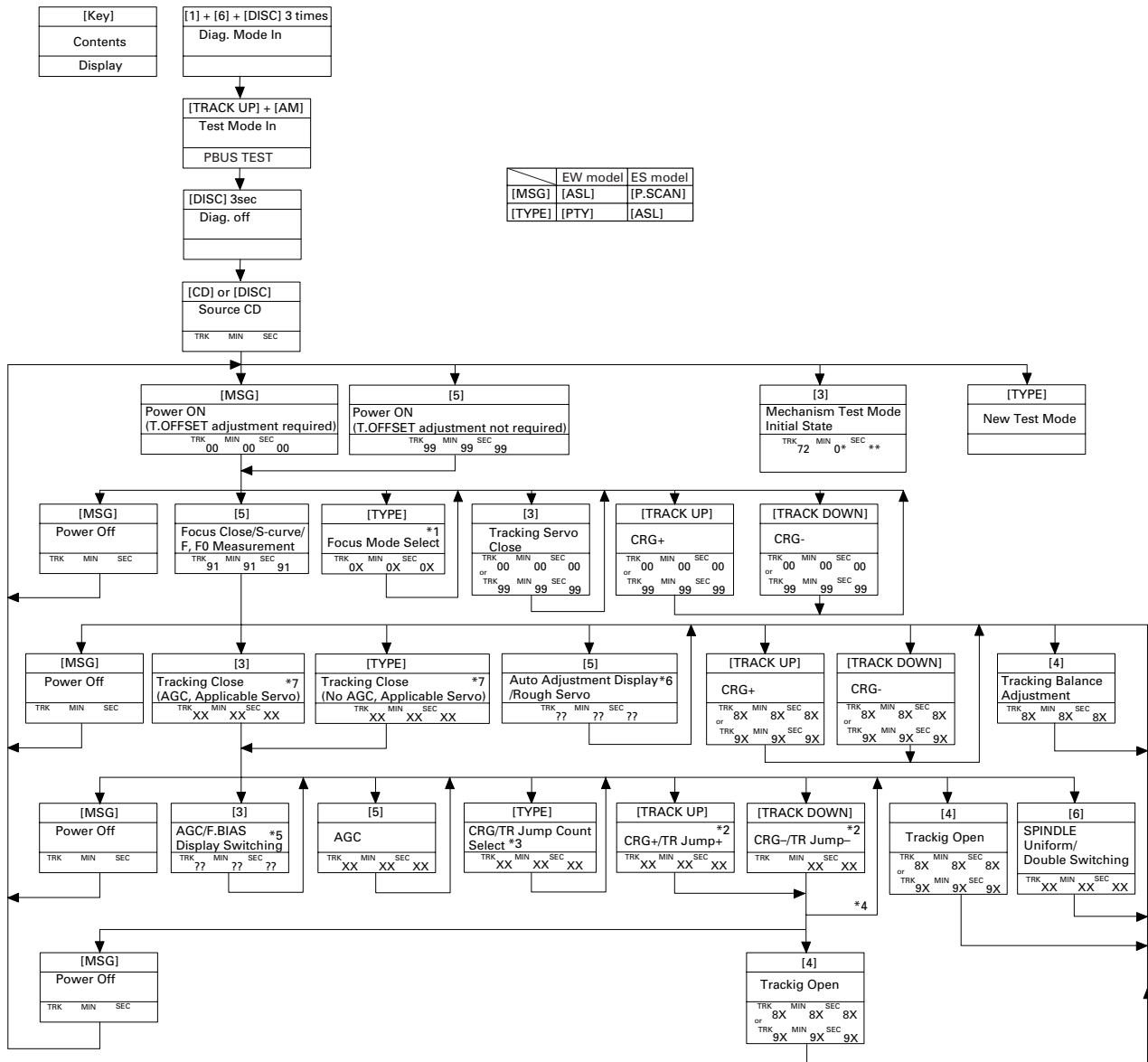
1) Precautions on Adjustment

- The unit employs a single voltage (+5V) for the regulator, thus the reference potential of the signal is RFOUT (approximately 2.5V) rather than GND. Inadvertent contact of RFOUT and GND during adjustment can result not only in disabling normal potential measurement but also in exposing the pickup to strong impacts due to malfunctioning of the servo. Therefore, you are requested to observe the following precautions.
- Make sure that the negative probe of the measuring instrument is not connected to RFOUT or GND. Special care must be exercised so that the channel 1 negative probe may not be connected to the oscilloscope and the channel 2 negative probe to GND. Since the frame of the measuring instrument is usually at the same potential as the negative probe, the frame of the measuring instrument must be changed to floating status.
When RFOUT is inadvertently connected to GND, you must immediately turn off the regulator or power supply.
- The regulator must be turned off before mounting or dismounting filters or wiring materials.
- You should not start adjustment or measurement immediately after the regulator is turned on. It is recommended to run the player for approximately one minute so that it may stabilize.
- When the test mode is turned on, various protective functions from the software become unavailable. Thus, you must make sure that undesirable electric or mechanical shocks are not be given to the system.
- This model employs a photo-transistor for detecting discs at their loading or ejection. Thus, if its outer case is removed during repair work and internal parts are exposed to light of strong intensity, malfunctions including the following can result:
 - * The eject button becomes inoperable during play. Pressing the eject button does not eject a disc and play is continued.
 - * Loading becomes unavailable.
 If a malfunction is recognized, appropriate remedial actions must be taken. Such actions include changing the light source position, changing the unit position and applying a cover to the photo-transistor.
- When you press the EJECT key to eject a disc, you must not touch any other key until the ejection is complete.
- If you press the TRACK UP or TRACK DOWN for the focus search in the test mode, you must turn the power off immediately. (Otherwise, the lens will be forced to stick to the top or bottom, potentially resulting in the burning of the actuator.)

2) Description of the Test Mode

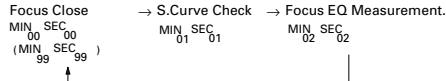
- Turning on the Test Mode
See page 76.
- Ending the Test Mode
Apply the reset (the reset will be applied three minutes after the power is turned from off).
- Operation of TR JUMPs (except 100TR) continues after your finger has left the key. CRG, MOVE and 100TR JUMP are forced to the tracking close mode as soon as the key is released.
- Turning the power on or off resets the JUMP MODE to the Single TR.

CD Player Flow Chart



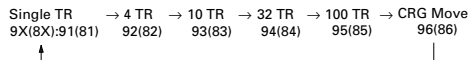
Switching must take place in the following sequence.

*1) Switching must take place in the following sequence.



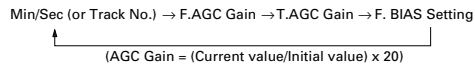
*2) Single TR /4TR / 10TR / 32TR / 100TR

*3) Switching must take place in the following sequence.

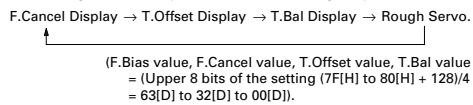


*4) It applies to the CRG Move and 100TR Jump alone.

*5) Switching must take place in the following sequence.



*6) Switching must take place in the following sequence.



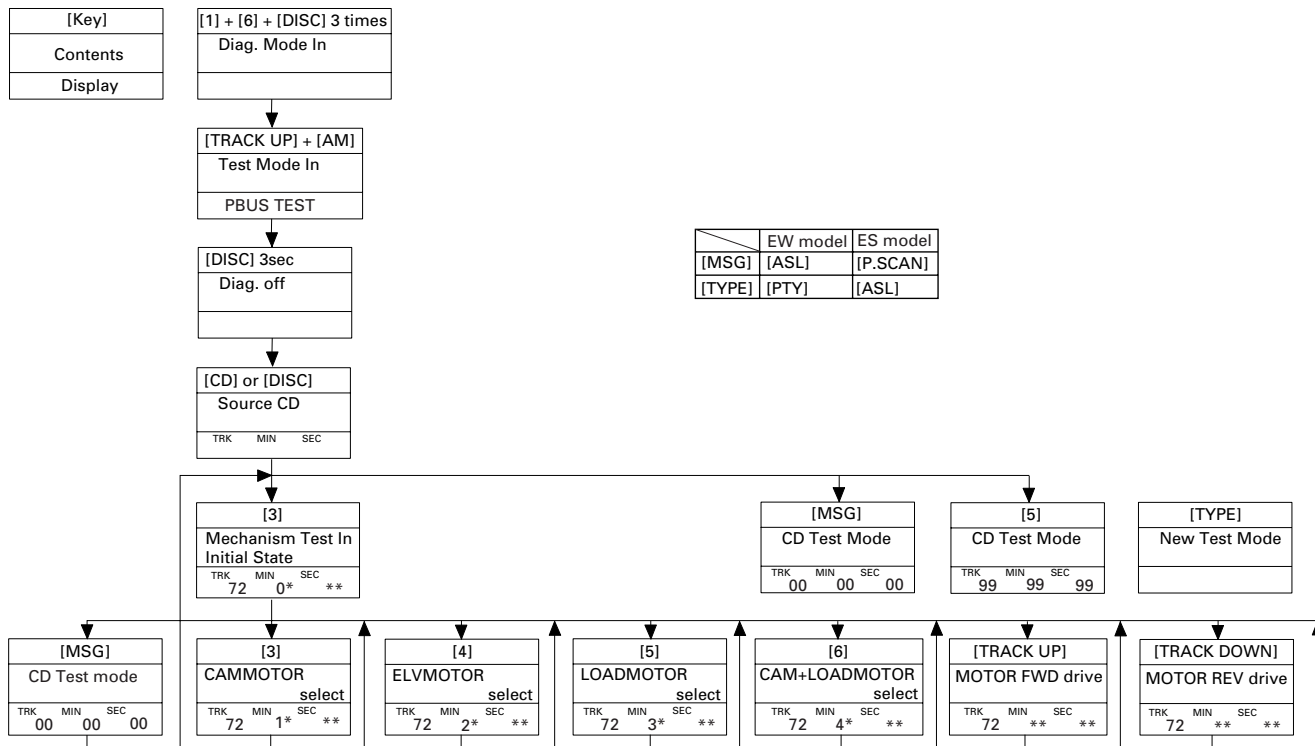
*7) Sound is unavailable even after the tracking has been closed (this trouble results when the IC for the STS is not controlled in the test mode).

[Key]	Operation	
	Test Mode	New Test Mode
[MSG] B0H	Power ON/OFF	Error occurrence time/ Cause display switching
[TRACK UP] B1H	CRG+/TR Jump+ (Toward outer perimeter)	Track+/FF
[TRACK DOWN] B2H	CRG-/TR Jump- (Toward inner perimeter)	Track-/REV
[3] B3H	Tracking Close/AGC gain, F.Bias adjustment value display switching	—
[4] B4H	Auto Tracking Balance adjustment/ Tracking Open	Mode
[5] B5H	Focus Close, S.Curve, F.EQ measurement/ Rough Servo/AGC	—
[6] B6H	Focus Open	RANDOM
[TYPE] B8H	Focus Mode select/Tracking Close/ CRG*TR Jump Switching	Auto/Manual switching
[2] A8H	DISC UP	DISC UP
[1] A9H	DISC DOWN	DISC DOWN
[EJECT] D1-D6	DISC Eject	DISC Eject
[LOAD] 61-66	DISC Load	DISC Load

Note: •When you pressed the [TRACK UP] or [TRACK DOWN] key during the Focus Search, you must turn the power off immediately (otherwise, the lens can stick resulting in actuator damages).

- Operation of TR JUMPs other than 100TR is continued after your finger has left the key.
- CRG Move and 100TR Jump are forced to the Tracking Close Mode when the key is released.
- Powering on or off resets the Jump Mode to the Single TR (91).
- When ending the test mode, apply the reset (the reset is applied in three minutes from powering off).

● CD Mechanism Test Mode Flow Chart



<Screen Display during Mechanism Test Mode>

[TRK] : 72

[MIN] : Upper (10th order): Type of motors selected
Lower (order of 1): State of DISC sensing phototransistor and switch

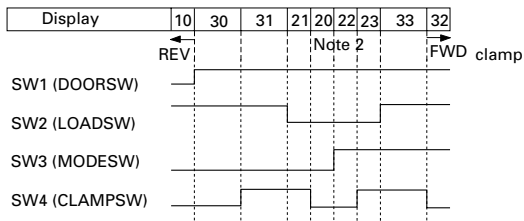
- 1* : CAM motor
- 2* : ELV motor
- 3* : LOAD motor
- 4* : CAM+LOAD motor

PH1	PH2	MAXSW	Display
L	L	L	*0
H	L	L	*1
L	H	L	*2
H	H	L	*3
L	L	H	*4
H	L	H	*5
L	H	H	*6
H	H	H	*7

L: Phototransistor is OPEN and switch is ON.
H: Phototransistor is CLOSE and switch is OFF.

[SEC] : ① When ELV motor is selected, ELV position is displayed
01: ELV at home position (1st disc).
10: ELV at a position other than home (2nd to 6th).
11: ELV moving to a specified position. * Note 1.
00: Not used (for an error)

② When CAM.LOAD motor is selected:
Indicates CAM SW (CAM gear) status.



□ Operating Procedures:

- Enter Diag and set on the CD test mode.
Subsequently, exit from Diag and set the source for the CD.
- Turn on the Mechanism Test Mode using the [3] key.
TRK MIN SEC
72* X*
- Select the motor to be driven using the [3] to [6] keys.
TRK MIN SEC
72* X*
- Press the [TRACK UP] or [TRACK DOWN] in this state to drive the selected motor.

[Key]	Operation
[MSG] B0H	Mechanism Test is initialized.
[TRACK UP] B1H	Valid only when the motor selected (using the [F3] to [F6] keys) is driven in FWD direction.
[TRACK DOWN] B2H	Valid only when the motor selected (using the [F3] to [F6] keys) is driven in REV direction.
[3] B3H	CAMMOTOR is selected.
[4] B4H	ELVMOTOR is selected.
[5] B5H	LOADMOTOR is selected.
[6] B6H	CAM + LOADMOTOR is selected.
[2] A8H	DISC UP
[1] A9H	DISC DOWN
[EJECT] 43H	DISC Eject
[LOAD] 60H	DISC Load

□ Precautions

- * The keys are inoperable as long as operation of the mechanism is continued.
- * When driving the CAMMOTOR in 31 → 30 → 10 (in REV direction), the elevation position must be at the EJECT/LOAD position (the top position).

Note 1: When the elevation is situated at the Note 1 position, move of any motor other than the REV is disabled.

Note 2: Before performing the elevation, make sure that the CAM SW (switch) is set to a position between 22 and 20.
As a rule, driving of the ELV MOTOR must be started immediately after the CAMSW indication has changed from 22 to 20.

○ Operating Procedures for Ejecting a Clamped Disc

- ① Select CAMMOTOR using [3], then press the [TRACK DOWN] while the disc is being clamped (CAMSW state is 32).
The CAMSW status indication sequentially changes through 32→33→23→22.
- ② When the disc to be ejected is not identical with the disc being clamped, select the [4] ELMOTOR in the vicinity of where the display changes from 22 to 20, then match the elevation to the disc to be ejected according to the following procedures:
After selecting ELMOTOR, lower the elevation until the ELV position display becomes 01 (1st disc) using the [TRACK DOWN].
Drive the elevation up until the display is changed to 10 using the [TRACK UP] . This is the elevation where the second disc is situated.
The next display of 10 tells you the elevation of the 3rd disc. Repeating this operation allows you to establish an elevation matching each disc. (When the elevation is driven from the 1st through 6th disc, the status display changes as 01→11→10→11→10→11→10→11→10→11→10.)
(When the disc to be ejected coincides with the disc being clamped, the above operations are not necessary.)
- ③ Select the [3] CAMMOTOR and then, using the [TRACK DOWN], drive it until the display changes from 20 (or 22) to 21 and 31.
- ④ Select the [4] ELMOTOR, then drive the tray of the disc to be ejected up to the EJECT/LOAD position (using the [TRACK UP]).
- ⑤ Select the [6] CAM+LOADMOTOR, then drive it in the REV direction until the display changes from 31 to 30 and 10.
The door will open immediately before the display changes to 10 and part of the disc will be pushed out.
- ⑥ When 10 is displayed, select the [5] LOADMOTOR, then drive it in REV direction until the disc is completely ejected.

● Error No. Display

The error mode is turned on if a CD player becomes not playable or is forced to halt due to an error. Cause(s) of an error will be indicated with numerical characters. The error-number-display function is intended to facilitate the error analysis and resulting repair work.

(1) Error Code

Error code	Category	Troubles	Description/Cause(s)
10	Electricity	Carriage home error	Unable to move to or from inner perimeter → Failure on home switch or carriage move trouble.
11	Electricity	Focus search error	Unable to set a focus → Scratches or stains on backside of the disc, severe vibrations, CD-R is not written to the disc (it can happen on the backside of the disc).
12	Electricity	Spindle lock error Sub-code error	Spindle lock unavailable, sub-code unreadable → Failure on spindle, scratches on the disc, stains or strong vibrations.
14	Electricity	Mirror error	MIRR signal error continues for 500 msec or more → Stains on the disc or strong vibrations.
17	Electricity	Setup error	AGC protection cannot be turned on in time or focus can be easily lost → Scratches or stains on the disc or strong vibrations.
19	Electricity	Tracking Balance error	Tracking error level is low or tracking balance adjustment is unavailable → Failure on the pickup or tracking-error circuit.
30	Electricity	Search time-out	Target address can't be reached → Failure on the carriage/tracking or scratches on the disc.
A0	System	Error on power supply	Ground fault of power supply (VD) → Failure on switching transistor or failure of power supply.
—		High temperature stand-by	Temperature error(High temperature).

Error code	AVC-LAN Error code
11, 12, 14, 17, 19, 30	ERROR1
10	ERROR3
A0	ERROR4
—	WAIT

Code	Name	Description
20	Door OPENING	While the mechanism is in operation, should have been closed a door was opened.
21	Roller OFF time-out	4 seconds have elapsed before completing the roller OFF (the cam gear has not been rotated to the roller-OFF end position).
22	Roller SET time-out (Roller OFF time-out)	4 seconds have elapsed before completing the roller SET. (During the roller OFF operation, 4 seconds have elapsed while the cam gear is rotating in REV direction.)
23	Door CLOSING	Door can't be closed when the roller OFF has ended.
24	Cam started from invalid position	The cam gear attempted to do roller OFF/roller SET from an invalid position.
26	Foreign substance on photo-transistor (before closing the door)	Foreign substance was found on the photo-transistor when closing the door after the loading is complete. An error will be indicated if the disc is still caught by the photo-transistor after 4 seconds of forced eject.
29	Roller being caught	Although the cam gear has been rotated up to the roller OFF end position, the roller can't be moved to the standby position.
41	Lift DOWN time-out	4 seconds have elapsed before completing the lift DOWN operation.
42	Lift UP time-out (Lift DOWN time-out)	4 seconds have elapsed before completing the lift UP operation. (During the lift DOWN operation, 4 seconds have passed with the cam gear rotating in REV direction.)
45	Lift DOWN cam displacement	The lift DOWN complete cam gear has been displaced from its specified position.
52	EJECT time-out	8 seconds have elapsed before completing the EJECT operation. An error will be indicated if the disc is still caught by the photo-transistor after 4 seconds of forced eject.
57	Photo-transistor being caught after forced EJECT	When forced eject was employed for the Bup failure during loading or ejection, an error will be indicated if the disk is still caught by the photo-transistor after 4 seconds of forced eject.
61	CRGIN time-out (CRGOUT time-out)	10 seconds have elapsed before completing CRGIN operation. (During CRGOUT operation, 10 seconds have elapsed with the cam gear rotating in REV direction.)
62	CRGOUT time-out	10 seconds have elapsed before completing the CRGOUT operation.
63	CRGOUT cam displacement	Position of the CRGOUT complete cam gear has been displaced.
71	ELVUP time-out	2 seconds have elapsed before completing 1-stage UP.
72	ELVDN time-out	2 seconds have elapsed before completing 1-stage DOWN.
74	ELV displacement	At the start of ELV, ELVSNS was not set to low. (In case of starting from the 1st floor, ELHOME was not set to low.)
75	ELV counting error	HLHOME was set to low though not on the 1st floor. (There is a conflict between the floor number stored on the microcomputer and the actual floor number.)
91	LOAD time-out	8 seconds have elapsed before completing the LOAD. An error will be indicated if the disc is still caught by the photo-transistor after 4 seconds of forced eject.
96	Settlement of foreign substance	Unauthorized foreign substance such as 8 cm disc has been loaded. An error will be indicated if the disc is still caught by the photo-transistor after 4 seconds of forced eject.

* AVC-LAN Error code : ERROR3

7.1.2 DIAGNOSIS MODE

1. How to Enter Diagnostic Test Mode

Diagnostic Test Mode

Speed = 0 km/h, PKB = ON

Tail OFF to ON to OFF to ON to OFF in this sequence pressing the information switch.

Entering from the head unit

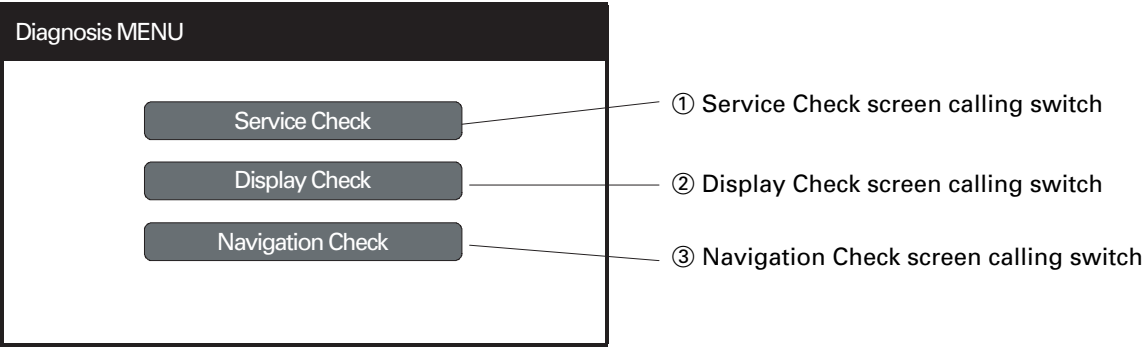
Press F1 and F6 (or F7 and F8) at the same time and press the Disc (or CD) button three times with (F1 pressed first).

2. How to exit from the diagnostic test mode

ACC OFF

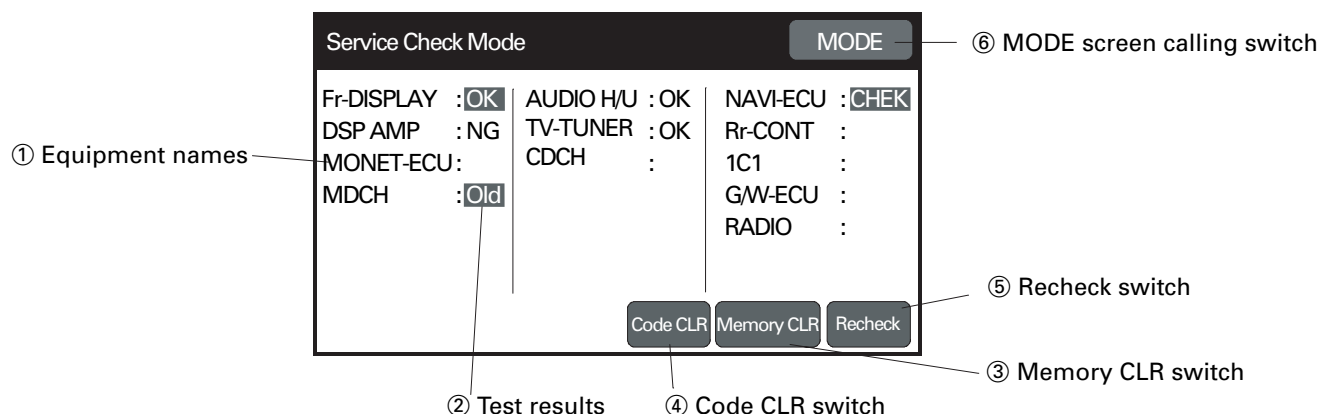
3. Diagnosis MENU

When the diagnostic test mode is entered, the Diagnosis MENU screen is displayed.



4. Service test

Use the function key on the Diagnosis menu screen to select Service Check Mode.



①	Equipment names	Names are displayed including succeeding fitted components.
②	Test results	Test results are displayed in the notation of "OK", "Check" and "Exchange". * "Exchange", "Check" and "Old Ver" are displayed as switches, and "Communication Diagnosis" and "Individual Diagnosis" are called according to the operation.
③	Memory CLR switch	Registered histories of the master equipment and all diagnostic memories of all equipment are cleared. (Long pressing of three seconds)
④	Code CLR switch	- Diagnostic memories of all equipment are cleared. - System test results are cleared and the contents of screen display of the test results are also cleared.
⑤	Recheck switch	The test is re-executed.
⑥	MODE screen calling switch	Processing returns to the MODE screen.

Displaying test results

The results tested based on the information such as responses of each equipment to "System Test Execution" and "Diagnostic Memory Presentation Request" and "Normal Diagnostic Notification" are displayed on the screen.

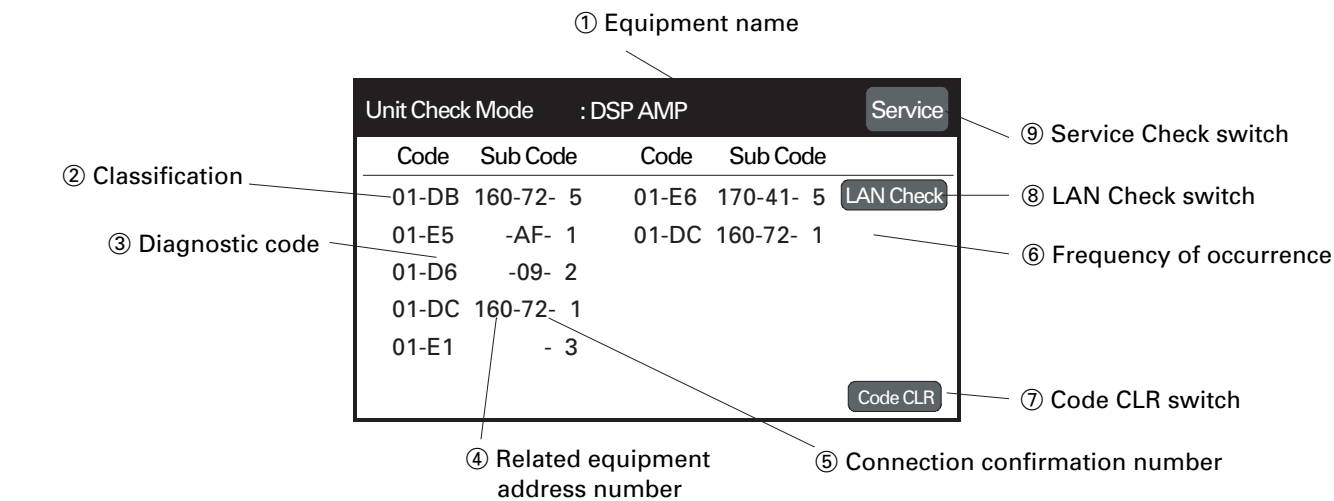
Display	Meaning
OK	No error code
Exchange	An error code indicating that exchange is judged to be necessary is entered.
Check	An error code indicating that diagnosis is judged to be necessary is entered.
Unconnected	Although registration is performed at ACC ON, there is no response when "Service Test" is started.
Old Ver	Some error code is entered in the object old diagnostic Ver. equipment.
No Response	Disconnection is occurring after "Service Test" has been started.

Calling the "Communication Diagnosis Detailed Information" or "Individual Diagnosis Detailed Information" screen

- When test results are "Exchange", "Check" or "Old Ver", this display is used as a switch to switch to the detailed display screen of "Communication Diagnosis" or "Individual Diagnosis" and to check the contents.
 - If an "Individual Diagnosis" code is entered, the "Individual Diagnosis Detailed Information" screen is displayed.
 - When an "Individual Diagnosis" code is not entered, the "Communication Diagnosis Detailed Information" screen is displayed.
- (Switching to both the detailed information screens is performed using the function key displayed on the screen.)

"Communication Diagnosis" detailed information screen

A "Communication Diagnosis" code is chosen and displayed in detail using the diagnostic code of the equipment displayed as "Check" in the Service Check results.

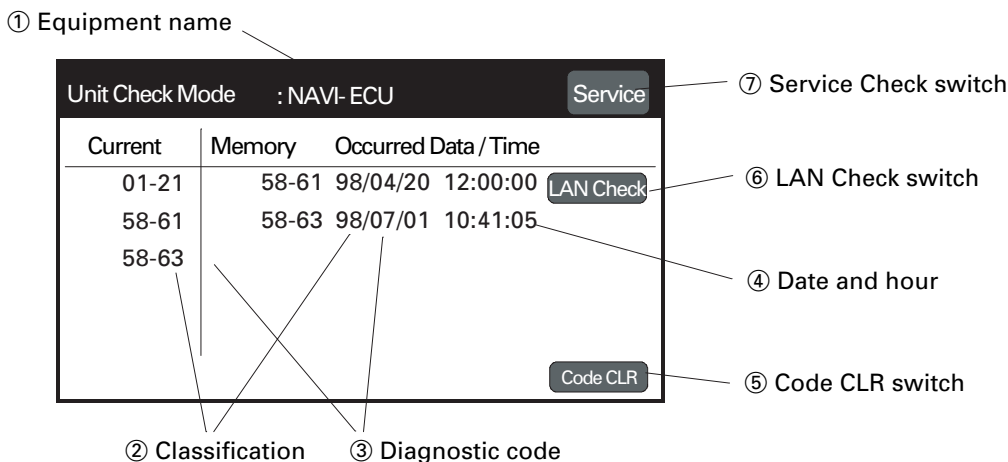


①	Equipment name	Object equipment name
②	Classification	Object logical address number
③	Diagnostic code	Diagnostic code
④	Related equipment address number	Physical address stored together with a diagnostic code (equipment code)
⑤	Connection confirmation number	Connection confirmation number stored together with a diagnostic code
⑥	Frequency of occurrence	Frequency of occurrence of the same diagnostic code stored together with a diagnostic code
⑦	Code CLR switch	The diagnostic information of object equipment is cleared. (Long pressing of three seconds)
⑧	LAN Check switch	The individual diagnosis detailed information screen is switched.
⑨	Service check switch	The service test screen is switched.

"Individual Diagnosis" detailed information screen

Error codes of the equipment displayed as "Exchange" are displayed on the Service Check screen by being divided into the current and previous errors.

Current error	• Error codes which were entered in the system test are displayed. (Up to six items)
Previous error	• Diagnostic memory collection results or contents of normal diagnostic notification are displayed up to six



①	Equipment name	Object equipment name
②	Classification	Object logical address number
③	Diagnostic code	Diagnostic code
④	Date and hour	Year, month, hour, minute and second at the time when a diagnostic code occurred (If time information is invalid, a blank is displayed.)
⑤	Code CLR switch	The diagnostic information of object equipment is cleared. (Long pressing of three seconds)
⑥	LAN Check switch	The Communication Diagnosis detailed information screen is switched.
⑦	Service Check switch	The service test screen is switched.

7.1.3 DISASSEMBLY

● Removing the Case (Fig.1)

- ➡ 1 Remove the two screws.
- ➡ 2 Remove the two screws and then remove the Guide.
- ➡ 3 Remove the two screws.
- ➡ 4 Remove the two screws and then remove the Case.

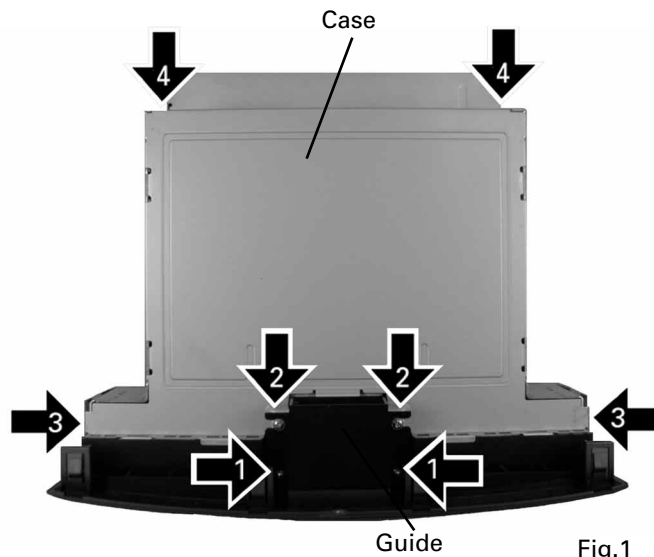


Fig.1

● Removing the Grille Assy (Fig.2)

- ➡ 1 Remove the two screws and then remove the Grille Assy.

● Removing the Cassette Mechanism Module (Fig.2)

- ➡ 2 Remove the four screws and then remove the Cassette Mechanism Module.

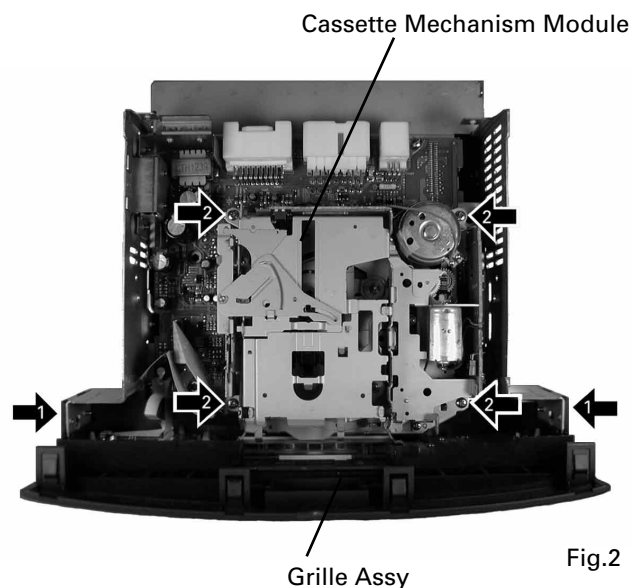


Fig.2

● Removing the Main Unit (Fig.3)

- ➡ 1 Remove the two screws.
- ➡ 2 Straighten the tabs at five locations indicated.
- ➡ 3 Remove the screw and then remove the Main Unit.

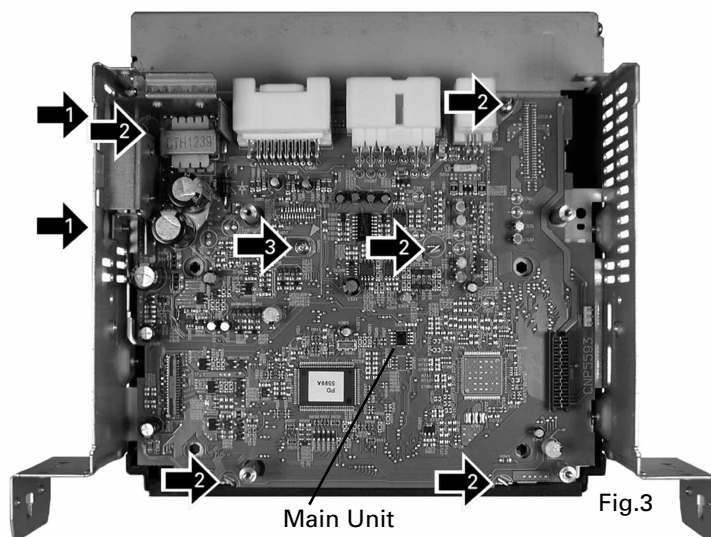
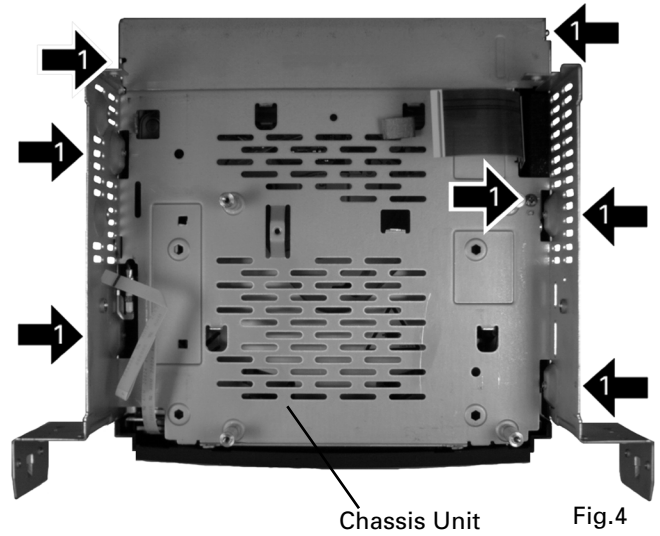


Fig.3

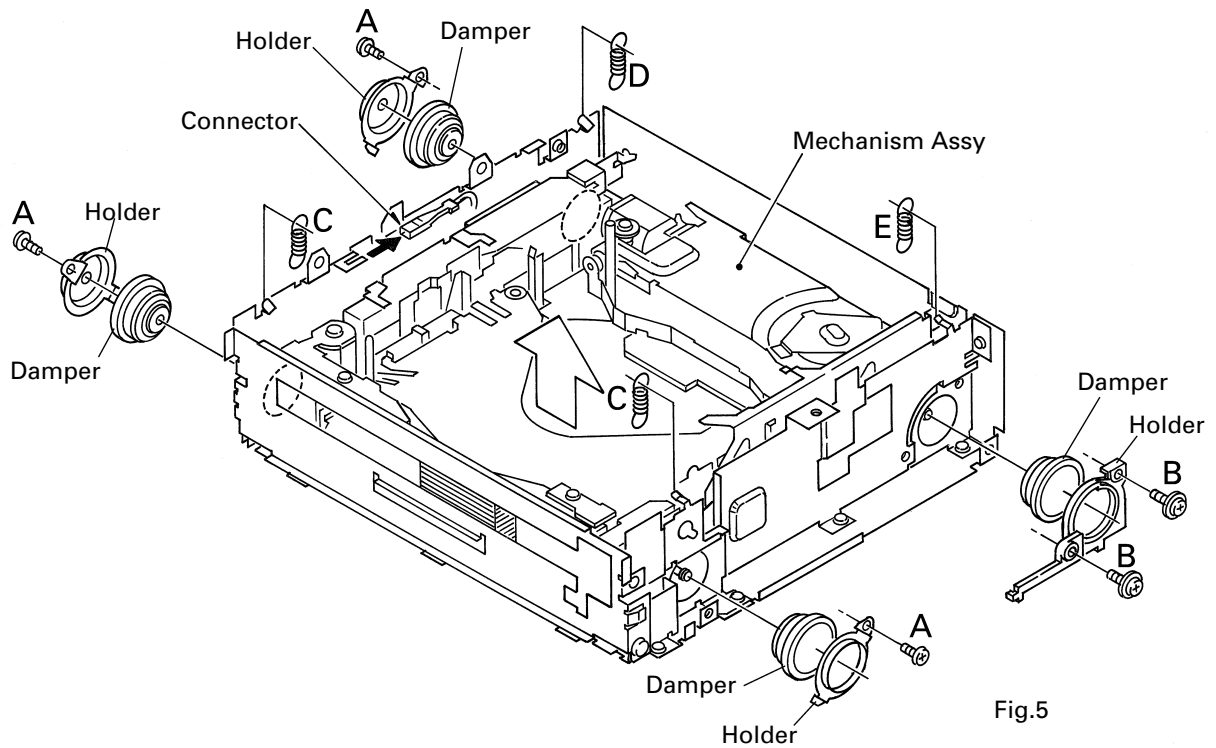
● Removing the Chassis Unit (Fig.4)

- ➔ 1 Remove the seven screws and then remove the Chassis Unit.



● Removing the Mechanism Assy (Fig.5)

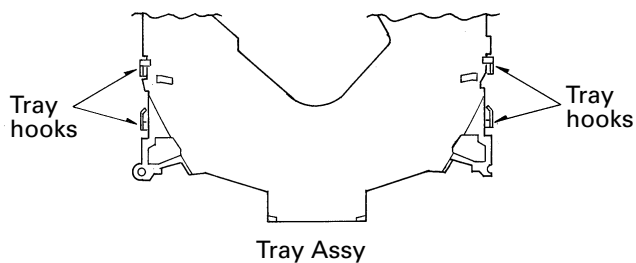
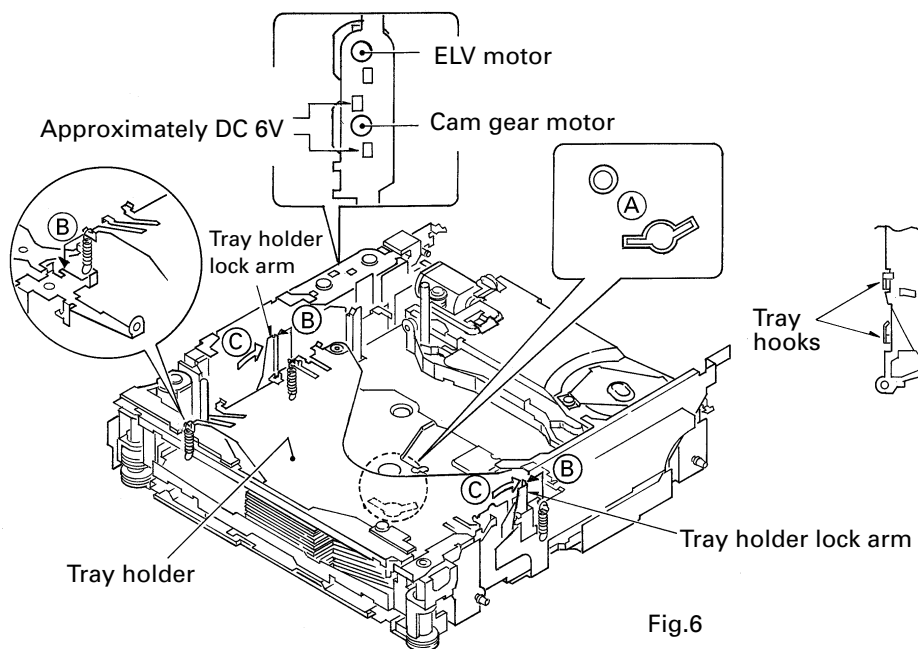
1. Disconnect the Connector.
2. Remove the three screws A, and then remove the Holder and Damper.
3. Remove the two screws B, and then remove the Holder and Damper.
4. Remove the two springs C, the spring D and the spring E and then remove the Mechanism Assy.



● How to remove the Tray Assy

1. Apply about 6V current to the Cam gear motor until all holes match at the position (A) (elevation OK position).
2. Hook the three springs B temporarily as shown in Fig. 5. While pushing the Tray holder lock arms (right and left) in the direction (C), remove the Tray holder.
3. Lift up the Tray assy to remove it.

* Be careful not to remove the Tray hooks from the Tray assy.



● How to remove the Carriage Mech Assy

1. Insert a short pin into the flexible PCB of the Pickup unit.
2. While opening the resin hooks, remove the cover from the Servo unit.
3. Disconnect the flexible PCBs from the connectors CN101 and CN301.
4. Remove the Tray holder and the Tray assy. (See above)
5. Rotate the Cam gear motor until the positions of all holes (E) match, then stop the motor.
(The Carriage Mech assy will stop as shown in the Fig.8.)

- * When the positions of all holes match, they will be completely covered by the Carriage mech assy.
 - * To rotate the Cam Gear motor, see "How to remove the Tray assy".
6. Unhook the spring A.
 7. Remove the flexible holder B (while opening the hooks).
 8. Remove the flexible PCB (C) from the motor. (The flexible PCB (C) has been stuck on the motor with double-sided adhesive tape.)
 9. Loosen the fixing screw and remove the flexible holder.

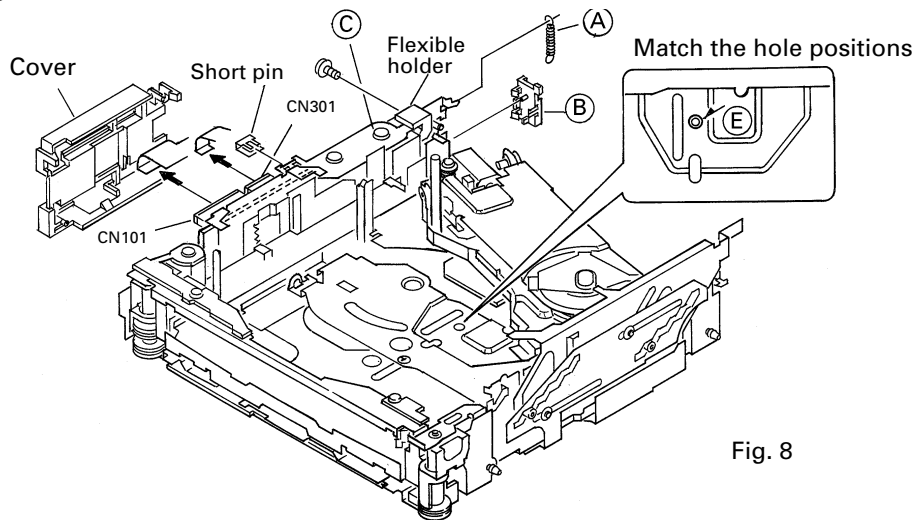


Fig. 8

10. Remove the screw, pressure spring and collar. Lift up the Carriage mechanism assy to remove it.

* Screw tightening torque: 2.6kgfcm

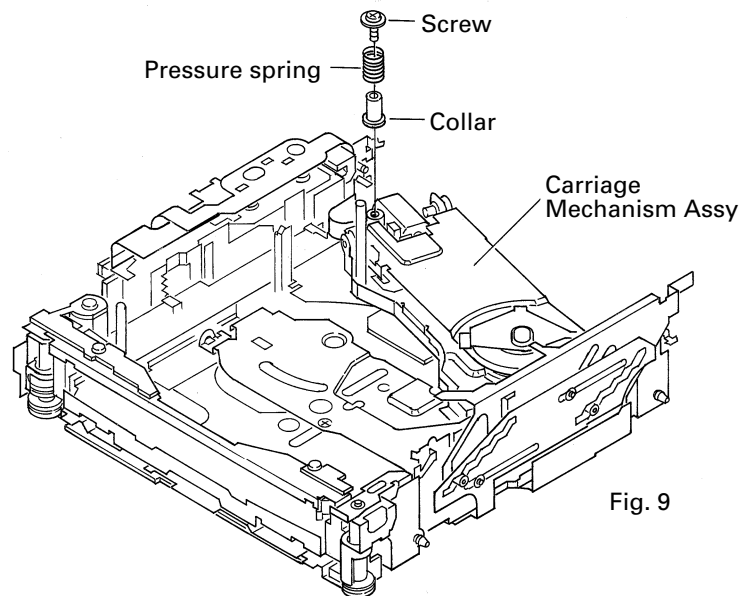


Fig. 9

● How to remove the Pickup unit

1. Remove the pulling spring, torsion spring and E-shaped ring. Then remove the Clamper arm.

* The spring (A) will be removed with the Clamper arm.

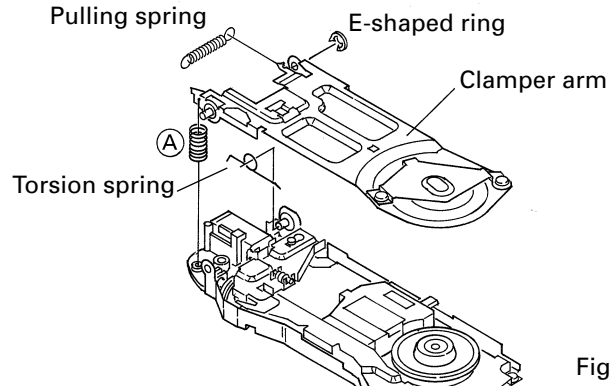


Fig. 10

2. Slide the Clamp UP lever (B) to remove it.
3. Loosen the 2 screws. Remove the feed-screw cover by sliding it.
4. Remove the feed-screw pressure spring (D).
5. Loosen the 2 screws. Remove the feed-screw holder (E).
6. Remove the belt.

7. Remove the Pickup unit together with the feed screw.

* Be careful not to lose the shaft holders at the both ends of the feed screw.

* Be careful not to damage the 2 flexible PCBs(for the Pickup and motor) when separating them. The flexible PCBs have been stuck each other with double-sided adhesive tape.

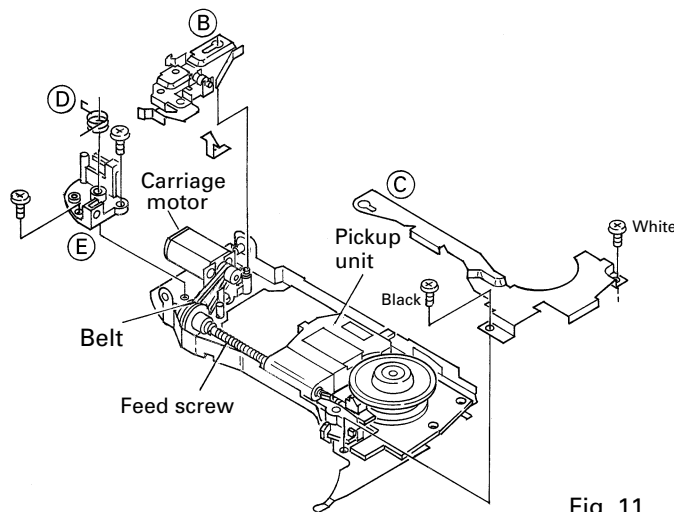


Fig. 11

8. Loosen the 2 screws. Remove the plate spring and the rack.
9. Pull out the feed screw from the Pickup unit.

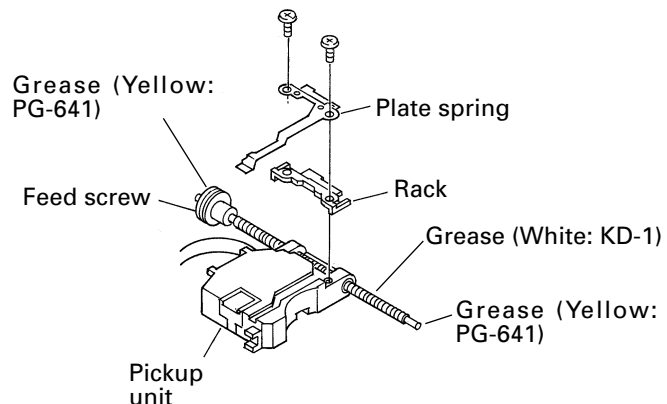
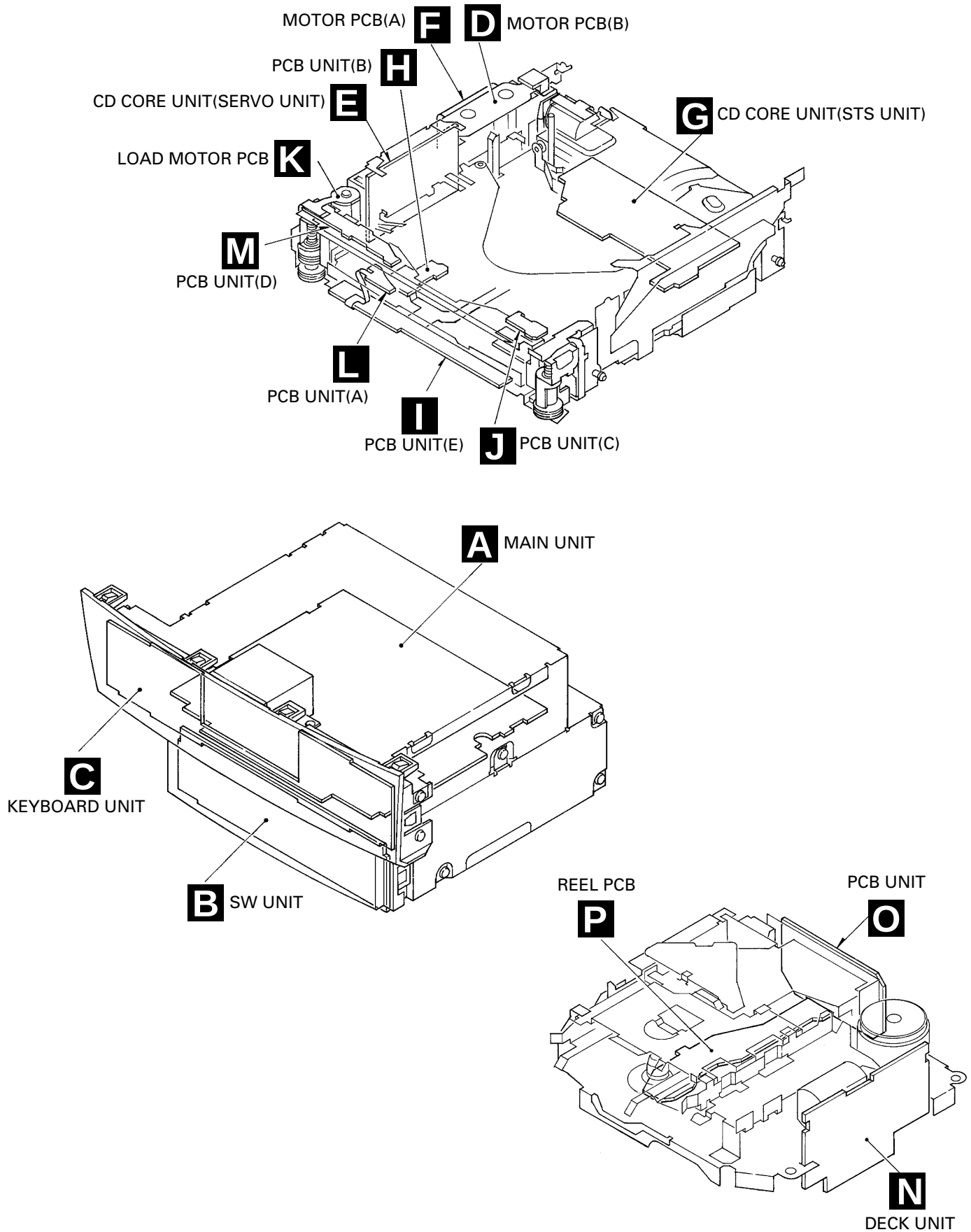
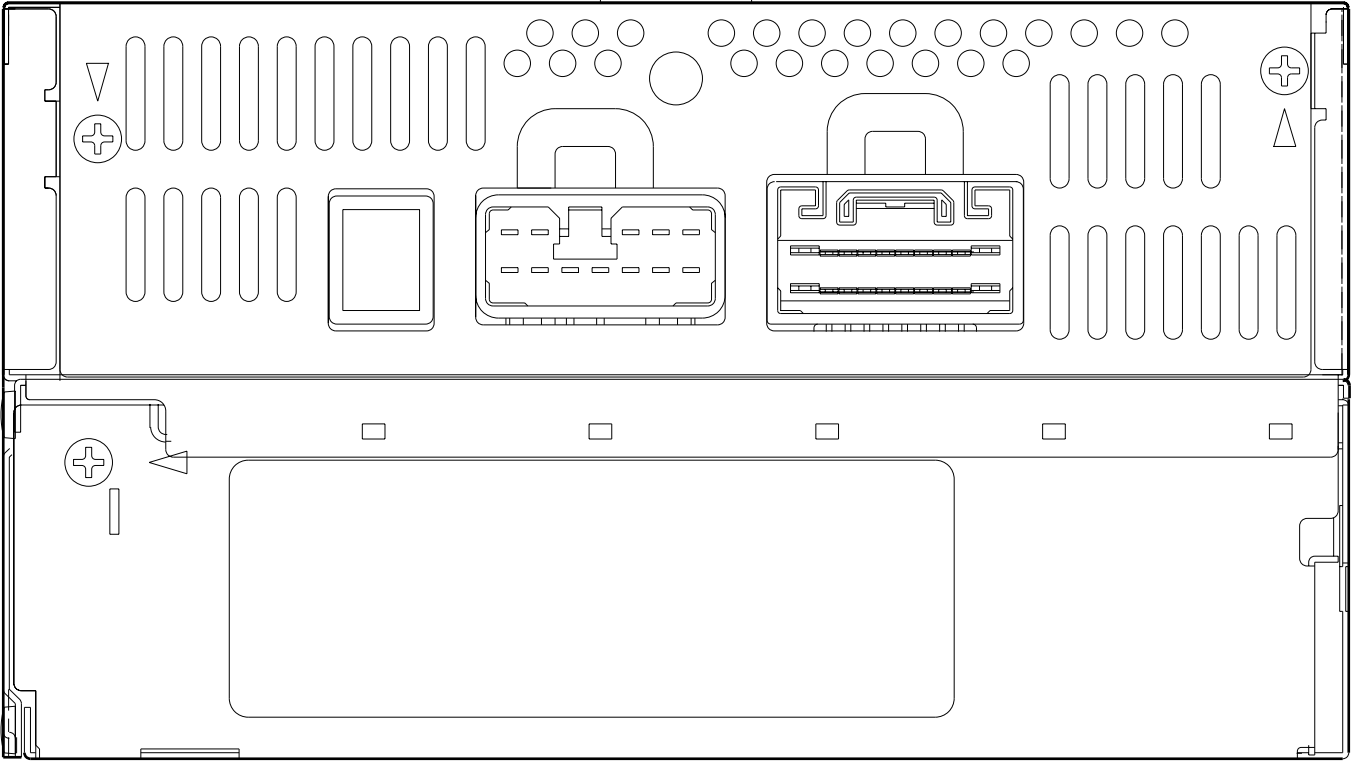
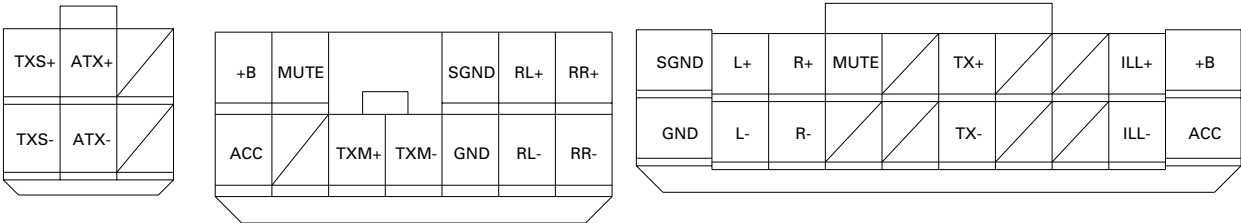


Fig. 12

7.1.4 PCB LOCATIONS



7.1.5 CONNECTOR FUNCTION DESCRIPTION



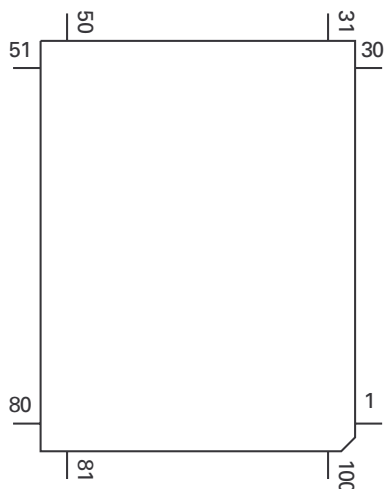
7.2 IC

● Pin Functions (PD5556B)

Pin No.	Pin Name	I/O	Function and Operation
1	LOFF	O	LCD driver OFF output
2	ECE	O	Chip enable output for EEPROM
3	BLIGHT	O	Back Light ON/OFF output
4	ILL	O	LAMP power supply control
5	LDO	O	LCD driver data output
6	NC		Not used
7	LCK	O	Clock output for LCD driver
8	BYTE		VCC joint
9	CNVSS		VSS joint
10,11	NC		Not used
12	RESET	I	Reset input
13	XOUT	O	Crystal oscillating element connection pin
14	VSS		GND
15	XIN	I	Crystal oscillating element connection pin
16	VDD		Power supply
17	NH $\bar{I}$		VDD joint
18	DLOAD	I	CD load key input
19	ASENS	I	ACC power sense input
20	BSENS	I	Back up power sense input
21	RX2	I	IE-BUS data input
22	IPPW	O	IP-BUS driver power supply output
23	ILSENS	I	Illumination sense input
24	LCE1	O	Chip enable output pin for LCD driver
25	VDSEL		GND
26,27	NC		Not used
28	BLIGHT	O	Back Light ON/OFF output
29	RX1	I	IE-BUS data input
30	TX	O	IE-BUS data output
31	BSO	O	P-BUS serial data output
32	BSI	I	P-BUS serial data input
33	BSCK	O	P-BUS clock output
34	NC		Not used
35	BRXEN	I/O	P-BUS reception enable input/output
36	BRST	I	P-BUS reset input
37	BSRQ	O	P-BUS service request output
38,39	NC		Not used
40	LRST	O	LCD driver reset output
41	EPM		Not used
42-44	NC		Not used
45	SWVDD	O	Display microcomputer power supply output
46	CE		Not used
47	SYSMUTE	O	System mute output
48	ANSW	O	Analog SW output
49	CDILL	O	CD illumination output
50	TAPEMUTE	O	Tape mute output
51	MUTE	O	BUS mute output
52	ILLPOW	O	Illumination power supply output
53	DSSILL	O	DSS illumination output
54	MODE	I	AUDIO mode key input
55	ENC1+	I	Encoder 1 (+) input
56	ENC1-	I	Encoder 1 (-) input
57	KD0	I	Key return input
58	KD1	I	Key return input
59	KD2	I	Key return input
60	KD3	I	Key return input
61	KST5	O	Key strobe output
62	VCC		Power supply

Pin No.	Pin Name	I/O	Function and Operation
63	KST4	O	Key strobe output
64	VSS		GND
65	KST3	O	Key strobe output
66	KST2	O	Key strobe output
67	KST1	O	Key strobe output
68	KST0	O	Key strobe output
69	MS	I	Music sense input
70	FR	O	Head forward/reverse select output
71	PLAY	O	MS gain select output
72	MTL	I	Cassette mechanism tape select input
73	CDEJ	I	CD eject key sense input
74	MDEJ	I	MD eject key sense input
75	CSEJ	I	Tape eject key sense input
76	NR	O	Dolby NR ON/OFF select output
77	CSLOAD	I	Tape loading detect input
78	POS	I	Cassette mechanism position sense input
79	RES	I	Cassette mechanism reverse end sense input
80	NES	I	Cassette mechanism forward end sense input
81	TEST	I	Test mode input
82	SC2	O	Cassette mechanism sub motor control output
83	SC1	O	Cassette mechanism sub motor control output
84	CM	O	Cassette mechanism capstan motor control output
85	STBY	O	Stand-by output
86	ENC2-	I	Encoder 2 (-) input
87	ENC2+	I	Encoder 2 (+) input
88	POWER	I	POWER key input
89	BASS	I	A/D converter input from BASS volume (not used)
90	TRE	I	A/D converter input from TREBLE volume (not used)
91	MID	I	A/D converter input from MID volume (not used)
92	FAD	I	A/D converter input from FADER volume (not used)
93	BAL	I	A/D converter input from BALANCE volume (not used)
94	ILL-	I	Rheostat signal input
95	NC		Not used
96	AVSS		A/D GND
97	ANO		GND
98	VREF	I	A/D converter reference voltage input
99	AVCC		A/D VCC
100	EDI	I	Data input from EEPROM

*PD5556B



IC's marked by* are MOS type.

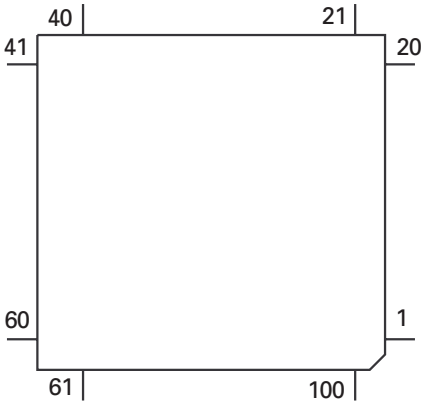
Be careful in handling them because they are very liable to be damaged by electrostatic induction.

● Pin Functions (PD5575B)

Pin No.	Pin Name	I/O	Format	Function and Operation
1	VDIN	I		Power supply short sensor input
2	DOORSW	I		Door open position SW input
3	NC			Not used
4	BSRQ	O	C	P-BUS service request output
5	CLAMP	I		DISC clamp SW input
6	ELHOME	I		ELV reset position SW input
7	XSCK	O	C	CD LSI clock output
8	XSO	O	C	CD LSI data output
9	XSI	I		CD LSI data input
10	XSTB	O	C	CD LSI strobe output
11	XRST	O	C	CD LSI reset output
12	XA0	O	C	Control signal distinguishing data from microcomputer
13	VDCONT	O	C	VD control output
14	NC			Not used
15	BSENS	I		Back up power sense input
16	BRXEN	I/O	C	P-BUS reception enable input/output
17	LOADSW	I		Loading position SW input
18	MODESW	I		ELV OK position SW input
19	BSCK	I/O	C	P-BUS serial clock input/output
20	BSO	O	C	P-BUS serial data output
21	BSI	I		P-BUS serial data input
22	BRST	I		P-BUS reset input
23	SBSY	I		Signal indicating head of subcode block
24	CNVSS	I		GND
25	RESET	I		Reset input
26	POWER	O	C	Servo/Mechanism power supply control output
27	CONT	O	C	Servo driver output control
28	Xin	I		Crystal oscillating element connection pin
29	Xout	O	C	Crystal oscillating element connection pin
30	VSS			GND
31–38	NC			Not used
39	TESTIN	I		Chip check program mode input
40	DCLOSE	I		Door close sense input
41	WDSL	O	C	Data comparison area specification signal output
42	XWIH	I		Data write inhibit input
43	XEMP	I		Data read inhibit input
44	CHDT	I		Data comparison mode monitor input
45	CHM0	O	C	Data comparison mode output 0
46	CHM1	O	C	Data comparison mode output 1
47–49	NC			Not used
50	XWRE	O	C	DRAM write enable output
51	XRDE	O	C	DRAM read enable output
52	XQOK	O	C	SUB-Q OK output
53	EMPH	O	C	DAC emphasis output
54	SCONT	O	C	Mode select output
55	LOAD	O	C	PHOT power supply control
56	CDMUTE	O	C	CD mute output
57	LO2	O	C	LOAD motor control terminal output 2
58	LO1	O	C	LOAD motor control terminal output 1
59	ELV2	O	C	ELV motor control terminal output 2
60	ELV1	O	C	ELV motor control terminal output 1
61	CG2	O	C	CAM motor control terminal output 2
62	CG1	O	C	CAM motor control terminal output 1
63	MIRR	I		CD LSI mirror detector input
64	LOCK	I		CD LSI spindle lock detector input
65	FOK	I		CD LSI FOK signal input
66–68	NC			Not used
69	ADENA	O	C	A/D reference voltage output

Pin No.	Pin Name	I/O	Format	Function and Operation
70	NC			Not used
71	VCC			VDD
72	VREF	I		A/D converter reference voltage input
73	AVSS			A/D GND
74	ADRMON	I		The remainder amount address monitor input
75	EREF			DRAM A/D reference voltage output
76	PH1	I		Disc photo sense input 1
77	PH2	I		Disc photo sense input 2
78	PH3	I		Disc photo sense input 3
79	ELVSNS	I		ELV position photo sense input
80	TEMP	I		Temperature detector input

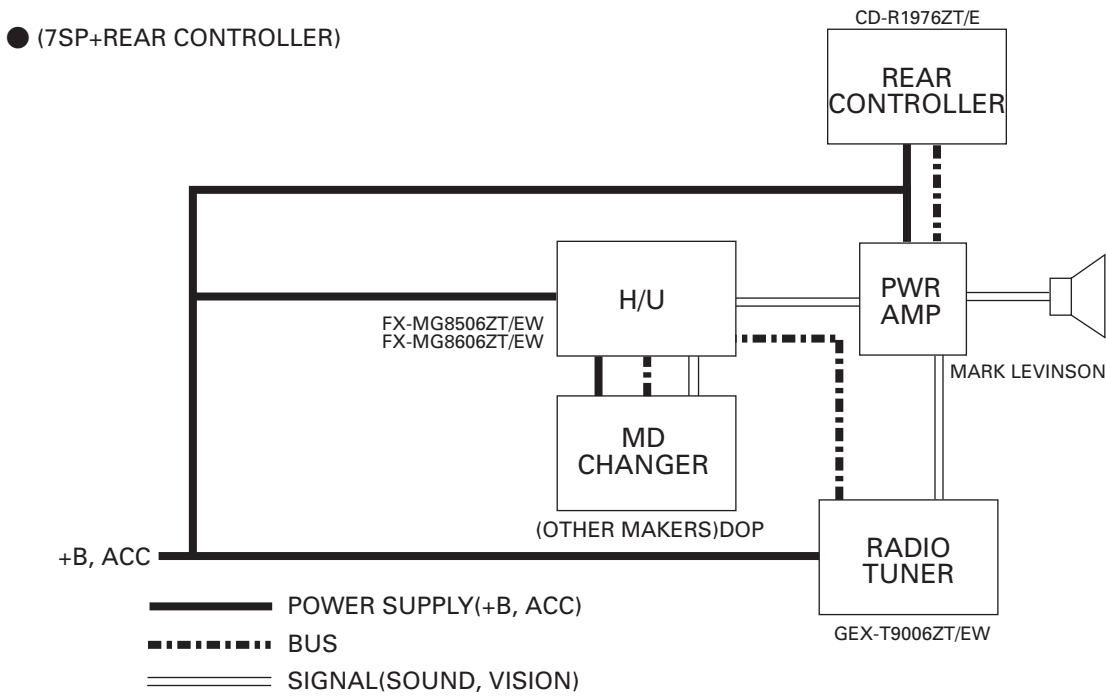
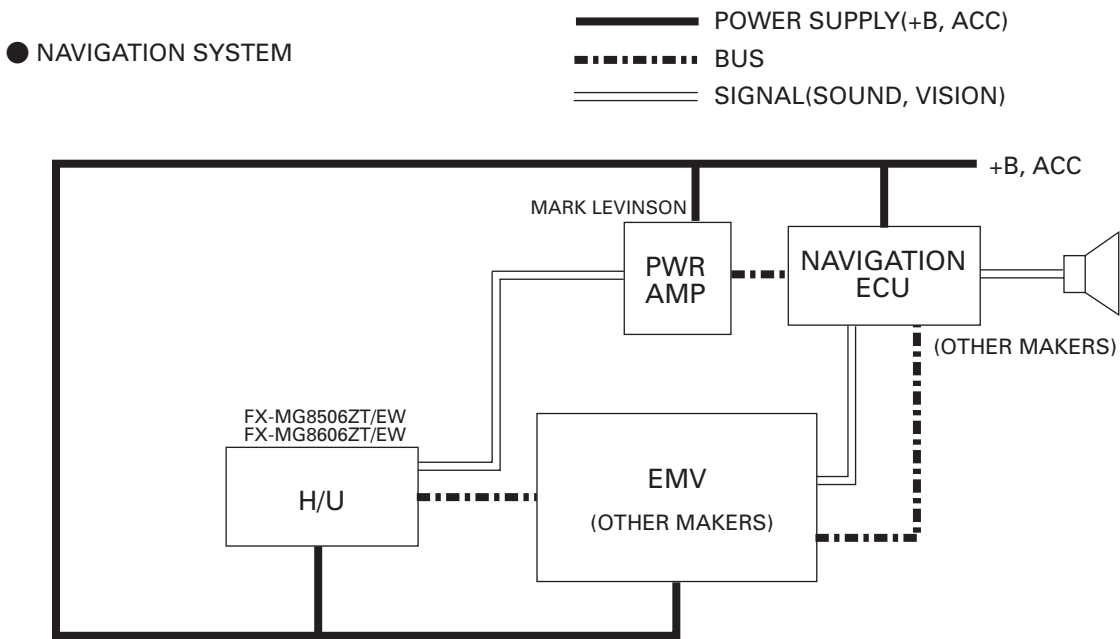
*PD5575B



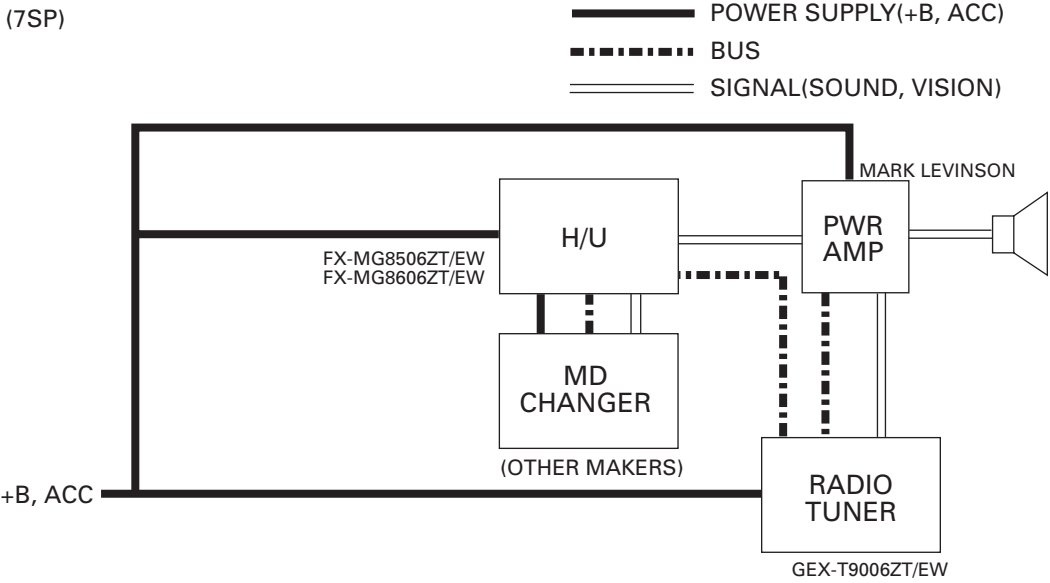
Format	Meaning
C	C MOS

7.3 EXPLANATION

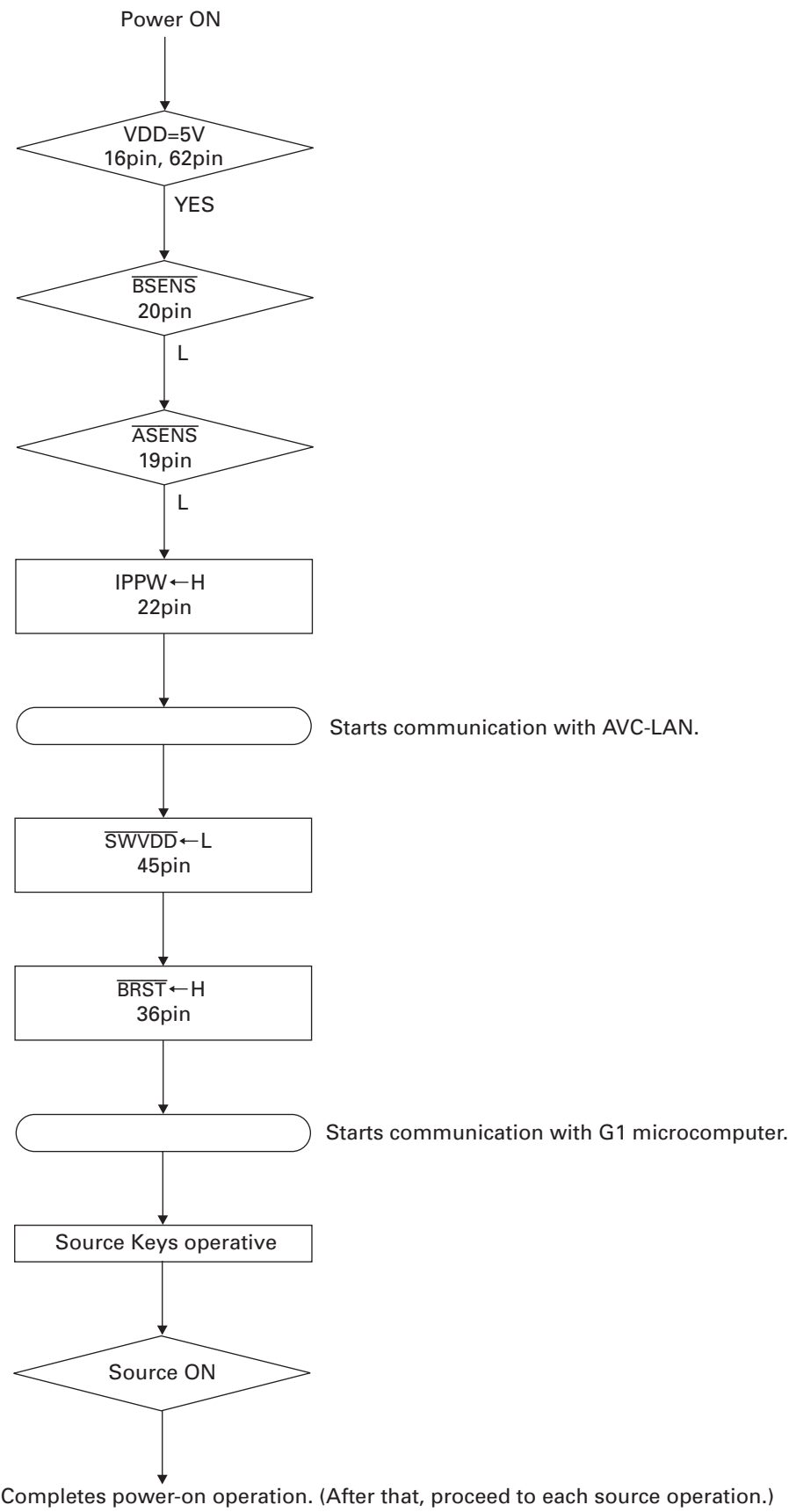
7.3.1 SYSTEM BLOCK DIAGRAM



● (7SP)



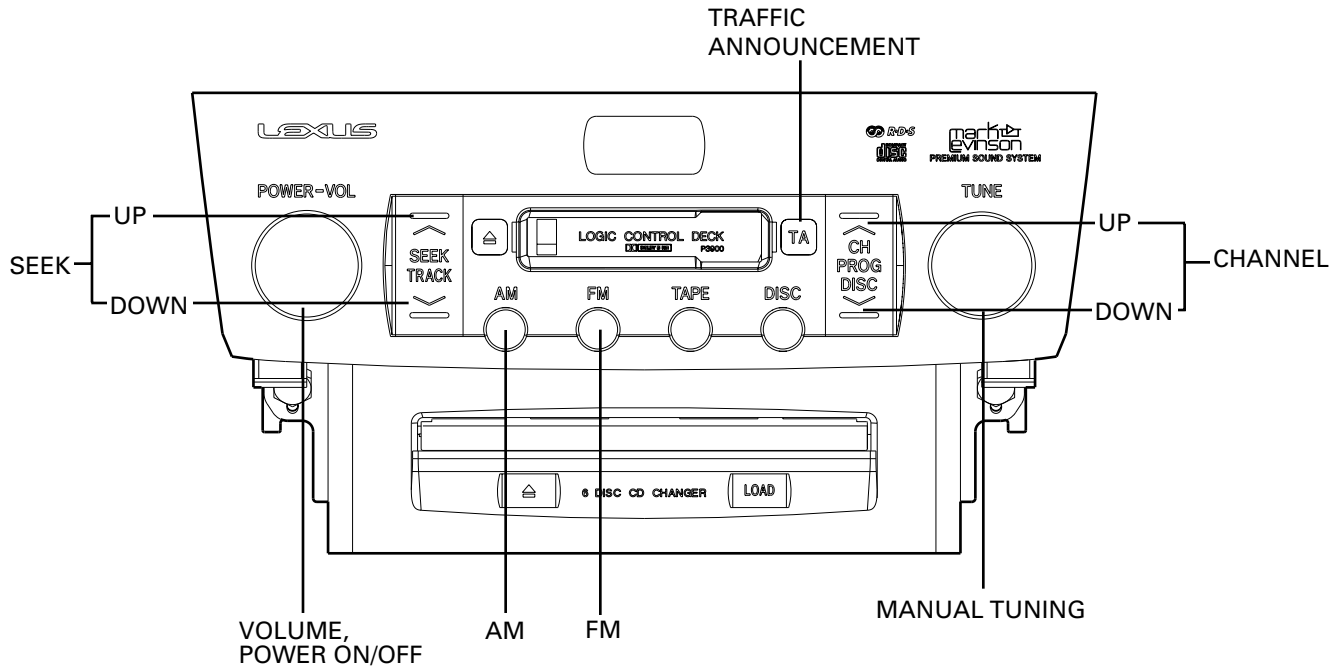
7.3.2 OPERATIONAL FLOW CHART



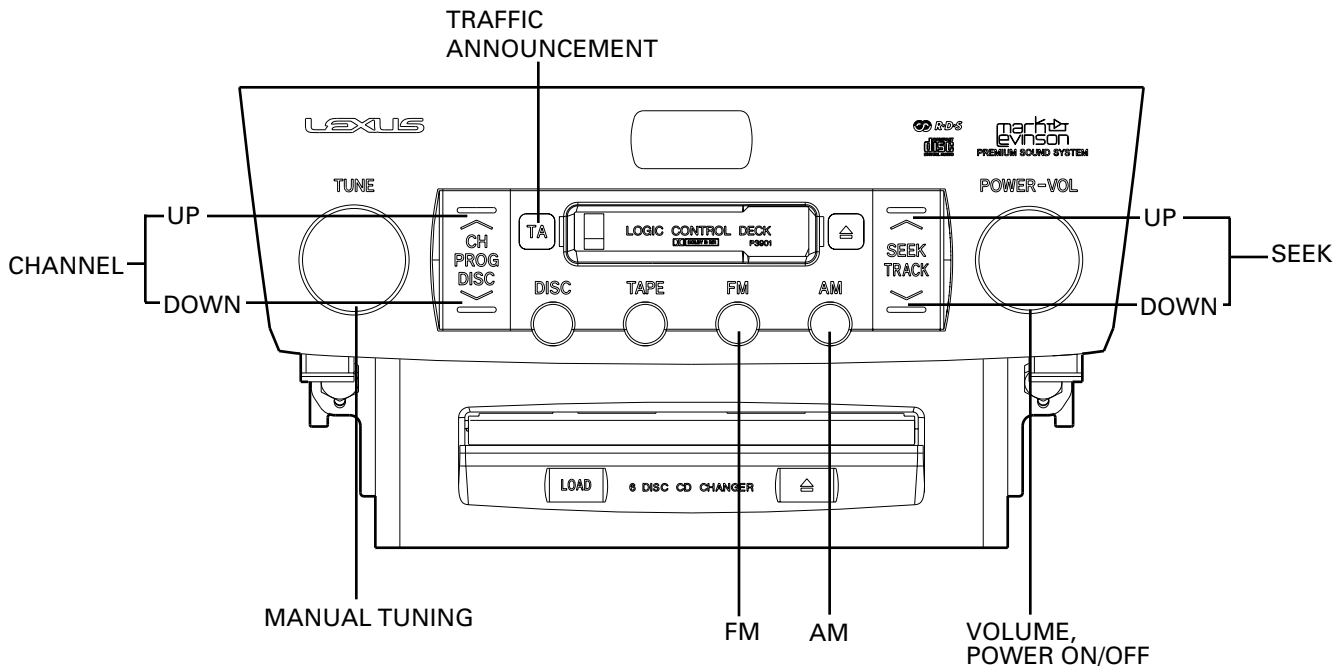
8. OPERATIONS AND SPECIFICATIONS

8.1 OPERATIONS

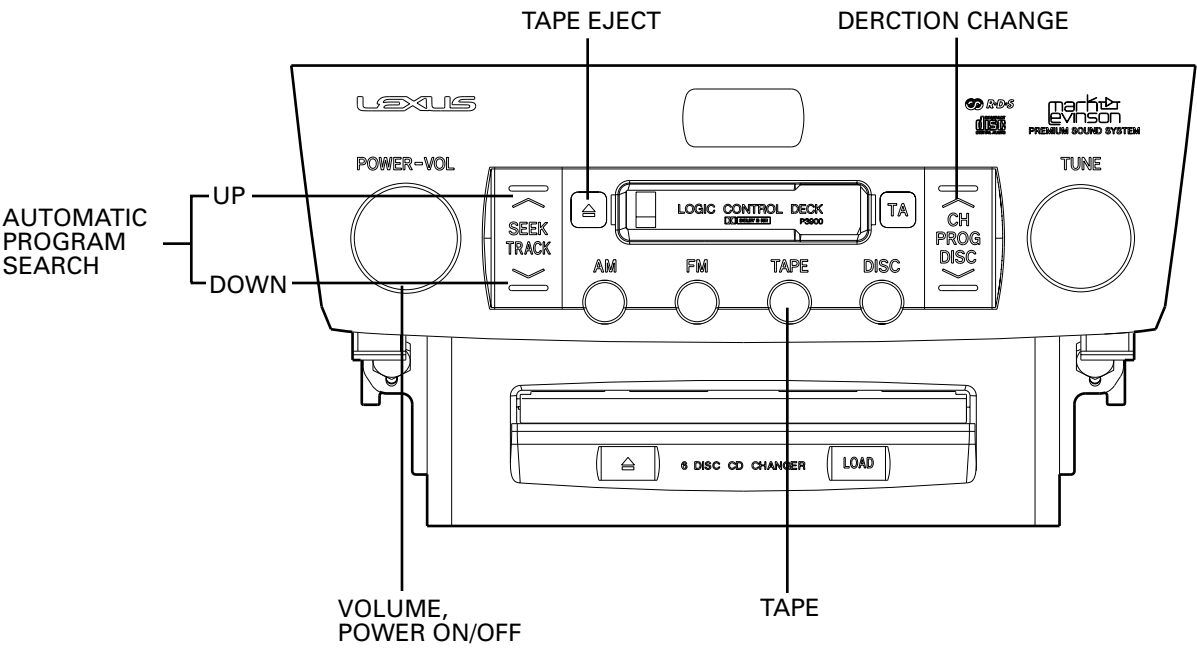
● RADIO(FX-MG8506ZT/EW)



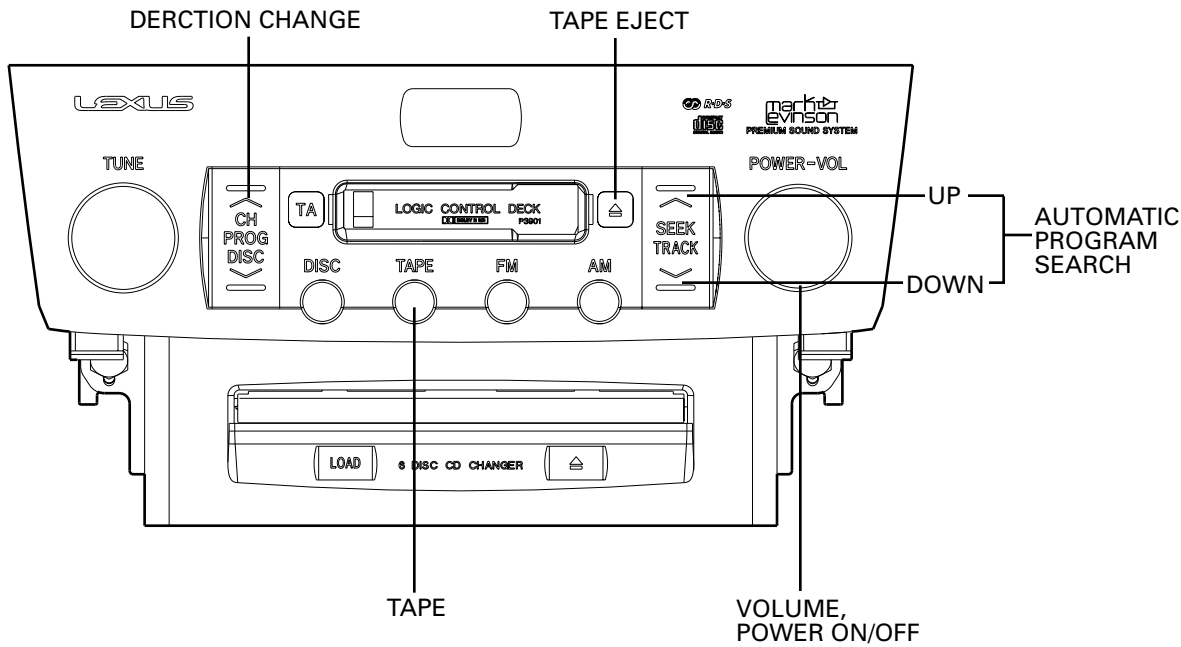
● RADIO(FX-MG8606ZT/EW)



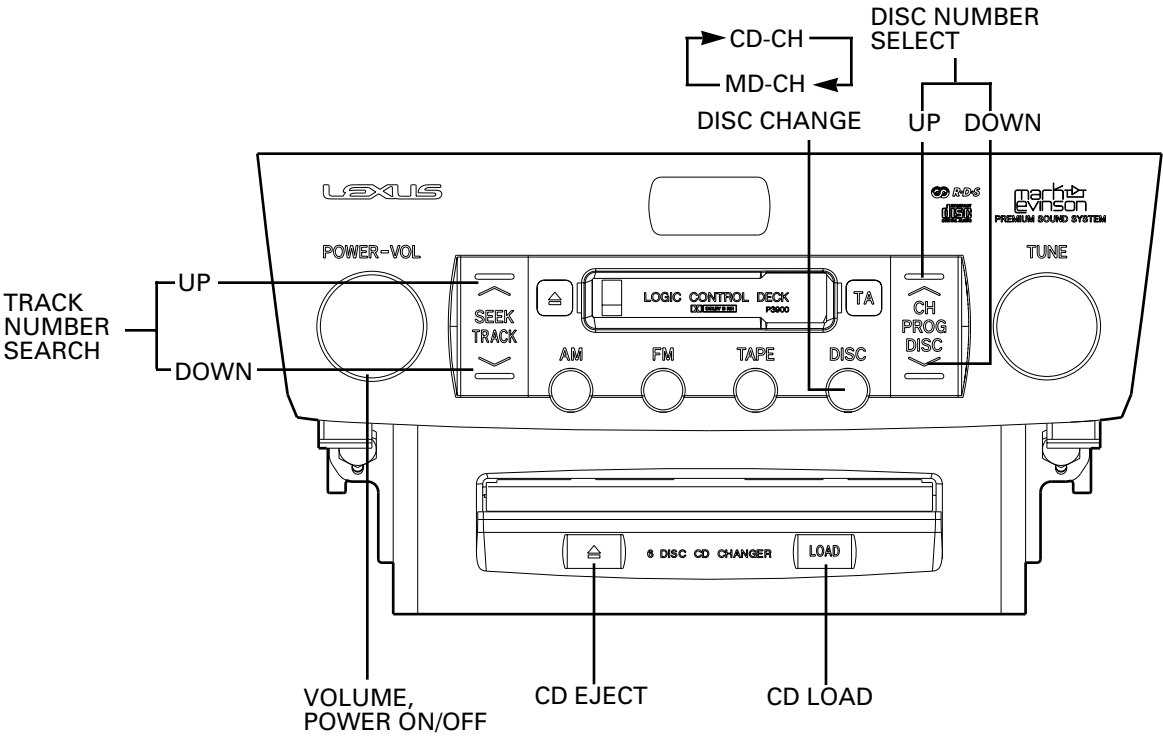
● TAPE(FX-MG8506ZT/EW)



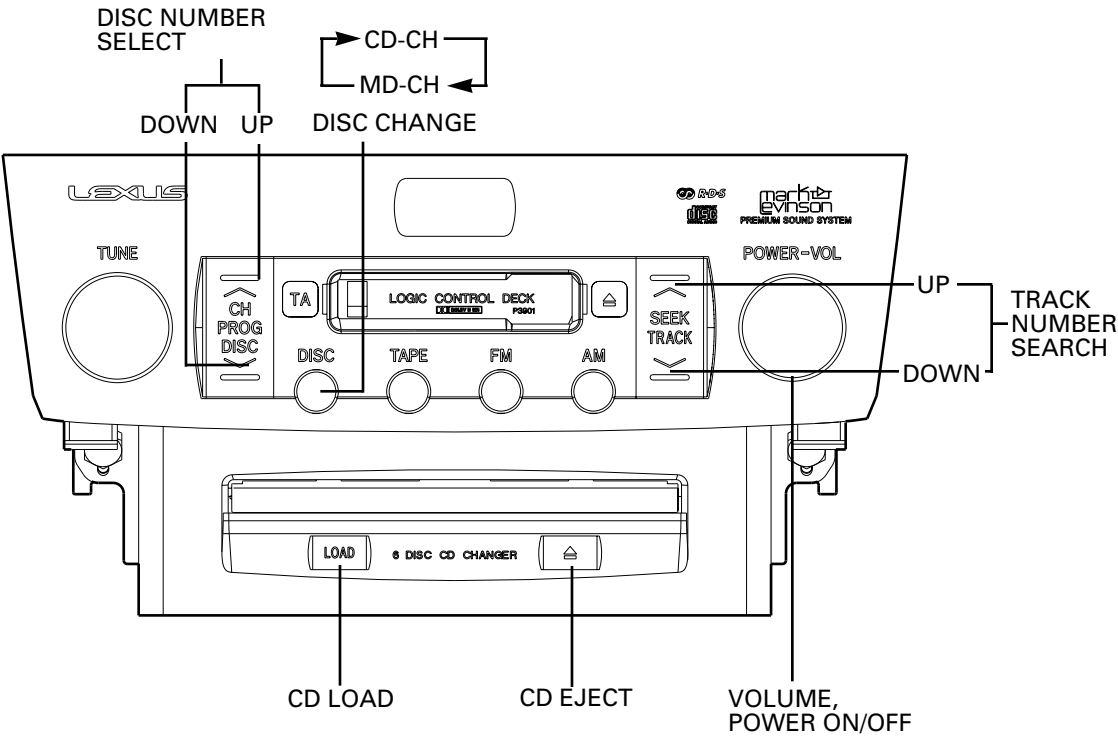
● TAPE(FX-MG8606ZT/EW)



● CD / MD(FX-MG8506ZT/EW)



● CD / MD(FX-MG8606ZT/EW)



8.2 SPECIFICATIONS

General

Power source.....	13.2V(10.5V-16.0V allowable) DC
Grounding system.....	Negative type
Electrode dark current	2mA or less
Dimensions(Chassis)	178(W)x100(H)x166(D)mm
(Grille)	254(W)x129(H)x47(D)mm
Weight.....	2.7kg

CD player

System	Compact disc audio system
Usable discs	Compact disc
Signal format	Sampling frequency : 44.1kHz
.....	Number of quantization : 16;linear
S/N	70dB or more
Distortion.....	0.2% or less

Cassette player

Tape.....	Compact cassette tape(C30-C90)
Tape speed	4.76 cm/sec.(+0.14 cm/sec.,-0.05 cm/sec.)
Wow and flutter.....	0.2% or less(WRMS)
Crosstalk	40dB or less
Stereo Separation.....	30dB or more
S/N	41dB or more
Distortion.....	3% or less