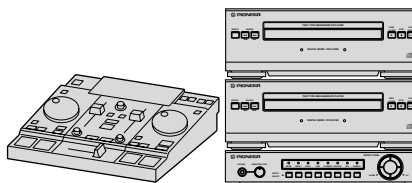


Service Manual

PIONEER®
The Art of Entertainment



ORDER NO.
RRV1936

REMIX MINI COMPONENT SYSTEM XS-R9

- This product is a system component. It combined the following components.

REMIX EFFECTOR..... EF-R9(S) /ZY
REMIX CONTROL MIXER MX-R9(S) /ZY
COMPACT DISC PLAYER PD-R9(S) /ZY

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Type	Model	Power Requirement	Remarks
	XS-R9		
ZY	○	DC power supplied from other system component	

- This product is a system component.
For the system composition, refer to the service manual RRV1937 for SX-R9/MY.
- This product does not operate normally by itself. Please connect it to the STEREO TUNER AMPLIFIER SX-R9/MY, for adjustment and operation inspection. Otherwise damage may result.

CONTENTS

1. SAFETY INFORMATION	2	7. GENERAL INFORMATION	52
2. EXPLODED VIEWS AND PARTS LIST	3	7.1 PARTS	52
3. SCHEMATIC DIAGRAM	10	7.1.1 IC	52
4. PCB CONNECTION DIAGRAM	30	7.2.2 DISPLAY	61
5. PCB PARTS LIST	42	7.2 DIAGNOSIS	62
6. ADJUSTMENT	46	7.2.1 DISASSEMBLY	62
		7.2.2 TEST MODE	65
		7.3 BLOCK DIAGRAM	74
		8. PANEL FACILITIES AND SPECIFICATIONS	77

PIONEER ELECTRONIC CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153-8654, Japan
PIONEER ELECTRONICS SERVICE, INC. P.O. Box 1760, Long Beach, CA 90801-1760, U.S.A.
PIONEER ELECTRONIC (EUROPE) N.V. Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 501 Orchard Road, #10-00 Lane Crawford Place, Singapore 0923
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T - IZY MAR. 1998 Printed in Japan

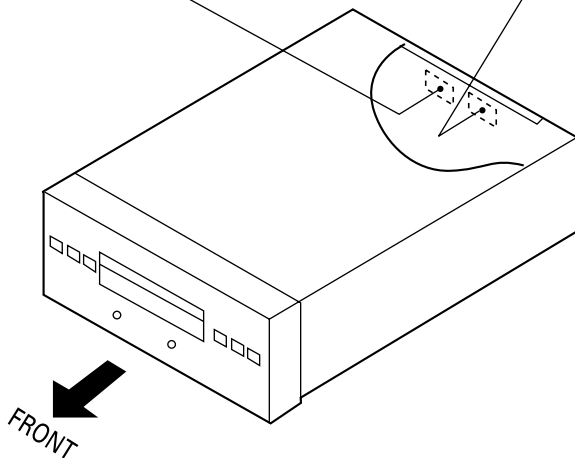
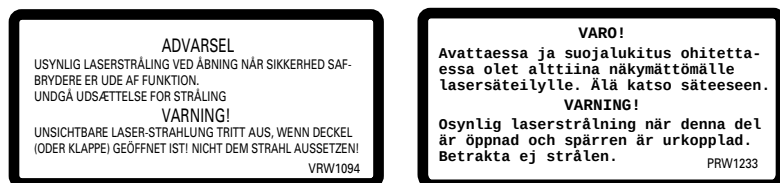
1. SAFETY INFORMATION

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.

— IMPORTANT —
THIS PIONEER APPARATUS CONTAINS
LASER OF CLASS 1.
SERVICING OPERATION OF THE APPARATUS
SHOULD BE DONE BY A SPECIALLY
INSTRUCTED PERSON.

■ LABEL CHECK (For PD-R9(S) /ZY)

— LASER DIODE CHARACTERISTICS —
MAXIMUM OUTPUT POWER : 5 mw
WAVELENGTH : 780-785 nm



Additional Laser Caution

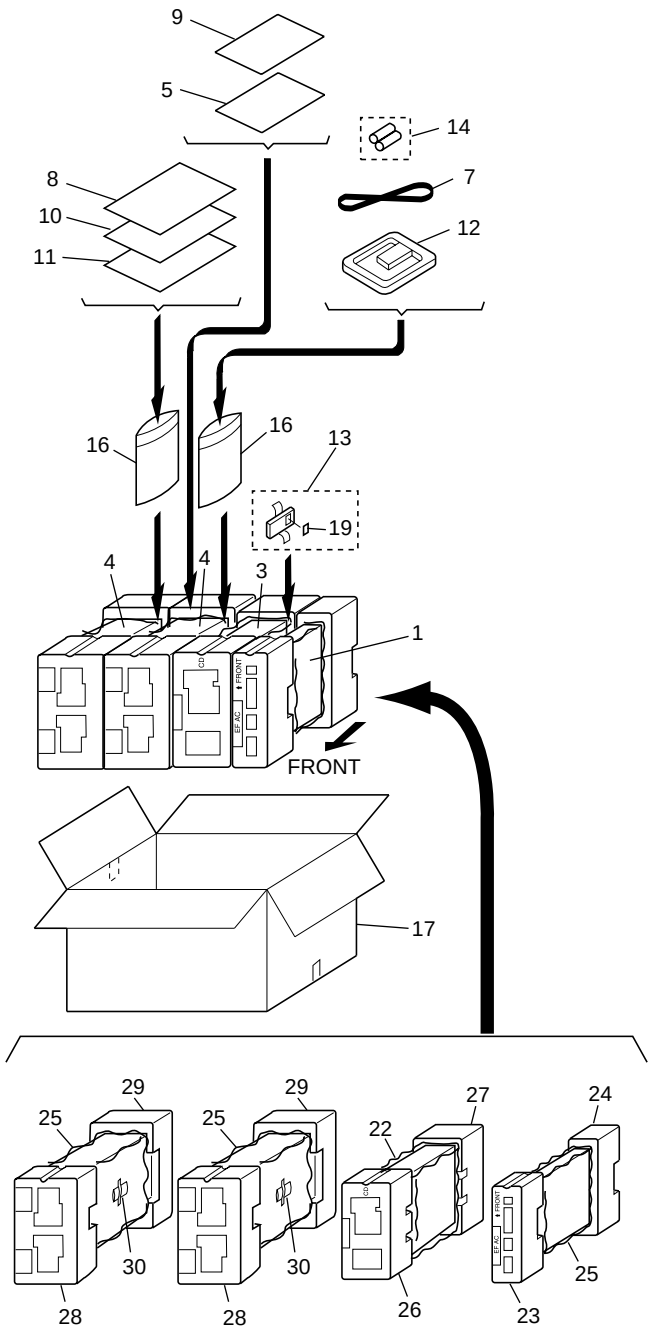
- Laser Interlock Mechanism**
The position of the switch (S610) for detecting loading state is detected by the system microprocessor, and the design prevents laser diode oscillation when the switch (S610) is not on CLMP terminal side (CLMP signal is OFF or high level.). Thus, the interlock will no longer function if the switch (S610) is deliberately set to CLMP terminal side (low level).
The interlock also does not function in the test mode *.
Laser diode oscillation will continue, if pin 1 of M51593FP (IC101) on the PRE-AMP BOARD ASSY mounted on the Pickup Assy is connected to GND, or pin 19 is connected to low level (ON).
- When the cover is opened, close viewing of the objective lens with the naked eye will cause exposure to a Class 1 laser beam.

* : Refer to page 47.

2. EXPLODED VIEWS AND PARTS LIST

NOTES: ● Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
 ● The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
 ● Screws adjacent to $\blacktriangledown$ mark on the product are used for disassembly.

2.1 PACKING

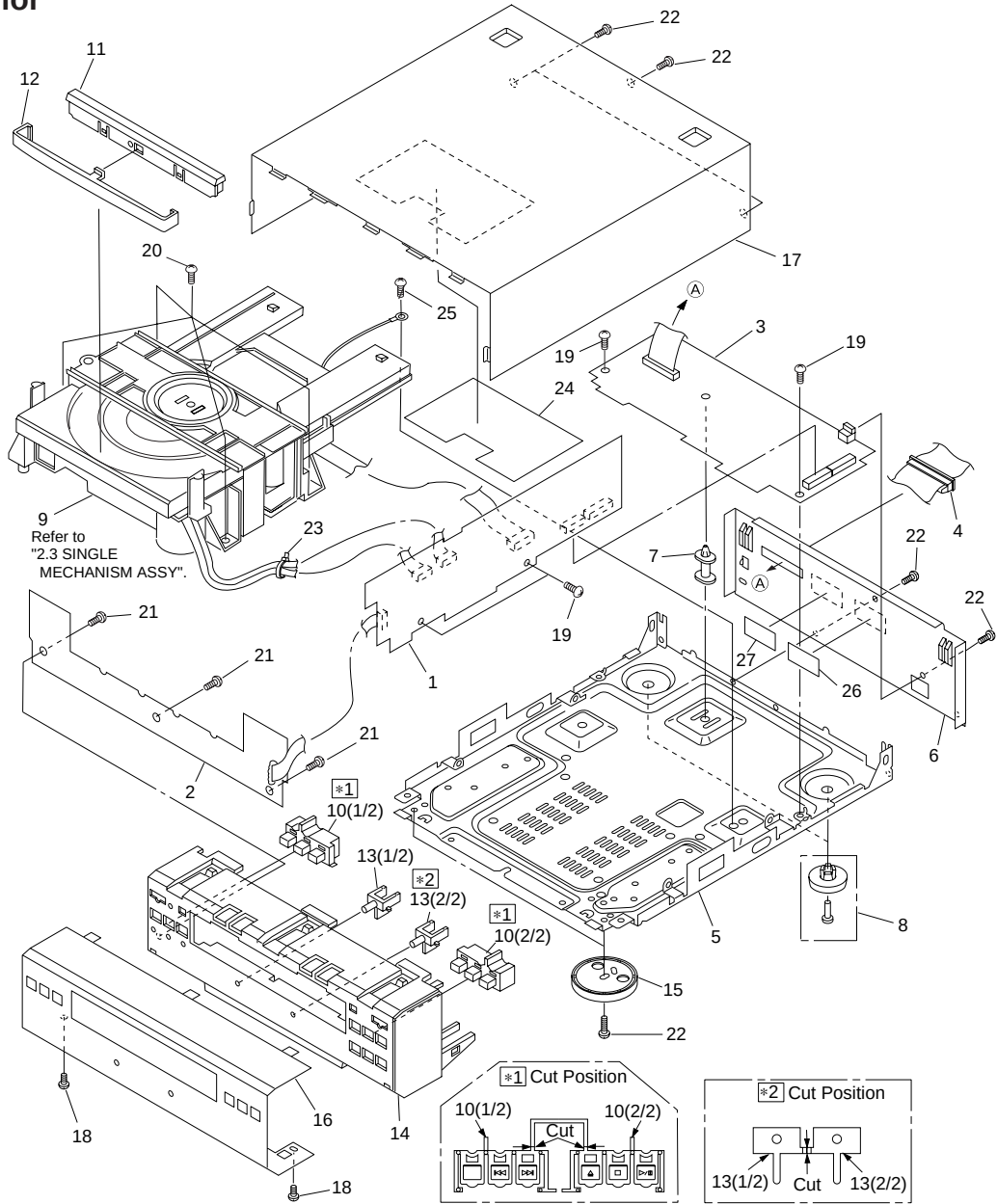


● PACKING PARTS LIST

Mark	No.	Description	Part No.
NSP	1	Remix Effector	EF-R9(S)
	2		
NSP	3	Remix Control Mixer	MX-R9(S)
NSP	4	Compact Disc Player	PD-R9(S)
	5	Caution Sheet	ARM7034
	6		
	7	FM Antenna	ADH7010
	8	Operating Instructions (German/Italian)	ARC7201
NSP	9	Warranty Card	ARY7008
	10	Operating Instructions (Spanish/Dutch)	ARC7202
	11	Operating Instructions (English/French)	ARE7168
	12	AM Loop Antenna	ATB7009
	13	Remote Control Unit (CU-SX123)	AXD7148
NSP	14	Dry Cell Battery (R6P,AA)	VEM-013
	15		
	16	Poly. Bag (0.03×230×340)	Z21-038
	17	Master Carton	AHD7613
	18		
	19	Battery Cover	AZA7219
	20		
	21		
	22	Mirror Mat (500×650×0.5)	AHG7050
	23	Pad F EF	AHA7189
	24	Pad R EF	AHA7190
	25	Mirror Mat	DHL1050
	26	Pad L	AHA7191
	27	Pad R	AHA7192
	28	Pad F CD	AHA7187
	29	Pad R CD	AHA7188
NSP	30	Silicagel	AEN7001

2.2 COMPACT DISC PLAYER [PD-R9(S)]

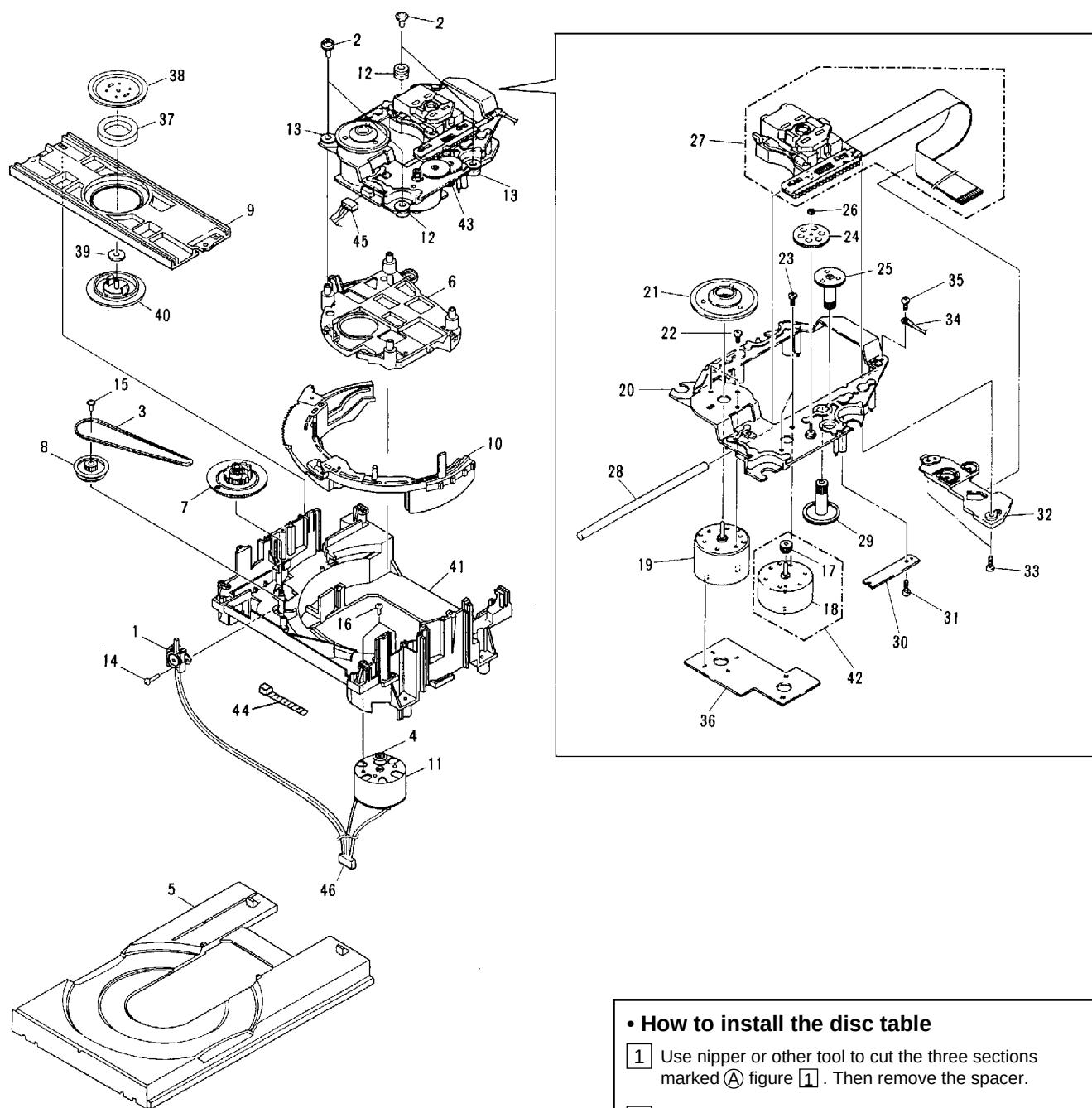
2.2.1 Exterior



● COMPACT DISC PLAYER PARTS LIST

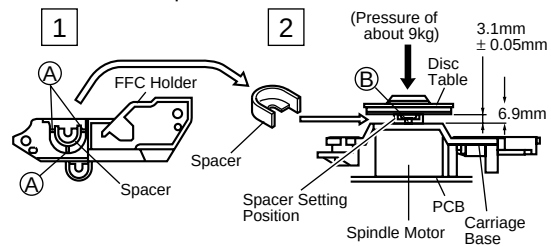
Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
NSP	1	MAIN Assy	AWU7142	16	AL Panel CD	ANB7105	
	2	FRONT Assy	AWZ8889	17	Bonnet MD,CD,TC	AZN7701	
	3	REAR Assy	AWU7144	18	Screw	BBT30P080FZK	
	4	Cord With Plug	ADE7025	19	Screw	BBZ30P060FCC	
	5	Chassis MD,CD,TC	ANA7063	20	Screw	BBZ30P100FMC	
NSP	6	Rear Panel CD	ANC7685	21	Screw	PPZ30P080FMC	
NSP	7	PCB Spacer	AEC1371	22	Screw	VBZ30P080FZK	
	8	Elastic Foot	AEC7114	23	Binder (SKB-90BK)	Z09-056	
NSP	9	SINGLE MECHANISM Assy	AXA7058	24	Rubber Sheet	AEB7107	
	10	Play Button CD	AAD7412	25	Screw	PDZ30P050FMC	
	11	Tray Panel	AAK7469	26	Caution Label HE	PRW1233	
	12	Tray Cap CD	AAK7470	27	Caution Label	VRW1094	
	13	LED Lens CD,TCA	AAK7472				
	14	Panel Base CDTC	AMB7461				
	15	Insulator Assy	AMR7189				

2.2.2 Single Mechanism Assy



• How to install the disc table

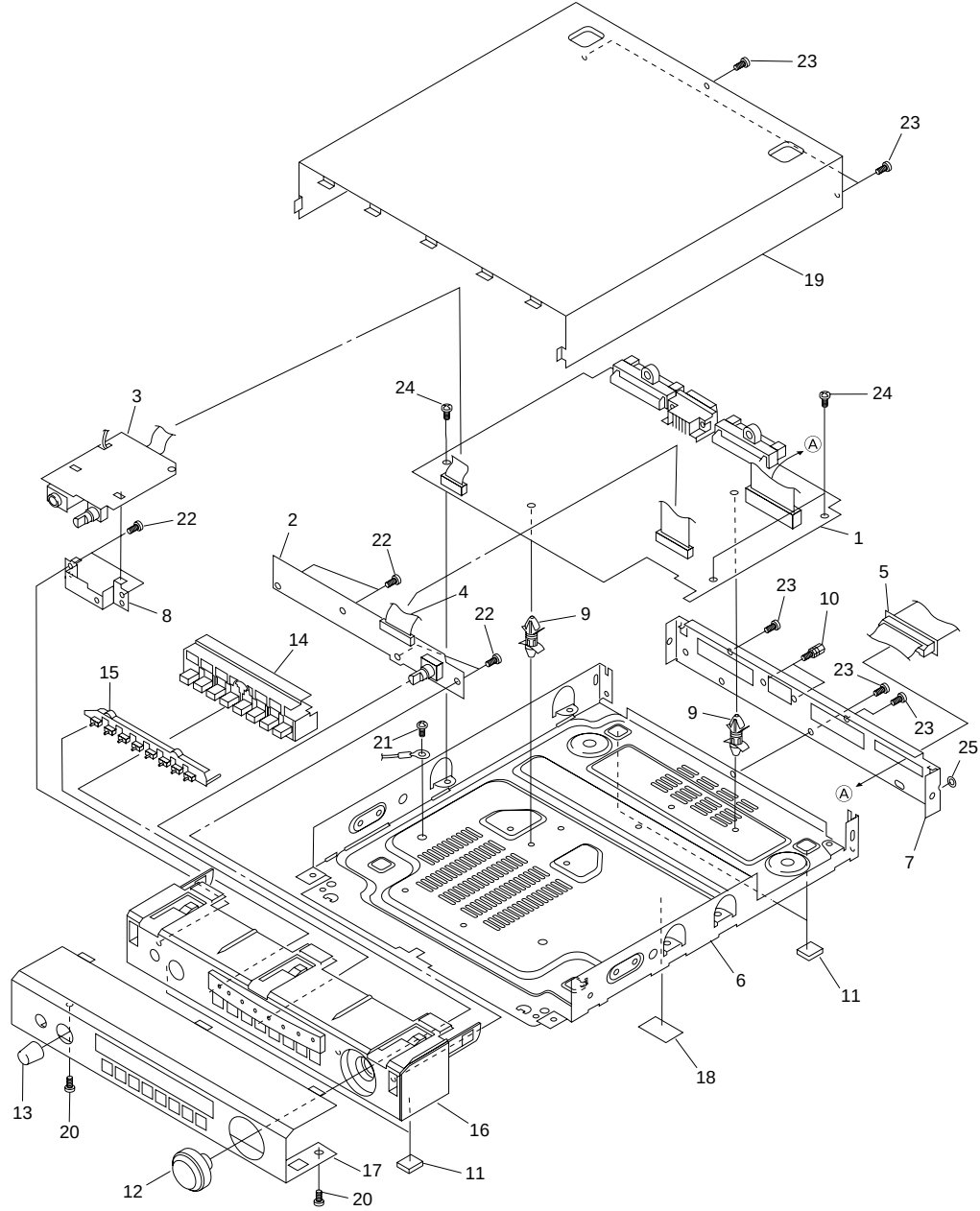
- 1 Use nipper or other tool to cut the three sections marked (A) figure 1. Then remove the spacer.
- 2 While supporting the spindle motor shaft with the stopper, put spacer on top of the motor base (angled so it doesn't touch section (B)), and stick the disc table on top (takes about 9 kg pressure). Take off the spacer.



● SINGLE MECHANISM ASSY PARTS LIST

Mark	No.	Description	Part No.
	1	Lever Switch	DSK1003
	2	Screw	PBA1048
	3	Rubber Belt	PEB1193
	4	Motor Pulley	PNW1634
	5	Tray Black V	PNW2455
	6	Float Base	PNW2032
	7	Drive Gear 2	PNW2369
	8	Gear Pulley	PNW2034
	9	Clamper Base	PNW2375
	10	Clamp Cam	PNW2364
	11	DC Motor/0.75W	PXM1010
	12	Float Rubber B	REB1287
	13	Float Rubber G	REB1288
	14	Screw	BPZ26P060FMC
	15	Screw	Z39-019
	16	Screw	PMZ26P040FMC
	17	Pinion Gear	PNW2055
	18	DC Motor (CARRIAGE)	PXM1027
	19	D.C. Motor Assy (SPINDLE)	PEA1235
	20	Carriage Base	PNW2699
	21	Disc Holder	PNW1608
	22	Screw	JFZ20P030FNI
	23	Screw	JFZ17P025FZK
	24	Gear 3	PNW2054
	25	Gear 2	PNW2053
	26	Washer	WT12D032D025
	27	Pickup Assy	PEA1291
	28	Guide Bar	PLA1094
	29	Gear 1	PNW2052
	30	Gear Stopper	PNB1303
	31	Screw	BPZ20P060FMC
	32	FFC Holder	PNW2057
	33	Screw	BPZ26P100FMC
	34	Earth Lead Unit	PDF1104
	35	Screw	BBZ26P060FMC
	36	MECHANISM BOARD Assy	PWX1192
	37	Clamp Magnet	PMF1014
	38	Yoke	PNB1216
NSP	39	H Rubber	PEB1249
	40	Clamper S	PNW1609
	41	Loading Base	AMR7190
	42	D.C. Motor Assy (CARRIAGE)	PEA1246
NSP	43	SERVO MECHANISM Assy	AXA7017
	44	Binder	Z09-056
	45	Connector Assy (4P)	RDE1043
	46	Connector Assy (5P)	PDE1239

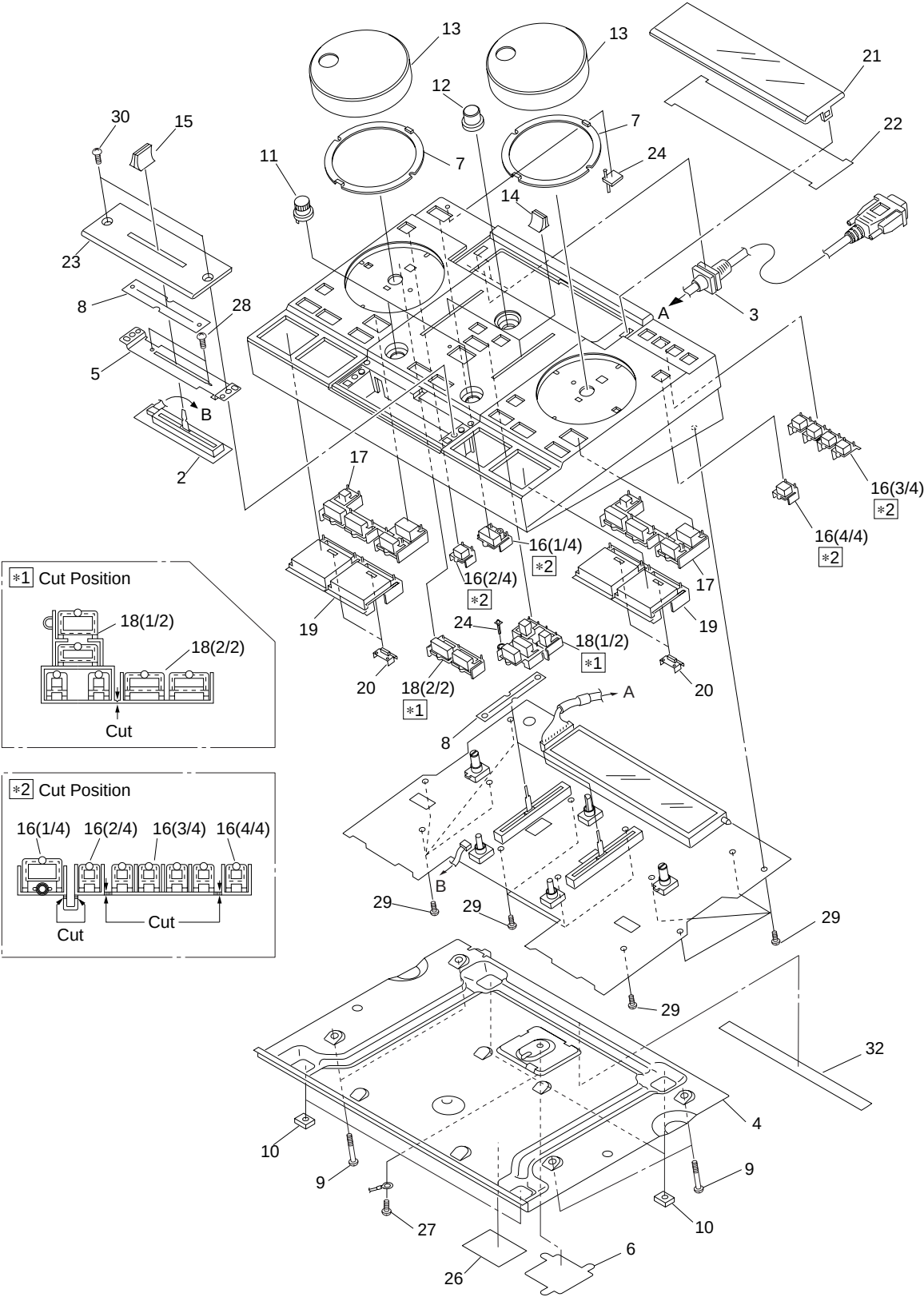
2.3 REMIX EFFECTOR [EF-R9(S)]



● REMIX EFFECTOR PARTS LIST

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	1	MAIN Assy	AWU7067		16	Panel Base EF	AMB7462
	2	FRONT Assy	AWU7068		17	AL Panel EF	ANB7107
	3	HEADPHONE Assy	AWU7069		18	Label	VRW1629
	4	Lead Card 15P	ADD7072		19	Bonnet EF,RC	AZN7702
	5	Cord With Plug	ADE7016		20	Screw	BBT30P080FZK
NSP	6	Chassis SX,EF,RC	ANA7062		21	Screw	PDZ30P050FMC
	7	Rear Panel EF	ANC7687		22	Screw	PPZ30P080FMC
	8	Jack Plate	ANG7158		23	Screw	VBZ30P080FZK
	9	MSPLS Support	DEC1955		24	Screw	ABA1021
	10	HEX. Screw	KFS-4S-C1WM		25	Washer	VEC1098
	11	Cushion	REB1004				
	12	Jog Knob EF,RC	AAB7182				
	13	Phone Knob EF	AAB7139				
	14	Operation Button EF	AAD7415				
	15	LED Lens EF	AAK7477				

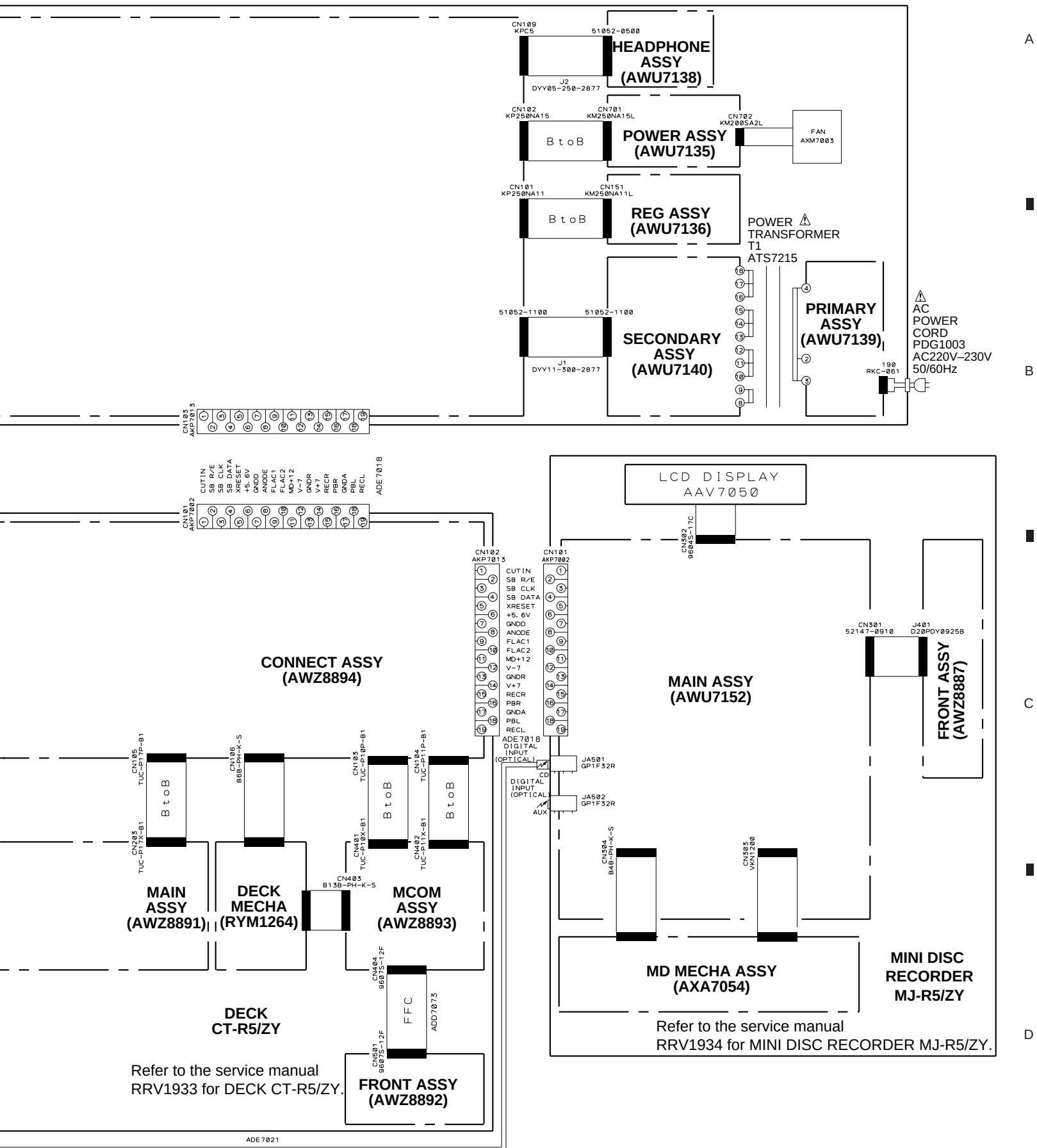
2.4 REMIX CONTROL MIXER [MX-R9(S)]

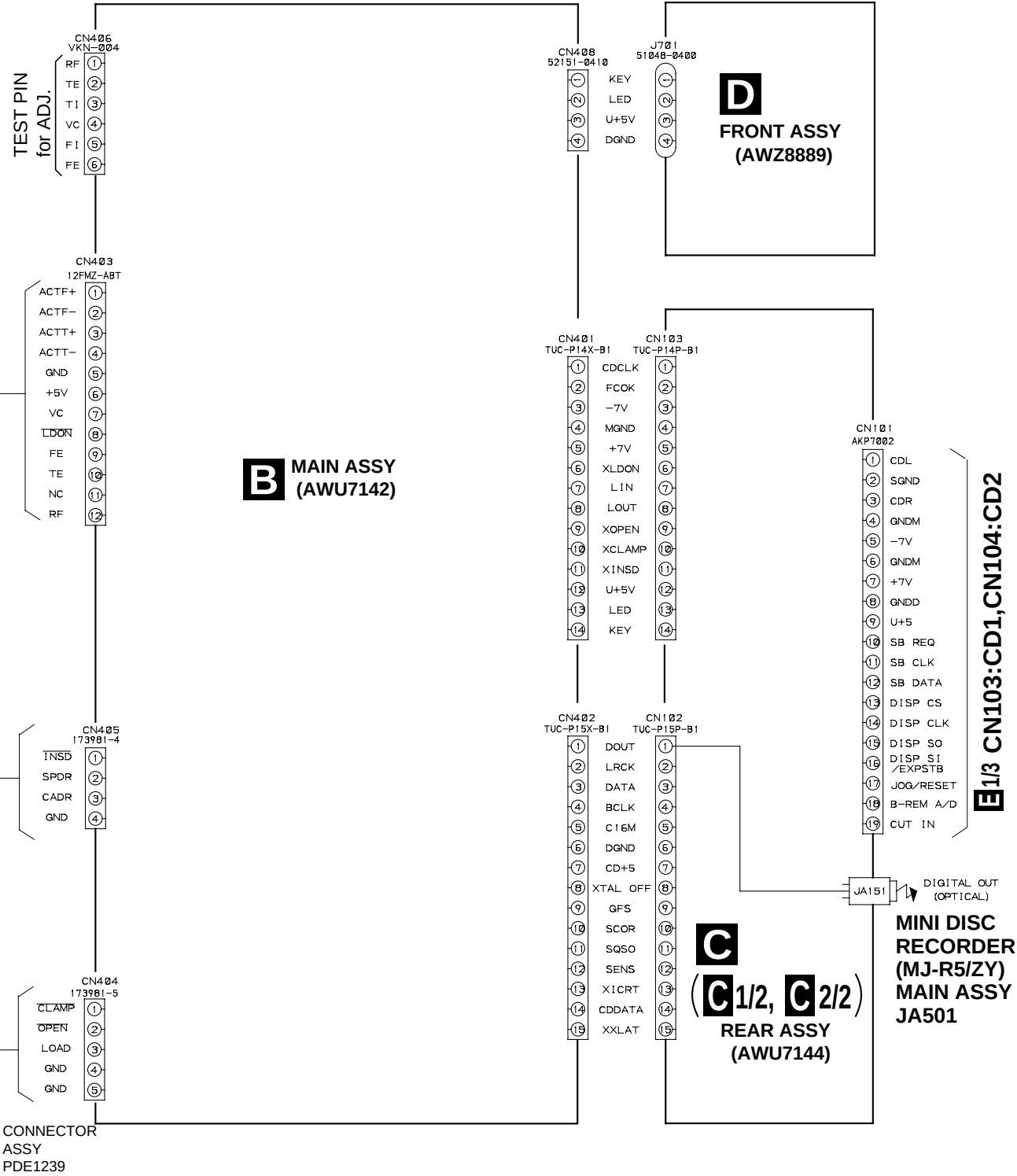


● REMIX CONTROL MIXER PARTS LIST

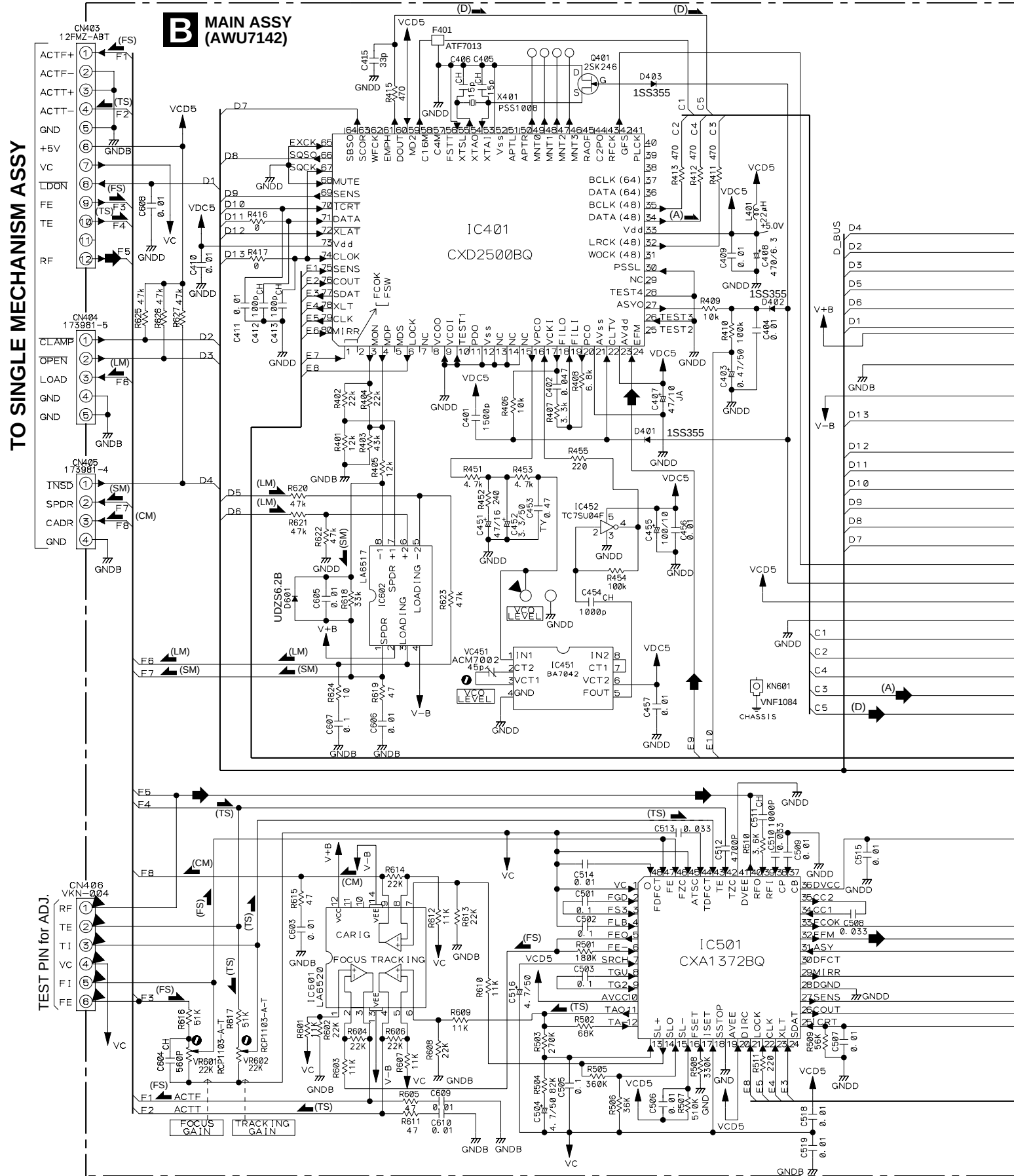
Mark	No.	Description	Part No.
NSP	1	MAIN Assy	AWZ8898
	2	VR Assy	AWZ8899
	3	Cord With Plug	ADE7019
	4	Bottom Plate	ANF7009
	5	Fader Stay	ANG7159
	6	PVC Sheet	AEC7119
	7	POM Ring	AMR7188
	8	Fader Sheet	AWL7029
	9	Screw	BPZ30P300FMC
	10	Disc Guard	PNM1245
	11	Equalizer Knob SX	AAB7135
	12	Tuning Knob SX	AAB7136
	13	Jog Knob CP	AAB7140
	14	Tempo Knob	AAC7004
	15	Fader Knob	AAC7005
	16	BPM Button	AAD7417
	17	Loop Button	AAD7419
	18	Sampler Button	AAD7422
	19	CUE Button	AAD7423
	20	LED Lens CP A	AAK7476
	21	Display Window CP	AAK7478
	22	FL filter CP	AAK7479
	23	Fader Cover	AAK7480
	24	LED Lens CP B	AAK7507
	25	Top Panel CP	AMB7464
NSP	26	Label	VRW1629
	27	Screw	BBZ30P060FCC
	28	Screw	BMZ20P030FMC
	29	Screw	PPZ30P080FMC
	30	Screw	CPZ30P080FZK
	31	Fader Assy	AZW7244
	32	Rear Spacer	AEC7126

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





3.2.2 MAIN, REAR(1/2) AND FRONT ASSEMBLIES





C

1

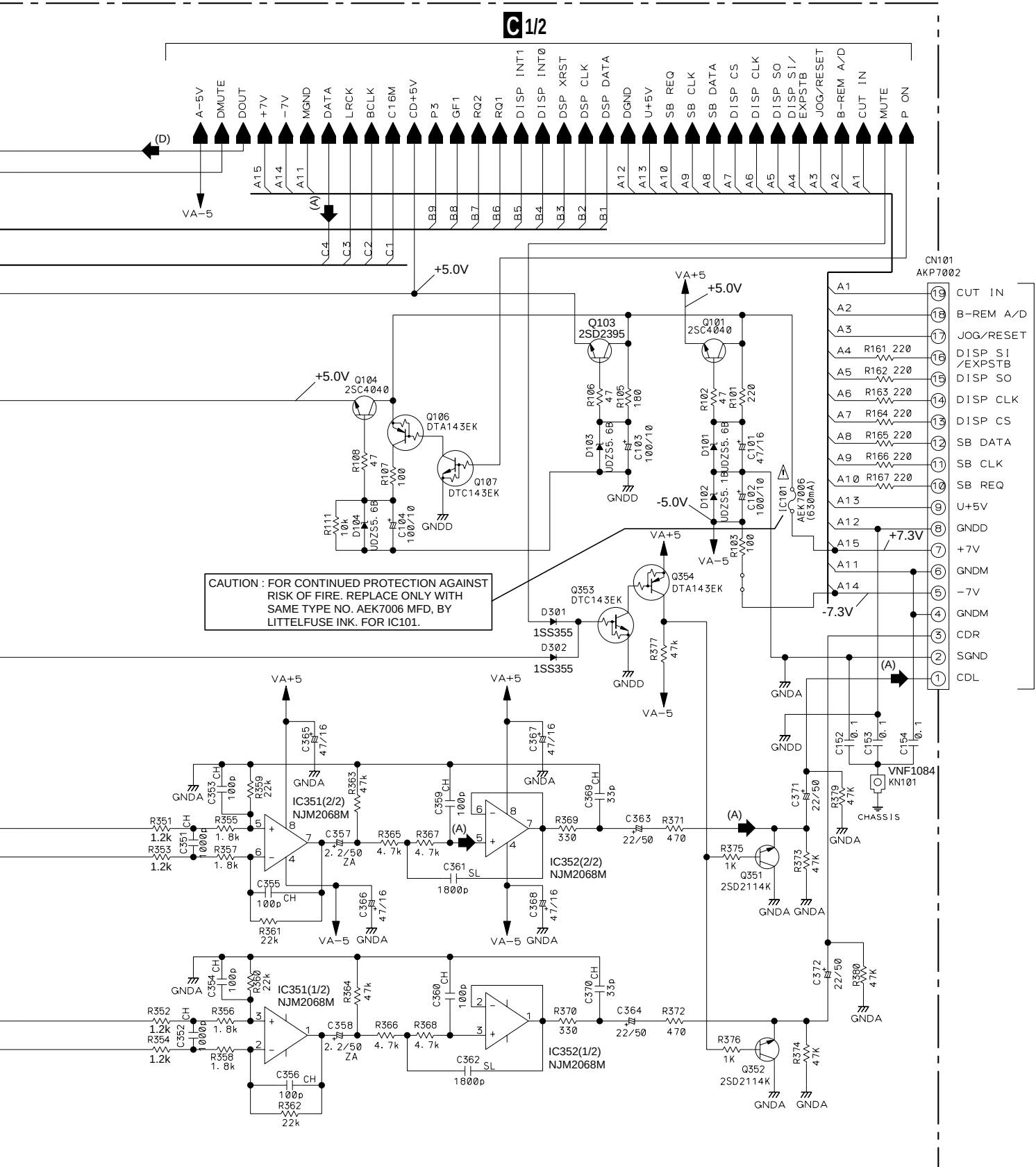
B C 1/2 D

A



SIGNAL ROUTE

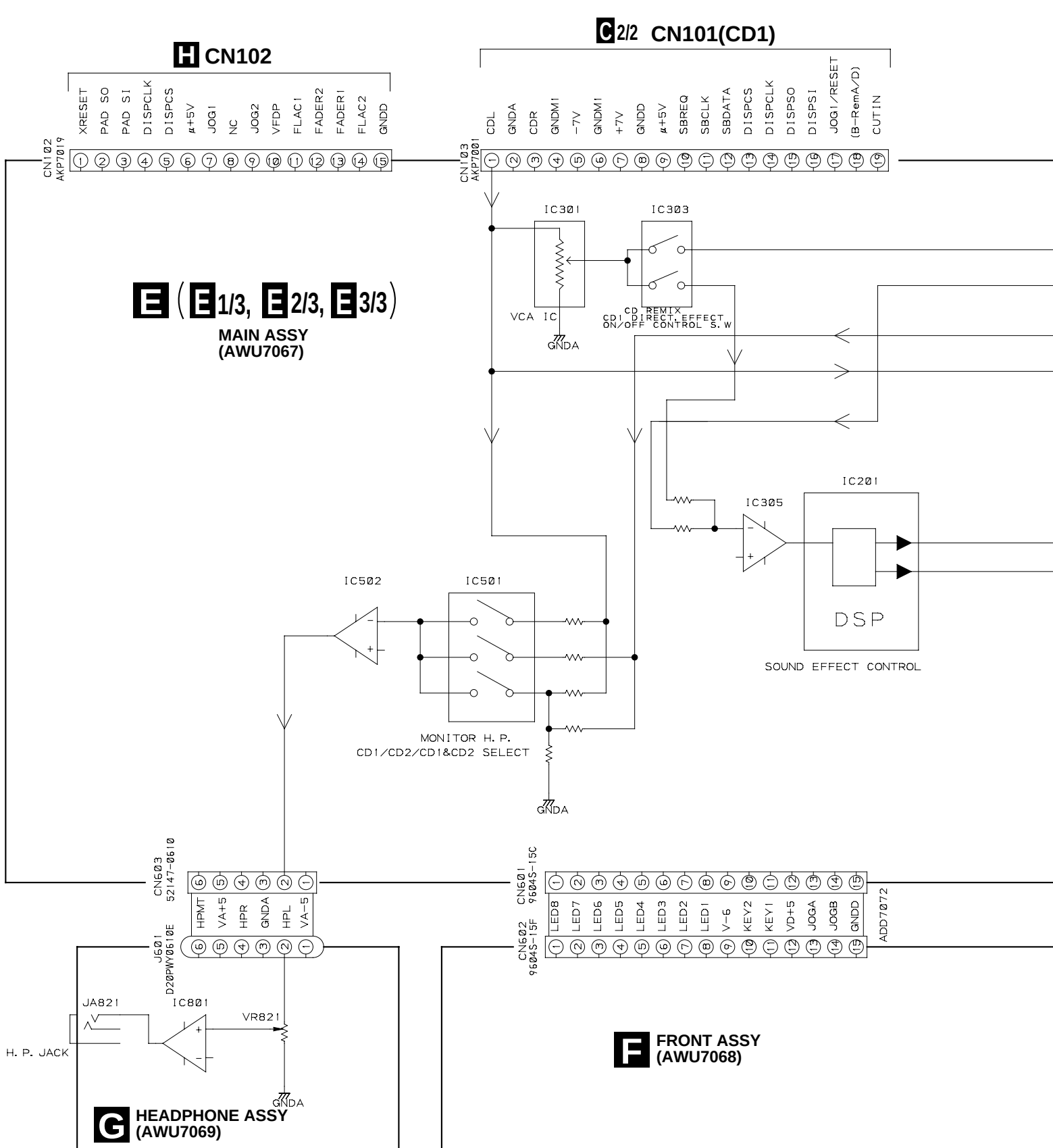
(D) ➤: DIGITAL AUDIO OUTPUT
 (A) ➤: ANALOG AUDIO OUTPUT

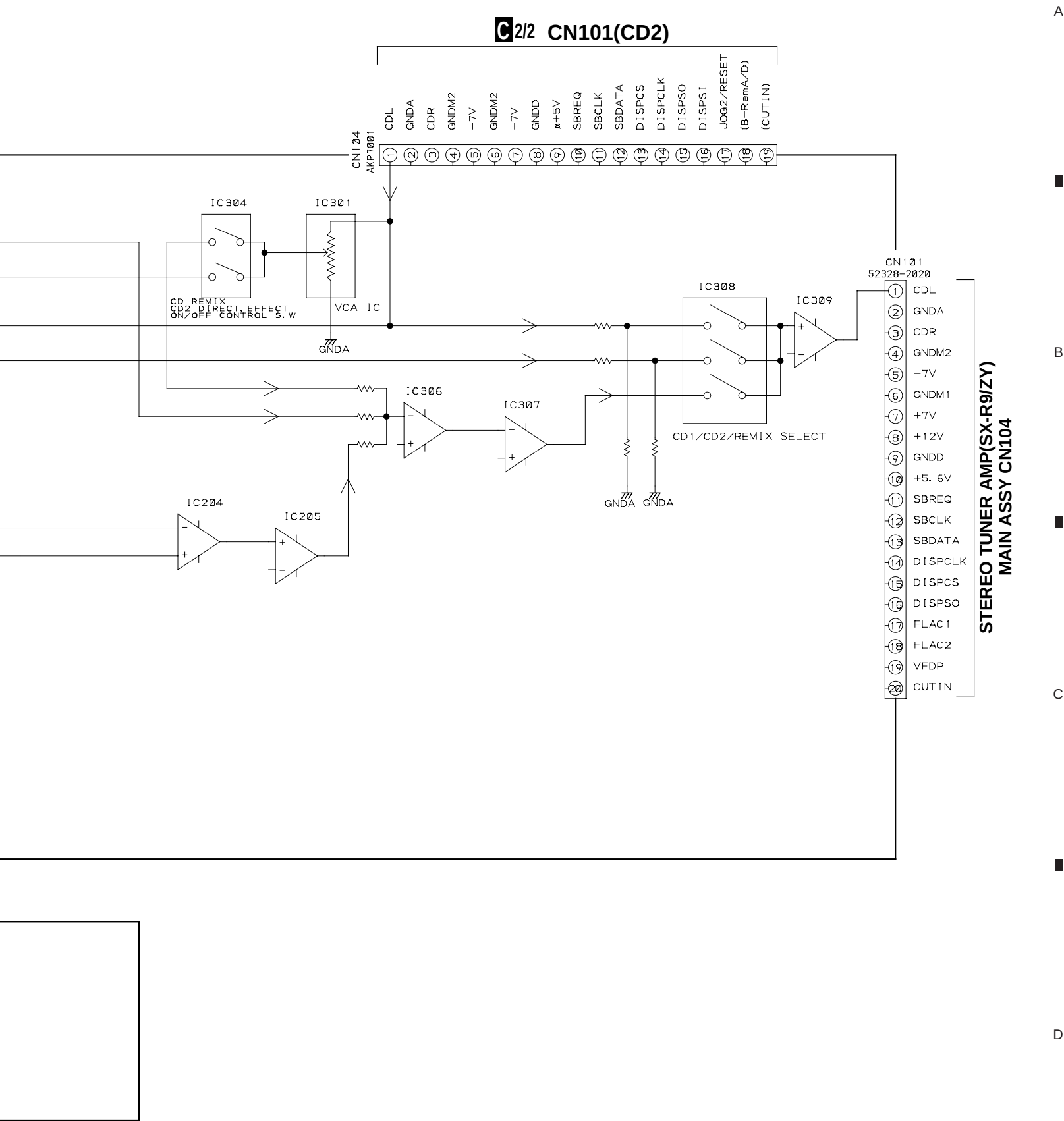


E1/3 CN103:(CD1),CN104:(CD2)

3.3 REMIX EFFECTOR [EF-R9(S)]

3.3.1 OVERALL CONNECTION DIAGRAM





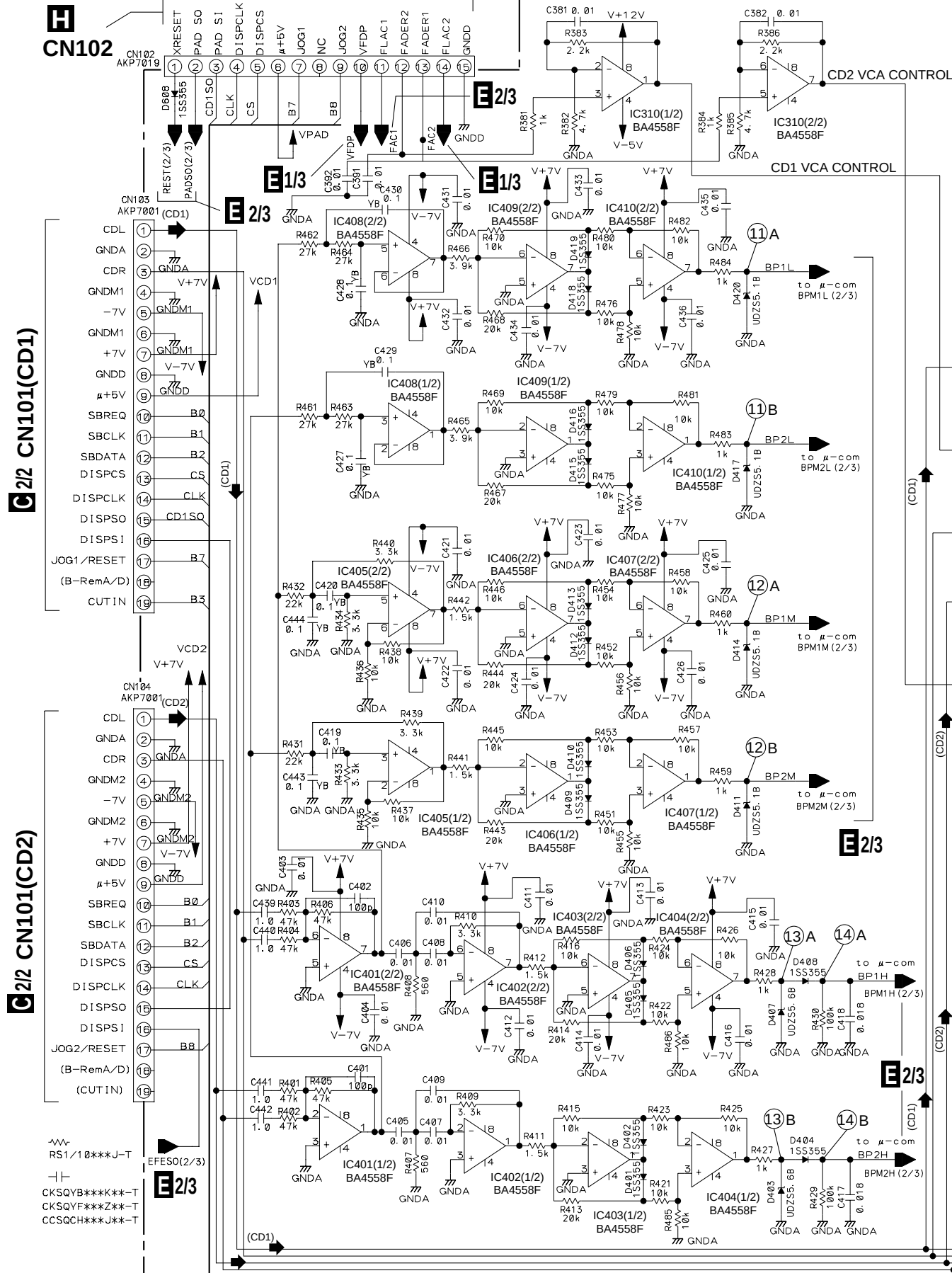
3.3.2 MAIN ASSY(1/3)

A

B

C

D



CAUTION : FOR CONTINUED PROTECTION AGAINST
RISK OF FIRE. REPLACE ONLY WITH
SAME TYPE NO. AEK7020 MFD, BY
LITTELFUSE INC. FOR IC102.



SIGNAL ROUTE

(CD1) ➡ CD1 AUDIO SIGNAL

(CD2) ➡ CD2 AUDIO SIGNAL

➡ AUDIO SIGNAL



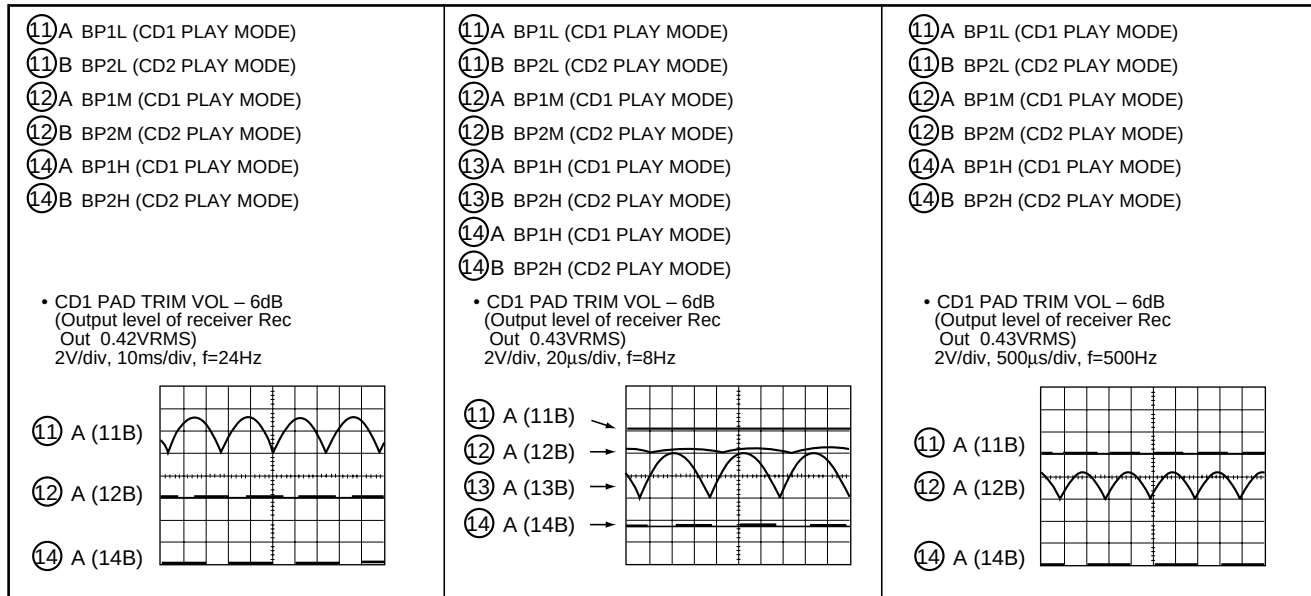
B

C

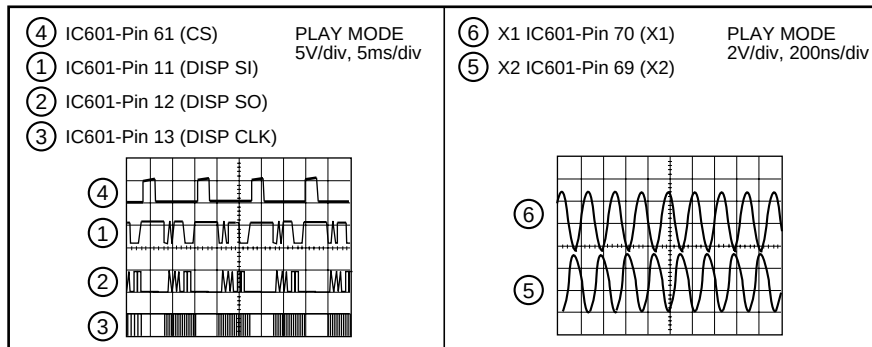
● WAVEFORMS OF REMIX EFFECTOR [EF-R9(S)]

Note : (No.) in the table correspond to the measurement points of schematic diagrams.

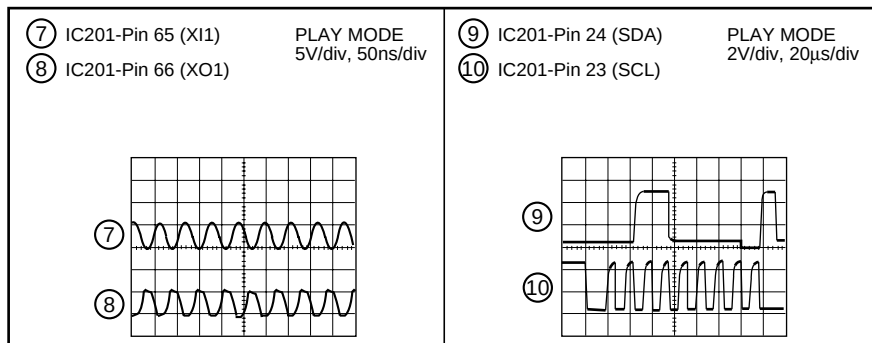
E 1/3 MAIN ASSY (1/3)



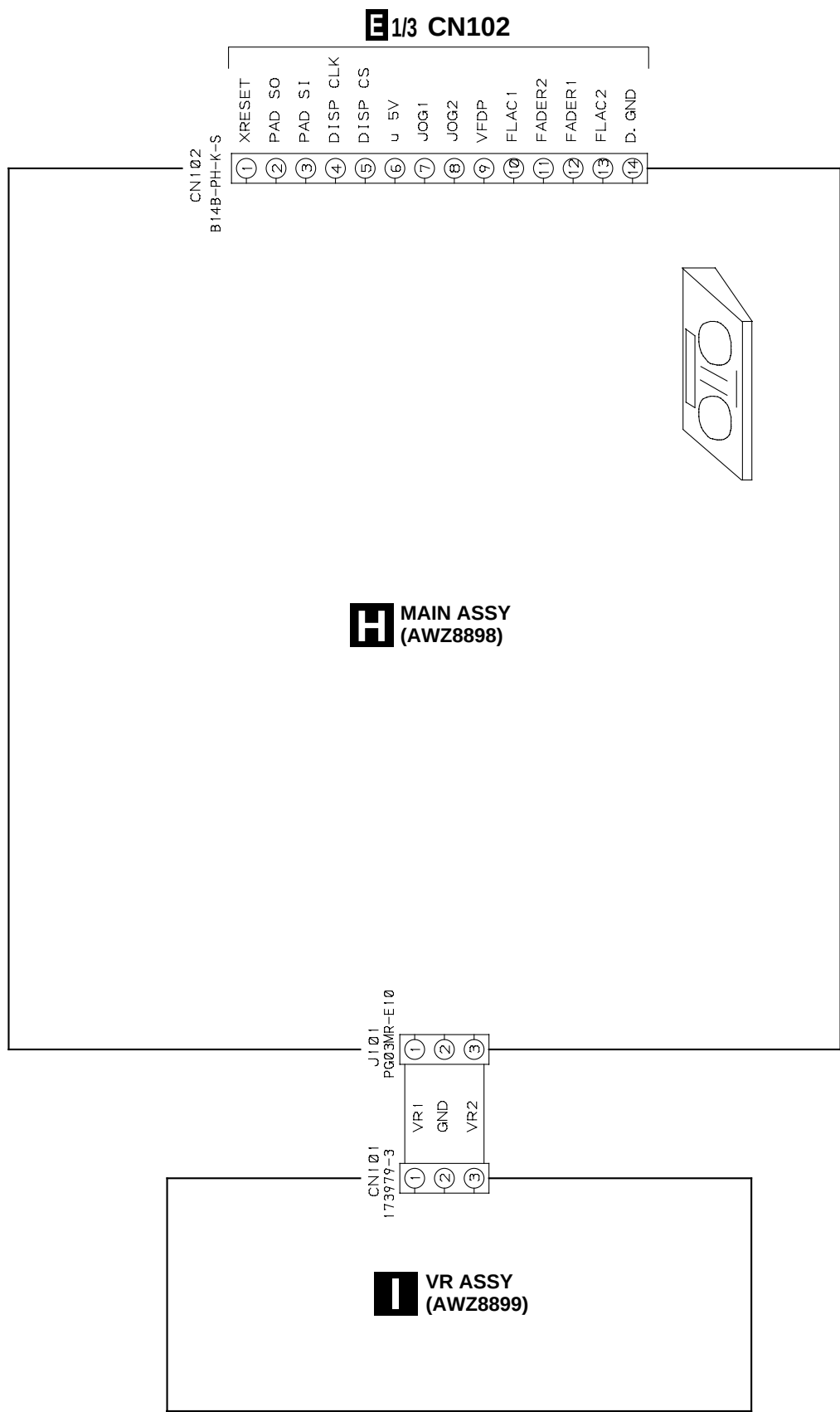
E 2/3 MAIN ASSY (2/3)



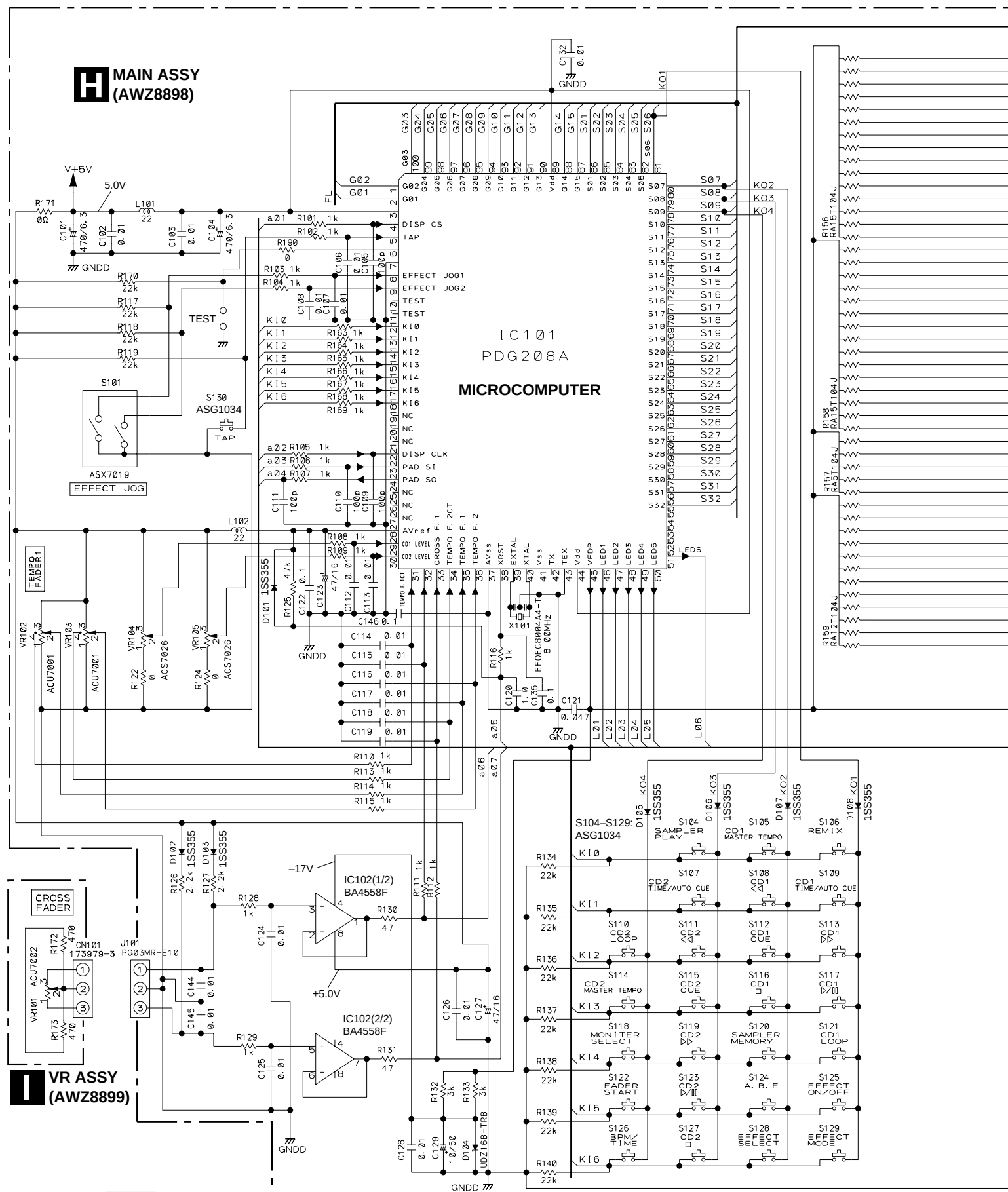
E 3/3 MAIN ASSY (3/3)

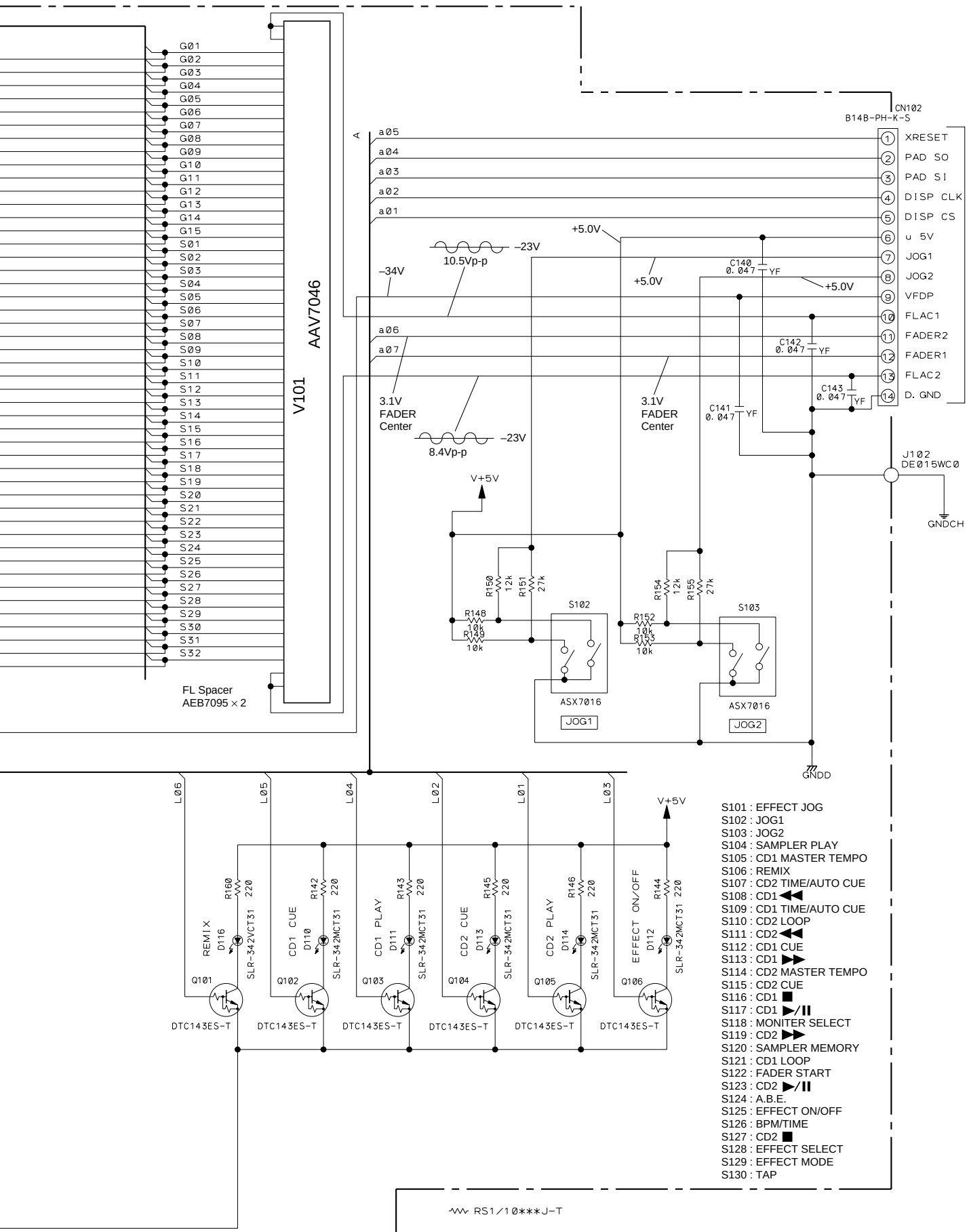


3.4 REMIX CONTROL MIXER [MX-R9(S)]
3.4.1 OVERALL CONNECTION DIAGRAM



3.4.2 MAIN AND VR ASSEMBLIES





E1/3 CN102

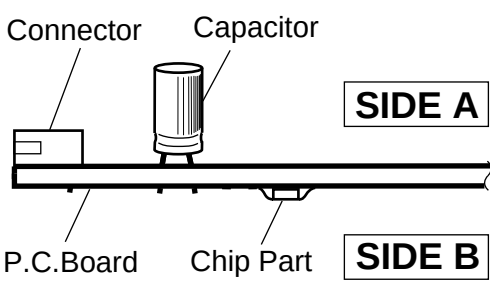
4. PCB CONNECTION DIAGRAM

NOTE FOR PCB DIAGRAMS :

- 1. Part numbers in PCB diagrams match those in the schematic diagrams.
- 2. A comparison between the main parts of PCB and schematic diagrams is shown below.

Symbol In PCB Diagrams	Symbol In Schematic Diagrams	Part Name
		Transistor
		Transistor with resistor
		Field effect transistor
		Resistor array
		3-terminal regulator

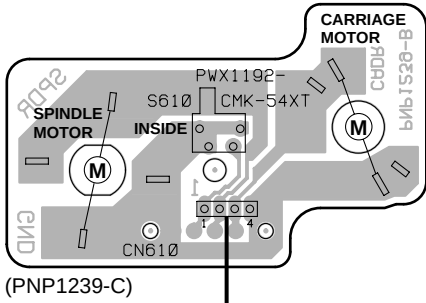
- 3. The parts mounted on this PCB include all necessary parts for several destinations.
For further information for respective destinations, be sure to check with the schematic diagram.
- 4. View point of PCB diagrams.



4.1 COMPACT DISC PLAYER [PD-R9(S)]

4.1.1 MECHANISM BOARD ASSY

A MECHANISM BOARD ASSY



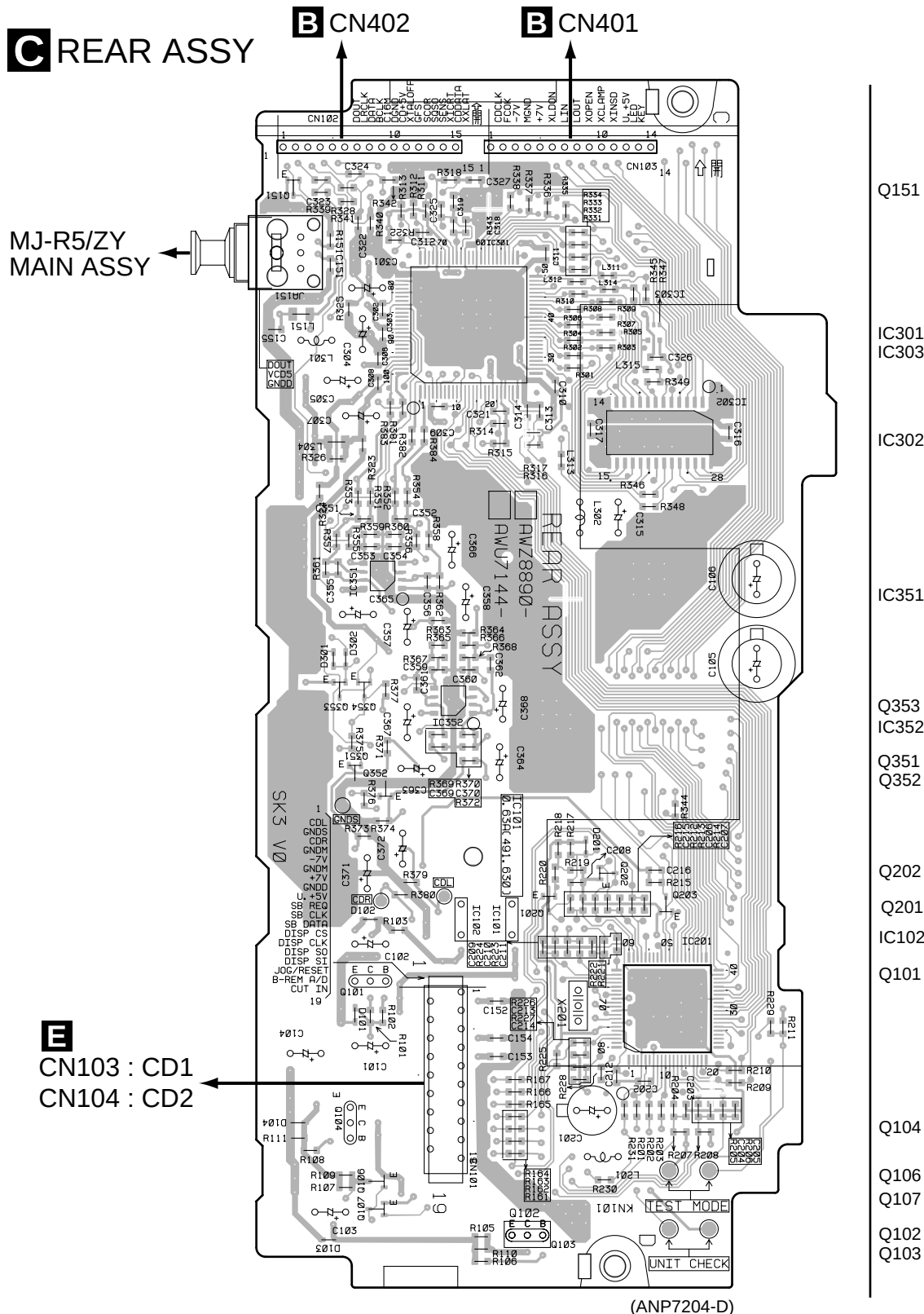
B CN405

SIDE A

B

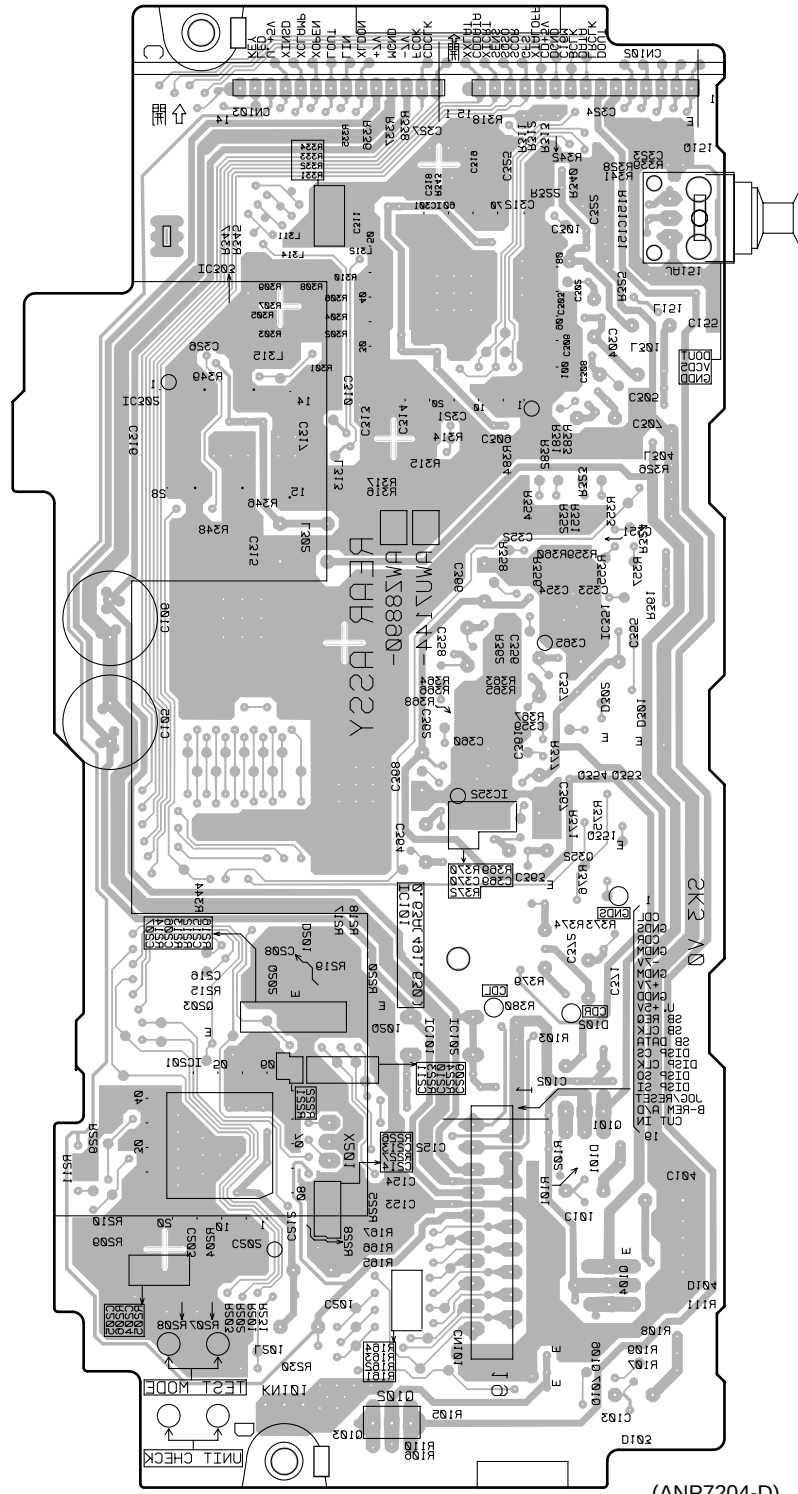


4.1.3 REAR ASSY



SIDE A

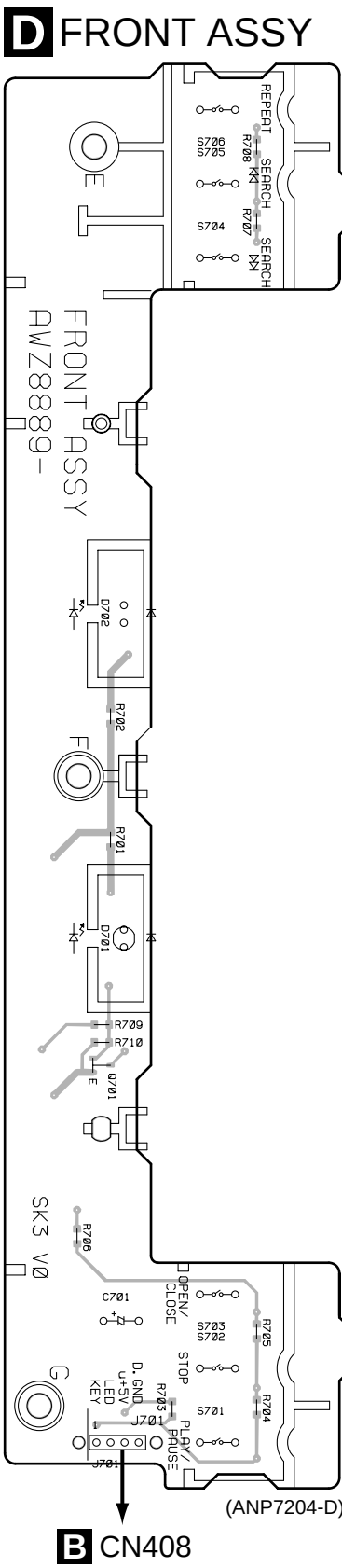
REAR ASSY



SIDE B

4.1.4 FRONT ASSY

A

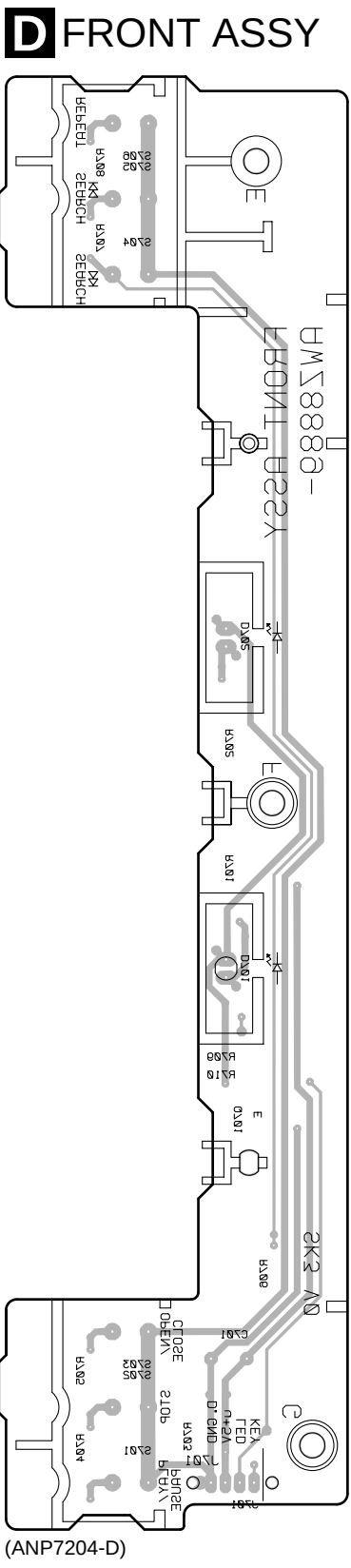


B

C

D

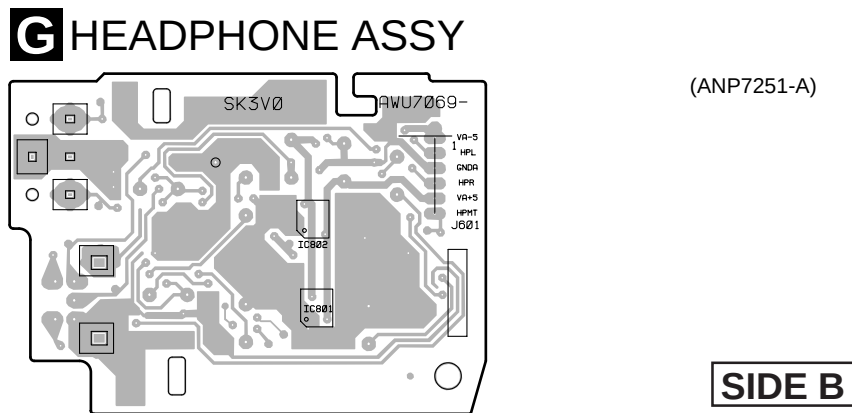
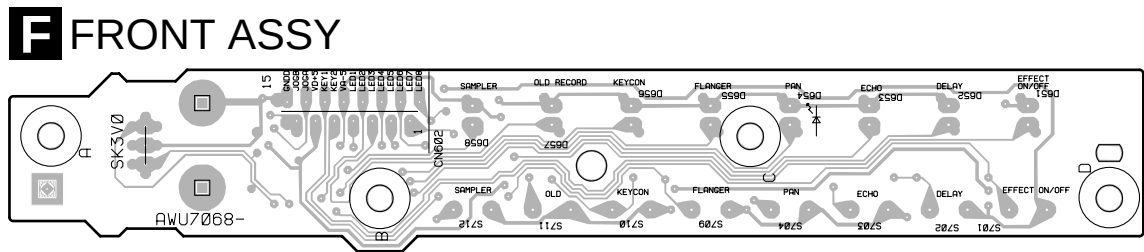
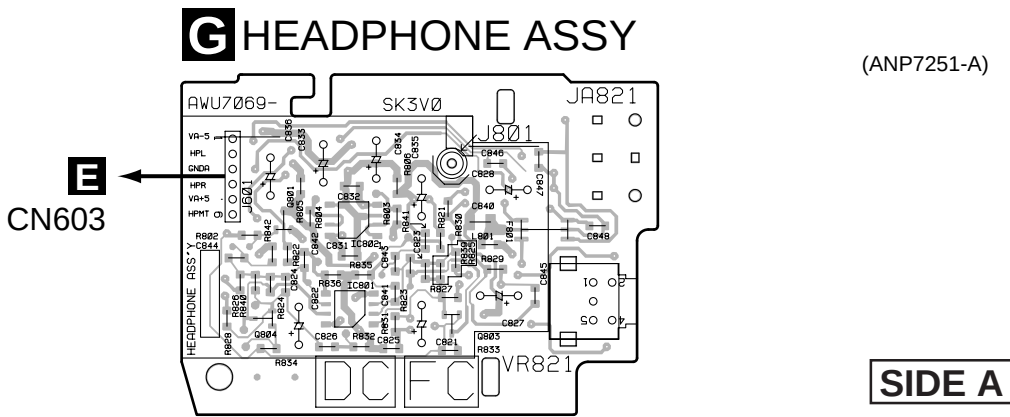
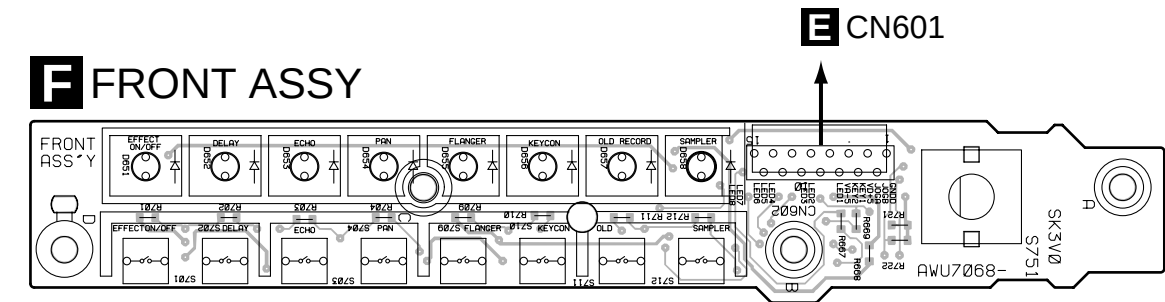
SIDE A



SIDE B

4.2 REMIX EFFECTOR [EF-R9(S)]

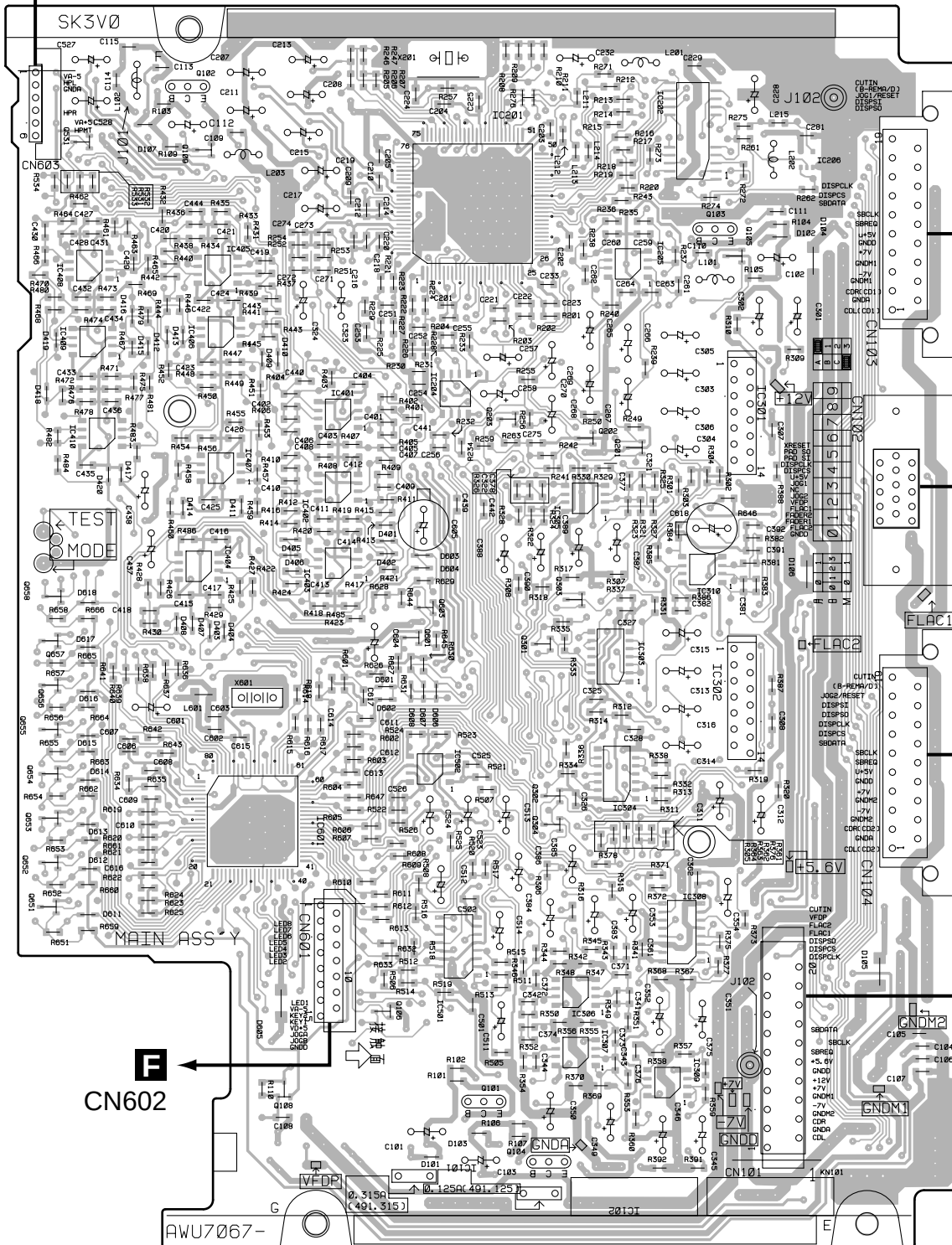
4.2.1 FRONT AND HEADPHONE ASSEMBLIES



4.2.2 MAIN ASSY

G J601

E MAIN ASSY



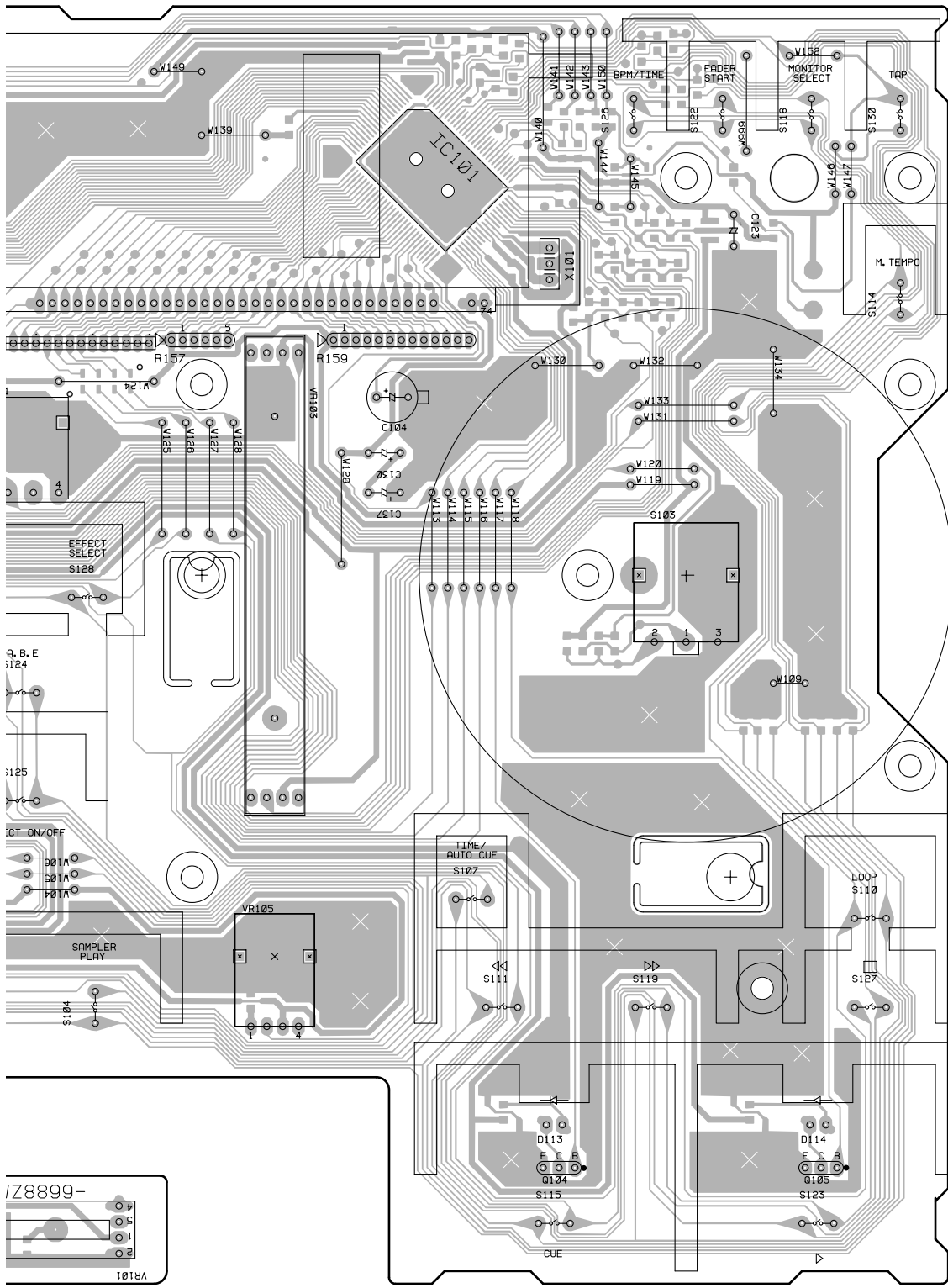
A



(ANP7251-A)

C

D

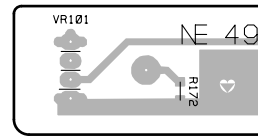
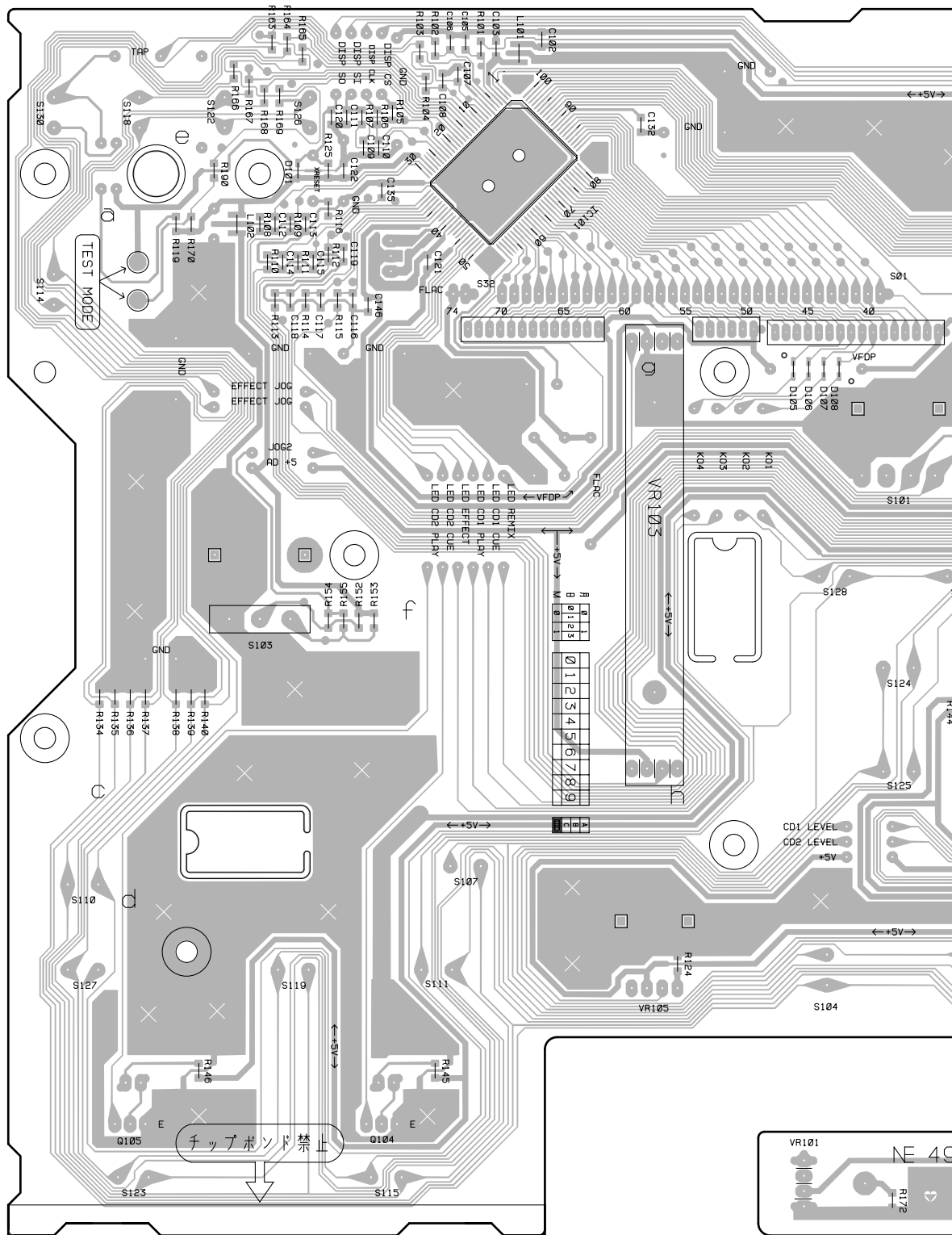


IC101
Q101
IC102
Q106
Q102-Q105

(ANP7207-C)

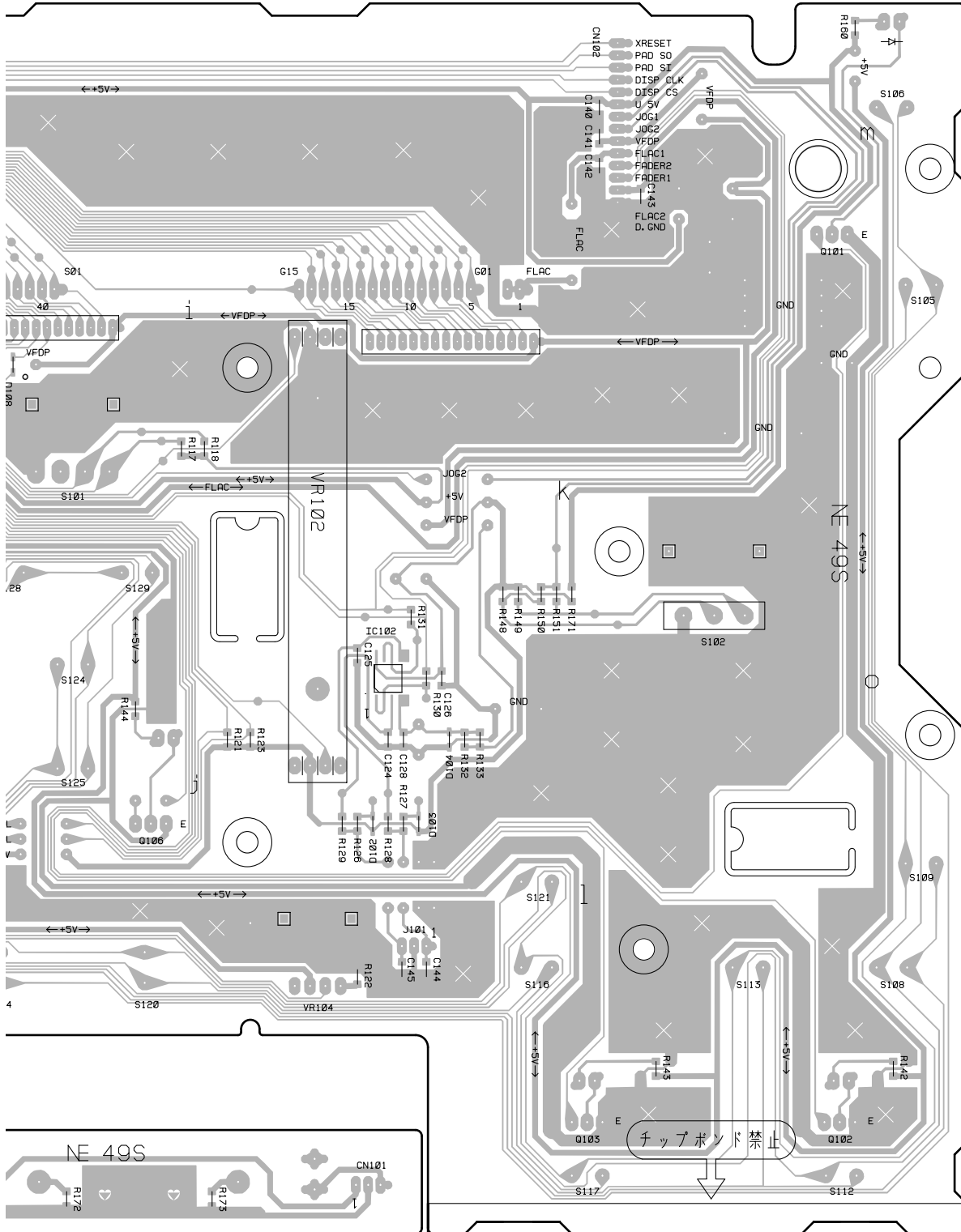
SIDE A

H MAIN ASSY



I VR ASSY

SIDE B



R ASSY

(ANP7207-C)

SIDE B

5. PCB PARTS LIST

NOTES: ●Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
●The Δ mark found on some component parts indicates the importance of the safety factor of the part.
Therefore, when replacing, be sure to use parts of identical designation.
●When ordering resistors, first convert resistance values into code form as shown in the following examples.
Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).
560 Ω → 56 × 10¹ → 561 RD1/4PU 5 6 1 J
47k Ω → 47 × 10³ → 473 RD1/4PU 4 7 3 J
0.5 Ω → R50 RN2H R 5 0 K
1 Ω → 1R0 RS1P 1 R 0 K
Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).
5.62k Ω → 562 × 10¹ → 5621 RN1/4PC 5 6 2 1 F

Mark	No.	Description	Part No.
LIST OF ASSEMBLIES			
NSP		COMPACT DISC PLAYER	PD-R9(S)
NSP	┌	SINGLE MECHANISM ASSY	AXA7058
NSP		└ SERVO MECHANISM ASSY	AXA7017
		└ MECHANISM BOARD ASSY	PWX1192
NSP		CD MAIN ASSY	AWM7372
	┌	MAIN ASSY	AWU7142
	┌	REAR ASSY	AWU7144
	┌	FRONT ASSY	AWZ8889
NSP		REMIX EFFECTOR	EF-R9(S)
NSP	┌	EF MAIN ASSY	AWM7366
		└ MAIN ASSY	AWU7067
		└ FRONT ASSY	AWU7068
		└ HEADPHONE ASSY	AWU7069
NSP		REMIX CONTROL MIXER	MX-R9(S)
NSP	┌	PAD MAIN ASSY	AWM7304
		└ MAIN ASSY	AWZ8898
NSP		└ VR ASSY	AWZ8899

■ COMPACT DISC PLAYER [PD-R9(S)]

A MECHANISM BOARD ASSY

SWITCH

S610	DSG1016
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OTHERS

CN610	MT CONNECTOR 4P	173979-4
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B MAIN ASSY

SEMICONDUCTORS

IC451	BA7042
IC501	CXA1372BQ
IC401	CXD2500BQ
IC602	LA6517
IC601	LA6520

Mark	No.	Description	Part No.
	IC452		TC7SU04F
	Q401		2SK246
	D401-D403		1SS355
	D601		UDZS6.2B

COIL AND FILTER

F401	CHIP EMI FILTER	ATF7013
L401		LCTA220J3225

CAPACITORS

VC451 (45pF)	ACM7002
C412,C413	CCSQCH101J50
C454,C511	CCSQCH102J50
C405,C406	CCSQCH150J50
C415	CCSQCH330J50
C604	CCSQCH561J50
C517	CEAL101M6R3
C455	CEAT101M10
C601,C602	CEAT331M10
C452	CEAT3R3M50
C451	CEAT470M16
C408	CEAT471M6R3
C504,C516	CEAT4R7M50
C403	CEATR47M50
C407	CEJA470M10
C453	CFTYA474J50
C404,C409-C411,C456,C457	CKSQYB103K50
C506,C507,C509,C514,C515	CKSQYB103K50
C518,C519,C603,C605,C606	CKSQYB103K50
C608-C610	CKSQYB103K50
C607	CKSQYB104K25
C401	CKSQYB152K50
C508,C510,C513	CKSQYB333K50
C512	CKSQYB472K50
C402	CKSQYB473K50
C501-C503,C505	CKSQYF104Z50

RESISTORS

VR601,VR602 (22kΩ)	RCP1103
Other Resistors	RS1/10S□□□□

Mark	No.	Description	Part No.
OTHERS			
	CN403	CONNECTOR 12P	12FMZ-ABT
	CN405	MT CONNECTOR 4P	173981-4
	CN404	MT CONNECTOR 5P	173981-5
	CN408	4P JUMPER CONNECTOR	52151-0410
	X401	CRYSTAL RESONATOR (16.9344MHz)	PSS1008
	CN401	CONNECTOR 14P	TUC-P14X-B1
	CN402	CONNECTOR 15P PCB BINDER	TUC-P15X-B1 VEF1040
	CN406	6P SIDE POST	VKN-004
	KN601	EARTH METAL FITTING	VNF1084

C REAR ASSY SEMICONDUCTORS

△	IC101 (630mA)	AEK7006
	IC302	HM514800CJ-7
	IC301	MN19413A
	IC351,IC352	NJM2068M
	IC201	PD4866A
	Q201	2SC2412K
	Q101,Q104	2SC4040
	Q351,Q352	2SD2114K
	Q103	2SD2395
	Q106,Q203,Q354	DTA143EK
	Q202	DTC124EK
	Q107,Q151,Q353	DTC143EK
	D201,D301,D302	1SS355
	D102	UDZS5.1B
	D101,D103,D104	UDZS5.6B

COILS

L151	LCTA100J3225
L304	LCTA680J3225
L201,L301,L302	LFA220J
L313,L314 CHIP BEADS	PTL1014

CAPACITORS

C210,C313,C314,C353-C356	CCSQCH101J50
C359,C360	CCSQCH101J50
C351,C352	CCSQCH102J50
C318,C319,C369,C370	CCSQCH330J50
C203-C205	CCSQCH391J50
C327	CCSQCH560J50
C361,C362	CCSQSL182J50
C102-C104,C301	CEAT101M10
C304	CEAT1R0M50
C363,C364,C371,C372	CEAT220M50
C101,C315,C365-C368	CEAT470M16
C201	CEAT471M6R3
C305,C307	CEZA220M25
C357,C358	CEZA2R2M50
C151,C212-C214,C302,C303	CKSQYB103K50
C309-C312,C316,C317,C321	CKSQYB103K50
C324,C325	CKSQYB103K50
C153,C202,C215,C306,C308	CKSQYB104K25
C323	CKSQYB104K25
C206,C207,C209,C211	CKSQYB471K50
C152,C154	CKSQYF104Z50
C208	CKSQYF105Z16

Mark	No.	Description	Part No.
RESISTORS			
	All Resistors		RS1/10S□□□J
OTHERS			
	CN101	CONNECTOR 19P	AKP7002
	JA151	OPTICAL LINK OUT	GP1F32T
	CN103	CONNECTOR 14P	TUC-P14P-B1
	CN102	CONNECTOR 15P	TUC-P15P-B1
		PCB BINDER	VEF1040
	KN101	EARTH METAL FITTING	VNF1084
	X201	CERAMIC RESONATOR	VSS1014
		(4.19MHz)	

D FRONT ASSY SEMICONDUCTORS

Q701	2SC2412K
D701,D702	SLR-342VCT31

SWITCHES

S701-S706	ASG1034
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RESISTORS

All Resistors	RS1/10S□□□J
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OTHERS

701	4P CABLE HOLDER	51048-0400
J701	JUMPER WIRE 4P	D20PDY0415E

■ REMIX EFFECTOR [EF-R9(S)]

E MAIN ASSY SEMICONDUCTORS

△	IC101 (315mA)	AEK7003
△	IC102 (125mA)	AEK7020
	IC204,IC205,IC305-IC307,IC310	BA4558F-HT
	IC401-IC410,IC502	BA4558F-HT
	IC308,IC501	BU4052BCF
	IC303,IC304	BU4066BCF
	IC202	HM514400CJ-7
	IC301,IC302	M51131L
	IC201	MN19413A
	IC309	NJM2068M
	IC601	PD4867A
	Q108,Q531,Q603,Q651-Q658	2SA1037K
	Q104	2SB1238X
	Q101-Q103	2SD1859X
	Q201,Q202	2SD2114K
	Q105,Q109,Q301-Q304	DTA124EK
	Q203	DTA143EK
	Q106	DTC124EK
	Q601	DTC143EK
	D104-D106,D605	1SR154-400
	D401,D402,D404-D406	1SS355
	D408-D410,D412,D413	1SS355
	D415,D416,D418,D419	1SS355
	D601-D604,D606-D608	1SS355
	D611-D618	1SS355
	D411,D414,D417,D420	UDZS5.1B
	D101-D103,D107,D403,D407	UDZS5.6B

XS-R9

Mark	No.	Description	Part No.
COILS			
	L601		LCTA220J3225
	L101,L201-L203		LFA220J
CAPACITORS			
	C222,C223,C271,C272		CCSQCH101J50
	C321,C322,C341-C344		CCSQCH101J50
	C401,C402,C525,C526		CCSQCH101J50
	C609,C610,C614,C616		CCSQCH101J50
	C224,C225,C263,C264		CCSQCH330J50
	C253-C256,C259,C260		CCSQCH471J50
	C251,C252		CCSQL152J50
	C345,C346		CEAL100M35
	C257,C258,C267-C270		CEAL2R2M50
	C311-C314,C323,C324		CEAL2R2M50
	C349-C352,C383-C390		CEAL2R2M50
	C511-C514,C523,C524		CEAL2R2M50
	C527,C528,C604		CEAL2R2M50
	C101-C103,C109		CEAT101M10
	C301-C304		CEAT2R2M50
	C207,C208,C211,C213,C215		CEAT470M16
	C217,C219,C228,C232		CEAT470M16
	C305,C306		CEAT470M16
	C601		CEJA101M10
	C265,C266,C315,C316		CEJA470M16
	C353,C354		CEJA470M16
	C605,C618		CEJA470M35
	C273,C274		CKSQYB102K50
	C112-C114,C201-C205		CKSQYB103K50
	C209,C210,C212,C214,C216		CKSQYB103K50
	C218,C220,C221,C229,C233		CKSQYB103K50
	C307,C308,C325-C328		CKSQYB103K50
	C361,C362,C381,C382		CKSQYB103K50
	C391,C392,C403-C416		CKSQYB103K50
	C421-C426,C431-C436		CKSQYB103K50
	C501,C502,C602,C603		CKSQYB103K50
	C606-C608,C611-C613,C615		CKSQYB103K50
	C419,C420,C427-C430		CKSQYB104K25
	C443,C444		CKSQYB104K25
	C417,C418		CKSQYB183K50
	C261,C262		CKSQYB332K50
	C104-C107,C275		CKSQYF104Z50
	C108,C439-C442,C617		CKSQYF105Z16
RESISTORS			
	R276 (47Ω)		DCN1090
	Other Resistors		RS1/10S□□□J
OTHERS			
	CN603	6P JUMPER CONNECTOR	52147-0610
	CN101	20P JUMPER CONNECTOR	52328-2020
	CN601	15P FFC CONNECTOR	9604S-15C
		19P SOCKET	AKP7001
	CN102	D-SUB MINI 15P	AKP7019
	X201	CRYSTAL RESONATOR (16.9344MHz)	PSS1008
	KN101	EARTH METAL FITTING	VNF1084
	X601	CERAMIC RESONATOR (4.19MHz)	VSS1014

Mark	No.	Description	Part No.
F FRONT ASSY			
SEMICONDUCTORS			
	D651		SLR-342MCT31
	D652-D658		SLR-342VCT31
SWITCHES			
	S701-S704,S709-S712		ASG1034
	S751		ASX7015
RESISTORS			
	All Resistors		RS1/10S□□□J
OTHERS			
	CN602	15P FFC CONNECTOR	9604S-15F
G HEADPHONE ASSY			
SEMICONDUCTORS			
	IC801,IC802		BA4560F
	Q801,Q803,Q804		2SD2114K
COIL AND FILTER			
	F801	EMI FILTER	ATF7016
	L801		LCTA2R2J3225
CAPACITORS			
	C823,C824		CCSQCH101J50
	C825,C826		CCSQCH151J50
	C843-C846		CCSQCH221J50
	C841,C842		CCSQCH470J50
	C835,C836		CEAL2R2M50
	C821,C822		CEJA100M16
	C827,C828,C833,C834		CEJA101M6R3
	C831,C832		CKSQYB103K50
	C847,C848		CKSQYB223K50
	C840		CKSQYF104Z50
RESISTORS			
	R803,R804 (1Ω)		ACN1104
	VR821 (10kΩ-B)		ACS7025
	Other Resistors		RS1/10S□□□J
OTHERS			
	J601	JUMPER WIRE 6P	D20PWY0610E
	JA821	STEREO JACK	KN-083

Mark	No.	Description	Part No.
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■ REMIX CONTROL MIXER [MX-R9(S)]

■ MAIN ASSY

SEMICONDUCTORS

IC102	BA4558F-HT
IC101	PDG208A
Q101-Q106	DTC143ES
D101-D103,D105-D108	1SS355
D110-D114	SLR-342MCT31
D116	SLR-342VCT31
D104	UDZ16B

COILS

L101,L102	LCTA220J3225
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SWITCHES

S104-S130	ASG1034
S102,S103	ASX7016
S101	ASX7019

CAPACITORS

C105,C109-C111	CCSQCH101J50
C129	CEAT100M50
C123,C127	CEAT470M16
C201	CEAT470M50
C101,C104	CEAT471M6R3
C102,C103,C106-C108	CKSQYB103K50
C112-C119,C124-C126,C128	CKSQYB103K50
C132,C144,C145	CKSQYB103K50
C122,C135,C146	CKSQYF104Z50
C120	CKSQYF105Z16
C121,C140-C143	CKSQYF473Z50

RESISTORS

R159	RA12T104J
R156,R158	RA15T104J
R157	RA5T104J
VR104,VR105 (10kΩ-B)	ACS7026
VR102,VR103 (10kΩ-B)	ACU7001
Other Resistors	RS1/10S□□□J

OTHERS

X101	CERAMIC RESONATOR	EFOEC8004A4
V101	FL TUBE	AAV7046
	PORON SHEET	AEB7095
J101	CONNECTOR ASSY	PG03MR-E10

■ VR ASSY

RESISTORS

VR101 (10kΩ-B)	ACU7002
Other Resistors	RS1/10S□□□J

OTHERS

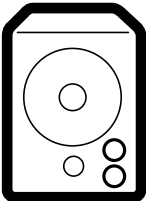
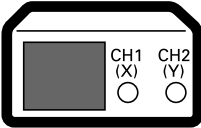
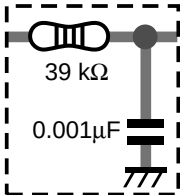
CN101	MT CONNECTOR 3P	173979-3
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6. ADJUSTMENT

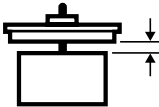
6.1 ADJUSTMENT OF COMPACT DISC PLAYER [PD-R9(S)]

6.1.1 PREPARATIONS

1. Jigs and Measuring Instruments

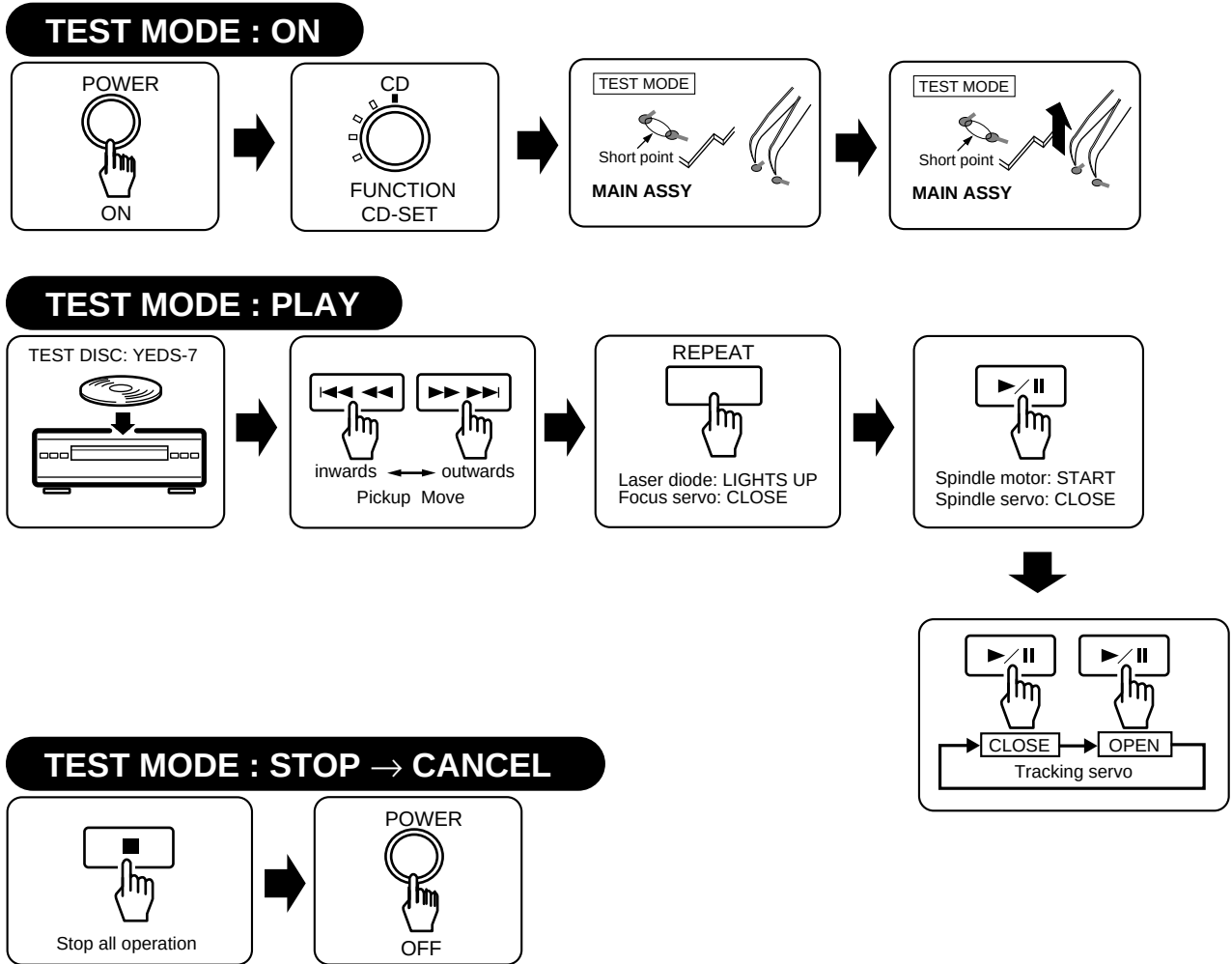
 8-cm DISC (With at least about 20 minutes recording)	 CD TEST DISC (YEDS-7)	 ⊖ Precise screwdriver	 ⊖ screwdriver (small)	 ⊕ screwdriver (medium)
 Ball point hexagon wrench (size: 1.5mm) GGK1002	 ⊕ screwdriver (large)	 Low-frequency oscillator	 Dual-trace oscilloscope (10 : 1 probe)	 Low pass filter (39 kΩ + 0.001μF)

2. Necessary Adjustment Points

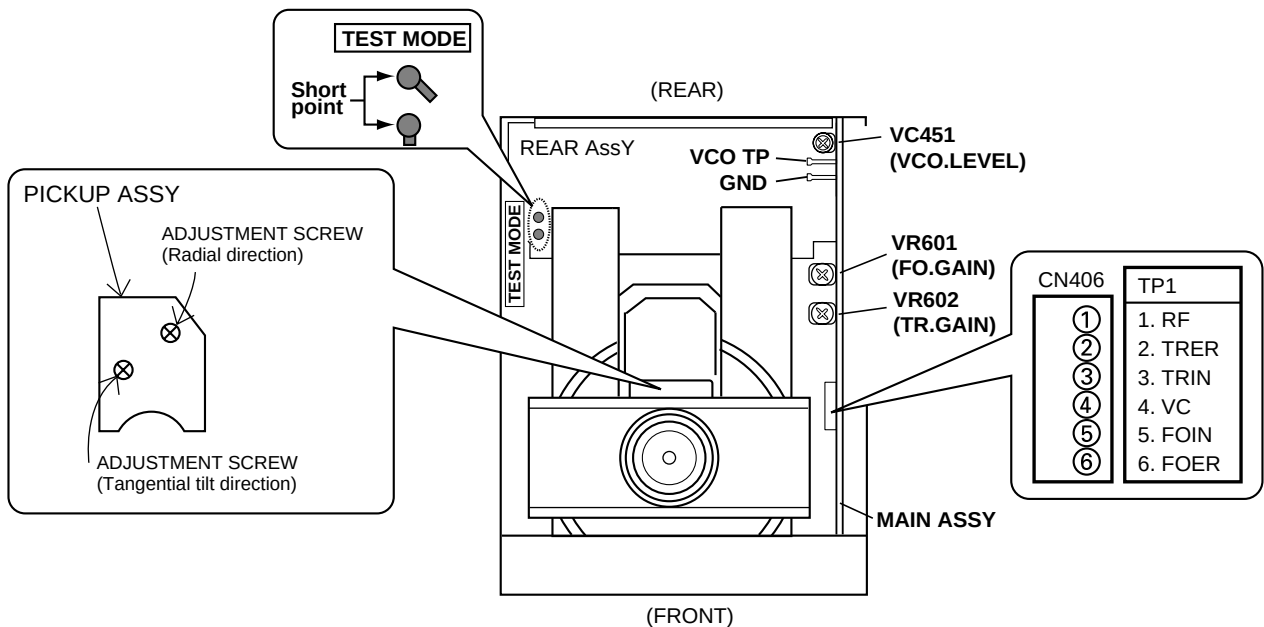
When	Adjustment points
Exchange PICKUP	2. 3. 4. 5. 6. 7. → Page 48 to 51
Exchange MAIN ASSY	1. 2. 3. 5. 6. 7. → Page 48 to 51
Exchange SERVO MECH ASSY	2. 3. 4. 5. 6. 7. → Page 48 to 51
Exchange SPINDLE MOTOR	 ADJ → Page 5

6.1.2 ADJUSTMENT

1. How to Start/Cancel Test Mode

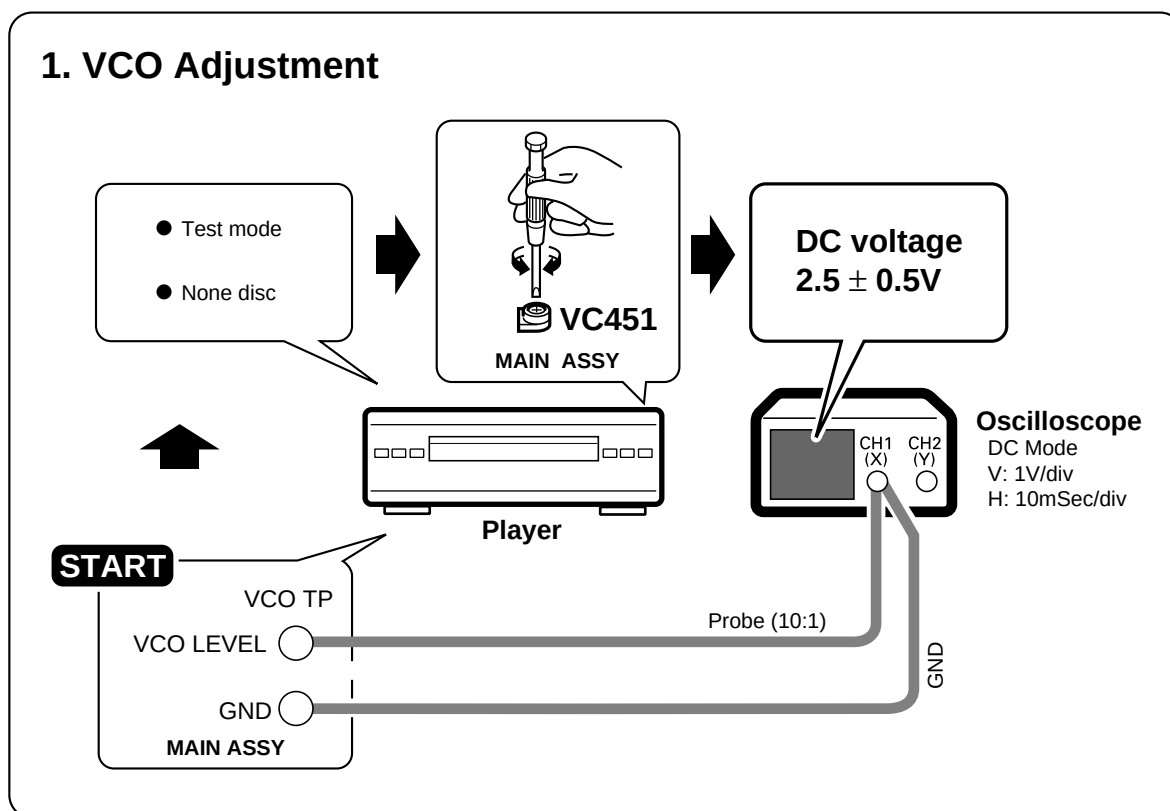


2. Adjustment Location

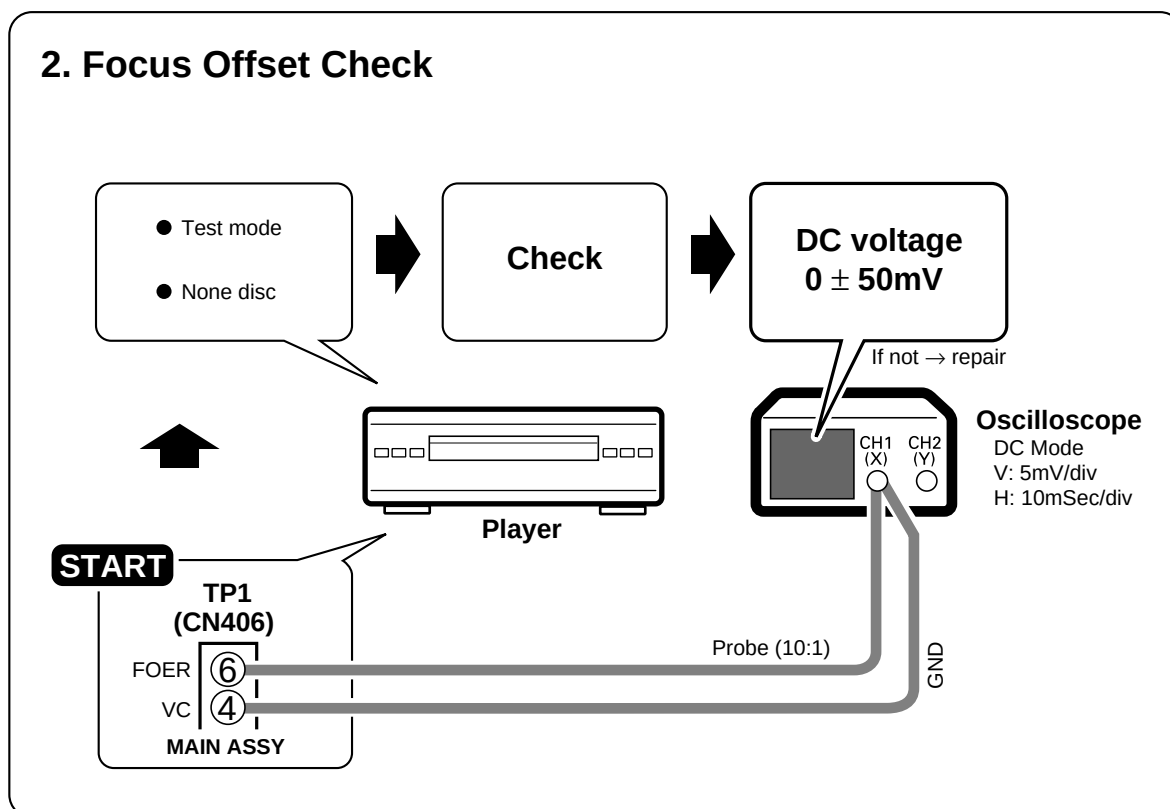


3. Check and Adjustment

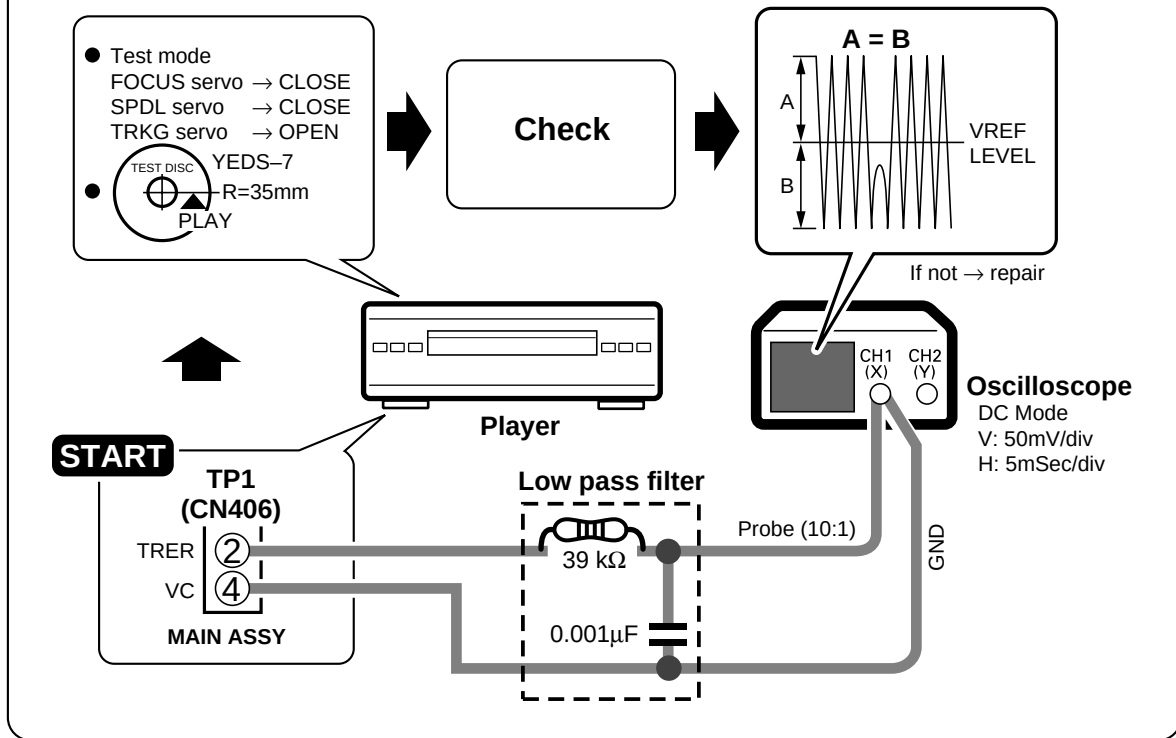
1. VCO Adjustment



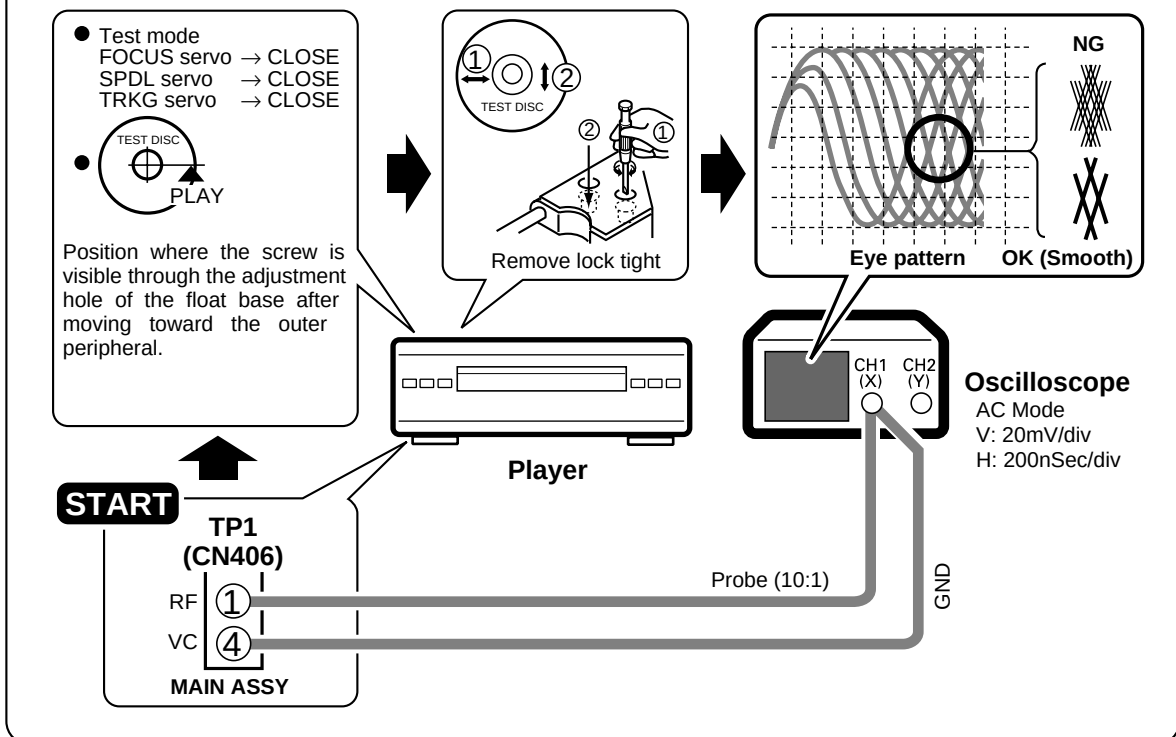
2. Focus Offset Check



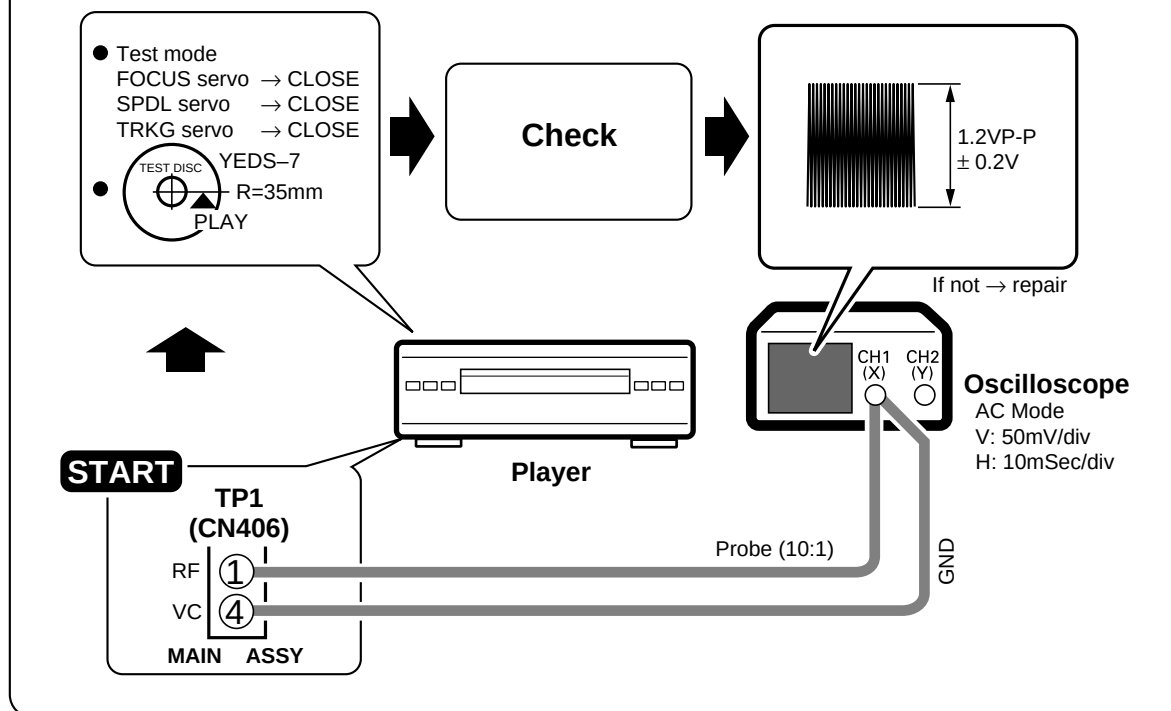
3. Tracking Error Balance Check



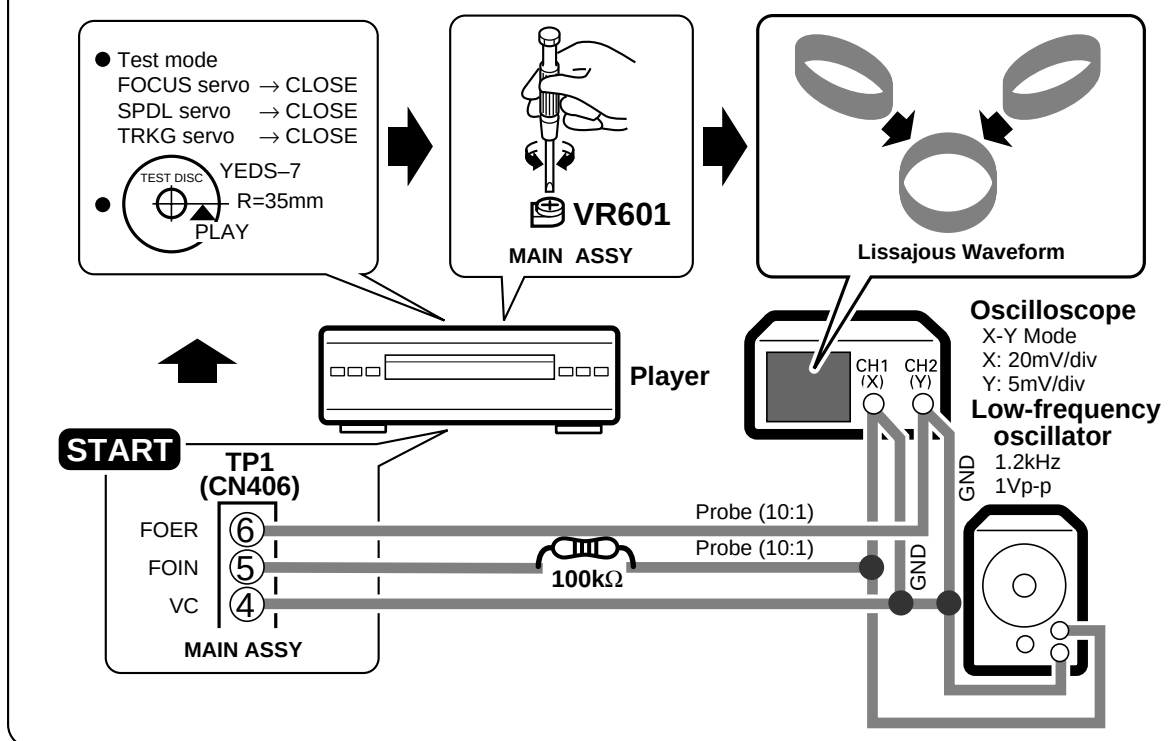
4. Pickup ① Radial/ ② Tangential Direction Tilt Adjustment



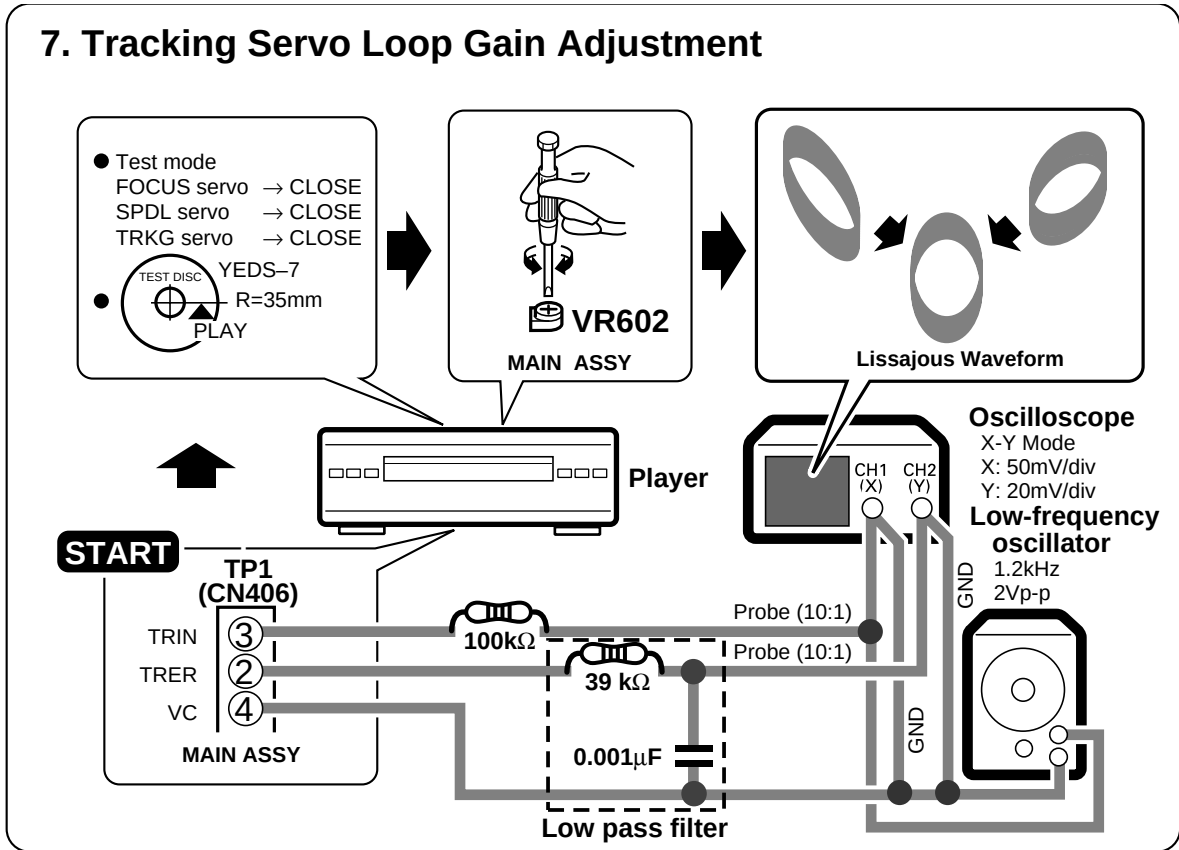
5. RF Level Check



6. Focus Servo Loop Gain Adjustment



7. Tracking Servo Loop Gain Adjustment



6.2 REMIX EFECTOR [EF-R9(S)]

- No adjustment is required.

6.3 REMIX CONTROL MIXER [MX-R9(S)]

- No adjustment is required.

7. GENERAL INFORMATION

7.1 PARTS

7.1.1 IC

• The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

•List of IC

PD4866A, MN19413, HM514400CJ-7, TC7S08F : COMPACT DISC PLAYER [PD-R9(S)]

PD4867A : REMIX EFECTOR [EF-R9(S)]

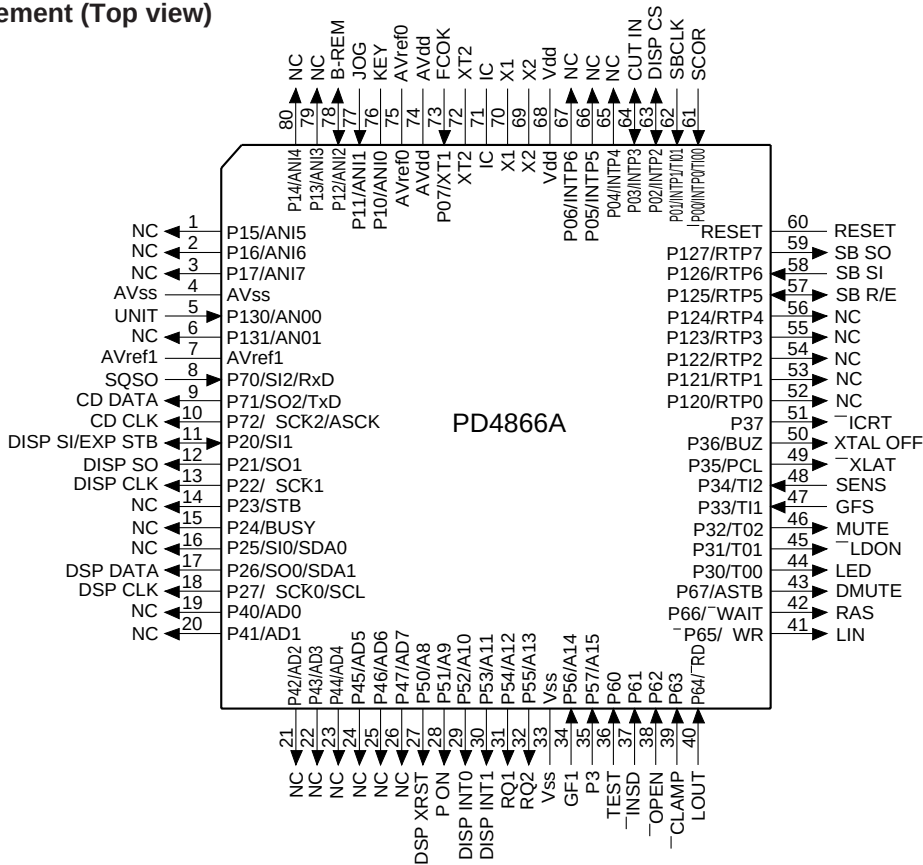
PDG208A : REMIX CONTROL MIXER [MX-R9(S)]

COMPACT DISC PLAYER [PD-R9(S)]

■ PD4866A (REAR ASSY : IC201)

• CD CONTROL MICROCOMPUTER

• Pin Arrangement (Top view)



• Pin Function

No.	Pin Function	Pin Name	I/O	Function
1	P15/ANI5	NC	O	—
2	P16/ANI6	NC	O	—
3	P17/ANI7	NC	O	—
4	AVss	AVss	—	GND
5	P130/AN00	UNIT	I	Check input of the unit board (L : unit board check)
6	P131/AN01	NC	O	—
7	AVref1	AVref1	—	+5V
8	P70/SI2/RxD	SQSO	I	CD subcode input
9	P71/SO2/TxD	CD DATA	O	Data output of CD decoder
10	P72/APSCK2/ASCK	CD CLK	O	Clock for CD decoder communication
11	P20/SI1	DISP SI/EXP STB	I/O	Data input for display communication
12	P21/SO1	DISP SO	O	Data output for display communication
13	P22/APSCK1	DISP CLK	O	Clock output for display communication
14	P23/STB	NC	O	—
15	P24/BUSY	NC	O	—

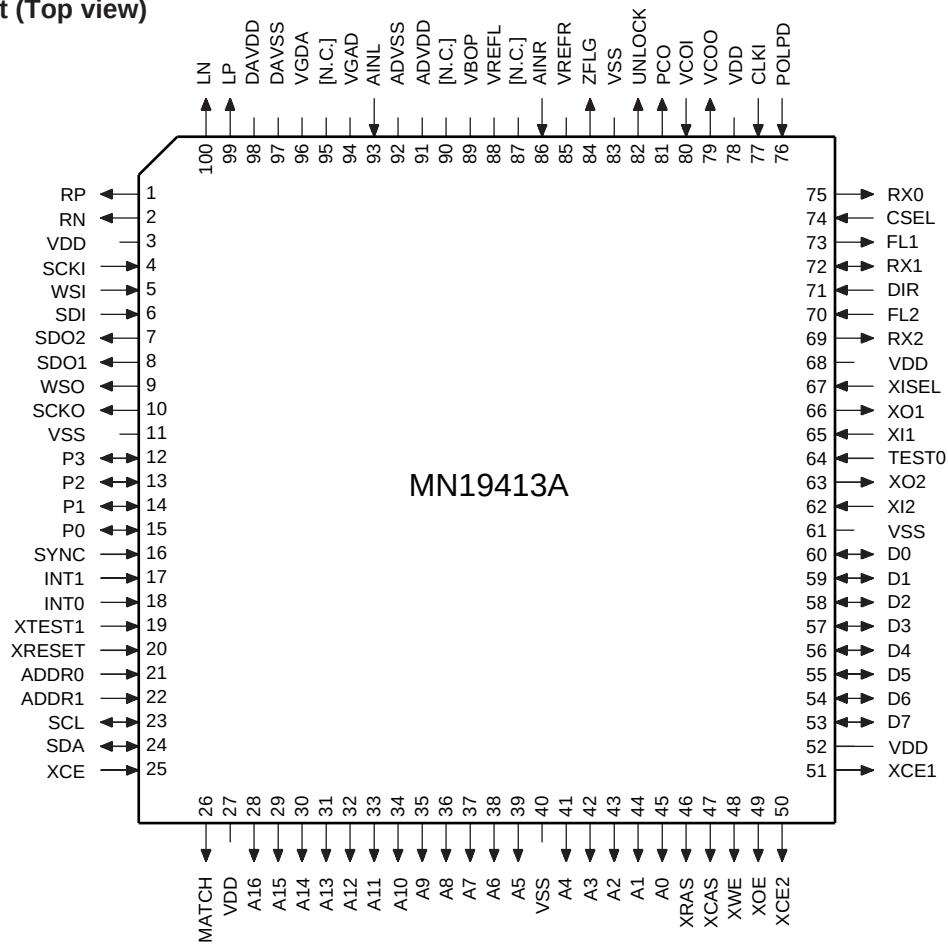
No.	Pin Function	Pin Name	I/O	Function
16	P25/SIO/SDA0	NC	O	—
17	P26/S00/SDA1	DSP DATA	O	CD DSP data output
18	P27/SCK0/SCL	DSP CLK	O	CD DSP clock output
19	P40/AD0	NC	O	—
20	P41/AD1	NC	O	—
21	P42/AD2	NC	O	—
22	P43/AD3	NC	O	—
23	P44/AD4	NC	O	—
24	P45/AD5	NC	O	—
25	P46/AD6	NC	O	—
26	P47/AD7	NC	O	—
27	P50/A8	DSP XRST	O	DSP reset output (L : reset)
28	P51/A9	P ON	O	DSP power supply ON/OFF (H : ON)
29	P52/A10	DISP INT0	O	Not used
30	P53/A11	DISP INT1	O	Not used
31	P54/A12	RQ1	O	DSP WRITE (Writing request)
32	P55/A13	RQ2	O	DSP READ (Reading request)
33	Vss	Vss	—	GND
34	P56/A14	GF1	I	DSP data compare/delay time
35	P57/A15	P3	I	DSP sampling memory
36	P60	TEST	I	CD TEST input (L : TEST mode)
37	P61	INSD	I	Carriage inside SW input (L : inside)
38	P62	OPEN	I	Tray OPEN SW (L : OPEN completion)
39	P63	CLAMP	I	Tray CLAMP SW (L : CLAMP completion)
40	P64/RD	LOUT	O	Loading motor output (LOUT, LIN: Stop ; L, H = CLOSE ; H, L = OPEN)
41	P65/WR	LIN	O	Refer to LOUT (pin 40)
42	P66/WAIT	RAS	O	D-RAM reset output (Pulse output when switching the function CD)
43	P67/ASTB	DMUTE	O	Optical digital output mute (H : mute)
44	P30/T00	LED	O	Front LED output (H : lights up)
45	P31/T01	LDON	O	Laser diode output (L : lights up)
46	P32/T02	MUTE	O	CD mute (H : mute)
47	P33/TI1	GFS	I	CD GFS signal input
48	P34/TI2	SENS	I	CD sense signal input
49	P35/PCL	XLAT	O	CD decoder latch output
50	P36/BUZ	XTAL OFF	O	CD decoder crystal ON/OFF (H : ON)
51	P37	ICRT	O	CD decoder reset output (L : reset)
52	P120/RTP0	NC	O	—
53	P121/RTP1	NC	O	—
54	P122/RTP2	NC	O	—
55	P123/RTP3	NC	O	—
56	P124/RTP4	NC	O	—
57	P125/RTP5	SB R/E	I/O	System bus request/enable
58	P126/RTP6	SB SI	I	System bus data input
59	P127/RTP7	SB SO	O	System bus data output
60	RESET	RESET	—	Microprocessor reset input (L : reset)
61	P00/INTP0/TIO0	SCOR	I	CD sync. signal input
62	P01/INTP1/TIO1	SBCLK	I	System bus clock input
63	P02/INTP2	DISP CS	I/O	Display communication data start / end input and output (↑ : start, ↓ : end)
64	P03/INTP3	CUT IN	I/O	Cut-in REC start input (L output at not used)
65	P04/INTP4	NC	O	—
66	P05/INTP5	NC	O	—
67	P06/INTP6	NC	O	—
68	Vdd	vdd	—	+5V
69	X2	X2	—	Main system clock
70	X1	X1	—	—
71	IC	IC	—	—
72	XT2	XT2	—	—
73	P07/XT1	FCOK	I	CD focus OK input (H : OK)
74	AVdd	AVdd	—	+5V
75	AVref0	AVref0	—	—
76	P10/ANI0	KEY	I	Main key A/D input
77	P11/ANI1	JOG	I	PAD/remix controller JOG A/D input
78	P12/ANI2	B - REM	I/O	Not used (L output)
79	P13/ANI3	NC	—	—
80	P14/ANI4	NC	—	—

COMPACT DISC PLAYER [PD-R9(S)]

■ MN19413A (REAR ASSY : IC301)

• DSP IC

● Pin Arrangement (Top view)



● Pin Function

No.	Pin Name	I/O/T	Function	No.	Pin Name	I/O	Function
1	RP	O	D/A R-ch analog output (positive)	15	P0/PT0	I/O/T	General purpose port 0 /Flag 0 for condition branch
2	RN	O	D/A R-ch analog output (negative)	16	SYNC	I	Input for program sync. (condition input)
3	VDD	–	Digital power supply (5V)	17	INT1	I	Interrupt input 1
4	SCKI	I	Serial clock for serial input	18	INT0	I	Interrupt input 0
5	WSI	I	Word select for serial input	19	XTEST1	I	Test input (normally 5V)
6	SDI	I	Data for serial input	20	XRESET	I	System reset input
7	SDO2	O	Data for serial output 2	21	ADDR0	I	Address select 0 for IIC bus
8	SDO1	O	Data for serial output 1	22	ADDR1	I	Address select 1 for IIC bus
9	WSO	O	Word select for serial output	23	SCL	I/O	Serial clock for IIC bus
10	SCKO	O	Serial clock for serial output	24	SDA	I/O	Serial data for IIC bus
11	VSS	–	Digital ground (0V)	25	XCE	I	Chip enable for IIC bus
12	P3	I/O/T	General purpose port 3	26	MATCH	O	Address match at coefficient input for IIC bus
13	P2	I/O/T	General purpose port 2	27	VDD	–	Digital power supply (5V)
14	P1/PT1	I/O/T	General purpose port 1 /Flag 1 for condition branch	28	A16	O	Address 16 for external RAM (Open when address is not used.)

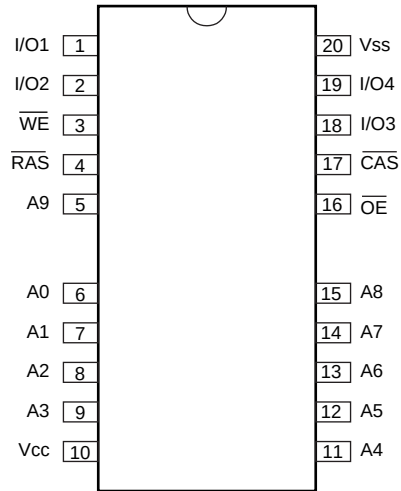
No.	Pin Name	I/O/T	Function	No.	Pin Name	I/O	Function
29	A15	O	Address 15 for external RAM	65	XI1	I	System clock 1 input
30	A14	O	Address 14 for external RAM	66	XO1	O	System clock 1 output
31	A13	O	Address 13 for external RAM	67	XISEL	I	System clock selection (0: XI2, 1: XI1)
32	A12	O	Address 12 for external RAM	68	VDD	–	Digital power supply (5V)
33	A11	O	Address 11 for external RAM	69	RX2	I/O	Digital audio signal input
34	A10	O	Address 10 for external RAM	70	FL2	O	RX2 feedback signal output
35	A9	O	Address 9 for external RAM	71	DIR	I	DIR selection (1: internal DIR use)
36	A8	O	Address 8 for external RAM	72	RX1	I/O	Digital audio signal input 1
37	A7	O	Address 7 for external RAM	73	FL1	O	RX1 feedback signal output
38	A6	O	Address 6 for external RAM	74	CSEL	I	A/D, D/A master clock selection (0: 256fs, 1: 384fs)
39	A5	O	Address 5 for external RAM	75	RXO	O	Digital audio signal output
40	VSS	–	Digital ground (0V)	76	POLPD	I	PCO output polarity selection
41	A4	O	Address 4 for external RAM	77	CLKI	I	VCO clock input (Connect the VCO output (VCOO).)
42	A3	O	Address 3 for external RAM	78	NC	–	Non connection
43	A2	O	Address 2 for external RAM	79	VCOO	O	Built-in VCO output
44	A1	O	Address 1 for external RAM	80	VCOI	I	Built-in VCO input
45	A0	O	Address 0 for external RAM	81	PCO	O	PLL phase comparator output
46	XRAS	O	Row address strobe for external DRAM (open at not used)	82	UNLOCK	O	PLL unlock flag output
47	XCAS	O	Column address strobe for external DRAM (open at not used)	83	VSS	–	Digital ground (0V)
48	XWE	O	Write enable for external RAM	84	ZFLG	O	D/A 0 input detecting output
49	XOE	O	Write put enable for external RAM	85	VREFR	–	A/D Rch reference voltage pin (1.0V)
50	XCE2	O	Chip enable 2 for external SRAM	86	AINR	I	A/D Rch analog input
51	XCE1	O	Chip enable 1 for external SRAM	87	NC	–	Non connection
52	VDD	–	Digital power supply (5V)	88	VREFL	–	A/D Lch reference voltage pin (1.0V)
53	D7	I/O	Data 7 for external RAM (When a DRAM is used, connect to D4 to 7.)	89	VBOP	–	Bias voltage of built-in OP amp. (2.5V)
54	D6	I/O	Data 6 for external RAM	90	NC	–	Non connection
55	D5	I/O	Data 5 for external RAM	91	ADVDD	–	A/D analog power supply (5V)
56	D4	I/O	Data 4 for external RAM	92	ADVSS	–	A/D analog ground (0V)
57	D3	I/O	Data 3 for external RAM	93	AINL	I	A/D Lch analog input
58	D2	I/O	Data 2 for external RAM	94	VGAD	–	A/D analog ground (2.5V)
59	D1	I/O	Data 1 for external RAM	95	NC	–	Non connection
60	D0	I/O	Data 0 for external RAM	96	VGDA	–	D/A analog ground (1.5V)
61	VSS	–	Digital ground (0V)	97	DAVSS	–	D/A analog ground (0V)
62	XI2	I	System clock 2 input	98	DAVDD	–	D/A analog power supply (5V)
63	XO2	O	System clock 2 output	99	LP	O	D/A Lch analog output (positive)
64	TEST0	I	Test input (Normally 0V)	100	LN	O	D/A Lch analog output (negative)

COMPACT DISC PLAYER [PD-R9(S)]

■ HM514400CJ-7 (REAR ASSY : IC302)

- DRAM (4M BIT) IC

● Pin Arrangement (Top view)



● Pin Function

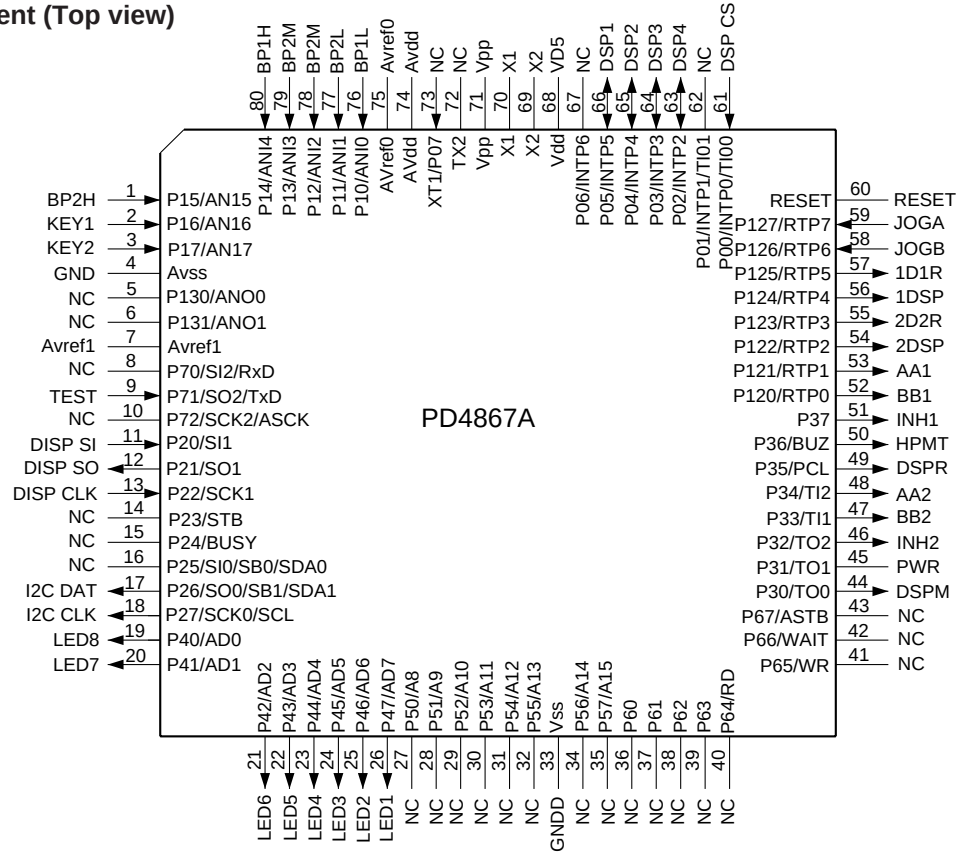
No.	Pin Name	Function	No.	Pin Name	Function
1	I/O1	Data input / output	11	A4	Address input / Refresh address input
2	I/O2		12	A5	
3	WE	Read / Write enable	13	A6	
4	RAS	Row address strobe	14	A7	
5	A9	Address input / Refresh address input	15	A8	
6	A0		16	OE	Output enable
7	A1		17	CAS	Column address strobe
8	A2		18	I/O3	Data input / output
9	A3		19	I/O4	
10	VCC	Power supply	20	VSS	Ground

REMIX EFFECTOR [EF-R9(S)]

■ PD4867A (MAIN ASSY : IC601)

• DSP CONTROL μ -COM

● Pin Arrangement (Top view)



● Pin Function

No.	Pin Function	Pin Name	I/O	Function
1	P15/AN15	BP2H	I	CD2 music signal High-pass
2	P16/AN16	KEY1	I	Key data input (A/D)
3	P17/AN17	KEY2	I	Key data input
4	Avss	GND	—	GND
5	P130/ANO0	—	—	—
6	P131/ANO1	—	—	—
7	Avref1	AVref1	—	Connect to VD5V
8	P70/SI2/RxD	—	—	—
9	P71/SO2/TxD	TEST	I	L : test mode IN
10	P72/SCK2/ASCK	—	—	—
11	P20/SI1	DISP SI	I	Display communication DATA IN
12	P21/SO1	DISP SO	O	Display communication DATA OUT
13	P22/SCK1	DISP CLK	I	Display communication CLK
14	P23/STB	—	—	—
15	P24/BUSY	—	—	—
16	P25/SI0/SB0/SDA0	—	—	—
17	P26/SO0/SB1/SDA1	I2C DATA	O	IIC DATA for DSP
18	P27/SCK0/SCL	I2C CLK	O	IIC CLK for DSP
19	P40/AD0	LED8	O	L : SAMPLER
20	P41/AD1	LED7	O	L : OLD
21	P42/AD2	LED6	O	L : KEYCON
22	P43/AD3	LED5	O	L : FLANGER
23	P44/AD4	LED4	O	L : PAN
24	P45/AD5	LED3	O	L : ECHO
25	P46/AD6	LED2	O	L : DELAY

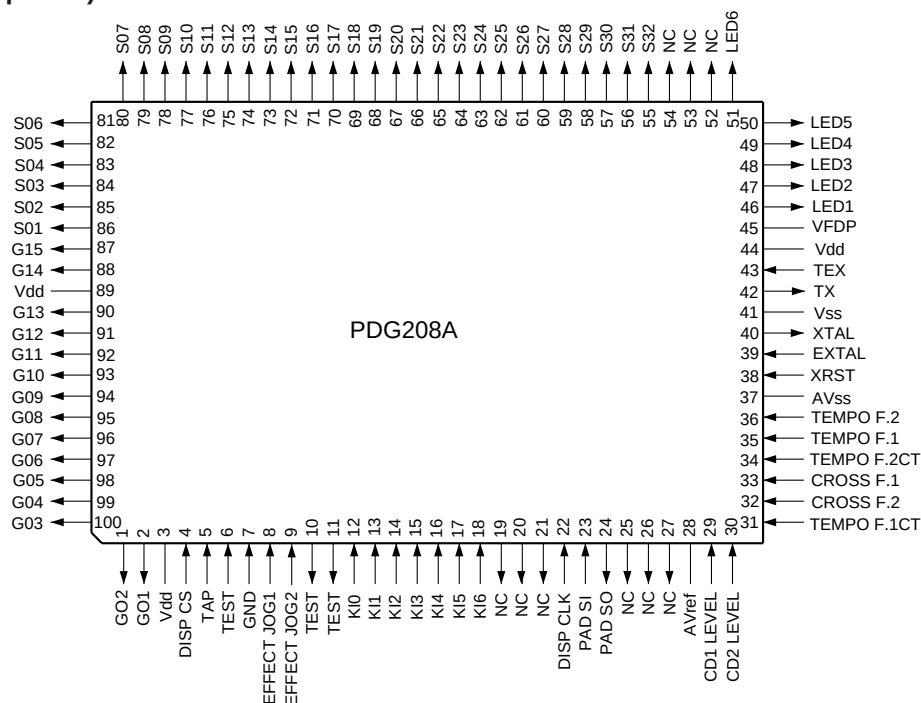
No.	Pin Function	Pin Name	I/O	Function
26	P47/AD7	LED1	O	L : EFFECT ON
27	P50/A8	—	—	—
28	P51/A9	—	—	—
29	P52/A10	—	—	—
30	P53/A11	—	—	—
31	P54/A12	—	—	—
32	P55/A13	—	—	—
33	Vss	GNDD	—	GND
34	P56/A14	—	—	—
35	P57/A15	—	—	—
36	P60	—	—	—
37	P61	—	—	—
38	P62	—	—	—
39	P63	—	—	—
40	P64/RD	—	—	—
41	P65/WR	—	—	—
42	P66/WAIT	—	—	—
43	P67/ASTB	—	—	—
44	P30/TO0	DSPM	O	H : DSP MUTE
45	P31/TO1	PWR	O	H : DSP power ON
46	P32/TO2	INH2	O	H : HP MUTE
47	P33/TI1	BB2	O	L : CD1 L : CD1 H : MUTE H : CD2 L : /2
48	P34/TI2	AA2	O	L : CD1 L : CD1 H : MUTE H : CD2 L : /2
49	P35/PCL	DSPR	O	L : DSP RESET
50	P36/BUZ	HPMT	O	H : HP MUTE
51	P37	INH1	O	H : MUTE
52	P120/RTP0	BB1	O	L : REMIX H : CD1 L : MUTE H : CD2
53	P121/RTP1	AA1	O	L : REMIX H : CD1 L : MUTE H : CD2
54	P122/RTP2	2DSP	O	L : CH2 DSP signal ON
55	P123/RTP3	2D2R	O	L : CH2 DIRECT signal ON
56	P124/RTP4	1DSP	O	L : CH1 DSP signal ON
57	P125/RTP5	1D1R	O	L : CH1 DIRECT signal ON
58	P126/RTP6	JOGB	I	Jog input
59	P127RTP7	JOGA	I	Jog input
60	RESET	RESET	—	RESET
61	P00/INTP0/TI00	DSP CS	I	Display communication chip select
62	P01/INTP1/TI01	—	—	—
63	P02/INTP2	DSP4	O	OLD sound output control
64	P03/INTP3	DSP3	O	NC
65	P04/INTP4	DSP2	O	DSP general purpose port connection
66	P05/INTP5	DSP1	I	H : during sampler memory
67	P06/INTP6	—	—	—
68	Vdd	VD5	—	VD5V
69	X2	X2	—	OSC (4.19MHz)
70	X1	X1	—	OSC (4.19MHz)
71	Vpp	Vpp	—	OSC (4.19MHz)
72	XT2	—	—	—
73	XT1/P07	—	—	—
74	AVdd	AVdd	—	Connect to VD5V
75	AVref0	AVref0	—	Connect to VD5V
76	P10/ANI0	BP1L	I	CD1 music signal Low-pass
77	P11/ANI1	BP2L	I	CD2 music signal Low-pass
78	P12/ANI2	BP2M	I	CD1 music signal intermediate-pass
79	P13/ANI3	BP2M	I	CD2 music signal intermediate-pass
80	P14/ANI4	BP1H	I	CD1 music signal high-pass

REMIX CONTROL MIXER [MX-R9(S)]

■ PDG208A (MAIN ASSY : IC101)

• SYSTEM μ -COM

● Pin Arrangement (Top view)



● Pin Function

No.	Pin Name	I/O	Function	No.	Pin Name	I/O	Function
1	GO2	O	FL grid output	20	—	O	NC (L output)
2	GO1			21	—		
3	VDD	—	Connect to VDD	22	DISP CLK	I	Serial clock of display communication
4	DISP CS	I	Display communication chip select (L : during communication period)	23	PAD SI	I	Serial data input of display communication
5	TAP	I	TAPE key input (L : Key ON)	24	PAD SO	O	Serial data output of display communication
6	TEST	I	Test mode input (L : Test mode ON/OFF)	25	—	O	NC (L output)
7	GND	I	Connect to GNDD	26	—		
8	EFFECT JOG1	I	EFFECT JOG input 1	27	—		
9	EFFECT JOG2	I	EFFECT JOG input 2	28	AVREF	I	Reference voltage input of A/D converter
10	TEST	O	NC (L output)	29	CD1 LEVEL	I	Analog input of CD1 LEVEL
11	TEST	O	NC (L output)	30	CD2 LEVEL	I	Analog input of CD2 LEVEL
12	KI0	I	Key scan and key return input	31	TEMPO F.1CT	I	Center tap analog input of tempo fader 1
13	KI1			32	CROSS F.2	I	Analog input at cross fade 2 side
14	KI2			33	CROSS F.1	I	Analog input at cross fade 1 side
15	KI3			34	TEMPO F.2CT	I	Center tap analog input of tempo fader 2
16	KI4			35	TEMPO F.1	I	Analog input of tempo fader 1
17	KI5			36	TEMPO F.2	I	Analog input of tempo fader 2
18	KI6			37	AVSS	—	Ground of A/D converter (connect to GNDD)
19	—	O	NC (L output)	38	XRST	I	Reset input (L : Reset)

No.	Pin Name	I/O	Function	No.	Pin Name	I/O	Function
39	EXTAL	I	Crystal connection pin for system clock oscillation	70	S17	O	FL segment output
40	XTAL	O		71	S16		
41	VSS	–	Ground (connect to GNDD)	72	S15		
42	TX	O	NC	73	S14		
43	TEX	–	Connect to GNDD	74	S13		
44	VDD	–	Power supply	75	S12		
45	VFDP	–	Power supply for FL (-33V)	76	S11		
46	LED1	O	CD2 PLAY LED control (H : light up)	77	S10		
47	LED2	O	CD2 CUE LED control (H : light up)	78	S09	O	FL segment output (K04 to K01 are combined with key scan pin.)
48	LED3	O	EFFECT ON/OFF LED control (H : light up)	79	S08		
49	LED4	O	CD1 PLAY LED control (H : light up)	80	S07		
50	LED5	O	CD1 CUE LED control (H : light up)	81	S06		
51	LED6	O	REMIX LED control (H : light up)	82	S05	O	FL segment output
52	—	O	NC (H output)	83	S04		
53	—			84	S03		
54	—			85	S02		
55	S32	O	FL segment output	86	S01	O	FL grid output
56	S31			87	G15		
57	S30			88	G14	–	Power supply
58	S29			89	VDD		
59	S28			90	G13	O	FL grid output
60	S27			91	G12		
61	S26			92	G11		
62	S25			93	G10		
63	S24			94	G09		
64	S23			95	G08		
65	S22			96	G07		
66	S21			97	G06		
67	S20			98	G05		
68	S19			99	G04		
69	S18			100	G03		

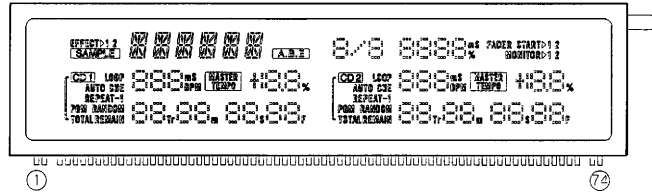
7.1.2 DISPLAY

REMIX CONTROL MIXER [MX-R9(S)]

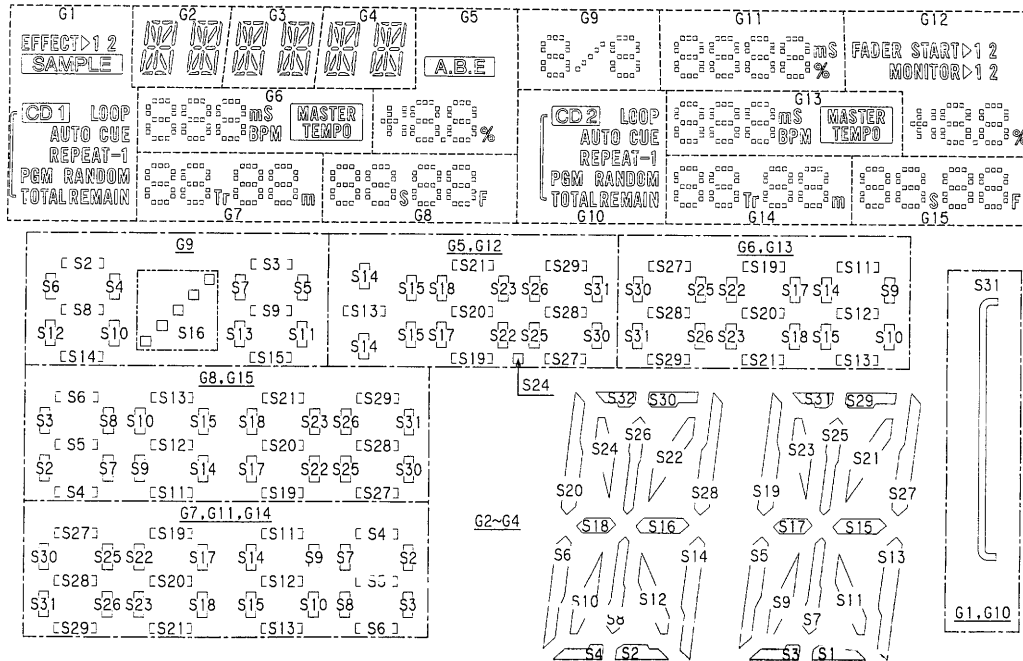
■ AVV7046 (MAIN ASSY : V101)

• FL TUBE

● Pin Arrangement



● Anode and Grid Assignment



	G1	G2~G4	G5	G6.G13	G7.G14	G8.G15	G9	G10	G11	G12
1										
2										
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● Pin Assignment

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20~38		39	40	41	42	43	44
Assignment	F1	F1	NP	NL	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12	G13	G14	G15	NL		S1	S2	S3	S4	S5	S6

Pin No.	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74
Assignment	S7	S8	S9	S10	S11	S12	S13	S14	S15	S16	S17	S18	S19	S20	S21	S22	S23	S24	S25	S26	S27	S28	S29	S30	S31	S32	NL	NP	F2	F2

F1,F2:Filament G1~G15:Grid S1~S32:Anode NP:No Pin NL:No Lead

7.2 DIAGNOSIS

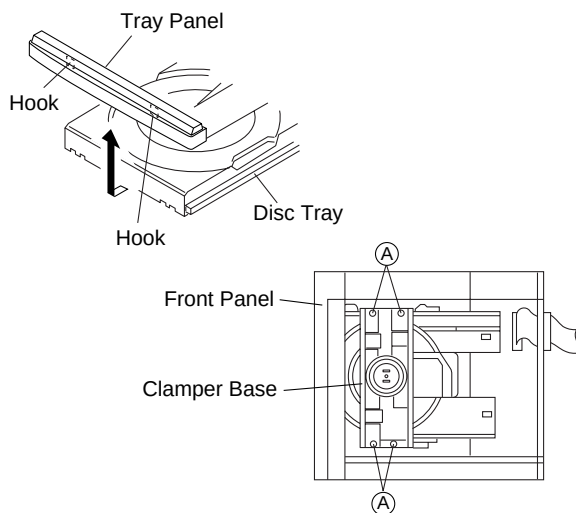
7.2.1 DISASSEMBLY

■ COMPACT DISC PLAYER [PD-R9 (S)]

1. Tray (Fig.1)

Removes the Tray in accordance with the next process so that the hook of Tray may not break.

- (1) Remove the Bonnet. (three screws)
- (2) Move the Tray to the open position by pressing the OPEN/CLOSE (▲) button of Front Panel.
- (3) Remove the Tray Panel. (Remove two hooks of Tray Panel, and pull it up in the top.)
- (4) Push in the Tray.
- (5) Remove the Clamper Base. (Remove four hooks (A) of Clamper Base.)
- (6) Remove the Front Panel.
- (7) Pull out the Tray.



Note: Make it the next when you pull out the Tray by hand.

- 1) Pull the right end (A) of the Clamp Cam in the Front Panel direction.

Servo Mechanism falls down, and Clamper is canceled, and Tray opens about 2cm.

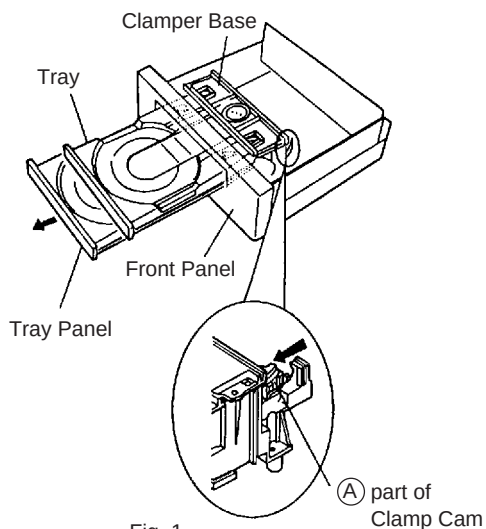


Fig. 1

2. Servo Mechanism Assy

- (1) Move the Tray and Clamper Base. (Refer to paragraph 1.)
- (2) Remove four screws (B) of Clamper and remove one screw (C) of ground wire under the condition (Tray open position) that Servo Mechanism Assy falls down.

Cut a Binder which lead wire is bundled with nipper on the Loading Base.

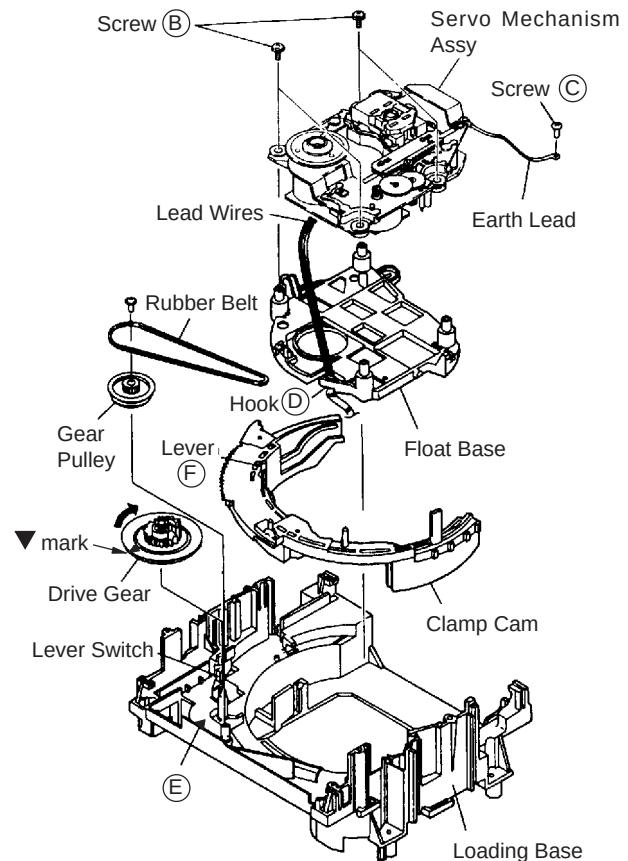


Fig. 2

3. Float Base (Fig.2)

- (1) Remove Servo Mechanism Assy. (Refer to paragraph 2.)
- (2) Turn the Drive Gear to the clockwise direction fully. Float Base is raised when Clamp Cam is fully turned to the counterclockwise direction.
- (3) Remove the Float Base after you remove Lead Wires from the hook part (D) of Float Base.

Note: It means that gear doesn't engage when Clamp Cam doesn't rotate even if Drive Gear rotates.

In this case, put gear together in accordance with the next process in the right position, and it turns Drive Gear.

- 1) Engage the ▼ mark rotation part of Drive Gear and ▲ mark (E) of Loading Base.
- 2) Turn the Lever (F) of Clamp Cam to the counterclockwise direction.

4. Clamp Cam

- (1) Remove the Float Base. (Refer to paragraph 3.)
- (2) Remove the Gear Pulley and Drive Gear.
- (3) Pull it up after you turn the Clamp Cam to the counterclockwise direction fully.

5. How to Attach the Clamp Cam

- (1) Attaches the Clamp Cam with pushing down Lever Switch on the Loading Base to the left side.

6. How to Attach the Float Base

- (1) It turns Clamp Cam to the counterclockwise direction fully, and attach the Float Base. (As for the details of the way of turning Clamp Cam, refer to paragraph 3.)
Remove the Float Base.

7. How to Attach the Tray

- (1) Turns the Drive Gear to the counterclockwise direction, and lowers the Servo Mechanism Assy fully.
- (2) Turn the Drive Gear to the counterclockwise direction, and engage ▼ of Drive Gear and the ▲ mark (E) of Loading Base.
- (3) Insert the tray.

Note 1: Gear doesn't engage when Servo Mechanism Assy doesn't fall down even if Drive Gear rotates. Perform step (2) in this case, and it turns Drive Gear one more time.

Note 2: Servo Mechanism Assy isn't raised fully when Tray isn't being inserted completely. When it is received, a power supply is raised to the Servo Mechanism Assy automatically.

■ REMIX EFFECTOR [EF-R9 (S)]

1. MAIN ASSY (Fig.1)

- (1) Remove the Bonnet (three screws of the rear part).
- (2) Remove the seven screws (A) that MAIN ASSY is fixed, and unhook two Hooks (B). (Fig.1).
- (3) Remove the MAIN ASSY (C).

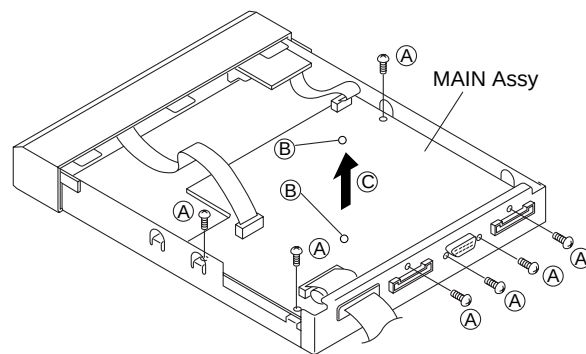


Fig. 1

2. Front Panel (Fig.2)

- (1) Remove the Bonnet (three screws of the rear part).
- (2) Remove the two screws (D) which fixes Front Panel.
- (3) Unhook the two Hooks (E) which fixes Front Panel, and make Front Panel slide into the front, and remove Front Panel.

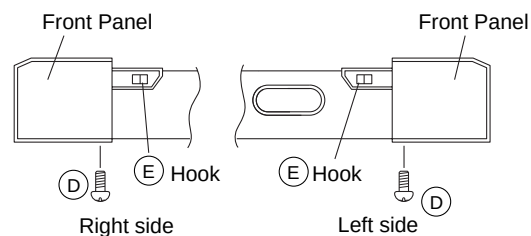


Fig. 2

■ REMIX CONTROL MIXER [MX-R9 (S)]

1. MAIN ASSY (Fig.1 to Fig.3)

- (1) Take off a Sheet (A).
- (2) Remove the five screws (B) which fixes the Bottom Plate. (Fig.1).
- (3) Remove the Bottom Plate (C).
- (4) Remove seven knobs (D). (Fig.2).
- (5) Remove 13 screws (● mark) (E) which fixes the MAIN ASSY. (Fig.3).
- (6) Remove the MAIN ASSY.

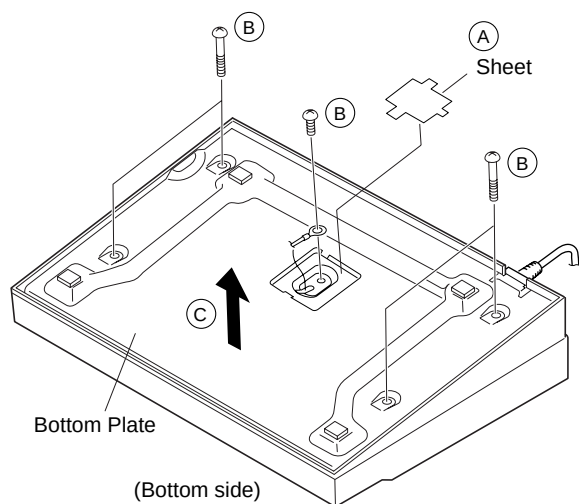


Fig. 1

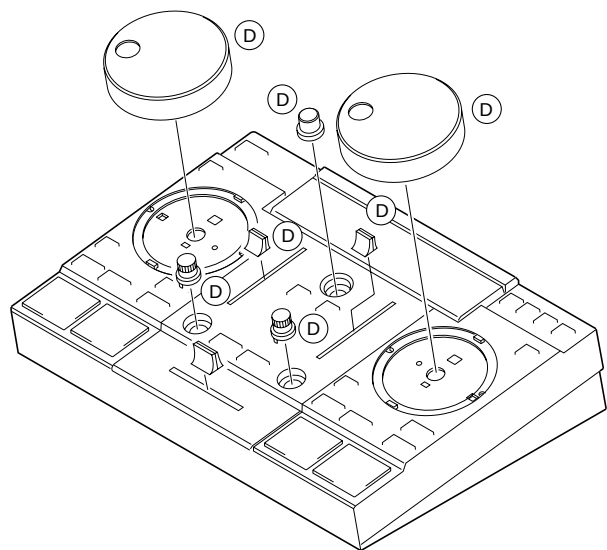


Fig. 2

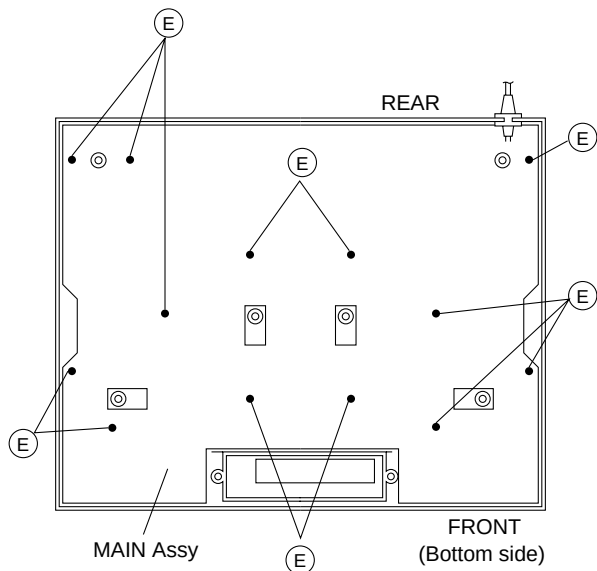


Fig. 3

2. Cross Fader VR (Fig.4)

- (1) Pull out a Fader Knob (F).
- (2) Remove the two screws (G) which fix the Cross Fader Cover.
- (3) Remove the Fader Cover (H).

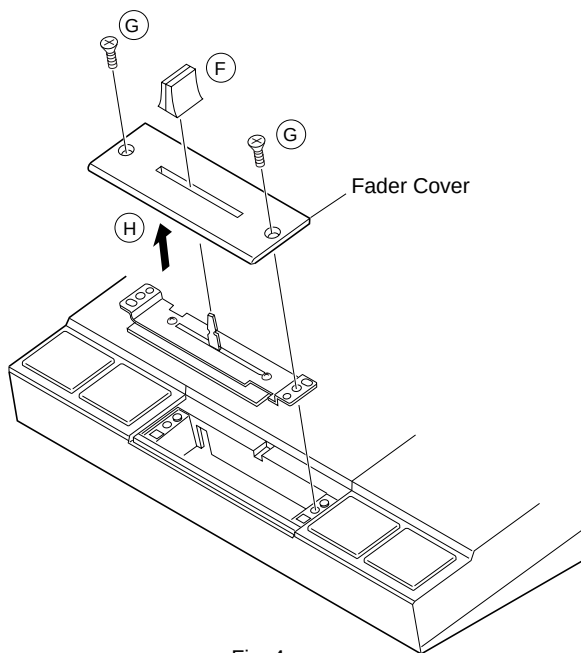


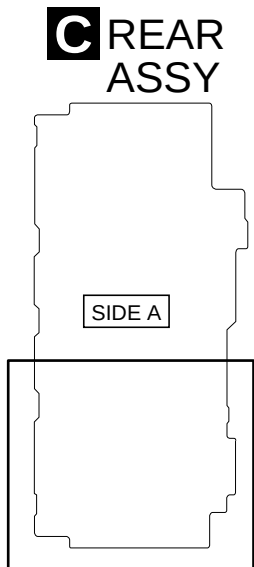
Fig. 4

7.2.2 TEST MODE

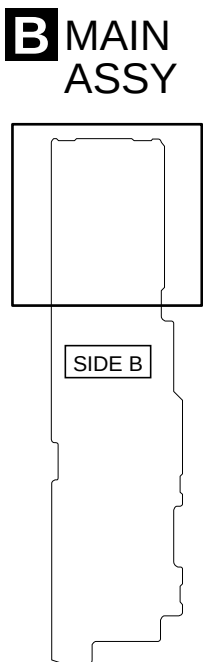
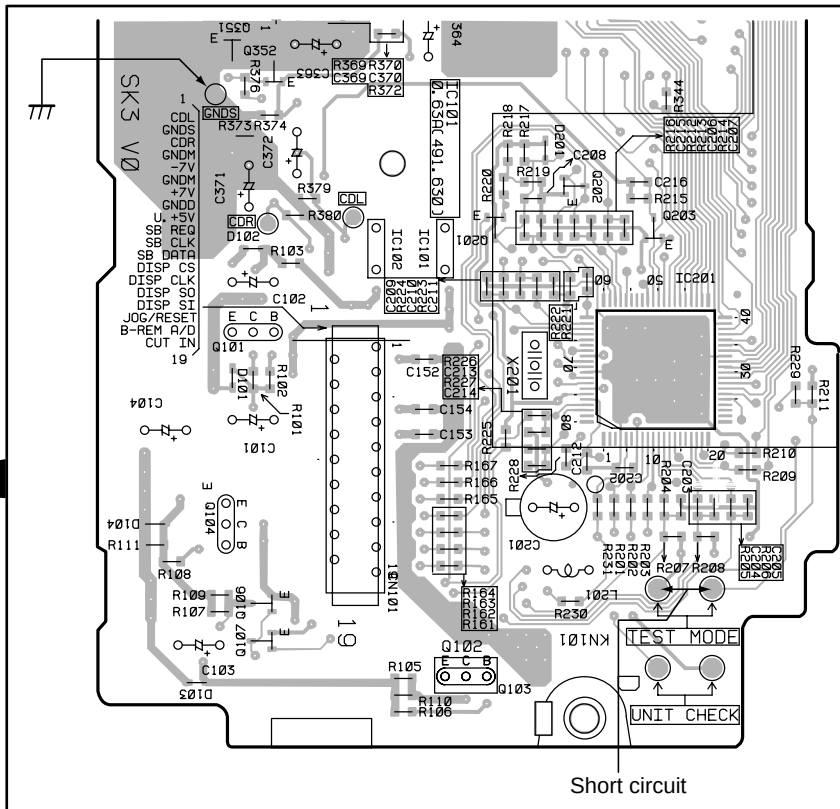
7.2.2.1 COMPACT DISC PLAYER [PD-R9 (S)]

1. Single Operation Method

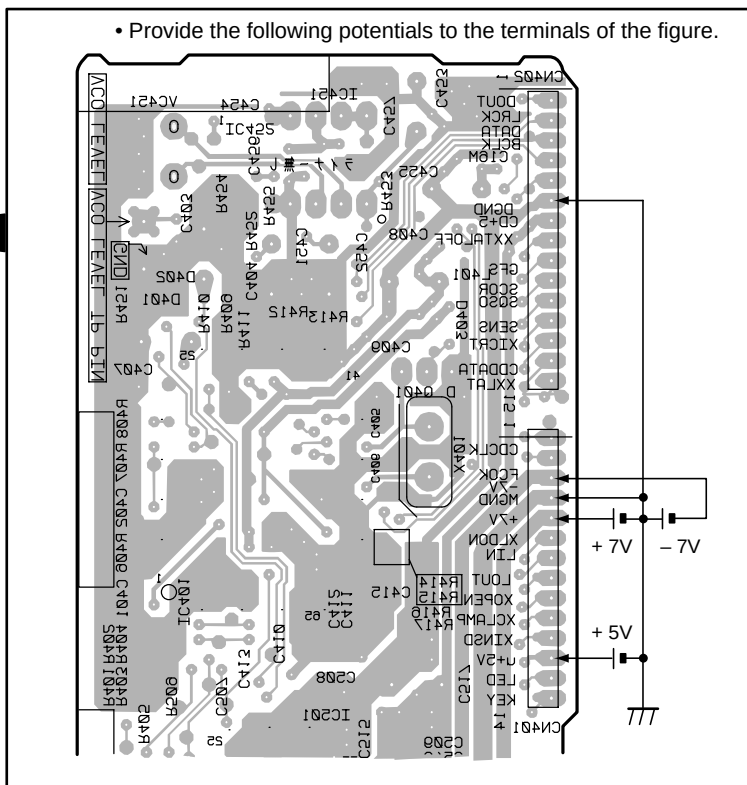
- As this product is a system product, operation with assembled components.
- When single operation can not be avoided, supply power etc. according to the following method.



For CD player operation by itself, short circuit the "TEST MODE" terminals. Release the short circuit after the operation is complete.



- Provide the following potentials to the terminals of the figure.



2. Operation Method When The Components Are Assembled

(1) How To Enter The Test Mode

	How to Enter the Test Mode	Connection Condition
Method 1	Short circuit the TEST pin after the power on.	Connect with the power supply jig.
Method 2	Short circuit the TEST pin or send the \$A25F code by function CD during power on. (Refer to the setup/release the test mode of section 6.1.2 Adjustment.)	Connect with the receiver

Note : • When test mode is 2, set the remix to off and stop the CD.

- A companion is not only SX-R9, and it thinks in the case of the power supply jig as well in the test mode.

When TEST terminal is short-circuited under the condition that a bus is never received after the reset, ignores the information of bus and judge it POWER ON state, and perform the independent movement.

(2) The Condition When Test Mode Was Entered

Function	Make it a CD forcibly. (Only when it is connected with the power supply jig.)
Power	Make it power on condition forcibly. (Only when it is connected with the power supply jig.)
Display	Send it to the time information of the display data with "TEST2". Turn on and off the front LED.

(3) Release The Test Mode

	How to release the TEST mode	The movement of the CD after the TEST mode release
Method 1	Release it with power OFF.	It becomes usual standby condition. (When it is connected with the receiver.)
Method 2	Release it by short circuit the TEST pin.	It usually moves under the condition of function CD.

(4) Movement and Key Reception in the Test Mode (it correspond with the remote control unit or bus communication.)

CD Main Key	Key Command	Movement
STOP key	STOP	STOP (Turn off all servos.)
EJECT key	EJECT	Eject / Load
REPEAT key	REPEAT	LD-on, Focus on
► / II key	►	Spindle kick
► / II key	► / II	Tracking off/on
I◀◀ / ◀◀, ▶▶ / ▶▶ key	I◀◀ / ◀◀, ▶▶ / ▶▶	Slider outside/inside

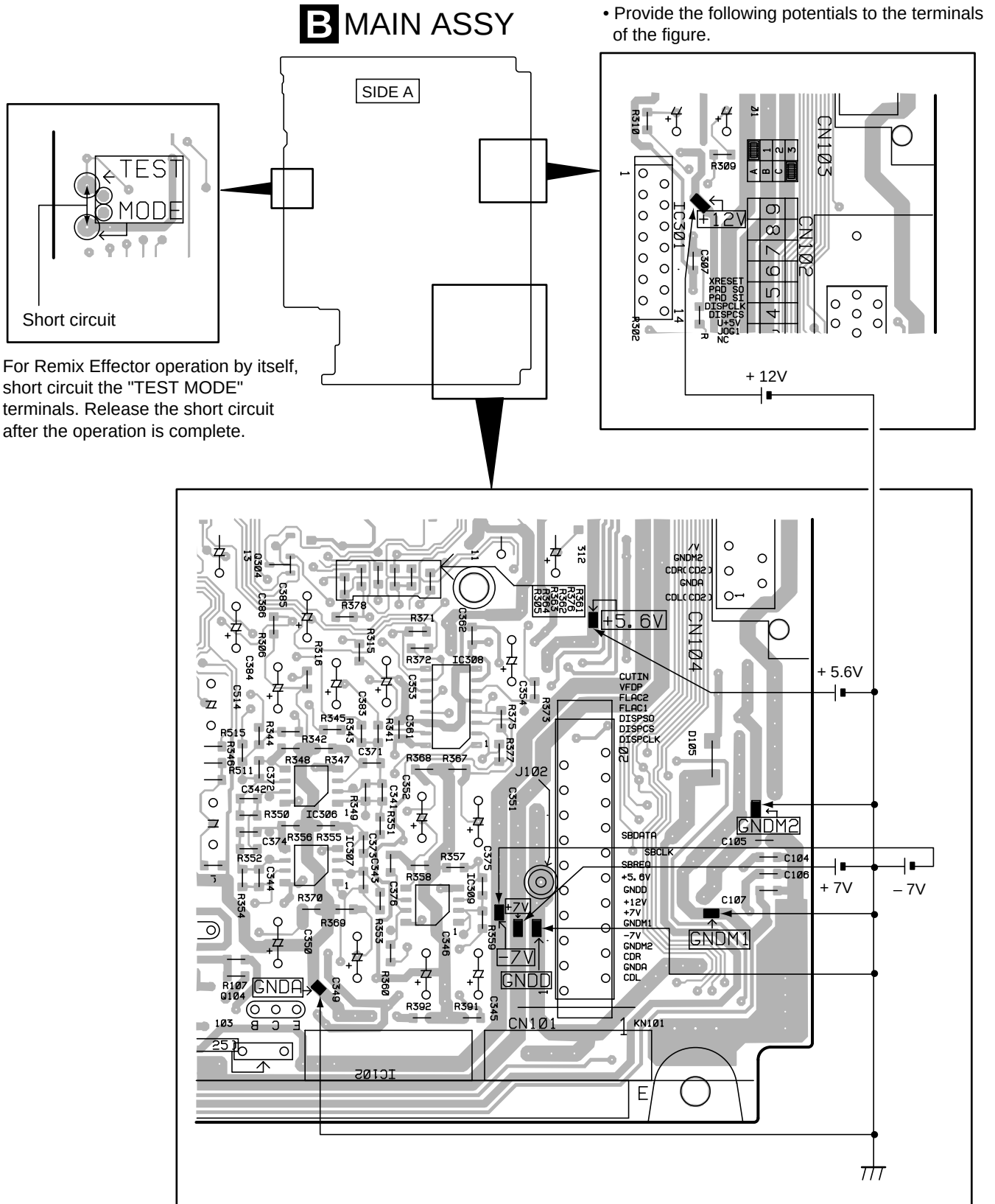
Test check of the Remix Control Mixer (Connect to Stereo Tuner Amplifier and Remix Control Mixer in the CD TEST mode.)

Control Mixer	Movement
REMIX key	REMIX LED light up/light out
SAMPLE MEMORY key	SAMPLE segment of receiver light up/light out
SAMPLE MODE/PLAY key	SAMPLE LED light up/light out
LOOP key	LOOP LED light up/light out
CUE key	CUE LED light up/light out
PLAY / PAUSE key	PLAY LED light up/light out
MASTER TEMPO key	MASTER TEMPO LED light up/light out
TEMPO RESET key	Receiver displays "TEMPO" ↔ time indication
TAP / AUTO CUE key	AUTO CUE segment of receiver light up/light out

7.2.2.2 REMIX EFFECTOR [EF-R9 (S)]

1. Single Operation Method

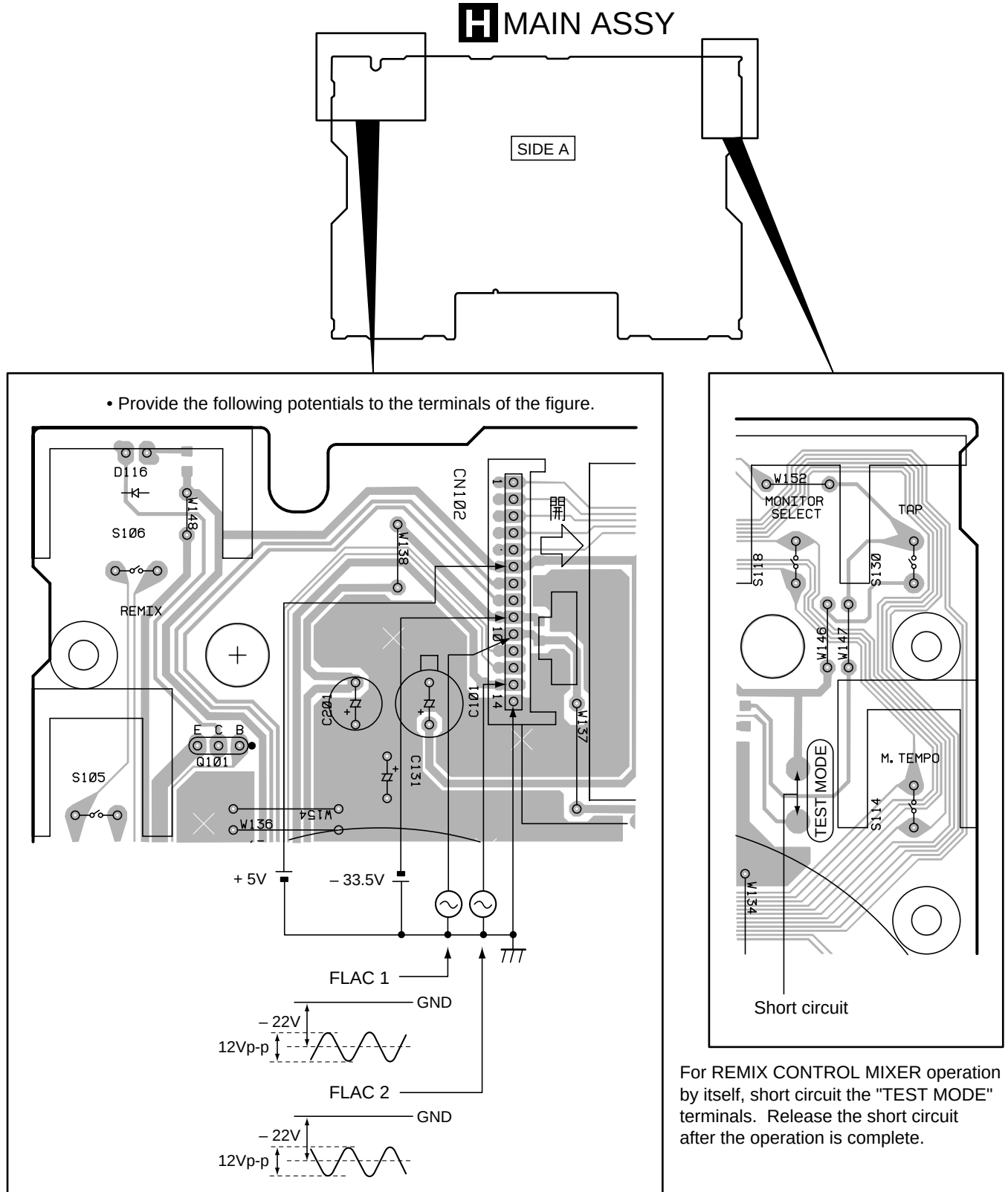
- As this product is a system product, operation with assembled components.
- When single operation can not be avoided, supply power etc. according to the following method.



7.2.2.3 REMIX CONTROL MIXER [MX-R9 (S)]

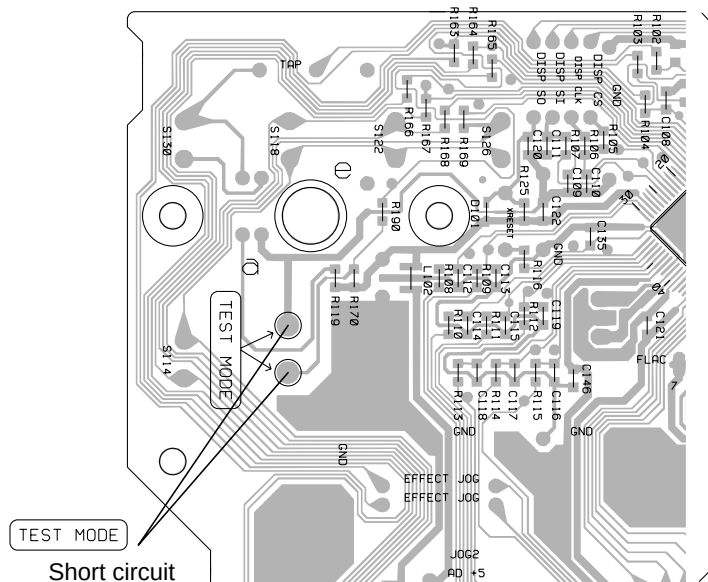
1. Single Operation Method

- As this product is a system product, operation with assembled components.
- When single operation can not be avoided, supply power etc. according to the following method.

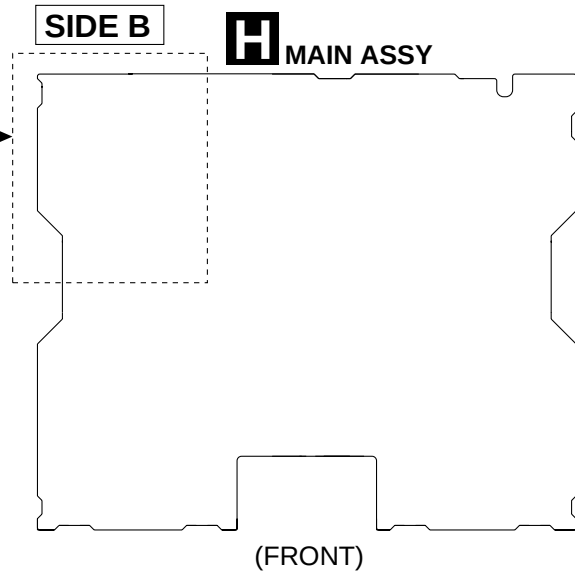


2. Operation Method When The Components Are Assembled

TEST MODE : ON



- Method 1 : Short circuit the TEST pin during the power on.
- Method 2 : Input **[A65F]** with the remote control unit during the system power on.



Note : A companion is not only SX-R9, and it thinks in the case of the power supply jig as well in the test mode.

When TEST terminal is short-circuited under the condition that a bus is never received after the reset, ignore the information of display communication and judge it POWER ON state, and perform the independent movement in the Remix ON state.

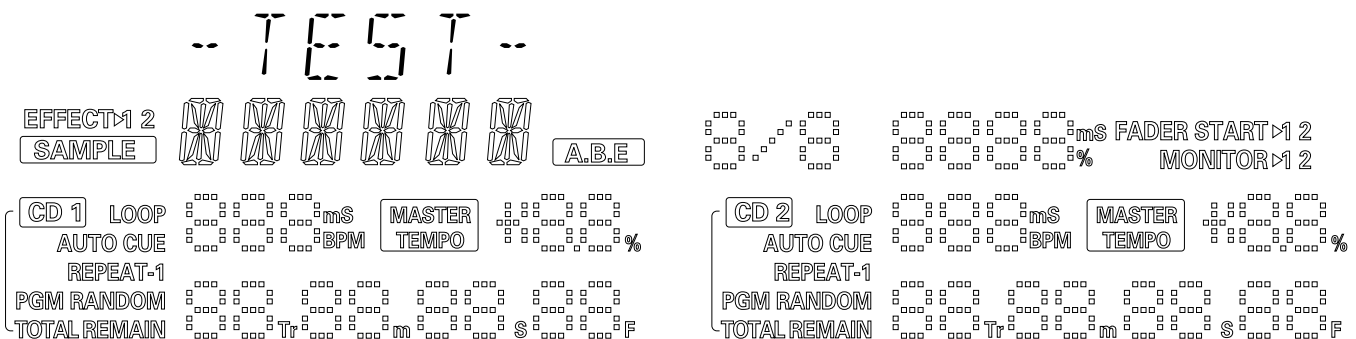
TEST MODE : CANCEL

- Method 1 : Set to the power standby or AC off.
- Method 2 : Short circuit the TEST pin during test mode.

TEST MODE : CHANGE

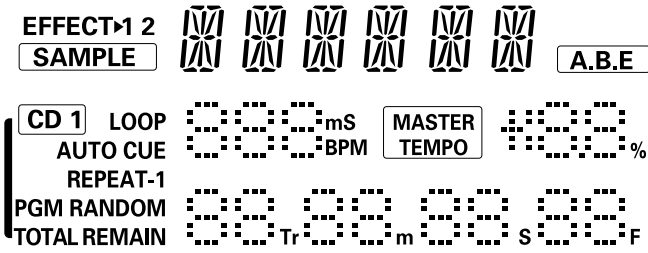
- Method 1 : Press **[TAP]** button during test mode.
- Method 2 : Switch as **TEST → All light up → All light out → Pattern 1 → Pattern 2 → Pattern 3 → Pattern 4 → Key check**

1 TEST Display

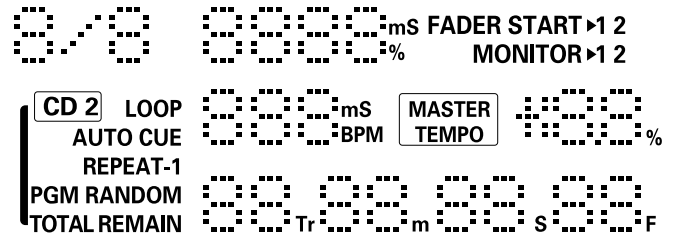


- Six characters : Normal display excepting -TEST-
- LED : Normal

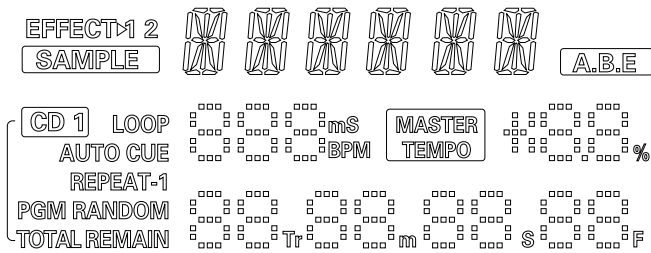
2 All Light up



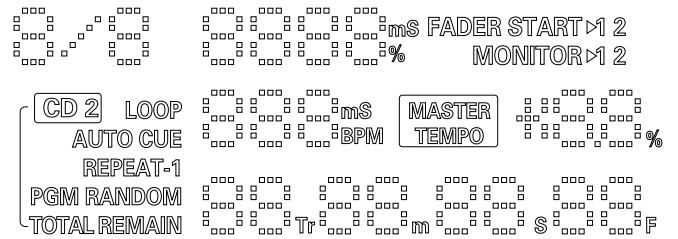
- FL : All light up
- LED : All light up



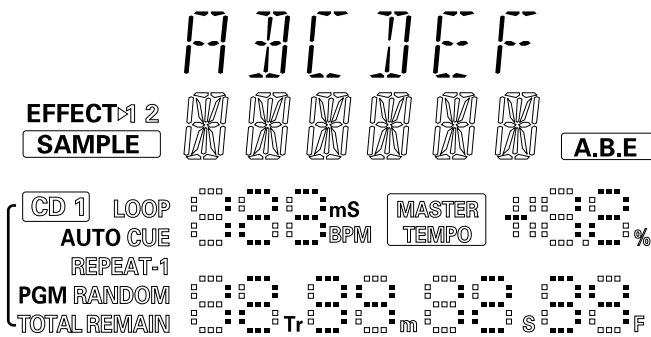
3 All Light out



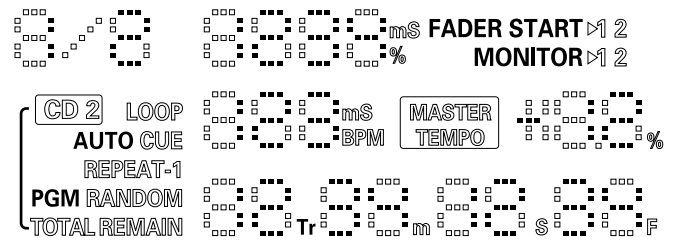
- FL : All light out
- LED : All light out



4 Pattern 1



- LED : CD1 PLAY light
- LED : CD2 PLAY light



5 Pattern 2

GHIJKL

EFFECT▶1 2
SAMPLE

A.B.E

CD 1 LOOP
AUTO CUE
REPEAT-1
PGM RANDOM
TOTAL REMAIN

ms
BPM

MASTER
TEMPO

%

Tr

m

s

F

- LED : CD1 CUE light
- : CD2 CUE light

ms
BPM

MASTER
TEMPO

%

FADER START▶1 2
MONITOR▶1 2

CD 2 LOOP
AUTO CUE
REPEAT-1
PGM RANDOM
TOTAL REMAIN

ms
BPM

MASTER
TEMPO

%

Tr

m

s

F

6 Pattern 3

MNOPQR

EFFECT▶1 2
SAMPLE

A.B.E

CD 1 LOOP
AUTO CUE
REPEAT-1
PGM RANDOM
TOTAL REMAIN

ms
BPM

MASTER
TEMPO

%

Tr

m

s

F

- LED : EFFECT ON/OFF light

ms
BPM

MASTER
TEMPO

%

FADER START▶1 2
MONITOR▶1 2

CD 2 LOOP
AUTO CUE
REPEAT-1
PGM RANDOM
TOTAL REMAIN

ms
BPM

MASTER
TEMPO

%

Tr

m

s

F

7 Pattern 4

UVWXYZ

EFFECT▶1 2
SAMPLE

A.B.E

CD 1 LOOP
AUTO CUE
REPEAT-1
PGM RANDOM
TOTAL REMAIN

ms
BPM

MASTER
TEMPO

%

Tr

m

s

F

- LED : REMIX light

ms
BPM

MASTER
TEMPO

%

FADER START▶1 2
MONITOR▶1 2

CD 2 LOOP
AUTO CUE
REPEAT-1
PGM RANDOM
TOTAL REMAIN

ms
BPM

MASTER
TEMPO

%

Tr

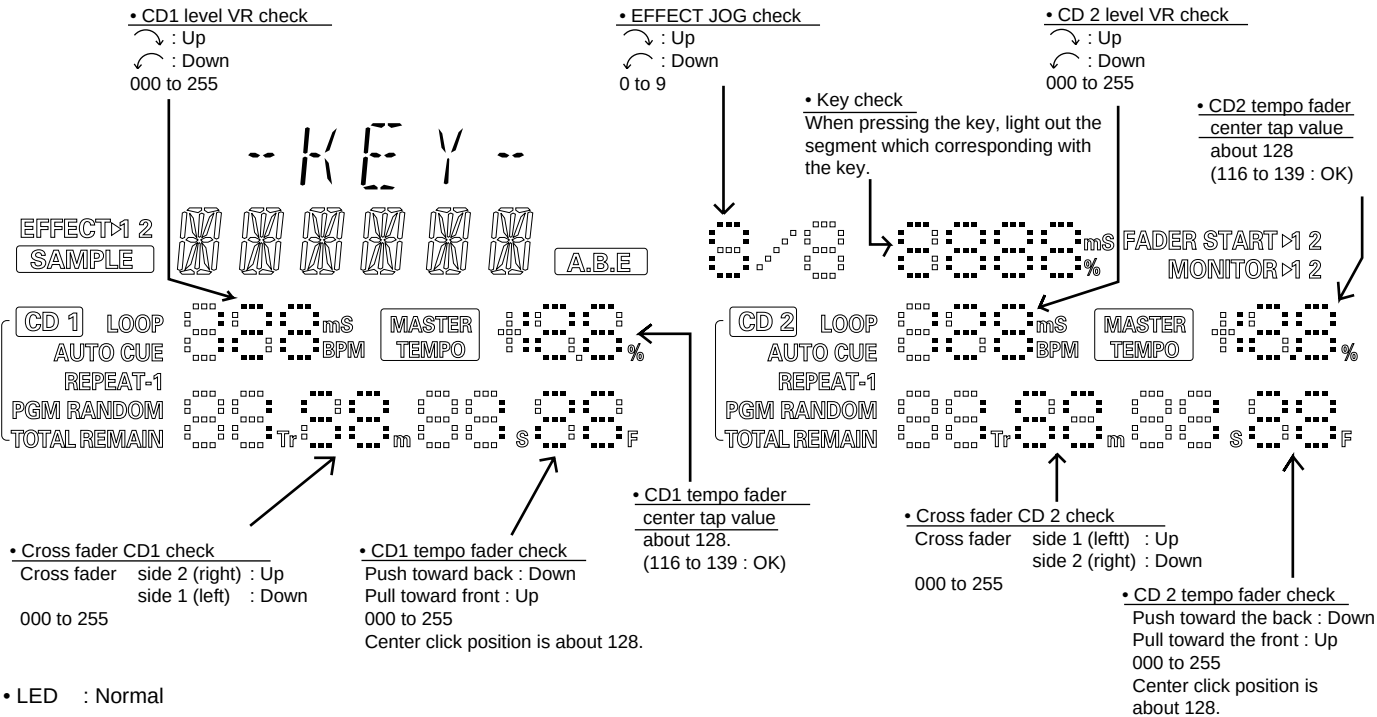
m

s

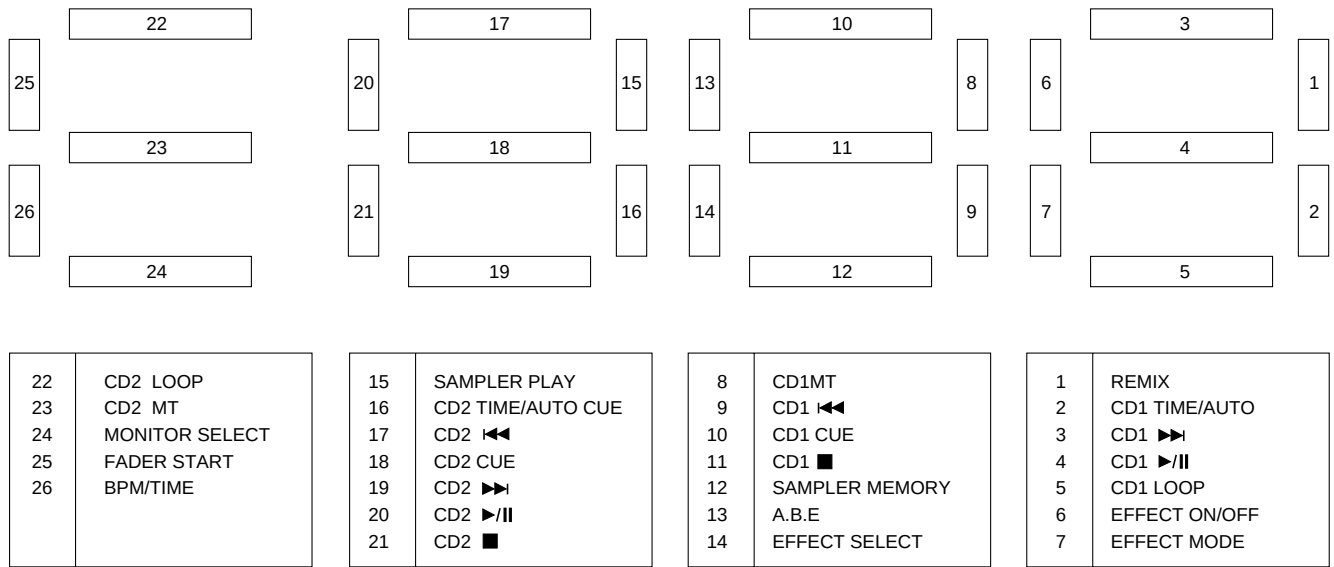
F

8 Key Check

Note : Don't press the **TAP** button during key check.

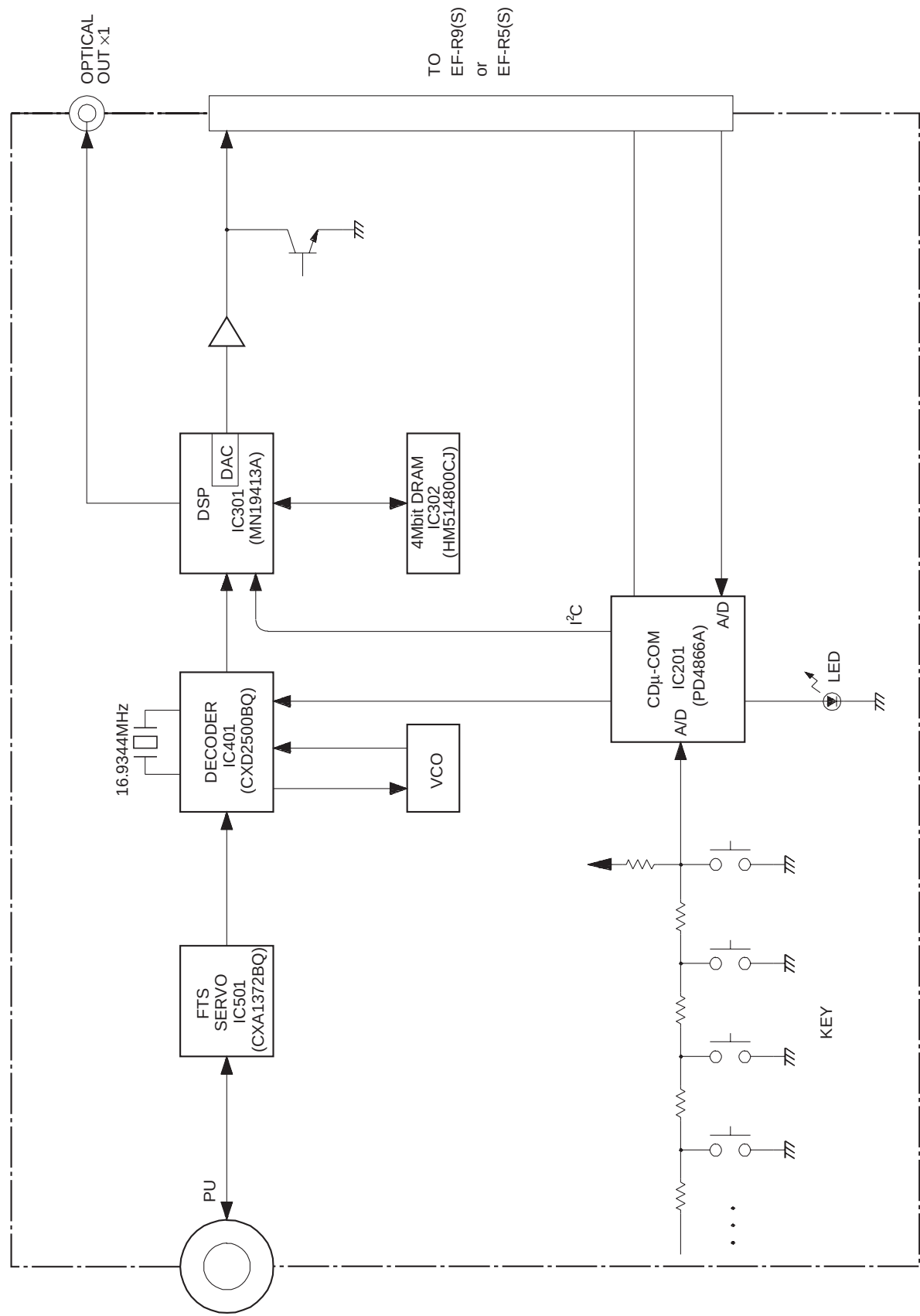


Correlation Diagram of Key and Segment at Key Check

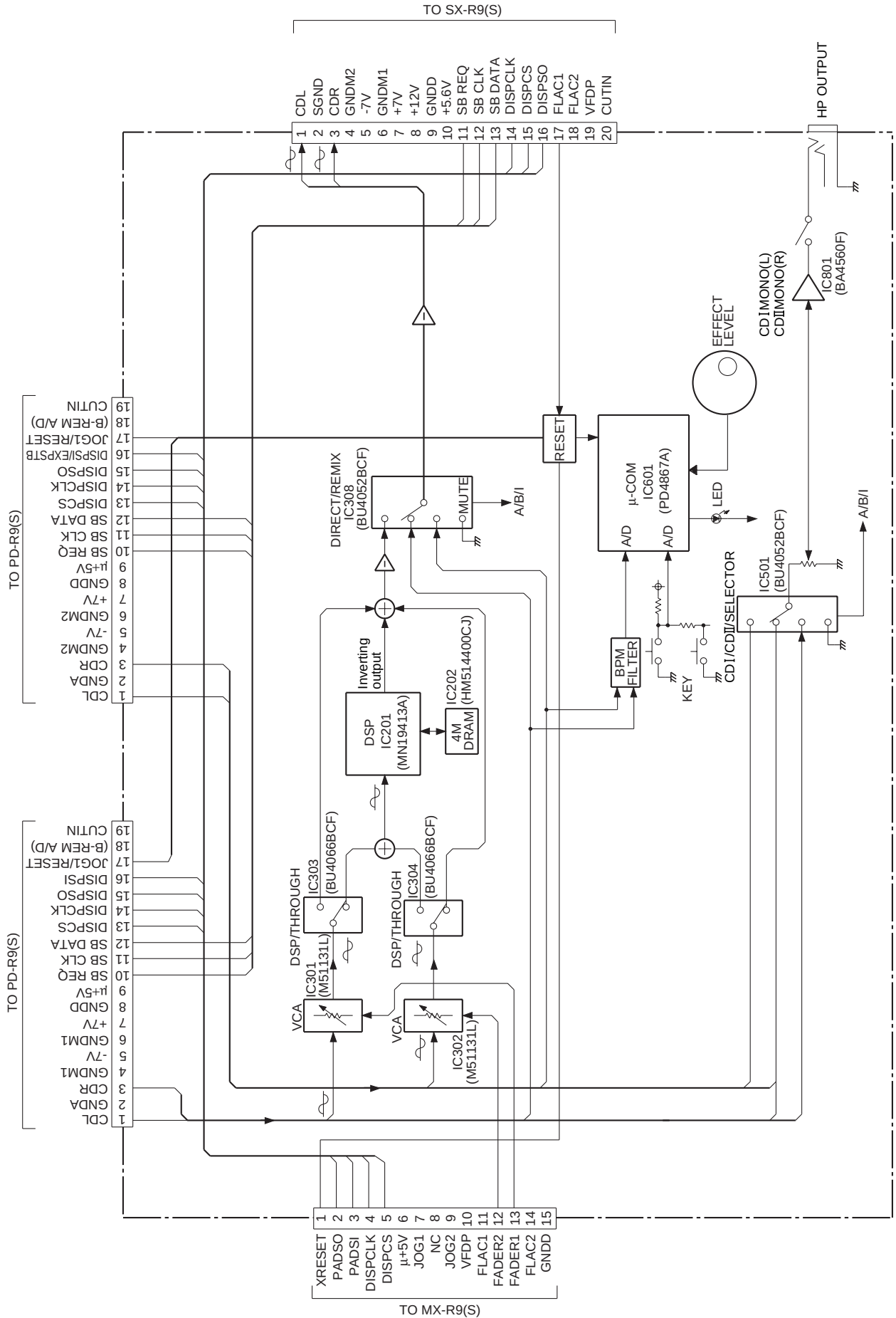


7.3 BLOCK DIAGRAM

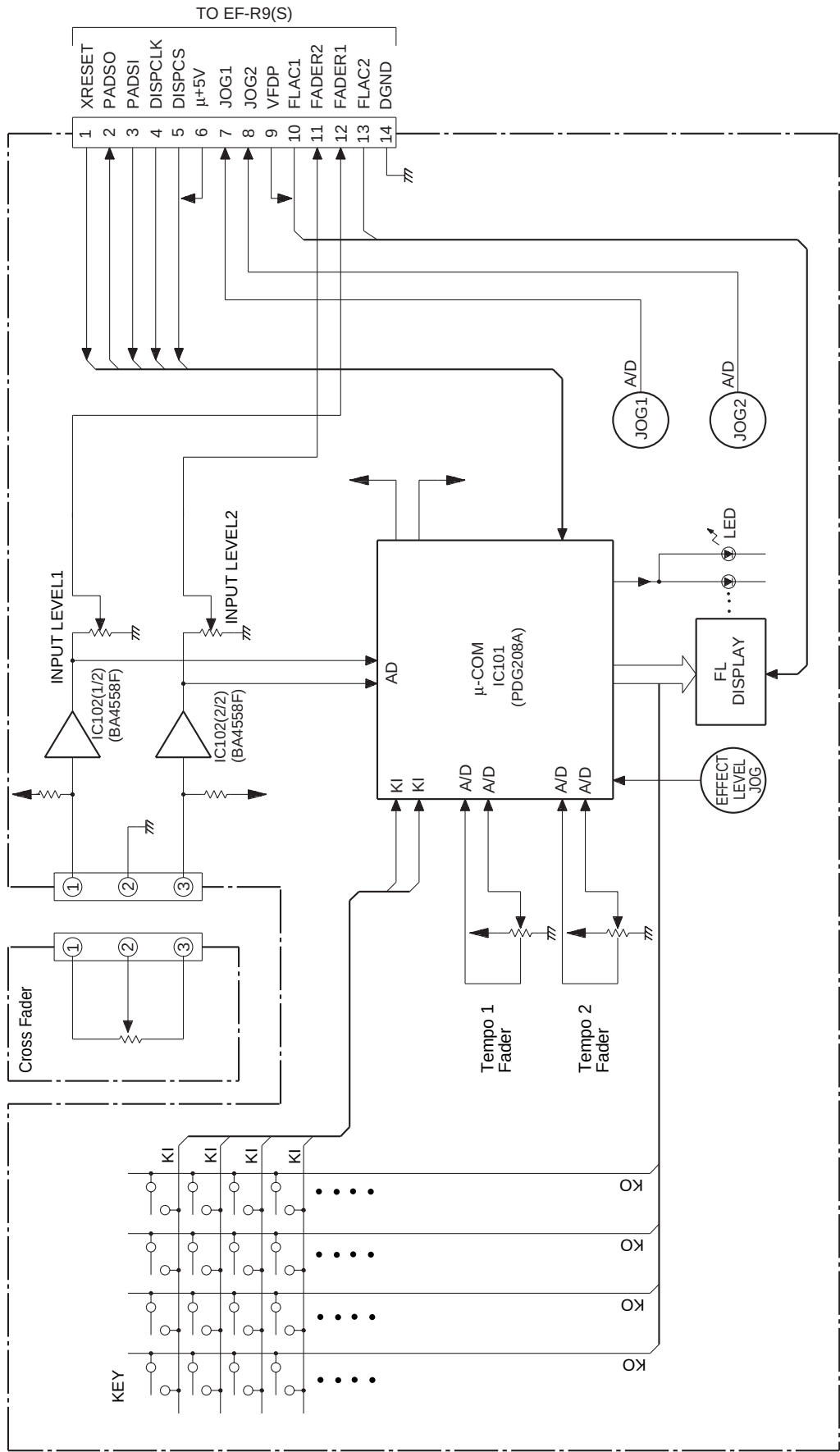
7.3.1 COMPACT DISC PLAYER [PD-R9 (S)]



7.3.2 REMIX EFFECTOR [EF-R9 (S)]

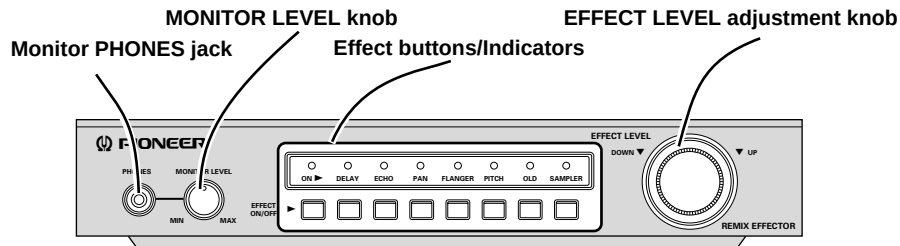


7.3.3 REMIX CONTROL MIXER [MX-R9 (S)]

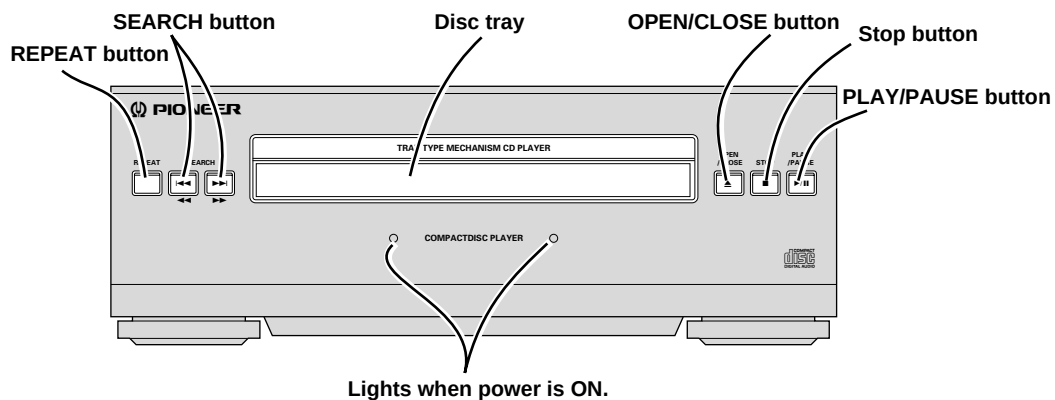


8. PANEL FACILITIES AND SPECIFICATIONS

■ REMIX EFFECTOR (EF-R9(S))

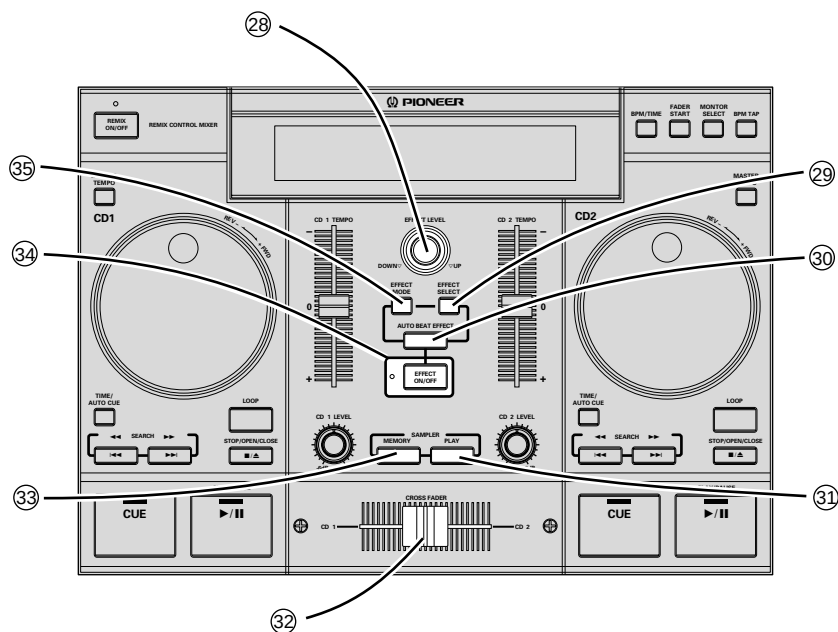
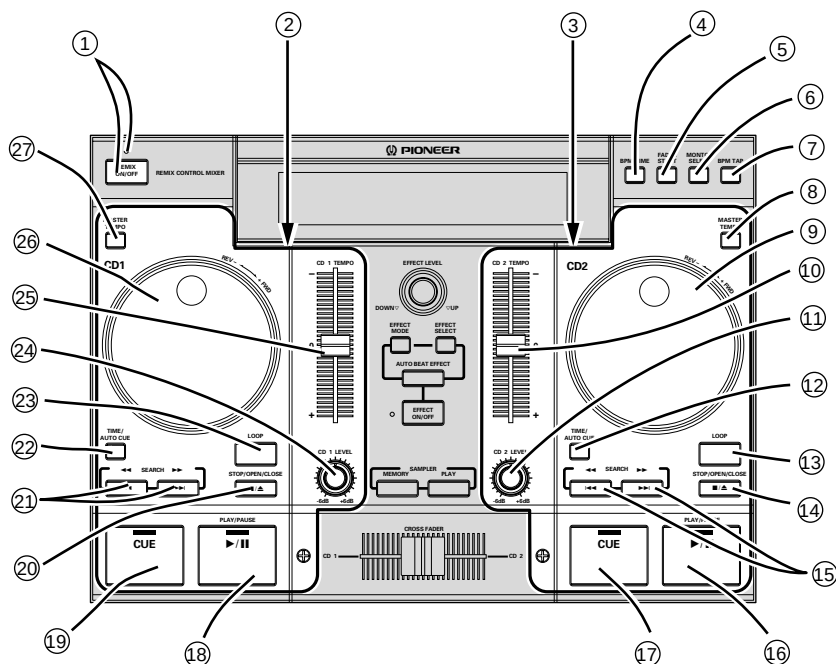


■ COMPACT DISC PLAYER (PD-R9(S))

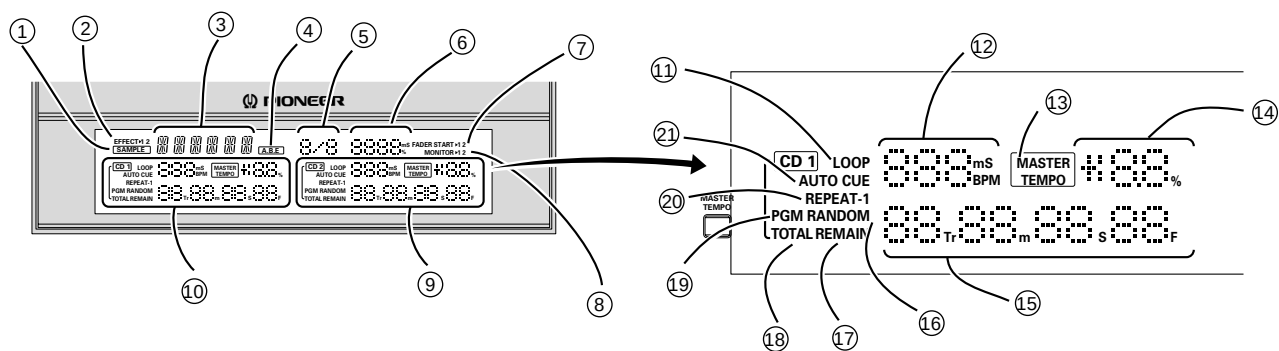


■ REMIX CONTROL MIXER (MX-R9(S))

● Front Panel



● Remix Control Mixer Display



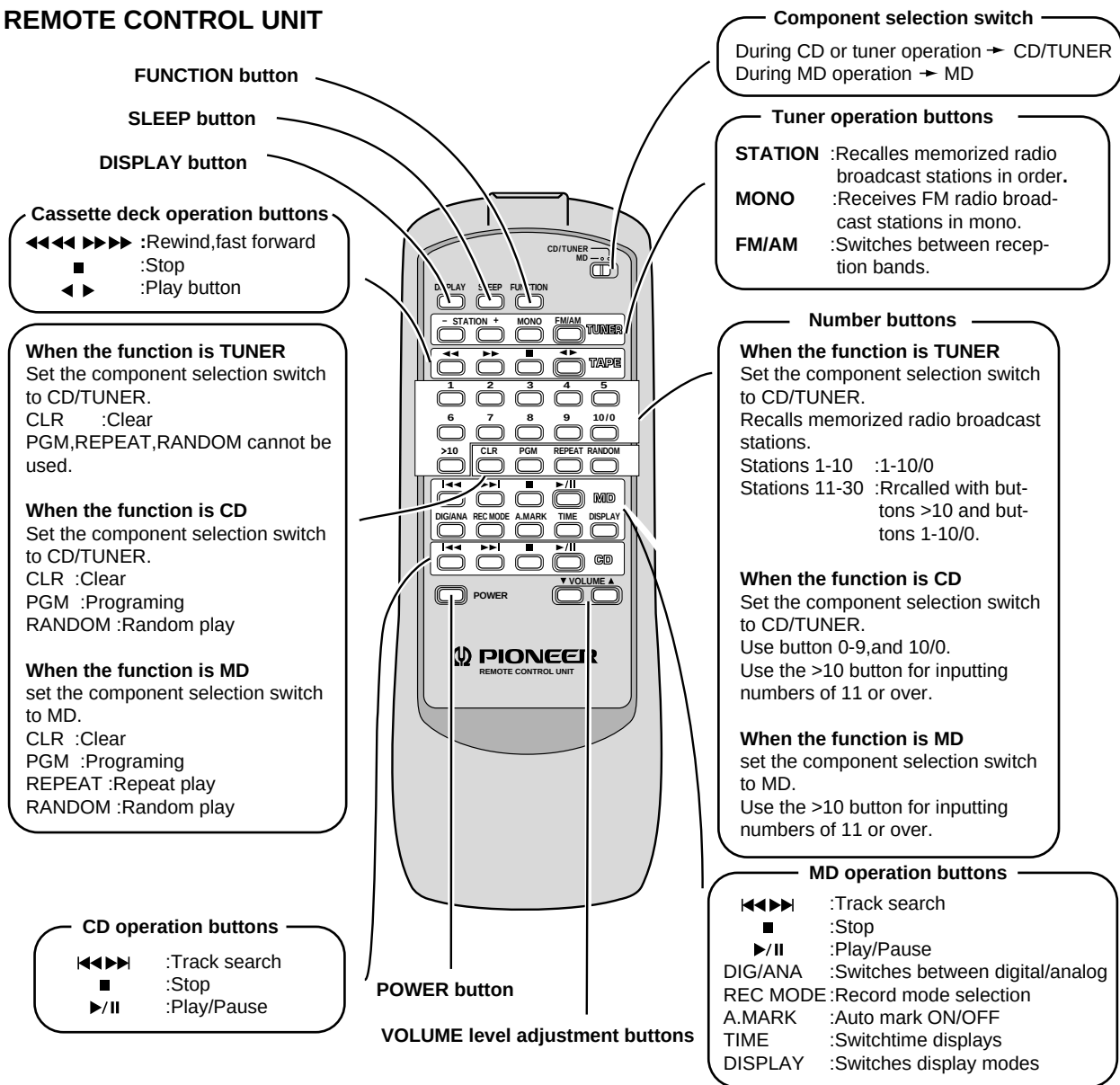
●Remix Control Mixer

- ① REMIX button / indicator
- ② CD1 operation section
- ③ CD2 operation section
- ④ BPM / TIME button
- ⑤ FADER START selection button
- ⑥ MONITOR SELECT button
- ⑦ TAP button
- ⑧ MASTER TEMPO button
- ⑨ Jog
- ⑩ Tempo slider
- ⑪ VOLUME LEVEL adjustment knob
- ⑫ TIME / AUTO CUE button
- ⑬ LOOP button
- ⑭ STOP / OPEN / CLOSE button
- ⑮ SEARCH button
- ⑯ PLAY / PAUSE button / Indicator
- ⑰ CUE button / Indicator
- ⑱ PLAY / PAUSE button / Indicator
- ⑲ CUE button / Indicator
- ⑳ STOP / OPEN / CLOSE button
- ㉑ SEARCH button
- ㉒ TIME / AUTO CUE button
- ㉓ LOOP button
- ㉔ VOLUME LEVEL adjustment knob
- ㉕ Tempo Slider
- ㉖ Jog
- ㉗ MASTER TEMPO button
- ㉘ EFFECT LEVEL adjustment knob
- ㉙ EFFECT SELECT button
- ㉚ AUTO BEAT EFFECT button
- ㉛ SAMPLER PLAY button
- ㉜ CROSS FADER slider
- ㉝ SAMPLER MEMORY button
- ㉞ EFFECT ON / OFF button / Indicator
- ㉟ EFFECT MODE button

●Remix Control Mixer Display

- ① Sampler indicator
- ② EFFECT selection indicator
- ③ Letter disply
- ④ Auto beat effect (A.B.E) indicator
- ⑤ Time signature indicator
- ⑥ Effect level display
- ⑦ FADER START selection indicator
- ⑧ MONITOR selection indicator
- ⑨ CD2 disply (same as the CD1 disply)
- ⑩ CD1 disply
- ⑪ Lights during loop play
- ⑫ BPM / Time disply
- ⑬ Master tempo indicator
- ⑭ Tempo display
- ⑮ Track number, time, frame display
- ⑯ Lights during random play
- ⑰ Remmaing Time display
- ⑱ Total time display
- ⑲ Lights during programing and program play
- ⑳ Lights during repeat play
During repeat play of all tracks:REPEAT
During repeat play of 1 track:REPEAT-1
- ㉑ Indicators auto cue setting

■ REMOTE CONTROL UNIT



■ SPECIFICATIONS

Remix Effector :EF-R9

Dimensions210(W) x 37.5(H) x 275(D) mm
Weight1.2kg

Remix Control Mixer :MX-R9

Dimensions300(W) x 73.5(H) x 217(D) mm
Weight1.0kg

Compact Disc Player :PD-R9

TypeCompact Disc digital audio system
Usable discs.....Compact Discs
Dimensions210(W) x 75(H) x 274(D) mm
Weight1.8kg

NOTE: The specifications and design of this product are subject to change without notice, due to improvement.

■ ACCESSORIES

