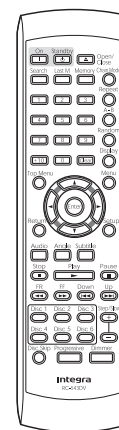
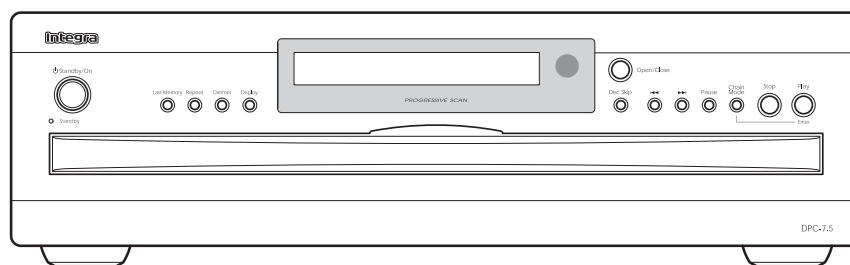


# Integra SERVICE MANUAL

May, 2004
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## DVD CHANGER MODEL DPC-7.5




RC-543DV

### Black model

BCDD1N	120V AC, 60Hz
BCPA4P	230-240V AC, 50Hz

### SAFETY-RELATED COMPONENT WARNING!!

THE MARK  FOUND ON SOME COMPONENT PARTS INDICATES THE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK.

WHEN REPLACING, BE SURE TO USE PARTS OF IDENTICAL DESIGNATION.

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.

## SPECIFICATIONS

Video system		Standard NTSC (U.S. model), PAL/AUTO (Australian model)
Region code		1 (U.S. model), 4 (Australian model)
Laser		Semiconductor laser, wavelength 650 nm (DVD), 780 nm (CD)
Frequency response	DVD linear audio	4 Hz-22 kHz @ 48 kHz sampling rate 4 Hz-44 kHz @ 96 kHz sampling rate
	CD audio	4 Hz-20 kHz
Signal-to-noise ratio (digital audio)		100 dB
Audio dynamic range (digital audio)		93 dB
Harmonic distortion (digital audio)		0.006%
Wow and Flutter		Below measurable level
Operating conditions	Temperature	5° to 35° C (41° F to 95° F)
	Installation	Install horizontally
Video outputs	COMPONENT VIDEO	Y: 1.0 V (p-p), 75 ohm, negative sync, RCA/phono x1, BNC x1 Pb/Pr: 0.7 V (p-p), 75 ohm
	S VIDEO (S-Video)	Y: 1.0 V (p-p), 75 ohm, negative sync, 4-pin mini DIN x2 C: 0.286 V (p-p), 75 ohm
	VIDEO (composite video)	1.0 V (p-p), 75 ohm, negative sync, RCA/phono x2
Audio outputs	OPTICAL	-22.5 dBm, optical connector x1
	COAXIAL	0.5 V (p-p), 75 ohm, RCA/phono x1
	ANALOG	2.0 V rms, 440, RCA/phono x2
General	Power supply	120 V AC, 60 Hz (U.S. model) 230-240 V AC, 50 Hz (Australian model)
	Power consumption	13 W
	Power consumption in Standby mode	0.99 W (U.S. model) 0.99 W (Australian model)
	Weight	6.4 kg (14.1 lbs.)
	Dimensions (W x H x D)	435 x 131 x 436 mm (17-1/8" x 5-3/16" x 17-3/16")

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.

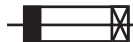
The label on the right is applied on the rear panel except for USA and Canadian models.

**"CLASS 1 LASER PRODUCT"**

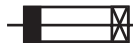
1. This unit is a CLASS 1 LASER PRODUCT and employs a laser inside the cabinet.
2. To prevent the laser from being exposed, do not remove the cover. Refer servicing to qualified personnel.

### 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 apposse.

#### 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



REF. NO.	PART NO.	DESCRIPTION
F1	5120-0130-0 or	1.6A-UL/T-237 <CDD1N>
	5120-1000-0	1.6A-T/UL-ST2 <CDD1N>
F1	5120-0094-0 or	2.5A-SE-EAK <CPA4P>
	5120-1010-0	2.5A-SE-TL250V <CPA4P>

<CDD1N> : North American area

<CPA4P> : Australian area

## 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".

After display "COMPLETE".

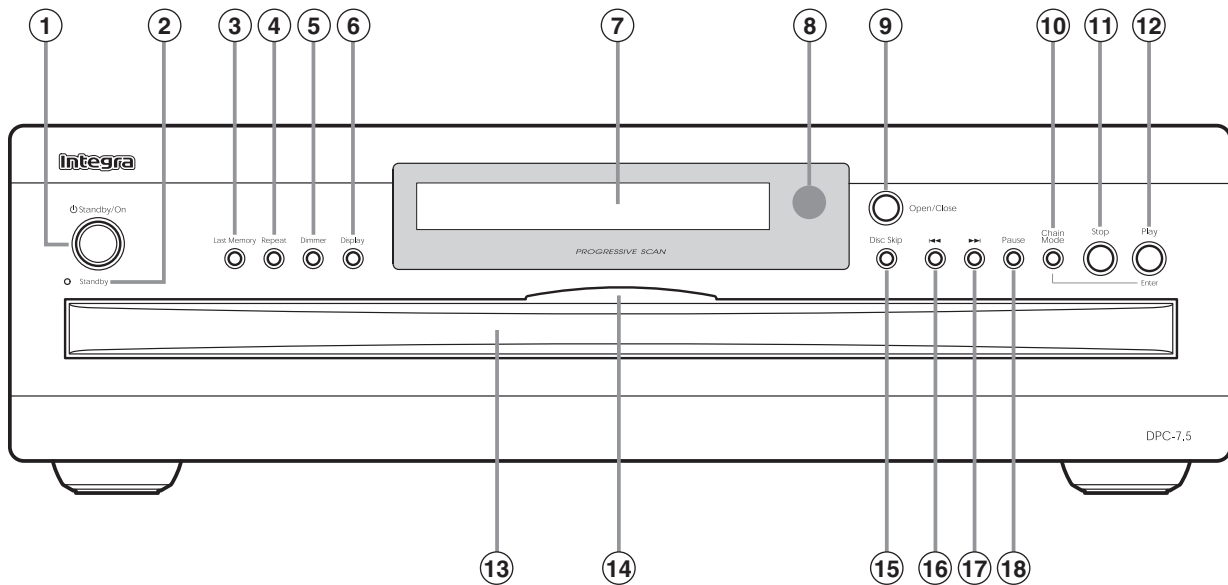
### REMOVE THE SOLDER OF LASER DIODE SHORT

When replace the mechanism or DVD main PC board.

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

## PANEL VIEW-1

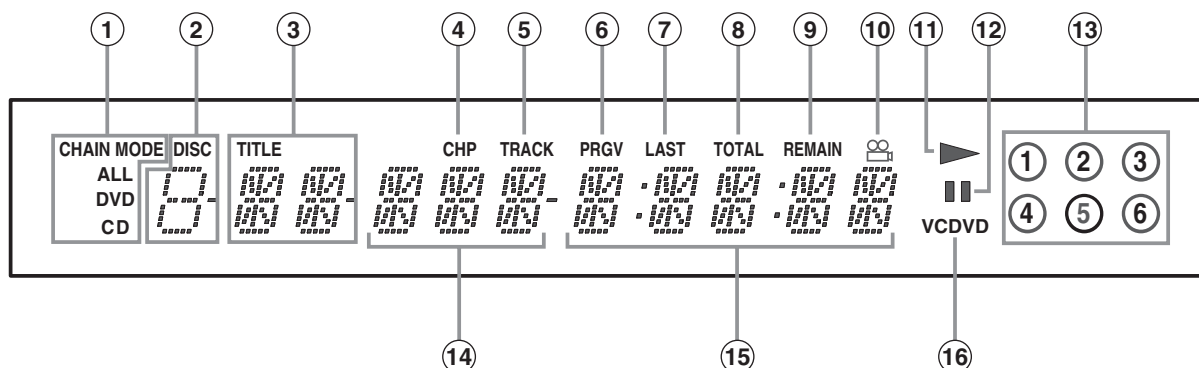
## FRONT PANEL



- ① Standby/On button**  
This button is used to set the DPC-7.5 to On or Standby.
- ② Standby indicator**  
This indicator lights up when the DPC-7.5 is in Standby mode.
- ③ Last Memory button**  
This button is used with the Last Memory function.
- ④ Repeat button**  
This button is used with the Repeat function.
- ⑤ Dimmer button**  
This button is used to adjust the display brightness.
- ⑥ Display button**  
This button is used to display information about the current disc, title, chapter, or track, including the elapsed time, remaining time, total time, and so on.
- ⑦ Display**  
See "Display" on page 11 for more information.
- ⑧ Remote control sensor**  
This sensor receives control signals from the remote controller.
- ⑨ Open/Close button**  
This button is used to open and close the disc tray.
- ⑩ Chain Mode button**  
This button is used with the Chain mode function.
- ⑪ Stop button**  
This button is used to stop playback.
- ⑫ Play/Enter button**  
This button is used to start playback and to cancel fast forward and fast reverse. It's also used to start Chain mode playback.
- ⑬ Disc tray**  
The disc tray has six bays for loading up to six discs.
- ⑭ Disc tray light**  
This light illuminates the disc tray. It comes on when the DPC-7.5 is turned on, and is brighter while the disc tray is open.
- ⑮ Disc Skip button**  
This button is used to select the disc bays (i.e., rotate the disc tray) when loading or removing discs, and to select discs for playback.
- ⑯ Down [◀◀] button**  
This button is used to select the previous chapter or track. During playback it selects the beginning of the current chapter or track.
- ⑰ Up [▶▶] button**  
This button is used to select the next chapter or track.
- ⑱ Pause button**  
This button is used to pause playback.

## PANEL VIEW-2

### FL DISPLAY



#### ① CHAIN MODE, ALL, DVD & CD indicators

The Chain Mode indicator appears when the Chain mode function is on. The ALL, DVD, and CD indicators show the type or Chain mode selected.

#### ② DISC indicator

The number of the currently selected disc appears here.

#### ③ TITLE indicator

While stopped, the total number of titles on the current DVD-Video is displayed here. During playback, the number of the current title is displayed.

#### ④ CHP indicator

This indicator appears while the number of the current chapter is being displayed.

#### ⑤ TRACK indicator

This indicator appears while track numbers are being displayed. While stopped, the total number of tracks on the current Video CD, audio CD, or MP3/WMA disc are displayed. During playback, the number of the current track is displayed.

#### ⑥ PRGV indicator

This indicator appears when the Progressive Scanning function is on.

#### ⑦ LAST indicator

This indicator appears when the Last Memory function has been set.

#### ⑧ TOTAL indicator

This indicator appears while the total time is being displayed.

#### ⑨ REMAIN indicator

This indicator appears while the remaining time is being displayed.

#### ⑩ Camera angle indicator

This indicator appears if the DVD-Video being played features multiple camera angles.

#### ⑪ Play ► indicator

This indicator is shown during playback.

#### ⑫ Pause ■■ indicator

This indicator appears when playback is paused.

#### ⑬ Disc indicators 1-6

These indicators show how many discs are loaded. The number of the current disc has a circle around it. When the disc tray is closed, all of the disc indicators appear until the DPC-7.5 has checked each bay for the presence of a disc. If a bay is found to have no disc, the corresponding indicator disappears.

#### ⑭ Chapter & track number

Chapter and track numbers appears here.

#### ⑮ Time display

Time information, such as total time, remaining time, and so on, is displayed here in hours, minutes, and seconds. Other messages are also displayed.

#### ⑯ VCDVD indicator

This indicator shows the type of disc currently selected:

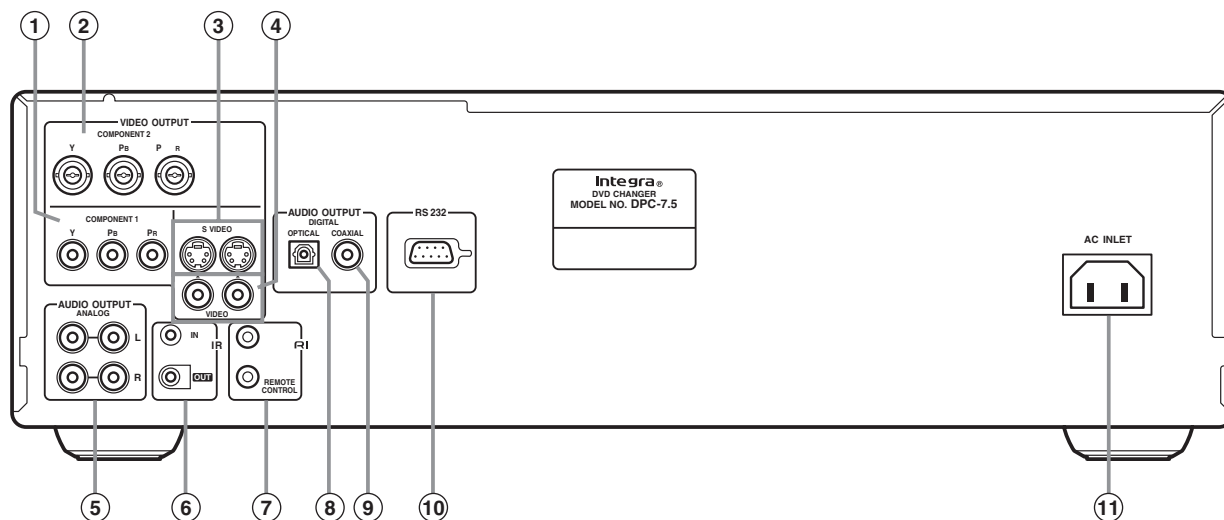
**DVD:** DVD-Video, DVD-R, or DVD-RW

**VCD:** Video CD

**CD:** Audio CD, MP3/WMA/JPEG CD-R, or CD-RW

## PANEL VIEW-3

### REAR PANEL



#### ① COMPONENT 1 VIDEO OUTPUT

These RCA/phono connectors can be used to connect a TV or projector with RCA/phono component video inputs.

The DPC-7.5 has two component video outputs, the COMPONENT 1 and COMPONENT 2, however, they output the same video signal.

#### ② COMPONENT 2 VIDEO OUTPUT

These BNC connectors can be used to connect a TV or projector with BNC component video inputs.

The DPC-7.5 has two component video outputs, the COMPONENT 1 and COMPONENT 2, however, they output the same video signal.

#### ③ S VIDEO OUTPUT

These connectors can be used to connect TVs or projectors with S-Video inputs.

The DPC-7.5 has two S-Video output connectors. They output the same video signal.

#### ④ VIDEO OUTPUT

These RCA/phono connectors can be used to connect TVs or projectors with composite video inputs.

The DPC-7.5 has two composite video output connectors. They output the same video signal respectively.

#### ⑤ ANALOG AUDIO OUTPUT

These RCA/phono connectors can be connected to the analog audio inputs on your TV, hi-fi amp, AV receiver, or surround sound decoder (Dolby Pro Logic). There are two sets of outputs. You could connect one set to your AV receiver, the other to your TV for those occasions when you want to watch a DVD-Video but don't want to use your AV receiver.

The DPC-7.5 has two pairs of stereo analog audio output connectors. They output the same audio signal respectively.

#### ⑥ IR IN/OUT

The IR IN connector can be used to connect a commercially available IR receiver, which can be used to pickup signals from the remote controller when the DPC-7.5 is located in another room, installed in a rack, or is out of range of the remote controller.

The IR OUT connector can be used to connect a commercially available IR emitter, which can be used to pass remote controller signals received by the IR IN along to other AV components.

#### ⑦ RI REMOTE CONTROL

These **RI** (Remote Interactive) connectors can be connected to the **RI** connectors on your other Integra/Onkyo AV components for interactive control.

To use **RI** you must also make an analog RCA/phono connection between your DPC-7.5 and Integra/Onkyo AV receiver, even if they are connected digitally.

#### ⑧ OPTICAL AUDIO OUTPUT

This optical digital audio output can be connected to an optical digital audio input on a hi-fi amp, AV receiver, or surround sound decoder (Dolby Digital, DTS).

#### ⑨ COAXIAL AUDIO OUTPUT

This coaxial digital audio output can be connected to a coaxial digital audio input on a hi-fi amp, AV receiver, or surround sound decoder (Dolby Digital, DTS).

#### ⑩ RS 232

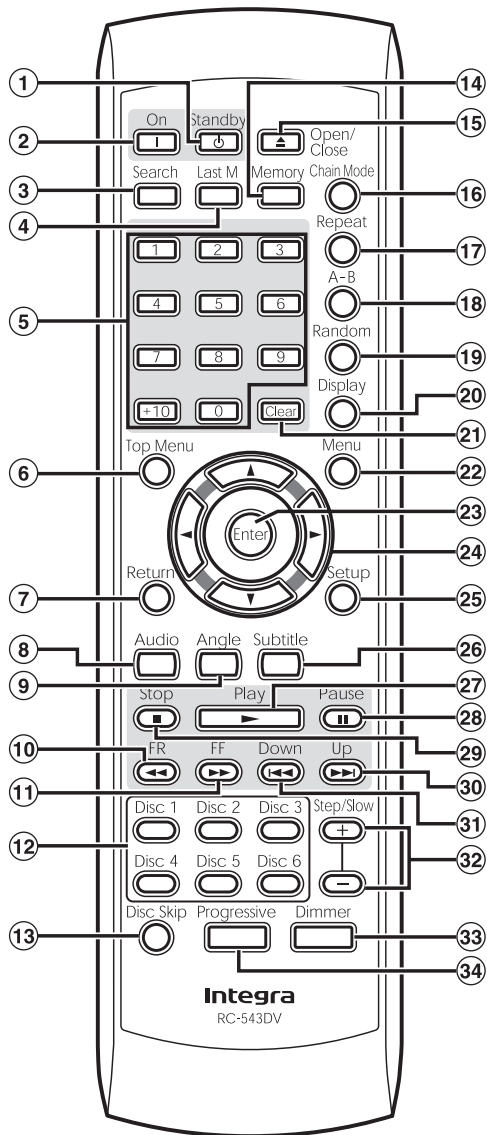
This RS-232 port can be connected to an external controller.

#### ⑪ AC INLET

The supplied power cord is connected here. The other end of the power cord should be connected to a suitable wall outlet.

## PANEL VIEW-4

## REMOTE CONTROLLER-1

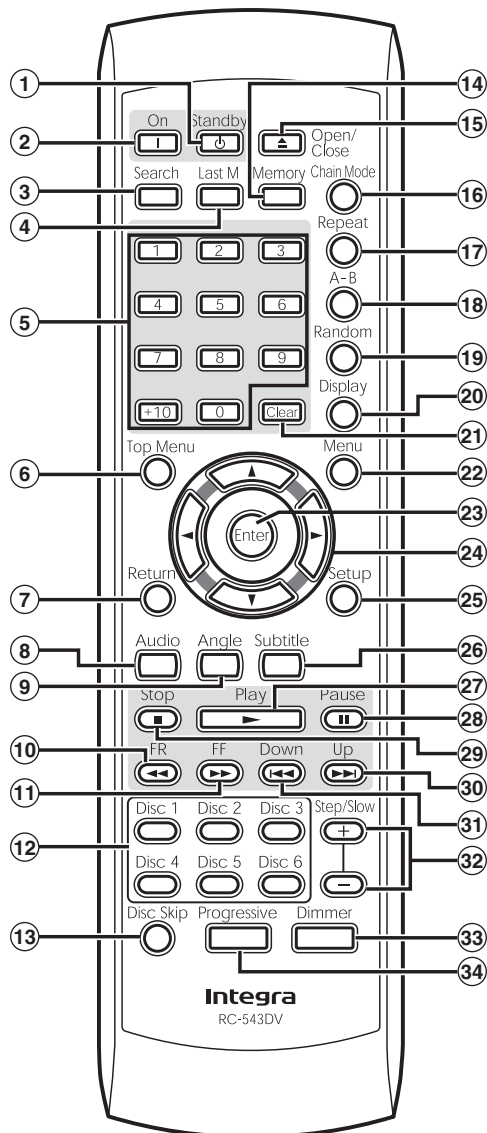


- ① **Standby button**  
This button is used to set the DPC-7.5 to Standby.
- ② **On button**  
This button is used to turn on the DPC-7.5.
- ③ **Search button**  
This button is used to search for titles, chapters, tracks, and specific points in time.
- ④ **Last M button**  
This button is used with the Last Memory function.
- ⑤ **Number buttons**  
These buttons are used to enter title, chapter, and track numbers and to enter times for locating specific points in time.  
To enter a single-digit number, simply press the corresponding button. To enter a double-digit number, enter the numbers in order from left-to-right (e.g., to enter 14, press [1] then [4]).  
The [+10] button is used to enter multiples of ten (i.e., 10, 20, 30, and so on). For example, to enter the number 25, press the [+10] button twice followed by the [5] button.
- ⑥ **Top Menu button**  
This button is used to select the top menu.
- ⑦ **Return button**  
This button is used to move the preceding setup menu and to restart Video CD menu playback.
- ⑧ **Audio button**  
This button is used to select foreign language soundtracks and audio formats (e.g., Dolby Digital or DTS).
- ⑨ **Angle button**  
This button is used to select different camera angles.
- ⑩ **FR [◀◀] button**  
This button is used to start fast reverse.
- ⑪ **FF [▶▶] button**  
This button is used to start fast forward.
- ⑫ **Disc 1-6 buttons**  
These buttons are used to select discs. Playback starts automatically when a disc is selected with these buttons.
- ⑬ **Disc Skip button**  
This button is used to select the disc bays (i.e., rotate the disc tray) when loading or removing discs, and to select discs for playback.
- ⑭ **Memory button**  
This button is used with the Memory Playback function.
- ⑮ **Open/Close [▲] button**  
This button is used to open and close the disc tray.
- ⑯ **Chain Mode button**  
This button is used with the Chain mode function.



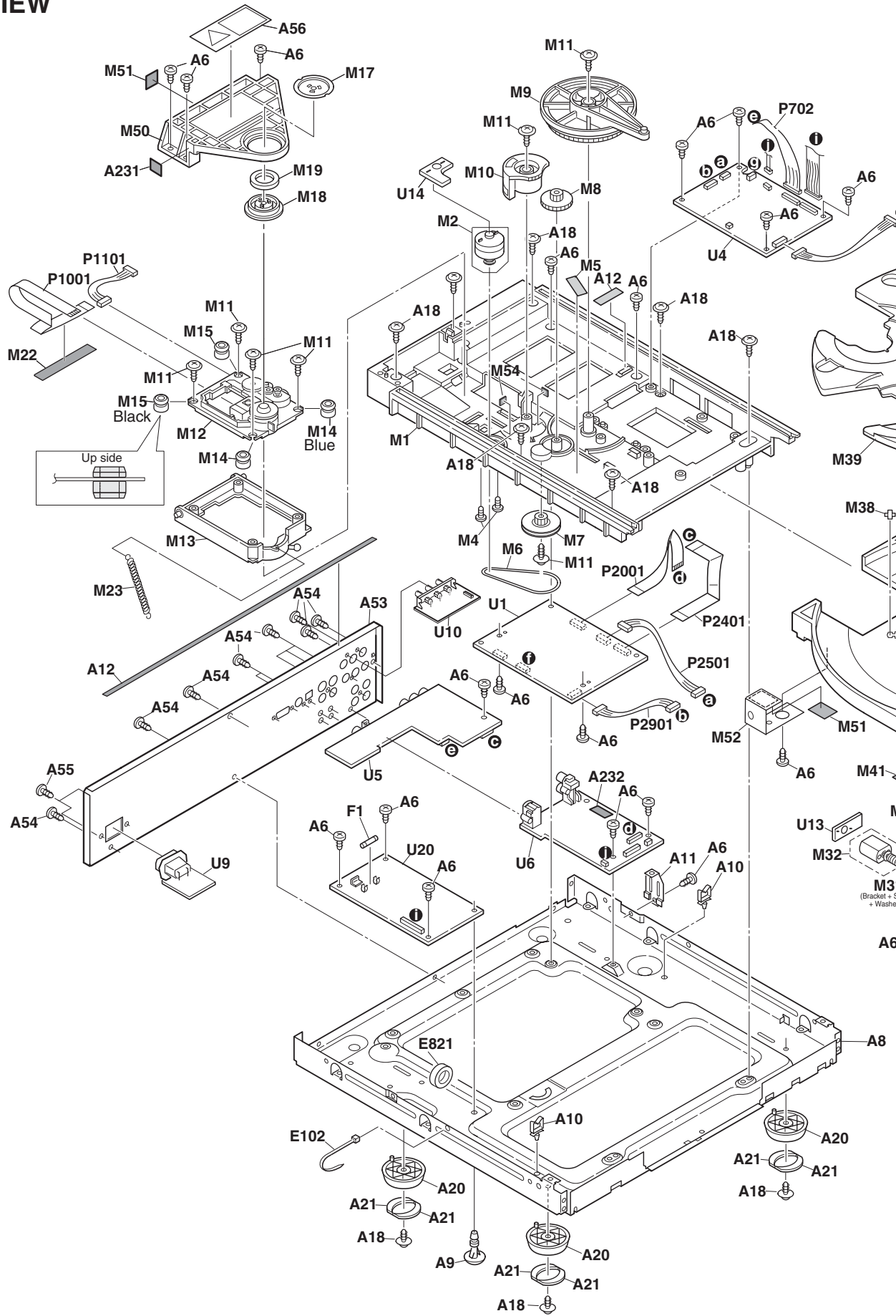
## PANEL VIEW-5

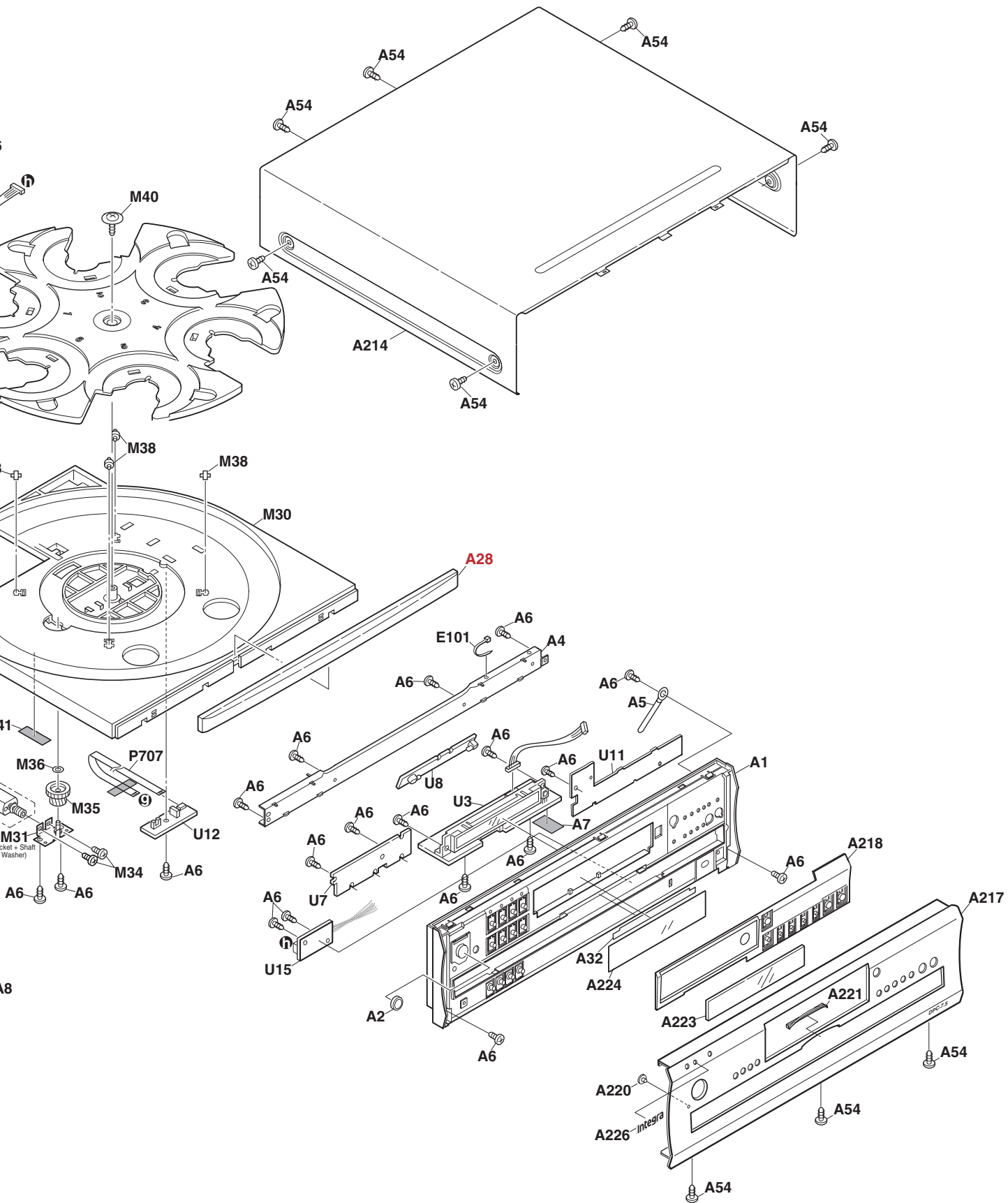
### REMOTE CONTROLLER-2



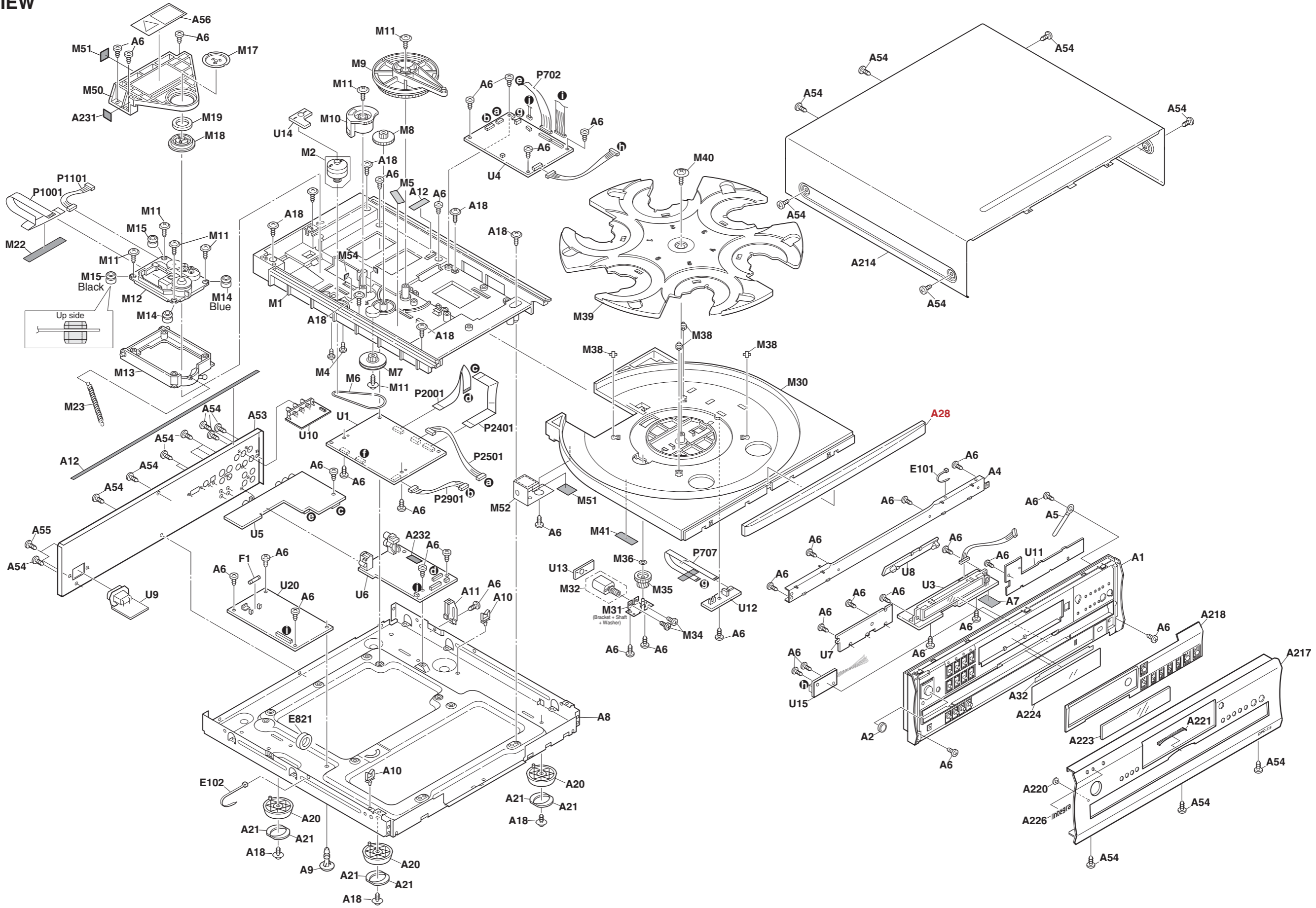
- ① **On** button
  - ② **Standby** button
  - ③ **Search** button
  - ④ **Last M** button
  - ⑤ **Memory** button
  - ⑥ **Chain Mode** button
  - ⑦ **Open/Close** button
  - ⑧ **Repeat** button
  - ⑨ **A-B** button
  - ⑩ **Random** button
  - ⑪ **Display** button
  - ⑫ **Clear** button
  - ⑬ **Top Menu** button
  - ⑭ **Menu** button
  - ⑮ **Enter** button
  - ⑯ **Return** button
  - ⑰ **Setup** button
  - ⑱ **Audio** button
  - ⑲ **Angle** button
  - ⑳ **Subtitle** button
  - ㉑ **Stop** button
  - ㉒ **Play** button
  - ㉓ **Pause** button
  - ㉔ **FR** button
  - ㉕ **FF** button
  - ㉖ **Down** button
  - ㉗ **Up** button
  - ㉘ **Disc 1** button
  - ㉙ **Disc 2** button
  - ㉚ **Disc 3** button
  - ㉛ **Step/Slow** button
  - ㉜ **Disc 4** button
  - ㉝ **Disc 5** button
  - ㉞ **Disc 6** button
  - ㉟ **Disc Skip** button
  - ㊱ **Progressive** button
  - ㊲ **Dimmer** button
- ⑬ **Repeat button**  
This button is used to set the Repeat Playback functions.
  - ⑭ **A-B button**  
This button is used to set the A-B Repeat Playback function.
  - ⑮ **Random button**  
This button is used with the Random Playback function.
  - ⑯ **Display button**  
This button is used to display information about the current disc, title, chapter, or track, including the elapsed time, remaining time, total time, and so on.
  - ⑰ **Clear button**  
This button is used to cancel various functions.
  - ⑱ **Menu button**  
This button is used to select the menu.
  - ⑲ **Enter button**  
This button is used to start playback of the selected title chapter, or track and to confirm settings.
  - ⑳ **[▲], [▼], [◀], [▶] buttons**  
These buttons are used to navigate DVD-Video menus and the onscreen setup menus.
  - ㉑ **Setup button**  
This button is used to open and close the onscreen setup menus.
  - ㉒ **Subtitle button**  
This button is used to select subtitles.
  - ㉓ **Play [▶] button**  
This button is used to start playback.
  - ㉔ **Pause [⏸] button**  
This button is used to pause playback.
  - ㉕ **Stop [■] button**  
This button is used to stop playback.
  - ㉖ **Up [▶▶] button**  
This button is used to select the next chapter or track.
  - ㉗ **Down [◀◀] button**  
This button is used to select the previous chapter or track. During playback it selects the beginning of the current chapter or track.
  - ㉘ **Step/Slow [+] & [-] buttons**  
These buttons are used with the Frame-by-Frame Playback and Slow Motion Playback functions.
  - ㉙ **Dimmer button**  
This button is used to adjust the display brightness.
  - ㉚ **Progressive button**  
This button is used to turn on and off the Progressive Scanning function. Progressive scanning can't be turned on or off during playback.

# EXPLODED VIEW

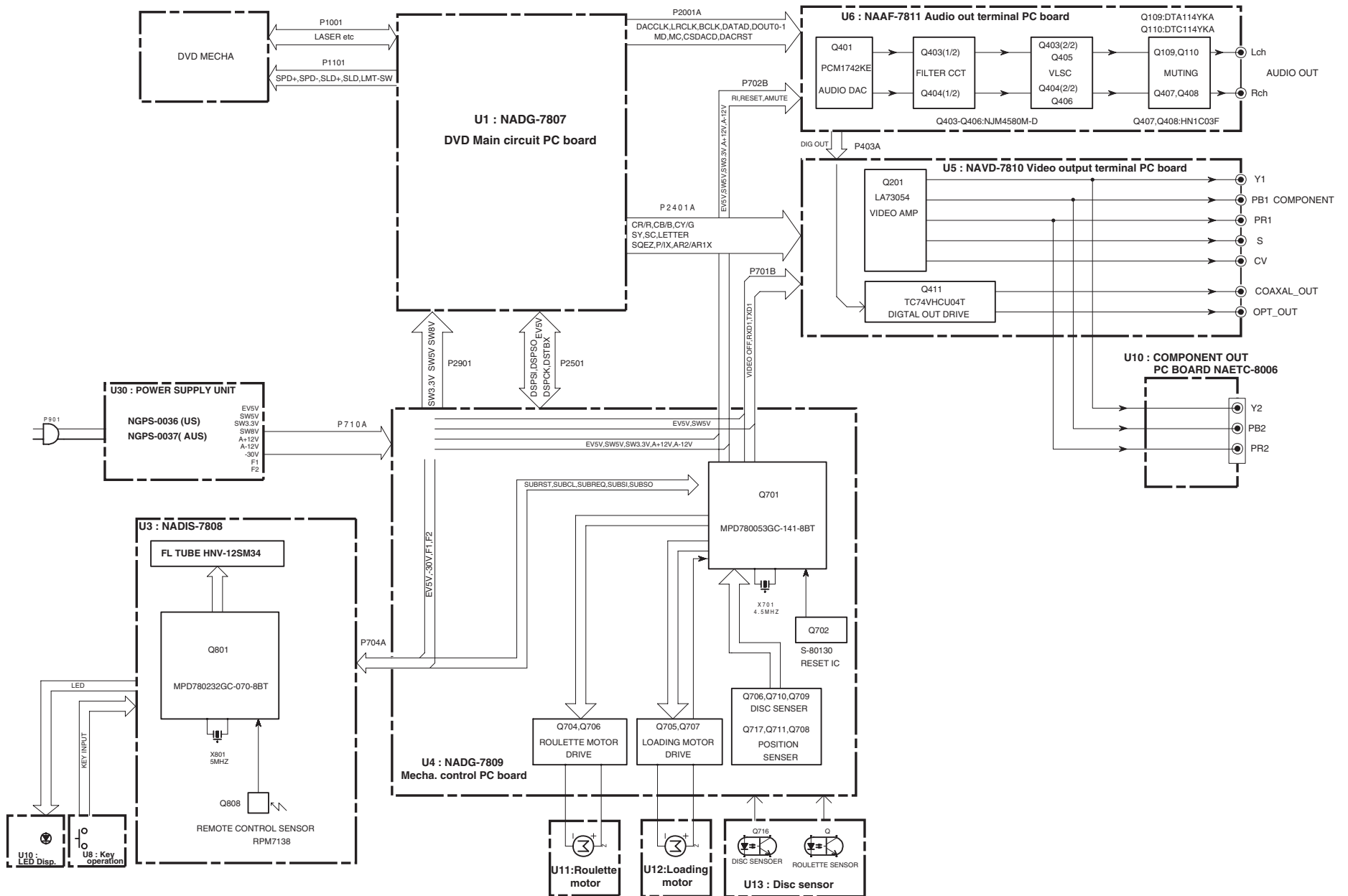




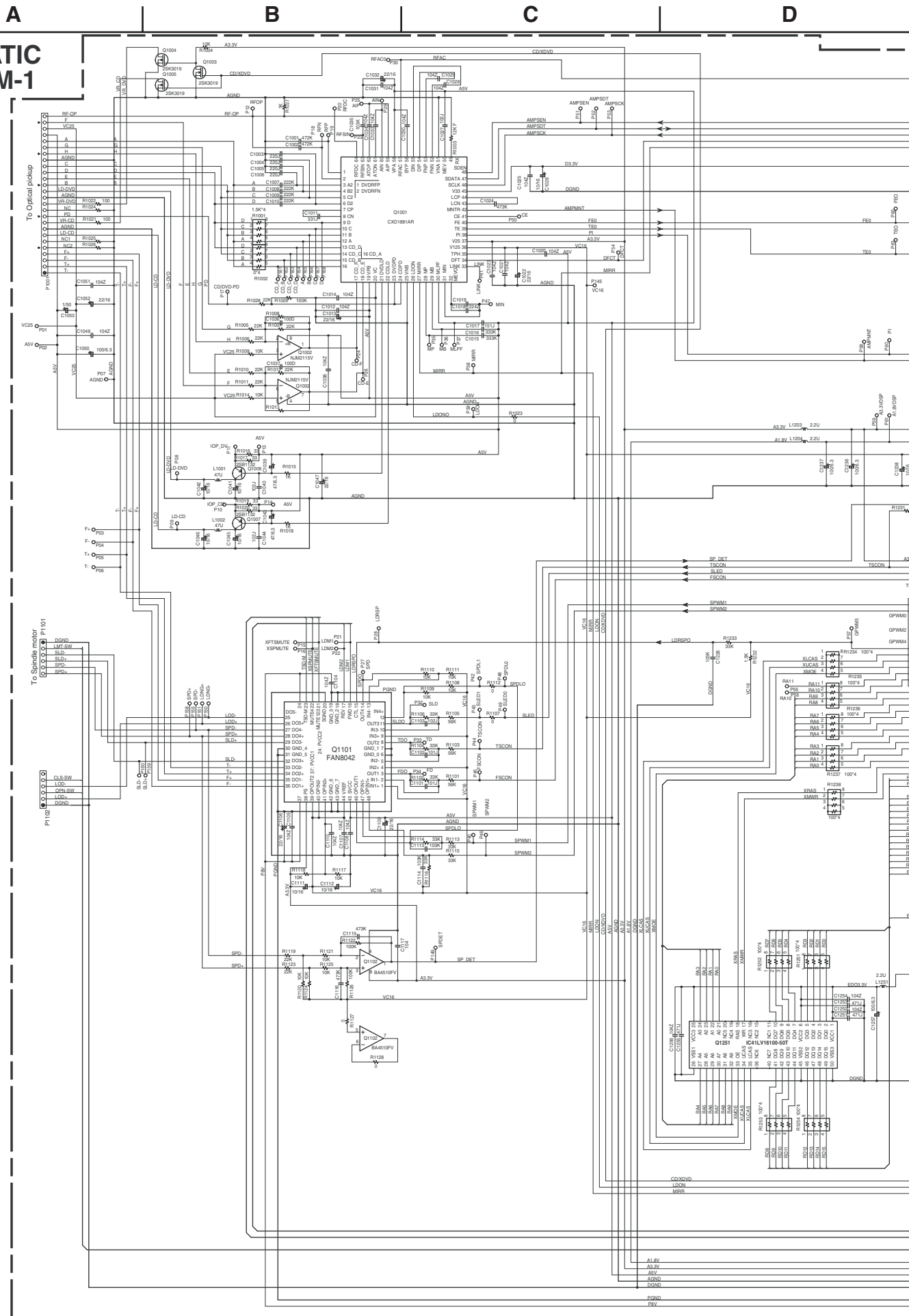
EXPLODED VIEW



# BLOCK DIAGRAM



# SCHEMATIC DIAGRAM-1



1

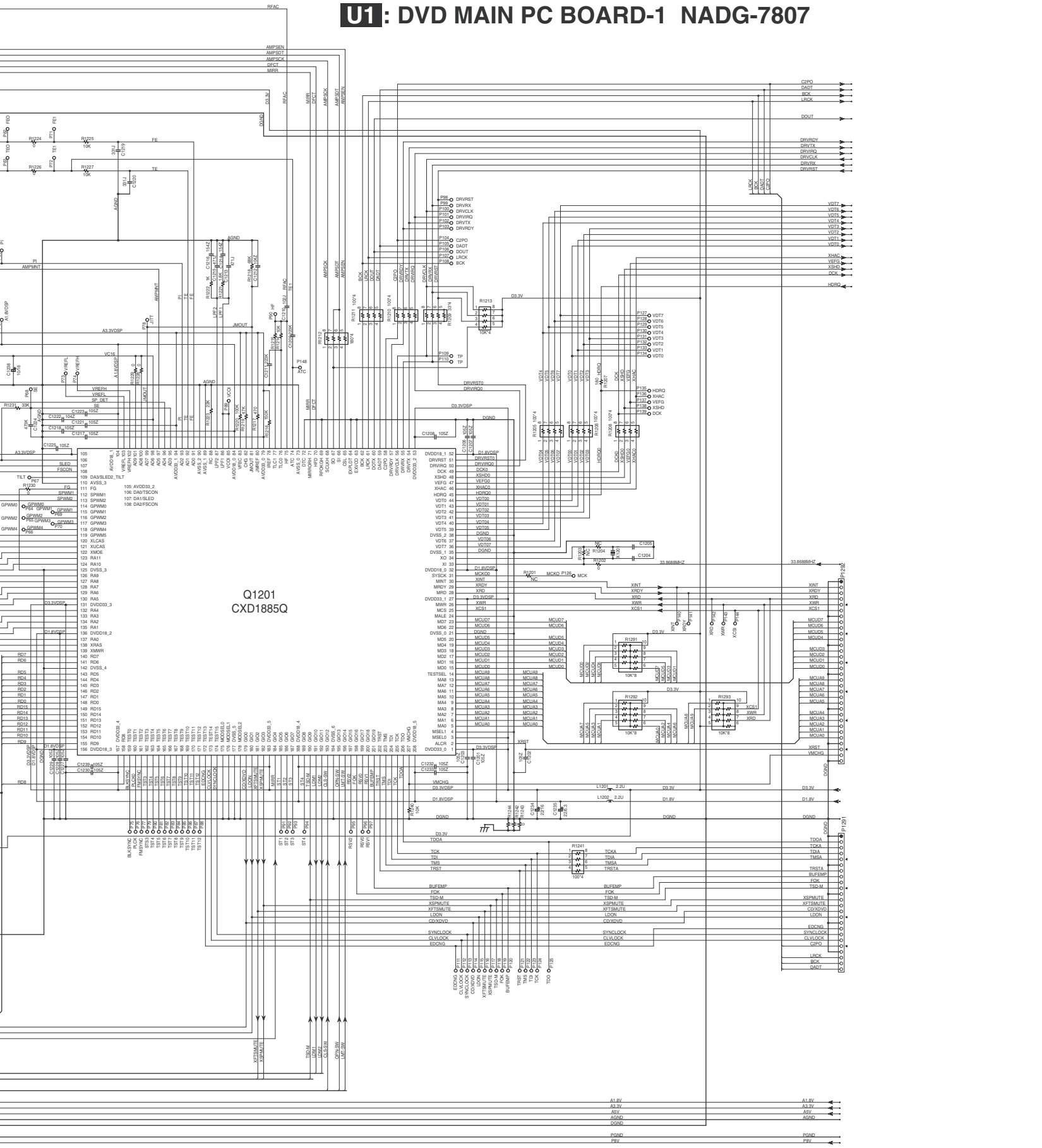
2

3

4

5

# U1: DVD MAIN PC BOARD-1 NADG-7807



**A B C D**

# SCHEMATIC DIAGRAM-2

## U1: DVD MAIN PC BOARD NADG-7807-2

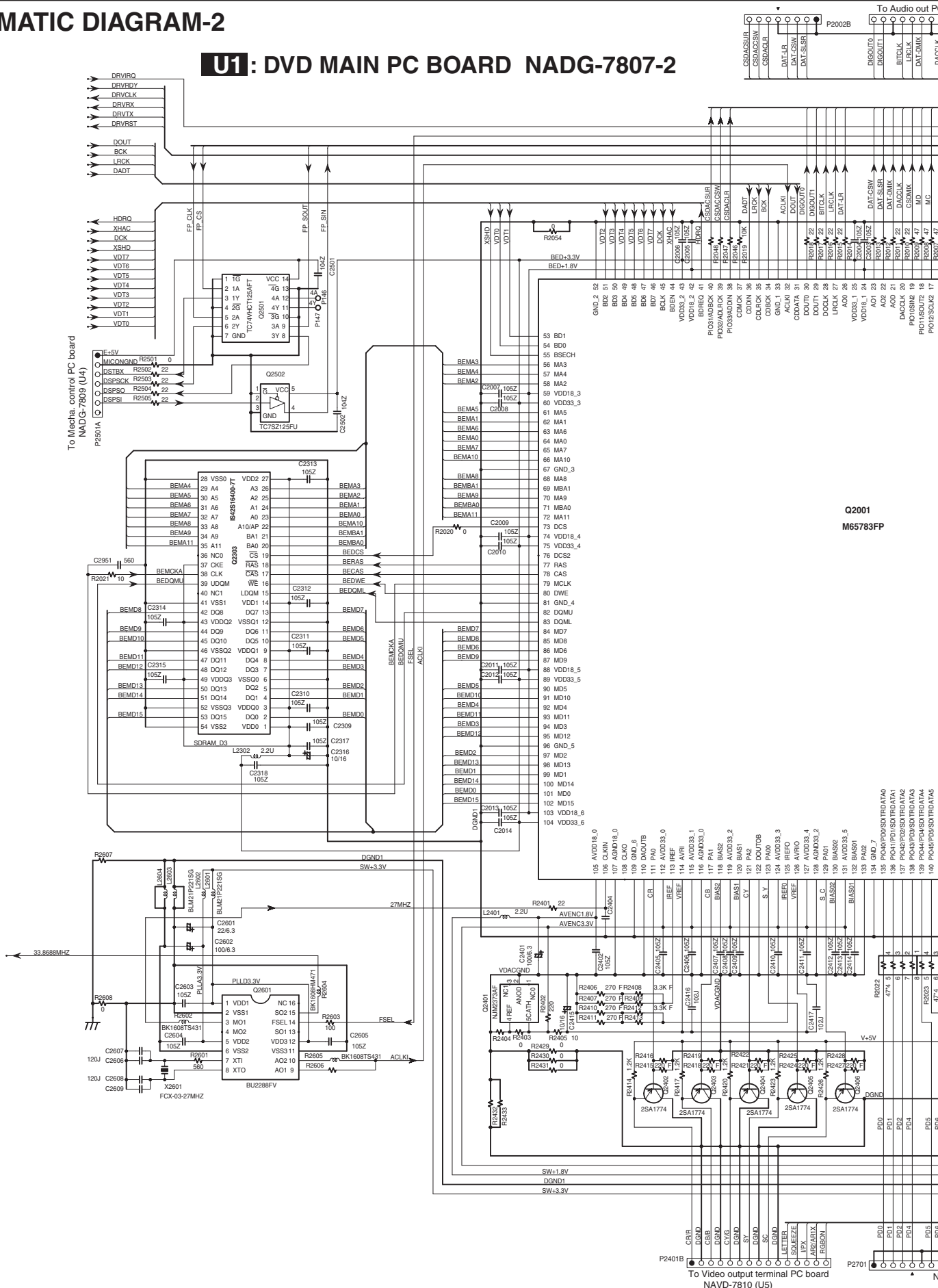
1

2

3

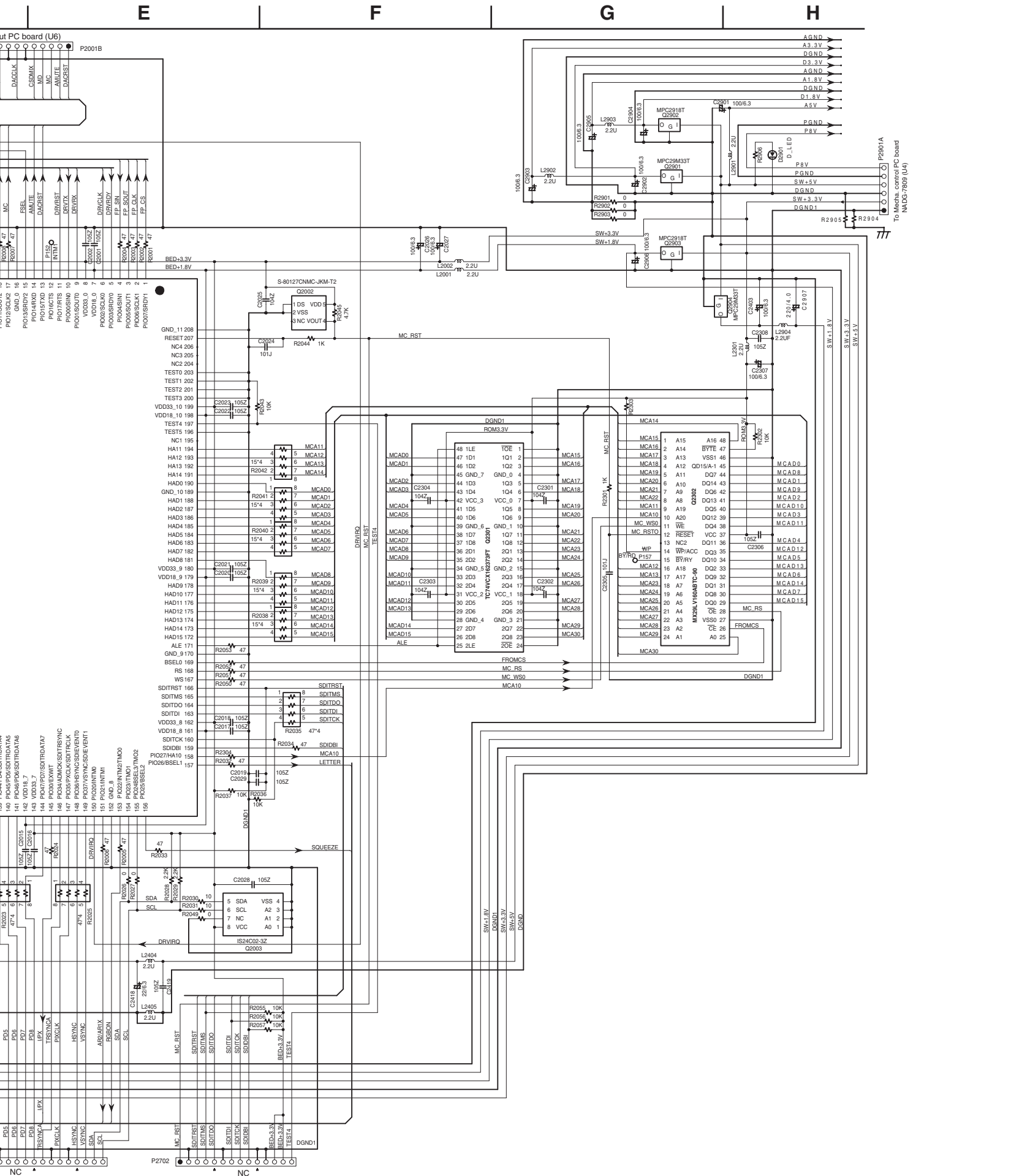
4

5



To Video output terminal PC board  
NAVD-7810 (U5)





To Media: central PC board (NA) Doc: 695 (U4)

E

F

G

H

ut PC board (U6)

NC

P2702

777

A

B

C

D

# SCHEMATIC DIAGRAM-3

## U3: FRONT DISPLAY PC BOARD NADIS-7808

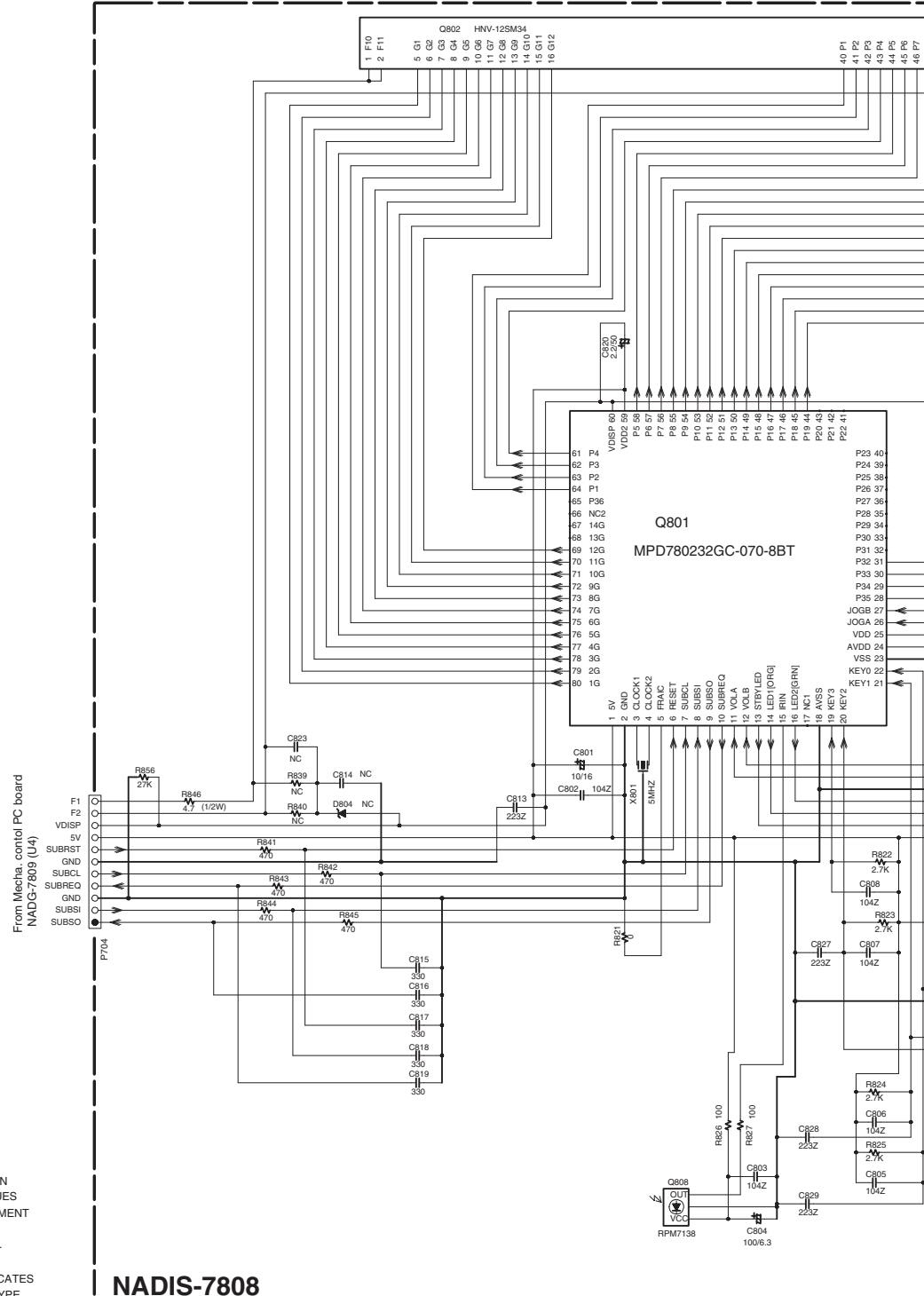
1

2

3

4

5



### 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.



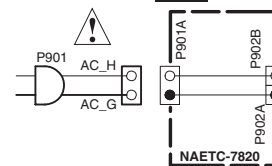
THIS SYMBOL LOCATED NEAR THE FUSE INDICATES THAT THE FUSE USED IS SLOW OPERATING TYPE FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE WITH SAME TYPE FUSE. FOR FUSE RATING REFER TO THE MARKING ADJACENT TO THE SYMBOL.



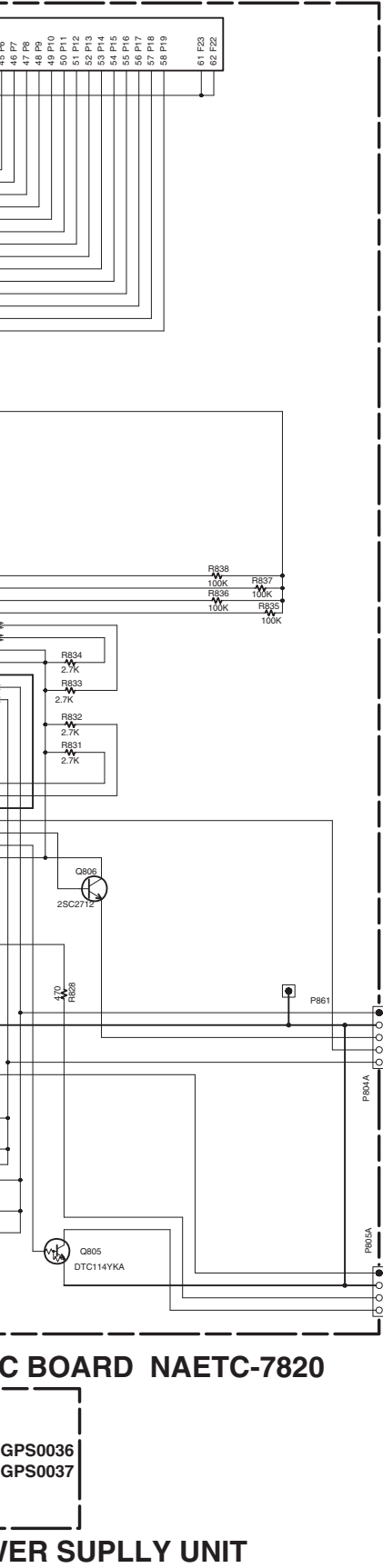
CE SYMBOLE INDIQUE QUE LE FUSIBLE UTILISE EST E LENT. POUR UNE PROTECTION PERMANENTE, N'UTILISER QUE DES FUSIBLES DE MEME TYPE. CE DARNIER EST INDIQUE LA OU LE PRESENT SYMBOLE EST APPOSE.

NADIS-7808

## U9: INLET TERMINAL PC



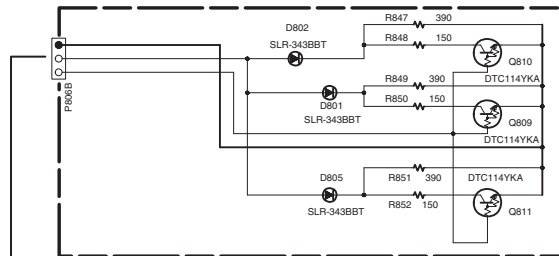
## U20: POWER



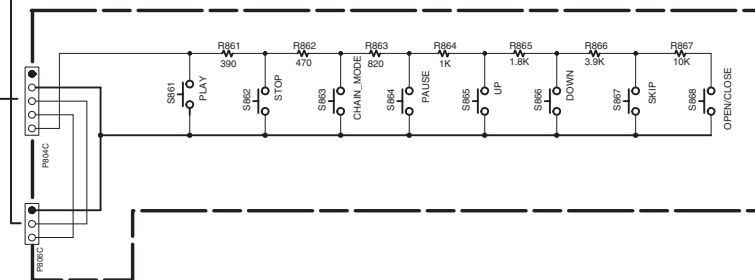
**NOTE**

- THE COMPONENTS IDENTIFIED BY MARK  $\triangle$  ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH PART NUMBER SPECIFIED.
- VOLTAGE (MEASURED WITH VOLTMETER)  $\langle \square \rangle$  IS DC VOLTAGE. (NO INPUT SIGNAL)
- ELECTROLYTIC CAPACITORS ( $\frac{-}{+}$ ) ARE IN  $\mu F/WV$ .
- ALL CAPACITORS ARE IN pF/50VW UNLESS OTHERWISE NOTED.  
EX) 030  $\rightarrow$  3pF 330  $\rightarrow$  33pF 331  $\rightarrow$  330pF 333  $\rightarrow$  0.033 $\mu F$
- ALL RESISTORS ARE IN OHMS 1/4WATTS UNLESS OTHERWISE NOTED.  
THE THICK LINES ON PC BOARD ARE THE PRINTING SIDE OF THE PARTS.  
EX)  $\langle \circ \circ \circ \rangle$   $\swarrow$  PRINTING SIDE
- CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.

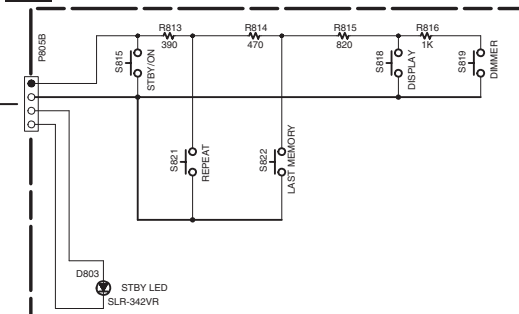
**U8 : LED DISPLAY PC BOARD NADIS-7815**



**U11 : KEY OPERATION PC BOARD NASW-8007**



**U7 : STANDBY SWITCH PC BOARD NASW-7814**



C BOARD NAETC-7820

GPS0036  
GPS0037

VER SUPPLY UNIT

A B C D

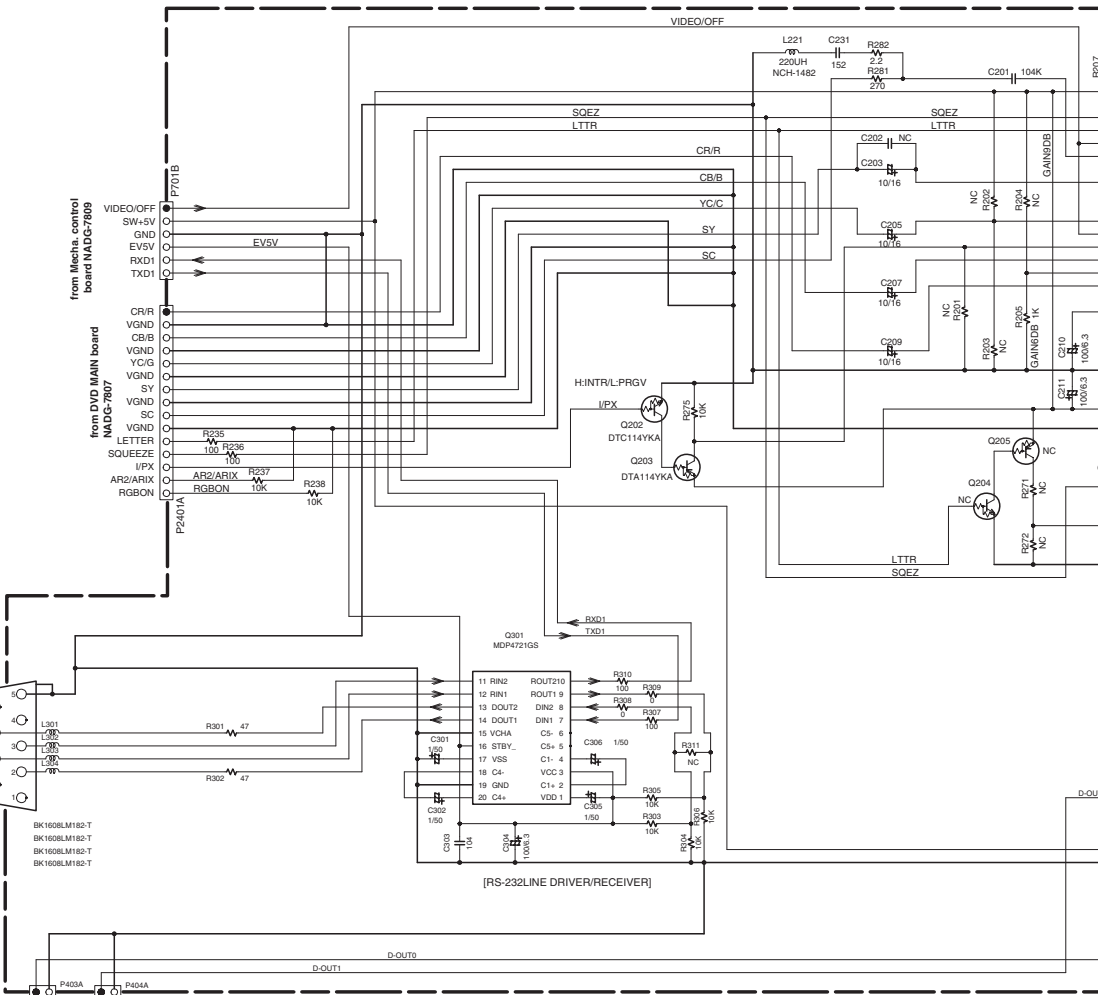
# SCHEMATIC DIAGRAM-4

## U5: VIDEO OUTPUT TERMINAL PC BOARD NAVD-7810

1

2

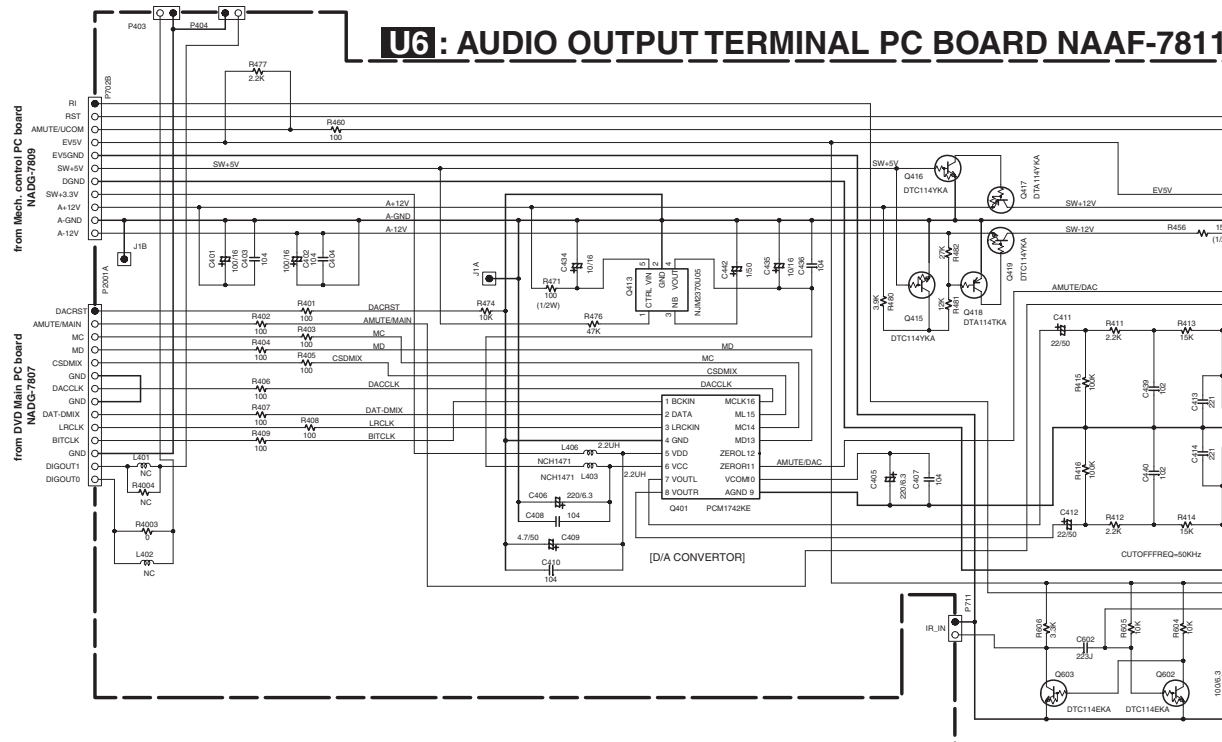
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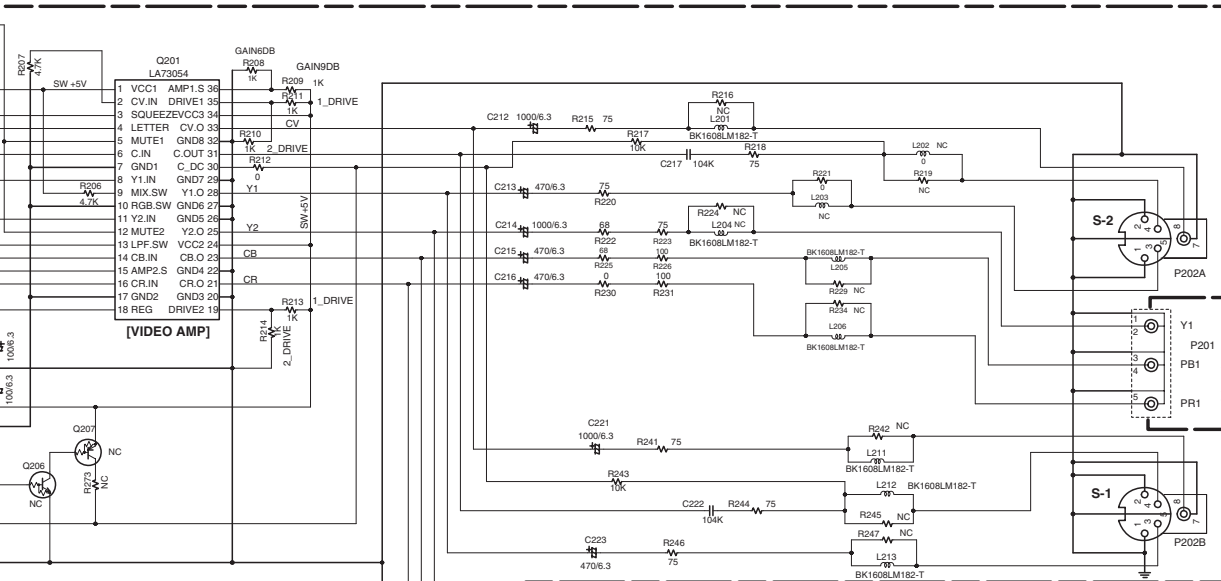


## U6: AUDIO OUTPUT TERMINAL PC BOARD NAAF-7811

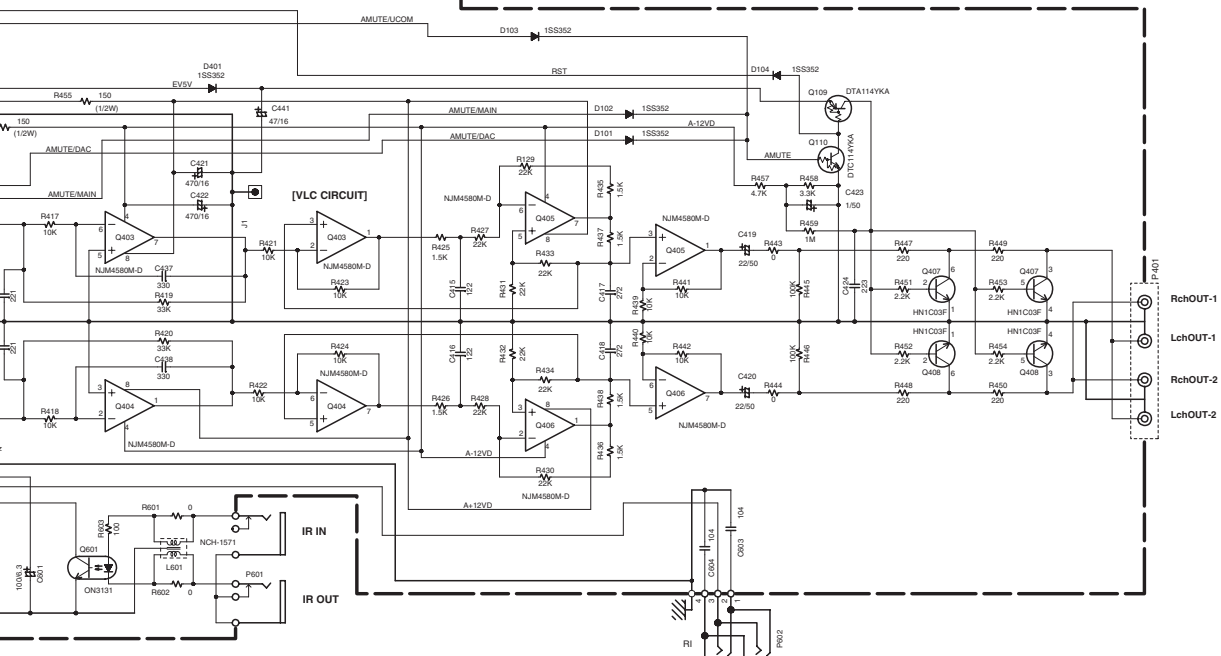
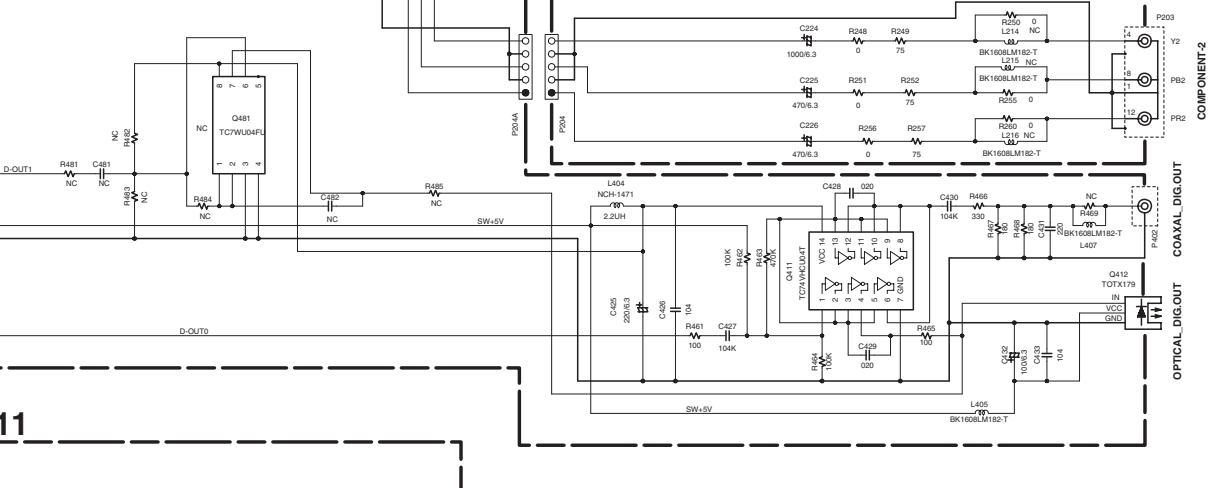
4

5





**U10: COMPONENT OUTPUT PC BOARD NAETC-8006**



A

B

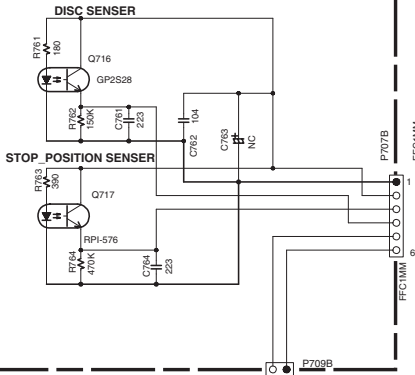
C

D

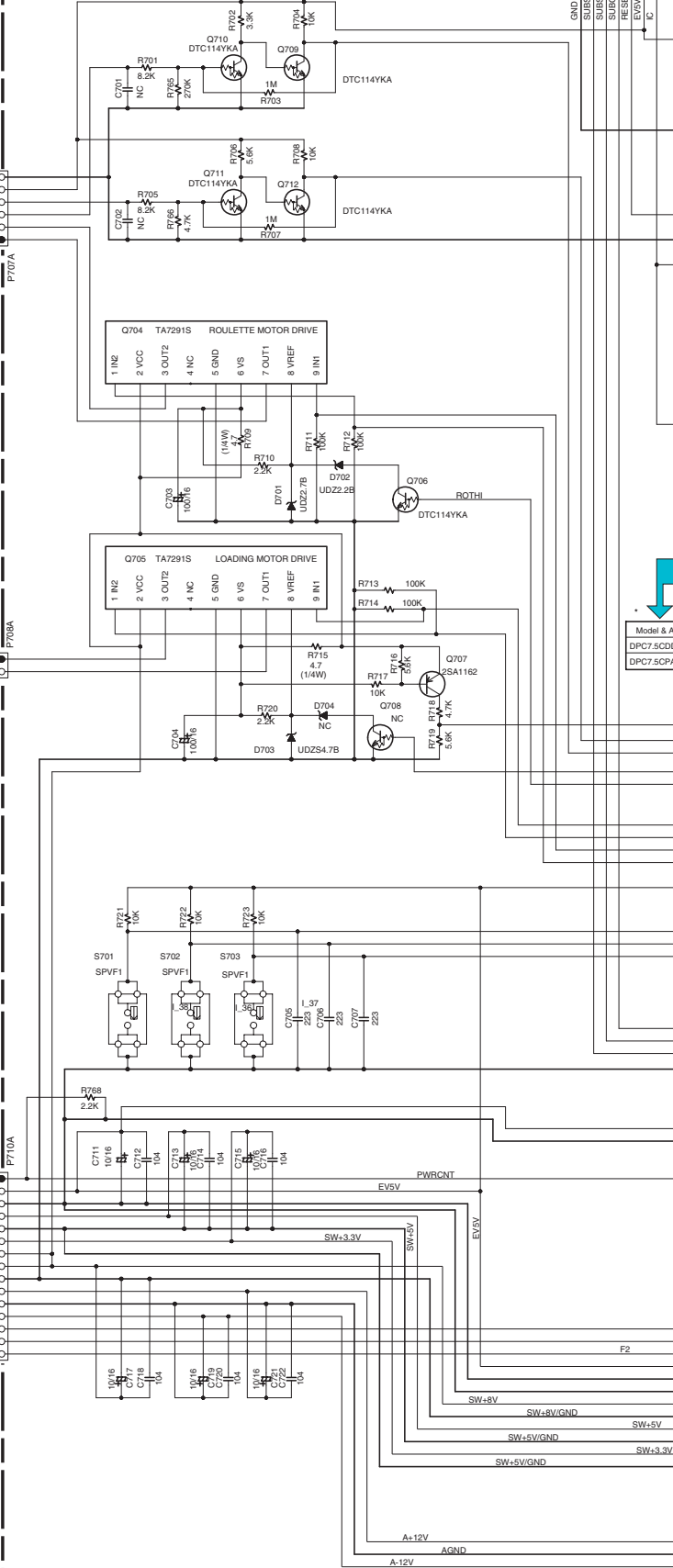
# SCHEMATIC DIAGRAM-5

## U12: DISC SENSOR PC BOARD

### NAETC-7818



### NADG-7809



1

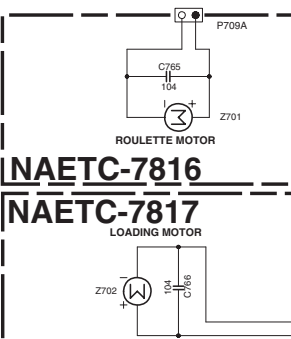
2

3

4

5

## U13: ROULETTE MOTOR PC BOARD

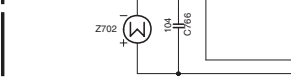


### NAETC-7816

### NAETC-7817

### LOADING MOTOR

## U14: LOADING MOTOR PC BOARD



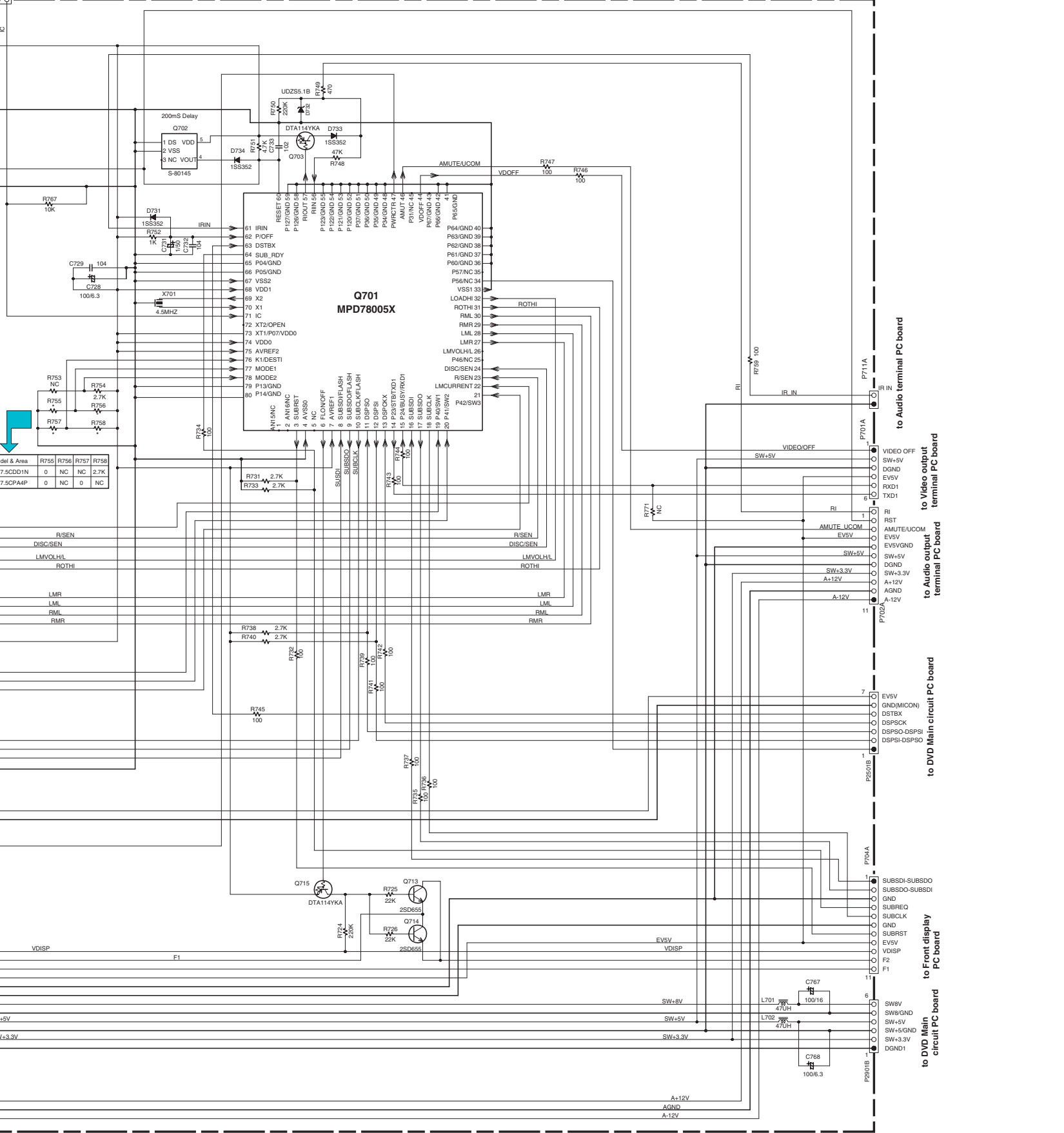
from Power supply unit

P710A

Model & A  
DPC7.5CDD  
DPC7.5CPA

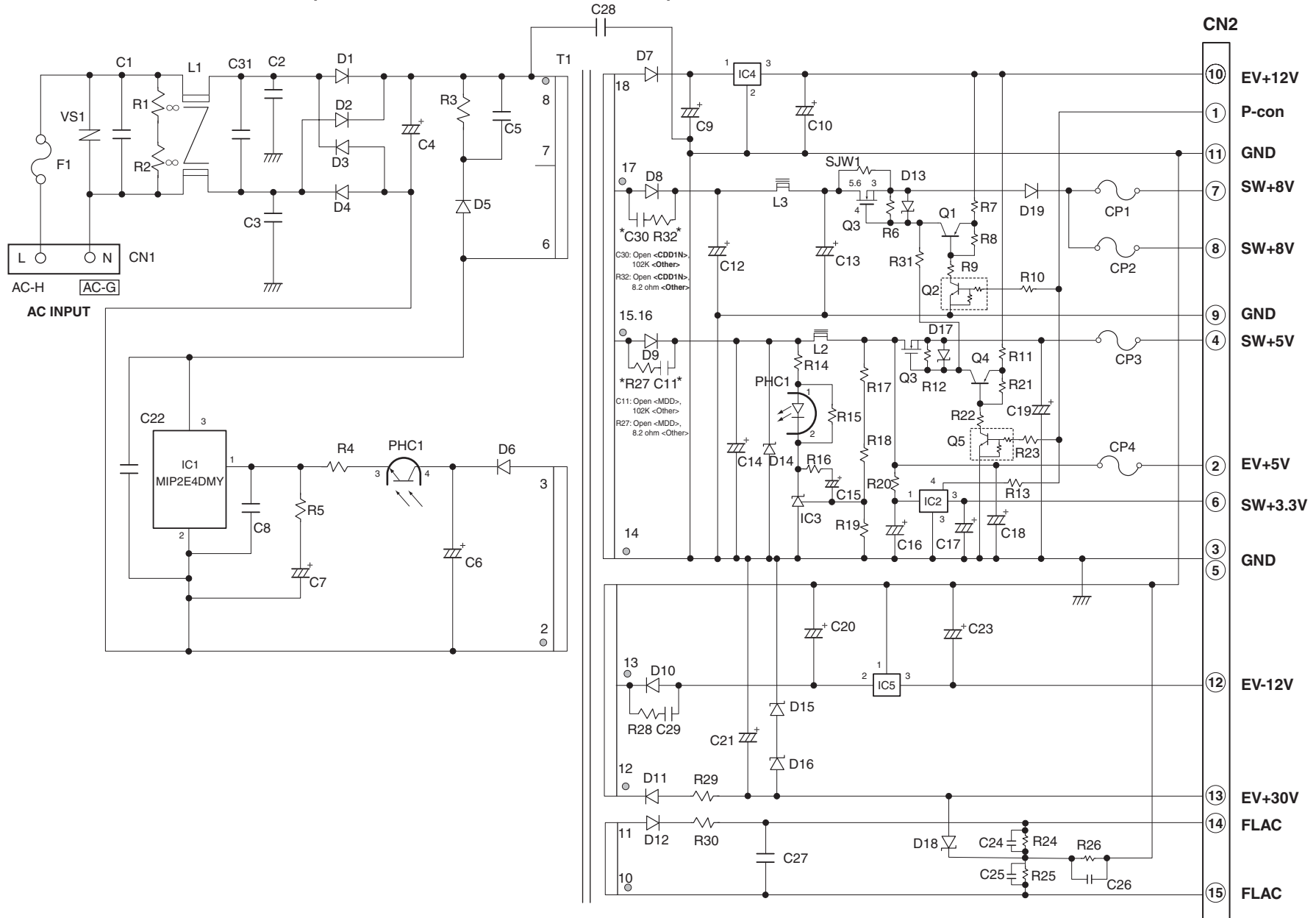
U4: MECHANISM CONTROL PC BOARD NADG-7809

WRITE IN FLASH PLUG



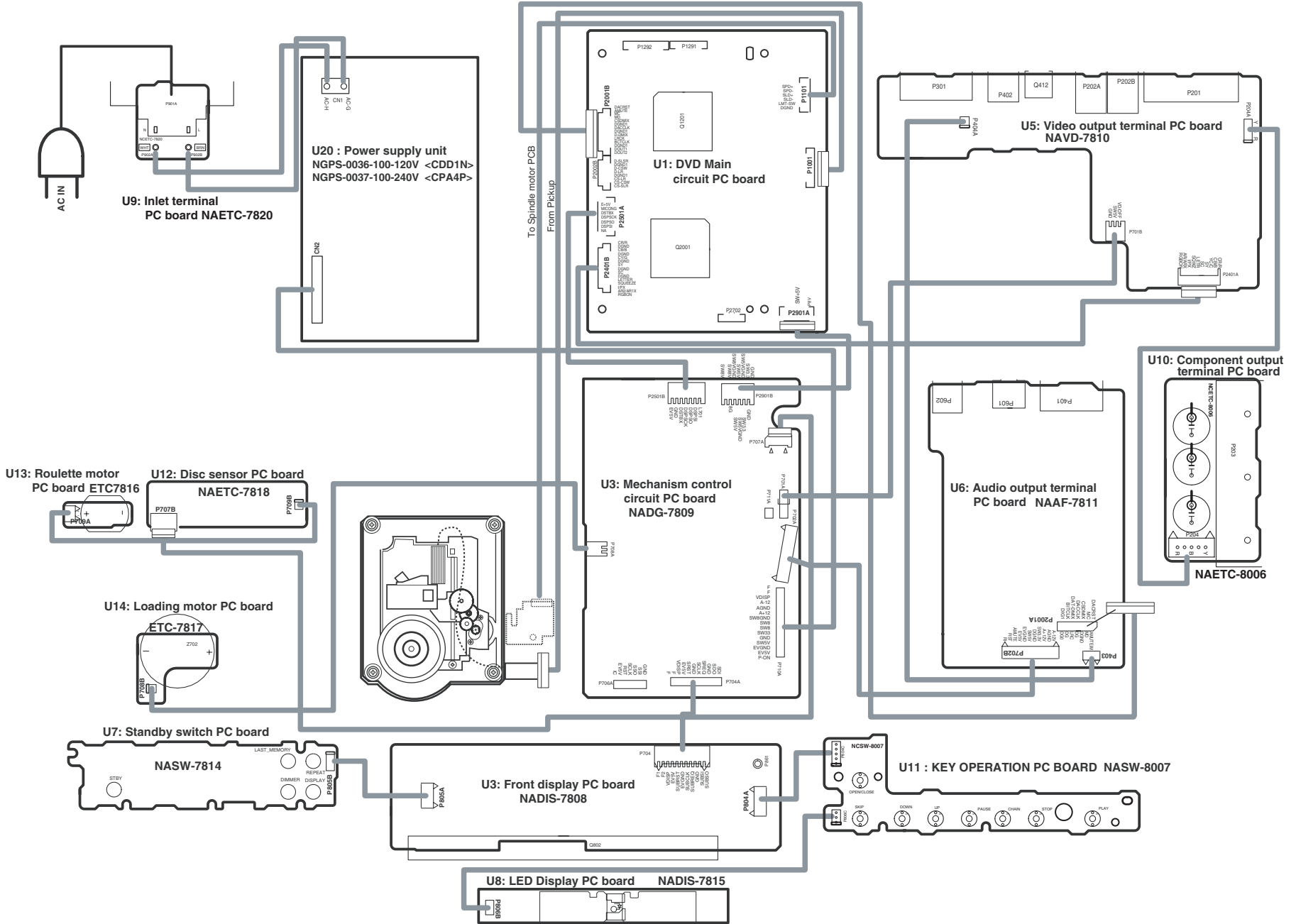
# SCHEMATIC DIAGRAM-6

**U20: POWER SUPPLY UNIT (NGPS-0036-100-120V <CDD1N>)**  
**(NGPS-0037-100-240V <CPA4P>)**





# PC BOARD CONNECTION DIAGRAM



PRINTED CIRCUIT BOARD VIEW-1

**U1**: DVD MAIN CIRCUIT PC BOARD (NADG-7807)

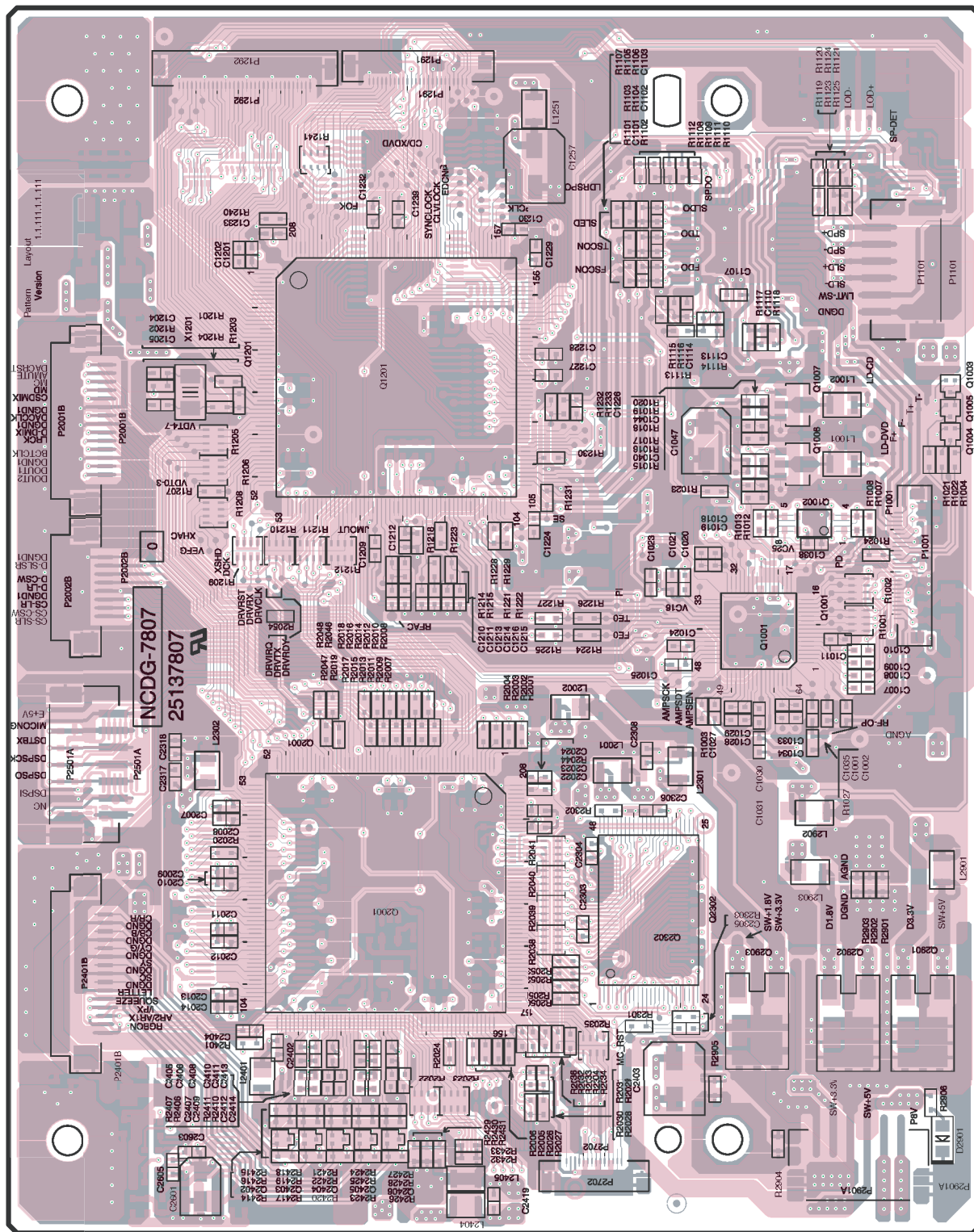
1

2

3

4

5



: Side A pattern  
 : Side B pattern

A

B

C

D

# PRINTED CIRCUIT BOARD VIEW-2

## U1: DVD MAIN CIRCUIT PC BOARD (NADVG-7807)

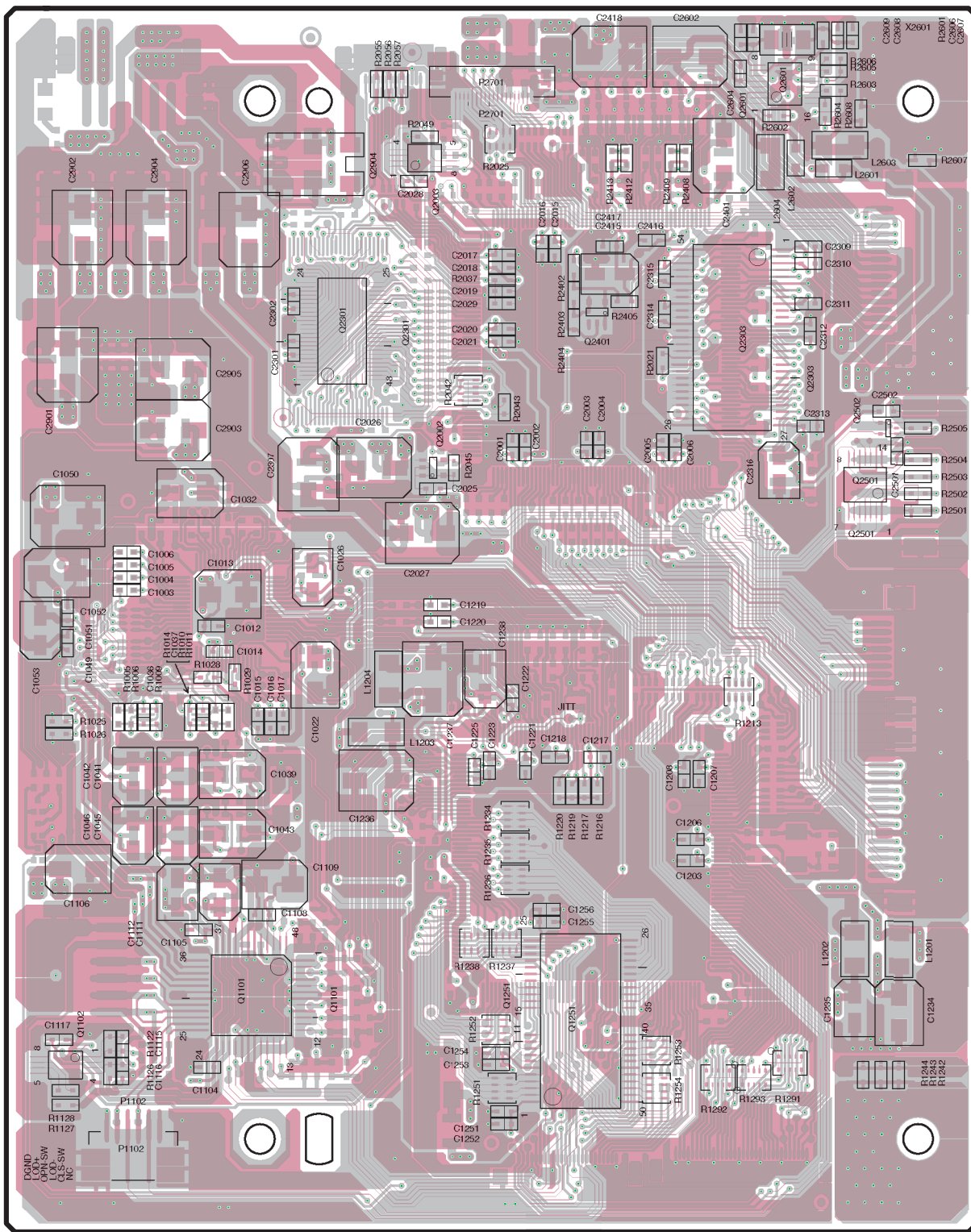
1

2

3

4

5



■ : Side B pattern  
■ : Side A pattern

A

B

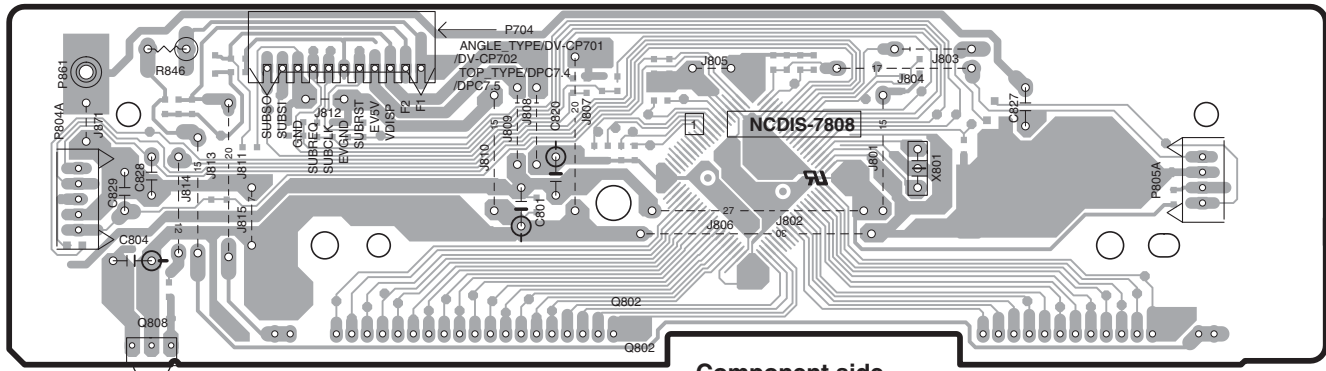
C

D

# PRINTED CIRCUIT BOARD VIEW FROM SOLDERING SIDE-3

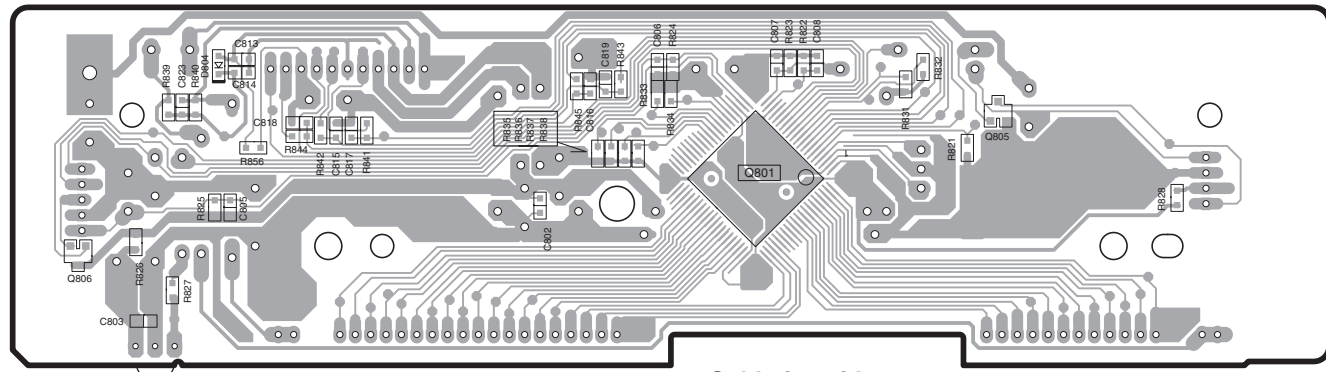
## U3: FRONT DISPLAY PC BOARD NADIS-7808

1



Component side

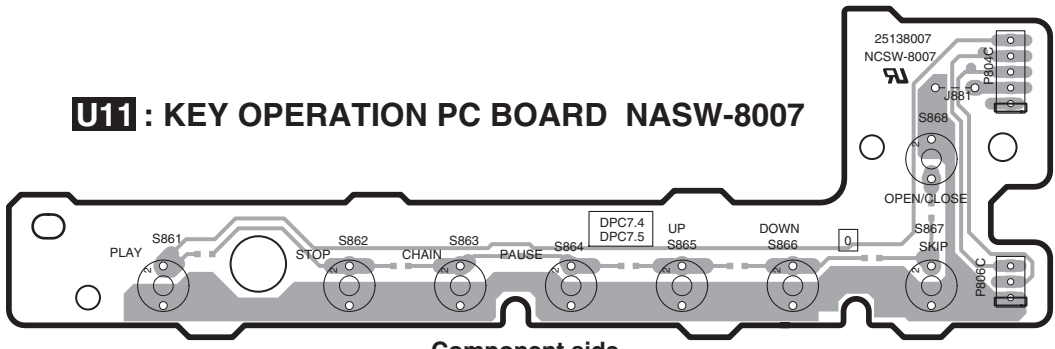
2



Soldering side

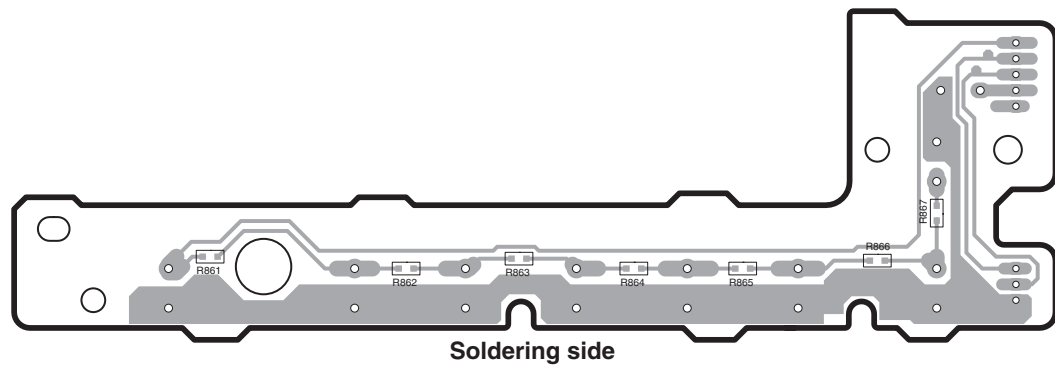
## U11: KEY OPERATION PC BOARD NASW-8007

4



Component side

5



Soldering side

A

B

C

D

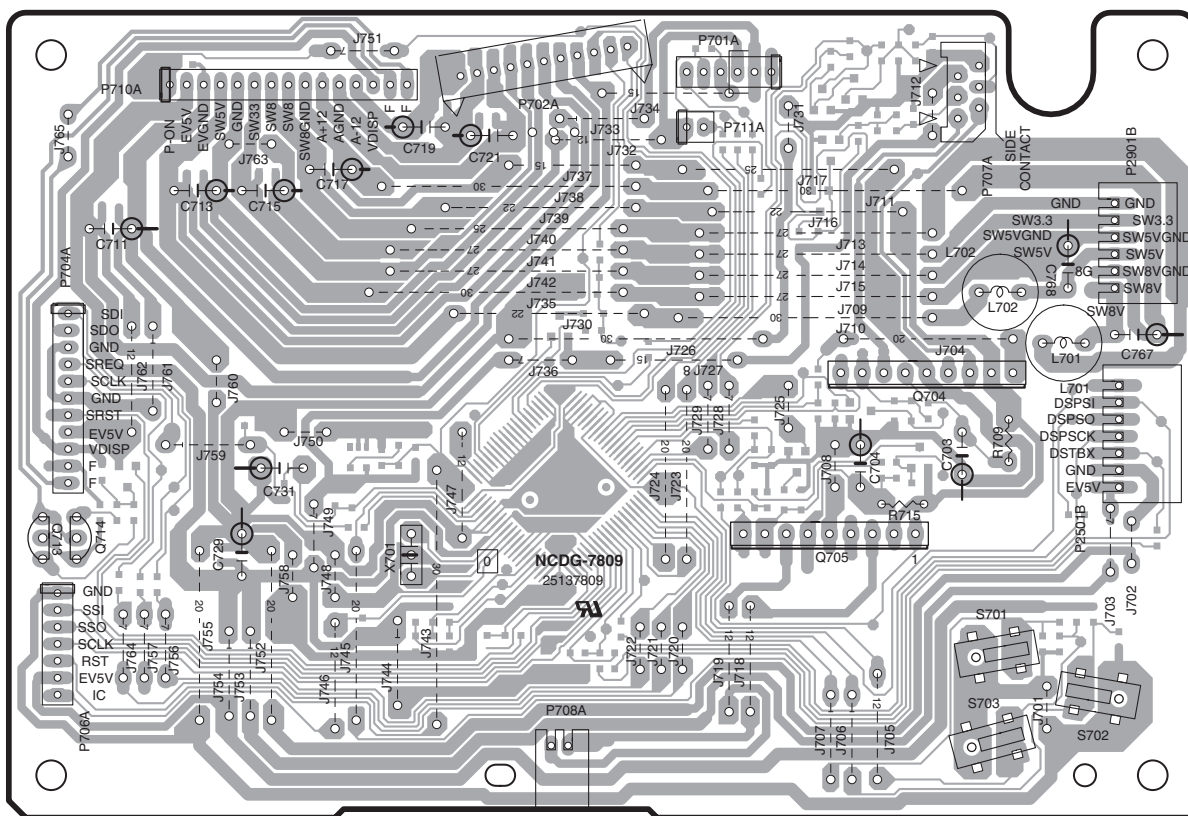
# PRINTED CIRCUIT BOARD VIEW FROM SOLDERING SIDE-4

## U4: MECHANISM CONTROL PC BOARD NADG-7809

1

2

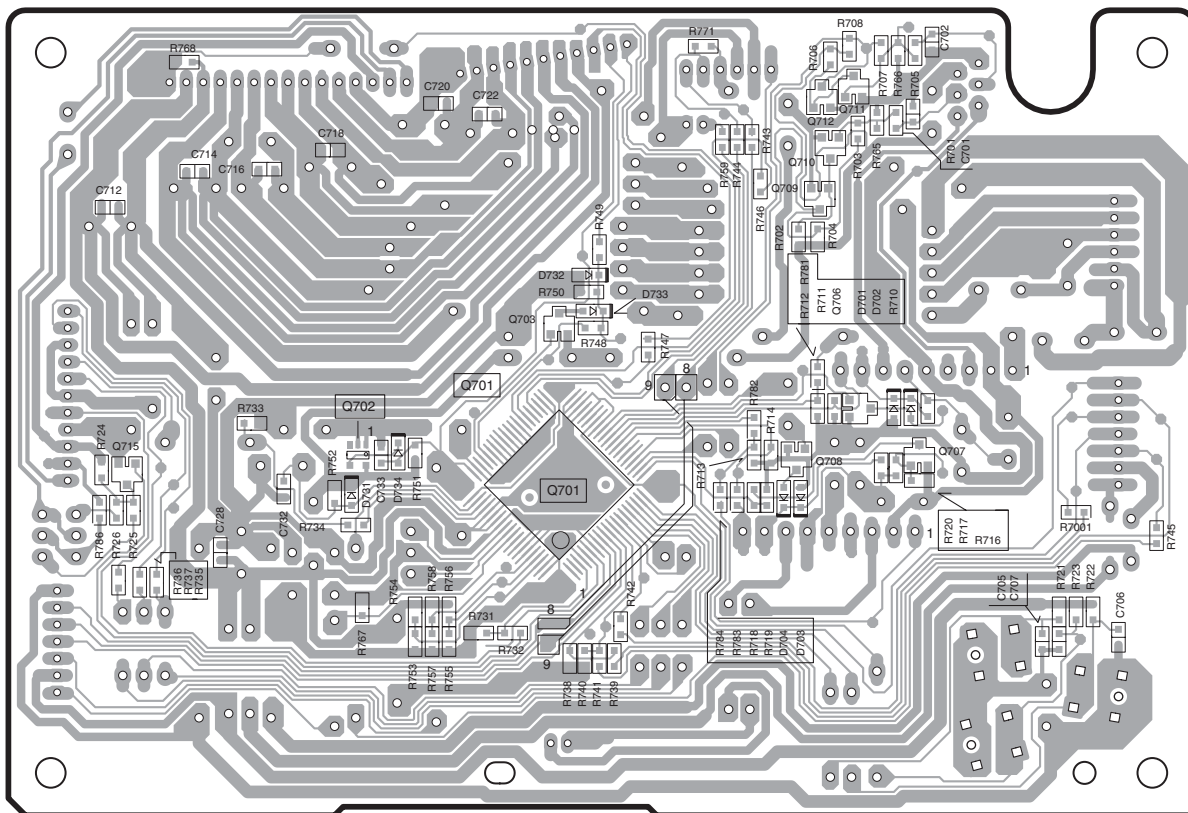
3



Component side

4

5



Soldering side



A

B

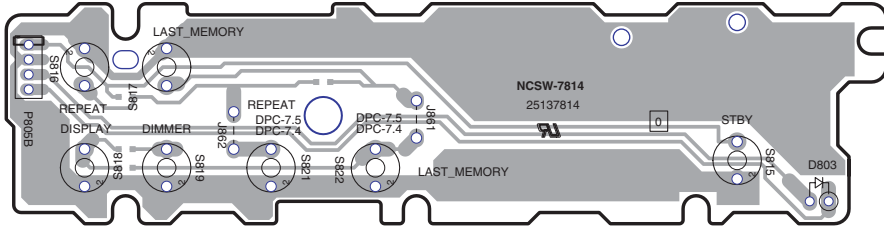
C

D

PRINTED CIRCUIT BOARD VIEW FROM SOLDERING SIDE-6

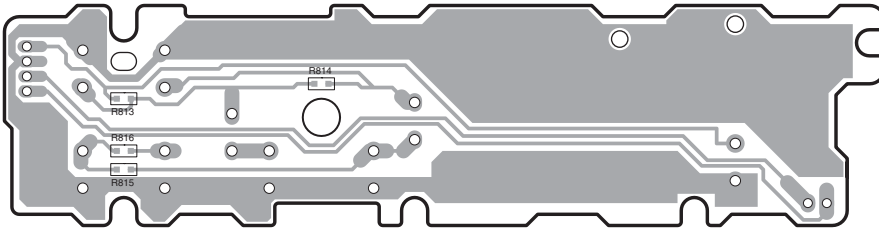
**U7**: STANDBY SWITCH PC BOARD NASW-7814

1



Component side

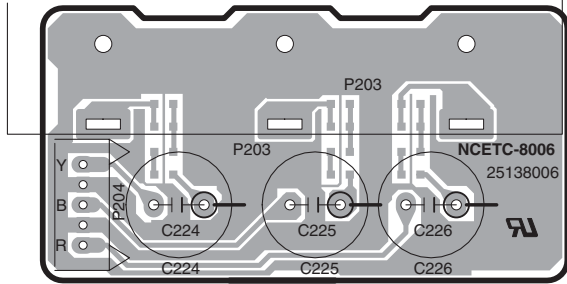
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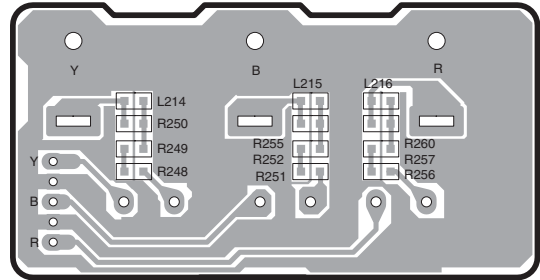
Soldering side

**U10**: COMPONENT OUTPUT PC BOARD NAETC-8006

3



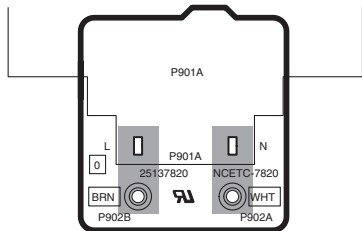
Component side



Soldering side

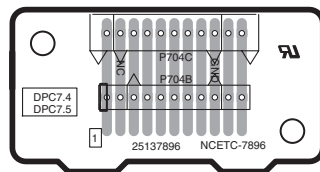
**U9**: INLET TERMINAL PC BOARD NAETC-7820

4



**U15**: CONNECTION PC BOARD NAETC-7896

5



A

B

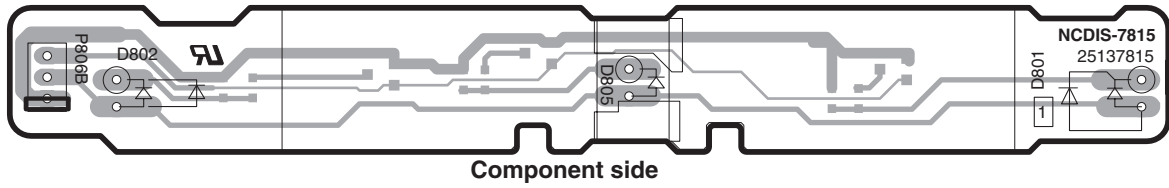
C

D

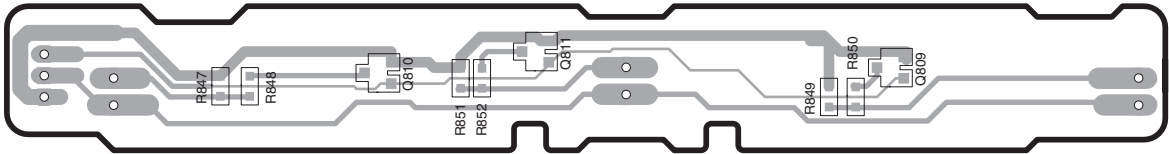
PRINTED CIRCUIT BOARD VIEW FROM SOLDERING SIDE-7

1

**U8**: LED DISPLAY PC BOARD NADIS-7815

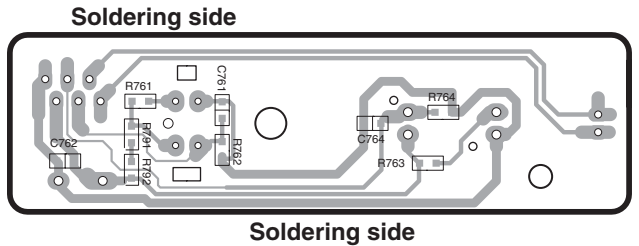
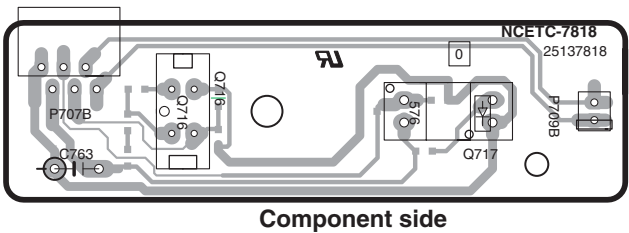


2



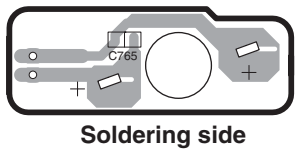
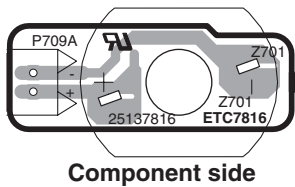
3

**U12**: DISC SENSOR PC BOARD NAETC-7818



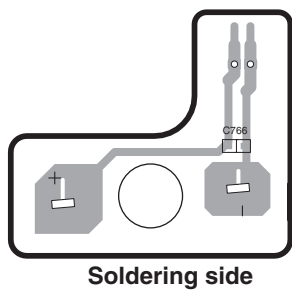
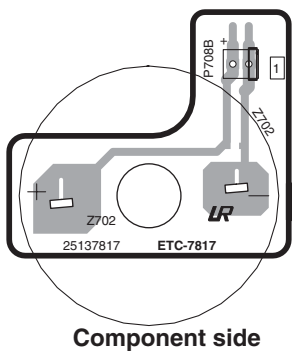
4

**U13**: ROULETTE MOTOR PC BOARD NAETC-7816



5

**U14**: LOADING MOTOR PC BOARD NAETC-7817





A

B

C

D

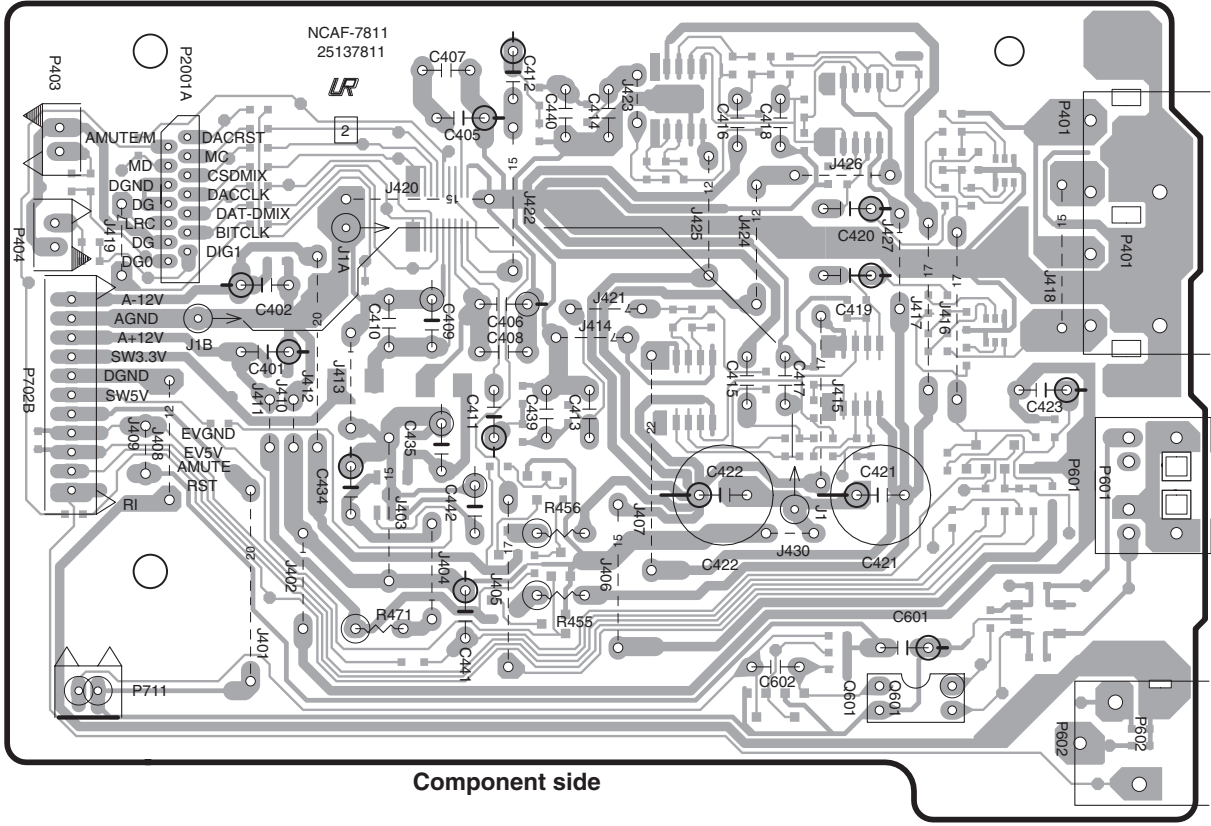
PRINTED CIRCUIT BOARD VIEW FROM SOLDERING SIDE-8

U6: AUDIO OUTPUT TERMINAL PC BOARD NAAF-7811

1

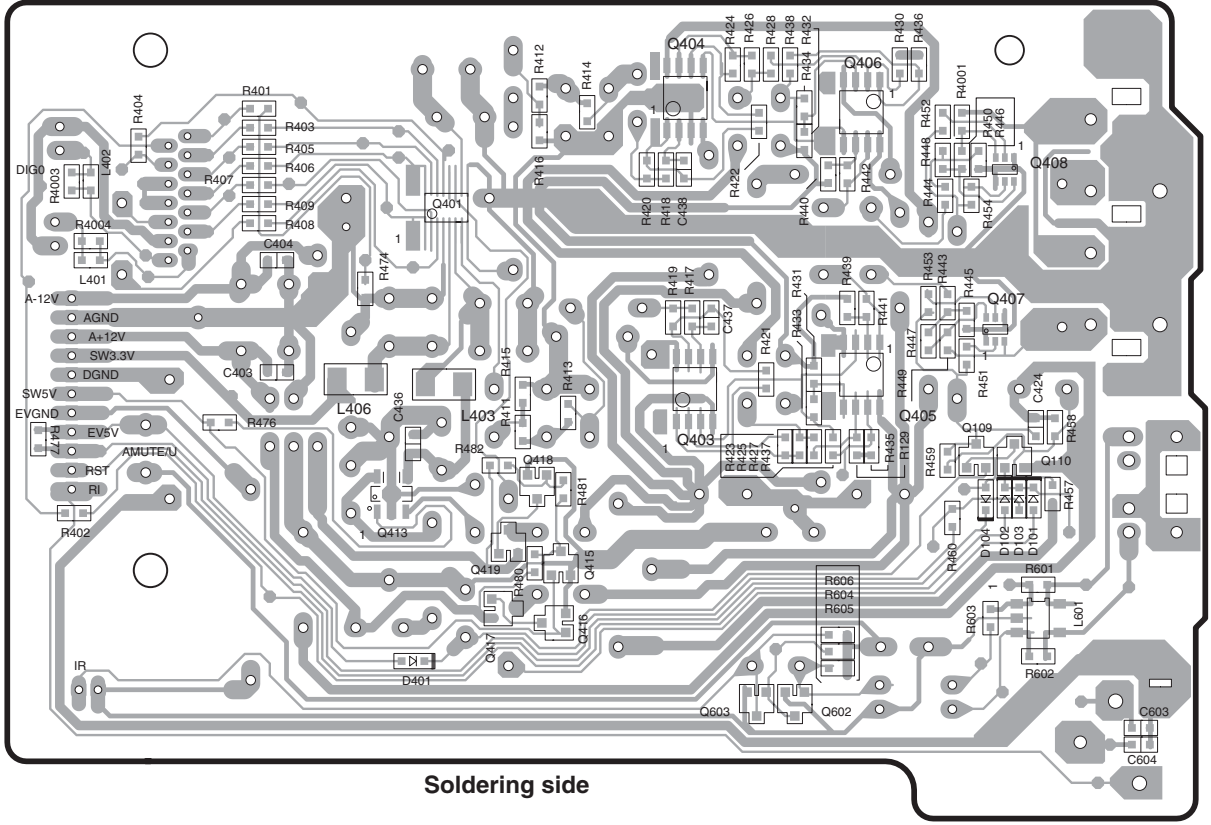
2

3



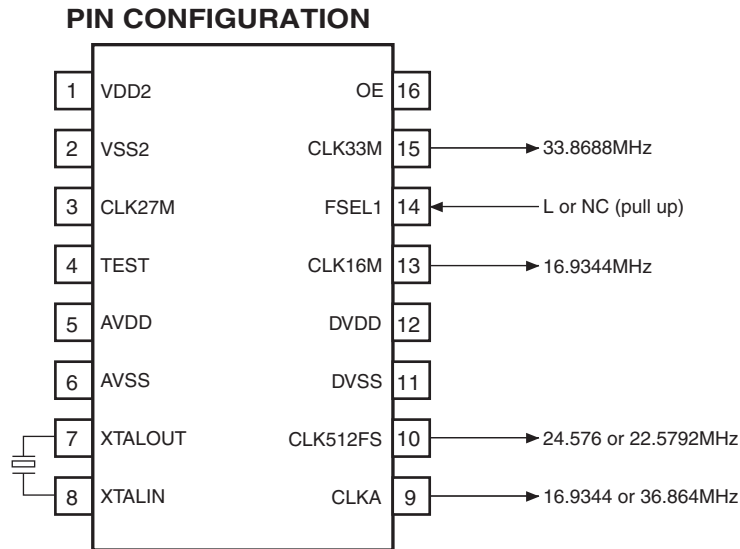
4

5



## IC BLOCK DIAGRAM/ TERMINAL DESCRIPTION

### Q2601: BU2288FV CLOCK GENERATOR



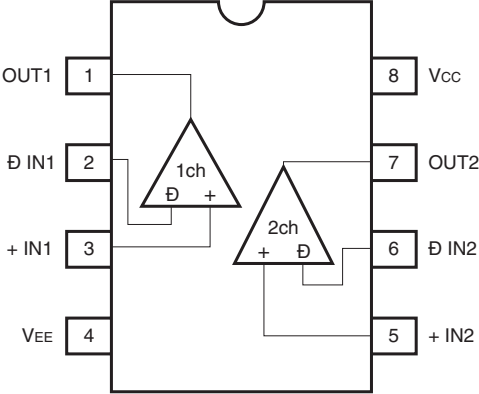
### PIN FUNCTION

PIN No.	PIN NAME	FUNCTION
1	VDD2	Digital VDD for 27MHz clock output
2	VSS2	Digital GND for 27MHz clock output
3	CLK27M	27MHz clock output
4	TEST	Output for test
5	AVDD	Analog VDD
6	AVSS	Analog GND
7	XTALOUT	Standard crystal output
8	XTALIN	Standard crystal input
9	CLKA	Clock output (FSEL1=Open: 16.9344MHz, FEL1=36.864MHz)
10	CLK512FS	Clock output (FSEL1=Open: 22.5792MHz, FEL1=24.576MHz)
11	DVSS	Digital GND
12	DVDD	Digital VDD
13	CLK16M	16.9344MHz clock output
14	FSEL1	Output select: with pull up Open: 16.9344MHz (9pin), 22.5792MHz (10pin) L: 36.864MHz (9pin), 24.576Mhz (10pin)
15	CLK33M	33.8688MHz clock output
16	OE	Output enable (open: enable, L: disable): with pull up

# IC BLOCK DIAGRAM/ TERMINAL DESCRIPTION

## Q1102: BA4510FV OPE. AMP

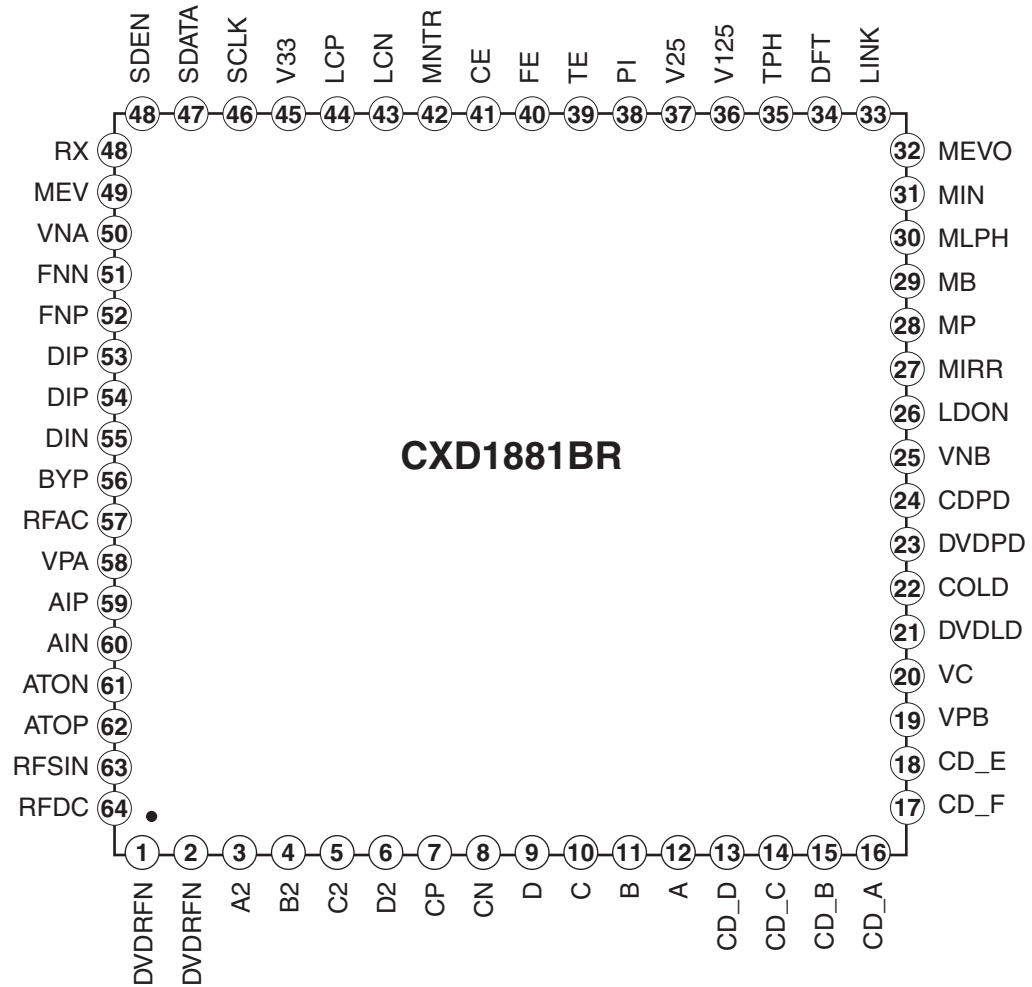
Block diagram



# IC BLOCK DIAGRAM/ TERMINAL DESCRIPTION

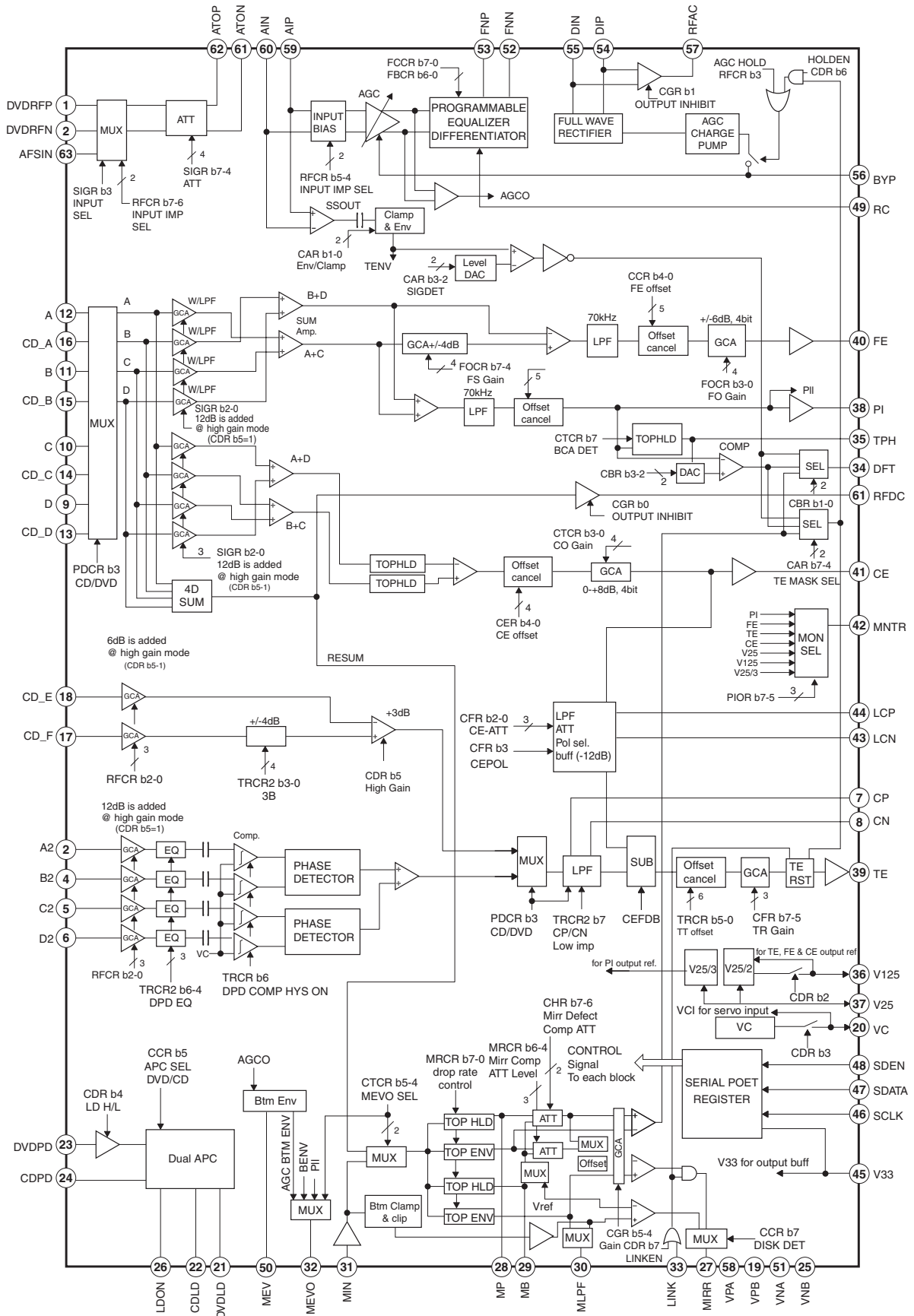
## Q1001 : CXD1881BR DVD ANALOG FRONTEND-1

### PIN LAYOUT



# IC BLOCK DIAGRAM/ TERMINAL DESCRIPTION

## Q1001 : CXD1881BR DVD ANALOG FRONTEND-2



## IC BLOCK DIAGRAM/ TERMINAL DESCRIPTION

### Q1001 : CXD1881BR DVD ANALOG FRONTEND-3

#### TERMINAL DESCRIPTION

##### Power supply

Pin Name	I/O	Description
VPA	-	Power supply for RF section and serial port.
VPB	-	Power supply for servo section.
VNA	-	Ground pin for RF section and serial port section.
VNB	-	Ground of servo section.
V33	-	Power supply for output buffer.
V25	-	Reference voltage pin for servo output.

##### Input pin

Pin name	I/O	Description
DVDRFP, DVDRFN	I	RF signal: RF attenuate deferential signal input pin.
RFSIN	I	RF signal: Single end RF signal input pin.
AIP, AIN	I	AGC Amp. input: Input pin of deferential amp.
DIP, DIN	I	Analog input pin for RF single buffer.
A, B, C, D	I	Interface input pin of photo detector.
A2, B2, C2, D2	I	Interface input pin of photo detector. AC coupling input pin for DPD from main beam photo detector.
CD_A, B, C, D	I	Interface input pin of CD photo detector.
CD_E, F	I	Interface input pin of CD photo detector.
MIN	I	RF signal input pin for mirror detection.
DVDPD	I	APC input pin. DVD APC input pin from monitor photo diode.
CDPD	I	APC input pin. CD APC input pin from monitor photo diode.
LDON	I	APC output control pin. H: LD output signal is active.
LINK	I	Link signal input pin.
	O	Mirror monitor signal output pin.

##### Output pin

Pin name	I/O	Description
ATOP, ATON	O	Deferential attenuation output pin.
FNP, FNN	O	Deferential normal output pin.
RFAC	O	Single end normal output pin
RFDC	O	RF signal output pin.
FE	O	Focus error signal output pin.
TE	O	Tracking error signal output pin.
CE	O	Center error signal output pin.
MEVO	O	RFDDC bottom envelope output pin.
DFT	O	Defect output pin.
MIRR	O	Mirror detection output pin.
OI	O	Puu in signal output pin.
DVDLD	O	APC output pin. For controlled laser power. (DVD APC)
CDLD	O	APC output pin. For controlled laser power. (CD APC)
MNTR	O	Monitor output pin.

## IC BLOCK DIAGRAM/ TERMINAL DESCRIPTION

### Q1001 : CXD1881BR DVD ANALOG FRONTEND-4

#### TERMINAL DESCRIPTION

##### Analog pins

Pin Name	I/O	Description
BYP	-	The RF AGC integration capacitor CBYP is connected between BYP and VPA.
CP	-	Deferential phase tracking LPF pin.
CN	-	Deferential phase tracking LPF pin.
LCP	-	The LPF terminal which lens shift offset cancel.
LCN	-	The LPF terminal which lens shift offset cancel.
MP	-	MIRR top hold pin.
MB	-	MIRR top hold pin.
MEV	-	RFDC bottom envelope pin.
MLPF	-	Mirror LPF pin.
TPH	-	PI top hold pin.
VC	-	Reference voltage output pin.
V125	-	Reference voltage output pin.
RX	-	Connect the reference resistor.

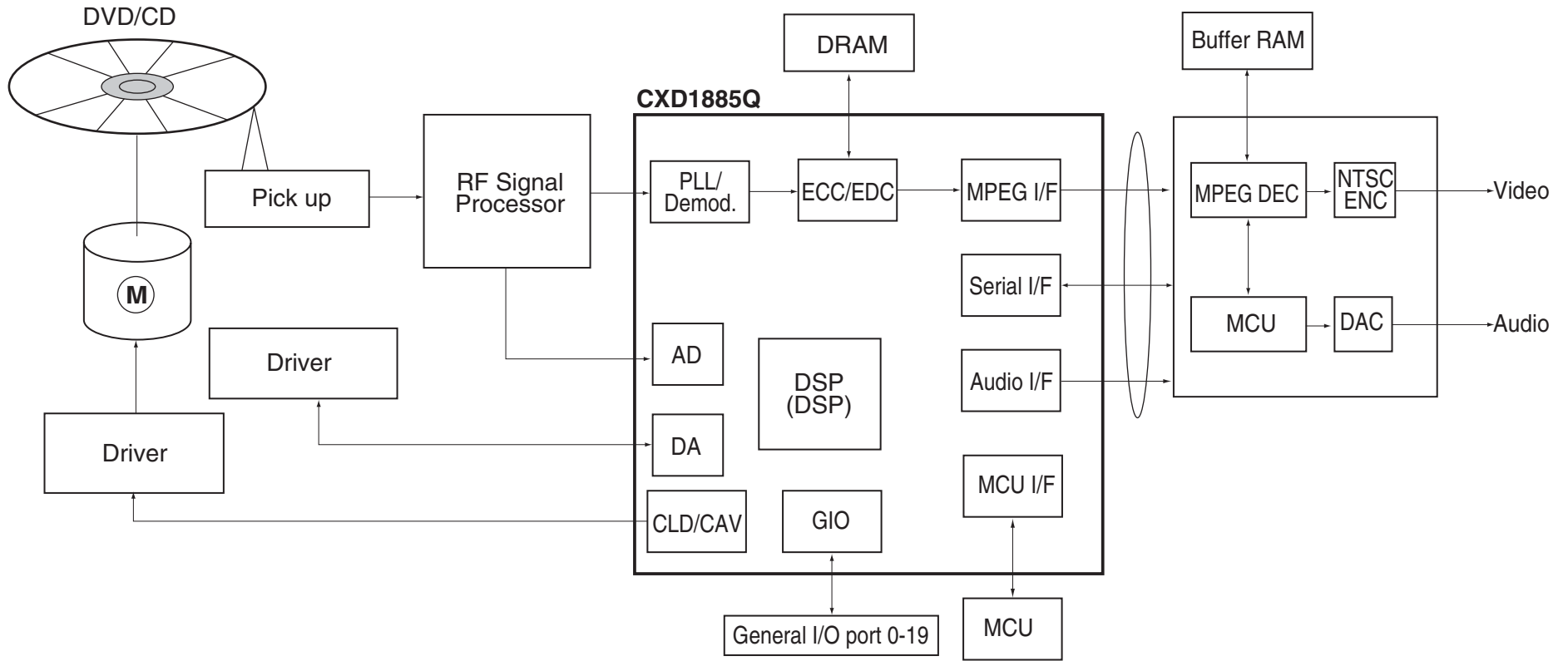
##### Serial port pin

Pin Name	I/O	Description
SDEN	I	Serial data enable input pin.
SDATA	I/O	Serial data input and output pin.
SCLK	I	Serial clock input pin.

# IC BLOCK DIAGRAM/ TERMINAL DESCRIPTION

Q1201: CXD1885Q (DVD DSP)-1

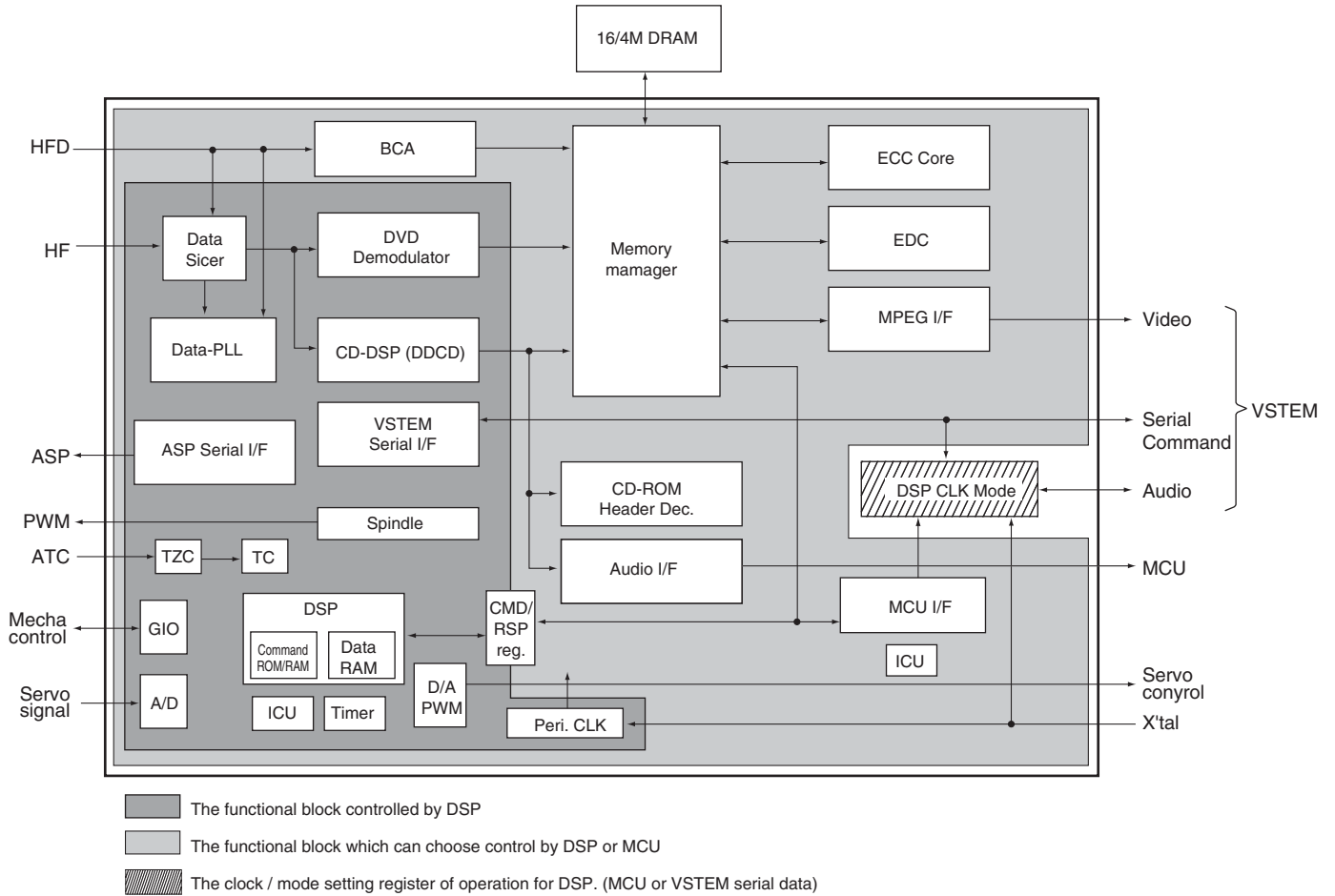
## BLOCK DIAGRAM





# IC BLOCK DIAGRAM/TERMINAL DESCRIPTION

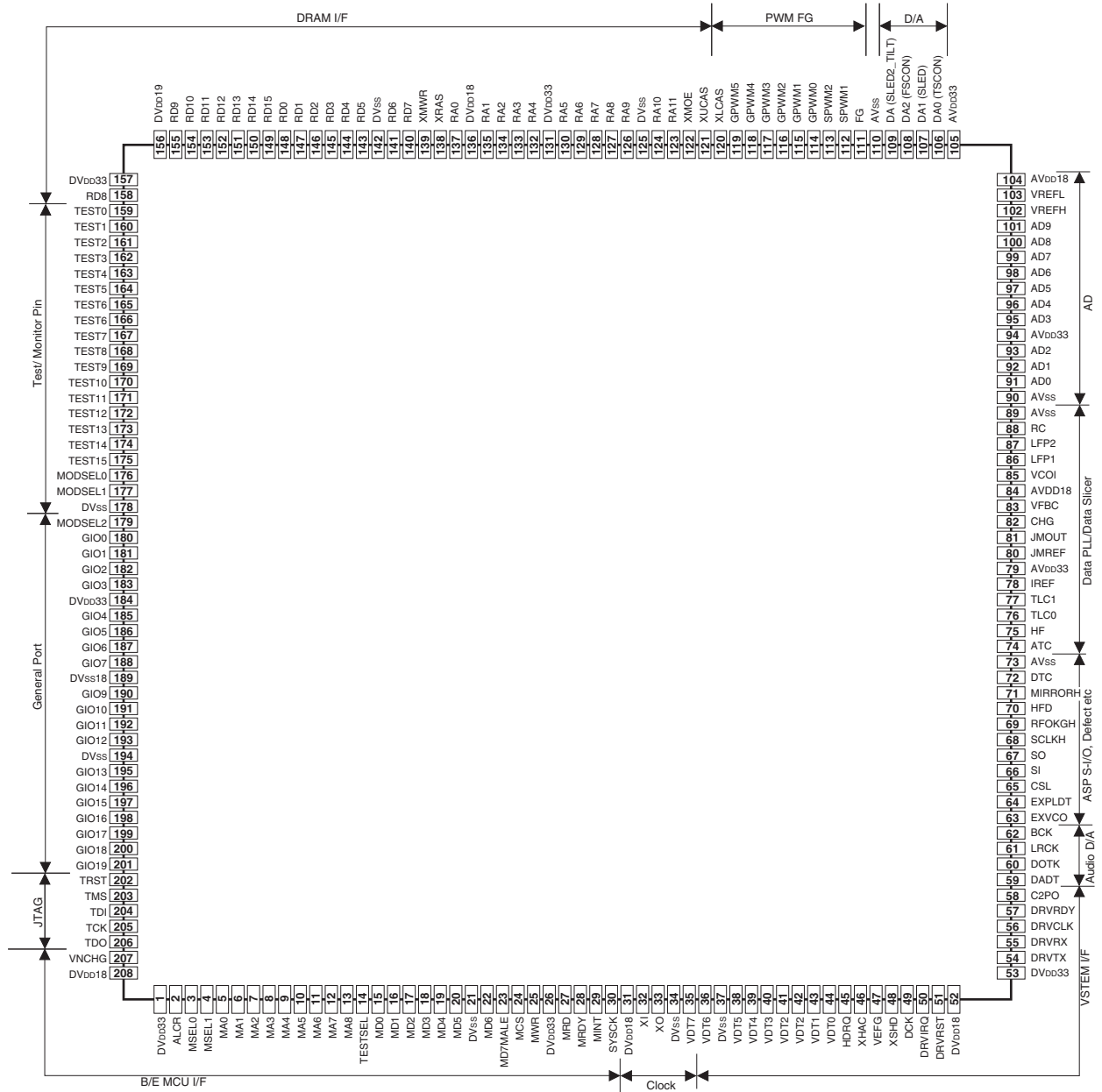
## Q1201: CXD1885Q (DVD DSP)-2



# IC BLOCK DIAGRAM/ TERMINAL DESCRIPTION

## Q1201: CXD1885Q (DVD DSP)-3

### PIN LAYOUT



## IC BLOCK DIAGRAM/ TERMINAL DESCRIPTION

### Q1201: CXD1885Q (DVD DSP)-4

No.	Sign	I/O	Classification	Description
1	DVDD33	P	VDD & GND	Digital power supply (3.3V)
2	ALCR	I	MCU I/F	Chip reset input port. L: Reset mode
3	MSEL0	I	MCU I/F	MUCH I/F mode select 0
4	MSEL1	I	MCU I/F	MUCH I/F mode select 1
5	MA0	I/O	MCU I/F	MUCH address input 0 / Data in/ out 0 port
6	MA1	I/O	MCU I/F	MUCH address input 1 / Data in/ out 1 port
7	MA2	I/O	MCU I/F	MUCH address input 2 / Data in/ out 2 port
8	MA3	I/O	MCU I/F	MUCH address input 3 / Data in/ out 3 port
9	MA4	I/O	MCU I/F	MUCH address input 4 / Data in/ out 4 port
10	MA5	I/O	MCU I/F	MUCH address input 5 / Data in/ out 5 port
11	MA6	I/O	MCU I/F	MUCH address input 6 / Data in/ out 6 port
12	MA7	I/O	MCU I/F	MUCH address input 7 / Data in/ out 7 port
13	MA8	I	MCU I/F	MUCH address input 8 / Data in/ out 8 port
14	TESTSEL	I	MCU I/F	Test select input port
15	MD0	I/O	MCU I/F	MUCH data in/ out 0 port. (LBS.)
16	MD1	I/O	MCU I/F	MUCH data in/ out 1 port
17	MD2	I/O	MCU I/F	MUCH data in/ out 2 port
18	MD3	I/O	MCU I/F	MUCH data in/ out 3 port
19	MD4	I/O	MCU I/F	MUCH data in/ out 4 port
20	MD5	I/O	MCU I/F	MUCH data in/ out 5 port
21	DVSS	P	VDD & GND	Digital GOD
22	MD6	I/O	MCU I/F	MUCH data in/ out 6 port
23	MD7	I/O	MCU I/F	MUCH data in/ out 7 port. (MOB)
24	MALE	I	MCU I/F	MUCH address latch signal input port
25	MCS	I	MCU I/F	MUCH chip select signal input port
26	MWR	I	MCU I/F	MUCH write strobe signal input port
27	DVDD33	P	VDD & GND	Digital power supply (3.3V)
28	MRD	I	MCU I/F	MUCH read strobe signal input port
29	MRDY	O	MCU I/F	MUCH reedy signal output port. L: Wait condition
30	MINT	O	MCU I/F	MUCH interruption output signal port. L: demand state of interruption
31	YSCK	O	Clock	Clock monitor output port
32	DVDD18	P	VDD & GND	Digital power supply (1.8V), for internal logic circuit
33	XI	I	Clock	Crystal oscillator connection port
34	XO	O	Clock	Crystal oscillator connection port
35	DVSS	P	VDD & GND	Digital GOD
36	VDT7	O	VSTEM A/V	MPEG data output 7 port
37	VDT6	O	VSTEM A/V	MPEG data output 6 port
38	DVSS	P	VDD & GND	Digital GOD
39	VDT5	O	VSTEM A/V	MPEG data output 5 port
40	VDT4	O	VSTEM A/V	MPEG data output 4 port
41	VDT3	O	VSTEM A/V	MPEG data output 3 port
42	VDT2	O	VSTEM A/V	MPEG data output 2 port
43	VDT1	O	VSTEM A/V	MPEG data output 1 port
44	VDT0	O	VSTEM A/V	MPEG data output 0 port
45	HDRQ	I	VSTEM A/V	MPEG data request input port
46	XHAC	O	VSTEM A/V	Data valid output port
47	VEFG	O	VSTEM A/V	BECK error select (Flag) output port. L: Error selector
48	XSHD	O	VSTEM A/V	DVD first sector flag signal output port
49	DCK	O	VSTEM A/V	Data strobe signal output port
50	DRVIRQ	O	VSTEM Command	Interrupt request output port. (for host )
51	DRVRST	I	VSTEM Command	Drive H/W reset input port. L: reset
52	DVSDD18	P	VDD & I/F	Digital power supply (1.8V), for internal logic circuit
53	DVSDD33	P	VDD & I/F	Digital power supply (3.3V), for I/O
54	DRVTX	O	VSTEM Command	Serial data output port (for host)
55	DRVRX	I	VSTEM Command	Serial data input port (from host)
56	DRVCLK	I	VSTEM Command	Clock signal input port
57	DRVRDY	O	VSTEM Command	Drive ready signal output port. L: ready condition
58	C2PO	O	Audio I/F	CD-DSL C2 pointer output port
59	DADT	O	Audio I/F	Audio serial data output port
60	DOTX	O	Audio I/F	Digital audio output port
61	LRCK	O	Audio I/F	L/R clock output port
62	BCK	O	Audio I/F	Audio-bit clock output port
63	EXVCO	I	TEST/ Monitor	External channel clock input port
64	EXPLDT	I	TEST/ Monitor	External FRO data input port
65	CSL	O	ASP I/F	FRO signal processing port. Latch signal output control

## IC BLOCK DIAGRAM/ TERMINAL DESCRIPTION

### Q1201: CXD1885Q (DVD DSP)-5

No.	Sign	I/O	Classification	Description
66	SI	I	ASP I/F	FRO signal processing port. Serial data input control
67	SO	O	ASP I/F	FRO signal processing port. Serial data output control
68	SCLKH	O	ASP I/F	FRO signal processing port. Serial clock output control
69	RFOKGH	I	ASP I/F	FRO signal OK output port
70	HFD	I	ASP I/F	FRO lack signal input port
71	MIRRORH	I	ASP I/F	Detect mirror signal input port. H: mirror detect
72	DTC	I	ASP I/F	Track cross signal input port
73	AVSS	P	VDD & GND	Analog GND
74	ATC	I	Data PLL	Track cross signal input port. (Analog level input)
75	HFD	I	Data PLL	RF signal input port
76	TLC0	O	Data PLL	Asymmetry charge pump output port 0
77	TLC1	O	Data PLL	Asymmetry charge pump output port 1
78	IREF	I	Data PLL	Reference current setting port for asymmetry circuit
79	AVDD33	P	VDD & GND	Analog voltage port. 3.3V
80	JMREF	I	Data PLL	Reference current setting port for jitter monitor
81	JMOUT	O	Data PLL	Jitter monitor output port
82	CHG	I	Data PLL	Reference setting pin of charge pump for PLL data
83	VFBC	I	Data PLL	Reference setting pin for off-set of PLL data (VCO)
84	AVDD18	I	VDD & GND	Analog power supply. 1.8V
85	VCOI	I	Data PLL	Reference voltage input port for PLL data (VCO)
86	LPF1	O	Data PLL	To connect the loop filter for PLL data 1
87	LPF2	O	Data PLL	To connect the loop filter for PLL data 2
88	RC	I	Data PLL	Gain control port for PLL data (VCO)
89	AVSS	P	VDD & GND	Analog GND
90	AVSS	P	VDD & GND	Analog GND
91	AD0	I	ADC	AD0 input port
92	AD1	I	ADC	AD1 input port
93	AD2	I	ADC	AD2 input port
94	AVDD33	P	VDD & GND	Analog power supply. 3.3V
95	AD3	I	ADC	AD3 input port
96	AD4	I	ADC	AD4 input port
97	AD5	I	ADC	AD5 input port
98	AD6	I	ADC	AD6 input port
99	AD7	I	ADC	AD7 input port
100	AD8	I	ADC	AD8 input port
101	AD9	I	ADC	AD9 input port
102	VREFH	I/O	ADC	Maximum reference voltage input port for ADC
103	VREFL	I/O	ADC	Minimum reference voltage input port for ADC
104	AVDD18	P	VDD & GND	Analog power supply. 1.8V
105	AVDD33	P	VDD & GND	Analog power supply. 3.3V
106	DA0 (TSCON)	O	DAC	Track servo output port
107	DA1 (SLED)	O	DAC	Sled servo output port
108	DA2 (FSCON) DA3	O	DAC	Focus servo output port
109	(SLED2_T ILT)	O	DAC	Sled servo/ Tilt servo control output port
110	AVSS	P	VDD & GND	Analog GND
111	FG	I	SPM	FG signal input port
112	SPWM1	O	SPM	Spindle motor PWM output-1 port
113	SPWM2	O	SPM	Spindle motor PWM output-2 port
114	GPWM0	O	General PWM	General PWM output-0 port
115	GPWM1	O	General PWM	General PWM output-1 port
116	GPWM2	O	General PWM	General PWM output-2 port
117	GPWM3	O	General PWM	General PWM output-3 port
118	GPWM4	O	General PWM	General PWM output-4 port
119	GPWM5	O	General PWM	General PWM output-5 port
120	XLCAS	O	DRAM I/F	LCAS of DRAM output port
121	XUCAS	O	DRAM I/F	UCAS of DRAM output port
122	XMOE	O	DRAM I/F	Enable output port of DRAM
123	RA11	O	DRAM I/F	Address output port-11 of DRAM
124	RA10	O	DRAM I/F	Address output port-10 of DRAM
125	DVSS	P	VDD & GND	Digital GND
126	RA9	O	DRAM I/F	Address output port-9 of DRAM

## IC BLOCK DIAGRAM/ TERMINAL DESCRIPTION

### Q1201: CXD1885Q (DVD DSP)-6

No.	Sign	I/O	Classification	Description
127	RA8	O	DRAM I/F	Address output port-8 of DRAM
128	RA7	O	DRAM I/F	Address output port-7 of DRAM
129	RA6	O	DRAM I/F	Address output port-6 of DRAM
130	RA5	O	DRAM I/F	Address output port-5 of DRAM
131	DVDD33	P	VDD & GND	Digital power supply. 3.3V
132	RA4	O	DRAM I/F	Address output port-4 of DRAM
133	RA3	O	DRAM I/F	Address output port-3 of DRAM
134	RA2	O	DRAM I/F	Address output port-2 of DRAM
135	RA1	O	DRAM I/F	Address output port-1 of DRAM
136	DVDD18	P	VDD & GND	Digital power supply. 1.8V
137	RA0	O	DRAM I/F	Address output port-0 of DRAM
138	XRAS	O	DRAM I/F	RAS output port of DRAM
139	XMWR	O	DRAM I/F	Write enable port of DRAM
140	RD7	I/O	DRAM I/F	Data input port-7
141	RD6	I/O	DRAM I/F	Data input port-6
142	DVSS	P	VDD & GND	Digital GND
143	RD5	I/O	DRAM I/F	Data input port-5
144	RD4	I/O	DRAM I/F	Data input port-4
145	RD3	I/O	DRAM I/F	Data input port-3
146	RD2	I/O	DRAM I/F	Data input port-2
147	RD1	I/O	DRAM I/F	Data input port-1
148	RD0	I/O	DRAM I/F	Data input port-0
149	RD15	I/O	DRAM I/F	Data input port-15
150	RD14	I/O	DRAM I/F	Data input port-14
151	RD13	I/O	DRAM I/F	Data input port-13
152	RD12	I/O	DRAM I/F	Data input port-12
153	RD11	I/O	DRAM I/F	Data input port-11
154	RD10	I/O	DRAM I/F	Data input port-10
155	RD9	I/O	DRAM I/F	Data input port-9
156	DVDD18	P	VDD & GND	Digital power supply. 1.8V
157	DVDD33	P	VDD & GND	Digital power supply. 3.3V
158	RD8	I/O	DRAM I/F	Data input port-8
159	TEST0	O	Test/ Monitor	Test for I/O-0
160	TEST1	O	Test/ Monitor	Test for I/O-1
161	TEST2	O	Test/ Monitor	Test for I/O-2
162	TEST3	O	Test/ Monitor	Test for I/O-3
163	TEST4	O	Test/ Monitor	Test for I/O-4
164	TEST5	O	Test/ Monitor	Test for I/O-5
165	TEST6	O	Test/ Monitor	Test for I/O-6
166	TEST7	O	Test/ Monitor	Test for I/O-7
167	TEST8	O	Test/ Monitor	Test for I/O-8
168	TEST9	O	Test/ Monitor	Test for I/O-9
169	TEST10	O	Test/ Monitor	Test for I/O-10
170	TEST11	O	Test/ Monitor	Test for I/O-11
171	TEST12	O	Test/ Monitor	Test for I/O-12
172	TEST13	O	Test/ Monitor	Test for I/O-13
173	TEST14	O	Test/ Monitor	Test for I/O-14
174	TEST15	O	Test/ Monitor	Test for I/O-15
175	MODSEL0	I	Test/ Monitor	Test mode select-0 input port
176	MODSEL1	I	Test/ Monitor	Test mode select-1 input port
177	DVSS	P	VDD & GND	Digital GND
178	MODSEL2	I	Test/ Monitor	Test mode select-2 input port
179	GIO0	I/O	General Port	General port-0
180	GIO1	I/O	General Port	General port-1
181	GIO2	I/O	General Port	General port-2
182	GIO3	I/O	General Port	General port-3
183	DVDD33	P	VDD & GND	Digital power supply. 3.3V
184	GIO4	I/O	General Port	General port-4
185	GIO5	I/O	General Port	General port-5
186	GIO6	I/O	General Port	General port-6
187	GIO7	I/O	General Port	General port-7
188	DVDD18	I/O	VDD & GND	Digital power supply. 1.8V
189	GIO8	I/O	General Port	General port-8
190	GIO9	I/O	General Port	General port-9
191	GIO10	I/O	General Port	General port-10
192	GIO11	I/O	General Port	General port-11

## IC BLOCK DIAGRAM/ TERMINAL DESCRIPTION

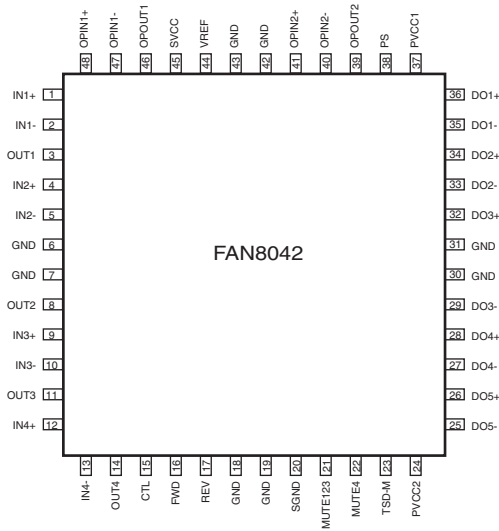
### Q1201: CXD1885Q (DVD DSP)-7

No.	Sign	I/O	Classification	Description
193	GIO12	I/O	General Port	General port-12
194	DVSS	P	VDD & GND	Digital GND
195	GIO13	I/O	General Port	General port-13
196	GIO14	I/O	General Port	General port-14
197	GIO15	I/O	General Port	General port-15
198	GIO16	I/O	General Port	General port-16
199	GIO17	I/O	General Port	General port-17
200	GIO18	I/O	General Port	General port-18
201	GIO19	I/O	General Port	General port-19
202	TRST	I	JTAG I/F	JYAG reset input port
203	TMS	I	JTAG I/F	JYAG mode select input port
204	TDI	I	JTAG I/F	JYAG data input port
205	TCK	I	JTAG I/F	JYAG clock input port
206	TDO	O	JTAG I/F	JYAG data output port
207	VMCHG	I	MCU I/F	System select port for DSP. (L: VSTEM, H: External MCU)
208	DVDD18	P	VDD & GND	Digital power supply. 1.8V (for internal logic)

# IC BLOCK DIAGRAM/ TERMINAL DESCRIPTION

## Q1101: FAN8042 5-CH MOTOR DRIVER-1

### PIN ASSIGNMENT

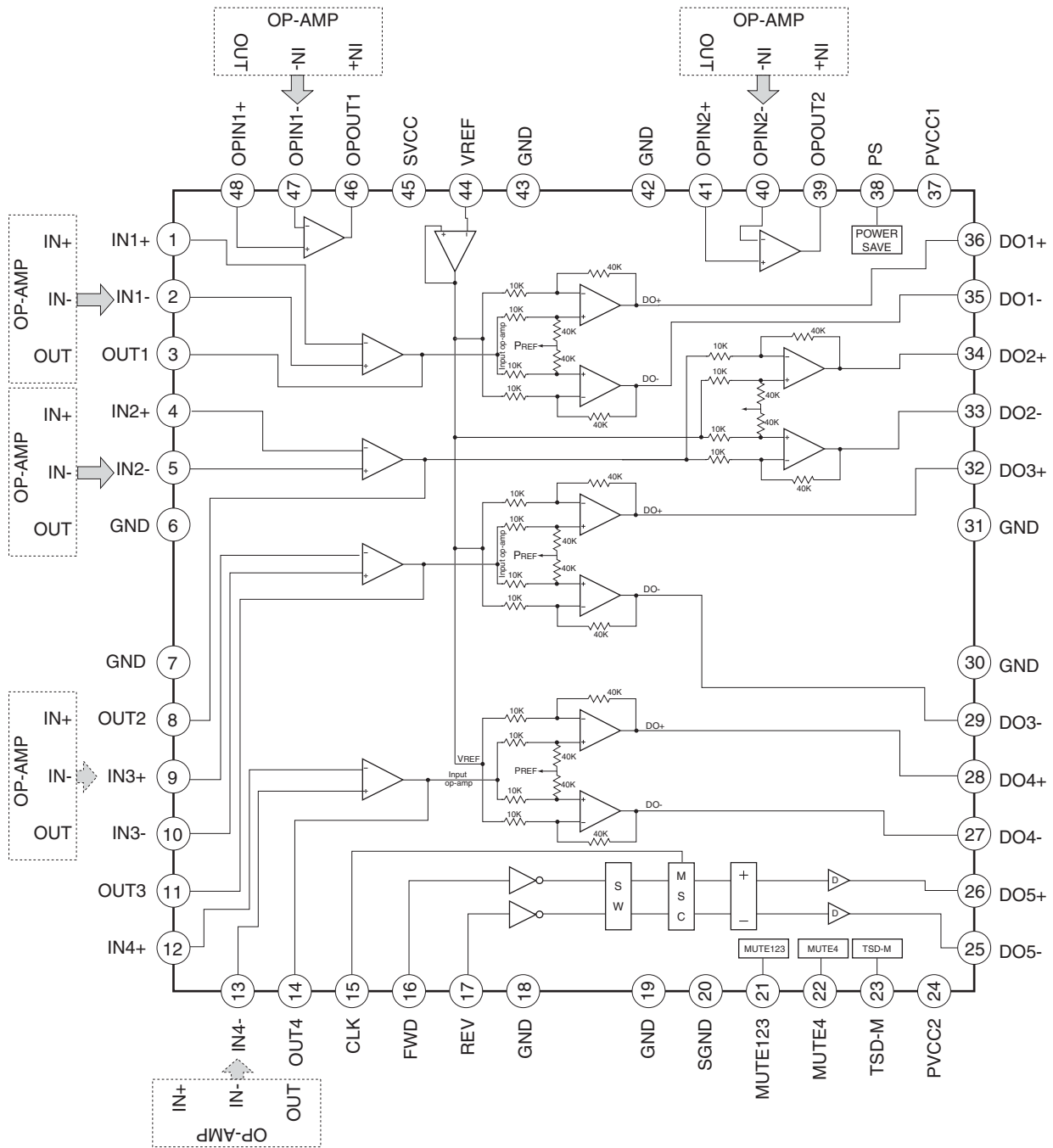


### PIN DEFINITION

Pin Number	Pin Name	I/O	Pin Function description
1	IN1+	I	CH1 op-amp input (+)
2	IN1-	I	CH1 op-amp input (-)
3	OUT1	O	CH1 op-amp output
4	IN2+	I	CH2 op-amp input (+)
5	IN2-	I	CH2 op-amp input (-)
6	GND	-	Ground
7	GND	-	Ground
8	OUT2	O	CH2 op-amp output
9	IN3+	I	CH3 op-amp input (+)
10	IN3-	I	CH3 op-amp input (-)
11	OUT3	O	CH3 op-amp output
12	IN4+	I	CH4 op-amp input (+)
13	IN4-	I	CH4 op-amp input (-)
14	OUT4	O	CH4 op-amp output
15	CTL	I	CH5 motor speed control
16	FWD	I	CH5 forward input
17	REV	I	CH5 reverse input
18	GND	-	Ground
19	GND	-	Ground
20	SGND	-	Signal Ground
21	MUTE123	I	Mute for CH1,2,3
22	MUTE4	I	Mute for CH4
23	TSD-M	O	TSD monitor
24	PVCC2	-	Power supply voltage 2 (For CH4, CH5)
25	DO5-	O	CH5 driver output (-)
26	DO5+	O	CH5 driver output (+)
27	DO4-	O	CH4 driver output (-)
28	DO4+	O	CH4 driver output (+)
29	DO3-	O	CH3 driver output (-)
30	GND	-	Ground
31	GND	-	Ground
32	DO3+	O	CH3 driver output (-)
33	DO2-	O	CH2 driver output (-)
34	DO2+	O	CH2 driver output (+)
35	DO1-	O	CH1 driver output (-)
36	DO1+	O	CH1 driver output (+)
37	PVCC1	-	Power supply voltage 1 (For CH1, CH2, CH3)
38	PS	I	Power save
39	OPOUT2	O	Normal op-amp2 output
40	OPIN2-	I	Normal op-amp2 input (-)
41	OPIN2+	I	Normal op-amp2 input (+)
42	GND	-	Ground
43	GND	-	Ground
44	VREF	I	Bias voltage input
45	SVCC	-	Signal & op-amps supply voltage
46	OPOUT1	O	Normal op-amp1 output
47	OPIN1-	I	Normal op-amp1 input (-)
48	OPIN1+	I	Normal op-amp1 input (+)

# IC BLOCK DIAGRAM/ TERMINAL DESCRIPTION

## Q1101: FAN8042 5-CH MOTOR DRIVER-2

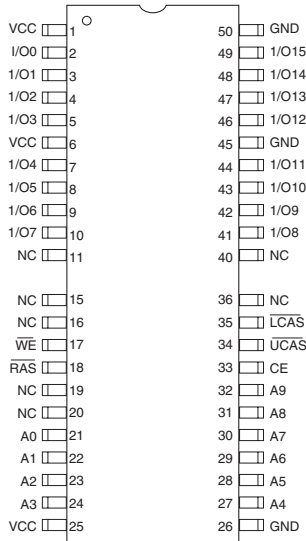




# IC BLOCK DIAGRAM/ TERMINAL DESCRIPTION

## Q1251: IC41LV16100-50T 16-MBIT DYNAMIC RAM

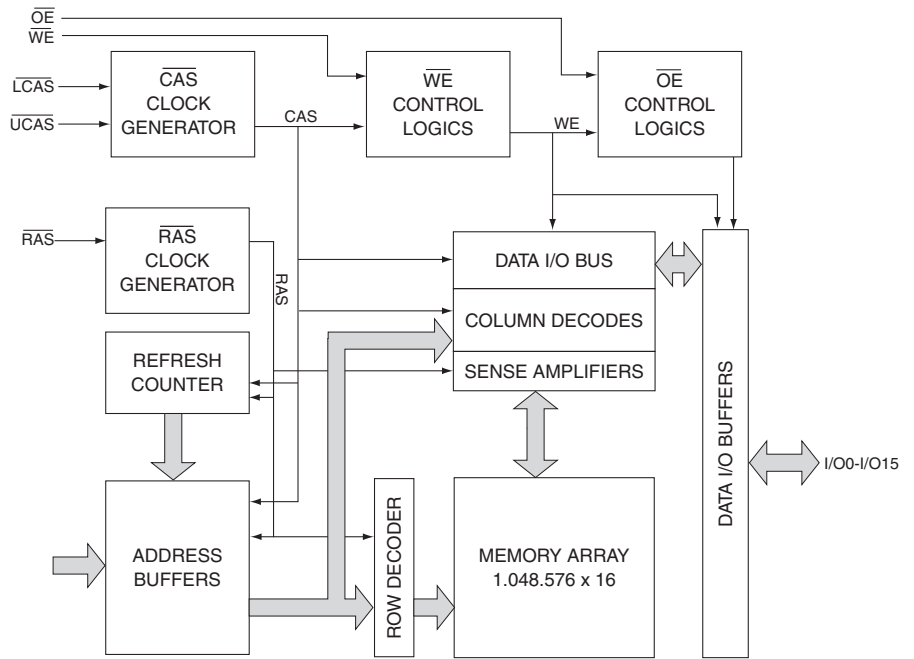
### PIN CONFIGURATION



### PIN DESCRIPTION

- A0-A9 Address input
- I/O0-15 Data inputs/outputs
- WE Write enable
- OE Output enable
- RAS Row address strobe
- UCAS Upper column address strobe
- LCAS Lower column address strobe
- VCC Power
- GND Ground
- NC No connection

### FUNCTIONAL BLOCK DIAGRAM



### TRUTH TABLE

Function	RAS	LCAS	UCAS	WE	OE	Address tr/tc	I/O	
Standby	H	H	H	X	X	X	High-Z	
Read: Word	L	L	L	H	L	ROW/COL	Dout	
Read: Lower Byte	L	L	H	H	L	ROW/COL	Lower Byte. Dout Upper Byte, High-Z	
Read: Upper Byte	L	H	L	H	L	ROW/COL	Lower Byte, High-Z Upper Byte. Dout	
Write: Word (Early Write)	L	L	L	L	X	ROW/COL	Din	
Write: Lower Byte (Early Write)	L	L	H	L	X	ROW/COL	Lower Byte. Din Upper Byte, High-Z	
Write: Upper Byte (Early Write)	L	H	L	L	X	ROW/COL	Lower Byte, High-Z Upper Byte. Din	
Read Write	L	L	L	H-L	H-L	ROW/COL	Dout, Din	
EDO Page-Mode Read	1st Cycle	L	H-L	H-L	H	L	ROW/COL	Dout
	2nd Cycle	L	H-L	H-L	H	L	NA/COL	Dout
	Any Cycle	L	L-H	L-H	H	L	NA/NA	Dout
EDO Page-Mode Read	1st Cycle	L	H-L	H-L	L	X	ROW/COL	Din
	2nd Cycle	L	H-L	H-L	L	X	NA/COL	Din
EDO Page-Mode Read-Write	1st Cycle	L	H-L	H-L	H-L	L	ROW/COL	Dout, Din
	2nd Cycle	L	H-L	H-L	H-L	L-H	NA/COL	Dout, Din
Hidden Refresh	1st Cycle	L-H-L	L	L	-H	L	ROW/COL	Dout
	2nd Cycle	L-H-L	L	L	L	X	ROW/COL	Dout
RAS-Only Refresh	L	H	H	X	X	ROW/NA	High-Z	
CBR Refresh	H-L	L	L	X	X	X	High-Z	

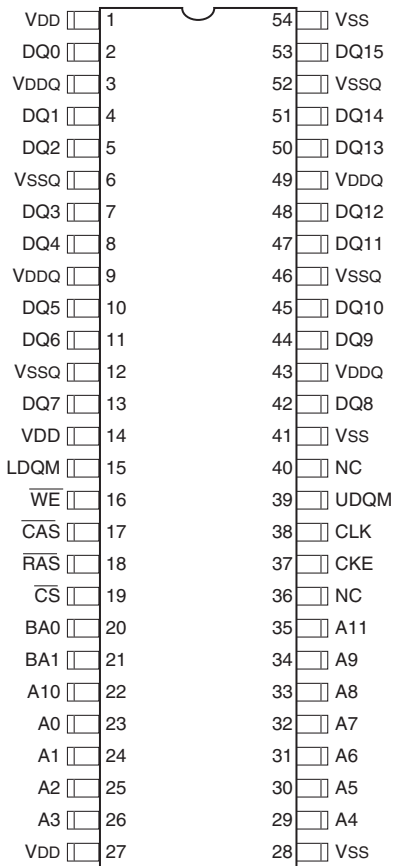
# IC BLOCK DIAGRAM/ TERMINAL DESCRIPTION

## Q2303 : IC42S16400-7T SYNCHRONOUS DYNAMIC RAM

The IC42S16400 are high-speed 67, 108, 864-bit synchronous dynamic random-access memories, organized as 2,097, 152 x 8 x 4 and 1,48, 576 x 16 x 4 (word x bit x bank), respectively. The synchronous DRAMs achieved high-speed data transfer using the pipeline architecture and clock frequency up to 133MHz for -7.

All input and outputs are synchronized with the positive edge of the clock. The synchronous DRAMs are compatible with Low Voltage TTL.

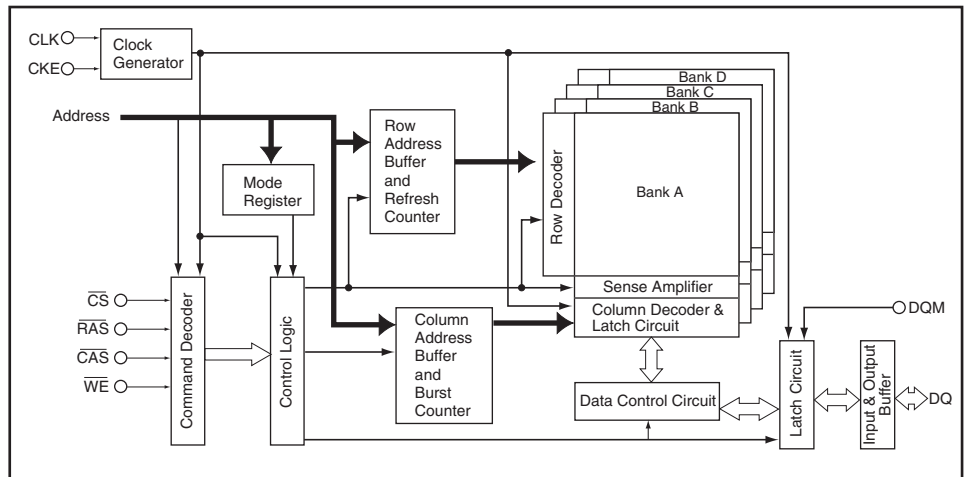
### PIN CONFIGURATIONS



### PIN DESCRIPTIONS

CLK	Master Clock	DQM	DQ Mask Enable
CKE	Clock Enable	A0 - 11	Address Input
CS	Chip Select	BA0, 1	Bank Address
RAS	Row Address Strobe	VDD	Power Supply
CAS	Column Address Strobe	VDDQ	Power Supply for DQ
WE	Write Enable	VSS	Ground
DQ0 - DQ15	Data I/O	VSSQ	Ground for DQ

### BLOCK DIAGRAM

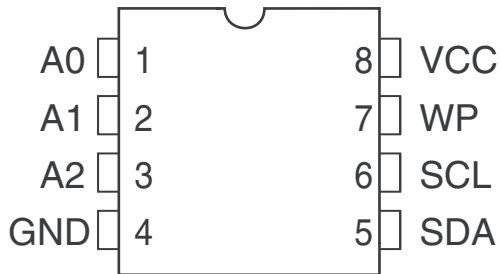


## IC BLOCK DIAGRAM/ TERMINAL DESCRIPTION

### Q2003 : IS24C08-3Z EEPROM

(8K-Bit 2-Wire Serial CMOS EEPROM)

#### PIN CONFIGURATION



#### PIN DESCRIPTIONS

A0-A2	Address Inputs
SDA	Serial Address/Data I/O
SCL	Serial Clock Input
WP	Write Protect Input
Vcc	Power Supply
GND	Ground

#### SCL

This input clock pin is used to synchronize the data transfer to and from the device.

#### SDA

The SDA is a Bi-directional pin used to transfer addresses and data into and out of the device. The SDA pin is an open drain output and can be wire-Or'd with other open drain or open collector outputs. The SDA bus requires a pullup resistor to Vcc.

#### A0, A1, A2

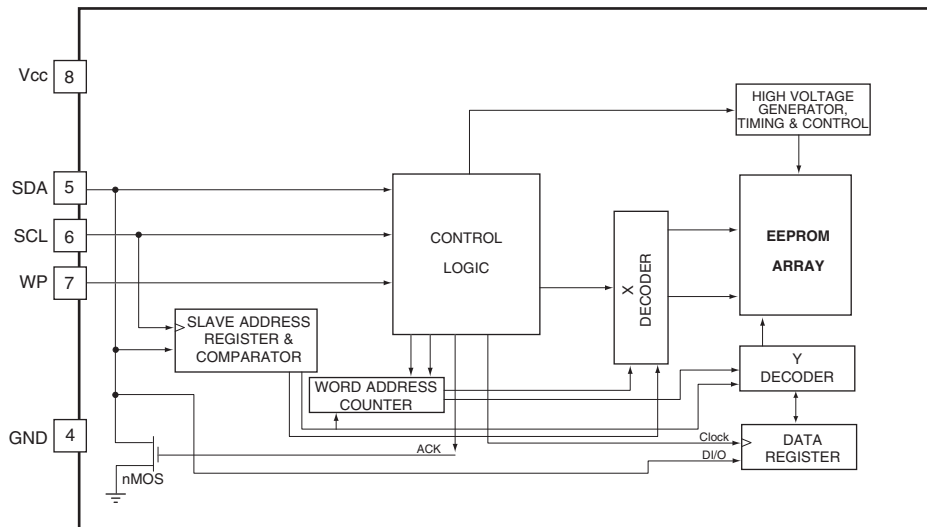
The A0, A1 and A2 are the device address inputs. The IS24C08 only use A2 input for hardwire addressing and a total of two devices may be addressed on a single bus system. The A0 and A1 pins are not used by IS24C08. They may be left floating or tied to either GND or Vcc.

#### WP

WP is the Write Protect pin.

On the and 24C08, if the WP pin is tied to Vcc the entire array becomes Write Protected (Read only). On the 24C16, if the WP pin is tied to Vcc the upper half array becomes Write Protected (Read only). When WP is tied to GND or left floating normal read/write operations are allowed to the device.

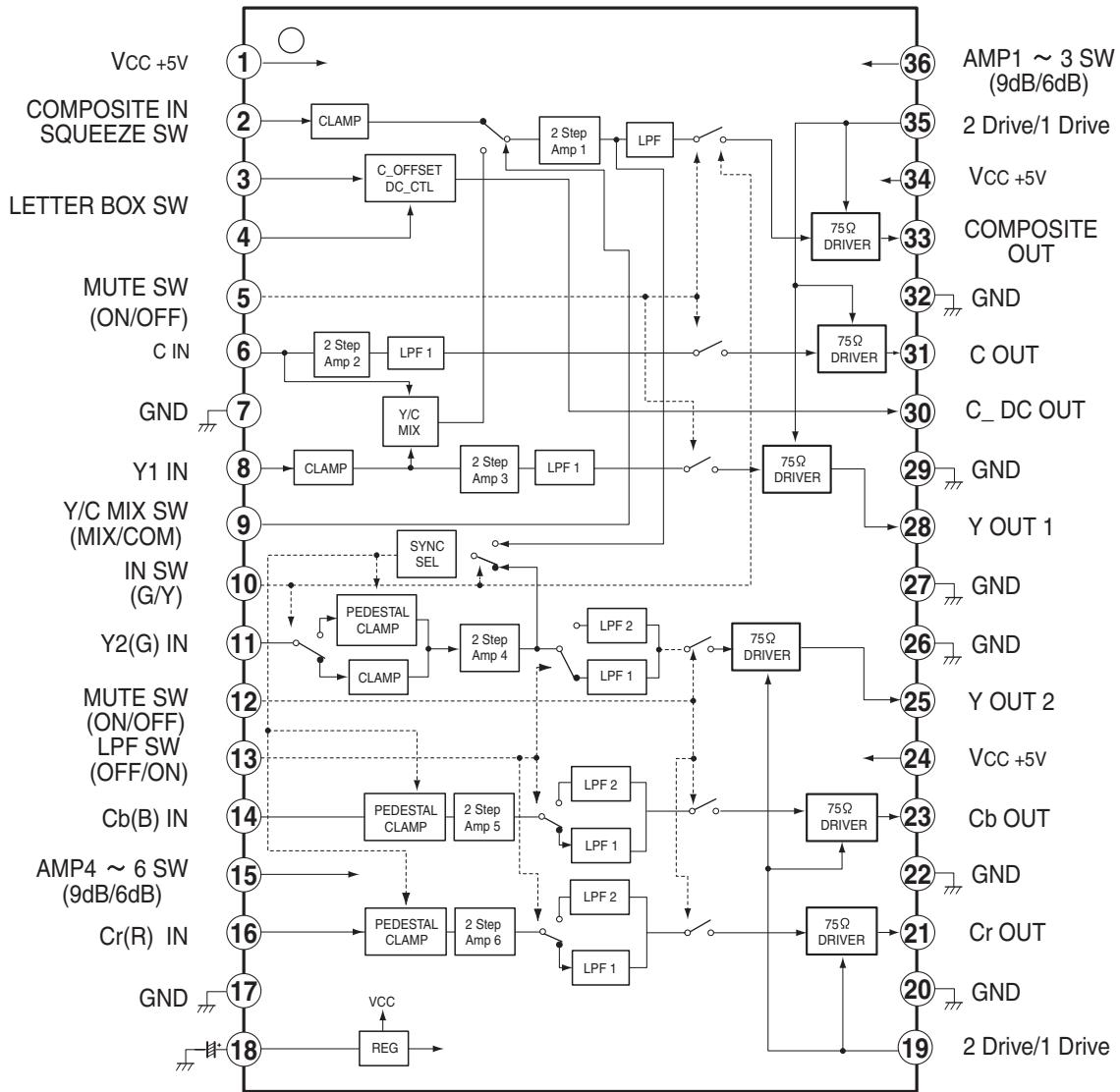
#### FUNCTIONAL BLOCK DIAGRAM



# IC BLOCK DIAGRAM/ TERMINAL DESCRIPTION

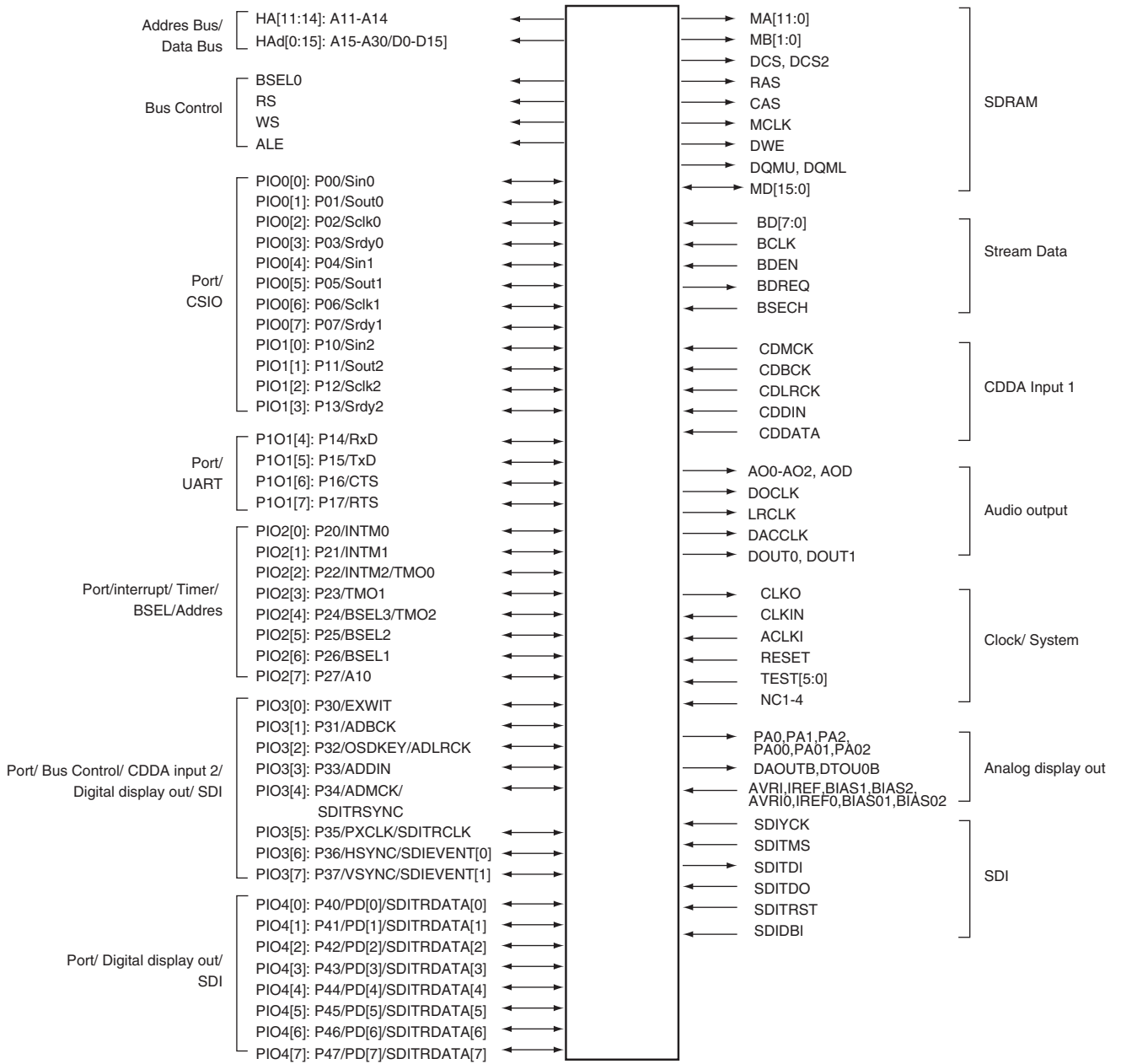
## Q201 : LA73054 6-CHANNEL VIDEO DRIVER

### Block Diagram



# IC BLOCK DIAGRAM/TERMINAL DESCRIPTION

## Q2001 : M65783AFP (BACKEND DECODER)-1



## IC BLOCK DIAGRAM/TERMINAL DESCRIPTION

### PORT ASSIGNMENT-1

Class	Port name	Function 1		Function 2		Function 3	
		I/O	Description	I/O	Description	I/O	Description
CPU outside Bus I/F	HA[11]	O	CPU Address				
	HA[12]	O	CPU Address				
	HA[13]	O	CPU Address				
	HA[14]	O	CPU Address				
	HA[0]	I/O	CPU Address/ Data				
	HAD[0]	I/O	CPU Address/ Data				
	HAD[1]	I/O	CPU Address/ Data				
	HAD[2]	I/O	CPU Address/ Data				
	HAD[3]	I/O	CPU Address/ Data				
	HAD[4]	I/O	CPU Address/ Data				
	HAD[5]	I/O	CPU Address/ Data				
	HAD[6]	I/O	CPU Address/ Data				
	HAD[7]	I/O	CPU Address/ Data				
	HAD[8]	I/O	CPU Address/ Data				
	HAD[9]	I/O	CPU Address/ Data				
	HAD[10]	I/O	CPU Address/ Data				
	HAD[11]	I/O	CPU Address/ Data				
	HAD[12]	I/O	CPU Address/ Data				
	HAD[13]	I/O	CPU Address/ Data				
	HAD[14]	I/O	CPU Address/ Data				
	HAD[15]	I/O	CPU Address/ Data				
	BSEL0	O	Block select 0				
	RS	O	Read Strobe				
	WS	O	Wright Strobe				
	ALE	O	Address Latch Enable				
	PI03[0]	I/O	Port 30	I	EXWIT		
CPU Circumference function	PI00[0]	I/O	Port 00	I	Sin0		
	PI00[1]	I/O	Port 01	O	Sout0		
	PI00[2]	I/O	Port 02	I/O	Sclk0		
	PI00[3]	I/O	Port 03	I/O	Srdy0		
	PI00[4]	I/O	Port 04	I	Sin1		
	PI00[5]	I/O	Port 05	O	Sout1		
	PI00[6]	I/O	Port 06	I/O	Sclk1		
	PI00[7]	I/O	Port 07	I/O	Srdy1		
	PI01[0]	I/O	Port 10	I	Sin2		
	PI01[1]	I/O	Port 11	O	Sout2		
	PI01[2]	I/O	Port 12	I/O	Sclk2		
	PI01[3]	I/O	Port 13	I/O	Srdy2		
	PI01[4]	I/O	Port 14	I	RxD		
	PI01[5]	I/O	Port 15	O	TxD		
	PI01[6]	I/O	Port 16	I	CTS		
	PI01[7]	I/O	Port 17	O	RTS		
	PI02[0]	I/O	Port 20	I	INTM0		
	PI02[1]	I/O	Port 21	I	INTM1		
	PI02[2]	I/O	Port 22	I	INTM2	O	TM00
	PI02[3]	I/O	Port 23			O	TM01
	PI02[4]	I/O	Port 24	O	BSEL3	O	TM02
	PI02[5]	I/O	Port 25	O	BSEL2		
	PI02[6]	I/O	Port 26	O	BSEL1		
	PI02[7]	I/O	Port 27	O	HA10		

## IC BLOCK DIAGRAM/TERMINAL DESCRIPTION

### PORT ASSIGNMENT-2

Class	Port name	Function 1		Function 2		Function 3	
		I/O	Description	I/O	Description	I/O	Description
	PI02[5] PI02[6] PI02[7]	I/O I/O I/O	Port 25 Port 26 Port 27	O O O	BSEL2 BSEL1 HA10		
CPU Circumference function/ Digital Video output/ CDDA input	PI03[1] PI03[2] PI03[3] PI03[4] PI03[5] PI03[6] PI03[7] PI04[0] PI04[1] PI04[2] PI04[3] PI04[4] PI04[5] PI04[6] PI04[7]	I/O I/O I/O I/O I/O I/O I/O I/O I/O I/O I/O I/O I/O I/O I/O	Port 31 Port 32 Port 33 Port 34 Port 35 Port 36 Port 37 Port 40 Port 41 Port 42 Port 43 Port 44 Port 45 Port 46 Port 47	O    O O  O  O O O O O O O O O O O	       OSDKEY   PXCLK HSYNC  VSYNC   PD[0] PD[1] PD[2] PD[3] PD[4] PD[5] PD[6] PD[7]	I I I I	ADBCK ADLRCK ADDIN ADMCK
CPU Debug	SDITCK SDITMS SDITDI SDITDO SDITRST SDIDBI	I I I O I I	SDI Clock input pin SDI Access mode input pin SDI Data input pin SDI Data output pin SDI Reset input pin SDI Interrupt Debugging				
CPU external Bus I/F	DAOUTB PA0 PA1 PA2 BIAS1 BIAS2 AVRI  IREF  DAOUT0B	AO AO AO AO AI AI AI  AI  AO	DAC Current output pin DAC signal output pin DAC signal output pin DAC signal output pin DAC Bias voltage (1) DAC Bias voltage (2) DAC Reference voltage input pin  DAC Reference voltage input pin  DAC Current output pin				
Video DAC	PA00 PA01 PA02 BIAS01 BIAS02  AVRI0  IREF0	AO AO AO AI AI  AI  AI	DAC signal output pin DAC signal output pin NC DAC Bias voltage (1) DAC Bias voltage (2)  DAC Reference voltage input pin  DAC Reference voltage input pin				

## IC BLOCK DIAGRAM/TERMINAL DESCRIPTION

### PORT ASSIGNMENT-3

Class	Port name	Function 1		Function 2		Function 3	
		I/O	Description	I/O	Description	I/O	Description
SDRAM I/F	DCS	O	SDRAM Chip select output pin				
	DCS2	O	SDRAM Chip select output pin				
	MCLK	O	SDRAM Clock output				
	RAS	O	SDARAM RAS output				
	CAS	O	SDARAM CAS output				
	DQML	O	SDARAM Data master				
	DQMU	O	SDARAM Data master				
	DWE	O	SDARAM Wright enable output				
	MBA[1]	O	SDRAM Bank Address				
	MD[0]	I/O	SDRAM Data input/ output				
	MD[1]	I/O	SDRAM Data input/ output				
	MD[2]	I/O	SDRAM Data input/ output				
	MD[3]	I/O	SDRAM Data input/ output				
	MD[4]	I/O	SDRAM Data input/ output				
	MD[5]	I/O	SDRAM Data input/ output				
	MD[6]	I/O	SDRAM Data input/ output				
	MD[7]	I/O	SDRAM Data input/ output				
	MD[8]	I/O	SDRAM Data input/ output				
	MD[9]	I/O	SDRAM Data input/ output				
	MD[10]	I/O	SDRAM Data input/ output				
MD[11]	I/O	SDRAM Data input/ output					
MD[12]	I/O	SDRAM Data input/ output					
MD[13]	I/O	SDRAM Data input/ output					
MD[14]	I/O	SDRAM Data input/ output					
MD[15]	I/O	SDRAM Data input/ output					
Stream I/F	BDREQ	O	Stream Request output pin				
	BDEN	I	Stream Enable input pin				
	BSECH	I	Sector display of head				
	BCLK	I	Stream data input pin				
	BD[0]	I	Stream data input pin				
	BD[1]	I	Stream data input pin				
	BD[2]	I	Stream data input pin				
	BD[3]	I	Stream data input pin				
	BD[4]	I	Stream data input pin				
	BD[5]	I	Stream data input pin				
	BD[6]	I	Stream data input pin				
BD[7]	I	Stream data input pin					
Audio I/F	CDNCK	I	CDDA Master clock input pin				
	CDBCK	I	CDDA Bit clock input pin				
	CDLRCK	I	CDDA L/R clock input pin				
	CDDIN	I	CDDA PCM data input pin				
	CDDATA	I	CDDA Digital data input pin				
	DACCLK	O	Clock output pin for DAC				
	DOCLK	O	Bit clock output pin for DAC				
	LRCLK	O	L/R clock output pin for DAC				
	AO0	O	Audio PCM output pin				
	AO1	O	Audio PCM output pin				
	AO2	O	Audio PCM output pin				
	AOD	O	Audio PCM output pin				
	DOUT0	O	Audio digital output pin				
	DOUT1	O	Audio digital output pin				



## IC BLOCK DIAGRAM/TERMINAL DESCRIPTION

### PORT ASSIGMENT-4

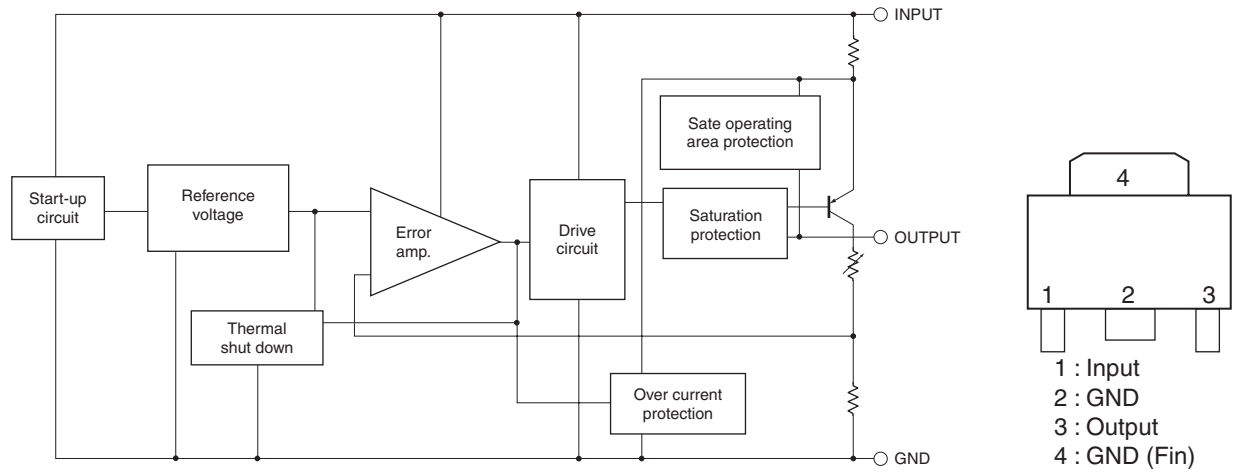
Class	Port name	Function 1		Function 2		Function 3	
		I/O	Description	I/O	Description	I/O	Description
System	ACLKI	I	Audio clock input pin				
	CLKIN	I	System clock input pin				
	CLK0	O	Clock output pin				
	RESET	I	Reset input pin				
	TEST[0]	I	Test mode input pin				
	TEST[1]	I	Test mode input pin				
	TEST[2]	I	Test mode input pin				
	TEST[3]	I	Test mode input pin				
	TEST[4]	I	Test mode input pin				
	TEST[5]	I	Test mode input pin				
	NC1	I	Test mode input pin				
	NC2	I	Test mode input pin				
	NC3	I	Test mode input pin				
	NC4	I	Test mode input pin				

## IC BLOCK DIAGRAM/ TERMINAL DESCRIPTION

Q2901, Q2904 : MPC29M33T REGURATOR IC 3.3 V output

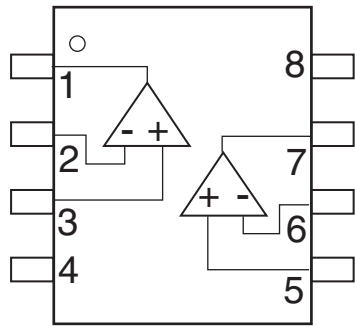
Q2902, Q2903 : MPC2918T REGURATOR IC 1.8 V output

### BLOCK DIAGRAM



## IC BLOCK DIAGRAM/ TERMINAL DESCRIPTION

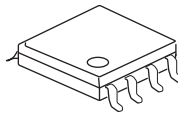
## Q1002: NJM2115V (2-ch Ope. amp.)



(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+

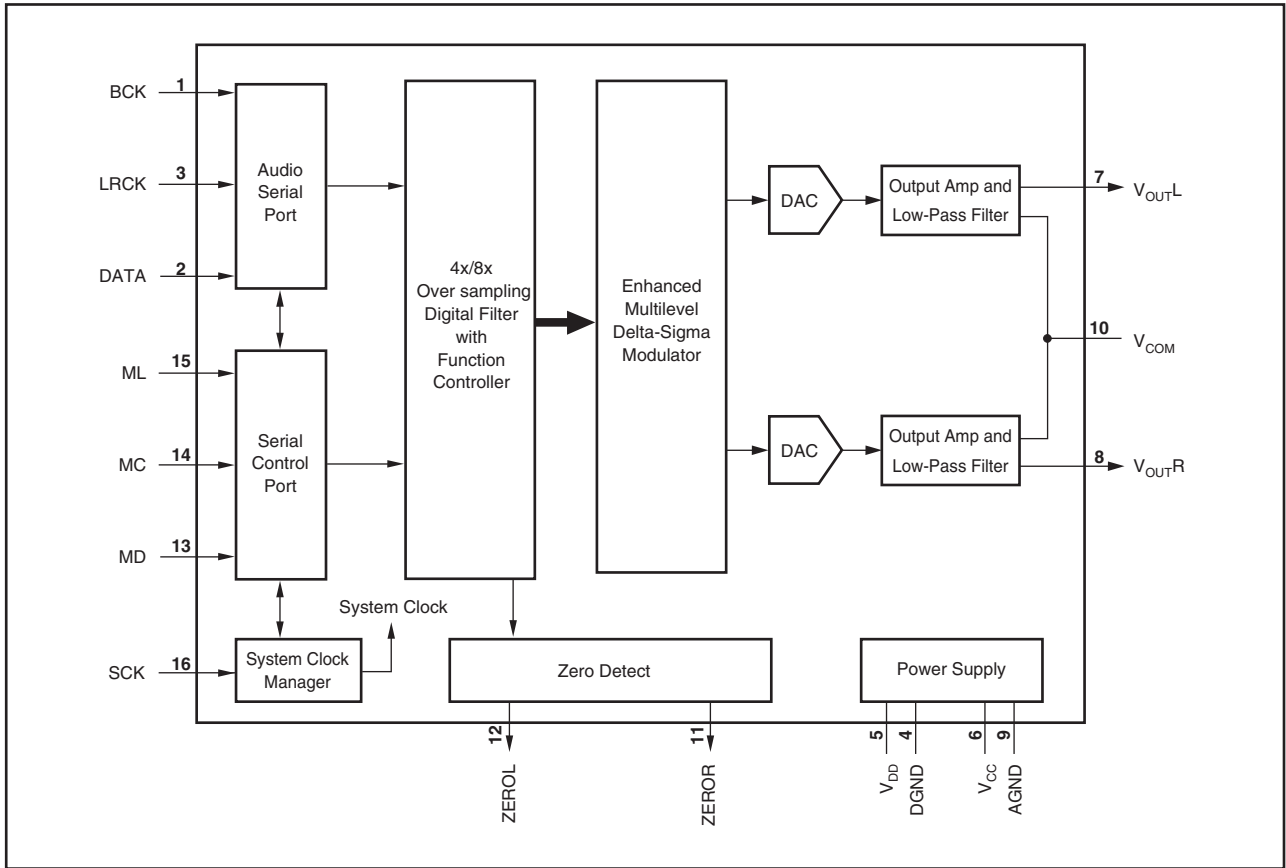


# IC BLOCK DIAGRAM/ TERMINAL DESCRIPTION

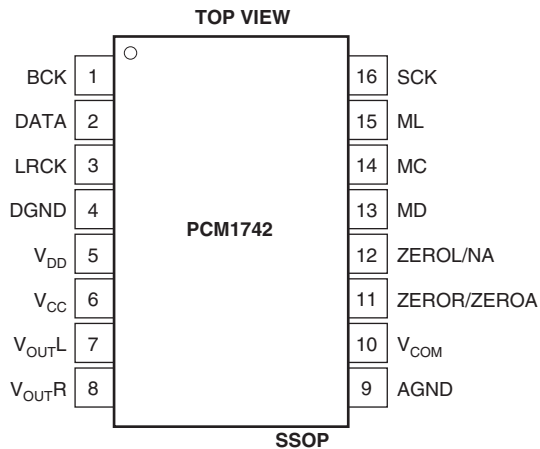
## Q401: PCM1742KE DIGITAL-TO-ANALOG CONVERTER

24-Bit, 192kHz Sampling  
Enhanced Multilevel, Delta-Sigma, Audio

### BLOCK DIAGRAM



### PIN CONFIGURATION



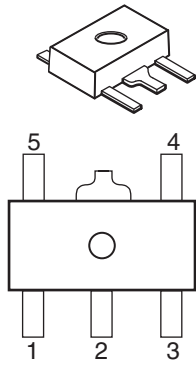
### PIN ASSIGNMENTS

PIN	NAME	TYPE	FUNCTION
1	BCK	IN	Audio Data Bit Clock Input. <sup>(1)</sup>
2	DATA	IN	Audio Data Digital Input. <sup>(1)</sup>
3	LRCK	IN	L-Channel and R-Channel Audio Data Latch Enable Input. <sup>(1)</sup>
4	DGND	-	Digital Ground
5	V <sub>DD</sub>	-	Digital Power Supply, +3.3V
6	V <sub>CC</sub>	-	Analog Power Supply, +5V
7	V <sub>OUTL</sub>	OUT	Analog Output for L-Channel.
8	V <sub>OUTR</sub>	OUT	Analog Output for R-Channel.
9	AGND	-	Analog Ground
10	V <sub>COM</sub>	-	Common Voltage Decoupling.
11	ZEROR/ ZEROA	OUT	Zero Flag Output for R-Channel/Zero Flag Output for L/R-Channel.
12	ZEROL/NA	OUT	Zero Flag Output for L-Channel/No Assign.
13	MD	IN	Mode Control Data Input. <sup>(2)</sup>
14	MC	IN	Mode Control Clock Input. <sup>(2)</sup>
15	ML	IN	Mode Control Latch Input. <sup>(2)</sup>
16	SCK	IN	System Clock Input.

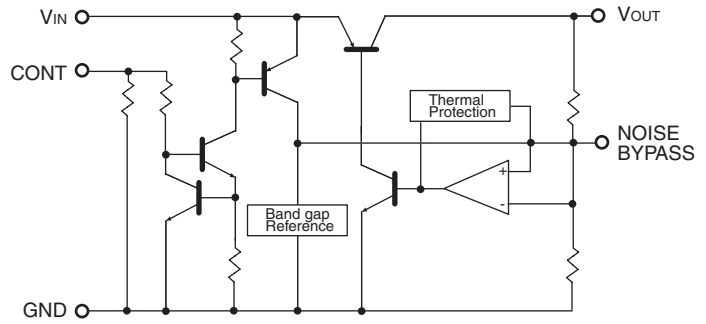
NOTES: (1) Schmitt-trigger input, 5V tolerant. (2) Schmitt-trigger with internal pull-down, 5V tolerant.

# IC BLOCK DIAGRAM/ TERMINAL DESCRIPTION

## Q413: NJM2370 (Regulated power supply)



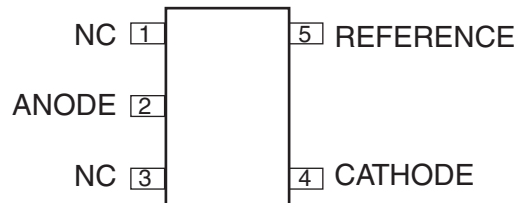
- PIN DESCRIPTION
- 1. Control
  - 2. GND
  - 3. Noise Bypass
  - 4. Vout
  - 5. Vin



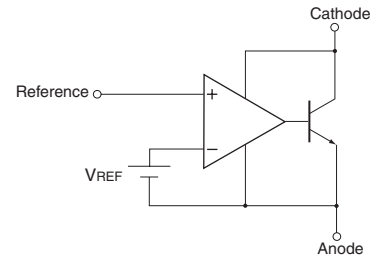
## IC BLOCK DIAGRAM/ TERMINAL DESCRIPTION

## Q2401: NJM2373AF (Adjustable High Precision Shunt Regulator)

Pin Configuration



Block Diagram

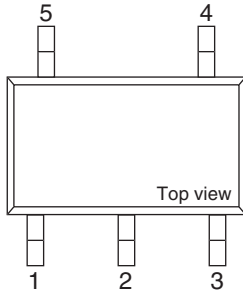


## IC BLOCK DIAGRAM/ TERMINAL DESCRIPTION

Q2002: S-80127CNMC-JKM VOLTAGE DETECTOR (12.7V N-ch open drain, Active L: out)

Q702: S-80130CLMC-JKM VOLTAGE DETECTOR (13.0V CMOS, Active L: out)

### PIN CONFIGURATION

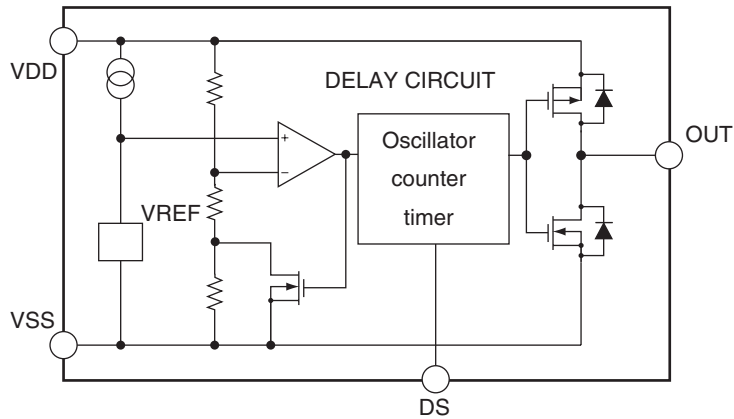


### PIN DESCRIPTION

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

\*1. NC pin is electrically open.

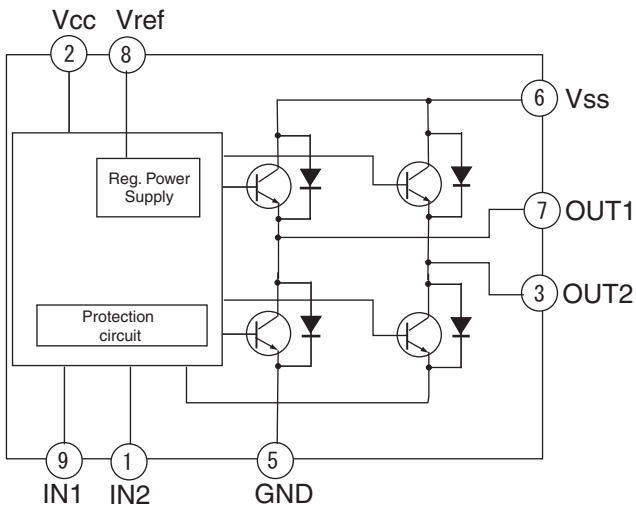
### BLOCK DIAGRAM



# IC BLOCK DIAGRAM/ TERMINAL DESCRIPTION

## Q704, Q705: TA7291S (MOTOR DRIVER)

### Block diagram



### Description

INPUT		OUTPUT		MODE
IN1	IN2	OUT1	OUT2	
0	0	∞	∞	STOP
1	0	H	L	CW/CCW
0	1	L	H	CCW/CW
1	1	L	L	BRAKE

CW : Clockwise direction  
 CCW : Counter clockwise direction

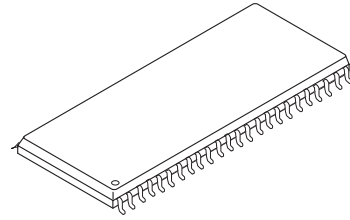


# IC BLOCK DIAGRAM/ TERMINAL DESCRIPTION

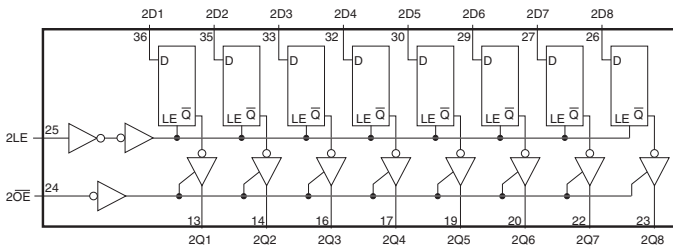
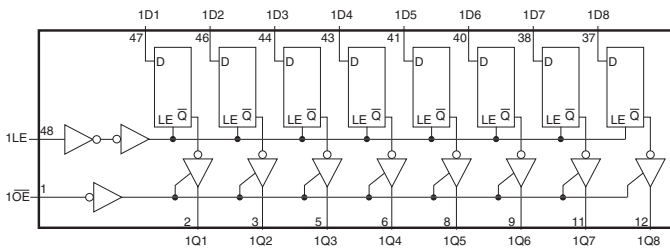
## Q2301: TC74VCX162373FT 16-BIT D-TYPE LATCH

### PIN ASSIGNMENT

1OE	1	48	1LE
1Q1	2	47	1D1
1Q2	3	46	1D2
GND	4	45	GND
1Q3	5	44	1D3
1Q4	6	43	1D4
VCC	7	42	VCC
1Q5	8	41	1D5
1Q6	9	40	1D6
GND	10	39	GND
1Q7	11	38	1D7
1Q8	12	37	1D8
2Q1	13	36	2D1
2Q2	14	35	2D2
GND	15	34	GND
2Q3	16	33	2D3
2Q4	17	32	2D4
VCC	18	31	VCC
2Q5	19	30	2D5
2Q6	20	29	2D6
GND	21	28	GND
2Q7	22	27	2D7
2Q8	23	26	2D8
2OE	24	25	2LE



### SYSTEM DIAGRAM



### Truth Table

Inputs			Outputs
1OE	1LE	1D1-1D8	1Q1-1Q8
H	X	X	Z
L	L	X	Qn
L	H	L	L
L	H	H	H

Inputs			Outputs
2OE	2LE	2D1-2D8	2Q1-2Q8
H	X	X	Z
L	L	X	Qn
L	H	L	L
L	H	H	H

X: Don't care

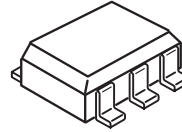
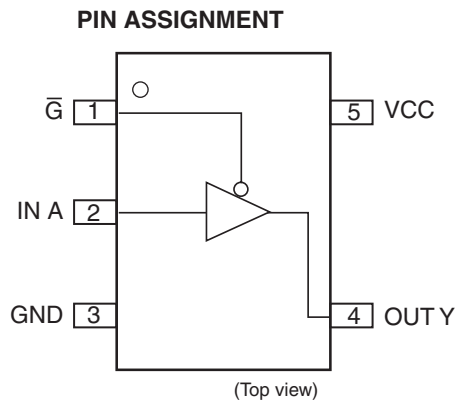
Z: High impedance

Qn: Q output are latched at the time

when the LE input is taken to a low logic level.

## IC BLOCK DIAGRAM/ TERMINAL DESCRIPTION

### Q2502: TC7SZ125FU (BUS BUFFER 3-STAGE OUTPUT)



**Truth table**

INPUT		OUTPUT
A	G	Y
X	H	Z
L	L	L
H	L	H

X: Don't care

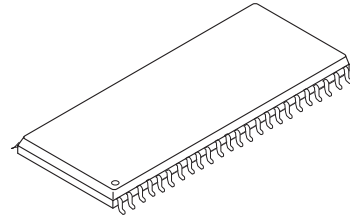
Z: High impedance

# IC BLOCK DIAGRAM/ TERMINAL DESCRIPTION

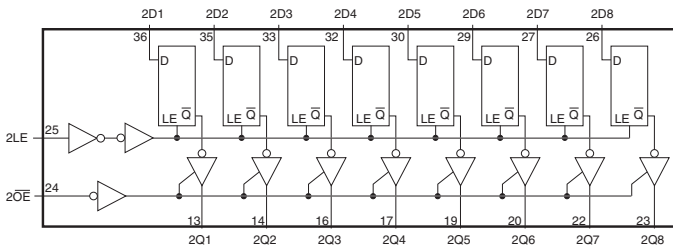
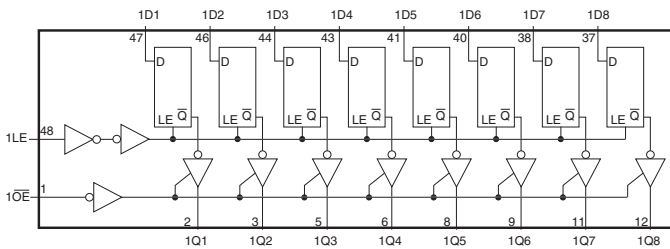
## Q2301: TC74VCX162373FT 16-BIT D-TYPE LATCH

### PIN ASSIGNMENT

1OE	1	48	1LE
1Q1	2	47	1D1
1Q2	3	46	1D2
GND	4	45	GND
1Q3	5	44	1D3
1Q4	6	43	1D4
VCC	7	42	VCC
1Q5	8	41	1D5
1Q6	9	40	1D6
GND	10	39	GND
1Q7	11	38	1D7
1Q8	12	37	1D8
2Q1	13	36	2D1
2Q2	14	35	2D2
GND	15	34	GND
2Q3	16	33	2D3
2Q4	17	32	2D4
VCC	18	31	VCC
2Q5	19	30	2D5
2Q6	20	29	2D6
GND	21	28	GND
2Q7	22	27	2D7
2Q8	23	26	2D8
2OE	24	25	2LE



### SYSTEM DIAGRAM



### Truth Table

Inputs			Outputs
1OE	1LE	1D1-1D8	1Q1-1Q8
H	X	X	Z
L	L	X	Qn
L	H	L	L
L	H	H	H

Inputs			Outputs
2OE	2LE	2D1-2D8	2Q1-2Q8
H	X	X	Z
L	L	X	Qn
L	H	L	L
L	H	H	H

X: Don't care

Z: High impedance

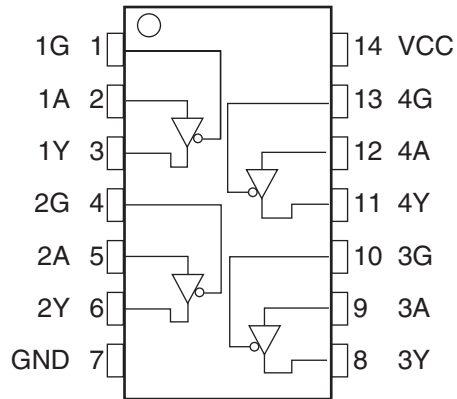
Qn: Q output are latched at the time

when the LE input is taken to a low logic level.

## IC BLOCK DIAGRAM/ TERMINAL DESCRIPTION

### Q2501: TC74VHCT125AF QUAD BUS BUFFER

#### Pin Assignment



#### Truth Table

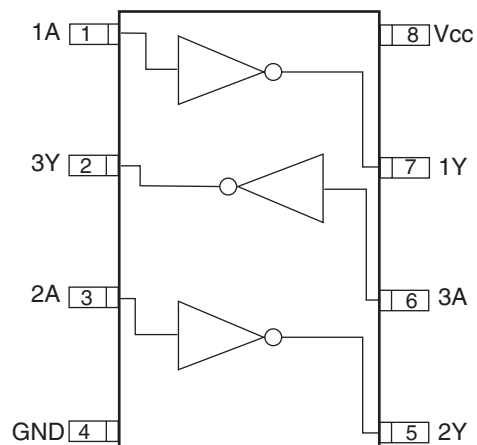
INPUTS		OUTPUTS
$\bar{G}$	A	Y
H	X	Z
L	L	L
L	H	H

X: Don't Care

Z: High Impedance

## IC BLOCK DIAGRAM/ TERMINAL DESCRIPTION

## Q481: TC7WU04FU (BUFFER)



Truth Table

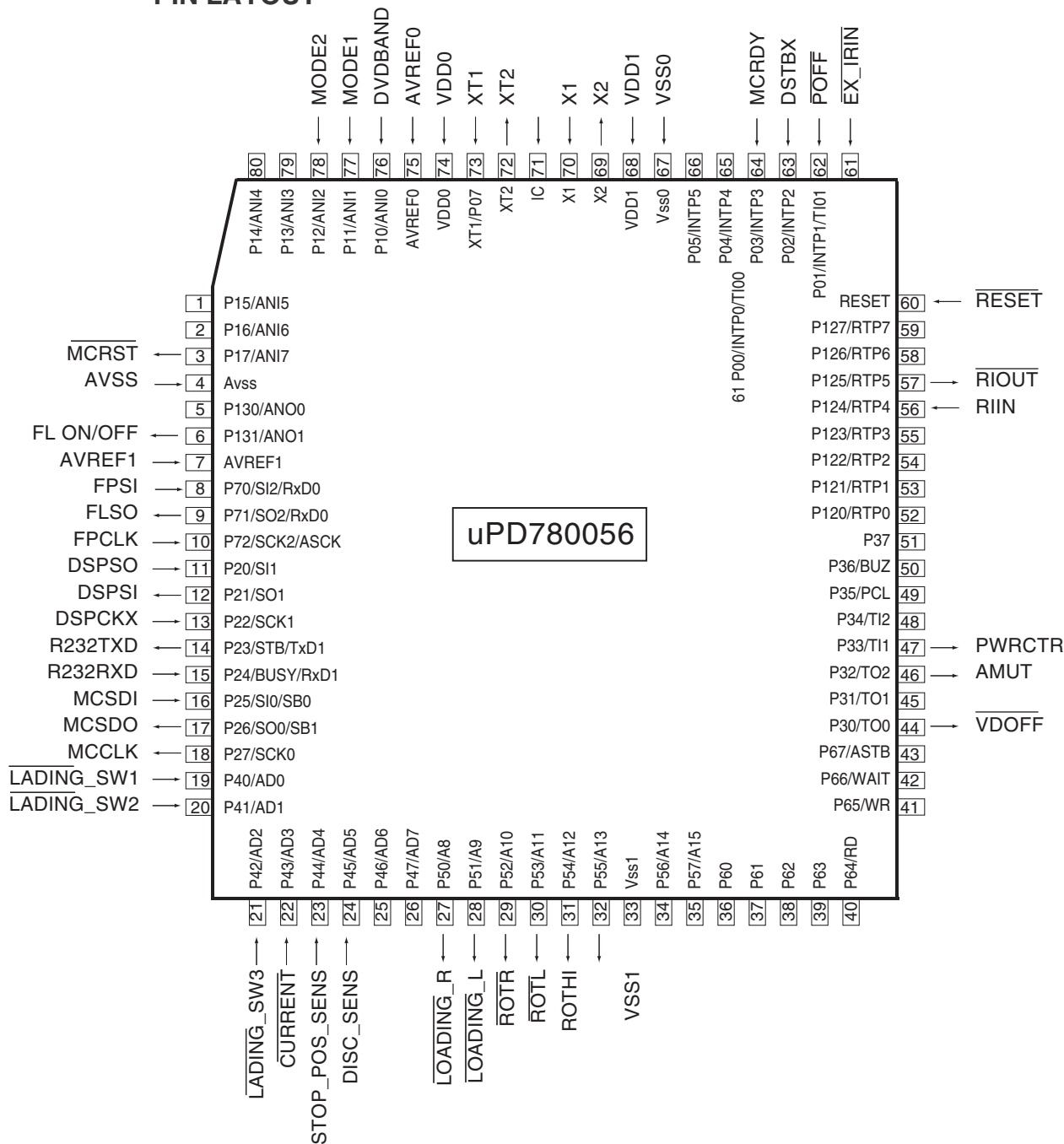
A	Y
L	H
H	L



# MICROPROCESSOR TERMINAL DESCRIPTION-1

## Q701: uPD780056

### PIN LAYOUT



## MICROPROCESSOR TERMINAL DESCRIPTION-2

PIN NO.	Sign	Functional name	I/O	Description
1	P15/ANI5			
2	P16/ANI6			
3	P17/ANI7	$\overline{\text{MCRST}}$	O	Reset output pin for sub microprocessor.
4	Avss	AVSS	I	To connect VSS.
5	P130/ANO0			
6	P131/ANO1	FL ON/OFF	O	Power ON/ OFF pin of FL tube.
7	AVREF1	AVREF1	I	Reference voltage input pin for D/A converter.
8	P70/SI2/RxD0	FPSI	I	Serial data input pin for Flash processor.
9	P71/SO2/RxD0	FLSO	O	Serial data output pin for Flash processor.
10	P72/SCK2/ASCK	FPCLK	I	Serial clock input pin for Flash processor.
11	P20/SI1	DSPSO	I	Serial communication port (SO).
12	P21/SO1	DSPSI	O	Serial communication port (SI).
13	P22/SCK1	DSPCKX	I	Serial communication port (CLK).
14	P23/STB/TxD1	R232TXD	O	TXD output pin. Serial data output pin at re-writing of the flash data.
15	P24/BUSY/RxD1	R232RXD	I	RXD input pin. Serial data input pin at re-writing of the flash data.
16	P25/SI0/SB0	MCSDI	I	Data input pin of sub microprocessor.
17	P26/SO0/SB1	MCSDO	O	Data output pin of sub microprocessor.
18	P27/SCK0	MCCLK	O	Serial clock output data pin.
19	P40/AD0	$\overline{\text{LADING\_SW1}}$	I	Detecting pin of loading switch-1.
20	P41/AD1	$\overline{\text{LADING\_SW2}}$	I	Detecting pin of loading switch-2.
21	P42/AD2	LADING_SW3	I	Detecting pin of loading switch-3.
22	P43/AD3	CURRENT	I	Detecting current pin of loading (tray) motor.
23	P44/AD4	STOP_POS_SENS	I	The input terminal of the detection sensor of a roulette stop position.
24	P45/AD5	DISC_SENS	I	Disk detection sensor input terminal.
25	P46/AD6			
26	P47/AD7			
27	P50/A8	$\overline{\text{LOADING\_R}}$	O	Loading tray motor control terminal. L= right-handed rotation
28	P51/A9	$\overline{\text{LOADING\_L}}$	O	Loading tray motor control terminal. L= left-handed rotation
29	P52/A10	$\overline{\text{ROTR}}$	O	Roulette motor control terminal. L= clockwise rotation.
30	P53/A11	$\overline{\text{ROTL}}$	O	Roulette motor control terminal. L= counterclockwise rotation.
31	P54/A12	ROTHI	O	Roulette motor speed control terminal.
32	P55/A13		O	
33	Vss1	VSS1	O	To connect to GND.
34	P56/A14			
35	P57/A15			
36	P60			Not used. To connect to GND
37	P61			Not used. To connect to GND
38	P62			Not used. To connect to GND
39	P63			Not used. To connect to GND



## MICROPROCESSOR TERMINAL DESCRIPTION-3

PIN NO.	Sign	Functional name	I/O	Description
40	P64/RD			Not used. To connect to GND
41	P65/WR			Not used. To connect to GND
42	P66/WAIT			Not used. To connect to GND
43	P67/ASTB			Not used. To connect to GND
44	P30/TO0	$\overline{\text{VDOFF}}$	O	Video off signal output pin.
45	P31/TO1			
46	P32/TO2	AMUT	O	Analog mute signal output pin.
47	P33/TI1	PWRCTR	O	Power control output pin. When power ON is "H".
48	P34/TI2			Not used. To connect to GND
49	P35/PCL			Not used. To connect to GND
50	P36/BUZ			Not used. To connect to GND
51	P37			Not used. To connect to GND
52	P120/RTP0			Not used. To connect to GND
53	P121/RTP1			Not used. To connect to GND
54	P122/RTP2			Not used. To connect to GND
55	P123/RTP3			Not used. To connect to GND
56	P124/RTP4	RIIN	I	RI system code data input pin.
57	P125/RTP5	RIOUT	O	RI system code data output pin.
58	P126/RTP6			Not used. To connect to GND
59	P127/RTP7			Not used. To connect to GND
60	RESET	$\overline{\text{RESET}}$	I	Reset pin of microprocessor.
61	P00/INTP0/TI00	$\overline{\text{EX\_IRIN}}$	I	Remote control signal input pin from multi room.
62	P01/INTP1/TI01	POFF	I	Power failure detection pin.
63	P02/INTP2	DSTBX	I	Serial data output pin (main STB signal).
64	P03/INTP3	MCRDY	I	Ready data detecting input pin of sub microprocessor.
65	P04/INTP4			Not used. To connect to GND
66	P05/INTP5			Not used. To connect to GND
67	Vss0	VSS0	I	To connect to GND
68	VDD1	VDD1	I	To connect to GND
69	X2	X2	O	The crystal (5MHz) connection terminal for a main system clock oscillation.
70	X1	X1	I	The crystal (5MHz) connection terminal for a main system clock oscillation.
71	IC		I	To connect to GND. Internal connection pin.
72	XT2	XT2	O	Not used. Use to clock oscillator connection for sub microprocessor.
73	XT1/P07	XT1	I	Not used. To connect to VDD
74	VDD0	VDD0	I	To connect to +5V (power supply).
75	AVREF0	AVREF0	I	The reference voltage input pin of a A/D converter.
76	P10/ANI0	DVDBAND	I	The destination judging terminal for DVD.
77	P11/ANI1	MODE1	I	Mode select input pin 1.
78	P12/ANI2	MODE2	I	Mode select input pin 2.
79	P13/ANI3			Not used. To connect to GND
80	P14/ANI4			Not used. To connect to GND

## UPDATE FIRMWARE-1

TV monitor

### 1 Check the version of firmware

1. Press the "STOP" key, while the set press the "DISPLAY" key in state of No DISC condition.
2. Press the "DISPLAY" key.  
Displayed on FL tube.
3. Press the "STANDBY" key and finish the FW check mode.



### 2 Writing the firmware in CD-R

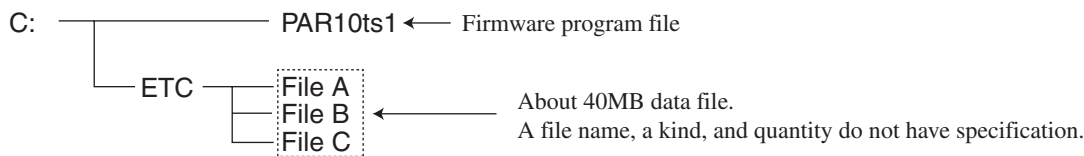
#### Prepare the required data file.

1. BANK30.ROM  
"BANK30.ROM" is the program file for firmware.
2. Dummy data file. (About 40MB)

NOTE: Every version and destination has same file name.

#### Make the file holder

Make the holder on the personal computer and make the required file the following tree structures.



NOTE: 1. Writing format is ISO9660 style.  
2. Finalize are single session.

### 3 Check operation of unit

Check that the compact disc can be play normally.  
If compact disc cannot be play normally, cannot do the update firmware.

### 4 Connect the display to the unit

To connect "VIDEO IN" terminal of TV and "VIDEO" terminal of the unit.

### 5 Update firmware

1. Press the "OPEN/CLOSE" button of the unit and tray is open.
2. Set the CD-R on disc-I bay.

FL Display

LOADING

It is displayed on TV as "WRITING." → "DONE"

After writing is completed, the tray opens automatically.

3. Disc is taken out.

After Tray has opened, the "DISPLAY" button is pushed and push the "STOP" button.  
Press "STANDBY/ON" button.

### 6 Check the version of firmware

Refer to item 1

## UPDATE FIRMWARE-2

### Exchange of DVD main board (NADG-7807)

#### 1 Update firmware

Check the version of present firmware.

DVD main board is not necessarily in the newest version.

#### 2 Setting the region code

##### [Preparation]

Remote controller: RC-484M Part No. 24140484

- ❶ Press the "DVD" key and "2" key of the remote controller.
- ❷ Press the "RETURN" key.
- ❸ Press the number key of region code.

**CDD1N type (U.S.A. model)**

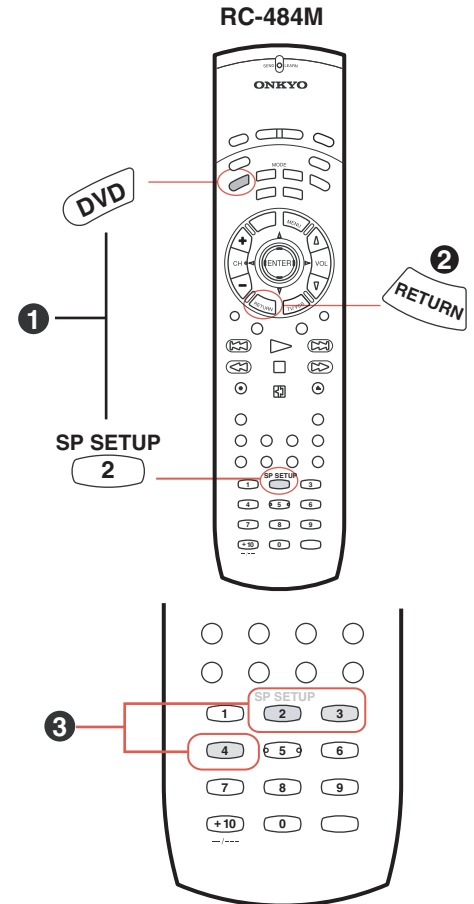
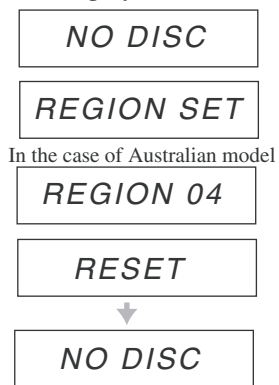
Region-1 Press the 1 key

**CPA4P type (Australian model)**

Region-4 Press the 4 key

Press the **STOP** button of unit.

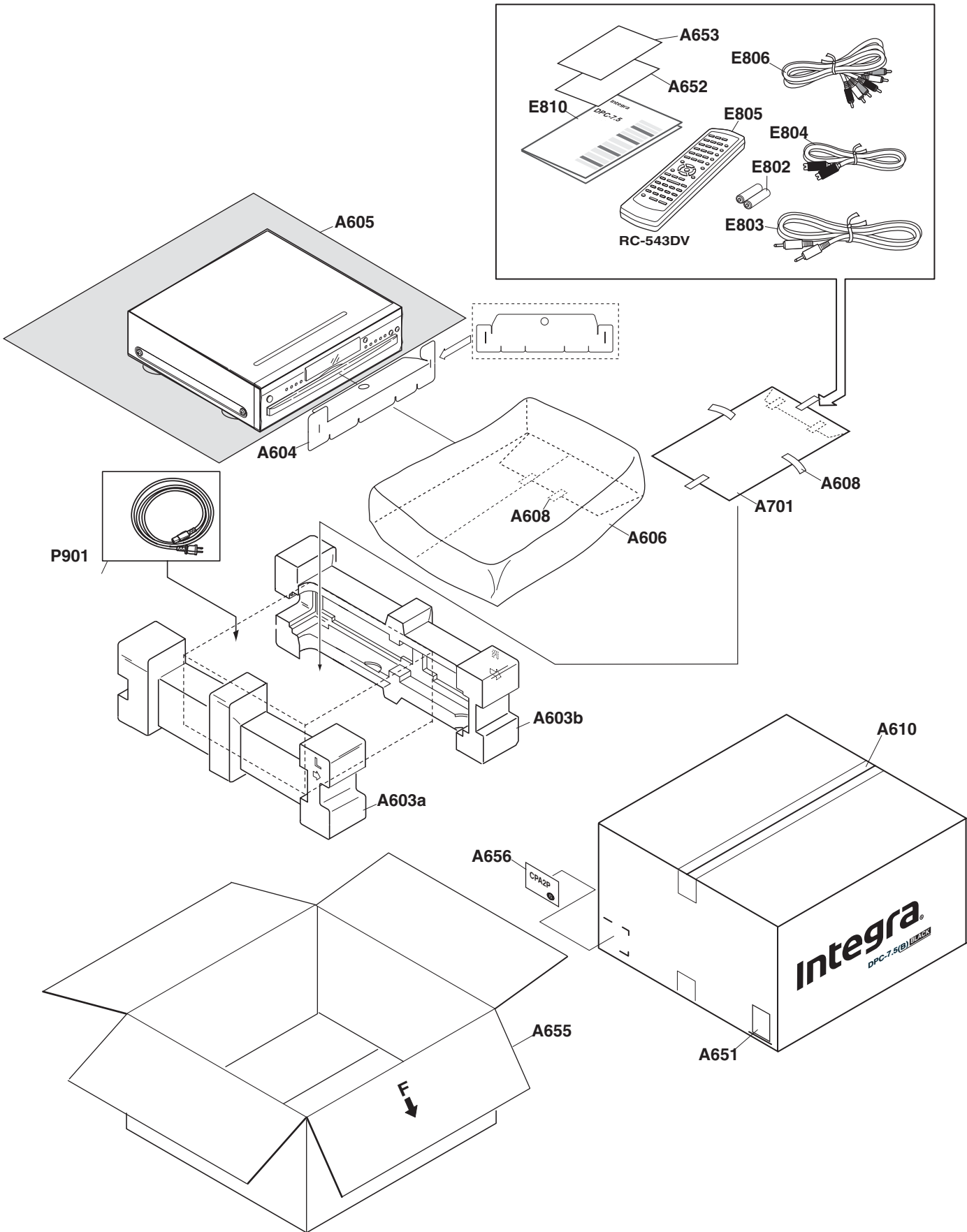
FL display



#### 3 Check the version of the firmware and region code

Refer to procedure **step 1**

PACKING VIEW



**PRINTED CIRCUIT BOARD PARTS LIST**

**DPC-7.5**

<b>U2</b>	Display circuit PC board assy	<b>PCB-Q0161C-MAIND</b>	<b>NADIS-7808</b>	<b>NSP</b>
(U3)	Front display PC board assy	<b>1H498508</b>	<b>NADIS-7808</b>	
(U4)	Mecha. Control PC board assy	<b>1H498509</b>	<b>NADG-7809</b>	
(U5)	Video output terminal PC board assy	<b>1H498510</b>	<b>NAVD-7810</b>	
(U6)	Audio output terminal PC board assy	<b>1H498511</b>	<b>NAAF-7811</b>	
(U7)	Standby switch PC board assy	<b>1H498514</b>	<b>NASW-7814</b>	
(U8)	LED Display PC board assy	<b>1H498515</b>	<b>NADIS-7815</b>	
(U9)	Inlet terminal PC board assy	<b>1H498520</b>	<b>NAETC-7820</b>	
(U10)	Component output PC board assy	<b>1H498506</b>	<b>NAETC-8006</b>	
(U11)	Key operation PC board assy	<b>1H498507</b>	<b>NASW-8007</b>	
(U12)	Disc sensor PC board assy	<b>1H498518</b>	<b>NAETC-7818</b>	
(U13)	Roulette motor PC board assy	<b>1H498516</b>	<b>NAETC-7816</b>	
(U14)	Loading motor PC board assy	<b>1H498517</b>	<b>NAETC-7817</b>	

REF. NO.	PART NAME	PART NO.	DESCRIPTION	REMARK
C201	C-CERA C	150D-104K-P-AC	CK725B1C-104K1	
C203	ELECT C	157D-106M-K-IUI	CE04W16V10M(SC)	
C205	ELECT C	157D-106M-K-IUI	CE04W16V10M(SC)	
C207	ELECT C	157D-106M-K-IUI	CE04W16V10M(SC)	
C209	ELECT C	157D-106M-K-IUI	CE04W16V10M(SC)	
C210	ELECT C	157B-107M-K-IUI	CE04W6.3V100M(SC)	
C211	ELECT C	157B-107M-K-IUI	CE04W6.3V100M(SC)	
C212	ELECT C	157B-108M-K-OVI	CE04W6.3V1000M(SC)	
C213	ELECT C	157B-477M-K-LUI	CE04W6.3V470M(SC)	
C214	ELECT C	157B-108M-K-OVI	CE04W6.3V1000M(SC)	
C215	ELECT C	157B-477M-K-LUI	CE04W6.3V470M(SC)	
C216	ELECT C	157B-477M-K-LUI	CE04W6.3V470M(SC)	
C217	C-CERA C	150D-104K-P-AC	CK725B1C-104K1	
C221	ELECT C	157B-108M-K-OVI	CE04W6.3V1000M(SC)	
C222	C-CERA C	150D-104K-P-AC	CK725B1C-104K1	
C223	ELECT C	157B-477M-5-LUI	CE04W6.3V470M(SC)	
C224	ELECT C	157B-108M-K-OVI	CE04W6.3V1000M(SC)	
C225	ELECT C	157B-477M-K-LUI	CE04W6.3V470M(SC)	
C226	ELECT C	157B-477M-K-LUI	CE04W6.3V470M(SC)	
C231	C-CERA C	15CH-152J-P-AC	CC725CH1H-152J1	
C301	ELECT C	157F-105M-K-IUI	CE04W50V1.0M(SC)	
C302	ELECT C	157F-105M-K-IUI	CE04W50V1.0M(SC)	
C303	C-CERA C	150F-104K-P-AC	CK725F1E-104Z1	
C304	ELECT C	157B-107M-K-IUI	CE04W6.3V100M(SC)	
C305	ELECT C	157F-105M-K-IUI	CE04W50V1.0M(SC)	
C306	ELECT C	157F-105M-K-IUI	CE04W50V1.0M(SC)	
C401	ELECT C	157D-107M-K-IUI	CE04W16V100M(SC)	
C402	ELECT C	157D-107M-K-IUI	CE04W16V100M(SC)	
C405	ELECT C	157B-227M-K-IUI	CE04W6.3V220M(SC)	
C406	ELECT C	157B-108M-K-OVI	CE04W6.3V1000M(SC)	
C407	TF C	153F-104J-K-MMN	ECQ-V50V-104J	
C408	TF C	153F-104J-K-MMN	ECQ-V50V-104J	
C409	ELECT C	157B-227M-K-IUI	CE04W6.3V220M(SC)	
C410	TF C	153F-104J-K-MMN	ECQ-V50V-104J	
C411	ELECT C	157D-226M-K-IUI	CE04W16V22M(SC)	
C412	ELECT C	157D-226M-K-IUI	CE04W16V22M(SC)	
C413	TF C	153F-221K-K-MMN	ECQ-B50V-221K	
C414	TF C	153F-221K-K-MMN	ECQ-B50V-221K	
C415	TF C	153F-221K-K-MMN	ECQ-B50V-122J	
C416	TF C	153F-221K-K-MMN	ECQ-B50V-122J	
C417	TF C	153F-272J-K-MMN	ECQ-B50V-272J	
C418	TF C	153F-272J-K-MMN	ECQ-B50V-272J	
C419	ELECT C	157F-226M-K-IUI	CE04W50V22M(SC)	
C420	ELECT C	157F-226M-K-IUI	CE04W50V22M(SC)	
C421	ELECT C	157D-108M-K-S5I	CE04W16V1000M(SC)	

C422	ELECT C	157D-108M-K-S5I	CE04W16V1000M(SC)	
C423	ELECT C	157F-105M-K-IUI	CE04W50V1.0M(SC)	
C424	C-CERA C	150F-223Z-P-AC	CK725F1H-223Z1	
C425	ELECT C	157B-227M-K-IUI	CE04W6.3V220M(SC)	
C426	C-CERA C	150D-104K-P-AC	CK725B1C-104K1	
C427	C-CERA C	150D-104K-P-AC	CK725B1C-104K1	
C428	C-CERA C	15CH-020C-P-AC	CC725CH1H-020C1	
C429	C-CERA C	15CH-020C-P-AC	CC725CH1H-020C1	
C430	C-CERA C	150D-104K-P-AC	CK725B1C-104K1	
C431	C-CERA C	15CH-220J-P-AC	CC725CH1H-220J1	
C432	ELECT C	157B-107M-K-IUI	CE04W6.3V100M(SC)	
C433	C-CERA C	150D-104K-P-AC	CK725B1C-104K1	
C434	ELECT C	157D-106M-K-IUI	CE04W16V10M(SC)	
C435	ELECT C	157D-106M-K-IUI	CE04W16V10M(SC)	
C436	C-CERA C	150F-104K-P-AC	CK725F1E-104Z1	
C437	C-CERA C	15CH-330J-P-AC	CC725CH1H-330J1	
C438	C-CERA C	15CH-330J-P-AC	CC725CH1H-330J1	
C439	TF C	153F-102J-K-MMN	ECQ-B50V-102J	
C440	TF C	153F-102J-K-MMN	ECQ-B50V-102J	
C441	ELECT C	157D-476M-K-IUI	CE04W16V47M(SC)	
C442	ELECT C	157F-105M-K-IUI	CE04W50V1.0M(SC)	
C601	ELECT C	157B-107M-K-IUI	CE04W6.3V100M(SC)	
C602	TF C	153F-223J-K-MMN	ECQ-B50V-223J	
C603	C-CERA C	150F-104K-P-AC	CK725F1E-104Z1	
C604	C-CERA C	150F-104K-P-AC	CK725F1E-104Z1	
C703	ELECT C	157D-107M-K-LII	CE04W16V100M(SSK)	
C704	ELECT C	157D-107M-K-LII	CE04W16V100M(SSK)	
C705	C-CERA C	150F-223Z-P-AC	CK725F1H-223Z1	
C706	C-CERA C	150F-223Z-P-AC	CK725F1H-223Z1	
C707	C-CERA C	150F-223Z-P-AC	CK725F1H-223Z1	
C711	ELECT C	157D-106M-K-GII	CE04W16V10M(SSK)	
C712	C-CERA C	150F-104K-P-AC	CK725F1E-104Z1	
C713	ELECT C	157D-106M-K-GII	CE04W16V10M(SSK)	
C714	C-CERA C	150F-104K-P-AC	CK725F1E-104Z1	
C715	ELECT C	157D-106M-K-GII	CE04W16V10M(SSK)	
C716	C-CERA C	150F-104K-P-AC	CK725F1E-104Z1	
C717	ELECT C	157D-106M-K-GII	CE04W16V10M(SSK)	
C718	C-CERA C	150F-104K-P-AC	CK725F1E-104Z1	
C719	ELECT C	157D-106M-K-GII	CE04W16V10M(SSK)	
C720	C-CERA C	150F-104K-P-AC	CK725F1E-104Z1	
C721	ELECT C	157D-106M-K-GII	CE04W16V10M(SSK)	
C722	C-CERA C	150F-104K-P-AC	CK725F1E-104Z1	
C728	C-CERA C	150F-104K-P-AC	CK725F1E-104Z1	
C729	ELECT C	157B-107M-K-LII	CE04W6.3V100M(SSK)	
C731	ELECT C	157F-105M-5-GII	CE04W50V1M(SSK)	
C732	C-CERA C	150F-104K-P-AC	CK725F1E-104Z1	
C733	C-CERA C	15CH-102J-P-AC	CC725CH1H-102J1	
C761	C-CERA C	150F-223Z-P-AC	CK725F1H-223Z1	
C762	C-CERA C	150F-104K-P-AC	CK725F1E-104Z1	
C764	C-CERA C	150F-223Z-P-AC	CK725F1H-223Z1	
C765	C-CERA C	150F-104K-P-AC	CK725F1E-104Z1	
C766	C-CERA C	150F-104K-P-AC	CK725F1E-104Z1	
C767	ELECT C	157D-107M-K-LII	CE04W16V100M(SSK)	
C768	ELECT C	157B-107M-K-LII	CE04W6.3V100M(SSK)	
C801	ELECT C	157D-106M-K-IUI	CE04W16V10M(SC)	
C802	C-CERA C	150F-104K-P-AC	CK725F1E-104Z1	
C803	C-CERA C	150F-104K-P-AC	CK725F1E-104Z1	
C804	ELECT C	157B-107M-K-IUI	CE04W6.3V100M(SC)	
C808	C-CERA C	150F-104K-P-AC	CK725F1E-104Z1	
C813	C-CERA C	150F-223Z-P-AC	CK725F1H-223Z1	
C815	C-CERA C	15CH-330J-P-AC	CC725CH1H-330J1	
C816	C-CERA C	15CH-330J-P-AC	CC725CH1H-330J1	
C817	C-CERA C	15CH-330J-P-AC	CC725CH1H-330J1	

C818	C-CERA C	15CH-330J-P-AC	CC725CH1H-330J1	
C819	C-CERA C	15CH-330J-P-AC	CC725CH1H-330J1	
C820	ELECT C	157F-225M-K-IUI	CE04W50V2.2M(SC)	
C827	CERA C	150F-223Z-K-RE	CK45F50V-223Z	
C828	CERA C	150F-223Z-K-RE	CK45F50V-223Z	
C829	CERA C	150F-223Z-K-RE	CK45F50V-223Z	
D101	C-DIODE	4840-1660-0	1SS355	
D101 or	C-DIODE	480S-3520-3	1SS352	
D102	C-DIODE	4840-1660-0	1SS355	
D102 or	C-DIODE	480S-3520-3	1SS352	
D103	C-DIODE	4840-1660-0	1SS355	
D103 or	C-DIODE	480S-3520-3	1SS352	
D104	C-DIODE	4840-1660-0	1SS355	
D104 or	C-DIODE	480S-3520-3	1SS352	
D401	C-DIODE	4840-1660-0	1SS355	
D401 or	C-DIODE	480S-3520-3	1SS352	
D701	ZENER D	483H-2V71-3	UDZ2.7B	
D702	ZENER D	483H-2V21-3	UDZ2.2B	
D703	ZENER D	483H-4V31-3	UDZS4.3B	
D731	C-DIODE	4840-1660-0	1SS355	
D731 or	C-DIODE	480S-3520-3	1SS352	
D732	ZENER D	483H-5V11-3	UDZS5.1B	
D733	C-DIODE	4840-1660-0	1SS355	
D733 or	C-DIODE	480S-3520-3	1SS352	
D734	C-DIODE	4840-1660-0	1SS355	
D734 or	C-DIODE	480S-3520-3	1SS352	
D801	LED	3700-2824-B	SLR-343BBT-XG	
D801 or	LED	3700-2835-B	SLR-343BBT-XH	
D801A	HOLDER	4171-0021-0	(LED)LA-5-6	
D802	LED	3700-2824-B	SLR-343BBT-XG	
D802 or	LED	3700-2835-B	SLR-343BBT-XH	
D802A	HOLDER	4171-0021-0	(LED)LA-5-6	
D803	LED	3700-2531-R	SLR-342VR	
E201	WS CLAMP	6360-9650-0	CP-1S	
L201	EMIFIL	1806-3647-0	BK1608LM182-T	
L221	CHOKE COIL	1803-0080-0	NCH-1482	
L301	EMIFIL	1806-3647-0	BK1608LM182-T	
L302	EMIFIL	1806-3647-0	BK1608LM182-T	
L303	EMIFIL	1806-3647-0	BK1608LM182-T	
L304	EMIFIL	1806-3647-0	BK1608LM182-T	
L403	CHOKE COIL	1803-0064-0	NCH-1471	
L404	CHOKE COIL	1803-0064-0	NCH-1471	
L405	EMIFIL	1806-3647-0	BK1608LM182-T	
L406	CHOKE COIL	1803-0064-0	NCH-1471	
L407	EMIFIL	1806-3647-0	BK1608LM182-T	
L601	CHOKE COIL	1803-0082-0	NCH-1571	
L701	CHOKE COIL	1803-0075-0	NCH-3608K470	
L702	CHOKE COIL	1803-0075-0	NCH-3608K470	
P2001A	SOCKET	2101-1440-0	NSCT-14P2405	
P2001A or	SOCKET	2101-1542-0	NSCT-14P2211	
P201	PIN JACK	2113-3042-0	NPJ-3PDRLG529	
P202B	PIN JACK	2113-2039-0	NPJ-10PDBY459	
P203	BNC JACK	2113-3041-0	YKC31-0157	
P204	PLUG	2101-1425-0	NPLG-5P425	
P204A	SOCKET AS	7012-6547-0	NSAS-10P1119	
P2401A	SOCKET	2101-1441-0	NSCT-15P2433	
P2401A or	SOCKET	2101-1543-0	NSCT-15P2249	
P2501B	PLUG	2101-3005-0	2003P0700T	
P2901B	PLUG	2101-3006-0	2003P0600T	
P301	SOCKET	2101-1492-0	NSCT-9P2277	
P401	PIN JACK	2113-3040-0	NPJ-4PDRW469	
P402	PIN JACK	2113-2037-0	NPJ-1PDOR403	
P403	PLUG	2101-1416-0	NPLG-2P116	

P403A	SOCKET AS	7012-6597-0	NSAS-4P1171	
P601	ST JACK	2113-2038-0	HSJ1002-01-1020	
P602	PIN JACK	2113-2022-0	NPJ-2PDB400	
P701A	SOCKET AS	7012-6599-0	NSAS-12P1153	
P701B	PLUG	2101-1493-0	NPLG-6P944	
P702A	PLUG	2101-1418-0	NPLG-11P431	
P702B	PLUG	2101-1418-0	NPLG-11P431	
P704	PLUG	2101-1418-0	NPLG-11P431	
P704A	SOCKET AS	7012-6542-0	NSAS-22P1126	
P704B	SOCKET AS	7012-6601-0	NSAS-22P1182	
P704C	PLUG	2101-1418-0	NPLG-11P431	
P707A	SOCKET	2101-1421-0	NSCT-6P2099	
P707A or	SOCKET	2101-1538-0	NSCT-6P1600	
P707A or	SOCKET	2101-1540-0	NSCT-6P1802	
P707B	SOCKET	2101-1422-0	NSCT-6P2136	
P707B or	SOCKET	2101-1541-0	NSCT-6P1839	
P707B or	SOCKET	2101-1539-0	NSCT-6P1637	
P708A	PLUG	2101-1451-0	NPLG-2P940	
P708B	SOCKET AS	7012-6554-0	NSAS-4P1138	
P709A	PLUG	2101-1424-0	NPLG-2P422	
P709B	SOCKET AS	7012-6545-0	NSAS-4P1127	
P710A	SOCKET AS	7012-6550-0	001-0488-H	
P711	PLUG	2101-1424-0	NPLG-2P422	
P711A	SOCKET AS	7012-6600-0	NSAS-4P1183	
P804A	PLUG	2101-1425-0	NPLG-5P425	
P804C	SOCKET AS	7012-6547-0	NSAS-10P1119	
P805A	PLUG	2101-1426-0	NPLG-4P424	
P805B	SOCKET AS	7012-6548-0	NSAS-8P1120	
P806C	SOCKET AS	7012-6552-0	NSAS-6P1137	
P901A	AC INLET	2113-3043-0	NPLG-2P913	
P902A	SOCKET AS	7012-6598-0	NSAS-4P1181	
Q109	TR	485A-1140-3	DTA114YKA	
Q109 or	TR	4852-4070-3	RN2407	
Q109 or	TR	4860-3440-3	KRA107S	
Q110	TR	485C-1140-3	DTC114YKA	
Q110 or	TR	4851-4070-3	RN1407	
Q110 or	TR	4851-07S0-3	KRC107S	
Q201	IC	3131-8760-0	LA73054	
Q202	TR	485C-1140-3	DTC114YKA	
Q202 or	TR	4851-4070-3	RN1407	
Q202 or	TR	4851-07S0-3	KRC107S	
Q203	TR	485A-1140-3	DTA114YKA	
Q203 or	TR	4852-4070-3	RN2407	
Q203 or	TR	4860-3440-3	KRA107S	
Q301	IC	3132-0630-0	MPD4721GS	
Q401	IC	3132-0180-0	PCM1742KE	
Q403	IC	3131-9970-0	NJM4580M-D	
Q404	IC	3131-9970-0	NJM4580M-D	
Q405	IC	3131-9970-0	NJM4580M-D	
Q406	IC	3131-9970-0	NJM4580M-D	
Q407	TR	485C-03FB-3	HN1C03F-B	
Q408	TR	485C-03FB-3	HN1C03F-B	
Q411	IC	3131-9960-0	TC74VHCU04FT	
Q412	PHT CP	481T-X179-3	TOTX179	
Q413	IC	3132-0270-0	NJM2370U05	
Q415	TR	485C-1140-3	DTC114YKA	
Q415 or	TR	4851-4070-3	RN1407	
Q415 or	TR	4851-07S0-3	KRC107S	
Q416	TR	485C-1140-3	DTC114YKA	
Q416 or	TR	4851-4070-3	RN1407	
Q416 or	TR	4851-07S0-3	KRC107S	
Q417	TR	485A-1140-3	DTA114YKA	
Q417 or	TR	4852-4070-3	RN2407	



Q417 or	TR	4860-3440-3	KRA107S	
Q418	TR	485A-1140-3	DTA114YKA	
Q418 or	TR	4852-4070-3	RN2407	
Q418 or	TR	4860-3440-3	KRA107S	
Q419	TR	485C-1140-3	DTC114YKA	
Q419 or	TR	4851-4070-3	RN1407	
Q419 or	TR	4851-07S0-3	KRC107S	
Q601	PHT CP	481N-3131-3	ON3131	
Q602	TR	4860-1350-3	DTC114EKA	
Q602 or	TR	4851-02S0-3	KRC102S	
Q603	TR	4860-1350-3	DTC114EKA	
Q603 or	TR	4860-1350-3	RN1402	
Q603 or	TR	4851-02S0-3	KRC102S	
Q701	IC	3132-0190-1	MPD780053GC-141-8BT	
Q702	IC	3132-0200-0	S-80130CLMC-JIP-T2	
Q703	TR	485A-1140-3	DTA114YKA	
Q703 or	TR	4852-4070-3	RN2407	
Q703 or	TR	4860-3440-3	KRA107S	
Q704	IC	3131-7990-0	TA7291S	
Q705	IC	3131-7990-0	TA7291S	
Q706	TR	485C-1140-3	DTC114YKA	
Q706 or	TR	4851-4070-3	RN1407	
Q706 or	TR	4851-07S0-3	KRC107S	
Q707	TR	4851-1620-3	2SA1162-O	
Q709	TR	485C-1140-3	DTC114YKA	
Q709 or	TR	4851-4070-3	RN1407	
Q709 or	TR	4851-07S0-3	KRC107S	
Q710	TR	4852-712G-3	2SC2712-GR	
Q711	TR	4852-712G-3	2SC2712-GR	
Q712	TR	485C-1140-3	DTC114YKA	
Q712 or	TR	4851-4070-3	RN1407	
Q712 or	TR	4851-07S0-3	KRC107S	
Q713	TR	485D-655E-K	2SD655-E	
Q714	TR	485D-655E-K	2SD655-E	
Q715	TR	485A-1140-3	DTA114YKA	
Q715 or	TR	4852-4070-3	RN2407	
Q715 or	TR	4860-3440-3	KRA107S	
Q716	PHT INT	481P-2S28-3	GP2S28	
Q717	PHT CP	481P-I576-3	RPI-576	
Q801	IC	3131-9950-0	MPD780232GC-070-8BT	
Q802	FL TUBE	2460-2020-0	HNV-12SM34	
Q802A	HOLDER	4154-6111-0	(FL)	
Q802B	SCREW	2954-3006-3000	3TTB+6B(BC)	
Q805	TR	485C-1140-3	DTC114YKA	
Q805 or	TR	4851-4070-3	RN1407	
Q805 or	TR	4851-07S0-3	KRC107S	
Q806	TR	4852-712G-3	2SC2712-GR	
Q808	REMO SENS	481M-7138-3	RPM7138	
Q809	TR	485C-1140-3	DTC114YKA	
Q809 or	TR	4851-4070-3	RN1407	
Q809 or	TR	4851-07S0-3	KRC107S	
Q810	TR	485C-1140-3	DTC114YKA	
Q810 or	TR	4851-4070-3	RN1407	
Q810 or	TR	4851-07S0-3	KRC107S	
R129	C-CARBON R	4723-223J-P-R	RN72K1J-223JE	
R2001	C-CARBON R	4723-000J-P-R	RN72K1J-000JE	
R2002	C-CARBON R	4723-000J-P-R	RN72K1J-000JE	
R2003	C-CARBON R	4723-000J-P-R	RN72K1J-000JE	
R2004	C-CARBON R	4723-000J-P-R	RN72K1J-000JE	
R2005	C-CARBON R	4723-000J-P-R	RN72K1J-000JE	
R2006	C-CARBON R	4723-000J-P-R	RN72K1J-000JE	
R2007	C-CARBON R	4723-000J-P-R	RN72K1J-000JE	
R2008	C-CARBON R	4723-000J-P-R	RN72K1J-000JE	

R2009	C-CARBON R	4723-000J-P-R	RN72K1J-000JE	
R205	C-CARBON R	4723-102J-P-R	RN72K1J-102JE	
R206	C-CARBON R	4723-472J-P-R	RN72K1J-472JE	
R207	C-CARBON R	4723-472J-P-R	RN72K1J-472JE	
R208	C-CARBON R	4723-102J-P-R	RN72K1J-102JE	
R210	C-CARBON R	4723-102J-P-R	RN72K1J-102JE	
R212	C-CARBON R	4723-000J-P-R	RN72K1J-000JE	
R214	C-CARBON R	4723-102J-P-R	RN72K1J-102JE	
R215	C-CARBON R	4723-750J-P-R	RN72K1J-750JE	
R216	C-CARBON R	4723-000J-P-R	RN72K1J-000JE	
R217	C-CARBON R	4723-103J-P-R	RN72K1J-103JE	
R218	C-CARBON R	4723-750J-P-R	RN72K1J-750JE	
R219	C-CARBON R	4723-000J-P-R	RN72K1J-000JE	
R220	C-CARBON R	4723-750J-P-R	RN72K1J-750JE	
R221	C-CARBON R	4723-000J-P-R	RN72K1J-000JE	
R222	C-CARBON R	4723-000J-P-R	RN72K1J-000JE	
R223	C-CARBON R	4723-750J-P-R	RN72K1J-750JE	
R224	C-CARBON R	4723-000J-P-R	RN72K1J-000JE	
R225	C-CARBON R	4723-000J-P-R	RN72K1J-000JE	
R226	C-CARBON R	4723-750J-P-R	RN72K1J-750JE	
R229	C-CARBON R	4723-000J-P-R	RN72K1J-000JE	
R230	C-CARBON R	4723-000J-P-R	RN72K1J-000JE	
R231	C-CARBON R	4723-750J-P-R	RN72K1J-750JE	
R234	C-CARBON R	4723-000J-P-R	RN72K1J-000JE	
R235	C-CARBON R	4723-101J-P-R	RN72K1J-101JE	
R236	C-CARBON R	4723-101J-P-R	RN72K1J-101JE	
R237	C-CARBON R	4723-103J-P-R	RN72K1J-103JE	
R238	C-CARBON R	4723-103J-P-R	RN72K1J-103JE	
R241	C-CARBON R	4723-750J-P-R	RN72K1J-750JE	
R242	C-CARBON R	4723-000J-P-R	RN72K1J-000JE	
R243	C-CARBON R	4723-103J-P-R	RN72K1J-103JE	
R244	C-CARBON R	4723-750J-P-R	RN72K1J-750JE	
R245	C-CARBON R	4723-000J-P-R	RN72K1J-000JE	
R246	C-CARBON R	4723-750J-P-R	RN72K1J-750JE	
R247	C-CARBON R	4723-000J-P-R	RN72K1J-000JE	
R248	C-CARBON R	4723-000J-P-R	RN72K1J-000JE	
R249	C-CARBON R	4723-750J-P-R	RN72K1J-750JE	
R250	C-CARBON R	4723-000J-P-R	RN72K1J-000JE	
R251	C-CARBON R	4723-000J-P-R	RN72K1J-000JE	
R252	C-CARBON R	4723-750J-P-R	RN72K1J-750JE	
R255	C-CARBON R	4723-000J-P-R	RN72K1J-000JE	
R256	C-CARBON R	4723-000J-P-R	RN72K1J-000JE	
R257	C-CARBON R	4723-750J-P-R	RN72K1J-750JE	
R260	C-CARBON R	4723-000J-P-R	RN72K1J-000JE	
R275	C-CARBON R	4723-103J-P-R	RN72K1J-103JE	
R281	C-CARBON R	4723-221J-P-R	RN72K1J-221JE	
R282	C-CARBON R	4723-2R2J-P-R	RN72K1J-022JE	
R301	C-CARBON R	4723-470J-P-R	RN72K1J-470JE	
R302	C-CARBON R	4723-470J-P-R	RN72K1J-470JE	
R303	C-CARBON R	4723-103J-P-R	RN72K1J-103JE	
R304	C-CARBON R	4723-103J-P-R	RN72K1J-103JE	
R305	C-CARBON R	4723-103J-P-R	RN72K1J-103JE	
R306	C-CARBON R	4723-103J-P-R	RN72K1J-103JE	
R307	C-CARBON R	4723-101J-P-R	RN72K1J-101JE	
R308	C-CARBON R	4723-000J-P-R	RN72K1J-000JE	
R309	C-CARBON R	4723-000J-P-R	RN72K1J-000JE	
R310	C-CARBON R	4723-101J-P-R	RN72K1J-101JE	
R4001	C-CARBON R	4723-000J-P-R	RN72K1J-000JE	
R4003	C-CARBON R	4723-000J-P-R	RN72K1J-000JE	
R401	C-CARBON R	4723-101J-P-R	RN72K1J-101JE	
R402	C-CARBON R	4723-101J-P-R	RN72K1J-101JE	
R403	C-CARBON R	4723-101J-P-R	RN72K1J-101JE	
R404	C-CARBON R	4723-101J-P-R	RN72K1J-101JE	

R405	C-CARBON R	4723-101J-P-R	RN72K1J-101JE	
R406	C-CARBON R	4723-101J-P-R	RN72K1J-101JE	
R407	C-CARBON R	4723-101J-P-R	RN72K1J-101JE	
R408	C-CARBON R	4723-101J-P-R	RN72K1J-101JE	
R409	C-CARBON R	4723-101J-P-R	RN72K1J-101JE	
R411	C-CARBON R	4723-222J-P-R	RN72K1J-222JE	
R412	C-CARBON R	4723-222J-P-R	RN72K1J-222JE	
R413	C-CARBON R	4723-153J-P-R	RN72K1J-153JE	
R414	C-CARBON R	4723-153J-P-R	RN72K1J-153JE	
R415	C-CARBON R	4723-104J-P-R	RN72K1J-104JE	
R416	C-CARBON R	4723-104J-P-R	RN72K1J-104JE	
R417	C-CARBON R	4723-103J-P-R	RN72K1J-103JE	
R418	C-CARBON R	4723-103J-P-R	RN72K1J-103JE	
R419	C-CARBON R	4723-333J-P-R	RN72K1J-333JE	
R420	C-CARBON R	4723-333J-P-R	RN72K1J-333JE	
R421	C-CARBON R	4723-103J-P-R	RN72K1J-103JE	
R422	C-CARBON R	4723-103J-P-R	RN72K1J-103JE	
R423	C-CARBON R	4723-103J-P-R	RN72K1J-103JE	
R424	C-CARBON R	4723-103J-P-R	RN72K1J-103JE	
R425	C-CARBON R	4723-152J-P-R	RN72K1J-152JE	
R426	C-CARBON R	4723-152J-P-R	RN72K1J-152JE	
R427	C-CARBON R	4723-223J-P-R	RN72K1J-223JE	
R428	C-CARBON R	4723-223J-P-R	RN72K1J-223JE	
R430	C-CARBON R	4723-223J-P-R	RN72K1J-223JE	
R431	C-CARBON R	4723-223J-P-R	RN72K1J-223JE	
R432	C-CARBON R	4723-223J-P-R	RN72K1J-223JE	
R433	C-CARBON R	4723-223J-P-R	RN72K1J-223JE	
R434	C-CARBON R	4723-223J-P-R	RN72K1J-223JE	
R435	C-CARBON R	4723-152J-P-R	RN72K1J-152JE	
R436	C-CARBON R	4723-152J-P-R	RN72K1J-152JE	
R437	C-CARBON R	4723-152J-P-R	RN72K1J-152JE	
R438	C-CARBON R	4723-152J-P-R	RN72K1J-152JE	
R439	C-CARBON R	4723-103J-P-R	RN72K1J-103JE	
R440	C-CARBON R	4723-103J-P-R	RN72K1J-103JE	
R441	C-CARBON R	4723-103J-P-R	RN72K1J-103JE	
R442	C-CARBON R	4723-103J-P-R	RN72K1J-103JE	
R443	C-CARBON R	4723-000J-P-R	RN72K1J-000JE	
R444	C-CARBON R	4723-000J-P-R	RN72K1J-000JE	
R445	C-CARBON R	4723-104J-P-R	RN72K1J-104JE	
R446	C-CARBON R	4723-104J-P-R	RN72K1J-104JE	
R447	C-CARBON R	4723-221J-P-R	RN72K1J-221JE	
R448	C-CARBON R	4723-221J-P-R	RN72K1J-221JE	
R449	C-CARBON R	4723-221J-P-R	RN72K1J-221JE	
R450	C-CARBON R	4723-221J-P-R	RN72K1J-221JE	
R451	C-CARBON R	4723-222J-P-R	RN72K1J-222JE	
R452	C-CARBON R	4723-222J-P-R	RN72K1J-222JE	
R453	C-CARBON R	4723-222J-P-R	RN72K1J-222JE	
R454	C-CARBON R	4723-222J-P-R	RN72K1J-222JE	
R455	METAL O R	4717-151J-5-X	RS1/2WBJ-150	
R456	METAL O R	4717-151J-5-X	RS1/2WBJ-150	
R457	C-CARBON R	4723-472J-P-R	RN72K1J-472JE	
R458	C-CARBON R	4723-332J-P-R	RN72K1J-332JE	
R459	C-CARBON R	4723-105J-P-R	RN72K1J-105JE	
R460	C-CARBON R	4723-101J-P-R	RN72K1J-101JE	
R461	C-CARBON R	4723-101J-P-R	RN72K1J-101JE	
R462	C-CARBON R	4723-104J-P-R	RN72K1J-104JE	
R463	C-CARBON R	4723-474J-P-R	RN72K1J-474JE	
R464	C-CARBON R	4723-104J-P-R	RN72K1J-104JE	
R465	C-CARBON R	4723-101J-P-R	RN72K1J-101JE	
R466	C-CARBON R	4723-331J-P-R	RN72K1J-331JE	
R467	C-CARBON R	4723-181J-P-R	RN72K1J-181JE	
R468	C-CARBON R	4723-181J-P-R	RN72K1J-181JE	
R471	METAL O R	4717-101J-5-X	RS1/2WBJ-100	

R474	C-CARBON R	4723-103J-P-R	RN72K1J-103JE	
R476	C-CARBON R	4723-473J-P-R	RN72K1J-473JE	
R477	C-CARBON R	4723-222J-P-R	RN72K1J-222JE	
R480	C-CARBON R	4723-392J-P-R	RN72K1J-392JE	
R481	C-CARBON R	4723-123J-P-R	RN72K1J-123JE	
R482	C-CARBON R	4723-273J-P-R	RN72K1J-273JE	
R603	C-CARBON R	4723-101J-P-R	RN72K1J-101JE	
R604	C-CARBON R	4723-103J-P-R	RN72K1J-103JE	
R605	C-CARBON R	4723-103J-P-R	RN72K1J-103JE	
R606	C-CARBON R	4723-332J-P-R	RN72K1J-332JE	
R7001	C-CARBON R	4723-000J-P-R	RN72K1J-000JE	
R701	C-CARBON R	4723-822J-P-R	RN72K1J-822JE	
R702	C-CARBON R	4723-332J-P-R	RN72K1J-332JE	
R703	C-CARBON R	4723-105J-P-R	RN72K1J-105JE	
R704	C-CARBON R	4723-103J-P-R	RN72K1J-103JE	
R705	C-CARBON R	4723-822J-P-R	RN72K1J-822JE	
R706	C-CARBON R	4723-562J-P-R	RN72K1J-562JE	
R707	C-CARBON R	4723-105J-P-R	RN72K1J-105JE	
R708	C-CARBON R	4723-103J-P-R	RN72K1J-103JE	
R709	NF CARBON R	4705-4R7J-K-P	R25J-4.7	
R710	C-CARBON R	4723-222J-P-R	RN72K1J-222JE	
R711	C-CARBON R	4723-104J-P-R	RN72K1J-104JE	
R712	C-CARBON R	4723-104J-P-R	RN72K1J-104JE	
R713	C-CARBON R	4723-104J-P-R	RN72K1J-104JE	
R714	C-CARBON R	4723-104J-P-R	RN72K1J-104JE	
R715	NF CARBON R	4705-4R7J-K-P	R25J-4.7	
R716	C-CARBON R	4723-682J-P-R	RN72K1J-682JE	
R717	C-CARBON R	4723-103J-P-R	RN72K1J-103JE	
R718	C-CARBON R	4723-472J-P-R	RN72K1J-472JE	
R719	C-CARBON R	4723-562J-P-R	RN72K1J-562JE	
R720	C-CARBON R	4723-222J-P-R	RN72K1J-222JE	
R721	C-CARBON R	4723-103J-P-R	RN72K1J-103JE	
R722	C-CARBON R	4723-103J-P-R	RN72K1J-103JE	
R723	C-CARBON R	4723-103J-P-R	RN72K1J-103JE	
R724	C-CARBON R	4723-224J-P-R	RN72K1J-224JE	
R725	C-CARBON R	4723-223J-P-R	RN72K1J-223JE	
R726	C-CARBON R	4723-223J-P-R	RN72K1J-223JE	
R731	C-CARBON R	4723-272J-P-R	RN72K1J-272JE	
R732	C-CARBON R	4723-101J-P-R	RN72K1J-101JE	
R733	C-CARBON R	4723-272J-P-R	RN72K1J-272JE	
R734	C-CARBON R	4723-101J-P-R	RN72K1J-101JE	
R735	C-CARBON R	4723-101J-P-R	RN72K1J-101JE	
R736	C-CARBON R	4723-101J-P-R	RN72K1J-101JE	
R737	C-CARBON R	4723-101J-P-R	RN72K1J-101JE	
R738	C-CARBON R	4723-272J-P-R	RN72K1J-272JE	
R739	C-CARBON R	4723-101J-P-R	RN72K1J-101JE	
R740	C-CARBON R	4723-272J-P-R	RN72K1J-272JE	
R741	C-CARBON R	4723-101J-P-R	RN72K1J-101JE	
R742	C-CARBON R	4723-101J-P-R	RN72K1J-101JE	
R743	C-CARBON R	4723-101J-P-R	RN72K1J-101JE	
R744	C-CARBON R	4723-101J-P-R	RN72K1J-101JE	
R745	C-CARBON R	4723-101J-P-R	RN72K1J-101JE	
R746	C-CARBON R	4723-101J-P-R	RN72K1J-101JE	
R747	C-CARBON R	4723-100J-P-R	RN72K1J-100JE	
R748	C-CARBON R	4723-473J-P-R	RN72K1J-473JE	
R749	C-CARBON R	4723-471J-P-R	RN72K1J-471JE	
R750	C-CARBON R	4723-224J-P-R	RN72K1J-224JE	
R751	C-CARBON R	4723-472J-P-R	RN72K1J-472JE	
R752	C-CARBON R	4723-102J-P-R	RN72K1J-102JE	
R754	C-CARBON R	4723-272J-P-R	RN72K1J-272JE	
R755	C-CARBON R	4723-000J-P-R	RN72K1J-000JE	
R757	C-CARBON R	4723-000J-P-R	RN72K1J-000JE	
R758	C-CARBON R	4723-272J-P-R	RN72K1J-272JE	

R759	C-CARBON R	4723-101J-P-R	RN72K1J-101JE	
R761	C-CARBON R	4723-181J-P-R	RN72K1J-181JE	
R762	C-CARBON R	4723-154J-P-R	RN72K1J-154JE	
R763	C-CARBON R	4723-391J-P-R	RN72K1J-391JE	
R764	C-CARBON R	4723-474J-P-R	RN72K1J-474JE	
R765	C-CARBON R	4723-274J-P-R	RN72K1J-274JE	
R766	C-CARBON R	4723-472J-P-R	RN72K1J-472JE	
R767	C-CARBON R	4723-103J-P-R	RN72K1J-103JE	
R768	C-CARBON R	4723-222J-P-R	RN72K1J-222JE	
R781	C-CARBON R	4723-000J-P-R	RN72K1J-000JE	
R782	C-CARBON R	4723-000J-P-R	RN72K1J-000JE	
R783	C-CARBON R	4723-000J-P-R	RN72K1J-000JE	
R784	C-CARBON R	4723-000J-P-R	RN72K1J-000JE	
R786	C-CARBON R	4723-000J-P-R	RN72K1J-000JE	
R791	C-CARBON R	4723-000J-P-R	RN72K1J-000JE	
R792	C-CARBON R	4723-000J-P-R	RN72K1J-000JE	
R813	C-CARBON R	4723-391J-P-R	RN72K1J-391JE	
R814	C-CARBON R	4723-471J-P-R	RN72K1J-471JE	
R815	C-CARBON R	4723-821J-P-R	RN72K1J-821JE	
R816	C-CARBON R	4723-102J-P-R	RN72K1J-102JE	
R821	C-CARBON R	4723-000J-P-R	RN72K1J-000JE	
R822	C-CARBON R	4723-272J-P-R	RN72K1J-272JE	
R823	C-CARBON R	4723-272J-P-R	RN72K1J-272JE	
R824	C-CARBON R	4723-272J-P-R	RN72K1J-272JE	
R825	C-CARBON R	4723-272J-P-R	RN72K1J-272JE	
R826	C-CARBON R	4723-101J-P-R	RN72K1J-101JE	
R827	C-CARBON R	4723-101J-P-R	RN72K1J-101JE	
R828	C-CARBON R	4723-471J-P-R	RN72K1J-471JE	
R831	C-CARBON R	4723-272J-P-R	RN72K1J-272JE	
R832	C-CARBON R	4723-272J-P-R	RN72K1J-272JE	
R833	C-CARBON R	4723-272J-P-R	RN72K1J-272JE	
R834	C-CARBON R	4723-272J-P-R	RN72K1J-272JE	
R835	C-CARBON R	4723-104J-P-R	RN72K1J-104JE	
R836	C-CARBON R	4723-104J-P-R	RN72K1J-104JE	
R837	C-CARBON R	4723-104J-P-R	RN72K1J-104JE	
R838	C-CARBON R	4723-104J-P-R	RN72K1J-104JE	
R841	C-CARBON R	4723-471J-P-R	RN72K1J-471JE	
R842	C-CARBON R	4723-471J-P-R	RN72K1J-471JE	
R843	C-CARBON R	4723-471J-P-R	RN72K1J-471JE	
R844	C-CARBON R	4723-471J-P-R	RN72K1J-471JE	
R845	C-CARBON R	4723-471J-P-R	RN72K1J-471JE	
R846	METAL O R	4717-4R7J-K-X	RS1/2WBJ-4.7	
R847	C-CARBON R	4723-391J-P-R	RN72K1J-391JE	
R848	C-CARBON R	4723-151J-P-R	RN72K1J-151JE	
R849	C-CARBON R	4723-391J-P-R	RN72K1J-391JE	
R850	C-CARBON R	4723-151J-P-R	RN72K1J-151JE	
R856	C-CARBON R	4723-273J-P-R	RN72K1J-273JE	
R861	C-CARBON R	4723-391J-P-R	RN72K1J-391JE	
R862	C-CARBON R	4723-471J-P-R	RN72K1J-471JE	
R863	C-CARBON R	4723-821J-P-R	RN72K1J-821JE	
R864	C-CARBON R	4723-102J-P-R	RN72K1J-102JE	
R865	C-CARBON R	4723-182J-P-R	RN72K1J-182JE	
R866	C-CARBON R	4723-392J-P-R	RN72K1J-392JE	
R867	C-CARBON R	4723-103J-P-R	RN72K1J-103JE	
S701	PUSH SW	5200-4862-0-01	NPS-111-S679	
S702	PUSH SW	5200-4862-0-01	NPS-111-S679	
S703	PUSH SW	5200-4862-0-01	NPS-111-S679	
S815	PUSH SW	5200-4861-0-01	NPS-111-S681	
S818	PUSH SW	5200-4861-0-01	NPS-111-S681	
S819	PUSH SW	5200-4861-0-01	NPS-111-S681	
S821	PUSH SW	5200-4861-0-01	NPS-111-S681	
S822	PUSH SW	5200-4861-0-01	NPS-111-S681	
S861	PUSH SW	5200-4861-0-01	NPS-111-S681	

S862	PUSH SW	5200-4861-0-01	NPS-111-S681	
S863	PUSH SW	5200-4861-0-01	NPS-111-S681	
S864	PUSH SW	5200-4861-0-01	NPS-111-S681	
S865	PUSH SW	5200-4861-0-01	NPS-111-S681	
S866	PUSH SW	5200-4861-0-01	NPS-111-S681	
S867	PUSH SW	5200-4861-0-01	NPS-111-S681	
S868	PUSH SW	5200-4861-0-01	NPS-111-S681	
X701	CERA LOCK	2703-0870-0	CSTLS4M50G56-A0	
X801	CERA LOCK	2703-0880-0	CSTS0500MG06	

<CDDIN>: North American area

<CPA4P>: Australian area

!: Safety part

NSP: Not Spare Parts

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