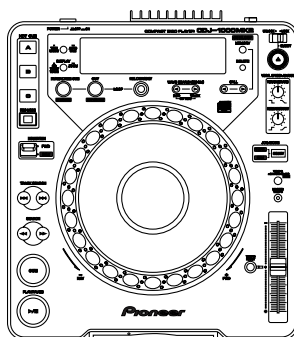


Service Manual



CDJ-1000MK2

ORDER NO.
RRV2802

COMPACT DISC PLAYER

CDJ-1000MK2

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

Model	Type	Power Requirement	Remarks
CDJ-1000MK2	KUCXJ	AC120V	
CDJ-1000MK2	TLXJ	AC110- 240V	
CDJ-1000MK2	WYXJ	AC220- 240V	



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

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.

WARNING

This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 – Proposition 65

NOTICE

(FOR CANADIAN MODEL ONLY)

Fuse symbols (fast operating fuse) and/or (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE

(POUR MODÈLE CANADIEN SEULEMENT)

Les symboles de fusible (fusible de type rapide) et/ou (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

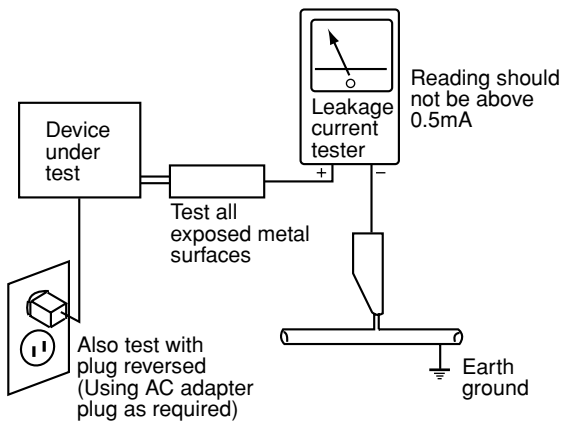
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5mA.



AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a Δ on the schematics and on the parts list in this Service Manual.

The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

IMPORTANT

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

LASER DIODE CHARACTERISTICS

MAXIMUM OUTPUT POWER: 5 mW
WAVELENGTH: 780 – 785 nm

WARNING !

The AEL(accessible emission level) of the laser power output is less then **CLASS 1** but the laser component is capable of emitting radiation exceeding the limit for **CLASS 1**.

A specially instructed person should servicing operation of the apparatus.

LABEL CHECK**CDJ-1000MK2/ TLXJ Type Only**

CAUTION
INVISIBLE LASER
RADIATION WHEN OPEN,
AVOID EXPOSURE
TO BEAM

PRW1018

CDJ-1000MK2/ WYXJ Type Only**VARO!**

Avattaessa ja suojauslukitus ohitetta-
essa olet alttiina näkymättömälle
lasersäteilylle. Älä katso säteeseen.

VAROING!

Oeynlig laserstrålning när denna del
är öppnad och spärren är urkopplad.
Betrakta ej strålen.

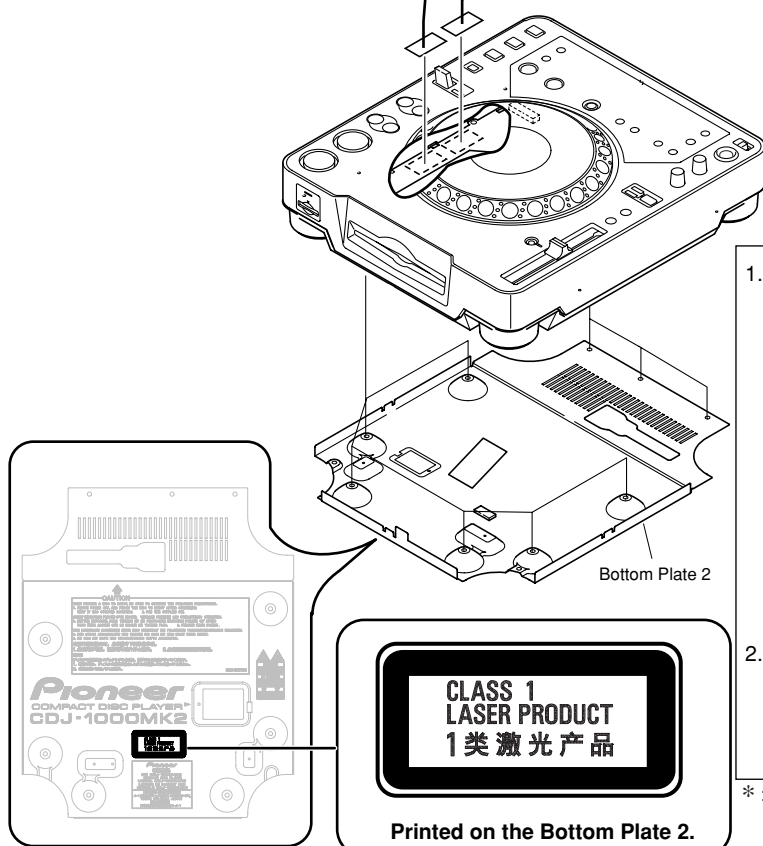
PRW1233

ADVARSEL

USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHED SAF-
BRYDERE ER UDE AF FUNKTION.
UNDGÅ UDSÆTTELSE FOR STRÅLING.

VORSICHT!

UNSICHTBARE LASER-STRÄHLUNG TRITTS AUS, WENN DECKEL
(ODER KLAPPE) GEÖFFNET IST! NICHT DEM STRAHL AUSSETZEN!
VRW1094



Printed on the Bottom Plate 2.

Additional Laser Caution**1. Laser Interlock Mechanism**

The position of the switch (S510) for detecting loading completion is detected by the system microprocessor, and the design prevents laser diode oscillation when the switch is not in LPS1 terminal side (when the mechanism is not clamped and LPS1 signal is high level.) Thus, the interlock will no longer function if the switch is deliberately set to LPS1 terminal side. (if LPS1 signal is low level).

In the test mode* the interlock mechanism will not function. Laser diode oscillation will continue, if pin 4 of AN8702NFH (IC800) on the MAIN ASSY is connected to GND, or else the terminals of Q600 are shorted to each other (fault condition).

2. 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 68.

[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.

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1. SPECIFICATIONS

■ CDJ-1000MK2/ KUCXJ type

1. General

System	Compact disc digital audio system
Power requirements	AC 120 V, 60 Hz
Power consumption	33 W
Operating temperature	+5 °C – +35 °C
Operating humidity	5% – 85%
(There should be no condensation of moisture.)	
Weight	4.2 kg (9.26 lb)
Dimensions	320 (W) × 370 (D) × 105 (H) mm
	12 – 5/8 (W) × 14 9/16 (D) × – 1/8 (H) in

2. Audio section

Frequency response	4 Hz – 20 kHz
Signal-to-noise ratio	115 dB or more (JEITA)
Distortion	0.006% (JEITA)

■ CDJ-1000MK2/ TLXJ type

1. General

System	Compact disc digital audio system
Power requirements	AC 110–240 V, 50/60 Hz
Power consumption	31 W
Operating temperature	+5 °C – +35 °C
Operating humidity	5% – 85%
(There should be no condensation of moisture.)	
Weight	4.2 kg
Dimensions	320 (W) × 370 (D) × 105 (H) mm

2. Audio section

Frequency response	4 Hz – 20 kHz
Signal-to-noise ratio	115 dB or more (JEITA)
Distortion	0.006% (JEITA)

■ CDJ-1000MK2/ WYXJ type

1. General

System	Compact disc digital audio system
Power requirements	AC 220–240V, 50/60 Hz
Power consumption	31 W
Operating temperature	+5 °C – +35 °C
Operating humidity	5% – 85%
(There should be no condensation of moisture.)	
Weight	4.2 kg
Dimensions	320 (W) × 370 (D) × 105 (H) mm

2. Audio section

Frequency response	4 Hz – 20 kHz
Signal-to-noise ratio	115 dB or more (JEITA)
Distortion	0.006% (JEITA)

3. Accessories

Operating instructions	1
Power cord	1
Audio cable	1
Control cord	1
Forced eject pin (housed in a groove in the bottom panel)	1
Multimedia Card (MMC) (16 MB)	1
Limited warranty	1

NOTE:

Specifications and design are subject to possible modification without notice.

3. Accessories

Operating instructions	1
Power cord	1
Audio cable	1
Control cord	1
Forced eject pin (housed in a groove in the bottom panel)	1
Multimedia Card (MMC) (16 MB)	1

NOTE:

Specifications and design are subject to possible modification without notice.

3. Accessories

Operating instructions	1
Power cord	1
Audio cable	1
Control cord	1
Forced eject pin (housed in a groove in the bottom panel)	1
Multimedia Card (MMC) (16 MB)	1

NOTE:

Specifications and design are subject to possible modification without notice.

Accessories

Audio Cable
(VDE1064) L=1.5m



Control Cord
(PDE-319) L=1 m



Power Cord
(KUCXJ type : ADG7021
(TLXJ, WYXJ type: ADG1154)



Forced Eject Pin
(DEX1013)



MMC Memory Card
(DWX2326)

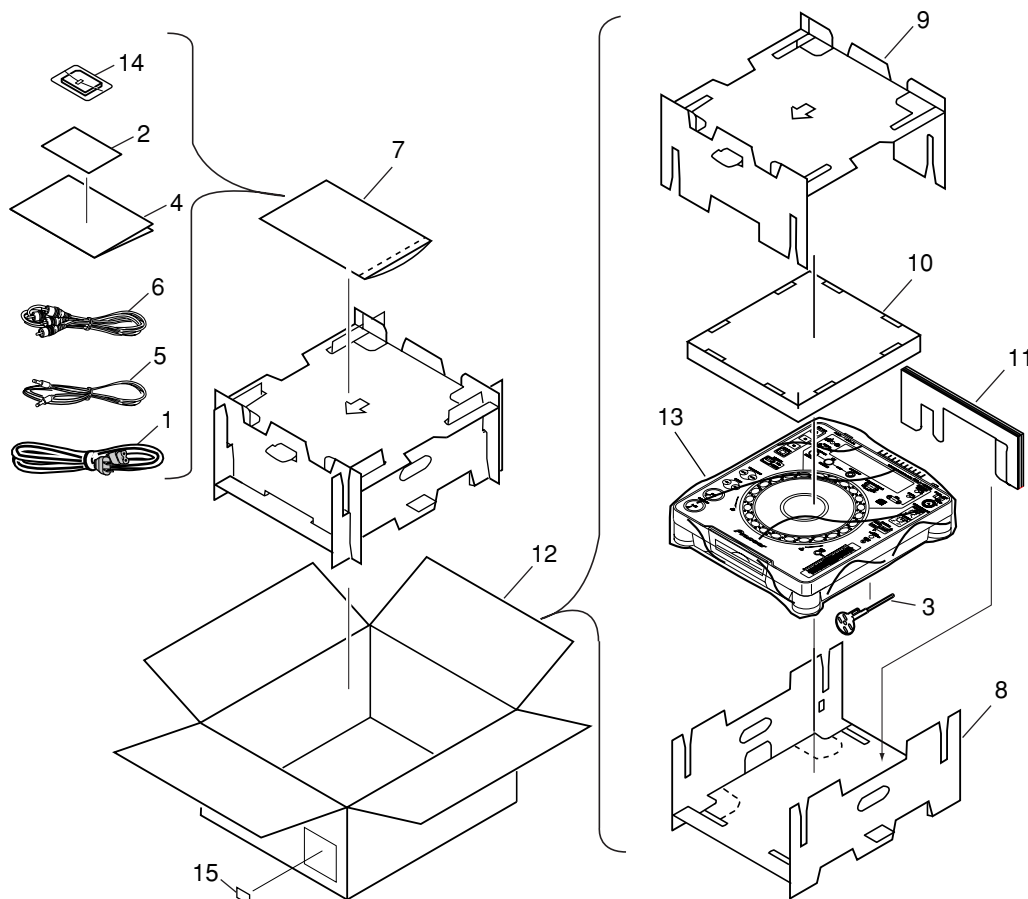


2. EXPLODED VIEWS AND PARTS LIST

NOTES:

- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The  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  mark on 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.)

2.1 PACKING



PACKING Parts List

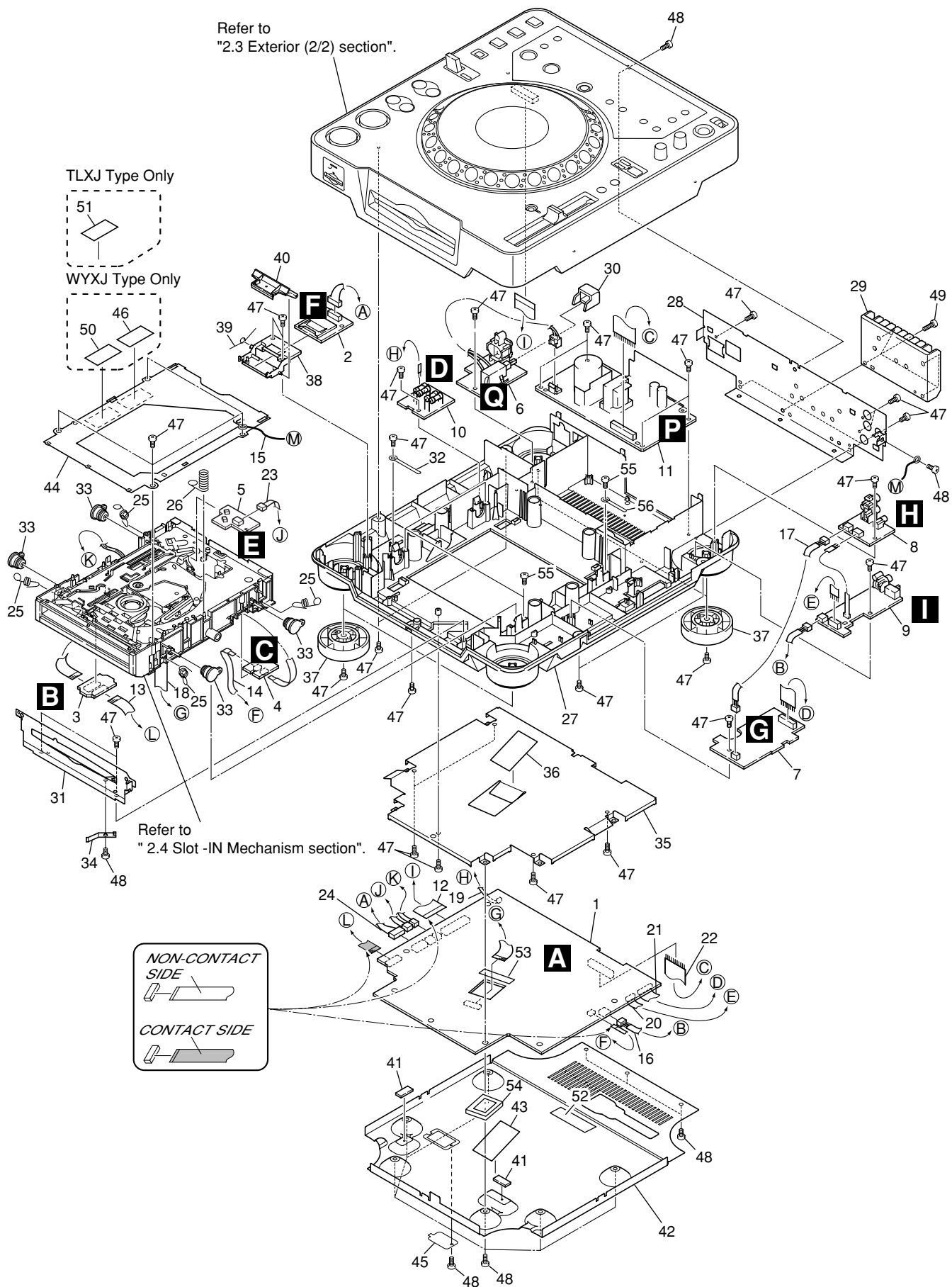
Mark No.	Description	Part No.	Mark No.	Description	Part No.
 1	Power Cord	See Contrast Table(2)	8	Pad (A)	DHA1533
NSP 2	Warranty Card	See Contrast Table(2)	9	Pad (B)	DHA1534
3	Forced Eject Pin	DEX1013	10	Pad (C)	DHA1535
4	Operating Instructions	See Contrast Table(2)	11	Pad (D)	DHA1536
5	Control Cord (L= 1m)	PDE-319	12	Packing Case	See Contrast Table(2)
6	Audio Cable (L= 1.5m)	VDE1064	13	Sheet	RHX1006
NSP 7	Polyethylene Bag (230 x 340 x 0.03)	Z21-038	14	MMC Memory Card	DWX2326
			NSP 15	Label	VRW1629

(2) CONTRAST TABLE

CDJ-1000MK2/KUCXJ, TLXJ and WYXJ types are constructed the same except for the following:

Mark	No.	Symbol and Description	Part No.		
			KUCXJ type	TLXJ type	WYXJ type
 NSP	1	Power Cord	ADG7021	ADG1154	ADG1154
	2	Warranty Card	ARY7043	Not used	Not used
	4	Operating Instructions (English)	DRB1339	Not used	Not used
	4	Operating Instructions (English, Spanish, Chinese)	Not used	DRB1340	Not used
	4	Operating Instructions (English, French, German, Italian, Dutch, Spanish)	Not used	Not used	DRB1338
	12	Packing Case	DHG2363	DHG2364	DHG2362

2.2 EXTERIOR SECTION (1/2)



EXTERIOR SECTION (1/2) Parts List

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	1	MAIN Assy	DWX2303		30	Power Knob	DAC1895
	2	MMCB Assy	DWX2304		31	Front Plate	DNH2480
	3	SPCN Assy	DWX2170		32	Cord Clamper	RNH-184
	4	STCN Assy	DWX2171		33	Damper	CNV6011
	5	SLMB Assy	DWX1309		34	Earth Plate (CU)	VBK1070
	6	PSWB Assy	See Contrast Table(2)		35	Shield Case	DNH2481
	7	DABB Assy	DWX2305		36	Shield Cushion	DEC2445
	8	JACB Assy	DWX2306		37	Insulator Assy	DXA1904
	9	DOUT Assy	DWX2307		38	Memory Holder	DNK3884
	10	FLRB Assy	DWX2308		39	Flap Spring	DBH1487
	11	SW POWER SUPPLY Assy	DWR1370		40	SD Flap	DNK3883
	12	25P Flexible Cable/60V	DDD1196	NSP	41	Silicone Rubber D5L	DEB1456
	13	12P Flexible Cable/60V	DDD1197		42	Bottom Plate 2	DNH2558
	14	4P Flexible Cable/60V	DDD1198		43	Bottom Cushion	DEC2444
	15	Earth Lead Unit/300V	DDF1024		44	Mecha Plate	DNH2339
	16	Connector Assy 3P	DKP3562		45	Bottom Cover	DNH2559
	17	Connector Assy 6P	DKP3654		46	Caution Label	See Contrast Table(2)
	18	FPC D5 Slot	DNP1948		47	Screw	BPZ30P080FZK
	19	Jumper Wire 03P	D20PYY0310E		48	Screw	BBZ30P060FZK
	20	Jumper Wire 05P	D20PYY0510E		49	Screw	BBZ30P120FZK
	21	Jumper Wire 09P	D20PYY0910E		50	Caution Label HE	See Contrast Table(2)
	22	Jumper Wire 15P	D20PYY1510E		51	Caution Label	See Contrast Table(2)
	23	Connector Assy	PF03PP-B30		52	65 Label	See Contrast Table(2)
	24	Connector Assy	PF09PP-D15		53	Protect Sheet	DEC2559
	25	Float Spring (G5)	DBH1494		54	PU Packing	DEC2593
	26	Earth Spring	DBH1398		55	Screw	SBPZ30P140FMC
	27	Chassis	DNK3869		56	Cord Clamper	ZCB-069Z
NSP	28	Rear Panel	See Contrast Table(2)				
	29	Heat Sink	DNG1082				

(2) CONTRAST TABLE

CDJ-1000MK2/KUCXJ, TLXJ and WYXJ types are constructed the same except for the following:

Mark	No.	Symbol and Description	Part No.		
			KUCXJ type	TLXJ type	WYXJ type
NSP	6	PSWB Assy	DWS1312	DWS1311	DWS1311
	28	Rear Panel	DNC1647	DNC1648	DNC1646
	46	Caution Label	Not used	Not used	VRW1094
	50	Caution Label HE	Not used	Not used	PRW1233
	51	Caution Label	Not used	PRW 1018	Not used
	52	65 Label	ARW7050	Not used	Not used

2.3 EXTERIOR SECTION (2/2)

A

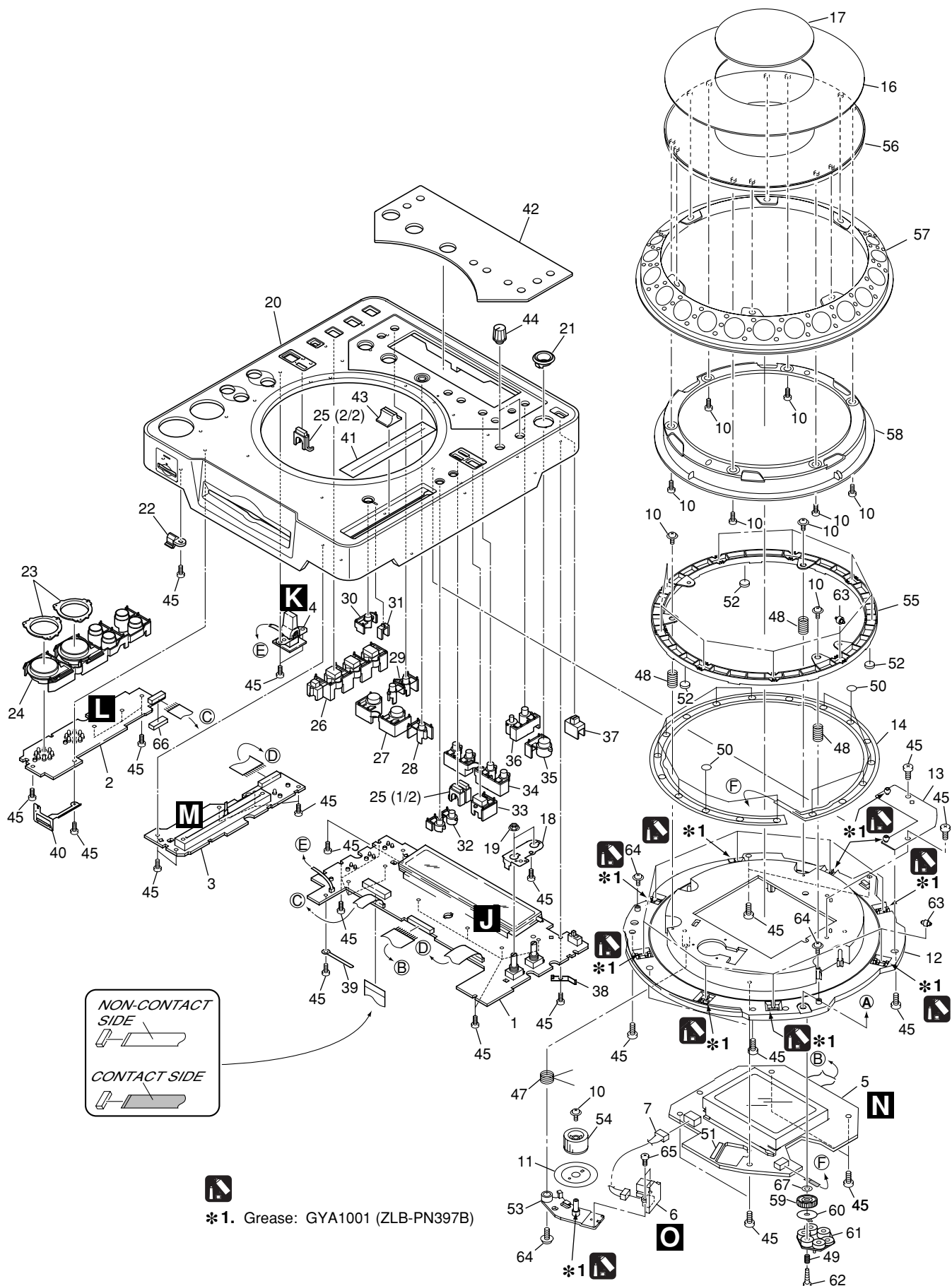
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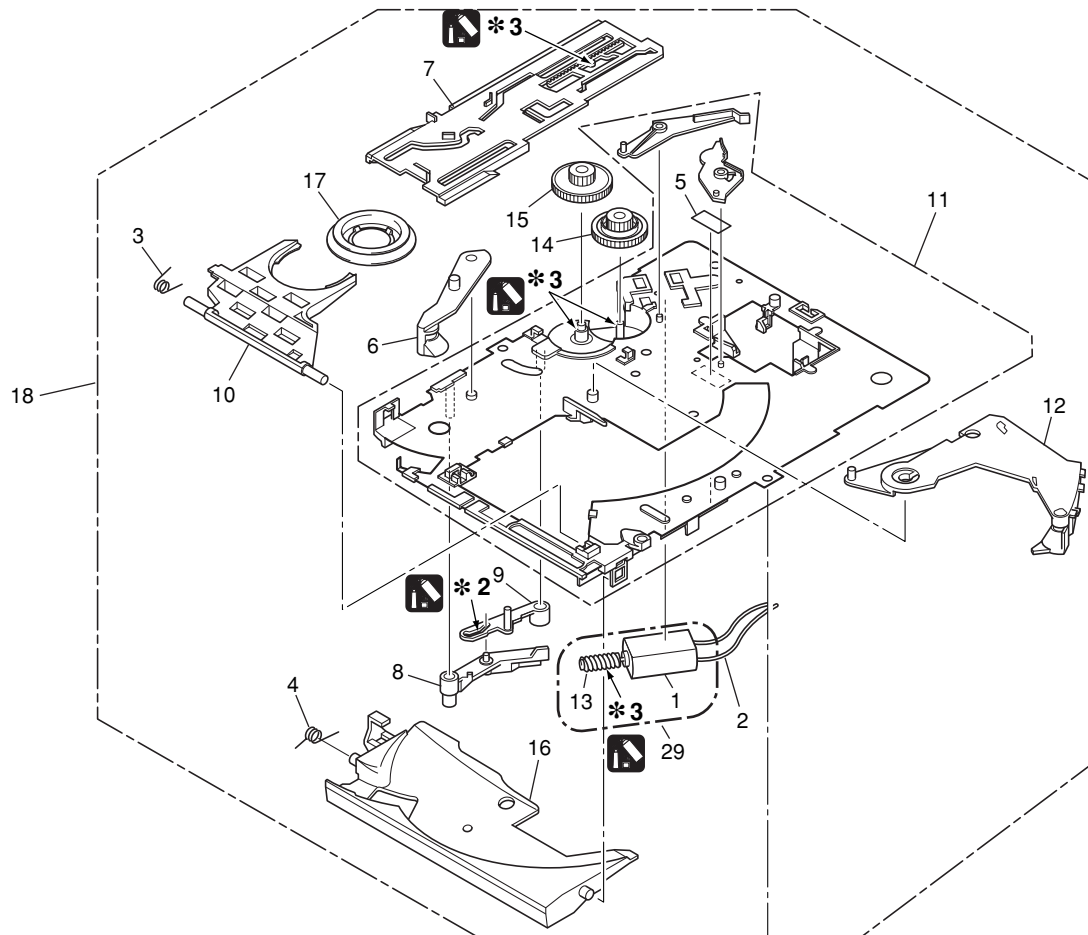
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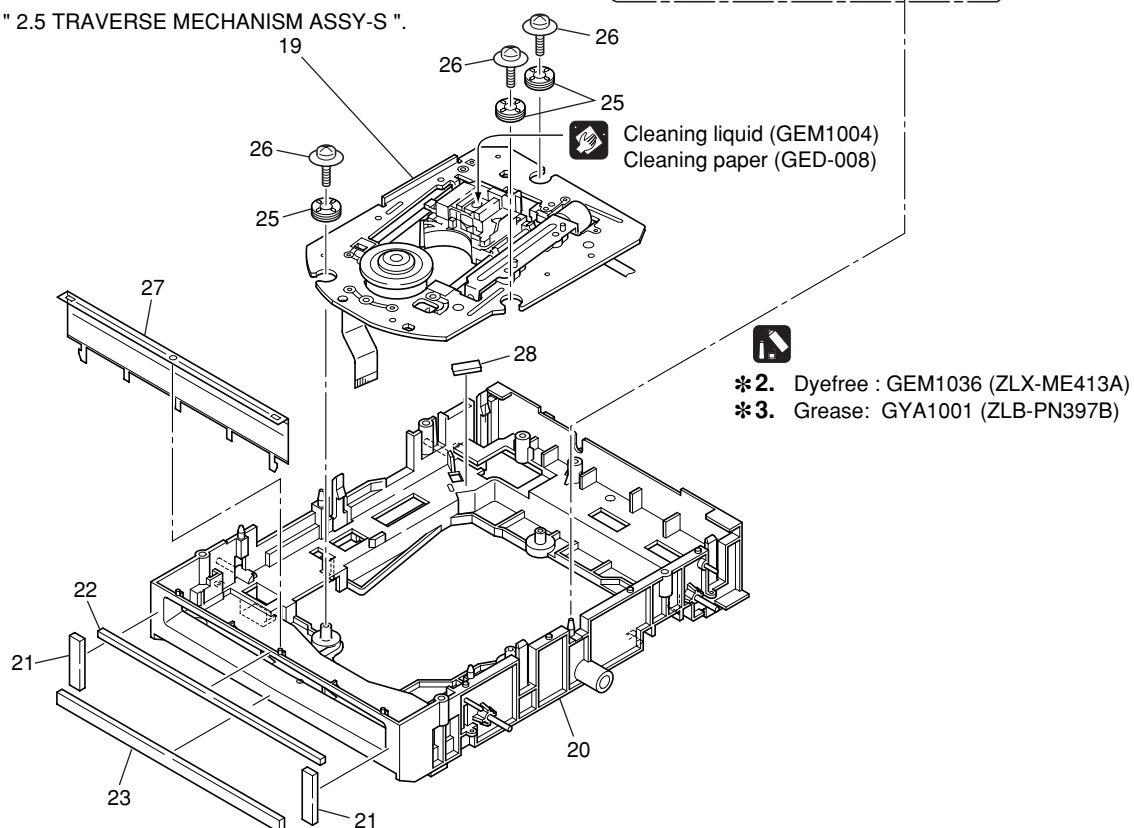
EXTERIOR SECTION (2/2) Parts List

<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>	<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>
1	MFLB Assy	DWG1567	51	Spacer	DEC2554
2	KSWB Assy	DWS1324	52	Ring Cushion	DEC2604
3	SLDB Assy	DWS1325	53	Gear Arm	DNK4065
4	RSWB Assy	DWS1310	54	D Gear	DNK4066
5	JFLB Assy	DWG1568	55	SW Ring	DNK4070
6	JOGB Assy	DWG1569	56	JOG A	DNK4172
7	Connector Assy	PF04PP-B07	57	JOG B	DNK4173
8			58	JOG C	DNK4174
9			59	Gear	DNK4176
10	Screw	PBA1062	60	Smoother	DNK4177
11	Encoder Plate	DEC2498	61	ADJ Plate	DNK4178
12	JOG Holder 2	DNK4175	62	Screw	BPZ20P100FMC
13	JOG Stay Assy	DXB1780	63	Roller A Assy	DXB1773
14	Sheet SW	DSX1060	64	Screw	IPZ30P100FMC
15			65	Screw	BPZ20P060FMC
16	JOG Plate	DAH2052	66	FFC Guard	DEC2586
17	JOG Panel	DAH2182	67	Washer	WA42D080D050
18	VR Stay	DNF1663			
19	Flange Nut (M9)	DBN1004			
20	Control Panel	DNK4180			
21	Eject Guard	DNK3958			
22	Card Lens	DNK3885			
23	Ring Lens	DNK3880			
24	Set Knob (PLAY) Assy	DXB1762			
25	Mode Lens	DNK3881			
26	Set Knob (HS)	DAC1986			
27	Set Knob (LOOP)	DAC1995			
28	Re-loop Knob	DAC1992			
29	Set Knob (TIME)	DAC1991			
30	Tempo Reset Knob	DAC1993			
31	Tempo Lens	DNK3882			
32	Set Knob (MT)	DAC1987			
33	Mode Select Knob	DAC1989			
34	Set Knob (SC)	DAC1988			
35	Eject Knob	DAC1990			
36	Set Knob (MEMO)	DAC1994			
37	Slide SW Knob	DAC1926			
38	Earth Plate (CU)	VBK1070			
NSP 39	Cord Clamper	ZCB-069Z			
40	Card Plate	DBK1212			
41	Slide Sheet 1C	DAH1988			
42	Display Panel	DAH2022			
43	Slide Knob	DNK2936			
44	Rotary Knob C	DAA1143			
45	Screw	BPZ30P080FZK			
46					
47	Arm Spring	DBH1503			
48	SW Spring 25	DBH1514			
49	Gear Spring 200	DBH1525			
50	SW Cushion HH48/2	DEC2538			

2.4 SLOT-IN MECHANISM SECTION



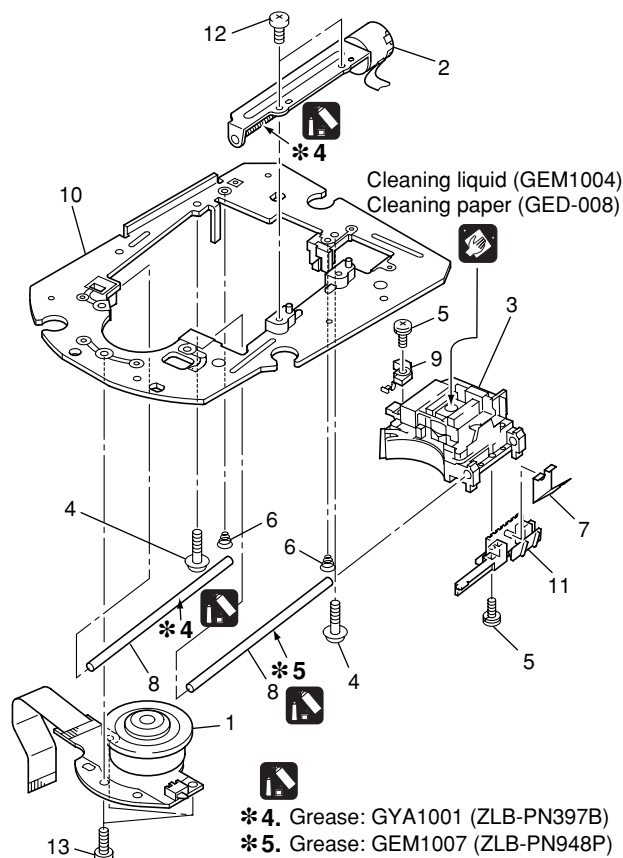
Refer to " 2.5 TRAVERSE MECHANISM ASSY-S ".



SLOT-IN MECHANISM SECTION Parts List

Mark No.	Description	Part No.	Mark No.	Description	Part No.
NSP 1	DC Motor	DXM1093	16	Disc Guide	DNK3914
2	Connector Assy	PF02PY-B32	17	Clamper D4 Assy	DXA1881
3	Clamp Spring	DBH1374	NSP 18	Slot-in Mechanism G5 Assy	DXA1906
4	Guide Spring	DBH1375	19	Traverse Mechanism Assy-S	DXX2502
5	SW Lever Spacer (PET)	DEC2420	20	Float Base (G5) Assy	DXB1748
6	Loading Lever	DNK3406	21	Vessel Cushion C	DEC2457
7	Main Cam	DNK3407	22	Vessel Cushion A	DEC2455
8	Lever B	DNK3558	23	Vessel Cushion B	DEC2456
9	Lever A	DNK3564	24	•••••	
10	Clamp Arm	DNK3576	25	Float Rubber D3	DEB1404
11	Loading Base Assy-S	DEA1022	26	Float Fastener	DBA1139
12	Eject Lever	DNK3684	27	Front Sheet	DED1132
NSP 13	Worm Gear	DNK3910	28	Spacer POR (T3)	DEB1566
14	Loading Gear	DNK3911	29	Loading Motor Assy-S	DEA1008
15	Drive Gear	DNK3912			

2.5 TRAVERSE MECHANISM ASSY-S

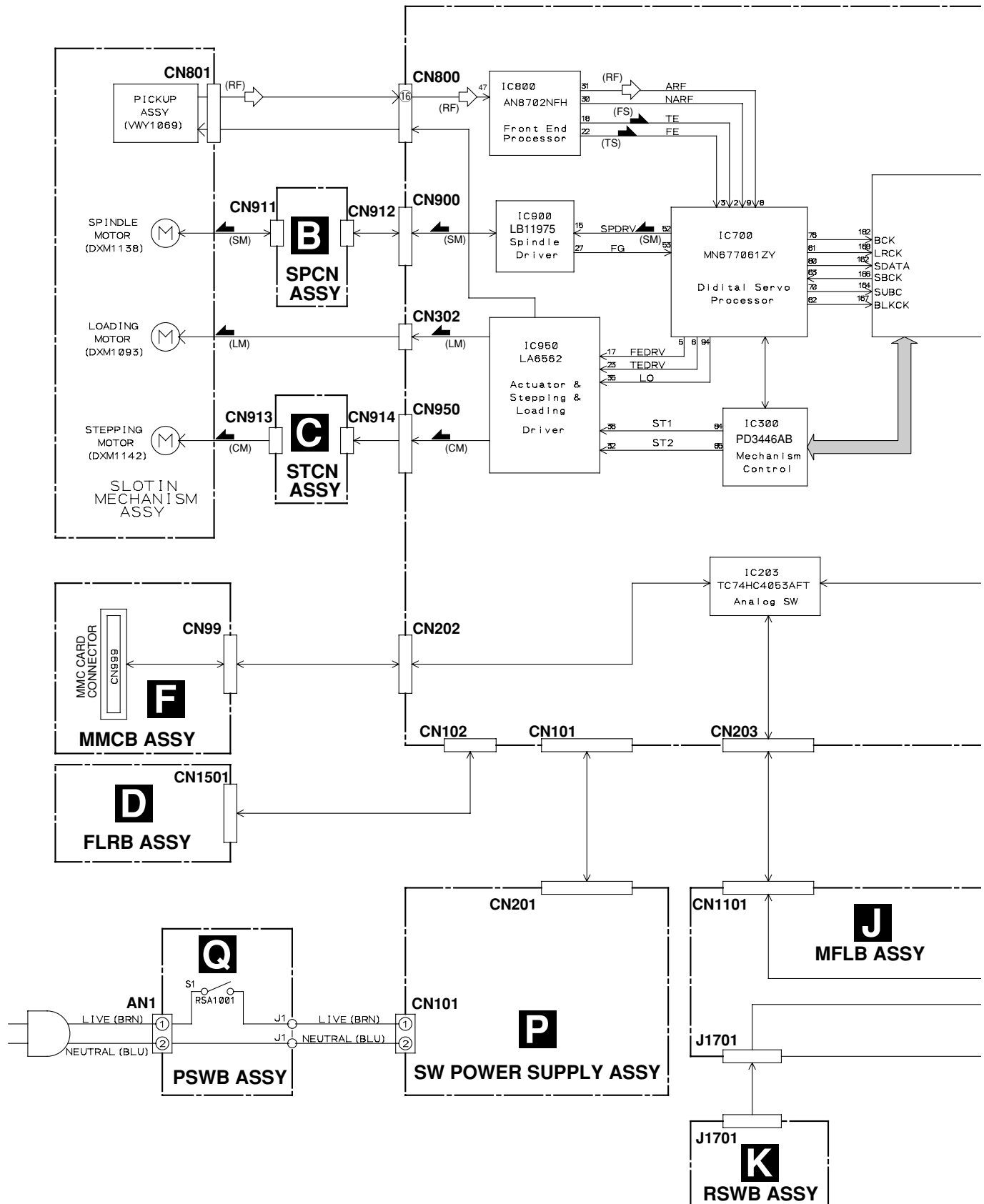


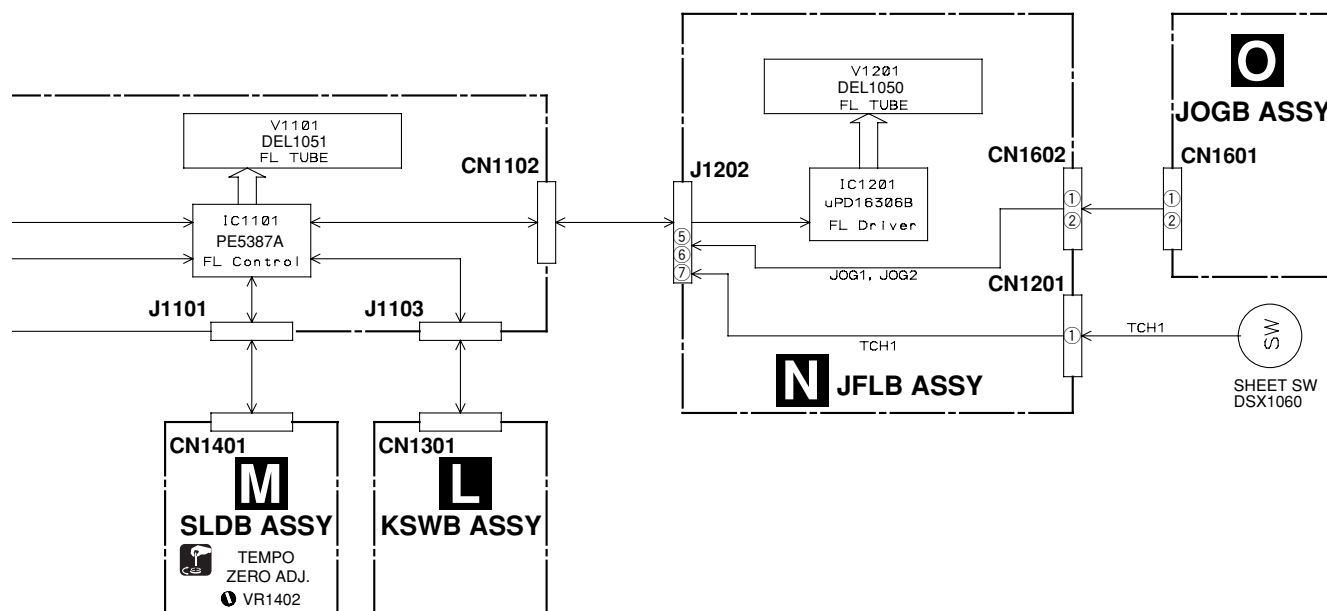
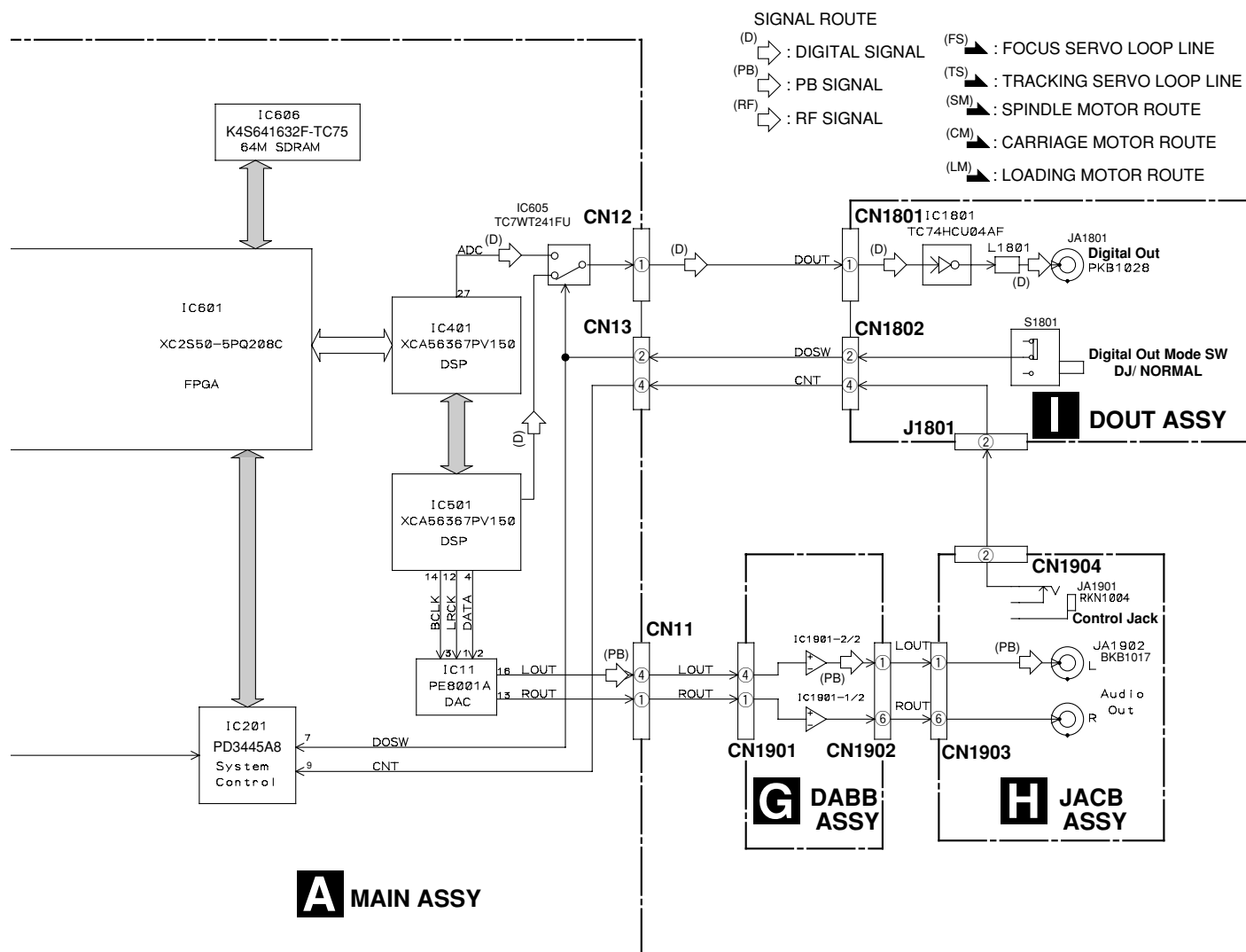
TRAVERSE MECHANISM ASSY-S Parts List

Mark No.	Description	Part No.	Mark No.	Description	Part No.
NSP 1	Spindle Motor	DXM1138	NSP 7	Joint Spring	DBK1188
NSP 2	Stepping Motor	DXM1142	NSP 8	Guide Shaft	DLA1840
NSP 3	Pickup Assy	VWY1069	NSP 9	Slider G4	DNK3733
NSP 4	Adjust Screw	DBA1119	NSP 10	Mechanism Frame G5	DNK3776
NSP 5	Precision Screw	DBA1124	NSP 11	Joint	DNK3777
NSP 6	Skew Spring	DBH1437	12	Screw	BPZ20P080FMC
			13	Screw	BPZ26P080FMC

3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

3.1 BLOCK DIAGRAM



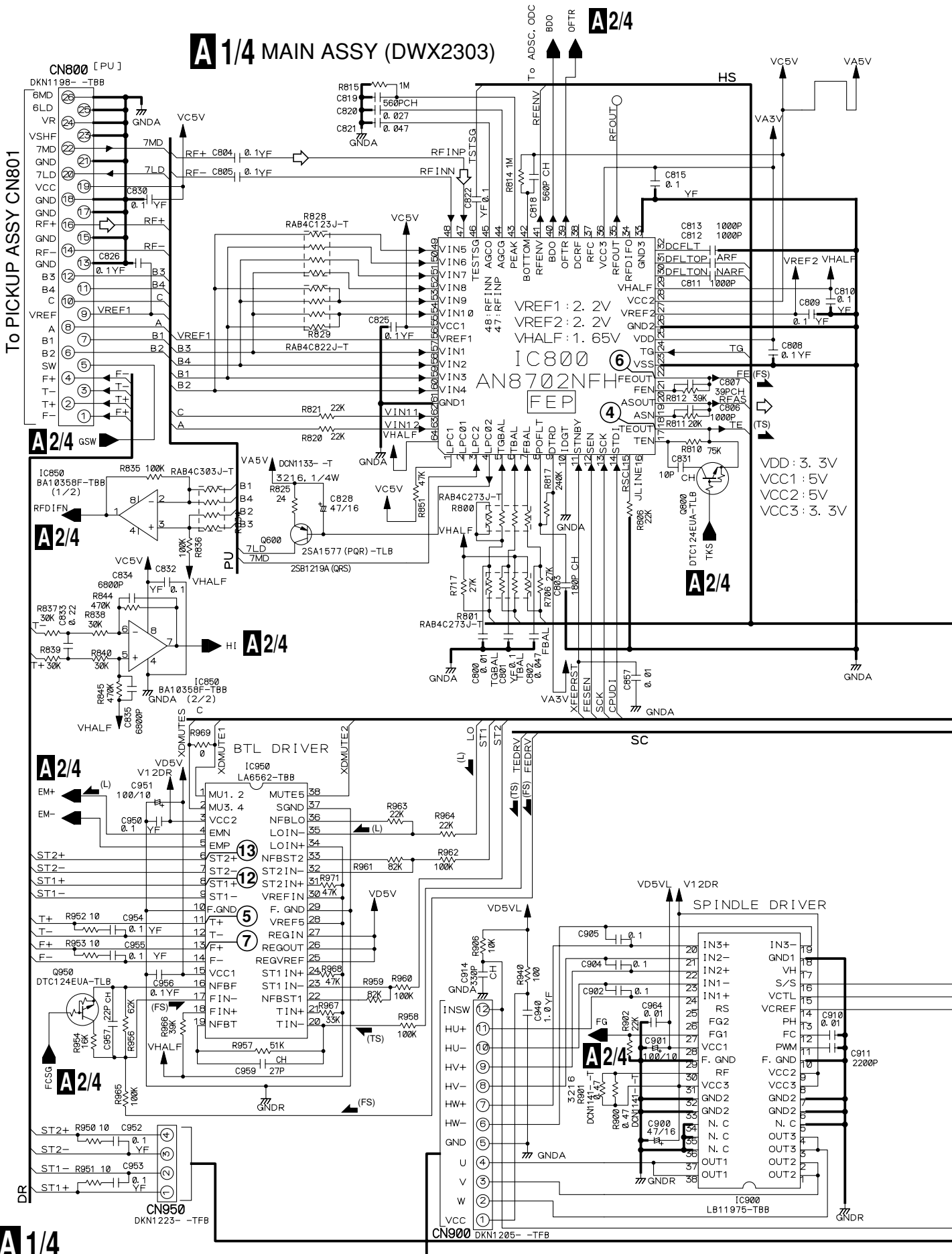


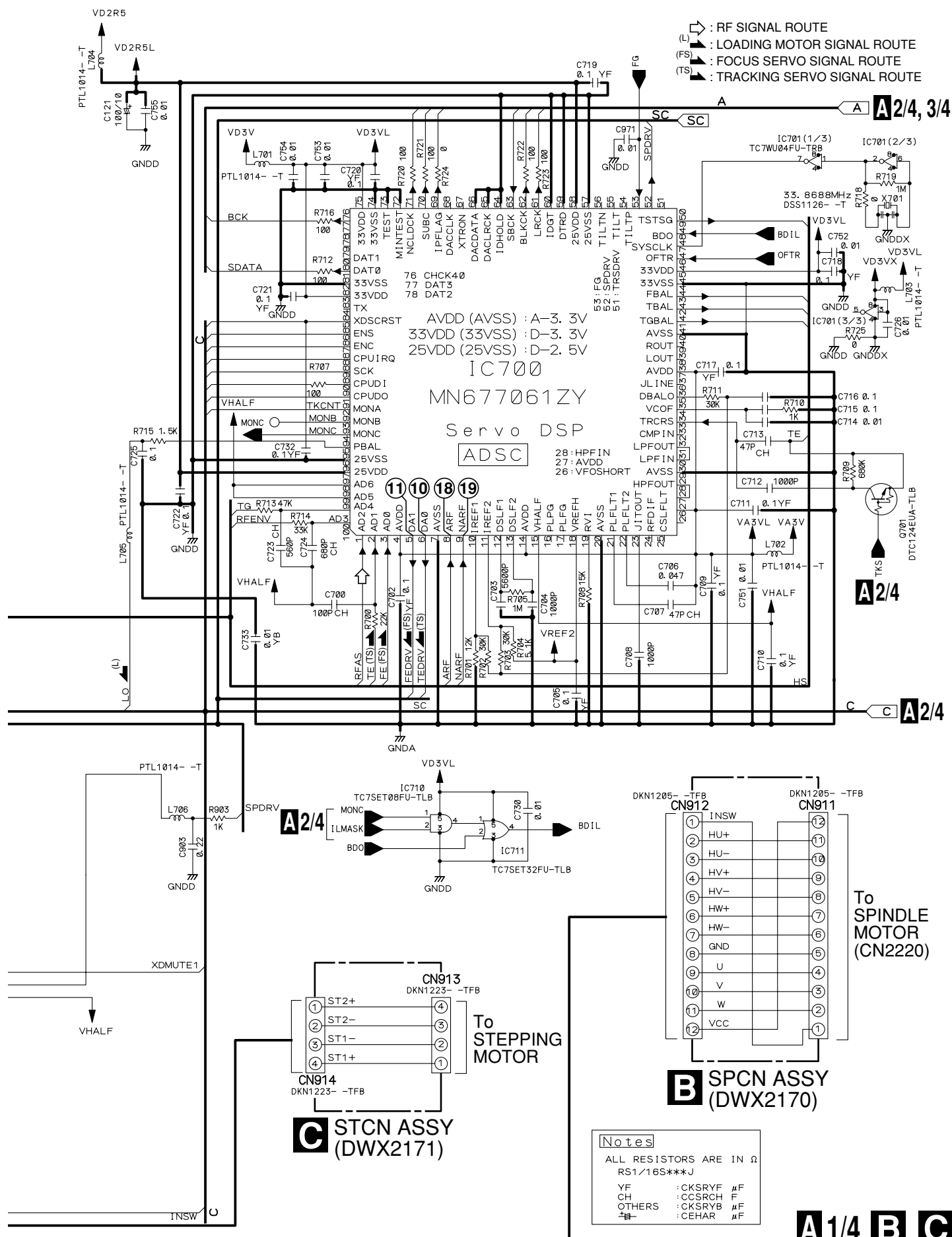
4



A



A 1/4



A



C

D

E

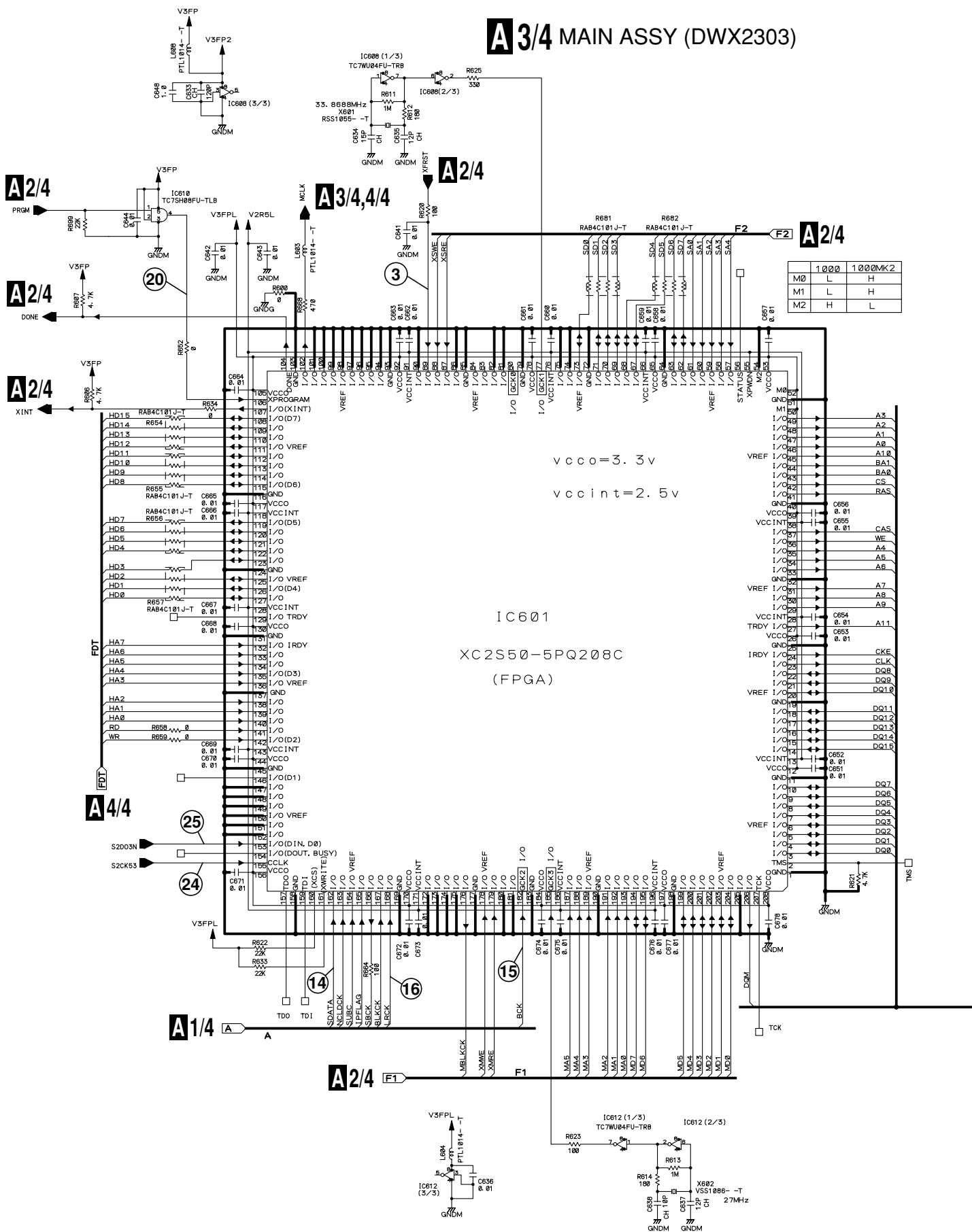
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CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE NO. ICP-N10, MFD BY ROHM CO., LTD. FOR IC106.

21

3.5 MAIN (3/4) and MMCB ASSYS

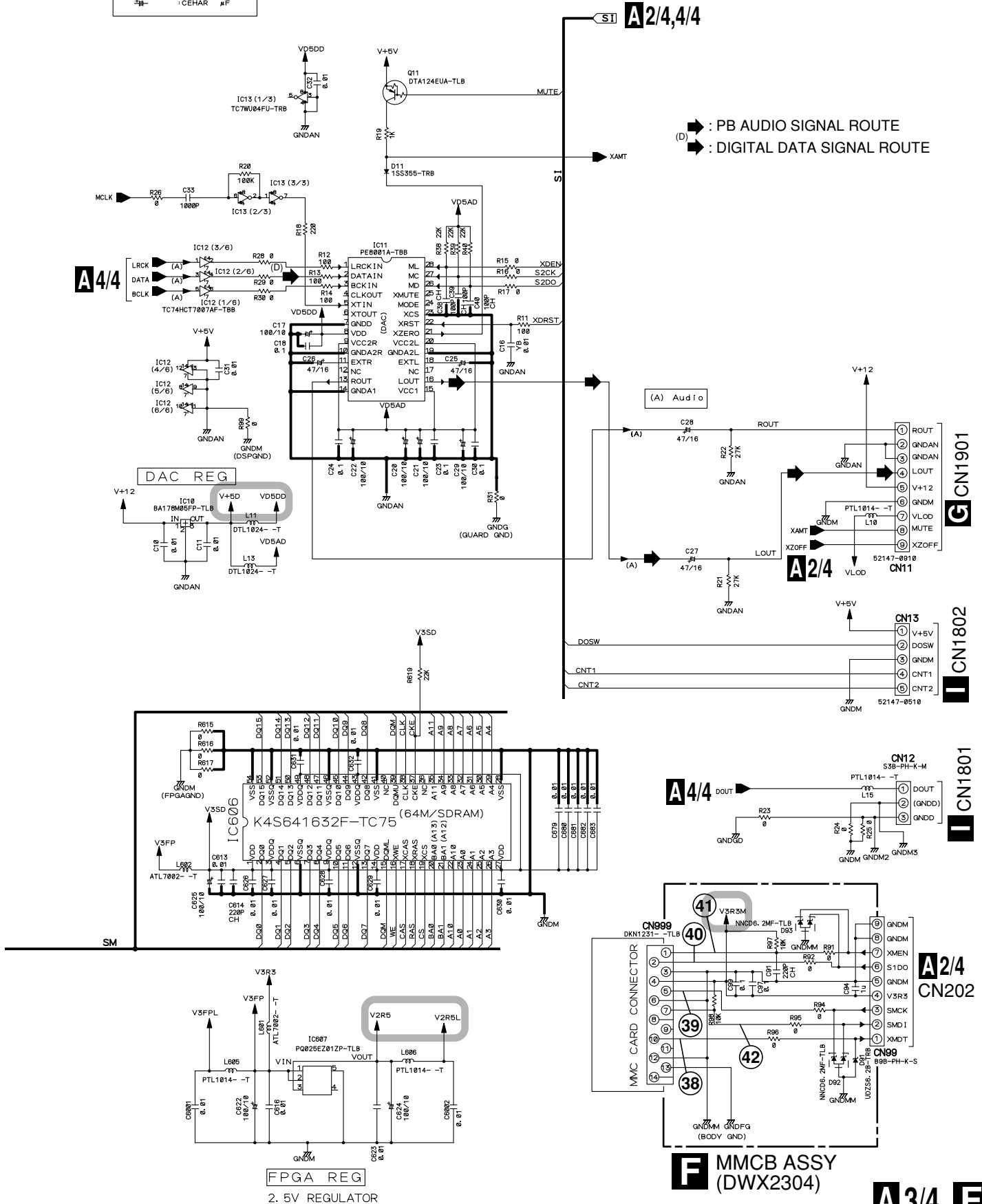
A3/4 MAIN ASSY (DWX2303)



A3/4

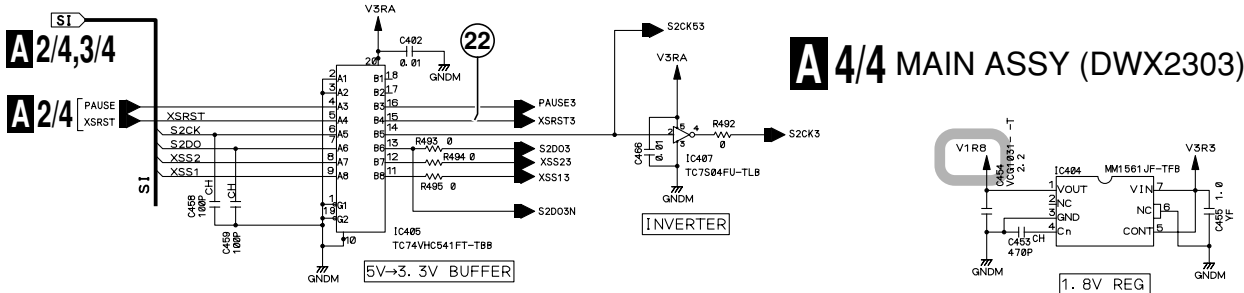
Notes
 ALL RESISTORS ARE IN Ω
 R51/16S***J
 CH : CCSRCH F
 OTHERS : CKSRYB #F
 : CEHAR #F

 : The power supply is shown with the marked box.



3.6 MAIN ASSY (4/4)

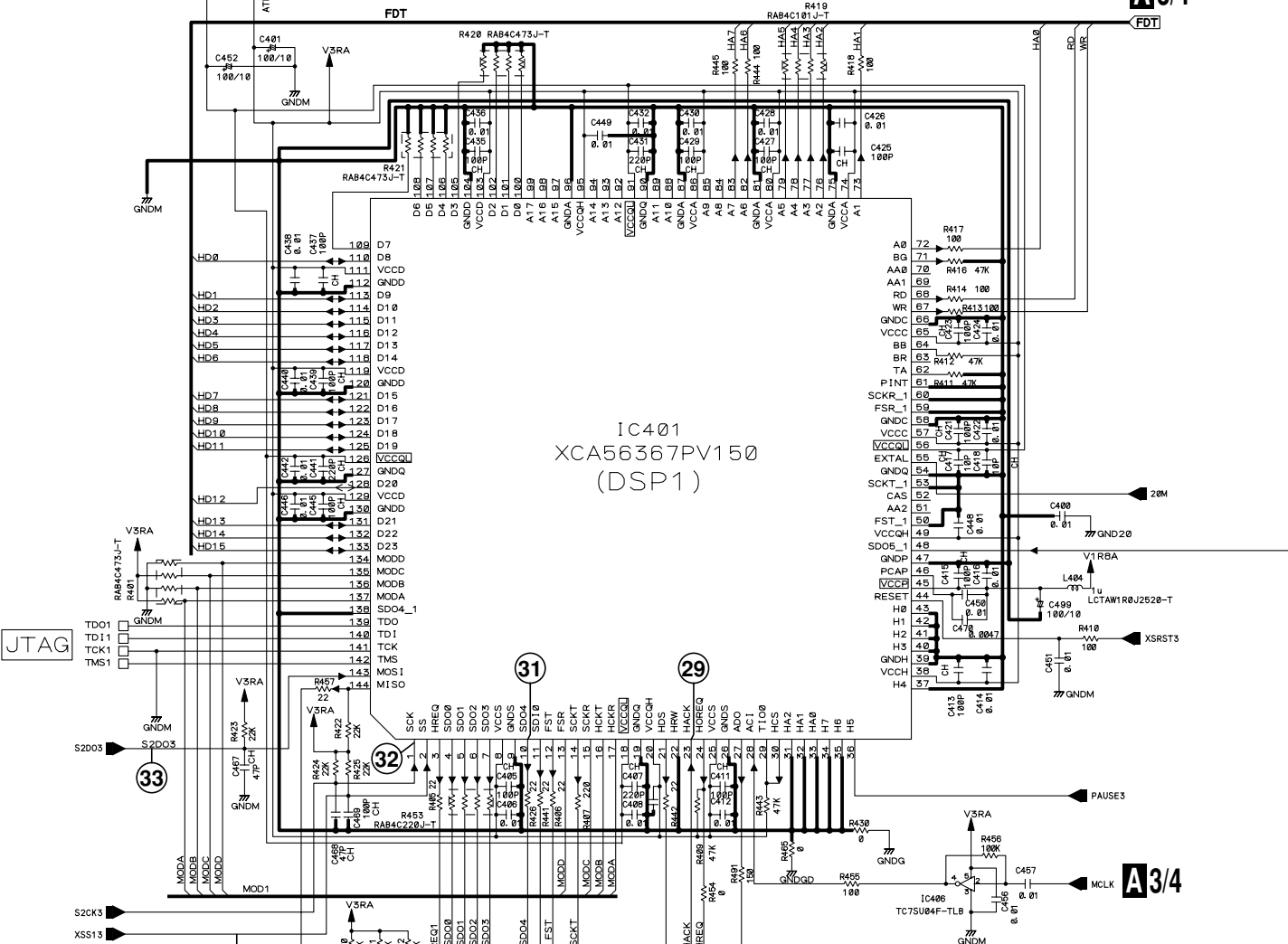
A



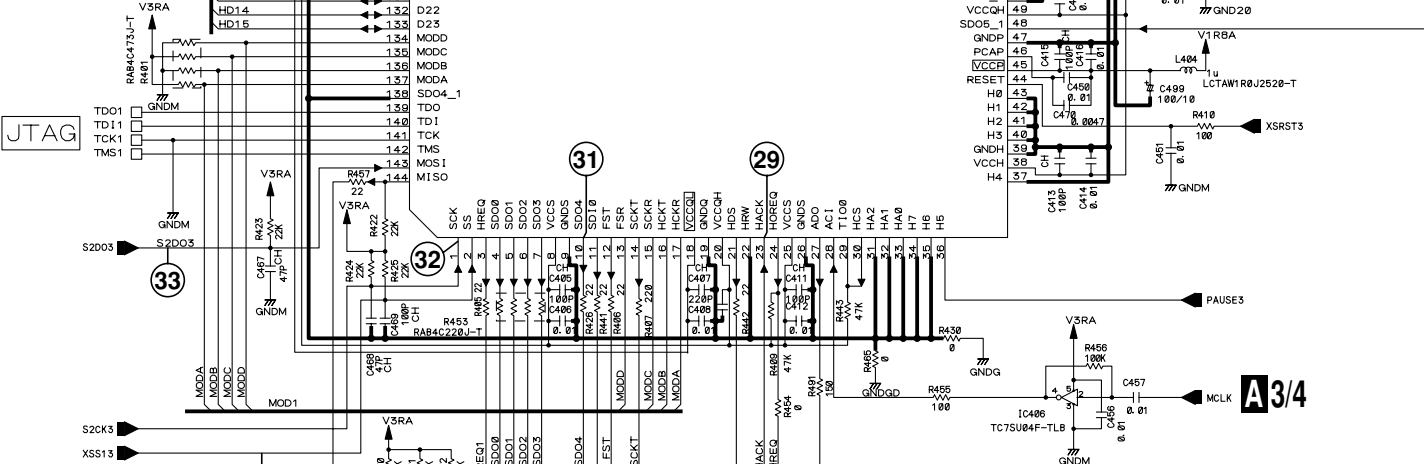
B



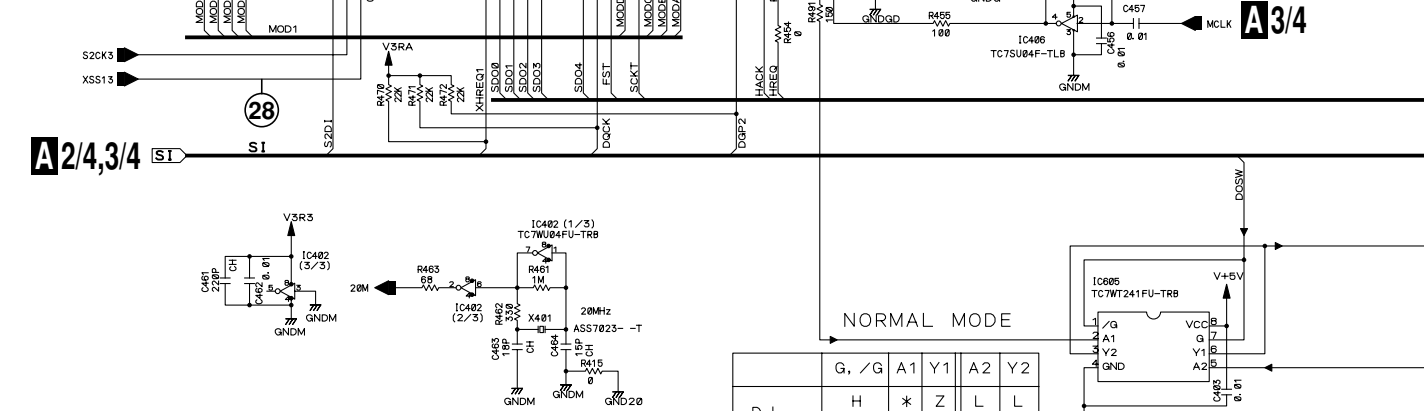
C



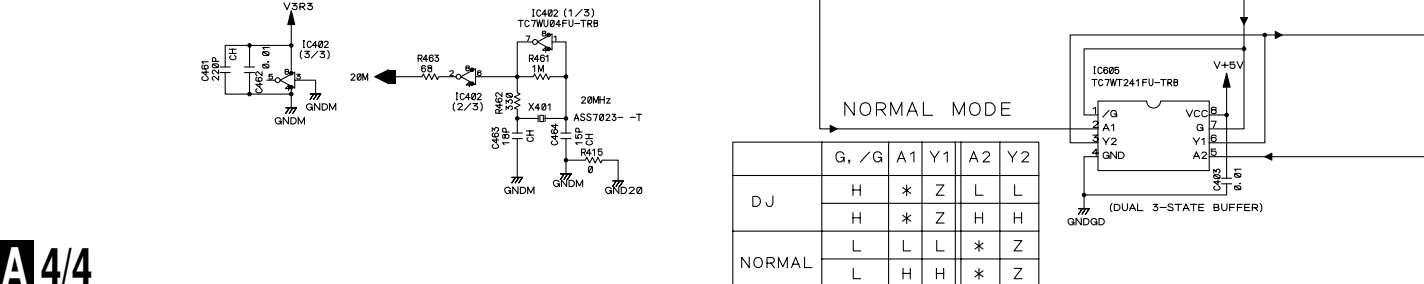
D



E



F



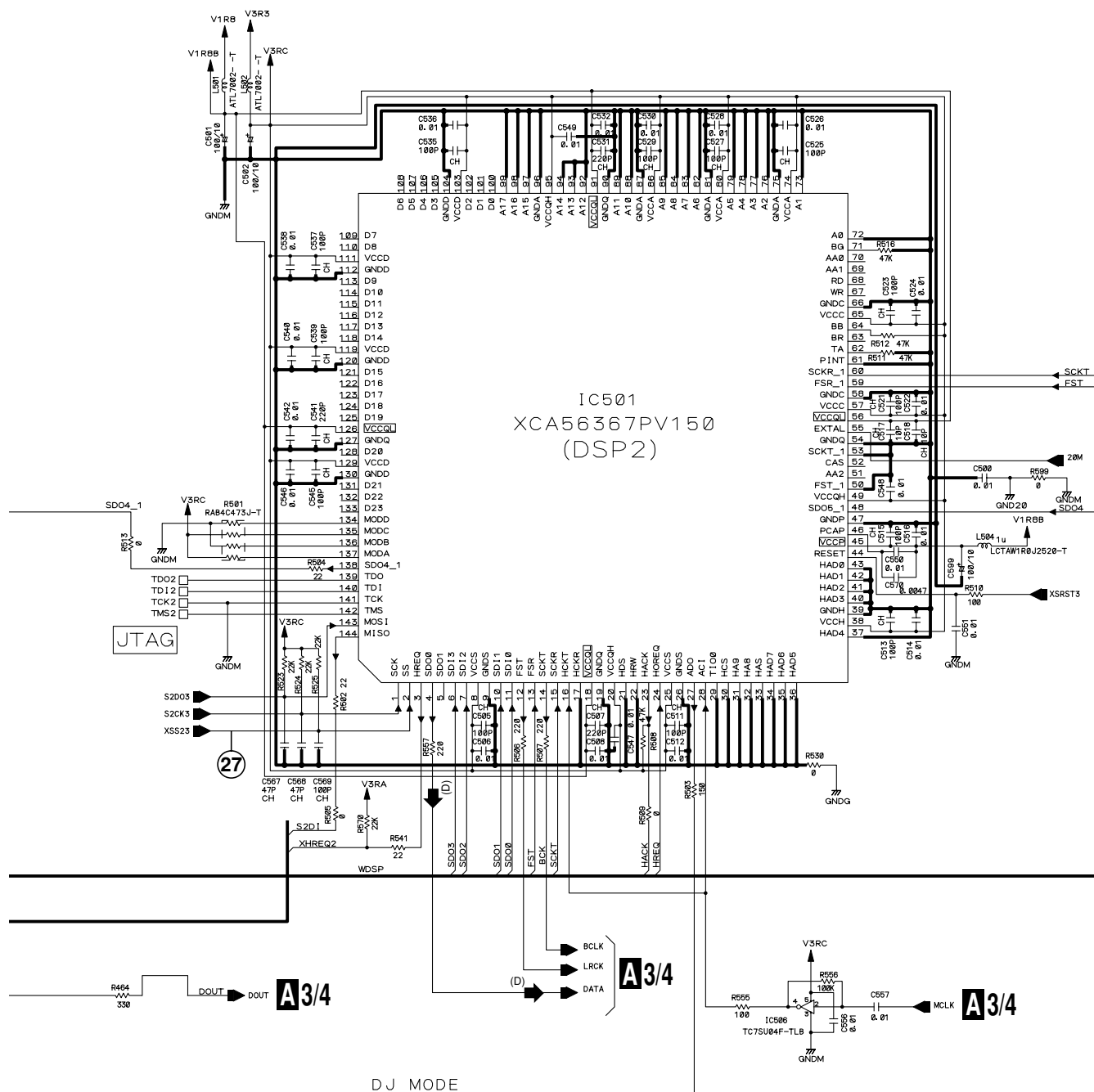
: The power supply is shown with the marked box.

(D)  : DIGITAL DATA SIGNAL ROUTE

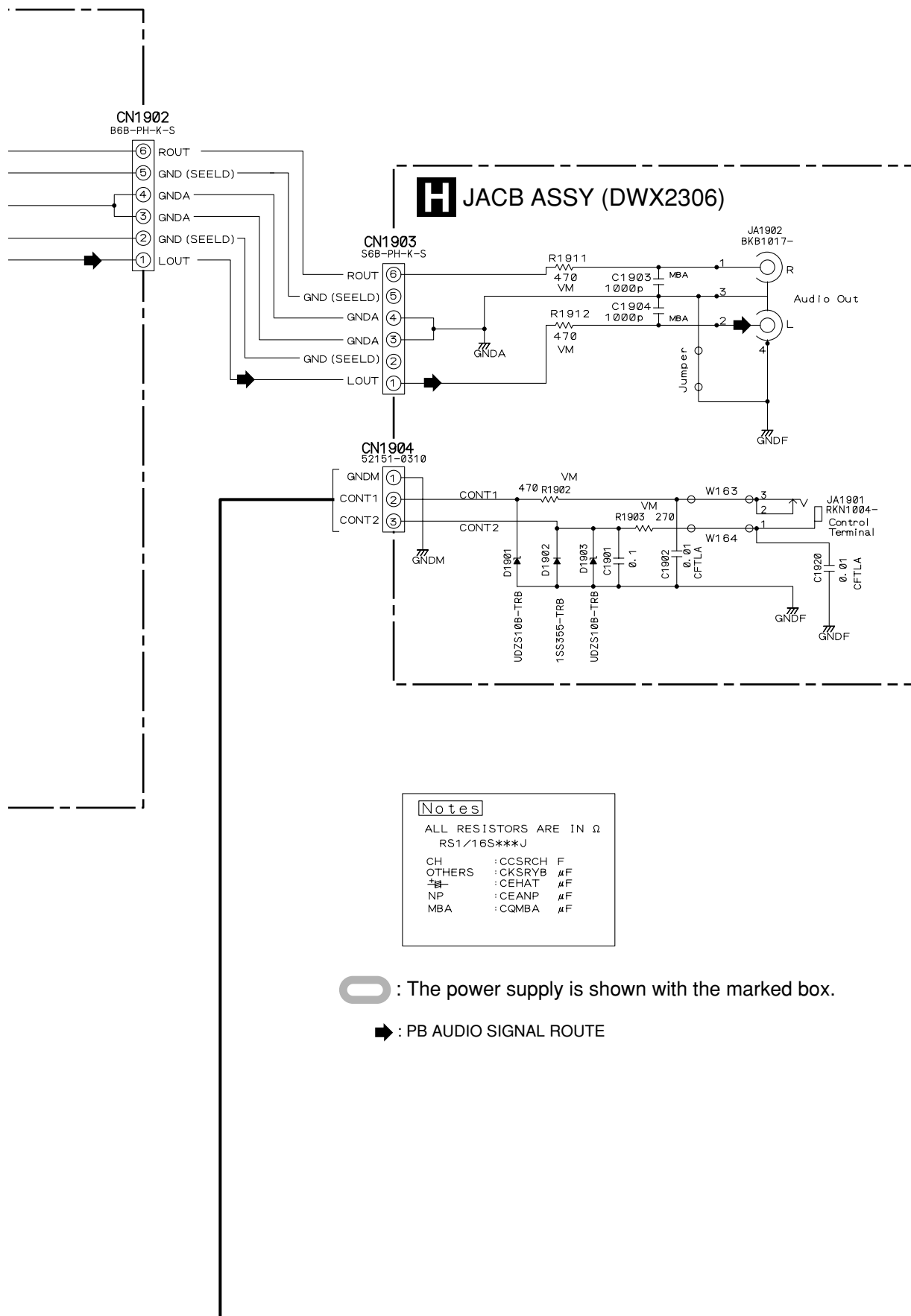
Notes

ALL RESISTORS ARE IN Ω
RS1/16S***J

YF	:CKSRYF	μF
CH	:CCSRCH	F
OTHERS	:CKSRYB	μF
+	:CEHAR	μF







4

SWITCHES
MFLB ASSY

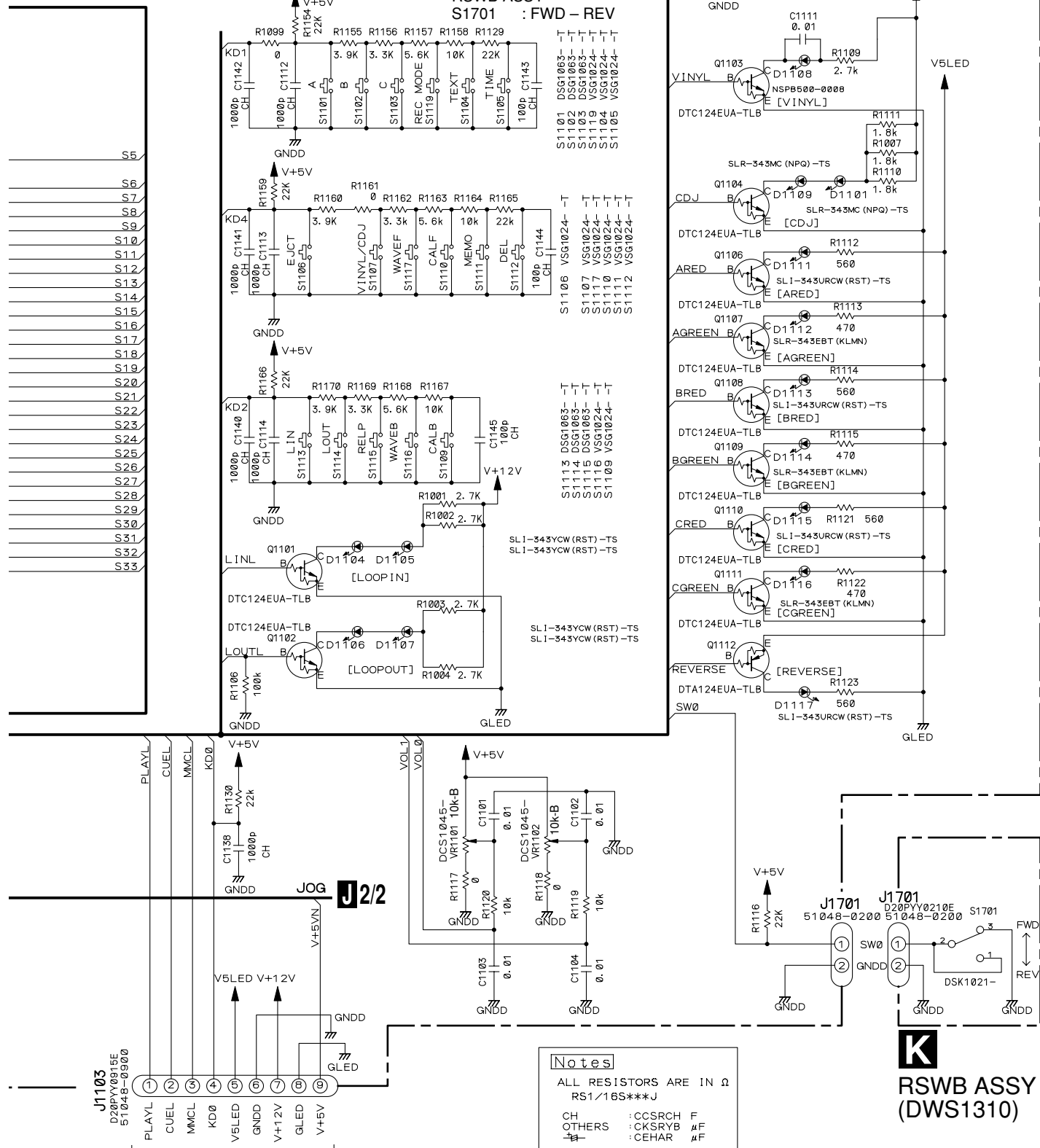
S1101 : A
S1102 : B
S1103 : C
S1104 : DISPLAY
TEXT/WAVE
S1105 : TIME MODE

S1106 : ▲(EJECT)
S1107 : SELECT
S1109 : ◀CALL
S1110 : CALL▶
S1111 : MEMORY
S1112 : DELETE

S1113 : IN/REALTIME CUE
S1114 : LOOP OUT
S1115 : RELOOP/EXIT
S1116 : ◀WAVE
S1117 : WAVE▶
S1118 : EJECT LOCK
S1119 : SELECT

RSWB ASSY

S1701 : FWD - REV



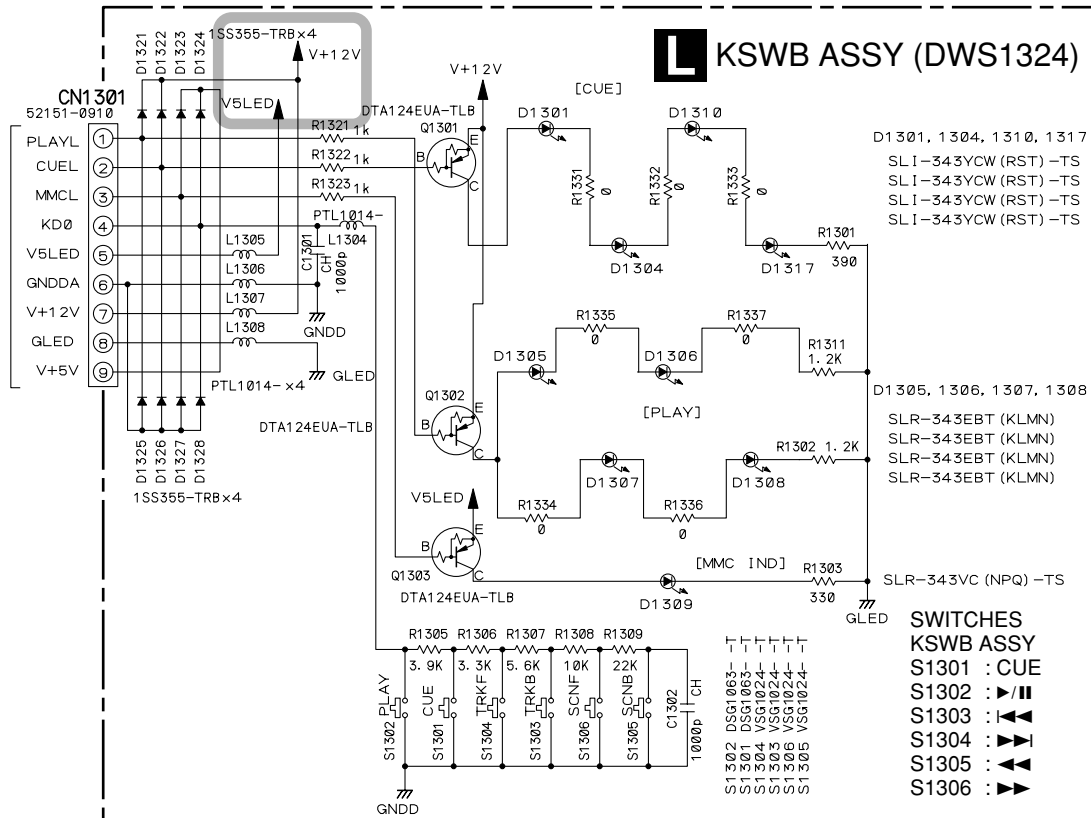
L CN1301

K
RSWB ASSY
(DWS1310)

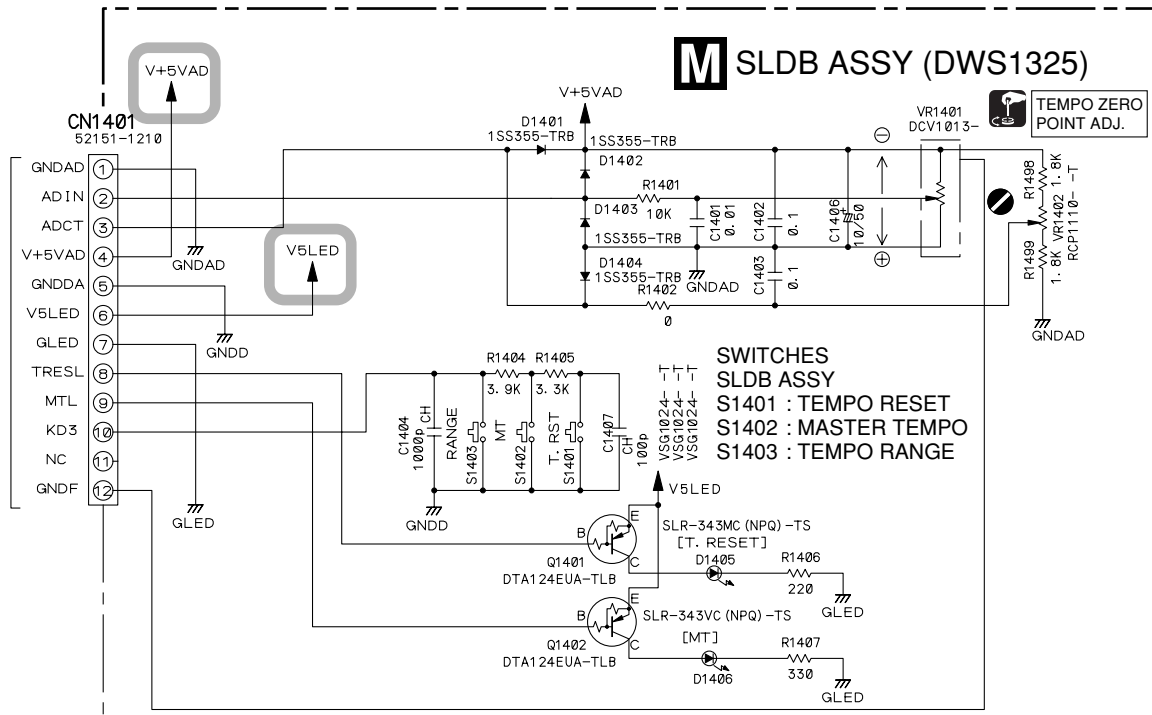
J 1/2 K

3.10 KSWB and SLDB ASSYS

J1/2
J1103



J1/2
J1101



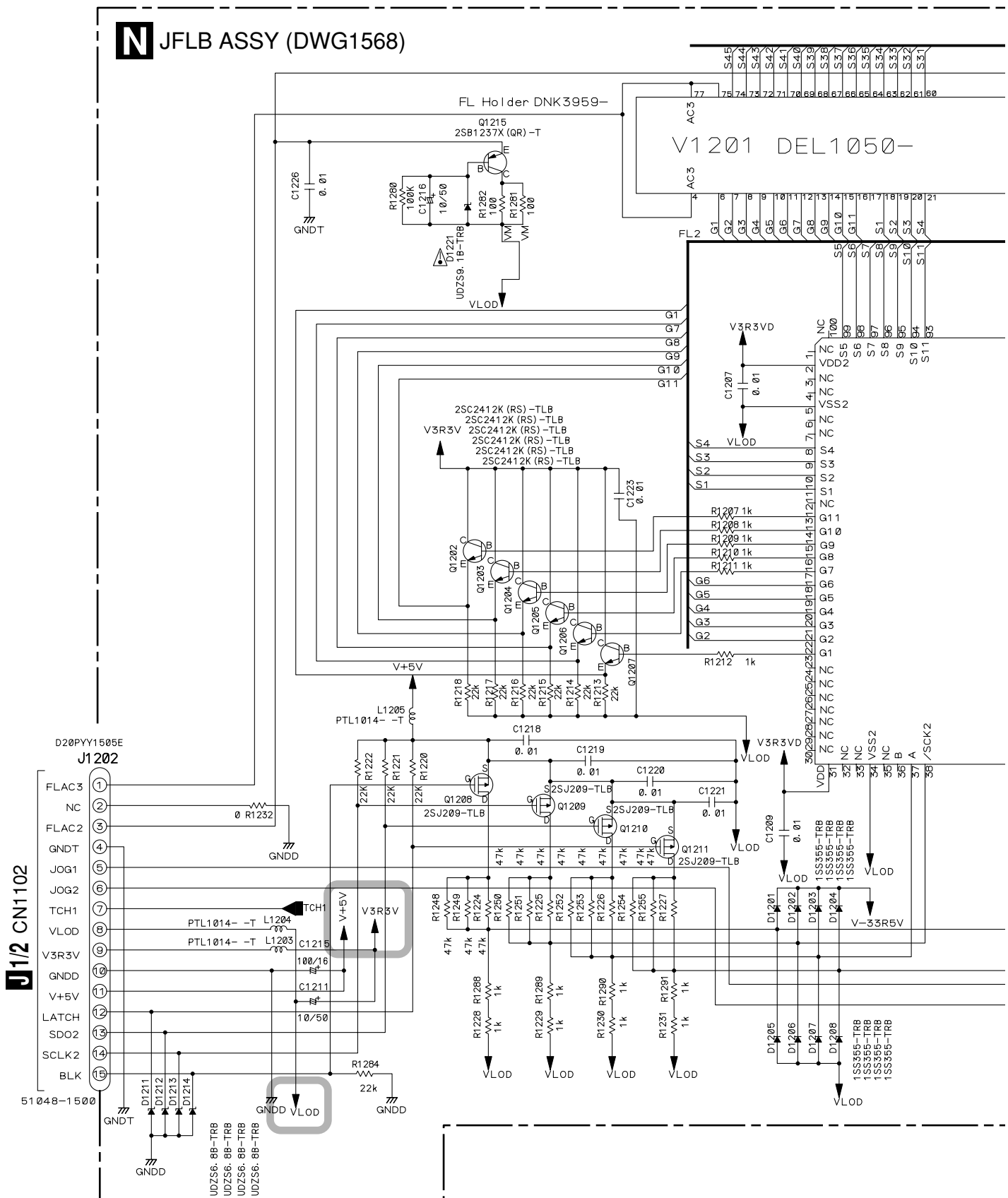
Notes

ALL RESISTORS ARE IN Ω
RS1/16S***J
YF : CKSRYF μF
CH : CCSRCH F
OTHERS : CKSRYB μF
CEHAT : CEHAT μF

 : The power supply is shown with the marked box.

L M

CDJ-1000MK2





NO

3.12 SW POWER SUPPLY and PSWB ASSYS

A

B

C

D

E

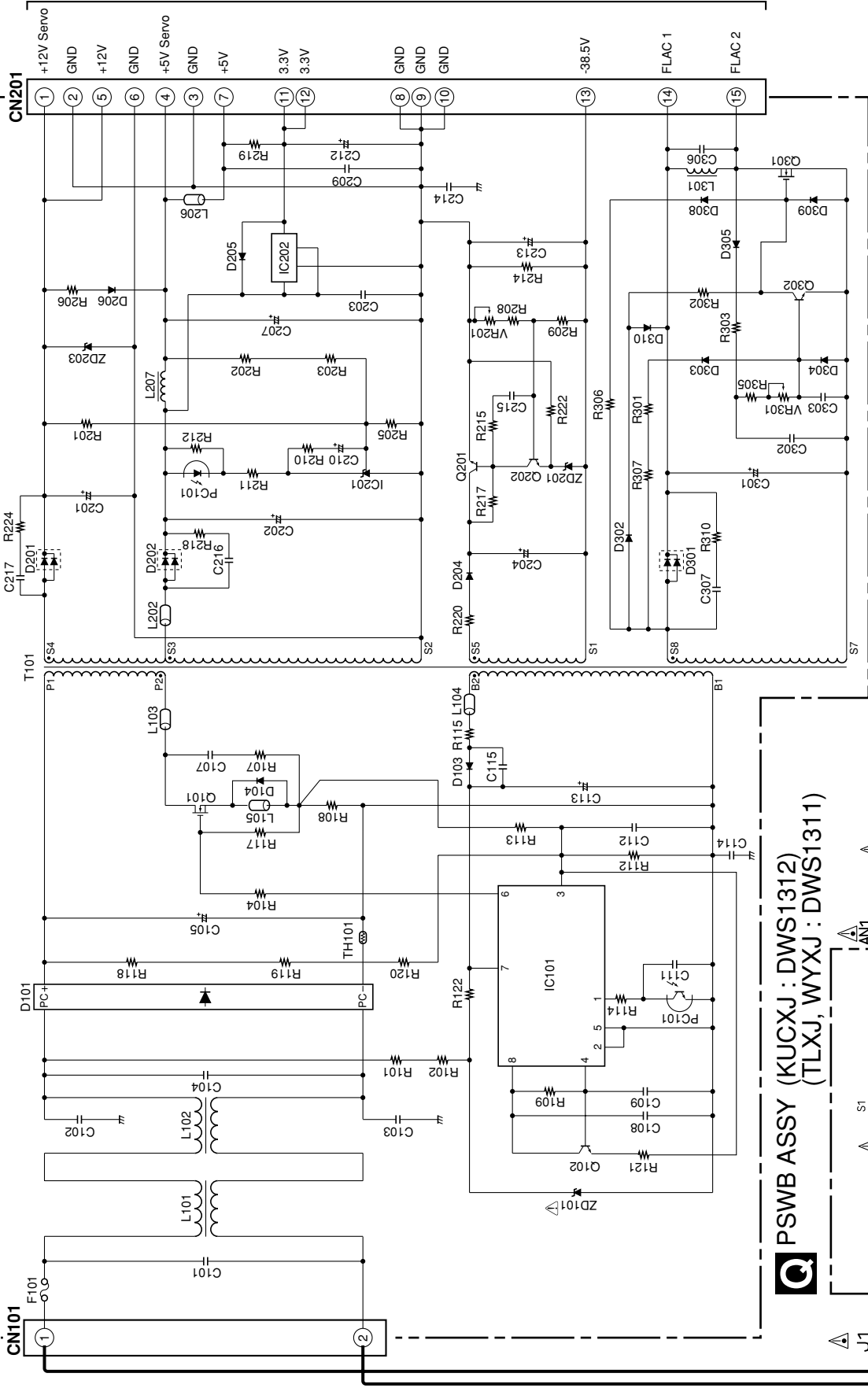
F

P SW POWER SUPPLY ASSY (DWR1370)

P

Q

A 2/4 CN101



NOTE FOR FUSE REPLACEMENT

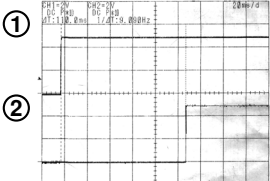
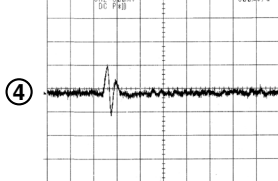
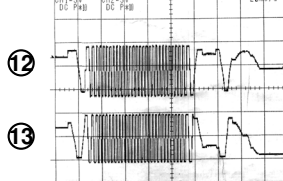
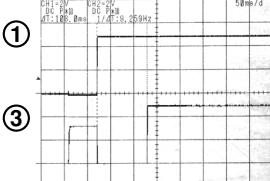
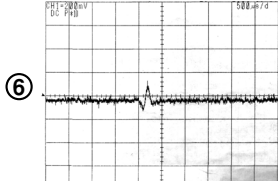
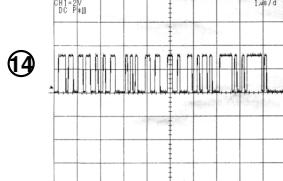
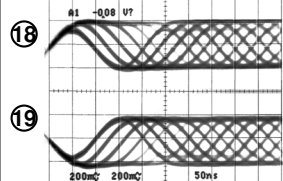
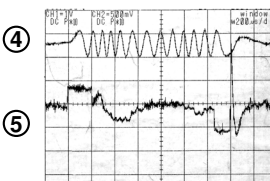
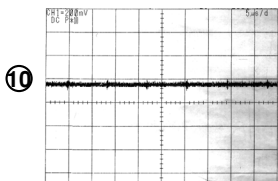
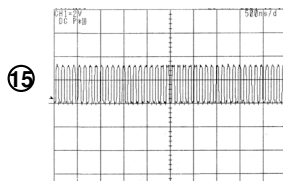
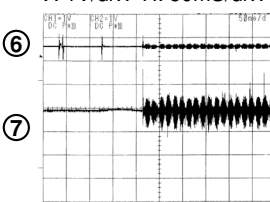
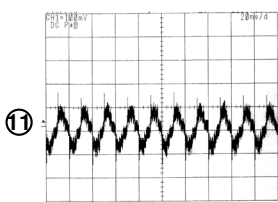
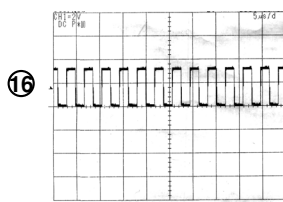
CAUTION - FOR CONTINUED PROTECTION AGAINST RISK OF FIRE.
REPLACE WITH SAME TYPE AND RATINGS ONLY.

Q PSWB ASSY (KUCXJ : DWS1312)
(TLXJ, WYXJ : DWS1311)

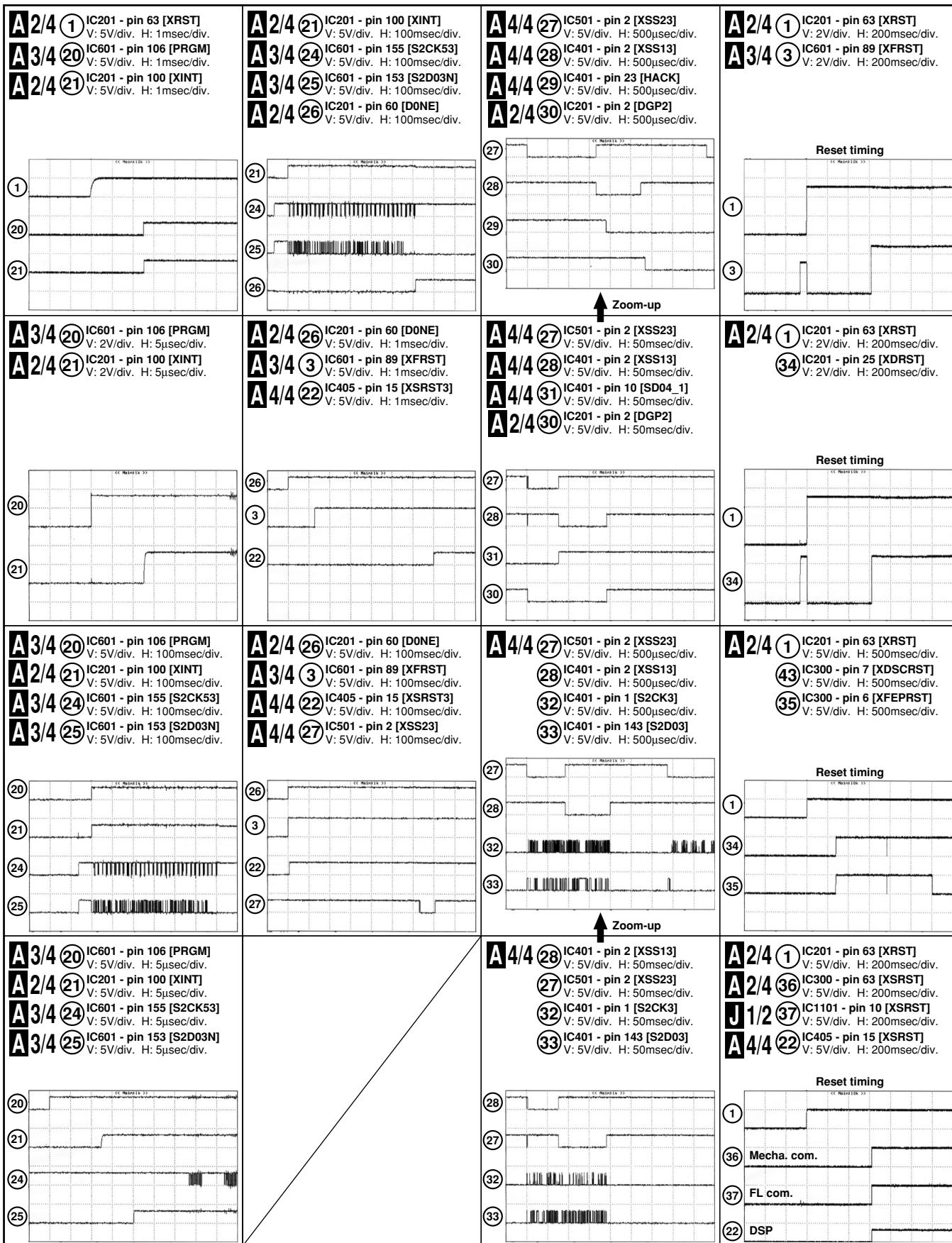
P

Q

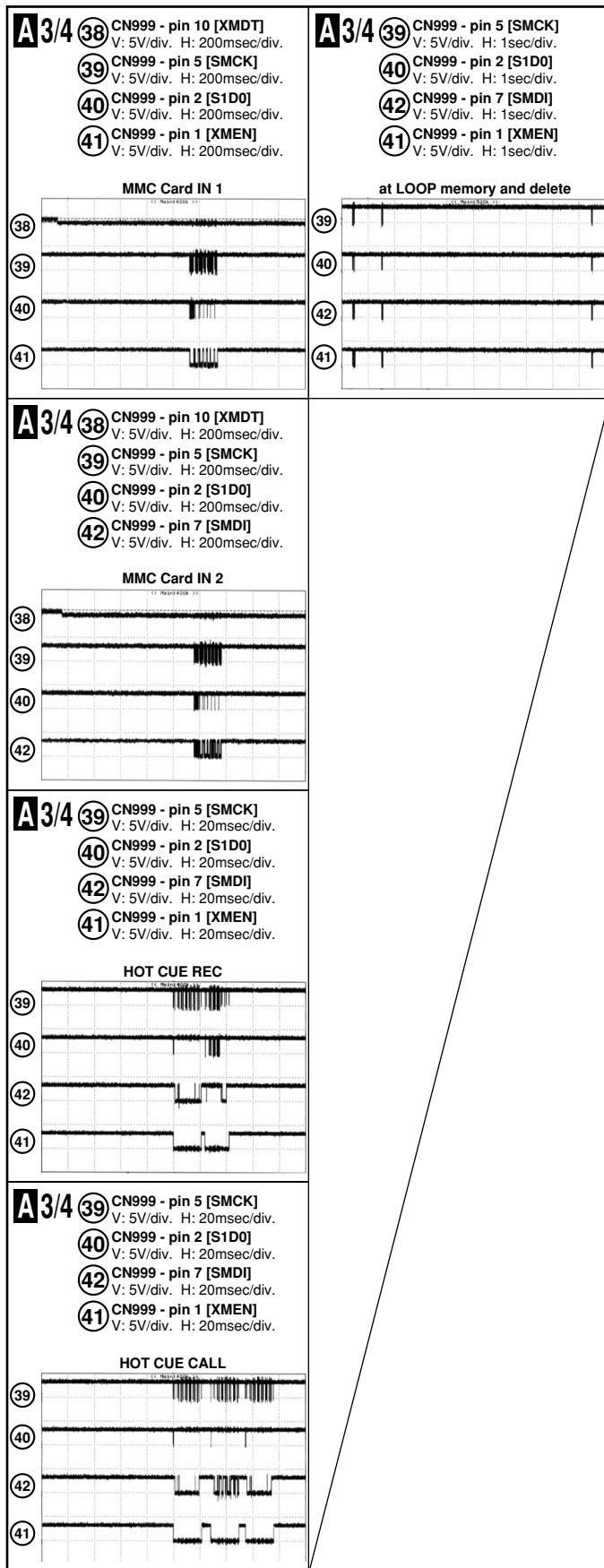
WAVEFORMS

A2/4 MAIN ASSY Mode: Power ON ① IC201- 63pin (XRST) V: 2V/div. H: 20mS/div. ② IC201- 19pin (XSRST) V: 2V/div. H: 20mS/div. 	A1/4 MAIN ASSY Mode: 1track Jump ④ IC800- 18pin (TE) V: 500mV/div. H: 500μS/div. 	A1/4 MAIN ASSY Mode: Search ⑫ IC950- 8pin (ST1+) V: 5V/div. H: 20mS/div. ⑬ IC950- 6pin (ST2+) V: 5V/div. H: 20mS/div. 	
A2/4, 3/4 MAIN ASSY Mode: Power ON ① IC201- 63pin (XRST) V: 2V/div. H: 50mS/div. ③ IC601- 89pin (XFRST) V: 2V/div. H: 50mS/div. 	A1/4 MAIN ASSY Mode: Focus Up/Down ⑥ IC800- 22pin (FE) V: 200mV/div. H: 500μS/div. 	A3/4 MAIN ASSY Mode: Play ⑭ IC601- 162pin (SDATA) V: 2V/div. H: 1μS/div. 	A1/4 MAIN ASSY Mode: 3100rpm/ Inside Play ⑮ IC700- 8pin (ARF) V: 200mV/div. H: 50nS/div. ⑲ IC700- 9pin (NARF) V: 200mV/div. H: 50nS/div. 
A1/4 MAIN ASSY Mode: Search ④ IC800- 18pin (TE) V: 1V/div. H: 200μS/div. ⑤ IC950- 11pin (T+) V: 500mV/div. H: 200μS/div. 	A1/4 MAIN ASSY Mode: Play ⑩ IC700- 6pin (TEDRV) V: 200mV/div. H: 5μS/div. 	A3/4 MAIN ASSY Mode: Play ⑮ IC601- 182pin (BCK) V: 2V/div. H: 500nS/div. 	
A1/4 MAIN ASSY Mode: Focus ⑥ IC800- 22pin (FE) V: 1V/div. H: 50mS/div. ⑦ IC950- 13pin (F+) V: 1V/div. H: 50mS/div. 	A1/4 MAIN ASSY Mode: Play ⑪ IC700- 5pin (FEDRV) V: 100mV/div. H: 20mS/div. 	A3/4 MAIN ASSY Mode: Play ⑮ IC601- 168pin (LRCK) V: 2V/div. H: 5μS/div. 	

A MAIN ASSY **J** MFLB ASSY



A MAIN ASSY



VOLTAGES

Voltage measurement mode

DJ MODE: PLAY, VINAL, MMC IN, MASTER TEMPO: OFF, SRIDER: 0%, HOT CUE: OFF

A 1/4 MAIN ASSY

IC700 (MN677061ZY)

Pin No.	Voltage (V)
1	2.1
2	1.4
3	1.6
4	3.3
5	1.6
6	1.6
7	0
8	1.6
9	1.6
10	1.5
11	1.5
12	1.6
13	1.5
14	3.3
15	1.7
16	2.2
17	0.2
18	2.1
19	1.4
20	0
21	1
22	1
23	2
24	1.6
25	1.1
26	1.1
27	3.3
28	1.1
29	1.1
30	0
31	1
32	1
33	1.6
34	1.6
35	1
36	1.2
37	1.6
38	3.3
39	0
40	1.6
41	0
42	1.6
43	0
44	1.8
45	0
46	3.3
47	0
48	1.6
49	0
50	0
51	1.7
52	1.9
53	1.5
54	1.1
55	1.1
56	1.1
57	0
58	2.4
59	0
60	0
61	1.6
62	0
63	0.3
64	0
65	0
66	0
67	0
68	1.6
69	0.2
70	0.1
71	3.2
72	0
73	0
74	0
75	3.3
76	1.7
77	0
78	0
79	1.7
80	1.6
81	0
82	3.3
83	-
84	4.9
85	4.8
86	4.9
87	3.2
88	4.9
89	4.8
90	0.7

IC700 (MN677061ZY)

Pin No.	Voltage (V)
91	0 to 3.2
92	0
93	0
94	1.6
95	0
96	2.4
97	1.7
98	1.7
99	1.6
100	2.3

IC701 (TC7WU04FU)

Pin No.	Voltage (V)
1	1.7
2	1.7
3	3.3
4	0
5	0
6	1.7
7	1.6
8	3.3

IC710 (TC7SET08FU)

Pin No.	Voltage (V)
1	0
2	0 to 4.9
3	0
4	0
5	3.3

IC711 (TC7SET32FU)

Pin No.	Voltage (V)
1	0
2	0
3	0
4	0
5	3.3

IC800 (AN8702NFH)

Pin No.	Voltage (V)
1	4.9
2	2.2
3	0.2
4	3.2
5	1.7
6	1.7
7	1.7
8	3.9
9	3.3
10	0
11	4.9
12	4.9
13	4.9
14	4.9
15	1.2
16	1.7
17	1.8
18	1.4
19	1.7
20	2.2
21	1.7
22	1.6
23	0
24	1.6
25	3.3
26	0
27	2.1
28	4.9
29	1.7
30	2
31	2
32	2
33	0
34	1.6
35	1.5
36	3.3
37	2
38	1
39	0
40	0
41	2.4
42	1.4
43	1.7
44	2.5
45	2.6
46	2.1
47	2
48	2
49	2.2
50	2.2
51	2.2
52	2.2
53	2.3
54	2.3
55	4.9
56	2.1
57	2.3
58	2.3
59	2.3
60	2.3
61	0
62	2.2
63	2.2
64	1.7

IC850 (BA10358F)

Pin No.	Voltage (V)
1	1.6
2	2.2
3	2.2
4	0
5	2.4
6	2.4
7	1.7
8	4.9

IC900 (LB11975)

Pin No.	Voltage (V)
1	10
2	10
3	10
4	10
5	0
6	0
7	0
8	11.8
9	11.8
10	0
11	2.4
12	2
13	0.1
14	1.7
15	1.9
16	4.9
17	0.1
18	0
19	1.8
20	1.8
21	1.8
22	1.8
23	1.8
24	1.8
25	5
26	2.8
27	1.5
28	5
29	0
30	11.7
31	11.8
32	0
33	0
34	0
35	0
36	0
37	10
38	10

IC950 (LA6562)

Pin No.	Voltage (V)
1	4.9
2	4.9
3	11.8
4	0
5	5.5
6	3.7
7	7.6
8	5.4
9	5.7
10	0
11	2.5
12	2.5
13	2.5
14	2.5
15	5
16	1.6
17	1.6
18	1.6
19	1.6
20	1.6
21	1.6
22	1.3
23	1.6
24	1.6
25	5
26	5
27	5
28	1.6
29	0
30	1.6
31	1.6
32	1.6
33	1.3
34	1.6
35	1.6
36	1.6
37	0
38	0

A 2/4 MAIN ASSY

IC100 (PQ025EZ01ZP)

Pin No.	Voltage (V)
1	4.9
2	4.9
3	2.4
4	0
5	0

IC150 (PQ1R33)

Pin No.	Voltage (V)
1	4.9
2	0
3	1.3
4	3.3
5	0
6	4.9

IC202 (BR24C64F)

Pin No.	Voltage (V)
1	0
2	0
3	0
4	0
5	5
6	5
7	0
8	5

IC203 (TC74HC4053AFT)

Pin No.	Voltage (V)
1	5
2	0.1
3	5
4	4.9
5	4.9
6	0
7	0
8	0
9	0
10	0
11	0
12	4.2
13	5
14	4.2
15	0.2
16	5

IC204 (TC7SET08FU)

Pin No.	Voltage (V)
1	3.3
2	5
3	0
4	5
5	5

IC205 (TC74VHC08FT)

Pin No.	Voltage (V)
1	0
2	0
3	0
4	5
5	3.3
6	3.3
7	0
8	3.3
9	5
10	3.3
11	3.3
12	5
13	3.3
14	3.3

IC206 (PQ1R33)

Pin No.	Voltage (V)
1	5
2	0
3	1.3
4	3.3
5	0
6	5

A 2/4 MAIN ASSY**IC300 (PD3446A8)**

Pin No.	Voltage (V)
1	3.1
2	4.9
3	0
4	0
5	2.5
6	4.9
7	4.9
8	0
9	0
10	0
11	0
12	4.8
13	4.9
14	0.9
15	4.9
16	4.9
17	0
18	4.9
19	4.9
20	0 to 4.9
21	0
22	0
23	0
24	0 to 4.9
25	4.9
26	4.9
27	1.7
28	0.3
29	1
30	0.4 to 0.7
31	1
32	1
33	0.5 to 1
34	0.2 to 0.5
35	4.9
36	2.6 to 2.8
37	0.6
38	4.4
39	0.2
40	4.2 to 4.5
41	2
42	0
43	0
44	0
45	0
46	0
47	0
48	0
49	0
50	0
51	0
52	0
53	0
54	0
55	4.9
56	0
57	0
58	0
59	0
60	0 to 4.9
61	0
62	4.9
63	5
64	0
65	0
66	2.5
67	2.4
68	4.9
69	4.9
70	4.9
71	4.9
72	4.9
73	4.9
74	0
75	4.9
76	3.3
77	3.3
78	1.7
79	1.6
80	1.7
81	0
82	0
83	2 to 2.6
84	2 to 2.6
85	1.2 to 2.5
86	0
87	0
88	0.1
89	3.2
90	0

IC300 (PD3446A8)

Pin No.	Voltage (V)
91	0
92	0
93	0
94	0 to 2.6
95	4.9
96	4.8
97	0 to 2.3
98	0
99	4.9
100	1.5

IC201 (PD3445A8)

Pin No.	Voltage (V)
1	3.2
2	0
3	0
4	3.3
5	4.8
6	4.7
7	5
8	5
9	4.9
10	0
11	0
12	0.1
13	4.3
14	2.9
15	0.1 to 0.2
16	0
17	5
18	5
19	5
20	0
21	0
22	0
23	0
24	5
25	5
26	0
27	1.1
28	2.5
29	1.1
30	2.5
31	1.2
32	1.2
33	1.2
34	1.2
35	5
36	0
37	5
38	5
39	0
40	5
41	0
42	0
43	0
44	0
45	0
46	0
47	0
48	0
49	0
50	0
51	0
52	0
53	0
54	0
55	1
56	5
57	0
58	0
59	0
60	3.3
61	0
62	5
63	5
64	0
65	0
66	2.5
67	2.5
68	5
69	5
70	5
71	5
72	5
73	5
74	0
75	5

IC600 (M51957BFP)

Pin No.	Voltage (V)
1	0
2	1.4
3	0
4	0
5	1.2
6	5
7	5
8	0

IC201 (PD3445A8)

Pin No.	Voltage (V)
76	5
77	5
78	2.4
79	2.4
80	0
81	0
82	0
83	0
84	0
85	0
86	0
87	5
88	0
89	3.3
90	0
91	0
92	0
93	5
94	5
95	5
96	5
97	5
98	0
99	5
100	3.1

A 3/4 MAIN ASSY**IC10 (BA178M05FP)**

Pin No.	Voltage (V)
1	11.8
2	0
3	5

IC11 (PE8001A)

Pin No.	Voltage (V)
1	-
2	-
3	-
4	-
5	2.4
6	-
7	0
8	5
9	5
10	0
11	-
12	-
13	2.5
14	0
15	5
16	2.5
17	-
18	-
19	0
20	5
21	4.4
22	5
23	0
24	-
25	-
26	0.1
27	4.9
28	5

IC12 (TC74HCT7007AF)

Pin No.	Voltage (V)
1	1.6
2	2.5
3	1.6
4	2.5
5	1.6
6	2.5
7	0
8	0
9	0
10	0
11	0
12	0
13	0
14	5

IC13 (TC7WU04FU)

Pin No.	Voltage (V)
1	2.6
2	2.6
3	0
4	0
5	5
6	2.6
7	2.4
8	5

IC606 (K4S641632F)

Pin No.	Voltage (V)
1	3.3
2	2.1
3	3.3
4	2.1
5	2.1
6	0
7	2.1
8	2.1
9	3.3
10	2.1
11	2.1
12	0
13	2.1
14	3.3
15	0
16	3.3
17	2.7
18	2.7
19	0
20	0
21	0
22	0
23	0
24	0
25	0
26	0
27	3.3
28	0
29	0
30	0
31	0
32	0
33	0
34	0
35	0
36	0
37	2.3
38	1.3
39	0
40	0
41	0
42	2.1
43	3.3
44	2.1
45	2.1
46	0
47	2.1
48	2.1
49	3.3
50	2.1
51	2.1
52	0
53	2.1
54	0

IC607 (PQ025EZ01ZP)

Pin No.	Voltage (V)
1	3.3
2	3.3
3	2.5
4	0
5	0

IC608 (TC7WU04FU)

Pin No.	Voltage (V)
1	1.6
2	1.6
3	0
4	0
5	3.3
6	1.7
7	1.7
8	3.3

IC610 (TC7SH08FU)

Pin No.	Voltage (V)
1	5
2	3.3
3	0
4	3.3
5	3.3

IC612 (TC7WU04FU)

Pin No.	Voltage (V)
1	1.8
2	1.8
3	0
4	0
5	3.3
6	1.7
7	1.7
8	3.3

A 3/4 MAIN ASSY

IC601 (XC2S50-5PQ208C)

Pin No.	Voltage (V)
1	0
2	0.2
3	2.1
4	2.1
5	2.1
6	2.1
7	2.1
8	2.1
9	2.1
10	2.1
11	0
12	3.3
13	2.5
14	2.1
15	2.1
16	2.1
17	2.1
18	2.1
19	0
20	2.1
21	2.1
22	2.1
23	1.3
24	2.3
25	0
26	3.3
27	0
28	2.5
29	0
30	0
31	0
32	0
33	0
34	0
35	0
36	3.3
37	2.7
38	2.5
39	3.3
40	0
41	2.7
42	0
43	0
44	0
45	0
46	0
47	0
48	0
49	0
50	3.3
51	0
52	3.3
53	3.3
54	0
55	2.5
56	0
57	5
58	0
59	5
60	5
61	0
62	1.1
63	1.1
64	0
65	3.3
66	2.5
67	1
68	1.1
69	2.4
70	2.5
71	1.2
72	0
73	2.4
74	0
75	0
76	2.5
77	1.6
78	3.3
79	0
80	0
81	0
82	0
83	0
84	0
85	0
86	0
87	0
88	0
89	5
90	0

IC601 (XC2S50-5PQ208C)

Pin No.	Voltage (V)
91	2.5
92	3.3
93	0
94	0
95	0
96	0
97	0
98	0
99	0
100	0
101	0
102	1.6
103	0
104	3.3
105	3.3
106	3.1
107	0
108	0
109	0
110	0
111	0
112	0
113	0
114	0
115	0
116	0
117	3.3
118	2.5
119	0
120	0
121	3.2
122	0
123	0
124	0
125	0
126	0
127	0.1
128	2.5
129	0
130	3.3
131	0
132	0
133	0
134	0
135	0
136	3.2
137	0
138	0
139	0
140	3.2
141	3
142	3.2
143	2.5
144	3.3
145	0
146	0
147	0
148	0
149	0
150	0
151	0
152	0
153	0.1
154	0
155	3.2
156	3.3
157	1.4
158	0
159	2.5
160	2.3
161	2.3
162	1.7
163	3.2
164	0.1
165	0.1
166	0.4
167	0.1
168	1.6
169	0
170	3.3
171	2.5
172	0
173	0
174	0
175	0
176	0
177	0
178	5
179	4.8
180	0

IC601 (XC2S50-5PQ208C)

Pin No.	Voltage (V)
181	0
182	1.6
183	0
184	3.3
185	1.6
186	2.5
187	2
188	4.2to4.5
189	0.2
190	0
191	4.4
192	0.6
193	2.6to2.8
194	0.2
195	1.8
196	2.5
197	3.3
198	0
199	1.7
200	1
201	1.1to1.5
202	0.3
203	1
204	1.5
205	0
206	0
207	2.5
208	3.3

A 4/4 MAIN ASSY

IC401(XCA56367PV150)

Pin No.	Voltage (V)
1	0.1
2	3.1
3	0.1
4	0.1
5	0.1
6	0.1
7	0.1
8	3.3
9	0
10	0.1
11	3.3
12	1.6
13	3.3
14	1.6
15	3.3
16	3.3
17	3.3
18	1.8
19	0
20	3.3
21	0
22	0
23	0.2
24	3.3
25	3.3
26	0
27	1.2
28	1.7
29	0
30	0
31	0
32	0
33	0
34	0
35	0
36	0
37	0
38	3.3
39	0
40	0
41	0
42	0
43	0
44	3.3
45	1.8
46	0.4
47	0
48	3.3
49	3.3
50	0
51	3.3
52	3.3
53	0
54	0
55	1.6
56	1.8
57	3.3
58	0
59	0
60	0
61	0
62	0
63	-
64	0
65	3.3
66	0
67	3.2
68	3
69	3.3
70	2.9
71	0
72	3.2
73	0
74	3.3
75	0
76	0
77	3.2
78	0
79	0
80	3.3
81	0

IC401(XCA56367PV15)

Pin No.	Voltage (V)
82	0
83	0
84	-
85	0
86	3.3
87	0
88	-
89	0
90	0
91	1.8
92	-
93	-
94	0
95	3.3
96	0
97	0
98	3.3
99	0
100	0
101	0
102	0
103	3.3
104	0
105	0
106	0
107	0
108	0
109	0
110	0.1
111	3.3
112	0
113	0
114	0
115	0
116	0
117	3.2
118	0
119	3.3
120	0
121	0
122	0
123	0
124	0
125	0
126	1.8
127	0
128	0
129	3.3
130	0
131	0
132	0
133	0
134	3.3
135	3.3
136	3.3
137	3.3
138	0
139	1.3
140	3.2
141	0
142	3.2
143	0.1
144	2.9

IC402(TC7WU04FU)

Pin No.	Voltage (V)
1	1.7
2	1.8
3	0
4	0
5	3.3
6	1.8
7	1.8
8	3.3

IC404 (MM1561JF)

Pin No.	Voltage (V)
1	1.8
2	0
3	0
4	0.6
5	3.3
6	0
7	3.3

IC405 (TC74VHC541FT)

Pin No.	Voltage (V)
1	0
2	0
3	0
4	1.1
5	5
6	4.9
7	0.1
8	4.7
9	4.8
10	0
11	3.1
12	3
13	0.1
14	3.2
15	3.3
16	0
17	0
18	0
19	0
20	3.3

IC407 (TC7S04FU)

Pin No.	Voltage (V)
1	0
2	3.2
3	0
4	0.1
5	3.3

IC605 (TC7WT241FU)

Pin No.	Voltage (V)
1	5
2	1.1
3	2.5
4	0
5	1.6
6	2.5
7	5
8	5

A 4/4 MAIN ASSY**IC501 (XCA56367PV150)**

Pin No.	Voltage (V)
1	0.1
2	3
3	3.3
4	1.6
5	0
6	0.1
7	0.1
8	3.3
9	0
10	0.1
11	0.1
12	1.6
13	1.6
14	1.6
15	1.6
16	1.7
17	0
18	1.8
19	0
20	3.3
21	0
22	0
23	0.2
24	3.3
25	3.3
26	0
27	1.6
28	1.7
29	0
30	0
31	0
32	0
33	0
34	0
35	0
36	0
37	0
38	3.3
39	0
40	0
41	0
42	0
43	0
44	3.3
45	1.8
46	0.4
47	0
48	0.1
49	3.3
50	0
51	1
52	1
53	0
54	0
55	1.6
56	1.8
57	3.3
58	0
59	1.6
60	1.6
61	0
62	0
63	3.3
64	3.3
65	3.3
66	0
67	0.9
68	0.9
69	0.9
70	0.9
71	0
72	0
73	0
74	3.3
75	0
76	0
77	0
78	0
79	0
80	3.3
81	0
82	0
83	0
84	0
85	0
86	3.3
87	0
88	0
89	0
90	0

IC501 (XCA56367PV150)

Pin No.	Voltage (V)
91	1.8
92	0
93	0
94	0
95	3.3
96	0
97	0
98	0
99	0
100	0
101	0
102	0
103	3.3
104	0
105	3.3
106	0
107	0
108	0
109	0
110	3.3
111	3.3
112	0
113	0
114	3.2
115	3.2
116	0
117	0
118	0
119	3.3
120	0
121	0
122	0
123	0
124	0
125	0
126	1.8
127	0
128	0
129	3.3
130	0
131	0
132	0
133	0
134	0
135	3.2
136	0
137	3.2
138	3.3
139	1
140	3.2
141	0
142	3.2
143	0.1
144	2.9

J 1/2 MFLB ASSY**IC1101 (PE5387A)**

Pin No.	Voltage (V)
1	5
2	5
3	5
4	0
5	0
6	0
7	0
8	0
9	0
10	5
11	2.4
12	2.1
13	0
14	5
15	0
16	5
17	4.9
18	0.1
19	4.3
20	1
21	3.8
22	4.7
23	0.2
24	0
25	0
26	0
27	5
28	5
29	5
30	5
31	5
32	2.7
33	2.2
34	5
35	5
36	5
37	0
38	5
39	0.3
40	0
41	5
42	5
43	11.7
44	0
45	5
46	5
47	-28.6 to -30.5
48	-21.7 to -23.7
49	-14.7
50	-16.8
51	-12.9
52	-12.8
53	-12.7
54	-10.8
55	-12.8
56	-12.8
57	-8.9
58	-12.7
59	-16.7
60	-18.7
61	-20.6 to -21.1
62	-16.6
63	-30.3
64	-32.3
65	-34.3
66	-32.4
67	-32.3
68	-32.3
69	-32.3
70	-28.4 to -31.4
71	-28.3 to -29.1
72	-30.4 to -31.2
73	-31.7 to -33.4
74	-34.5 to -36.3
75	-34.8 to -35.3
76	-36.2 to -37.1
77	-30.6 to -31
78	-32.3 to -33.3
79	-38.4
80	-32.2 to -34.6
81	-32.9 to -36.2
82	-33.1 to -35.7
83	-32.4 to -35.9
84	-30.2 to -32.9
85	-36.4
86	-36.3
87	-36.4
88	-36.4
89	-36.4
90	-36.4

IC1101 (PE5387A)

Pin No.	Voltage (V)
91	-36.4
92	-36.4
93	-36.4
94	-36.4
95	-36.4
96	-36.4
97	-36.4
98	-36.4
99	-36.4
100	-36.4

N JFLB ASSY**IC1201 (UPD16306B)**

Pin No.	Voltage (V)
1	0
2	3.2
3	0
4	0
5	-38.3
6	0
7	0
8	-26.9 to -27.8
9	-29.7 to -30.8
10	-27 to -27.9
11	-26.8 to -27.8
12	-38.4
13	-32.6
14	-32.6
15	-32.6
16	-32.6
17	-32.6
18	-33.1
19	-32.7
20	-32.8
21	-32.8
22	-32.8
23	-35.5
24	-38.4
25	-38.4
26	-38.4
27	-38.3
28	-38.3
29	-38.3
30	-38.3
31	3.2
32	0
33	0
34	-38.3
35	0
36	-33.6
37	-33.6
38	-37.9
39	-38.3
40	-35.5
41	-33.4
42	-33.4
43	-33.5
44	-38.3
45	-37.2
46	0
47	-38.3
48	0
49	0
50	3.2
51	-29.7 to -30.7
52	-29.7 to -30.7
53	-29.7 to -30.7
54	-29.7 to -30.7
55	-29.7 to -30.7
56	-29.7 to -30.7
57	-29.7 to -30.7
58	-29.7 to -30.7
59	-29.7 to -30.7
60	-29.7 to -30.7
61	-29.7 to -30.7
62	-29.7 to -30.7
63	-29.7 to -30.7
64	-29.7 to -30.7
65	-29.7 to -30.7
66	-29.7 to -30.7
67	-29.7 to -30.7
68	-29.7 to -30.7
69	-29.7 to -30.7
70	-29.7 to -30.7
71	-29.7 to -30.7
72	-29.7 to -30.7
73	-29.7 to -30.7
74	0
75	0
76	-38.3
77	0
78	0
79	3.2
80	0
81	0
82	-29.7 to -30.7
83	-29.7 to -30.7
84	-29.7 to -30.7
85	-29.7 to -30.7
86	-29.7 to -30.7
87	-29.7 to -30.7
88	-29.7 to -30.7
89	-29.7 to -30.7
90	-29.7 to -30.7

IC1201 (UPD16306B)

Pin No.	Voltage (V)
91	-29.7 to -30.7
92	-29.7 to -30.7
93	-29.7 to -30.7
94	-29.7 to -30.7
95	-29.7 to -30.7
96	-29.7 to -30.7
97	-29.7 to -30.7
98	-29.7 to -30.7
99	-29.7 to -30.7
100	0

I DOUT ASSY**IC1801 (TC74HC04AF)**

Pin No.	Voltage (V)
1	0
2	5
3	2.5
4	2.5
5	2.5
6	2.6
7	0
8	2.6
9	2.5
10	2.6
11	2.5
12	2.6
13	2.5
14	5

G DABB ASSY**IC1901 (NJM4580D)**

Pin No.	Voltage (V)
1	0
2	0
3	0
4	-13.1
5	0
6	0
7	0
8	11.2

4. PCB CONNECTION DIAGRAM

4.1 MAIN ASSY

A

SIDE A

IC202
IC101-IC106 Q202
Q201
IC607
IC201
IC10
IC608
IC12
IC610
IC404
IC600
IC601
IC606
IC401
IC605
IC204
IC206
IC402
IC612
IC205
Q203
Q204
IC407
IC405
IC100
IC150
IC710
Q301
Q950
IC711
IC701
IC950
IC200
IC850
Q600

1 CN1802 G CN1901

1 CN1801

C CN914

CN11

CN13

CN12

CN950

CN101

P CN201

CAUTION
REPLACE IC LINKS AS MARKED

ATTENTION
REPLACER LE
IC LINKS
COMME INDIQUE

DWX2303
MAIN

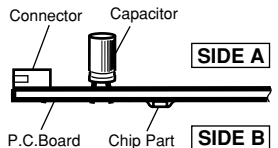
PICKUP AS
CN801

CN800

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.
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.

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



IC700
IC901
IC800
Q701
Q800

119.5

FC DC

A

SIDE B

A MAIN ASSY

B

C

D

E

F

CN102

CN203

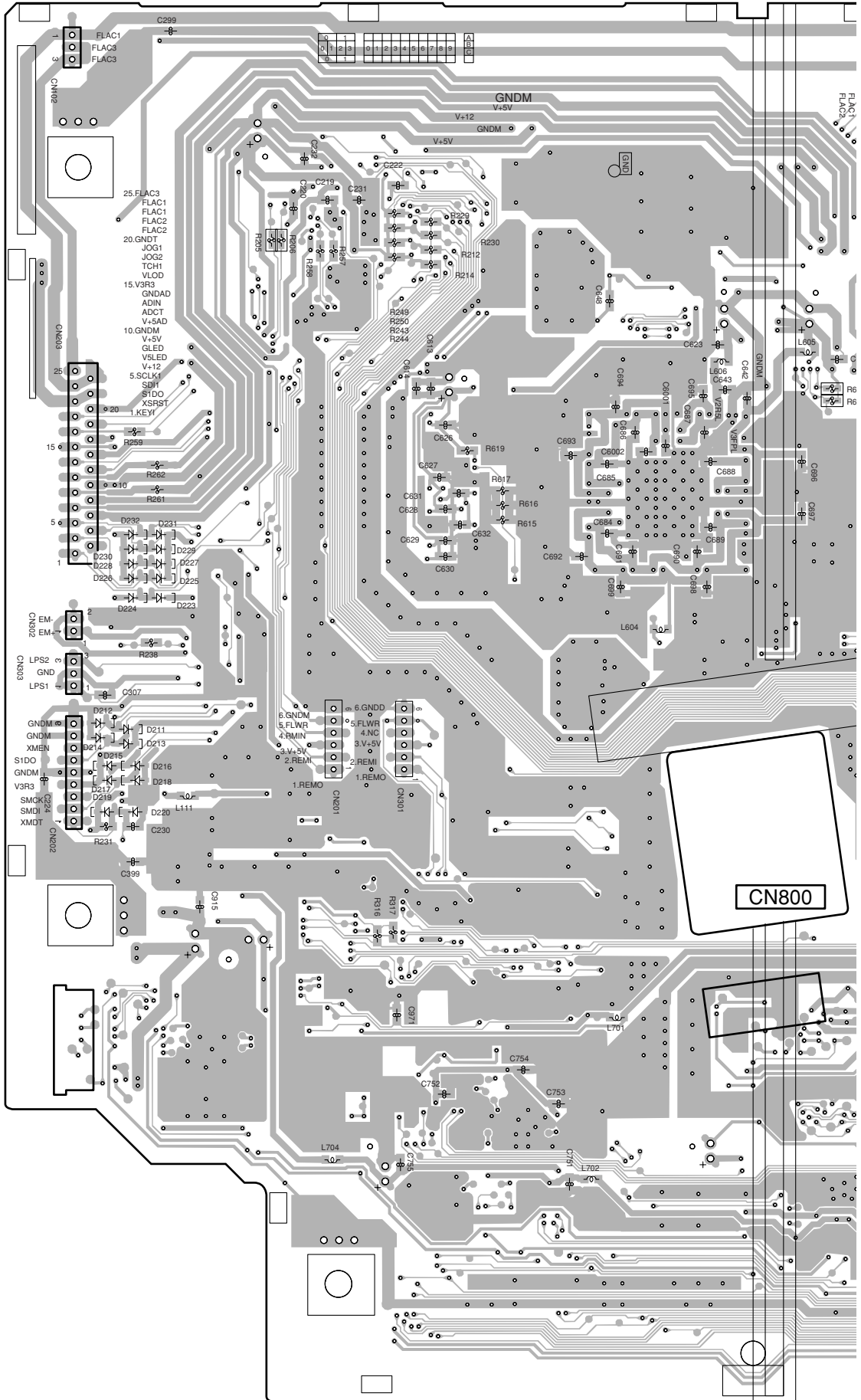
CN302

CN303

CN202

CN900

CN800



CDJ-1000MK2

A

SIDE B

A

B

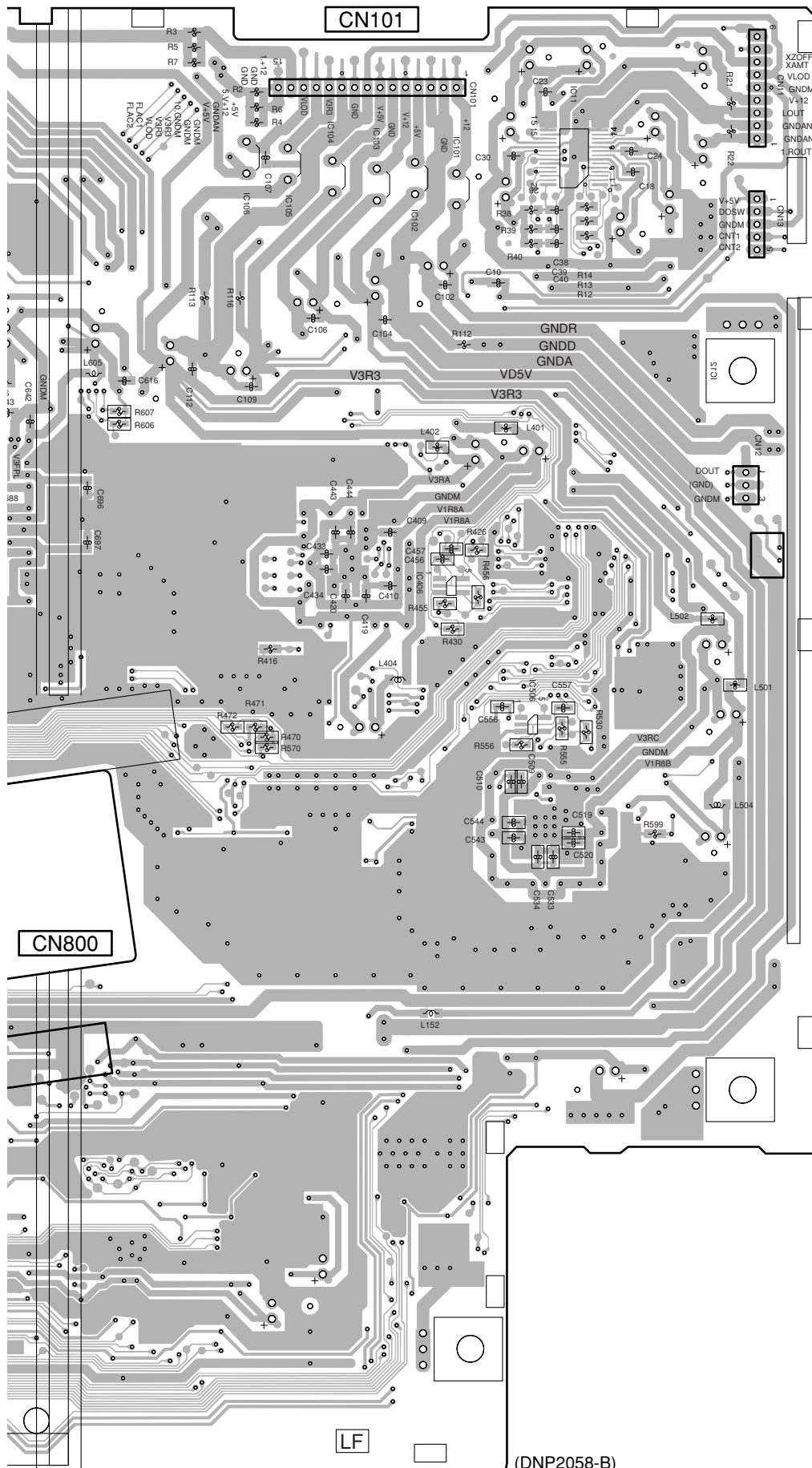
C

D

E

F

A



(DNP2058-B)

CDJ-1000MK2

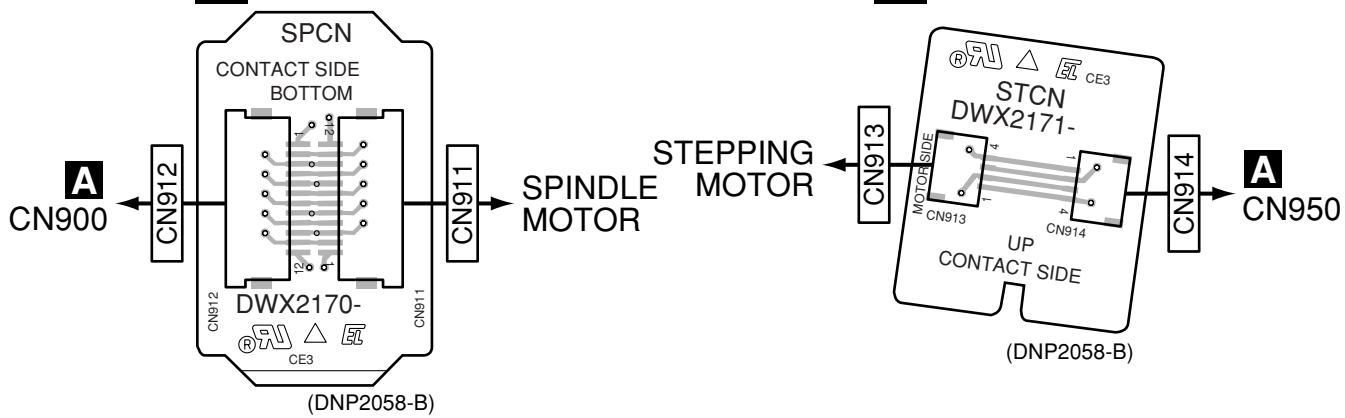
4.2 SPCN, STCN, FLRB, SLMB and MMCB ASSYS

SIDE A

SIDE A

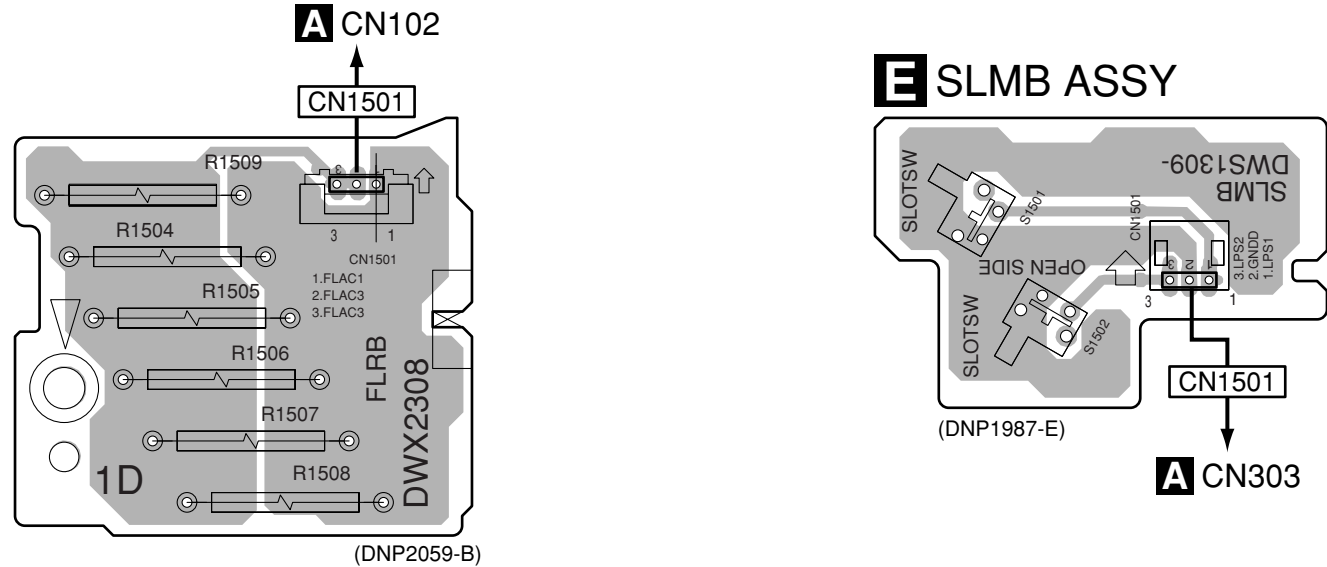
SPCN ASSY

STCN ASSY

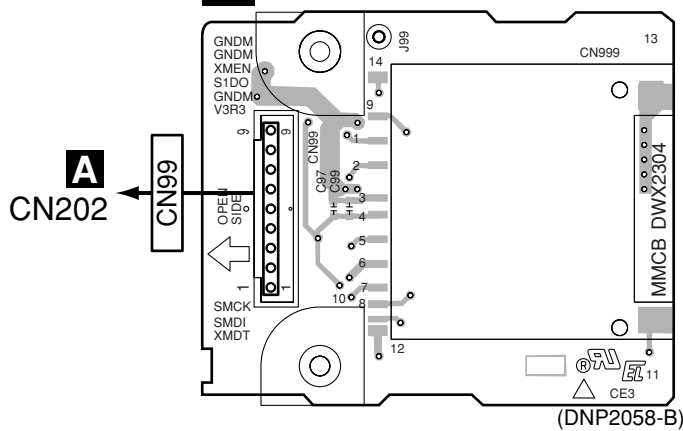


FLRB ASSY

SLMB ASSY



MMCB ASSY



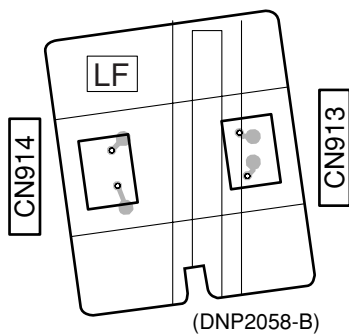
B C D E F

B C D E F

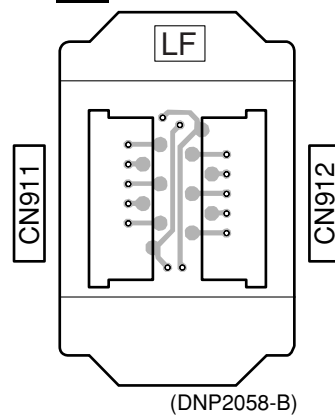
SIDE B

SIDE B

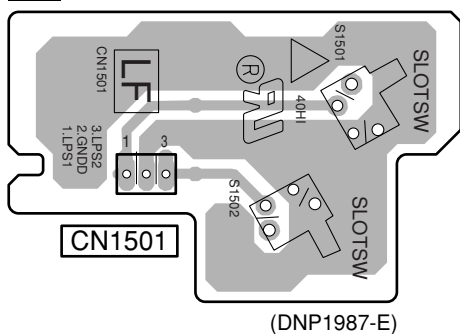
C STCN ASSY



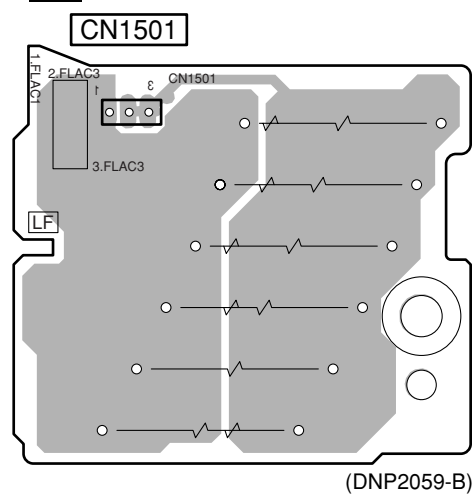
B SPCN ASSY



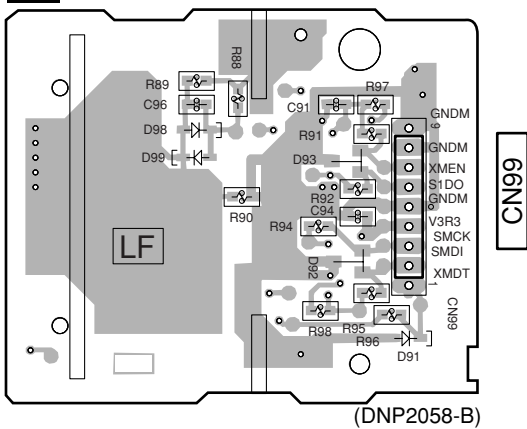
E SLMB ASSY



D FLRB ASSY



F MMCB ASSY



B C D E F

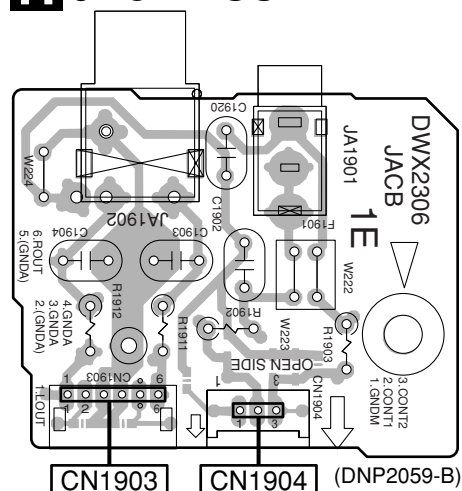
B C D E F

4.3 DABB, JACB and DOUT ASSYS

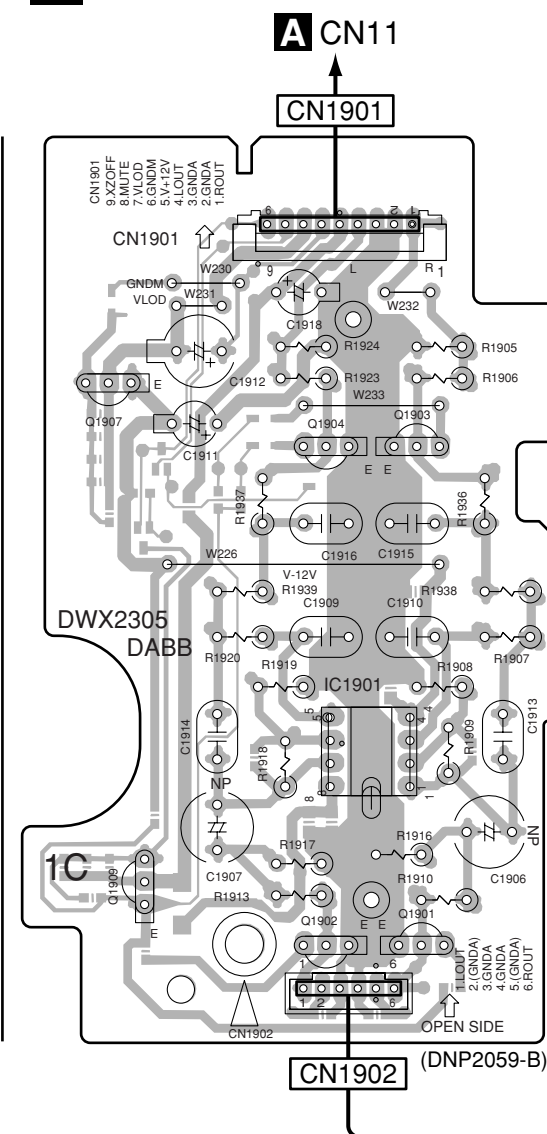
SIDE A

SIDE A

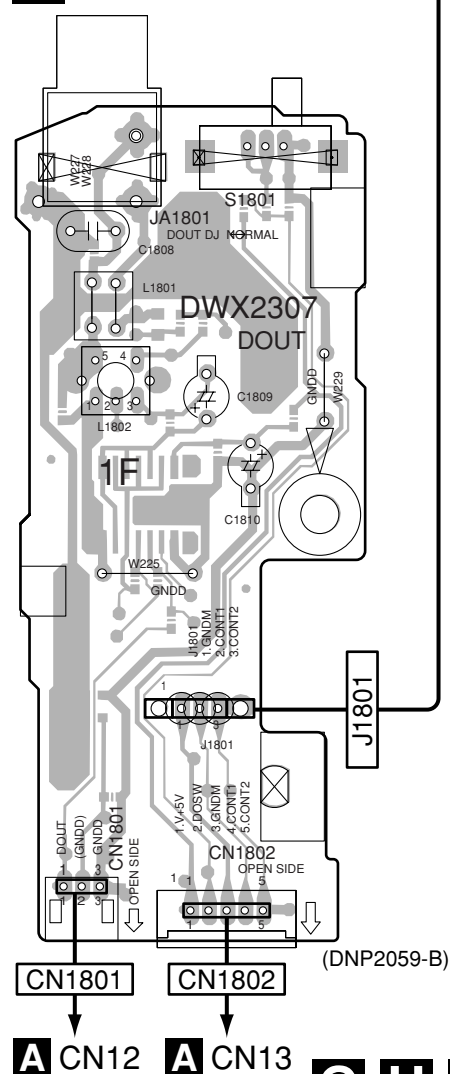
H JACB ASSY



G DABB ASSY

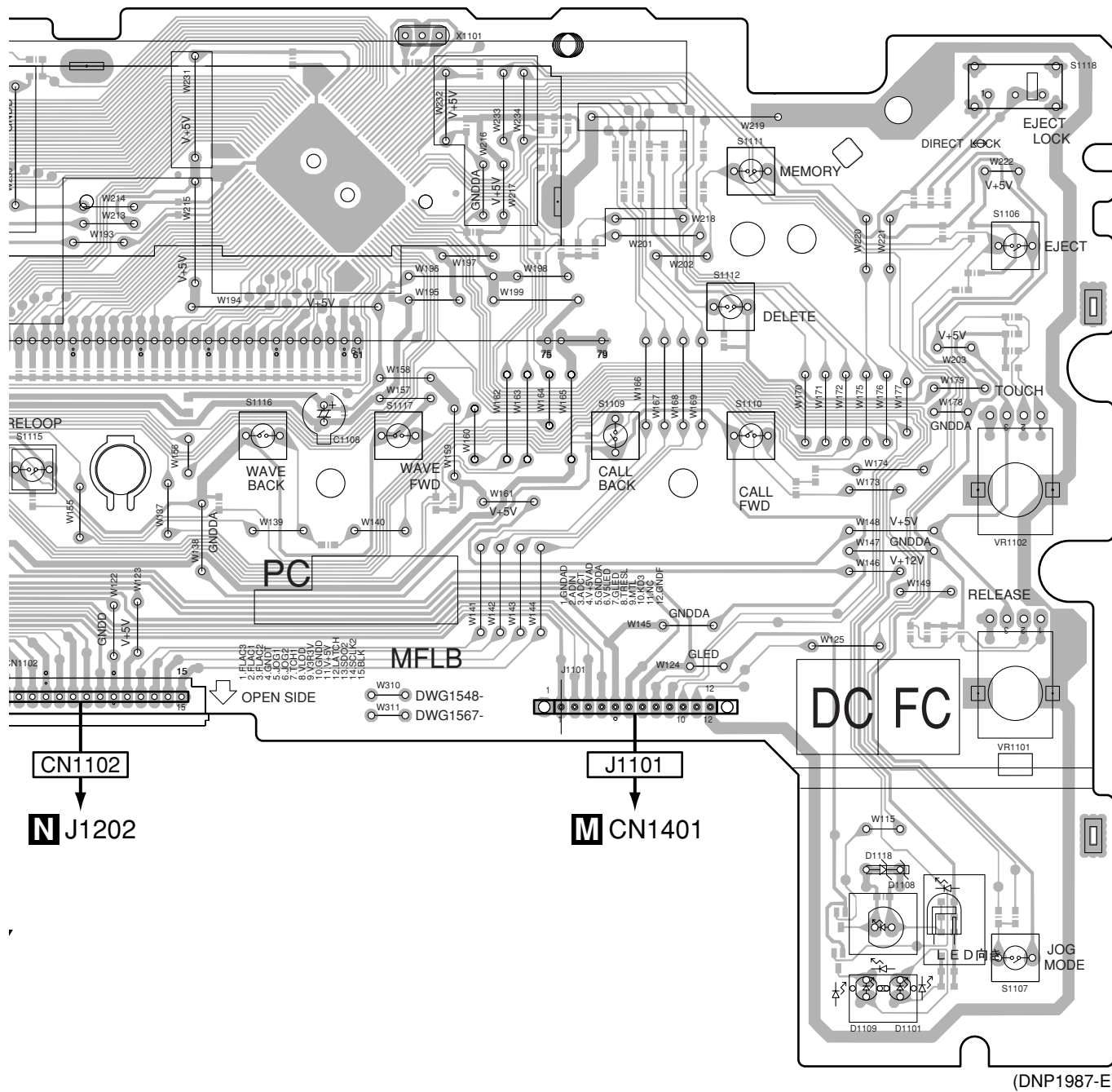


I DOUT ASSY



G H I

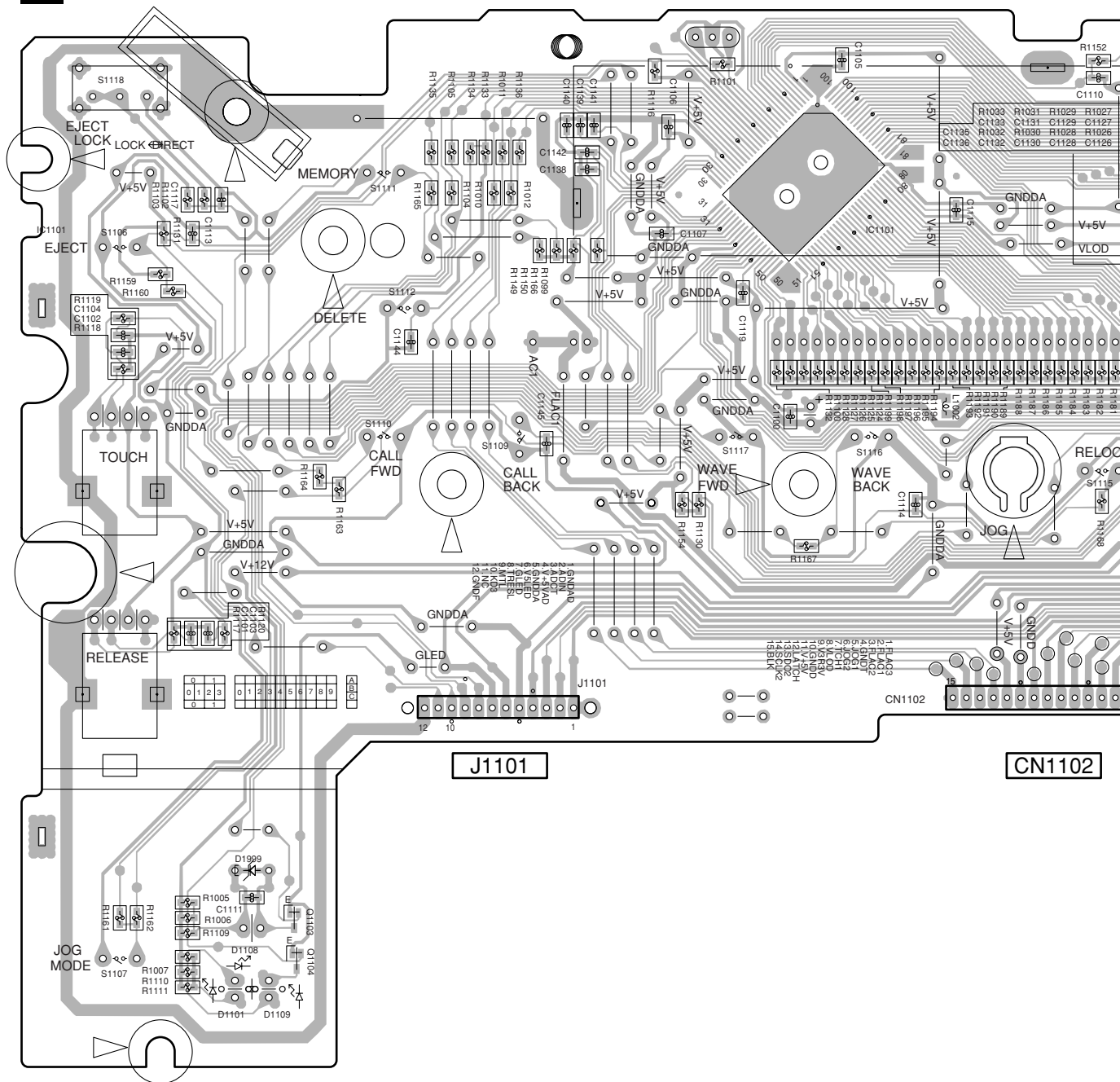
G H I

SIDE A

(DNP1987-E)

SIDE B

J MFLB ASSY

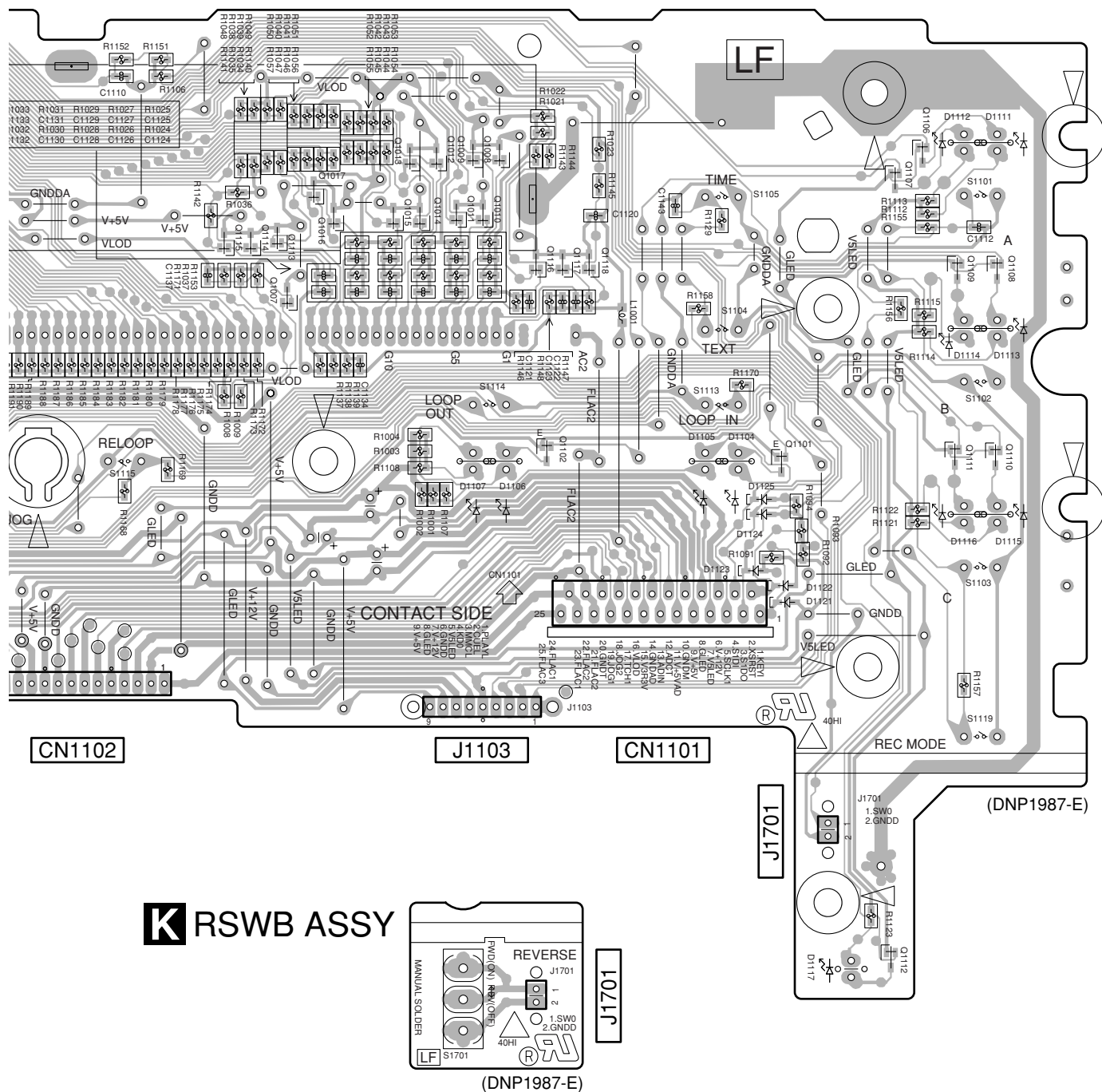


Q1103

Q1104

IC1101

SIDE B



Q1017 Q1009 Q1008 Q1106

Q1113-Q1115 Q1016 Q1010-Q1015 Q1107 Q1109 Q1108

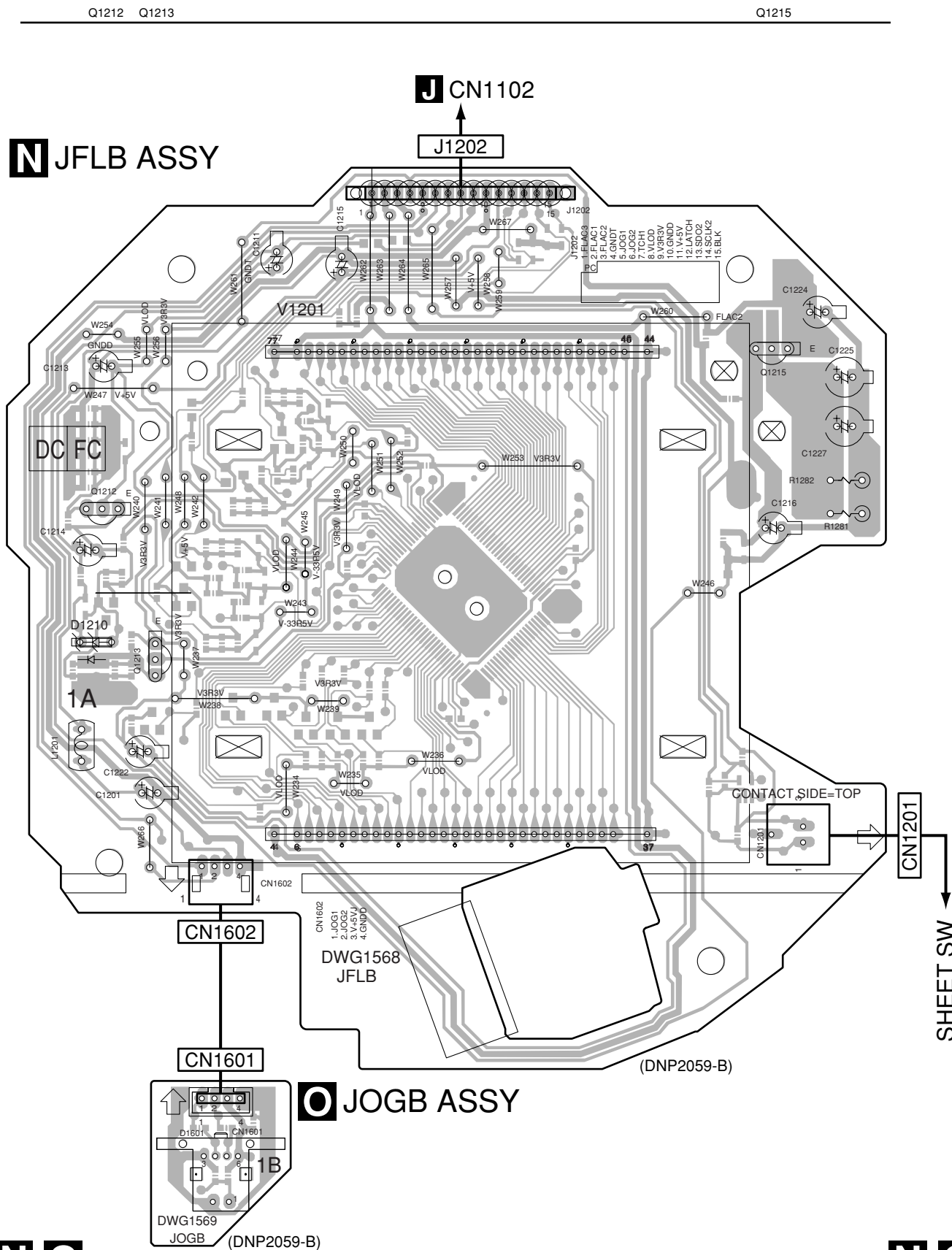
Q1007 Q1116-Q1118 Q1101 Q1112 Q1111 Q1110

Q1102

4.7 JFLB and JOGB ASSYS

SIDE A

SIDE A



SIDE B

SIDE B

A

B

C

D

F

F

N JFLB ASSY

J1202

CN1201

CN1602

(DNP2059-B)

LF

DWG1568

CN1601



(DNP2059-B)

NO

NO

CDJ-1000MK2

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 $\rightarrow$ 56 $\times 10^1$ $\rightarrow$ 561 RD1/4PU 561J

47k Ω $\rightarrow$ 47 $\times 10^3$ $\rightarrow$ 473 RD1/4PU 473J

0.5 Ω $\rightarrow$ R50 RN2H R50K

1 Ω $\rightarrow$ 1R0 RSIP 1R0K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k Ω $\rightarrow$ 562 $\times 10^1$ $\rightarrow$ 5621 RN1/4PC 5621F

LIST OF PCB ASSEMBLIES

Mark	Symbol and Description	CDJ-1000MK2 KUCXJ	CDJ-1000MK2 TLXJ	CDJ-1000MK2 WYXJ
NSP	1..MOTHER ASSY	DWM2162	DWM2162	DWM2162
	2..MAIN ASSY	DWX2303	DWX2303	DWX2303
	2..SPCN ASSY	DWX2170	DWX2170	DWX2170
	2..STCN ASSY	DWX2171	DWX2171	DWX2171
	2..MMCB ASSY	DWX2304	DWX2304	DWX2304
NSP	1..DISP ASSY	DWM2165	DWM2163	DWM2163
	2..SLMB ASSY	DWS1309	DWS1309	DWS1309
	2..MFLB ASSY	DWG1567	DWG1567	DWG1567
	2..RSWB ASSY	DWS1310	DWS1310	DWS1310
	2..KSWB ASSY	DWS1324	DWS1324	DWS1324
	2..SLDB ASSY	DWS1325	DWS1325	DWS1325
	2..PSWB ASSY	DWS1312	DWS1311	DWS1311
NSP	1..SUB ASSY	DWM2164	DWM2164	DWM2164
	2..FLRB ASSY	DWX2308	DWX2308	DWX2308
	2..DABB ASSY	DWX2305	DWX2305	DWX2305
	2..JACB ASSY	DWX2306	DWX2306	DWX2306
	2..DOUT ASSY	DWX2307	DWX2307	DWX2307
	2..JFLB ASSY	DWG1568	DWG1568	DWG1568
	2..JOGB ASSY	DWG1569	DWG1569	DWG1569
Δ	1..SW POWER SUPPLY ASSY	DWR1370	DWR1370	DWR1370

CONTRAST OF PCB ASSEMBLIES

Q PSWB ASSY

DWS1312 and DWS1311 are constructed the same except for the following:

Mark	Symbol and Description	DWS1312	DWS1311
	AN1 (AC SOCKET)	AKP7032	Not used
	AN1 (1P AC INLET)	Not used	BKP1046

PARTS LIST OF CDJ-1000MK2/ KUCXJ

Mark No.	Description	Part No.	Mark No.	Description	Part No.
A	MAIN ASSY		IC950		LA6562
	SEMICONDUCTORS		IC900		LB11975
	IC800	AN8702NFH	IC600		M51957BFP
	IC850	BA10358F	IC404		MM1561JF
	IC10	BA178M05FP	IC700		MN677061ZY
	IC202	BR24C64F	IC201		PD3445A8
Δ	IC106 (0.4A)	ICP-N10			
Δ	IC102,IC103 (0.6A)	ICP-N15	IC300		PD3446A8
Δ	IC101,IC104 (0.8A)	ICP-N20	IC11		PE8001A
Δ	IC105	ICP-N25	IC100,IC607		PQ025EZ01ZP
	IC606	K4S641632F-TC75	IC150,IC206		PQ1R33
			IC203		TC74HC4053AFT

Mark No.	Description	Part No.	Mark No.	Description	Part No.
A	IC12	TC74HCT7007AF		C501,C502,C599,C622	CEHAR101M10
	IC205	TC74VHC08FT		C624,C625,C901,C951	CEHAR101M10
	IC405	TC74VHC541FT		C101,C105,C25-C28,C828	CEHAR470M16
	IC407	TC7S04FU		C900	CEHAR470M16
	IC204,IC710	TC7SET08FU		C237,C33,C704,C708,C712	CKSRYB102K50
	IC711	TC7SET32FU		C806,C811-C813	CKSRYB102K50
	IC610	TC7SH08FU		C10,C102,C104,C106,C109	CKSRYB103K50
	IC406,IC506	TC7SU04F		C11,C112,C122,C123,C154	CKSRYB103K50
	IC605	TC7WT241FU		C157,C158,C16,C200	CKSRYB103K50
	IC13,IC402,IC608,IC612,IC701	TC7WU04FU		C202,C203,C205-C210,C217	CKSRYB103K50
B	IC601	XC2S50-5PQ208C		C225,C226,C230-C233	CKSRYB103K50
	IC401,IC501	XCA56367PV150		C31,C32,C331-C333,C400	CKSRYB103K50
	Q600	2SA1577		C402,C403,C406,C408,C412	CKSRYB103K50
	Q204	2SC4081		C414,C416,C422,C424,C426	CKSRYB103K50
	Q11,Q202	DTA124EUA		C428,C430,C432,C436,C438	CKSRYB103K50
	Q201,Q203,Q301,Q701,Q800	DTC124EUA		C440,C442,C446-C451	CKSRYB103K50
	Q950	DTC124EUA		C456,C457,C462,C466,C500	CKSRYB103K50
	D11,D203-D232	1SS355		C506,C508,C512,C514,C516	CKSRYB103K50
				C522,C524,C526,C528,C530	CKSRYB103K50
				C532,C536,C538,C540,C542	CKSRYB103K50
COILS AND FILTERS				C546-C551,C556,C557	CKSRYB103K50
C	L401,L402,L501,L502	ATL7002		C6001,C6002,C613,C616,C618	CKSRYB103K50
	CHIP FERRITE BEAD			C623,C626-C632,C636	CKSRYB103K50
	L601,L602 CHIP FERRITE BEAD	ATL7002		C641-C644,C651-C683,C714	CKSRYB103K50
	L11,L13,L200 (CHIP COIL 4R7)	DTL1024		C726,C730,C733,C751-C755	CKSRYB103K50
	L404,L504	LCTAW1R0J2520		C800,C857,C910,C964,C971	CKSRYB103K50
	L10,L101,L111,L15,L152	PTL1014		C159,C18,C204,C213,C215	CKSRYB104K16
	CHIP BEAD			C228,C23,C24,C30,C300	CKSRYB104K16
	L201,L603-L606,L608	PTL1014		C306,C620,C621,C715,C716	CKSRYB104K16
	CHIP BEAD			C725,C902,C904,C905	CKSRYB104K16
	L701-L706 CHIP BEAD	PTL1014		C229,C648	CKSRYB105K6R3
CAPACITORS				C218,C911	CKSRYB222K50
D	C417,C418,C517,C518,C638	CCSRCH100D50		C833,C903	CKSRYB224K10
	C831	CCSRCH100D50		C820	CKSRYB273K16
	C221,C223,C236,C38-C40	CCSRCH101J50		C470,C570	CKSRYB472K50
	C405,C411,C413,C415,C421	CCSRCH101J50		C706,C802,C821	CKSRYB473K25
	C423,C425,C427,C429,C435	CCSRCH101J50		C107	CKSRYB473K50
	C437,C439,C445,C458,C459	CCSRCH101J50		C703	CKSRYB562K50
	C469,C505,C511,C513,C515	CCSRCH101J50		C834,C835	CKSRYB682K50
	C521,C523,C525,C527,C529	CCSRCH101J50		C301,C303,C305,C702,C705	CKSRYF104Z25
	C535,C537,C539,C545,C569	CCSRCH101J50		C709-C711,C717-C722,C732	CKSRYF104Z25
	C700	CCSRCH101J50		C801,C804,C805,C808-C810	CKSRYF104Z25
	C635,C637	CCSRCH120J50		C815,C822,C825,C826,C830	CKSRYF104Z25
	C633	CCSRCH121J50		C832,C950,C952-C956	CKSRYF104Z25
	C464,C634	CCSRCH150J50		C455,C940	CKSRYF105Z10
	C463	CCSRCH180J50		C454 (2.2 microF/10V)	VCG1031
E	C803	CCSRCH181J50			
	C957	CCSRCH220J50			
	C407,C431,C441,C461,C507	CCSRCH221J50			
	C531,C541,C614	CCSRCH221J50			
	C959	CCSRCH270J50			
	C914	CCSRCH331J50			
	C807	CCSRCH390J50			
	C467,C468,C567,C568,C707	CCSRCH470J50			
	C713	CCSRCH470J50			
	C453	CCSRCH471J50			
F	C723,C818,C819	CCSRCH561J50			
	C724	CCSRCH681J50			
	C103,C108,C110,C121,C155	CEHAR101M10			
	C17,C20,C201,C21,C211	CEHAR101M10			
	C22,C29,C401,C452,C499	CEHAR101M10			

RESISTORS

R825 (47 ohm)	DCN1133
R900,R901 (4.7 ohm)	DCN1141
R323,R324,R419,R654-R657	RAB4C101J
R681,R682	RAB4C101J
R828	RAB4C123J
R453	RAB4C220J
R800,R801	RAB4C273J
R834	RAB4C303J
R401,R420,R421,R501	RAB4C473J
R829	RAB4C822J
R610	RS1/16S1501D
R806	RS1/16S2202F

Mark No.	Description	Part No.
R609	Other Resistors	RS1/16S3901D
		RS1/16S###J
OTHERS		
X401	CRYSTAL RESONATOR (20.000MHz)	ASS7023
X701	CHIP CERAMIC (33.86MHz)	DSS1126
X201,X300	CHIP CERAMIC (20MHz)	DSS1127
X601	CRYSTAL RESONATOR (33.8MHz)	RSS1055
X602	CRYSTAL RESONATOR (27MHz)	VSS1086
CN13	5P JUMPER CONNECTOR	52147-0510
CN11	9P JUMPER CONNECTOR	52147-0910
CN101	15P JUMPER CONNECTOR	52147-1510
CN102	3P JUMPER CONNECTOR	52151-0310
CN201,CN301	KR CONNECTOR	B6B-PH-K-S
CN900	12P FFC CONNECTOR	DKN1205
CN950	4P FFC CONNECTOR	DKN1223
CN203	25P FFC CONNECTOR	HLEM25R-1
CN302	KR CONNECTOR	S2B-PH-K-S
CN12,CN303	KR CONNECTOR	S3B-PH-K-S
CN202	KR CONNECTOR	S9B-PH-K-S

B SPCN ASSY

OTHERS

CN911,CN912	DKN1205
12P FFC CONNECTOR	

C STCN ASSY

OTHERS

CN913,CN914	DKN1223
4P FFC CONNECTOR	

D FLRB ASSY

RESISTORS

R1504,R1507-R1509	RS3LMF330J
R1505,R1506	RS3LMF360J

OTHERS

CN1501	3P JUMPER CONNECTOR	52147-0310
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E SLMB ASSY

SWITCHES AND RELAYS

S1501,S1502	DSG1017
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OTHERS

CN1501	KR CONNECTOR	S3B-PH-K-M
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F MMCB ASSY

SEMICONDUCTORS

D92,D93	NNCD6.2MF
D91	UDZS6.2B

Mark No.	Description	Part No.
CAPACITORS		
C91		CCSRCH221J50
C99		CKSRYB103K50
C97		CKSRYB104K16
C94		CKSRYB105K6R3

RESISTORS

All Resistors	RS1/16S###J
---------------	-------------

OTHERS

CN99	KR CONNECTOR	B9B-PH-K-S
CN999	SD CONNECTOR	DKN1231

G DABB ASSY

SEMICONDUCTORS

IC1901	NJM4580D
Q1907	2SA1145
Q1901-Q1904	2SD2144S
Q1906	DTA124EUA
Q1905	DTC124EUA

D1906	1SR154-400
D1904,D1905,D1907	1SS355
D1918	UDZS13B

CAPACITORS

C1906,C1907	CEANP101M16
C1912	CEAT101M50
C1905,C1908	CKSRYB104K16
C1915,C1916	CQMBA102J50
C1909,C1910,C1913,C1914	CQMBA152J50

RESISTORS

R1908,R1919	RD1/2VM103J
R1909,R1918	RD1/2VM113J
R1907,R1920,R1938,R1939	RD1/2VM182J
R1916,R1917	RD1/2VM273J
R1906,R1910,R1913,R1923	RD1/2VM471J

R1936,R1937	RD1/2VM471J
R1999	RS1/10S0R0J
Other Resistors	RS1/16S###J

OTHERS

CN1901	9P JUMPER CONNECTOR	52147-0910
CN1902	KR CONNECTOR	B6B-PH-K-S

H JACB ASSY

SEMICONDUCTORS

D1902	1SS355
D1901,D1903	UDZS10B

CAPACITORS

C1902,C1920	CFTLA103J50
C1901	CKSRYB104K16
C1903,C1904	CQMBA102J50

RESISTORS

R1903	RD1/2VM271J
R1902,R1911,R1912	RD1/2VM471J

OTHERS

CN1904	3P JUMPER CONNECTOR	52151-0310
JA1902	2P PIN JACK	BKB1017
JA1901	REMOTE CONTROL JACK	RKN1004
CN1903	KR CONNECTOR	S6B-PH-K-S

Mark No.	Description	Part No.
I	ROUT ASSY	
	SEMICONDUCTORS	
IC1801		TC74HCU04AF

COILS AND FILTERS

L1802	PULS TRANS.	PTL1003
L1803	CHIP BEAD	PTL1014
⚠ L1801	COMMON CHOKE COIL	PTL1017

SWITCHES AND RELAYS

S1801		DSH1025
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CAPACITORS

C1810		CEAT101M6R3
C1809		CEAT470M10
C1808		CFTLA104J50
C1803,C1804,C1806,C1807		CKSRYB104K16

RESISTORS

All Resistors		RS1/16S###J
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OTHERS

0	3P CABLE HOLDER	51048-0300
J1801	JUMPER WIRE 3P	D20PYY0305E
JA1801	1P JACK (ORANGE)	PKB1028
CN1801	KR CONNECTOR	S3B-PH-K-M

J MFLB ASSY

SEMICONDUCTORS

⚠ IC1101		PE5387A
Q1007-Q1017,Q1113-Q1118		2SC4081
Q1112		DTA124EUA
Q1101-Q1104,Q1106-Q1111		DTC124EUA
D1108		NSPB500-0008

D1111,D1113,D1115,D1117		SLI-343URCW
D1104-D1107		SLI-343YCW
D1112,D1114,D1116		SLR-343EBT
D1101,D1109		SLR-343MC
D1121-D1125		UDZS6.8B

COILS AND FILTERS

L1001,L1002	CHIP BEAD	PTL1014
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SWITCHES AND RELAYS

S1104-S1107,S1109-S1112		VSG1024
S1116,S1117,S1119		VSG1024
S1101-S1103,S1113-S1115		DSG1063
S1118		DSH1049

CAPACITORS

C1143-C1145		CCSRCH101J50
C1112-C1114,C1138-C1142		CCSRCH102J50
C1121-C1137		CCSRCH471J50
C1108,C1109,C1116,C1118		CEHAR470M16
C1100-C1107,C1110,C1111,C1115		CKSRYB103K50

C1117,C1119,C1120		CKSRYB103K50
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RESISTORS

VR1101,VR1102 (10k Ω)		DCS1045
Other Resistors		RS1/16S###J

Mark No.	Description	Part No.
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OTHERS

X1101	CERAMIC RESONATOR (4.19MHz)	DSS1130
0	2P CABLE HOLDER	51048-0200
0	9P CABLE HOLDER	51048-0900
0	12P CABLE HOLDER	51048-1200

CN1101	25P FFC CONNECTOR	52492-2520
J1103	JUMPER WIRE 9P	D20PYY0915E
J1101	JUMPER WIRE 12P	D20PYY1215E
V1101	FL TUBE	DEL1051
0	FL HOLDER	DNF1665

K RSWB ASSY

SWITCHES AND RELAYS

S1701		DSK1021
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OTHERS

0	2P CABLE HOLDER	51048-0200
J1701	JUMPER WIRE 2P	D20PYY0210E

L KSWB ASSY

SEMICONDUCTORS

Q1301-Q1303		DTA124EUA
D1321-D1328		1SS355
D1301,D1304,D1310,D1317		SLI-343YCW
D1305-D1308		SLR-343EBT
D1309		SLR-343VC

COILS AND FILTERS

L1304-L1308	CHIP BEAD	PTL1014
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SWITCHES AND RELAYS

S1303-S1306		VSG1024
S1301,S1302		DSG1063

CAPACITORS

C1302		CCSRCH101J50
C1301		CCSRCH102J50

RESISTORS

All Resistors		RS1/16S###J
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OTHERS

CN1301	9P JUMPER CONNECTOR	52151-0910
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M SLDB ASSY

SEMICONDUCTORS

Q1401,Q1402		DTA124EUA
D1401-D1404		1SS355
D1405		SLR-343MC
D1406		SLR-343VC

SWITCHES AND RELAYS

S1401-S1403		VSG1024
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CAPACITORS

C1407		CCSRCH101J50
C1404		CCSRCH102J50
C1406		CEHAT100M50
C1401		CKSRYB103K50
C1402,C1403		CKSRYB104K16

Mark No.	Description	Part No.
RESISTORS		
	VR1401	DCV1013
	VR1402 (1 kohm)	RCP1110
	Other Resistors	RS1/16S###J

N JFLB ASSY SEMICONDUCTORS

⚠ IC1201	UPD16306B
⚠ Q1212	2SA933S
Q1213,Q1215	2SB1237X
Q1202-Q1207,Q1214	2SC2412K
Q1208-Q1211	2SJ209
D1201-D1208	1SS355
D1210	MTZJ30D
⚠ D1219	UDZS4.3B
D1211-D1214	UDZS6.8B
⚠ D1221	UDZS9.1B

COILS AND FILTERS

L1201	LRCA101J
L1203-L1205 CHIP BEAD	PTL1014

CAPACITORS

C1211,C1213,C1214,C1216	CEHAT100M50
C1201,C1215	CEHAT101M16
C1203	CKSRYB102K50
C1202,C1206,C1207,C1209,C1212	CKSRYB103K50
C1218-C1221,C1223,C1226	CKSRYB103K50

RESISTORS

R1281,R1282	RD1/2VM101J
Other Resistors	RS1/16S###J

OTHERS

CN1201 FLEXIBLE CONNECTOR	5597-03APB
J1202 JUMPER WIRE 15P	D20PYY1505E
V1201 FL TUBE	DEL1050
0 FL HOLDER	DNK3959
CN1602 KR CONNECTOR	S4B-PH-K-S

O JOGB ASSY SEMICONDUCTORS

D1601	GP1A038RBK
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CAPACITORS

C1601,C1602	CKSRYB103K50
-------------	--------------

RESISTORS

All Resistors	RS1/16S###J
---------------	-------------

OTHERS

CN1601 KR CONNECTOR	B4B-PH-K-S
---------------------	------------

P SW POWER SUPPLY ASSY

There is no service parts.

Mark No.	Description	Part No.
Q PSWB ASSY SWITCHES AND RELAYS		
⚠ S1		RSA1001

OTHERS

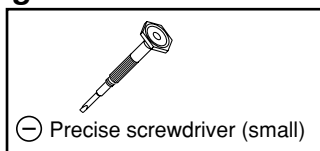
⚠ AN1 AC SOCKET	AKP7032
⚠ J1 CONNECTOR ASSY	DKP3560
0 PCB BINDER	VEF1040

6. ADJUSTMENT

6.1 TEMPO ZERO POINT ADJUSTMENT



Jig



Necessary Adjustment Points

When

Exchange the SLIDER VR

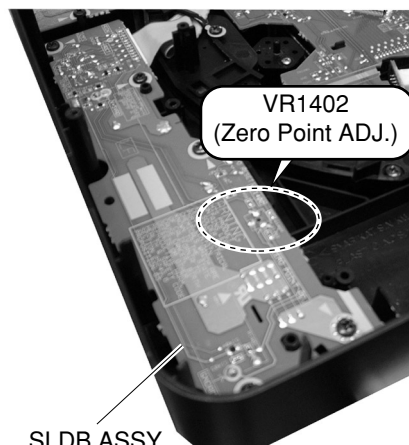
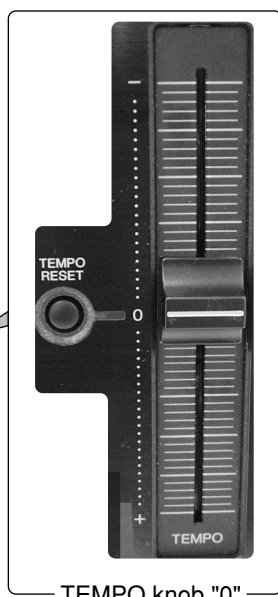
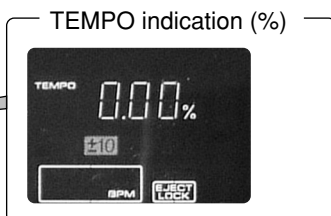
Adjustment points

VR1402
(Zero Point ADJ.)

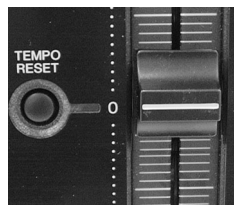
Adjustment and Check Points



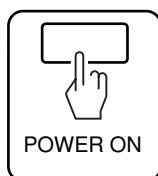
Control panel



Zero Point ADJ.



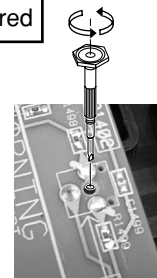
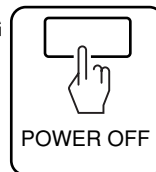
Set the TEMPO knob to the mechanical center "0."



Check that the TEMPO indication shows 0.00%.

OK No adjustment required

NG



Perform fineadjustment with the VR1402.

Repeat the procedure until the TEMPO indication shows 0.00%.

Note:

Because the value of the adjusted voltage is read only when the unit is turned on, if the TEMPO indication does not become 0% at the slider center after adjustment, turn off the power, and perform fineadjustment again. (Repeat the sequence of fineadjustment, power on, check, power off, and fine-adjustment.)

When adjusting the VR1402 (Zero point adj.), adjust it from the hole on the foil side with the SLDB Assy attached to the control panel.

7. GENERAL INFORMATION

7.1 DIAGNOSIS

7.1.1 SERVICE MODE

■ Types of Service Modes

The unit is provided with three microcomputers: a microcomputer that controls key input and FL/LED display (display u com.) a mechanism-control microcomputer that drives the disc loading mechanism and servo mechanism, and a system control microcomputer that controls the whole system. The following test modes are provided for diagnosis of each microcomputer.

① Mode for checking key input in the display block and for display functions

In this mode, key input and the display function associated with such input can be checked.

② Mode for checking operation of the mechanical and servo blocks (using a connected PC)

In this mode, once you have connected a PC via the CN301 connector, which is directly connected to the mechanism-control microcomputer on the MAIN Assy through a special device, operation of the mechanical and servo blocks can be checked.

③ Mode for checking audio output (using a connected PC)

In this mode, once you have connected a PC via the CN201 connector, which is directly connected to the system control microcomputer on the MAIN Assy through a special device, audio output can be checked.

Before entering this mode, it is necessary to disconnect the CN1101 connector on the MFLB Assy and remove the upper unit (jog and display block), because the communication line is shared between audio output and display functions.

④ Mode for checking the load on the Jog dial

In this mode, the load (light/heavy) on the Jog dial while it is rotated is subjectively measured.

⑤ Mode for checking the error log

In this mode, the latest 16 errors can be checked.

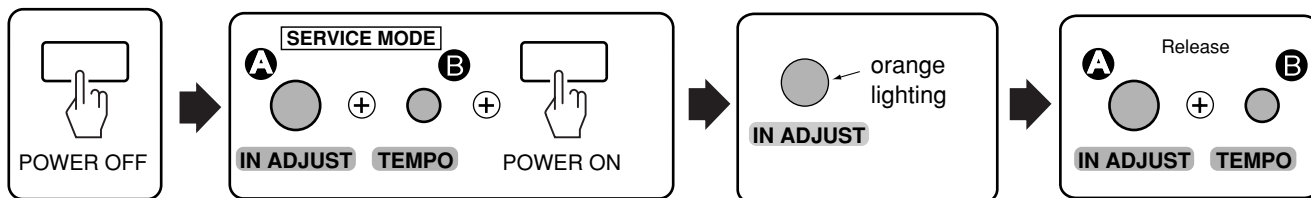
⑥ Mode for checking the version of the software program

In this mode, the version of the software program for each microcomputer can be checked.

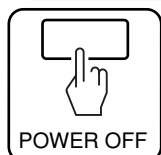
① Mode for checking key input in the display block and for display functions

- In this test mode, individual FL and LED displays can be checked, as shown below.
- The display lights while the key(s) is(are) held pressed.

FL Check Mode : ON

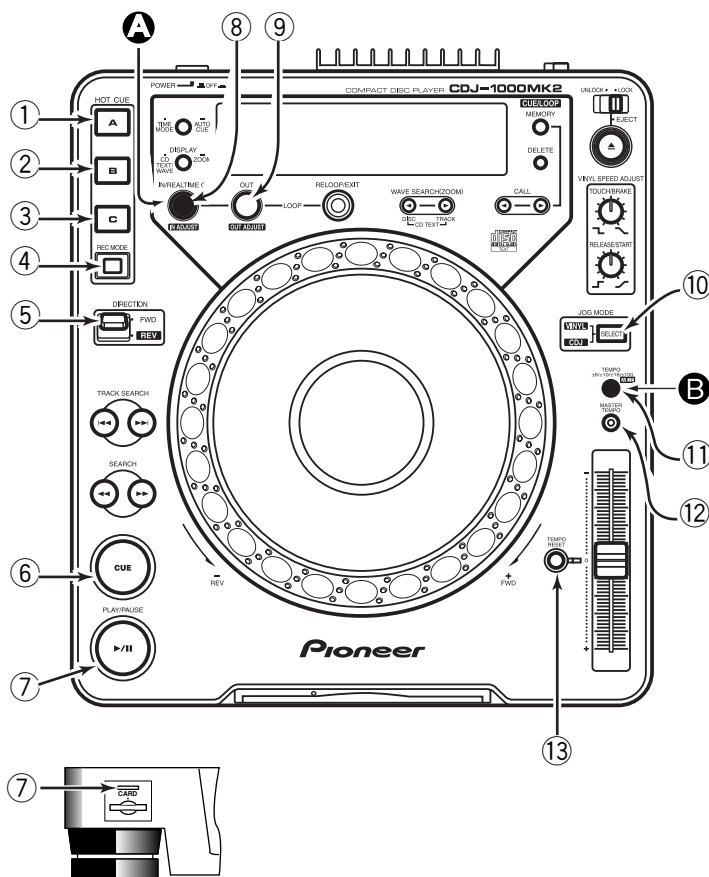


FL Check Mode : CANCEL



LED Check

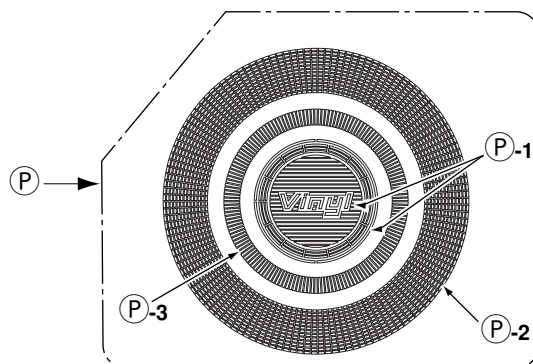
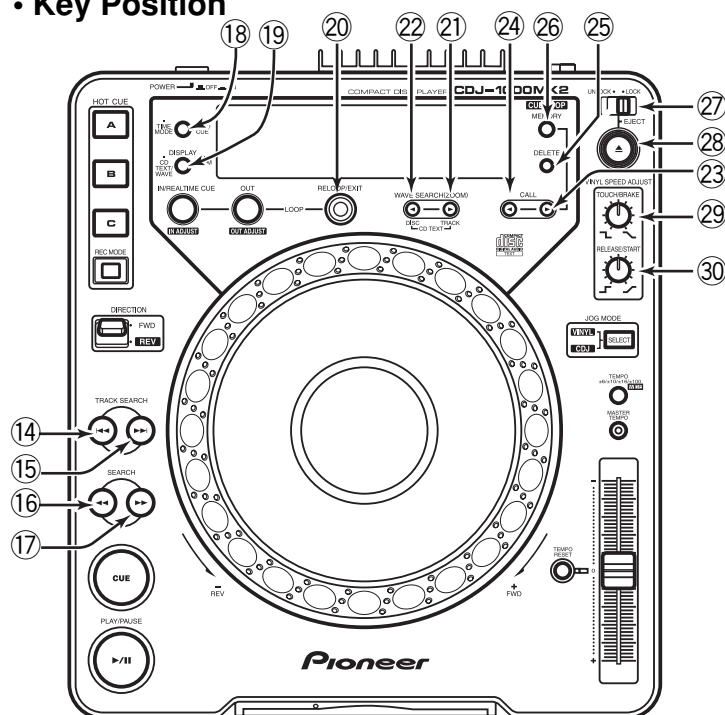
Key Name	LED lighting
① HOT CUE -A	A (red)
② HOT CUE -B	B (red)
③ HOT CUE -C	C (red)
④ REC MODE	A (green) B (green) C (green)
⑤ DIRECTION (SW)	REV (red)
⑥ CUE	CUE (orange)
⑦ PLAY/PAUSE	PLAY/PAUSE (red) CARD (green)
⑧ IN ADJUST	IN ADJUST (orange)
⑨ OUT ADJUST	OUT ADJUST (orange)
⑩ JOG MODE	CDJ (green)
⑪ TEMPO	VINYL (blue)
⑫ MASTER TEMPO	MASTER TEMPO (red)
⑬ TEMPO RESET	TEMPO RESET (green)



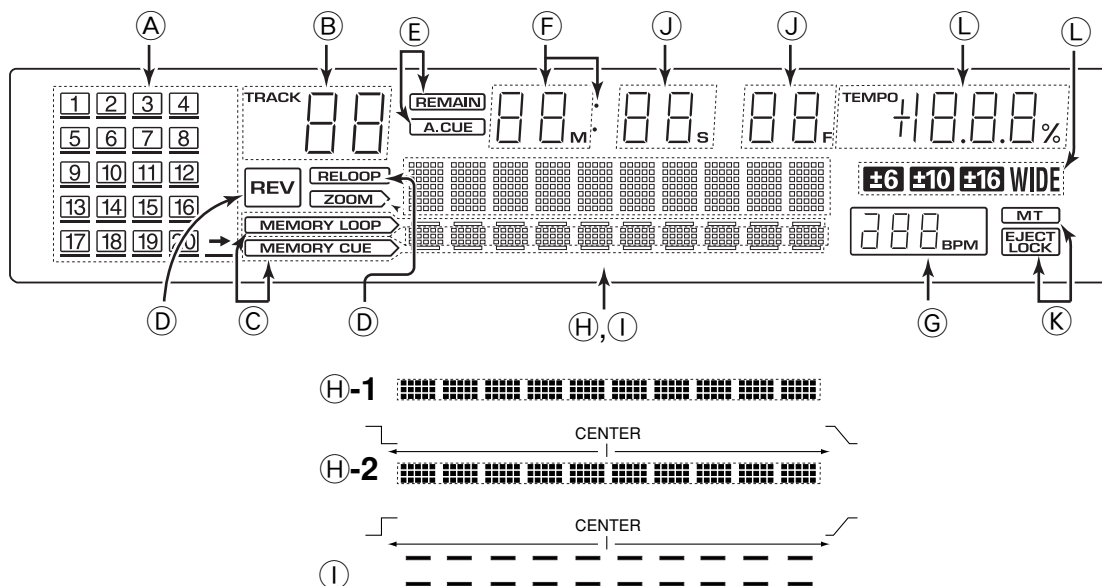
FL Check

Key Name	FL lighting Position
14 I◀◀	(A)
15 ▶▶I	(B)
16 ◀◀	(C)
17 ▶▶	(D)
18 TIME MODE/AUTO CUE	(E)
19 DISPLAY	(F)
20 RELOOP/ EXIT	(P- 1)
21 WAVE - FWD	(P- 2)
22 WAVE - REV	(P- 3)
23 CALL - FWD	(G)
24 CALL - REV	(H- 1)
25 DELETE	(J)
26 MEMORY	All of FL, (P): Jog-FL and LED light up.
27 EJECT LOCK (SW)	(K)
28 EJECT	(L)
29 MEMORY JOG ADJUST -TOUCH (VOL)	(H- 2)
30 MEMORY JOG ADJUST -RELEASE (VOL)	(I)

• Key Position



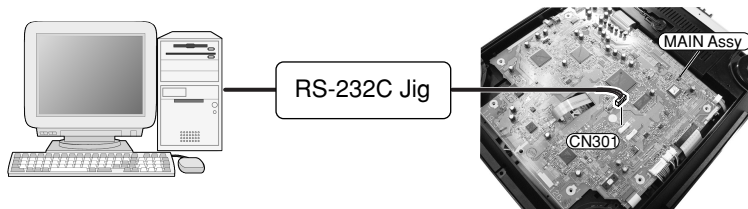
(FL DISPLAY)



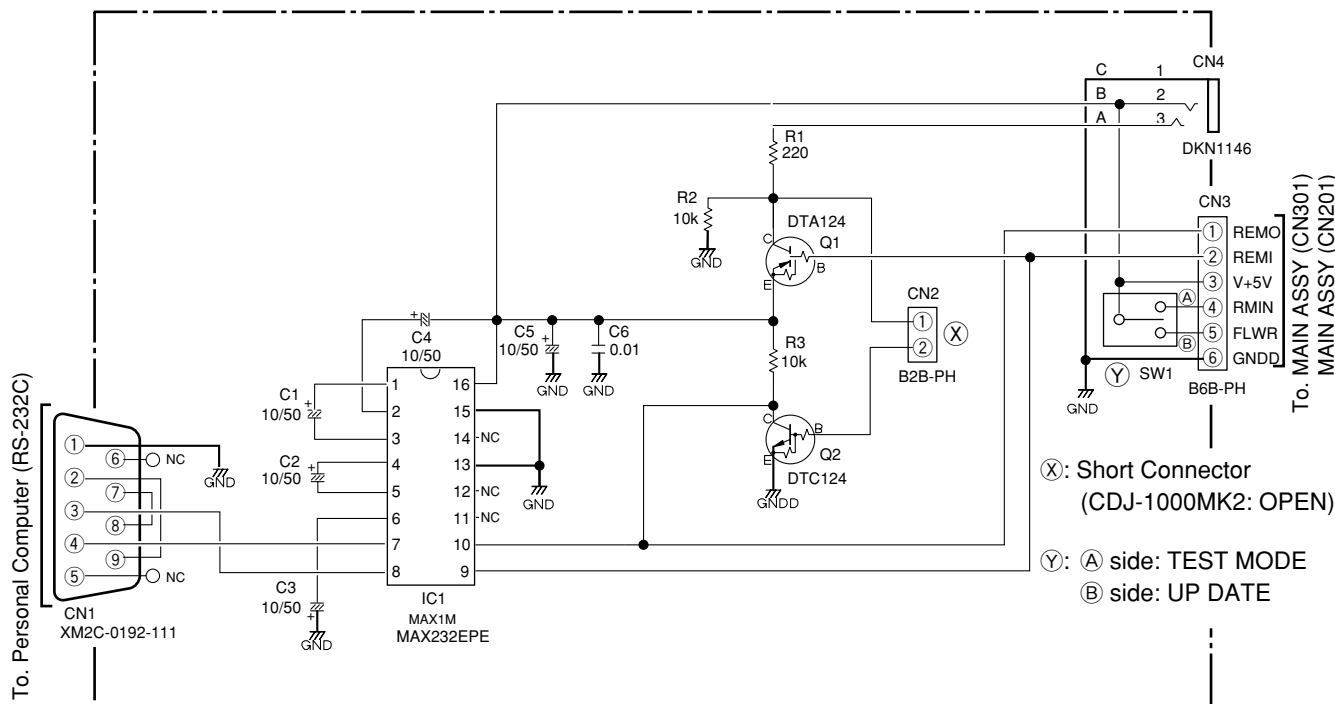
② Mode for checking operation of the mechanical and servo blocks (using a connected PC)

In this mode, once you have connected a PC via the CN301 connector, which is directly connected to the mechanism control microcomputer on the MAIN Assy through a RS-232C Jig, operation of the mechanical and servo blocks can be checked. The commands in this mode are mainly for testing the mechanical and servo systems, and not for testing the DJ functions (such as scan and tempo).

You can search your desired piece of music and play it. See "③ Mode for checking audio output (using a connected PC)".



■ RS-232C Jig Schematic Diagram



Parts List

SEMICONDUCTORS

IC1	: MAX232EPE
Q1	: 2N7000
Q2	: 2N7000

CAPACITORS

C1, C2, C3, C4, C5	: CEAT100M50
C6	: CKSQYF103Z50

RESISTORS

R1	: RD1/2VM221J
R2, R3	: RD1/2VM103J

OTHERS

CN1 (RS-232C CONNECTOR)	: XM2C-0192-111
CN2 (2P CONNECTOR)	: B2B-PH
CN3 (6P CONNECTOR)	: B6B-PH
CN4 (MIN JACK)	: DKN1146

■ Communication Soft

- Windows standard Hyper-Terminal
- Tera Term, CCT Win etc.

[Setup]

- Baud Rate : 4800bps
- Data Bits : 8bit
- Stop Bits : 1bit
- Parity : None

■ Communication Command

Command	Name	Description
TS	Test Mode Entry	To enter Test mode (It checks coming to a personal computer on the contrary with OFF.
BK	Address Block	To make the block-address assignment
TR	Address Track	To make the track-address assignment
IX	Address Index	To make the index-address assignment
TM	Address Time	To make the time-address assignment
SA	Start Up	To turn all servos on, and wait paused at the innermost track
PL	Play	To trace the signals on the disc (but not audio playback))
PA	Pause	To pause as soon as the command is received
SE	Search	To pause after searching for a given location
RJ	Reject	To turn all servos off and stop rotation of the disc
OP	Open	To eject the disc inside
EC	Error Count	To calculate the error rate
? A	Address Request	To return the address data (TNO:INDEX:AMIN:ASEC:AFRAME)
? B	Block Number Request	To return the block-number data (AMIN:ASEC:AFRAME)
? I	Index Number Request	To return the index-number data (TNO:INDEX)
? R	Track Number Request	To return the track-number data (TNO:INDEX)
? T	Time Code Request	To return the time-code data (AMIN:ASEC)
? Q	TOC Information Request	To return the TOC data (FTNO:ETNO:AMIN:ASEC:AFRAME)
? E	Error Rate Request	To return the error-rate data (effective EC command execution)
0TM	All Servo Off	To turn all servos off
1TM	LD On/Off	To turn on/off the laser-diode output (cyclic switching)
2TM	Focus Servo On/Off	To turn on/off the focus servo (cyclic switching)
3TM	Spindle On/Off	To turn on/off the spindle servo (cyclic switching)
4TM	Tracking Servo On/Off	To turn on/off the tracking servo (cyclic switching)
6TM	Address Read	To start a synchronized operation and start reading out the address data
9TM	Disc Search	To collect the disc data necessary for judging if a disc is inserted and for the focus servo
12TM	Focus Position Adjust	To perform the focus-position adjustment
13TM	Tracking Balance Adjust	To perform the tracking-balance adjustment
15TM	Focus Gain Adjust	To perform the focus-gain adjustment
16TM	Tracking Gain Adjust	To perform the tracking-gain adjustment
SF	Single Jump Fwd	To jump by one track toward the outermost track
SR	Single Jump Rev	To jump by one track toward the innermost track
MF	Multi Jump Fwd	To jump by the assigned number of tracks toward the outermost track
MR	Multi Jump Rev	To jump by the assigned number of tracks toward the innermost track
NF	Slider Move Fwd	To move the slider about 1 mm toward the outermost track
NR	Slider Move Rev	To move the slider about 1 mm toward the innermost track

Note:

To enter Test mode, execute the TS command before inserting a disc. Otherwise, audio playback of the first piece of music automatically starts responding to the command from the system-control microcomputer, and any command execution afterwards will not be accepted. In this case, "OFF" is displayed when a command is execution.

● Methods for assigning an address in a search operation

There are six methods for assigning an address in a search operation, as follows.

(Address Block) *

With the BK command, the address mode is set to block (absolute time = AMIN:ASEC:AFRAME).

Example: To search for 2 min 3 sec 4 frame: BK20304SE

(Address Track) *

With the TR command, the address mode is set to track.

Example: To search for the fifth piece of music (5th track): TR5SE

(Address Index) *

With the IX command, the address mode is set to index (TNO:INDEX).

Example: To search for Index 3 of the second piece of music: IX203SE

(Address Time) *

With the TM command, the address mode is set to time (absolute time = AMIN:ASEC)

Example: To search for 2 min 3 sec: TM203SE

* Once one of these address modes is assigned, it is maintained until another address mode is assigned.

(Error Count)

The error rate from the current location to the assigned address is calculated.

Example: To calculate the error rate from 20 min 0 sec 0 frame to 21 min 0 sec 0 frame and show the result

BK200000SE210000EC?E

Note: Figures in parentheses indicate the number of uncorrectable errors.

(TOC Information Request)

The TOC information for the disc is displayed.

Example: If the TOC information is 0116704307:

Number of the starting track = 01, number of the ending track = 16, recorded time = 70:43:07

● To manually start a servo

You can control the servo operations manually. Care must be taken during a manual operation in Test mode, because an inappropriate operation may damage the player.

For manual starting, the commands must be executed in the following order:

- 1TM : For turning on the laser diode
- 9TM : For judging if a disc is inside
- 3TM : For turning on the spindle
- 9TM : For disc search
- 2TM : For turning on the focus servo
- 13TM : For the tracking balance adjustment
- 4TM : For turning on the tracking servo
- 12TM : For the focus-position adjustment
- 15TM : For the focus-gain adjustment
- 16TM : For the tracking-gain adjustment
- 6TM : To start reading the address

(Single Jump Fwd/Rev)

To jump by one track (physical track, not one piece of music) toward the outermost/innermost track of the disc

(Multi Jump Fwd/Rev)

To jump by a given number of tracks (physical track, not pieces of music) toward the outermost/innermost track of the disc

Example: To jump by 100 tracks from the current location toward the outermost track: 100MF

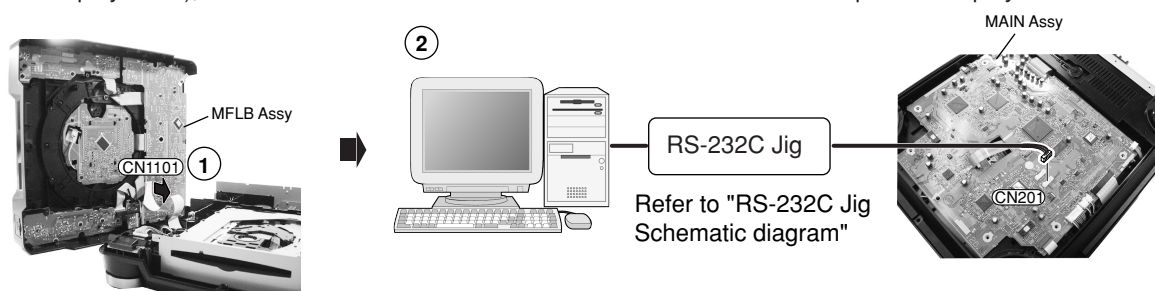
(Slider Move Fwd/Rev)

To move the slider by about 1 mm toward the outermost/innermost track of the disc. You can move the slider to your desired location by repeatedly executing this command.

③ Mode for checking audio output (using a connected PC)

In this mode, once you have connected a PC via the CN201 connector, which is directly connected to the system control microcomputer on the MAIN Assy through a RS-232C Jig, the audio outputs can be checked.

Before entering this mode, it is necessary to disconnect the CN1101 connector on the MFLB Assy and remove the upper unit (jog and display block), because the communication line is shared between audio output and display functions.



■ Communication Soft

- Windows standard Hyper-Terminal
- Tera Term, CCT Win etc.

[Setup]

- Baud Rate : 4800bps
- Data Bits : 8bit
- Stop Bits : 1bit
- Parity : None

■ Communication Command

Command	Name	Description
AD	Audio Play	To search for a designated piece of music, and start audio playback
RJ	Reject	To stop audio playback and disc rotation
OP	Open	To eject the disc

Supplement

(AD: Audio Play)

If the AD command is executed after disc insertion, audio playback of the designated piece of music starts.

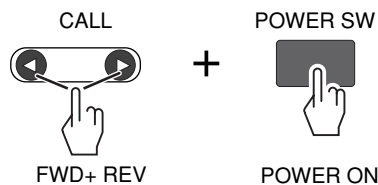
Example: For audio playback of the third piece of music: 3AD

Note: Designate the number in the range from 1 to the number of pieces of music recorded.

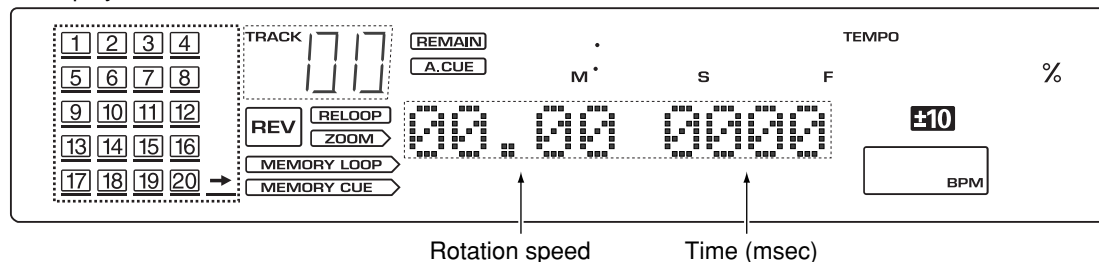
4 Mode for checking the load on the Jog dial

In this mode, the load (light/heavy) on the Jog dial while it is rotated is subjectively measured.

JOG Check Mode : ON



FL display



Measuring method

In this state, if you rotate the Jog dial rapidly either clockwise or counterclockwise, figures are displayed.

For example, if "16.14 0135" is displayed, it means as follows:

16.14: Highest speed (given that the normal [1x] speed is when it takes 1.8 sec for the Jog dial to rotate one full turn.)

0135: Time (msec) required for the Jog dial to decrease its speed from 3x speed to 1.5x speed

As to the time required for the Jog dial to decrease its speed, if the measurement is performed for several times repeatedly, from the second measurement and afterward, the average of the current required time and the previous required time is displayed. Thus, after several measurements, the result becomes closer to the mean.

Notes

- Perform the measurement of load on the Jog dial more than three times.
- The measurement result is displayed only when the Jog dial is rotated 7 times normal speed "07.00" or more.

Management value

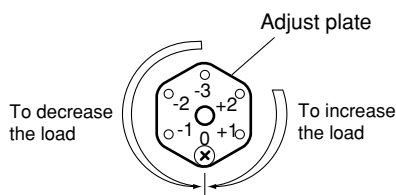
Jog management value: 150 ± 25 (msec)

Load adjustment method

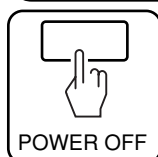
Remove the screw fixing the adjust plate, then screw it into the hole corresponding to the value (-1, -2, -3, +1, or +2) for a load to be added:

-1, -2, -3 : To decrease the load

+1, +2 : To increase the load



JOG Check Mode : CANCEL

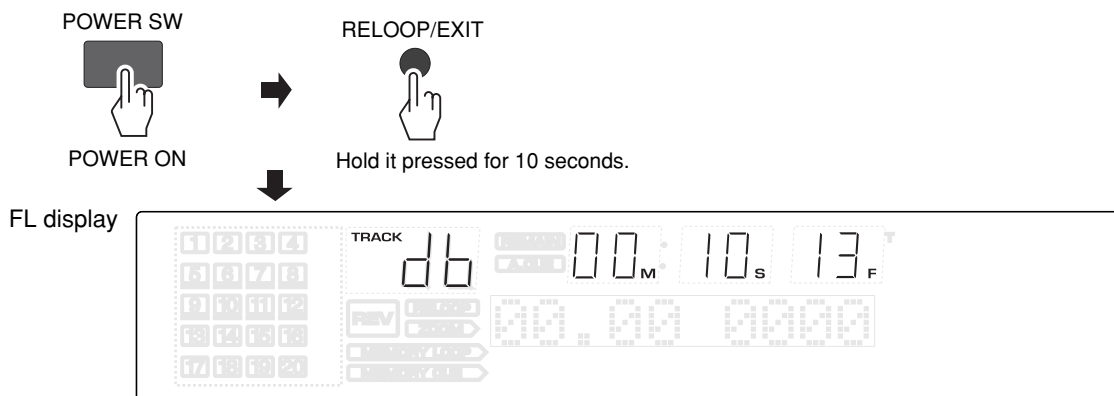


⑤ Mode for checking the error log

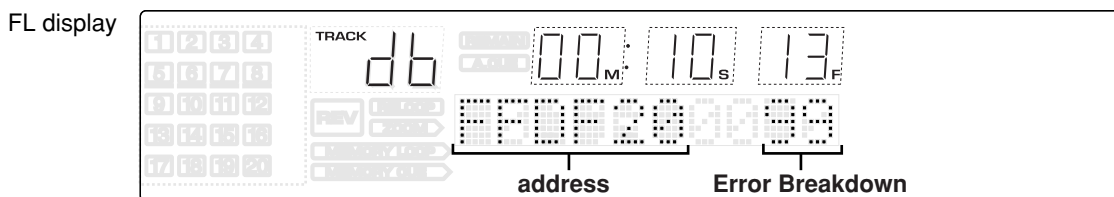
If any abnormality occurs in normal use, the following error numbers are displayed in the display block.

• How to check the error log

Error Check Mode : ON



• If a JOG dial is rotated on the right, it will become error display mode.



• By entering this mode, the latest 16 errors can be checked.

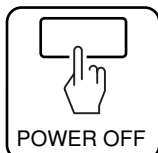
In this mode, an error breakdown code is displayed in the minute display block, and the address where that error breakdown code is stored in the memory of the microcomputer is displayed in the second and frame display block (in hexadecimal notation).

The error breakdown code of the latest error is stored at address FFDF20, and that of the oldest error is stored at address FFDF2F. You can change the address by turning the Jog dial from FFDF20 to FFDF2F (initial value: FFDF20).

Error No.	Error Name	Error Breakdown
E-6001	FPGA PROGRAM DOWNLOAD ERROR	61: The program cannot be written in the FPGA.
E-6002	DSP PROGRAM DOWNLOAD ERROR	62: The program cannot be written in the DSP.
E-7201	TOC READ ERROR	26: The TOC data cannot be read.
E-8301	PLAYER ERROR (startup problem)	11: Any error occurring before disc recognition and leading to operation stop is categorized as this error.* 20: The spindle motor does not rotate.* 21: No disc (focus error level: low)* 24: The address cannot be read.*
E-8302	PLAYER ERROR (playback problem)	12: Your desired address cannot be searched. 15: The address cannot be read. 22: The focus servo cannot close. 23: The tracking servo cannot close.
E-8303	PLAYER ERROR (problem in writing in the buffer)	99: Problem in writing in the buffer
E-9101	MECHANICAL TIME OUT	90: Abnormality in the disc-loading mechanism (timeout)

* If this error occurs before the inserted disc is recognized as a CD, the disc is automatically ejected. In this case, the error code No. is not displayed, but you can see the error breakdown code stored in memory. Only in the case of breakdown code 20 (the spindle motor does not rotate), the disc will not be ejected, because this is not a problem of the media.

Error Check Mode : CANCEL

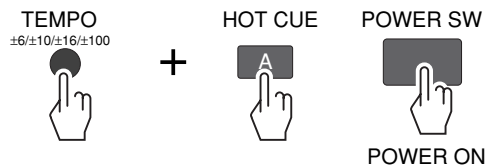


⑥ Mode for checking the version of the software program

In this mode, the version of the software program for each microcomputer can be checked.

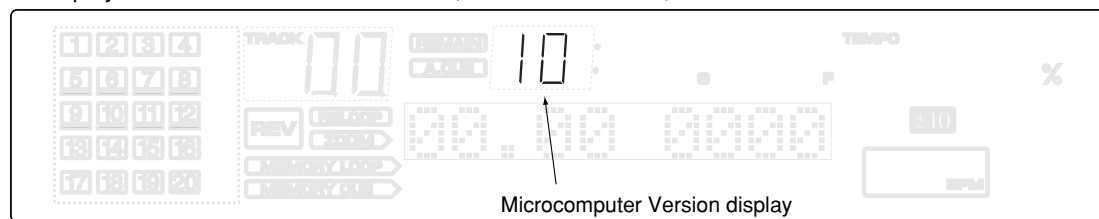
• How to check the software version for the display microcomputer

Ver. Check Mode : ON



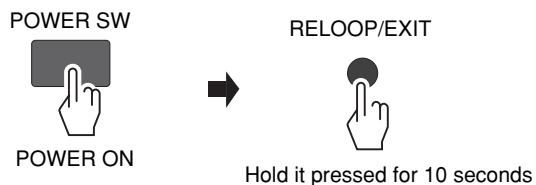
FL display

(10 for the first version)



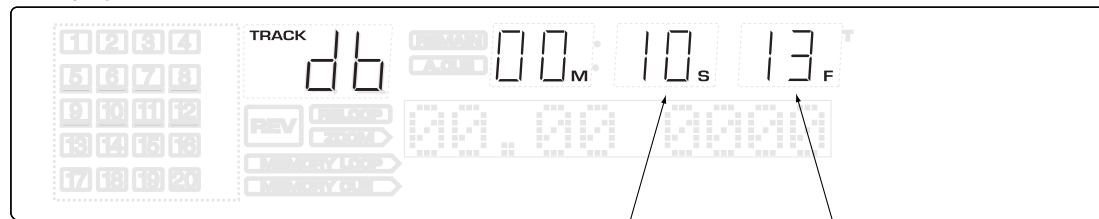
• How to check the software version for the mechanism-control and system-control microcomputers

Ver. Check Mode : ON

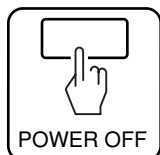


FL display

(13 for the first version)

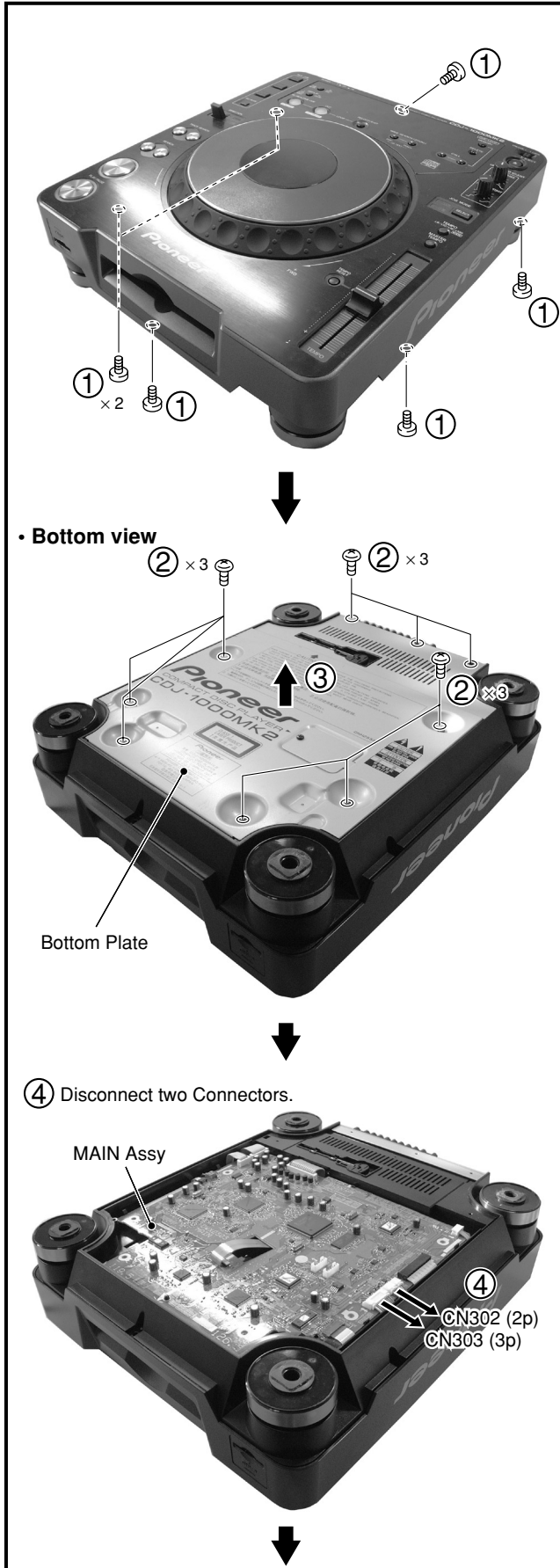


Ver. Check Mode : CANCEL

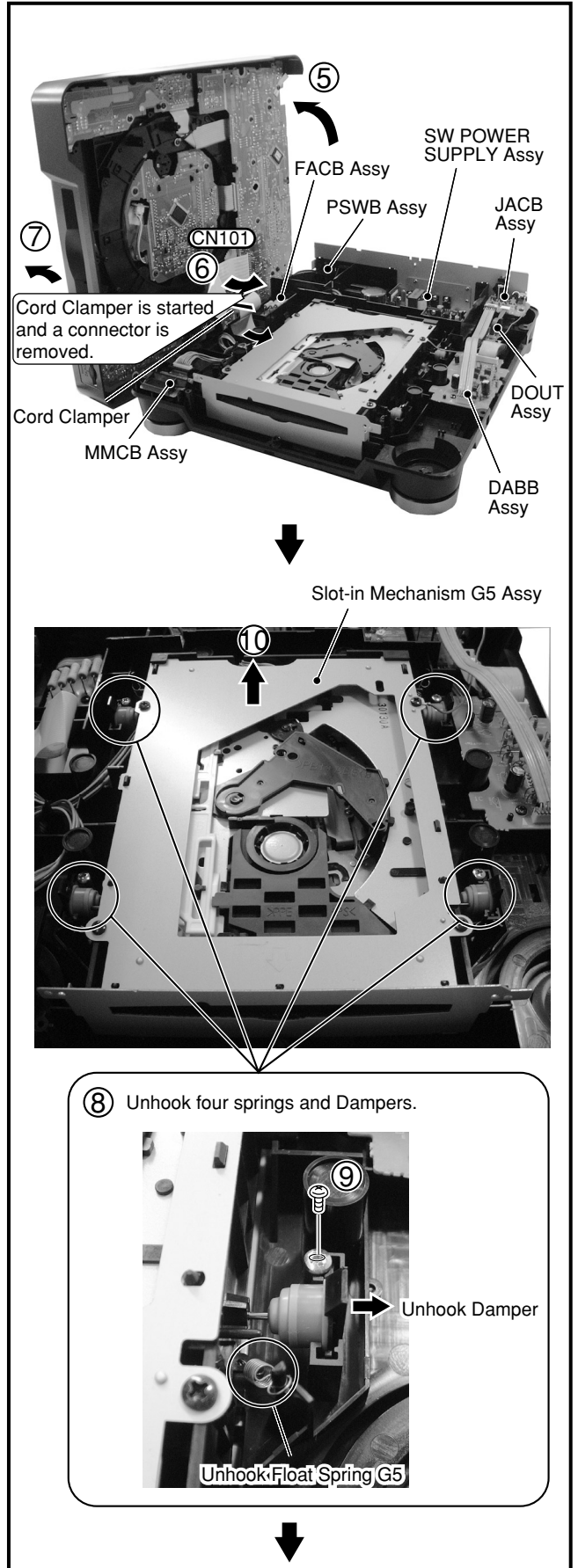


7.1.2 DISASSEMBLY

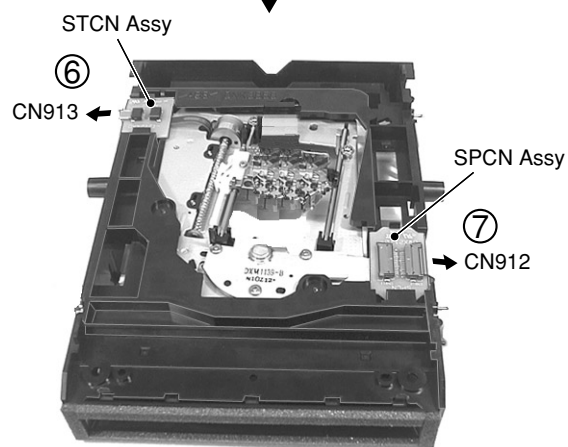
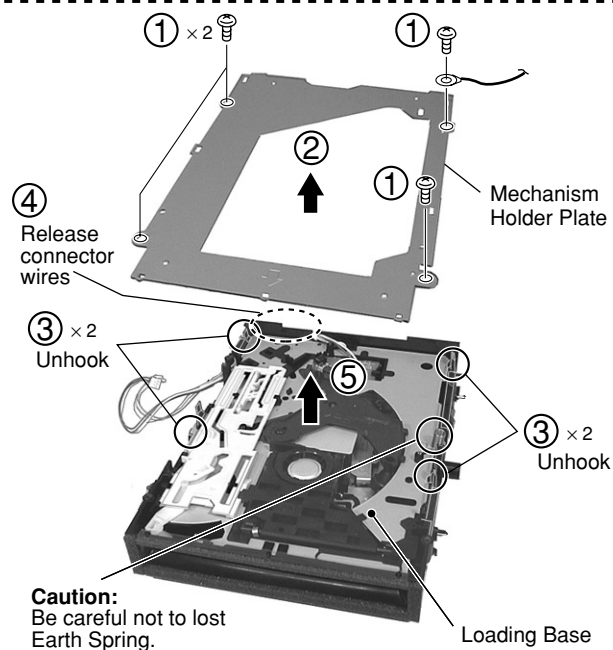
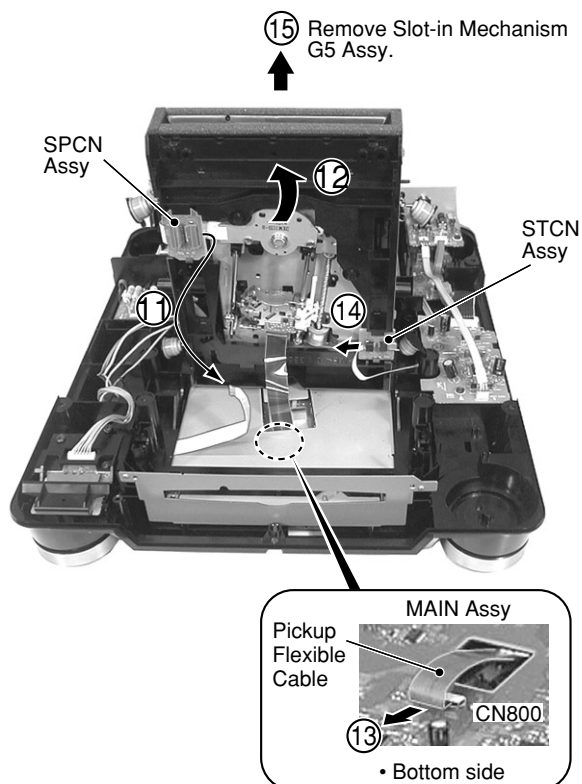
1 MAIN Assy



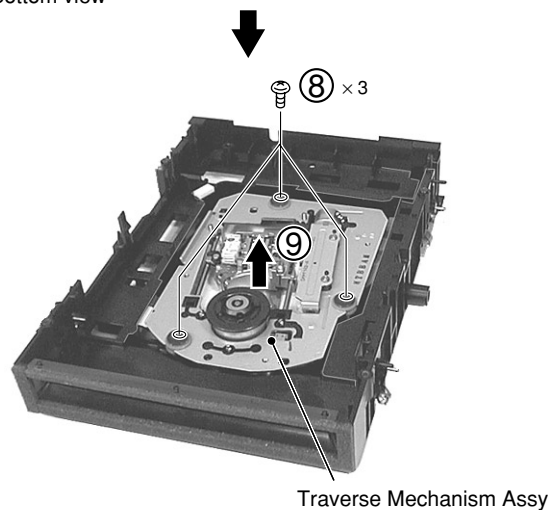
2 SLOT-IN MECHANISM Assy



3 Traverse Mechanism Assy

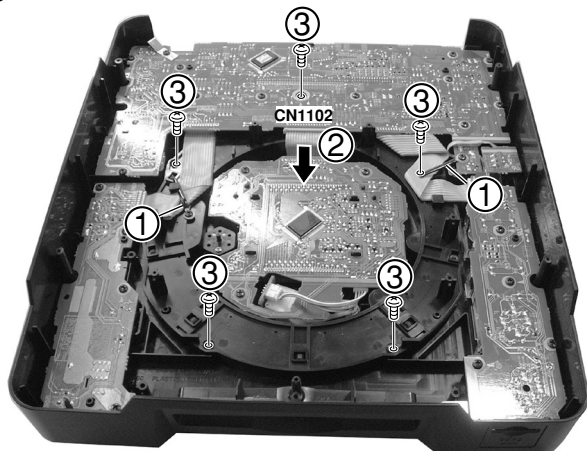


• Bottom view

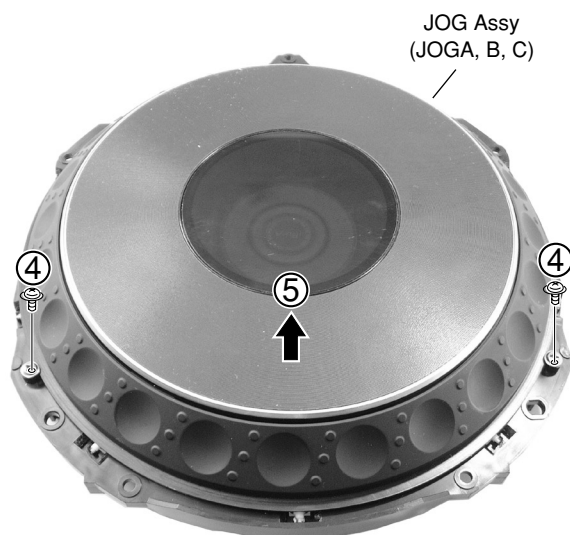


4 JOG Section

- ① Release a Cord Clamper.
- ② Disconnect a connector assy (CN1102).
- ③ Remove five screws.

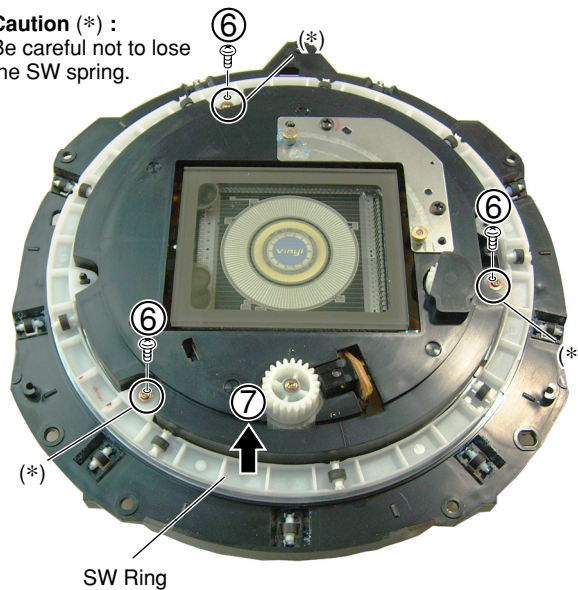


- ④ Remove two screws.
- ⑤ Remove the JOG ASSY (JOG A, B and C)



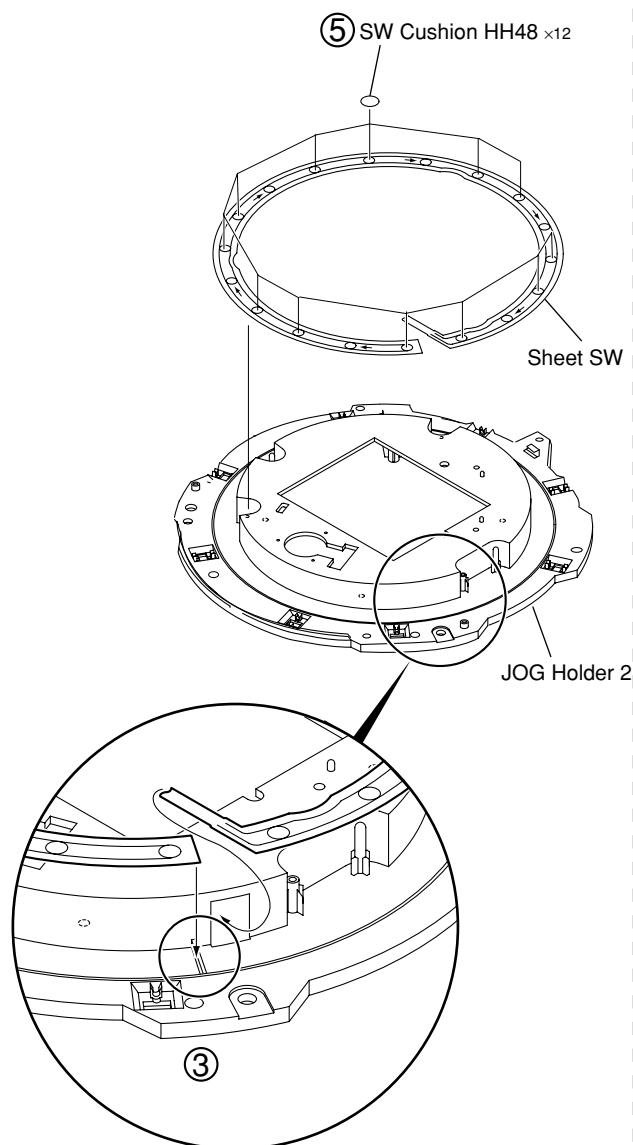
- ⑥ Remove three screws.
- ⑦ Remove the SW Ring.

Caution (*) :
Be careful not to lose
the SW spring.



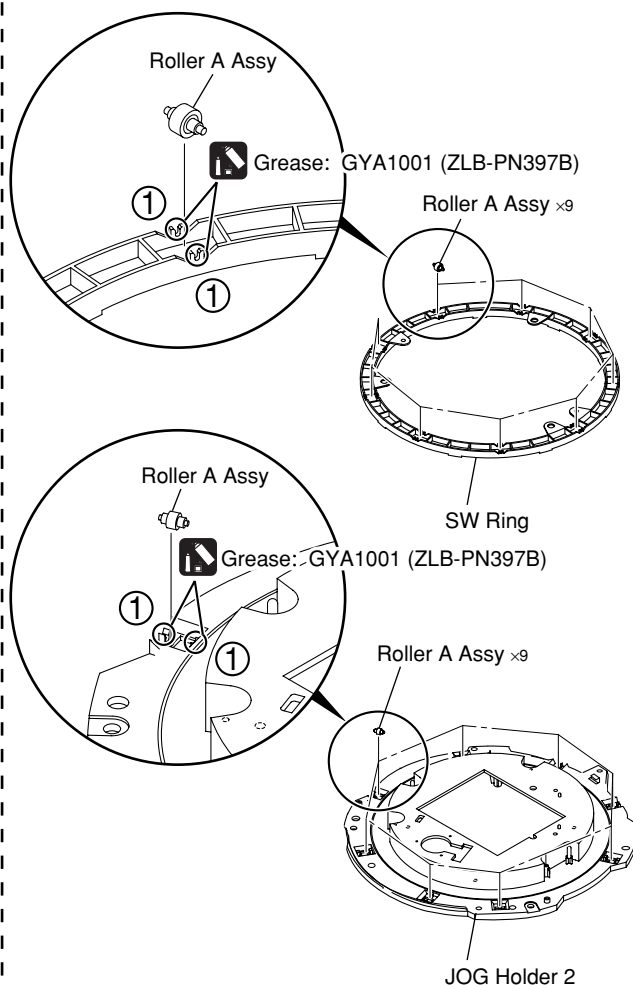
Caution in Sheet SW Installation

- ① Be careful not to bend and fold the Sheet SW.
- ② Confirm that the dust or trash does not adhere to pasting side (JOG Holder).
In addition, when tearing off the former Sheet SW and putting a new part, completely wipe the JOG Holder off with alcohol so that paste does not remain on the pasting side of JOG Holder.
- ③ When putting the Sheet SW, match the position not to run aground on rib of the internal circumference of JOG Holder.
- ④ Sheet SW pushes all the sides including the point of contact fully, and put it. (No good air getting into it.)
(When the air got into it, remove it and replace the new one. Do not recycle it.)
- ⑤ Put the SW Cushion HH48 on direction arrow part (12 places) of the Sheet SW.
- ⑥ When inserting a cable in connector, release a lock by all means, and connector locks after inserting it.



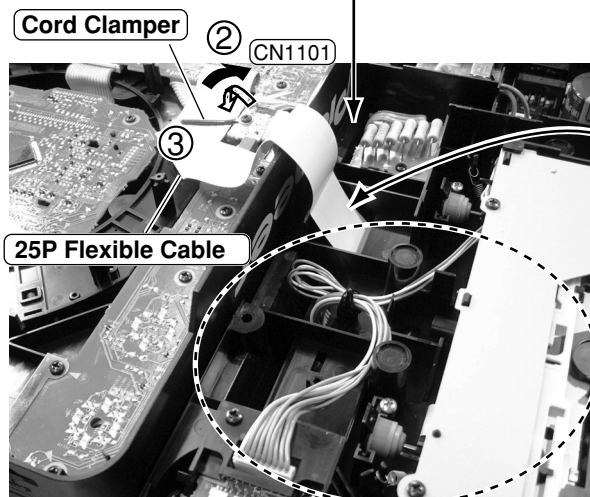
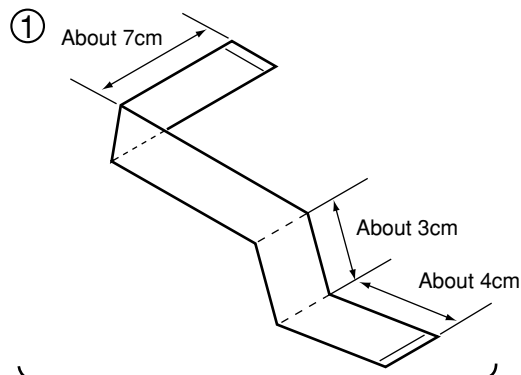
Caution in Roller A Assy Installation

- ① Apply a grease (GYA1001) to the shaft bearing section of JOG Holder side and SW Ring side.
(Apply it to two places for roller one.)
(Be careful so that grease does not adhere to rubber section of the roller.)

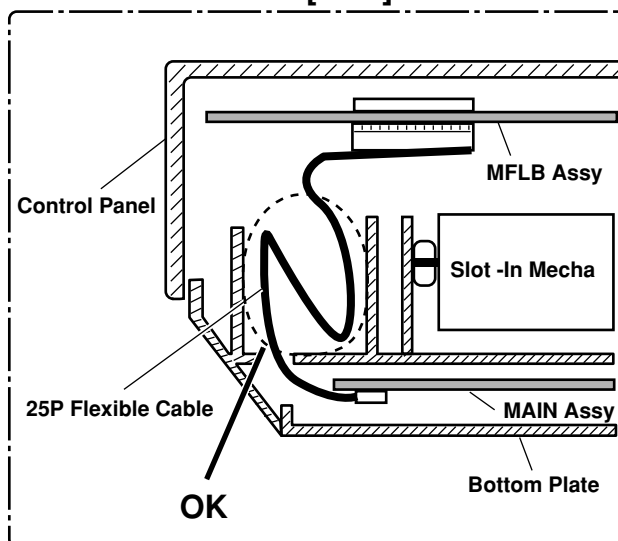


■ The processing method of each wire rod

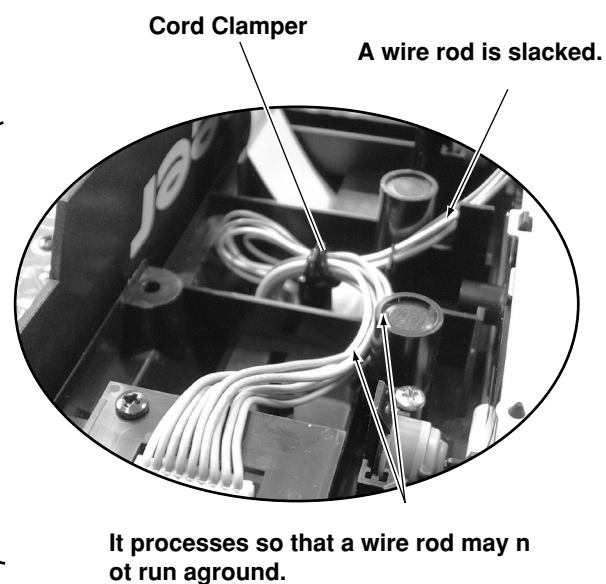
● Processing of flexible cable



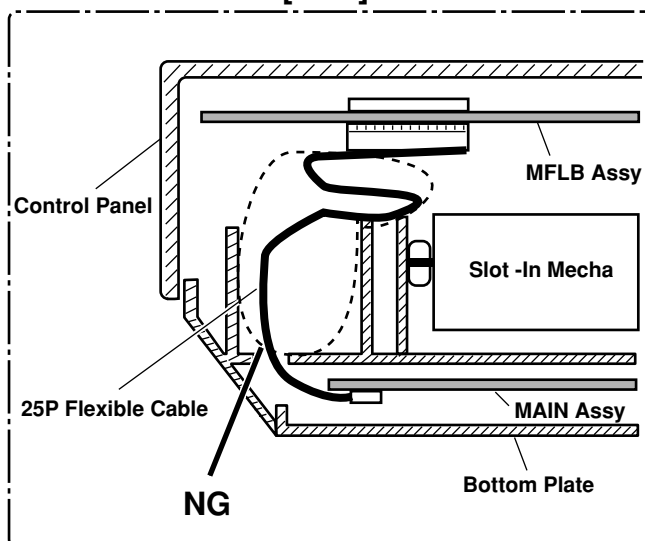
● The cautions on an assembly [OK]



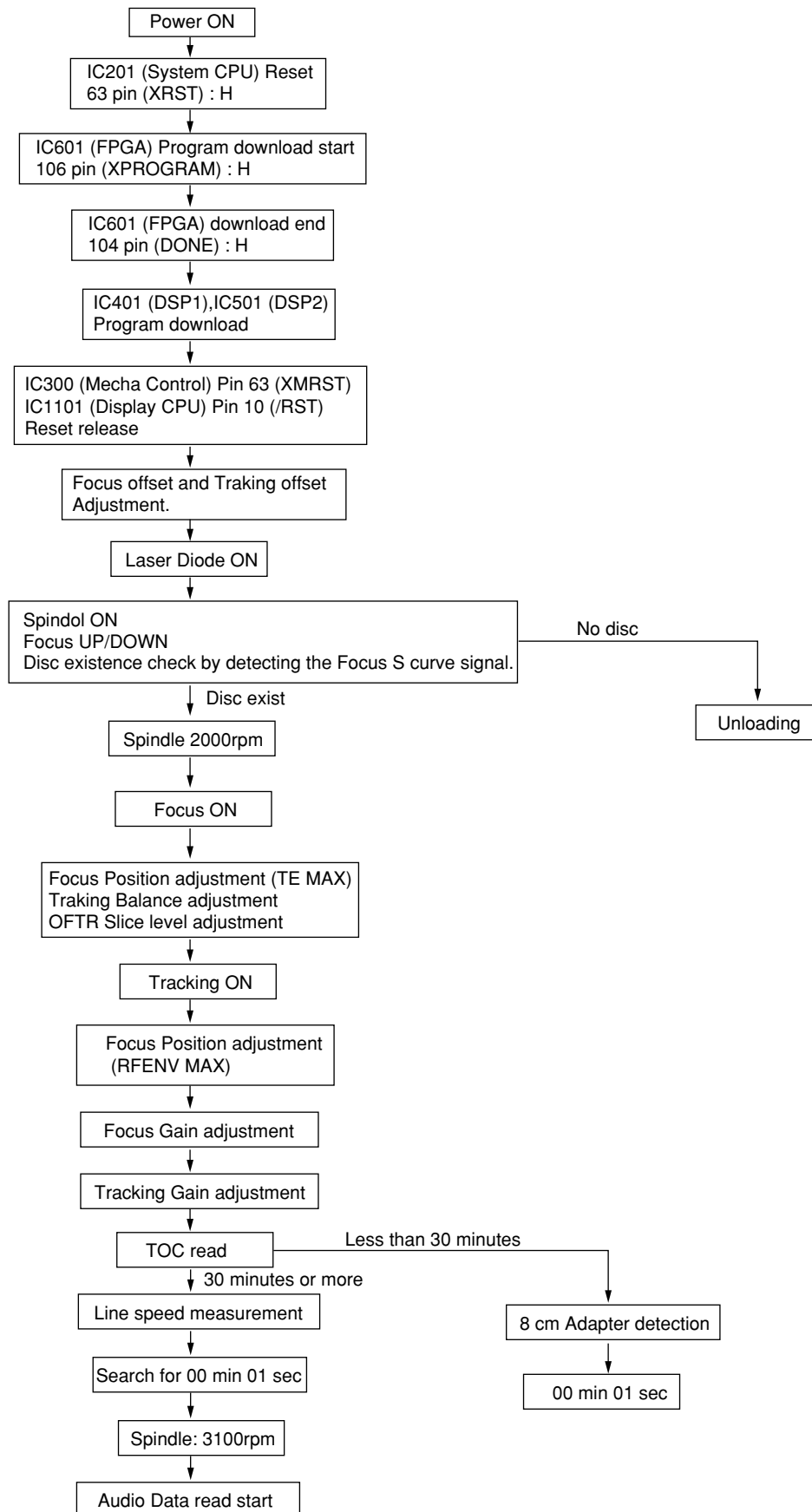
● Processing of each wire rod



[NG]



7.1.5 POWER ON SEQUENCE



• Action of the CPU

t1 Measurement about 2.5 ms

After checking that /INT is L, the CPU sets /PROGRAM to H.
The FPGA checks that /PROGRAM is L, and sets /INIT and DONE to L.

t2 Measurement approx. 2.5 μ s

The CPU waits until /INT becomes H.
The FPGA checks that /PROGRAM is H, and clears the Configuration memory, changes /INT to open drain output, and confirms that /INT is H.

t3 Measurement approx. 20 μ s

The CPU waits for several dozens of microseconds.
The FPGA confirms that /INT is H, then checks the Mode pins (M0-M2).

t4

The CPU waits either until DONE becomes H or /INIT becomes L.
When DONE becomes H, it is judged as completion of downloading.

If /INT becomes L, it is judged that the downloading failed, and the retrieval starts.

If /INT becomes H and DONE becomes L, this status is temporarily stored in the stack.

→ The program has been changed to execute retries. According to the specifications, as /INT becomes H while the serial CLK is input, waiting is not required. (See the waveform examples.)

If DONE does not become H even after approx. 6 ms of waiting, the sequence is retried from the beginning up to three times. If it fails, a timeout error is generated, and an error message is displayed.

t5 Measurement approx. 1.3 ms

If DONE becomes H, XFRST is set to H in 1 ms.
Clearance of the FPGA register and initialization.

t6 Measurement approx. 5.7 ms

XSRST is set to H 5 ms after XFRST is set to H.
Resetting the software programs of the mechanism-controller and display controller to the defaults

t7 Measurement approx. 600 ms

XSS2 is set to L approx. 500 ms after XSRST is set to H.
After the initially downloaded program is sent to DSP2, XSS2 becomes H. Then, XSS1 is set to L to send the initially downloaded program to DSP1. After completion, XSS1 becomes H.

t8

DGP2 is checked (timeout: 6 ms).

Transmission of the DSP program is performed in two steps. At the first step, only the program for port initialization is transmitted, and at the second step, the main program is sent.

First downloading

In a case when the DGP2 pin does not become L within 6 ms after the first data transmission is completed

It is judged that downloading failed, and retries start.

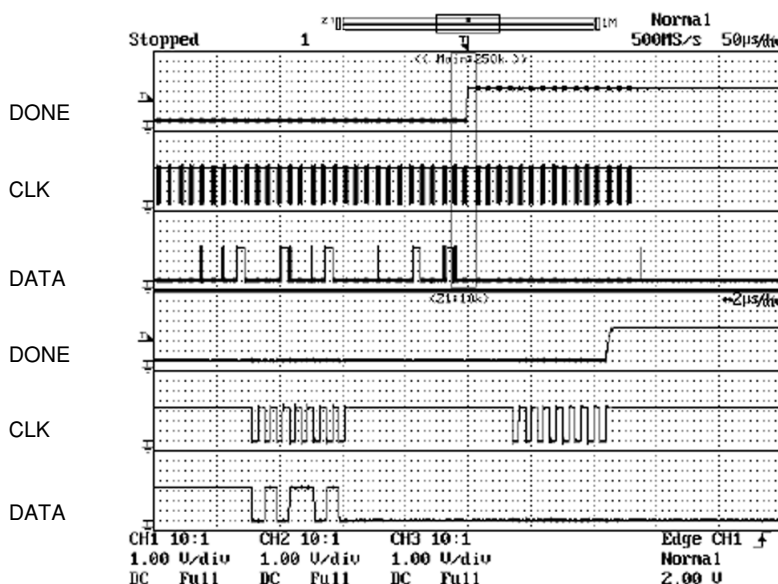
* If the flag (HACK) indicating that downloading is OK from DSP2 becomes L and if downloading is OK for DSP1 itself, DSP1 sends L to the CPU as an OK flag (DGP2).

Second downloading

In a case when the DGP2 pin does not become H within 6 ms after the second data transmission is completed

It is judged that downloading failed, and retries start.

* If the flag (SDO4_1) indicating that downloading is OK from DSP2 becomes H and if downloading is OK for DSP1 itself, DSP1 sends H to the CPU as an OK flag (DGP2).



7.2 PARTS

7.2.1 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**

PD3445A8, PD3446A8, PE5387A

■ PD3445A8 (MAIN ASSY: IC201)

System Control UCOM

- Pin Function (1/3)

No.	Pin Name	I/O	Description
1	Vcc	-	By the capacitor (0.1μF) It GND-connects.
2	DGP2	I	Motorola DSP (preceding paragraph) Interface
3	XHREQ1	I	
4	XHREQ2	I	Motorola DSP (latter part) Interface
5	XSS1	O	Motorola DSP (preceding paragraph) Interface
6	XSS2	O	Motorola DSP (latter part) Interface
7	DOSW	I	Digital OUT ON/OFF SW detection
8	CNT2	I	Control 2 input terminal
9	CNT1	I/O	Control 1 input and output terminal
10	WFILSH	I	The terminal which detects a flash write-in permission signal
11	Vss	-	Digital GND
12	S2DO	O	The serial output terminal to DSP
13	S1DO	O	A serial output besides a controller
14	S2DI	I	The serial input from DSP
15	S1DI	I	A serial input besides a controller
16	S2CK	O	The serial clock to DSP
17	S1CK	O	A serial clock besides a controller
18	XFRST	O	Reset to FPGA
19	XSRST	O	Reset to circumference IC
20	ASWC	O	Serial change SW enable
21	MUTE	O	Line OUT output MUTE
22	Vss	-	Digital GND
23	MON2	O	Monitor terminal 2
24	XZOFF	O	The terminal for repealing zero detection
25	XDRST	O	The reset terminal for DAC
26	NC	-	-
27	D0	-	FPGA interface (data bus)
28	D1	-	
29	D2	-	
30	D3	-	
31	D4	-	
32	D5	-	
33	D6	-	
34	D7	-	
35	Vcc	-	Power supply (VD5V)
36	A0	-	FPGA interface (data bus)
37	A1	-	
38	A2	-	
39	A3	-	
40	A4	-	

• Pin Function (2/3)

No.	Pin Name	I/O	Description
41	NC	O	It connects with GND.
42	NC	I	
43	NC	I	
44	Vss	-	Digital (GND)
45	NC	I	It connects with GND.
46	NC	I	
47	NC	I	
48	NC	I	
49	NC	I	
50	NC	I	
51	NC	I	
52	NC	I	
53	NC	I	
54	NC	I	
55	KEYI	I	The key processing demand from front CPU
56	TCH	I	JIG touch sensor input
57	Vss	-	Digital GND
58	NC	I	It connects with GND.
59	XMDT	I	MMC detection signal
60	DONE	O	The initialization end signal from FPGA
61	20M	I	It connects with GND.
62	STBY	I	Low power consumption mode
63	XRST	I	Hard reset
64	NMI	I	Compulsive interruption
65	Vss	-	Digital GND
66	EXTAL	I	Crystal oscillation
67	XTAL	I	
68	Vcc	-	Digital 5V
69	NC	O	-
70	XSRD	O	FPGA Read
71	XSWR	O	FPGA Write
72	NC	O	-
73	MD0	I	CPU mode setup
74	MD1	I	
75	MD2	I	
76	Avcc	-	The power supply terminal of A/D conversion machine, and D/A conversion machine
77	VREF	-	The standard voltage input terminal of A/D conversion machine, and D/A conversion machine
78	ADCT	I	Slider center value
79	ADIN	I	Slider data value
80	NC	I	It connects with GND.

• Pin Function (3/3)

No.	Pin Name	I/O	Description
81	NC	I	It connects with GND.
82	NC	I	
83	NC	I	
84	NC	O	
85	NC	O	
86	AVss	-	The grand terminal of A/D conversion machine, and D/A conversion machine
87	JOG1	I	JOG pulse input 1
88	JOG2	I	JOG pulse input 2
89	DQCK	I	Motorola DSP (preceding paragraph) Interface
90	NC	I	It connects with GND.
91	RMIN	I	For a RS232C input
92	Vss	-	GND
93	XMEN	I	MMC chip enable
94	XDEN	I	DAC communication enable
95	ICDT	O	EEPROM data output
96	ICCK	O	EEPROM clock output
97	HRST	I	MMC hard reset output
98	NC	O	It connects with GND.
99	XPRGM	O	FPGA program permission signal
100	XINT	I	-

PD3446A8 (MAIN ASSY: IC300)

Mecha. Control UCOM

• Pin Function (3/3)

No.	Mark	Pin Name	I/O	Description
1	Vcc	-	-	Power supply (VD5V)
2	PB0	XDMUTE1	O	Driver IC mute control (0: MUTE 1: MUTE release)
3	PB1	-	I	It connects with Vss.
4	PB2	FCSG	O	A focus gain is changed.
5	PB3	CRC	O	CRC check result of a sub code (NG 1: 0: O.K.)
6	PB4	XFEPRST	O	FEP reset pulse (0: Reset 1: Reset release)
7	PB5	XDSCRST	O	ADSC reset pulse (0: Reset 1: Reset release)
8	PB6	LDONM	I	LD ON (0: usually 1: LD on-mode)
9	PB7	-	O	NC
10	FEW	WFLASH	I	The write-in enable signal of a flash memory
11	Vss	-	-	GND
12	TxD0	CPUDTIN	O	The serial output to FEP/ADSC
13	TxD1	REMO	O	The serial output to a personal computer/remote control
14	RxD0	CPUDTOUT	I	The serial input from FEP/ADSC
15	RxD1	REMI	I	The serial input to a personal computer/remote control
16	SCK0	SCK	O	The serial communication clock with FEP/ADSC
17	P95	WFLASH	O	The write-in control signal of a flash memory
18	P40	TKS	O	The slice level of TE is chosen. (zero: high-speed 1: low speed)
19	P41	INSW	I	Slider Inside detection switch
20	P42	XDMUTES	O	Stepper control
21	P43	DSPSTOP	O	Read-out of DSP is forbidden.
22	Vss	-	-	GND
23	P44	-	O	NC
24	P45	-	O	NC
25	P46	GSW	O	OEIC gain selection (0: Low 1: Hi)
26	P47	TMODE	I	Test mode (0: It shifts to test mode)
27	D0	D0	I/O	Data bus
28	D1	D1	I/O	
29	D2	D2	I/O	
30	D3	D3	I/O	
31	D4	D4	I/O	
32	D5	D5	I/O	
33	D6	D6	I/O	
34	D7	D7	I/O	
35	Vcc	-	-	Power supply (VD5V)
36	A0	A0	O	Address bus
37	A1	A1	O	
38	A2	A2	O	
39	A3	A3	O	
40	A4	A4	O	

• Pin Function (2/3)

No.	Mark	Pin Name	I/O	Discription
A 41	A5	A5	O	Address bus
42	A6	-	I	It connects with Vss.
43	A7	-	I	
44	Vss	-	-	GND
45	A8	-	I	It connects with Vss.
46	A9	-	I	
47	A10	-	I	
48	A11	-	I	
49	A12	-	I	
B 50	A13	-	I	
51	A14	-	I	
52	A15	-	I	
53	A16	-	I	
54	A17	-	I	
55	P52	LPS1	I	A loading mechanism's condition
56	P53	LPS2	I	
57	Vss	-	-	GND
58	WAIT	-	I	It connects with Vss.
59	P61	-	I	
C 60	P62	ILMASK	O	The mask of the Interruption circuit is carried out.
61	P67	-	I	It connects with Vss.
62	STBY	XSTBY	I	It connects with Vss.
63	RES	XMRST	I	Reset input (0:reset 1:reset release)
64	NMI	NMI	I	It connects with Vss.
65	Vss	Vss	-	GND
66	EXTAL	EXTAL	I	(20MHz)
67	XTAL	XTAL	I	(20MHz)
68	Vcc	Vcc	-	Power supply (VD5V)
D 69	AS	-	O	NC
70	RD	XRD	O	Read strobe signal
71	S39/PE7	XWR	O	Write strobe signal
72	VDD4	-	O	NC
73	S40/PF0	MD0	I	CPU mode setup
74	S41/PF1	MD1	I	
75	S42/PF2	MD2	I	
76	S43/PF3	-	-	Power supply (VD3V)
77	S44/PF4	-	-	
E 78	S45/PF5	HI	I	Function (Analog)
79	S46/PF6	RFDIF	I	
80	S47/PF7	VHALF	I	Function

• Pin Function (3/3)

No.	Mark	Pin Name	I/O	Description
81	AN3	OFTR	I	Function
82	P74	-	I	It connects with Vss.
83	AN5	P75	I	The monitor of ST1
84	DA0	ST1	O	Stepper drive (analog)
85	DA1	ST2	O	
86	AVss	-	-	Analog GND
87	IRQ0	MBLKCK	I	The interruption demand from FPGA
88	IRQ1	BLKCK	I	
89	IRQ2	CPUIRQ	I	
90	P83	-	I	It connects with Vss.
91	P84	-	I	
92	Vss	-	-	GND
93	PA0	OFTR	I	Function
94	TCLKB	TKCNT	I	Track pulse input (pulse width is measured and speed is detected)
95	PA2	ENC	O	Serial input enable of ADSC CIRC part (0: permission 1: prohibition)
96	PA3	ENS	O	Serial input enable of ADSC part (0: permission 1: prohibition)
97	PA4	TKCNT	I	Track pulse input
98	PA5	XDMUTE2	O	Driver IC mute control (0:MUTE 1:MUTE release)
99	PA6	FESEN	O	FEP serial input enable (0: permission 1: prohibition)
100	TIOCB2	FG	I	FG pulse input

PE5387A (MFLB ASSY: IC1101) **Disply Control UCOM**

• Pin Function (1/3)

No.	Mark	Pin Name	I/O	Description
1	VDD	-	-	Power supply (VD5V)
2	P37	LED15, Model distinction	O	LOUT, and NEXT / NET distinction
3	P36/BUZ	LED14	I	LIN
4	P35/PCL	LED13	O	CRED
5	P34/TI2	LED12	O	CGREEN
6	P33/TI1	LED11	O	BRED
7	P32/TO2	LED10	O	BGREEN
8	P31/TO1	LED9	O	ARED
9	P30/TO0	LED8	O	AGREEN
10	RESET	RESET	I	RESET
11	X2	CLOCK	-	(5MHz)
12	X1	CLOCK	-	(5MHz)
13	IC	GND	-	-
14	XT2	NC	-	-
15	P04/XT1	SW0	I	Reverse Switch
16	VDD	-	-	-
17	P27/SCK0	SCLK1	I	The clock input from host CPU
18	P26/SO0/SB1	SDO1	O	The data output to host CPU
19	P25/SI0/SB0	SDI1	I	The data input from host CPU
20	P24/BUSY	ENABLE	O	The enable output to host CPU
21	P23/STB	BLK	O	The blank output to FL drive
22	P22/SCK1	SCLK2	O	The clock output to FL driver
23	P21/SO1	SDO2	O	The strike robe to FL driver
24	P20/SI1	STB	O	NC
25	Avss	GND	-	GND
26	P17/ANI7	LED5	I	-
27	P16/ANI6	KEYAD5	I	Key input
28	P15/ANI5	KEYAD4	I	
29	P14/ANI4	KEYAD3	I	
30	P13/ANI3	KEYAD2	I	
31	P12/ANI2	KEYAD1	I	
32	P11/ANI1	VOL1	I	Turntable VOL
33	P10/ANI0	VOL2	I	
34	AVDD	VDD	-	Power supply (+5V)
35	AVREF	VDD	-	
36	P03/INT3/CI0	LED16	O	VINYL
37	P02/INTP2	LED7	O	CDJ
38	P01/INTP1	LED6	O	MT
39	P00/INTP/TI0	ELSW	I	Eject Switch
40	Vss	-	-	-

• Pin Function (2/3)

No.	Mark	Pin Name	I/O	Description
41	P74	LED4	O	TRES
42	P73	LED3	O	MMC
43	P72	LED2	O	CUE
44	P71	LED1	O	PLAY
45	P70	LED0	O	REVERSE
46	VDD	-	-	Power supply (5V)
47	P127/FIP52	S37	O	FL display
48	P126/FIP51	S36	O	
49	P125/FIP50	S35	O	
50	P124/FIP49	S34	O	
51	P123/FIP48	S33	O	
52	P122/FIP47	S32	O	
53	P121/FIP46	S31	O	
54	P120/FIP45	S30	O	
55	P117/FIP44	S29	O	
56	P116/FIP43	S28	O	
57	P115/FIP42	S27	O	
58	P114/FIP41	S26	O	
59	P113/FIP40	S25	O	
60	P112/FIP39	S24	O	
61	P111/FIP38	S23	O	
62	P110/FIP37	S22	O	
63	P107/FIP36	S21	O	
64	P106/FIP35	S20	O	
65	P105/FIP34	S19	O	
66	P104/FIP33	S18	O	
67	P103/FIP32	S17	O	
68	P102/FIP31	S16	O	
69	P101/FIP30	S15	O	
70	P100/FIP29	S14	O	
71	P97/FIP28	S13	O	
72	P96/FIP27	S12	O	
73	P95/FIP26	S11	O	
74	P94/FIP25	S10	O	
75	P93/FIP24	S9	O	
76	P92/FIP23	S8	O	
77	P91/FIP22	S7	O	
78	P90/FIP21	S6	O	
79	VLOAD	-	-	-
80	P87/FIP20	S5	O	FL display

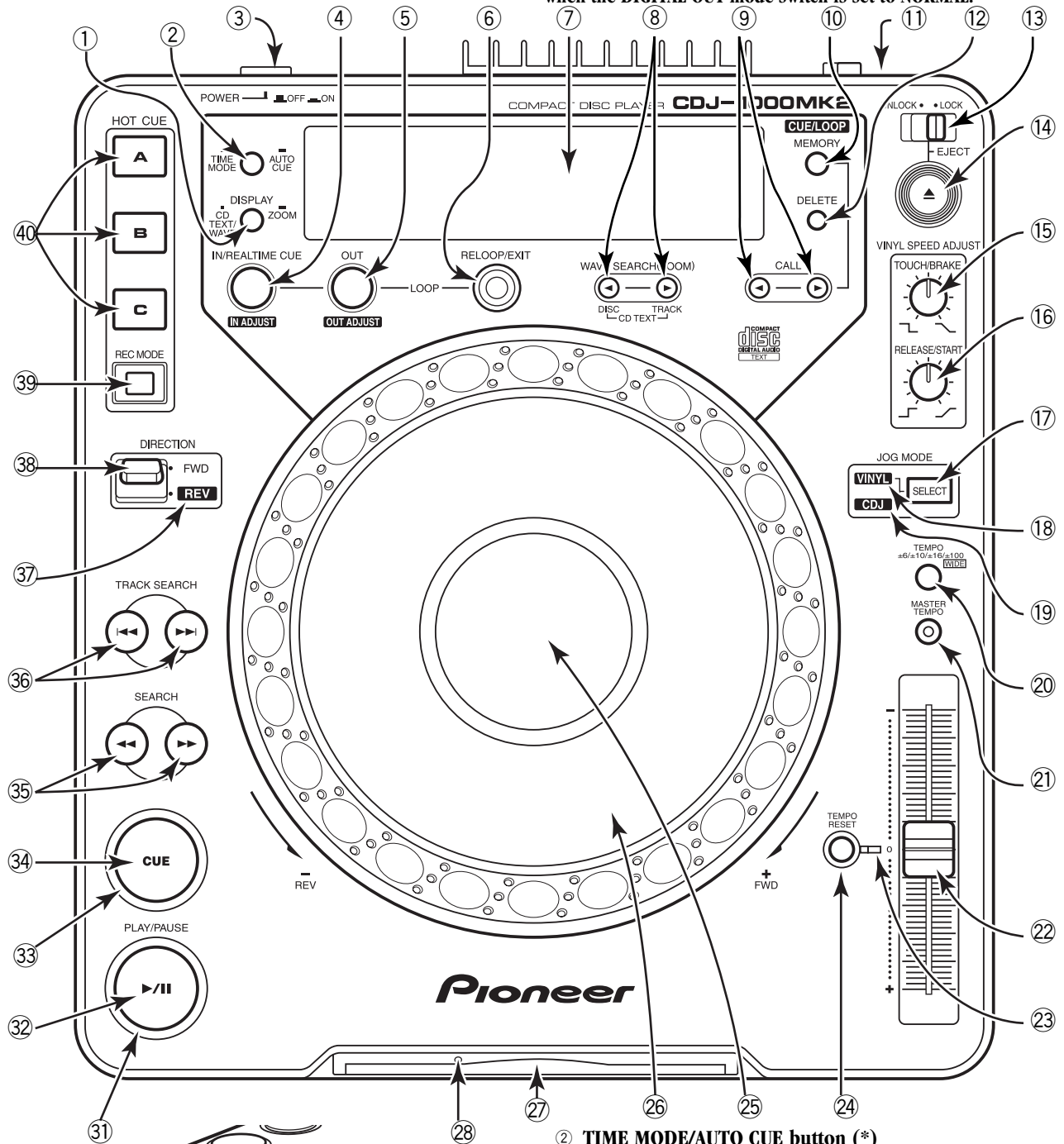
• Pin Function (3/3)

No.	Mark	Pin Name	I/O	Description
A 81	P86/FIP19	S4	O	FL display
82	P85/FIP18	S3	O	
83	P84/FIP17	S2	O	
84	P83/FIP16	S1	O	
85	P82/FIP15	G16	O	
86	P81/FIP14	G15	O	
87	P80/FIP13	G14	O	
88	FIP12	G13	O	
89	FIP11	G12	O	
B 90	FIP10	G11	O	
91	FIP9	G10	O	
92	FIP8	G9	O	
93	FIP7	G8	O	
94	FIP6	G7	O	
95	FIP5	G6	O	
96	FIP4	G5	O	
97	FIP3	G4	O	
98	FIP2	G3	O	
99	FIP1	G2	O	
C 100	FIP0	G1	O	

8. PANEL FACILITIES

■ Top Panel

Operation buttons marked with the asterisk (*) are disabled when the DIGITAL OUT mode switch is set to NORMAL.



① **DISPLAY CD TEXT/WAVE (ZOOM) button (*)**

Each press of this button toggles the display between WAVE display and CD-TEXT disc/track title display. When the button is held down for 1 second or longer, the WAVE display cycles between the 1 track full-scale and 2x zoom scale.

② **TIME MODE/AUTO CUE button (*)**

TIME MODE:

Each time this button is pressed, the time display changes between elapsed playback time and remaining playback time (REMAIN) of each track.

The **TIME MODE** is stored in memory and persists even when the power is turned off.

AUTO CUE:

Hold down this key for 1 second or longer to toggle between **AUTO CUE** on and off.

AUTO CUE on/off status is stored in memory and persists even when the power is turned off.

③ **POWER switch OFF/ON**

This switch is located on the rear panel of the unit.

④ **LOOP IN/REALTIME CUE/IN ADJUST button/indicator (*)**

Real-time cue
Enter loop in point
Loop in point adjust

⑤ **LOOP OUT/OUT ADJUST button/indicator (*)**

Enter loop out point
Loop out point adjust

⑥ **RELOOP/EXIT button (*)**

⑦ **Display**

⑧ **WAVE SEARCH (ZOOM)/CD TEXT buttons (◀, ▶) (*)**

This button moves the displayed area when WAVE is in zoom display mode.
In the TEXT display mode, pressing the ◀ button will display the disc title and pressing the ▶ button will display the track title.

⑨ **CUE/LOOP CALL buttons (◀, ▶) (*)**

Calls Cue points and Loop points stored in internal memory or external memory (when a memory card is inserted). (When a memory card is inserted, the external memory takes precedence.)

⑩ **CUE/LOOP MEMORY button (*)**

Stores Cue points and Loop points in internal memory or external memory (when a memory card is inserted). (When a memory card is inserted, the external memory takes precedence.)

⑪ **DIGITAL OUT mode switch (DJ/NORMAL)**

This switch is located on the unit's rear panel.
When set to DJ, the DIGITAL OUT connector outputs audio data alone. When set to NORMAL, digital data (including sub-codes) is output, but the unit's DJ functions are not supported (operation buttons marked with the asterisk (*) are disabled). No sound will be produced in the Pause mode.

⑫ **CUE/LOOP DELETE button (*)**

Deletes Cue points or Loop points stored in internal memory or external memory (when memory card is inserted). (When a memory card is inserted, the external memory takes precedence.)

⑬ **EJECT UNLOCK/LOCK switch**

UNLOCK: In this mode the disc can be ejected even during playback.
LOCK: In this mode, the disc cannot be ejected during playback. The disc can be ejected when in pause mode.

⑭ **EJECT button (▲)**

When this button is pressed the disc is ejected through the disc insertion slot when it stops rotating. When the **EJECT UNLOCK/LOCK** switch is set to [LOCK] position, the disc can only be ejected when in pause mode.

⑮ **VINYL SPEED ADJUST TOUCH/BRAKE dial (*)**

When the **JOG MODE SELECT** button is set to [VINYL] position, you can use this dial to adjust the speed by which the playback stops when the surface of the Jog dial is pressed.

Playback stops faster as the dial is turned counterclockwise and stops slower as the dial is turned clockwise.

⑯ **VINYL SPEED ADJUST RELEASE/START dial (*)**

When the **JOG MODE SELECT** button is set to [VINYL] position, you can use this dial to adjust the speed by which playback starts after you take your hand off the surface of the Jog dial. Playback starts normal speed faster as the dial is turned counterclockwise and takes longer time to return to normal speed when turned clockwise.

⑰ **JOG MODE SELECT button (*)**

VINYL mode: when the surface of the Jog dial is pressed during playback, playback stops and if the dial is rotated, music is output according to the speed the dial is turned.

The **JOG MODE** is stored in memory and remains in memory even if the power is turned off.

CDJ mode: above operation is not performed even when the Jog dial surface is pressed.

⑱ **VINYL indicator (*)**

This indicator lights when the **JOG MODE** is in **VINYL** mode.

⑲ **CDJ indicator (*)**

This indicator lights when the **JOG MODE** is in **CDJ** mode.

⑳ **TEMPO Control Range button ±6/±10/±16/±100 WIDE (*)**

Each time the button is pressed, the range changes (±6%/±10%/±16%/±100%).

㉑ **MASTER TEMPO button/indicator (*)**

Each press of the button turns the master tempo function on or off.

㉒ **Tempo Control knob (*)**

Slide the knob towards you (+) to increase the tempo and slide it away from you (−) to decrease it.

㉓ **Tempo Reset indicator (*)**

Shows that the tempo has been reset to [0] (normal tempo) regardless of the position of the **Tempo Control** knob.

㉔ **TEMPO RESET button (*)**

Resets the tempo to [0] (normal tempo) regardless of the position of the **Tempo Control** knob. Press button once more to release it.

㉕ **Jog Dial Display**

㉖ **Jog dial (+FWD/−REV) (*)**

㉗ **Disc Loading Slot**

㉘ **Force Ejection Hole**

㉙ **Memory Card Loading Slot**

㉚ **Memory Card indicator**

Lights when the MMC card is being accessed.

Do not remove the card or turn off the power when this lamp is on.

㉛ **Play/Pause indicator**

Lights during play and flashes during pause.

㉜ **PLAY/PAUSE button (▶/⏸) (*)**

㉝ **CUE indicator (*)**

Lights when a Cue point is set and a search is not being performed. Flashes in pause mode.

㉞ **CUE button (*)**

Cue point settings
Cue point sampler
Back cue

㉟ **SEARCH button (◀◀, ▶▶) (*)**

㊱ **TRACK SEARCH button (◀◀, ▶▶) (*)**

㊲ **Reverse indicator (REV) (*)**

Lights when the **DIRECTION FWD/REV** switch is set to reverse.

㊳ **DIRECTION FWD/REV switch (*)**

Plays tracks backwards when set to the [REV] position (forward position).

㊴ **HOT CUE REC MODE button (*)**

Switches **HOT CUE** button function (REC/CALL).

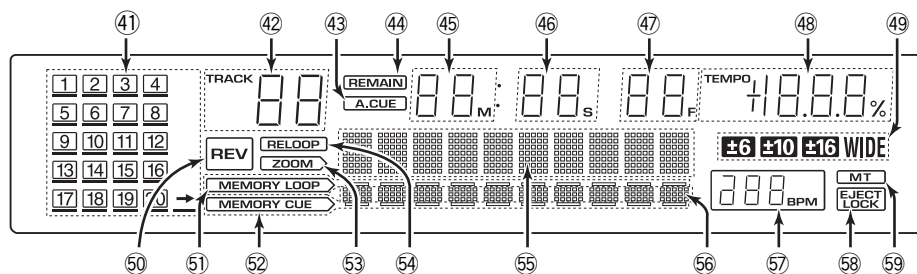
It is set to call when the power is turned on.

㊵ **HOT CUE A, B, C button/indicator**

It is set to hot cue point recording mode when **A**, **B** and **C** light in red.

It is set to call mode when **A**, **B** and **C** light in green. When the button is pressed, playback starts from the hot cue point. It is off when no hot cue point has been recorded.

■ DISPLAY



41 Calendar display (1 - 20 , ➡)

TRACK numbers beyond the current track lights. When the next track is 21 or beyond, ➡ lights. When Cue points or loops are stored, an underscore lights in the corresponding **TRACK** numbers.

42 TRACK Number indicator

Displays **TRACK** numbers.

43 Auto Cue indicator (A. CUE)

Lights when auto cue is on.

44 REMAIN indicator

Indicates that track remaining time is being displayed.

45 Time display (min) (M)

46 Time display (sec) (S)

47 Frame display (F)

One second is 75 frames.

48 Playback Tempo display (TEMPO)

Indicates the rate of change in the playback tempo.

49 Tempo Adjustment Range indicator (±6, ±10, ±16, WIDE)

Indicates the variable range of the **Tempo Control** knob selected with the **TEMPO Control Range** button. When ±100% is selected, the **WIDE** indicator appears in the display.

50 Reverse indicator (REV)

Indicates that the **DIRECTION FWD/REV** switch is set to reverse ([REV] position).

51 MEMORY LOOP indicator

Displays the selected track loop memory position above the playback address display (10 points). Even when there may be several memory points in the same block, only one lights.

52 MEMORY CUE indicator

Displays the selected cue memory positions under the playback address display (10 points). Even when there may be several memory points in the same block, only one lights.

53 ZOOM indicator

Indicates that **WAVE** is indicated in zoom mode.

54 RELOOP indicator

Lights when the unit is in reloop standby or performing a loop.

55 Wave/Text display

When **WAVE** is displayed the music level of the current track.

The level is indicated either in 1-track full scale, or zoom when only part of the track is shown. In the zoom mode, the display area is moved using the **WAVE SEARCH (ZOOM)** buttons (◀, ▶).

CD TEXT will be displayed in the TEXT mode.

The contents of the display is the disc title and track title in English up to a maximum of 48 letters which can be scrolled.

56 Playback Address display

Indicates elapsed playback time and remaining playback time in an easy to grasp 1-track full scale or 2x zoom scale bar graph.

The 1-track full scale mode shows elapsed time by lit segments from the left.

The 1-track full scale mode shows remaining time by unlit segments from the left.

When the remaining time is 30 seconds or less, the display flashes gently and the flashing becomes faster when there is 15 seconds or less left.

In the 2x zoom scale mode, only the playback position is lit for the **WAVE** display.

57 BPM Counter

Indicates BPM for the current track.

The BPM counter may sometimes not be able to measure the BPM of a track.

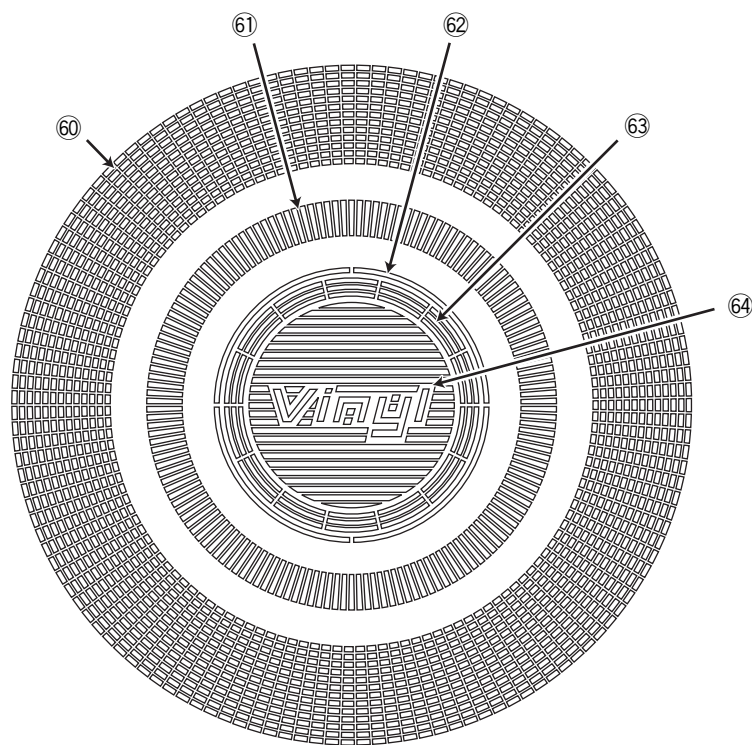
58 EJECT LOCK indicator

Lights when the **EJECT UNLOCK/LOCK** switch is set to the [LOCK] position.

59 Master Tempo indicator (MT)

Lights when the master tempo function is on.

■ JOG DIAL DISPLAY



⑥① Operation display

Indicates play position in frames 135 frames for one full rotation. Turns during playback and stops during pause.

⑥② Cue point position indicator

Indicates the current cue point position.

⑥③ Display the condition of the audio memory

When set in the audio memory display mode the light will flash when recording.

⑥④ Jog touch detection indicator

In the **VINYL** mode, this indicator lights when the surface of the Jog dial is pressed.

⑥⑤ VINYL mode display.

Lights up in the **VINYL** mode.