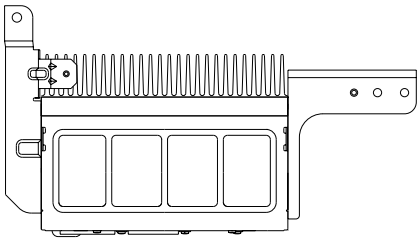
Pioneer *sound.vision.soul*

Service Manual

TOYOTA



GM-9127ZT/EW

ORDER NO.
CRT2884

POWER AMPLIFIER

GM-9127ZT/EW
GM-9127ZT-91/EW
GM-9227ZT/E
GM-9227ZT-91/E

VEHICLE	DESTINATION	PRODUCED AFTER	TOYOTA PART No.	ID No.	PIONEER MODEL No.
LAND CRUISER	Europe	August 2002	86280-60340	——	GM-9127ZT/EW
					GM-9127ZT-91/EW
LAND CRUISER	Any country or area except for Japan	August 2002	86280-60320	——	GM-9227ZT/E
					GM-9227ZT-91/E

For details, refer to "Important symbols for good services".

PIONEER CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153-8654, Japan
PIONEER ELECTRONICS (USA) INC. P.O.Box 1760, Long Beach, CA 90801-1760 U.S.A.
PIONEER EUROPE NV Haven 1087 Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE.LTD. 253 Alexandra Road, #04-01, Singapore 159936

K-ZZB. JULY 2002 Printed in Japan

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.

[Important symbols for good services]
In this manual, the symbols shown-below indicate that adjustments, settings or cleaning should be made securely.
When you find the procedures bearing any of the symbols, be sure to fulfill them:

1. Product safety

You should conform to the regulations governing the product (safety, radio and noise, and other regulations), and should keep the safety during servicing by following the safety instructions described in this manual.

2. Adjustments

To keep the original performances of the product, optimum adjustments or specification confirmation is indispensable. In accordance with the procedures or instructions described in this manual, adjustments should be performed.

3. Cleaning

For optical pickups, tape-deck heads, lenses and mirrors used in projection monitors, and other parts requiring cleaning, proper cleaning should be performed to restore their performances.

4. Shipping mode and shipping screws

To protect the product from damages or failures that may be caused during transit, the shipping mode should be set or the shipping screws should be installed before shipping out in accordance with this manual, if necessary.

5. Lubricants, glues, and replacement parts

Appropriately applying grease or glue can maintain the product performances. But improper lubrication or applying glue may lead to failures or troubles in the product. By following the instructions in this manual, be sure to apply the prescribed grease or glue to proper portions by the appropriate amount.For replacement parts or tools, the prescribed ones should be used.

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

Description	Part No.	
	GM-9127ZT-91/EW	GM-9227ZT-91/E
Cover	CEG1057	CEG1045
Polyethylene Bag	Not used	CEG1185
Protector	CHP2329	Not used
Protector	CHP2330	Not used
Carton	CHG4144	CHG4865
Contain Box	CHL4863	CHL4866

NOTE:

● When diagnosing a product, take care of its heated portion.

Power IC (IC801,802,803)
Power Supply IC (IC901,902)
DSP IC (IC201,251)
Heat Sink
IC Holder

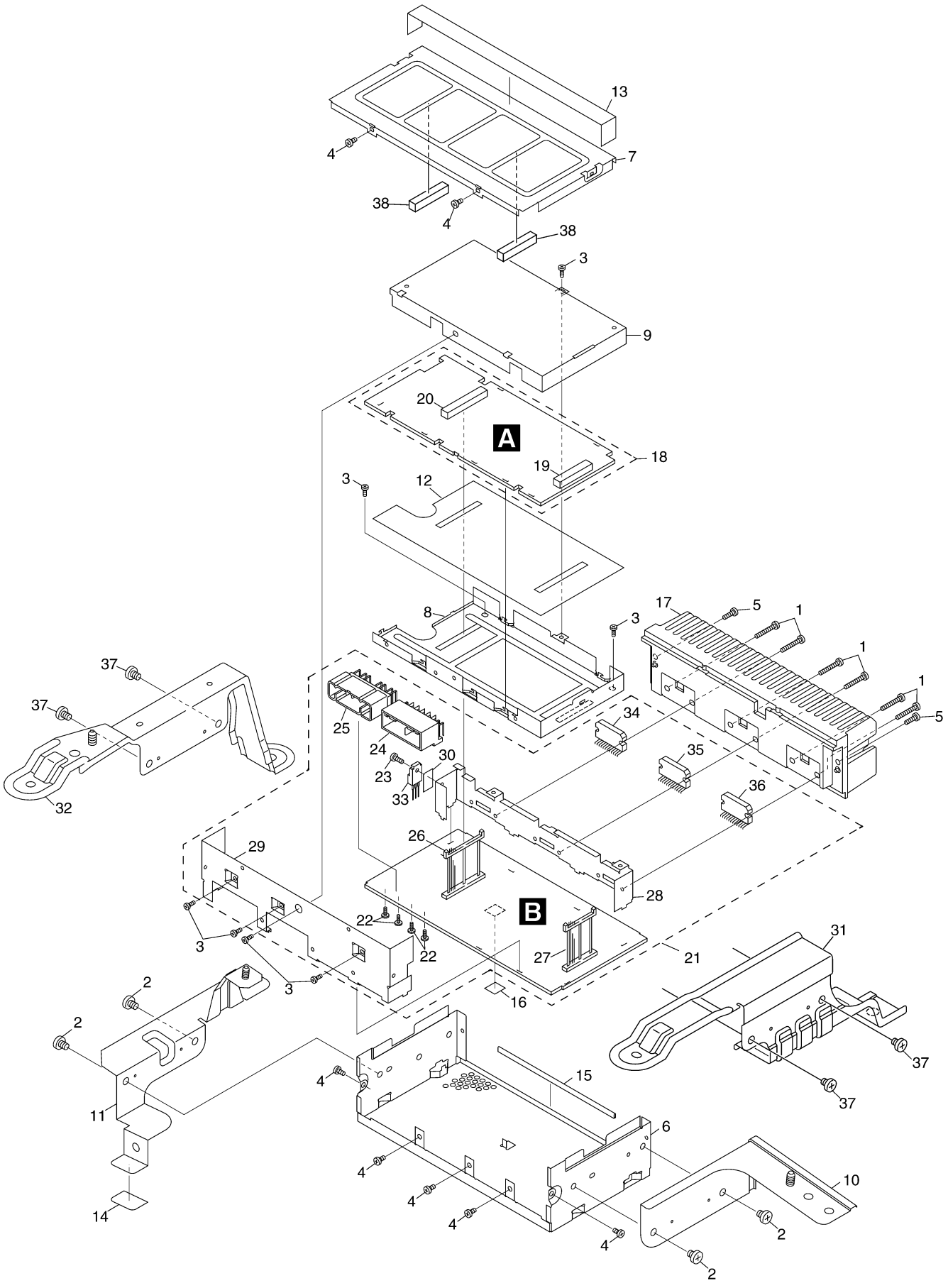
CONTENTS

1. SPECIFICATIONS

Power source . . . . . .13.2±0.1V(10.5-16.0V)
Grounding . . . . . .Negative type
Backup current . . . . . .1.0mA or less
Dimensions(No Bracket) . . . .210mm(W)x60mm(H)x150mm(D)
Weight(GM-9127ZT/EW) 1.985kg
(GM-9227ZT/E) 2.086kg
Maximum output power . . . .22W or more(Front)
22W or more(Rear)
22W or more(Woofer)

2. EXPLODED VIEWS AND PARTS LIST

2.1 EXTERIOR



NOTE:

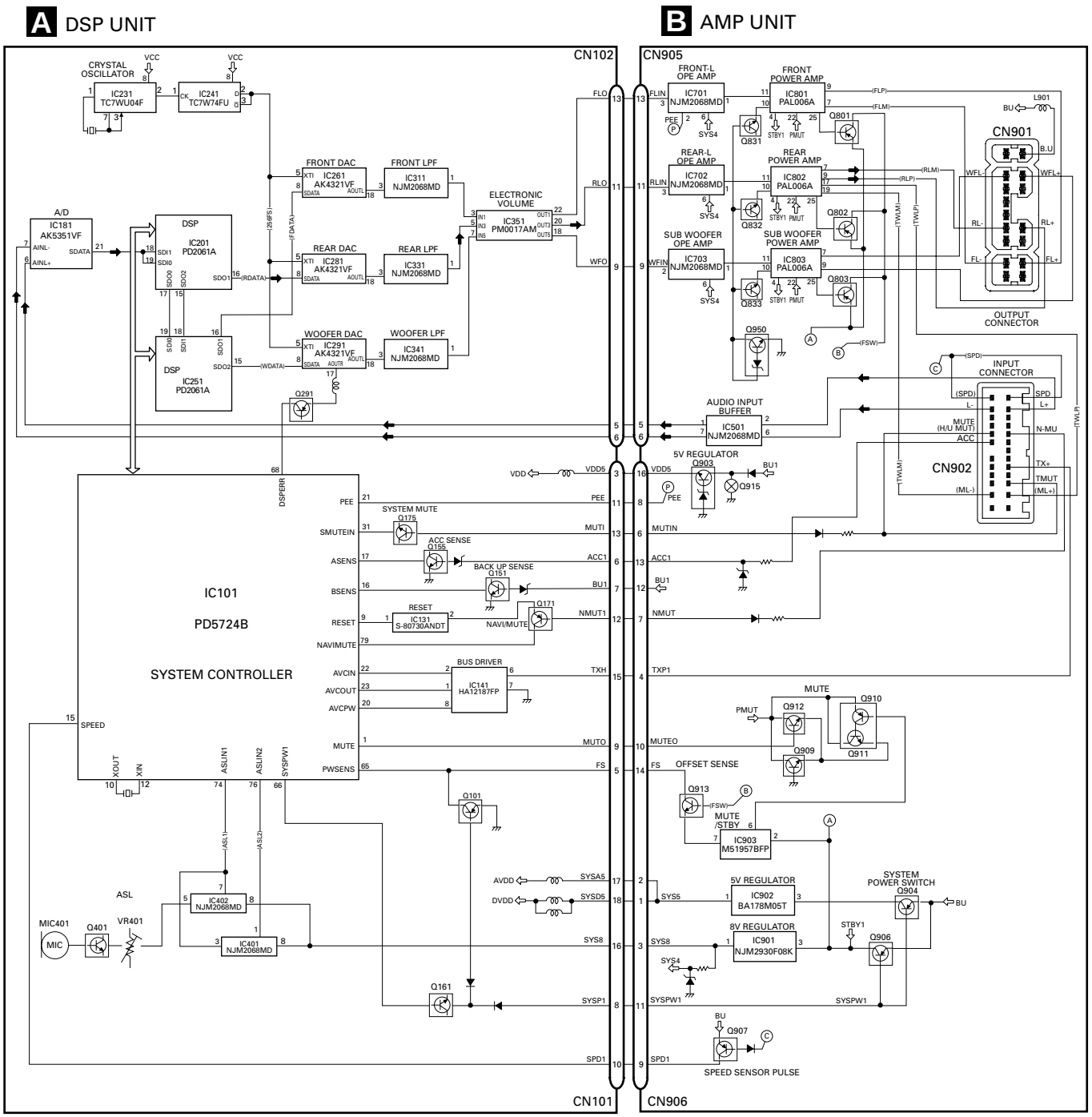
- Parts marked by "*" are generally unavailable because they are not in our Master Spare Parts List.
- Screws adjacent to ∇ mark on the product are used for disassembly.
- For the applying amount of lubricants or glue, follow the instructions in this manual.
  (In the case of no amount instructions, apply as you think it appropriate.)

● EXTERIOR SECTION PARTS LIST

Mark No.	Description	Part No.
1	Screw	BMZ30P200FMC
2	Screw(GM-9127ZT/EW)	BMZ50P060FMC
3	Screw	BSZ26P060FMC
4	Screw	BSZ30P060FMC
5	Screw	BSZ30P100FMC
6	Chassis	CNA2142
7	Case	CNB2563
8	Shield Case	CNC8185
9	Shield Case	CNC8186
10	Bracket(GM-9127ZT/EW)	CNC8919
11	Bracket(GM-9127ZT/EW)	CNC8920
12	Insulator	CNM6145
13	Seal	CNM6686
14	Cushion(GM-9127ZT/EW)	CNM7009
15	Seal	CNM7170
16	Seal	CNM7305
17	Heat Sink	CNR1566
18	DSP Unit	CWM8080
19	Socket(CN102)	CKS3632
20	Socket(CN101)	CKS4241
21	Amp Unit	CWM8081
22	Screw	BPZ30P060FSN
23	Screw	BSZ26P080FMC
24	Connector(CN902)	CKM1308
25	Connector(CN901)	CKM1310
26	Plug(CN906)	CKS4240
27	Plug(CN905)	CKS4242
28	Holder	CNC8187
29	Bracket	CNC8681
30	Sheet	CNM7015
31	Bracket(GM-9227ZT/E)	CND1093
32	Holder(GM-9227ZT/E)	CND1355
33	IC(IC902)	BA178M05T
34	IC(IC801)	PAL006A
35	IC(IC802)	PAL006A
36	IC(IC803)	PAL006A
37	Screw(GM-9227ZT/E)	BMZ50P060FMC
38	Cushion	CNM7756

3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

3.1 BLOCK DIAGRAM



A

B

C

D

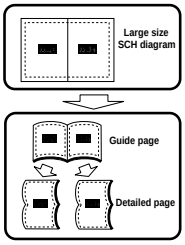
E

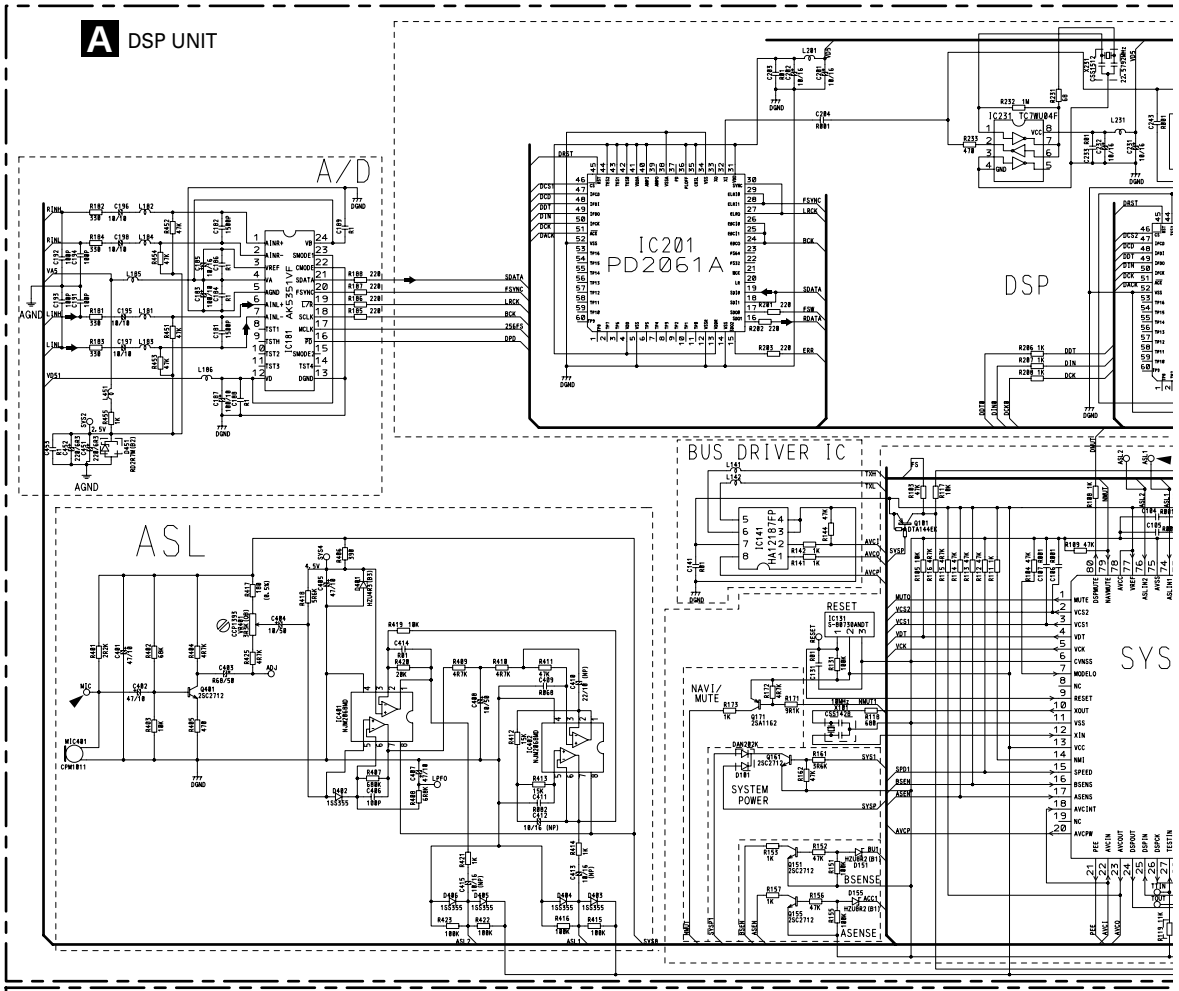
F

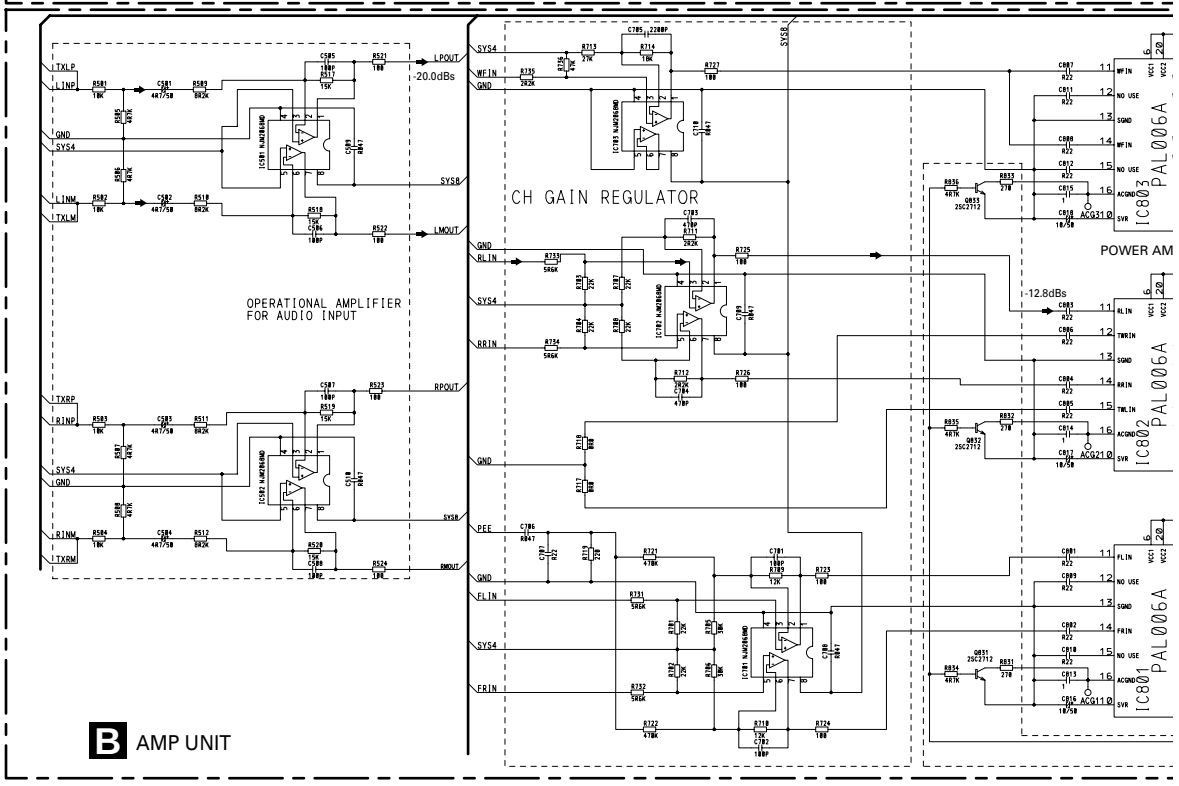
3.2 SCHEMATIC DIAGRAM (GUIDE PAGE)

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

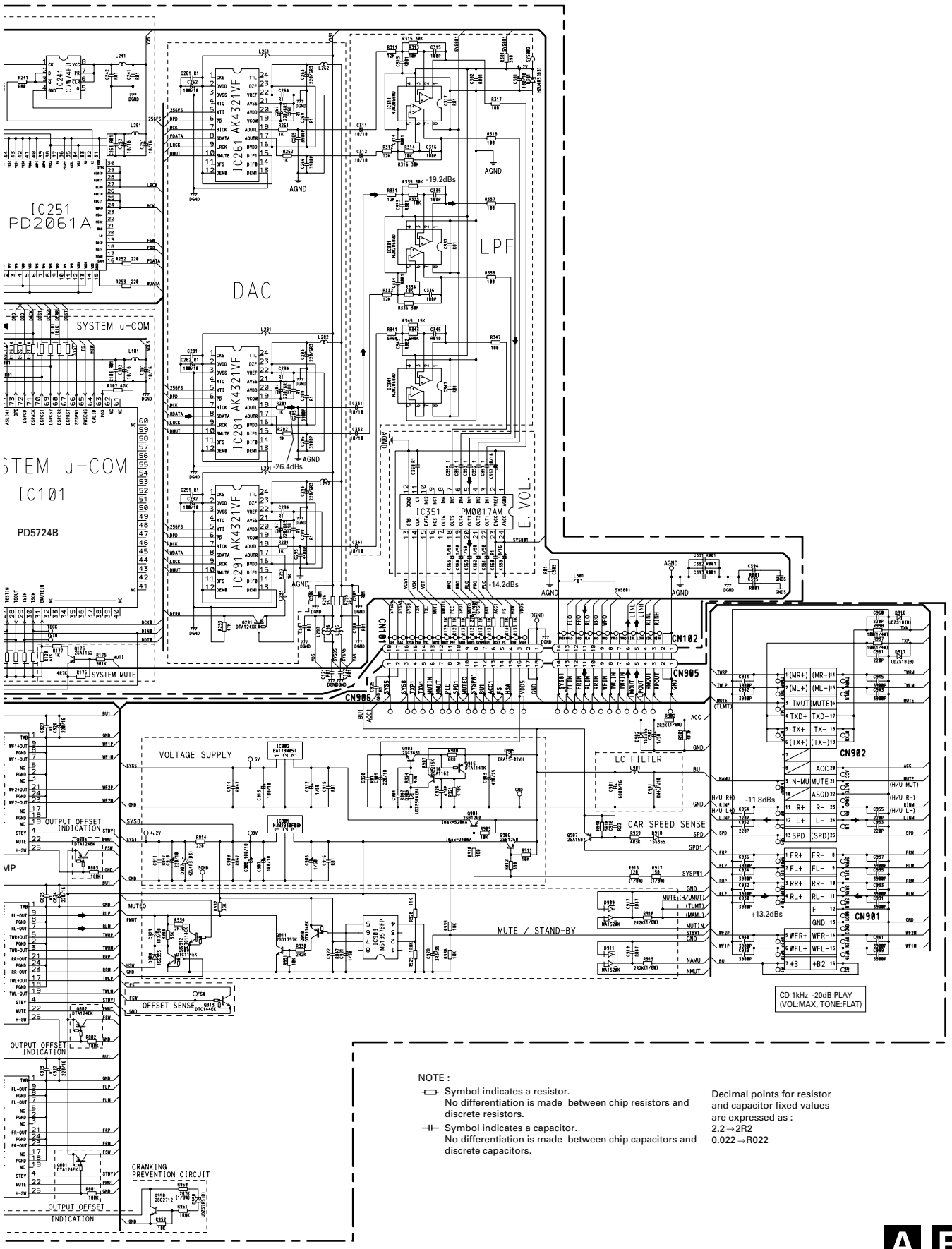
A-a







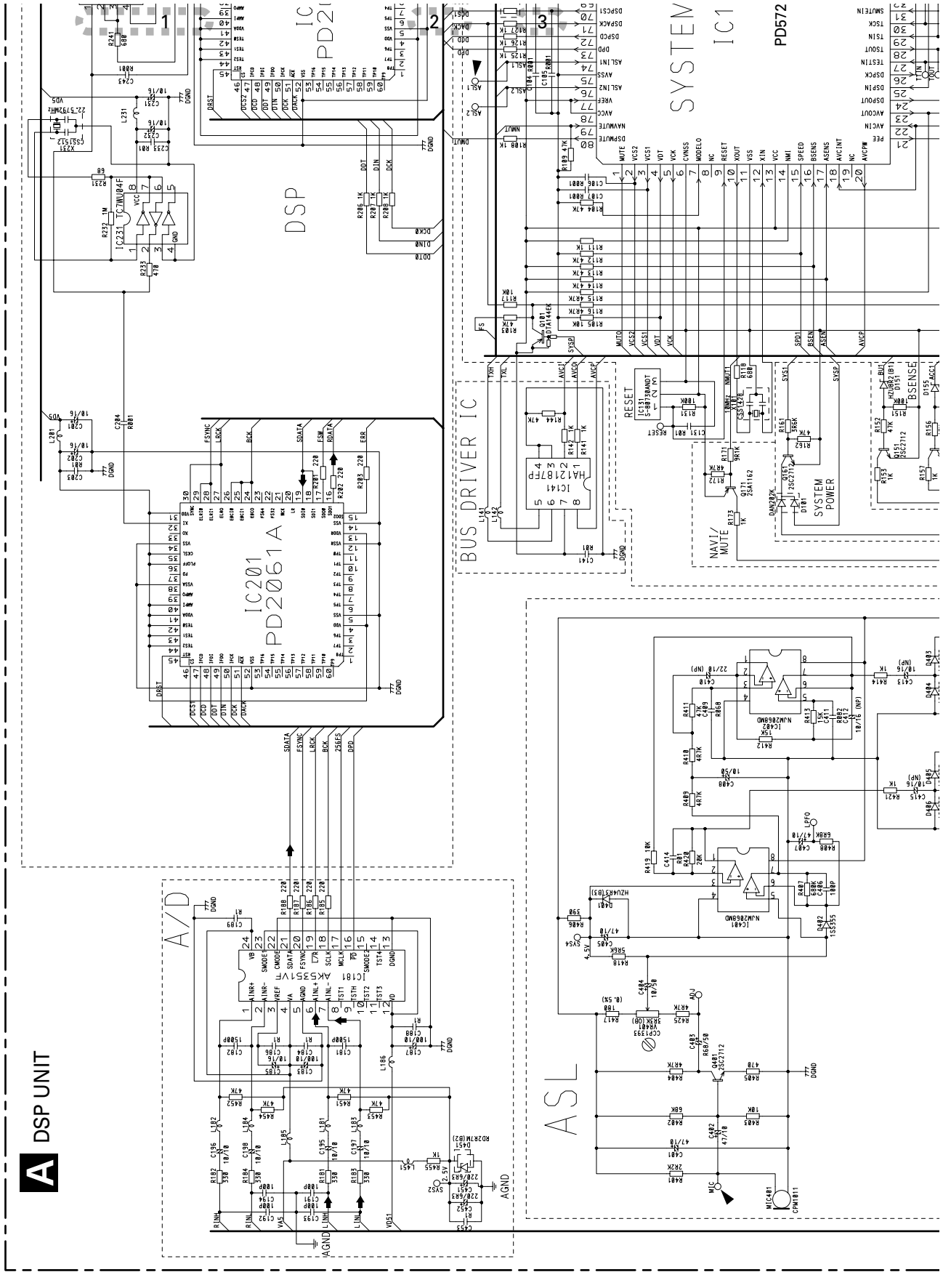
A B

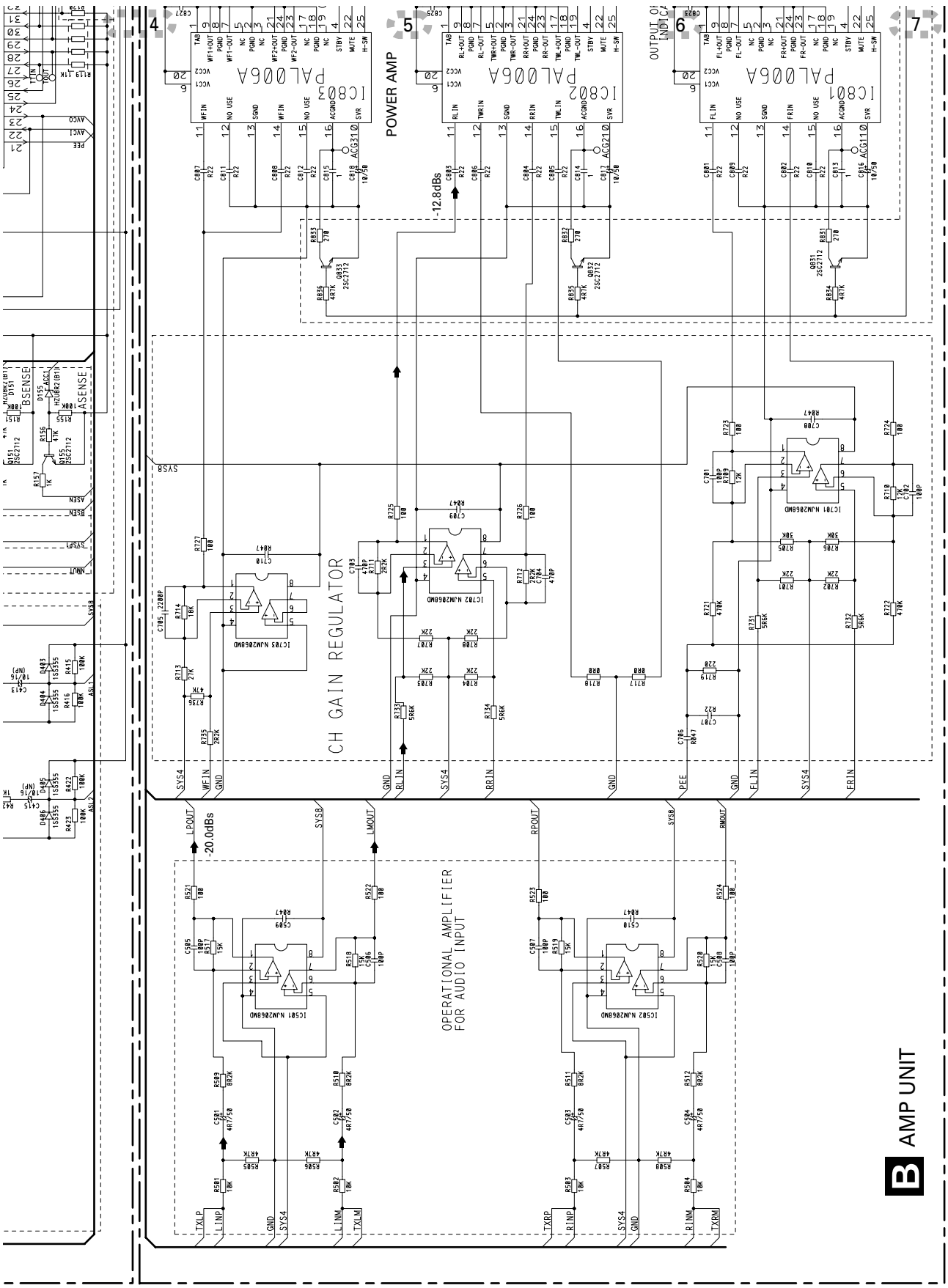


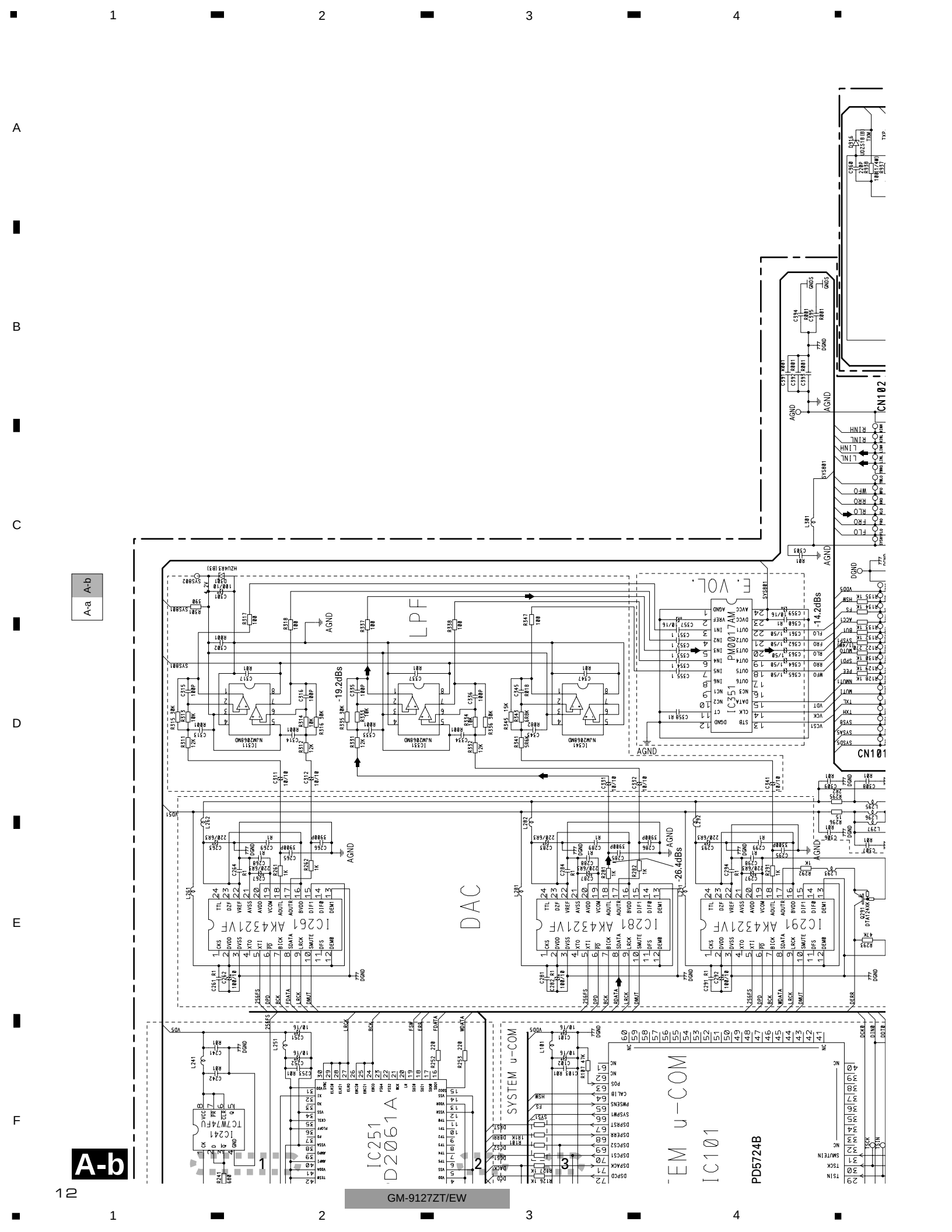
NOTE :

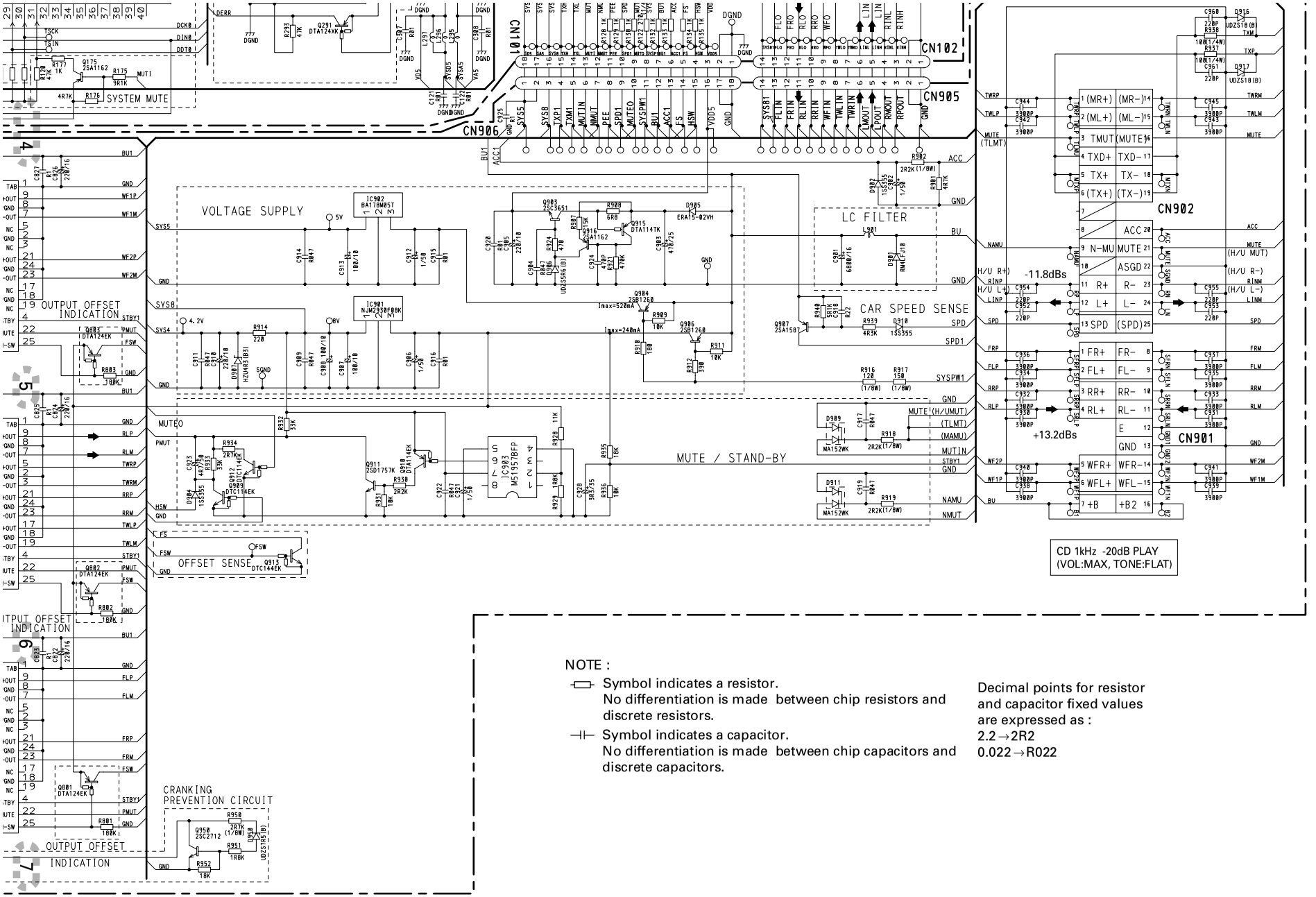
- Symbol indicates a resistor.
  No differentiation is made between chip resistors and discrete resistors.
- Symbol indicates a capacitor.
  No differentiation is made between chip capacitors and discrete capacitors.

Decimal points for resistor and capacitor fixed values are expressed as :
2.2→2R2
0.022→R022


DSP UNIT
A/D
ASL
DSP
IC PD2
SYSTEM IC1
PD572
BUS DRIVER IC
RESET
SYSTEM POWER
NAVI/ MUTE
BSENSE
IC201 PD2061A
IC181 AK5351VT
IC141 HA12187FP
MIC401


A-b
POWER AMP
-12.8dBs
CH GAIN REGULATOR
-20.0dBs
OPERATIONAL AMPLIFIER
FOR AUDIO INPUT
B AMP UNIT
A-a
A-b


A-b
A-a
LPF
DAC
IC261 AK4321VF
IC281 AK4321VF
IC291 AK4321VF
IC351 PM0017AM
EL. VOL.
-19.2dBs
-14.2dBs
-26.4dBs
IC251 D2061A
SYSTEM u-COM
IC101 PD5724B
IC241 TC7W74FC
CN102
CN101
A-b



NOTE :

- Symbol indicates a resistor. No differentiation is made between chip resistors and discrete resistors.
- Symbol indicates a capacitor. No differentiation is made between chip capacitors and discrete capacitors.

Decimal points for resistor and capacitor fixed values are expressed as :
2.2→2R2
0.022→R022

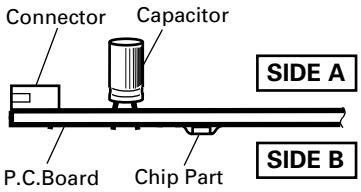
4. PCB CONNECTION DIAGRAM

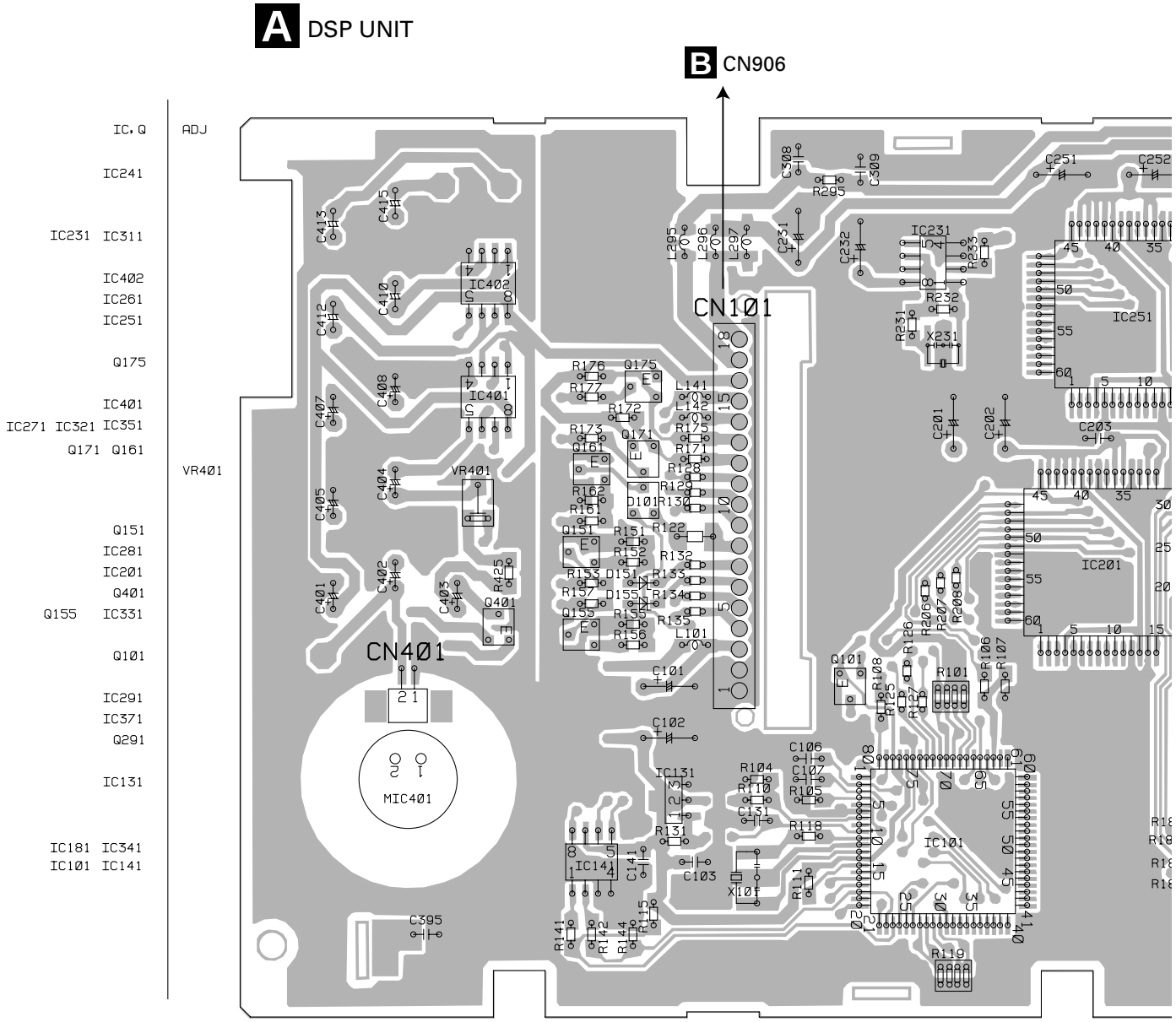
4.1 DSP UNIT

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.

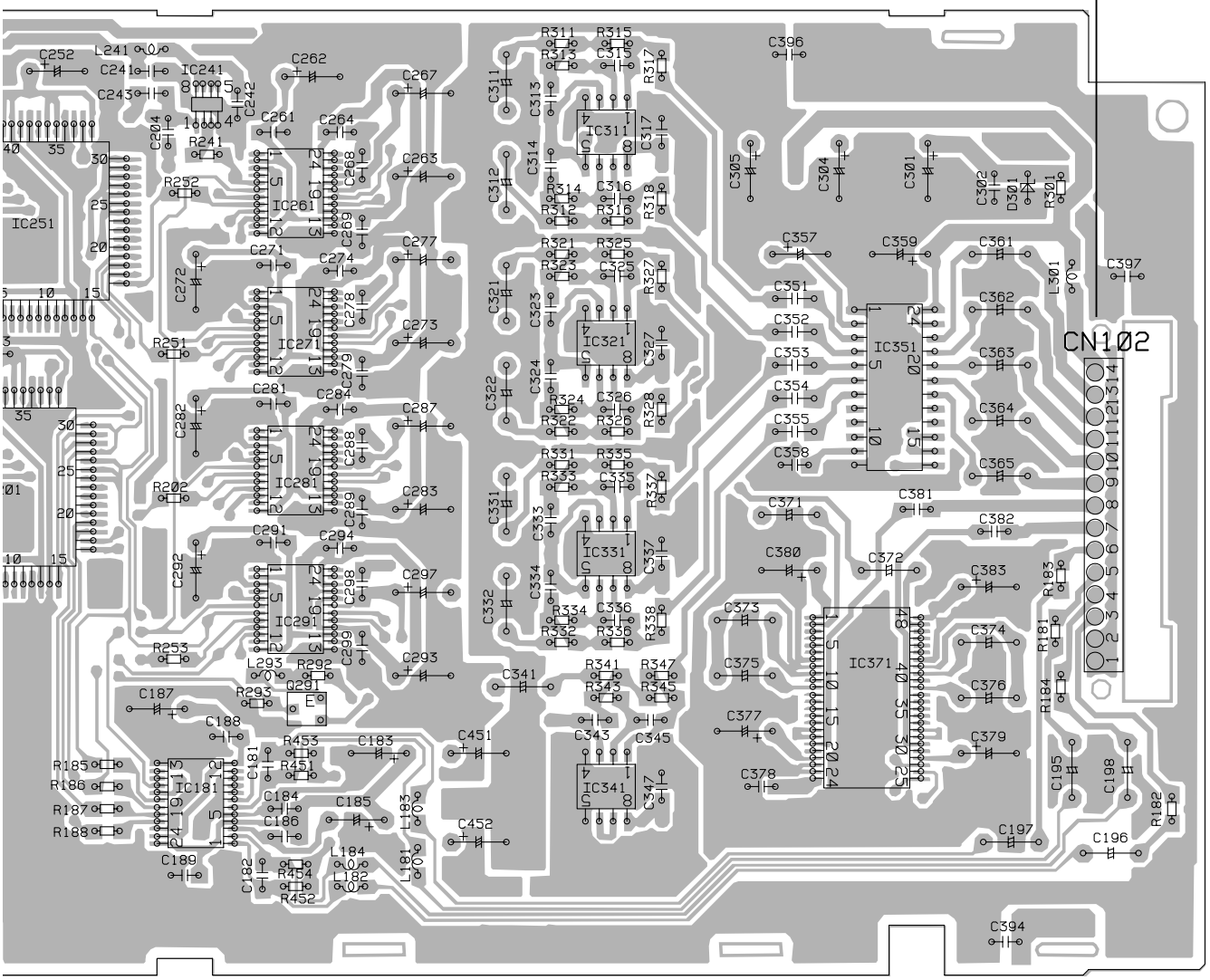
2.Viewpoint of PCB diagrams





SIDE A

B CN905



FRONT

A

A

B

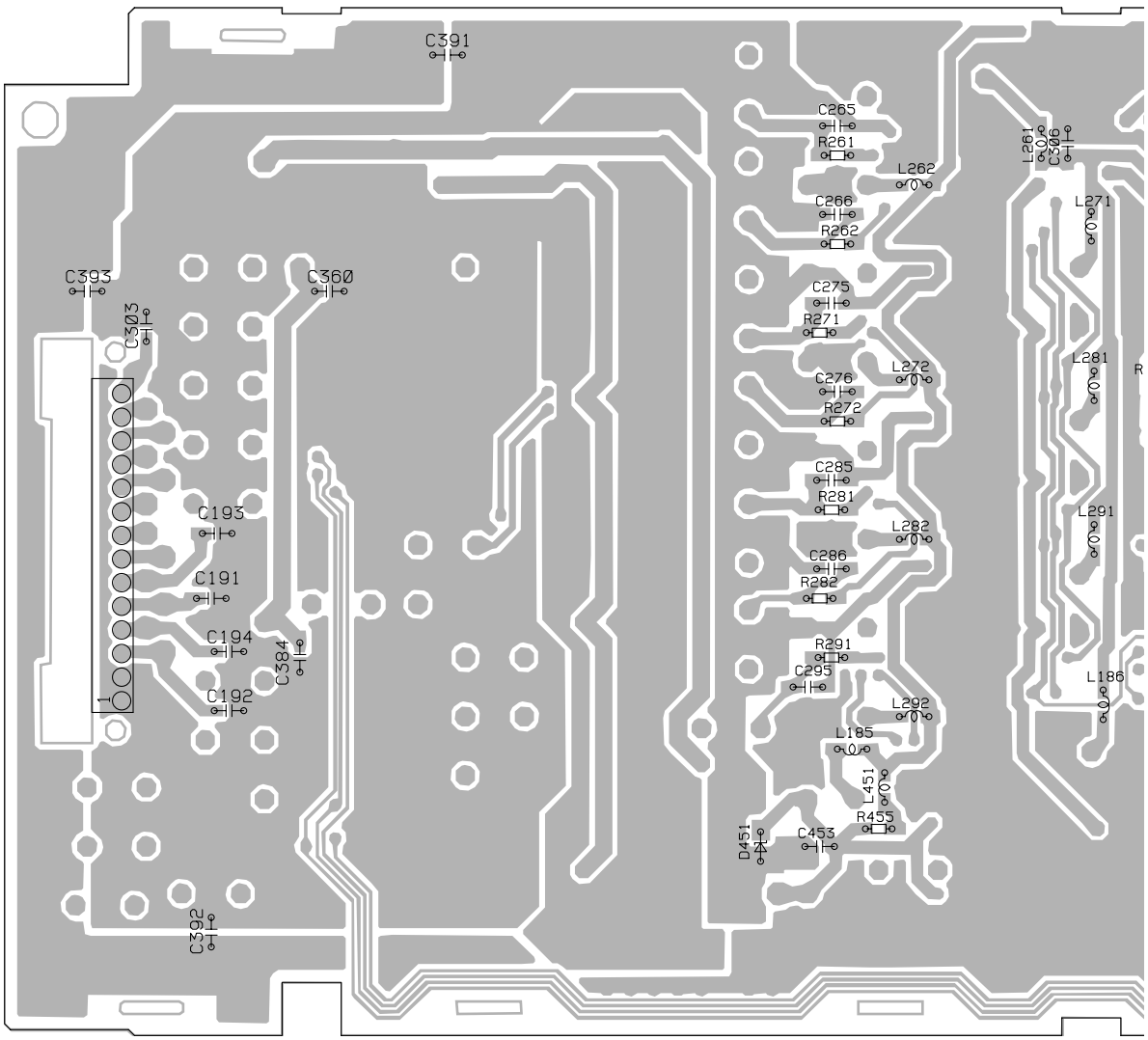
C

D

E

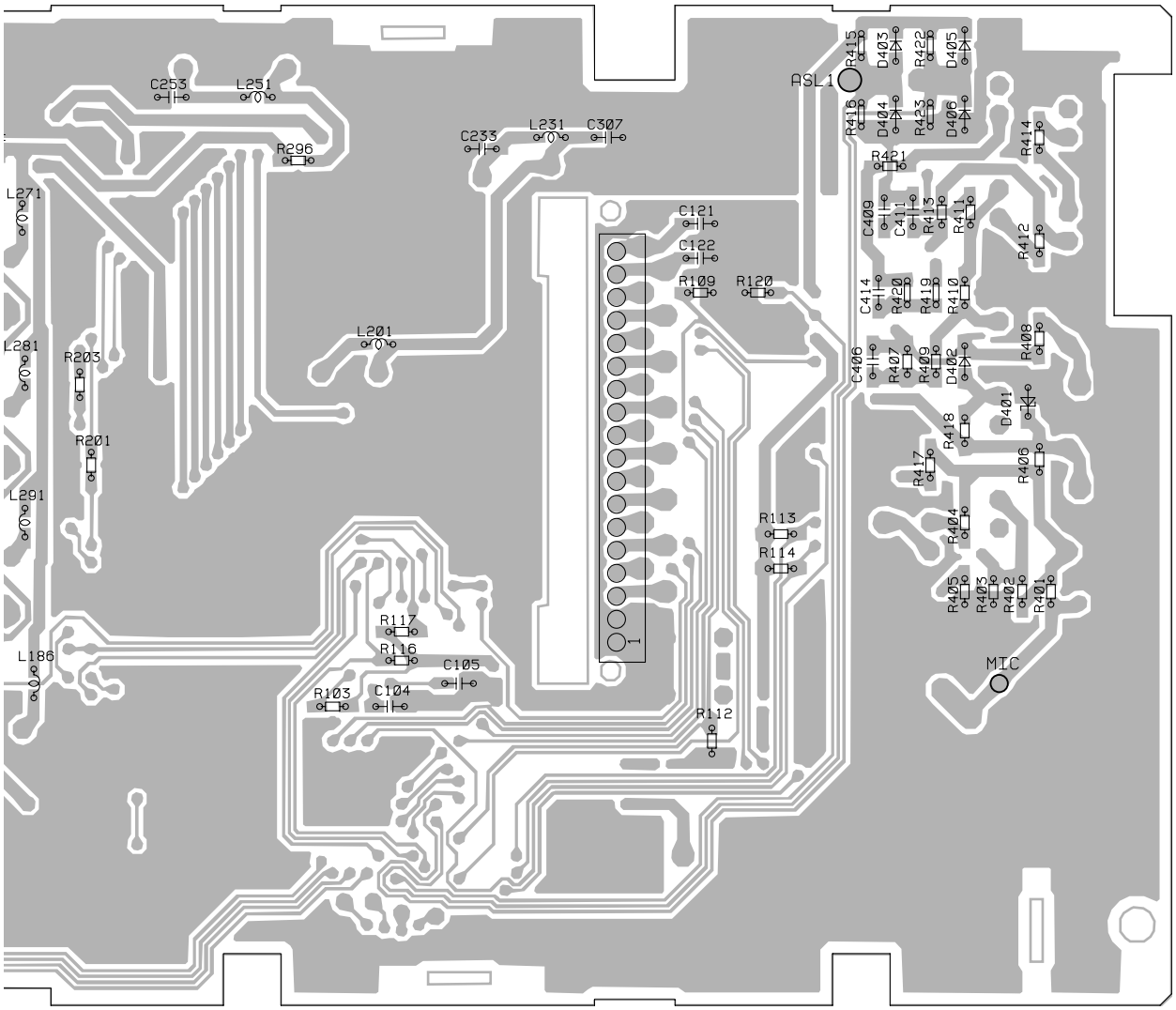
F

A DSP UNIT

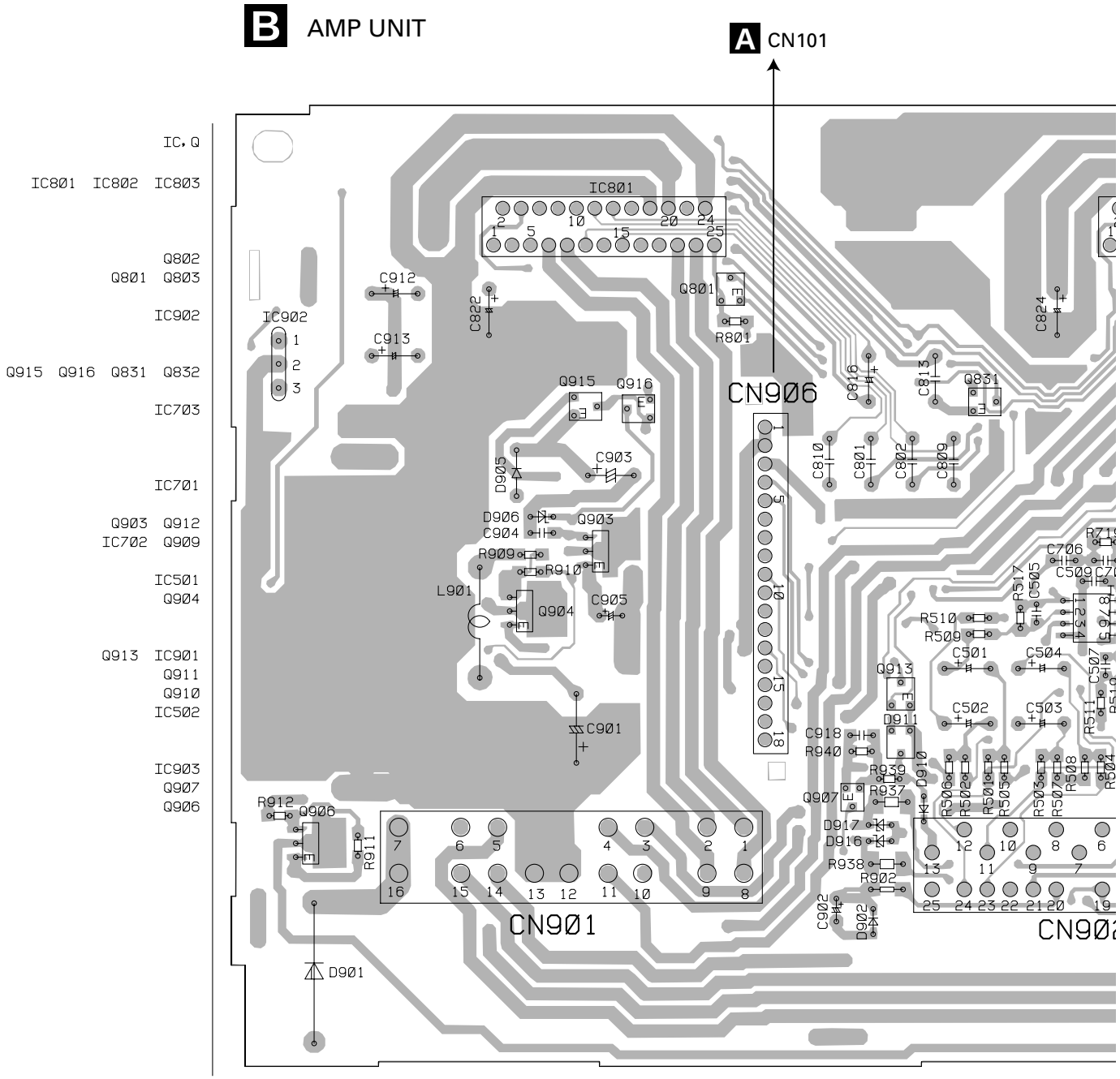


A

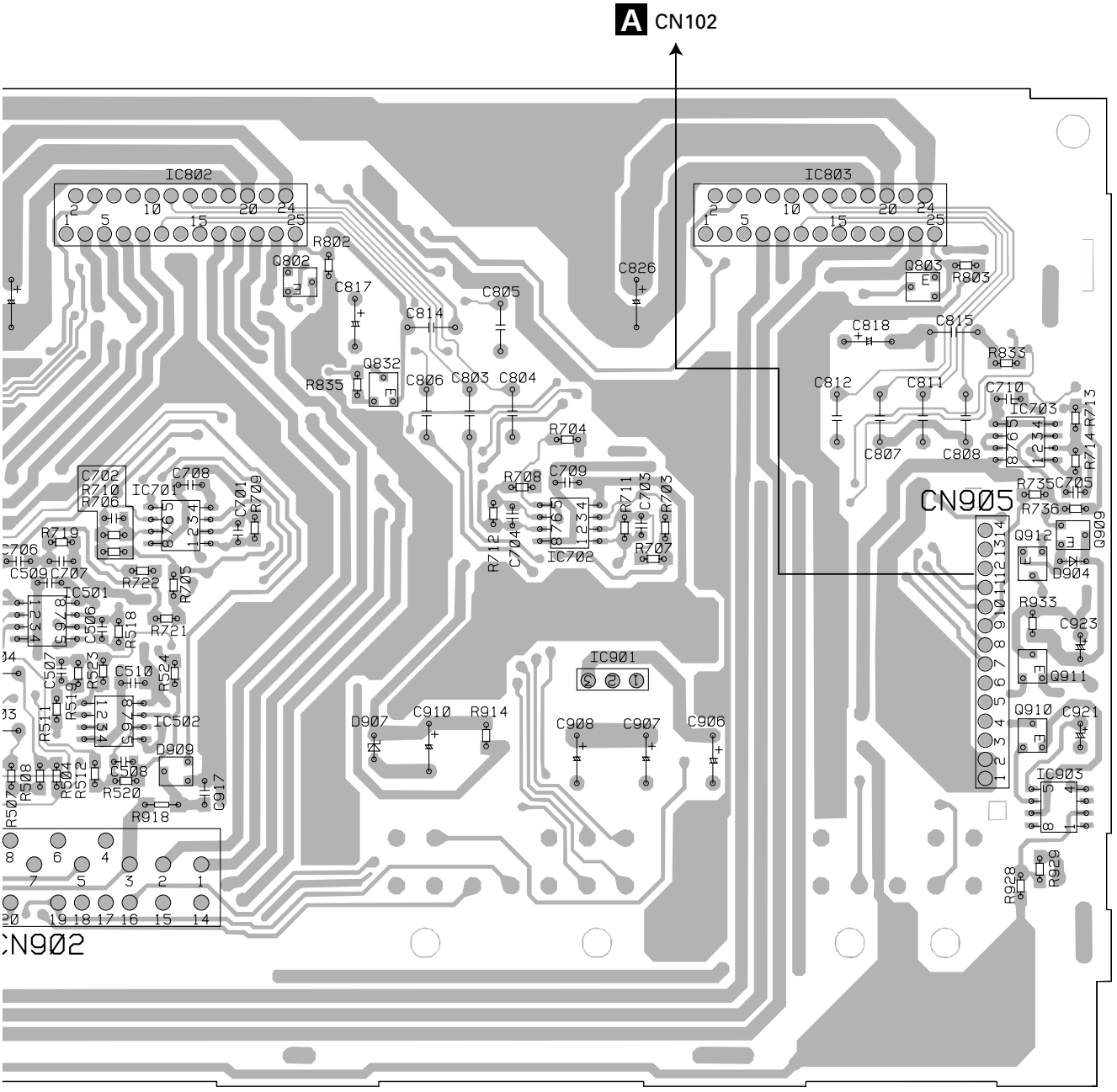
SIDE B


C253
L251
C233
L231
C307
R296
L271
C121
C122
R109
R120
L201
L281
R203
R201
L291
L186
R117
R116
C105
R103
C104
R112
R113
R114
ASL1
R415
D403
R422
D405
R416
D404
R423
D406
R414
R421
C409
C411
R413
R411
R412
C414
R420
R419
R410
C406
R407
R409
D402
R408
D401
R418
R417
R406
R404
R405
R403
R402
R401
MIC

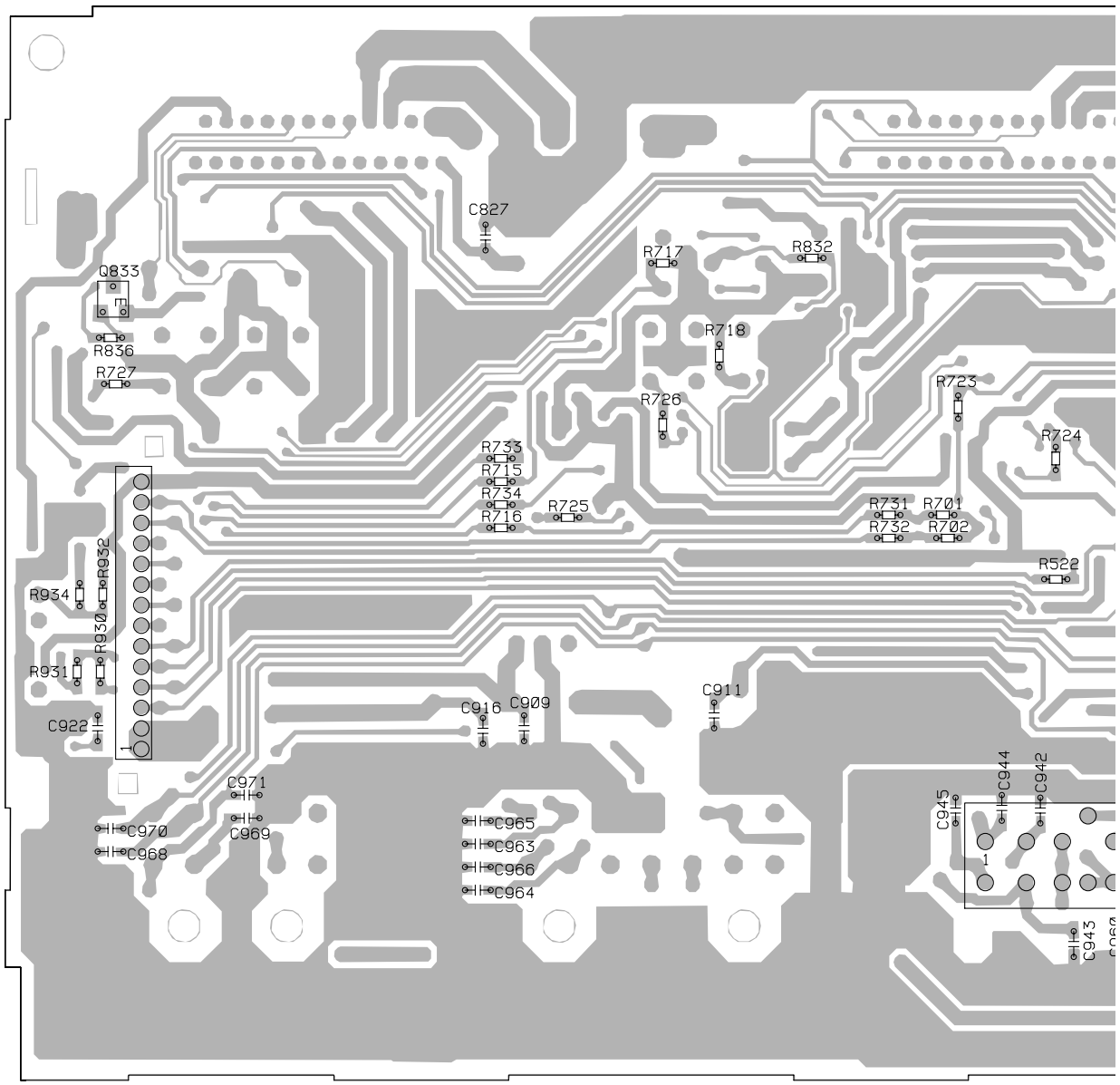
4.2 AMP UNIT


B AMP UNIT
A CN101
IC, Q
IC801 IC802 IC803
Q802
Q801 Q803
IC902
Q915 Q916 Q831 Q832
IC703
IC701
Q903 Q912
IC702 Q909
IC501
Q904
Q913 IC901
Q911
Q910
IC502
IC903
Q907
Q906
IC801
IC902
C912
C913
C822
Q801
R801
CN906
C824
C816
C813
Q831
Q915
Q916
C903
D905
C810
C801
C802
C809
D906
C904
Q903
R909
R910
L901
Q904
C905
C901
C706
C509
C505
R517
R510
R509
C501
C504
Q913
C502
C503
D911
C918
R940
R939
R937
Q907
D917
D916
R938
R902
C902
D902
R912
Q906
R911
D901
CN901
CN902

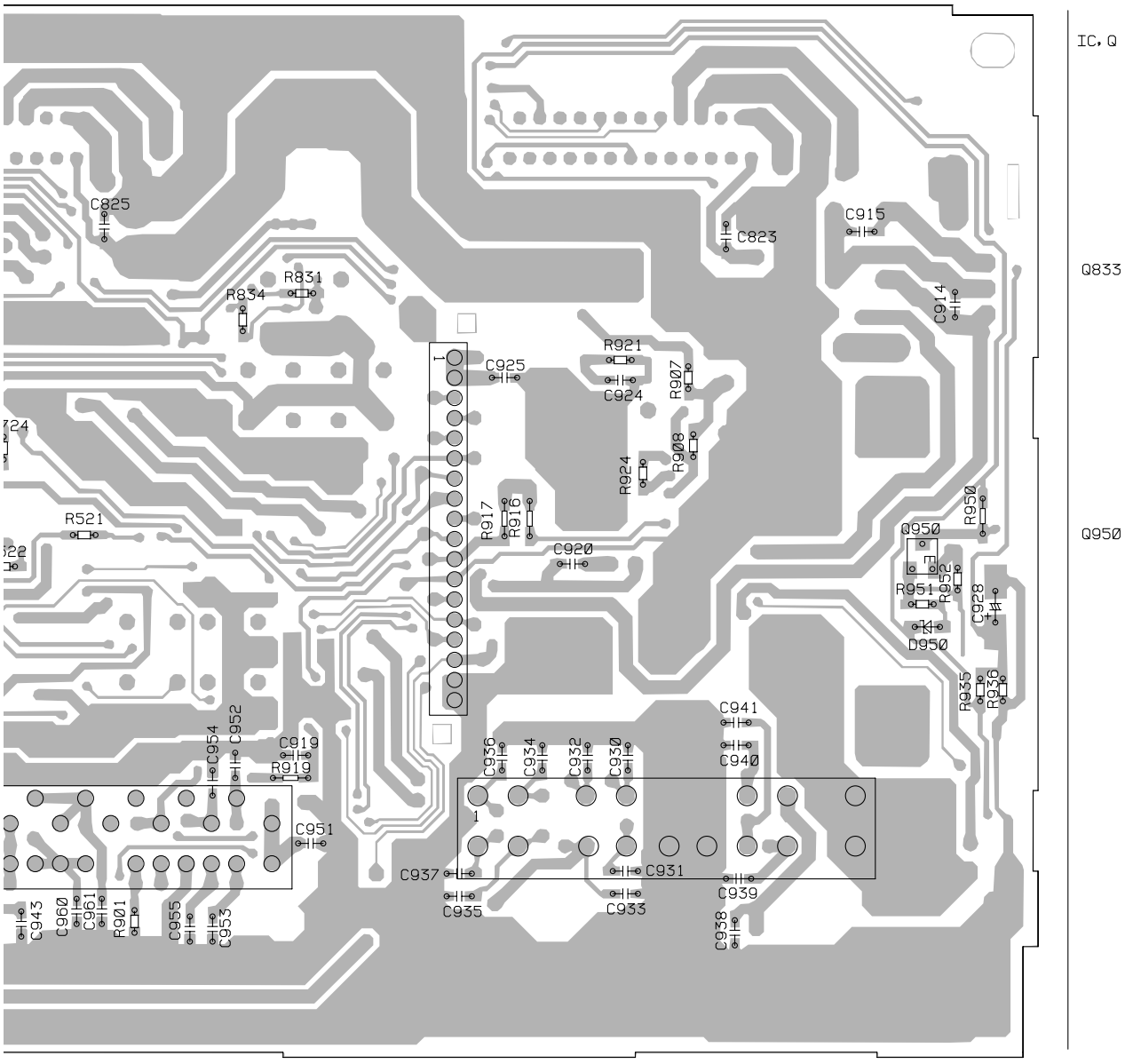
SIDE A


A CN102
IC802
IC803
R802
Q802
C817
C814
C805
C826
Q803
R803
C818
C815
R833
Q832
R835
C806
C803
C804
C812
C811
C710
IC703
C807
C808
R704
C702
R710
R706
IC701
C708
C701
R709
R719
C706
C509
C707
C501
R722
R705
R721
R518
C507
C506
R523
R524
C510
R511
R509
R504
R512
R508
R507
IC502
D909
C917
R520
R918
CN902
R708
C709
C704
IC702
R711
C703
R703
R707
R712
CN905
R735
C705
R714
R713
R736
Q912
G909
D904
R933
C923
Q911
Q910
C921
IC903
R928
R929
IC901
D907
C910
R914
C908
C907
C906

B AMP UNIT


C827
Q833
R836
R727
R717
R832
R718
R726
R723
R724
R733
R715
R734
R716
R725
R731
R732
R701
R702
R522
R934
R932
R930
R931
C922
C916
C909
C911
C971
C970
C968
C969
C965
C963
C966
C964
C945
C944
C942
C943

SIDE B


IC, Q
Q833
Q950
C825
R831
R834
C823
C915
C914
C925
R921
C924
R907
R908
R924
R917
R916
C920
R521
R950
Q950
R951
R952
C928
D950
R935
R936
C941
C940
C936
C934
C932
C930
C919
R919
C954
C952
C951
C937
C931
C935
C933
C939
C938
C943
C960
C961
R901
C955
C953

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/○S○○○J,RS1/○○S○○○J

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

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

A Unit Number : CWM8080
Unit Name : DSP Unit

MISCELLANEOUS

=====Circuit Symbol and No.		===Part Name	Part No.
IC	101	IC	PD5724B
IC	131	IC	S-80730ANDT
IC	141	IC	HA12187FP
IC	181	IC	AK5351VF
IC	201	IC	PD2061A
IC	231	IC	TC7WU04F
IC	241	IC	TC7W74FU
IC	251	IC	PD2061A
IC	261	IC	AK4321VF
IC	281	IC	AK4321VF
IC	291	IC	AK4321VF
IC	311	IC	NJM2068MD
IC	331	IC	NJM2068MD
IC	341	IC	NJM2068MD
IC	351	IC	PM0017AM
IC	401	IC	NJM2068MD
IC	402	IC	NJM2068MD
Q	101	Transistor	DTA144EK
Q	151	Transistor	2SC2712
Q	155	Transistor	2SC2712
Q	161	Transistor	2SC2712
Q	171	Transistor	2SA1162
Q	175	Transistor	2SA1162
Q	291	Transistor	DTA124XK
Q	401	Transistor	2SC2712
D	101	Diode	DAN202K
D	151	Diode	HZU8R2(B1)
D	155	Diode	HZU8R2(B1)
D	301	Diode	HZU4R3(B3)
D	401	Diode	HZU4R3(B3)
D	402	Diode	1SS355
D	403	Diode	1SS355
D	404	Diode	1SS355
D	405	Diode	1SS355
D	406	Diode	1SS355
D	451	Diode	RD2R7M(B2)
L	101	Inductor	LCTB1R0K2125
L	141	Inductor	CTF1305
L	142	Inductor	CTF1305
L	181	Inductor	LCTB1R0K2125
L	182	Inductor	LCTB1R0K2125
L	183	Inductor	LCTB1R0K2125
L	184	Inductor	LCTB1R0K2125
L	185	Inductor	LCTB4R7K2125
L	186	Inductor	LCTB120K2125
L	201	Inductor	LCTBR82K2125
L	231	Inductor	LCTB1R0K2125
L	241	Inductor	LCTB1R0K2125
L	251	Inductor	LCTBR82K2125
L	261	Inductor	LCTB1R0K2125

=====Circuit Symbol and No.		===Part Name	Part No.
L	262	Inductor	LCTB120K2125
L	281	Inductor	LCTB1R0K2125
L	282	Inductor	LCTB120K2125
L	291	Inductor	LCTB1R0K2125
L	292	Inductor	LCTB120K2125
L	293	Inductor	LCTB1R0K2125
L	295	Inductor	LCTB1R0K3216
L	296	Chip-Inductor	LCTA2R2J3225
L	297	Chip-Inductor	LCTA2R2J3225
L	301	Inductor	LCTB1R0K2125
L	451	Inductor	LCTB4R7K2125
X	101	Radiator 10.00MHz	CSS1428
X	231	Ceramic Resonator 22.5792MHz	CSS1512
VR	401	Semi-fixxed 1kΩ(OB)	CCP1393
MIC	401	Microphone	CPM1011

RESISTORS

R	101	1kΩ	CCN1120
R	103		RS1/10S473J
R	104		RS1/10S473J
R	105		RS1/10S103J
R	107		RS1/10S473J
R	108		RS1/10S102J
R	109		RS1/10S473J
R	111		RS1/10S102J
R	112		RS1/10S473J
R	113		RS1/10S473J
R	114		RS1/10S473J
R	115		RS1/10S472J
R	116		RS1/10S472J
R	117		RS1/10S103J
R	118		RS1/10S681J
R	119	47kΩ	CCN1131
R	120		RS1/10S473J
R	122		RS1/4S271J
R	125		RS1/16S102J
R	126		RS1/16S102J
R	127		RS1/16S102J
R	128		RS1/16S102J
R	129		RS1/16S102J
R	130		RS1/16S102J
R	131		RS1/10S104J
R	132		RS1/16S102J
R	133		RS1/16S102J
R	134		RS1/16S102J
R	135		RS1/16S102J
R	141		RS1/10S102J
R	142		RS1/10S102J
R	144		RS1/10S473J
R	151		RS1/10S104J
R	152		RS1/10S473J
R	153		RS1/10S102J

=====Circuit Symbol and No.	===Part Name	Part No.
R 155		RS1/10S104J
R 156		RS1/10S473J
R 157		RS1/10S102J
R 161		RS1/10S362J
R 162		RS1/10S473J
R 171		RS1/10S912J
R 172		RS1/10S472J
R 173		RS1/10S102J
R 175		RS1/10S912J
R 176		RS1/10S472J
R 177		RS1/10S102J
R 181		RS1/10S331J
R 182		RS1/10S331J
R 183		RS1/10S331J
R 184		RS1/10S331J
R 185		RS1/10S221J
R 186		RS1/10S221J
R 187		RS1/10S221J
R 188		RS1/10S221J
R 201		RS1/10S221J
R 202		RS1/10S221J
R 203		RS1/10S221J
R 206		RS1/16S102J
R 207		RS1/16S102J
R 208		RS1/16S102J
R 231		RS1/10S680J
R 232		RS1/10S105J
R 233		RS1/10S471J
R 241		RS1/10S681J
R 252		RS1/10S221J
R 253		RS1/10S221J
R 261		RS1/10S102J
R 262		RS1/10S102J
R 281		RS1/10S102J
R 282		RS1/10S102J
R 291		RS1/10S102J
R 292		RS1/10S102J
R 293		RS1/10S473J
R 295		RS1/10S2R2J
R 296		RS1/10S150J
R 301		RS1/10S391J
R 311		RS1/10S123J
R 312		RS1/10S123J
R 313		RS1/10S103J
R 314		RS1/10S103J
R 315		RS1/10S303J
R 316		RS1/10S303J
R 317		RS1/10S101J
R 318		RS1/10S101J
R 331		RS1/10S123J
R 332		RS1/10S123J
R 333		RS1/10S103J
R 334		RS1/10S103J
R 335		RS1/10S303J
R 336		RS1/10S303J
R 337		RS1/10S101J
R 338		RS1/10S101J
R 341		RS1/10S562J
R 343		RS1/10S682J
R 345		RS1/10S153J
R 347		RS1/10S101J
R 401		RS1/10S222J
R 402		RS1/10S683J
R 403		RS1/10S103J
R 404		RS1/10S472J

=====Circuit Symbol and No.	===Part Name	Part No.
R 405		RS1/10S471J
R 406		RS1/10S391J
R 407		RS1/10S684J
R 408		RS1/10S682J
R 409		RS1/10S472J
R 410		RS1/10S472J
R 411		RS1/10S473J
R 412		RS1/10S153J
R 413		RS1/10S153J
R 414		RS1/10S102J
R 415		RN1/10SE1003D
R 416		RN1/10SE1003D
R 417		RS1/10S1800D
R 418		RS1/10S562J
R 419		RN1/10SE1002D
R 420		RN1/10SE2002D
R 421		RS1/10S102J
R 422		RN1/10SE1003D
R 423		RN1/10SE1003D
R 425		RS1/10S472J
R 451		RS1/10S473J
R 452		RS1/10S473J
R 453		RS1/10S473J
R 454		RS1/10S473J
R 455		RS1/10S102J

CAPACITORS

C 101		CEJA100M16
C 102		CEJA100M16
C 103		CKSQYB103K50
C 104		CKSQYB102K50
C 105		CKSQYB102K50
C 106		CKSQYB102K50
C 107		CKSQYB102K50
C 121		CKSQYB103K50
C 122		CKSQYB103K50
C 131		CKSQYB103K50
C 141		CKSQYB103K50
C 181		CKSQYB152K50
C 182		CKSQYB152K50
C 183		CEJA101M10
C 184		CKSQYB104K25
C 185		CEJA100M16
C 186		CKSQYB104K25
C 187		CEJA101M10
C 188		CKSQYB104K25
C 189		CKSQYB104K25
C 191		CCSQCH101J50
C 192		CCSQCH101J50
C 193		CCSQCH101J50
C 194		CCSQCH101J50
C 195		CEJANP100M10
C 196		CEJANP100M10
C 197		CEJANP100M10
C 198		CEJANP100M10
C 201		CEJA100M16
C 202		CEJA100M16
C 203		CKSQYB103K50
C 204		CKSQYB102K50
C 231		CEJA100M16
C 232		CEJA100M16
C 233		CKSQYB103K50
C 241		CKSQYB103K50
C 242		CKSQYB103K50
C 243		CKSQYB102K50
C 251		CEJA100M16
C 252		CEJA100M16

C	253		CKSQYB103K50	
C	261		CKSQYB104K25	
C	262		CEJA101M10	
C	263		CEJA221M6R3	
C	264		CKSQYB104K25	
C	265		CKSQYB392K50	
C	266		CKSQYB392K50	
C	267		CEJA221M6R3	
C	268		CKSQYB104K25	
C	269		CKSQYB104K25	
C	281		CKSQYB104K25	
C	282		CEJA101M10	
C	283		CEJA221M6R3	
C	284		CKSQYB104K25	
C	285		CKSQYB392K50	
C	286		CKSQYB392K50	
C	287		CEJA221M6R3	
C	288		CKSQYB104K25	
C	289		CKSQYB104K25	
C	291		CKSQYB104K25	
C	292		CEJA101M10	
C	293		CEJA221M6R3	
C	294		CKSQYB104K25	
C	295		CKSQYB332K50	
C	297		CEJA221M6R3	
C	298		CKSQYB104K25	
C	299		CKSQYB104K25	
C	301		CEJA101M10	
C	302		CKSQYB102K50	
C	303		CKSQYB103K50	
C	306		CKSQYB103K50	
C	307		CKSQYB103K50	
C	308		CKSQYB103K50	
C	309		CKSQYB103K50	
C	311		CEJANP100M10	
C	312		CEJANP100M10	
C	313		CKSQYB102K50	
C	314		CKSQYB102K50	
C	315		CCSQCH101J50	
C	316		CCSQCH101J50	
C	317		CKSQYB103K50	
C	331		CEJANP100M10	
C	332		CEJANP100M10	
C	333		CKSQYB102K50	
C	334		CKSQYB102K50	
C	335		CCSQCH101J50	
C	336		CCSQCH101J50	
C	337		CKSQYB103K50	
C	341		CEJANP100M10	
C	343		CKSQYB823K25	
C	345		CKSQYB183K50	
C	347		CKSQYB103K50	
C	351		CKSYB105K16	
C	352		CKSYB105K16	
C	353		CKSYB105K16	
C	354		CKSYB105K16	
C	355		CKSYB105K16	
C	357		CEJA100M16	
C	358		CKSQYB104K25	
C	359		CEJA100M16	
C	360		CKSQYB104K25	
C	361		CEJANP1R0M50	
C	362		CEJANP1R0M50	
C	363		CEJANP1R0M50	
C	364		CEJANP1R0M50	
C	365		CEJANP1R0M50	
C	391		CKSQYB102K50	
C	392		CKSQYB102K50	
C	393		CKSQYB102K50	
C	394		CKSQYB102K50	
C	395		CKSQYB102K50	
C	401		CEAT470M10	
C	402		CEAT470M10	
C	403		CCH1386	
C	404		CEAT100M50	
C	405		CEAT470M10	
C	406		CCSQCH101J50	
C	407		CEAT470M10	
C	408		CEAT100M50	
C	409		CKSQYB683K25	
C	410		CEANP220M10	
C	411		CKSQYB823K25	
C	412		CEANP100M16	
C	413		CEANP100M16	
C	414		CKSQYB103K50	
C	415		CEANP100M16	
C	451		CEJA221M6R3	
C	452		CEJA221M6R3	
C	453		CKSQYB104K25	

B Unit Number : CWM8081
Unit Name : Amp Unit

MISCELLANEOUS

IC	501	IC	NJM2068MD
IC	502	IC	NJM2068MD
IC	701	IC	NJM2068MD
IC	702	IC	NJM2068MD
IC	703	IC	NJM2068MD
IC	801	IC	PAL006A
IC	802	IC	PAL006A
IC	803	IC	PAL006A
IC	901	IC	NJM2930F08K
IC	902	IC	BA178M05T
IC	903	IC	M51957BFP
Q	801	Transistor	DTA124EK
Q	802	Transistor	DTA124EK
Q	803	Transistor	DTA124EK
Q	831	Transistor	2SC2712
Q	832	Transistor	2SC2712
Q	833	Transistor	2SC2712
Q	903	Transistor	2SC3651
Q	904	Transistor	2SB1260
Q	906	Transistor	2SB1260
Q	907	Transistor	2SA1587
Q	909	Transistor	DTC114EK
Q	910	Transistor	DTA114EK
Q	911	Transistor	2SD1757K
Q	912	Transistor	DTC114EK
Q	913	Transistor	DTC144EK
Q	915	Transistor	DTA114TK
Q	916	Transistor	2SA1162
Q	950	Transistor	2SC2712
D	901	Diode	RM4LFJ10
D	902	Diode	1SS355
D	904	Diode	1SS355
D	905	Diode	ERA15-02VH
D	906	Diode	UDZS5R6(B)
D	907	Diode	HZU4R3(B3)
D	909	Diode	MA152WK
D	910	Diode	1SS355
D	911	Diode	MA152WK
D	916	Diode	UDZS18(B)
D	917	Diode	UDZS18(B)

=====Circuit Symbol and No.	===Part Name	Part No.
D 950	Diode	UDZS7R5(B)
L 901	Choke Coil 260mH	CTH1240

RESISTORS

R 501		RS1/10S103J
R 502		RS1/10S103J
R 503		RS1/10S103J
R 504		RS1/10S103J
R 505		RS1/10S472J
R 506		RS1/10S472J
R 507		RS1/10S472J
R 508		RS1/10S472J
R 509		RS1/10S822J
R 510		RS1/10S822J
R 511		RS1/10S822J
R 512		RS1/10S822J
R 517		RS1/10S153J
R 518		RS1/10S153J
R 519		RS1/10S153J
R 520		RS1/10S153J
R 521		RS1/10S101J
R 522		RS1/10S101J
R 523		RS1/10S101J
R 524		RS1/10S101J
R 701		RS1/10S223J
R 702		RS1/10S223J
R 703		RS1/10S223J
R 704		RS1/10S223J
R 705		RS1/10S303J
R 706		RS1/10S303J
R 707		RS1/10S223J
R 708		RS1/10S223J
R 709		RS1/10S123J
R 710		RS1/10S123J
R 711		RS1/10S222J
R 712		RS1/10S222J
R 713		RS1/10S273J
R 714		RS1/10S183J
R 717		RS1/10S0R0J
R 718		RS1/10S0R0J
R 719		RS1/10S221J
R 721		RS1/10S474J
R 722		RS1/10S474J
R 723		RS1/10S101J
R 724		RS1/10S101J
R 725		RS1/10S101J
R 726		RS1/10S101J
R 727		RS1/10S101J
R 731		RS1/10S562J
R 732		RS1/10S562J
R 733		RS1/10S562J
R 734		RS1/10S562J
R 735		RS1/10S222J
R 736		RS1/10S473J
R 801		RS1/10S184J
R 802		RS1/10S184J
R 803		RS1/10S184J
R 831		RS1/10S271J
R 832		RS1/10S271J
R 833		RS1/10S271J
R 834		RS1/10S472J
R 835		RS1/10S472J
R 836		RS1/10S472J
R 901		RS1/10S472J
R 902		RS1/8S222J
R 907		RS1/10S153J
R 908		RS1/10S6R8J
R 909		RS1/10S103J
R 910		RS1/10S181J
R 911		RS1/10S103J
R 912		RS1/10S391J
R 914		RS1/10S221J
R 916		RS1/8S121J
R 917		RS1/8S151J
R 918		RS1/8S222J
R 919		RS1/8S222J
R 921		RS1/10S474J
R 924		RS1/10S471J
R 928		RN1/10SE1102D
R 929		RN1/10SE1801D
R 930		RS1/10S222J
R 931		RS1/10S103J
R 932		RS1/10S333J
R 933		RS1/10S333J
R 934		RS1/10S272J
R 935		RS1/10S183J
R 936		RS1/10S103J
R 937		RS1/4S101J
R 938		RS1/4S101J
R 939		RS1/10S432J
R 940		RS1/10S512J
R 950		RS1/8S272J
R 951		RS1/10S182J
R 952		RS1/10S183J

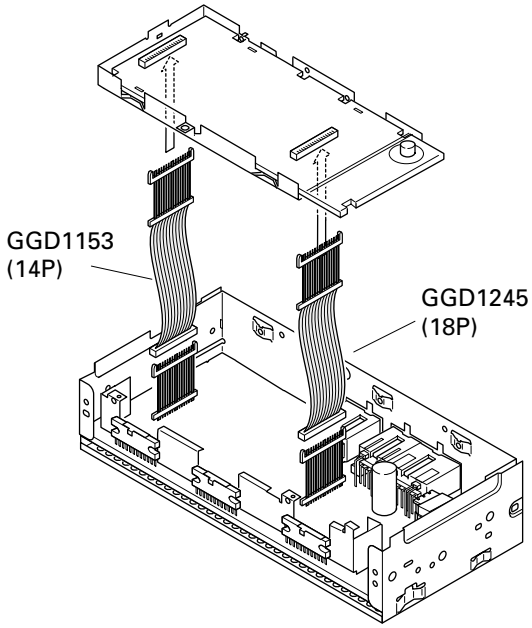
CAPACITORS

C 501		CEAS4R7M50
C 502		CEAS4R7M50
C 503		CEAS4R7M50
C 504		CEAS4R7M50
C 505		CCSQCH101J50
C 506		CCSQCH101J50
C 507		CCSQCH101J50
C 508		CCSQCH101J50
C 509		CKSQYB473K25
C 510		CKSQYB473K25
C 701		CCSQCH101J50
C 702		CCSQCH101J50
C 703		CKSQYB471K50
C 704		CKSQYB471K50
C 705		CKSQYB222K50
C 706		CKSQYB473K25
C 707		CKSQYB224K16
C 708		CKSQYB473K25
C 709		CKSQYB473K25
C 710		CKSQYB473K25
C 801		CFTNA224J50
C 802		CFTNA224J50
C 803		CFTNA224J50
C 804		CFTNA224J50
C 805		CFTNA224J50
C 806		CFTNA224J50
C 807		CFTNA224J50
C 808		CFTNA224J50
C 809		CFTNA224J50
C 810		CFTNA224J50
C 811		CFTNA224J50
C 812		CFTNA224J50
C 813		CFTNA105J50
C 814		CFTNA105J50
C 815		CFTNA105J50
C 816		CEAS100M50
C 817		CEAS100M50
C 818		CEAS100M50
C 822		CEHAQ221M16
C 823		CKSQYB104K25

		=====Circuit Symbol and No.	===Part Name	Part No.
	C	824		CEHAQ221M16
	C	825		CKSQYB104K25
	C	826		CEHAQ221M16
	C	827		CKSQYB104K25
	C	901	6800µF/16V	CCH1390
	C	902		CEAT1R0M50
	C	903		CEAT471M25
	C	904		CKSQYB473K25
	C	905		CEAT221M10
	C	906		CEAS1R0M50
	C	907	100µF/10V	CCH1282
	C	908	100µF/10V	CCH1282
	C	909		CKSQYB473K25
	C	910		CEAT221M10
	C	911		CKSQYB473K25
	C	912		CEHAQ1R0M50
	C	913	100µF/10V	CCH1282
	C	914		CKSQYB473K25
	C	915		CKSQYB103K50
	C	916		CKSQYB103K50
	C	917		CKSQYB473K25
	C	918		CKSQYB224K25
	C	919		CKSQYB473K25
	C	920		CKSQYB103K50
	C	921		CEAT1R0M50
	C	922		CKSQYB473K25
	C	923		CEAT4R7M50
	C	924		CKSQYB471K50
	C	925		CKSQYB104K25
	C	928		CSZSR3R3M35
	C	930		CKSQYB392K50
	C	931		CKSQYB392K50
	C	932		CKSQYB392K50
	C	933		CKSQYB392K50
	C	934		CKSQYB392K50
	C	935		CKSQYB392K50
	C	936		CKSQYB392K50
	C	937		CKSQYB392K50
	C	938		CKSQYB392K50
	C	939		CKSQYB392K50
	C	940		CKSQYB392K50
	C	941		CKSQYB392K50
	C	942		CKSQYB392K50
	C	943		CKSQYB392K50
	C	944		CKSQYB392K50
	C	945		CKSQYB392K50
	C	952		CKSQYB221K50
	C	953		CKSQYB221K50
	C	954		CKSQYB221K50
	C	955		CKSQYB221K50
	C	960		CKSQYB221K50
	C	961		CKSQYB221K50

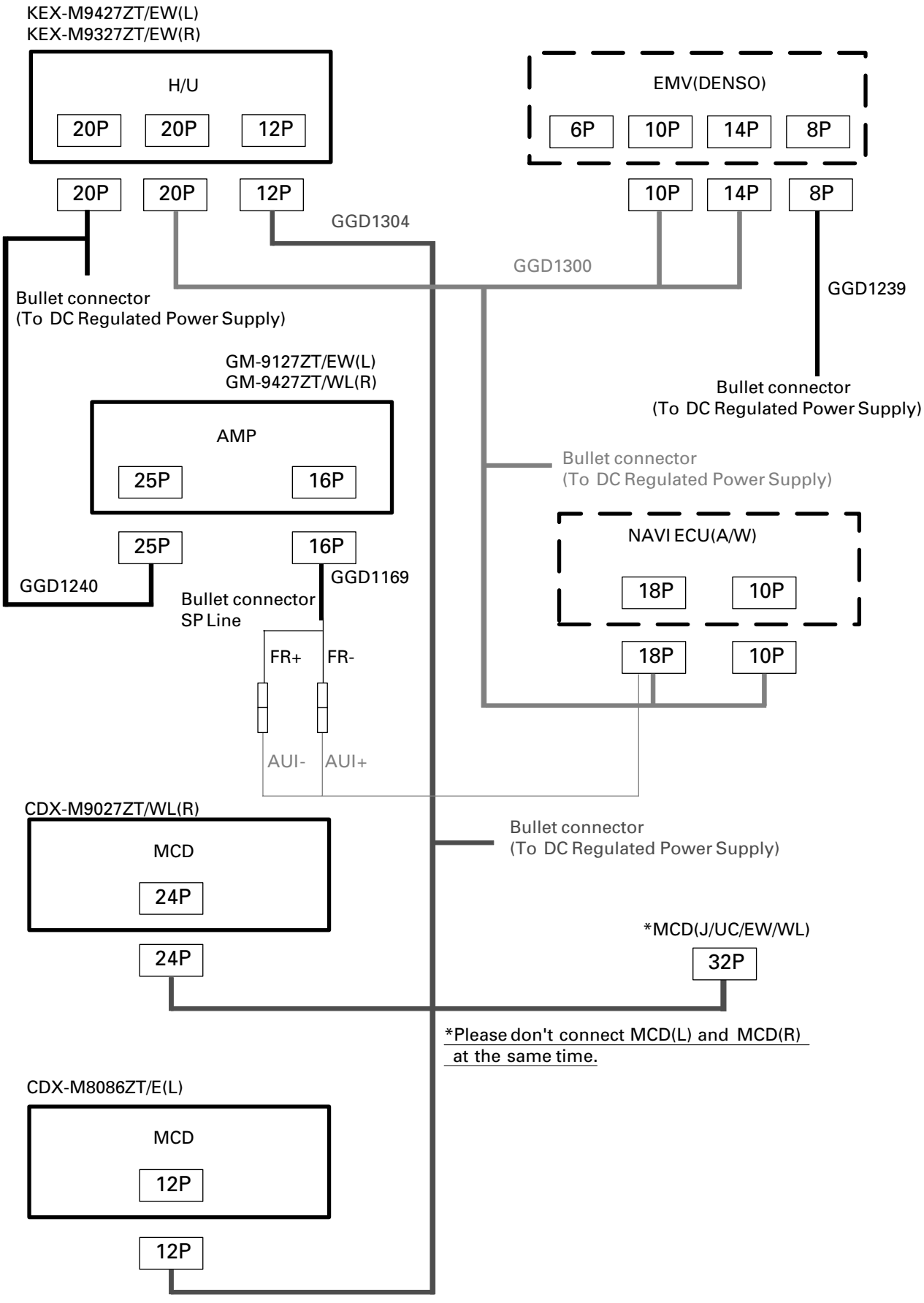
6. ADJUSTMENT

● Jigs

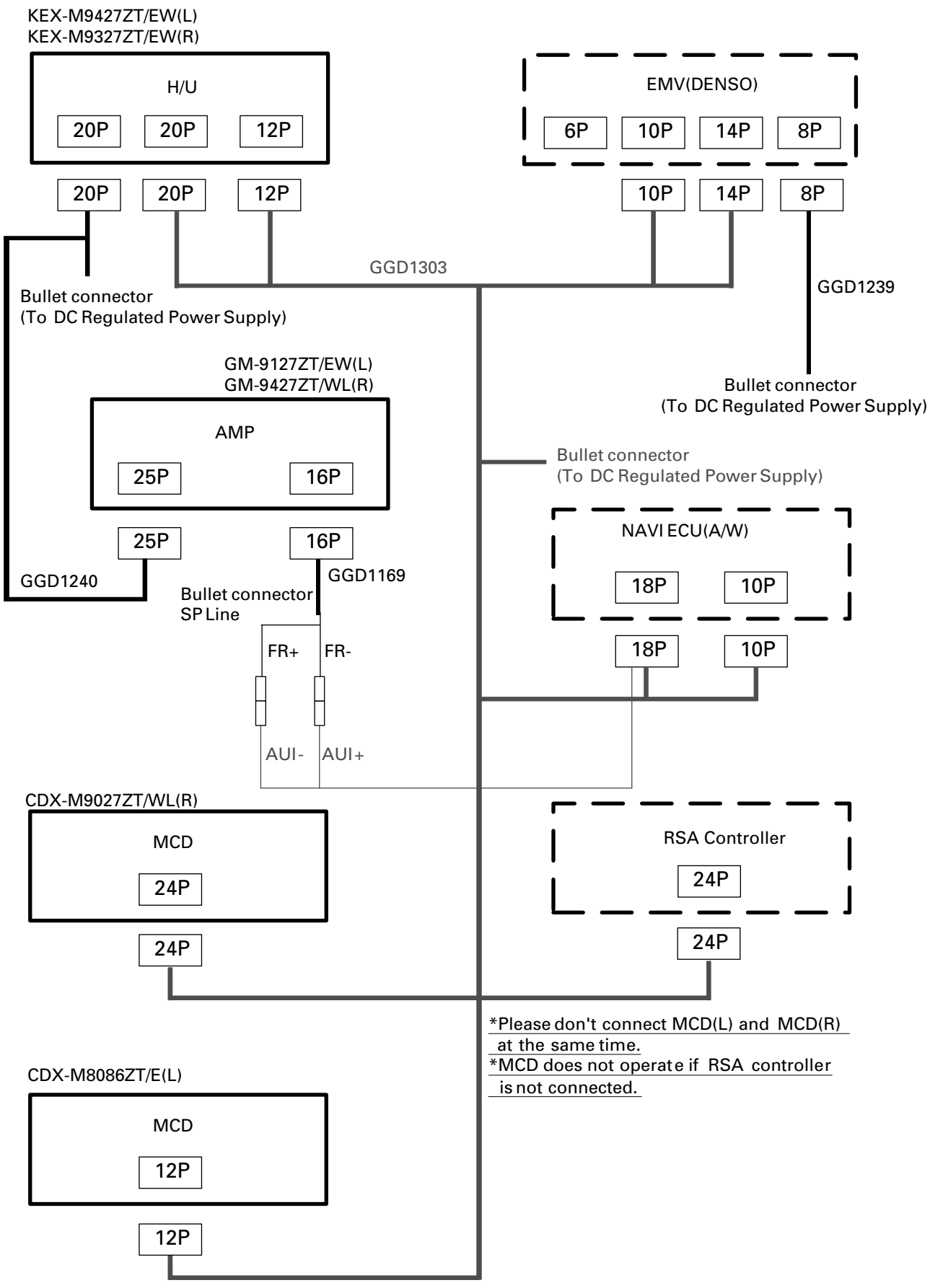


5 6 7 8

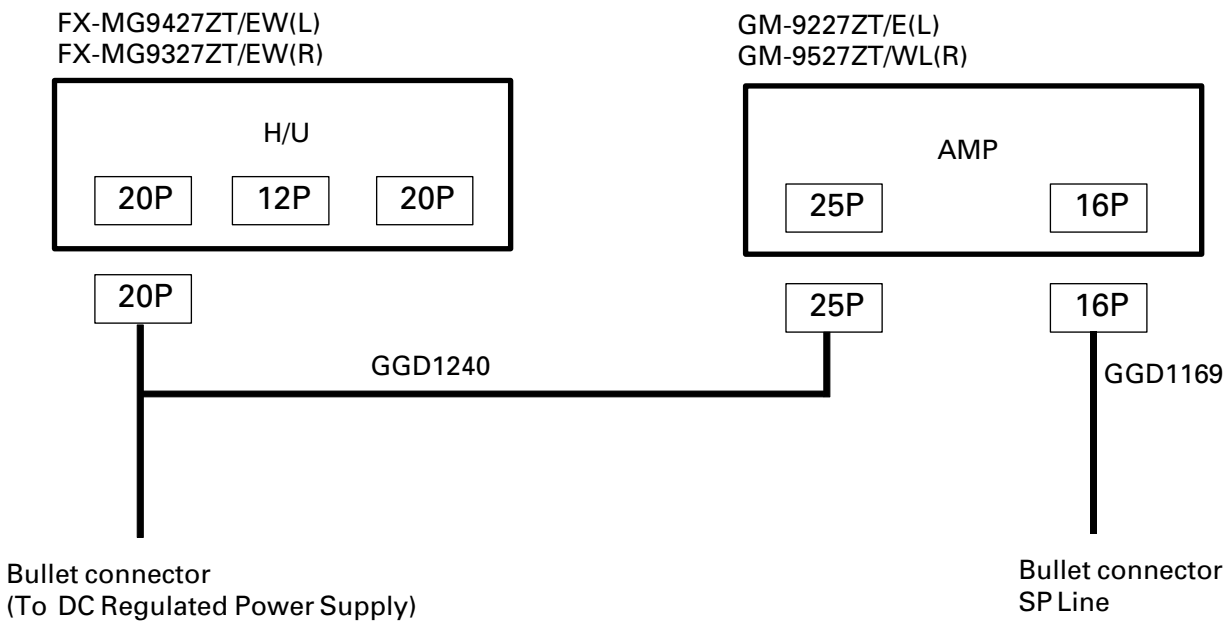
● Connection Diagram



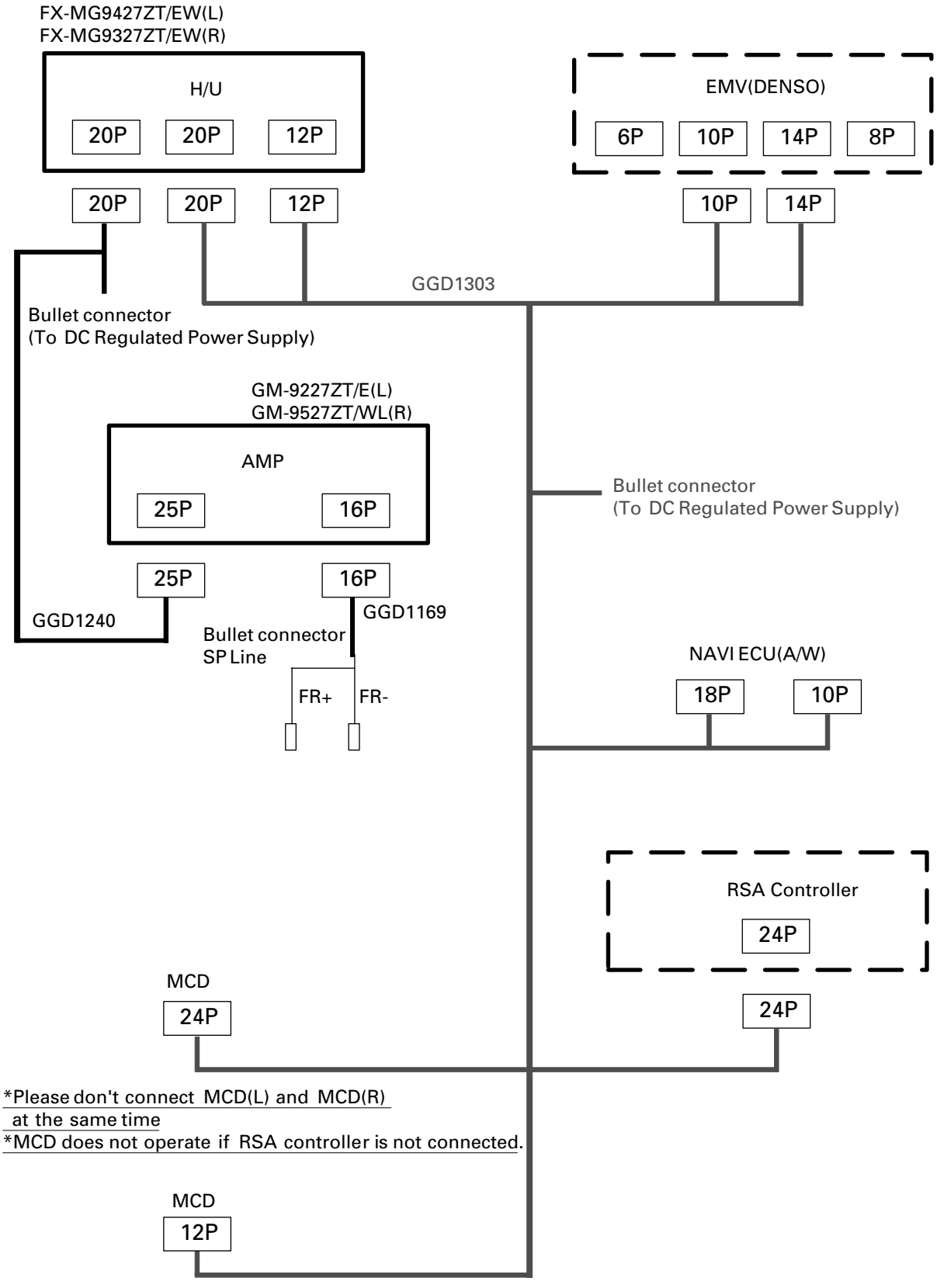
● Connection Diagram



● Connection Diagram



● Connection Diagram



6.1 ASL SECTION ADJUSTMENT

Preset conditions

1. Set VR401 around the center of the adjustable range.

Input (MIC)	Output (Pin 74 : test point "ASL1")	Adjustment	
		Adj.point	Spec.
By using the jig(CAN-906,CAN-912), apply a sine wave of 100dBSPL voltage directly to the MIC terminal. (Close up as much as possible.)	Observe the output at **ALS1** on a audio analyzer (Corresponding to analog meter 7Hz).	VR401	100dBSPL 314±28mV

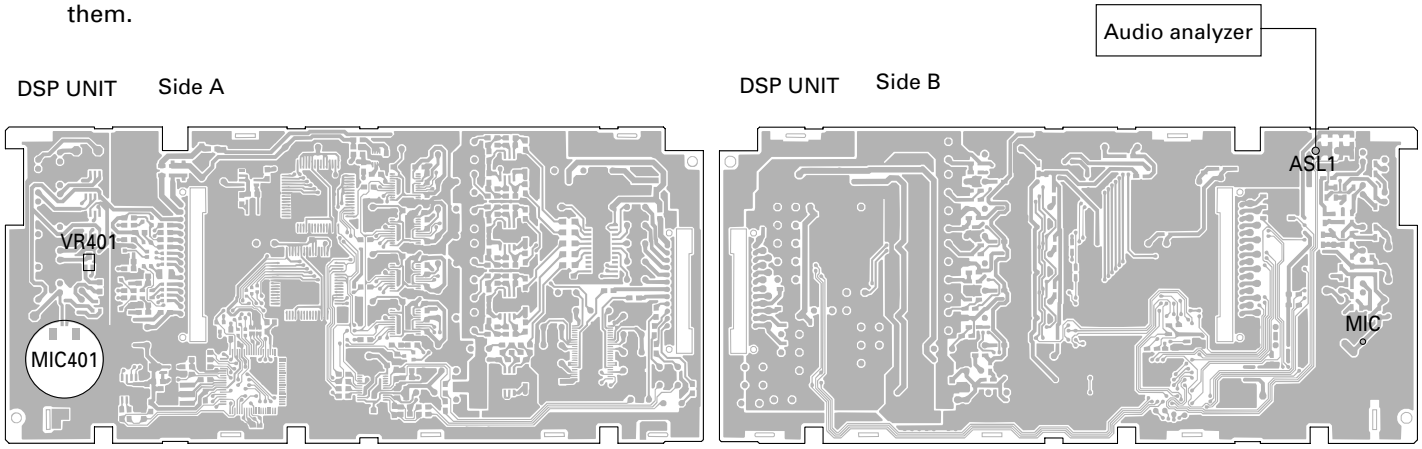
To connect the Amp unit and the DSP unit, use Jig GGD1153 and GGD1245.

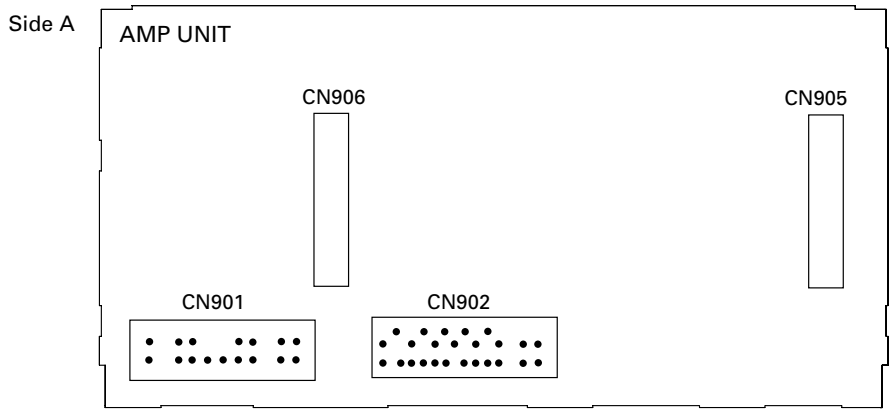
Caution:

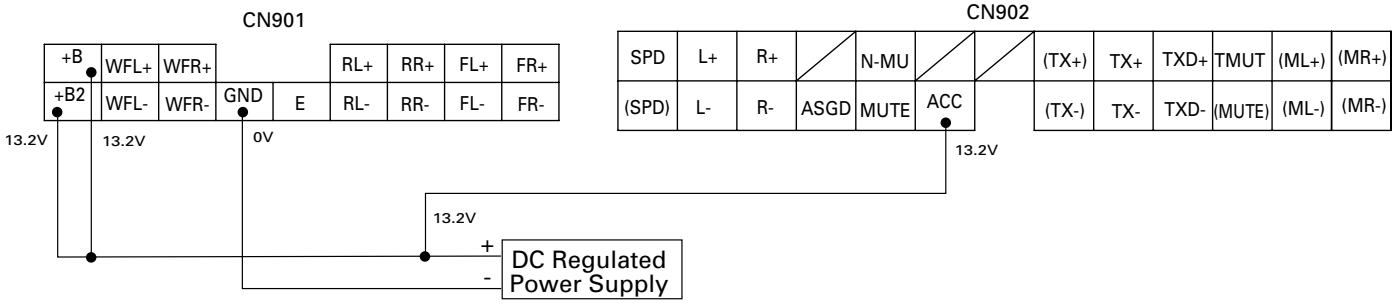
1) Before starting measurement, be sure to perform the initial check for the ASL adjustment jig. (The sound pressure level should be 100dBSPL at the sound emission section.)
2) Note that it may take 20 seconds or more to obtain waveforms, in some cases. Do not switch off the jig soon after starting measurement.

Conditions:

1) This adjustment is sensitive to external shocks or wind. During adjustment, keep away the product and jig from them.







7. GENERAL INFORMATION

7.1 DIAGNOSIS

7.1.1 DISASSEMBLY

● **Removing the Shield Case (Fig.1)**

1 Remove the two screws and then remove the Shield Case.

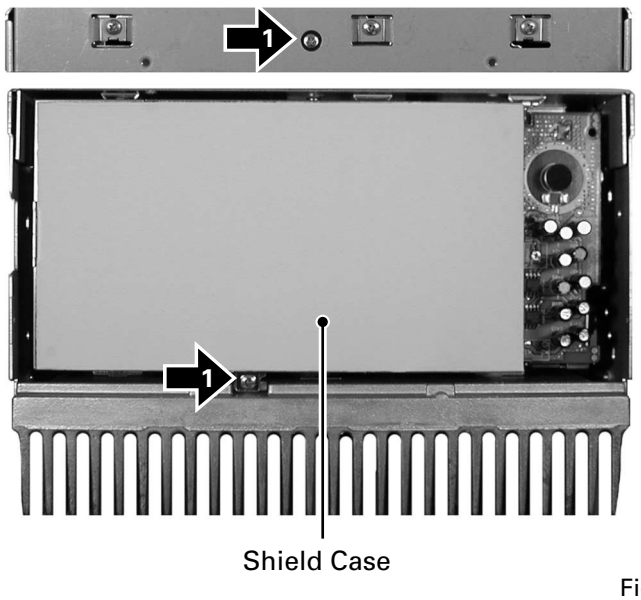


Fig.1

● **Removing the DSP Uint (Fig.2)**

1 Remove the five screws and then remove the DSP Unit.

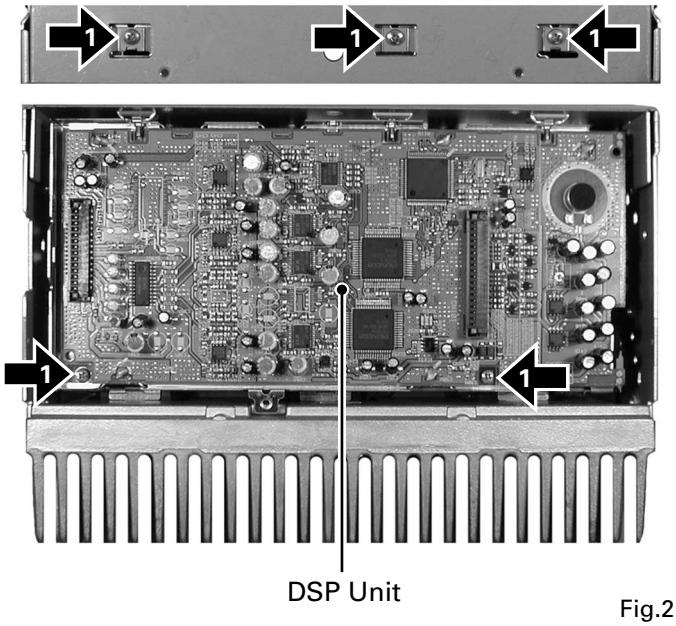


Fig.2

● **Removing the Amp Uint (Fig.3)**

1. Remove the six screws.
2. Remove the two screws and then remove the Heat Sink.
3. Remove the five screws and then remove the Amp Unit.

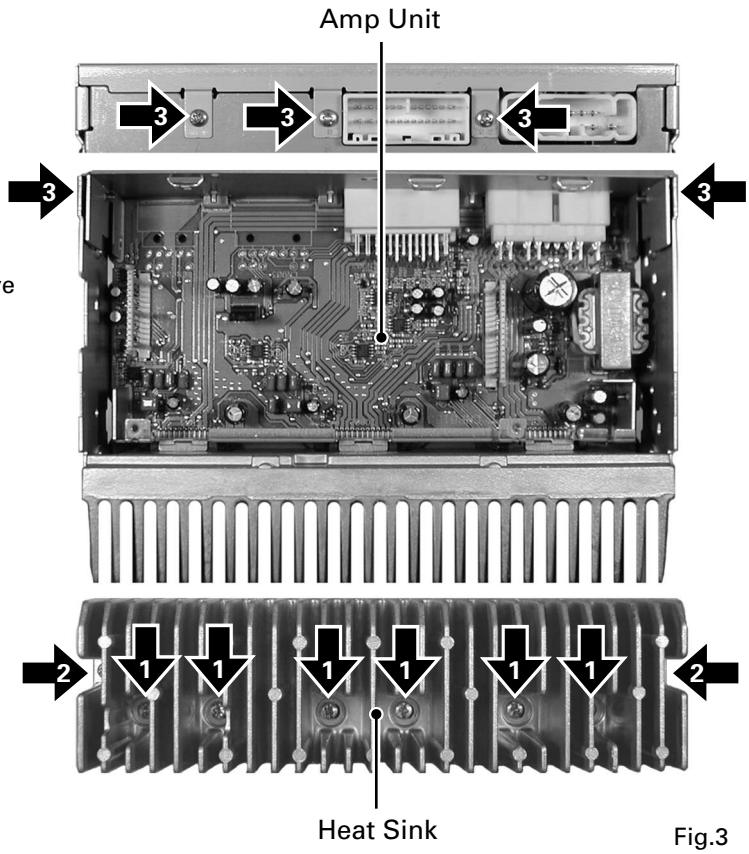
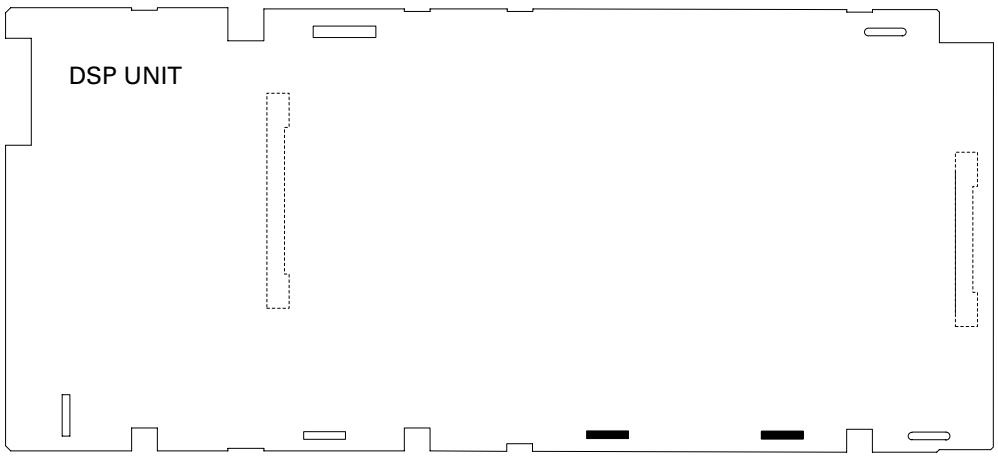


Fig.3

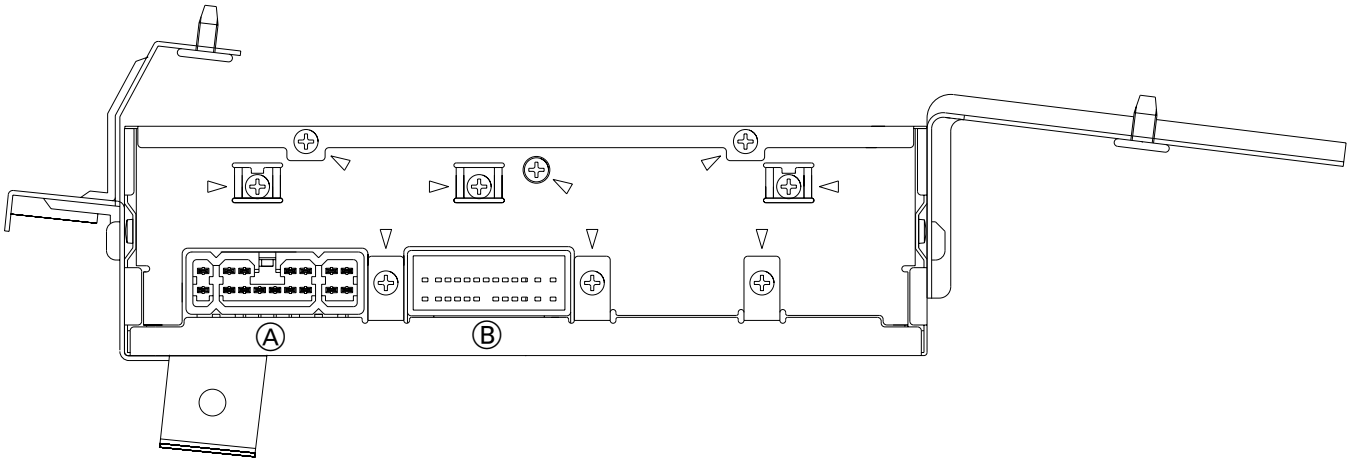
● "Pawl bending and soldering" points of the pawls for securing the base plate of a shielded case (bottom case).

• The portion marked by ▬ is a point in which pawl bending and soldering are not performed. (Faulty pawl bending point)
• The portion marked by ▭ is a point in which pawl bending and soldering are necessary.

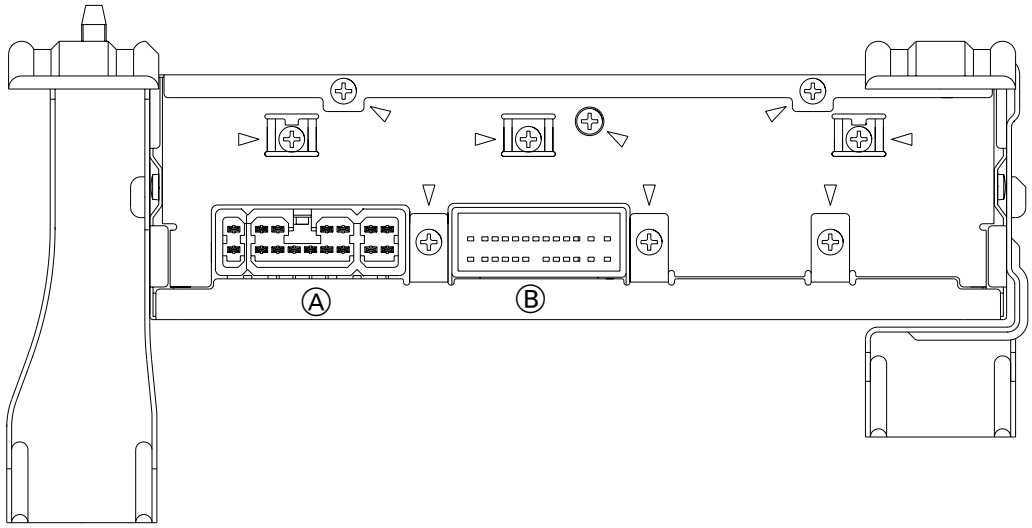


7.1.2 CONNECTOR FUNCTION DESCRIPTION

● GM-9127ZT/EW



● GM-9227ZT/E



Ⓐ

+B	WFL+	WFR+			RL+	RR+	FL+	FR+
+B2	WFL-	WFR-	GND	E	RL-	RR-	FL-	FR-

Ⓑ

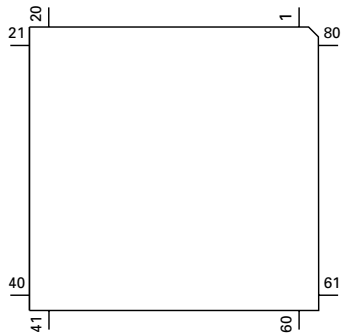
SPD	L+	R+		N-MU			(TX+)	TX+	TXD+	TMUT	(ML+)	(MR+)
(SPD)	L-	R-	ASGD	MUTE	ACC		(TX-)	TX-	TXD-	(MUTE)	(ML-)	(MR-)

7.2 IC

● Pin Functions (PD5724B)

Pin No.	Pin Name	I/O	Format	Function and Operation
1	MUTE	O	C	Mute output
2	VCS2	O	C	SN761029 strobe output
3	VCS1	O	C	PM0017AM strobe output
4	VDT	O	C	Data output for electronic volume
5	VCK	O	C	Clock output for electronic volume
6	CVNSS			Connect to VSS
7	MODEL0	I		R handle /L handle select input
8	NC			Not used
9	RESET	I		Reset input
10	XOUT	O		Crystal oscillating element connection pin
11	VSS			GND
12	XIN	I		Crystal oscillating element connection pin
13	VCC			5V
14	NMI			Connect to VCC
15	SPEED	I		Speed sensor pulse input
16	BSENS	I		Back up power sense input
17	ASENS	I		ACC power sense input
18	AVCINT	I		AVC-LAN data input
19	NC			Not used
20	AVCPW	O	C	AVC-LAN driver power supply output
21	PEE	O	C	Beep tone output
22	AVCIN	I		AVC-LAN data input
23	AVCOUT	O	C	AVC-LAN data output
24	DSPOUT	O	C	DSPI/F serial data output
25	DSPIN	I		DSPI/F serial data input
26	DSPCK	O	C	DSPI/F serial clock output
27	TESTIN	I		Test program start input
28	TSOUT	O	C	Test serial data output
29	TSIN	I		Test serial data input
30	TSCK	I		Test serial clock input
31	SMUTEIN	I		System mute input
32-62	NC			Not used
63	POS	I		POS disable terminal
64	CALIB	O	C	Power IC control output
65	PWSENS	I		Power IC heat sense input
66	SYSPW1	O	C	System power output
67	DSPRST	O	C	DSP hard reset output
68	DSPERR	I		DSP error detect input
69	DSPCS2	O	C	TC9332F chip select 2
70	DSPCS1	O	C	TC9332F chip select 1
71	DSPACK	I		DSP-IC ACK input
72	DSPCD	O		DSP command/data output
73	DPD	O	C	AD/DAC calibration output
74	ASLIN1	I		Difference of noise and signal input 1
75	AVSS			VSS
76	ASLIN2	I		Difference of noise and signal input 2
77	VREF	I		A/D converter reference voltage input
78	AVCC			VCC
79	NAVMUTE	I		Navigation mute input
80	DSPMUTE	O	C	DSP mute output

*PD5724B

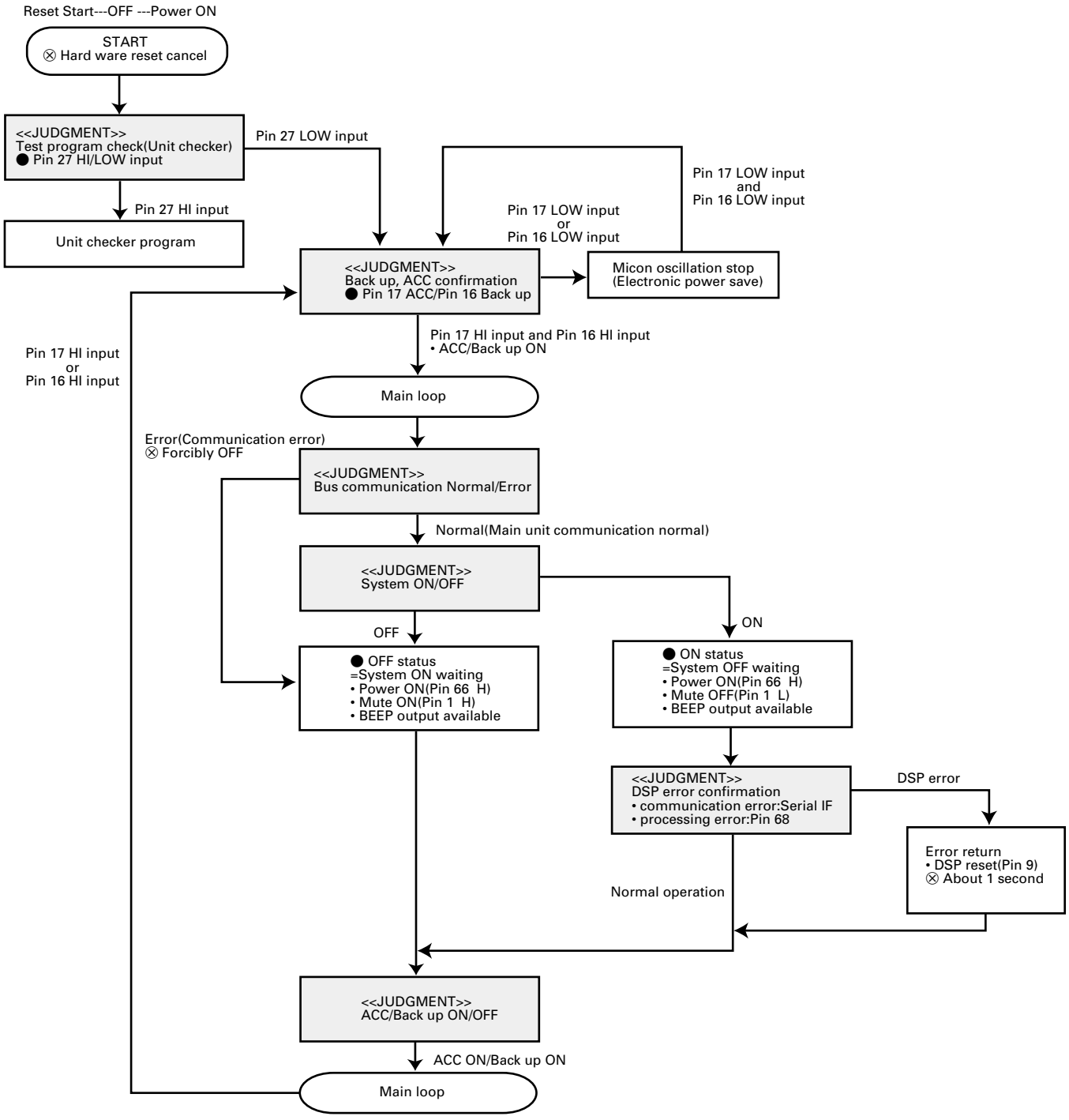


IC's marked by * are MOS type.
Be careful in handling them because they are very liable to be damaged by electrostatic induction.

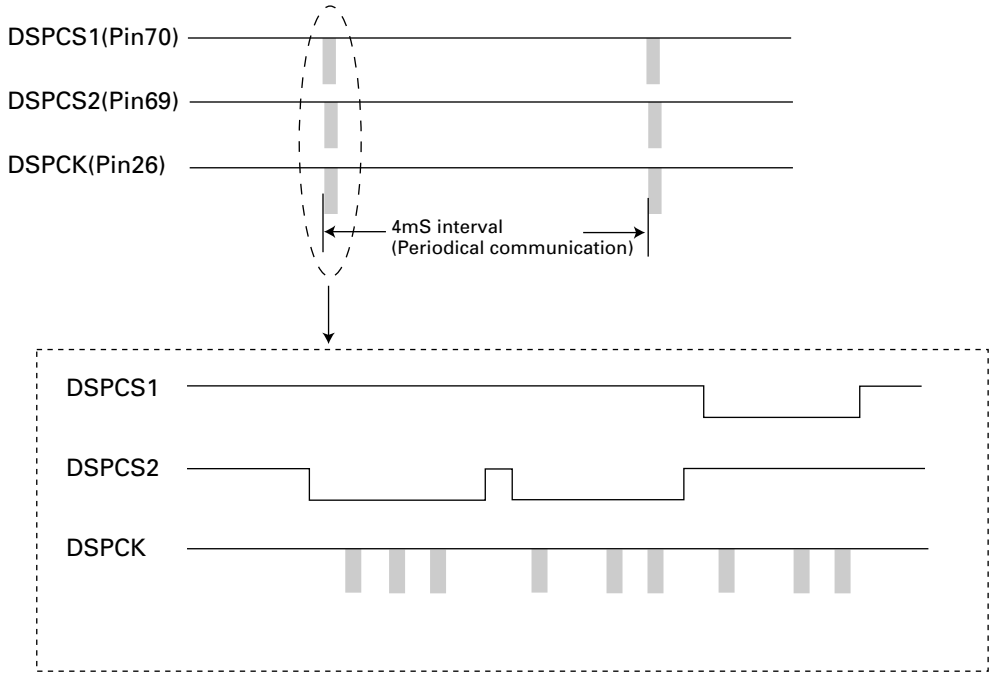
Format	Meaning
C	C MOS

7.3 EXPLANATION

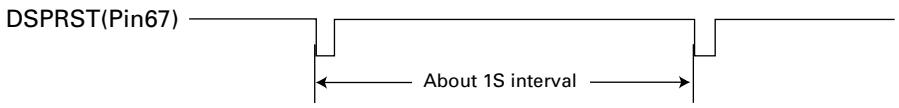
7.3.1 OPERATIONAL FLOW CHART



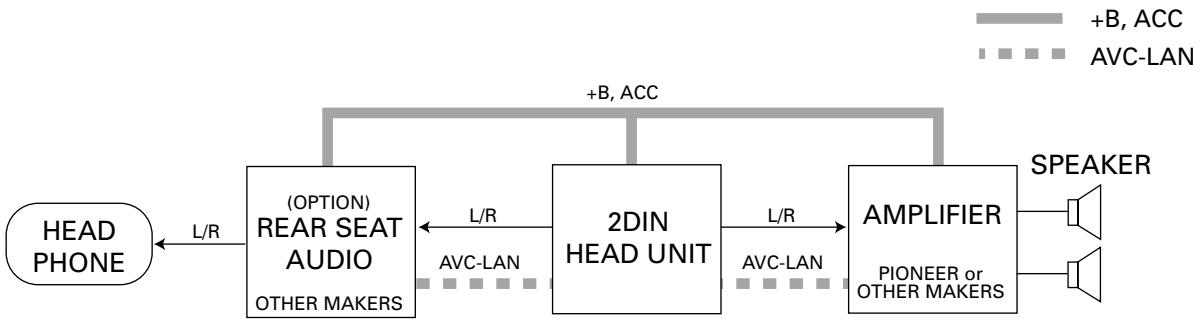
● DSP error check (Normal)

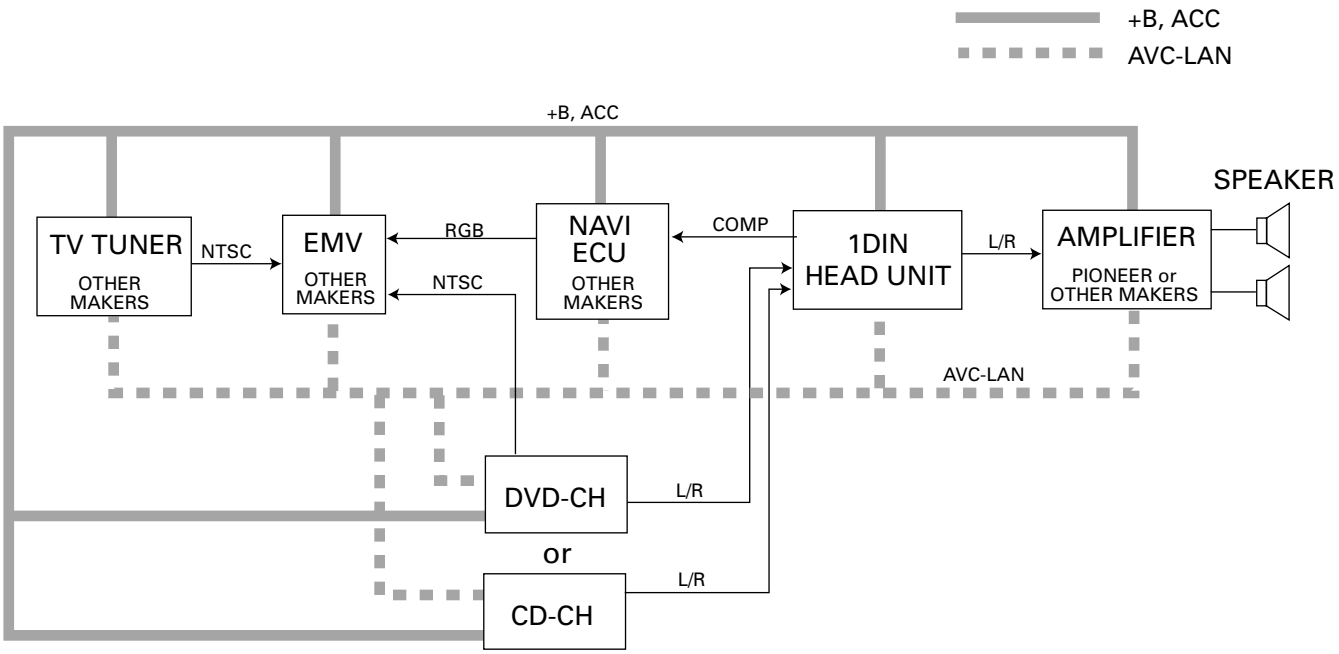


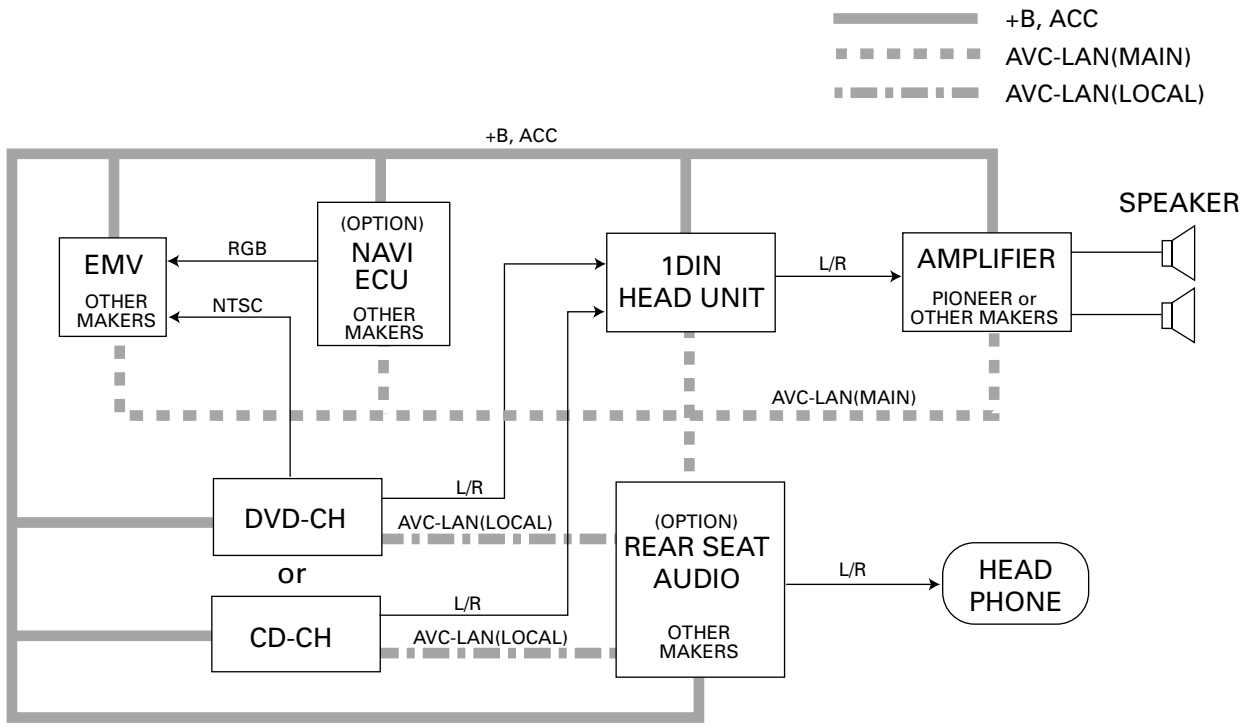
● DSP error check ---Error continuation

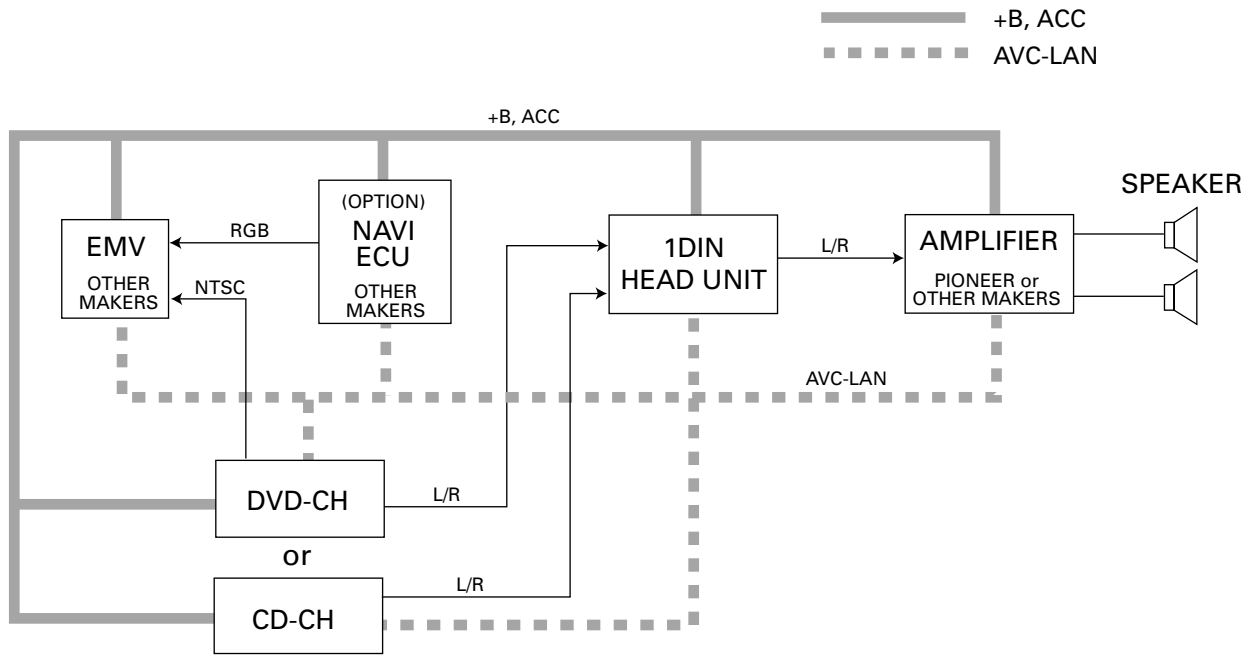


7.3.2 SYSTEM BLOCK DIAGRAM









8. OPERATIONS

There is no information to be shown in this chapter.