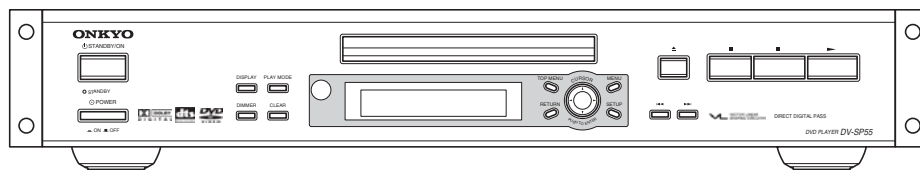


ONKYO SERVICE MANUAL

DVD PLAYER MODEL DV-SP55




RC-524DV

Black model

MDD1N	120V AC, 60Hz
-------	---------------

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  ON THE SCHEMATIC DIAGRAM AND IN THE PARTS LIST ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE THESE COMPONENTS WITH ONKYO PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL.

MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

SPECIFICATION

DV-SP55

Signal System		Standard NTSC
Composite Video Output/Impedance		1.0 V (p-p)/75 Ω negative sync, RCA/phono
S-Video Output/Impedance		Y: 0.7 V (p-p)/75 Ω negative sync, 4-pin mini DIN C: 0.286 V (p-p)/75 Ω
Component Video Output/Impedance		Y: 1.0 V (p-p)/75 Ω PB/PR: 0.7 V (p-p)/75 Ω RCA/ phono, BNC
Frequency response	DVD Linear Sound	4 Hz-44 kHz (96kHz) 4 Hz-22 kHz (48kHz)
	Audio CD	4 Hz-20 kHz (44.1kHz)
S/N Ratio		106 dB
Audio Dynamic Range		96 dB
THD (Total Harmonic Distortion)		0.008 % (1kHz)
Wow and Flutter		Below threshold of measurability
Audio Output (Digital/Optical)		-22.5 dBm
Audio Output/Impedance (Digital/Coaxial)		0.5 p-p/75 Ω
Audio Output/Impedance (Analog)		2.0 V (rms)/470 Ω

■ General

Power Supply	120 V AC, 60 Hz
Power Consumption	15 W
Stand-by Power Consumption	0.90 W
Dimensions (W x H x D)	483 X 81 X 313 mm (19" X 3-3/16" X 12-5/16")
Weight	8.4 lbs. (3.8 kg)
Operation Condition Temperature	5 °C-35 °C
Disc Compatibility	DVD-video, DVD-R/RW, Audio CD, CD-R/RW, Video CD, MP3, WMA, JPEG Disc that have not been property finalized may only be partially play-able or not playable at all

Specifications and features subject to change without notice.

SERVICE PROCEDURES-1

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs a laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!!

SERVICE WARNING : DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION, BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICKUP BLOCK.

Laser Diode Properties

Wavelength: 650/780nm (DVD/CD)

WARNING

WARNING:

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

CAUTION:

TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



WARNING
RISK OF ELECTRIC SHOCK
DO NOT OPEN

AVIS
RISQUE DE CHOC ELECTRIQUE
NE PAS OUVRIR



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

LASER WARNING

This unit contains a semiconductor laser system and is classified as a "CLASS 1 LASER PRODUCT". So, to use this model properly, read this Instruction Manual carefully. In case of any trouble, please contact the store where you purchased the unit. To prevent being exposed to the laser beam, do not try to open the enclosure.

CAUTION:

VISIBLE LASER RADIATION WHEN OPEN AND INTERLOCK FAILED OR DEFEATED. DO NOT STARE INTO BEAM.

CAUTION:

THIS PRODUCT UTILIZES A LASER. USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

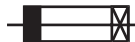
The label on the right is applied on the rear panel except for USA and Canadian models.

"CLASS 1 LASER PRODUCT"

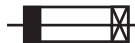
1. This unit is a CLASS 1 LASER PRODUCT and employs a laser inside the cabinet.
2. To prevent the laser from being exposed, do not remove the cover. Refer servicing to qualified personnel.

SERVICE PROCEDURE

1. Replacing the fuses



This symbol located near the fuse indicates that the fuse used is show operating type, For continued protection against fire hazard, replace with same type fuse , For fuse rating, refer to the marking adjust to the symbol.



Ce symbole indique que le fusible utilise est e lent. Pour une protection permanente, n'utiliser que des fusibles de meme type. Ce demier est indique la qu le present symbol est appose.

REF. NO.	PART NO.	DESCRIPTION
F1	252252 or	1.6A-TL/T-ST2 <MDD>
	252147	1.6A-TSC

<MDD> : North American model

LASER BEAM CAUTION LABEL



WAVE LENGTH:650nm
MAX LASER POWER:0.5mW
波 長 : 650nm
最大レーザー出力 : 0.5mW

98764160



SERVICE PROCEDURES-2

2. Safety-check out

(Only U.S.A. model)

After correcting the original service problem perform the following safety check before releasing the set to the customer
Connect the insulating-resistance tester between the plug of power supply cord and terminal GND on the back panel.

Specifications: More than 10M ohm at 500V

INITIALIZING

Factory-shipped condition.

Push button "ON" (Mechanical SW)

Press the [STOP] and [STANDBY] same time with NO DISC condition.

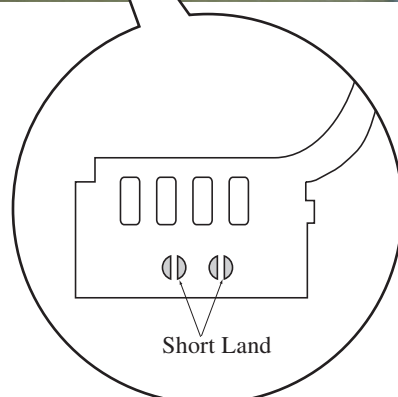
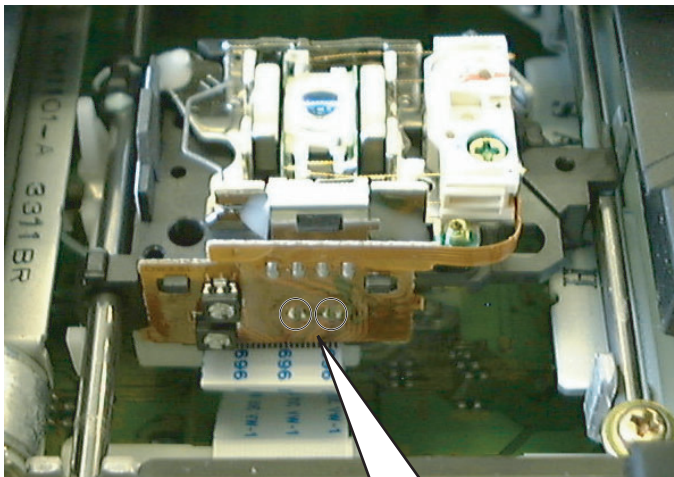
Push button "STANDBY".

REMOVE THE SOLDER OF LASER DIODE SHORT

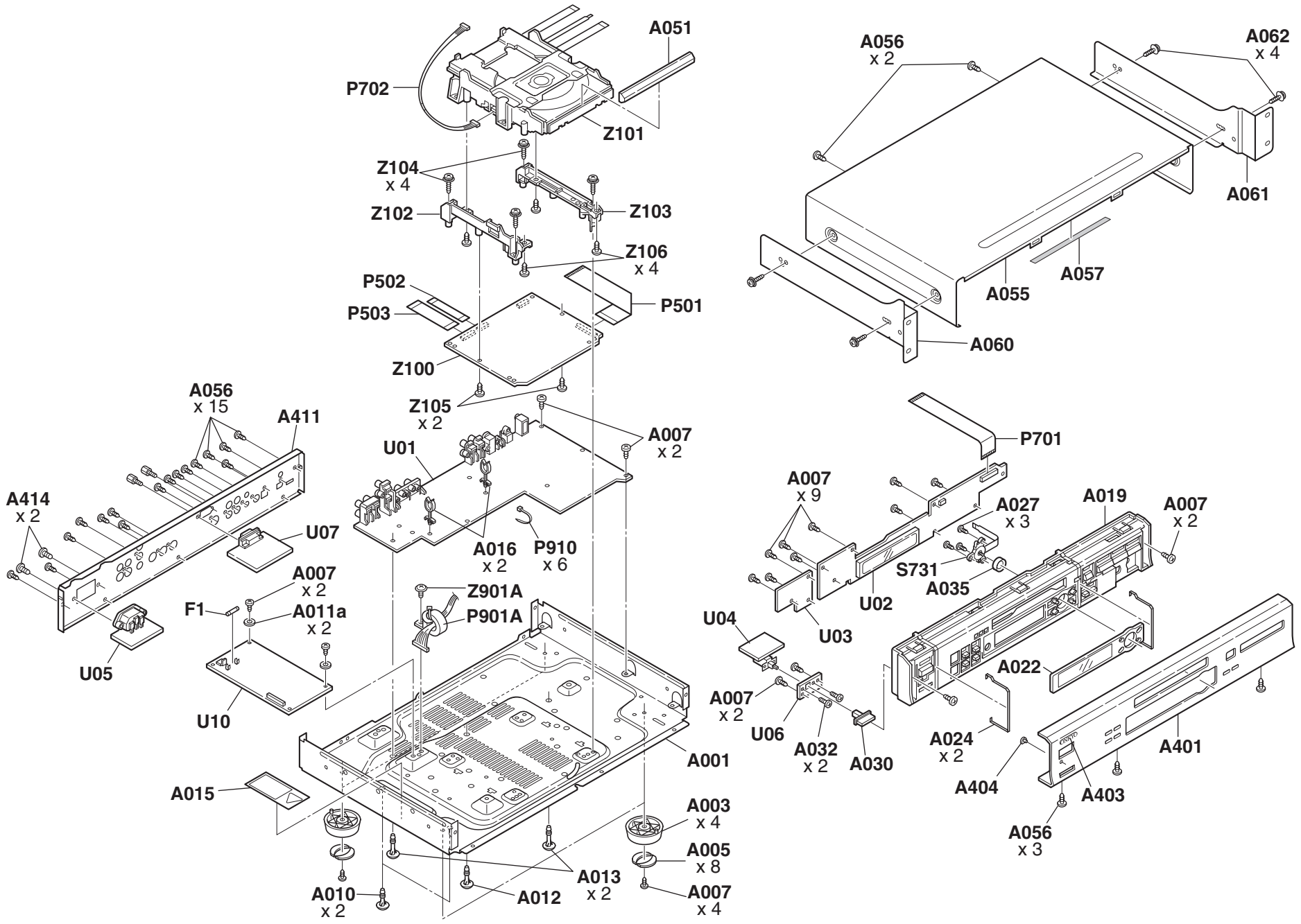
When replace the mechanism or DVD main PC board.

Shorting the solder of Shot-circuit land. (2 positions)

Mechanism

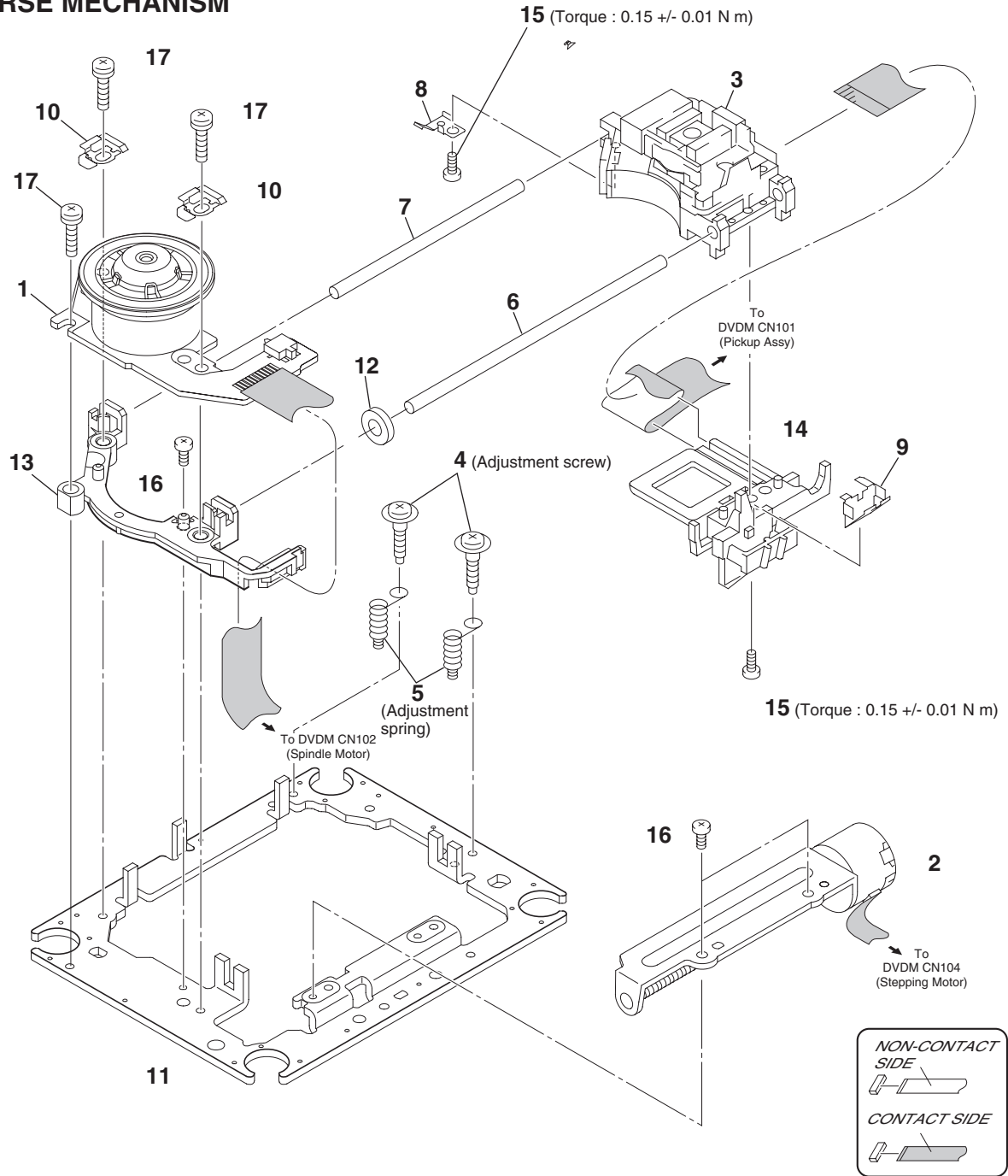


EXPLODED VIEW



EXPLODED VIEW / PARTS LIST

TRAVERSE MECHANISM



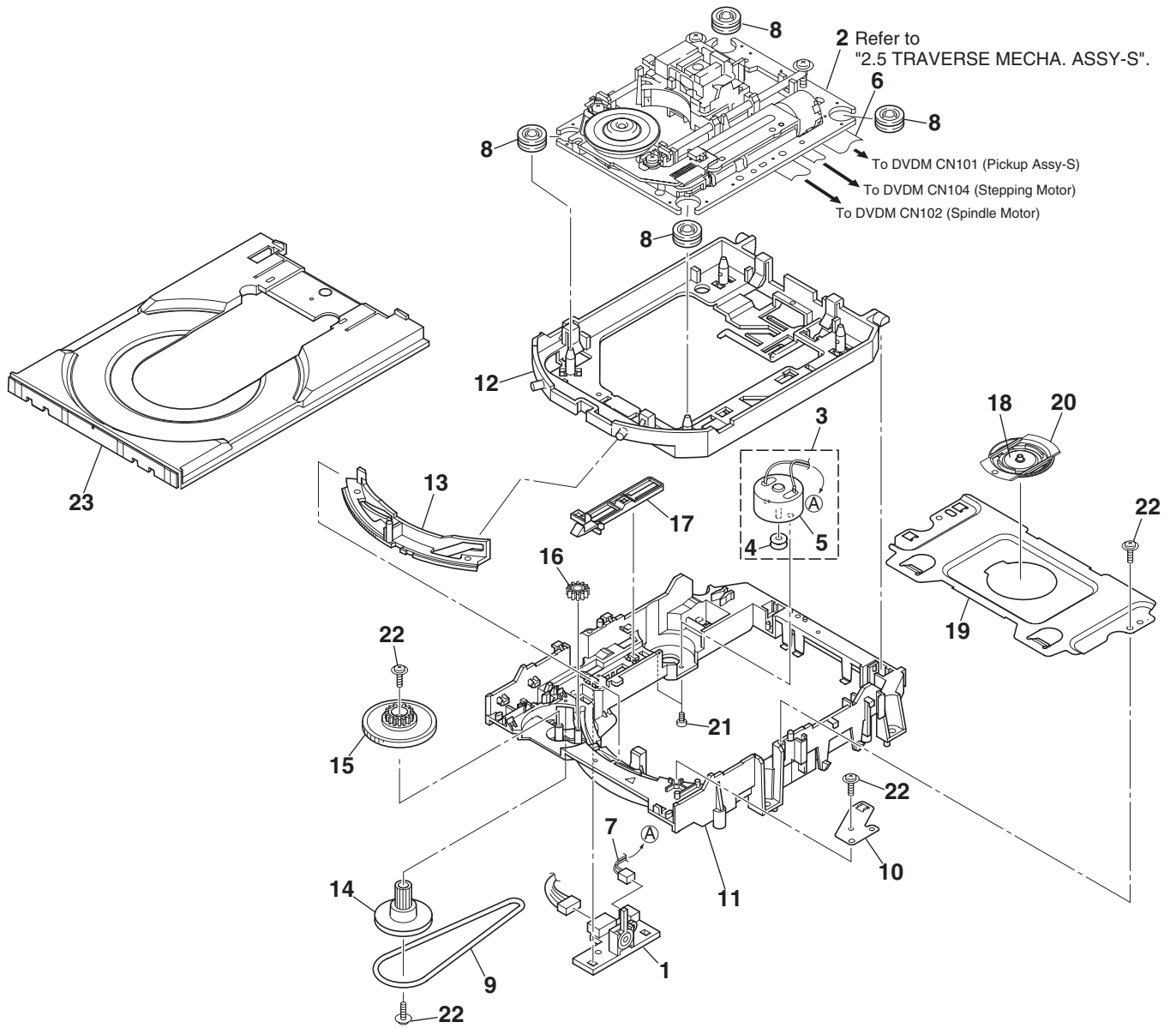
TRAVERSE MECHA. ASSY Parts List

Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	Spindle Motor	VXM1099	9	Joint Spring	VNC1019
2	Stepping Motor	VXM1101	10	Support Spring	VNC1020
3	Pickup Assy-S	OXX8005	NSP 11	Mecha.Chassis	VNE2248
4	Skew Screw	VBA1080	12	Damper Sheet	VEB1335
5	Skew Spring	VBH1335	13	Spacer	VNL1913
6	Guide Bar	VLL1514	14	Joint 03	VNL1949
7	Sub Guide Bar	VLL1515	15	Tapping Screw	OBA8016
8	Leaf Spring	VNC1023	16	Screw	BBZ20P050FZK
			17	Screw	PMA26P100FMC

NSP : Not service parts

EXPLODED VIEW / PARTS LIST

LOADING MECHANISM



LOADING MECHA. ASSY parts List

Mark No.	Description	Part No.	Mark No.	Description	Part No.
NSP 1	LOAB Assy	—	17	SW Lever	VNL1925
2	Traverse Mecha. Assy-S	VXX2871	18	Clamber Plate	VNE2251
3	Loading Motor Assy	VXX2872	19	Bridge	VNE2252
4	Motor Pulley	—	20	Clamber	VNL1924
5	Motor	—	21	Screw	JGZ17P028FMC
6	Flexible Cable (24P)	VDA1945	22	Screw	801530
7	Connector Assy 2P	VKP2253	23	Tray	VNL1920
8	Floating Rubber	VEB1351			
9	Belt	VEB1330			
10	Stabilizer	VNE2253			
11	Loading Base	VNL1917			
12	Float Base DVD	VNL1918			
13	Drive Cam	VNL1919			
14	Gear Pulley	VNL1921			
15	Loading Gear	VNL1922			
16	Drive Gear	VNL1923			

A

B

C

D

PRINTED CIRCUIT BOARD VIEWS-1

U01 AUDIO/VIDEO OUTPUT TERMINAL PC BOARD NAAR-7997

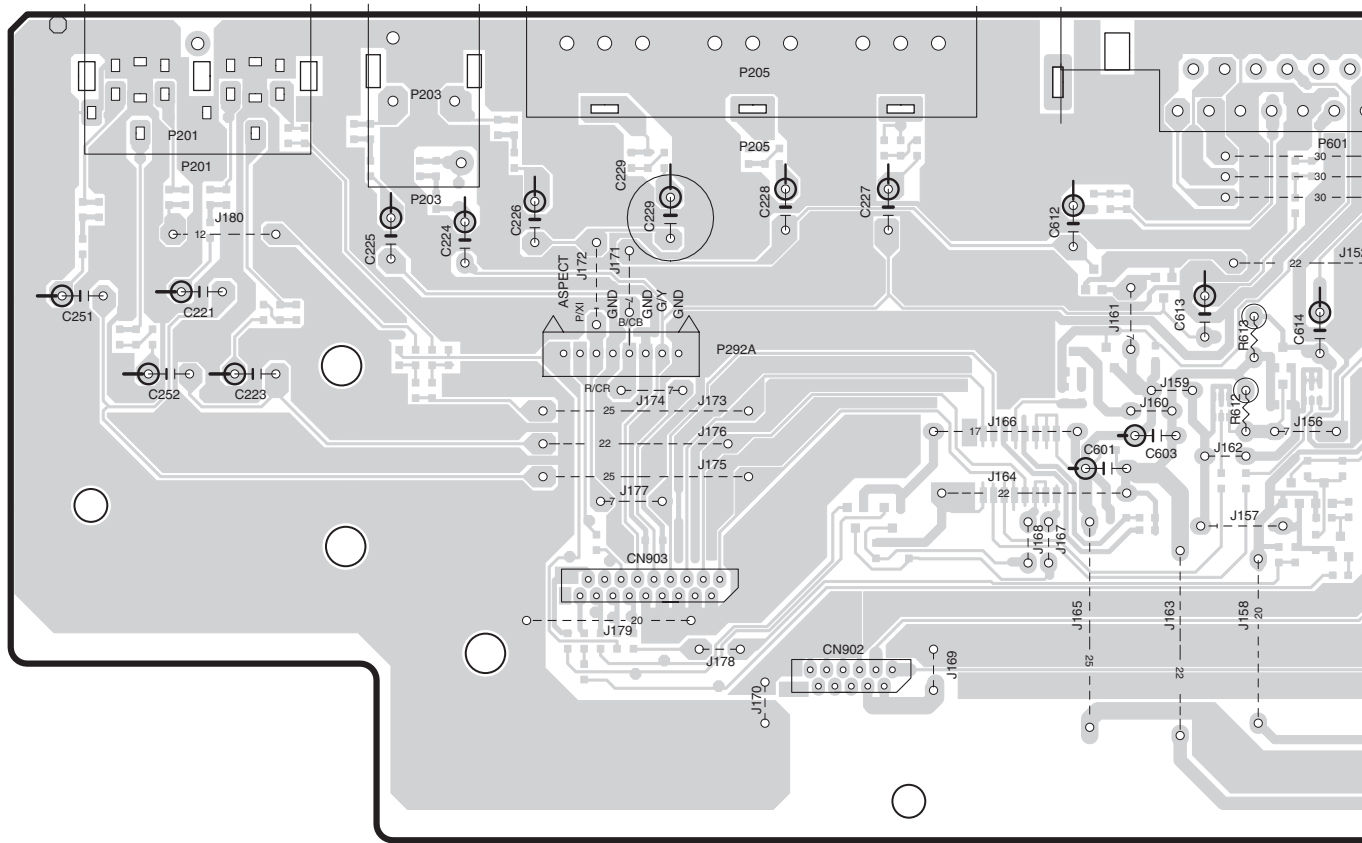
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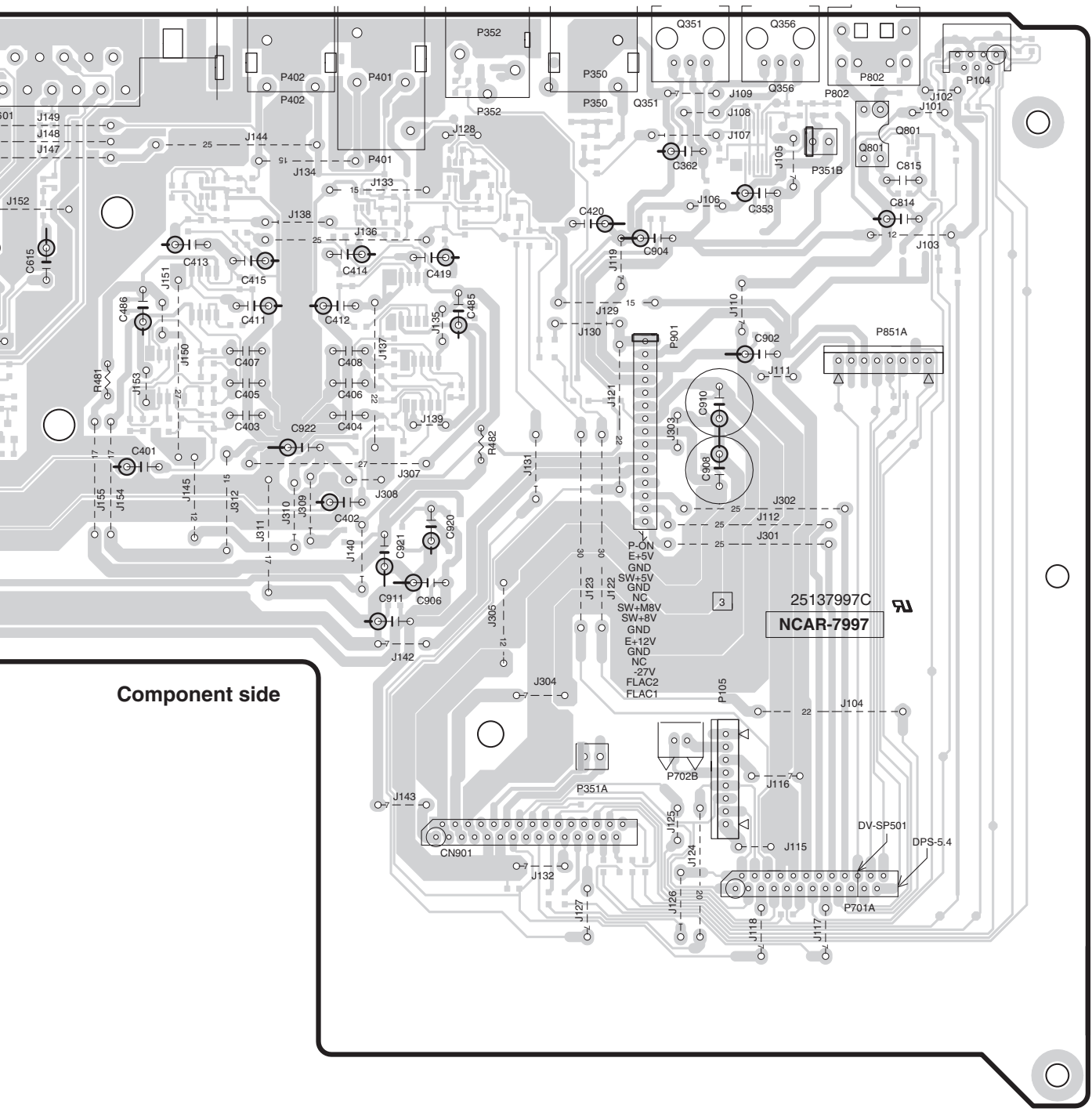
2

3

4

5





Component side

P ON
E+5V
GND
SW+5V
GND
NC
SW+M8V
SW+8V
GND
E+12V
GND
-27V
FLAC2
FLAC1

25137997C
NCAR-7997

DV-SP501
DPS-5.4

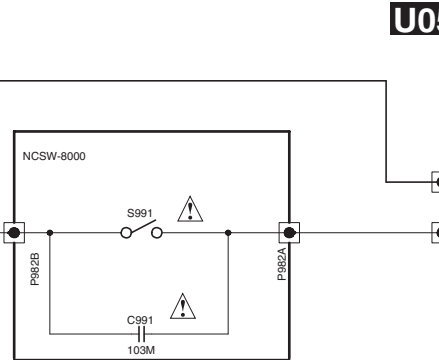
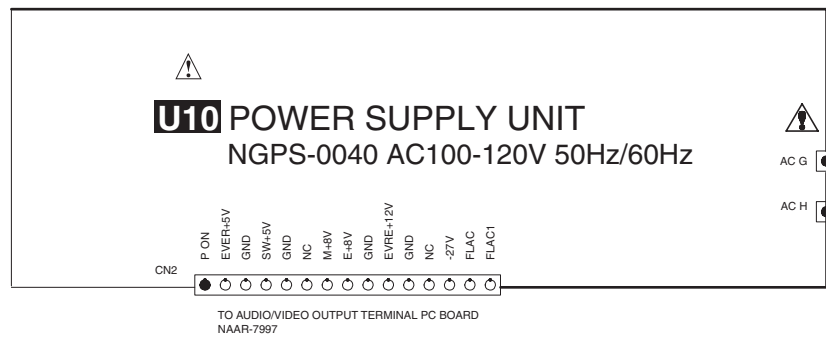
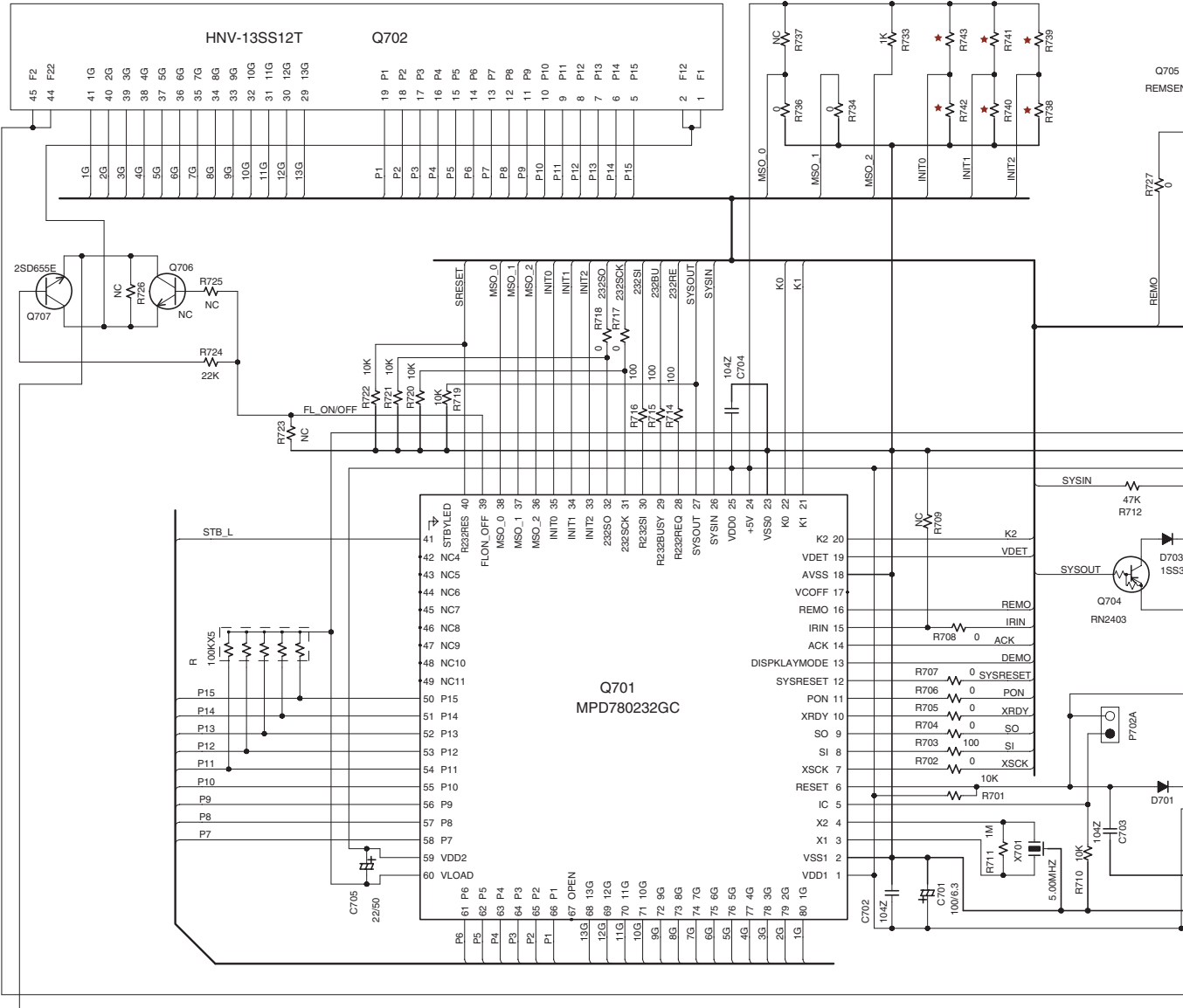
A B C D

SCHEMATIC DIAGRAMS-2

★	MJJ	MDD
Region	2	1
R738	0	0
R739	NC	NC
R740	0	0
R741	NC	NC
R742	0	NC
R743	NC	1K

NCDIS-7998

U02 FRONT DISPLAY PC BOARD NADIS-7998



U04 POWER SWITCH PC BOARD NASW-8000

1

2

3

4

5

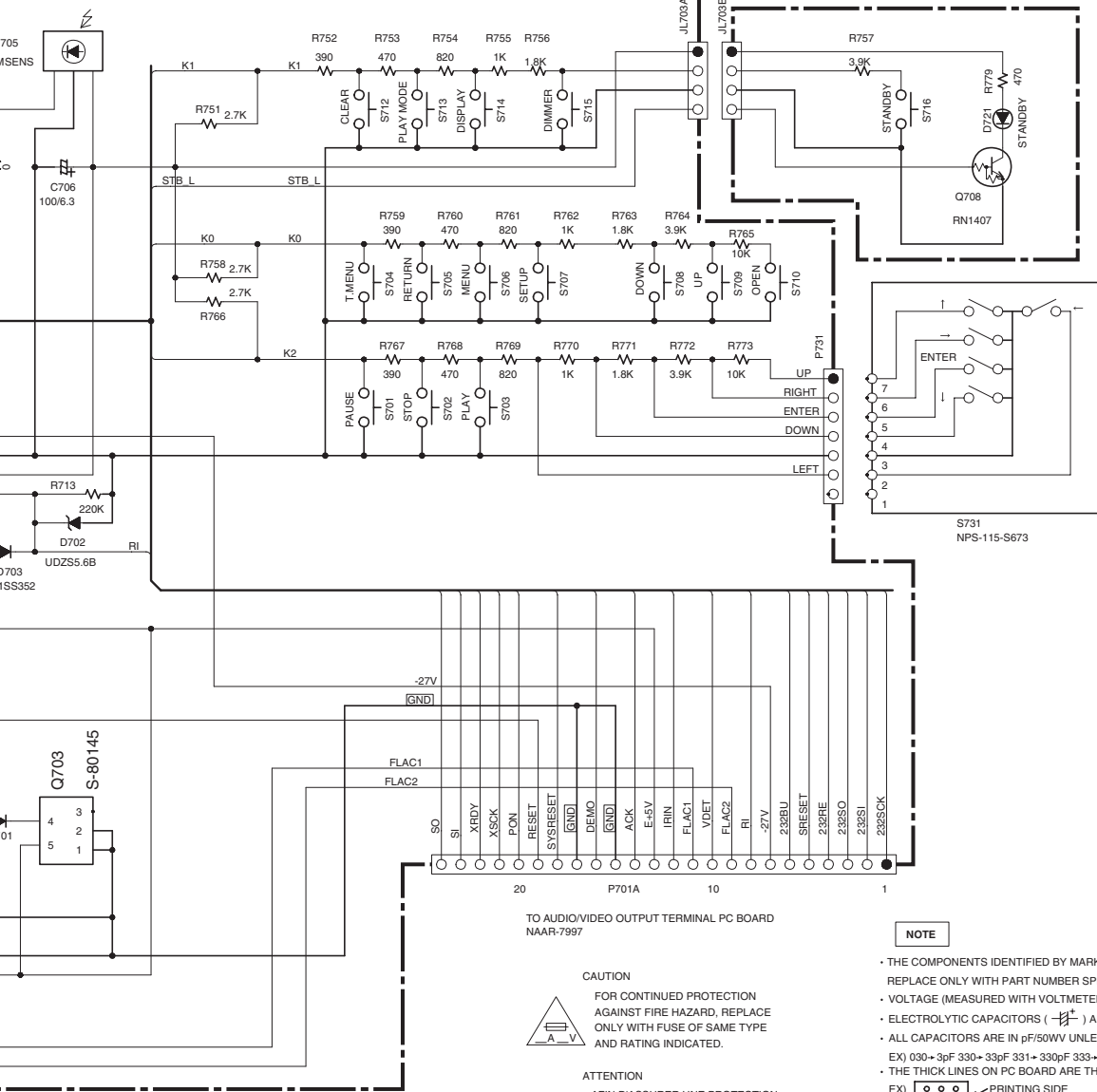
E

F

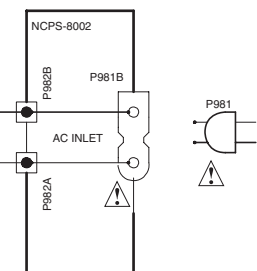
G

H

U03 STANDBY LED PC BOARD
NADIS-7999



U05 INLET TERMINAL PC BOARD
NAPS-8002



TO AUDIO/VIDEO OUTPUT TERMINAL PC BOARD
NAAR-7997

CAUTION

FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH FUSE OF SAME TYPE AND RATING INDICATED.



ATTENTION

AFIN D'ASSURER UNE PROTECTION PERMANENTE CONTRE LES RISQUES D'INCENDIE, REMPLACER UNIQUEMENT PAR UN FUSIBLE DE MEME TYPE ET CALIBRATION COMME INDIQUE.



THIS SYMBOL LOCATED NEAR THE FUSE INDICATES THAT THE FUSE USED IS SLOW OPERATING TYPE FOR CONTINUED PROTECTION AGAINST FIRE HAZARD. REPLACE WITH SAME TYPE FUSE. FOR FUSE RATING REFER TO THE MARKING ADJACENT TO THE SYMBOL.



CE SYMBOLE INDIQUE QUE LE FUSIBLE UTILISE EST LENT. POUR UNE PROTECTION PERMANENTE, N'UTILISER QUE DES FUSIBLES DE MEME TYPE. CE DERNIER EST INDIQUE LA QU LE PRESENT SYMBOLE EST APPOSE.

NOTE

- THE COMPONENTS IDENTIFIED BY MARK ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH PART NUMBER SPECIFIED.
- VOLTAGE (MEASURED WITH VOLTMETER) IS DC VOLTAGE. (NO INPUT SIGNAL)
- ELECTROLYTIC CAPACITORS () ARE IN uF/WV.
- ALL CAPACITORS ARE IN pF/50WV UNLESS OTHERWISE NOTED.
- EX) 030+3pF 330+ 33pF 331+ 330pF 333+ 0.033uF
- THE THICK LINES ON PC BOARD ARE THE PRINTING SIDE OF THE PARTS.
- EX) PRINTING SIDE
- CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.

A

B

C

D

E

SCHEMATIC DIAGRAMS-3

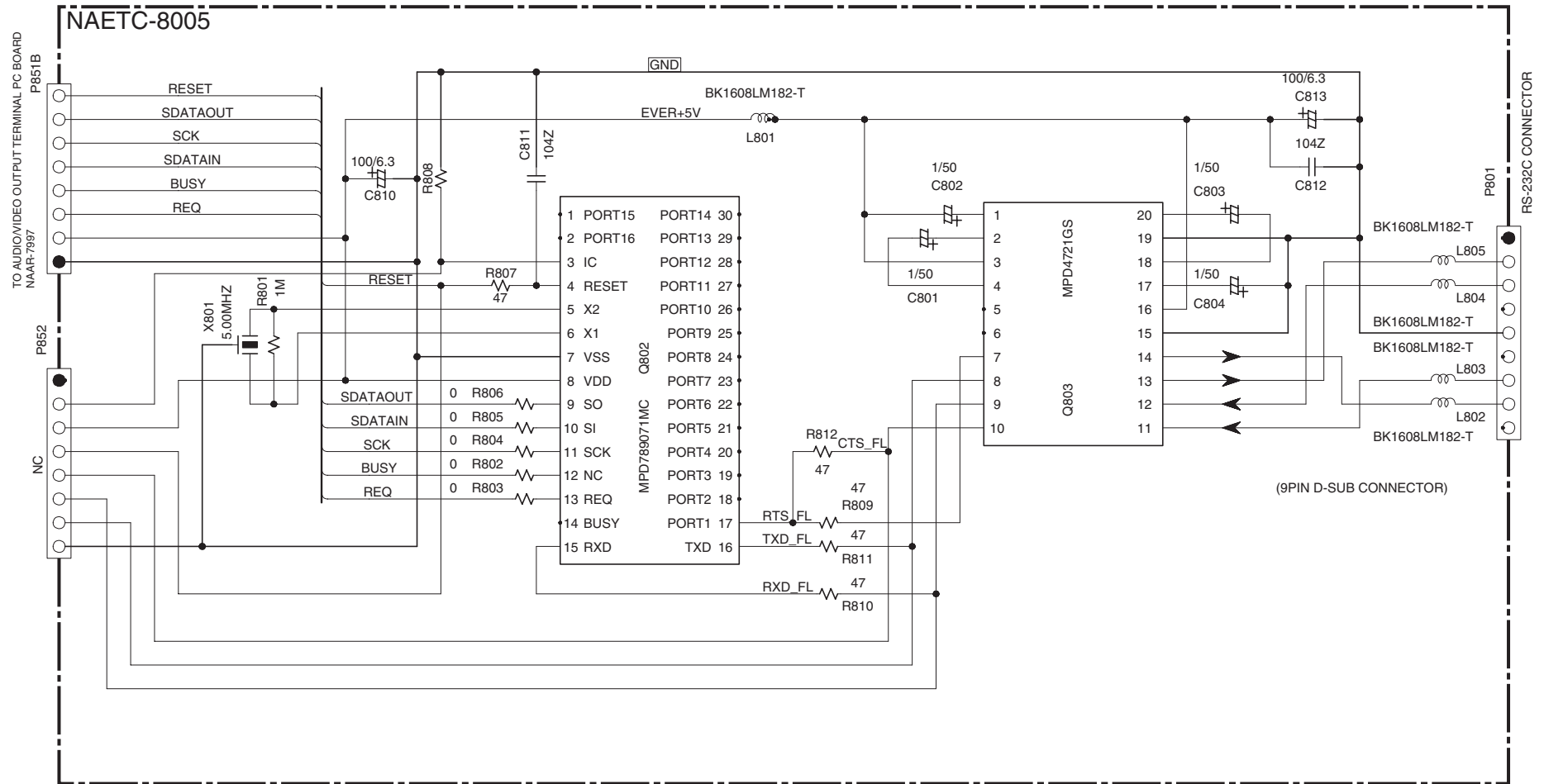
**U07 RS-232C TERMINAL PC BOARD
NAETC-8005**

1

2

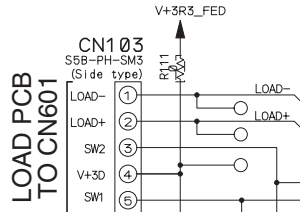
3

4

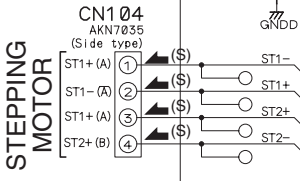


SCHEMATIC DIAGRAMS-4 DVD MAIN CIRCUIT PC BOARD (1/3) DV-SP55

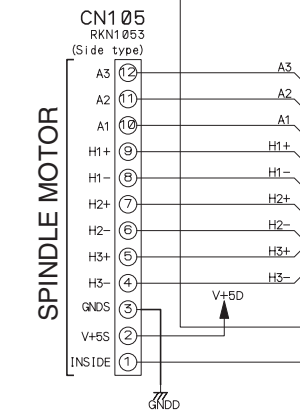
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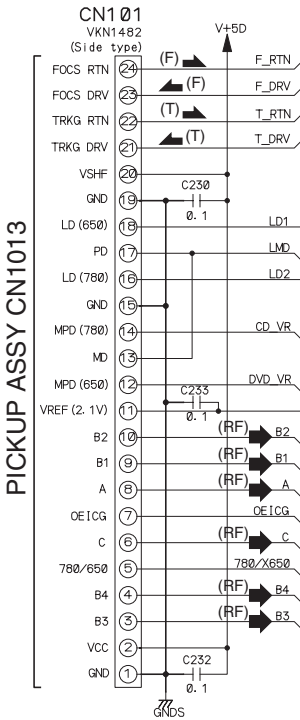
2



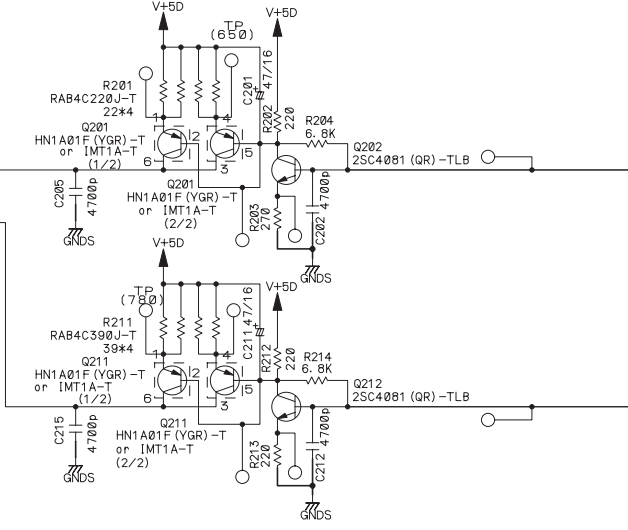
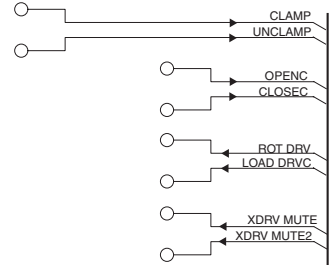
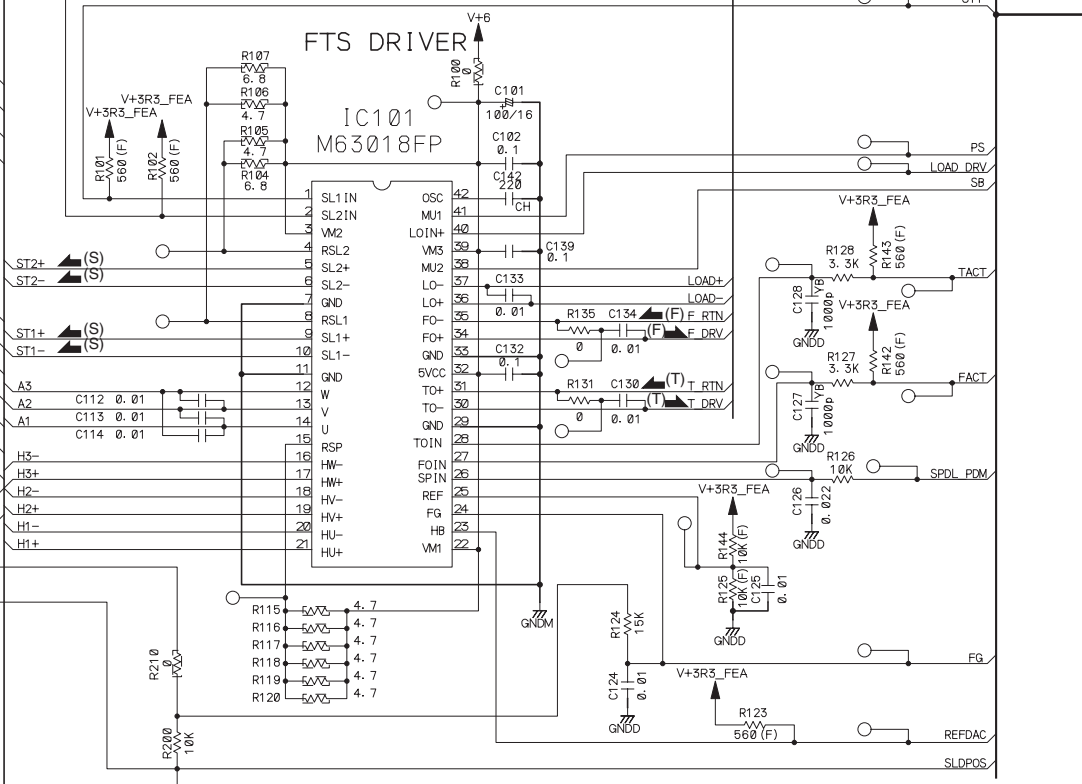
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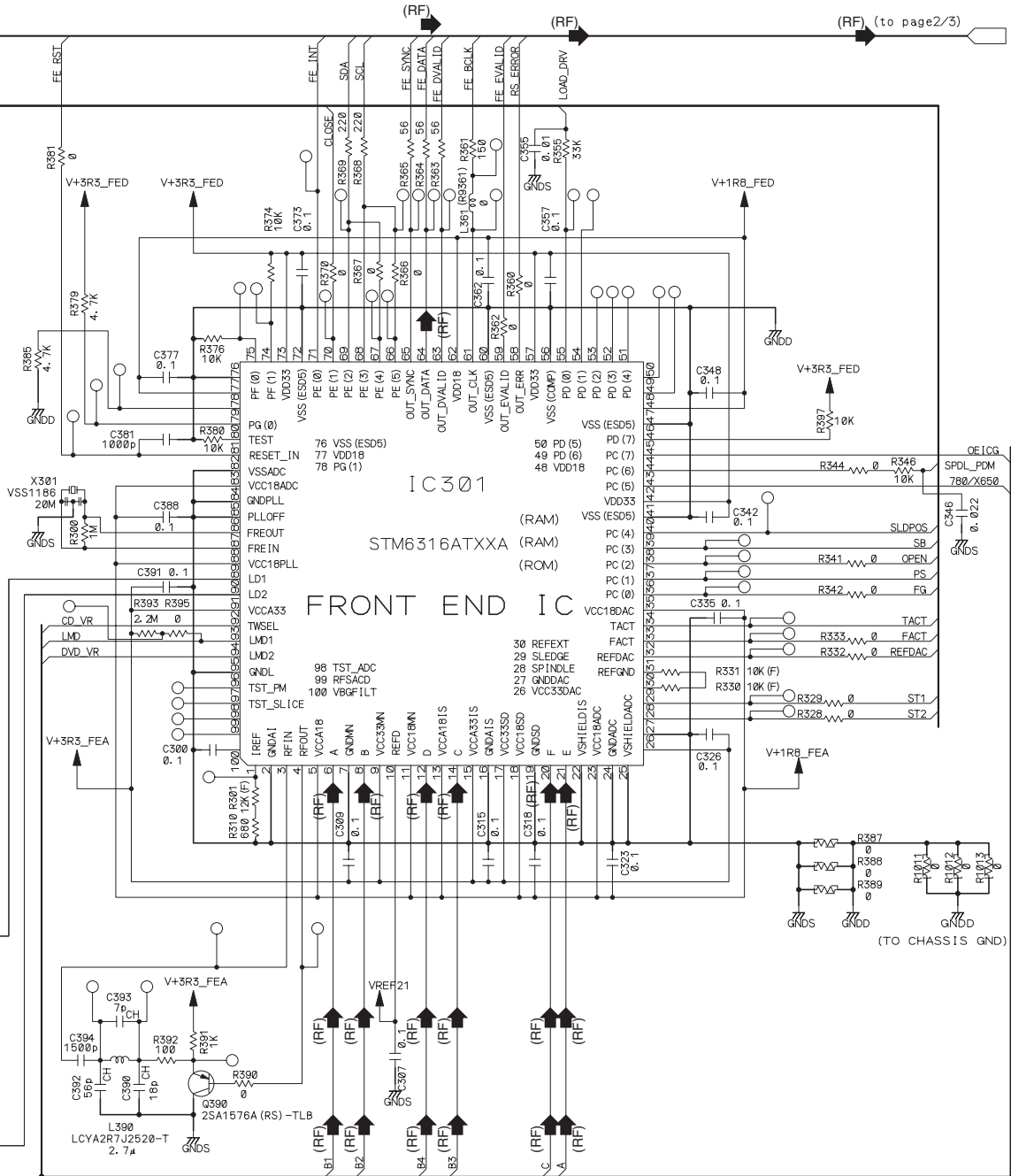
4



5



- (RF) : RF SIGNAL ROUTE
- (F) : FOCUS SERVO LOOP LINE
- (T) : TRACKING SERVO LOOP LINE
- (S) : STEPPING SERVO LOOP LINE



(RF) (to page2/3) BE 2/3

(TO CHASSIS GND)

A B C D
SCHEMATIC DIAGRAMS-5 DVD MAIN CIRCUIT PC BOARD (2/3) DV-SP55

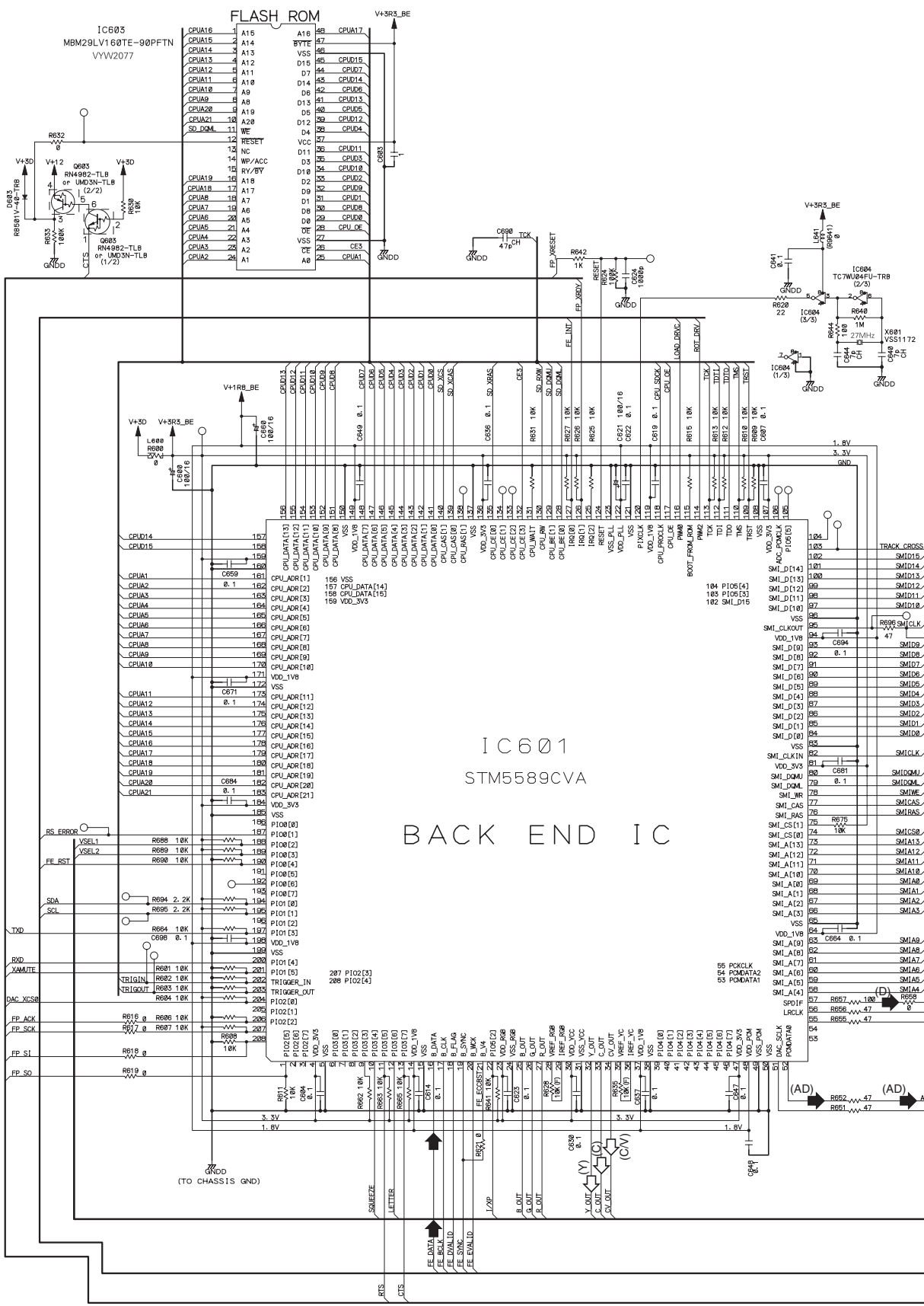
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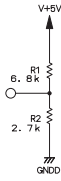
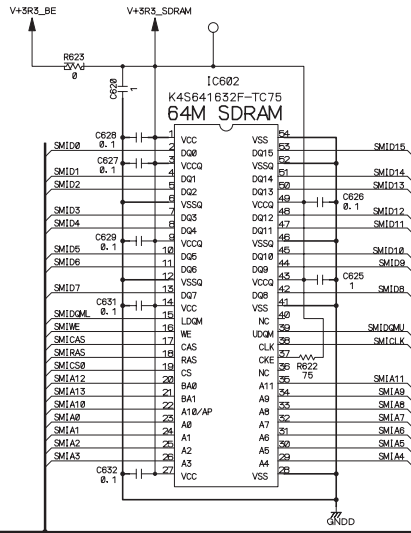
2

3

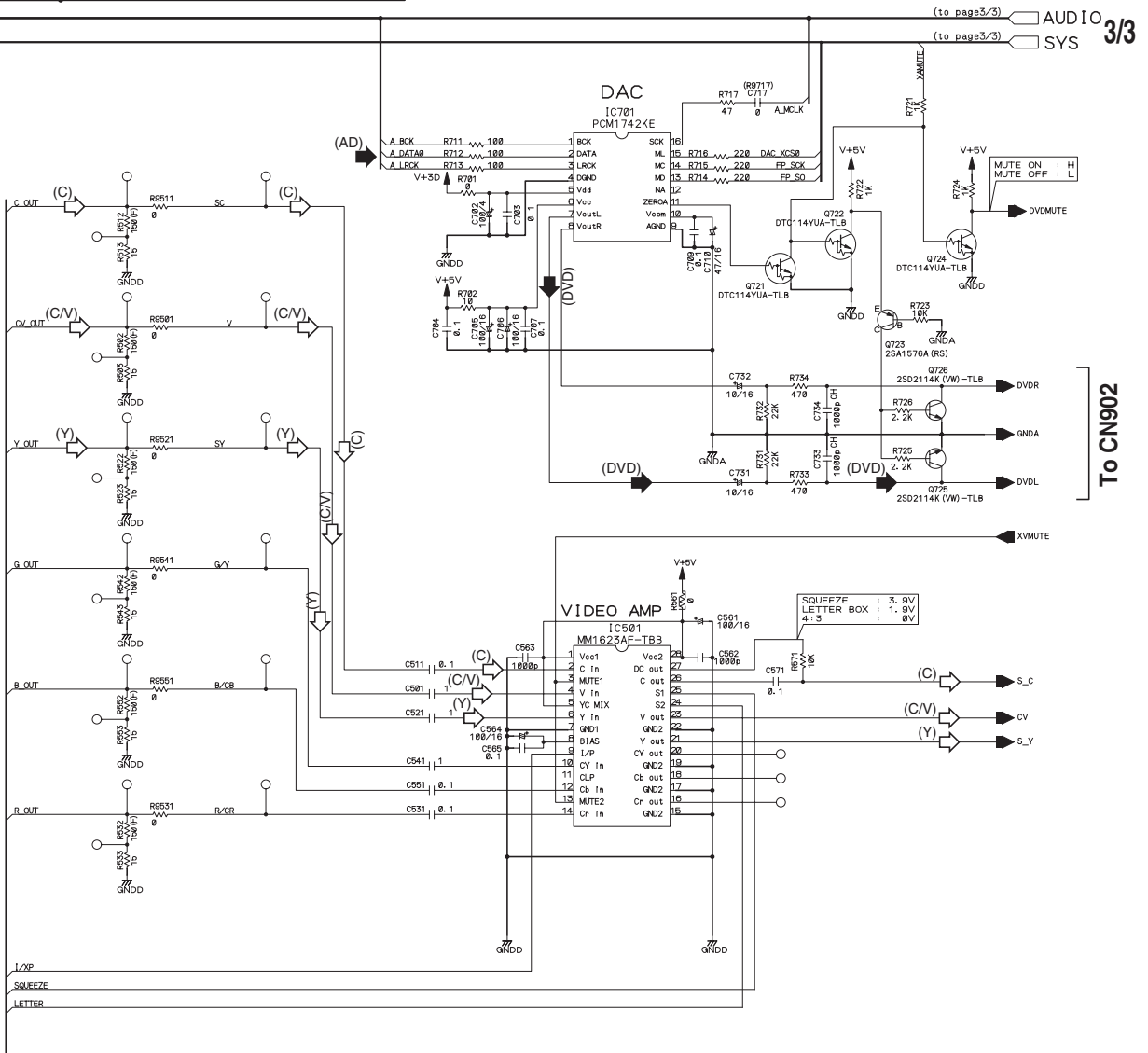
4

5





- FE_DATA SIGNAL ROUTE (RF)
- RF SIGNAL ROUTE (C/V)
- VIDEO SIGNAL ROUTE (C/V)
- S VIDEO SIGNAL ROUTE (Y)
- S VIDEO SIGNAL ROUTE (C)
- AUDIO DATA SIGNAL ROUTE (AD)
- AUDIO SIGNAL ROUTE (DIGITAL) (D)
- AUDIO SIGNAL ROUTE (DVD_L ch) (DVD)



(to page3/3) AUDIO 3/3
 (to page3/3) SYS

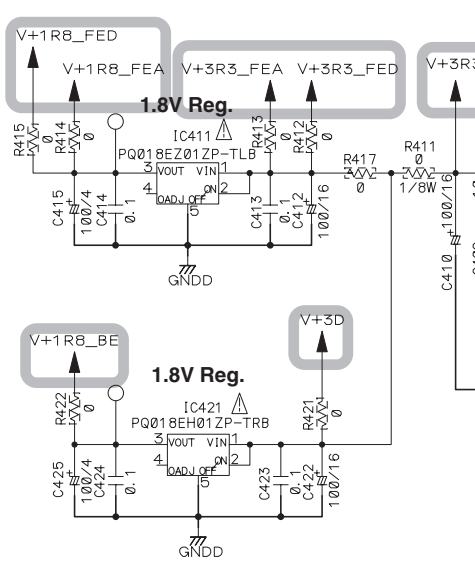
To CN902

(to page1/3) BE 1/3

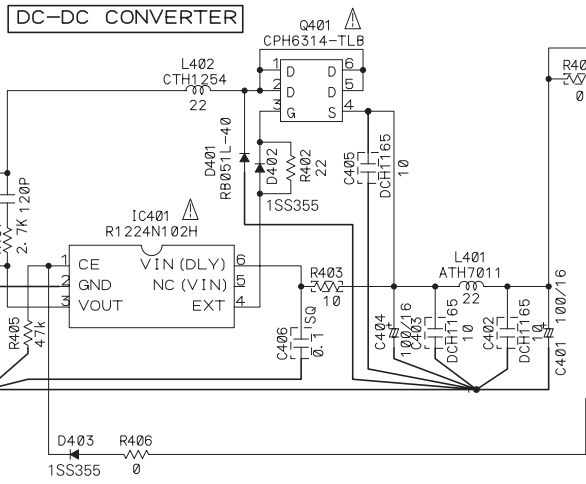
A **B** **C** **D**

SCHEMATIC DIAGRAMS-6 DVD MAIN CIRCUIT PC BOARD (3/3) DV-SP55

1



2



2/3

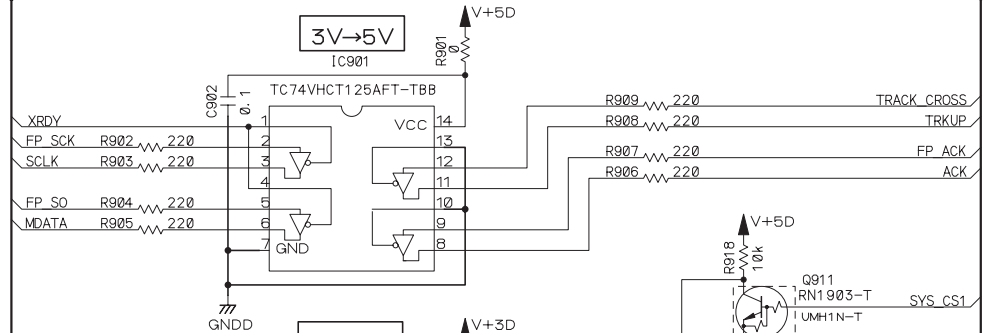
AUDIO
SYS

(to page2/3) (D)

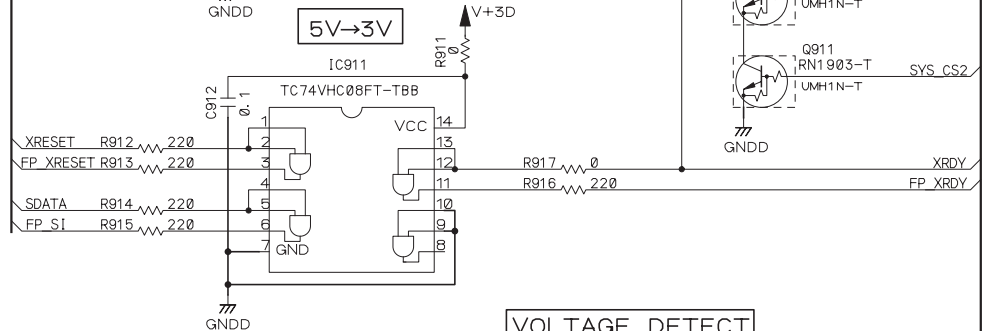
(D)

(D)

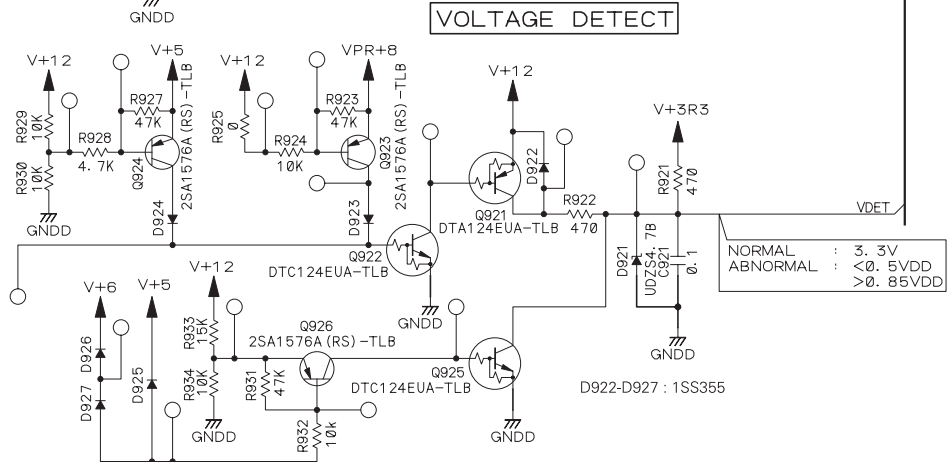
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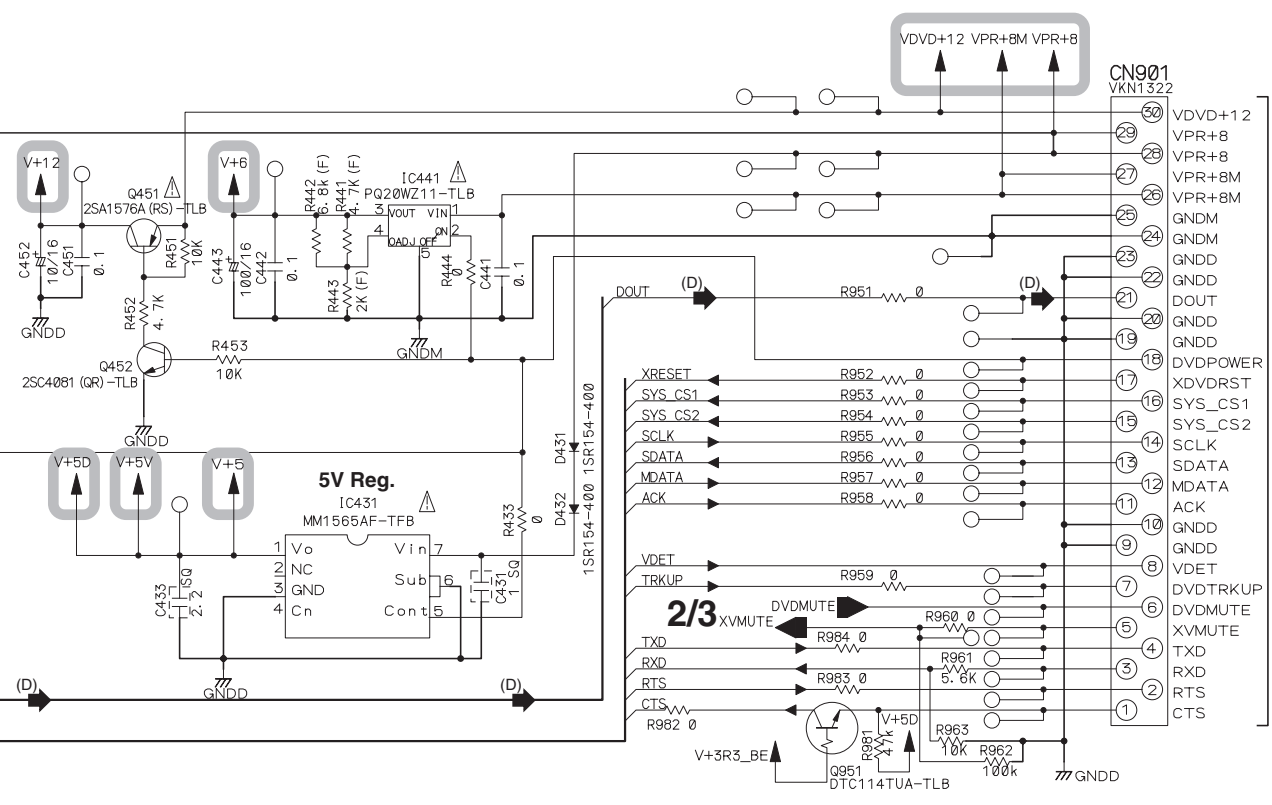
4



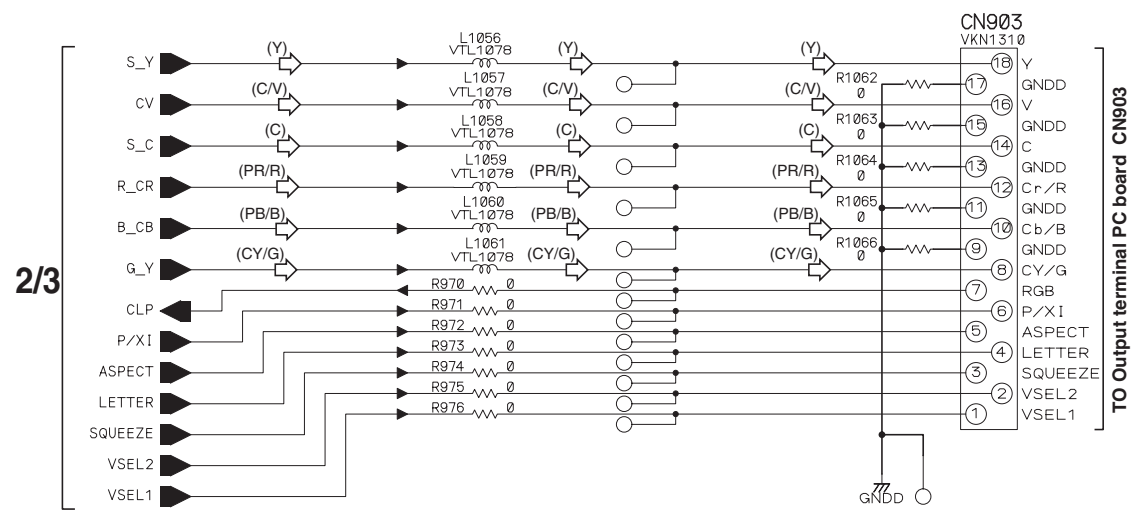
5



E F G H



TO Output terminal PC board CN901



TO Output terminal PC board CN903

- (C/V) ↘ : VIDEO SIGNAL ROUTE (C/V)
- (Y) ↘ : S VIDEO SIGNAL ROUTE (Y)
- (C) ↘ : S VIDEO SIGNAL ROUTE (Y)
- (PR/R) ↘ : VIDEO SIGNAL ROUTE (PR/R)
- (CY/G) ↘ : VIDEO SIGNAL ROUTE (CY/G)
- (PB/B) ↘ : VIDEO SIGNAL ROUTE (PB/B)
- (D) ↘ : AUDIO SIGNAL ROUTE (DIGITAL)

SCHEMATIC DIAGRAMS-7

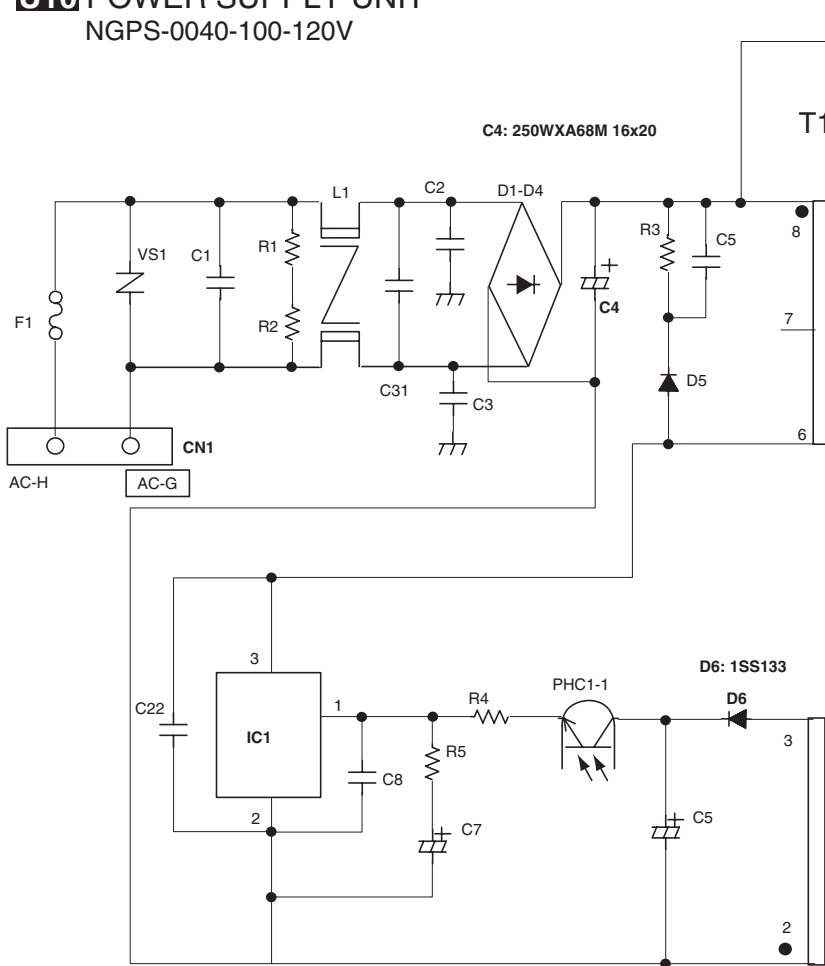
U10 POWER SUPPLY UNIT
NGPS-0040-100-120V

1

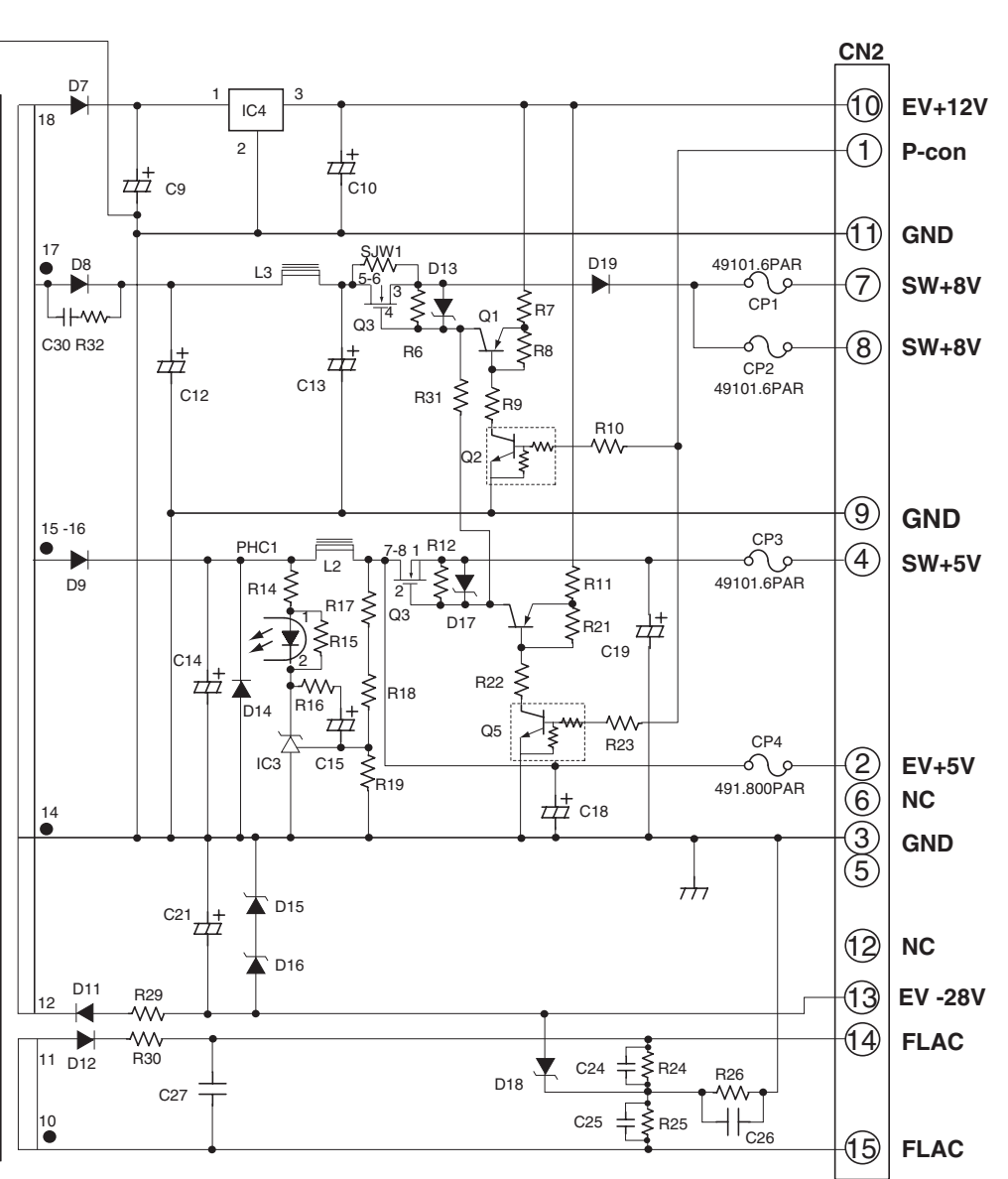
2

3

4



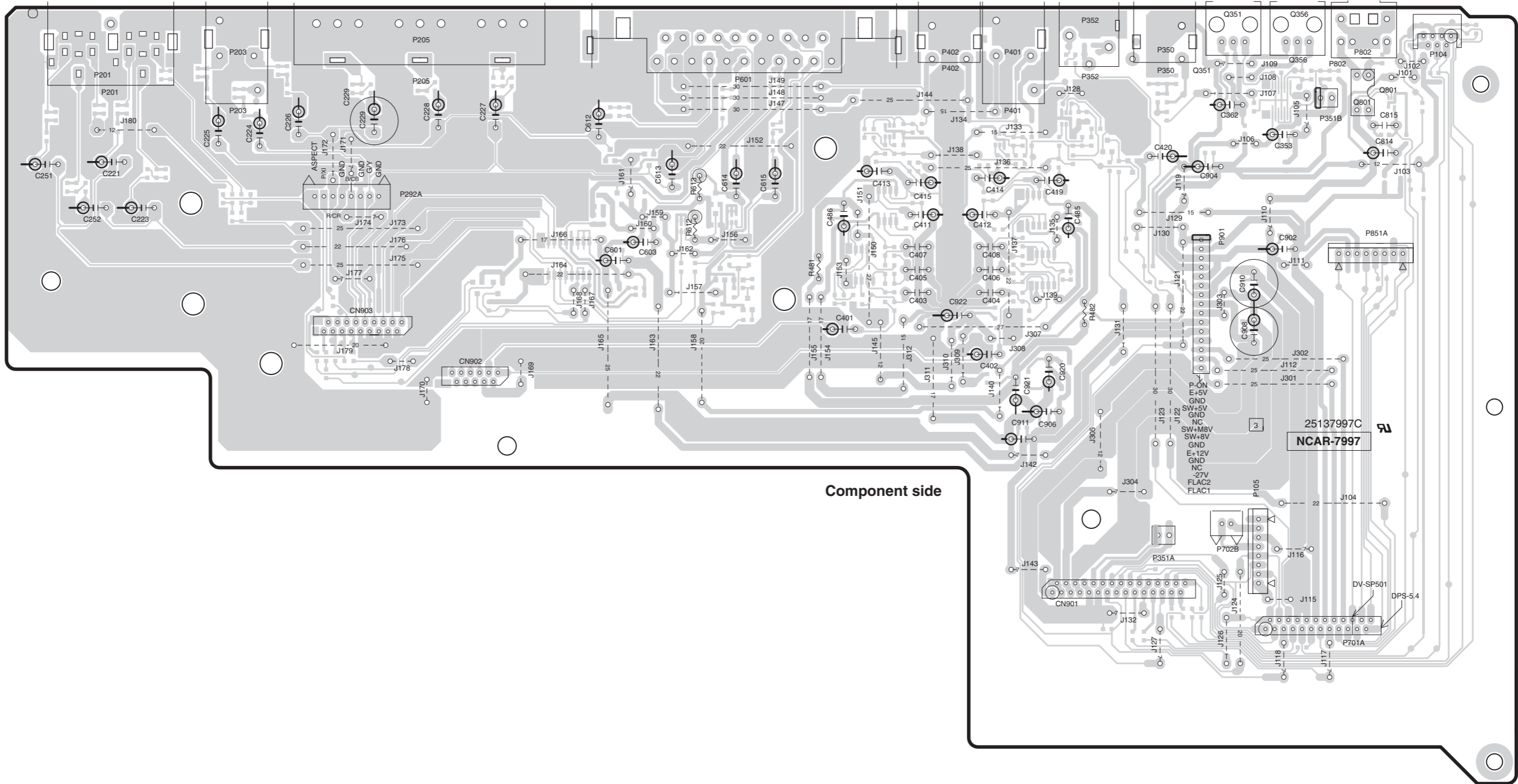
NOTE: DC 5v is added to a P-ON terminal, a voltage check can be performed only in a completion board.



PRINTED CIRCUIT BOARD VIEWS-1

U01 AUDIO/VIDEO OUTPUT TERMINAL PC BOARD NAAR-7997

1
2
3
4
5



Component side

25137997C
NCAR-7997



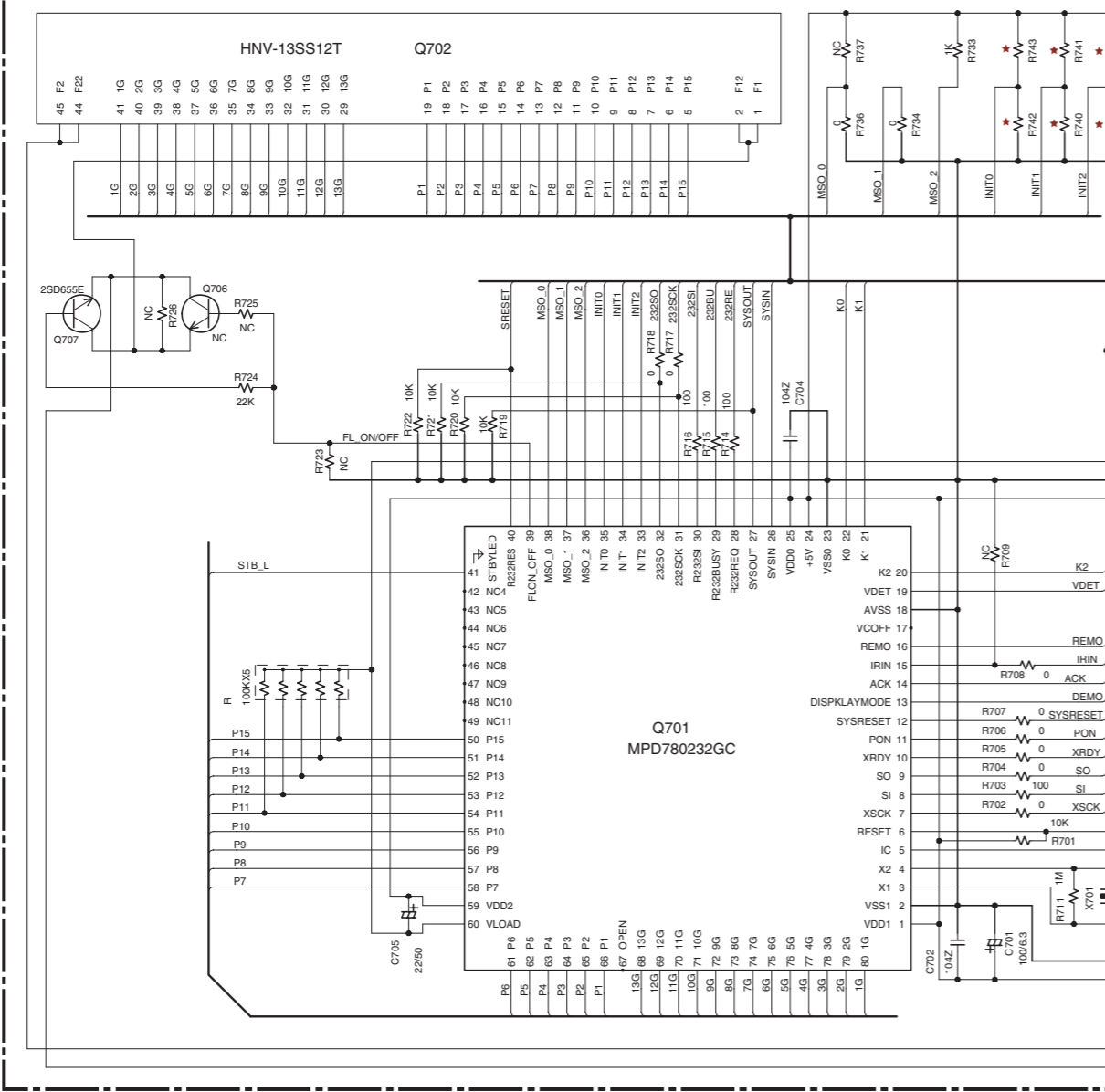
DV-SP501
DPS-5.4

SCHEMATIC DIAGRAMS-2

1

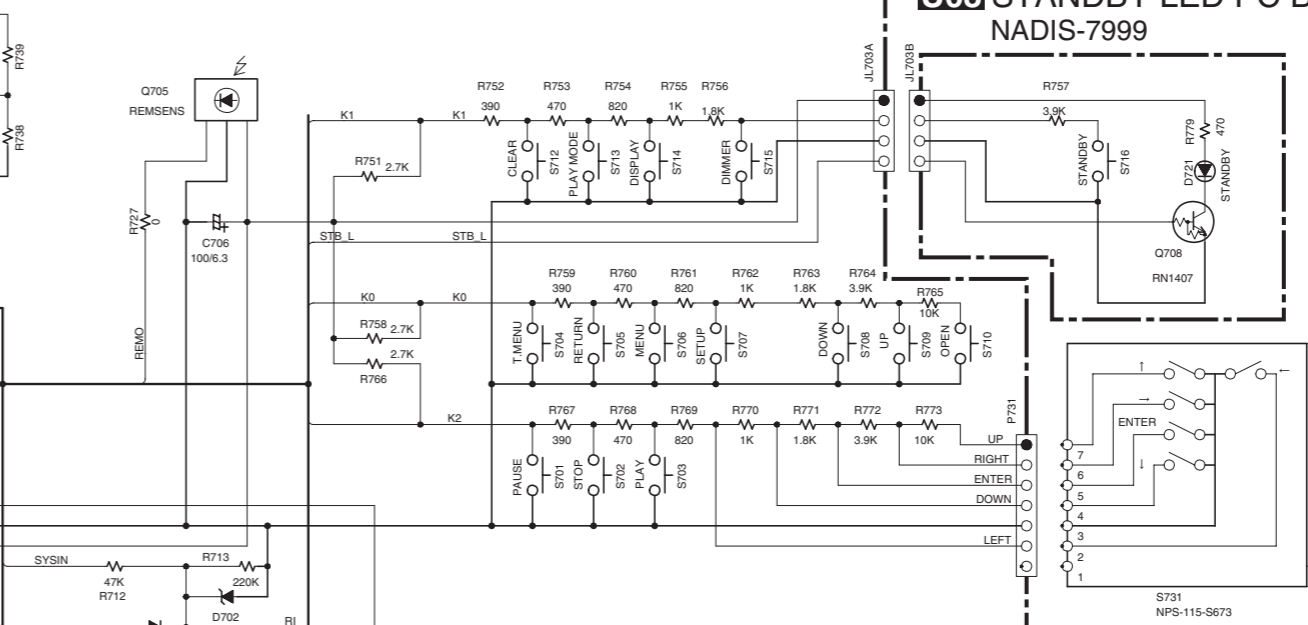
NCDIS-7998
U02 FRONT DISPLAY PC BOARD
NADIS-7998

Region	MJJ	MDD
R738	0	0
R739	NC	NC
R740	0	0
R741	NC	NC
R742	0	NC
R743	NC	1K



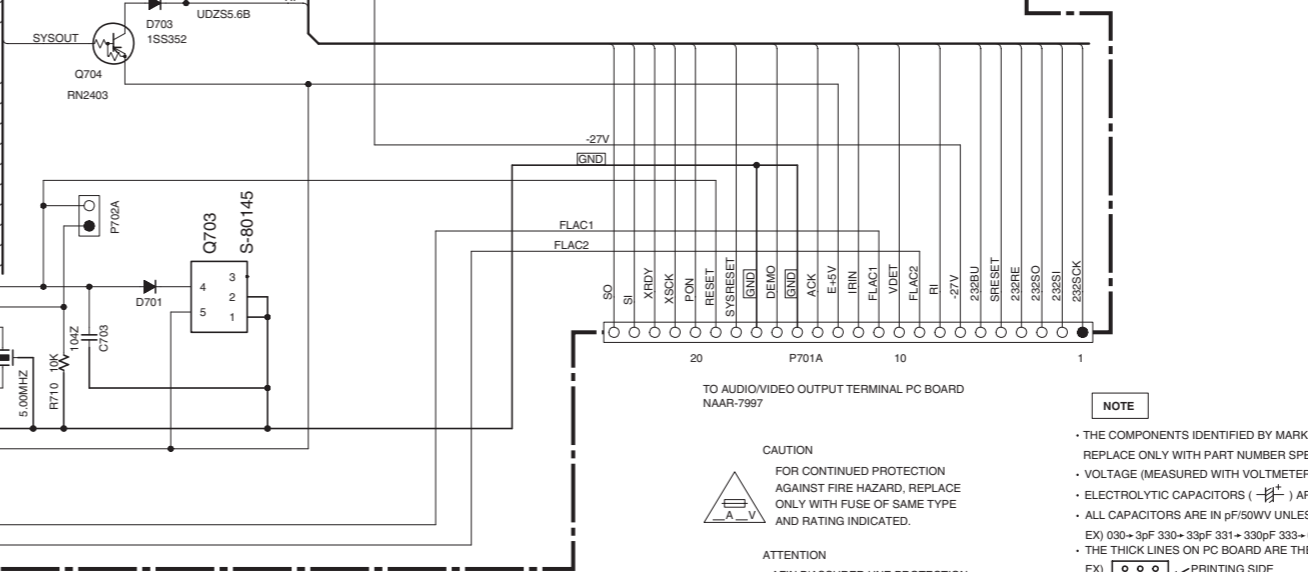
2

U03 STANDBY LED PC BOARD
NADIS-7999



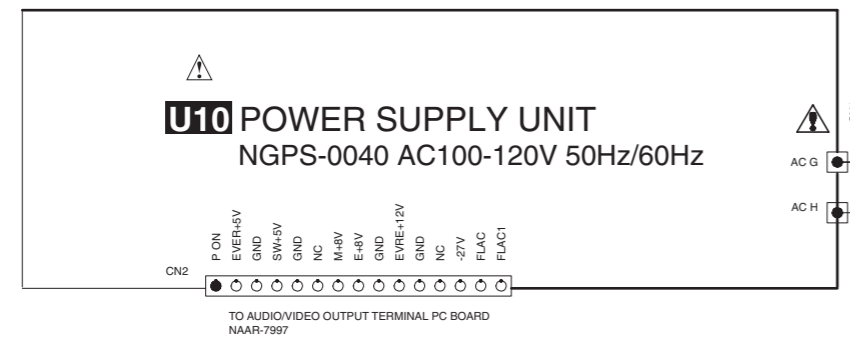
3

U05 INLET TERMINAL PC BOARD
NAPS-8002



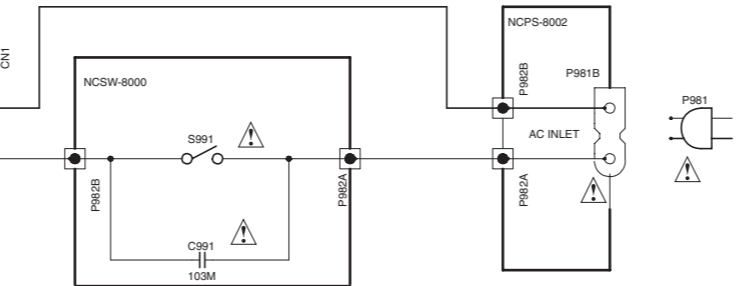
4

U10 POWER SUPPLY UNIT
NGPS-0040 AC100-120V 50Hz/60Hz



5

U04 POWER SWITCH PC BOARD
NASW-8000



TO AUDIO/VIDEO OUTPUT TERMINAL PC BOARD
NAAR-7997

CAUTION
FOR CONTINUED PROTECTION
AGAINST FIRE HAZARD, REPLACE
ONLY WITH FUSE OF SAME TYPE
AND RATING INDICATED.

ATTENTION
AFIN D'ASSURER UNE PROTECTION
PERMANENTE CONTRE LES RISQUES
D'INCENDIE, REMPLACER UNIQUEMENT
PAR UN FUSIBLE DE MEME TYPE
ET CALIBRATION COMME INDIQUE.

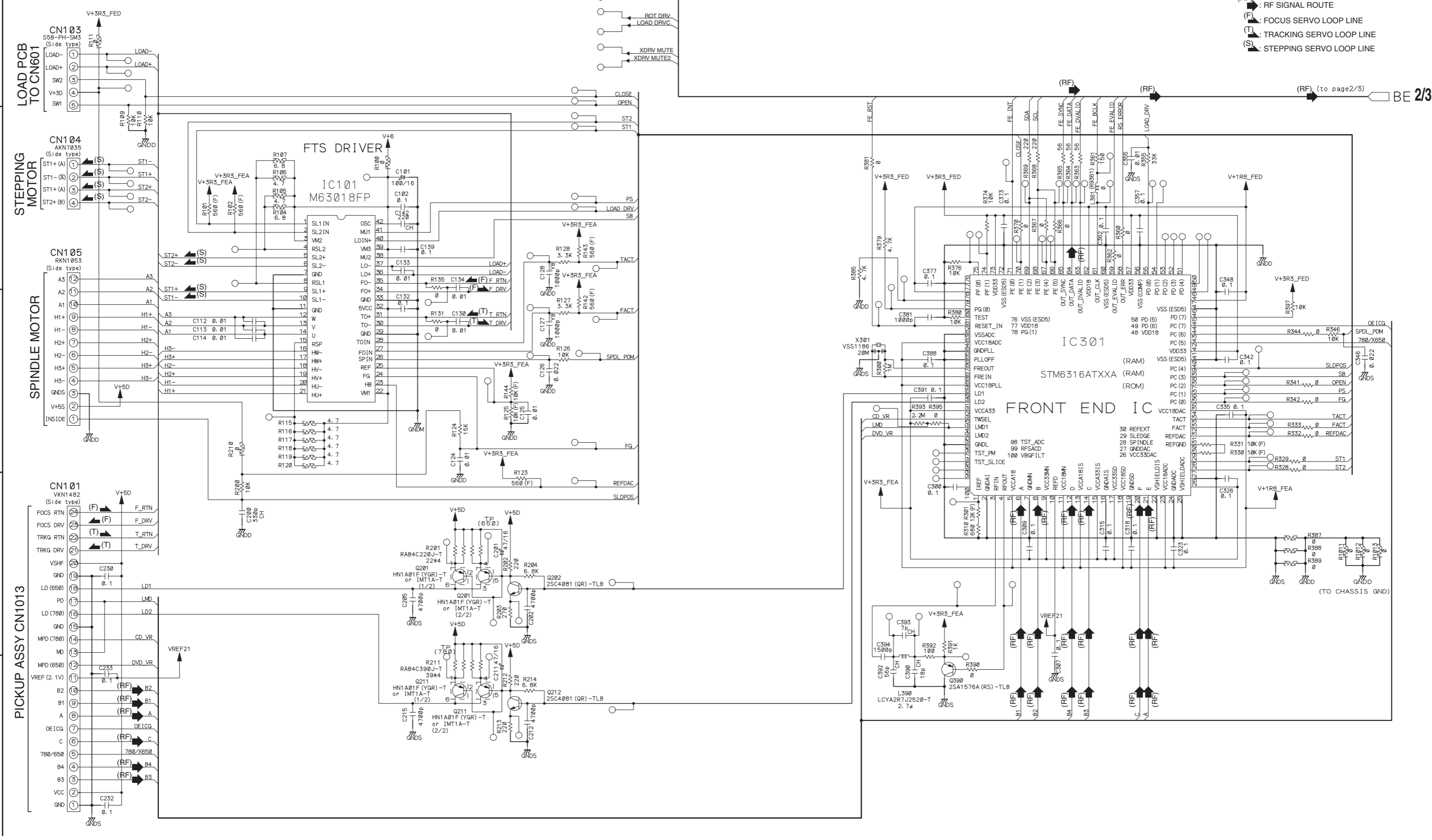
THIS SYMBOL LOCATED NEAR THE FUSE INDICATES
THAT THE FUSE USED IS SLOW OPERATING TYPE
FOR CONTINUED PROTECTION AGAINST FIRE
HAZARD, REPLACE WITH SAME TYPE FUSE. FOR FUSE
RATING REFER TO THE MARKING ADJACENT TO THE SYMBOL.

CE SYMBOLE INDIQUE QUE LE FUSIBLE UTILISE EST
E LENT. POUR UNE PROTECTION PERMANENTE, UTILISER
QUE DES FUSIBLES DE MEME TYPE. CE DERNIER EST
INDIQUE LA QU LE PRESENT SYMBOLE EST APOSE.

- NOTE**
- THE COMPONENTS IDENTIFIED BY MARK ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH PART NUMBER SPECIFIED.
 - VOLTAGE (MEASURED WITH VOLTMETER) IS DC VOLTAGE. (NO INPUT SIGNAL)
 - ELECTROLYTIC CAPACITORS () ARE IN uF/WV.
 - ALL CAPACITORS ARE IN pF/50WV UNLESS OTHERWISE NOTED.
 - EX) 030 = 3pF 330 = 33pF 331 = 330pF 333 = 0.033uF
 - THE THICK LINES ON PC BOARD ARE THE PRINTING SIDE OF THE PARTS.
 - EX) PRINTING SIDE
 - CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.

SCHEMATIC DIAGRAMS-4 DVD MAIN CIRCUIT PC BOARD (1/3) DV-SP55

1
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4
5



SCHEMATIC DIAGRAMS-5 DVD MAIN CIRCUIT PC BOARD (2/3) DV-SP55

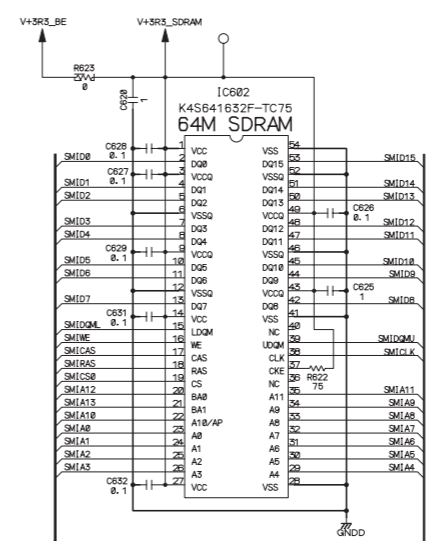
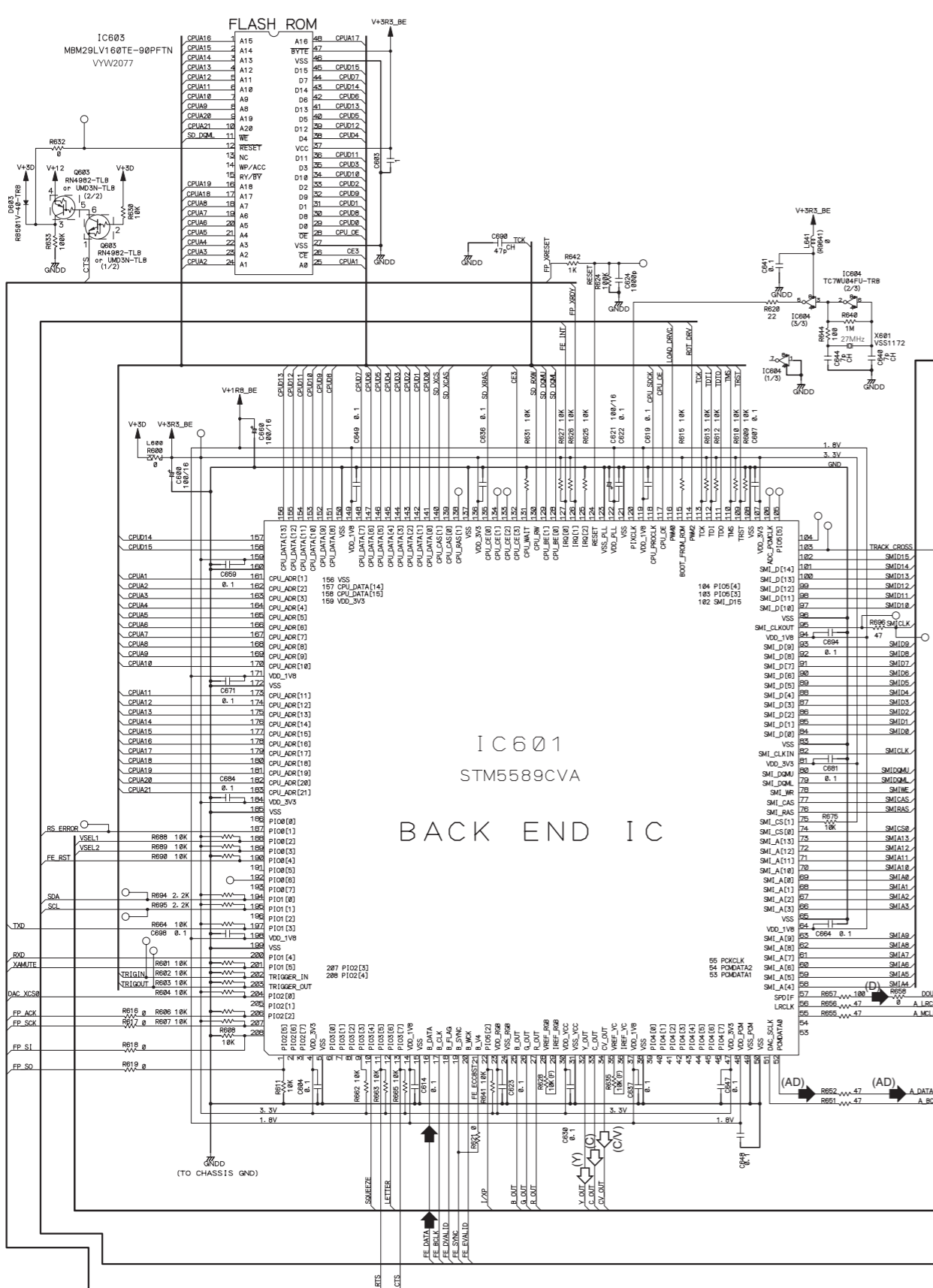
1

2

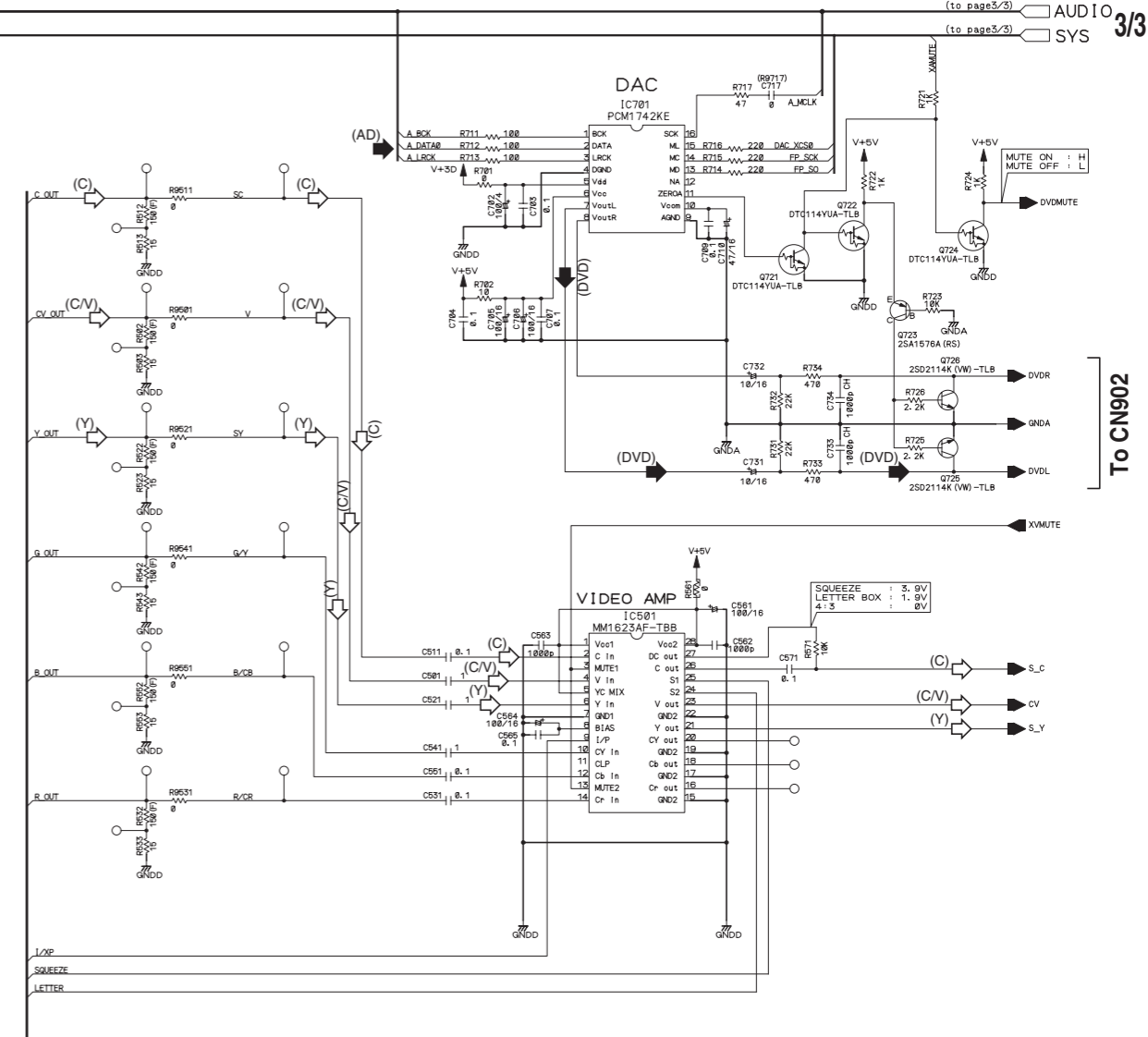
3

4

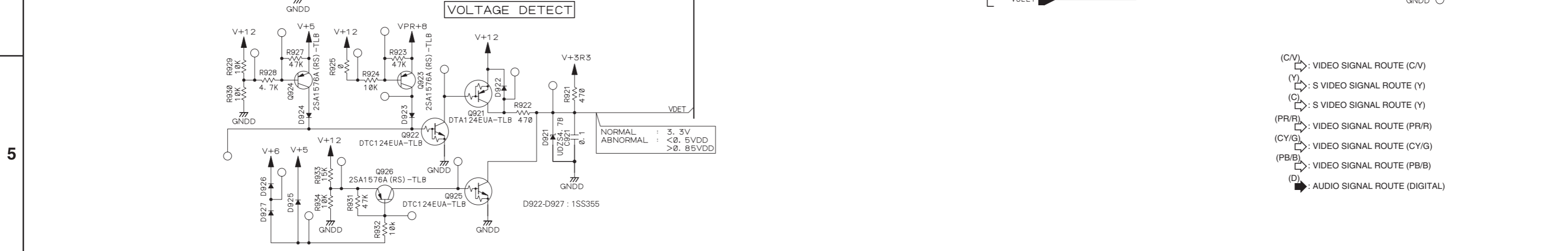
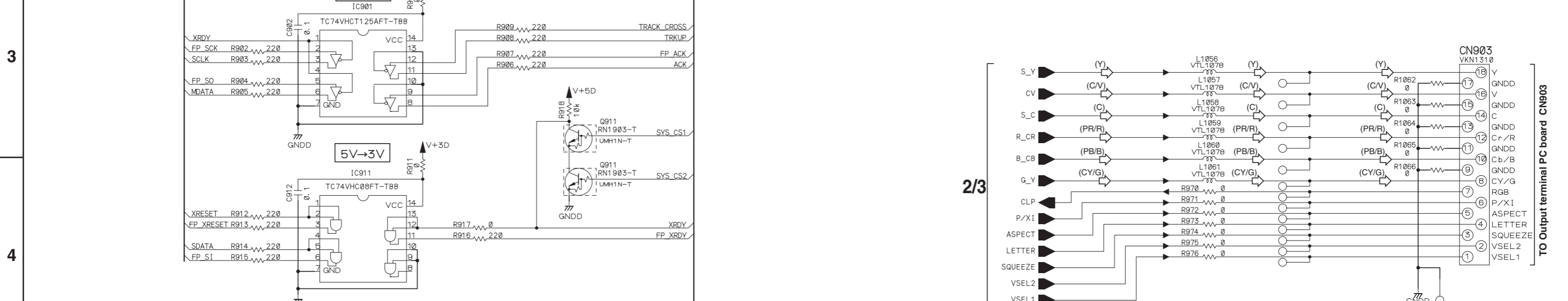
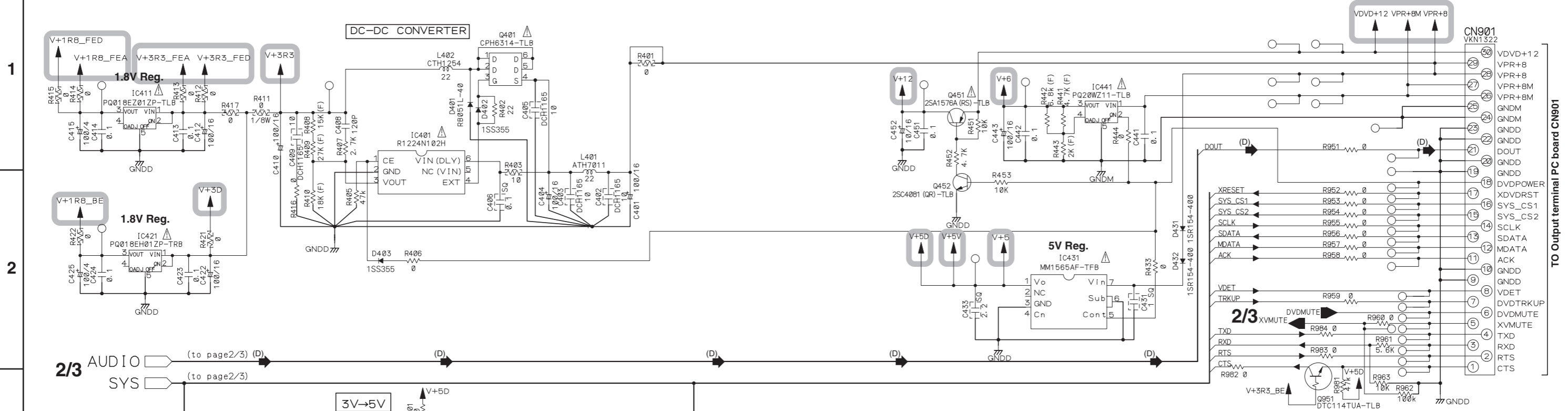
5



- (F) : FE_DATA SIGNAL ROUTE
- (RF) : RF SIGNAL ROUTE
- (CV) : VIDEO SIGNAL ROUTE (C/V)
- (Y) : S VIDEO SIGNAL ROUTE (Y)
- (C) : S VIDEO SIGNAL ROUTE (C)
- (AD) : AUDIO DATA SIGNAL ROUTE
- (D) : AUDIO SIGNAL ROUTE (DIGITAL)
- (DVD) : AUDIO SIGNAL ROUTE (DVD_L ch)

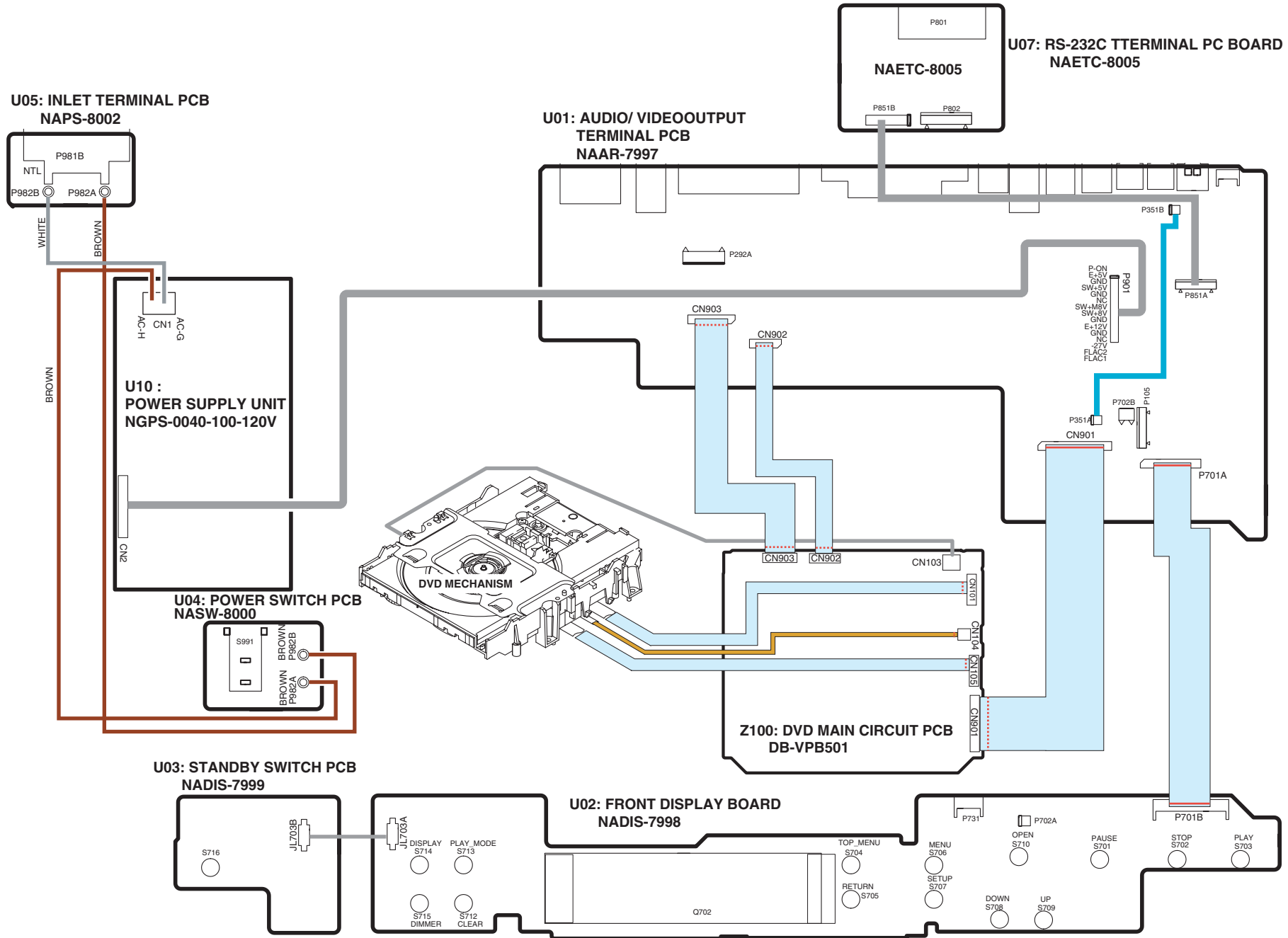


SCHEMATIC DIAGRAMS-6 DVD MAIN CIRCUIT PC BOARD (3/3) DV-SP55



- (C/V) : VIDEO SIGNAL ROUTE (C/V)
- (Y) : S VIDEO SIGNAL ROUTE (Y)
- (C) : S VIDEO SIGNAL ROUTE (Y)
- (PR/R) : VIDEO SIGNAL ROUTE (PR/R)
- (CY/G) : VIDEO SIGNAL ROUTE (CY/G)
- (PB/B) : VIDEO SIGNAL ROUTE (PB/B)
- (D) : AUDIO SIGNAL ROUTE (DIGITAL)

PC BOARD CONNECTION DIAGRAM



A

B

C

D

PRINTED CIRCUIT BOARD VIEWS-2

U01 AUDIO/VIDEO OUTPUT TERMINAL PC BOARD NAAR-7997

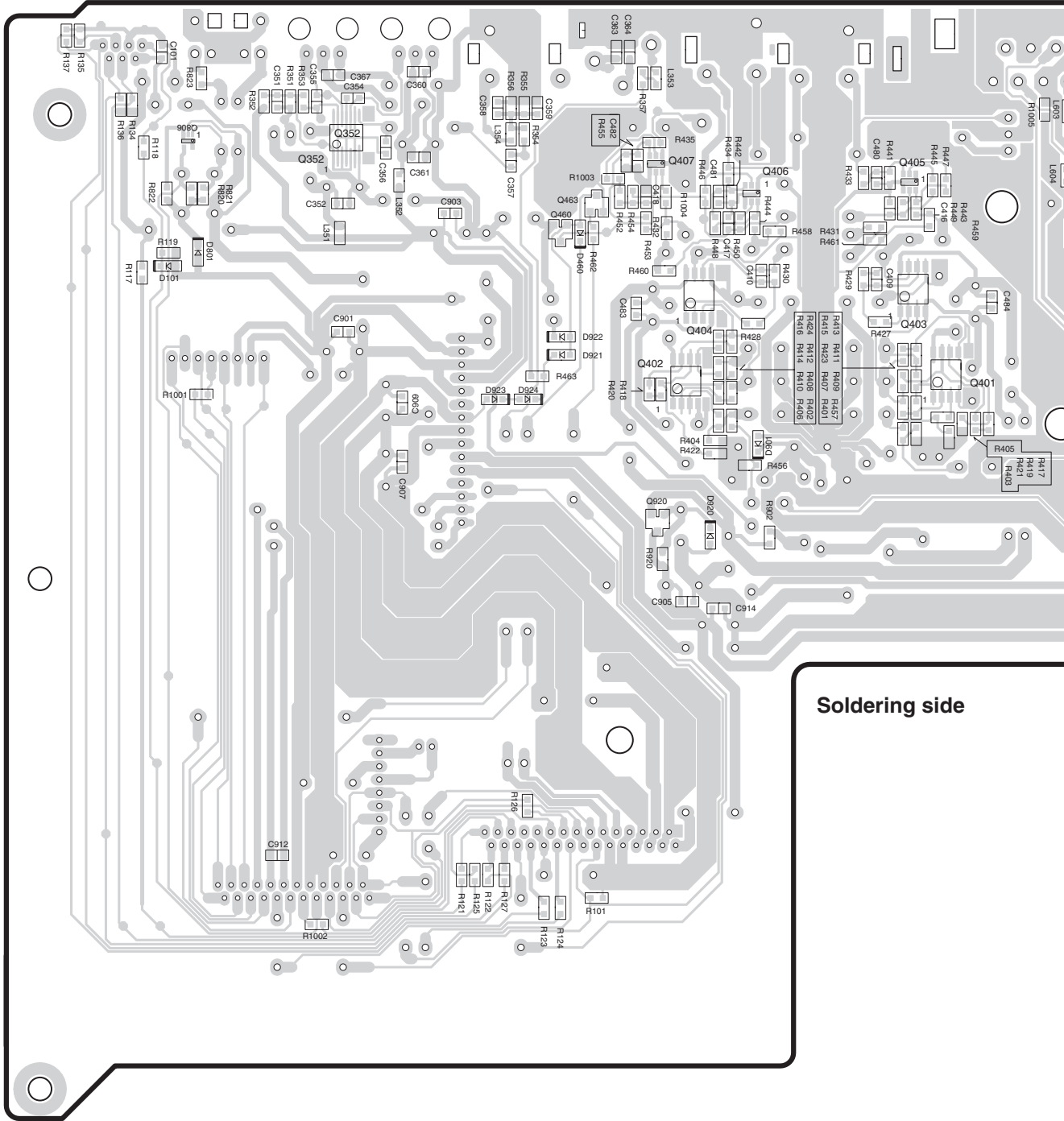
1

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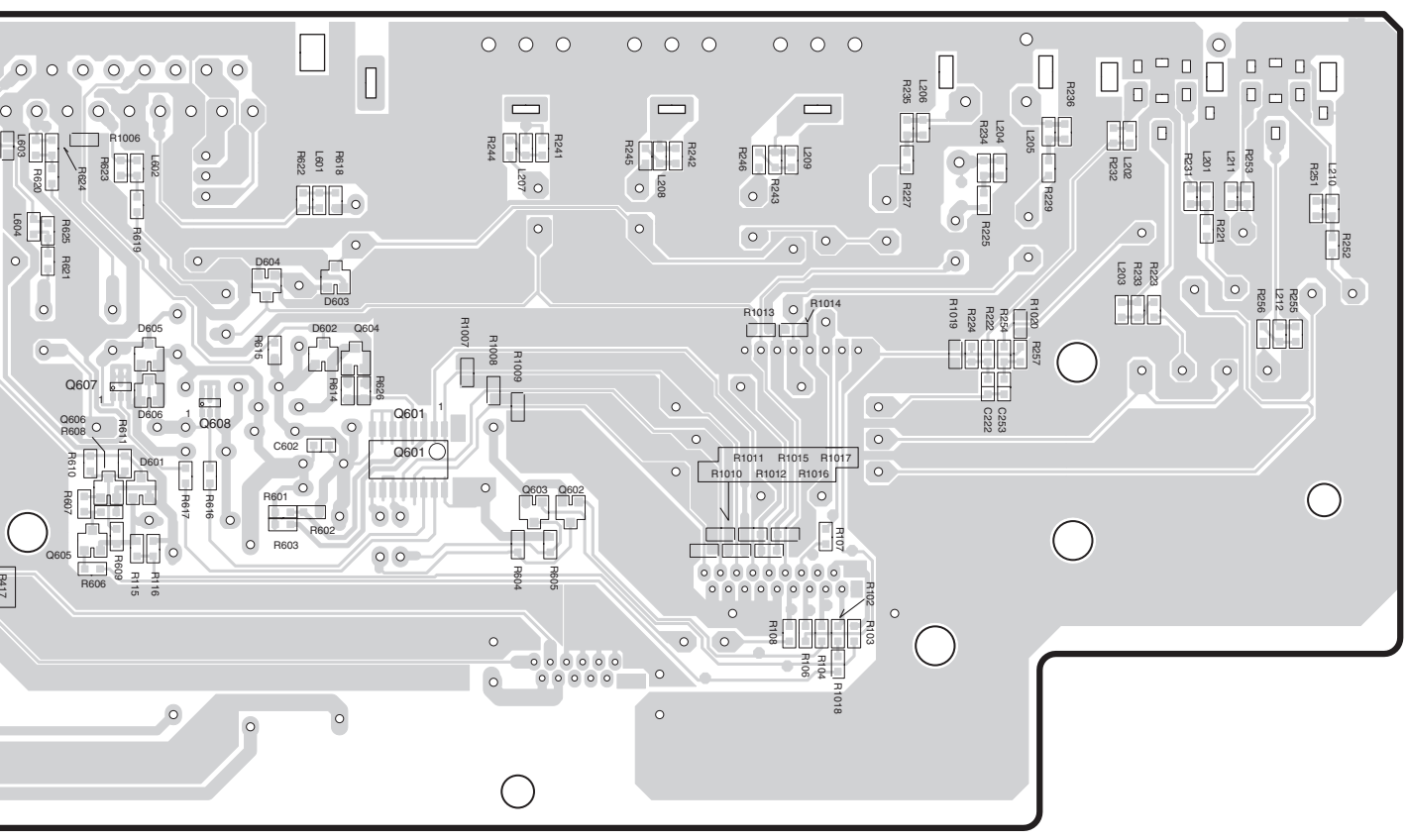
Soldering side

E

F

G

H



A

B

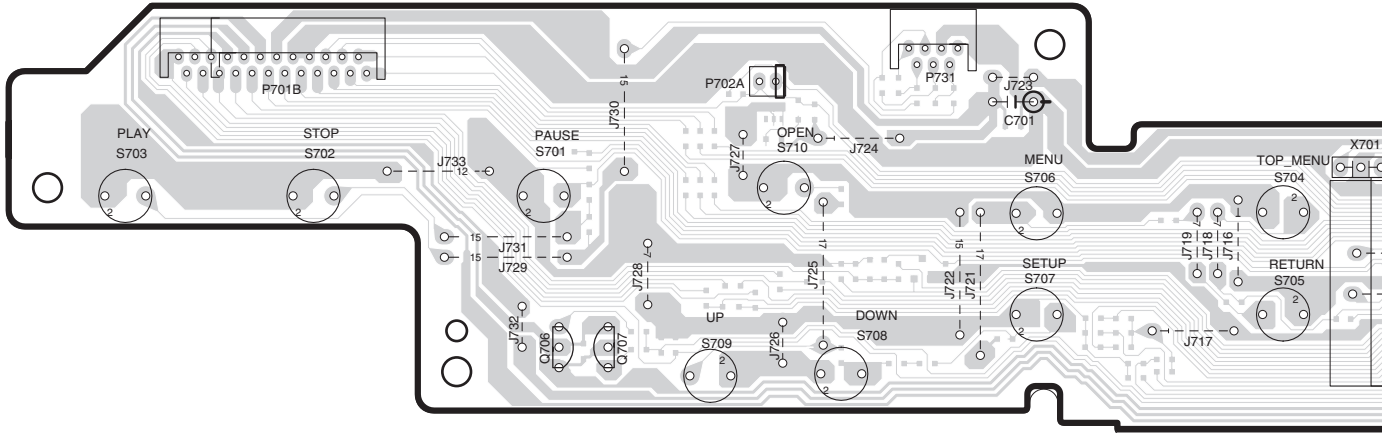
C

D

PRINTED CIRCUIT BOARD VIEWS-3

U02 FRONT DISPLAY PC BOARD NADIS-7998

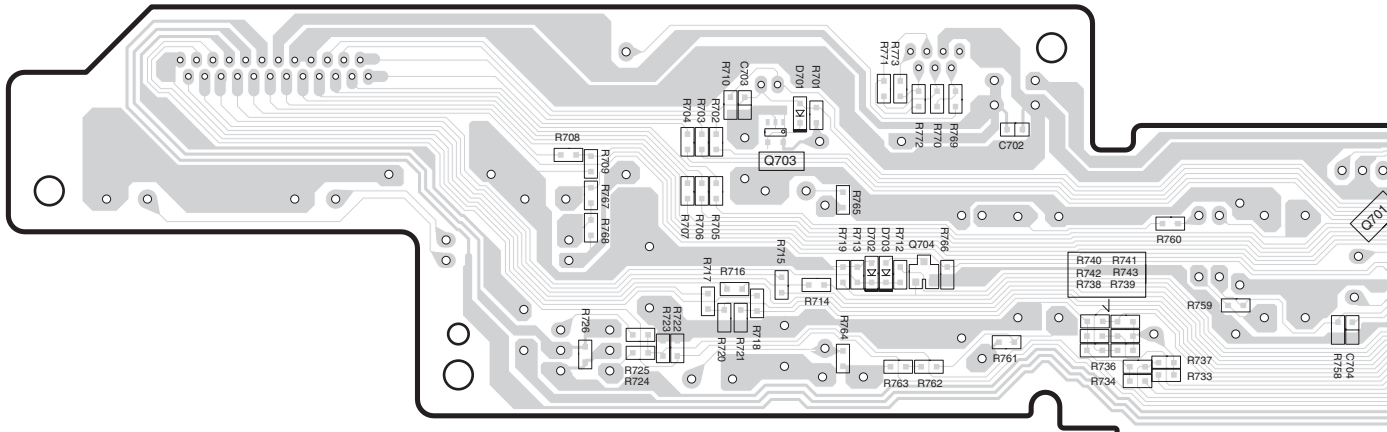
1



2

3

4



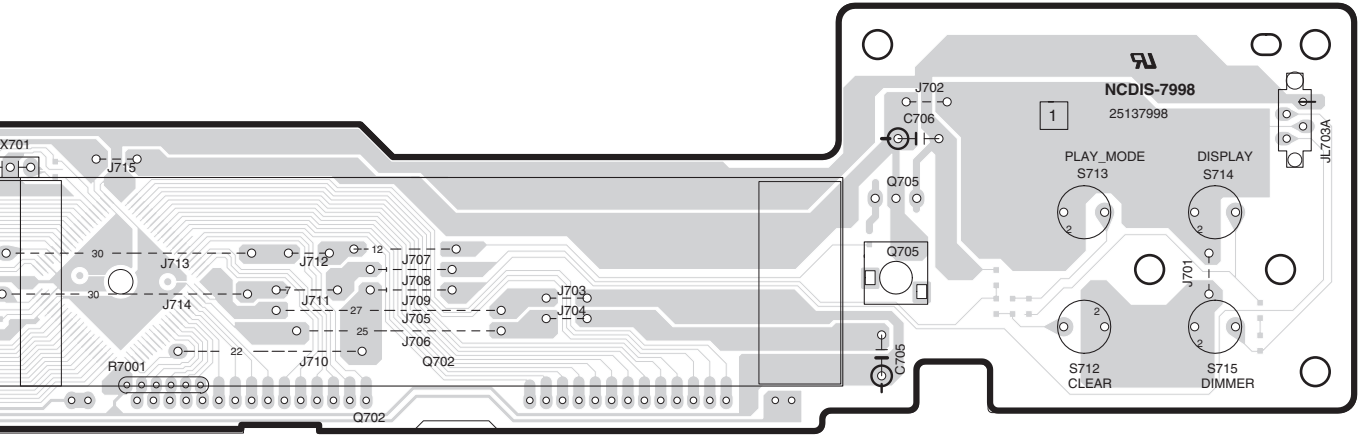
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E

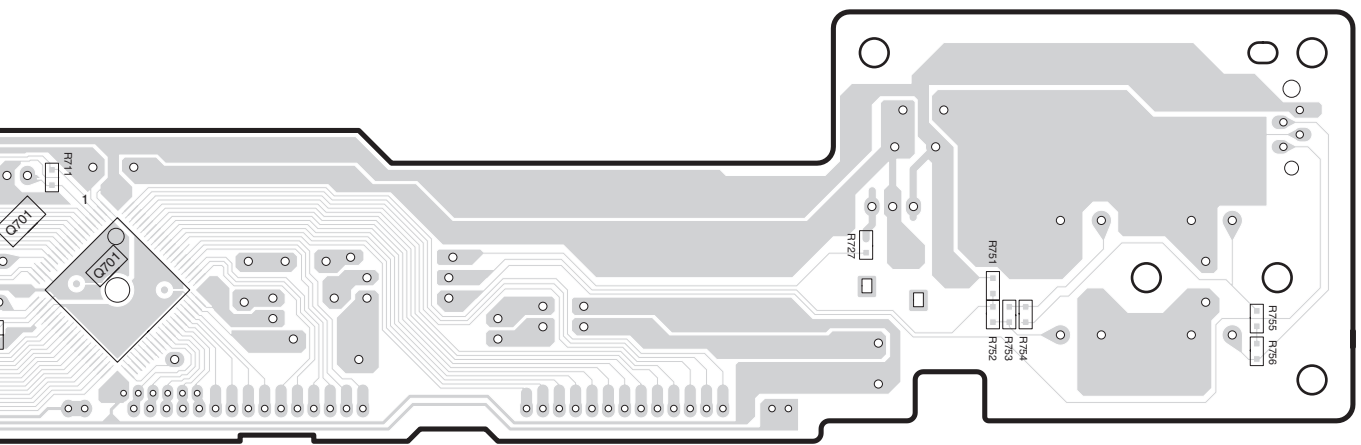
F

G

H



Component side



Soldering side

A

B

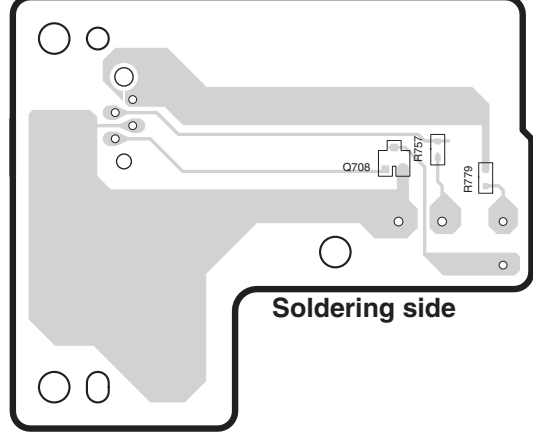
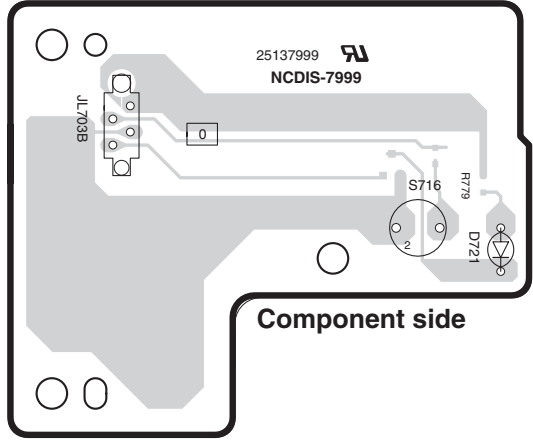
C

D

PRINTED CIRCUIT BOARD VIEWS-4

1

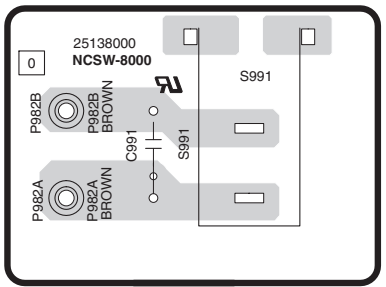
U03 STANDBY LED PC BOARD NADIS-7999



2

3

U04 POWER SWITCH PC BOARD NASW-8000



4

5

A

B

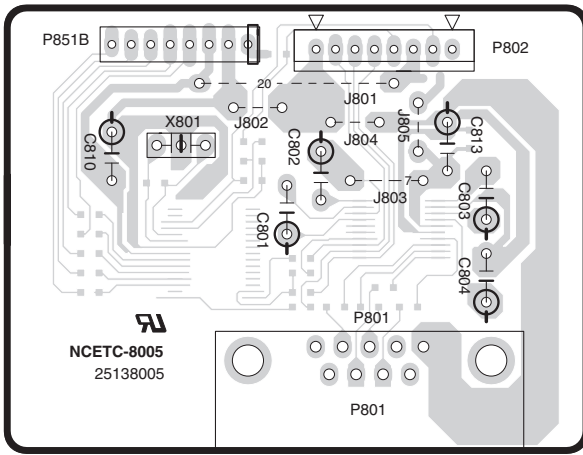
C

D

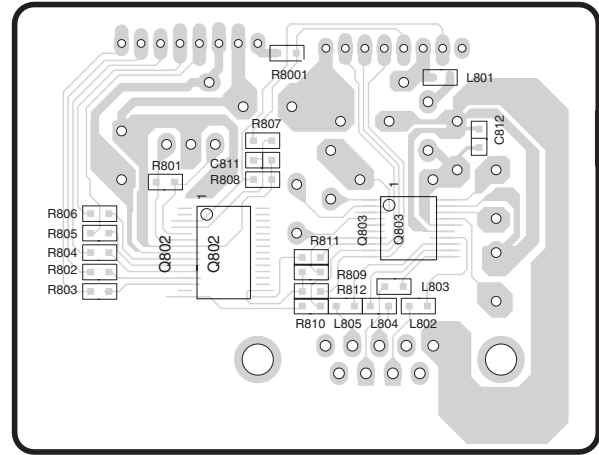
PRINTED CIRCUIT BOARD VIEWS-5

1

U07 RS-232C TERMINAL PC BOARD
NAETC-8005



Component side

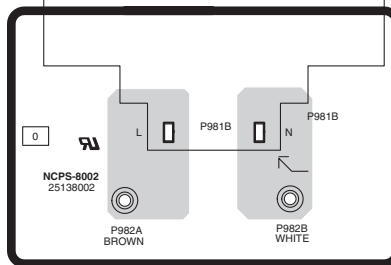


Soldering side

2

3

U05 INLET TERMINAL PC BOARD
NAPS-8002



Soldering side

4

5

A

B

C

D

PRINTED CIRCUIT BOARD VIEWS-6 DVD MAIN CIRCUIT PC BOARD (DV-SP55)

1 **SIDE A**

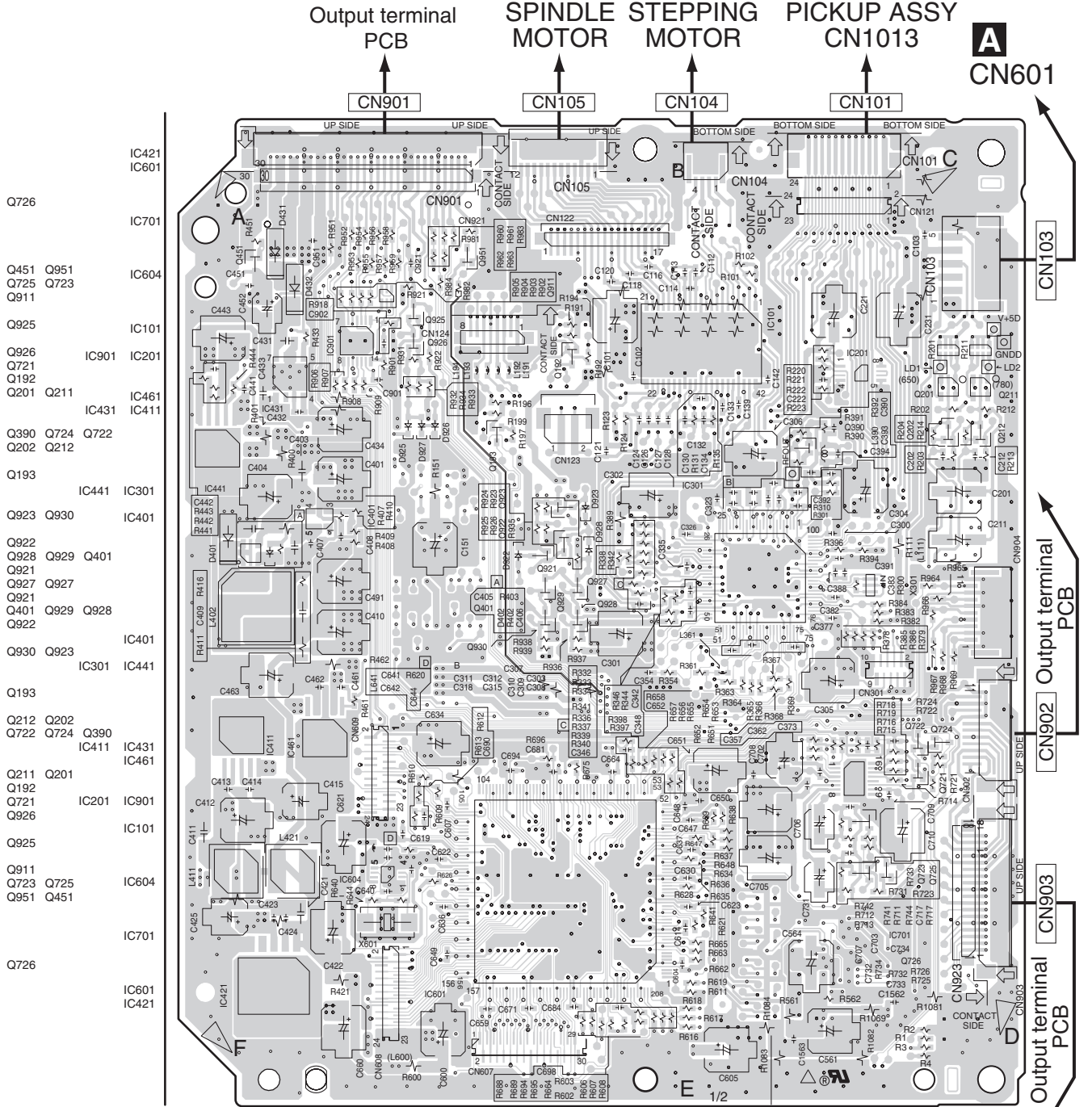
SIDE A

2

3

4

5



(ANP7463-B)

A

B

C

D

PRINTED CIRCUIT BOARD VIEWS-7
DVD MAIN CIRCUIT PC BOARD (DV-SP55)

SIDE B

SIDE B

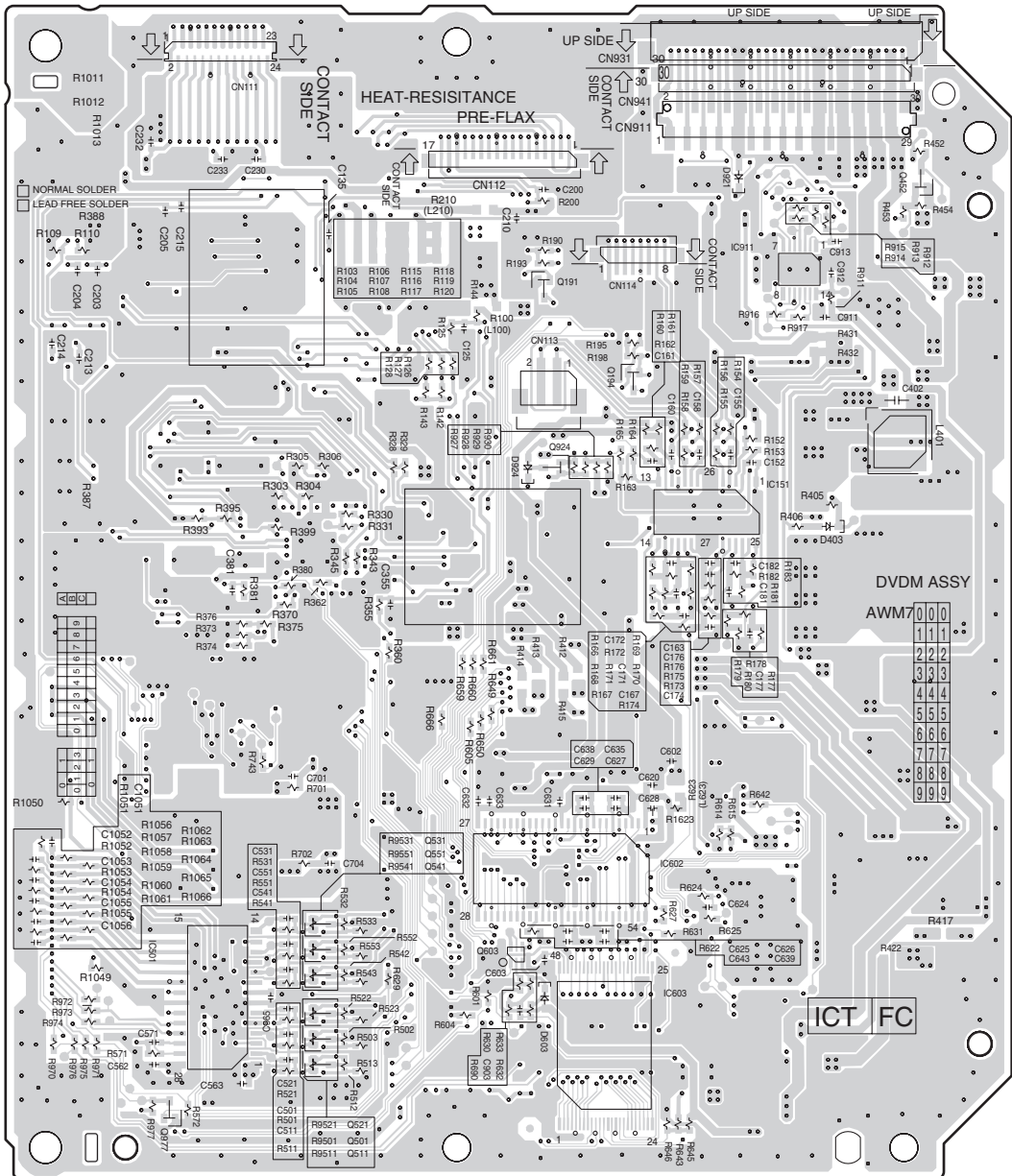
1

2

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4

5



- IC603
- Q603 Q452 IC501
- Q541 IC602 IC911 Q551 Q531 Q191
- Q194
- Q924
- IC151
- IC151 AWM7

0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
- Q194
- Q191 Q531 Q551 Q541 IC911 IC602
- IC501 Q452 Q603
- IC603
- Q977 Q521 Q501 Q511

A

B

C

D

PRINTED CIRCUIT BOARD VIEWS-8

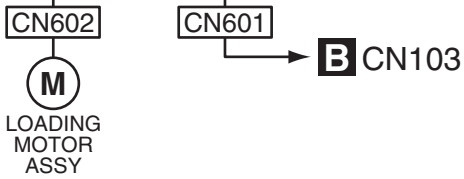
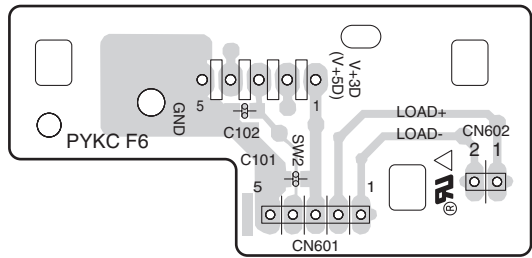
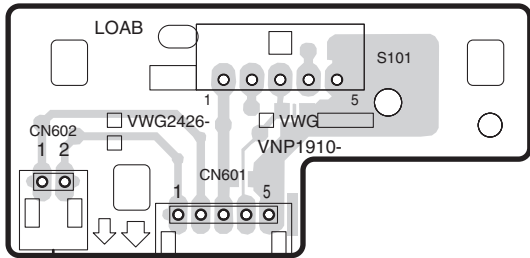
1

LOAD ASSY

SIDE A

SIDE B

2



3

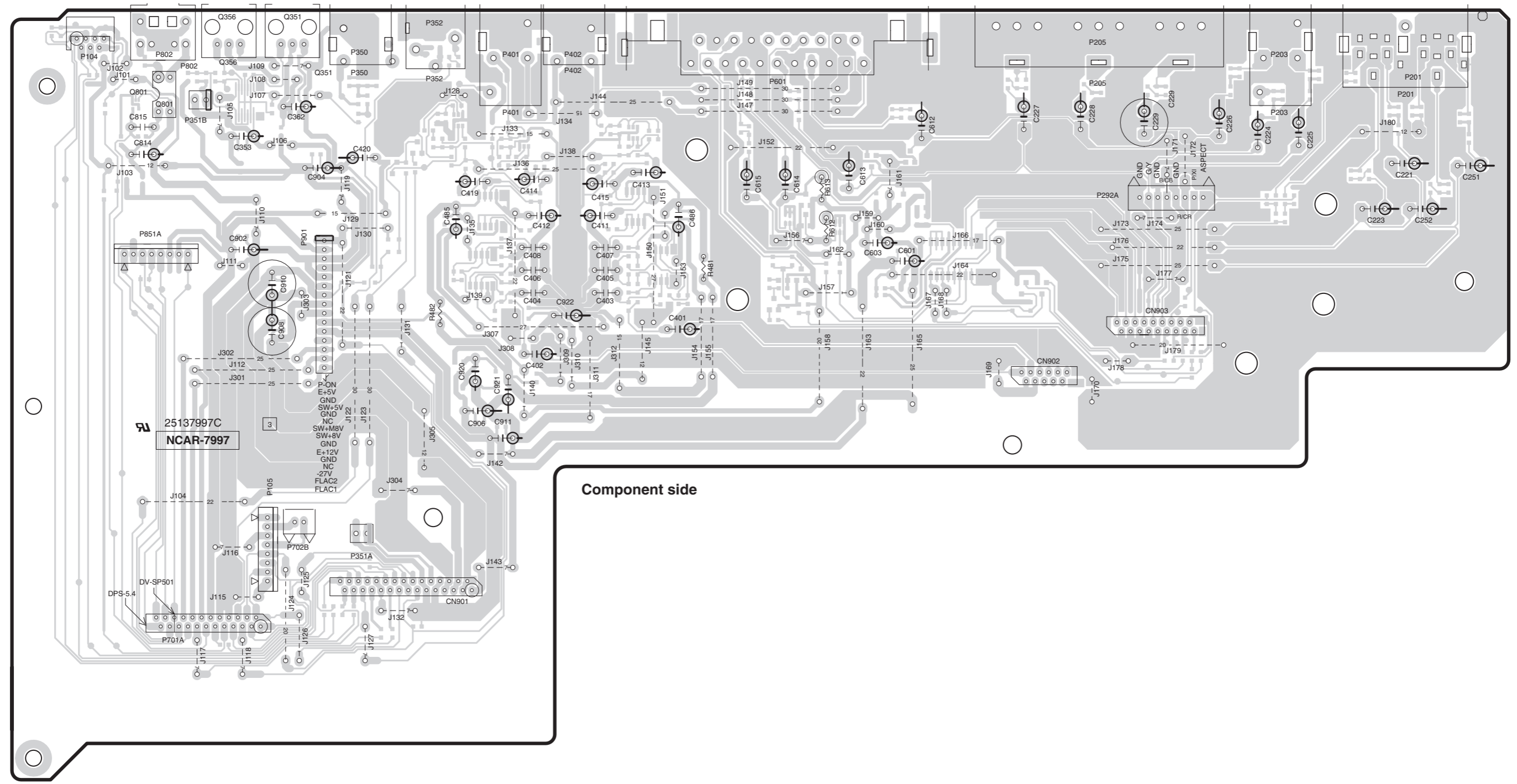
4

5

A B C D E F G H

PRINTED CIRCUIT BOARD VIEWS-1
U01 AUDIO/VIDEO OUTPUT TERMINAL PC BOARD NAAR-7997

1
2
3
4
5



Component side

A B C D E F G H

PRINTED CIRCUIT BOARD VIEWS-2

U01 AUDIO/VIDEO OUTPUT TERMINAL PC BOARD NAAR-7997

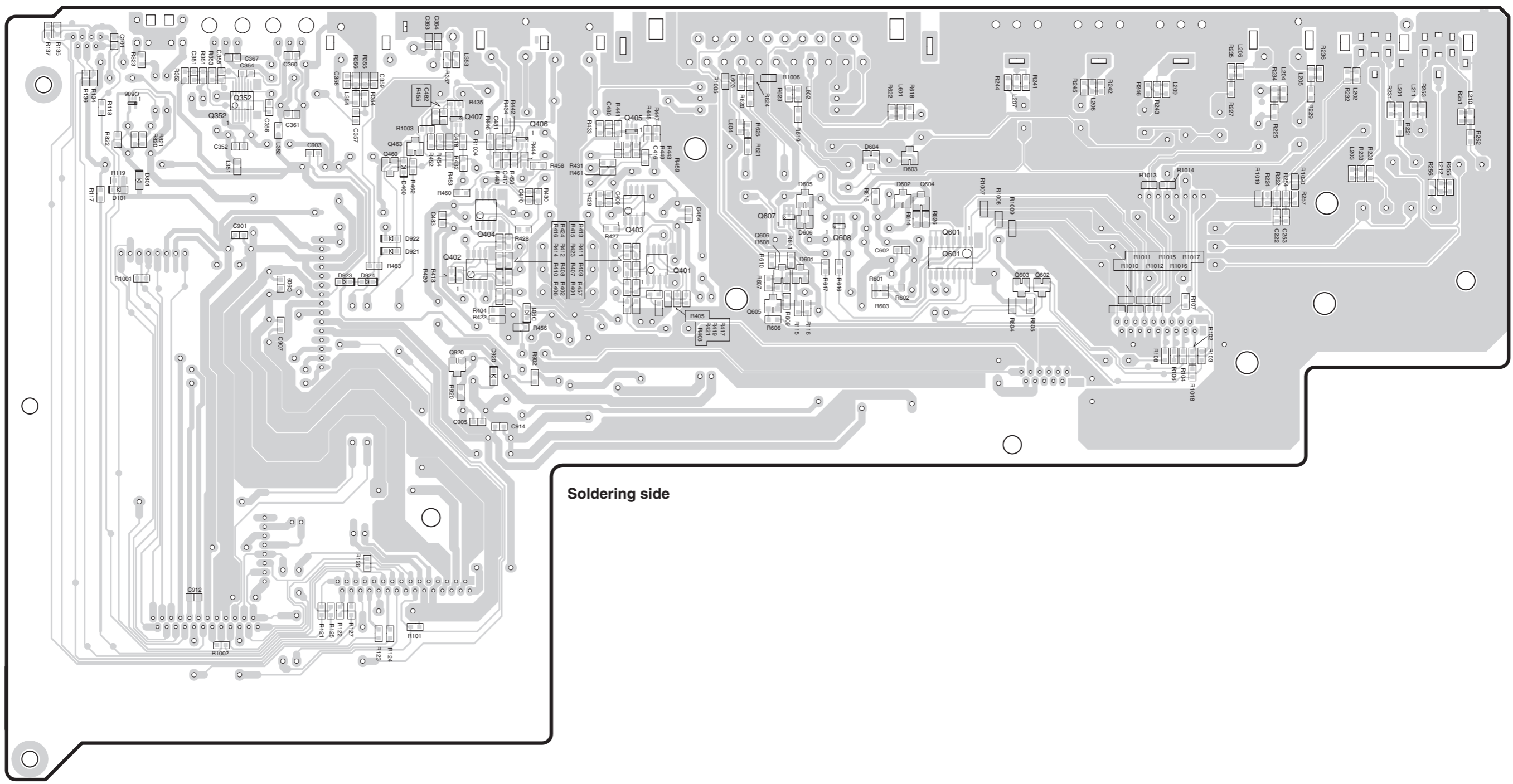
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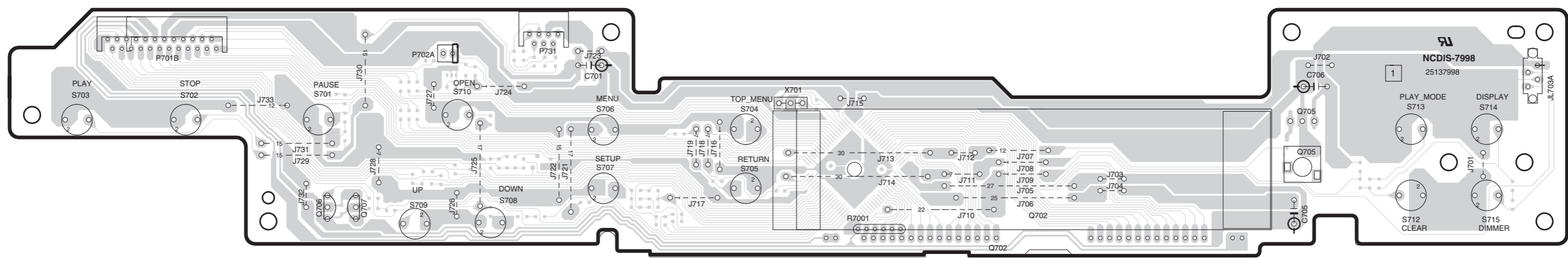
Soldering side

A B C D E F G H

PRINTED CIRCUIT BOARD VIEWS-3

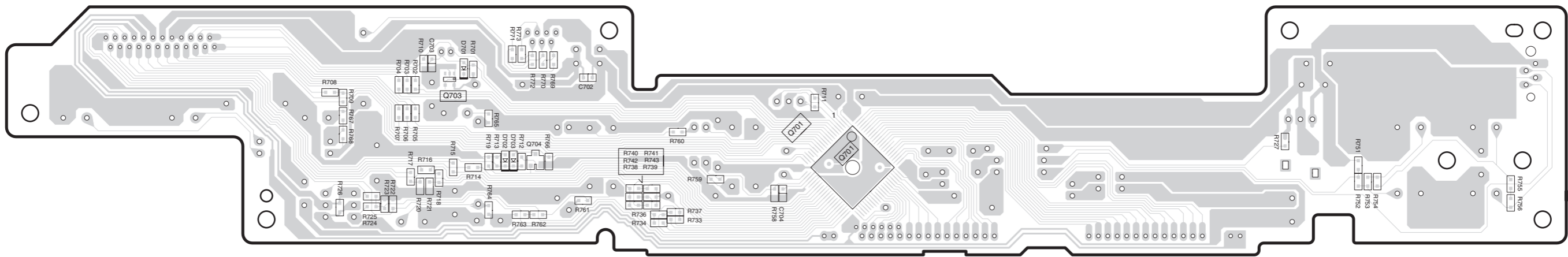
U02 FRONT DISPLAY PC BOARD NADIS-7998

1



Component side

3



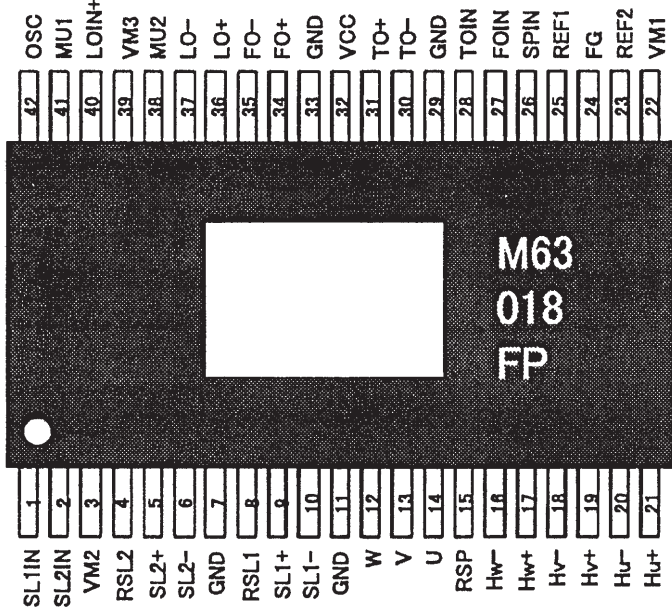
Soldering side

5

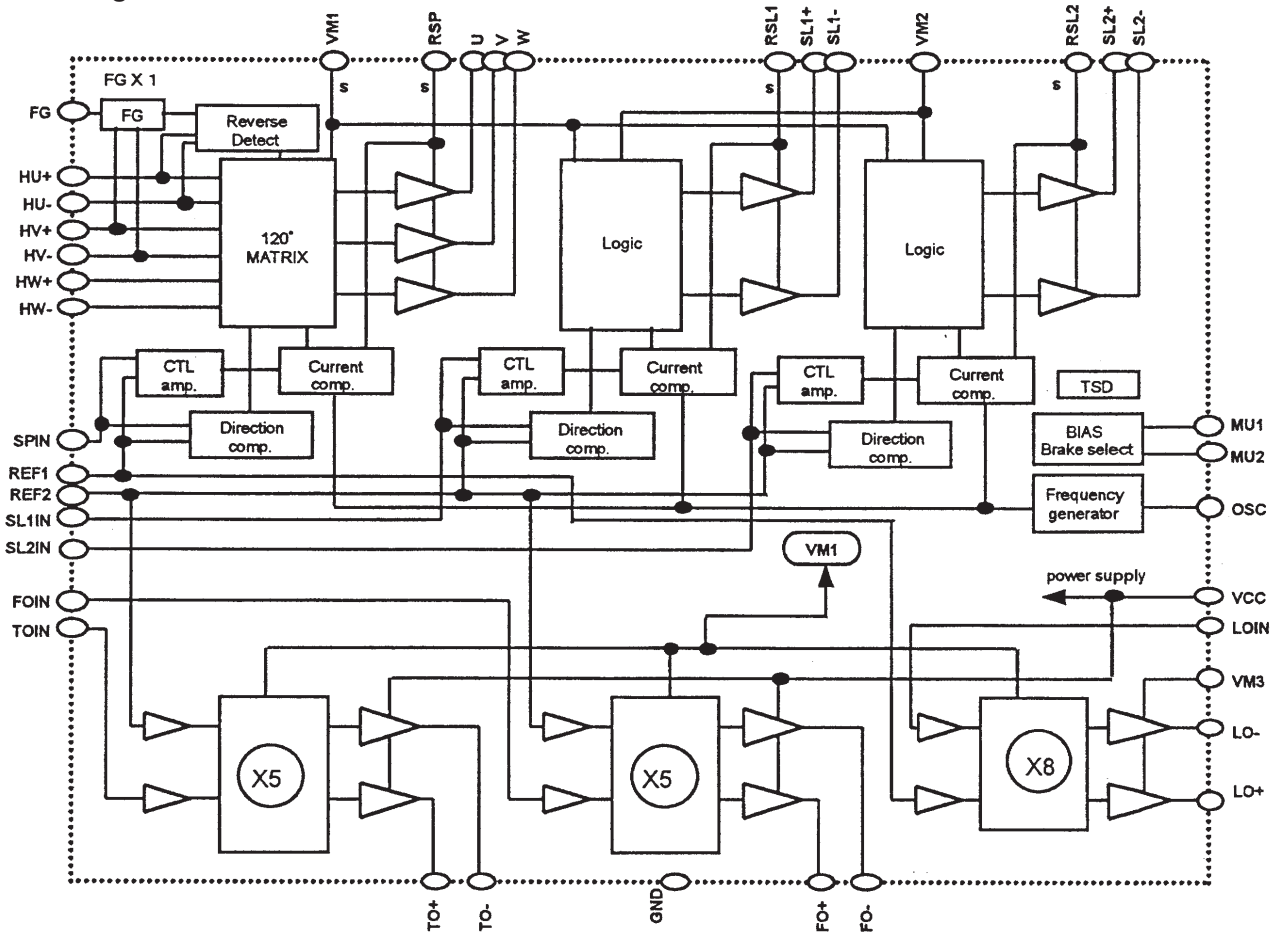
IC BLOCK DIAGRAM / TERMINAL DESCRIPTION

IC101 : M63018FP (BTL DRIVER)-1

Pin Arrangement



Block Diagram



IC BLOCK DIAGRAM / TERMINAL DESCRIPTION

IC101 : M63018FP (BTL DRIVER)-2

Pin Function

TERMINAL	SYMBOL	TERMINAL FUNCTION	TERMINAL	SYMBOL	TERMINAL FUNCTION
1	SL1IN	Slide control voltage input 1	4 2	OSC	PWM carrier oscillation set
2	SL2IN	Slide control voltage input 2	4 1	MU1	mute / brake select terminal 1
3	VM2	Motor Power Supply 2 (for Slide)	4 0	LOIN+	Loading control input(+)
4	RSL2	Slide current sense 2	3 9	VM3	Power Supply3 (for Loading)
5	SL2+	Slide non-inverted output 2	3 8	MU2	mute / brake select terminal 2
6	SL2-	Slide inverted output 2	3 7	LO-	Loading inverted output
7	GND	GND	3 6	LO+	Loading non-inverted output
8	RSL1	Slide current sense 1	3 5	FO-	Focus inverted output
9	SL1+	Slide non-inverted output 1	3 4	FO+	Focus non-inverted output
1 0	SL1-	Slide inverted output 1	3 3	GND	GND
1 1	GND	GND	3 2	VCC	Power Supply (for FS ,TS)
1 2	W	Motor drive output W	3 1	TO+	Tracking non-inverted output
1 3	V	Motor drive output V	3 0	TO-	Tracking inverted output
1 4	U	Motor drive output U	2 9	GND	GND
1 5	RSP	Spindle current sense	2 8	TOIN	Tracking control voltage input
1 6	HW-	HW- sensor amp. input	2 7	FOIN	Focus control voltage input
1 7	HW+	HW+ sensor amp. input	2 6	SPIN	Spindle control voltage input
1 8	HV-	HV- sensor amp. input	2 5	REF1	Reference voltage input 1 (for Spindle,Loading)
1 9	HV+	HV+ sensor amp. input	2 4	FG	Frequency generator output
2 0	HU-	HU- sensor amp. input	2 3	REF2	Reference voltage input 2 (for Slide,Focus,Tracking)
2 1	HU+	HU+ sensor amp. input	2 2	VM1	Motor Power Supply 1 (for Spindle)

IC BLOCK DIAGRAM / TERMINAL DESCRIPTION

IC601 : STM5589CVA BACK END IC

No.	Pin Name	Dir.	Pin Function
1	FP_SO	OUT	Front Panel / DAC interface. Serial transfer data output.
2	A_DATA3	OUT	reserve
3	VCLK	OUT	reserve
4	VDD_3V3	-	3.3 V Power supply
5	VSS	-	Ground
6	BIDATA	OUT	reserve
7	BIBCLK	OUT	reserve
8	BIFLAG	OUT	reserve
9	TRYPOS	OUT	It is not connected except 5 Disc Changer
		IN	Only 5 Disc Changer. Tray rotation pulse input. CAPTURE_IN0 can be used.
10	SQUEEZE	OUT	Output signal for S-Video output S1/S2 control. 'H' : squeeze output mode.
11	RTS	OUT	UART(RS-232C) Request To Send signal output
12	LETTER	OUT	Output signal for S-Video output S1/S2 control & EURO(SCART) connector (FUNCTION SWITCHING) signal. 'H' : letter-box output mode.
13	CTS	IN	UART(RS-232C) Clear To Send signal input
14	VDD_1V8	-	1.8 V Power supply
15	VSS	-	Ground
16	FE_DATA	IN	Front-End L6316 stream interface. Serial data input.
17	FE_BCLK	IN	Front-End L6316 stream interface. Serial clock input.
18	FE_DVALID	IN	Front-End L6316 stream interface. Data valid flag input.
19	FE_SYNC	IN	Front-End L6316 stream interface. Serial synchronize flag input.
20	FE_EVALID	IN	Front-End L6316 stream interface. Error valid flag for RS_split.
21	FE_ECCBST	IN	Front-End L6316 stream interface. ECC block start flag for RS_split.
22	I/XP	OUT	Output signal for a change of interlace/Progressive output for video driver. 'L' : progressive 'H' : interlace
23	VDD_RGB	-	RGB circuit 3.3 V Power supply
24	VSS_RGB	-	RGB circuit Ground
25	B_OUT	OUT	B / Cb
26	G_OUT	OUT	G / Y
27	R_OUT	OUT	R / Cr
28	VREF_RGB	IN	RGB DAC reference
29	IREF_RGB	IN	RGB DAC current reference
30	VDD_YCC	-	YC circuit 3.3 V Power supply
31	VSS_YCC	-	YC circuit Ground
32	Y_OUT	OUT	Y
33	C_OUT	OUT	C
34	CV_OUT	OUT	CV
35	VREF_YCC	IN	YCC DAC reference
36	IREF_YCC	IN	YCC DAC current reference
37	VDD_1V8	-	1.8 V Power supply
38	VSS	-	Ground

IC BLOCK DIAGRAM / TERMINAL DESCRIPTION

IC601 : STM5589CVA BACK END IC

No.	Pin Name	Dir.	Pin Function
39	XDRVMUTE	OU	It is not connected except 5 Disc Changer. Only 5 Disc Changer. Output signal for motor driver muting. 'L' : muting
40	OPEN	OUT	It is not connected except 5 Disc Changer
		IN	Only 5 Disc Changer. Input signal for tray position. 'H' : complete OPEN position.
41	CLOSE	OUT	It is not connected except 5 Disc Changer
		IN	Only 5 Disc Changer. Input signal for tray position. 'H' : complete CLOSE position.
42	CLAMP	OUT	It is not connected except 5 Disc Changer
		IN	Only 5 Disc Changer. Input signal for showing disc clamp position. 'H' : complete disc clamp position.
43	UNCLAMP	OUT	It is not connected except 5 Disc Changer
		IN	Only 5 Disc Changer. Input signal for showing disc un-clamp position. 'H' : complete disc clamp position.
44	DISC_SNS	OUT	It is not connected except 5 Disc Changer
		IN	Only 5 Disc Changer. Input signal for disc existing. 'L' : existing
45	XDRVMUTE2	OUT	reserved
46	TP-x	OUT	reserved
47	VDD_3V3	-	3.3 V Power supply
48	VDD_PCM	-	1.8 V Power supply
49	VSS_PCM	-	Ground
50	VSS	-	Ground
51	A_BCK	OUT	Audio DAC clock
52	A_DATA0	OUT	Audio DAC Front L,R data
53	A_DATA1	OUT	reserved
54	A_DATA2	OUT	reserved
55	A_MCLK	OUT	Audio DAC Master clock
56	A_LRCK	OUT	Audio DAC L/R clock
57	A_DOUT	OUT	S/PDIF(IEC60958) digital audio output
58	SMI_A4	OUT	SMI SDRAM Address
59	SMI_A5		
60	SMI_A6		
61	SMI_A7		
62	SMI_A8		
63	SMI_A9		
64	VDD_1V8	-	1.8 V Power supply
65	VSS	-	Ground
66	SMI_A3	OUT	SMI SDRAM Address
67	SMI_A2		
68	SMI_A1		
69	SMI_A0		
70	SMI_A10		
71	SMI_A11		
72	SMI_A12		
73	SMI_A13		

IC BLOCK DIAGRAM / TERMINAL DESCRIPTION

IC601 : STM5589CVA BACK END IC

No.	Pin Name	Dir.	Pin Function
74	SMI_CS0	OUT	SMI SDRAM chip select 'L'
75	SMI_CS1	OUT	reserve
76	SMI_RAS	OUT	SMI SDRAM RAS 'L'
77	SMI_CAS	OUT	SMI SDRAM CAS 'L'
78	SMI_WE	OUT	SMI SDRAM Write Enable 'L'
79	SMI_DQML	OUT	SMI SDRAM Lower DQM 'L': Lower select
80	SMI_DQMU	OUT	SMI SDRAM Upper DQM 'L': Upper select
81	VDD_3V3	-	3.3 V Power supply
82	SMI_CLKIN	IN	External SDRAM clock input
83	VSS	-	Ground
84	SMI_D0	I/O	SMI SDRAM Data
85	SMI_D1		
86	SMI_D2		
87	SMI_D3		
88	SMI_D4		
89	SMI_D5		
90	SMI_D6		
91	SMI_D7		
92	SMI_D8		
93	SMI_D9		
94	VDD_1V8	-	1.8 V Power supply
95	SMI_CLKOUT	OUT	SDRAM clock output
96	VSS	-	Ground
97	SMI_D10	I/O	SMI SDRAM Data
98	SMI_D11		
99	SMI_D12		
100	SMI_D13		
101	SMI_D14		
102	SMI_D15		
103	TRACK_CROSS	OUT	reserved
104	DSD_XPCM	OUT	reserved
105	DAC_XRST	OUT	reserved
106	ADC_PCMCLK	OUT	reserved
107	VDD_3V3	-	3.3 V Power supply
108	VSS	-	Ground
109	XTRST	IN	Diagnostic Control Unit interface
110	TMS	IN	Diagnostic Control Unit interface
111	TDO	OUT	Diagnostic Control Unit interface
112	TDI	IN	Diagnostic Control Unit interface
113	TCK	IN	Diagnostic Control Unit interface
114	ROTDRV	OUT	Only 5 disc changer. PWM output for tray rotation.
115	BOOT_FROM_ROM	IN	Boot select 'L' : Boot from DCU. 'H' : Boot form ROM.
116	LOAD_DRV	OUT	Only 5 disc changer. PWM output for tray Open/Close drive.
117	CPU_OE	OUT	OE signal for 16M bits FLASH memory for firmware. 'L': enable

IC BLOCK DIAGRAM / TERMINAL DESCRIPTION

IC601 : STM5589CVA BACK END IC

No.	Pin Name	Dir.	Pin Function
118	CPU_SDCK	OUT	CLOCK for 64M bits SDRAM for debugging firmware
119	VDD_1V8	-	1.8 V Power supply
120	PIXCLK	IN	Master 27MHz system clock input
121	VSS	-	Ground
122	VDD_PLL	-	Clock PLL circuit 1.8 V Power supply
123	VSS_PLL	-	Clock PLL circuit Ground
124	XRESET	IN	Power ON system RESET signal. 'L': reset
125	SACD_IRQ	IN	reserved
126	FP_XRDY	IN	Front Panel interface. Hand-shake input.
127	FE_INT	IN	Interrupt input signal from Front-End L6316
128	F_XWE, SD_DQML	OUT	Flash memory write enable. Debug SDRAM/SRAM Lower DQM. 'L': enable, Lower select.
129	SD_DQMU	OUT	Debug SDRAM/SRAM Upper DQM 'L':upper select
130	SD_RXW	OUT	Debug SDRAM Read/Write 'L':write, 'H':read
131	CPU_WAIT	IN	CPU wait 'H' input
132	CE_FLASH	OUT	Flash memory Chip Enable 'L'
133	CPU_CE2	OUT	reserved
134	CPU_CE1	OUT	reserved
135	SD_XRAS	OUT	Debug SDRAM RAS 'L' Debug SRAM chip enable 'L'
136	VDD_3V3	-	3.3 V Power supply
137	VSS	-	Ground
138	CPU_RAS1	OUT	reserved
139	SD_XCAS	OUT	Debug SDRAM CAS 'L'
140	SD_XCS	OUT	Debug SDRAM Chip Select 'L'
141	CPU_D0	I/O	FLASH, Debug SDRAM/SRAM data
142	CPU_D1		
143	CPU_D2		
144	CPU_D3		
145	CPU_D4		
146	CPU_D5		
147	CPU_D6		
148	CPU_D7		
149	VDD_1V8	-	1.8 V Power supply
150	VSS	-	Ground
151	CPU_D8	I/O	FLASH, Debug SDRAM/SRAM data
152	CPU_D9		
153	CPU_D10		
154	CPU_D11		
155	CPU_D12		
156	CPU_D13		
157	CPU_D14		
158	CPU_D15		
159	VDD_3V3	-	3.3 V Power supply
160	VSS	-	Ground

IC BLOCK DIAGRAM / TERMINAL DESCRIPTION

IC601 : STM5589CVA BACK END IC

No.	Pin Name	Dir.	Pin Function
161	CPU_A1	OUT	FLASH, Debug SDRAM/SRAM Address
162	CPU_A2		
163	CPU_A3		
164	CPU_A4		
165	CPU_A5		
166	CPU_A6		
167	CPU_A7		
168	CPU_A8		
169	CPU_A9		
170	CPU_A10		
171	VDD_1V8	-	1.8 V Power supply
172	VSS	-	Ground
173	CPU_A11	OUT	FLASH, Debug SDRAM/SRAM Address
174	CPU_A12		
175	CPU_A13		
176	CPU_A14		
177	CPU_A15		
178	CPU_A16		
179	CPU_A17		
180	CPU_A18		
181	CPU_A19		
182	CPU_A20		
183	CPU_A21		
184	VDD_3V3		3.3 V Power supply
185	VSS		Ground
186	XEXPE	OUT	reserved
187	FE_ERROR	IN	Front-End L6316 stream interface. ECC Error flag
188	VSEL1	OUT	EURO(SCART) connector (BLINKING) output signal 'L' : RGB output disable 'H' : RGB output enable
189	VSEL2	OUT	EURO(SCART) connector V/Y, R/C signal. 'L' : VRGB output = YCGB 'H' : VRGB output = VRGB
190	FE_RST	OUT	Front-End L6316. Hardware reset output. 'L' : reset
191	SACD_XRST	OUT	reserved
192	XMMUTE	OUT	reserved
193	B_SYNC	OUT	reserved
194	SDA	I/O	Front-End L6316 command interface I2C bus serial data line.
195	SCL	OUT	Front-End L6316 command interface I2C bus serial clock line.
196	B_WCLK	OUT	reserved
197	TXD	OUT	UART(RS-232C) data output
198	VDD_1V8	-	1.8 V Power supply
199	VSS	-	Ground
200	RXD	IN	UART(RS-232C) data input

IC BLOCK DIAGRAM / TERMINAL DESCRIPTION

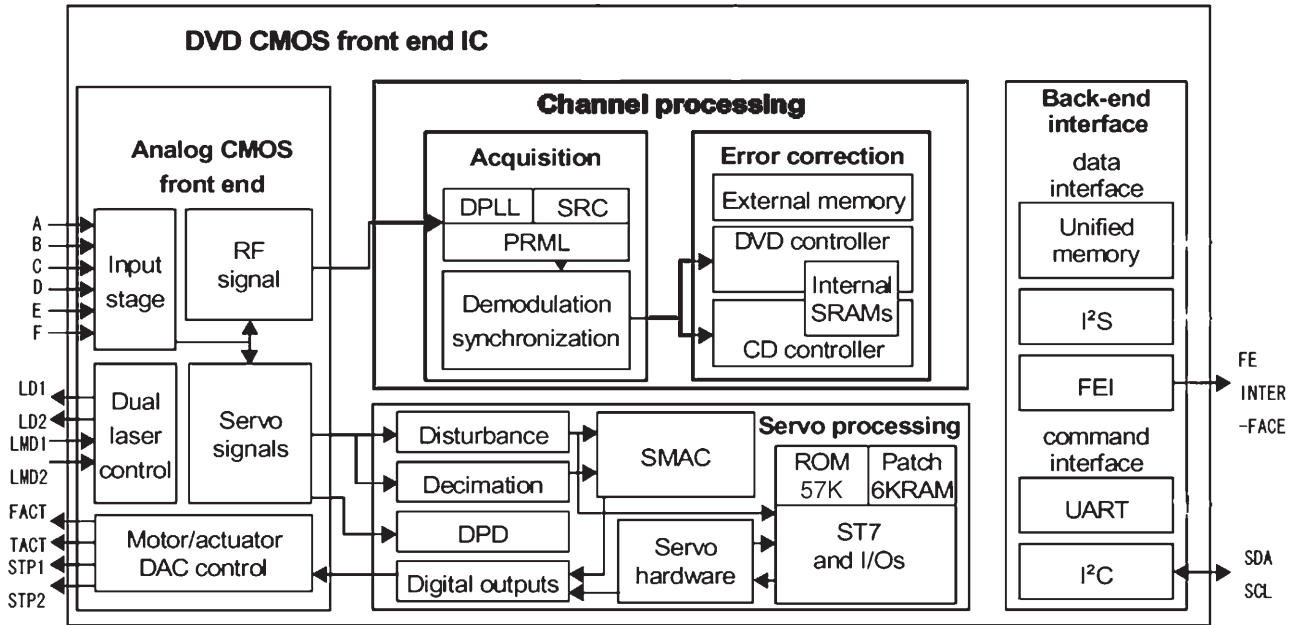
IC601 : STM5589CVA BACK END IC

No.	Pin Name	Dir.	Pin Function
201	XAMUTE	OUT	Output signal for analog audio output line muting. 'L' : muting
202	TRIGIN	IN	Diagnostic Control Unit interface
203	TRIGOUT	OUT	Diagnostic Control Unit interface
204	DAC_XCS0	OUT	Chip enable for audio DAC serial control. 'L' : enable
205	DAC_XCS1	OUT	reserved
206	FP_ACK	OUT	Front Panel / DAC interface. Hand-shake (acknowledge) output 'H'.
207	FP_SCK	OUT	Front Panel / DAC interface. Serial transfer clock output.
208	FP_SI	IN	Front Panel interface. Serial transfer data input.

IC BLOCK DIAGRAM / TERMINAL DESCRIPTION

IC301 : STM6316ATXXA FRONT END IC

Block Diagram



IC BLOCK DIAGRAM / TERMINAL DESCRIPTION

IC301 : STM6316AT

No.	Pin Name	description	detail
1	IREF	12.7k	Analog block reference part
2	GNDAI	GND	analog gnd
3	RFIN	capacitor	RF signal C association input to a demodulation block
4	RFOUT	capacitor	B1+B2+B3+B4 mixture listing from an analog block
5	VCCA18	1V8	analog 1V
6	A	B1	PU - B1 input
7	GNDMN	GND	analog gnd
8	B	B2	PU - B2 input
9	VCC33MN	3V3	analog 3V
10	REFD	to pick up	2V1 output for PU
11	VCC18MN	1V8	analog 1V
12	D	B4	PU - B4 input
13	VCCA18IS	1V8	analog 1V
14	C	B3	PU - B3 input
15	VCCA33IS	3V3	analog 3V
16	GNDAIS	GND	analog gnd
17	VCC33SD	3V3	analog 3V
18	VCC18SD	1V8	analog 1V
19	GNDSD	GND	analog gnd
20	F	C	PU-3 beam C input
21	E	A	PU-3 beam A input
22	VSHIELDIS	GND	analog gnd
23	VCC18ADC	1V8	analog 1V
24	GNDADC	GND	analog gnd
25	VSHIELDADC	GND	analog gnd
26	VCC33DAC	3V3	analog 3V
27	GNDDAC	GND	analog gnd
28	SPINDLE	560ohm(st2)	DAC current listing for stepper drive
29	SLEDGE	560ohm(st1)	DAC current listing for stepper drive
30	REFEXT	20K1	Reference for DAC
31	REFGND	refex	analog gnd
32	REFDAC	560ohm1%	DAC reference
33	FACT	560ohm1%	DAC current listing for focus
34	TACT	560ohm1%	DAC current listing for tracking
35	VCC18DAC	1V8	analog 1V
36	PG0	F	FG pulse input
37	PC1	P	Driver control signal
38	PC2	tray SW1(open)	SW input for tray OPEN position
39	PC3	SI	Driver control signal
40	PC4	SLD position	Inside SW input

IC BLOCK DIAGRAM / TERMINAL DESCRIPTION

IC301 : STM6316AT

No.	Pin Name	description	detail
41	VSS	GND	digital gnd
42	VDD33	3V3	digital 3V3
43	PC5	780/X65	780nm/650nmLD change control signal
44	PC6	spinde PD	Control PDM listing for spindle drive
45	PC7	opicgai	OEIC gain control signal
46	PD7	03PU/X02P	Pull-up settlemen
47	VSS	GND	digital gnd
48	VDD18	1V8	digital 1V8
49	PD6	(debug)	test
50	PD5	(debug)	test
51	PD4	(DSPclk)	test
52	PD3	(DSPdata)	test
53	PD2	(DSPstrb1)	test
54	PD1	error monitor	Terminal for TRKG error monitor (30KHzLPF add need)
55	PD0	tray PDM drive	Control PDM signal for tray drive
56	VSS	GND	digital gnd
57	VDD33	3V3	digital 3V3
58	OUT_ERR	RS_ERRO	BE DATA I/F
59	OUT_EVALID	RS_ERR_E	BE DATA I/F
60	VSS	GND	digital gnd
61	OUT_CLK	RS_BCL	BE DATA I/F
62	VDD18	1V8	digital 1V8
63	OUT_DVALID	RS_DVALI	BE DATA IF
64	OUT_DATA	RS_DAT	BE DATA I/F
65	OUT_SYNC	RS_ECCBS	BE DATA IF
66	PE5	SCL(DMA)	FE routine download input
67	PE4	SDA(DMA)	FE routine download input
68	PE2	SC	BE command I/F
69	PE2	SD	BE command I/
70	PE1	tray SW2(close)	SW input for tray CLOSE position
71	PE0	DXXIN	FE status propagation signal
72	VSS	GNDD	digital gnd
73	VDD3	3V3	digital 3V3
74	PF1	10K-pullup	Built-in facility setting terminal
75	PF0	10K-pulldown	Built-in facility setting terminal
76	VSS	GND	digital gnd
77	VDD18	1V8	digital 1V8
78	PG1	to EMULATO	Built-in facility setting terminal
79	PG0	to EMULATO	Built-in facility setting terminal
80	TEST	10K-pulldown	test

IC BLOCK DIAGRAM / TERMINAL DESCRIPTION

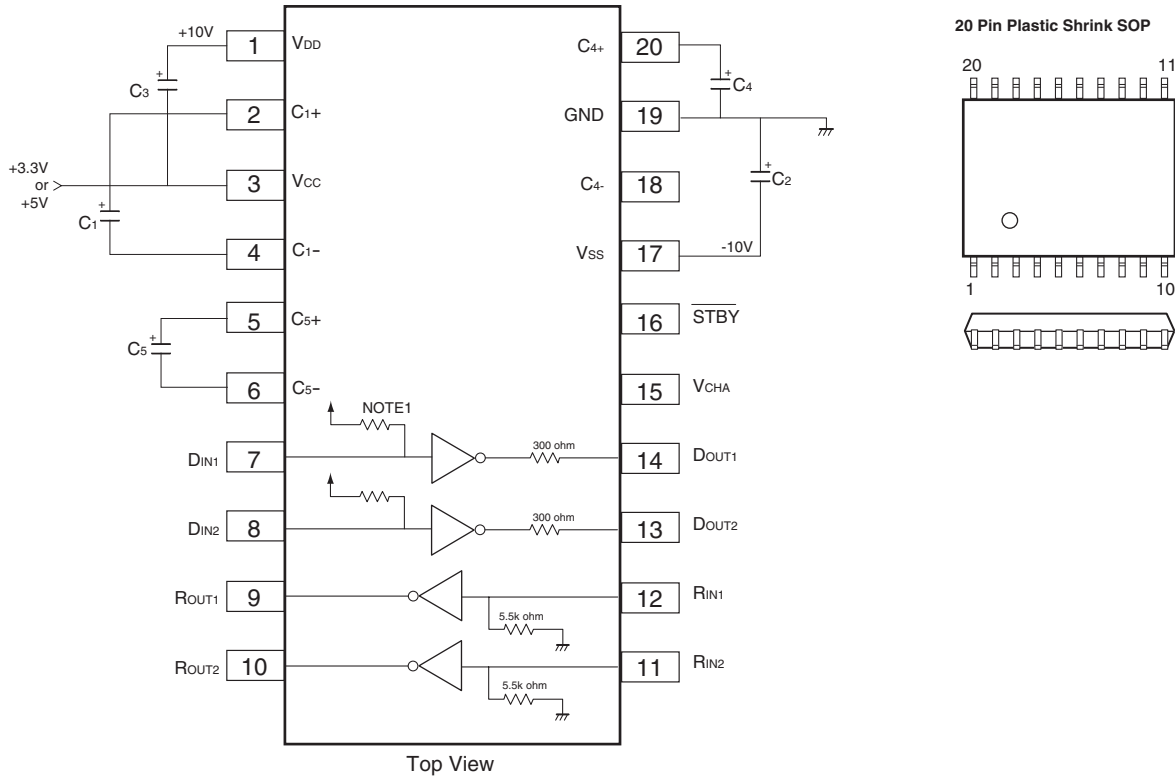
IC301 : STM6316AT

No.	Pin Name	description	detail
81	RESET_N	RESET	RESET input
82	VSSADC	GND	analog gnd
83	VDD18ADC	1V8	analog 1V8
84	GNDPLL	GND	analog gnd
85	PLLOFF	GND	analog gnd
86	FREOUT	20MXtal	SYSTEMCLK oscillating circuit
87	FREIN	20MXtal	SYSTEMCLK oscillating circuit
88	VCC18PLL	1V8	analog 1V8
89	LD1	650nmLD	650nmLD driving signal
90	LD2	780nmLD	780nmLD driving signal
91	VCCA33	3V3	digital 3V3
92	TWSEL	CD_VR/GN	Monitor diodes VR junction terminal for CD
93	LMD1	LMD/LMD	Monitor voltage junction terminal
94	LMD2	DVD_VR/LMD2	Monitor diodes VR junction terminal for DVD
95	GNDL	GND	analog gnd
96	TST_PM	n	tset
97	TST_SLICE	n	test
98	TST_ADC	n	test
99	RFSACD	SACD_I	RF signal output
100	VBGFILT	capacitor	Condenser junction terminal for inside reference stability

IC BLOCK DIAGRAM / TERMINAL DESCRIPTION

Q803: MPD4721GS RS-232C LINE DRIVER/ RECEIVER

BLOCK DIAGRAM



Truth table

Driver

STBY	DIN	DOUT	Remarks
L	x	Z	Standby mode
H	L	H	Space level output
H	H	L	Mark level output

Receiver

STBY	RIN	ROUT	Remarks
L	x	H	Standby mode
H	L	H	Mark level input
H	H	L	Space level input

3V — 5V switching

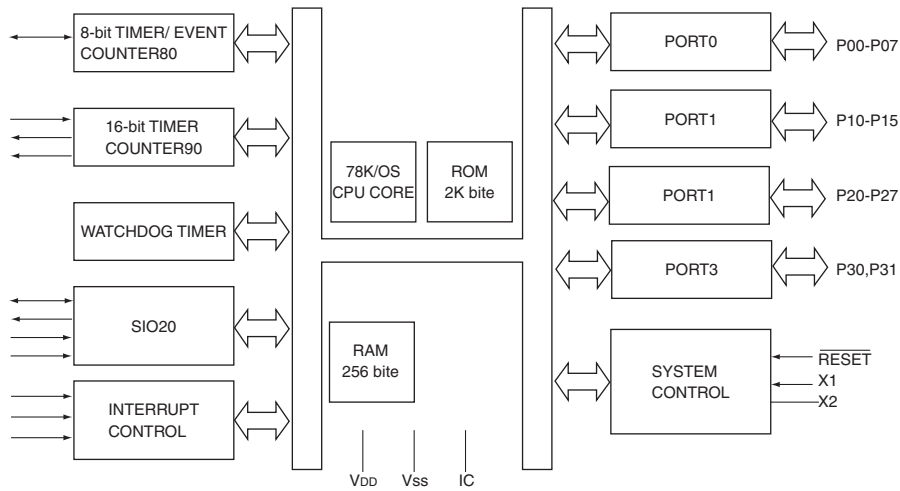
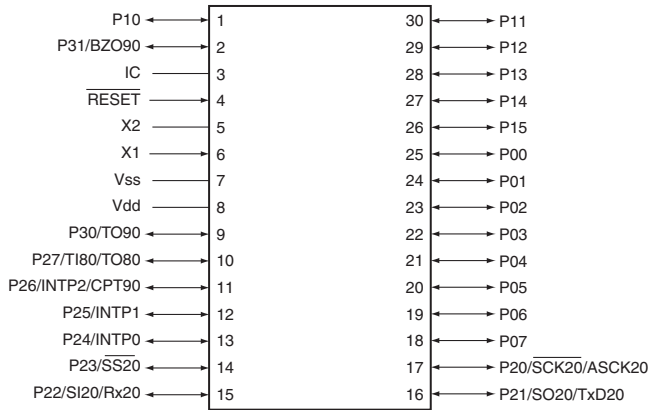
VCHA	Operating mode
L	5 V mode (double step-up)
H	3 V mode (3 times step-up)

H : high-level, L : low-level, Z : high-impedance, x : H or L

IC BLOCK DIAGRAM/TERMINAL DESCRIPTION

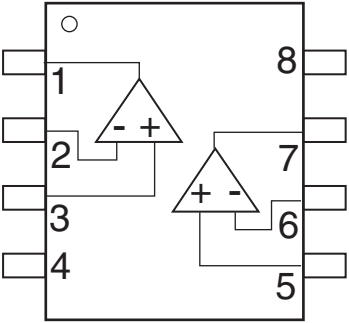
Q802 : MPD789071MC 8-Bit Microprocessor

PIN LAYOUT



IC BLOCK DIAGRAM/ TERMINAL DESCRIPTION

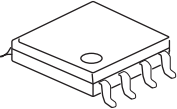
Q401,Q402,Q403,Q404 NJM4580M-D (2-ch Ope. amp.)



(Top view)

Pin description

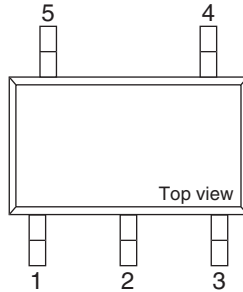
- 1. A OUTPUT
- 2. A -INPUT
- 3. A +INPUT
- 4. V-
- 5. B +INPUT
- 6. B -INPUT
- 7. B OUTPUT
- 8. V+



IC BLOCK DIAGRAM/ TERMINAL DESCRIPTION

Q703: S-80130CLMC-JKM VOLTAGE DETECTOR (13.0V CMOS, Active L: out)

Pin Layout



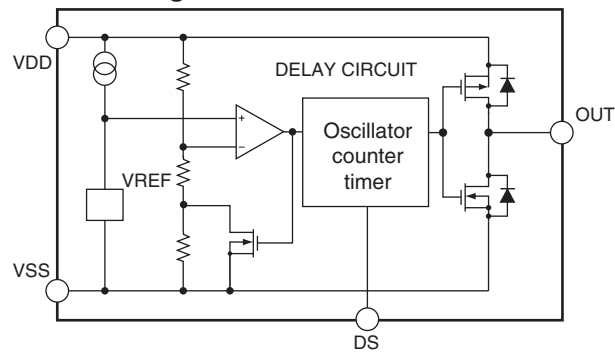
Detection voltage: 3.0V +/-2%
 Delay time: 200ms typ.

Pin Description

No.	Symbol	Description
1	DS	ON/OFF switch for delay time
2	VSS	GND
3	NC *1	Non-connection
4	OUT	Voltage detection output pin
5	VDD	Voltage input pin

*1. NC pin is electrically open.

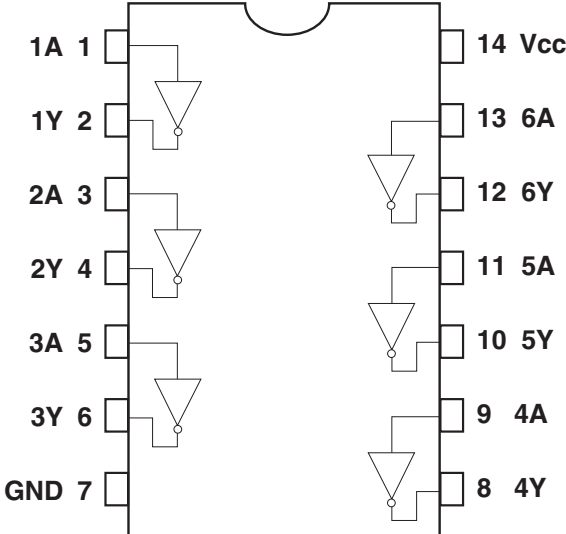
Block Diagram



IC BLOCK DIAGRAM / TERMINAL DESCRIPTION

Q352 : TC74VHCU04FT Hex inverter

Pin layout

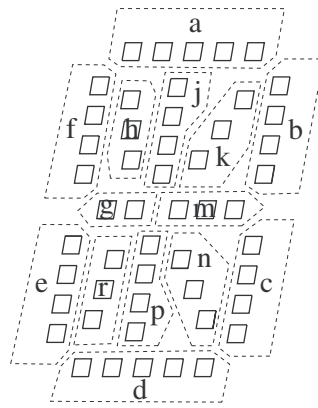
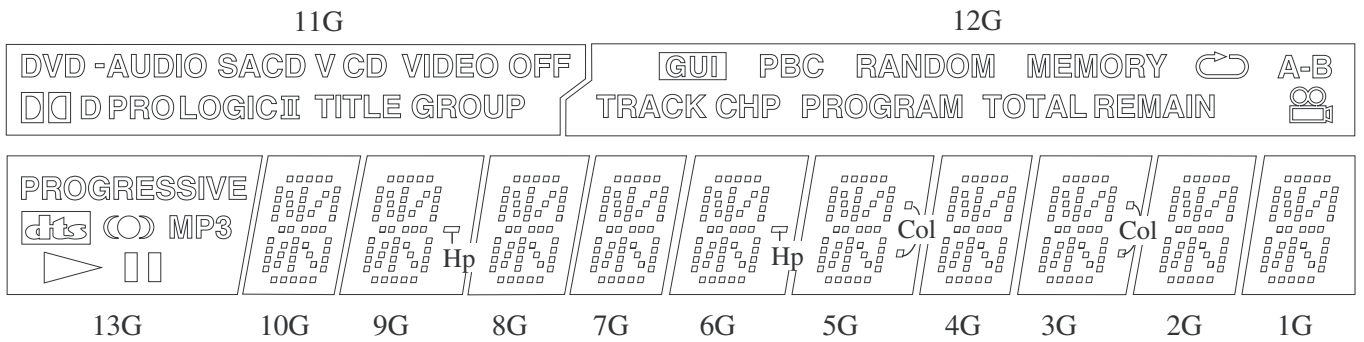


Truth table

A	Y
L	H
H	L

FL VIEW

Q702:HNV-13SS12T

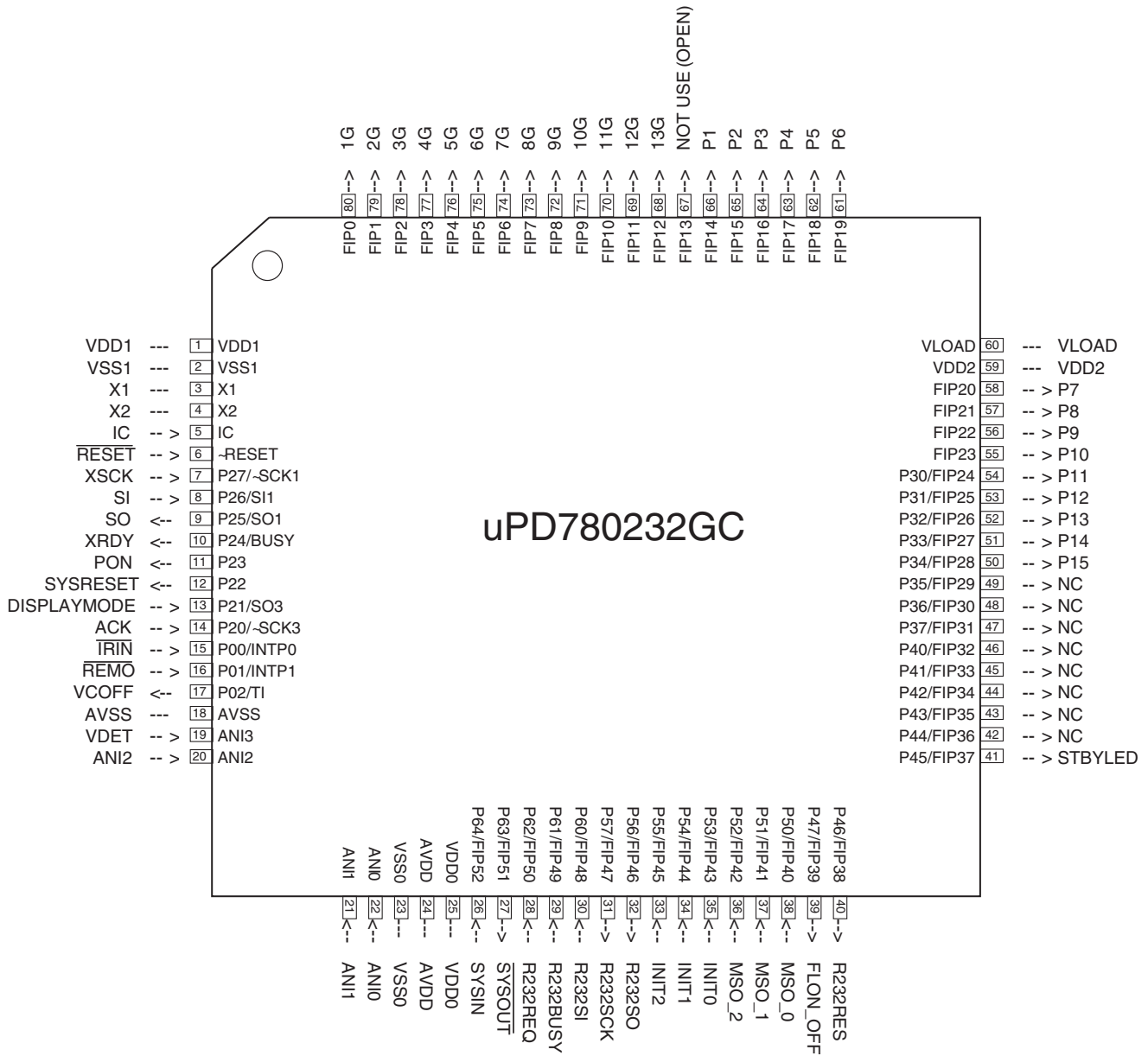


(1G-10G)

	1G	2G	3G	4G	5G	6G	7G	8G	9G	10G	11G	12G	13G
P1	a	a	a	a	a	a	a	a	a	a	GROUP	REMAIN	-
P2	h	h	h	h	h	h	h	h	h	h	TITLE	TOTAL	-
P3	l	j	j	j	j	j	j	j	j	j	PRO LOGIC		-
P4	k	k	k	k	k	k	k	k	k	k	D	TRACK	-
P5	b	b	b	b	b	b	b	b	b	b		CHP	-
P6	f	f	f	f	f	f	f	f	f	f	CD		-
P7	m	m	m	m	m	m	m	m	m	m	V	-B	-
P8	g	g	g	g	g	g	g	g	g	g	SACD	A	-
P9	c	c	c	c	c	c	c	c	c	c	-AUDIO	PROGRAM	-
P10	e	e	e	e	e	e	e	e	e	e	DVD		
P11	r	r	e	r	r	r	r	r	r	r		MEMORY	
P12	p	p	p	p	p	p	p	p	p	p	VIDEO OFF	RANDOM	PROGRESSIVE
P13	n	n	n	n	n	n	n	n	n	n	-	PBC	MP3
P14	d	d	d	d	d	d	d	d	d	d	-	-	
P15	-	-	col	-	col	Hp	-	-	Hp	-	-	-	

MICROPROCESSOR TERMINAL DESCRIPTION-1

Q701 : MPD780232GC



MICROPROCESSOR TERMINAL DESCRIPTION-2

No.	PIN NAME	SIGNAL	I/O	DESCRIPTION
1	VDD1	VDD1		Power supply port
2	VSS1	VSS1		Ground port
3	X1	X1		Connect to clock oscillator of main micro processor
4	X2	X2		Connect to clock oscillator of main micro processor
5	IC	IC	I	Connect to VSS1
6	~RESET	~RESET	I	System reset input port
7	P27/~SCK1	XSCK	I	Clock output port for writing in FLASH ROM
8	P26/SI1	SI	I	Data input port for writing in FLASH ROM
9	P25/SO1	SO	O	Data output port for writing in FLASH ROM
10	P24/BUSY	XRDY	O	XRDY output port
11	P23	PON	O	POWER ON/OFF control output port to a system processor. "H": Power ON
12	P22	SYSRESET	O	System reset control output port
13	P21/SO3	DISPLAY_MOI	I	Exhibition mode. Active "L":Exhibition mode
14	P20/~SCK3	ACK	I	ACK input port.
15	P00/INTP0	~IRIN	I	IR remote control input port. Active "L": IR mode
16	P01/INTP1	~REMO	I	Remote control signal input port. Active "L": Remote control mode
17	P02/TI	VCOFF	O	Video circuit off control output port.
18	AVSS	AVSS		Ground pin of A/D converter.
19	ANI3	VDET	I	VDET input port
20	ANI2	ANI2	I	Analog input port for A/D converter
21	ANI1	ANI1	I	Analog input port for A/D converter
22	ANI0	ANI0	I	Analog input port for A/D converter
23	VSS0	VSS0		Ground pin
24	AVDD	AVDD		Reference analog power supply of A/D converter. VDD1
25	VDD0	VDD0		Power supply pin
26	P64/FIP52	SYSIN	I	Input port for system buss
27	P63/FIP51	~SYSOUT	O	Output port for system buss
28	P62/FIP50	R232REQ	I	Open pin.
29	P61/FIP49	R232BUSY	I	Open pin.
30	P60/FIP48	R232SI	I	Open pin.
31	P57/FIP47	R232SCK	O	Open pin.
32	P56/FIP46	R232SO	O	Open pin.
33	P55/FIP45	INIT2	I	Initialized setting port of analog input 2
34	P54/FIP44	INIT1	I	Initialized setting port of analog input 1
35	P53/FIP43	INIT0	I	Initialized setting port of analog input 0
36	P52/FIP42	MSO_2	I	Model select input port 2
37	P51/FIP41	MSO_1	I	Model select input port 1
38	P50/FIP40	MSO_0	I	Model select input port 0
39	P47/FIP39	FLON_OFF	O	FL filament control output port
40	P46/FIP38	R232RES	O	Open pin.
41	P45/FIP37	STBYLED	O	STANDBY LED control output port
42	P44/FIP36	NC	O	Open pin.
43	P43/FIP35	NC	O	Open pin.
44	P42/FIP34	NC	O	Open pin.
45	P41/FIP33	NC	O	Open pin.
46	P40/FIP32	NC	O	Open pin.
47	P37/FIP31	NC	O	Open pin.
48	P36/FIP30	NC	O	Open pin.
49	P35/FIP29	NC	O	Open pin.
50	P34/FIP28	P15	O	Segment (P15) control output port for FL tube
51	P33/FIP27	P14	O	Segment (P14) control output port for FL tube
52	P32/FIP26	P13	O	Segment (P13) control output port for FL tube
53	P31/FIP25	P12	O	Segment (P12) control output port for FL tube
54	P30/FIP24	P11	O	Segment (P11) control output port for FL tube
55	FIP23	P10	O	Segment (P10) control output port for FL tube
56	FIP22	P9	O	Segment (P9) control output port for FL tube
57	FIP21	P8	O	Segment (P8) control output port for FL tube
58	FIP20	P7	O	Segment (P7) control output port for FL tube
59	VDD2	VDD2		Power supply port of FIP
60	VLOAD	VLOAD		Connect to a pull down resistor
61	FIP19	P6	O	Segment (P6) control output port for FL tube
62	FIP18	P5	O	Segment (P5) control output port for FL tube
63	FIP17	P4	O	Segment (P4) control output port for FL tube
64	FIP16	P3	O	Segment (P3) control output port for FL tube
65	FIP15	P2	O	Segment (P2) control output port for FL tube
66	FIP14	P1	O	Segment (P1) control output port for FL tube
67	FIP13	NOT USE	O	Open pin.
68	FIP12	13G	O	Grid (13G) control output port for FL tube
69	FIP11	12G	O	Grid (12G) control output port for FL tube
70	FIP10	11G	O	Grid (11G) control output port for FL tube
71	FIP9	10G	O	Grid (10G) control output port for FL tube
72	FIP8	9G	O	Grid (9G) control output port for FL tube
73	FIP7	8G	O	Grid (8G) control output port for FL tube
74	FIP6	7G	O	Grid (7G) control output port for FL tube
75	FIP5	6G	O	Grid (6G) control output port for FL tube
76	FIP4	5G	O	Grid (5G) control output port for FL tube
77	FIP3	4G	O	Grid (4G) control output port for FL tube
78	FIP2	3G	O	Grid (3G) control output port for FL tube
79	FIP1	2G	O	Grid (2G) control output port for FL tube
80	FIP0	1G	O	Grid (1G) control output port for FL tube

ID NUMBER AND DATA SETTING

Caution: It is necessary to enter individual ID number and ID data to each player when you repair it.

Note: When previous ID number and ID data, such as a factory present ID number and ID data, are maintained, the unit enters ID Number Confirmation Mode when the above keys are pressed. However, if only an ID number is maintained, the unit enters ID Data Input Mode.

Preparations:

- ① Remote controller RC-484M
- ② TV monitor
- ③ ID Data DVD Disc. (Part No.0R119b)

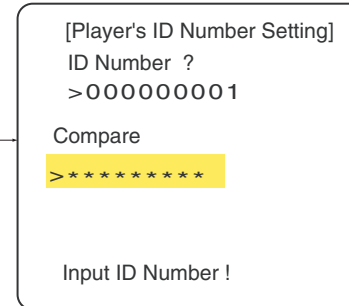
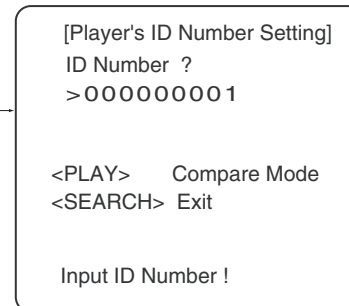
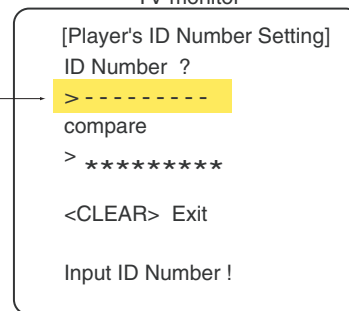
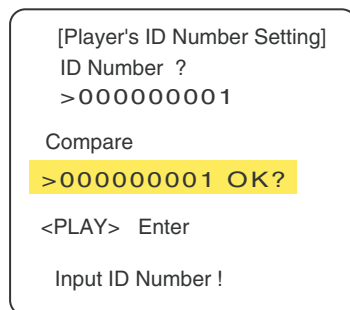
A: ID number Input Mode

[Remote controller RC-484M]

1. Press "DVD" and "1" at the same time.
2. Press "RETURN" key and "STEREO" key.
3. Enter a 9-digit ID number and ID number is also displayed on the FL display.
4. After entering all 9 digits, when you press the "PLAY" key the unit enters Compare mode.

Note: When you press the PLAY key before inputting a 9- digit ID number, the unit returns to Step 2.

5. After entering all 9 digits, when you press the "SEARCH" key, the unit unconditionally sets the input number as the ID number. Then the unit automatically enters Player's Data input Mode.
6. This display appears when the "PLAY" key is pressed in step 4. Enter a 9- digit number to compare.
7. After entering all 9 digits, you press the "PLAY" key.



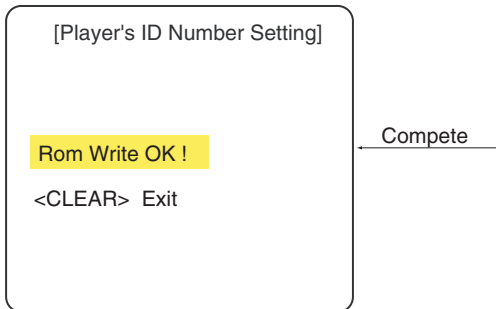
ID NUMBER AND DATA SETTING

B : ID DATA Input Mode

[Remote controller RC-484M]

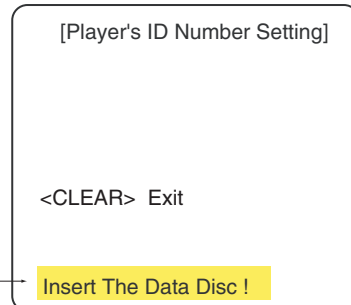
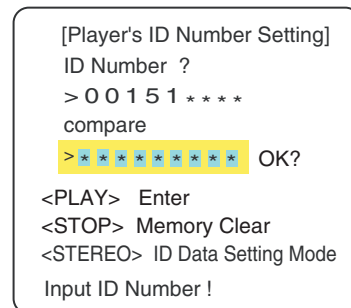
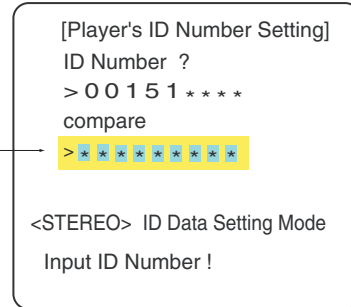
1. Press "DVD" and "1" at the same time.
2. Press "RETURN" key and "STEREO" key.
3. Enter a 9-digit ID data.

4. After entering all 9 digits, when you press the "PLAY" key, the unit enters Compare mode.
5. Entering 9- digits again, and press the "PLAY" key.
6. Insert the data disc on the tray of the unit.
7. Writing the data, automatically.
About 2 minutes.



8. Press open the tray of the unit, and take out a disc.
9. Push the power switch off (Mechanical switch) .
Push the power switch, standby switch on and close the tray.

TV monitor



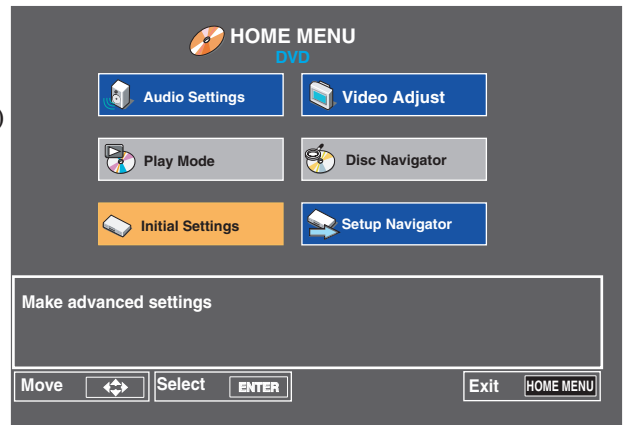
Confirm ID number

1. Push the power switch and press standby button at no disc condition.
2. Press ■ key and I◀◀ key at same time.
3. Displayed on FL tube about 2 second.

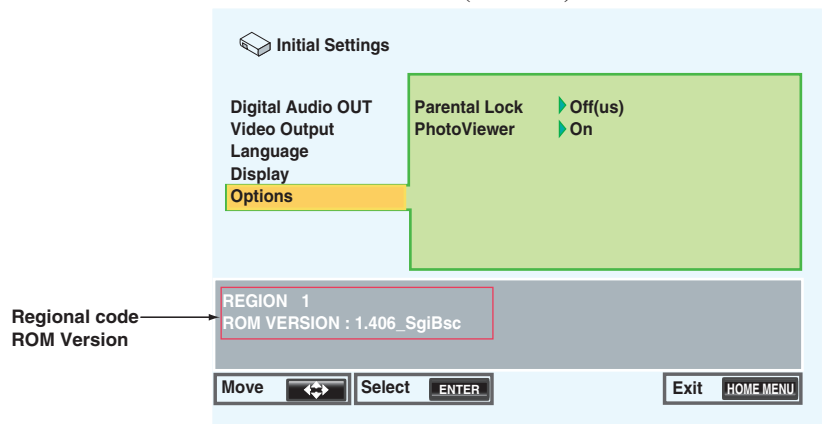
UPGRADE FIRMWARE-1

Confirm the Regional code and Firmware version.

1. Connect the TV monitor to the DV-SP55.
2. Turn ON the power switch and standby switch ON. (No Disc)
3. Press the "SETUP" key on the front panel.
Appear a HOME MENU. (Photo-1)
4. Select "Initial Settings" menu and press "ENTER".
5. Select "Options" menu, and press the "DISPLAY" button.
6. Appear regional code and firmware ROM number.
Confirm the regional cord and firmware version.
When close the menu, press "RETURN" button of the unit. (Photo-2)



(Photo-1)



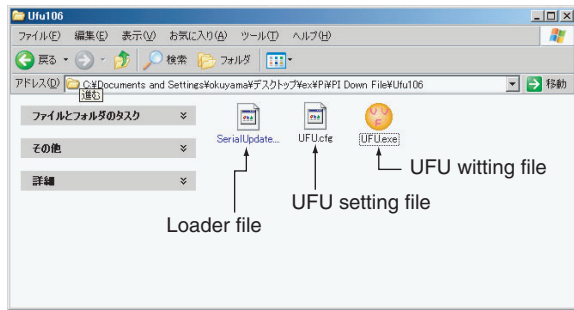
(Photo-2)

UPGRADE FIRMWARE-2

Using for Window tool

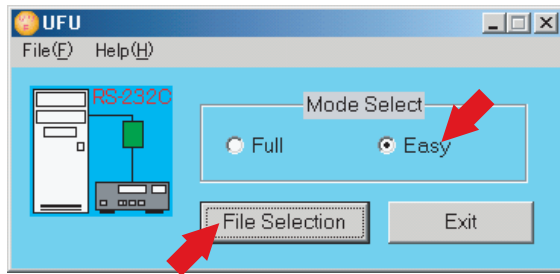
1 Writing the firmware as below.

1. Prepare three data on a hard disk of the personal computer.

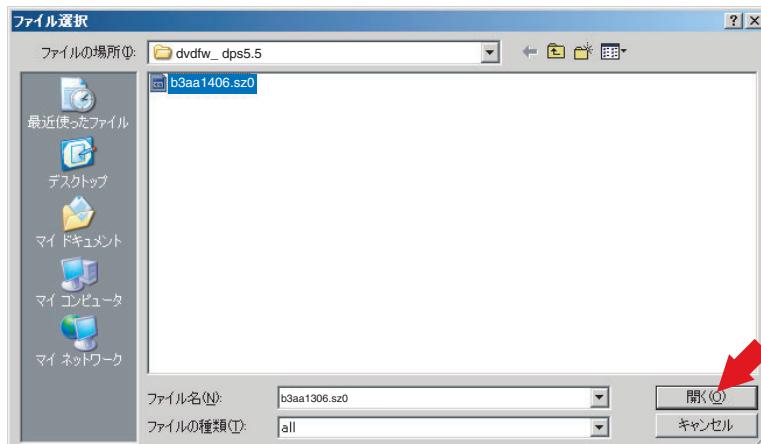


2. Start the UFU.exe file.
Double click the UFU.exe.

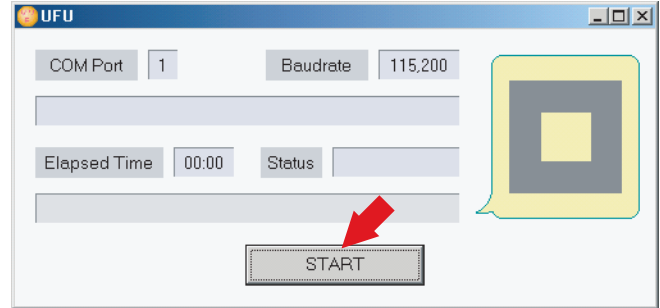
3. Select "Easy" mode.
4. Select "File Selection" mode.



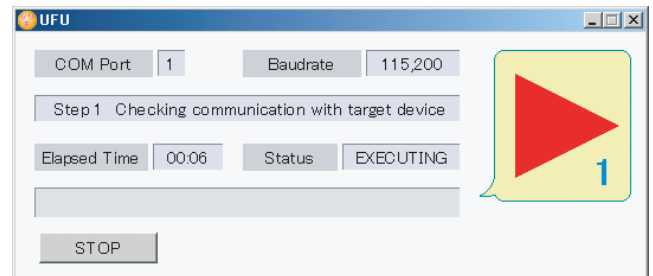
5. Select a program file and open the file.



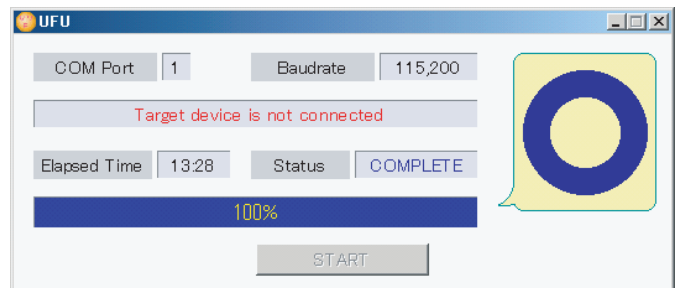
- 6. Connect the JIG (0J13), FFC and connection cable (RS-232C straight type).
- 7. Turn the power switch and standby "ON" of the DPS-5.5. No disc condition.
- 8. Press the start key.



9. Wait for about 10 minutes.



10. Complete the upgrade firmware.



Next step.
Please continue work ID number and ID data set up.

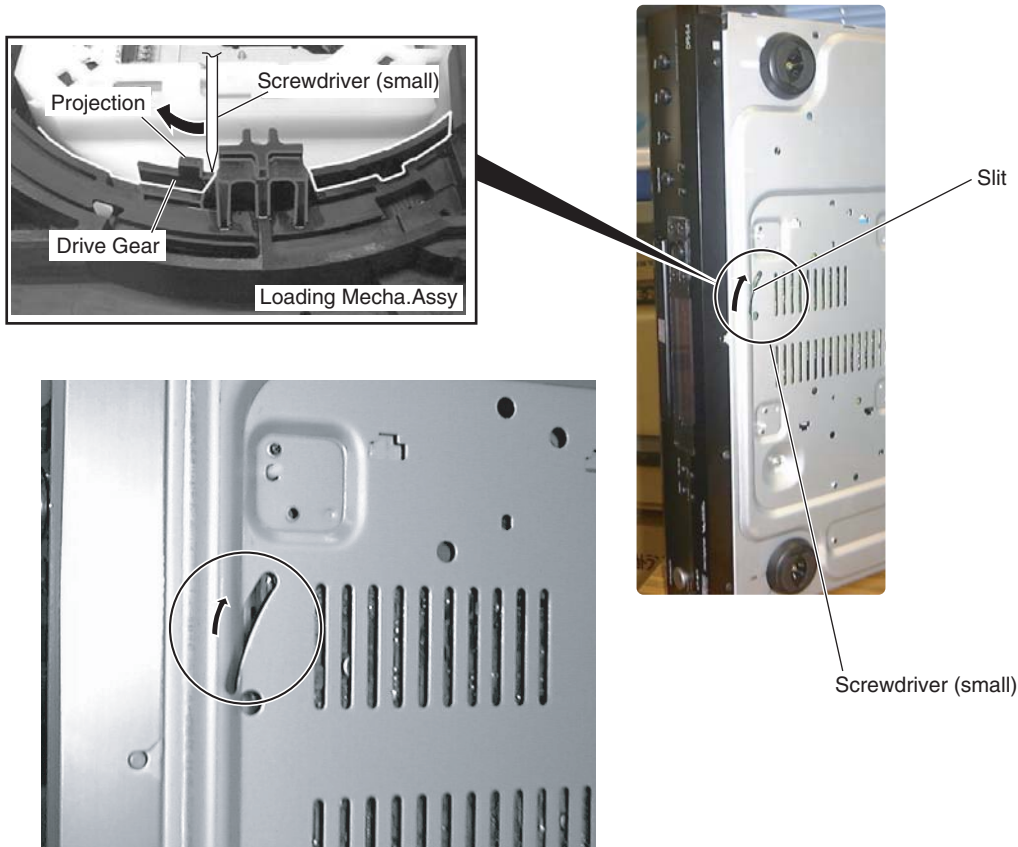
DISASSEMBLY DVD MECHANISM-1

Top cover

1. Remove the side panel by 4 screws and top cover by six screws.

How to open the Tray when the power cannot be on

Insert a screwdriver (small) into the slit located at the bottom of the unit, and slide the projection of the Drive Gear in the Loading Mecha. Assy in the direction of the arrow, as



Remove the mechanism assembly

1. Remove three screws (Black 3TT+8B(BC)) from bottom side. Remove the front panel.
2. Remove two screws on front bracket. And release the FFC (P71).
3. Remove two screws on the power switch PC board and wire holder.
4. Remove four screw (3SMS8W.SW+14B(BC)) from DVD mechanism.
5. Soldering the short lands. It is required because of static electricity protection.
6. Remove sex FFCs and one connector assy.
7. Remove the DVD mechanism assembly.

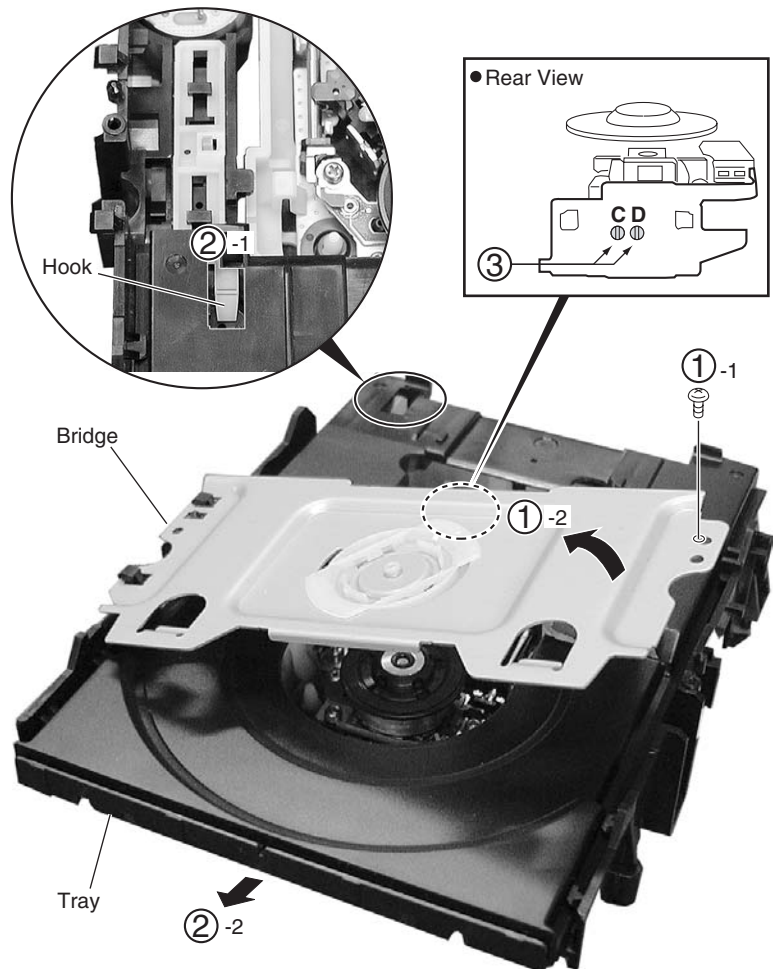
DISASSEMBLY DVD MECHANISM-2

1 Loading Mecha. Assy

- ① Remove the bridge by removing the one screw.
- ② Pull out the tray, then remove it by pressing the hook.
- ③ Short-circuit two points of C and D by soldering.

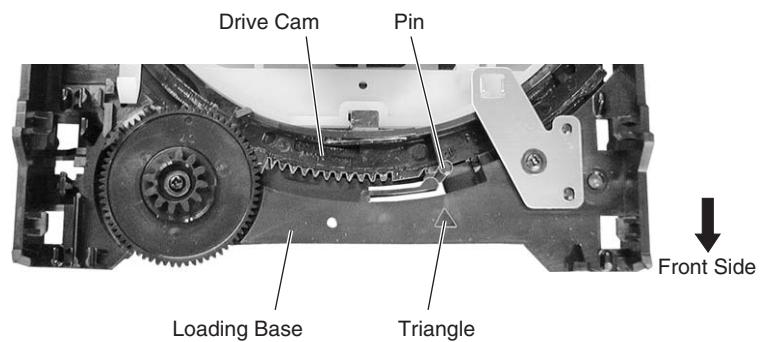
Note: After replacement, connect the flexible cable, then remove the soldered joint (open).

- ④ Remove the four connectors from the Loading Mecha. Assy.
- ⑤ Remove the four screws that secure the Loading Mecha. Assy to the unit.



Note : when reinserting the Tray

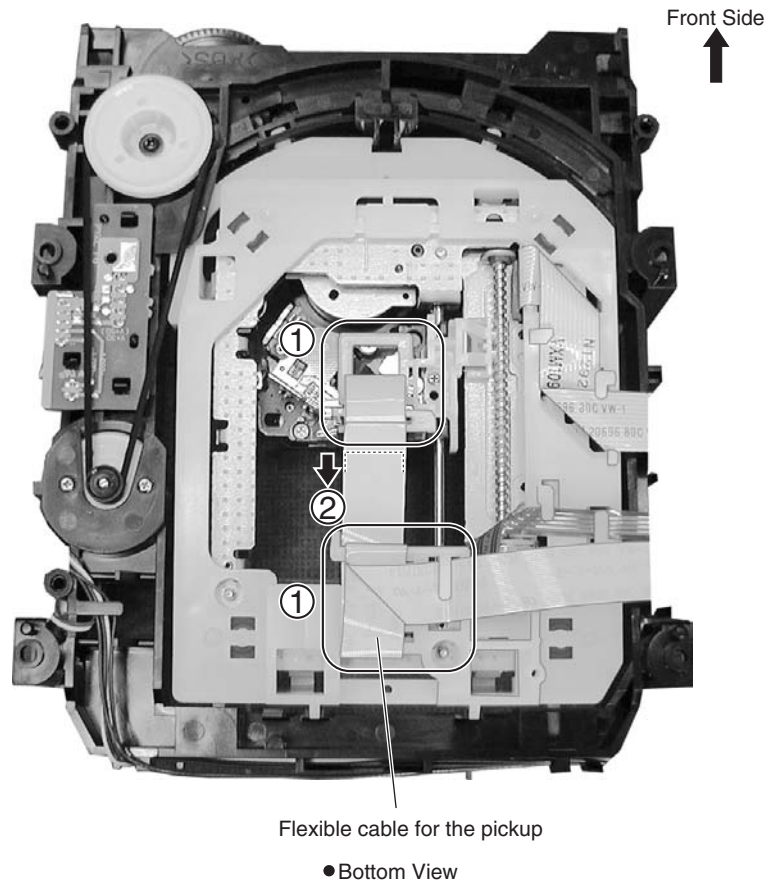
When reinserting the Tray, first align the triangle printed on the Loading Base and the pin of the Drive Cam, then insert the Tray.



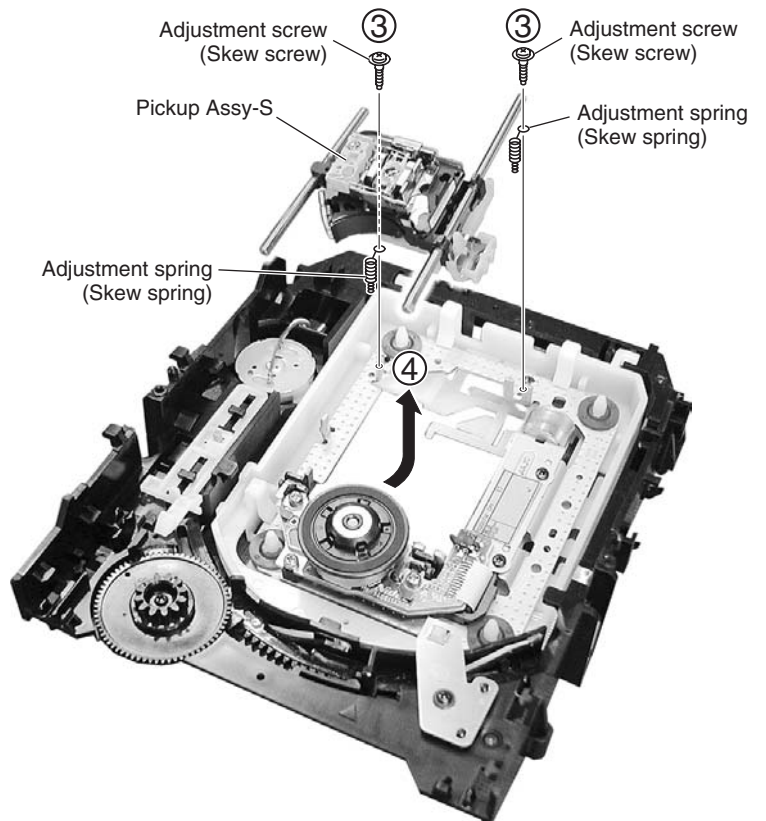
DISASSEMBLY DVD MECHANISM-3

Pickup Assy-S

- ① Dislodge the flexible cable for the pickup from its packaged placement.
- ② Remove the flexible cable for the pickup.



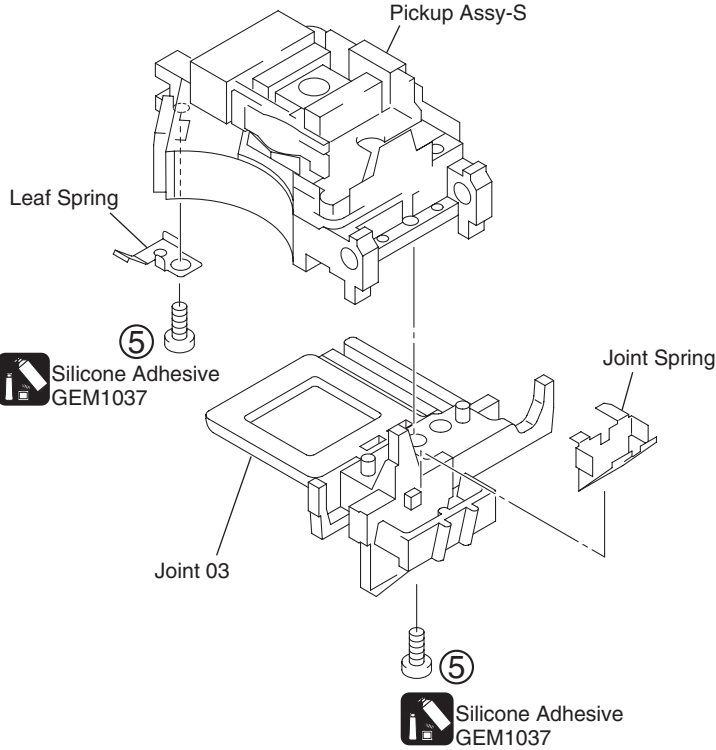
- ③ Remove the two adjustment screws and two adjustment springs.
- ④ Remove the Pickup Assy-S.



DISASSEMBLY DVD MECHANISM-4

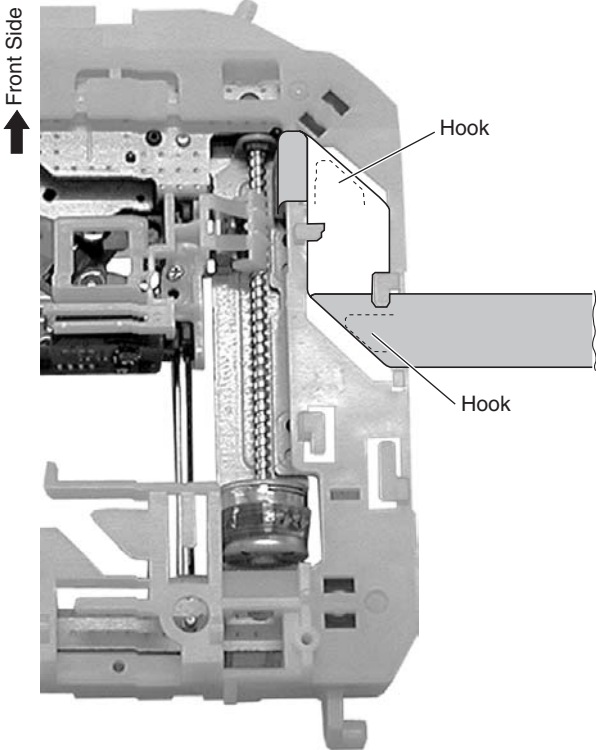
⑤ Remove the two screws.

Note: The screws are secured with epoxy.
Make sure to apply epoxy after reattaching the screws.



Arrangement of the flexible cable for the spindle motor

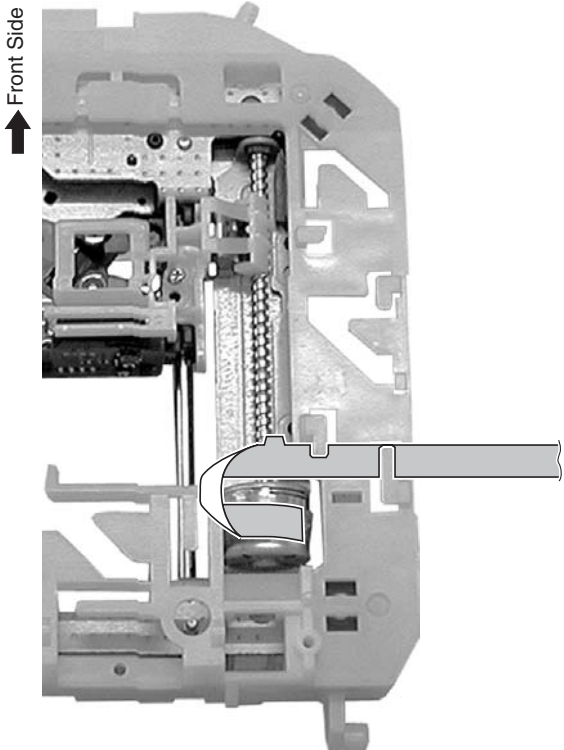
■ : Conductive surface



● Bottom View

Arrangement of the flexible cable for the stepping motor

■ : Conductive surface



● Bottom View

DISASSEMBLY DVD MECHANISM-5

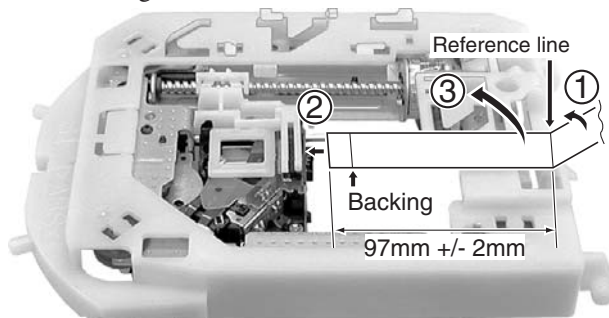
Arrangement of the flexible cable for the pickup

 : Conductive surface

Note:

Be sure to move the Pickup Assy-S to the innermost perimeter.

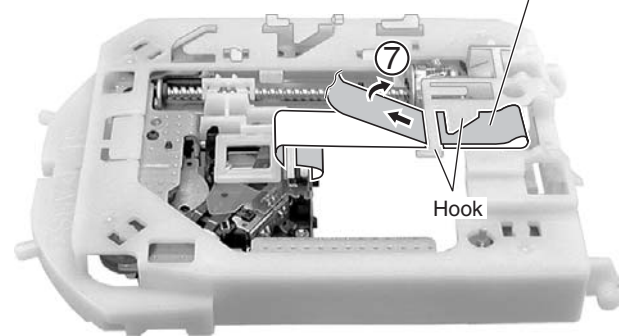
- ① Fold the flexible cable inward at the position of the reference line.
- ② Attach the flexible cable of the pickup to the connector.
- ③ Fold the flexible cable of the pickup with the backing inward.



Front Side ← • Bottom View

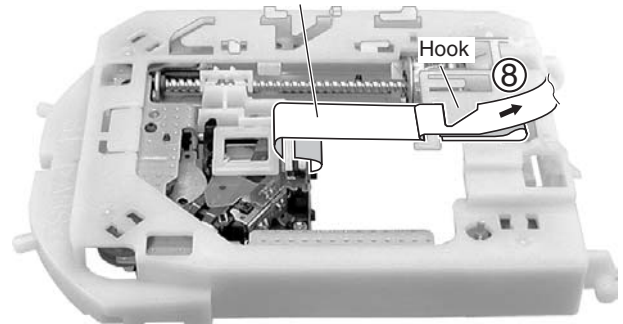
- ⑦ Pass the flexible cable below the hook, and fold it back.

Make sure that the cable does not have any slack

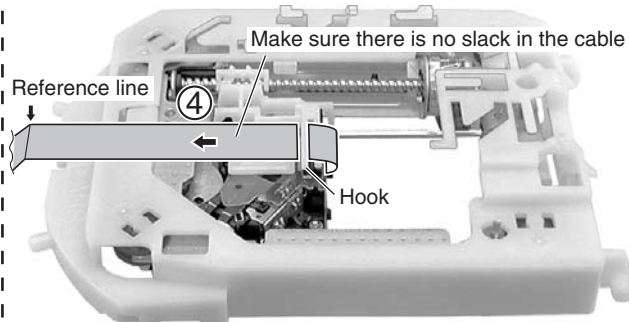


- ⑧ Fold the flexible cable back at the hook.

Make sure that the cable is loose

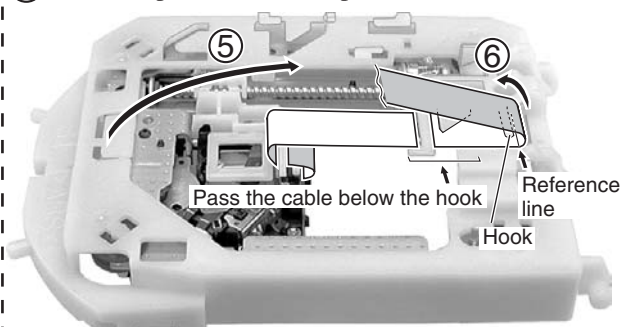


- ④ Pass the flexible cable through the hook not allowing any slack.

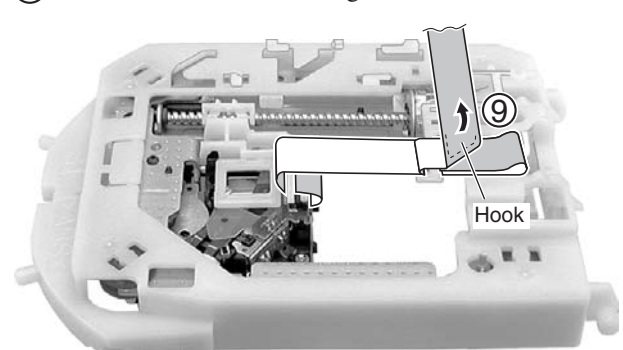


- ⑤ Fold the flexible cable as indicated in the photo.

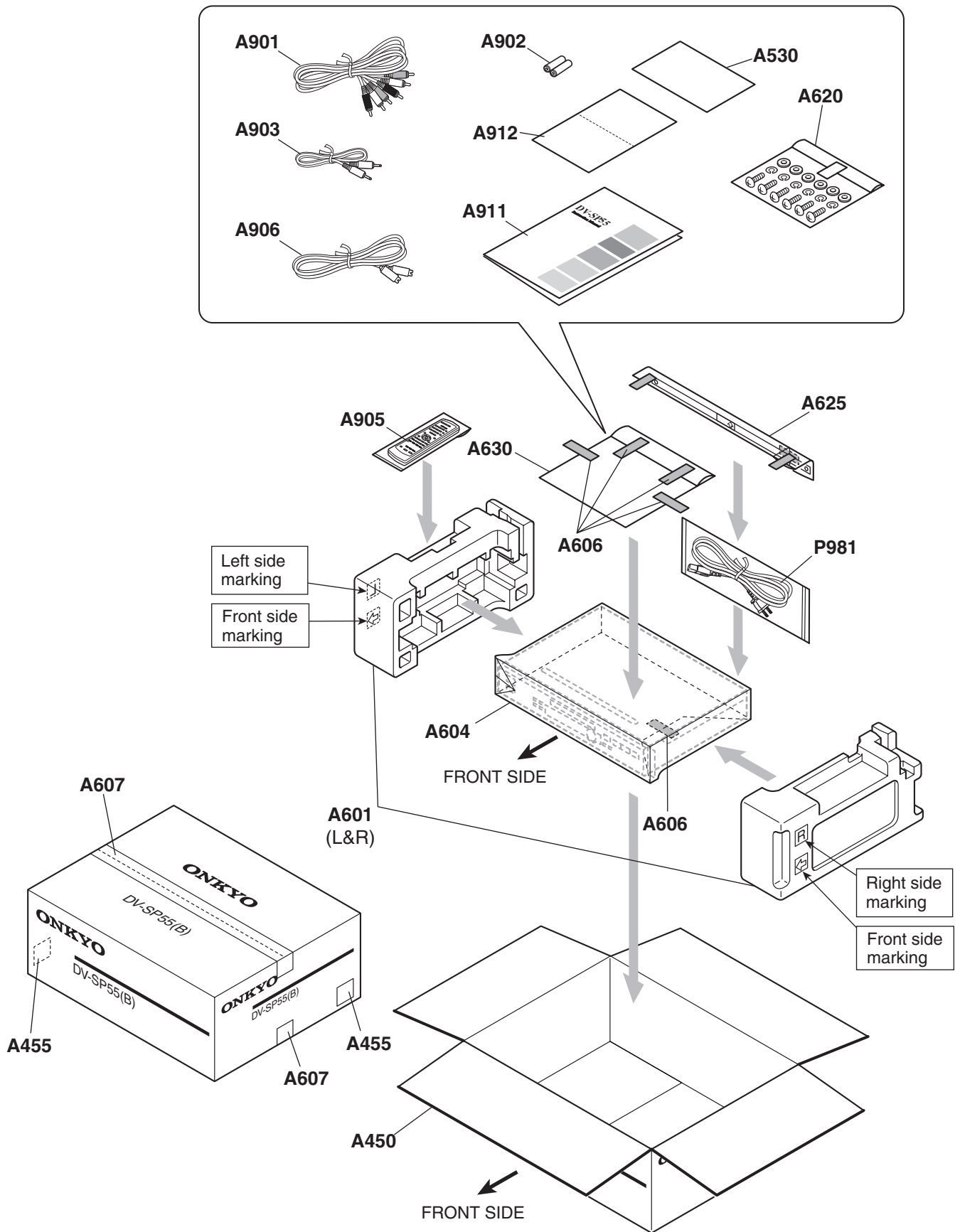
- ⑥ Hook the part folded in Step 1 to the hook.



- ⑨ Fold the flexible cable along the hook.



PACKING PROCEDURES



EXPLODED VIEW PARTS LIST

**NOTE : THE COMPONENTS IDENTIFIED BY THE MARK
! ARE CRITICAL FOR RISK OF FIRE AND
ELECTRIC SHOCK. REPLACE ONLY WITH PART
NUMBER SPECIFIED.**

<Notes>

! :Safety parts

	REF. NO.	NAME	DESCRIPTION	Q'TY	PART NO	REMARKS
EXP	A001	CHASSIS	---	1	27100425C	
EXP	A003	LEG	LEG	4	27175316C	
EXP	A005	CUSHION	---	8	28141494	
EXP	A007	SCREW	3TTB+8B	21	838130088	
EXP	A010	HOLDER	KGLS-10RT	2	27190428A	
EXP	A011a	WASHER	W3x10F(BC)	2	87643010	
EXP	A012	HOLDER	KGLS-18RT	1	27190657	MAIN PWB
EXP	A013	HOLDER	KGLS-22RT	2	27190772	MAIN PWB
EXP	A015	LABEL(DVD2)	---	1	29362648	
EXP	A016	CLAMP	HL-18-0	2	27301394	
EXP	A019	F BRACKET	(AS)	1	27111363	
EXP	A022	CLEAR PLT	DV-SP502(B)	1	28192043	
EXP	A024	TAPE	---	2	29110161	
EXP	A027	SCREW	2.6TTB+8B(BC)	3	838426088	
EXP	A030	KNOB	(POW)	1	28325497A	
EXP	A032	SCREW	3P+10FN(BC)	2	82143010	
EXP	A035	KNOB	(CRS)	1	28326244	
EXP	A051	DOOR	(B)	1	28148586	
EXP	A055	COVER	(B)	1	28184864	
EXP	A056	SCREW	3TTB+8B(BC)	20	838430088	
EXP	A057	CUSHION	HIME0.5x120x10	1	28141542	
EXP	A060	BRACKET	(L)	1	27130976	
EXP	A061	BRACKET	(R)	1	27130977	
EXP	A062	SCREW	3SMS8W.SW+14B(BC)	4	801433	
EXP	A401	F PANEL	DV-SP55	1	27212728	
EXP	A403	BADGE	BADGE	1	28135244	
EXP	A404	FACET	(S)	1	28198906	
EXP	A411	REAR PANEL	DV-SP55	1	27123387	N
EXP	A414	SCREW	4TTB+8C(BC)	2	838440089	AC INLET
EXP	F1	FUSE	1.6A-T/UL-ST2	1	252252	!
EXP	F1 or	FUSE	1.6A-TSC	(1)	252147	!
EXP	P501	FFC	NCFC5-301512	1	2045301512	
EXP	P502	FFC	NCFC5-110612	1	2045110612	
EXP	P503	FFC	NCFC5-180712	1	2045180712	
EXP	P701	FFC	NCFC5-242012	1	2045242012	
EXP	P702	SOCKET AS	NSAS-10P1160	1	20044391025	
EXP	P901A	CORE	NFY-25 BLACK	1	230945	
EXP	P910	WIRE TIE	BSK-1	6	260208	
EXP	S731	JOY STICK	NPS-115-S673	1	25035710	
EXP	U01	Audi/ Video output terminal PC board AS	NAAR-7997-3A	1	1H505597-3A	N
EXP	U02	Front Display PC board AS	NADIS-7998-3A	1	1H505598-3A	N
EXP	U03	Standby LED PC board AS	NADIS-7999-3A	1	1H505599-3A	N
EXP	U04	Power switch PC board AS	NASW-8000-3A	1	1H505500-3A	N
EXP	U05	Inlet terminal PC board AS	NAPS-8002-3A	1	1H505502-3A	N
EXP	U06	Support PC board	NAETC-8003-3A	1	1H505503-3A	N
EXP	U07	RS-232C terminal PC board AS	NAETC-8005-3A	1	1H505505-3A	N
EXP	U10	Power supply unit	NGPS-0040-100-120V	1	24150040	!
EXP	Z100	DVD Main circuit PC board AS	DB-VPB501	1	24150042	
EXP	Z101	DVD Mechanism AS	DB-VLD501-007	1	24801018	
EXP	Z102	HOLDER	(ML)	1	27191201	
EXP	Z103	HOLDER	(MR)	1	27191202	
EXP	Z104	SCREW	3SMS8W.SW+14B(BC)	4	801433	
EXP	Z105	SCREW	3TTB+8B	2	838130088	

EXP	Z106	SCREW	3TTB+8B	4	838130088	
EXP	Z901A	SCREW	4TTC+8C(BC)	1	830440089	2/18 PAGE

PC BOARD PARTS LIST

DV-SP55

U01 AUDI/VIDEO OUTPUT TERMINAL PC BOARD(NAAR-7997-3A)

	REF. NO.	NAME	DESCRIPTION	Q'TY	PART NO	REMARKS
PCB	Q351	PHT CP	TOTX179L	1	24120102	
PCB	Q352	IC	TC74VHCU04FT	1	22274004HR2TO	
PCB	Q401	IC	NJM4580M-D	1	22241448R2	
PCB	Q402	IC	NJM4580M-D	1	22241448R2	
PCB	Q403	IC	NJM4580M-D	1	22241448R2	
PCB	Q404	IC	NJM4580M-D	1	22241448R2	
PCB	Q405	TR	HN1C03F-B	1	2216141R2	
PCB	Q406	TR	HN1C03F-B	1	2216141R2	
PCB	Q460	TR	DTA114YKA	1	2216480R2	
PCB	Q460 or	TR	RN2407	(1)	2216360R2	
PCB	Q460 or	TR	KRA107S	(1)	2216350R2	
PCB	Q463	TR	DTC114YKA	1	2216470R2	
PCB	Q463 or	TR	RN1407	(1)	2216260R2	
PCB	Q463 or	TR	KRC107S	(1)	2216340R2	
PCB	Q701	IC	MPD780232GC-092-8BT	1	22242005R3	
PCB	Q702	FL TUBE	HNV-13SS12T	1	212238	
PCB	Q702A	CUSHION	t3x10x25	2	28141513	
PCB	Q703	IC	S-80130CLMC-JIP-T2	1	22241924R2	
PCB	Q704	TR	KRA103S	1	2216230R2	
PCB	Q704 or	TR	RN2403	(1)	2214540R2	
PCB	Q705	REMO SENS	RPM7138-H9	1	241348	
PCB	Q707	TR	2SD655-E	1	2211705	
PCB	Q707 or	TR	2SD655-F	(1)	2211706	
PCB	Q708	TR	DTC114YKA	1	2216470R2	
PCB	Q708 or	TR	KRC107S	(1)	2216340R2	
PCB	Q708 or	TR	RN1407	(1)	2216260R2	
PCB	Q801	PHT CP	ON3131	1	24120043	
PCB	Q802	IC	MPD789071MC-011-5A4	1	22241624R2	
PCB	Q803	IC	MPD4721GS	1	22241537R2	
PCB	Q806	TR	UMG9N	1	2216706R2	
PCB	Q920	TR	KTC3875-GR	1	2216175R2	
PCB	Q920 or	TR	2SC2712-GR	(1)	2213145R2	
PCB	D101	ZENER D	UDZS5.1B	1	224550510R2	
PCB	D460	C-DIODE	1SS352	1	223234R2	
PCB	D460 or	C-DIODE	1SS355	(1)	223269R2	
PCB	D701	C-DIODE	1SS352	1	223234R2	
PCB	D701 or	C-DIODE	1SS355	(1)	223269R2	
PCB	D702	ZENER D	UDZS5.6B	1	224550560R2	
PCB	D703	C-DIODE	1SS352	1	223234R2	
PCB	D703 or	C-DIODE	1SS355	(1)	223269R2	
PCB	D721	LED	SEL4110R	1	225290	
PCB	D801	C-DIODE	1SS352	1	223234R2	
PCB	D801 or	C-DIODE	1SS355	(1)	223269R2	
PCB	D901	ZENER D	UDZS5.1B	1	224550510R2	
PCB	D920	ZENER D	UDZS11B	1	224551100R2	
PCB	D921	C-DIODE	1SS352	1	223234R2	
PCB	D921 or	C-DIODE	1SS355	(1)	223269R2	
PCB	D922	C-DIODE	1SS352	1	223234R2	
PCB	D922 or	C-DIODE	1SS355	(1)	223269R2	
PCB	D923	C-DIODE	1SS352	1	223234R2	
PCB	D923 or	C-DIODE	1SS355	(1)	223269R2	
PCB	D924	C-DIODE	1SS352	1	223234R2	

PCB	D924 or	C-DIODE	ISS355	(1)	223269R2	
PCB	L351	EMIFIL	BK1608LM182-T	1	230958R1	3/18 PAGE
PCB	L351 or	EMIFIL	FBM-10-160808-202T	(1)	230968R1	
PCB	L352	EMIFIL	BK1608LM182-T	1	230958R1	
PCB	L352 or	EMIFIL	FBM-10-160808-202T	(1)	230968R1	
PCB	L353	EMIFIL	BK1608LM182-T	1	230958R1	
PCB	L353 or	EMIFIL	FBM-10-160808-202T	(1)	230968R1	
PCB	L354	EMIFIL	BK1608LM182-T	1	230958R1	
PCB	L354 or	EMIFIL	FBM-10-160808-202T	(1)	230968R1	
PCB	L801	EMIFIL	BK1608LM182-T	1	230958R1	
PCB	L801 or	EMIFIL	FBM-10-160808-202T	(1)	230968R1	
PCB	L802	EMIFIL	BK1608LM182-T	1	230958R1	
PCB	L802 or	EMIFIL	FBM-10-160808-202T	(1)	230968R1	
PCB	L803	EMIFIL	BK1608LM182-T	1	230958R1	
PCB	L803 or	EMIFIL	FBM-10-160808-202T	(1)	230968R1	
PCB	L804	EMIFIL	BK1608LM182-T	1	230958R1	
PCB	L804 or	EMIFIL	FBM-10-160808-202T	(1)	230968R1	
PCB	L805	EMIFIL	BK1608LM182-T	1	230958R1	
PCB	L805 or	EMIFIL	FBM-10-160808-202T	(1)	230968R1	
PCB	X701	CERA LOCK	CST5.00MGW	1	3010242	
PCB	X701 or	CERA LOCK	CSTLS5M00G56-A0	(1)	3010406	
PCB	X801	CERA LOCK	CST5.00MGW	1	3010242	
PCB	X801 or	CERA LOCK	CSTLS5M00G56-A0	(1)	3010406	
PCB	C101	C-CERA C	CK725F1E-104Z1	1	332161040R1	
PCB	C221	VR C	CE04W6.3V-470M(VR)	1	394624717	
PCB	C222	C-CERA C	CK725B1C-104K1	1	332121045R1	
PCB	C223	VR C	CE04W6.3V-470M(VR)	1	394624717	
PCB	C224	VR C	CE04W6.3V-1000M(VR)	1	394621027	
PCB	C225	VR C	CE04W6.3V-470M(VR)	1	394624717	
PCB	C226	VR C	CE04W6.3V-470M(VR)	1	394624717	
PCB	C227	VR C	CE04W6.3V-1000M(VR)	1	394621027	
PCB	C228	VR C	CE04W6.3V-470M(VR)	1	394624717	
PCB	C229	VR C	CE04W6.3V-470M(VR)	1	394624717	
PCB	C251	VR C	CE04W6.3V-470M(VR)	1	394624717	
PCB	C252	VR C	CE04W6.3V-470M(VR)	1	394624717	
PCB	C253	C-CERA C	CK725B1C-104K1	1	332121045R1	
PCB	C352	C-CERA C	CK725F1E-104Z1	1	332161040R1	
PCB	C353	VR C	CE04W6.3V-100M(VR)	1	394621017	
PCB	C357	C-CERA C	CK725B1C-104K1	1	332121045R1	
PCB	C358	C-CERA C	CC725CH1H-220J1	1	342102204R1	
PCB	C360	C-CERA C	CK725F1E-104Z1	1	332161040R1	
PCB	C361	C-CERA C	CK725F1E-104Z1	1	332161040R1	
PCB	C362	VR C	CE04W6.3V-100M(VR)	1	394621017	
PCB	C363	C-CERA C	CK725F1H-223Z1	1	332152230R1	
PCB	C364	C-CERA C	CK725F1H-223Z1	1	332152230R1	
PCB	C401	VX C	CE04W16V-47M(VX)	1	393344707	
PCB	C402	VX C	CE04W16V-47M(VX)	1	393344707	
PCB	C403	TF C	ECQ-B50V-681J	1	374726814	
PCB	C404	TF C	ECQ-B50V-681J	1	374726814	
PCB	C405	TF C	ECQ-B50V-152J	1	374721524	
PCB	C406	TF C	ECQ-B50V-152J	1	374721524	
PCB	C407	TF C	ECQ-B50V-102J	1	374721024	
PCB	C408	TF C	ECQ-B50V-102J	1	374721024	
PCB	C409	C-CERA C	CC725CH1H-470J1	1	342104704R1	
PCB	C410	C-CERA C	CC725CH1H-470J1	1	342104704R1	
PCB	C411	VR C	CE04W6.3V-220M(VR)	1	394622217	
PCB	C412	VR C	CE04W6.3V-220M(VR)	1	394622217	
PCB	C413	VX C	CE04W50V-47M(VX)	1	393384707	
PCB	C414	VX C	CE04W50V-47M(VX)	1	393384707	
PCB	C420	VR C	CE04W6.3V-470M(VR)	1	394624717	
PCB	C485	VR C	CE04W16V-220M(VR)	1	394642217	

PCB	C486	VR C	CE04W16V-220M(VR)	1	394642217	
PCB	C701	ELECT C	CE04W6.3V-100M	1	355721019	4/18 PAGE
PCB	C702	C-CERA C	CK725F1E-104Z1	1	332161040R1	
PCB	C703	C-CERA C	CK725F1E-104Z1	1	332161040R1	
PCB	C704	C-CERA C	CK725F1E-104Z1	1	332161040R1	
PCB	C705	ELECT C	CE04W50V-22M	1	355782209	
PCB	C706	ELECT C	CE04W6.3V-100M	1	355721019	
PCB	C801	VR C	CE04W50V-1M(VR)	1	394680107	
PCB	C802	VR C	CE04W50V-1M(VR)	1	394680107	
PCB	C803	VR C	CE04W50V-1M(VR)	1	394680107	
PCB	C804	VR C	CE04W50V-1M(VR)	1	394680107	
PCB	C810	VR C	CE04W6.3V-100M(VR)	1	394621017	
PCB	C811	C-CERA C	CK725F1E-104Z1	1	332161040R1	
PCB	C812	C-CERA C	CK725F1E-104Z1	1	332161040R1	
PCB	C813	VR C	CE04W6.3V-100M(VR)	1	394621017	
PCB	C814	VR C	CE04W6.3V-100M(VR)	1	394621017	
PCB	C815	TF C	ECQ-B50V-223J	1	374722234	
PCB	C901	C-CERA C	CK725F1E-104Z1	1	332161040R1	
PCB	C902	VR C	CE04W16V-220M(VR)	1	394642217	
PCB	C903	C-CERA C	CK725F1E-104Z1	1	332161040R1	
PCB	C904	VR C	CE04W6.3V-220M(VR)	1	394622217	
PCB	C905	C-CERA C	CK725F1E-104Z1	1	332161040R1	
PCB	C906	VR C	CE04W16V-220M(VR)	1	394642217	
PCB	C907	C-CERA C	CK725F1E-104Z1	1	332161040R1	
PCB	C908	VR C	CE04W16V-1000M(VR)	1	394641027	
PCB	C909	C-CERA C	CK725F1E-104Z1	1	332161040R1	
PCB	C910	VR C	CE04W16V-1000M(VR)	1	394641027	
PCB	C911	VR C	CE04W16V-100M(VR)	1	394641017	
PCB	C914	C-CERA C	CK725F1E-104Z1	1	332161040R1	
PCB	C920	VR C	CE04W16V-10M(VR)	1	394641007	
PCB	C921	VR C	CE04W16V-220M(VR)	1	394642217	
PCB	C922	VR C	CE04W16V-220M(VR)	1	394642217	
PCB	C991	IS C	RE275V-103M	1	3500196S	
PCB	R101	C-CARBON R	RN72K1J-103JE	1	435031034R1	
PCB	R102	C-CARBON R	RN72K1J-470JE	1	435034704R1	
PCB	R103	C-CARBON R	RN72K1J-470JE	1	435034704R1	
PCB	R104	C-CARBON R	RN72K1J-470JE	1	435034704R1	
PCB	R106	C-CARBON R	RN72K1J-470JE	1	435034704R1	
PCB	R107	C-CARBON R	RN72K1J-470JE	1	435034704R1	
PCB	R108	C-CARBON R	RN72K1J-470JE	1	435034704R1	
PCB	R115	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R117	C-CARBON R	RN72K1J-103JE	1	435031034R1	
PCB	R118	C-CARBON R	RN72K1J-103JE	1	435031034R1	
PCB	R119	C-CARBON R	RN72K1J-103JE	1	435031034R1	
PCB	R121	C-CARBON R	RN72K1J-470JE	1	435034704R1	
PCB	R122	C-CARBON R	RN72K1J-470JE	1	435034704R1	
PCB	R123	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R124	C-CARBON R	RN72K1J-470JE	1	435034704R1	
PCB	R125	C-CARBON R	RN72K1J-470JE	1	435034704R1	
PCB	R126	C-CARBON R	RN72K1J-470JE	1	435034704R1	
PCB	R127	C-CARBON R	RN72K1J-470JE	1	435034704R1	
PCB	R134	C-CARBON R	RN72K1J-103JE	1	435031034R1	
PCB	R135	C-CARBON R	RN72K1J-103JE	1	435031034R1	
PCB	R136	C-CARBON R	RN72K1J-103JE	1	435031034R1	
PCB	R137	C-CARBON R	RN72K1J-103JE	1	435031034R1	
PCB	R221	C-CARBON R	RN72K1J-750JE	1	435037504R1	
PCB	R222	C-CARBON R	RN72K1J-750JE	1	435037504R1	
PCB	R223	C-CARBON R	RN72K1J-750JE	1	435037504R1	
PCB	R224	C-CARBON R	RN72K1J-103JE	1	435031034R1	
PCB	R225	C-CARBON R	RN72K1J-750JE	1	435037504R1	
PCB	R227	C-CARBON R	RN72K1J-750JE	1	435037504R1	

PCB	R229	C-CARBON R	RN72K1J-750JE	1	435037504R1	
PCB	R231	C-CARBON R	RN72K1J-000JE	1	435030004R1	5/18 PAGE
PCB	R232	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R233	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R234	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R235	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R236	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R241	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R242	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R243	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R244	C-CARBON R	RN72K1J-750JE	1	435037504R1	
PCB	R245	C-CARBON R	RN72K1J-750JE	1	435037504R1	
PCB	R246	C-CARBON R	RN72K1J-750JE	1	435037504R1	
PCB	R251	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R252	C-CARBON R	RN72K1J-750JE	1	435037504R1	
PCB	R253	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R254	C-CARBON R	RN72K1J-750JE	1	435037504R1	
PCB	R255	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R256	C-CARBON R	RN72K1J-750JE	1	435037504R1	
PCB	R257	C-CARBON R	RN72K1J-103JE	1	435031034R1	
PCB	R351	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R353	C-CARBON R	RN72K1J-474JE	1	435034744R1	
PCB	R354	C-CARBON R	RN72K1J-331JE	1	435033314R1	
PCB	R355	C-CARBON R	RN72K1J-181JE	1	435031814R1	
PCB	R356	C-CARBON R	RN72K1J-181JE	1	435031814R1	
PCB	R357	C-CARBON R	RN72K1J-471JE	1	435034714R1	
PCB	R401	C-CARBON R	RN72K1J-152JE	1	435031524R1	
PCB	R402	C-CARBON R	RN72K1J-152JE	1	435031524R1	
PCB	R405	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R406	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R407	C-CARBON R	RN72K1J-103JE	1	435031034R1	
PCB	R408	C-CARBON R	RN72K1J-103JE	1	435031034R1	
PCB	R409	C-CARBON R	RN72K1J-103JE	1	435031034R1	
PCB	R410	C-CARBON R	RN72K1J-103JE	1	435031034R1	
PCB	R411	C-CARBON R	RN72K1J-152JE	1	435031524R1	
PCB	R412	C-CARBON R	RN72K1J-152JE	1	435031524R1	
PCB	R413	C-CARBON R	RN72K1J-223JE	1	435032234R1	
PCB	R414	C-CARBON R	RN72K1J-223JE	1	435032234R1	
PCB	R415	C-CARBON R	RN72K1J-223JE	1	435032234R1	
PCB	R416	C-CARBON R	RN72K1J-223JE	1	435032234R1	
PCB	R417	C-CARBON R	RN72K1J-223JE	1	435032234R1	
PCB	R418	C-CARBON R	RN72K1J-223JE	1	435032234R1	
PCB	R419	C-CARBON R	RN72K1J-152JE	1	435031524R1	
PCB	R420	C-CARBON R	RN72K1J-152JE	1	435031524R1	
PCB	R421	C-CARBON R	RN72K1J-223JE	1	435032234R1	
PCB	R422	C-CARBON R	RN72K1J-223JE	1	435032234R1	
PCB	R423	C-CARBON R	RN72K1J-152JE	1	435031524R1	
PCB	R424	C-CARBON R	RN72K1J-152JE	1	435031524R1	
PCB	R427	C-CARBON R	RN72K1J-103JE	1	435031034R1	
PCB	R428	C-CARBON R	RN72K1J-103JE	1	435031034R1	
PCB	R429	C-CARBON R	RN72K1J-103JE	1	435031034R1	
PCB	R430	C-CARBON R	RN72K1J-103JE	1	435031034R1	
PCB	R433	C-CARBON R	RN72K1J-101JE	1	435031014R1	
PCB	R434	C-CARBON R	RN72K1J-101JE	1	435031014R1	
PCB	R441	C-CARBON R	RN72K1J-104JE	1	435031044R1	
PCB	R442	C-CARBON R	RN72K1J-104JE	1	435031044R1	
PCB	R443	C-CARBON R	RN72K1J-271JE	1	435032714R1	
PCB	R444	C-CARBON R	RN72K1J-271JE	1	435032714R1	
PCB	R445	C-CARBON R	RN72K1J-222JE	1	435032224R1	
PCB	R446	C-CARBON R	RN72K1J-222JE	1	435032224R1	
PCB	R447	C-CARBON R	RN72K1J-101JE	1	435031014R1	

PCB	R448	C-CARBON R	RN72K1J-101JE	1	435031014R1	
PCB	R449	C-CARBON R	RN72K1J-222JE	1	435032224R1	6/18 PAGE
PCB	R450	C-CARBON R	RN72K1J-222JE	1	435032224R1	
PCB	R456	C-CARBON R	RN72K1J-104JE	1	435031044R1	
PCB	R457	C-CARBON R	RN72K1J-104JE	1	435031044R1	
PCB	R459	C-CARBON R	RN72K1J-154JE	1	435031544R1	
PCB	R460	C-CARBON R	RN72K1J-154JE	1	435031544R1	
PCB	R462	C-CARBON R	RN72K1J-102JE	1	435031024R1	
PCB	R463	C-CARBON R	RN72K1J-102JE	1	435031024R1	
PCB	R481	NF CARBON R	R25J-2.2	1	415470224	
PCB	R482	NF CARBON R	R25J-2.2	1	415470224	
PCB	R701	C-CARBON R	RN72K1J-103JE	1	435031034R1	
PCB	R702	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R703	C-CARBON R	RN72K1J-101JE	1	435031014R1	
PCB	R704	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R705	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R706	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R707	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R708	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R710	C-CARBON R	RN72K1J-103JE	1	435031034R1	
PCB	R711	C-CARBON R	RN72K1J-105JE	1	435031054R1	
PCB	R712	C-CARBON R	RN72K1J-473JE	1	435034734R1	
PCB	R713	C-CARBON R	RN72K1J-224JE	1	435032244R1	
PCB	R714	C-CARBON R	RN72K1J-101JE	1	435031014R1	
PCB	R715	C-CARBON R	RN72K1J-101JE	1	435031014R1	
PCB	R716	C-CARBON R	RN72K1J-101JE	1	435031014R1	
PCB	R717	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R718	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R719	C-CARBON R	RN72K1J-103JE	1	435031034R1	
PCB	R720	C-CARBON R	RN72K1J-103JE	1	435031034R1	
PCB	R721	C-CARBON R	RN72K1J-103JE	1	435031034R1	
PCB	R722	C-CARBON R	RN72K1J-103JE	1	435031034R1	
PCB	R724	C-CARBON R	RN72K1J-223JE	1	435032234R1	
PCB	R727	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R733	C-CARBON R	RN72K1J-102JE	1	435031024R1	
PCB	R734	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R737	C-CARBON R	RN72K1J-102JE	1	435031024R1	
PCB	R738	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R740	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R743	C-CARBON R	RN72K1J-102JE	1	435031024R1	
PCB	R751	C-CARBON R	RN72K1J-272JE	1	435032724R1	
PCB	R752	C-CARBON R	RN72K1J-391JE	1	435033914R1	
PCB	R753	C-CARBON R	RN72K1J-471JE	1	435034714R1	
PCB	R754	C-CARBON R	RN72K1J-821JE	1	435038214R1	
PCB	R755	C-CARBON R	RN72K1J-102JE	1	435031024R1	
PCB	R756	C-CARBON R	RN72K1J-182JE	1	435031824R1	
PCB	R757	C-CARBON R	RN72K1J-392JE	1	435033924R1	
PCB	R758	C-CARBON R	RN72K1J-272JE	1	435032724R1	
PCB	R759	C-CARBON R	RN72K1J-391JE	1	435033914R1	
PCB	R760	C-CARBON R	RN72K1J-471JE	1	435034714R1	
PCB	R761	C-CARBON R	RN72K1J-821JE	1	435038214R1	
PCB	R762	C-CARBON R	RN72K1J-102JE	1	435031024R1	
PCB	R763	C-CARBON R	RN72K1J-182JE	1	435031824R1	
PCB	R764	C-CARBON R	RN72K1J-392JE	1	435033924R1	
PCB	R765	C-CARBON R	RN72K1J-103JE	1	435031034R1	
PCB	R766	C-CARBON R	RN72K1J-272JE	1	435032724R1	
PCB	R767	C-CARBON R	RN72K1J-391JE	1	435033914R1	
PCB	R768	C-CARBON R	RN72K1J-471JE	1	435034714R1	
PCB	R769	C-CARBON R	RN72K1J-821JE	1	435038214R1	
PCB	R770	C-CARBON R	RN72K1J-102JE	1	435031024R1	
PCB	R771	C-CARBON R	RN72K1J-182JE	1	435031824R1	

PCB	R772	C-CARBON R	RN72K1J-392JE	1	435033924R1	
PCB	R773	C-CARBON R	RN72K1J-103JE	1	435031034R1	7/18 PAGE
PCB	R779	C-CARBON R	RN72K1J-471JE	1	435034714R1	
PCB	R801	C-CARBON R	RN72K1J-105JE	1	435031054R1	
PCB	R802	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R803	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R804	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R805	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R806	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R807	C-CARBON R	RN72K1J-470JE	1	435034704R1	
PCB	R808	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R809	C-CARBON R	RN72K1J-470JE	1	435034704R1	
PCB	R810	C-CARBON R	RN72K1J-470JE	1	435034704R1	
PCB	R811	C-CARBON R	RN72K1J-470JE	1	435034704R1	
PCB	R812	C-CARBON R	RN72K1J-470JE	1	435034704R1	
PCB	R820	C-CARBON R	RN72K1J-332JE	1	435033324R1	
PCB	R821	C-CARBON R	RN72K1J-103JE	1	435031034R1	
PCB	R822	C-CARBON R	RN72K1J-103JE	1	435031034R1	
PCB	R823	C-CARBON R	RN72K1J-101JE	1	435031014R1	
PCB	R902	C-CARBON R	RN72K1J-222JE	1	435032224R1	
PCB	R920	C-CARBON R	RN72K1J-221JE	1	435032214R1	
PCB	R1001	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R1002	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R1003	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R1004	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R1005	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R1006	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R1007	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R1008	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R1009	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R1010	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R1012	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R1013	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R1015	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R1016	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R1017	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R1018	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R1019	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R1020	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	R8001	C-CARBON R	RN72K1J-000JE	1	435030004R1	
PCB	P104	SOCKET	NSCT-7P2241	1	25052344	
PCB	P104 or	SOCKET	NSCT-7P1676	(1)	25051889	
PCB	P104 or	SOCKET	NSCT-7P2425	(1)	25052528	
PCB	P201	PIN JACK	NPJ-10PDBY458	1	25045659	
PCB	P203	PIN JACK	NPJ-3PDGLR454	1	25045654	
PCB	P205	BNC JACK	P2298	1	25045634	
PCB	P350	PIN JACK	NPJ-1PDOR369	1	25045548	
PCB	P351A	SOCKET AS	NSAS-4P1148	1	2009990787UL	
PCB	P352	PIN JACK	NPJ-2PDB400	1	25045589	
PCB	P401	PIN JACK	NPJ-2PDRW435	1	25045628	
PCB	P402	PIN JACK	NPJ-2PDRW435	1	25045628	
PCB	P701A	SOCKET	NSCT-24P2415	1	25052518	
PCB	P701Aor	SOCKET	NSCT-24P1735	(1)	25051948	
PCB	P701Aor	SOCKET	NSCT-24P2221	(1)	25052324	
PCB	P701B	SOCKET	NSCT-24P2442	1	25052545	
PCB	P701Bor	SOCKET	NSCT-24P2258	(1)	25052361	
PCB	P701Bor	SOCKET	NSCT-24P1693	(1)	25051906	
PCB	P731	SOCKET	NSCT-7P2241	1	25052344	
PCB	P731 or	SOCKET	NSCT-7P1676	(1)	25051889	
PCB	P731 or	SOCKET	NSCT-7P2425	(1)	25052528	
PCB	P801	SOCKET	NSCT-9P2277	1	25052379	

PCB	P802	ST JACK	HSJ1002-01-1020	1	25045647	
PCB	P851A	PLUG	NPLG-8P136	1	25055152	8/18 PAGE
PCB	P851B	SOCKET AS	NSAS-16P0277	1	2002341620	
PCB	P901	SOCKET AS	NSAS-30P1102	1	2004C193060UL	
PCB	P981B	AC INLET	NPLG-2P913	1	25055960	
PCB	P982A	CRIMP AS	CRIMP AS	1	2069943301UL	
PCB	P982B	SOCKET AS	NSAS-2P0921	1	2009990661UL	
PCB	S701	PUSH SW	NPS-111-S681	1	25035718	
PCB	S702	PUSH SW	NPS-111-S681	1	25035718	
PCB	S703	PUSH SW	NPS-111-S681	1	25035718	
PCB	S704	PUSH SW	NPS-111-S681	1	25035718	
PCB	S705	PUSH SW	NPS-111-S681	1	25035718	
PCB	S706	PUSH SW	NPS-111-S681	1	25035718	
PCB	S707	PUSH SW	NPS-111-S681	1	25035718	
PCB	S708	PUSH SW	NPS-111-S681	1	25035718	
PCB	S709	PUSH SW	NPS-111-S681	1	25035718	
PCB	S710	PUSH SW	NPS-111-S681	1	25035718	
PCB	S712	PUSH SW	NPS-111-S681	1	25035718	
PCB	S713	PUSH SW	NPS-111-S681	1	25035718	
PCB	S714	PUSH SW	NPS-111-S681	1	25035718	
PCB	S715	PUSH SW	NPS-111-S681	1	25035718	
PCB	S716	PUSH SW	NPS-111-S681	1	25035718	
PCB	S991	PUSH SW	NPS-111-L666P	1	25035703	!
PCB	S991 or	P SW	NPS-111-L512P	(1)	25035550	!
PCB	CN901	SOCKET	NSCT-30P2421	1	25052524	
PCB	CN901 or	SOCKET	NSCT-30P1741	(1)	25051954	
PCB	CN901 or	SOCKET	NSCT-30P2227	(1)	25052330	
PCB	CN902	SOCKET	NSCT-11P2402	1	25052505	
PCB	CN902 or	SOCKET	NSCT-11P1822	(1)	25051935	
PCB	CN902 or	SOCKET	NSCT-11P2208	(1)	25052311	
PCB	CN903	SOCKET	NSCT-18P2409	1	25052512	
PCB	CN903 or	SOCKET	NSCT-18P1729	(1)	25051942	
PCB	CN903 or	SOCKET	NSCT-18P2215	(1)	25052318	
PCB	JL703A	WIRE HOL	NSCT-4P875	1	25051088	
PCB	JL703B	WIRE HOL	NSCT-4P875	1	25051088	

PACKING PARTS LIST

DV-SP55

**NOTE : THE COMPONENTS IDENTIFIED BY THE MARK
! ARE CRITICAL FOR RISK OF FIRE AND
ELECTRIC SHOCK. REPLACE ONLY WITH PART
NUMBER SPECIFIED.**

<Notes>

! :Safety parts

	REF. NO.	NAME	DESCRIPTION	Q'TY	PART NO	REMARKS
PKG	A450	CARTON	MDD1N	1	29054310	N
PKG	A455	UPC LABEL	MDD1N	1	29364030	N
PKG	A530	WRNTY CARD	(ONKYO)	1	29365090B	
PKG	A601	PAD	(AS)	1	29092194	
PKG	A604	POLY BAG	650x500	1	29100037-1A	
PKG	A606	TAPE	NITTO NO.29	1	29110149	0.3:MT
PKG	A607	PP TAPE	W48 OPP TAPE	1	29110148	1.3:MT
PKG	A620	ACCESSORY	AS	1	292209	
PKG	A625	F PANEL	AS	1	27212730	N
PKG	A630	POLY BAG	350x250	1	29100097-1A	
PKG	A901	CORD AS	RCA3P(YWR)	1	2010412	
PKG	A901 or	PIN CORD AS	RCA3P(YWR)	(1)	2010379	
PKG	A902	BATTERY	R6/AA(UM-3)	2	3010194	
PKG	A902 or	BATTERY	R6/AA(UM-3)	(2)	3010054	
PKG	A903	CORD AS	3.5 MINI PLUG	1	2010431	
PKG	A905	REMO CON	RC-524DV	1	24140524	

PKG	A906	CORD AS	(S CORD)	1	2010380	
PKG	A906 or	CORD AS	TPX3000	(1)	2010360	9/18 PAGE
PKG	A911	INS MANUAL	En(DV-SP55)	1	29343916	N
PKG	A912	INST SHEET	---	1	29355474	MP002:RACK INST
PKG	P981	AC CORD	AS-UC-2	1	253352TES	!
PKG	P981 or	AC CORD	AS-UC-2	(1)	253297KAW	!

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