

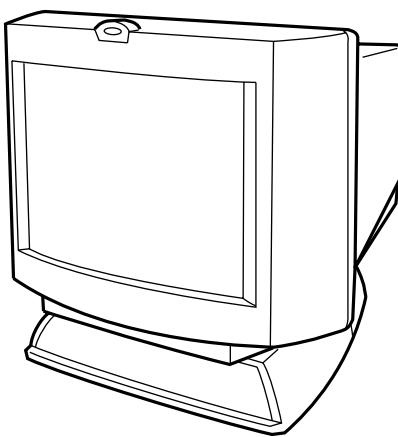
CPD-201VS

SERVICE MANUAL

US Model

Canadian Model

Chassis No. SCC-L21A-A



VAIO

V-3 CHASSIS

SPECIFICATIONS

Picture tube	0.25 mm aperture grille pitch, 17 inches measured diagonally (16.0" viewable), 90-degree deflection, AR coating	Headphones output	Stereo minijack, 15 mW + 15 mW at 16 Ω
Viewable image size	Approx. 327 × 241 mm (w/h) (12 7/8 × 9 1/2 inches) 16.0" viewing image (measured diagonally)	Subwoofer output	3.5 mm miniplug, volume variable
Max. resolution	Horizontal: Max. 1280 dots Vertical: Max. 1024 lines	Controls	Front panel direct: Audio volume/Contrast/Audio mute/GPE (AUTO/off mode 1/ mode 2) OSD menu: Brightness/Contrast/Picture size/ Picture zoom/Picture centering/ Sceen moiré/Color temperature (5000K/6500K/9300K/11000K)/ Rotation/Pincushion/Pin balance/ Keystone/Key balance/Bass boost/ Manual Degauss/OSD position/ OSD language
VESA standards	640 × 480 at 85 Hz 800 × 600 at 85 Hz 1024 × 768 at 85 Hz 1280 × 1024 at 60 Hz	AC input voltage/current	100 to 240 V, 50 – 60 Hz, 1.5 – 0.6 A
Deflection frequency	Horizontal: 30 to 70 kHz Vertical: 50 to 120 Hz	Power consumption	Max. 120 W
Speaker	Left, right: 3.0 W × 2 50 Hz – 20 kHz	Dimensions	Approx. 415 × 451 × 423 mm (w/h/d)
Microphones	Uni-directional, electret condenser microphone	Mass	Approx. 19.6 kg (43 lb 3 oz)
Microphones output	3.5 mm miniplug	Design and specifications are subject to change without notice.	
Audio input	3.5 mm Stereo miniplug, input impedance 47 kΩ, input level 0.7 Vrms typical		



MICROFILM

TRINITRON® MULTIMEDIA COMPUTER DISPLAY
SONY®

DIAGNOSIS

Failure	Power LED
+B Failure	Blink Amber (On 0.5 sec, Off 0.5 sec)
H Stop or V Stop Failure (Included S-Cap Failure)	Blink Amber (On 1.5 sec, Off 0.5 sec)
ABL Failure	Blink Amber (On 0.5 sec, Off 1.5 sec)
Aging/Self-Test	Blink Amber (On 0.5 sec, Off 0.5 sec) Blink Green (On 0.5 sec, Off 0.5 sec)
Out of Range	On Green (OSD Indication)

TIMING SPECIFICATION

PRIMARY MODE MODE AT PRODUCTION	MODE 1	MODE 2	MODE 3	PRIMARY MODE 4	MODE 5	MODE 6	MODE 7	MODE 8	MODE 9
RESOLUTION	640 X 480	800 X 600	800 X 600	1024 X 768	1024 X 768	1280 X 1024	640 X 400	640 X 480	1152 X 864
CLOCK	36.000 MHZ	40.000 MHZ	49.500 MHZ	78.750 MHZ	94.500 MHZ	108.500 MHZ	25.175 MHZ	25.175 MHZ	80.000 MHZ
<hr/>									
— HORIZONTAL —									
H-FREQ	43.269 kHz	37.879 kHz	46.875 kHz	60.023 kHz	68.677 kHz	63.974 kHz	31.469 kHz	31.469 kHz	54.945 kHz
	usec	usec	usec	usec	usec	usec	usec	usec	usec
H. TOTAL	23.111	26.4	21.333	16.66	14.561	15.631	31.778	31.778	18.2
H. BLK	5.333	6.4	5.172	3.657	3.725	3.834	6.356	6.356	3.8
H. FP	1.556	1	0.323	0.203	0.508	0.59	0.636	0.636	0.8
H. SYNC	1.556	3.2	1.616	1.219	1.016	1.18	3.813	3.813	1.4
H. BP	2.222	2.2	3.232	2.235	2.201	2.065	1.907	1.907	1.6
H. ACTIV	17.778	20	16.162	13.003	10.836	11.797	25.422	25.422	14.4
<hr/>									
— VERTICAL —									
V. FREQ(HZ)	85.008 Hz	60.317 Hz	75.000 Hz	75.029 Hz	84.997 Hz	60.013 Hz	70.086 Hz	59.940 Hz	59.984 Hz
	lines	lines	lines	lines	lines	lines	lines	lines	lines
V. TOTAL	509	628	625	800	808	1066	449	525	916
V. BLK	29	28	25	32	40	42	49	45	52
V. FP	1	1	1	1	1	1	12	10	6
V. SYNC	3	4	3	3	3	3	2	2	5
V. BP	25	23	21	28	36	38	35	33	41
V. ACTIV	480	600	600	768	768	1024	400	480	864
<hr/>									
— SYNC —									
INT(G)	NO	NO	NO	NO	NO	NO	NO	NO	NO
EXT(H/V)/POLARITY	YES -/-	YES +/+	YES +/+	NO +/+	YES +/+	YES +/+	YES -/+	YES -/-	YES +/+
EXT(CS)/POLARITY	NO	NO	NO	NO	NO	NO	NO	NO	NO
INT/NON INT	NON INT	NON INT	NON INT	NON INT	NON INT	NON INT	NON INT	NON INT	NON INT

98.4.27 VER.

Power Saving Function

This display meets the power saving guidelines set by the International ENERGY STAR Program. It is capable of reduced power consumption when used with a computer equipped with Display Power Management Signaling (DPMS). By sensing the absence of the sync signal coming from the computer, it will reduce the power consumption as follows:

✓ CAUTION

The Power Saving function will automatically put the display into Deep Sleep mode if the power switch is turned on without any video signal input. Once the horizontal and vertical syncs are sensed, the display will automatically return to its Normal Operation mode.

Mode	Power consumption	Recovery time	① Power indicator
1 Normal Operation	CPD-101VS: 110 W (max) CPD-201VS: 120 W (max)	—	Green
2 Sleep	15 W (max)	Approx. 3 sec.	Green ↔ Orange
3 Deep Sleep	8 W (max)	Approx. 10 sec.	Orange
4 Power-off	0 W	—	Off

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.
4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
5. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
6. Check the line cords for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
7. Check the B+ and HV to see if they are specified values. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.
8. Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC Leakage. Check leakage as described below.

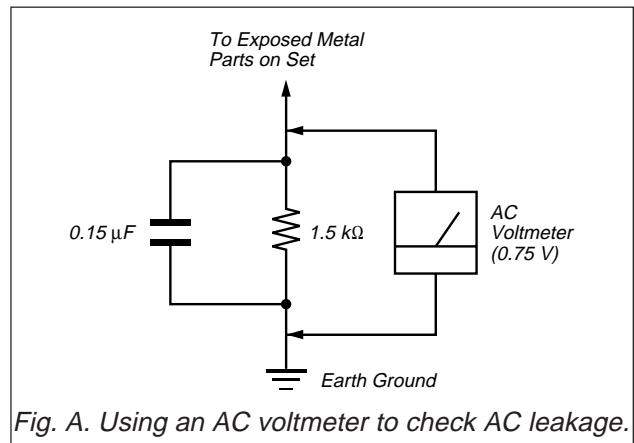


Fig. A. Using an AC voltmeter to check AC leakage.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes).

Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOMs that are suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

WARNING!!

NEVER TURN ON THE POWER IN A CONDITION IN WHICH THE DEGAUSS COIL HAS BEEN REMOVED.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK \triangle ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL FOR SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

AVERTISSEMENT!!

NE JAMAIS METTRE SOUS TENSION QUAND LA BOBINE DE DEMAGNETISATION EST ENLEVÉE.

ATTENTION AUX COMPOSANTS RELATIFS À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET UNE MARQUE \triangle SONT CRITIQUES POUR LA SÉCURITÉ. NE LES REMPLACER QUE PAR UNE PIÈCE PORTANT LE NUMÉRO SPECIFIÉ. LES RÉGLAGES DE CIRCUIT DONT L'IMPORTANCE EST CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT SONT IDENTIFIÉS DANS LE PRÉSENT MANUEL. SUIVRE CES PROCÉDURES LORS DE CHAQUE REMPLACEMENT DE COMPOSANTS CRITIQUES, OU LORSQU'UN MAUVAIS FONCTIONNEMENT EST SUSPECTÉ.

TABLE OF CONTENTS

<i>Section</i>	<i>Title</i>	<i>Page</i>
1. GENERAL		1-1
2. DISASSEMBLY		
2-1. Cabinet Removal		2-1
2-2. Service Position		2-1
2-3. D Board Removal		2-2
2-4. U Board Removal		2-2
2-5. J Board Removal		2-3
2-6. Picture Tube Removal		2-4
2-7. Harnes Location		2-5
3. SAFETY RELATED ADJUSTMENT		3-1
4. ADJUSTMENTS		4-1
5. DIAGRAMS		
5-1. Block Diagrams		5-1
5-2. Frame Schematic Diagram		5-5
5-3. Circuit Boards Location		5-7
5-4. Schematic Diagrams and Printed Wiring Boards ...	5-7	
(1) Schematic Diagram of A Board		5-11
(2) Schematic Diagrams of D Board		5-17
(3) Schematic Diagrams of AA, DA, J and U Boards		5-21
5-5. Semiconductors		5-26
6. EXPLODED VIEWS		
6-1. Chassis		6-1
6-2. Stand Block		6-2
6-3. Packing Materials		6-3
7. ELECTRICAL PARTS LIST		7-1

SECTION 1

GENERAL

The operating instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.

Introduction

Congratulations on your purchase of a Sony Multimedia CPD-101VS/201VS display! This display incorporates over 25 years of Sony experience with Trinitron display technology, ensuring excellent performance and outstanding reliability. This display's wide scan range (30 – 70 kHz), together with Digital Multiscan Technology, allows it to sync to any video mode from standard VGA through VESA 1024 × 768 at 85 Hz (VESA 1280 × 1024 at 60 Hz). In addition, its four factory-preset color modes give you unprecedented flexibility in matching on-screen colors to hard copy printouts. Furthermore, it features:

- Graphic Picture Enhancement function improves monitor performance to match the application that you are running.
- With the GPE AUTO MODE, you can use "IntelliLight" compatible software which will maximize the color and brightness of a window running a multimedia presentation without affecting the brightness and contrast of text based applications.
- Integrated stereo speakers with Bass Boost enables you to enjoy excellent sound reproduction via 3.0 W stereo speakers.

All together, CPD-101VS/201VS delivers incredible performance with the quality and support you can expect from Sony.

Plug and play

This display complies with DDC™¹ and DDC2B which are the Display Data Channel (DDC) standards of VESA. When a DDC1 host system is connected, the display synchronizes with the V. CLK in accordance with the VESA standards and outputs the EDID (Extended Display Identification Data) to the data line. When a DDC2B host system is connected, the display automatically switches to DDC2B communication.

DDC™ is a trademark of Video Electronics Standard Association.

6 Introduction

Precautions 7

Warning on Power Connection

- Use the supplied power cord.
For the customers in U.S.A.
If you do not do this, this display will not conform to mandatory FCC standards.
- **For the customers in UK.**
If you use the display in the UK, please use the supplied UK cable with the UK plug.



- Before disconnecting the power cord, wait at least 30 seconds after turning off the power switch to discharge static electricity from the CRT display surface.
- After the power has been turned on, the CRT is demagnetized for approximately 5 seconds. This generates a strong magnetic field around the bezel which may affect the data stored on magnetic tape or disks near the bezel. Place such magnetic recording equipment and tapes/disks at a distance from this unit.

The socket-outlet shall be installed near the equipment and shall be easily accessible.

Precautions

Installation

- Prevent internal heat build-up by allowing adequate air circulation. Do not place the unit on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies) that may block the ventilation holes.
- Do not install the unit near heat sources such as radiators or air ducts, nor in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.
- Do not place the unit near equipment which generates magnetism, such as a converter or high voltage power lines.

Maintenance

- Clean the cabinet, glass panel and controls with a soft cloth lightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent, such as alcohol or benzene.
- Do not rub, touch, or tap the surface of the screen with sharp or abrasive items, like a ball point pen or a screwdriver, as this type of contact may result in a scratched picture tube.

Transportation

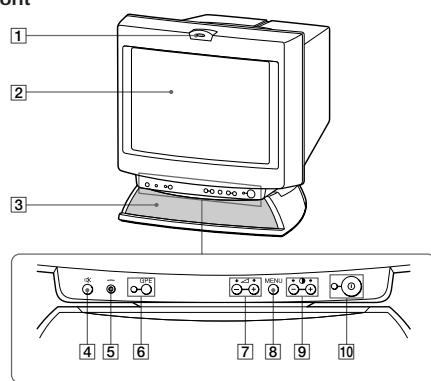
- Do not discard the carton and packing materials. When transporting the unit, use these packing materials so that the unit is properly packaged.
- When carrying the unit, be careful not to get your hands caught between the display and the tilt-swivel.

Continued to the next page →

Functions of Controls

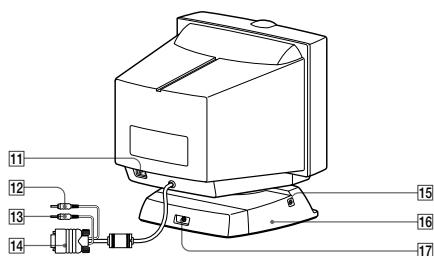
CPD-101VS is used for illustration purposes throughout this manual.

Front



1	Microphone	—
2	Screen	—
3	Stereo speakers	—
4	⊗ Mute button	Mutes sound (page 20).
5	--- Reset switch	Resets adjustments to factory setting (page 30).
6	GPE button and indicator	Sets GPE mode (page 31).
7	△ Volume +/- buttons	Adjust speaker volume (page 19). Use to select items in an OSD.
8	MENU button	Displays the OSD menu.
9	○ +/- Contrast buttons	Adjust picture contrast (page 21). Use to adjust items in an OSD.
10	① Power switch and indicator	Turns the display on and off.

Rear



- | | |
|--|--|
| [1] AC IN connector | Connect the supplied power cord (page 13). |
| [2] □ Audio plug (green) | Connect to the computer's audio output (page 12). |
| [3] ✸ MIC plug (red) | Connect to the computer's microphone input (page 12). |
| [4] □ Video signal cable (blue) | Connect to the computer's video output (page 12). |
| [5] □ Headphones jack | Connect standard mini-plug headphones (not supplied). The speakers are turned off when headphones are connected. |
| [6] Tilt-Swivel | Adjusts the angle of the display (page 15). |
| [7] Subwoofer output jack | Connect to a subwoofer's input (not supplied). |

Getting Started

Before using this display, please make sure that the following items are included in your package:

- Multimedia computer display (1)
- Power cord (1)
- Warranty card (1)
- Operating instructions manual (1)
- Windows Monitor Information Disk and its instruction manual (1)

Tip

This display will sync with any IBM or compatible system equipped with VGA¹⁾ or greater graphics capability. Although this display will sync to other platforms running at horizontal frequencies between 30 and 70 kHz, including Macintosh²⁾ and Power Macintosh systems, a cable adapter is required. Please consult Sony Technical Support for advice on which adapter is suitable for your needs.

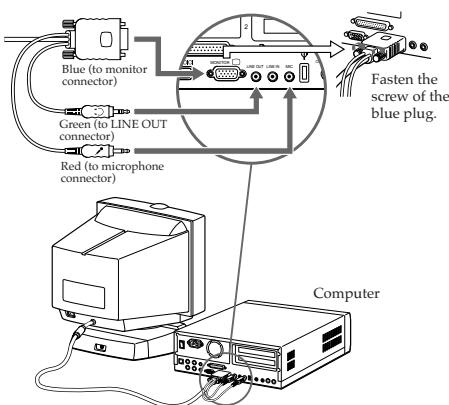
- 1) VGA is a trademark of IBM Corporation.
2) Macintosh is a trademark of Apple Computer Inc.

Continued to the next page ➤

Installation

■ Step 1: Connect the computer

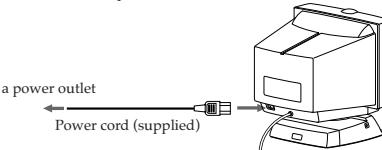
With the computer switched off, connect the video signal cable to the display (VGA) connector on your computer. If your computer supports the DDC plug-and-play standard, this connection will enable DDC communication between the display and the computer. The video signal cable is combined with audio and microphone cables. If your computer is equipped with sound capability, connect the audio (green) and microphone (red) plugs to appropriate jacks located on your computer.



- ✓ Note on handling the video signal cable
Do not touch the pins of the video signal cable.

■ Step 2: Connect the power cord

With the display switched off, connect the power cord to the display and the other end to a power outlet.



■ Step 3: Turn on the display, and then your computer.

For proper Plug and Play recognition, turn on the display before you turn on your computer.

✓ Note on Warning Messages

If there is something wrong with the input signal, one of the following messages appears.

"OUT OF SCAN RANGE"

This indicates that the input signal is not supported by the display's specifications.

"NO INPUT SIGNAL"

This indicates that video signal is missing.

To solve these problems, see "Troubleshooting" on page 36.

■ Step 4: If necessary...

Adjust the user controls according to your personal preference.

The installation of your display is complete. Enjoy your display.

Using Your Display

Preset and user modes

The Multimedia CPD-101VS/201VS display has factory preset modes for the 9 most popular industry standards for true "plug and play" capability.

For less common modes, its Digital Multiscan Technology will perform all of the complex adjustments necessary to ensure a high quality picture for any timing between 30 and 70kHz.

NO.	Resolution (dots x lines)	Horizontal Frequency	Vertical Frequency
1	640 x 400	31.5 kHz	70 Hz
2	640 x 480	31.5 kHz	60 Hz
3	640 x 480	43.3 kHz	85 Hz
4	800 x 600	37.9 kHz	60 Hz
5	800 x 600	46.9 kHz	75 Hz
6	1024 x 768	60.0 kHz	75 Hz
7	1024 x 768	68.7 kHz	85 Hz
8	1152 x 864	54.8 kHz	60 Hz
9	1280 x 1024	64.0 kHz	60 Hz

✓ Note for Windows® 95/98 users

To maximize the potential of your display, install the new model information file from the supplied Windows® Monitor Information Disk onto your PC.

This display complies with the "VESA DDC" Plug & Play standard. If your PC/graphics board complies with DDC, select "Plug & Play Monitor (VESA DDC)" or this display's model name as the monitor type in the "Control Panel" of Windows® 95/98. If your PC/graphics board has difficulty communicating with this display, load the Windows® Monitor Information Disk and select this display's model name as the monitor type.

Windows® is a registered trademark of Microsoft Corporation in the United States and other countries.

✓ Note on recommended horizontal timing conditions

Horizontal sync width should be more than 1.0 usec.
Horizontal blanking width should be more than 3.6 psec.

To enter new timings

When using a video mode that is not one of the 9 factory preset modes, some fine tuning may be required to optimize the display to your preferences. Simply adjust the display according to the adjustment instructions. The adjustments will be stored automatically and recalled whenever that mode is used.

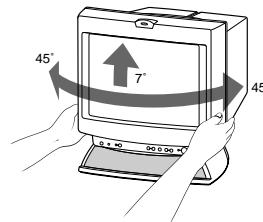
A total of 16 user-defined modes can be stored in memory. If a 17th mode is entered, it will replace the first.

Using the tilt-swivel

With the tilt-swivel, this unit can be adjusted to be viewed at your desired angle within 90° horizontally and 7° vertically.

To turn the unit vertically and horizontally, hold it at its bottom with both hands.

Be careful not to get your hands caught between the display and the tilt-swivel.

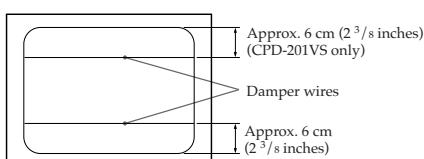


Damper wire

Using a white background, a very thin horizontal line on the screen may be visible as shown below. This line is the damper wire.

The Trinitron tube has a vertically striped Aperture Grille inside. The Aperture Grille allows more light to pass through to the screen giving the Trinitron CRT more color and brightness.

The damper wire is attached to the Aperture Grille to prevent vibration of the Aperture Grille wire so that the screen image is constantly stable.



Adjustments

When one of the preset-type signals is input, no picture adjustment is necessary.

You can, however, adjust the picture to your preference by following the procedure described below.

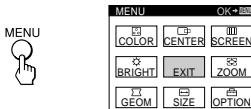
To adjust the display, turn on the display and computer.

Introducing the On-Screen Display

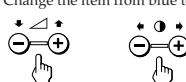
Beyond sound volume and picture contrast adjustment, most adjustments are made using the OSD menu system.

Using the OSD menu

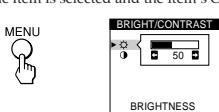
1. Press the MENU button to display the MENU OSD.



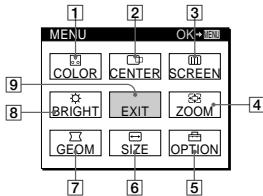
2. Use the four arrow ($\uparrow/\downarrow/\leftarrow/\rightarrow$) buttons ($\triangle/+/-$ and $\circ/+/-$ buttons) to select the item you want to adjust. Change the item from blue to yellow.



3. Press the MENU button again. The item is selected and the item's OSD appears.



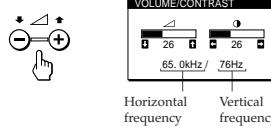
Summary of each item



- ① COLOR
Selects the color temperature.
- ② CENTER
Adjusts the picture centering.
- ③ SCREEN
Reduces the moiré pattern.
- ④ ZOOM
Adjusts the picture size in horizontal and vertical direction proportionally.
- ⑤ OPTION
Activates bass-boost and screen degauss, changes the OSD position and selects the OSD language.
- ⑥ SIZE
Adjusts the picture size. You can adjust the size in horizontal or vertical direction individually.
- ⑦ GEOM
Adjusts the picture rotation, pincushion, etc.
- ⑧ BRIGHT
Adjusts the picture brightness and contrast.
- ⑨ EXIT
Closes the OSD menu.

Adjusting the sound volume

1. Press the $\triangle +$ or $\triangle -$ button.
The VOLUME/CONTRAST OSD appears.
The horizontal and vertical frequencies for each input signal received appear.



2. Press the $\triangle +$ or $\triangle -$ buttons to adjust volume.
+ to increase volume
- to decrease volume

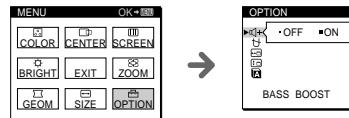


The VOLUME/CONTRAST OSD disappears three seconds after you release the buttons.

- Tip**
- Adjust the volume while listening to the sound.
 - Excessively high volume may cause howling.

To activate Bass Boost for rich bass sound

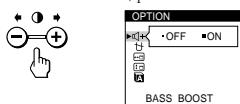
1. Select OPTION in the MENU OSD and press the MENU button.
The OPTION OSD appears.



Continued to the next page →

2. Select BASS BOOST with the \uparrow/\downarrow buttons.

3. Press the \rightarrow button to select ON.
To cancel bass boost, press the \leftarrow button to select OFF.



To exit the OSD

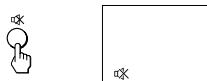
Press the MENU button again.

- Tip**

If you don't touch any buttons, the OSD automatically disappears after 30 seconds.

To mute the sound

Press the \otimes button. The \otimes indicator appears while the sound is muted.



Press again to cancel muting.

You can cancel muting also by pressing the $\triangle +$ button.

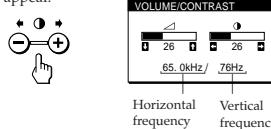
- Tip**

\otimes appears instead of $\triangle +$ on the VOLUME/CONTRAST OSD while the sound is muted.

Adjusting the picture contrast

The adjustment data becomes the common setting for all input signals.

1. Press the $\bullet +$ or $\bullet -$ button.
The VOLUME/CONTRAST OSD appears.
The horizontal and vertical frequencies for each input signal received appear.



2. Press the $\bullet +$ or $\bullet -$ buttons to adjust the picture contrast.
+ for more contrast
- for less contrast

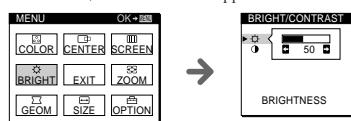


The VOLUME/CONTRAST OSD disappears three seconds after you release the buttons.

Adjusting the picture brightness

The adjustment data becomes the common setting for all input signals.

1. Select BRIGHT in the MENU OSD and press the MENU button.
The BRIGHT/CONTRAST OSD appears.



Continued to the next page →

2. Press the \leftrightarrow buttons to adjust the picture brightness.
 ➔ for more brightness
 ➜ for less brightness



To exit the OSD

Press the MENU button again.



If you don't touch any buttons the OSD automatically disappears after 30 seconds.

Adjusting the picture centering

The adjustment data becomes the individual setting for each input signal received.

1. Select CENTER in the MENU OSD and press the MENU button.
 The CENTER OSD appears.



2. For vertical adjustment
 Press the \uparrow/\downarrow buttons.
 ➔ to move up
 ➜ to move down



- For horizontal adjustment
 Press the \leftrightarrow buttons.
 ➔ to move right
 ➜ to move left



To exit the OSD

Press the MENU button again.

22 Adjustments

2. For vertical adjustment
 Press the \uparrow/\downarrow buttons.
 ➔ to increase
 ➜ to decrease



- For horizontal adjustment
 Press the \leftrightarrow buttons.
 ➔ to increase
 ➜ to decrease



To exit the OSD

Press the MENU button again.

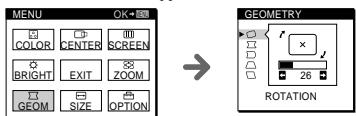


If you don't touch any buttons the OSD automatically disappears after 30 seconds.

Adjusting the geometry

The rotation adjustment data becomes the common setting for all input signals. All other data becomes the individual setting for each input signal received.

1. Select GEOM in the MENU OSD and press the MENU button.
 The GEOMETRY OSD appears.



2. Press the \uparrow/\downarrow buttons to select the item you want to adjust.



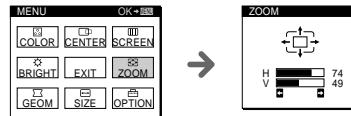
If you don't touch any buttons, the OSD automatically disappears after 30 seconds.

Adjusting the picture size

The adjustment data becomes the individual setting for each input signal received.

To adjust the picture size in horizontal and vertical direction proportionally

1. Select ZOOM in the MENU OSD and press the MENU button.
 The ZOOM OSD appears.

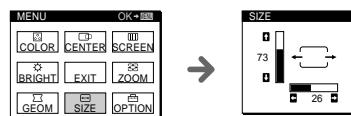


2. Press the \leftrightarrow buttons for the best size.



To adjust the picture size in horizontal or vertical direction

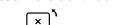
1. Select SIZE in the MENU OSD and press the MENU button.
 The SIZE OSD appears.



Continued to the next page ➤

Adjustments 23

3. Press the \leftrightarrow buttons to adjust:
 ROTATION ➔ to rotate the picture clockwise
 ➜ to rotate counter-clockwise



- PINCUSHION ➔ to bend both sides outward
 ➜ to bend inward



- PIN BALANCE ➔ to bend both sides to the right
 ➜ to the left



- KEYSTONE ➔ to widen the top
 ➜ to shrink the top



- KEY BALANCE ➔ to move the top to the right
 ➜ to the left.



To exit the OSD

Press the MENU button again.

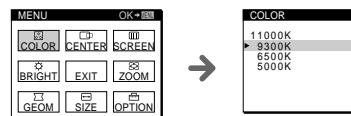


If you don't touch any buttons the OSD automatically disappears after 30 seconds.

Selecting the color temperature

The selected color temperature becomes the common setting for all input signals.

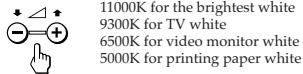
1. Select COLOR in the MENU OSD and press the MENU button.
 The COLOR OSD appears.



Continued to the next page ➤

Adjustments 25

2. Select the desired color temperature with the **↑/↓** buttons.



To exit the OSD

Press the MENU button again.

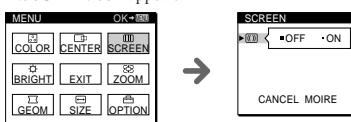


If you don't touch any buttons, the OSD automatically disappears after 30 seconds.

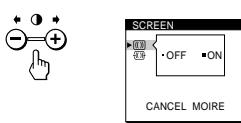
Adjusting the screen moiré

This adjustment is to eliminate wavy or elliptical lines that may appear on the screen.
The adjustment data becomes the common setting for all input signals.

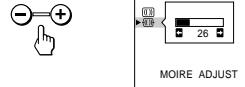
1. Select SCREEN in the MENU OSD and press the MENU button.
The SCREEN OSD appears.



2. Press the **→** button to select ON.
The MOIRE ADJUST icon appears under the CANCEL MOIRE icon.



3. Press the **↓** button to select MOIRE ADJUST.



4. Press the **←/→** buttons to tune the moiré cancellation effect.

To exit the OSD

Press the MENU button again.



If you don't touch any buttons, the OSD automatically disappears after 30 seconds.

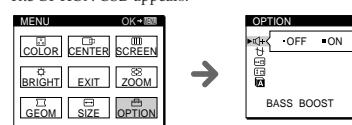
✓ Note on the moiré cancellation effect

When CANCEL MOIRE is set to ON, the picture may appear fuzzy. If you set CANCEL MOIRE to OFF, the picture may be clearer, but the moiré will reappear.

Activating screen degauss

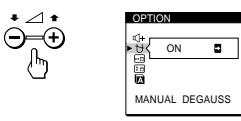
The display screen is automatically degaussed (demagnetized) when the power is turned on.
To manually degauss the screen, do as follows. If you need to degauss the screen a second time, wait at least 20 minutes for the best result.

1. Select OPTION in the MENU OSD and press the MENU button.
The OPTION OSD appears.



Continued to the next page →

2. Select MANUAL DEGAUSS with the **↑/↓** buttons.



3. Press the **→** button to activate the degauss cycle.

To exit the OSD

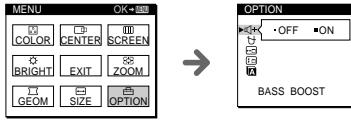
Press the MENU button again.



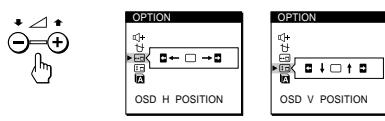
If you don't touch any buttons, the OSD automatically disappears after 30 seconds.

Changing the OSD position

1. Select OPTION in the MENU OSD and press the MENU button.
The OPTION OSD appears.



2. Select OSD H (horizontal) POSITION or OSD V (vertical) POSITION with the **↑/↓** buttons.



3. Press the **←/→** buttons to move the OPTION OSD to the desired position.



To exit the OSD

Press the MENU button again.

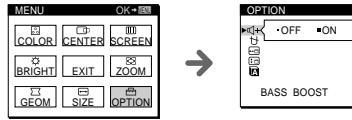


If you don't touch any buttons, the OSD automatically disappears after 30 seconds.

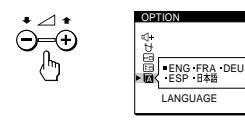
Selecting the OSD language

English, French, German, Spanish and Japanese version of the OSDs are available.

1. Select OPTION in the MENU OSD and press the MENU button.
The OPTION OSD appears.



2. Select LANGUAGE with the **↑/↓** buttons.



Continued to the next page →

3. Press the \leftarrow/\rightarrow buttons to select the desired language.



To exit the OSD

Press the MENU button again.



If you don't touch any buttons, the OSD automatically disappears after 30 seconds.

Resetting

■ To recall the factory settings for an individual adjustment item

- Select the item you want to reset.
First select the OSD containing the item in the MENU OSD, and then select the item in the OSD.
- Press the \leftarrow/\rightarrow button while the OSD of the item is on.
Only the item highlighted in yellow returns to the factory setting.



■ To recall the factory settings for the current video mode

Press the \leftarrow/\rightarrow button while no OSD is displayed.

■ To recall the factory settings for all modes

Press and hold the \leftarrow/\rightarrow button for more than two seconds.
All adjustments return to the factory settings.

Graphic Picture Enhancement (GPE)

Available GPE modes

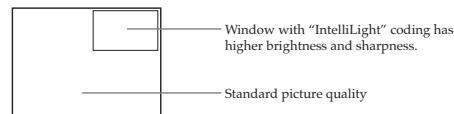
Graphic Picture Enhancement is a function designed for your viewing comfort.

There are four GPE modes: AUTO, MODE 1, MODE 2 and OFF.
The default setting is "AUTO."

■ AUTO mode

This mode is effective only with "IntelliLight™" compatible applications. When an image playback window with "IntelliLight" coding appears on the screen, the display senses the exact location and size of the window and applies a higher brightness and sharpness effect to images inside the window, while the rest of the screen remains at standard picture quality. For inquiries about "IntelliLight" and compatible software, check Sony's web site (www.ita.sel.sony.com) or call Sony Technical Support (1-888-4SONYPC).

"IntelliLight™" is a trademark of Sony Electronics Inc.



✓ Note on the AUTO mode

If one of the four corners of the "IntelliLight" window is covered or if the window goes beyond the screen border, the GPE effect turns off.



You can adjust the picture contrast or brightness of the screen outside of the "IntelliLight" window. The "IntelliLight" window always remains clear and sharp regardless of the adjustments made to the rest of the screen.

■ MODE 1

Higher contrast is applied across the entire screen. MODE 1 is designed to enhance still image presentations.

✓ Note on MODE 1

Whenever the screen resolution is changed, power saving activated, or power turned off, MODE 1 is cancelled and GPE returns to the AUTO mode.

■ MODE 2

Higher contrast and sharpness is applied across the entire screen. MODE 2 is designed to enhance graphic games and movie/video presentations.

✓ Note on MODE 2

Whenever the screen resolution is changed, power saving activated, or power turned off, MODE 2 is cancelled and GPE returns to the AUTO mode.



MODE 2 may produce ghost images when displaying text oriented applications. In this case, select the AUTO or OFF mode.

■ GPE OFF mode

Screen sharpness and brightness are set to standard quality without any additional enhancements. This mode is suited for text-based applications.

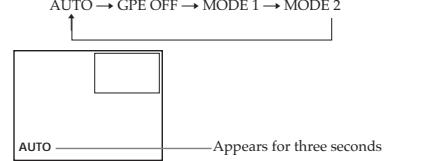
✓ Note on the GPE OFF mode

Once OFF mode is selected, GPE status stays in the OFF mode until you manually select other GPE modes.

Selecting the GPE mode

Press the GPE button repeatedly until the screen message of the desired mode is displayed.

Each time you press the GPE button, the GPE mode changes as follows:



The GPE indicator lights up when AUTO, MODE 1 or MODE 2 is selected.

Power Saving Function

This display meets the power saving guidelines set by the International ENERGY STAR Program. It is capable of reduced power consumption when used with a computer equipped with Display Power Management Signaling (DPMs). By sensing the absence of the sync signal coming from the computer, it will reduce the power consumption as follows:

✓ CAUTION

The Power Saving function will automatically put the display into Deep Sleep mode if the power switch is turned on without any video signal input. Once the horizontal and vertical syncs are sensed, the display will automatically return to its Normal Operation mode.

Mode	Power consumption	Recovery time	① Power indicator
1 Normal Operation	CPD-101VS: 110 W (max) CPD-201VS: 120 W (max)	—	Green
2 Sleep	15 W (max)	Approx. 3 sec.	Green \leftrightarrow Orange
3 Deep Sleep	8 W (max)	Approx. 10 sec.	Orange
4 Power-off	0 W	—	Off

Troubleshooting

This section may help you isolate a problem and as a result, eliminate the need to contact technical support, allowing continued productivity.

No picture

If the \odot indicator is not lit

- Check that the power cord is properly connected.
- Check that the \odot switch is in the "on" position.

If the "NO INPUT SIGNAL" message appears on the screen, or if the \odot indicator is either orange or alternating between green and orange

- Try pressing any key on the computer keyboard.
- Check that your computer power switch is in the "on" position.
- Check that the video signal cable is properly connected and all plugs are firmly seated in their sockets.
- Ensure that no pins are bent or pushed in the HD15 video input connector.

If the "OUT OF SCAN RANGE" message appears on the screen

- Check that the video frequency is within that specified for the display.
Horizontal: 30 - 70 kHz
Vertical: 50 - 120 Hz
Refer to your computer's instruction manual to adjust the video frequency range.
- If you are using a video signal cable adapter, check that it is the correct one.

If no message is displayed and the \odot indicator is green or flashing orange

- See "Self-diagnosis function" (page 39).

No sound from speaker

If the \otimes indicator is displayed

- Press the \otimes button to cancel muting.

→ Check that the audio plug is properly connected.

→ Adjust the volume with $\triangle +/-$ buttons.

→ Check that the headphones are not connected.

→ Check the volume control, muting, sound selector, etc. of the sound board. (See the computer's manual.)

Microphone mixing is not possible

→ Check that the MIC plug is properly connected.

- Check the microphone control, sound selector, etc. of the sound board. (See the computer's manual.)

Howling (feedback) is heard

- Decrease the volume with $\triangle +/-$ buttons, or turn down the microphone input volume of the sound board.

Picture is scrambled

- Check your computer manual for the proper display setting.
- Check this manual and confirm that the graphic mode and the frequency you are trying to operate is supported. Even if the frequency is within the proper range, some video boards may have a sync pulse that is too narrow for the display to sync correctly.

Color is not uniform

- Degauss the display (page 27).

If you place equipment which generates a magnetic field, such as a speaker, near the display, or you change the direction of the display, color may lose uniformity. The degauss function demagnetizes the metal frame of the CRT to obtain a neutral field for uniform color reproduction. If a second degauss cycle is needed, allow a minimum interval of 20 minutes for the best result.

Screen image is not centered or sized properly

- Adjust the size or centering (pages 22, 23).
- Some video modes do not fill the screen to the edge. This problem tends to occur with certain video boards.

Edges of the image are curved

- Adjust the geometry (page 24).

Picture is fuzzy

- Adjust the contrast and brightness (page 21). Some brands of video boards have an excessive video output level which creates a fuzzy picture at maximum contrast.

- Degauss the display (page 27).

If you place equipment which generates a magnetic field, such as a speaker, near the display, or you change the direction of the display, color may lose uniformity. The degauss function demagnetizes the metal frame of the CRT to obtain a neutral field for uniform color reproduction. If a second degauss cycle is needed, allow a minimum interval of 20 minutes for the best result.

- If moiré is cancelled, the picture may become fuzzy. Decrease the moiré cancellation effect (page 26).

- If the GPE mode is set to AUTO, change it to OFF (page 32).

Continued to the next page ➔

Picture bounces or has wavy oscillations

- Isolate and eliminate any potential sources of electric or magnetic fields. Common causes for this symptom are electric fans, fluorescent lighting, laser printers, etc.
- If you have another display close to this display, increase the distance between them to reduce interference.
- Try plugging the display into a different AC outlet, preferably on a different circuit.

Picture is flickering

- Set the refresh rate on the computer to obtain the best possible picture by referring to your computer's manual.
- If the GPE mode is set to AUTO, change it to OFF (page 32).

Picture appears to be ghosting

- Eliminate the use of video extensions and / or video switch boxes if this symptom occurs. Excessive cable length or weak connections can produce this symptom.
- If the GPE mode is set to AUTO, change it to OFF (page 32).
- If the GPE mode is set to MODE 2, the picture may appear to be ghosting. Set to another GPE mode (page 32).

Wavy or elliptical (moiré) pattern is visible

- Cancel the moiré (page 26).
- The moiré may be modified depending on the connected computer.
- Due to the relationship between resolution, display dot pitch and the pitch of some image patterns, certain screen backgrounds sometimes show moiré. Change your desktop pattern.

IntelliLight does not work

- Check that all four corners of the "IntelliLight" window are clearly displayed and are not covered by another window.
- Check that the GPE mode is set to AUTO (page 32).
- Leave the display's power "on" and reboot your computer.
- IntelliLight does not work correctly with an interlaced video mode. Check the vertical refresh rate in the Properties window of Windows 95/98 and select a non-interlaced mode.

Tiny color bars appear in the corners of the IntelliLight window

- Set the GPE mode to AUTO (page 32).
- Check that all four corners of the "IntelliLight" window are clearly displayed and are not covered by another window.

A fine horizontal line (wire) is visible

- This wire stabilizes the vertically striped Aperture Grille (page 16). This Aperture Grille allows more light to pass through to the screen giving the Trinitron CRT more color and brightness.

Hum is heard right after the power is turned on

- When the power is turned on, the Auto-degauss cycle is activated. While the Auto-degauss cycle is activated, a hum may be heard. The same hum is heard when the display is manually degaussed. This is not a malfunction.

- If the problem persists, call your authorized Sony dealer from a location near you, or call Sony Technical Support at 1-888-4SONYPC (1-888-476-6972).
- Note the model name and the serial number of your display. Also note the make and name of your computer and video board.

Self-diagnosis function

This display is equipped with a self-diagnosis function. Use this function if there is a problem with your display or computer.

1. Disconnect the video input cable or turn off the connected computer.
2. Turn the display off and on.
3. Press and hold the $\odot \rightarrow$ button for more than 2 seconds.

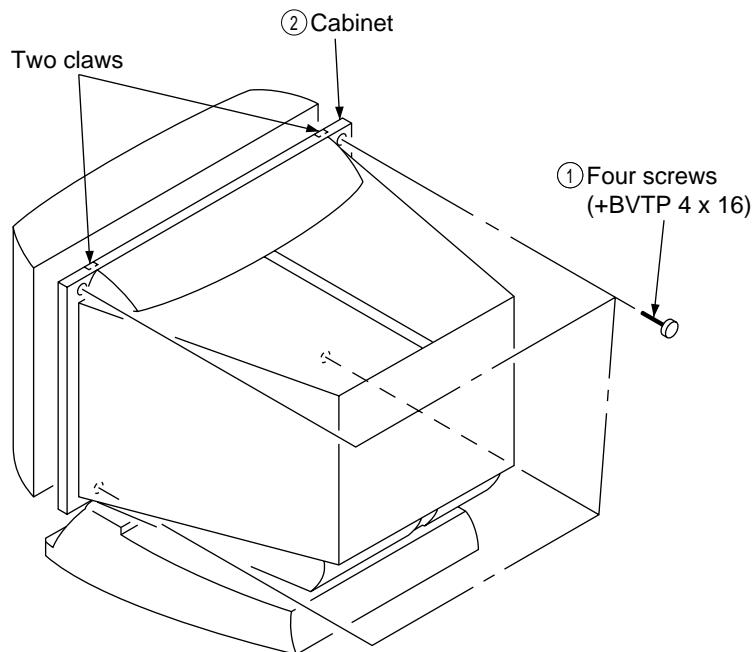
If all four color bars appear (white, red, green, blue) after a few seconds, the display is working properly, but there might be a problem with your computer. Contact your computer's manufacturer.

If the color bars do not appear, there might be a problem with the display. Contact your local authorized Sony dealer, or call Sony Technical Support at 1-888-4SONYPC (1-888-476-6972).

SECTION 2 DISASSEMBLY

CPD-201VS

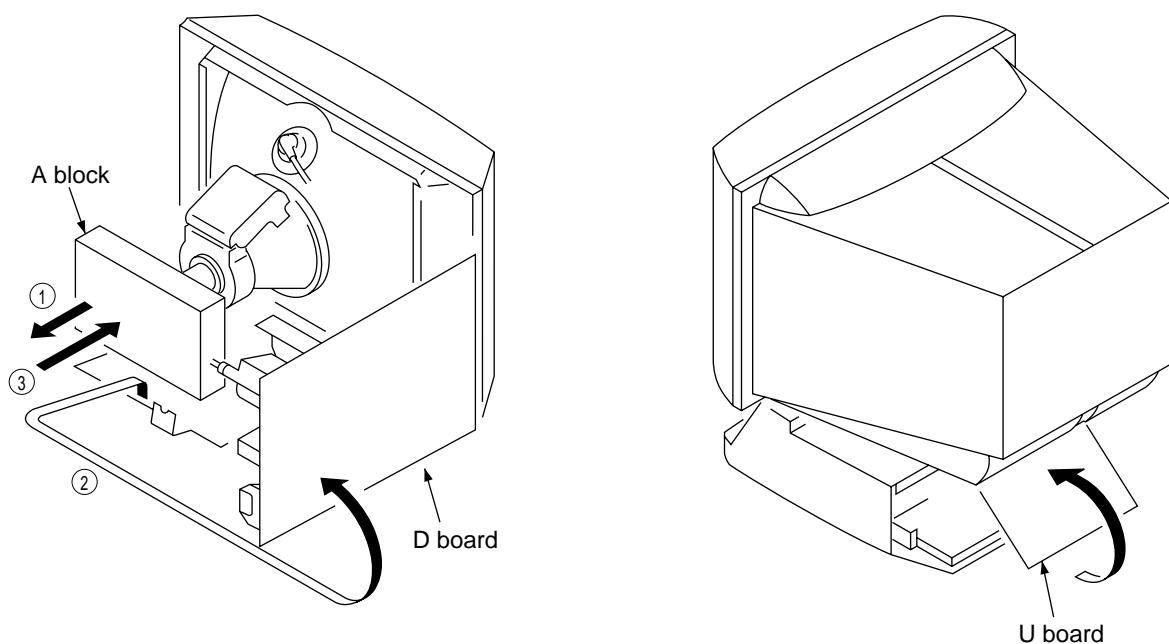
2-1. CABINET REMOVAL



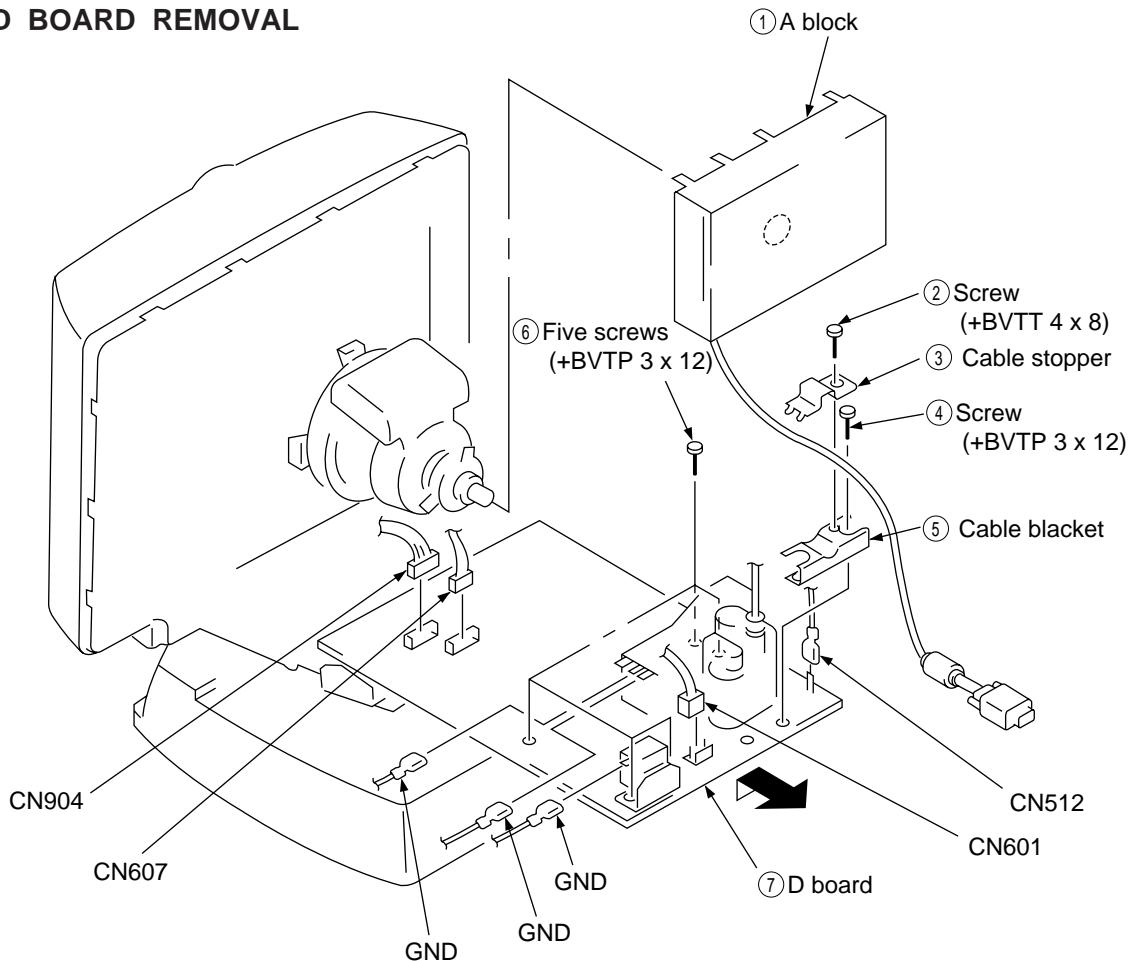
2-2. SERVICE POSITION

(1) D board

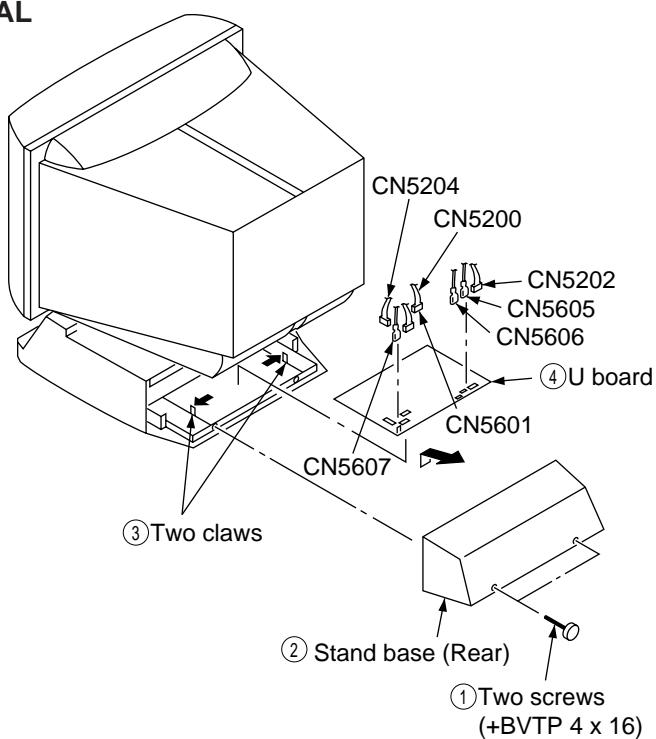
(2) U board



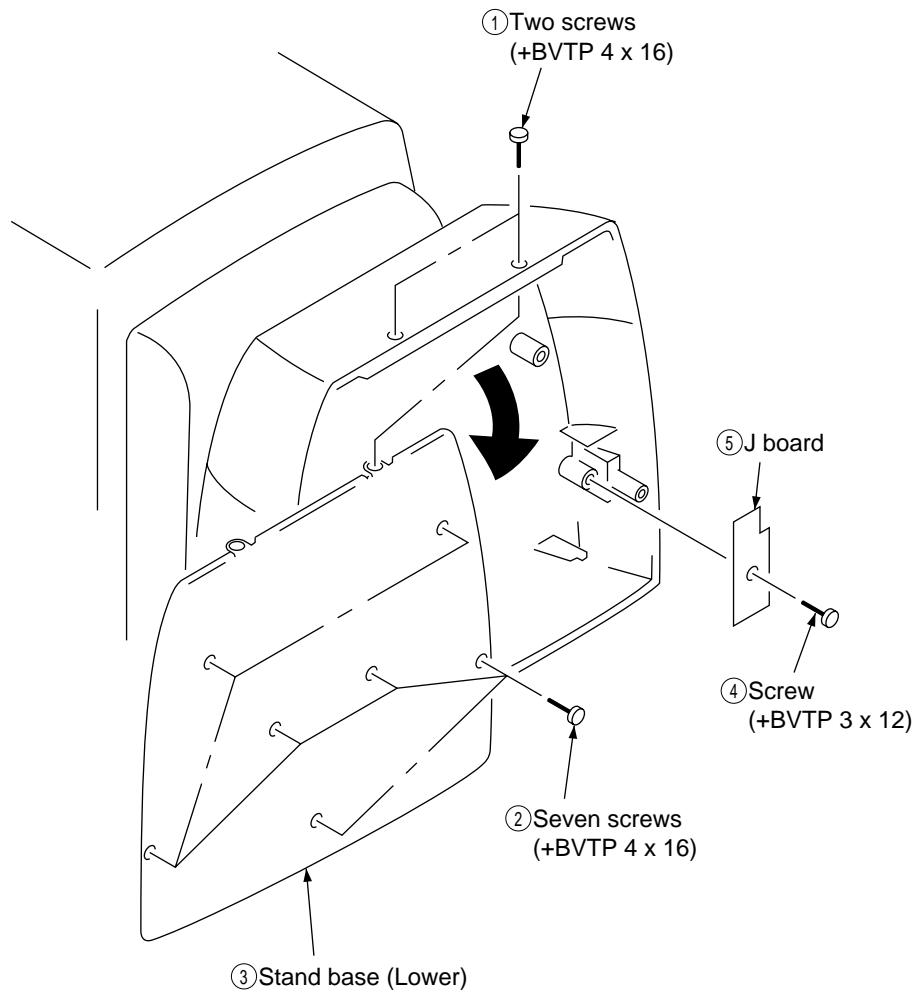
2-3. D BOARD REMOVAL



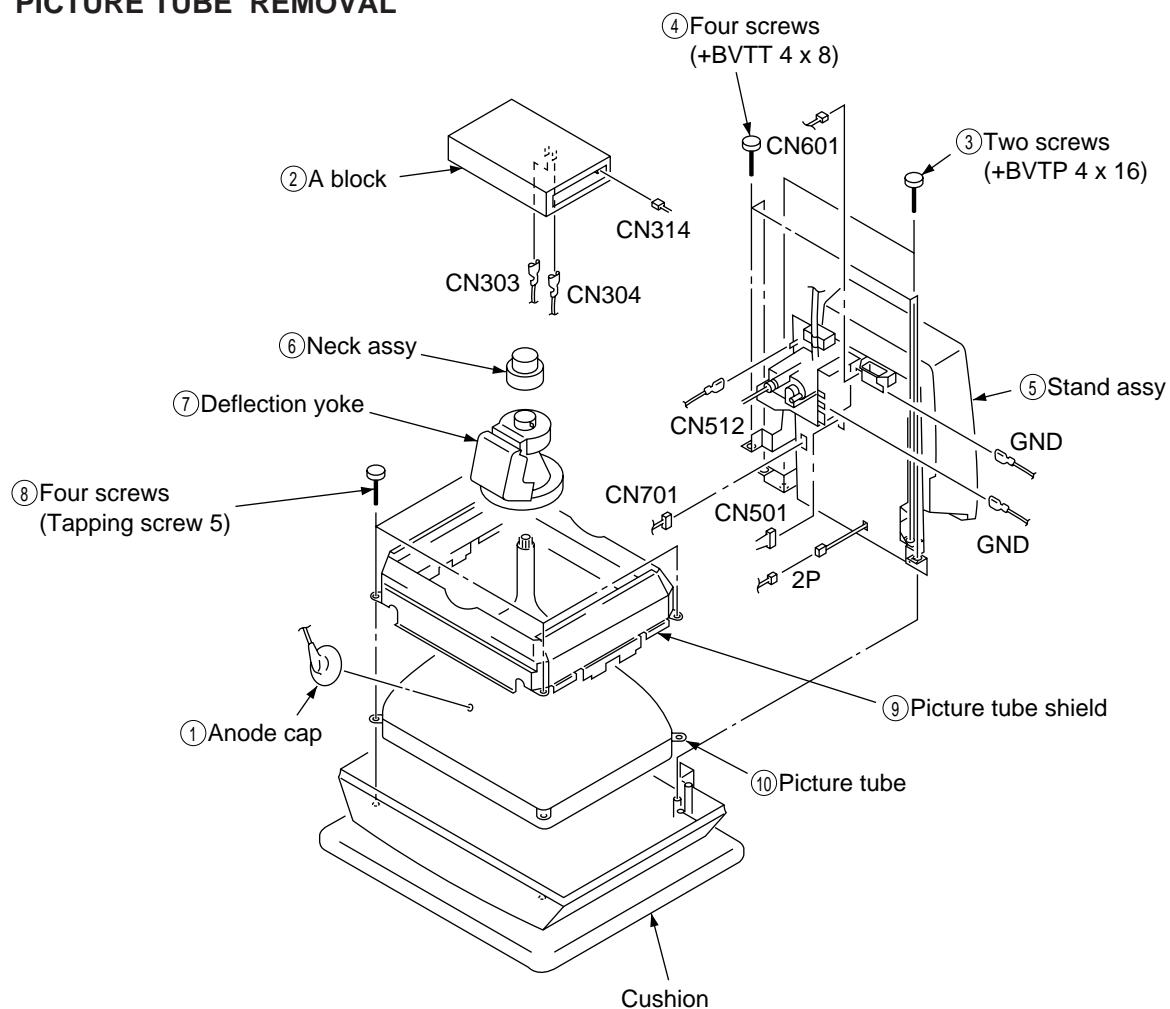
2-4. U BOARD REMOVAL



2-5. J BOARD REMOVAL



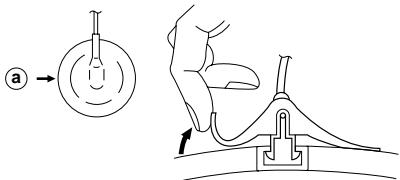
2-6. PICTURE TUBE REMOVAL



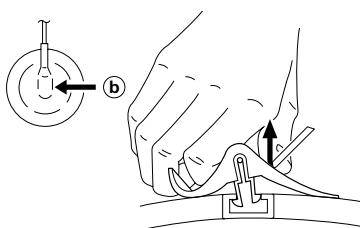
• REMOVAL OF ANODE-CAP

NOTE: Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon painted on the CRT, after removing the anode.

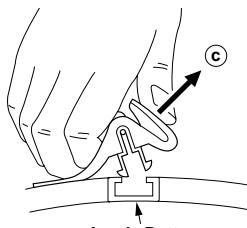
• REMOVING PROCEDURES



- ① Turn up one side of the rubber cap in the direction indicated by the arrow ④.



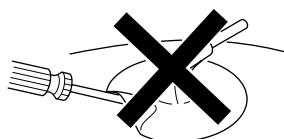
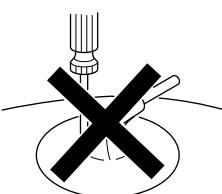
- ② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ⑤.



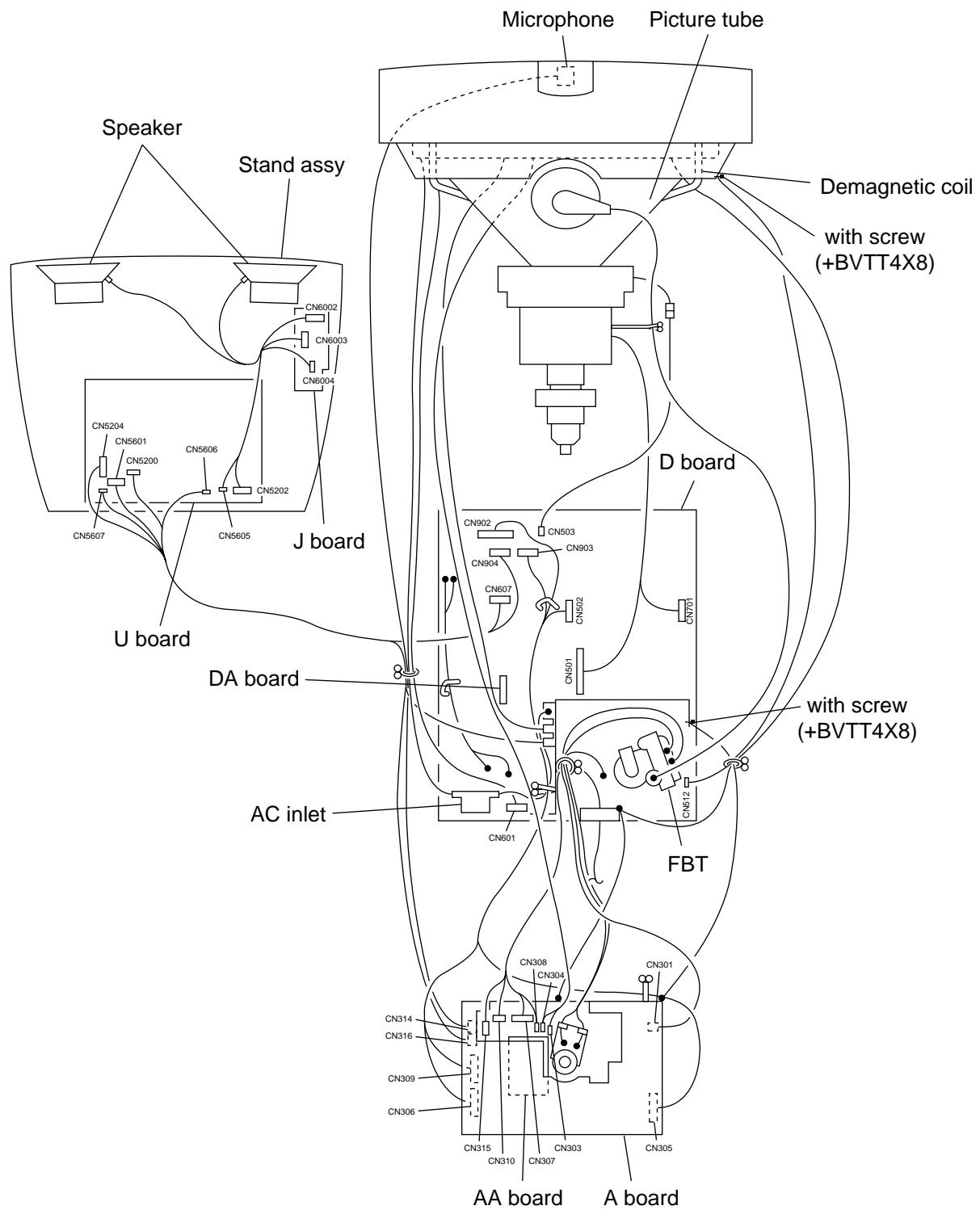
- ③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow ⑥.

• HOW TO HANDLE AN ANODE-CAP

- ① Don't hurt the surface of anode-caps with sharp shaped material!
- ② Don't press the rubber hardly not to hurt inside of anode-caps!
A material fitting called as shatter-hook terminal is built in the rubber.
- ③ Don't turn the foot of rubber over hardly!
The shatter-hook terminal will stick out or hurt the rubber.



2-7. HARNESS LOCATION



SECTION 3

SAFETY RELATED ADJUSTMENT

When replacing or repairing the shown below table, the following operational checks must be performed as a safety precaution against X-rays emissions from the unit.

	Part Replaced (☒)
HV ADJ	RV501

	Part Replaced (☒)
HV Regulator Circuit Check	D board IC501, C553, C554, C555, C558, C561, R540, R564, R567, RV501, T501 (FBT)
HV Hold-down Circuit Check	D board IC603, IC901, D515, D517, C540, C542, C544, R543, R547, R549, R552, T501 (FBT)
Beam Current Protector Circuit Check	D board IC603, IC604, IC901, C535, C541, R515, R545, R546, R548, R550, R934, T501 (FBT)

* Confirm one minute later turning on the power.

• HV Protector Circuit Check

Confirm that the voltage between cathode of D517 on D board and GND is more than 28.5 V DC and Using external DC Power Supply, apply the voltage shown below between cathode of D517 and GND, and confirm that the HV HOLD DOWN circuite works. (TV Rester disappears)

Standard voltage : Less than 31.70 V DC

Check Condition

- Input voltage : 100 – 120 V AC
- Input signal : White Cross hatch at Max fH
- Beam control : CONT : 255, BRT : 80

• Beam Current Protector Check

Connect a variable resistor (20 kΩ or more) and an ammeter in series between FBT pin ⑪ on D board and -15 V line. Decrease gradually the resistance of the variable resistor from maximum to minimum, and confirm that the Beam Current Protector Circuite works (TV Rester disappears). The current must be within the range shown below.

• Standard current : Less than 1.50 mA

Check Condition

- Input voltage : 100 – 120 V AC
- Input signal : White Cross hatch at Max fH
- Beam control : CONT : 255, BRT : 80

• B+ Voltage Check

Standard voltage : 150.0 ± 3.0 V DC

Check Condition

- Input voltage : 100 – 120 V AC
Note : Use NF power supply or make sure that distortion factor is 3% or less.
- Input signal : White Cross hatch at 64.0 kHz
- Beam control : CONT : 255, BRT : 80

SECTION 4

ADJUSTMENTS

CPD-201VS

• Landing Rough Adjustment

1. Enter the full white signal. (or the full black dots signal)
2. Set the contrast to "CONT"=MAX.
3. Make the screen monogreen.
- Note: Off the outputs from R ch and B ch of SG.
4. Reverse the DY, and adjust coarsely the purity magnet so that a green raster positions in the center of screen.
5. Moving the DY forward, adjust so that an entire screen becomes monogreen.
6. Adjust the tilt of DY, and fix lightly with a clamp.

• Landing Fine Adjustment

< Measurement condition >

Brightness : $\sum I_k$ (819μA)
 Magnetic field : BH=0, BV=45μT
 CRT size : 312 × 234
 Measurement point : 296 × 220
 Temperature : 25°C

After aging for 9 minutes and more than 3 hours, adjust so that it is exactly this value.

a1	a4	a7	[μm]
a2	a5	a8	
a3	a6	a9	

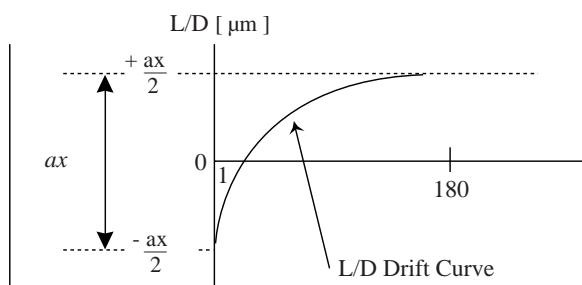
< Adjustment target >

After aging for 1 minute and more than 3 hours, adjust so that it is exactly this value.

$-\frac{a1}{2}$	$-\frac{a4}{2}$	$-\frac{a7}{2}$	$+\frac{a1}{2}$	$+\frac{a4}{2}$	$+\frac{a7}{2}$
$-\frac{a2}{2}$	$-\frac{a5}{2}$	$-\frac{a8}{2}$	$+\frac{a2}{2}$	$+\frac{a5}{2}$	$+\frac{a8}{2}$
$-\frac{a3}{2}$	$-\frac{a6}{2}$	$-\frac{a9}{2}$	$+\frac{a3}{2}$	$+\frac{a6}{2}$	$+\frac{a9}{2}$

1 minute

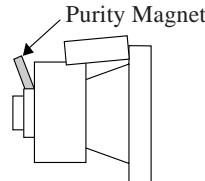
3 hours



1. Put the set inside the Helmholtz coil.
2. Input the single green signal.
3. Demagnetize the CRT surface with the hand degausser, and perform auto degaussing.
4. Attach the wobbling coil to the designated part of the CRT neck.

5. Attach the sensor of the landing adjustment unit on the CRT surface.

Purity magnet position



<<Zero Position>>



6. Adjust the DY position and purity, and the DY tilt.

L/D control specification

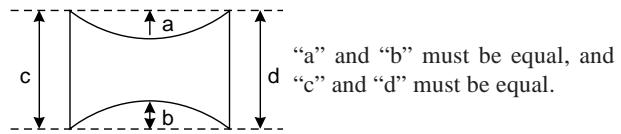
± 5	± 7	± 5
± 5	± 7	± 5
± 5	± 7	± 5

7. Fasten DY with screw.

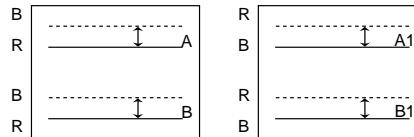
Note: Torque 22 ± 2 kgcm (2.2 ± 0.2 Nm)

Perform auto degaussing.

8. Adjust each top and bottom pins by two wedges, and also adjust swinging DY neck right-left by H.TILT and horizontal trapezoid, and then fix with two wedges.
 (When fixing DY with wedges, insert wedges completely so that the DY does not shake.)

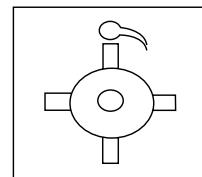


Signal : Inverted crosshatch (Make the monogreen)



"A" and "B",
 "A1" and "B1"
 must be equal.

<How to drive in wedges>



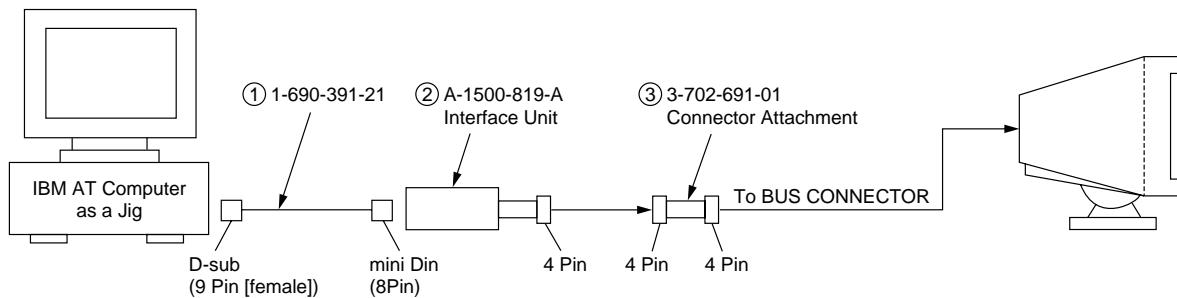
9. Check the landing of each corner, and if they do not satisfy the specification, paste a Disk-Mg onto the funnel and adjust.

Note:

- (1) When necessary to paste magnets more than 2 pieces, be careful that the convergence and the distortion would be alterable.
- (2) Paste within 80 to 120 mm from the DY on the diagonal line of the magnet.
10. If using the magnet, be sure to demagnetize with the de-gausser and check.
11. Remove the sensor and wobbling coil.
12. Check that the DY is not tilting.

CPD-201VS

Connect the communication cable of the computer to the connector located on the D board on the monitor. Run the service software and then follow the instruction.



*The parts above (①～③) are necessary for DAS adjustment.

• Convergence Rough Adjustment

1. Enter the white crosshatch signal (white lines on black).
2. Adjust roughly the horizontal and vertical convergence at four-pole magnet.
3. Adjust roughly HMC and VMC at six-pole magnet.
Standard: $\pm 0.1\text{mm}$ (In the center of screen)

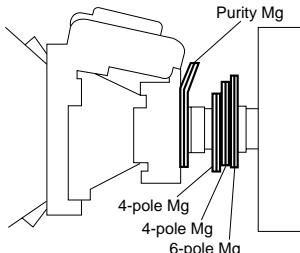


Fig. 1

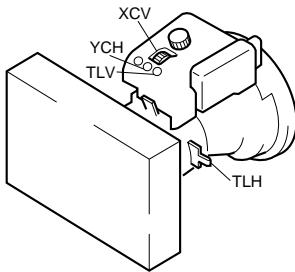
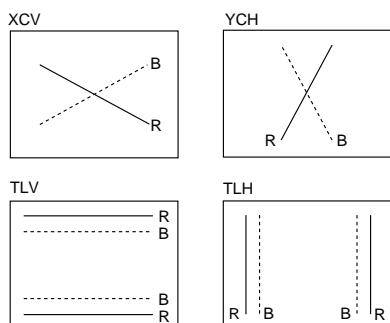


Fig. 2



<6 Pole Magnet>

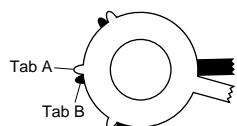
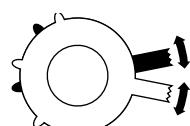
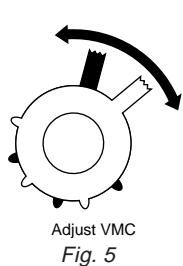


Fig. 3

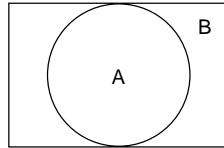


Adjust HMC



Adjust VMC

• Convergence Specification

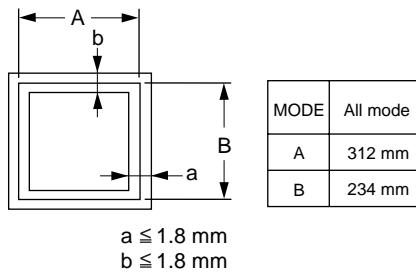


MODE	All mode
A	0.24 mm
B	0.30 mm

• White Balance Adjustment Specification

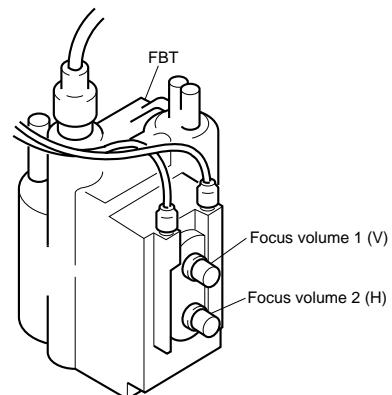
- | | |
|-------------------|-------------------|
| (1) 11000K | (2) 9300K |
| x = 0.274 ± 0.008 | x = 0.283 ± 0.008 |
| y = 0.287 ± 0.008 | y = 0.298 ± 0.008 |
| (3) 5000K | |
| x = 0.345 ± 0.008 | |
| y = 0.358 ± 0.008 | |

• Vertical and Horizontal Position and Size Specification



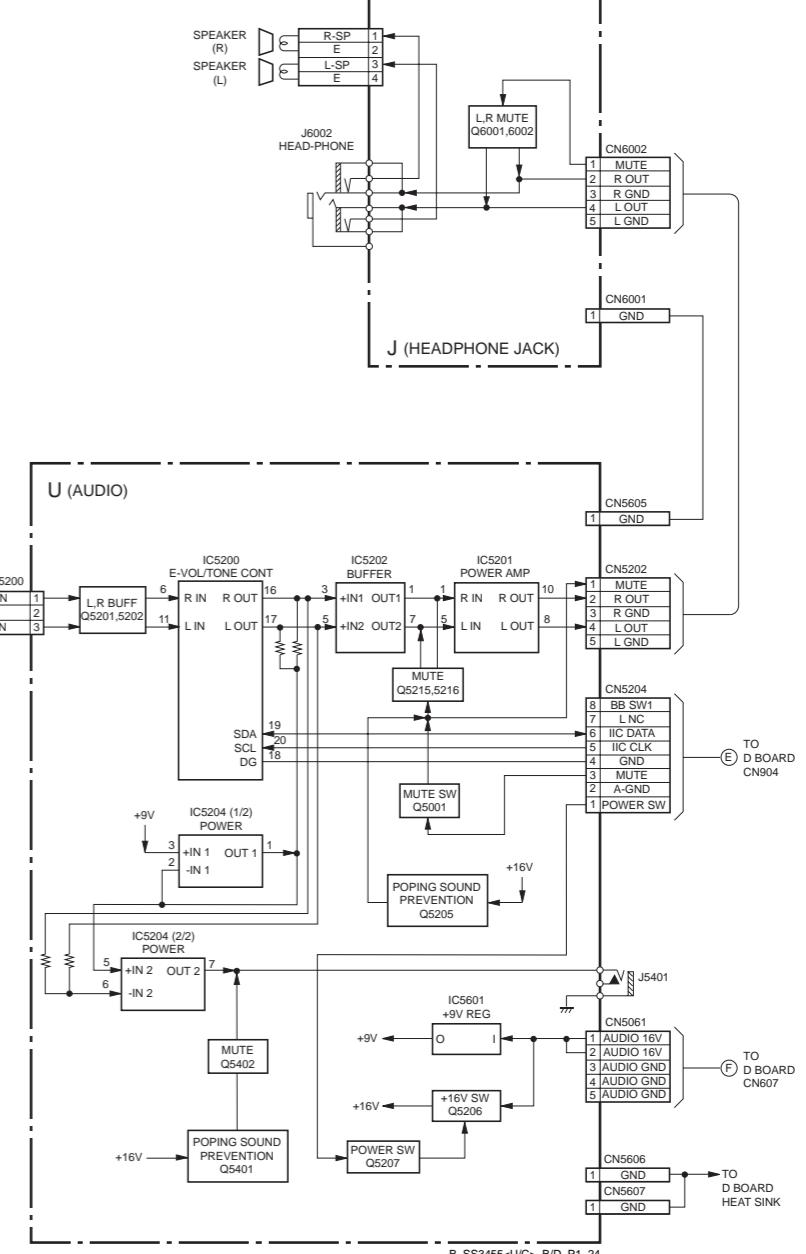
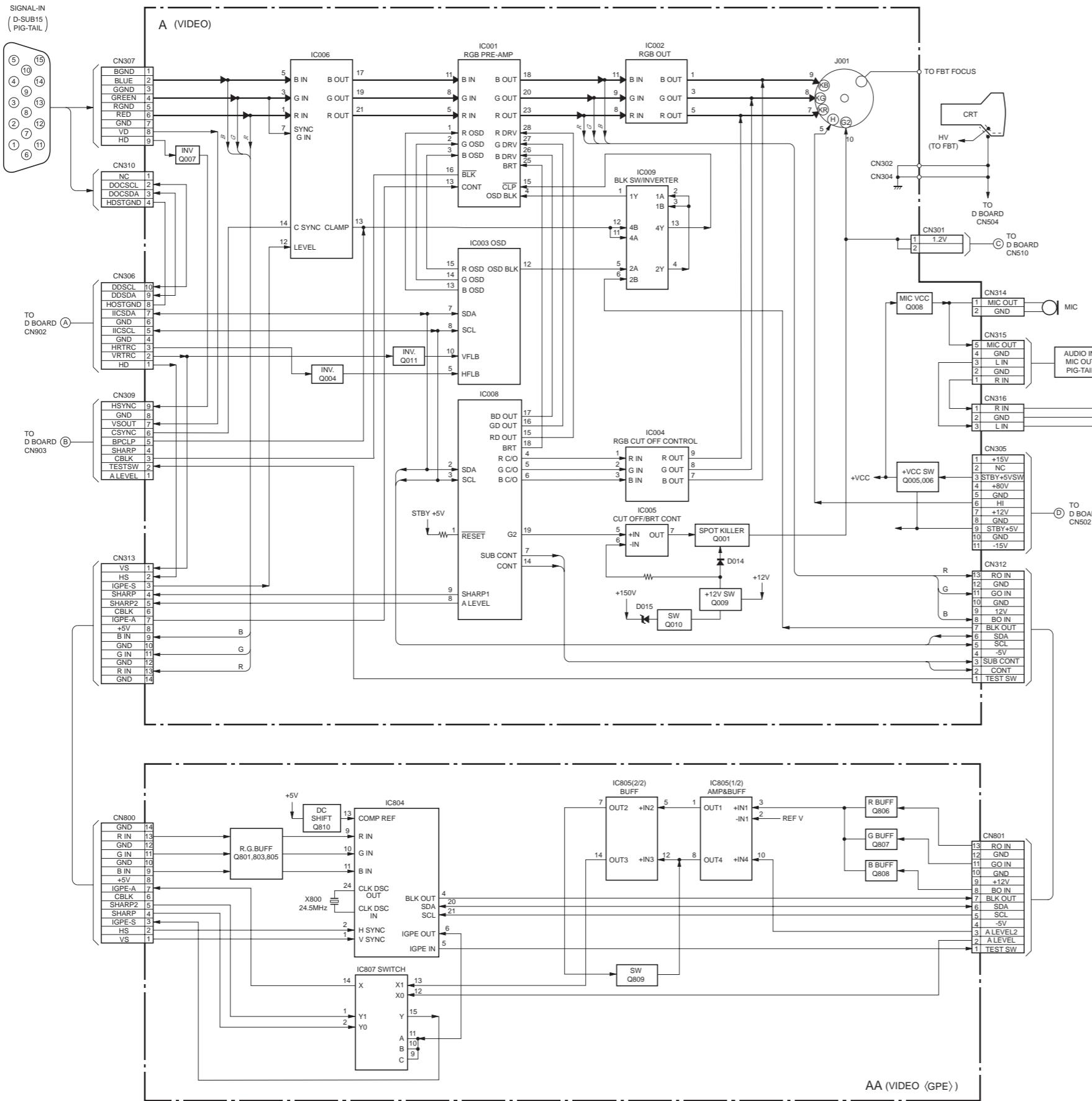
• Focus adjustment

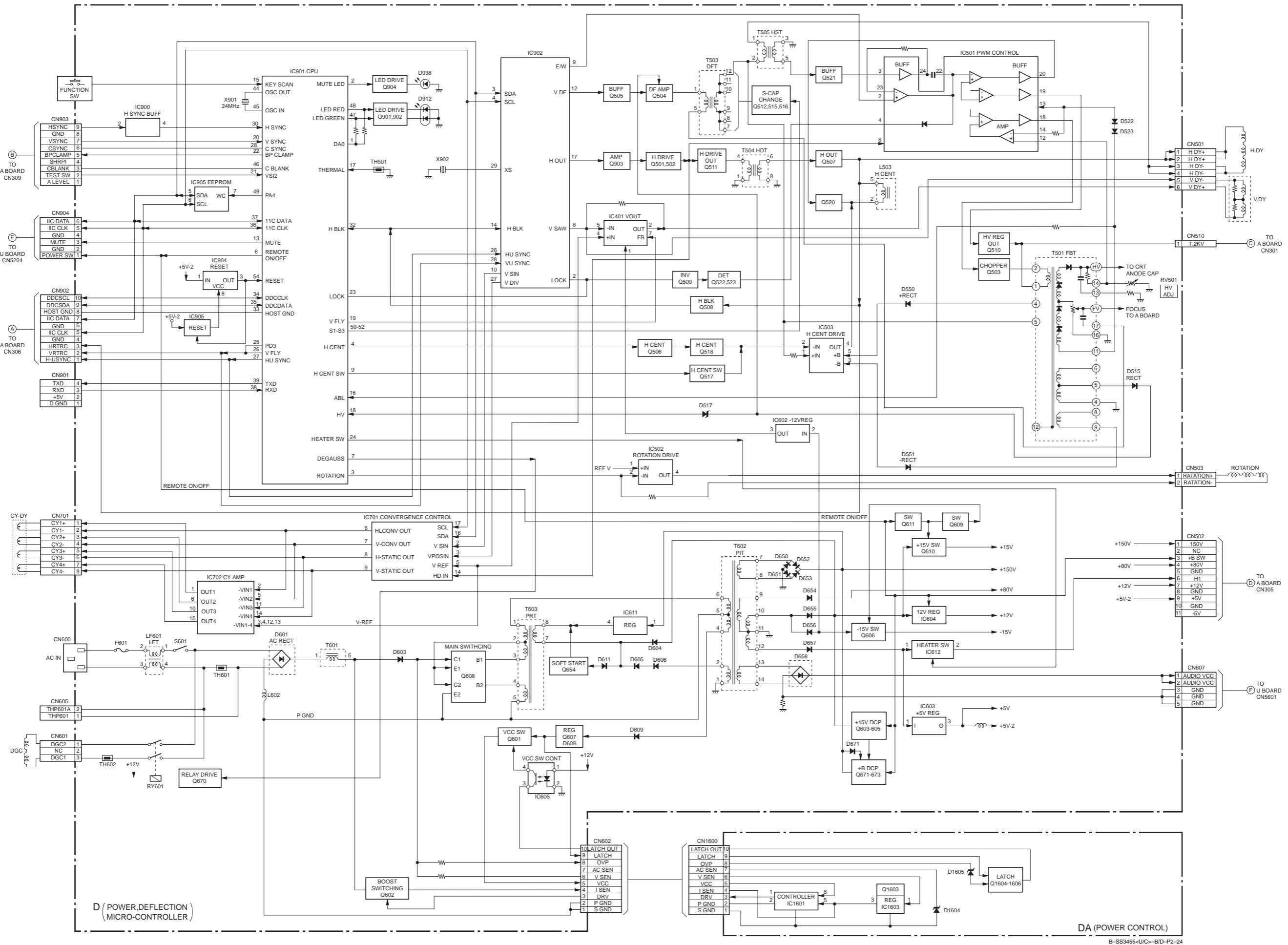
Adjust the focus volume 1 and 2 for the optimum focus.
Standard: HMC, VMC $\pm 0.1\text{ mm}$ (In the center of screen)



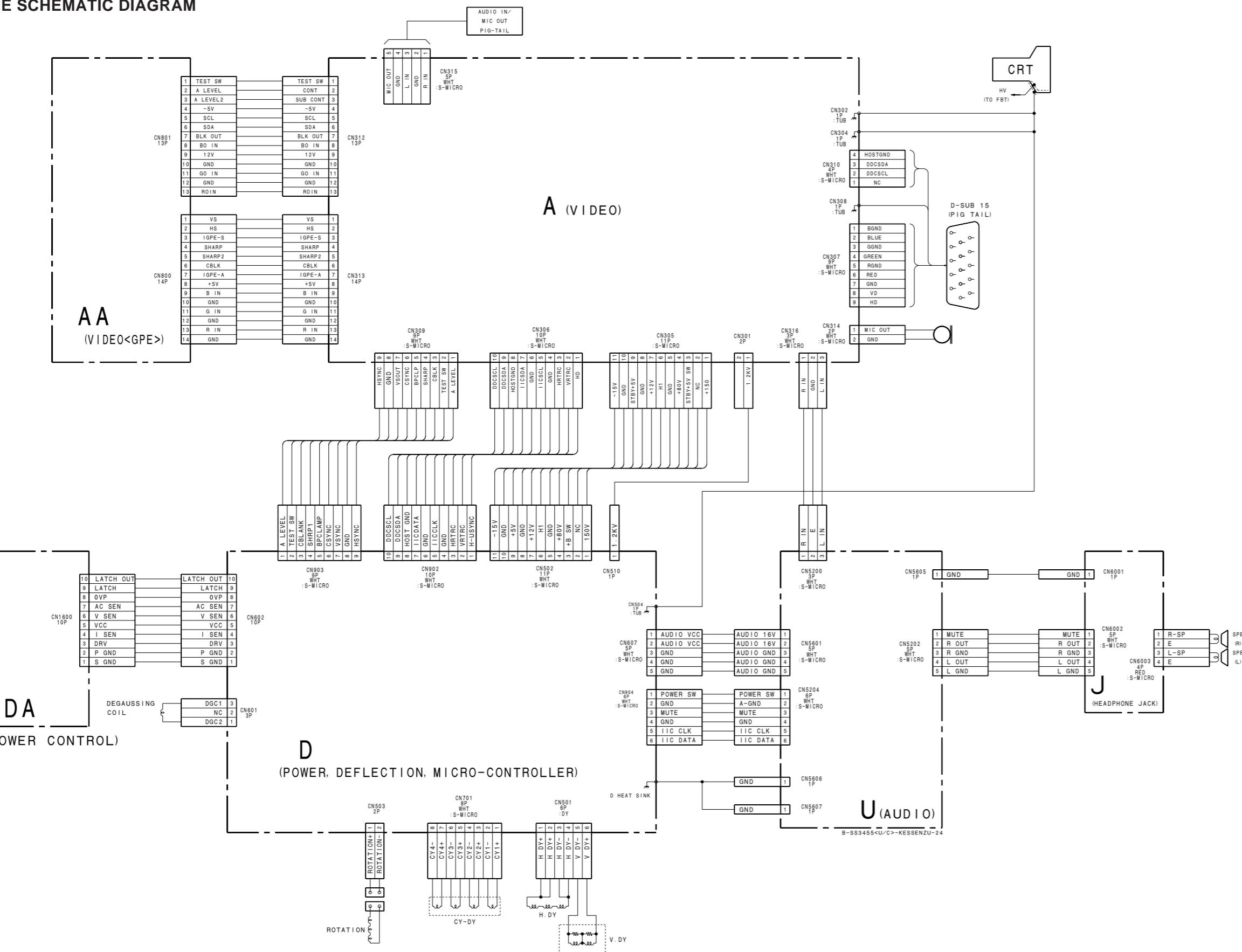
SECTION 5 DIAGRAMS

5-1. BLOCK DIAGRAMS

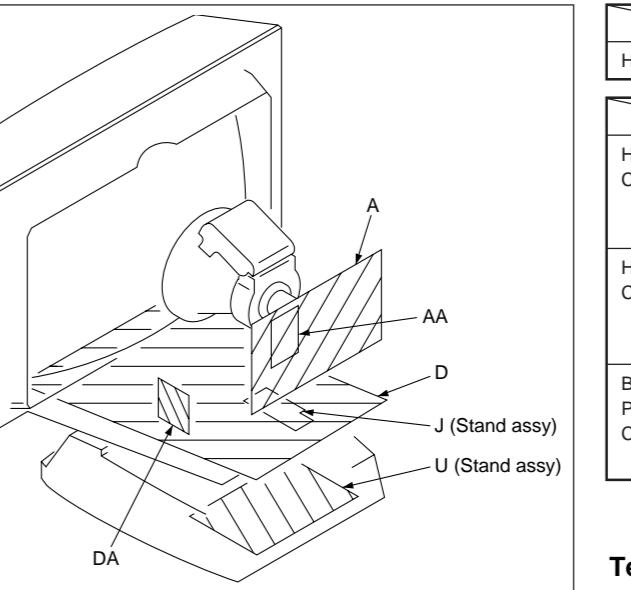




5-2. FRAME SCHEMATIC DIAGRAM



CIRCUIT BOARDS LOCATION



	Part replaced (<input checked="" type="checkbox"/>)	
J	RV501	
	Part replaced (<input checked="" type="checkbox"/>)	
ulator Check	D Board	IC501, C553, C554 C555, C558, C561 R540, R564, R567 RV501, T501 (FBT)
d-down Check	D Board	IC603, IC901, D515 D517, C540, C542 C544, R543, R547 R549, R552, T501 (FBT)
Current or Circuit	D Board	IC603, IC604, IC901 C535, C541, R515 R545, R546, R548 R550, R934, T501 (FBT)

SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

- capacitors are in μF unless otherwise noted. (pF: μpF)
capacitors without voltage indication are all 50 V.
ration of resistance, which does not have one for rating
rical power, is as follows.

ch: 5 mm

ting electrical power 1/4 W (CHIP : 1/10 W)

sistors are in ohms.

: nonflammable resistor.

: fusible resistor.

: internal component.

: panel designation, and adjustment for repair.

variable and adjustable resistors have characteristic curve B,
ss otherwise noted.

: earth-ground.

: earth-chassis.

oltages are in V.

lings are taken with a 10 M digital multimeter.

lings are taken with a color-bar signal input.

age variations may be noted due to normal production
ances.

: Can not be measured.

ed numbers are waveform references.

: B + bus.

: B - bus.

components identified by in this basic schematic diagram
been carefully factory-selected for each set in order to
fy regulations regarding X-ray radiation.

uld replacement be required, replace only with the value
nally used.

n replacing components identified by , make the
ssary adjustments indicated. (See page 3-1)

n replacing the part in below table, be sure to perform the
ed adjustment.

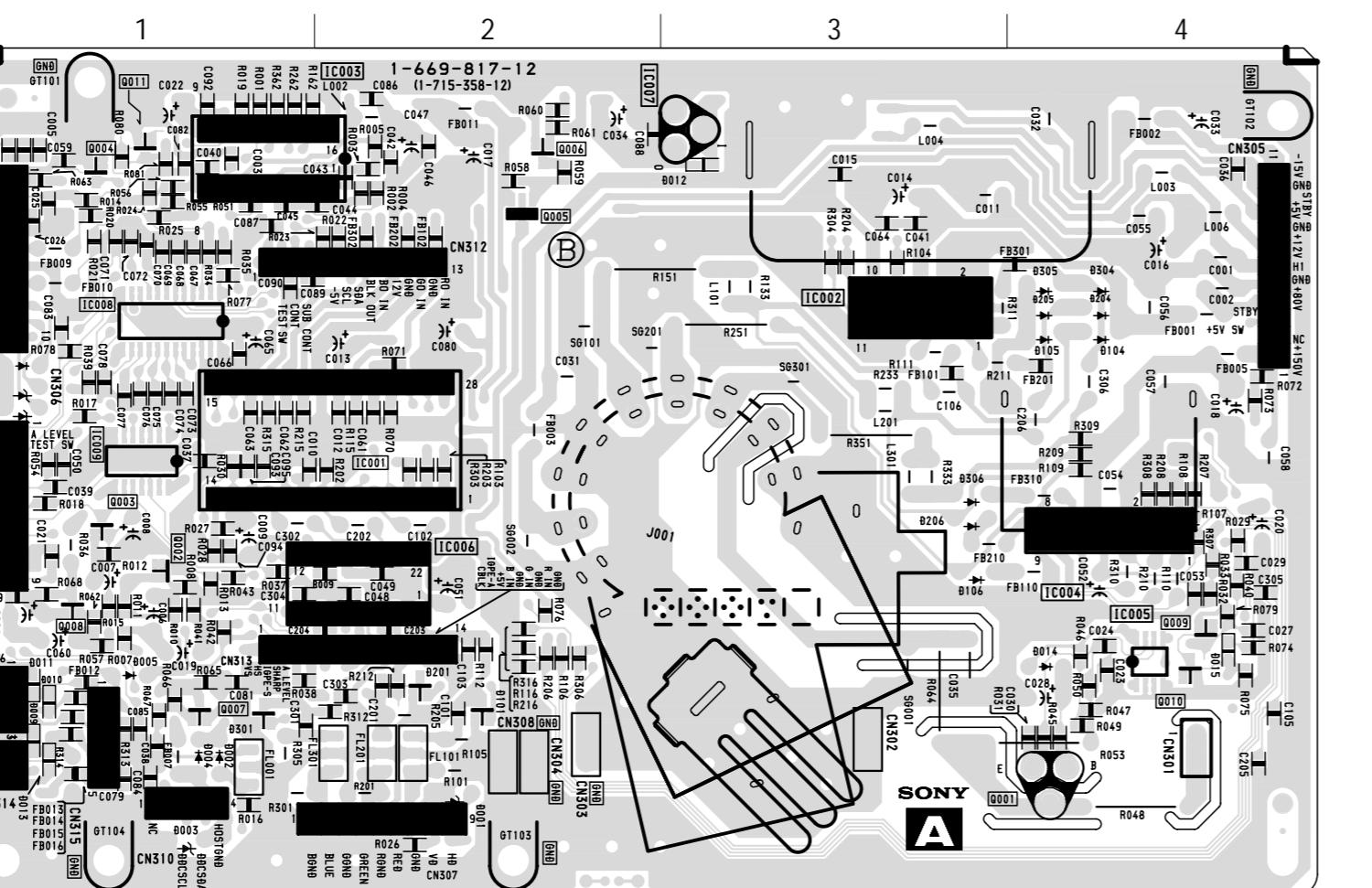
Note: The components identified by shading and mark  are critical for safety. Replace only with part number specified.

Device	Printed symbol	Terminal name	Circuit
Transistor	T	Collector Base Emitter	 
Transistor	—	Collector Base Emitter	 
Diode	F	Cathode Anode	
Diode	T	Cathode Anode (NC)	
Diode	—	Cathode Anode (NC)	
Diode	T	Common Anode Cathode	
Diode	—	Common Anode Cathode	
Diode	T	Common Anode Anode	
Diode	—	Common Anode Anode	
Diode	T	Common Cathode Cathode	
Diode	—	Common Cathode Cathode	
Diode		Anode Anode Cathode	
Transistor (T)		Drain Source Gate	
Transistor (T)	T	Drain Source Gate	
Transistor (T)		Source Drain Gate	
Transistor		Emitter Collector Base	 

Les composants identifiés par un tramé et une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

A [VIDEO]

— A BOARD (Conductor Side) —



• A BOARD SEMICONDUCTOR LOCATION

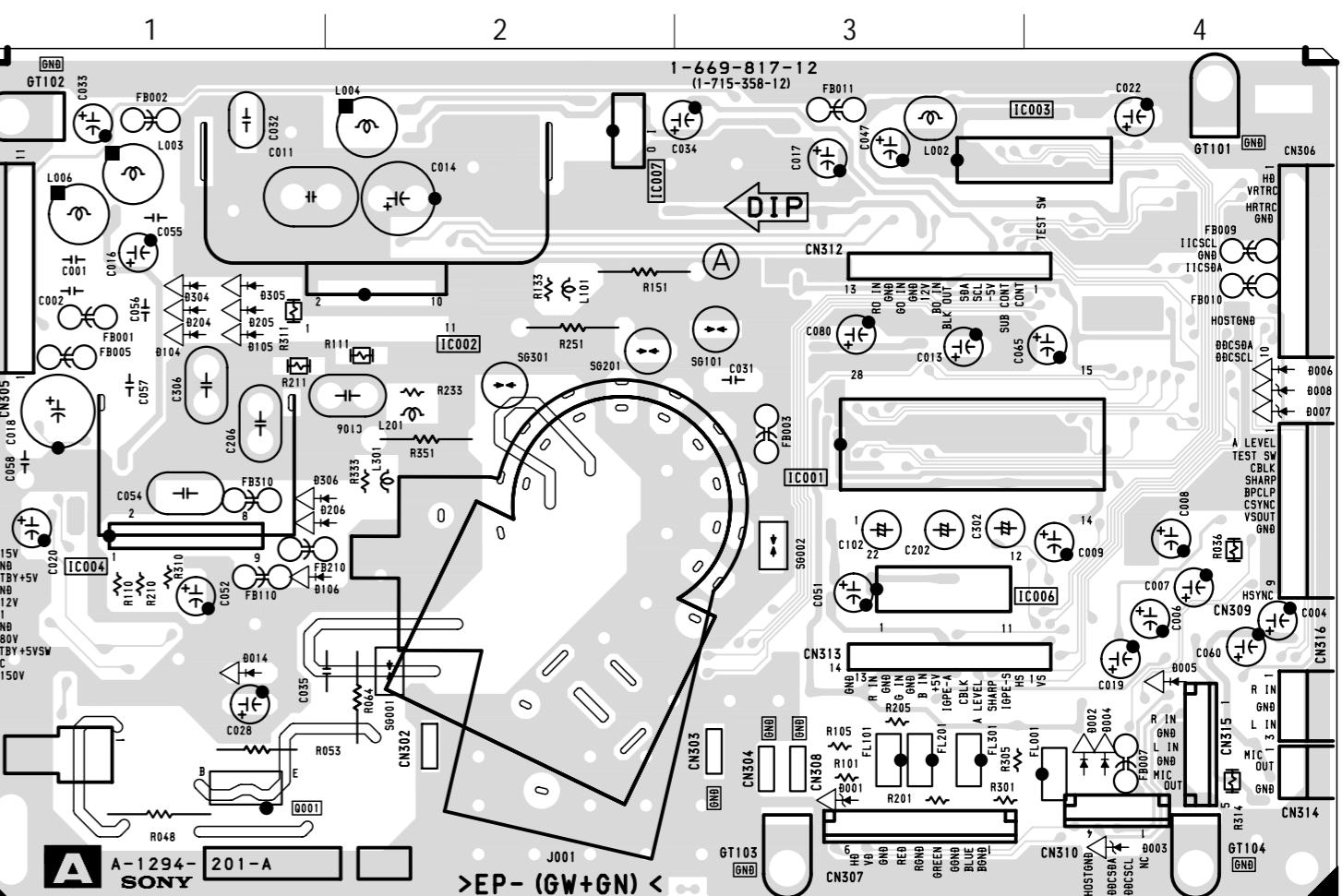
IC	
(Conductor Side)	(Component Side)
IC001	B-2
IC002	A-3
IC003	A-2
IC004	B-4
IC005	B-4
IC006	B-2
IC008	A-1
IC009	B-1

TRANSISTOR	
(Conductor Side)	(Component Side)
Q001	C-4
Q004	A-1
Q005	A-2
Q006	A-2
Q007	B-1
Q008	B-1
Q009	B-4
Q010	B-4
Q011	A-1

DIODE	
(Conductor Side)	(Component Side)
D001	C-2
D003	C-1
D005	B-1
D006	A-1
D007	B-1
D008	B-1
D009	B-4
D013	C-1
D014	B-4
D015	B-2
D101	B-2
D104	A-4
D105	A-4
D106	B-3
D201	B-2
D204	A-4
D205	A-4
D206	B-3
D301	B-1
D304	A-4
D305	A-4
D306	B-3

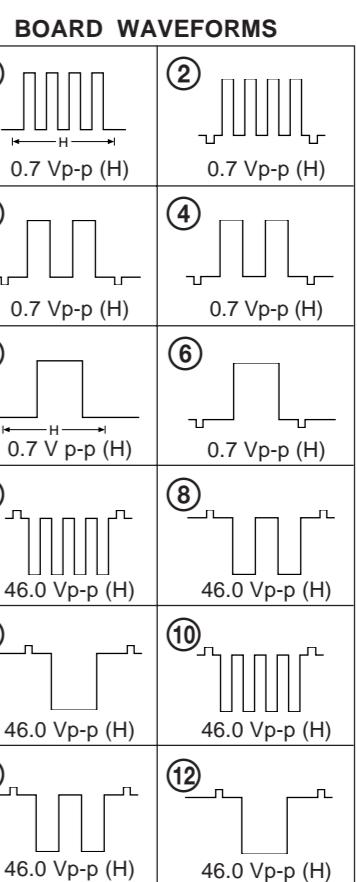
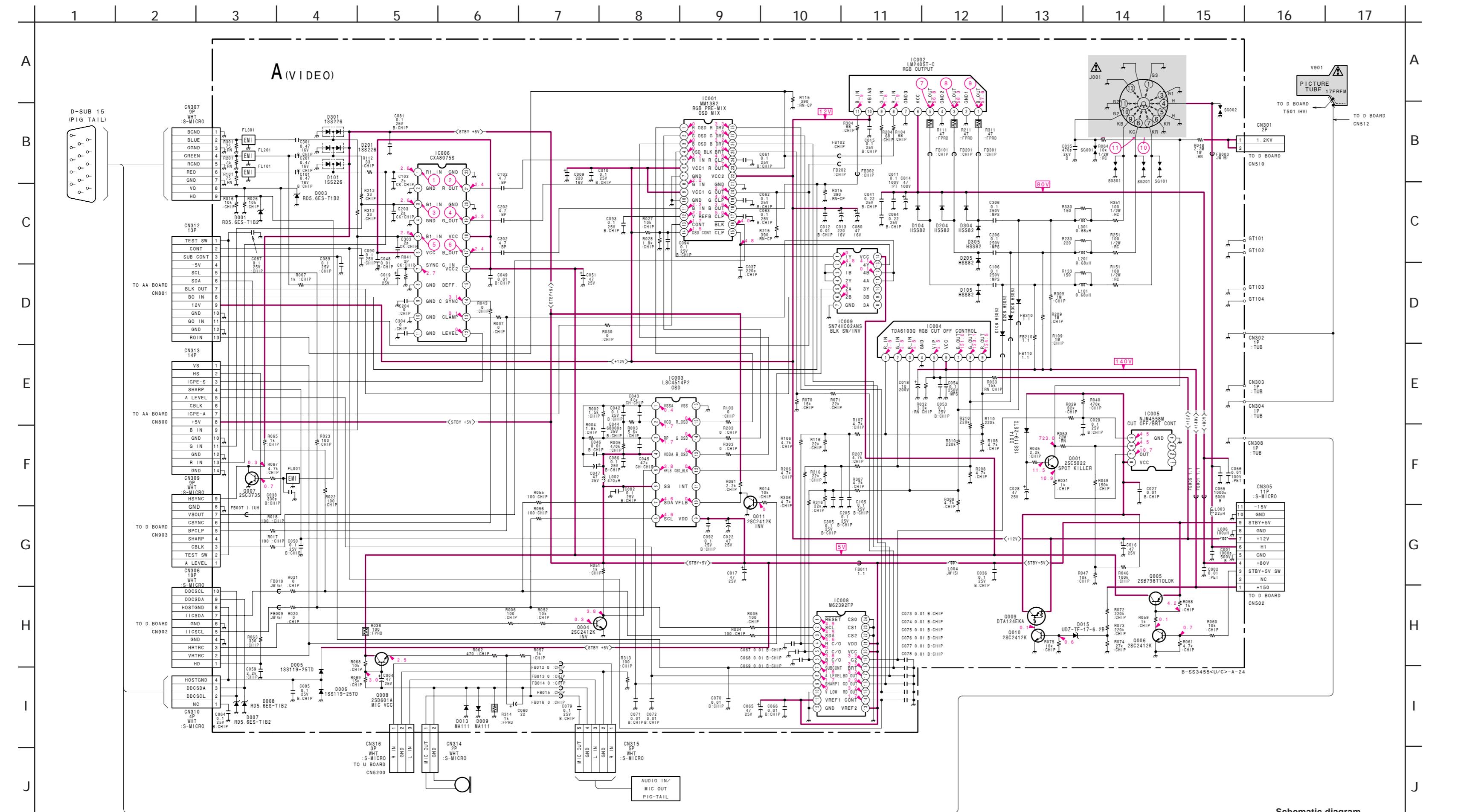
*: Refer to Terminal name of semiconductors
in silk screen printed circuit (see page 5-7)

— A BOARD (Component Side) —



NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

(1) Schematic Diagram of A Board



D

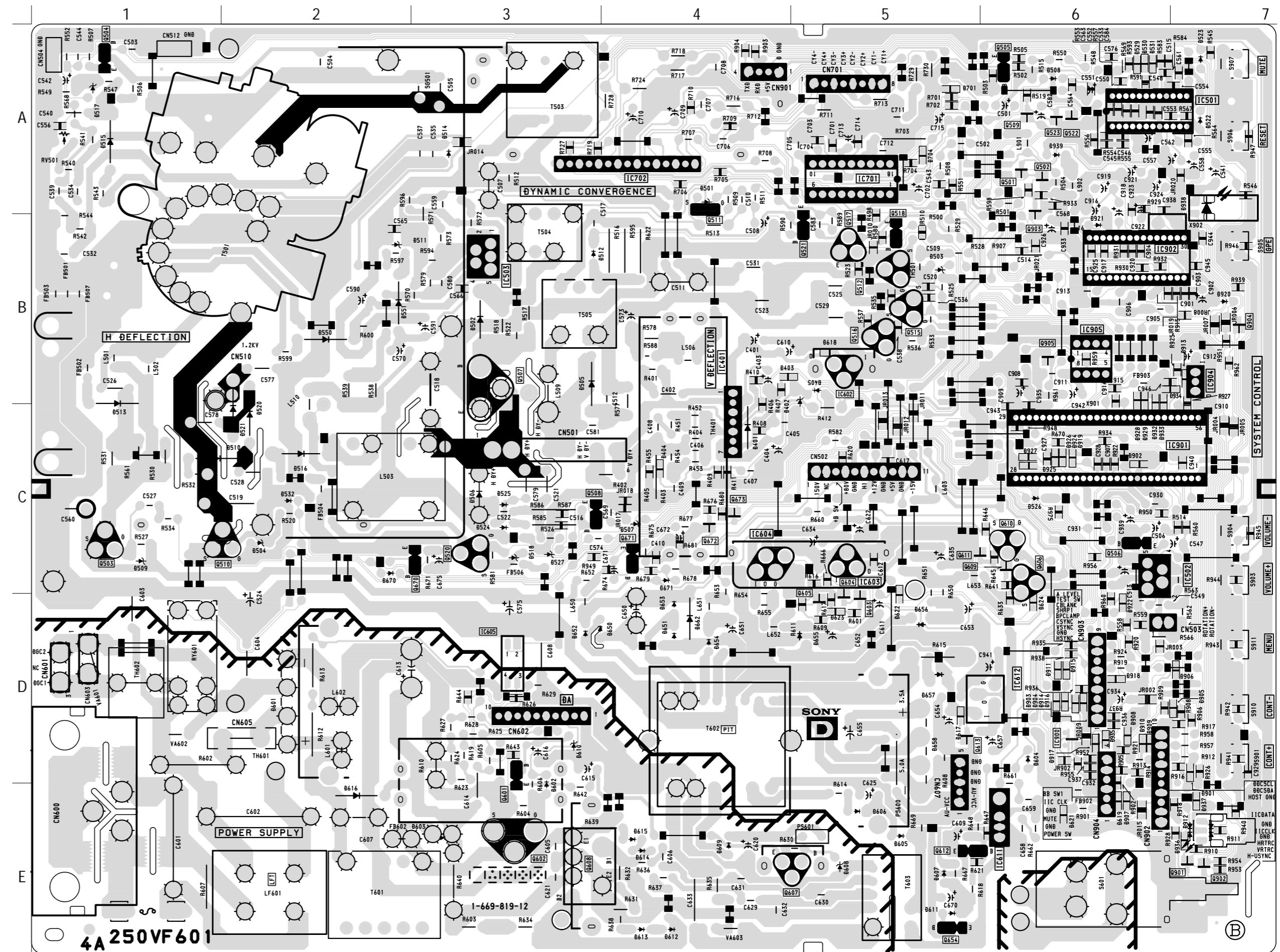
[POWER, DEFLECTION
MICRO-CONTROLLER]

• D BOARD
SEMICONDUCTOR LOCATION

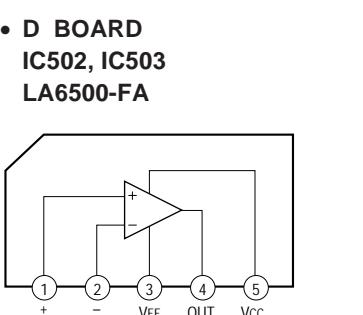
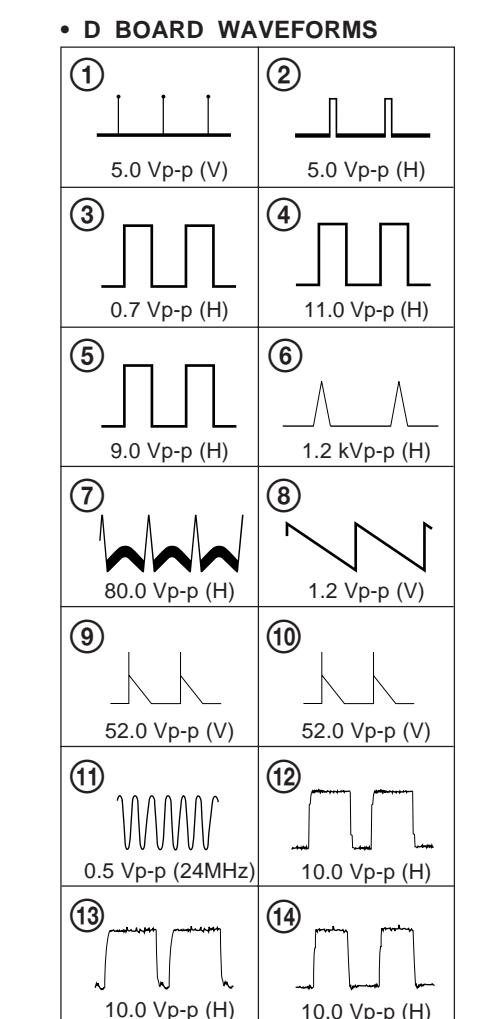
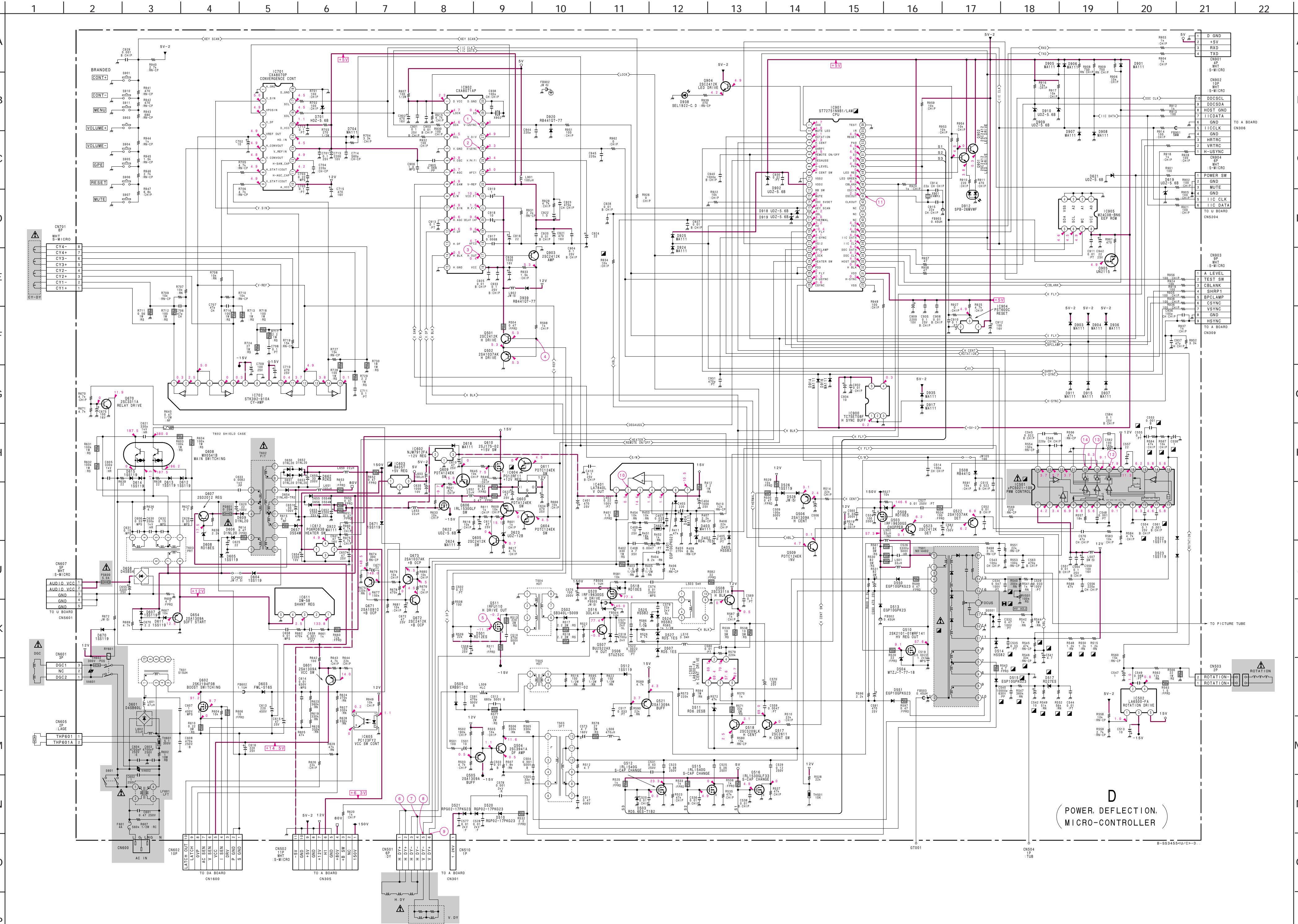
IC		A-1	-
D515	C-2		
D516	C-2		
D517	A-1		
D518	C-3		
D520	C-2		
D521	C-2		
D522	A-7		
D523	A-7		
D524	C-3		
D525	C-3		
D526	C-6		
D527	C-3		
D550	B-2		
D551	B-2		
D601	D-2		
D603	E-3		
D604	D-6		
D605	E-5	(③)	
D606	E-5		
D608	E-5		
D609	E-4		
D611	E-5		
D612	E-4		
D613	E-4		
D614	E-4		
D615	E-4		
Q501	A-6	①	*
Q502	A-6	①	*
Q503	C-1	-	
Q504	A-1	-	
Q505	A-6		
Q506	C-6		
Q507	B-3		
Q508	C-3		
Q509	A-6	①	
Q510	C-1	-	
Q511	A-4	-	
Q512	B-5	-	
Q515	B-5	-	
Q516	B-5	-	
Q517	B-5	-	
Q518	B-5	-	
Q520	C-3	-	
Q521	B-5	-	
Q522	A-6	①	
Q523	A-6	①	
Q601	E-3	-	
Q602	E-3	-	
Q603	D-5	①	
Q604	D-5	①	
Q605	D-5	①	
Q606	C-6	-	
Q607	E-4	-	
Q608	E-3	-	
Q609	C-6	①	
Q610	C-6	-	
Q611	C-5	①	
Q654	E-5	-	
Q670	C-3	-	
Q671	D-6	③	
Q672	C-4	①	
Q673	C-4	①	
Q901	E-7	①	
Q902	E-7	①	
Q903	B-6	①	
Q904	B-7	①	
Q905	B-6	①	
DIODE			
D401	C-4	-	*
D402	C-4	-	*
D403	B-5	③	
D404	C-4	③	
D405	C-5	-	
D501	A-4	-	
D502	B-3	-	
D503	B-5	-	
D504	C-2	-	
D506	C-3	-	
D507	C-4	-	
D508	A-6	-	
D509	C-1	-	
D510	C-2	-	
D511	B-2	-	
D512	B-3	-	
D513	C-1	-	
D514	A-3	-	
VARIABLE RESISTOR		RV501	A-1
CRYSTAL		X901	B-6
		X902	B-7

NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

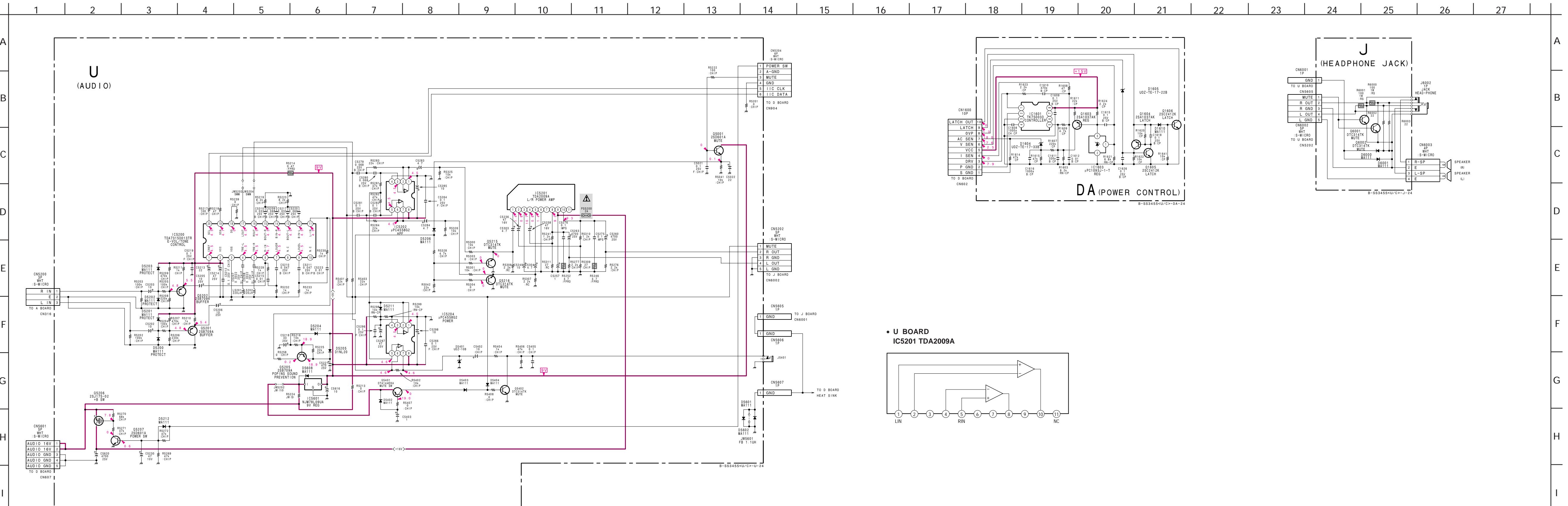
— D BOARD —



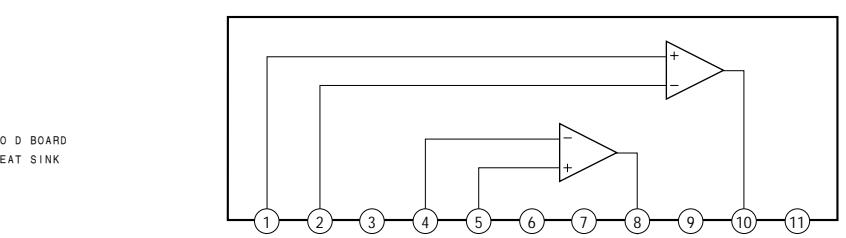
(2) Schematic Diagram of D Board



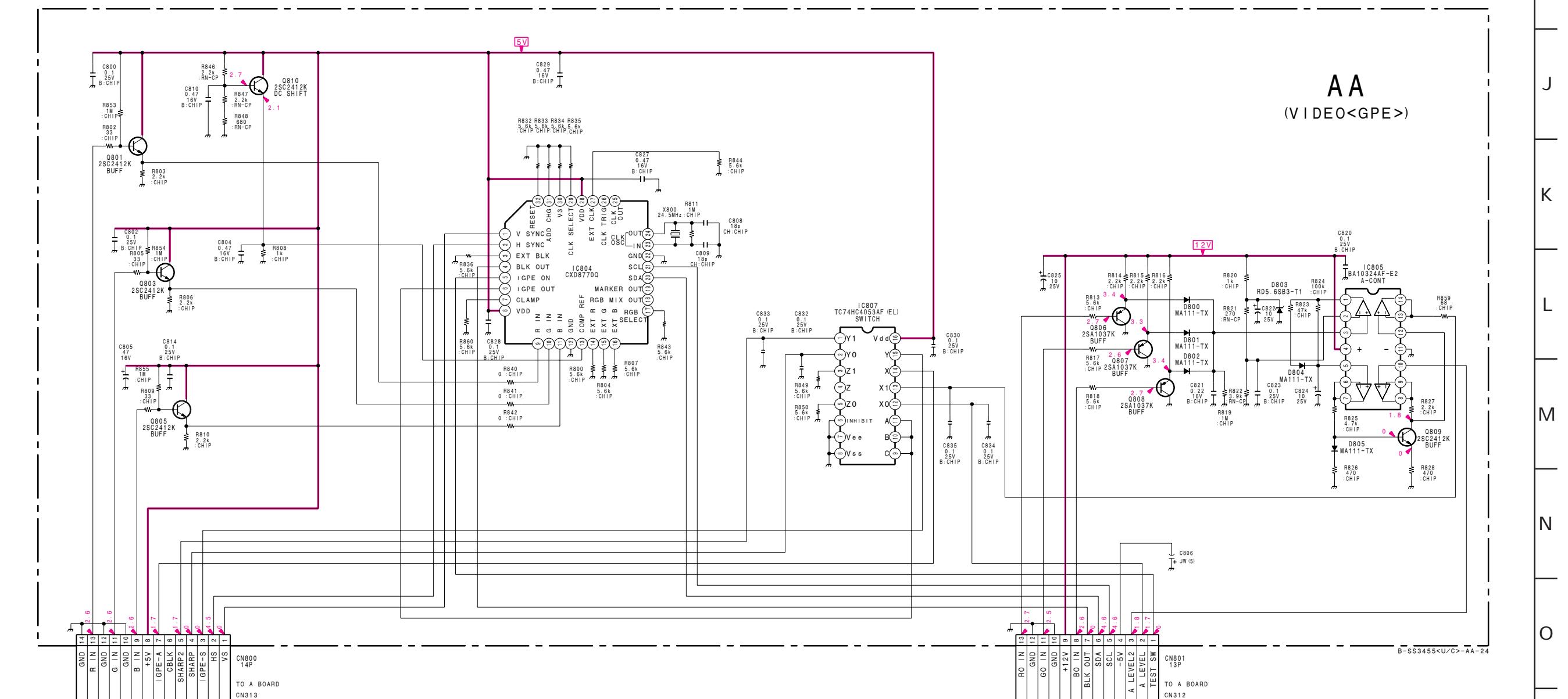
(3) Schematic Diagrams of AA, DA, J and U Boards



- U BOARD
IC5201 TDA2009A



AA



U. S. BOARD

U BOARD
Terminal name of semicon

Ref.
Q5001, Q5201, Q5202,
Q5205, Q5207, Q5215,
Q5216, Q5401, Q5402

D5200-D5204, D5206,
D5211, D5212, D5401-D5404

*: Refer to Terminal name of sensor

Schematic diagram

Schematic diagram

100

Schematic diagrams

AA

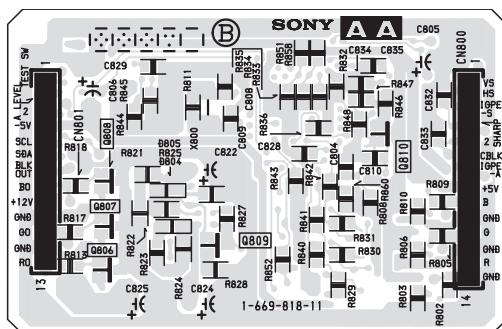
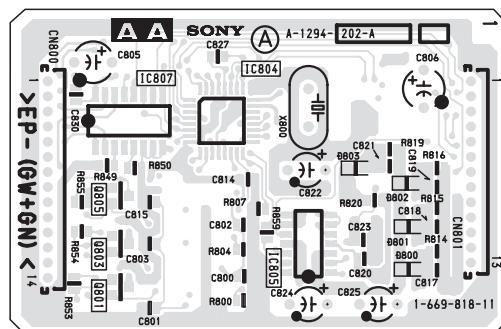
[VIDEO (GPE)]

DA

[POWER CONTROL]

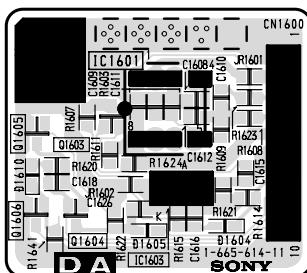
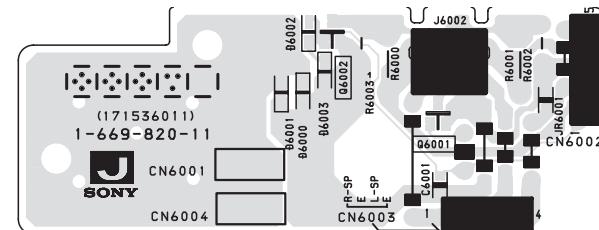
J

[HEADPHONE JACK]

— AA BOARD (Conductor Side) —**— AA BOARD (Component Side) —****AA BOARD****Terminal name of semiconductors
in silk screen printed circuit (*)**

Ref.	*
Q801, Q803, Q805	②
-----	-----
Q806-Q810	①
-----	-----
D800-D805	③

*: Refer to Terminal name of semiconductors
in silk screen printed circuit (see page 5-7)

— DA BOARD —**— J BOARD —****DA BOARD****Terminal name of semiconductors
in silk screen printed circuit (*)**

Ref.	*
Q1603-Q1606	①
-----	-----
D1604, D1605, D1610	③

*: Refer to Terminal name of semiconductors
in silk screen printed circuit (see page 5-7)

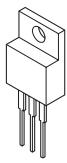
J BOARD**Terminal name of semiconductors
in silk screen printed circuit (*)**

Ref.	*
Q6001, Q6002	①
-----	-----
D6000, D6001	③

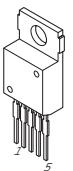
*: Refer to Terminal name of semiconductors
in silk screen printed circuit (see page 5-7)

5-5. SEMICONDUCTORS

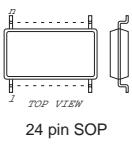
BA05T



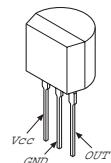
LA6500FA



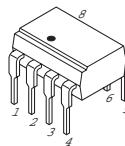
M62392FP



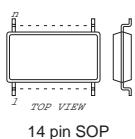
PST600C-T



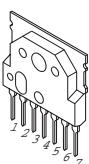
TK75003D



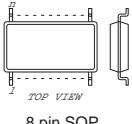
**BA10324AF-E2
SN74HC02ANS
SN74HC02ANS-E20
XRA10324AF**



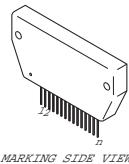
LA7840L



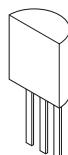
**NJM4558M
UPC4558G2**



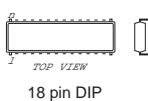
STK392-910A



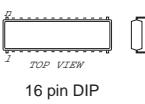
UPC1093J-1-T



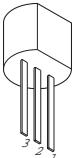
CXA8070P



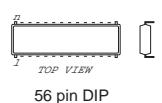
LSC4514P2



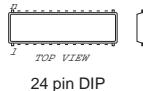
**NJM78L09UA
TA78L09F-TE12L**



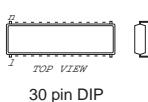
ST72751N9B1/LAM



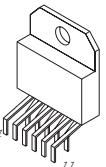
UPC5021-109



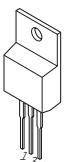
CXA8071AP



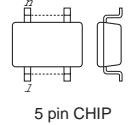
LM2405T-C



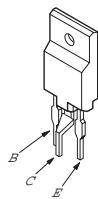
NJM7912FA



TC7SET08F



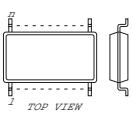
BU2522AX



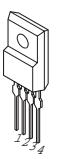
CXA8075S



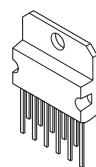
**MC74HC4053F
TC74HC4053AF**



PQ12RF11

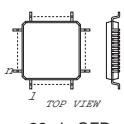


TDA2009A



**DTA114TK
DTA124EKA-T146
DTA144EKA-T146
DTC314TKH04
DTC314TK-T-146
PDTA124EK-115
PDTC124EK-115
UN2115-QRS
2SA1037AK-T146-QR
2SA1037AK-T146-R
2SA1037K-T-146-QR
2SA1162G
2SB709A-QRS-TX
2SC1623-L5L6
2SC2412K-T-146-Q
2SC2412K-T-146-QR
2SC3735-L-B35
2SC3735-T1B-B35
2SD601A-Q
2SD601A-QRS-TX**

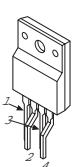
CXD8770Q



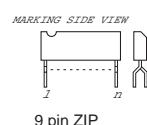
MM1382



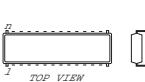
PQ6RD83B



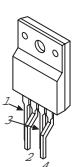
TDA6103Q/N3,112



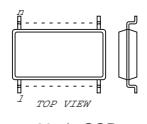
DM-58

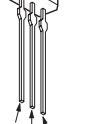
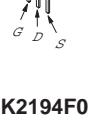
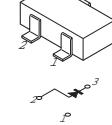
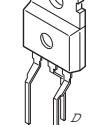
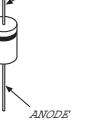
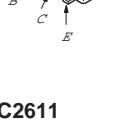
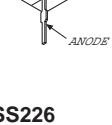
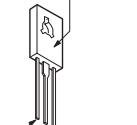
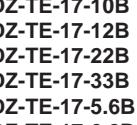
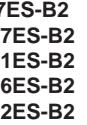
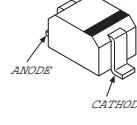
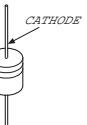
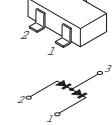
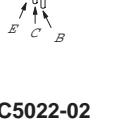


M24C08-BN6



TDA7315D013TR



IRFI9630GS IRFI9630GS-LF	2SA1175-HFE 2SA1309A-QRSTA 2SC2785-HFE 2SC3311A-QRSTA	2SJ175 2SJ175-02	D5S4M	PC123F2 PC123FY2
				
IRFU110 IRFU110A		2SK2194F08	EGP10D R2KS	
	2SB798-DL 2SB798-DLDK			
IRLI530GLF33	2SC2611	DTZ10B DTZ33B MA111 RD12SB2 RD5.6S-B RD5.6SB3 UDZ-TE-17-10B UDZ-TE-17-12B UDZ-TE-17-22B UDZ-TE-17-33B UDZ-TE-17-5.6B UDZ-TE-17-6.2B UDZ-TE-17-25	EGP10GPKG23 MTZJ-T-77-18 RB441Q RB441QT-77 RD10ES-B2 RD12ES-B2 RD18ES-B2 RD27ES-B2 RD4.7ES-B2 RD5.1ES-B2 RD5.6ES-B2 RD6.2ES-B2 1SS119-25	SB340L-5009
				
IRLI540GLF33	2SC3209LK	2SC3209LK	1SS226	
				
MX0541B-F	2SC5022-02 2SD2012	D1NL20 D1NL20-TR2 ERB91-02 HSS82 RGP02-17EL-6433 RGP02-17PKG23 3DL41A	FML-S16S FMG-G2CS	SEL1922D-C SEL1922D-C,D
				
2SA1091-O 2SA1091O-TPE2 2SC3941A-Q	2SK2101-01MR-F141	D1NL40 D4SBS4 D4SBS4-F D4SB60L	FMQ-G5FMS 5TUZ52C	
				

SECTION 6

EXPLODED VIEWS

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.

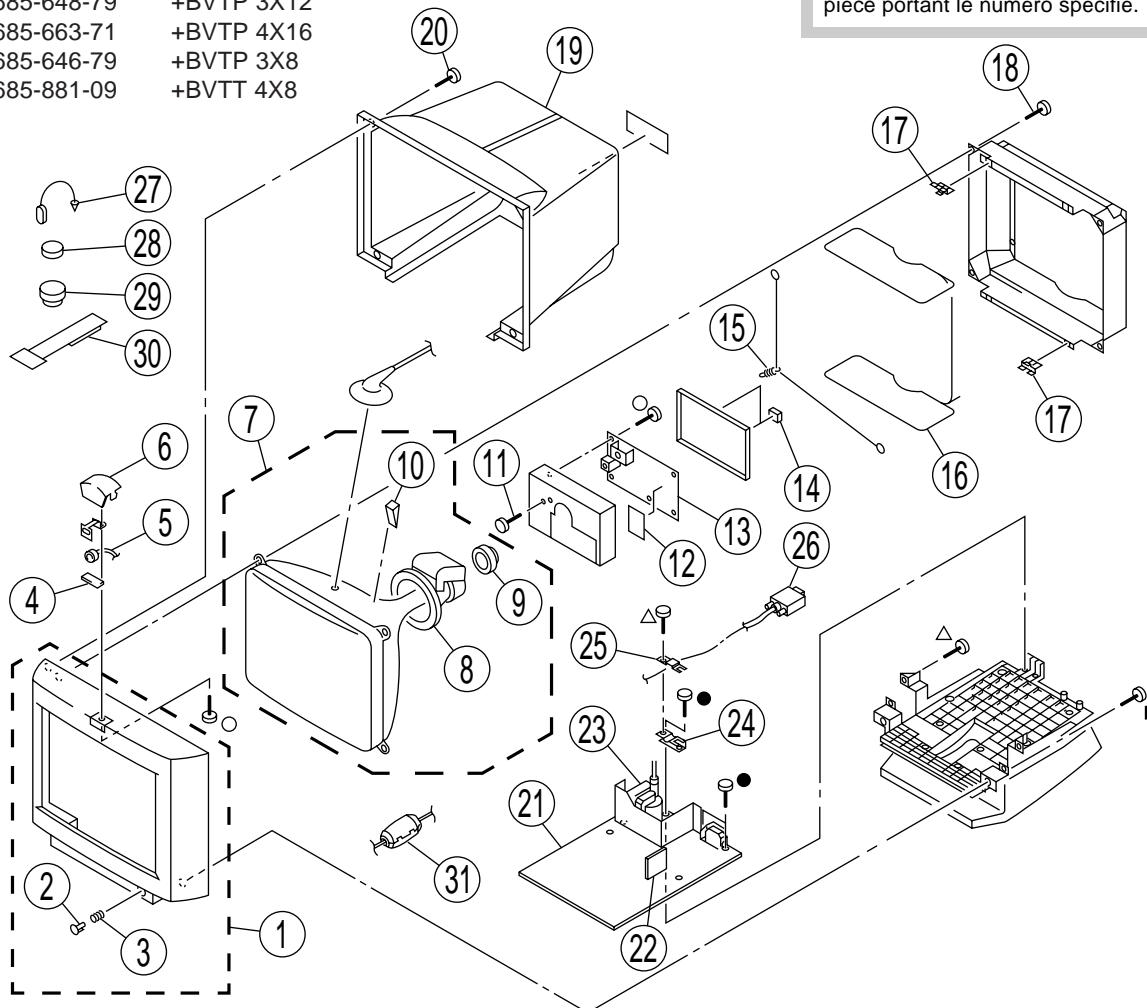
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark \triangle are critical for safety. Replace only with part number specified.

Les composants identifiés par un trame et une marque \triangle sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

6-1. CHASSIS

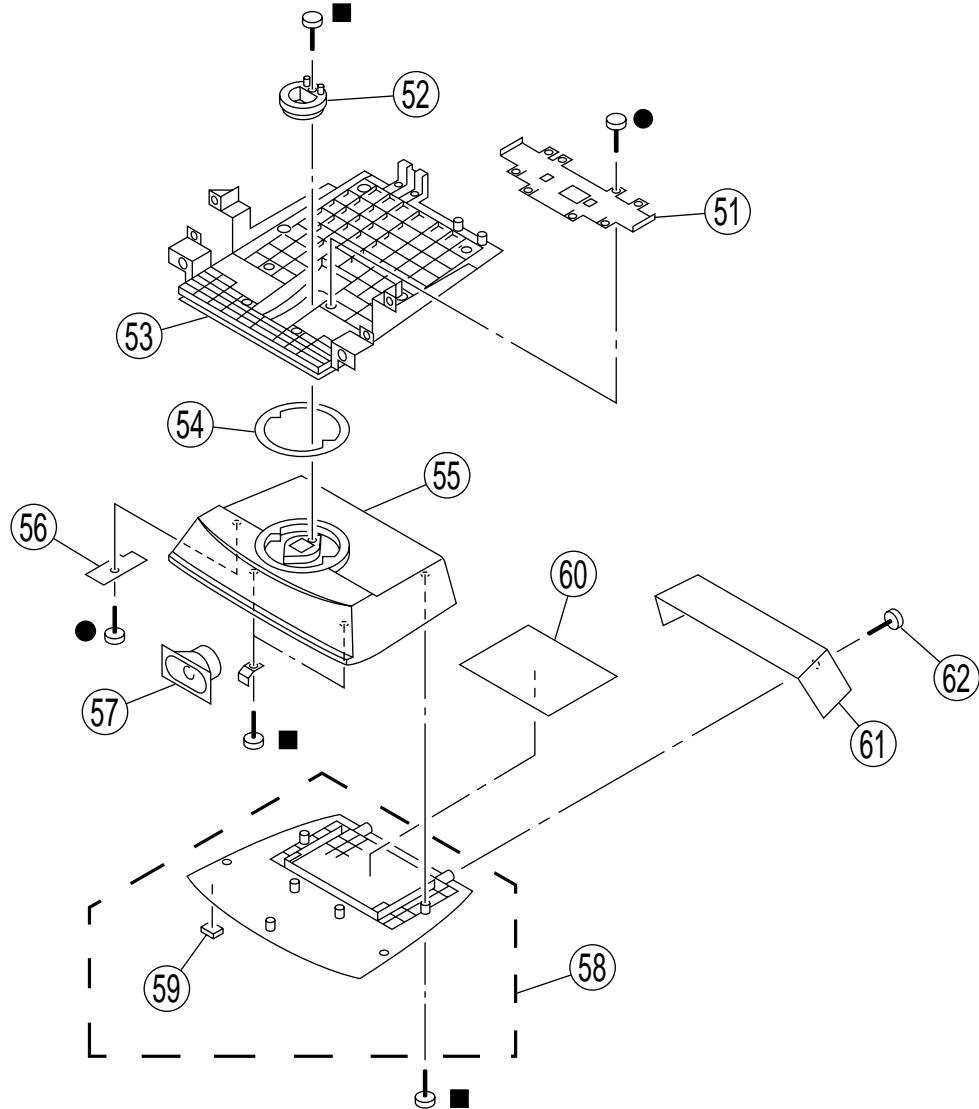
● 7-685-648-79	+BVTP 3X12
■ 7-685-663-71	+BVTP 4X16
○ 7-685-646-79	+BVTP 3X8
\triangle 7-685-881-09	+BVTT 4X8



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
1	X-4035-980-1	BEZEL ASSY	2,3	18	4-365-808-01	SCREW (5), TAPPING	
2	4-066-423-01	BUTTON, POWER		19	4-066-420-01	CABINET	
3	3-653-339-01	SPRING, COMPRESSION		20	4-052-070-11	SCREW +BVTP 4X16	
4	* 4-058-939-01	CUSHION, MICROPHONE		21	* A-1346-765-A	D BOARD, COMPLETE	22
5	1-542-361-11	MICROPHONE ASSY		22	* 8-933-240-00	DA BOARD, COMPLETE	
6	4-058-386-01	CABINET, MICROPHONE		23	\triangle X-4036-234-1	TRANSFORMER ASSY, FLYBACK (NX-4402//J1K4)	
7	\triangle 8-738-733-83	ITC ASSY (17FRFM-R3)	8-10	24	* 4-045-130-01	BRACKET, CABLE	
8	\triangle 8-451-490-11	DEFLECTION YOKE (Y17FRJ3-M)		25	* 4-054-667-01	STOPPER, CABLE	
9	\triangle 1-452-912-11	NECK ASSY, PICTURE TUBE (NA-2914)		26	1-783-935-11	CABLE ASSY(15PD-SUB CONNECTOR)	
10	4-050-492-01	SPACER, DY		27	4-308-870-00	CLIP, LEAD WIRE	
11	4-382-854-01	SCREW (M3X8), P, SW (+)		28	1-452-032-00	MAGNET,DISC ; 10mm \varnothing	
12	* 8-933-326-00	AA BOARD, COMPLETE		29	1-452-094-00	MAGNET, ROTATABLE DISK ; 15mm \varnothing	
13	* A-1294-314-A	A BOARD, COMPLETE		30	4-059-492-01	PERMALLOY (75), CONV.CORRECT	
14	* 4-050-329-01	CUSHION (A)		31	1-500-386-11	FILTER, CLAMP (FERRITE CORE)	
15	* 4-047-316-01	SPRING, TENSION					
16	\triangle 1-416-282-11	COIL, DEMAGNETIC					
17	* 4-056-260-01	SPACER, DEGAUSSER COIL					

6-2. STAND BLOCK

- 7-685-648-79 +BVTP 3X12
- 7-685-663-71 +BVTP 4X16

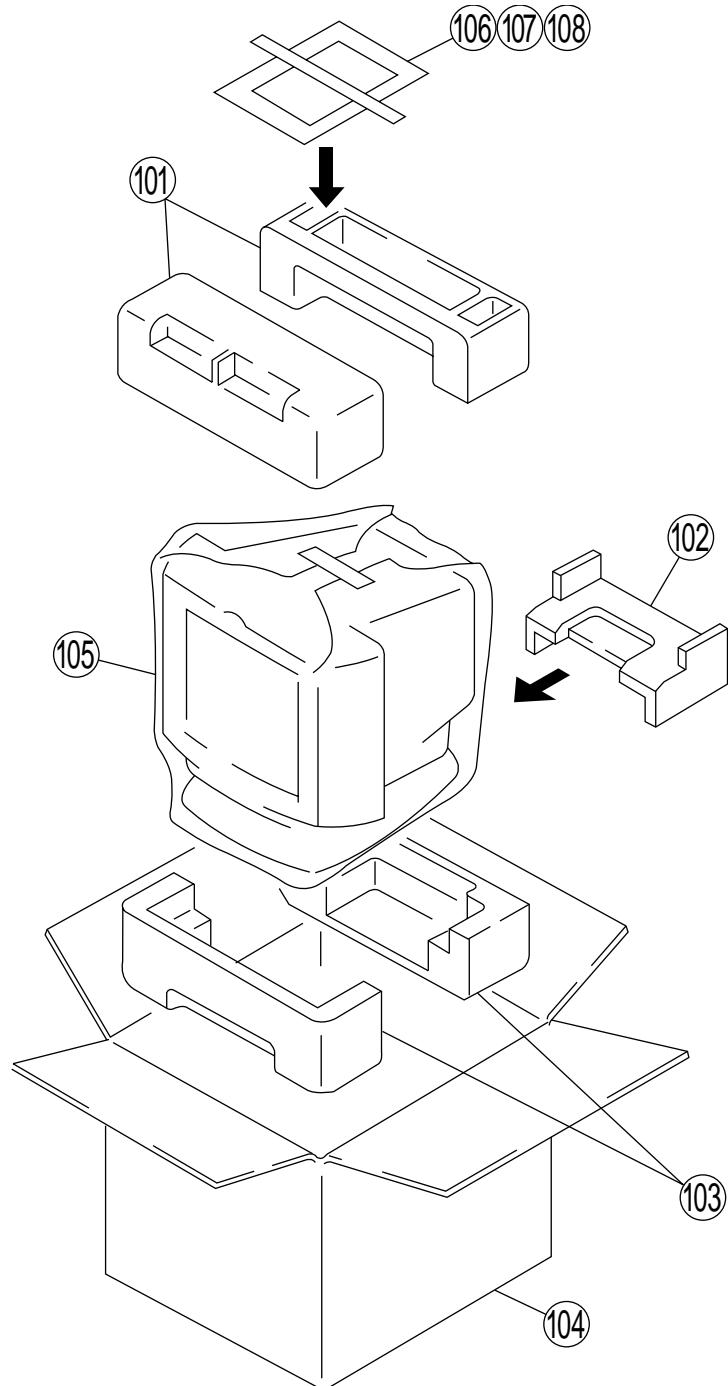


REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
51	* 4-058-388-01	COVER, CABLE		57	1-529-123-11	SPEAKER (5X9CM)	
52	* 4-058-385-01	STOPPER		58	X-4035-821-1	BASE (LOWER) ASSY, STAND	59
53	4-066-421-01	COVER, BOTTOM		59	* 4-061-996-01	CUSHION	
54	* 4-041-625-01	RING, TILT SWIVEL		60	* A-1373-698-A	U BOARD, COMPLETE	
55	X-4035-870-1	BASE (UPPER) ASSY, STAND		61	4-065-203-02	BASE (REAR), STAND	
56	* 1-669-820-11	J BOARD		62	4-052-070-11	SCREW +BVTP 4X16	

6-3. PACKING MATERIALS

The components identified by shading and mark \triangle are critical for safety. Replace only with part number specified.

Les composants identifiés par un trame et une marque \triangle sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
101	* 4-065-435-01	CUSHION (UPPER) (ASSY)		106	\triangle 1-534-827-14	CORD SET, POWER	
102	* 4-065-441-01	PAD, TILT FIXED		107	3-864-163-12	MANUAL, INSTRUCTION	
103	* 4-065-436-01	CUSHION (LOWER) (ASSY)		108	1-759-641-11	DISK, INFORMATION (V2.30) (Windows)	
104	* 4-065-434-01	INDIVIDUAL CARTON					
105	* 4-041-927-31	BAG, POLYETHYLENE					

SECTION 7

ELECTRICAL PARTS LIST

NOTE:

The components identified by shading and mark  are critical for safety.
Replace only with part number specified.

Les composants identifiés par un trame et une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

The components identified by in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted

RESISTORS

- All resistors are in ohms
 - F : nonflammable
 - Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- CAPACITORS

MF : μF

- COILS

AA **A**

REF.NO.	PART NO.	DESCRIPTION	REMARK		REF.NO.	PART NO.	DESCRIPTION	REMARK		
R826	1-216-041-00	RES,CHIP	470	5%	1/10W	C029	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
R827	1-216-057-00	RES,CHIP	2.2K	5%	1/10W	C035	1-162-134-11	CERAMIC 470PF	10%	2KV
R828	1-216-041-00	RES,CHIP	470	5%	1/10W	C036	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
R832	1-216-067-00	RES,CHIP	5.6K	5%	1/10W	C037	1-163-001-11	CERAMIC CHIP 220PF	10%	50V
R833	1-216-067-00	RES,CHIP	5.6K	5%	1/10W	C038	1-163-003-11	CERAMIC CHIP 330PF	10%	50V
R834	1-216-067-00	RES,CHIP	5.6K	5%	1/10W	C041	1-115-340-11	CERAMIC CHIP 0.22MF	10%	25V
R835	1-216-067-00	RES,CHIP	5.6K	5%	1/10W	C042	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
R836	1-216-067-00	RES,CHIP	5.6K	5%	1/10W	C043	1-163-243-11	CERAMIC CHIP 47PF	5%	50V
R840	1-216-295-91	SHORT	0			C044	1-164-344-11	CERAMIC CHIP 0.068MF	10%	25V
R841	1-216-295-91	SHORT	0			C045	1-163-243-11	CERAMIC CHIP 47PF	5%	50V
R842	1-216-295-91	SHORT	0			C046	1-163-021-91	CERAMIC CHIP 0.01MF	10%	50V
R843	1-216-067-00	RES,CHIP	5.6K	5%	1/10W	C047	1-104-664-11	ELECT 47MF	20%	25V
R844	1-216-067-00	RES,CHIP	5.6K	5%	1/10W	C048	1-163-021-91	CERAMIC CHIP 0.01MF	10%	50V
R846	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	C049	1-163-021-91	CERAMIC CHIP 0.01MF	10%	50V
R847	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	C050	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
R848	1-216-647-11	METAL CHIP	680	0.50%	1/10W	C051	1-104-664-11	ELECT 47MF	20%	25V
R849	1-216-067-00	RES,CHIP	5.6K	5%	1/10W	C053	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
R850	1-216-067-00	RES,CHIP	5.6K	5%	1/10W	C054	1-137-528-11	FILM 0.1MF	10%	250V
R853	1-216-121-91	RES,CHIP	1M	5%	1/10W	C055	1-162-318-11	CERAMIC 0.001MF	10%	500V
R854	1-216-121-91	RES,CHIP	1M	5%	1/10W	C056	1-137-150-11	MYLAR 0.01MF	10%	100V
R855	1-216-121-91	RES,CHIP	1M	5%	1/10W	C059	1-216-057-00	RES,CHIP 2.2K	5%	1/10W
R859	1-216-021-00	RES,CHIP	68	5%	1/10W	C060	1-126-965-11	ELECT 22MF	20%	50V
R860	1-216-067-00	RES,CHIP	5.6K	5%	1/10W	C061	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
 <CRYSTAL>										
X800	1-767-639-21	VIBRATOR, CRYSTAL				C062	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V

* A-1294-314-A A BOARD, COMPLETE										

4-382-854-01 SCREW (M3X8), P, SW (+) (IC002, IC004)										
 <CAPACITOR>										
C001	1-162-318-11	CERAMIC	0.001MF	10%	500V	C072	1-163-021-91	CERAMIC CHIP 0.01MF	10%	50V
C002	1-137-150-11	MYLAR	0.01MF	10%	100V	C073	1-163-021-91	CERAMIC CHIP 0.01MF	10%	50V
C004	1-104-664-11	ELECT	47MF	20%	25V	C074	1-163-021-91	CERAMIC CHIP 0.01MF	10%	50V
C009	1-126-934-11	ELECT	220MF	20%	16V	C075	1-163-021-91	CERAMIC CHIP 0.01MF	10%	50V
C010	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	C076	1-163-021-91	CERAMIC CHIP 0.01MF	10%	50V	
C011	1-106-220-00	MYLAR	0.1MF	10%	100V	C077	1-163-021-91	CERAMIC CHIP 0.01MF	10%	50V
C012	1-163-021-91	CERAMIC CHIP 0.01MF	10%	50V	C078	1-163-021-91	CERAMIC CHIP 0.01MF	10%	50V	
C013	1-126-934-11	ELECT	220MF	20%	16V	C079	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C014	1-128-562-11	ELECT	47MF	20%	100V	C080	1-126-786-11	ELECT 47MF	20%	16V
C015	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	C081	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C016	1-104-664-11	ELECT	47MF	20%	25V	C082	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C017	1-104-664-11	ELECT	47MF	20%	25V	C084	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C018	1-107-652-11	ELECT	10MF	20%	200V	C085	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C019	1-104-664-11	ELECT	47MF	20%	25V	C086	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C022	1-104-664-11	ELECT	47MF	20%	25V	C087	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C027	1-163-021-91	CERAMIC CHIP 0.01MF	10%	50V	C089	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C028	1-104-664-11	ELECT	47MF	20%	25V	C090	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
						C092	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
						C093	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
						C094	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
						C101	1-107-823-11	CERAMIC CHIP 0.47MF	10%	16V
						C102	1-110-591-91	ELECT 4.7MF	20%	50V

The components identified by shading and mark \triangle are critical for safety. Replace only with part number specified.

Les composants identifiés par un trame et une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.



A

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
L003	1-412-529-11	INDUCTOR 22UH		R053	1-219-621-91	METAL	22M 10% 1/4W
L006	1-412-537-31	INDUCTOR 100UH		R055	1-216-025-91	RES,CHIP	100 5% 1/10W
L101	1-414-140-11	INDUCTOR 0.68UH		R056	1-216-025-91	RES,CHIP	100 5% 1/10W
L201	1-414-140-11	INDUCTOR 0.68UH		R057	1-216-049-91	RES,CHIP	1K 5% 1/10W
L301	1-414-140-11	INDUCTOR 0.68UH		R058	1-216-049-91	RES,CHIP	1K 5% 1/10W
		<TRANSISTOR>		R059	1-216-049-91	RES,CHIP	1K 5% 1/10W
Q001	8-729-032-61	TRANSISTOR 2SC5022-02		R060	1-216-073-00	RES,CHIP	10K 5% 1/10W
Q004	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R061	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
Q005	8-729-101-07	TRANSISTOR 2SB798-DL		R062	1-216-041-00	RES,CHIP	470 5% 1/10W
Q006	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R063	1-216-037-00	RES,CHIP	330 5% 1/10W
Q007	8-729-140-47	TRANSISTOR 2SC3735-L-B35		R064	1-202-830-00	SOLID	10K 20% 1/2W
Q008	8-729-422-27	TRANSISTOR 2SD601A-Q		R065	1-216-049-91	RES,CHIP	1K 5% 1/10W
Q009	8-729-027-31	TRANSISTOR DTA124EKA-T146		R066	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
Q010	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R067	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
Q011	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R068	1-216-073-00	RES,CHIP	10K 5% 1/10W
		<RESISTOR>		R069	1-216-077-00	RES,CHIP	15K 5% 1/10W
R002	1-216-053-00	RES,CHIP	1.5K 5% 1/10W	R070	1-216-077-00	RES,CHIP	15K 5% 1/10W
R003	1-216-067-00	RES,CHIP	5.6K 5% 1/10W	R071	1-216-081-00	RES,CHIP	22K 5% 1/10W
R004	1-216-055-00	RES,CHIP	1.8K 5% 1/10W	R072	1-216-105-91	RES,CHIP	220K 5% 1/10W
R005	1-216-113-00	RES,CHIP	470K 5% 1/10W	R073	1-216-105-91	RES,CHIP	220K 5% 1/10W
R006	1-216-025-91	RES,CHIP	100 5% 1/10W	R074	1-216-083-00	RES,CHIP	27K 5% 1/10W
R007	1-216-049-91	RES,CHIP	1K 5% 1/10W	R075	1-216-073-00	RES,CHIP	10K 5% 1/10W
R014	1-216-073-00	RES,CHIP	10K 5% 1/10W	R081	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R016	1-216-073-00	RES,CHIP	10K 5% 1/10W	R101	1-215-394-00	METAL	75 1% 1/4W
R017	1-216-025-91	RES,CHIP	100 5% 1/10W	R103	1-216-295-91	SHORT	0
R018	1-216-025-91	RES,CHIP	100 5% 1/10W	R104	1-216-021-00	RES,CHIP	68 5% 1/10W
R020	1-216-295-91	SHORT	0	R106	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
R021	1-216-295-91	SHORT	0	R107	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
R022	1-216-025-91	RES,CHIP	100 5% 1/10W	R108	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
R023	1-216-025-91	RES,CHIP	100 5% 1/10W	R109	1-216-121-91	RES,CHIP	1M 5% 1/10W
R026	1-216-073-00	RES,CHIP	10K 5% 1/10W	R110	1-215-477-00	METAL	220K 1% 1/4W
R027	1-216-073-00	RES,CHIP	10K 5% 1/10W	R111	1-249-401-11	CARBON	47 5% 1/4W F
R028	1-216-055-00	RES,CHIP	1.8K 5% 1/10W	R112	1-216-013-00	RES,CHIP	33 5% 1/10W
R029	1-216-095-00	RES,CHIP	82K 5% 1/10W	R115	1-216-641-11	METAL CHIP	390 0.50% 1/10W
R030	1-216-295-91	SHORT	0	R116	1-216-081-00	RES,CHIP	22K 5% 1/10W
R031	1-216-049-91	RES,CHIP	1K 5% 1/10W	R133	1-249-407-11	CARBON	150 5% 1/4W
R032	1-216-663-11	METAL CHIP	3.3K 0.50% 1/10W	R151	1-202-549-00	SOLID	100 20% 1/2W
R033	1-216-679-11	METAL CHIP	15K 0.50% 1/10W	R201	1-215-394-00	METAL	75 1% 1/4W
R034	1-216-025-91	RES,CHIP	100 5% 1/10W	R203	1-216-295-91	SHORT	0
R035	1-216-025-91	RES,CHIP	100 5% 1/10W	R204	1-216-021-00	RES,CHIP	68 5% 1/10W
R036	1-249-405-11	CARBON	100 5% 1/4W F	R206	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
R037	1-216-295-91	SHORT	0	R207	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
R040	1-216-113-00	RES,CHIP	470K 5% 1/10W	R208	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
R041	1-163-085-00	CERAMIC CHIP	0.25PF 50V	R209	1-216-121-91	RES,CHIP	1M 5% 1/10W
R043	1-216-295-91	SHORT	0	R210	1-215-477-00	METAL	220K 1% 1/4W
R045	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	R211	1-249-401-11	CARBON	47 5% 1/4W F
R046	1-216-097-91	RES,CHIP	100K 5% 1/10W	R212	1-216-013-00	RES,CHIP	33 5% 1/10W
R047	1-216-073-00	RES,CHIP	10K 5% 1/10W	R215	1-216-641-11	METAL CHIP	390 0.50% 1/10W
R048	1-211-885-21	METAL	2.2M 5% 1W	R216	1-216-081-00	RES,CHIP	22K 5% 1/10W
R049	1-216-101-00	RES,CHIP	150K 5% 1/10W	R233	1-247-815-91	CARBON	220 5% 1/4W
R051	1-216-049-91	RES,CHIP	1K 5% 1/10W	R251	1-202-549-00	SOLID	100 20% 1/2W
R052	1-216-073-00	RES,CHIP	10K 5% 1/10W	R301	1-215-394-00	METAL	75 1% 1/4W
				R303	1-216-295-91	SHORT	0
				R304	1-216-021-00	RES,CHIP	68 5% 1/10W
				R306	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
				R307	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
				R308	1-216-065-91	RES,CHIP	4.7K 5% 1/10W



REF.NO.	PART NO.	DESCRIPTION	REMARK		REF.NO.	PART NO.	DESCRIPTION	REMARK	
R309	1-216-121-91 RES,CHIP	1M	5%	1/10W	C510	1-102-228-00 CERAMIC	470PF	10%	500V
R310	1-215-477-00 METAL	220K	1%	1/4W	C511	1-115-343-11 FILM	0.47MF	5%	400V
R311	1-249-401-11 CARBON	47	5%	1/4W F	C512	1-102-002-00 CERAMIC	680PF	10%	500V
R312	1-216-013-00 RES,CHIP	33	5%	1/10W	C513	1-126-964-11 ELECT	10MF	20%	50V
R313	1-216-025-91 RES,CHIP	100	5%	1/10W	C514	1-163-251-11 CERAMIC CHIP	100PF	5%	50V
R314	1-249-417-11 CARBON	1K	5%	1/4W F	C515	1-163-037-11 CERAMIC CHIP	0.022MF	10%	50V
R315	1-216-641-11 METAL CHIP	390	0.50%	1/10W	C517	1-130-489-00 FILM	0.033MF	5%	50V
R316	1-216-081-00 RES,CHIP	22K	5%	1/10W	C518	1-117-832-11 FILM	4700PF	3%	2KV
R333	1-249-407-11 CARBON	150	5%	1/4W	C519	1-136-064-00 FILM	2200PF	3%	1.2KV
R351	1-202-549-00 SOLID	100	20%	1/2W	C520	1-163-021-91 CERAMIC CHIP	0.01MF	10%	50V
<SPARK GAP>									
SG001	1-519-422-11 GAP, SPARK				C521	1-107-444-11 CERAMIC	100PF	5%	2KV
SG002	1-519-422-11 GAP, SPARK				C522	1-136-481-11 MYLAR	0.0022MF	10%	100V
SG101	1-517-499-21 GAP, SPARK				C523	1-115-520-11 FILM	0.68MF	5%	250V
SG201	1-517-499-21 GAP, SPARK				C524	1-107-955-11 ELECT	100MF	20%	200V
SG301	1-517-499-21 GAP, SPARK				C525	1-117-206-21 FILM	0.36MF	5%	250V

* A-1346-765-A D BOARD, COMPLETE									

2-371-561-00 BUSHING (P), INSULATING (IC503)									
4-045-133-01 HOLDER (B), LED (D938)									
* 4-049-002-01 HOLDER, LED (D912)									
4-061-191-01 SHEET, INSULATE (IC503)									
4-061-192-01 SHEET, INSULATE (Q602)									
4-382-854-01 SCREW (M3X8), P, SW (+) (Q607)									
4-382-854-11 SCREW (M3X10), P, SW (+) (IC401,									
IC503, IC602, IC603, IC604, Q503, Q507,									
Q510, Q602, Q608, D506, D601, D603,									
D658)									
4-382-854-21 SCREW (M3X14), P, SW (+) (IC702)									
4-389-025-01 SCREW (M4) (EXT TOOTH WASHER)									
<CAPACITOR>									
C401	1-128-528-11 ELECT	470MF	20%	25V	C551	1-163-021-91 CERAMIC CHIP	0.01MF	10%	50V
C402	1-106-228-00 MYLAR	0.22MF	10%	100V	C552	1-163-021-91 CERAMIC CHIP	0.01MF	10%	50V
C403	1-126-969-11 ELECT	220MF	20%	50V	C553	1-163-009-11 CERAMIC CHIP	0.001MF	10%	50V
C404	1-126-942-61 ELECT	1000MF	20%	25V	C554	1-164-004-11 CERAMIC CHIP	0.1MF	10%	25V
C405	1-137-371-11 FILM	0.015MF	5%	50V	C555	1-130-495-00 FILM	0.1MF	5%	50V
C406	1-137-368-11 FILM	0.0047MF	5%	50V	C556	1-163-259-91 CERAMIC CHIP	220PF	5%	50V
C407	1-137-372-11 FILM	0.022MF	5%	50V	C557	1-126-965-11 ELECT	22MF	20%	50V
C408	1-107-713-11 ELECT	4.7MF	20%	35V	C558	1-126-960-11 ELECT	1MF	20%	50V
C409	1-124-006-11 ELECT	10MF	20%	25V	C559	1-137-368-11 FILM	0.0047MF	5%	50V
C410	1-164-004-11 CERAMIC CHIP	0.1MF	10%	25V	C560	1-117-665-11 FILM	0.33MF	5%	200V
C501	1-126-964-11 ELECT	10MF	20%	50V	C561	1-163-009-11 CERAMIC CHIP	0.001MF	10%	50V
C502	1-137-370-11 FILM	0.01MF	5%	50V	C562	1-126-933-11 ELECT	100MF	20%	16V
C503	1-102-129-00 CERAMIC	0.01MF	10%	50V	C563	1-163-005-11 CERAMIC CHIP	470PF	10%	50V
C504	1-162-318-11 CERAMIC	0.001MF	10%	500V	C564	1-164-004-11 CERAMIC CHIP	0.1MF	10%	25V
C505	1-109-843-11 CERAMIC	33PF	5%	2KV	C569	1-130-495-00 FILM	0.1MF	5%	50V
C506	1-126-960-11 ELECT	1MF	20%	50V	C570	1-104-665-11 ELECT	100MF	20%	25V
C508	1-104-665-11 ELECT	100MF	20%	25V	C573	1-107-635-11 ELECT	4.7MF	20%	160V
C509	1-162-117-00 CERAMIC	100PF	10%	500V	C574	1-117-879-91 CAPACITOR	0.01MF	10%	250V
					C575	1-107-955-11 ELECT	100MF	20%	200V

D

Les composants identifiés par un tramé et une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK		REF.NO.	PART NO.	DESCRIPTION	REMARK	
C576	1-163-243-11	CERAMIC CHIP 47PF	5%	50V	C708	1-130-495-00	FILM	0.1MF	5% 50V
C577	1-115-349-51	CERAMIC	0.01MF	2KV	C709	1-126-942-61	ELECT	1000MF	20% 25V
C578	1-117-214-11	CERAMIC	0.001MF	10% 2KV	C710	1-126-941-11	ELECT	470MF	20% 25V
C579	1-109-879-11	CERAMIC	22PF	5% 2KV	C711	1-130-495-00	FILM	0.1MF	5% 50V
C580	1-137-370-11	FILM	0.01MF	5% 50V	C712	1-130-495-00	FILM	0.1MF	5% 50V
C581	1-102-228-00	CERAMIC	470PF	10% 500V	C713	1-126-927-11	ELECT	2200MF	20% 10V
C582	1-128-579-11	ELECT	2.2MF	20% 100V	C714	1-163-135-00	CERAMIC CHIP 560PF	5%	50V
C584	1-164-004-11	CERAMIC CHIP	0.1MF	10% 25V	C715	1-126-935-11	ELECT	470MF	20% 16V
C590	1-126-941-11	ELECT	470MF	20% 25V	C901	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C591	1-126-941-11	ELECT	470MF	20% 25V	C902	1-126-935-11	ELECT	470MF	20% 16V
C601	Δ 1-104-708-51	FILM	0.47MF	20% 250V	C903	1-163-021-91	CERAMIC CHIP 0.01MF	10%	50V
C602	Δ 1-107-533-51	FILM	1MF	20% 250V	C904	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C603	Δ 1-113-912-51	CERAMIC	0.0047MF	20% 250V	C905	1-136-500-11	FILM	0.068MF	5% 50V
C604	Δ 1-113-912-51	CERAMIC	0.0047MF	20% 250V	C906	1-136-177-00	FILM	1MF	5% 50V
C605	1-162-115-00	CERAMIC	330PF	10% 1KV	C908	1-163-021-91	CERAMIC CHIP 0.01MF	10%	50V
C606	1-136-171-00	FILM	0.33MF	5% 50V	C909	1-126-927-11	ELECT	2200MF	20% 10V
C607	1-137-479-11	FILM	1MF	10% 400V	C910	1-130-495-00	FILM	0.1MF	5% 50V
C608	1-113-900-11	CERAMIC	470PF	10% 250V	C911	1-137-370-11	FILM	0.01MF	5% 50V
C610	1-104-664-11	ELECT	47MF	20% 25V	C912	1-126-933-11	ELECT	100MF	20% 16V
C611	1-104-664-11	ELECT	47MF	20% 25V	C913	1-130-495-00	FILM	0.1MF	5% 50V
C613	1-113-707-11	ELECT (BLOCK)	220MF	20% 450V	C914	1-163-235-11	CERAMIC CHIP 22PF	5%	50V
C614	1-136-203-11	FILM	0.01MF	10% 630V	C915	1-163-235-11	CERAMIC CHIP 22PF	5%	50V
C615	1-107-888-11	ELECT	47MF	20% 25V	C916	1-126-965-11	ELECT	22MF	20% 50V
C616	1-104-666-11	ELECT	220MF	20% 25V	C917	1-163-019-00	CERAMIC CHIP 0.0068MF	10%	50V
C620	1-128-560-11	ELECT	22MF	20% 100V	C918	1-126-964-11	ELECT	10MF	20% 50V
C621	1-162-115-00	CERAMIC	330PF	10% 1KV	C919	1-126-960-11	ELECT	1MF	20% 50V
C622	1-104-664-11	ELECT	47MF	20% 25V	C920	1-163-021-91	CERAMIC CHIP 0.01MF	10%	50V
C625	1-126-965-11	ELECT	22MF	20% 50V	C921	1-126-935-11	ELECT	470MF	20% 16V
C629	1-136-171-00	FILM	0.33MF	5% 50V	C922	1-126-960-11	ELECT	1MF	20% 50V
C630	1-162-115-00	CERAMIC	330PF	10% 1KV	C923	1-163-133-00	CERAMIC CHIP 470PF	5%	50V
C631	1-136-167-00	FILM	0.15MF	5% 50V	C924	1-126-965-11	ELECT	22MF	20% 50V
C632	1-136-167-00	FILM	0.15MF	5% 50V	C925	1-163-021-91	CERAMIC CHIP 0.01MF	10%	50V
C633	1-110-488-11	FILM	0.0082MF	2.50% 1KV	C926	1-126-767-11	ELECT	1000MF	20% 16V
C634	1-128-528-11	ELECT	470MF	20% 25V	C927	1-163-021-91	CERAMIC CHIP 0.01MF	10%	50V
C635	1-126-926-11	ELECT	1000MF	20% 10V	C928	1-163-021-91	CERAMIC CHIP 0.01MF	10%	50V
C650	1-110-641-51	ELECT	33MF	20% 200V	C929	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V
C651	1-128-561-91	ELECT	33MF	20% 100V	C930	1-137-370-11	FILM	0.01MF	5% 50V
C652	1-107-890-11	ELECT	2200MF	20% 25V	C931	1-136-356-11	FILM	470PF	5% 50V
C653	1-107-890-11	ELECT	2200MF	20% 25V	C932	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C654	1-126-927-11	ELECT	2200MF	20% 10V	C933	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C655	1-107-891-11	ELECT	3300MF	20% 25V	C934	1-126-964-11	ELECT	10MF	20% 50V
C657	1-104-664-11	ELECT	47MF	20% 25V	C935	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C658	1-136-153-00	FILM	0.01MF	5% 50V	C936	1-163-251-11	CERAMIC CHIP 100PF	5%	50V
C659	1-104-987-11	FILM	0.001MF	10% 200V	C937	1-163-243-11	CERAMIC CHIP 47PF	5%	50V
C670	1-126-961-11	ELECT	2.2MF	20% 50V	C938	1-163-251-11	CERAMIC CHIP 100PF	5%	50V
C671	1-126-965-11	ELECT	22MF	20% 50V	C940	1-163-021-91	CERAMIC CHIP 0.01MF	10%	50V
C672	1-104-664-11	ELECT	47MF	20% 25V	C941	1-104-664-11	ELECT	47MF	20% 16V
C675	1-126-933-11	ELECT	100MF	20% 16V	C942	1-128-551-11	ELECT	22MF	20% 25V
C701	1-164-004-11	CERAMIC CHIP	0.1MF	10% 25V	C944	1-163-001-11	CERAMIC CHIP 220PF	10%	50V
C702	1-126-964-11	ELECT	10MF	20% 50V	C945	1-163-001-11	CERAMIC CHIP 220PF	10%	50V
C703	1-136-169-00	FILM	0.22MF	5% 50V			<CONNECTOR>		
C704	1-163-259-91	CERAMIC CHIP	220PF	5% 50V			CN501*	1-580-798-11CONNECTOR PIN (DY)	
C705	1-130-495-00	FILM	0.1MF	5% 50V			CN502*	1-564-514-11PLUG, CONNECTOR 11P	
C706	1-102-852-91	CERAMIC	47PF	5% 50V					
C707	1-102-852-91	CERAMIC	47PF	5% 50V					



The components identified by shading and mark \triangle are critical for safety.
Replace only with part number specified.

Les composants identifiés par un tramé et une marque \triangle sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
CN504	1-695-915-11 TAB (CONTACT)			D611	8-719-911-19 DIODE 1SS119-25		
CN600 \triangle	1-251-644-11 INLET, AC 3P (WITH NOISE FILTER)			D612	8-719-911-19 DIODE 1SS119-25		
CN601	1-691-960-11 PIN, CONNECTOR (PC BOARD) 3P			D613	8-719-911-19 DIODE 1SS119-25		
CN602*	1-774-511-11 CONNECTOR, BOARD TO BOARD 10P			D614	8-719-911-19 DIODE 1SS119-25		
CN605*	1-506-371-00 PIN, CONNECTOR 2P			D615	8-719-911-19 DIODE 1SS119-25		
CN607*	1-564-508-11 PLUG, CONNECTOR 5P			D618	8-719-404-49 DIODE MA111		
CN701*	1-564-511-11 PLUG, CONNECTOR 8P			D619	8-719-158-15 ZENER DIODE RD5.6SB		
CN901*1	1-508-879-11 BASE POST			D621	8-719-158-15 ZENER DIODE RD5.6SB		
CN902	1-564-513-11 PLUG, CONNECTOR 10P			D622	8-719-158-15 ZENER DIODE RD5.6SB		
CN903*1	1-564-512-11 PLUG, CONNECTOR 9P			D623	8-719-158-49 ZENER DIODE RD12SB2		
CN904*1	1-564-509-11 PLUG, CONNECTOR 6P			D624	8-719-404-49 DIODE MA111		
<DIODE>				D650	8-719-510-46 DIODE D1NL20		
D401	8-719-979-58 DIODE EGP10D			D651	8-719-510-46 DIODE D1NL20		
D402	8-719-109-81 ZENER DIODE RD4.7ESB2			D652	8-719-510-46 DIODE D1NL20		
D403	8-719-404-49 DIODE MA111			D653	8-719-510-46 DIODE D1NL20		
D404	8-719-404-49 DIODE MA111			D654	8-719-052-90 DIODE D1NL40-TA2		
D405	8-719-970-83 DIODE HSS82			D655	8-719-500-70 DIODE D5S4M		
D501	8-719-110-31 ZENER DIODE RD12ESB2			D656	8-719-500-70 DIODE D5S4M		
D502	8-719-047-65 DIODE SB340L-5009			D657	8-719-500-70 DIODE D5S4M		
D503	8-719-109-89 ZENER DIODE RD5.6ESB2			D658	8-719-052-91 DIODE D4SBS4-F		
D504	8-719-110-49 ZENER DIODE RD18ESB2			D662	8-719-064-37 DIODE R2KS		
D505	8-719-941-74 DIODE ERB91-02			D670	8-719-911-19 DIODE 1SS119-25		
D506	8-719-061-21 DIODE FMQ-G5FMS			D671	8-719-911-19 DIODE 1SS119-25		
D507	8-719-109-85 ZENER DIODE RD5.1ESB2			D701	8-719-158-15 ZENER DIODE RD5.6SB		
D508	8-719-986-73 DIODE RB441Q			D704	8-719-404-49 DIODE MA111		
D509	8-719-110-17 ZENER DIODE RD10ESB2			D901	8-719-404-49 DIODE MA111		
D510	8-719-028-72 DIODE RGP02-17EL-6433			D902	8-719-158-15 ZENER DIODE RD5.6SB		
D511	8-719-109-93 ZENER DIODE RD6.2ESB2			D903	8-719-404-49 DIODE MA111		
D512	8-719-911-19 DIODE 1SS119-25			D904	8-719-404-49 DIODE MA111		
D513	8-719-979-58 DIODE EGP10D			D905	8-719-404-49 DIODE MA111		
D514	8-719-970-83 DIODE HSS82			D906	8-719-404-49 DIODE MA111		
D515	8-719-979-58 DIODE EGP10D			D907	8-719-404-49 DIODE MA111		
D516	8-719-051-97 DIODE 3DL41A(LC6-15)			D908	8-719-404-49 DIODE MA111		
D517	8-719-110-67 ZENER DIODE RD27ESB2			D909	8-719-158-15 ZENER DIODE RD5.6SB		
D518	8-719-110-17 ZENER DIODE RD10ESB2			D910	8-719-158-15 ZENER DIODE RD5.6SB		
D520	8-719-028-72 DIODE RGP02-17EL-6433			D911	8-719-404-49 DIODE MA111		
D521	8-719-028-72 DIODE RGP02-17EL-6433			D912	8-719-045-19 DIODE SPB-26MVWF		
D522	8-719-911-19 DIODE 1SS119-25			D914	8-719-404-49 DIODE MA111		
D523	8-719-911-19 DIODE 1SS119-25			D915	8-719-404-49 DIODE MA111		
D524	8-719-970-83 DIODE HSS82			D916	8-719-404-49 DIODE MA111		
D525	8-719-970-83 DIODE HSS82			D917	8-719-404-49 DIODE MA111		
D526	8-719-911-19 DIODE 1SS119-25			D918	8-719-158-15 ZENER DIODE RD5.6SB		
D527	8-719-109-85 ZENER DIODE RD5.1ESB2			D919	8-719-158-15 ZENER DIODE RD5.6SB		
D550	8-719-979-58 DIODE EGP10D			D920	8-719-986-73 DIODE RB441Q		
D551	8-719-979-58 DIODE EGP10D			D922	8-719-404-49 DIODE MA111		
D601 \triangle	8-719-510-53 DIODE D4SB60L			D924	8-719-404-49 DIODE MA111		
D603	8-719-051-96 DIODE FMG-G2CS			D925	8-719-404-49 DIODE MA111		
D604	8-719-911-19 DIODE 1SS119-25			D935	8-719-404-49 DIODE MA111		
D605	8-719-911-19 DIODE 1SS119-25			D936	8-719-404-49 DIODE MA111		
D606	8-719-510-46 DIODE D1NL20			D937	8-719-404-49 DIODE MA111		
D607	8-719-911-19 DIODE 1SS119-25			D938	8-719-311-90 DIODE SEL1922D-C		
D608	8-719-110-49 ZENER DIODE RD18ESB2			D939	8-719-986-73 DIODE RB441Q		
D609	8-719-510-46 DIODE D1NL20			<FUSE>			
F601 \triangle 1-576-231-11 FUSE (H.B.C.) (4A/250V)							

CPD-201VS

D

Les composants identifiés par un trame et une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

The components identified by shading and mark \triangle are critical for safety.
Replace only with part number specified.

The components identified by shading and mark \triangle are critical for safety.
Replace only with part number specified.

Les composants identifiés par un tramé et une marque \triangle sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
Q610	8-729-322-37	TRANSISTOR 2SJ175		R522	1-249-401-11	CARBON	47
Q611	8-729-043-28	TRANSISTOR PDTC124EK-115		R523	1-216-089-91	RES,CHIP	47K
Q654	8-729-119-76	TRANSISTOR 2SA1175-HFE		R525	1-249-417-11	CARBON	1K
Q670	8-729-119-78	TRANSISTOR 2SC2785-HFE		R526	1-249-425-11	CARBON	4.7K
Q671	8-729-200-17	TRANSISTOR 2SA1091-O		R527	1-249-429-11	CARBON	10K
Q672	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R528	1-247-863-91	CARBON	22K
Q673	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R		R529	1-249-429-11	CARBON	10K
Q901	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R530	1-216-474-11	METAL OXIDE	82
Q902	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R531	1-216-474-11	METAL OXIDE	82
Q903	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R532	1-249-385-11	CARBON	2.2
Q904	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R533	1-249-417-11	CARBON	1K
Q905	8-729-900-51	TRANSISTOR DTA114TK		R534	1-249-405-11	CARBON	100
<RESISTOR>				R535	1-216-089-91	RES,CHIP	47K
JW105	1-247-807-31	CARBON	100	R536	1-249-417-11	CARBON	1K
R401	1-249-383-11	CARBON	1.5	R537	1-216-089-91	RES,CHIP	47K
R402	1-215-866-11	METAL OXIDE	330	R538	1-215-905-11	METAL OXIDE	10
R403	1-214-796-00	METAL	1.5	R539	1-215-905-11	METAL OXIDE	10
R404	1-215-443-00	METAL	8.2K	R540 \triangle	1-215-476-91	METAL	200K
R405	1-214-796-00	METAL	1.5	R541	1-215-421-00	METAL	1K
R406	1-216-677-11	METAL CHIP	12K	R542	1-215-421-00	METAL	1K
R407	1-216-659-11	METAL CHIP	2.2K	R543	1-249-389-11	CARBON	4.7
R408	1-216-081-00	RES,CHIP	22K	R544	1-215-493-00	METAL	1M
R409	1-216-671-11	METAL CHIP	6.8K	R545	1-216-691-11	METAL CHIP	47K
R410	1-216-677-11	METAL CHIP	12K	R546	1-216-687-11	METAL CHIP	33K
R411	1-216-691-11	METAL CHIP	47K	R547	1-215-482-00	METAL	360K
R412	1-216-353-00	METAL OXIDE	2.2	R548	1-215-423-00	METAL	1.2K
R451	1-215-451-00	METAL	18K	R549	1-215-462-00	METAL	51K
R452	1-215-421-00	METAL	1K	R550	1-215-423-00	METAL	1.2K
R453	1-215-445-00	METAL	10K	R551	1-216-683-11	METAL CHIP	22K
R454	1-215-445-00	METAL	10K	R552	1-215-463-00	METAL	56K
R455	1-218-762-11	METAL CHIP	270K	R553	1-216-699-11	METAL CHIP	100K
R498	1-216-659-11	METAL CHIP	2.2K	R554	1-218-756-11	METAL CHIP	150K
R500	1-249-377-11	CARBON	0.47	R556	1-216-691-11	METAL CHIP	47K
R501	1-247-807-31	CARBON	100	R557	1-216-681-11	METAL CHIP	18K
R502	1-216-103-00	RES,CHIP	180K	R558	1-216-675-11	METAL CHIP	10K
R503	1-216-065-91	RES,CHIP	4.7K	R559	1-216-661-11	METAL CHIP	2.7K
R504	1-249-377-11	CARBON	0.47	R560	1-216-679-11	METAL CHIP	15K
R505	1-216-073-00	RES,CHIP	10K	R561	1-216-474-11	METAL OXIDE	82
R506	1-215-481-00	METAL	330K	R562	1-215-447-00	METAL	12K
R507	1-215-427-00	METAL	1.8K	R563	1-249-383-11	CARBON	1.5
R508	1-247-807-31	CARBON	100	R564	1-216-089-91	RES,CHIP	47K
R509	1-247-863-91	CARBON	22K	R565	1-215-481-00	METAL	330K
R510	1-216-081-00	RES,CHIP	22K	R566	1-215-859-00	METAL OXIDE	22
R511	1-249-381-11	CARBON	1	R567	1-216-073-00	RES,CHIP	10K
R512	1-249-389-11	CARBON	4.7	R568	1-249-437-11	CARBON	47K
R513	1-215-888-00	METAL OXIDE	220	R569	1-216-635-11	METAL CHIP	220
R514	1-216-081-00	RES,CHIP	22K	R570	1-249-417-11	CARBON	1K
R515	1-215-423-00	METAL	1.2K	R571	1-215-926-00	METAL OXIDE	33K
R516	9-910-999-31	METAL	150	R572	1-249-437-11	CARBON	47K
R517	1-216-393-00	METAL OXIDE	2.2	R573	1-247-887-00	CARBON	220K
R518	1-216-393-00	METAL OXIDE	2.2	R577	1-215-888-00	METAL OXIDE	220
R519	1-216-073-00	RES,CHIP	10K	R578	1-216-447-00	METAL OXIDE	27
R520	1-249-397-11	CARBON	22	R579	1-247-887-00	CARBON	220K
				R580	1-216-077-00	RES,CHIP	15K
				R581	1-249-429-11	CARBON	10K
				R582	1-249-397-11	CARBON	22
							5% 1/4W F

D

Les composants identifiés par un trame et une marque \triangle sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

The components identified by shading and mark \triangle are critical for safety. Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R583	1-216-073-00 RES,CHIP	10K	5% 1/10W	R646	1-216-073-00 RES,CHIP	10K	5% 1/10W
R584	1-216-065-91 RES,CHIP	4.7K	5% 1/10W	R650	1-249-377-11 CARBON	0.47	5% 1/4W F
R585	1-260-099-11 CARBON	1K	5% 1/2W	R651	1-249-377-11 CARBON	0.47	5% 1/4W F
R586	1-260-103-11 CARBON	2.2K	5% 1/2W	R652	1-249-377-11 CARBON	0.47	5% 1/4W F
R587	1-216-049-91 RES,CHIP	1K	5% 1/10W	R653	1-249-381-11 CARBON	1	5% 1/4W F
R589	1-249-425-11 CARBON	4.7K	5% 1/4W	R654	1-249-377-11 CARBON	0.47	5% 1/4W F
R590	1-215-453-00 METAL	22K	1% 1/4W	R655	1-249-377-11 CARBON	0.47	5% 1/4W F
R591	1-216-073-00 RES,CHIP	10K	5% 1/10W	R660	1-249-430-11 CARBON	12K	5% 1/4W F
R594	1-215-493-00 METAL	1M	1% 1/4W	R661	1-249-417-11 CARBON	1K	5% 1/4W
R595	9-910-999-31 METAL	150	1% 1/2W	R662	1-247-895-91 CARBON	470K	5% 1/4W
R596	1-249-421-11 CARBON	2.2K	5% 1/4W	R666	1-216-073-00 RES,CHIP	10K	5% 1/10W
R597	1-249-377-11 CARBON	0.47	5% 1/4W F	R667	1-249-429-11 CARBON	10K	5% 1/4W
R598	1-216-049-91 RES,CHIP	1K	5% 1/10W	R669	1-249-425-11 CARBON	4.7K	5% 1/4W
R599	1-249-377-11 CARBON	0.47	5% 1/4W F	R670	1-216-065-91 RES,CHIP	4.7K	5% 1/10W
R600	1-249-421-11 CARBON	2.2K	5% 1/4W	R671	1-249-425-11 CARBON	4.7K	5% 1/4W
R601	1-216-049-91 RES,CHIP	1K	5% 1/10W	R674	1-216-641-11 METAL CHIP	390	0.50% 1/10W
R602 \triangle	1-205-998-11 CEMENTED	1	5% 10W	R675	1-215-477-00 METAL	220K	1% 1/4W
R603	1-218-642-11 METAL OXIDE	100K	5% 1W F	R676	1-216-049-91 RES,CHIP	1K	5% 1/10W
R604	1-249-429-11 CARBON	10K	5% 1/4W	R677	1-247-883-00 CARBON	150K	5% 1/4W
R605	1-249-437-11 CARBON	47K	5% 1/4W	R678	1-247-895-91 CARBON	470K	5% 1/4W
R606	1-249-393-11 CARBON	10	5% 1/4W F	R679	1-216-073-00 RES,CHIP	10K	5% 1/10W
R607 \triangle	1-202-882-91 SOLID	560K	20% 1/2W	R680	1-216-073-00 RES,CHIP	10K	5% 1/10W
R608	1-249-389-11 CARBON	4.7	5% 1/4W F	R681	1-216-073-00 RES,CHIP	10K	5% 1/10W
R609	1-216-073-00 RES,CHIP	10K	5% 1/10W	R701	1-216-025-91 RES,CHIP	100	5% 1/10W
R610	1-216-381-11 METAL OXIDE	0.22	5% 3W F	R702	1-216-025-91 RES,CHIP	100	5% 1/10W
R611	1-216-049-91 RES,CHIP	1K	5% 1/10W	R703	1-260-092-11 CARBON	270	5% 1/2W
R614	1-249-377-11 CARBON	0.47	5% 1/4W F	R704	1-216-061-00 RES,CHIP	3.3K	5% 1/10W
R615	1-202-933-61 FUSIBLE	0.1	10% 1/2W F	R705	1-216-667-11 METAL CHIP	4.7K	0.50% 1/10W
R616	1-216-073-00 RES,CHIP	10K	5% 1/10W	R706	1-216-667-11 METAL CHIP	4.7K	0.50% 1/10W
R617	1-216-065-91 RES,CHIP	4.7K	5% 1/10W	R707	1-215-445-00 METAL	10K	1% 1/4W
R619	1-215-481-00 METAL	330K	1% 1/4W	R708	1-215-445-00 METAL	10K	1% 1/4W
R620	1-216-049-91 RES,CHIP	1K	5% 1/10W	R709	1-216-675-11 METAL CHIP	10K	0.50% 1/10W
R622	9-910-999-31 METAL	150	1% 1/2W	R710	1-216-675-11 METAL CHIP	10K	0.50% 1/10W
R623	1-215-482-00 METAL	360K	1% 1/4W	R711	1-216-346-00 METAL OXIDE	0.56	5% 1W F
R624	1-215-479-00 METAL	270K	1% 1/4W	R712	1-215-863-11 METAL OXIDE	100	5% 1W F
R625	1-215-481-00 METAL	330K	1% 1/4W	R713	1-216-349-00 METAL OXIDE	1	5% 1W F
R626	1-216-081-00 RES,CHIP	22K	5% 1/10W	R716	1-215-863-11 METAL OXIDE	100	5% 1W F
R627	1-215-481-00 METAL	330K	1% 1/4W	R717	1-216-353-00 METAL OXIDE	2.2	5% 1W F
R628	1-215-481-00 METAL	330K	1% 1/4W	R718	1-215-863-11 METAL OXIDE	100	5% 1W F
R629	1-215-461-00 METAL	47K	1% 1/4W	R719	1-216-679-11 METAL CHIP	15K	0.50% 1/10W
R630	1-249-421-11 CARBON	2.2K	5% 1/4W	R724	1-216-423-11 METAL OXIDE	27	5% 1W F
R631	1-218-642-11 METAL OXIDE	100K	5% 1W F	R727	1-216-679-11 METAL CHIP	15K	0.50% 1/10W
R632	1-218-642-11 METAL OXIDE	100K	5% 1W F	R728	1-215-863-11 METAL OXIDE	100	5% 1W F
R633	1-216-073-00 RES,CHIP	10K	5% 1/10W	R729	1-216-353-00 METAL OXIDE	2.2	5% 1W F
R634	1-218-642-11 METAL OXIDE	100K	5% 1W F	R730	1-216-422-11 METAL OXIDE	18	5% 1W F
R636	1-249-389-11 CARBON	4.7	5% 1/4W	R901	1-247-807-31 CARBON	100	5% 1/4W
R637	1-249-389-11 CARBON	4.7	5% 1/4W	R902	1-216-025-91 RES,CHIP	100	5% 1/10W
R638	1-247-791-91 CARBON	22	5% 1/4W	R903	1-216-049-91 RES,CHIP	1K	5% 1/10W
R639	1-247-791-91 CARBON	22	5% 1/4W	R904	1-216-049-91 RES,CHIP	1K	5% 1/10W
R640	1-220-926-11 FUSIBLE	0.47	10% 1/2W F	R905	1-216-025-91 RES,CHIP	100	5% 1/10W
R641	1-216-089-91 RES,CHIP	47K	5% 1/10W	R906	1-216-073-00 RES,CHIP	10K	5% 1/10W
R642	1-247-807-31 CARBON	100	5% 1/4W	R907	1-260-087-11 CARBON	100	5% 1/2W
R643	1-216-065-91 RES,CHIP	4.7K	5% 1/10W	R908	1-216-648-11 METAL CHIP	750	0.50% 1/10W
R644	1-216-081-00 RES,CHIP	22K	5% 1/10W	R909	1-216-648-11 METAL CHIP	750	0.50% 1/10W
R645	1-216-073-00 RES,CHIP	10K	5% 1/10W	R910	1-216-033-00 RES,CHIP	220	5% 1/10W



The components identified by shading and mark \triangle are critical for safety. Replace only with part number specified.

Les composants identifiés par un tramé et une marque \triangle sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

The components identified by \blacksquare in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R911	1-216-041-00	RES,CHIP	470 5% 1/10W			<RELAY>	
R912	1-249-417-11	CARBON	1K 5% 1/4W			RY601 1-755-031-11	RELAY
R913	1-247-807-31	CARBON	100 5% 1/4W				
R914	1-216-025-91	RES,CHIP	100 5% 1/10W				
R915	1-216-065-91	RES,CHIP	4.7K 5% 1/10W			<SWITCH>	
R916	1-216-077-00	RES,CHIP	15K 5% 1/10W			S601 \triangle 1-571-433-31	SWITCH, PUSH (AC POWER)
R917	1-216-077-00	RES,CHIP	15K 5% 1/10W			S901 1-692-431-21	SWITCH, TACTILE (CONT+)
R918	1-216-049-91	RES,CHIP	1K 5% 1/10W			S903 1-692-431-21	SWITCH, TACTILE (VOLUME+)
R919	1-247-807-31	CARBON	100 5% 1/4W			S904 1-692-431-21	SWITCH, TACTILE (VOLUME-)
R920	1-216-049-91	RES,CHIP	1K 5% 1/10W			S905 1-692-431-21	SWITCH, TACTILE (GPE)
R921	1-216-025-91	RES,CHIP	100 5% 1/10W			S906 1-692-431-21	SWITCH, TACTILE (RESET)
R922	1-216-073-00	RES,CHIP	10K 5% 1/10W			S907 1-692-431-21	SWITCH, TACTILE (MUTE)
R924	1-247-807-31	CARBON	100 5% 1/4W			S910 1-692-431-21	SWITCH, TACTILE (CONT-)
R925	1-216-065-91	RES,CHIP	4.7K 5% 1/10W			S911 1-692-431-21	SWITCH, TACTILE (MENU)
R926	1-216-295-91	SHORT	0				
R927	1-216-295-91	SHORT	0				
R928	1-216-025-91	RES,CHIP	100 5% 1/10W			<SPARK GAP>	
R929	1-216-065-91	RES,CHIP	4.7K 5% 1/10W			SG501 1-519-422-11	GAP, SPARK
R930	1-216-025-91	RES,CHIP	100 5% 1/10W				
R931	1-216-659-11	METAL CHIP	2.2K 0.50% 1/10W			<TRANSFORMER>	
R932	1-216-025-91	RES,CHIP	100 5% 1/10W			T501 \triangle X-4036-234-1	TRANSFORMER ASSY, FLYBACK
R933	1-216-053-00	RES,CHIP	1.5K 5% 1/10W				(NX-4402/J1K4)
R934	1-216-073-00	RES,CHIP	10K 5% 1/10W			T503 1-429-109-11	TRANSFORMER, FERRITE (DFT)
R935	1-216-025-91	RES,CHIP	100 5% 1/10W			T504 1-429-103-11	TRANSFORMER, FERRITE (HDT)
R936	1-216-025-91	RES,CHIP	100 5% 1/10W			T505 1-426-998-11	TRANSFORMER, FERRITE (HST)
R937	1-216-049-91	RES,CHIP	1K 5% 1/10W			T601 1-416-286-21	COIL, CHOKE 515UH
R938	1-216-025-91	RES,CHIP	100 5% 1/10W				
R939	1-216-637-11	METAL CHIP	270 0.50% 1/10W			T602 \triangle 1-431-386-11	TRANSFORMER, CONVERTER (PIT)
R940	1-216-661-11	METAL CHIP	2.7K 0.50% 1/10W			T603 1-429-992-11	TRANSFORMER, CONVERTER (PRT)
R941	1-216-643-11	METAL CHIP	470 0.50% 1/10W				
R942	1-216-643-11	METAL CHIP	470 0.50% 1/10W			<THERMISTOR>	
R943	1-216-647-11	METAL CHIP	680 0.50% 1/10W			TH401 1-803-114-11	THERMISTOR, POSITIVE
R944	1-216-651-11	METAL CHIP	1K 0.50% 1/10W			TH501 1-807-796-11	THERMISTOR
R945	1-216-655-11	METAL CHIP	1.5K 0.50% 1/10W			TH601 \triangle 1-810-990-11	THERMISTOR
R946	1-216-661-11	METAL CHIP	2.7K 0.50% 1/10W			TH602 1-809-827-11	THERMISTOR, POSITIVE
R947	1-216-671-11	METAL CHIP	6.8K 0.50% 1/10W				
R948	1-216-025-91	RES,CHIP	100 5% 1/10W			<VARISTOR>	
R949	1-216-073-00	RES,CHIP	10K 5% 1/10W			VA601 1-810-622-11	VARISTOR
R951	1-216-025-91	RES,CHIP	100 5% 1/10W			VA602 \triangle 1-801-268-51	VARISTOR TNR14V471K660
R952	1-216-061-00	RES,CHIP	3.3K 5% 1/10W				
R953	1-216-073-00	RES,CHIP	10K 5% 1/10W			<CRYSTAL>	
R954	1-216-073-00	RES,CHIP	10K 5% 1/10W			X901 1-767-641-11	VIBRATOR, CRYSTAL
R956	1-216-025-91	RES,CHIP	100 5% 1/10W			X902 1-767-933-11	OSCILLATOR, CERAMIC
R957	1-249-401-11	CARBON	47 5% 1/4W				
R958	1-249-401-11	CARBON	47 5% 1/4W				
R959	1-216-073-00	RES,CHIP	10K 5% 1/10W				
R960	1-216-065-91	RES,CHIP	4.7K 5% 1/10W				
R961	1-249-413-11	CARBON	470 5% 1/4W				
R962	1-216-295-91	SHORT	0				
R975	1-216-065-91	RES,CHIP	4.7K 5% 1/10W				
<hr/>							
<VARIABLE RESISTOR>							
<hr/>							
RV501 \triangle 1-241-767-21RES, ADJ, CERMET 100K (HV ADJ) 3-710-578-01COVER, VOLUME, 6 MOLD ; RV501							

CPD-201VS

DA U

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
	* 8-933-240-00 DA BOARD, COMPLETE	*****		R1641	1-216-073-00 RES,CHIP	10K	5% 1/10W
	<CAPACITOR>				*****		
C1608	1-163-275-11 CERAMIC CHIP 0.001MF	5% 50V			* A-1373-698-A U BOARD, COMPLETE	*****	
C1609	1-164-004-11 CERAMIC CHIP 0.1MF	10% 25V			4-382-854-11 SCREW (M3X10), P, SW (+) (IC5201)		
C1610	1-163-005-11 CERAMIC CHIP 470PF	10% 50V			<CAPACITOR>		
C1611	1-163-003-11 CERAMIC CHIP 330PF	10% 50V		C5021	1-163-038-91 CERAMIC CHIP 0.1MF	25V	
C1612	1-163-021-91 CERAMIC CHIP 0.01MF	10% 50V		C5022	1-126-965-11 ELECT	22MF	20% 50V
C1615	1-164-004-11 CERAMIC CHIP 0.1MF	10% 25V		C5202	1-126-964-11 ELECT	10MF	20% 50V
C1616	1-163-009-11 CERAMIC CHIP 0.001MF	10% 50V		C5203	1-126-964-11 ELECT	10MF	20% 50V
C1618	1-164-004-11 CERAMIC CHIP 0.1MF	10% 25V		C5205	1-107-698-11 ELECT	10MF	20% 25V
C1626	1-164-004-11 CERAMIC CHIP 0.1MF	10% 25V		C5206	1-107-698-11 ELECT	10MF	20% 25V
	<CONNECTOR>			C5207	1-164-695-11 CERAMIC CHIP 0.0022MF	5%	50V
CN1600*	1-774-512-11CONNECTOR, BPARD TO BOARD 10P			C5208	1-164-695-11 CERAMIC CHIP 0.0022MF	5%	50V
	<DIODE>			C5209	1-164-344-11 CERAMIC CHIP 0.068MF	10%	25V
D1604	8-719-977-81 ZENER DIODE DTZ33B			C5210	1-163-809-11 CERAMIC CHIP 0.047MF	10%	25V
D1605	8-719-056-95 ZENER DIODE UDV-TE-17-22B			C5211	1-163-809-11 CERAMIC CHIP 0.047MF	10%	25V
D1610	8-719-404-49 DIODE MA111			C5212	1-163-038-91 CERAMIC CHIP 0.1MF	25V	
	<IC>			C5213	1-126-965-11 ELECT	22MF	20% 50V
IC1601	8-759-462-65 IC TK75003D			C5214	1-104-664-11 ELECT	47MF	20% 25V
IC1603	8-759-198-31 IC uPC1093J-1-T			C5215	1-163-021-91 CERAMIC CHIP 0.01MF	10%	50V
	<CHIP CONDUCTOR>			C5217	1-163-989-11 CERAMIC CHIP 0.033MF	10%	25V
JR1601	1-216-295-91 SHORT	0		C5218	1-104-663-11 ELECT	33MF	20% 25V
JR1602	1-216-295-91 SHORT	0		C5219	1-163-038-91 CERAMIC CHIP 0.1MF	25V	
	<TRANSISTOR>			C5220	1-164-344-11 CERAMIC CHIP 0.068MF	10%	25V
Q1603	8-729-026-49 TRANSISTOR 2SA1037AK-T146-R			C5221	1-126-941-11 ELECT	470MF	20% 25V
Q1604	8-729-026-49 TRANSISTOR 2SA1037AK-T146-R			C5223	1-163-021-91 CERAMIC CHIP 0.01MF	10%	50V
Q1605	8-729-120-28 TRANSISTOR 2SC1623-L5L6			C5230	1-104-664-11 ELECT	47MF	20% 10V
Q1606	8-729-120-28 TRANSISTOR 2SC1623-L5L6			C5236	1-104-664-11 ELECT	47MF	20% 16V
	<RESISTOR>			C5240	1-126-964-11 ELECT	10MF	20% 50V
R1603	1-216-673-11 METAL CHIP	8.2K 0.50% 1/10W		C5257	1-126-960-11 ELECT	1MF	20% 50V
R1607	1-216-105-91 RES,CHIP	220K 5% 1/10W		C5258	1-104-664-11 ELECT	47MF	20% 16V
R1608	1-216-017-91 RES,CHIP	47 5% 1/10W		C5260	1-125-959-11 ELECT CHIP	2200MF	20% 25V
R1609	1-216-065-91 RES,CHIP	4.7K 5% 1/10W		C5263	1-125-959-11 ELECT CHIP	2200MF	20% 25V
R1611	1-216-081-00 RES,CHIP	22K 5% 1/10W		C5264	1-163-038-91 CERAMIC CHIP 0.1MF	25V	
R1614	1-216-089-91 RES,CHIP	47K 5% 1/10W		C5266	1-163-038-91 CERAMIC CHIP 0.1MF	25V	
R1615	1-216-089-91 RES,CHIP	47K 5% 1/10W		C5275	1-136-165-00 FILM	0.1MF	5% 50V
R1620	1-216-073-00 RES,CHIP	10K 5% 1/10W		C5276	1-136-165-00 FILM	0.1MF	5% 50V
R1621	1-216-671-11 METAL CHIP	6.8K 0.50% 1/10W		C5279	1-164-344-11 CERAMIC CHIP 0.068MF	10%	25V
R1622	1-216-073-00 RES,CHIP	10K 5% 1/10W		C5280	1-164-004-11 CERAMIC CHIP 0.1MF	10%	25V
R1623	1-216-057-00 RES,CHIP	2.2K 5% 1/10W		C5281	1-164-344-11 CERAMIC CHIP 0.068MF	10%	25V
R1624	1-216-057-00 RES,CHIP	2.2K 5% 1/10W		C5282	1-164-004-11 CERAMIC CHIP 0.1MF	10%	25V
				C5283	1-126-963-11 ELECT	4.7MF	20% 50V
				C5284	1-126-963-11 ELECT	4.7MF	20% 50V
				C5285	1-126-964-11 ELECT	10MF	20% 50V
				C5296	1-163-038-91 CERAMIC CHIP 0.1MF	25V	
				C5297	1-104-664-11 ELECT	47MF	20% 25V
				C5298	1-126-964-11 ELECT	10MF	20% 50V
				C5303	1-126-963-11 ELECT	4.7MF	20% 50V
				C5304	1-126-963-11 ELECT	4.7MF	20% 50V



The components identified by shading and mark Δ are critical for safety.
Replace only with part number specified.

Les composants identifiés par un trame et une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C5310	1-163-989-11	CERAMIC CHIP 0.033MF	10% 25V			<COIL>	
C5402	1-126-964-11	ELECT 10MF	20% 50V	L5201	1-410-435-21	INDUCTOR 220UH	
C5403	1-126-960-11	ELECT 1MF	20% 50V	L5202	1-410-435-21	INDUCTOR 220UH	
C5405	1-115-339-11	CERAMIC CHIP 0.1MF	10% 50V			<IC LINK>	
C5616	1-126-964-11	ELECT 10MF	20% 50V			PS5200 Δ 1-532-984-91LINK, IC (2A/90V AC, 60V DC)	
C5620	1-125-960-11	ELECT 4700MF	20% 25V				
<CONNECTOR>				<TRANSISTOR>			
CN5200*	1-564-506-11PLUG	CONNECTOR 3P		Q5001	8-729-422-27	TRANSISTOR 2SD601A-Q	
CN5202*	1-564-508-11PLUG	CONNECTOR 5P		Q5201	8-729-216-22	TRANSISTOR 2SA1162-G	
CN5204*	1-564-509-11PLUG	CONNECTOR 6P		Q5202	8-729-216-22	TRANSISTOR 2SA1162-G	
CN5601*	1-564-508-11PLUG	CONNECTOR 5P		Q5205	8-729-216-22	TRANSISTOR 2SA1162-G	
CN5605	1-695-915-11TAB	(CONTACT)		Q5206	8-729-322-37	TRANSISTOR 2SJ175	
CN5606	1-695-915-11TAB	(CONTACT)		Q5207	8-729-422-27	TRANSISTOR 2SD601A-Q	
CN5607	1-695-915-11TAB	(CONTACT)		Q5215	8-729-920-21	TRANSISTOR DTC314TK-T-146	
<DIODE>				Q5216	8-729-920-21	TRANSISTOR DTC314TK-T-146	
D5200	8-719-404-49	DIODE MA111		Q5401	8-729-027-38	TRANSISTOR DTA144EKA-T146	
D5201	8-719-404-49	DIODE MA111		Q5402	8-729-920-21	TRANSISTOR DTC314TK-T-146	
D5202	8-719-404-49	DIODE MA111		<RESISTOR>			
D5203	8-719-404-49	DIODE MA111		R5041	1-216-073-00	RES,CHIP	10K 5% 1/10W
D5204	8-719-404-49	DIODE MA111		R5042	1-216-081-00	RES,CHIP	22K 5% 1/10W
D5205	8-719-510-46	DIODE D1NL20		R5201	1-216-295-91	SHORT	0
D5206	8-719-404-49	DIODE MA111		R5202	1-240-095-21	RES,CHIP	100K 5% 1/10W
D5211	8-719-404-49	DIODE MA111		R5203	1-240-095-21	RES,CHIP	100K 5% 1/10W
D5212	8-719-404-49	DIODE MA111		R5204	1-240-095-21	RES,CHIP	100K 5% 1/10W
D5401	8-719-977-28	ZENER DIODE DTZ10B		R5205	1-240-095-21	RES,CHIP	100K 5% 1/10W
D5402	8-719-404-49	DIODE MA111		R5206	1-240-099-21	RES,CHIP	220K 5% 1/10W
D5403	8-719-404-49	DIODE MA111		R5207	1-240-103-21	RES,CHIP	470K 5% 1/10W
D5404	8-719-404-49	DIODE MA111		R5208	1-240-099-21	RES,CHIP	220K 5% 1/10W
D5601	8-719-404-49	DIODE MA111		R5209	1-240-103-21	RES,CHIP	470K 5% 1/10W
D5602	8-719-404-49	DIODE MA111		R5210	1-216-651-11	RES,CHIP	1K 5% 1/10W
D5608	8-719-404-49	DIODE MA111		R5211	1-216-651-11	RES,CHIP	1K 5% 1/10W
<IC>				R5213	1-216-295-91	SHORT	0
IC5200 8-759-273-12 IC TDA7315D013TR				R5214	1-249-377-11	CARBON	0.47 5% 1/4W F
IC5201 8-759-980-43 IC TDA2009A				R5216	1-216-073-00	RES,CHIP	10K 5% 1/10W
IC5202 8-759-100-96 IC uPC4558G2				R5217	1-216-025-91	RES,CHIP	100 5% 1/10W
IC5204 8-759-100-96 IC uPC4558G2				R5218	1-216-017-91	RES,CHIP	47 5% 1/10W
IC5601 8-759-168-19 IC TA78L09F-TE12L				R5219	1-240-082-21	RES,CHIP	8.2K 5% 1/10W
<JACK>				R5222	1-216-025-91	RES,CHIP	100 5% 1/10W
J5401	1-563-330-11	JACK		R5223	1-240-082-21	RES,CHIP	8.2K 5% 1/10W
<CHIP CONDUCTOR>				R5225	1-216-081-00	RES,CHIP	22K 5% 1/10W
JR5201	1-216-296-91	SHORT	0	R5229	1-216-651-11	RES,CHIP	1K 5% 1/10W
<FERRITE BEAD>				R5230	1-216-651-11	RES,CHIP	1K 5% 1/10W
JW56011-412-911-31	FERRITE		1.1UH	R5232	1-216-651-11	RES,CHIP	1K 5% 1/10W
				R5233	1-216-651-11	RES,CHIP	1K 5% 1/10W
				R5239	1-216-295-91	SHORT	0
				R5241	1-240-072-21	RES,CHIP	1.2K 5% 1/10W
				R5246	1-249-389-11	CARBON	4.7 5% 1/4W F
				R5252	1-249-389-11	CARBON	4.7 5% 1/4W F
				R5258	1-216-295-91	SHORT	0
				R5269	1-216-089-91	RES,CHIP	47K 5% 1/10W

REF.NO.	PART NO.	DESCRIPTION	REMARK		REF.NO.	PART NO.	DESCRIPTION	REMARK			
R5270	1-216-093-00	RES,CHIP	68K	5%	1/10W	* 1-669-820-11	J BOARD	*****			
R5271	1-216-089-91	RES,CHIP	47K	5%	1/10W	C6001	1-115-339-11 CERAMIC CHIP	0.1MF	10% 50V		
R5272	1-216-089-91	RES,CHIP	47K	5%	1/10W	<CAPACITOR>					
R5276	1-216-659-11	RES,CHIP	2.2K	5%	1/10W	CN6001	1-695-915-11TAB (CONTACT)				
R5277	1-216-659-11	RES,CHIP	2.2K	5%	1/10W	CN6002*	1-564-508-11PLUG, CONNECTOR 5P				
R5281	1-240-091-21	RES,CHIP	47K	5%	1/10W	CN6003*	1-564-507-11PLUG, CONNECTOR 4P				
R5282	1-240-091-21	RES,CHIP	47K	5%	1/10W	<CONNECTOR>					
R5283	1-216-683-11	RES,CHIP	22K	5%	1/10W	<DIODE>					
R5284	1-216-683-11	RES,CHIP	22K	5%	1/10W	D6000	8-719-404-49 DIODE MA111				
R5298	1-216-675-11	METAL CHIP	10K	0.50%	1/10W	D6001	8-719-404-49 DIODE MA111				
R5299	1-216-675-11	METAL CHIP	10K	0.50%	1/10W	J6002	1-568-267-11 JACK	<JACK>			
R5300	1-216-675-11	RES,CHIP	10K	5%	1/10W	Q6001	8-729-920-21 TRANSISTOR DTC314TK-T-146				
R5301	1-216-675-11	RES,CHIP	10K	5%	1/10W	Q6002	8-729-920-21 TRANSISTOR DTC314TK-T-146				
R5303	1-216-295-91	SHORT	0	<TRANSISTOR>		<RESISTOR>					
R5304	1-216-295-91	SHORT	0	<RESISTOR>		R6000	1-215-863-11 METAL OXIDE	100	5% 1W F		
R5306	1-216-659-11	RES,CHIP	2.2K	5%	1/10W	R6001	1-215-863-11 METAL OXIDE	100	5% 1W F		
R5307	1-216-659-11	RES,CHIP	2.2K	5%	1/10W	R6002	1-249-397-11 CARBON	22	5% 1/4W F		
R5309	1-240-052-21	RES,CHIP	27	5%	1/10W	R6003	1-249-397-11 CARBON	22	5% 1/4W F		
R5310	1-240-072-21	RES,CHIP	1.2K	5%	1/10W	*****					
R5311	1-240-052-21	RES,CHIP	27	5%	1/10W						
R5325	1-216-675-11	RES,CHIP	10K	5%	1/10W						
R5326	1-216-675-11	RES,CHIP	10K	5%	1/10W						
R5328	1-216-065-91	RES,CHIP	4.7K	5%	1/10W						
R5401	1-216-081-00	RES,CHIP	22K	5%	1/10W						
R5402	1-216-073-00	RES,CHIP	10K	5%	1/10W						
R5403	1-216-081-00	RES,CHIP	22K	5%	1/10W						
R5404	1-216-049-91	RES,CHIP	1K	5%	1/10W						
R5406	1-216-089-91	RES,CHIP	47K	5%	1/10W						
R5407	1-216-295-91	SHORT	0								
R5408	1-216-295-91	SHORT	0								