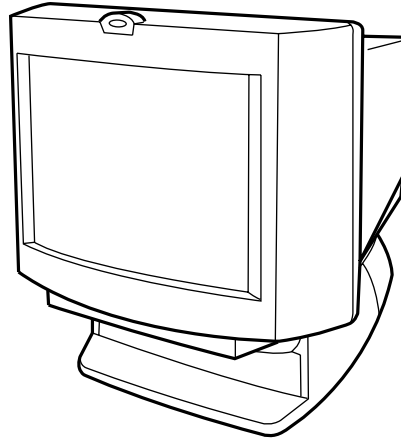


CPD-101VS

SERVICE MANUAL

US Model
Canadian Model

Chassis No. SCC-L19A-A



W.A.I.O

V-3 CHASSIS

SPECIFICATIONS

Picture tube	0.25 mm aperture grille pitch, 15 inches measured diagonally (14.0" viewable), 90-degree deflection, AR coating	Headphones output	Stereo minijack, 15 mW + 15 mW at 16 Ω
Viewable image size	Approx. 285 × 214 mm (w/h) (11 1/4 × 8 1/2 inches) 14.0" 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/ Screen 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, 1.1 – 0.6 A
Deflection frequency	Horizontal: 30 to 70 kHz Vertical: 50 to 120 Hz	Power consumption	Max. 110 W
Speaker	Left, right: 3.0 W × 2 50 Hz – 20 kHz	Dimensions	Approx. 368 × 408 × 388 mm (w/h/d) (14 1/2 × 16 1/8 × 15 3/8 inches)
Microphones	Uni-directional, electret condenser microphone	Mass	Approx. 15.3 kg (33 lb 12 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		

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
— 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
— 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
— 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	Power indicator
1 Normal Operation	110 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 (US Model only)

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.

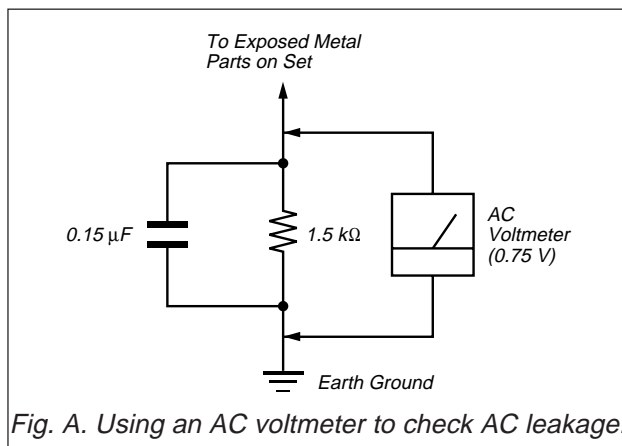


Fig. A. Using an AC voltmeter to check AC leakage.

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 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 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.

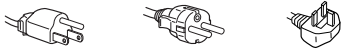
When a DDC1 host system is connected, the display synchronizes with the V. CLK in accordance with the VESA standards and outputs the EDID (Extended Display Identification Data) to the data line.

When a DDC2B host system is connected, the display automatically switches to DDC2B communication.

DDC™ is a trademark of Video Electronics Standard Association.

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.



for 100 to 120 V AC for 220 to 240 V AC for 240 V AC only

- 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.

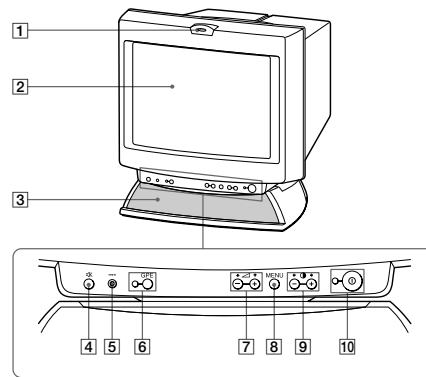
Transportation

- 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 →

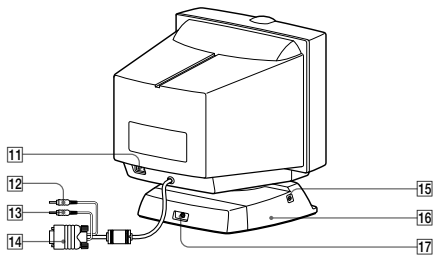
Functions of Controls

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). The default setting of the volume level is 30 %. 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 | Power switch and indicator | Turns the display on and off. |

Rear



- 11 AC IN connector Connect the supplied power cord (page 13).
- 12 Audio plug (green) Connect to the computer's audio output (page 12).
- 13 MIC plug (red) Connect to the computer's microphone input (page 12).
- 14 Video signal cable (blue) Connect to the computer's video output (page 12).
- 15 Headphones jack Connect standard mini-plug headphones (not supplied). The speakers are turned off when headphones are connected.
- 16 Tilt-Swivel Adjusts the angle of the display (page 15).
- 17 Subwoofer output jack Connect to a subwoofer's input jack (not supplied).

Getting Started

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

- Multimedia CPD-101VS display (1)
- Power cord (1)
- Warranty card (1)
- Operating instructions manual (1)
- Windows 95/98 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.

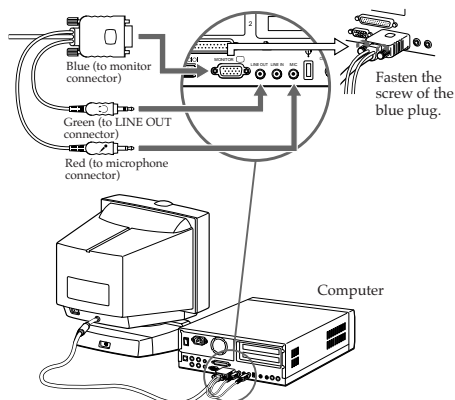
- 1) VGA is a trademark of IBM Corporation.
- 2) Macintosh is a trademark of Apple Computer Inc.

Continued to the next page →

Installation

Step 1: Connect the computer

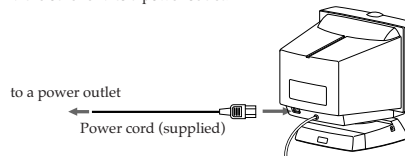
With the computer switched off, connect the video signal cable to the display (VGA) connector on your computer. If your computer supports the DDC plug-and-play standard, this connection will enable DDC communication between the display and the computer. The video signal cable is combined with audio and 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 35.

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 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 70 kHz.

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

✓ Note for Windows® 95/98 users

Install the new model information of the Sony computer display from "Windows 95/98 Monitor Information disk" into your PC. (To install the file, refer to the attached "About the Windows 95/98 Monitor Information Disk".)

This display complies with "VESA DDC," the standards of Plug & Play. If your PC/graphic board complies with DDC, select "Plug & Play Display (VESA DDC)" or this display's model name (CPD-101VS) as "Display type" from "Control Panel" in Windows 95/98. Some PC/graphic boards do not comply with DDC. Even if they comply with DDC, that may have some problems connecting this display. In this case, select this display's model name (CPD-101VS) as "Display type" in Windows 95/98.

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 μsec.
Horizontal blanking width should be more than 3.6 μsec.

■ 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.

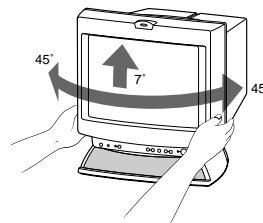
A total of 16 user-defined modes can be stored in memory. If a 17th mode is entered, it will replace the first.

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.

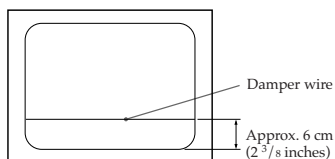


Damper wire

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.

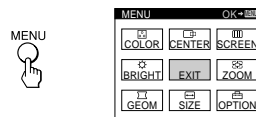
To adjust the display, turn on the display and computer.

Introducing the On-Screen Display

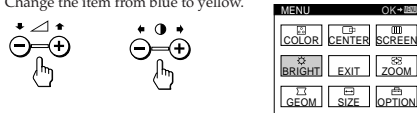
Beyond sound volume and picture contrast adjustment, most adjustments are made using the OSD menu system.

Using the OSD menu

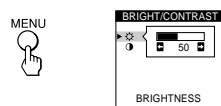
1. Press the MENU button to display the MENU OSD.



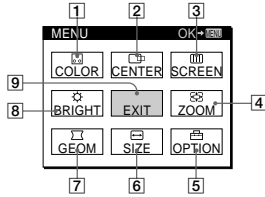
2. Use the four arrow (↑/↓/←/→) buttons (↶ +/- and ↷ +/- buttons) to select the item you want to adjust. Change the item from blue to yellow.



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



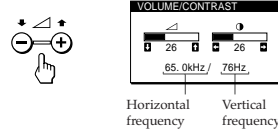
Summary of each item



- 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 \triangleleft + or - button.
The VOLUME/CONTRAST OSD appears.
The horizontal and vertical frequencies for each input signal received appear.



2. Press the \triangleleft +/- buttons to adjust volume.
+ to increase volume
- to decrease volume



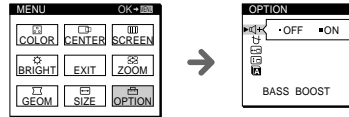
The VOLUME/CONTRAST OSD disappears three seconds after you release the buttons.

Tips

- The default setting of the volume level is 30 %.
- Adjust the volume while listening to the sound.
- Excessively high volume may cause howling.

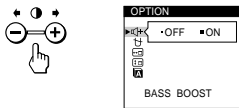
To activate Bass Boost for rich bass sound

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 \triangleleft + button.

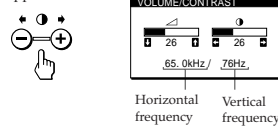
Tip

\otimes appears instead of \triangleleft 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 \odot + or - button.
The VOLUME/CONTRAST OSD appears.
The horizontal and vertical frequencies for each input signal received appear.



2. Press the \odot +/- buttons to adjust the picture contrast.
+ for more contrast
- for less contrast

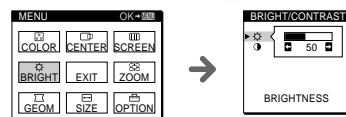


The VOLUME/CONTRAST OSD disappears three seconds after you release the buttons.

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 →

- Press the \leftarrow/\rightarrow buttons to adjust the picture brightness.
 \rightarrow for more brightness
 \leftarrow for less brightness



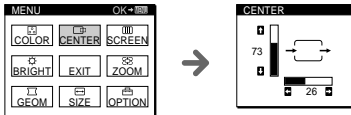
To exit the OSD
Press the MENU button again.

Tip
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.

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



- For vertical adjustment**
Press the \uparrow/\downarrow buttons.
 \uparrow to move up
 \downarrow to move down



- For horizontal adjustment**
Press the \leftarrow/\rightarrow buttons.
 \rightarrow to move right
 \leftarrow to move left



To exit the OSD
Press the MENU button again.

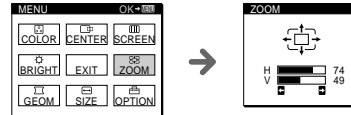
Tip
If you don't touch any buttons, the OSD automatically disappears after 30 seconds.

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

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

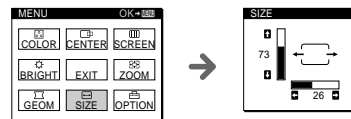


- Press the \leftarrow/\rightarrow buttons for the best size.



To adjust the picture size in horizontal or vertical direction

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



Continued to the next page \rightarrow

- For vertical adjustment**
Press the \uparrow/\downarrow buttons.
 \uparrow to increase
 \downarrow to decrease



- For horizontal adjustment**
Press the \leftarrow/\rightarrow buttons.
 \rightarrow to increase
 \leftarrow to decrease



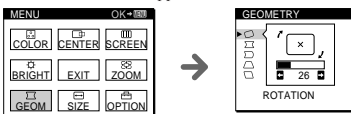
To exit the OSD
Press the MENU button again.

Tip
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.

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



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



- Press the \leftarrow/\rightarrow buttons to adjust.

<p>ROTATION \rightarrow to rotate the picture clockwise </p> <p>PINCUSHION \rightarrow to bend both sides outward </p> <p>PIN BALANCE \rightarrow to bend both sides to the right </p> <p>KEystone \rightarrow to widen the top </p> <p>KEY BALANCE \rightarrow to move the top to the right </p>	<p>\leftarrow to rotate counterclockwise </p> <p>\leftarrow to bend inward </p> <p>\leftarrow to the left </p> <p>\leftarrow to shrink the top </p> <p>\leftarrow to the left. </p>
--	---

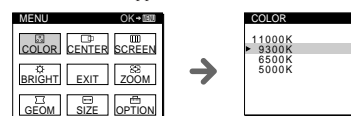
To exit the OSD
Press the MENU button again.

Tip
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.

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



Continued to the next page \rightarrow

2. Select the desired color temperature with the \uparrow/\downarrow buttons.



11000K for the brightest white
9300K for TV white
6500K for video monitor white
5000K for printing paper white

To exit the OSD

Press the MENU button again.

Tip

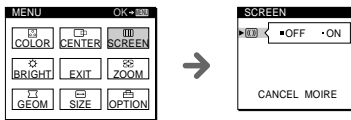
If you don't touch any buttons, the OSD automatically disappears after 30 seconds.

Adjusting the screen moiré

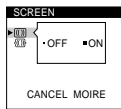
This adjustment is to eliminate wavy or elliptical lines that may appear on the screen.

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

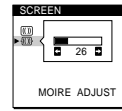
1. Select SCREEN in the MENU OSD and press the MENU button. The SCREEN OSD appears.



2. Press the \rightarrow button to select ON. The MOIRE ADJUST icon appears under the CANCEL MOIRE icon.



3. Press the \downarrow button to select MOIRE ADJUST.



4. Press the \leftarrow/\rightarrow buttons to tune the moiré cancellation effect.

To exit the OSD

Press the MENU button again.

Tip

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

Note on the moiré cancellation effect

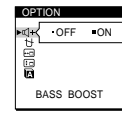
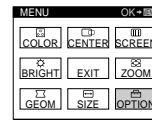
When CANCEL MOIRE is set to ON, the picture may appear fuzzy. If you set CANCEL MOIRE to OFF, the picture may be clearer, but the moiré will reappear.

Activating screen degauss

The display screen is automatically degaussed (demagnetized) when the power is turned on.

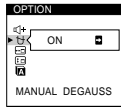
To manually degauss the screen, do as follows. If you need to degauss the screen a second time, wait at least 20 minutes for the best result.

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



Continued to the next page \rightarrow

2. Select MANUAL DEGAUSS with the \uparrow/\downarrow buttons.



3. Press the \rightarrow button to activate the degauss cycle.

To exit the OSD

Press the MENU button again.

Tip

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

3. Press the \leftarrow/\rightarrow buttons to move the OPTION OSD to the desired position.



To exit the OSD

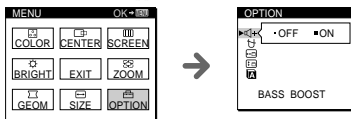
Press the MENU button again.

Tip

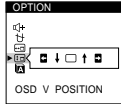
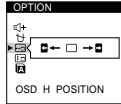
If you don't touch any buttons, the OSD automatically disappears after 30 seconds.

Changing the OSD position

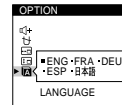
1. Select OPTION in the MENU OSD and press the MENU button. The OPTION OSD appears.



2. Select OSD H (horizontal) POSITION or OSD V (vertical) POSITION with the \uparrow/\downarrow buttons.



2. Select LANGUAGE with the \uparrow/\downarrow buttons.



Continued to the next page \rightarrow

- Press the ←/→ buttons to select the desired language.



To exit the OSD

Press the MENU button again.

Tip

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 *** 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 *** button while no OSD is displayed.

To recall the factory settings for all modes

Press and hold the *** button for more than two seconds. All adjustments return to the factory settings.

Graphic Picture Enhancement (GPE)

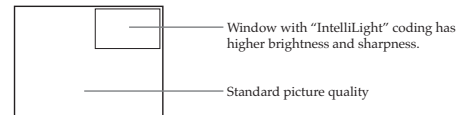
Available GPE modes

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.

Tip

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.

Tip

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.

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.

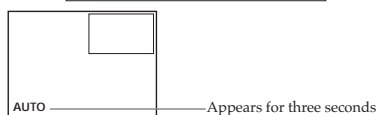
Mode	Power consumption	Recovery time	Power indicator
1 Normal Operation	110 W (max)	—	Green
2 Sleep	15 W (max)	Approx. 3 sec.	Green ↔ Orange
3 Deep Sleep	8 W (max)	Approx. 10 sec.	Orange
4 Power-off	0 W	—	Off

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:

AUTO → GPE OFF → MODE 1 → MODE 2





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


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  indicator is not lit


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

If the "NO INPUT SIGNAL" message appears on the screen, or if the  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  indicator is green or flashing orange

- See "Self-diagnosis function" (page 38).

No sound from speaker

If the  indicator is displayed

- Press the  button to cancel muting.

- Check that the audio plug is properly connected.
- Adjust the volume with  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.)

Continued to the next page →

Troubleshooting 35

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.

Continued to the next page →

Troubleshooting 37

Howling (feedback) is heard

- Decrease the volume with  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).

36 Troubleshooting

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 1-888-4SONYPYC (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  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.

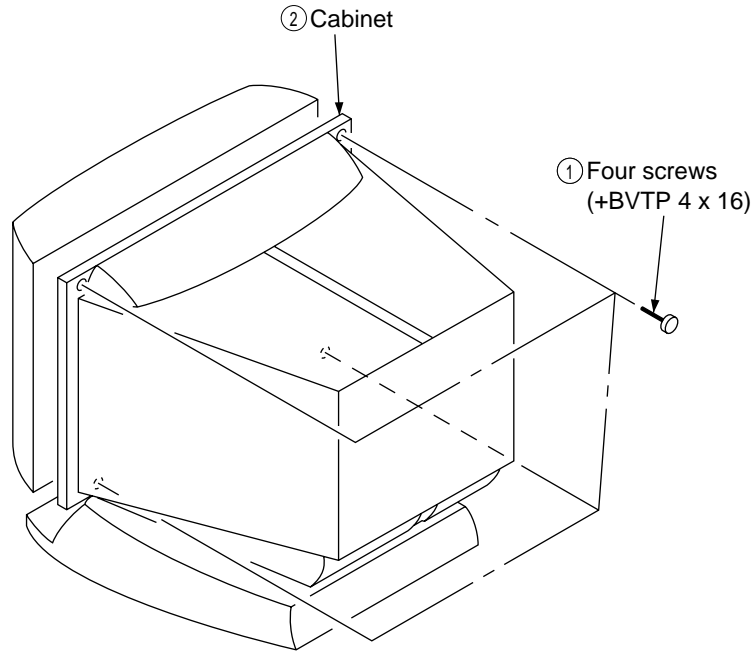
If the color bars do not appear, there might be a problem with the display. Contact your local authorized Sony dealer, or call Sony Technical Support at 1-888-4SONYPYC (1-888-476-6972).

38 Troubleshooting

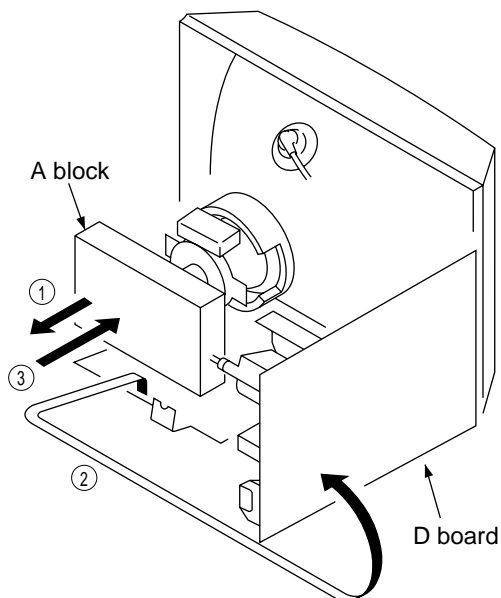
SECTION 2 DISASSEMBLY

CPD-101VS

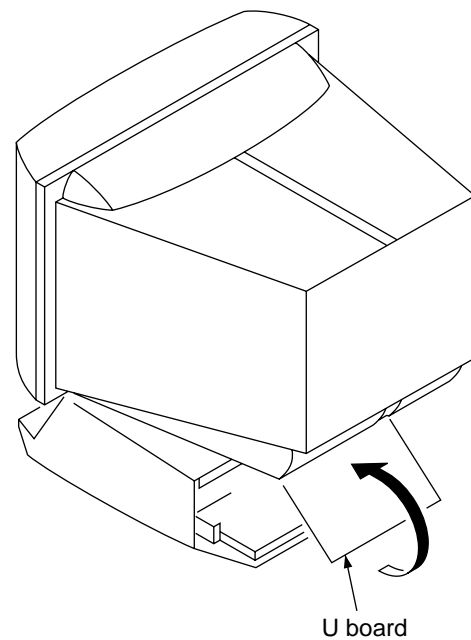
2-1. CABINET REMOVAL



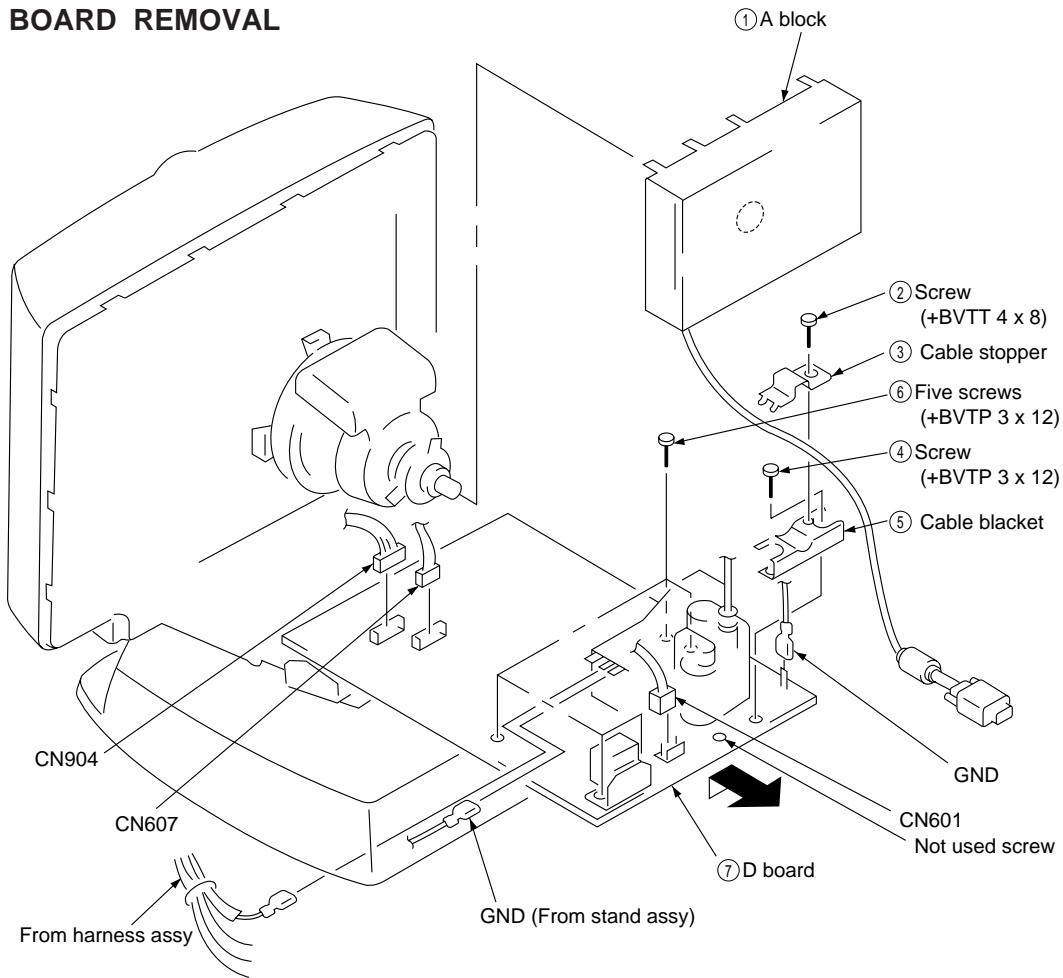
2-2. SERVICE POSITION (1) D board



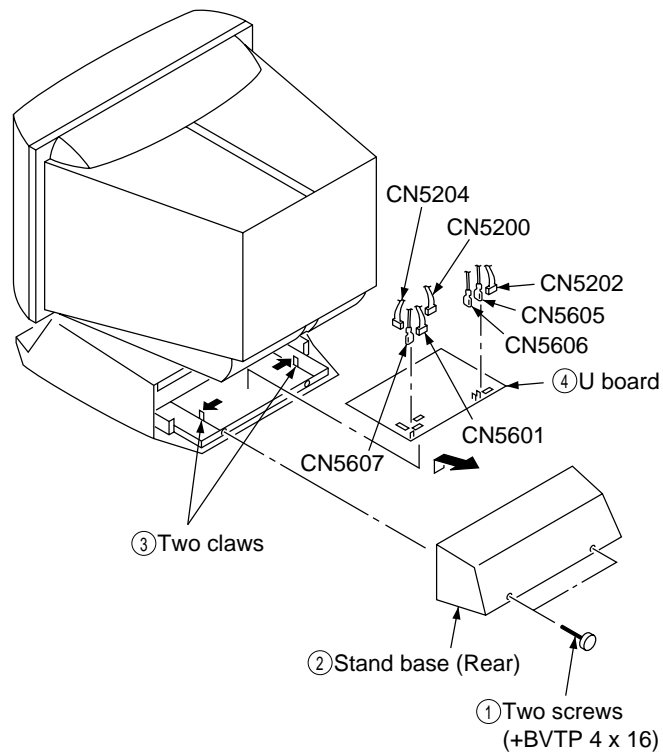
(2) U board



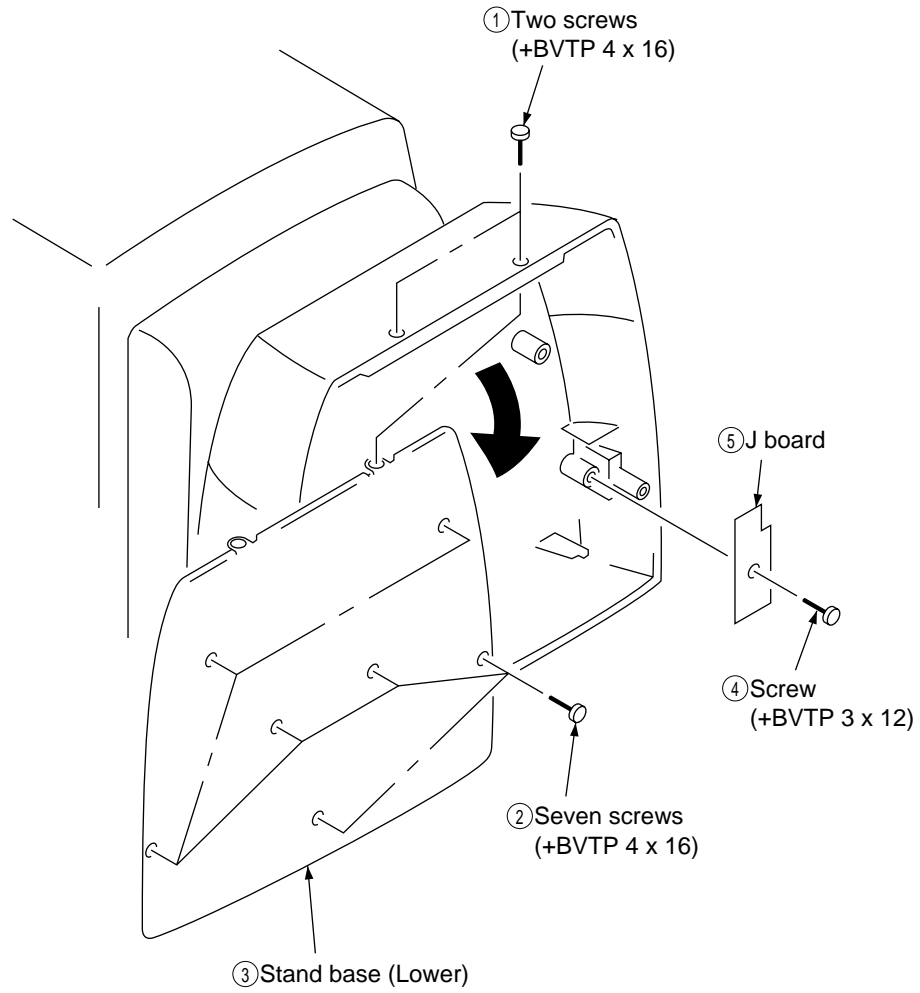
2-3. D BOARD REMOVAL



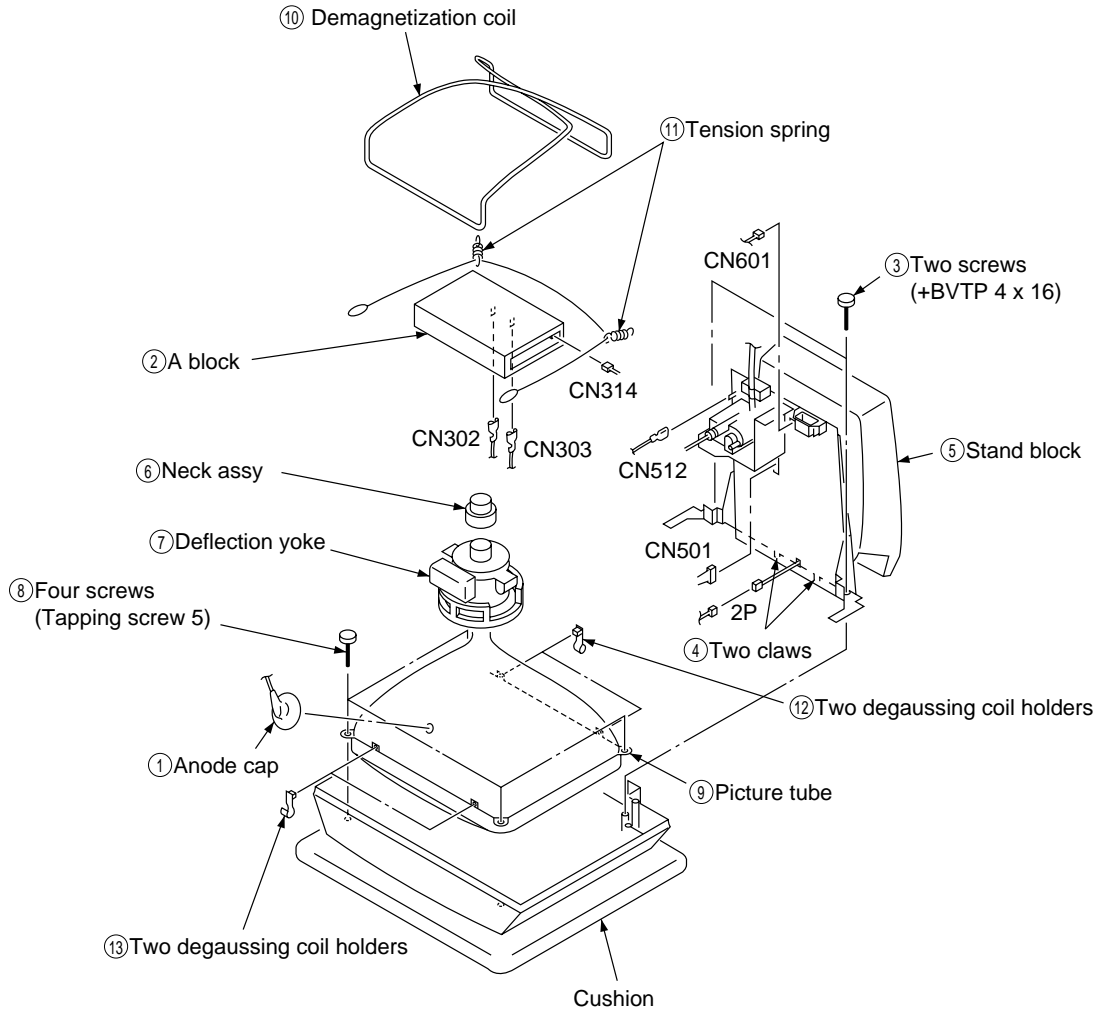
2-4. U BOARD REMOVAL



2-5. J BOARD REMOVAL



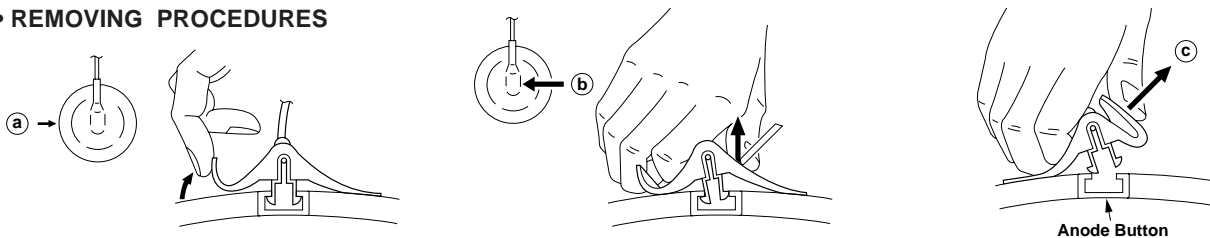
2-6. PICTURE TUBE REMOVAL



• 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.

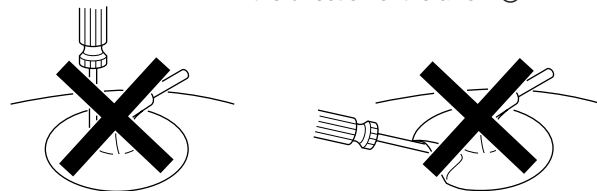
• REMOVING PROCEDURES



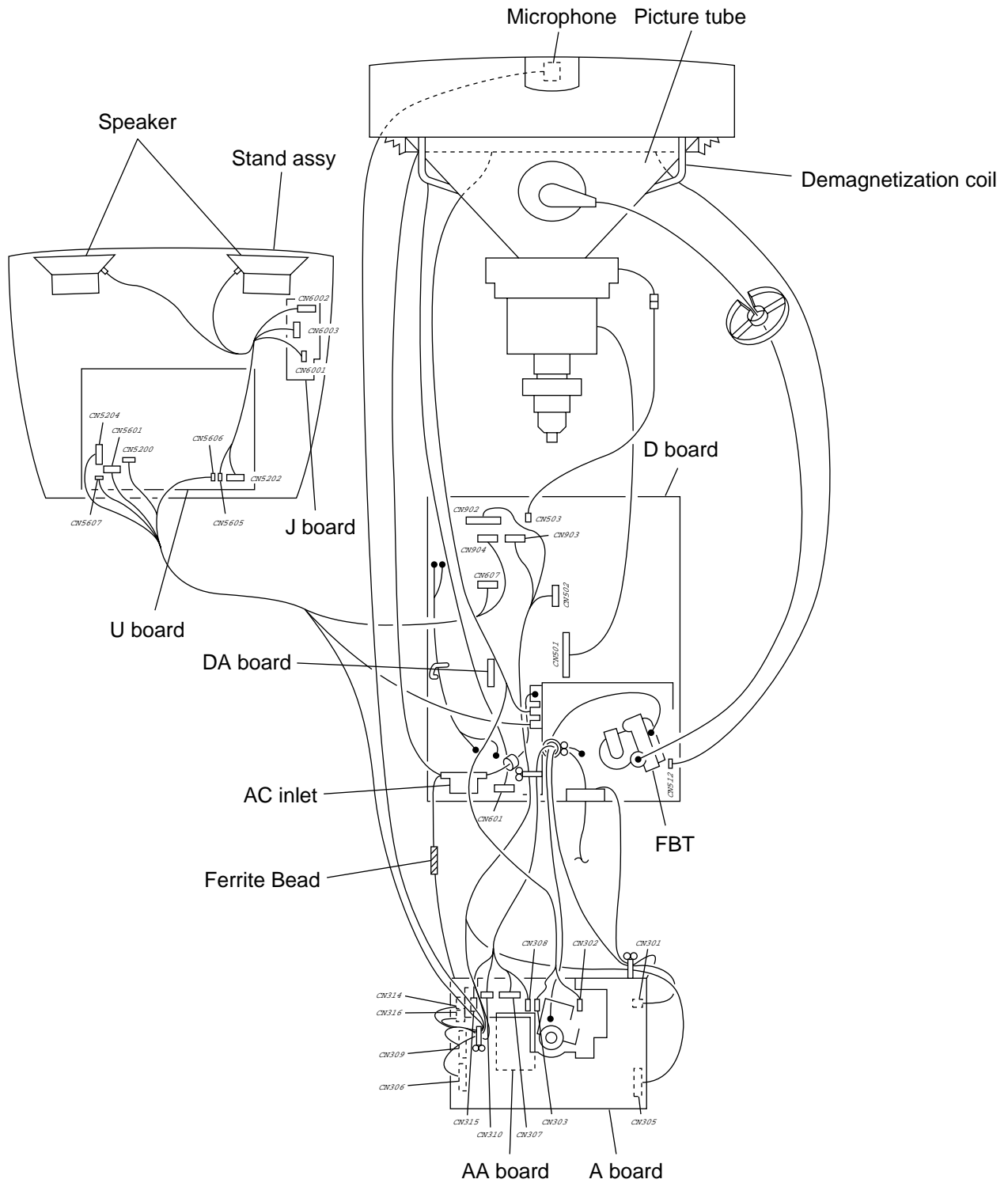
- ① Turn up one side of the rubber cap in the direction indicated by the arrow (a).
- ② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow (b).
- ③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow (c).

• 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 17.5 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 ⑩ 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

• 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 (2-pole Mg) 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.
- Note: "TILT" shall be set at 0.

• Landing Fine Adjustment

< Measurement condition >

Brightness : ΣI_k (520 μ A)
 Magnetic field : BH=0, BV=45 μ T
 CRT size : 270 \times 202
 Measurement point : 256 \times 190
 Temperature : 25°C

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

a1	a4	a7	[μ m]
a2	a5	a8	
a3	a6	a9	

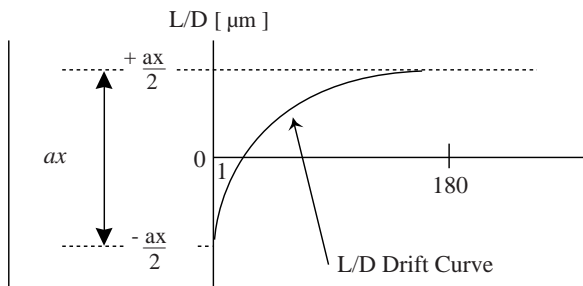
< Adjustment target >

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

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

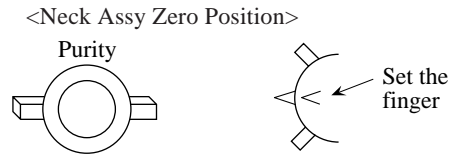
1 minute

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

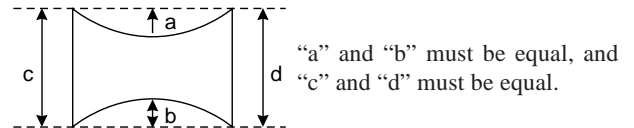


6. Adjust the DY position and purity, and the DY tilt.
L/D control specification

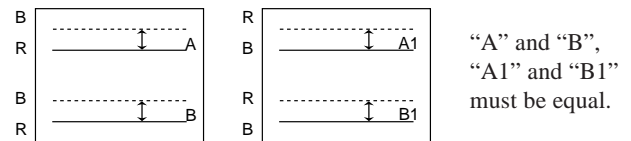
± 5	± 7	± 5
± 5	± 7	± 5
± 5	± 7	± 5

7. Fasten DY with screw.
Note: Torque 22 \pm 2kgcm (2.2 \pm 0.2 Nm)
Perform auto degaussing.

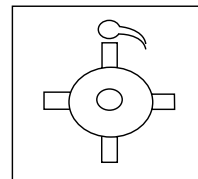
8. Adjust each top and bottom pins by two wedges, and also adjust swinging DY neck right-left by H.TILT and horizontal trapezoid, and then fix with two wedges.
(When fixing DY with wedges, insert wedges completely so that the DY does not shake.)



Signal : Inverted crosshatch (Make the monogreen)



<How to drive in wedges>



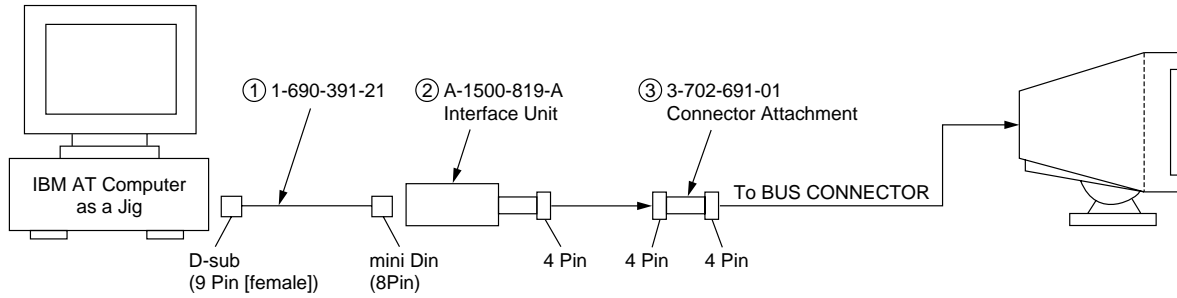
9. If they do not satisfy the specification, connect the purity magnet on DY and the disc magnet of the front and the rear of DY located CRT side.

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 degausser and check.
11. Remove the sensor and wobbling coil.
12. Check that the DY is not tilting.

CPD-101VS

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)

• Convergence Specification

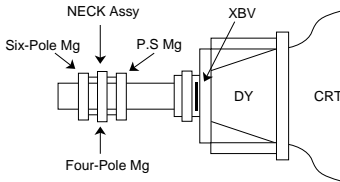
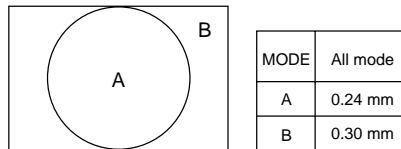


Fig. 1

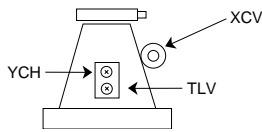
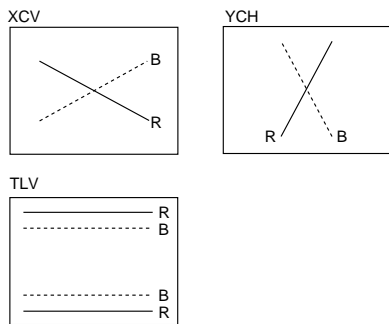


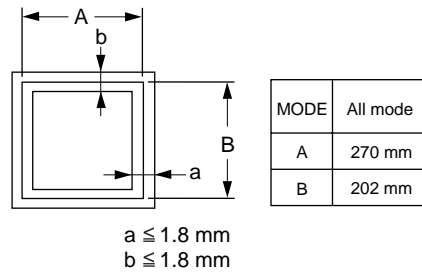
Fig. 2

• White Balance Adjustment Specification

- | | |
|-----------------------|-----------------------|
| (1) 1100K | (2) 9300K |
| $x = 0.274 \pm 0.008$ | $x = 0.283 \pm 0.008$ |
| $y = 0.287 \pm 0.008$ | $y = 0.298 \pm 0.008$ |
| (3) 5000K | |
| $x = 0.345 \pm 0.008$ | |
| $y = 0.358 \pm 0.008$ | |



• Vertical and Horizontal Position and Size Specification



<6 Pole Magnet>

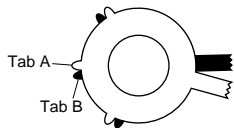
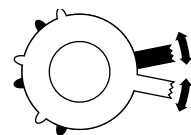
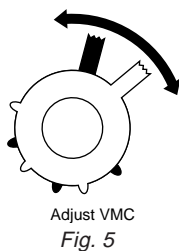


Fig. 3



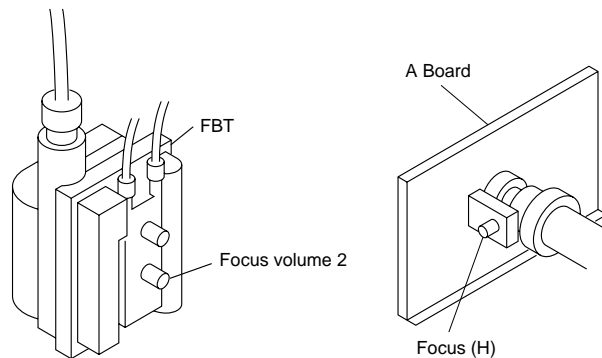
Adjust HMC
Fig. 4



Adjust VMC
Fig. 5

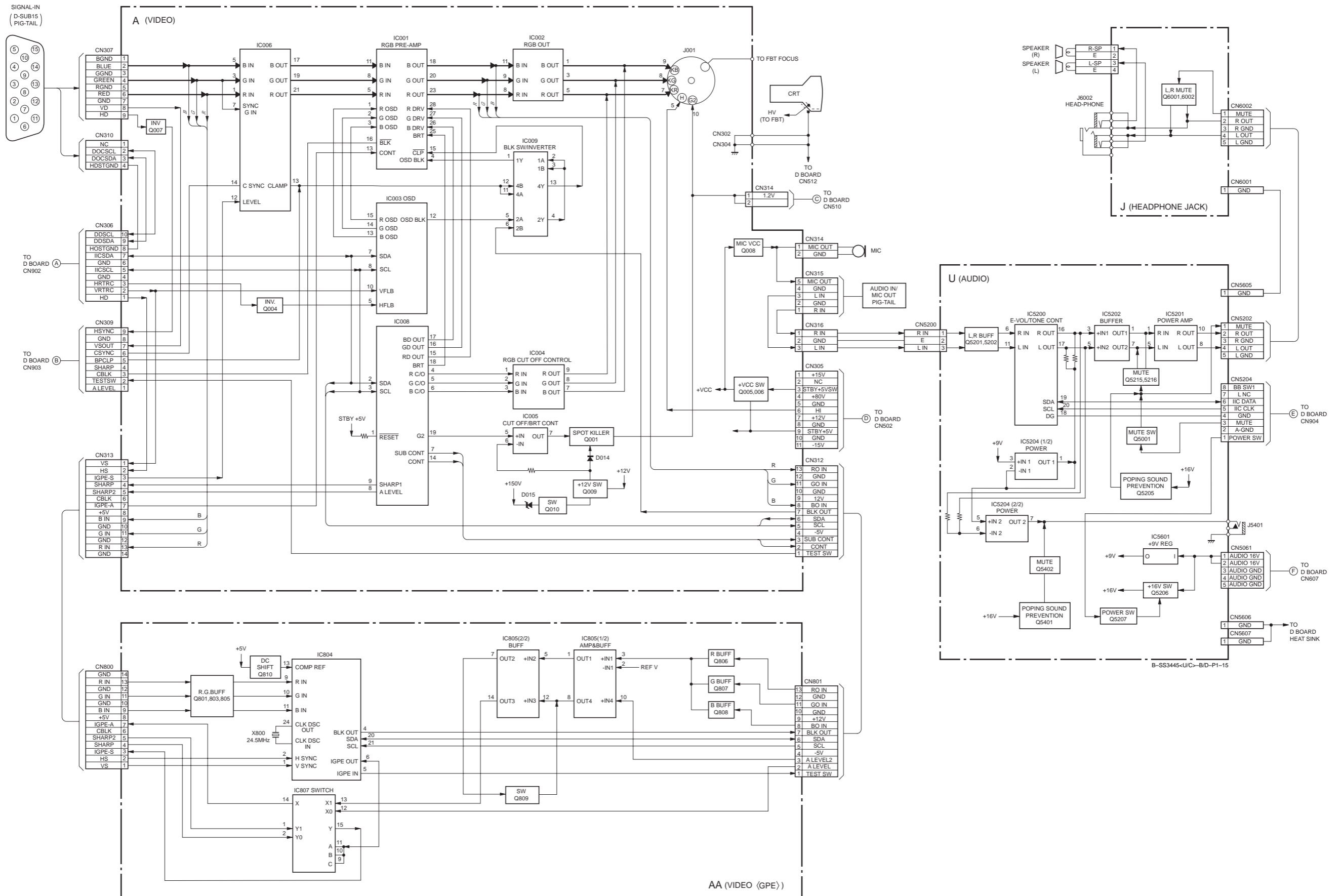
• Focus adjustment

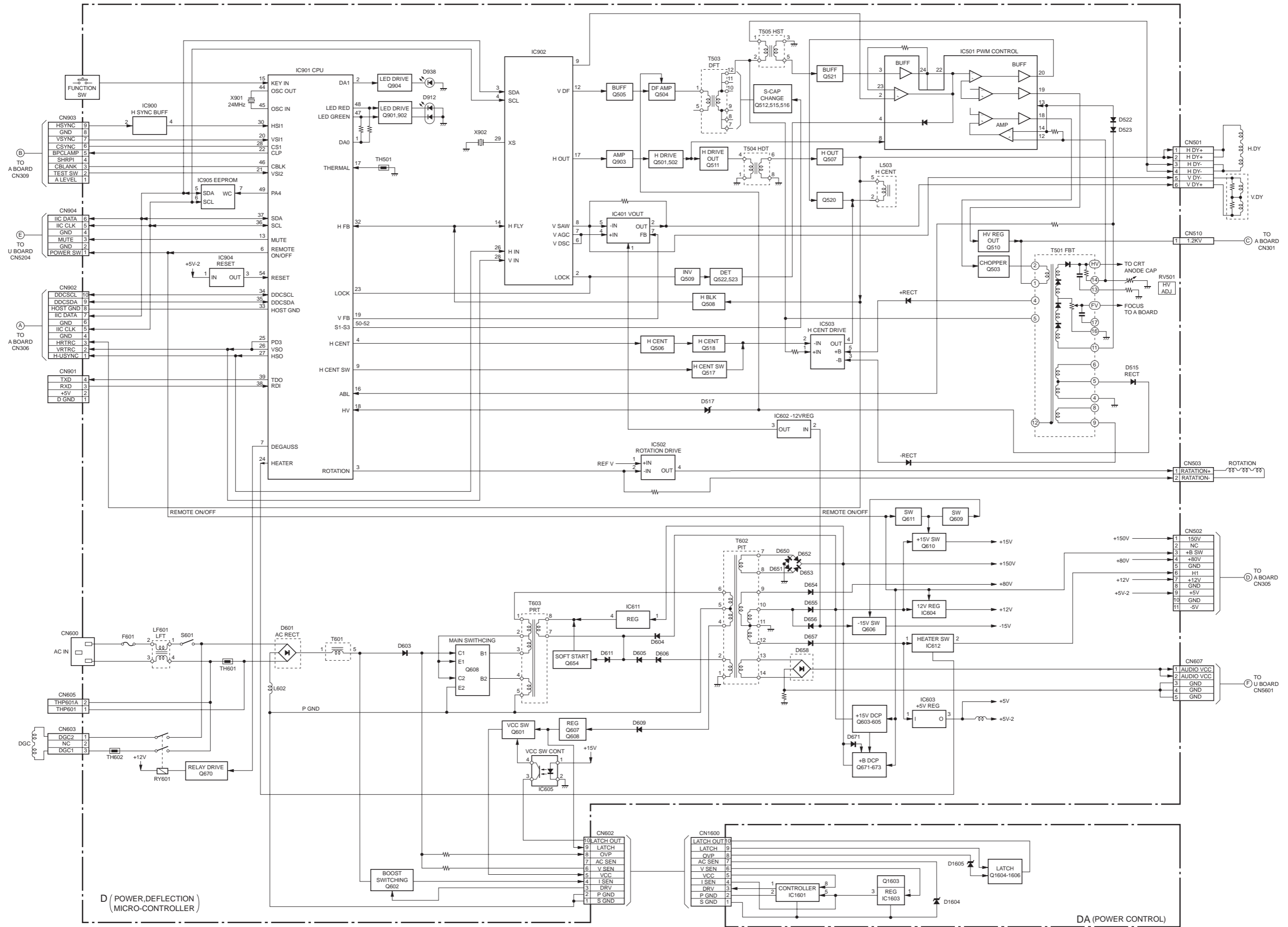
Adjust the focus volume 2 for the optimum focus.



SECTION 5 DIAGRAMS

5-1. BLOCK DIAGRAMS

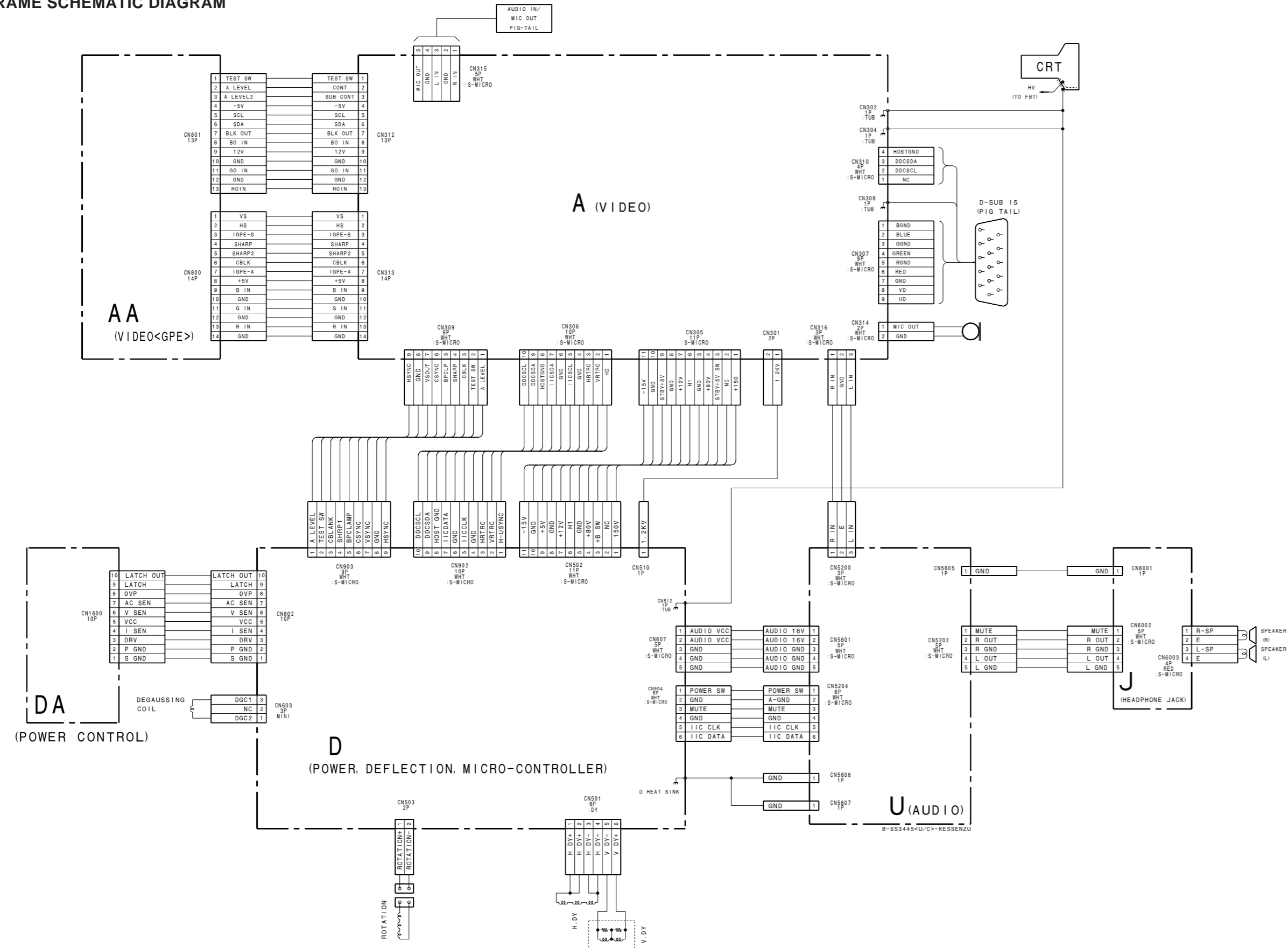




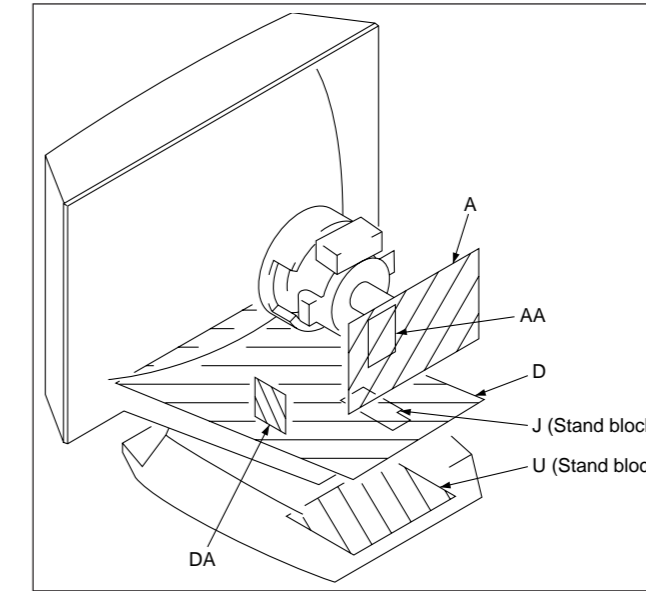
D (POWER, DEFLECTION) MICRO-CONTROLLER

DA (POWER CONTROL)

5-2. FRAME SCHEMATIC DIAGRAM



5-3. CIRCUIT BOARDS LOCATION



5-4. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

Note:

- All capacitors are in μF unless otherwise noted. (μF : $\mu\mu\text{F}$)
- Capacitors without voltage indication are all 50 V.
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch: 5 mm
Rating electrical power 1/4 W (CHIP : 1/10 W)

- All resistors are in ohms.
- : nonflammable resistor.
- : fusible resistor.
- Δ : internal component.
- : panel designation, and adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- \perp : earth-ground.
- : earth-chassis.
- All voltages are in V.
- Readings are taken with a 10 M digital multimeter.
- Readings are taken with a color-bar signal input.
- Voltage variations may be noted due to normal production tolerances.
- * : Can not be measured.
- Circled numbers are waveform references.
- : B + bus.
- : B - bus.
- The components identified by in this basic schematic diagram 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.
- When replacing components identified by , make the necessary adjustments indicated. (See page 3-1)
- When replacing the part in below table, be sure to perform the related adjustment.

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

	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)

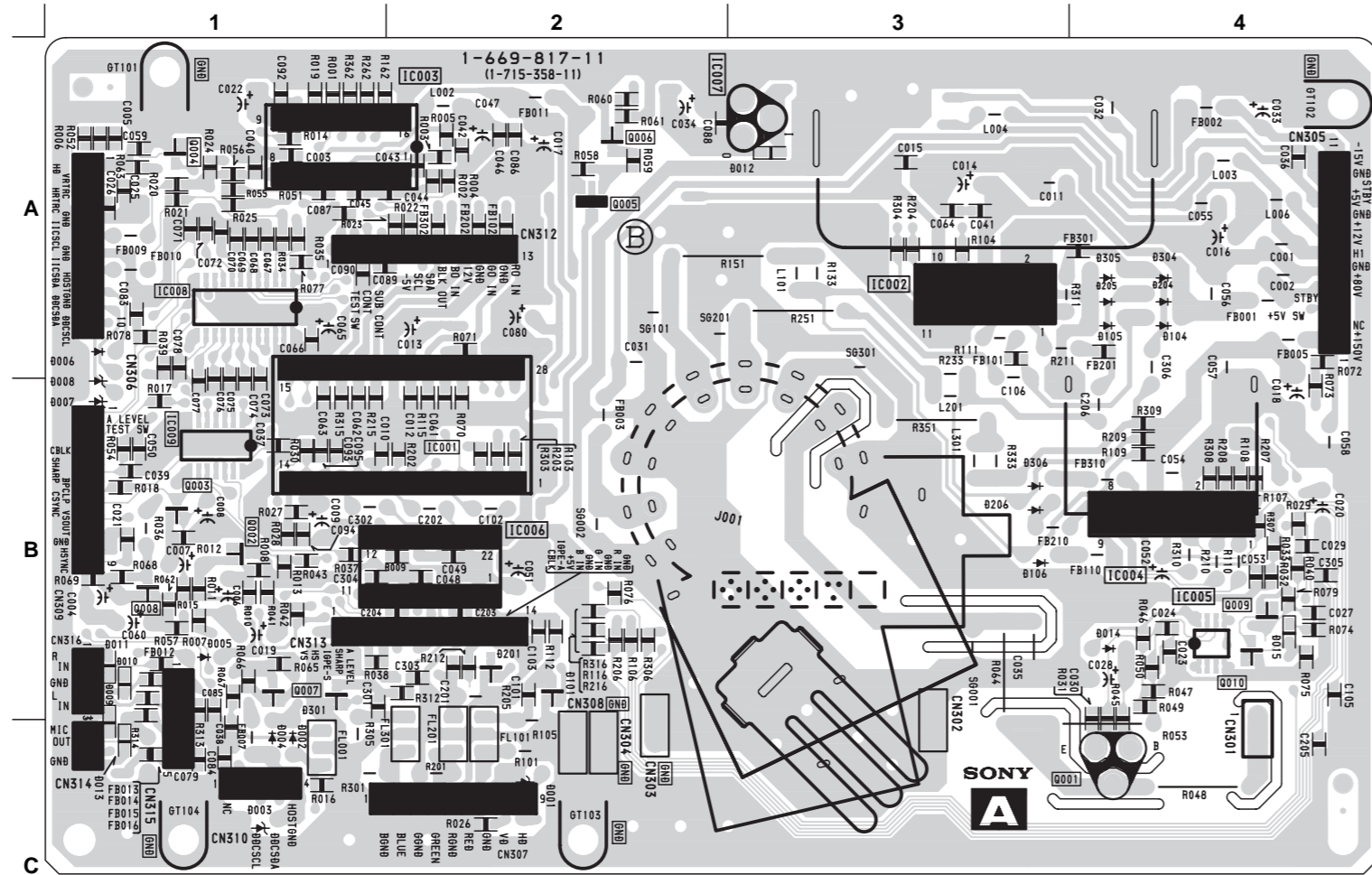
Terminal name of semiconductors in silk screen printed circuit (※)

Device	Printed symbol	Terminal name	Circuit
① Transistor		Collector Base Emitter	
② Transistor		Collector Base Emitter	
③ Diode		Cathode Anode	
④ Diode		Cathode Anode (NC)	
⑤ Diode		Cathode Anode (NC)	
⑥ Diode		Common Anode Cathode	
⑦ Diode		Common Anode Cathode	
⑧ Diode		Common Anode Anode	
⑨ Diode		Common Anode Anode	
⑩ Diode		Common Cathode Cathode	
⑪ Diode		Common Cathode Cathode	
⑫ Diode		Anode Anode Cathode	
⑬ Transistor (FET)		Drain Gate Source	
⑭ Transistor (FET)		Drain Source Gate	
⑮ Transistor (FET)		Source Drain Gate	
⑯ Transistor		Emitter Collector Base	

(Chip semiconductors that are not actually used are included.)

Note: 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 BOARD (Conductor Side) —



A [VIDEO]

• A BOARD SEMICONDUCTOR LOCATION

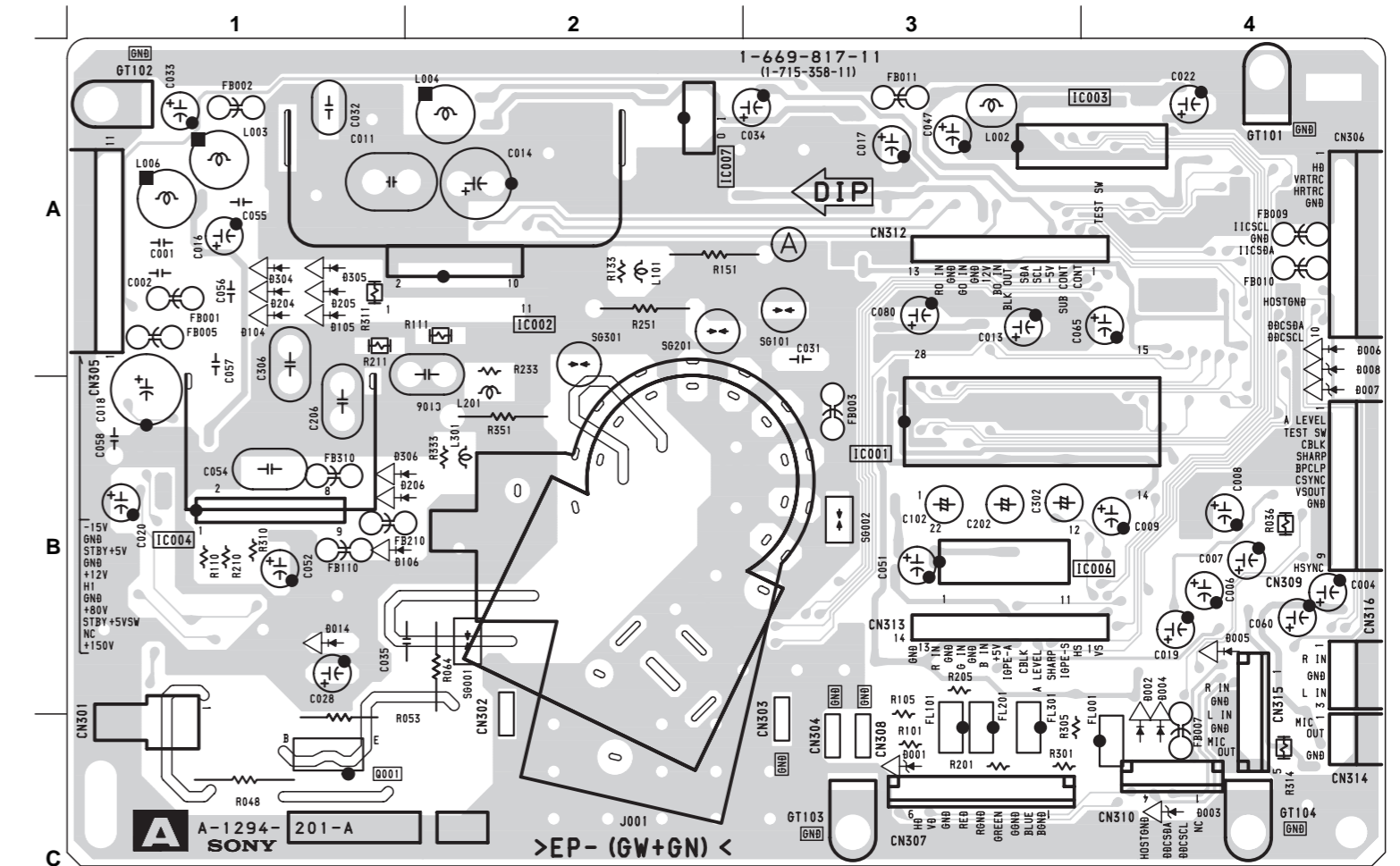
IC	
(Conductor Side)	(Component Side)
IC001	B-2 B-3
IC002	A-3 A-2
IC003	A-2 A-4
IC004	B-4 B-1
IC005	B-4 B-1
IC006	B-2 B-3
IC008	A-1
IC009	B-1

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

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

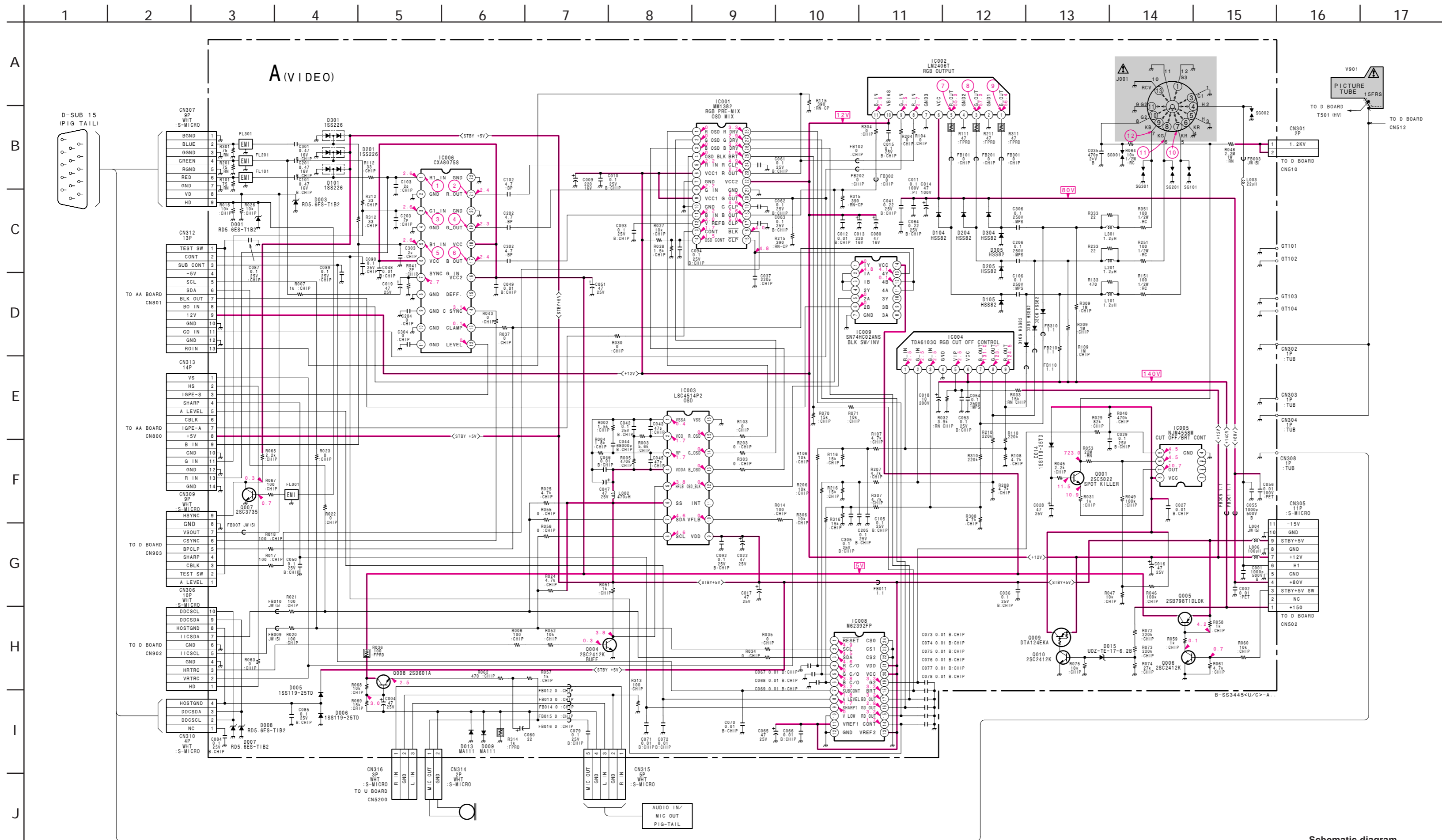
*: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 5-7)

— A BOARD (Component Side) —

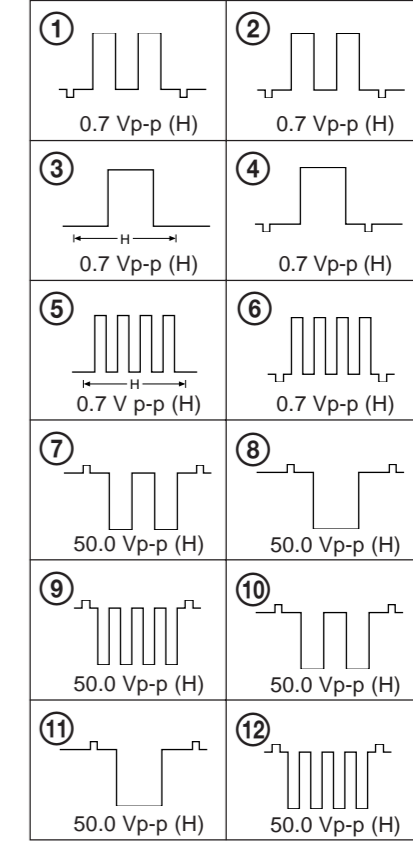


NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

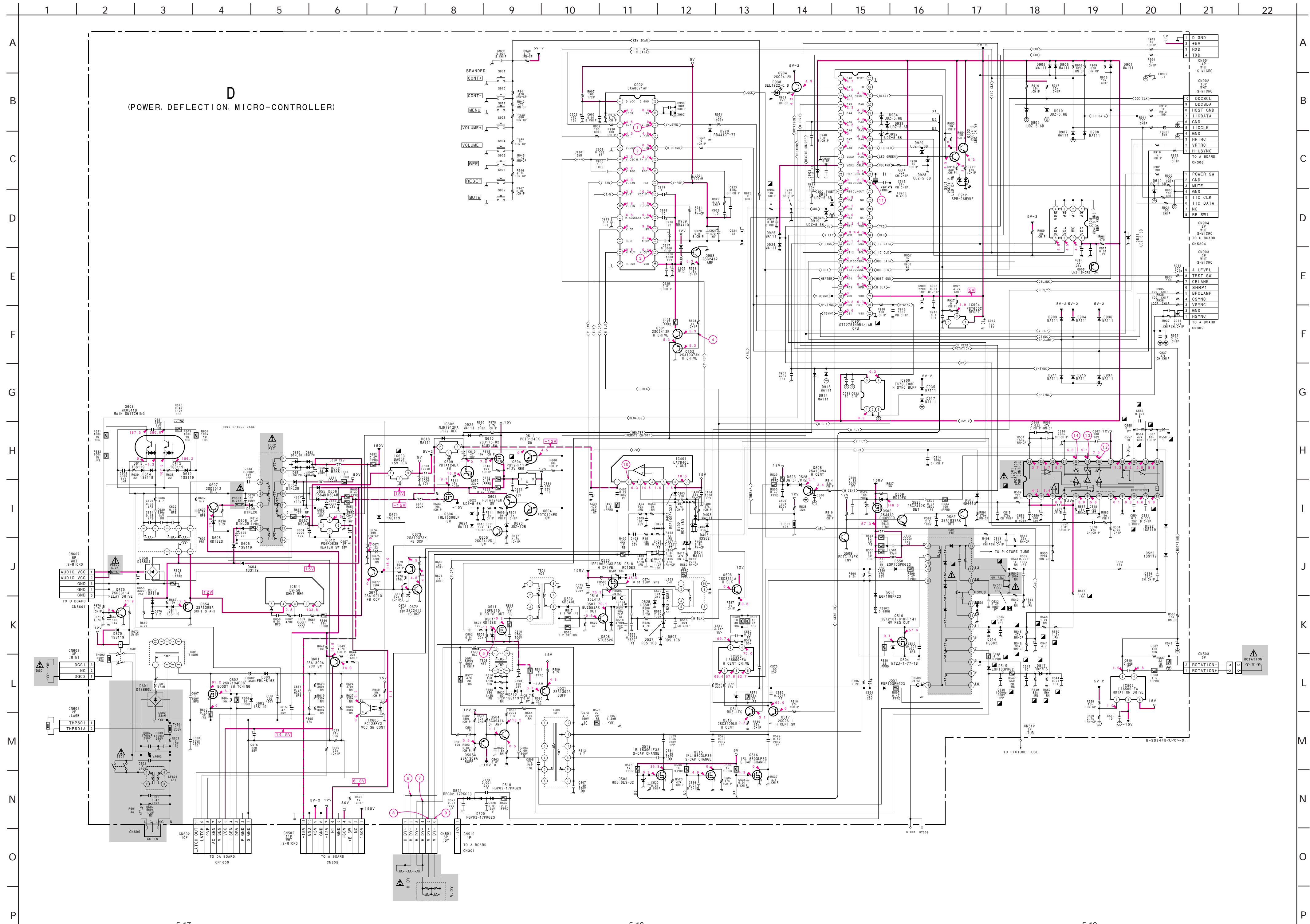
(1) Schematic Diagram of A Board



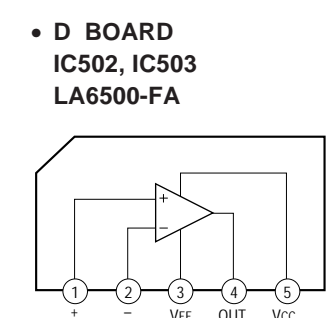
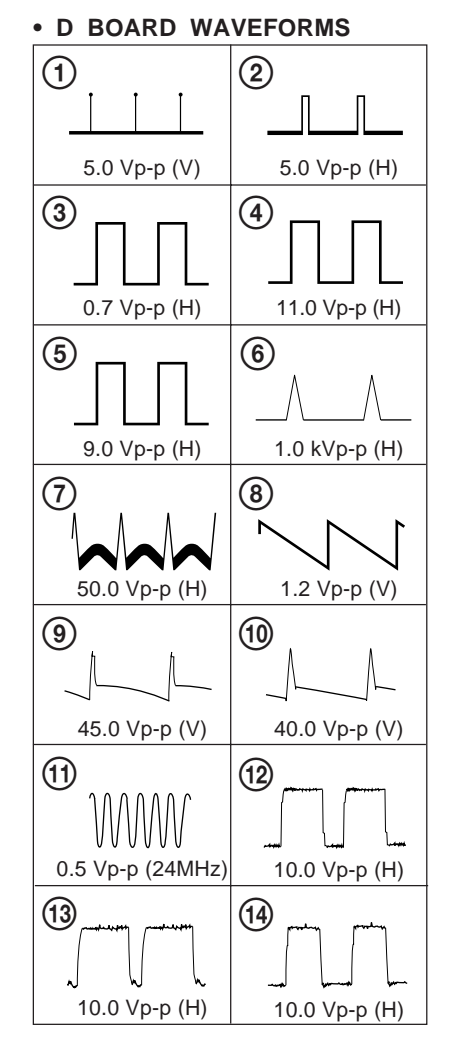
• A BOARD WAVEFORMS

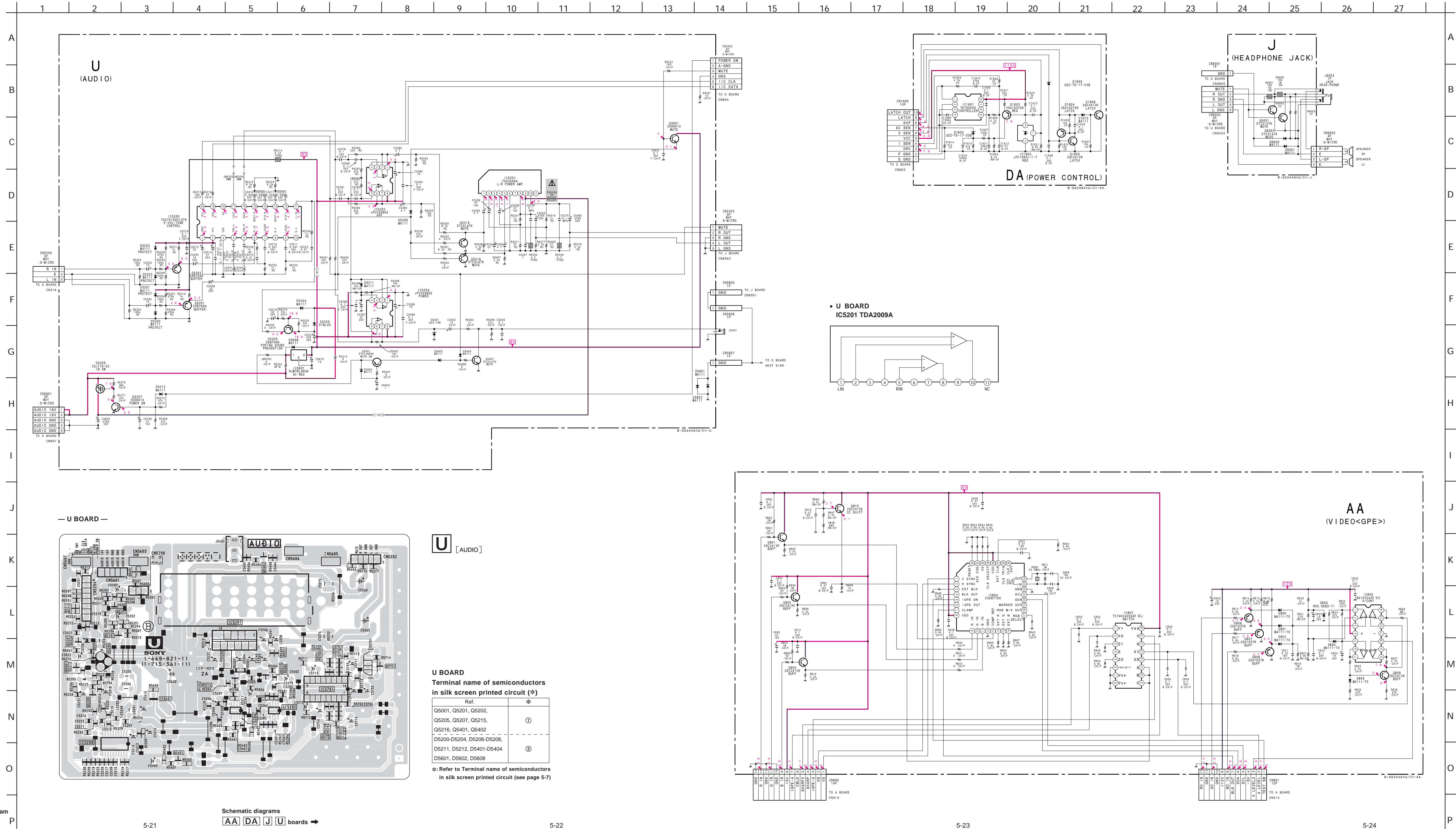


Schematic diagram
← A board



D
(POWER, DEFLECTION, MICRO-CONTROLLER)



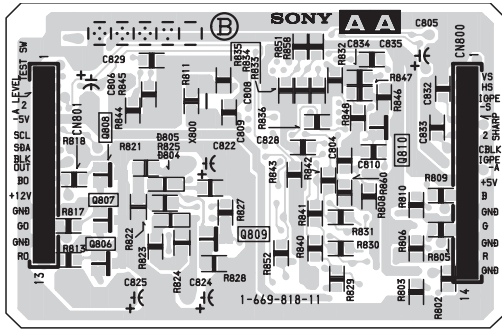


AA [VIDEO (GPE)]

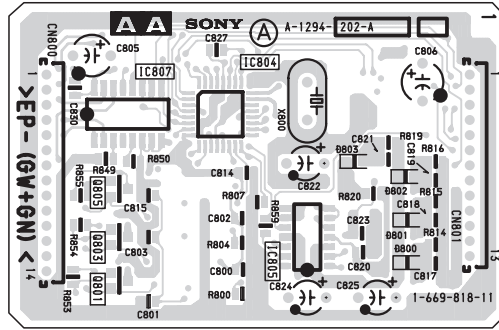
DA [POWER CONTROL]

J [HEADPHONE JACK]

— AA BOARD (Conductor Side) —



— AA BOARD (Component Side) —



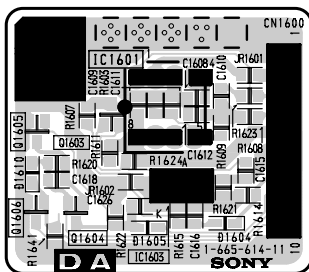
AA BOARD

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 —



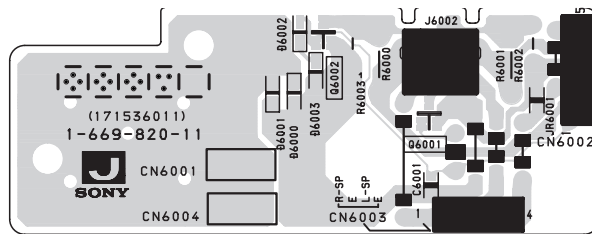
DA BOARD

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 —



J BOARD

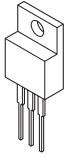
Terminal name of semiconductors
in silk screen printed circuit (*)

Ref.	*
Q6001, Q6002	①
D6000, D6001	③

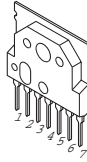
*: Refer to Terminal name of semiconductors
in silk screen printed circuit (see page 5-7)

5-5. SEMICONDUCTORS

BA05T



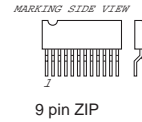
LA7840L



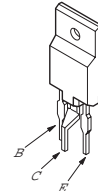
**NJM78L09UA
TA78L09F-TE12L**



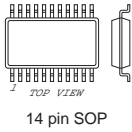
TDA6103Q/N3,112



BU12522AX



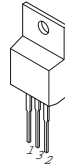
**BA10324AF-E2
SN74HC02ANS
SN74HC02ANS-E20
XRA10324AF**



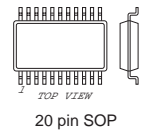
LSC4514P2



NJM7912FA

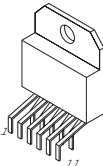


TDA7315D013TR

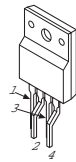


**DTA124EKA-T146
DTC144EKA-T146
DTC314TKH04
DTC314TK-T-146
PDTA124EK-115
PDTC124EK-115
2SA1037AK-T146-QR
2SA1037AK-T146-R
2SA1037K-T-146-QR
2SA1162G
2SB709A-QRS-TX
2SC1623-L5L6
2SC2412K-T-146-QR
2SC3735-L-B35
2SC3735-T1B-B35
2SD601A-Q
2SD601A-QRS-TX**

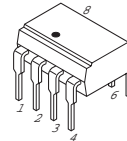
LM2406T



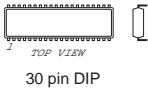
PQ6RD83B



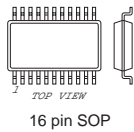
TK75003D



CXA8071AP

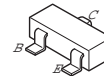
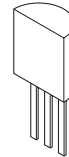


**MC74HC4053F
TC74HC4053AF**

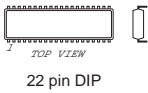


PST600C-T

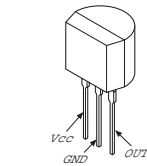
UPC1093J-1-T



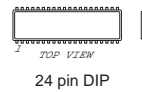
CXA8075S



MM1382



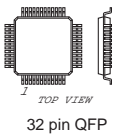
UPC5021-109



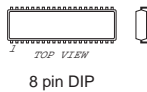
**IRFU110
IRFU110A**



CXD8770Q



M24C08-BN6



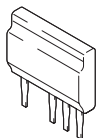
ST72751N9B1/LAM



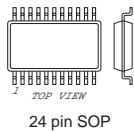
**IRFI9620GSLF35
IRLI530GLF33**



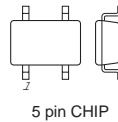
DM-58



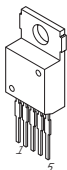
M62392FP



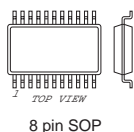
TC7SET08F



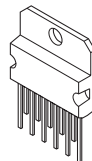
LA6500FA



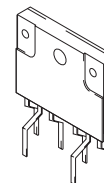
**NJM4558M
UPC4558G2**



TDA2009A



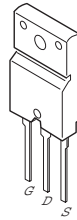
MX0541B-F



2SA1091-O
2SA1091O-E2
2SC3941A-Q

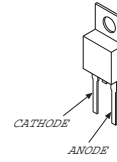


2SK2101-01MR-F141

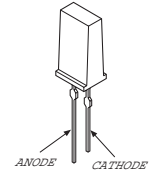


DTZ-TT11-5.6B
DTZ10B
DTZ33B
DTZ5.6B
MA111
RD12SB2
RD5.6S-B
RD5.6SB3
UDZ-TE-17-10B
UDZ-TE-17-12B
UDZ-TE-17-22B
UDZ-TE-17-33B
UDZ-TE-17-5.6B
UDZ-TE-17-6.2B

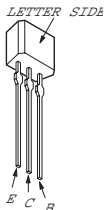
FML-S16S
FMG-G2CS



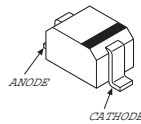
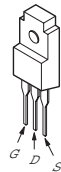
SEL1922D-C
SEL1922D-C,D



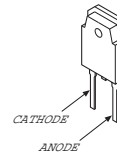
2SA1175-HFE
2SC2785-HFE
2SC3311A-QRSTA



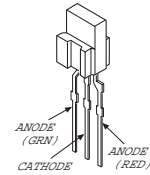
2SJ175



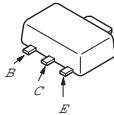
FMQ-G5FMS
5TUZ52C



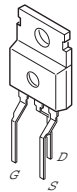
SPB-26MVWF



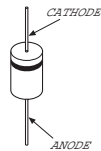
2SB798-DL
2SB798-DLDK



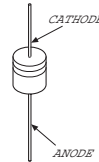
2SK2194F08



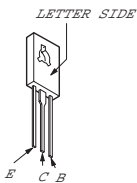
D1NL20
D1NL20-TR
HSS82
RGP02-17EL-6433
RGP02-17PKG23
3DL41A



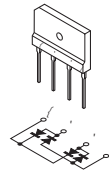
MTZJ-T-77-18
RB441Q
RB441QT-77
RD10ES-B2
RD12ES-B2
RD18ES-B2
RD27ES-B2
RD4.7ES-B2
RD5.1ES-B2
RD5.6ES-B2
1SS119-25



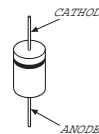
2SC2611



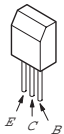
D4SBS4
D4SBS4-F
D4SB60L



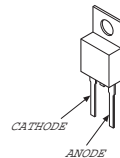
SB340



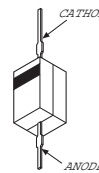
2SC3209LK



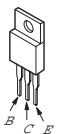
D5S4M



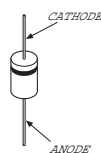
SB340L-6489



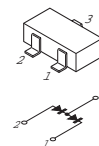
2SC5022-02
2SD2012
2SJ449
2SJ449 (2)



EGP10D
EGP10DPKG23
R2KS



1SS226



SECTION 6
EXPLODED VIEWS

NOTE:

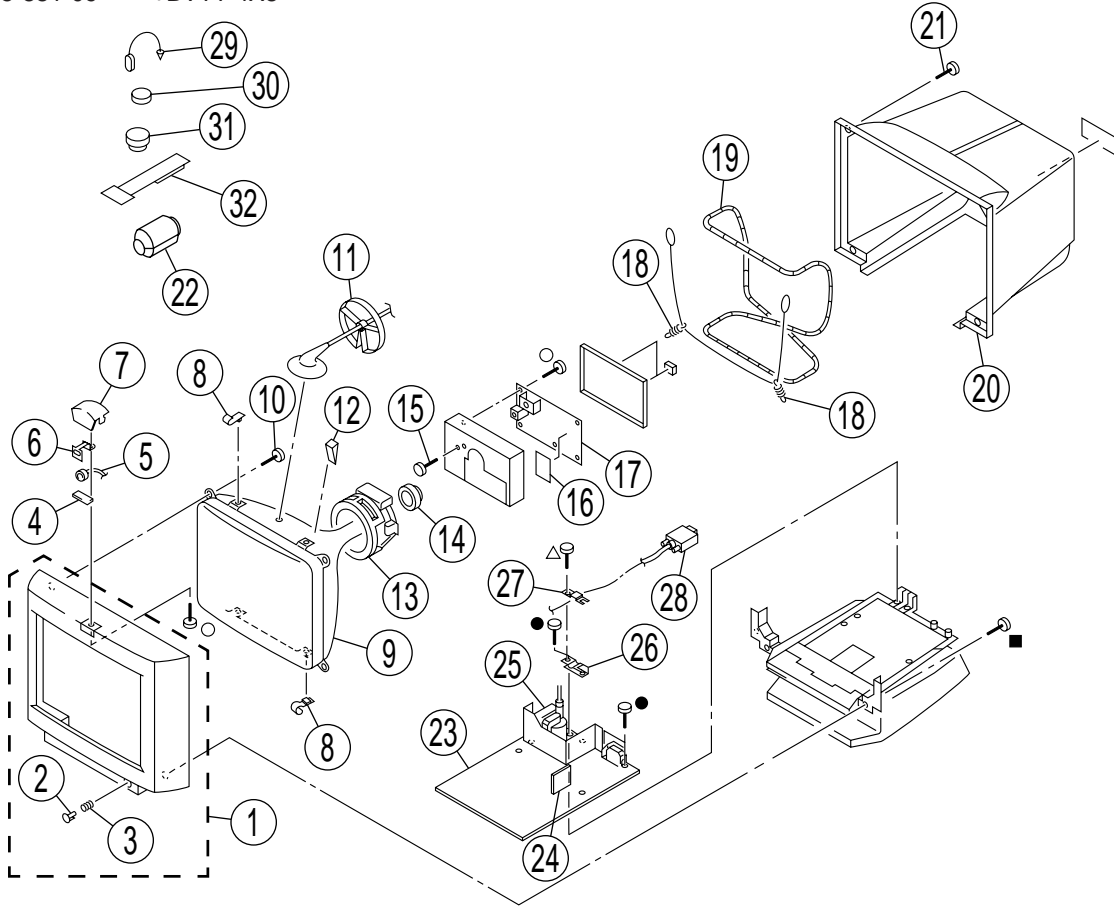
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark 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.

6-1. CHASSIS

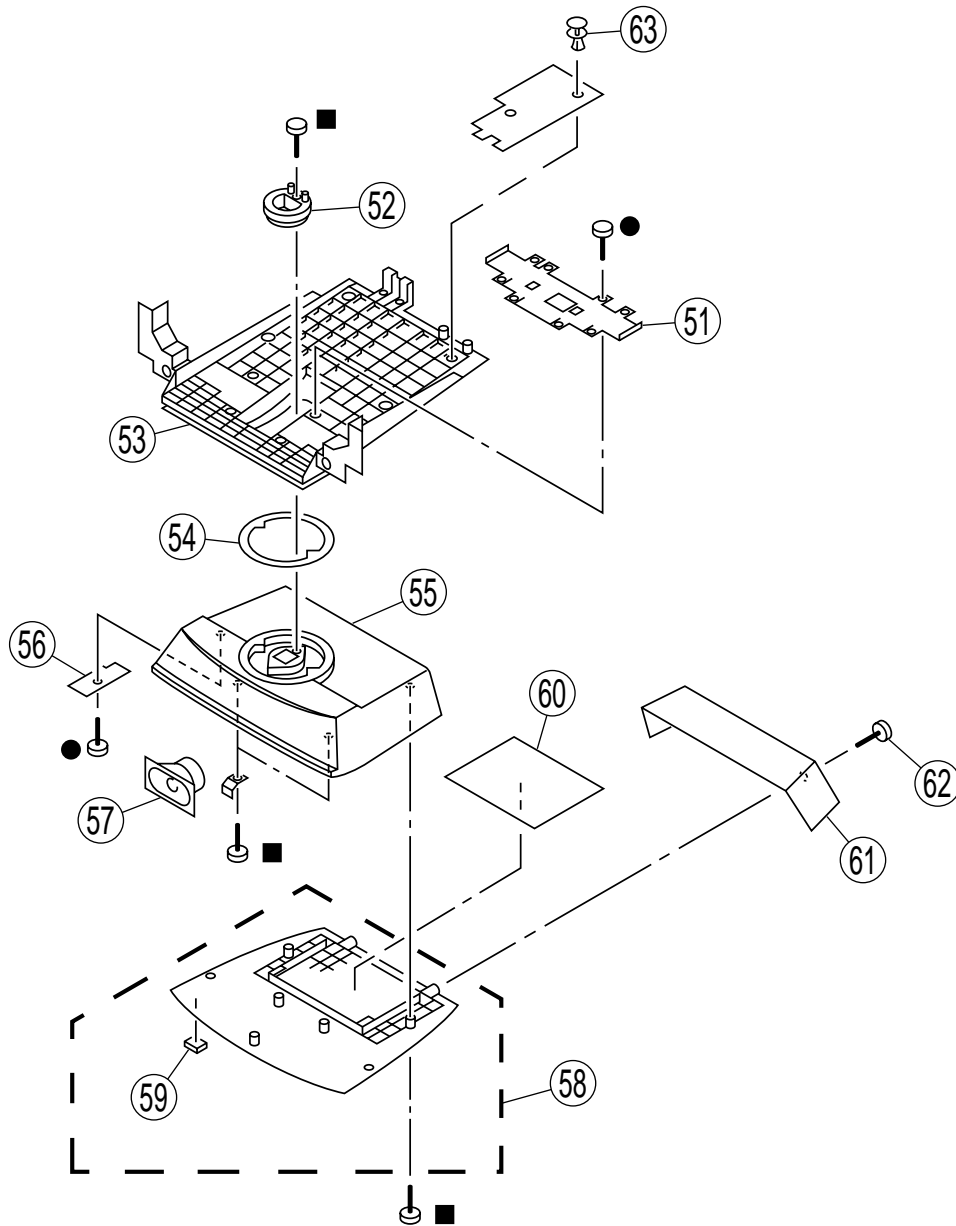
- 7-685-648-79 +BVTP 3X12
- 7-685-663-71 +BVTP 4X16
- 7-685-646-79 +BVTP 3X8
- Δ 7-685-881-09 +BVTT 4X8



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
1	X-4035-799-1	BEZEL ASSY	2,3	17	*8-933-327-00	A BOARD, COMPLETE	
2	4-065-195-01	BUTTON, POWER		18	4-369-318-00	SPRING, TENSION	
3	3-653-339-01	SPRING, COMPRESSION		19	Δ 1-409-799-21	COIL, DEMAGNETIZATION	
4	*4-058-939-01	CUSHION, MICROPHONE		20	4-065-193-01	CABINET	
5	1-542-361-11	MICROPHONE ASSY		21	4-052-070-11	SCREW +BVTP 4X16	
6	*4-058-877-01	SHIELD, MICROPHONE		22	1-500-249-11	BEAD, FERRITE (CASE)	
7	4-058-386-01	CABINET, MICROPHONE		23	*8-933-328-00	D BOARD, COMPLETE	24
8	4-045-123-01	HOLDER, DEGAUSSING COIL		24	*8-933-240-00	DA BOARD, COMPLETE	
9	Δ 8-734-837-05	PICTURE TUBE 15FRS (MIZ)		25	Δ X-4035-935-1	TRANSFORMER ASSY, FLYBACK (NX-4431//J1K4)	
10	4-365-808-01	SCREW (5), TAPPING		26	*4-045-130-01	BRACKET, CABLE	
11	3-704-372-01	HOLDER, HV CABLE		27	*4-054-667-01	STOPPER, CABLE	
12	4-050-492-01	SPACER, DY		28	1-783-935-11	CABLE ASSY(15PD-SUB CONNECTOR)	
13	Δ 8-451-469-21	DEFLECTION YOKE (Y15FRF2M2)		29	4-308-870-00	CLIP, LEAD WIRE	
14	Δ 1-452-912-21	NECK ASSY, PICTURE TUBE (NA-2914)		30	1-452-032-00	MAGNET, DISC ; 10mm ϕ	
15	4-382-854-01	SCREW (M3X8), P, SW (+)		31	1-452-094-00	MAGNET, ROTATABLE DISK ; 15mm ϕ	
16	*8-933-326-00	AA BOARD, COMPLETE		32	4-059-492-01	PERMALLOY (75), CONV.CORRECT	

6-2. STAND BLOCK

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

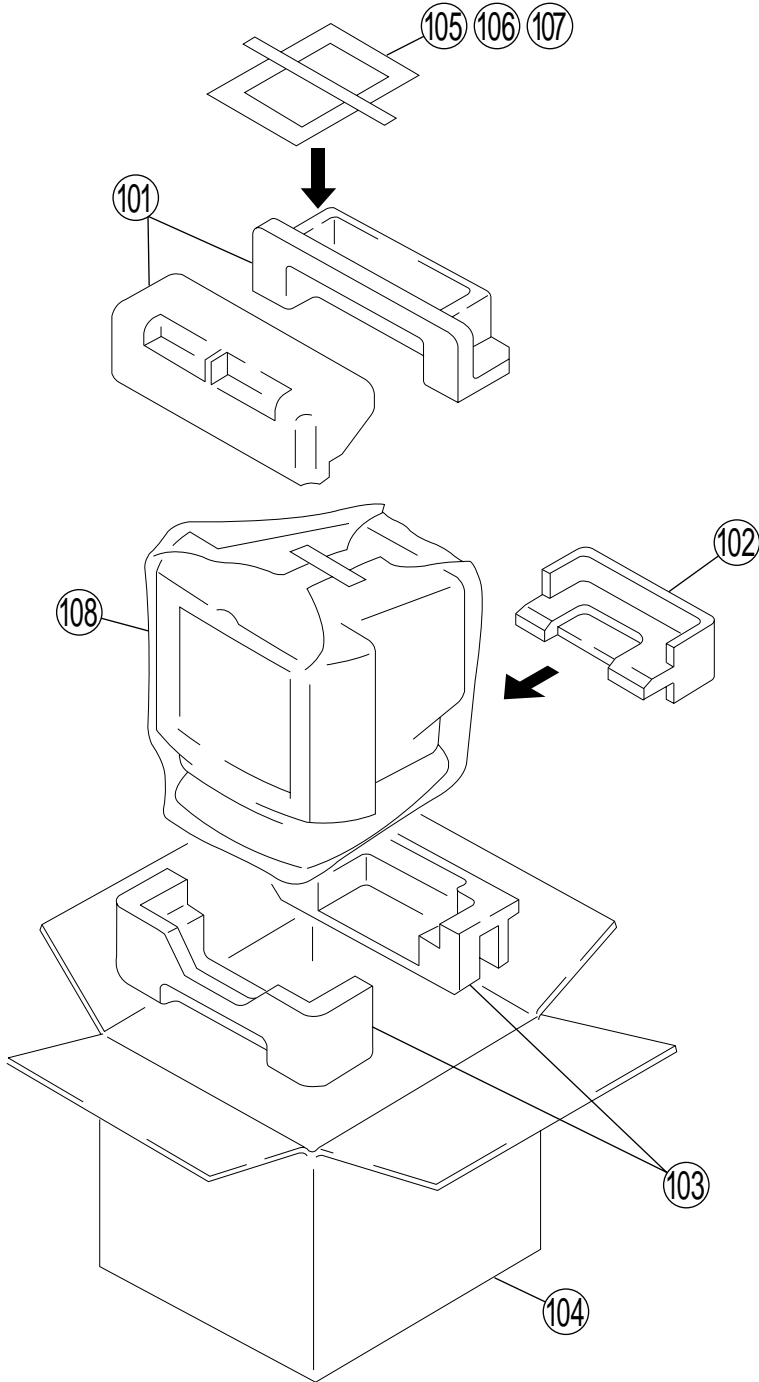


REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
51	*4-058-388-01	COVER, CABLE		57	1-529-123-11	SPEAKER (5X9CM)	
52	*4-058-385-01	STOPPER		58	X-4035-821-1	BASE (LOWER) ASSY, STAND	59
53	4-065-205-01	COVER, BOTTOM		59	*4-061-996-01	CUSHION	
54	*4-041-625-01	RING, TILT SWIVEL		60	*8-933-329-00	U BOARD, COMPLETE	
55	X-4035-870-1	BASE (UPPER) ASSY, STAND		61	4-065-203-01	BASE (REAR), STAND	
56	*1-669-820-11	J BOARD		62	4-052-070-11	SCREW +BVTP 4X16	
				63	4-812-134-00	RIVET (DIA. 3.5), NYLON	

6-3. PACKING MATERIALS

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
101	*4-064-420-01	CUSHION (UPPER) (ASSY)		105	1-759-641-11	DISK, INFORMATION (V2.30) (Windows)	
102	*4-064-426-02	PAD, TILT FIXING		106	Δ 1-534-827-14	CORD SET, POWER	
103	*4-064-421-02	CUSHION (LOWER) (ASSY)		107	3-864-163-12	MANUAL, INSTRUCTION	
104	*4-064-427-01	INDIVIDUAL CARTON		108	*4-041-927-31	BAG, POLYETHYLENE	

SECTION 7 ELECTRICAL PARTS LIST



NOTE:

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

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.

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

The components identified by Δ 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 : μ F

COILS

UH : μ H

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
	* 8-933-327-00	A BOARD, COMPLETE *****		C056	1-137-150-11	MYLAR 0.01MF	10% 100V
	4-382-854-01	SCREW (M3X8), P, SW (+) (IC002, IC004)		C060	1-126-965-11	ELECT 22MF	20% 50V
	<CAPACITOR>			C061	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C001	1-162-318-11	CERAMIC 0.001MF	10% 500V	C062	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C002	1-137-150-11	MYLAR 0.01MF	10% 100V	C063	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C004	1-104-664-11	ELECT 47MF	20% 25V	C064	1-115-340-11	CERAMIC CHIP 0.22MF	10% 25V
C009	1-126-934-11	ELECT 220MF	20% 16V	C065	1-104-664-11	ELECT 47MF	20% 25V
C010	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C066	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V
C011	1-106-220-00	MYLAR 0.1MF	10% 100V	C067	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V
C012	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V	C068	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V
C013	1-126-934-11	ELECT 220MF	20% 16V	C069	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V
C014	1-128-562-11	ELECT 47MF	20% 100V	C070	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V
C015	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C071	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V
C016	1-104-664-11	ELECT 47MF	20% 25V	C072	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V
C017	1-104-664-11	ELECT 47MF	20% 25V	C073	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V
C018	1-107-652-11	ELECT 10MF	20% 200V	C074	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V
C019	1-104-664-11	ELECT 47MF	20% 25V	C075	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V
C022	1-104-664-11	ELECT 47MF	20% 25V	C076	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V
C027	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V	C077	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V
C028	1-104-664-11	ELECT 47MF	20% 25V	C078	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V
C029	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C079	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C035	1-162-134-11	CERAMIC 470PF	10% 2KV	C080	1-126-786-11	ELECT 47MF	20% 16V
C036	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C084	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C037	1-163-001-11	CERAMIC CHIP 220PF	10% 50V	C085	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C041	1-115-340-11	CERAMIC CHIP 0.22MF	10% 25V	C087	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C042	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C089	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C043	1-163-243-11	CERAMIC CHIP 47PF	5% 50V	C090	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C044	1-164-344-11	CERAMIC CHIP 0.068MF	10% 25V	C092	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C045	1-163-243-11	CERAMIC CHIP 47PF	5% 50V	C093	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C046	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V	C094	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C047	1-104-664-11	ELECT 47MF	20% 25V	C101	1-107-823-11	CERAMIC CHIP 0.47MF	10% 16V
C048	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V	C102	1-110-591-91	ELECT 4.7MF	20% 50V
C049	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V	C103	1-163-085-00	CERAMIC CHIP 2PF	0.25PF 50V
C050	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C105	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C051	1-104-664-11	ELECT 47MF	20% 25V	C106	1-137-528-11	FILM 0.1MF	10% 250V
C053	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C201	1-107-823-11	CERAMIC CHIP 0.47MF	10% 16V
C054	1-137-528-11	FILM 0.1MF	10% 250V	C202	1-110-591-91	ELECT 4.7MF	20% 50V
C055	1-162-318-11	CERAMIC 0.001MF	10% 500V	C203	1-163-085-00	CERAMIC CHIP 2PF	0.25PF 50V
				C204	1-216-295-91	SHORT 0	
				C205	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
				C206	1-137-528-11	FILM 0.1MF	10% 250V
				C301	1-107-823-11	CERAMIC CHIP 0.47MF	10% 16V

CPD-101VS



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
C302	1-110-591-91	ELECT 4.7MF	20% 50V	FB014	1-216-295-91	SHORT	0
C303	1-163-085-00	CERAMIC CHIP 2PF	0.25PF 50V	FB015	1-216-295-91	SHORT	0
C304	1-216-295-91	SHORT	0	FB016	1-216-295-91	SHORT	0
C305	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	FB101	1-216-295-91	SHORT	0
C306	1-137-528-11	FILM 0.1MF	10% 250V	FB102	1-216-295-91	SHORT	0
<CONNECTOR>				FB110	1-412-911-11	FERRITE	1.1UH
CN301*	1-766-179-11	PIN, CONNECTOR (PC BOARD) 2P		FB201	1-216-295-91	SHORT	0
CN302	1-695-915-11	TAB (CONTACT)		FB202	1-216-295-91	SHORT	0
CN303	1-695-915-11	TAB (CONTACT)		FB210	1-412-911-11	FERRITE	1.1UH
CN304	1-695-915-11	TAB (CONTACT)		FB301	1-216-295-91	SHORT	0
CN305*	1-564-526-11	PLUG, CONNECTOR 11P		FB302	1-216-295-91	SHORT	0
CN306*	1-564-525-11	PLUG, CONNECTOR 10P		FB310	1-412-911-11	FERRITE	1.1UH
CN307*	1-564-512-11	PLUG, CONNECTOR 9P		<FILTER>			
CN308	1-695-915-11	TAB (CONTACT)		FL001	1-412-911-31	FERRITE	0UH
CN309	1-564-524-11	PLUG, CONNECTOR 9P		FL101	1-412-911-31	FERRITE	0UH
CN310*	1-564-507-11	PLUG, CONNECTOR 4P		FL201	1-412-911-31	FERRITE	0UH
CN312	1-785-221-11	PIN, CONNECTOR (PC BOARD) 13P		FL301	1-412-911-31	FERRITE	0UH
CN313	1-785-222-11	PIN, CONNECTOR (PC BOARD) 14P		<TERMINAL>			
CN314	1-564-517-11	PLUG, CONNECTOR 2P		GT101*	1-537-738-21	TERMINAL, EARTH	
CN315*	1-564-508-11	PLUG, CONNECTOR 5P		GT102*	1-537-738-21	TERMINAL, EARTH	
CN316*	1-564-518-11	PLUG, CONNECTOR 3P		GT103*	1-537-738-21	TERMINAL, EARTH	
<DIODE>				GT104*	1-537-738-21	TERMINAL, EARTH	
D001	8-719-109-89	ZENER DIODE RD5.6ESB2		<IC>			
D003	8-719-109-89	ZENER DIODE RD5.6ESB2		IC001	8-759-474-78	IC MM1382	
D005	8-719-911-19	DIODE 1SS119-25		IC002	8-759-399-84	IC LM2406T	
D006	8-719-911-19	DIODE 1SS119-25		IC003	8-759-541-26	IC LSC4514P2	
D007	8-719-109-89	ZENER DIODE RD5.6ESB2		IC004	8-759-434-40	IC TDA6103Q/N3,112	
D008	8-719-109-89	ZENER DIODE RD5.6ESB2		IC005	8-759-100-96	IC uPC4558G2	
D009	8-719-404-49	DIODE MA111		IC006	8-759-543-53	IC CXA8075S	
D013	8-719-404-49	DIODE MA111		IC008	8-759-542-46	IC M62392FP	
D014	8-719-911-19	DIODE 1SS119-25		IC009	8-759-925-72	IC SN74HC02ANS	
D015	8-719-105-99	ZENER DIODE RD6.2M-B1		<JACK>			
D101	8-719-800-76	DIODE 1SS226		J001 Δ	1-251-637-11	SOCKET, PICTURE TUBE	
D104	8-719-970-83	DIODE HSS82		<COIL>			
D105	8-719-970-83	DIODE HSS82		L002	1-410-682-31	INDUCTOR 470UH	
D106	8-719-970-83	DIODE HSS82		L003	1-412-529-11	INDUCTOR 22UH	
D201	8-719-800-76	DIODE 1SS226		L006	1-412-537-31	INDUCTOR 100UH	
D204	8-719-970-83	DIODE HSS82		L101	1-410-498-11	INDUCTOR 1.2UH	
D205	8-719-970-83	DIODE HSS82		L201	1-410-498-11	INDUCTOR 1.2UH	
D206	8-719-970-83	DIODE HSS82		L301	1-410-498-11	INDUCTOR 1.2UH	
D301	8-719-800-76	DIODE 1SS226		<TRANSISTOR>			
D304	8-719-970-83	DIODE HSS82		Q001	8-729-032-61	TRANSISTOR 2SC5022-02	
D305	8-719-970-83	DIODE HSS82		Q004	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
D306	8-719-970-83	DIODE HSS82		Q005	8-729-101-07	TRANSISTOR 2SB798-DL	
<FERRITE BEAD>							
FB001	1-412-911-11	FERRITE	1.1UH				
FB005	1-412-911-11	FERRITE	1.1UH				
FB011	1-412-911-11	FERRITE	1.1UH				
FB012	1-216-295-91	SHORT	0				
FB013	1-216-295-91	SHORT	0				



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
Q006	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R065	1-216-057-00	RES,CHIP 2.2K	5% 1/10W
Q007	8-729-140-47	TRANSISTOR 2SC3735-L-B35		R067	1-216-025-91	RES,CHIP 100	5% 1/10W
Q008	8-729-422-27	TRANSISTOR 2SD601A-Q		R068	1-216-073-00	RES,CHIP 10K	5% 1/10W
Q009	8-729-027-31	TRANSISTOR DTA124EKA-T146		R069	1-216-077-00	RES,CHIP 15K	5% 1/10W
Q010	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R070	1-216-077-00	RES,CHIP 15K	5% 1/10W
		<RESISTOR>		R071	1-216-073-00	RES,CHIP 10K	5% 1/10W
				R072	1-216-105-91	RES,CHIP 220K	5% 1/10W
				R073	1-216-105-91	RES,CHIP 220K	5% 1/10W
R002	1-216-053-00	RES,CHIP 1.5K	5% 1/10W	R074	1-216-083-00	RES,CHIP 27K	5% 1/10W
R003	1-216-067-00	RES,CHIP 5.6K	5% 1/10W	R075	1-216-073-00	RES,CHIP 10K	5% 1/10W
R004	1-216-055-00	RES,CHIP 1.8K	5% 1/10W	R101	1-215-394-00	METAL 75	1% 1/4W
R005	1-216-113-00	RES,CHIP 470K	5% 1/10W	R103	1-216-295-91	SHORT 0	
R006	1-216-025-91	RES,CHIP 100	5% 1/10W	R104	1-216-295-91	SHORT 0	
R007	1-216-049-91	RES,CHIP 1K	5% 1/10W	R106	1-216-073-00	RES,CHIP 10K	5% 1/10W
R014	1-216-025-91	RES,CHIP 100	5% 1/10W	R107	1-216-065-91	RES,CHIP 4.7K	5% 1/10W
R016	1-216-073-00	RES,CHIP 10K	5% 1/10W	R108	1-216-065-91	RES,CHIP 4.7K	5% 1/10W
R017	1-216-025-91	RES,CHIP 100	5% 1/10W	R109	1-216-121-91	RES,CHIP 1M	5% 1/10W
R018	1-216-025-91	RES,CHIP 100	5% 1/10W	R110	1-215-477-00	METAL 220K	1% 1/4W
R020	1-216-025-91	RES,CHIP 100	5% 1/10W	R111	1-249-401-11	CARBON 47	5% 1/4W F
R021	1-216-025-91	RES,CHIP 100	5% 1/10W	R112	1-216-013-00	RES,CHIP 33	5% 1/10W
R022	1-216-295-91	SHORT 0		R115	1-216-641-11	METAL CHIP 390	0.50%1/10W
R023	1-216-295-91	SHORT 0		R116	1-216-077-00	RES,CHIP 15K	5% 1/10W
R026	1-216-073-00	RES,CHIP 10K	5% 1/10W	R133	1-249-413-11	CARBON 470	5% 1/4W
R027	1-216-073-00	RES,CHIP 10K	5% 1/10W	R151	1-202-549-00	SOLID 100	20% 1/2W
R028	1-216-053-00	RES,CHIP 1.5K	5% 1/10W	R201	1-215-394-00	METAL 75	1% 1/4W
R029	1-216-095-00	RES,CHIP 82K	5% 1/10W	R203	1-216-295-91	SHORT 0	
R030	1-216-295-91	SHORT 0		R204	1-216-295-91	SHORT 0	
R031	1-216-049-91	RES,CHIP 1K	5% 1/10W	R206	1-216-073-00	RES,CHIP 10K	5% 1/10W
R032	1-216-665-11	METAL CHIP 3.9K	0.50%1/10W	R207	1-216-065-91	RES,CHIP 4.7K	5% 1/10W
R033	1-216-679-11	METAL CHIP 15K	0.50%1/10W	R208	1-216-065-91	RES,CHIP 4.7K	5% 1/10W
R034	1-216-295-91	SHORT 0		R209	1-216-121-91	RES,CHIP 1M	5% 1/10W
R035	1-216-295-91	SHORT 0		R210	1-215-477-00	METAL 220K	1% 1/4W
R036	1-249-405-11	CARBON 100	5% 1/4W F	R211	1-249-401-11	CARBON 47	5% 1/4W F
R037	1-216-295-91	SHORT 0		R212	1-216-013-00	RES,CHIP 33	5% 1/10W
R040	1-216-113-00	RES,CHIP 470K	5% 1/10W	R215	1-216-641-11	METAL CHIP 390	0.50%1/10W
R041	1-163-085-00	CERAMIC CHIP 2PF	0.25PF 50V	R216	1-216-077-00	RES,CHIP 15K	5% 1/10W
R043	1-216-295-91	SHORT 0		R233	1-247-791-91	CARBON 22	5% 1/4W
R045	1-216-057-00	RES,CHIP 2.2K	5% 1/10W	R251	1-202-549-00	SOLID 100	20% 1/2W
R046	1-216-097-91	RES,CHIP 100K	5% 1/10W	R301	1-215-394-00	METAL 75	1% 1/4W
R047	1-216-073-00	RES,CHIP 10K	5% 1/10W	R303	1-216-295-91	SHORT 0	
R048	1-211-885-21	METAL 2.2M	5% 1W	R304	1-216-295-91	SHORT 0	
R049	1-216-097-91	RES,CHIP 100K	5% 1/10W	R306	1-216-073-00	RES,CHIP 10K	5% 1/10W
R051	1-216-049-91	RES,CHIP 1K	5% 1/10W	R307	1-216-065-91	RES,CHIP 4.7K	5% 1/10W
R052	1-216-073-00	RES,CHIP 10K	5% 1/10W	R308	1-216-065-91	RES,CHIP 4.7K	5% 1/10W
R053	1-219-621-91	METAL 22M	10% 1/4W	R309	1-216-121-91	RES,CHIP 1M	5% 1/10W
R055	1-216-295-91	SHORT 0		R310	1-215-477-00	METAL 220K	1% 1/4W
R056	1-216-295-91	SHORT 0		R311	1-249-401-11	CARBON 47	5% 1/4W F
R057	1-216-049-91	RES,CHIP 1K	5% 1/10W	R312	1-216-013-00	RES,CHIP 33	5% 1/10W
R058	1-216-049-91	RES,CHIP 1K	5% 1/10W	R313	1-216-025-91	RES,CHIP 100	5% 1/10W
R059	1-216-049-91	RES,CHIP 1K	5% 1/10W	R314	1-249-417-11	CARBON 1K	5% 1/4W F
R060	1-216-073-00	RES,CHIP 10K	5% 1/10W	R315	1-216-641-11	METAL CHIP 390	0.50%1/10W
R061	1-216-065-91	RES,CHIP 4.7K	5% 1/10W	R316	1-216-077-00	RES,CHIP 15K	5% 1/10W
R062	1-216-041-00	RES,CHIP 470	5% 1/10W	R333	1-247-791-91	CARBON 22	5% 1/4W
R063	1-216-295-91	SHORT 0		R351	1-202-549-00	SOLID 100	20% 1/2W
R064	1-202-830-00	SOLID 10K	20% 1/2W				

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
R849	1-216-067-00	RES,CHIP	5.6K 5% 1/10W	C518	1-117-832-11	FILM 4700PF	3% 2KV
R850	1-216-067-00	RES,CHIP	5.6K 5% 1/10W	C519	1-136-538-11	FILM 0.001MF	3% 2KV
R853	1-216-121-91	RES,CHIP	1M 5% 1/10W	C520	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V
R854	1-216-121-91	RES,CHIP	1M 5% 1/10W	C521	1-107-444-11	CERAMIC 100PF	5% 2KV
R855	1-216-121-91	RES,CHIP	1M 5% 1/10W	C522	1-136-481-11	MYLAR 0.0022MF	10% 100V
R859	1-216-021-00	RES,CHIP	68 5% 1/10W	C523	1-115-519-11	FILM 0.56MF	5% 200V
R860	1-216-067-00	RES,CHIP	5.6K 5% 1/10W	C524	1-107-955-11	ELECT 100MF	20% 200V
		<CRYSTAL>		C525	1-117-665-11	FILM 0.33MF	5% 200V
X800	1-767-639-21	VIBRATOR, CRYSTAL		C526	1-104-331-11	CERAMIC 0.0022MF	10% 1KV
*****				C527	1-117-879-91	CAPACITOR 0.01MF	10% 250V
	* 8-933-328-00	D BOARD, COMPLETE		C528	1-115-349-51	CERAMIC 0.01MF	2KV
		*****		C529	1-115-511-11	FILM 0.12MF	5% 200V
	2-371-561-00	BUSHING (P), INSULATING (IC503)		C531	1-117-206-21	FILM 0.36MF	5% 250V
	4-045-133-01	HOLDER (B), LED (D938)		C532	1-137-426-11	FILM 0.47MF	10% 100V
	4-046-042-01	WASHER, PVC		C535	1-137-370-11	FILM 0.01MF	5% 50V
	* 4-049-002-01	HOLDER, LED (D912)		C536	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V
	4-061-191-01	SHEET, INSULATE (IC503)		C538	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V
	4-061-192-01	SHEET, INSULATE (Q602)		C539	1-137-418-11	FILM 0.022MF	10% 100V
	4-382-854-01	SCREW (M3X8), P, SW (+) (Q607)		C540	1-136-203-11	FILM 10000PF	5% 630V
	4-382-854-11	SCREW (M3X10), P, SW (+) (IC401, IC503, IC602, IC603, IC604, Q503, Q507, Q510, Q602, Q608, D506, D601, D603, D658)		C541	1-126-963-11	ELECT 4.7MF	20% 50V
	4-389-025-01	SCREW (M4) (EXT TOOTH WASHER)		C542	1-126-964-11	ELECT 10MF	20% 50V
		<CAPACITOR>		C543	1-163-251-11	CERAMIC CHIP 100PF	5% 50V
C401	1-128-528-11	ELECT	470MF 20% 25V	C544	1-137-370-11	FILM 0.01MF	5% 50V
C402	1-106-228-00	MYLAR	0.22MF 10% 100V	C545	1-163-037-11	CERAMIC CHIP 0.022MF	10% 50V
C403	1-126-969-11	ELECT	220MF 20% 50V	C546	1-163-259-91	CERAMIC CHIP 220PF	5% 50V
C404	1-126-942-61	ELECT	1000MF 20% 25V	C547	1-126-960-11	ELECT 1MF	20% 50V
C405	1-137-371-11	FILM	0.015MF 5% 50V	C548	1-137-364-11	FILM 0.001MF	5% 50V
C406	1-137-368-11	FILM	0.0047MF 5% 50V	C549	1-137-375-11	FILM 0.068MF	5% 50V
C407	1-137-372-11	FILM	0.022MF 5% 50V	C550	1-126-933-11	ELECT 100MF	20% 16V
C408	1-107-713-11	ELECT	4.7MF 20% 35V	C551	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V
C409	1-107-698-11	ELECT	10MF 20% 25V	C552	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V
C410	1-164-004-11	CERAMIC CHIP	0.1MF 10% 25V	C553	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C501	1-126-964-11	ELECT	10MF 20% 50V	C554	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C502	1-137-370-11	FILM	0.01MF 5% 50V	C555	1-130-495-00	FILM 0.1MF	5% 50V
C503	1-102-129-00	CERAMIC	0.01MF 10% 50V	C556	1-163-259-91	CERAMIC CHIP 220PF	5% 50V
C504	1-162-318-11	CERAMIC	0.001MF 10% 500V	C557	1-126-964-11	ELECT 10MF	20% 50V
C505	1-110-400-91	CERAMIC	27PF 5% 2KV	C558	1-126-960-11	ELECT 1MF	20% 50V
C506	1-126-960-11	ELECT	1MF 20% 50V	C559	1-137-368-11	FILM 0.0047MF	5% 50V
C507	1-115-517-11	FILM	0.39MF 5% 250V	C560	1-117-665-11	FILM 0.33MF	5% 200V
C508	1-104-665-11	ELECT	100MF 20% 25V	C561	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C509	1-162-117-00	CERAMIC	100PF 10% 500V	C562	1-126-933-11	ELECT 100MF	20% 16V
C510	1-102-228-00	CERAMIC	470PF 10% 500V	C570	1-104-665-11	ELECT 100MF	20% 25V
C513	1-126-964-11	ELECT	10MF 20% 50V	C573	1-107-635-11	ELECT 4.7MF	20% 160V
C514	1-163-251-11	CERAMIC CHIP	100PF 5% 50V	C574	1-117-879-91	CAPACITOR 0.01MF	10% 250V
C515	1-163-133-00	CERAMIC CHIP	470PF 5% 50V	C575	1-107-955-11	ELECT 100MF	20% 200V
C516	1-163-251-11	CERAMIC CHIP	100PF 5% 50V	C576	1-163-243-11	CERAMIC CHIP 47PF	5% 50V
C517	1-137-370-11	FILM	0.01MF 5% 50V	C577	1-115-349-51	CERAMIC 0.01MF	2KV
				C578	1-117-214-11	CERAMIC 0.001MF	10% 2KV
				C579	1-109-842-11	CERAMIC 10PF	5% 2KV
				C580	1-137-370-11	FILM 0.01MF	5% 50V
				C581	1-165-136-11	CERAMIC 3300PF	10% 500V
				C582	1-128-579-11	ELECT 2.2MF	20% 100V
				C590	1-126-941-11	ELECT 470MF	20% 25V
				C591	1-126-941-11	ELECT 470MF	20% 25V
				C601 Δ	1-104-708-51	FILM 0.47MF	20% 250V



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.

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
C602	Δ 1-107-533-51	FILM 1MF	20% 250V	C922	1-126-960-11	ELECT 1MF	20% 50V
C603	Δ 1-113-912-51	CERAMIC 0.0047MF	20% 250V	C923	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C604	Δ 1-113-912-51	CERAMIC 0.0047MF	20% 250V	C924	1-126-965-11	ELECT 22MF	20% 50V
C605	1-162-115-00	CERAMIC 330PF	10% 1KV	C925	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V
C606	1-136-171-00	FILM 0.33MF	5% 50V	C926	1-126-767-11	ELECT 1000MF	20% 16V
C607	1-137-479-11	FILM 1MF	10% 400V	C927	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V
C608	1-113-900-11	CERAMIC 470PF	10% 250V	C928	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V
C610	1-104-664-11	ELECT 47MF	20% 25V	C929	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C611	1-104-664-11	ELECT 47MF	20% 25V	C930	1-137-370-11	FILM 0.01MF	5% 50V
C613	1-113-707-11	ELECT(BLOCK) 220MF	20% 450V	C931	1-136-356-11	FILM 470PF	5% 50V
C614	1-136-203-11	FILM 0.01MF	10% 630V	C932	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C615	1-107-888-11	ELECT 47MF	20% 25V	C934	1-126-964-11	ELECT 10MF	20% 50V
C616	1-104-666-11	ELECT 220MF	20% 25V	C936	1-163-251-11	CERAMIC CHIP 100PF	5% 50V
C620	1-128-560-11	ELECT 22MF	20% 100V	C937	1-163-243-11	CERAMIC CHIP 47PF	5% 50V
C621	1-162-115-00	CERAMIC 330PF	10% 1KV	C938	1-163-251-11	CERAMIC CHIP 100PF	5% 50V
C622	1-104-664-11	ELECT 47MF	20% 25V	C940	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V
C625	1-126-965-11	ELECT 22MF	20% 50V	C941	1-104-664-11	ELECT 47MF	20% 16V
C629	1-136-171-00	FILM 0.33MF	5% 50V	C942	1-128-551-11	ELECT 22MF	20% 25V
C630	1-162-115-00	CERAMIC 330PF	10% 1KV	C943	1-163-251-11	CERAMIC CHIP 100PF	5% 50V
C631	1-136-167-00	FILM 0.15MF	5% 50V				
C632	1-136-167-00	FILM 0.15MF	5% 50V			<CONNECTOR>	
C633	1-110-488-11	FILM 0.0082MF	2.50% 1KV	CN501*	1-580-798-11	CONNECTOR PIN (DY) 6P	
C634	1-128-528-11	ELECT 470MF	20% 25V	CN502*	1-564-514-11	PLUG, CONNECTOR 11P	
C635	1-126-926-11	ELECT 1000MF	20% 10V	CN512	1-695-915-11	TAB (CONTACT)	
C650	1-110-641-51	ELECT 33MF	20% 200V	CN600	Δ 1-251-644-11	INLET, AC 3P (WITH NOISE FILTER)	
C651	1-128-561-91	ELECT 33MF	20% 100V	CN602*	1-774-511-11	CONNECTOR, BOARD TO BOARD 10P	
C652	1-107-890-11	ELECT 2200MF	20% 25V	CN603	1-691-960-11	PIN, CONNECTOR (PC BOARD) 3P	
C653	1-107-890-11	ELECT 2200MF	20% 25V	CN605*	1-506-371-00	PIN, CONNECTOR 2P	
C654	1-126-927-11	ELECT 2200MF	20% 10V	CN607*	1-564-508-11	PLUG, CONNECTOR 5P	
C655	1-107-891-11	ELECT 3300MF	20% 25V	CN901*	1-508-879-11	BASE POST	
C657	1-104-664-11	ELECT 47MF	20% 25V	CN902	1-564-513-11	PLUG, CONNECTOR 10P	
C658	1-136-153-00	FILM 0.01MF	5% 50V	CN903*	1-564-512-11	PLUG, CONNECTOR 9P	
C659	1-104-987-11	FILM 0.001MF	10% 200V	CN904*	1-564-509-11	PLUG, CONNECTOR 6P	
C670	1-126-961-11	ELECT 2.2MF	20% 50V				
C671	1-126-965-11	ELECT 22MF	20% 50V			<DIODE>	
C672	1-104-664-11	ELECT 47MF	20% 25V	D401	8-719-979-58	DIODE EGP10D	
C675	1-126-933-11	ELECT 100MF	20% 16V	D402	8-719-109-81	ZENER DIODE RD4.7ESB2	
C902	1-126-935-11	ELECT 470MF	20% 16V	D403	8-719-404-49	DIODE MA111	
C903	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V	D404	8-719-404-49	DIODE MA111	
C905	1-136-500-11	FILM 0.068MF	5% 50V	D405	8-719-970-83	DIODE HSS82	
C906	1-136-177-00	FILM 1MF	5% 50V	D501	8-719-110-31	ZENER DIODE RD12ESB2	
C908	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V	D502	8-719-975-77	DIODE SB340	
C909	1-126-927-11	ELECT 2200MF	20% 10V	D503	8-719-109-89	ZENER DIODE RD5.6ESB2	
C910	1-130-495-00	FILM 0.1MF	5% 50V	D504	8-719-110-49	ZENER DIODE RD18ESB2	
C911	1-137-370-11	FILM 0.01MF	5% 50V	D506	8-719-061-21	DIODE FMQ-G5FMS	
C912	1-126-933-11	ELECT 100MF	20% 16V	D507	8-719-109-85	ZENER DIODE RD5.1ESB2	
C913	1-130-495-00	FILM 0.1MF	5% 50V	D508	8-719-986-73	DIODE RB441Q	
C914	1-163-235-11	CERAMIC CHIP 22PF	5% 50V	D509	8-719-110-17	ZENER DIODE RD10ESB2	
C915	1-163-235-11	CERAMIC CHIP 22PF	5% 50V	D510	8-719-028-72	DIODE RGP02-17EL-6433	
C916	1-126-965-11	ELECT 22MF	20% 50V	D511	8-719-109-85	ZENER DIODE RD5.1ESB2	
C917	1-163-019-00	CERAMIC CHIP 0.0068MF	10% 50V	D512	8-719-911-19	DIODE 1SS119-25	
C918	1-126-964-11	ELECT 10MF	20% 50V	D513	8-719-979-58	DIODE EGP10D	
C919	1-126-960-11	ELECT 1MF	20% 50V	D514	8-719-970-83	DIODE HSS82	
C920	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V				
C921	1-126-935-11	ELECT 470MF	20% 16V				

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
D515	8-719-979-58	DIODE EGP10D		D911	8-719-404-49	DIODE MA111	
D516	8-719-051-97	DIODE 3DL41A(LC6-15)		D912	8-719-045-19	DIODE SPB-26MVWF	
D517	8-719-110-67	ZENER DIODE RD27ESB2		D914	8-719-404-49	DIODE MA111	
D518	8-719-110-17	ZENER DIODE RD10ESB2		D915	8-719-404-49	DIODE MA111	
D520	8-719-028-72	DIODE RGP02-17EL-6433		D916	8-719-404-49	DIODE MA111	
D521	8-719-028-72	DIODE RGP02-17EL-6433		D917	8-719-404-49	DIODE MA111	
D522	8-719-911-19	DIODE 1SS119-25		D918	8-719-158-15	ZENER DIODE RD5.6SB	
D523	8-719-911-19	DIODE 1SS119-25		D919	8-719-158-15	ZENER DIODE RD5.6SB	
D524	8-719-970-83	DIODE HSS82		D920	8-719-986-73	DIODE RB441Q	
D525	8-719-970-83	DIODE HSS82		D922	8-719-404-49	DIODE MA111	
D527	8-719-109-85	ZENER DIODE RD5.1ESB2		D924	8-719-404-49	DIODE MA111	
D550	8-719-979-58	DIODE EGP10D		D925	8-719-404-49	DIODE MA111	
D551	8-719-979-58	DIODE EGP10D		D928	8-719-158-15	ZENER DIODE RD5.6SB	
D601 Δ	8-719-510-53	DIODE D4SB60L		D929	8-719-158-15	ZENER DIODE RD5.6SB	
D602	8-719-911-19	DIODE 1SS119-25		D932	8-719-158-15	ZENER DIODE RD5.6SB	
D603	8-719-051-96	DIODE FMG-G2CS		D933	8-719-158-15	ZENER DIODE RD5.6SB	
D604	8-719-911-19	DIODE 1SS119-25		D934	8-719-158-15	ZENER DIODE RD5.6SB	
D605	8-719-911-19	DIODE 1SS119-25		D935	8-719-404-49	DIODE MA111	
D606	8-719-510-46	DIODE D1NL20		D936	8-719-404-49	DIODE MA111	
D607	8-719-911-19	DIODE 1SS119-25		D937	8-719-404-49	DIODE MA111	
D608	8-719-110-49	ZENER DIODE RD18ESB2		D938	8-719-311-90	DIODE SEL1922D-C	
D609	8-719-510-46	DIODE D1NL20		D939	8-719-986-73	DIODE RB441Q	
D611	8-719-911-19	DIODE 1SS119-25				<FUSE>	
D612	8-719-911-19	DIODE 1SS119-25		F601 Δ	1-576-231-11	FUSE (H.B.C.) (4A/250V)	
D613	8-719-911-19	DIODE 1SS119-25			1-533-223-11	HOLDER, FUSE ; F601	
D614	8-719-911-19	DIODE 1SS119-25				<FERRITE BEAD>	
D615	8-719-911-19	DIODE 1SS119-25		FB502	1-410-396-41	FERRITE	0.45UH
D618	8-719-404-49	DIODE MA111		FB504	1-412-911-11	FERRITE	1.1UH
D619	8-719-158-15	ZENER DIODE RD5.6SB		FB506	1-412-911-11	FERRITE	1.1UH
D621	8-719-158-15	ZENER DIODE RD5.6SB		FB602	1-410-396-41	FERRITE	0.45UH
D622	8-719-158-15	ZENER DIODE RD5.6SB		FB902	1-410-397-21	FERRITE	1.1UH
D623	8-719-158-49	ZENER DIODE RD12SB2		FB903	1-410-396-41	FERRITE	0.45UH
D624	8-719-404-49	DIODE MA111				<TERMINAL>	
D650	8-719-510-46	DIODE D1NL20		GT001*	1-537-738-21	TERMINAL, EARTH	
D651	8-719-510-46	DIODE D1NL20		GT002*	1-537-738-21	TERMINAL, EARTH	
D652	8-719-510-46	DIODE D1NL20				<IC>	
D653	8-719-510-46	DIODE D1NL20		IC401	8-759-444-83	IC LA7840L	
D654	8-719-510-46	DIODE D1NL20		IC501 Δ	8-759-478-76	IC uPC5021-109	
D655	8-719-500-70	DIODE D5S4M		IC502	8-759-803-42	IC LA6500-FA	
D656	8-719-500-70	DIODE D5S4M		IC503	8-759-803-42	IC LA6500-FA	
D657	8-719-500-70	DIODE D5S4M		IC602	8-759-701-88	IC NJM7912FA	
D658	8-719-052-91	DIODE D4SBS4-F		IC603	8-759-450-47	IC BA05T	
D662	8-719-064-37	DIODE R2KS		IC604	8-759-513-72	IC PQ12RF11	
D670	8-719-911-19	DIODE 1SS119-25		IC605	8-749-010-64	PHOTO COUPLER PC123F2	
D671	8-719-911-19	DIODE 1SS119-25		IC611	8-749-012-13	IC DM-58	
D901	8-719-404-49	DIODE MA111		IC612	8-749-013-76	IC PQ6RD83B	
D902	8-719-158-15	ZENER DIODE RD5.6SB		IC900	8-759-525-10	IC TC7SET08F(TE85L)	
D903	8-719-404-49	DIODE MA111		IC901	8-759-541-29	IC ST72751N9B1/LAM	
D904	8-719-404-49	DIODE MA111					
D905	8-719-404-49	DIODE MA111					
D906	8-719-404-49	DIODE MA111					
D907	8-719-404-49	DIODE MA111					
D908	8-719-404-49	DIODE MA111					
D909	8-719-158-15	ZENER DIODE RD5.6SB					
D910	8-719-158-15	ZENER DIODE RD5.6SB					

CPD-101VS



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			
IC902	8-759-537-27	IC CXA8071AP		Q503	8-729-035-54	TRANSISTOR 2SJ449				
IC904	8-759-165-80	IC PST600C-T		Q504	8-729-031-89	TRANSISTOR 2SC3941A-Q(TA)				
IC905	8-759-527-71	IC M24C08-BN6		Q505	8-729-119-76	TRANSISTOR 2SA1175-HFE				
<CHIP CONDUCTOR>				Q506	8-729-119-76	TRANSISTOR 2SA1175-HFE				
JR002	1-216-296-91	SHORT	0	Q507	8-729-041-29	TRANSISTOR BU2522AX-ON5008				
JR003	1-216-295-91	SHORT	0	Q508	8-729-119-78	TRANSISTOR 2SC2785-HFE				
JR004	1-216-296-91	SHORT	0	Q509	8-729-043-28	TRANSISTOR PDTC124EK-115				
JR005	1-216-296-91	SHORT	0	Q510	8-729-042-42	TRANSISTOR 2SK2101-01MR-F141				
JR006	1-216-296-91	SHORT	0	Q511	8-729-042-34	TRANSISTOR IRFU110A				
JR007	1-216-296-91	SHORT	0	Q512	8-729-041-93	TRANSISTOR IRLI530GLF33				
JR008	1-216-295-91	SHORT	0	Q515	8-729-041-93	TRANSISTOR IRLI530GLF33				
JR009	1-216-296-91	SHORT	0	Q516	8-729-041-93	TRANSISTOR IRLI530GLF33				
JR010	1-216-295-91	SHORT	0	Q517	8-729-326-11	TRANSISTOR 2SC2611				
JR011	1-216-296-91	SHORT	0	Q518	8-729-140-50	TRANSISTOR 2SC3209LK				
JR012	1-216-296-91	SHORT	0	Q520	8-729-042-23	TRANSISTOR IRFI9620GSLF35				
JR013	1-216-296-91	SHORT	0	Q521	8-729-119-76	TRANSISTOR 2SA1175-HFE				
JR014	1-216-296-91	SHORT	0	Q522	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R				
JR015	1-216-296-91	SHORT	0	Q523	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
JR017	1-216-295-91	SHORT	0	Q601	8-729-119-76	TRANSISTOR 2SA1175-HFE				
JR018	1-216-295-91	SHORT	0	Q602	8-729-037-98	TRANSISTOR 2SK2194F08				
JR019	1-216-295-91	SHORT	0	Q603	8-729-043-33	TRANSISTOR PDTA124EK-115				
JR020	1-216-295-91	SHORT	0	Q604	8-729-043-28	TRANSISTOR PDTC124EK-115				
JR021	1-216-295-91	SHORT	0	Q605	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
<COIL>				Q606	8-729-041-93	TRANSISTOR IRLI530GLF33				
L501	1-412-531-31	INDUCTOR 33UH		Q607	8-729-209-15	TRANSISTOR 2SD2012				
L502	1-412-531-31	INDUCTOR 33UH		Q608	8-729-039-65	TRANSISTOR MX0541B-F				
L503	1-411-594-41	COIL, CHOKE 5mH		Q609	8-729-043-33	TRANSISTOR PDTA124EK-115				
L506	1-412-550-11	INDUCTOR 1.2mH		Q610	8-729-322-37	TRANSISTOR 2SJ175				
L509	1-409-896-11	COIL, HORIZONTAL LINEARITY		Q611	8-729-043-28	TRANSISTOR PDTC124EK-115				
L510	1-416-367-11	COIL, HORIZONTAL CENTER		Q654	8-729-119-76	TRANSISTOR 2SA1175-HFE				
L601	1-406-663-21	COIL, CHOKE 47UH		Q670	8-729-119-78	TRANSISTOR 2SC2785-HFE				
L602	Δ 1-412-529-41	INDUCTOR 22UH		Q671	8-729-200-17	TRANSISTOR 2SA1091-O				
L603	1-412-537-31	INDUCTOR 100UH		Q672	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
L650	1-412-529-11	INDUCTOR 22UH		Q673	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R				
L651	1-410-645-31	INDUCTOR 100UH		Q901	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
L652	1-412-529-11	INDUCTOR 22UH		Q902	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
L653	1-412-529-11	INDUCTOR 22UH		Q903	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
L901	1-412-537-31	INDUCTOR 100UH		Q904	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
<FILTER>				Q905	8-729-900-51	TRANSISTOR DTA114TK				
LF601	Δ 1-429-180-11	TRANSFORMER, LINE FILTER		<RESISTOR>						
<IC LINK>				R401	1-249-383-11	CARBON	1.5	5%	1/4W	F
PS600	Δ 1-533-597-31	LINK, IC (5A/90V AC, 60V DC)		R402	1-215-866-11	METAL OXIDE	330	5%	1W	F
PS601	Δ 1-532-727-91	LINK, IC (0.25A/150V)		R403	1-214-798-21	METAL	1.8	1%	1/2W	
<TRANSISTOR>				R404	1-215-443-00	METAL	8.2K	1%	1/4W	
Q501	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R405	1-214-796-00	METAL	1.5	1%	1/2W	
Q502	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R		R406	1-216-677-11	METAL CHIP	12K	0.50%	1/10W	
				R407	1-216-065-91	RES,CHIP	4.7K	5%	1/10W	
				R408	1-216-089-91	RES,CHIP	47K	5%	1/10W	
				R409	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W	
				R410	1-216-677-11	METAL CHIP	12K	0.50%	1/10W	
				R411	1-216-691-11	METAL CHIP	47K	0.50%	1/10W	
				R451	1-215-451-00	METAL	18K	1%	1/4W	
				R452	1-215-421-00	METAL	1K	1%	1/4W	

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

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.



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R453	1-215-445-00	METAL	10K	1%	1/4W		
R454	1-215-445-00	METAL	10K	1%	1/4W		
R455	1-218-762-11	METAL CHIP	270K	0.50%	1/10W		
R498	1-216-295-91	SHORT	0				
R500	1-249-377-11	CARBON	0.47	5%	1/4W	F	
R501	1-247-807-31	CARBON	100	5%	1/4W		
R502	1-216-103-00	RES,CHIP	180K	5%	1/10W		
R503	1-216-069-00	RES,CHIP	6.8K	5%	1/10W		
R504	1-249-377-11	CARBON	0.47	5%	1/4W	F	
R505	1-216-073-00	RES,CHIP	10K	5%	1/10W		
R506	1-215-476-00	METAL	200K	1%	1/4W		
R507	1-215-427-00	METAL	1.8K	1%	1/4W		
R508	1-247-807-31	CARBON	100	5%	1/4W		
R509	1-247-863-91	CARBON	22K	5%	1/4W		
R510	1-216-081-00	RES,CHIP	22K	5%	1/10W		
R511	1-249-381-11	CARBON	1	5%	1/4W	F	
R512	1-249-389-11	CARBON	4.7	5%	1/4W		
R513	1-215-888-00	METAL OXIDE	220	5%	2W	F	
R514	1-216-081-00	RES,CHIP	22K	5%	1/10W		
R515	1-215-423-00	METAL	1.2K	1%	1/4W		
R516	9-910-999-31	METAL	150	1%	1/2W		
R517	1-216-393-00	METAL OXIDE	2.2	5%	3W	F	
R518	1-216-393-00	METAL OXIDE	2.2	5%	3W	F	
R519	1-216-073-00	RES,CHIP	10K	5%	1/10W		
R520	1-249-397-11	CARBON	22	5%	1/4W	F	
R522	1-249-401-11	CARBON	47	5%	1/4W		
R523	1-216-089-91	RES,CHIP	47K	5%	1/10W		
R525	1-249-417-11	CARBON	1K	5%	1/4W	F	
R526	1-249-425-11	CARBON	4.7K	5%	1/4W		
R527	1-249-429-11	CARBON	10K	5%	1/4W		
R528	1-247-863-91	CARBON	22K	5%	1/4W		
R529	1-249-429-11	CARBON	10K	5%	1/4W	F	
R530	1-216-474-11	METAL OXIDE	82	5%	3W	F	
R531	1-216-474-11	METAL OXIDE	82	5%	3W	F	
R532	1-249-385-11	CARBON	2.2	5%	1/4W	F	
R533	1-249-417-11	CARBON	1K	5%	1/4W	F	
R534	1-249-405-11	CARBON	100	5%	1/4W	F	
R535	1-216-089-91	RES,CHIP	47K	5%	1/10W		
R536	1-249-417-11	CARBON	1K	5%	1/4W	F	
R537	1-216-089-91	RES,CHIP	47K	5%	1/10W		
R538	1-215-905-11	METAL OXIDE	10	5%	3W	F	
R539	1-215-905-11	METAL OXIDE	10	5%	3W	F	
R540 Δ	1-215-476-91	METAL	200K	1%	1/4W		
R541	1-215-421-00	METAL	1K	1%	1/4W		
R542	1-215-421-00	METAL	1K	1%	1/4W		
R543	1-249-389-11	CARBON	4.7	5%	1/4W	F	
R544	1-215-493-00	METAL	1M	1%	1/4W		
R545	1-216-691-11	METAL CHIP	47K	0.50%	1/10W		
R546	1-216-687-11	METAL CHIP	33K	0.50%	1/10W		
R547	1-215-487-00	METAL	560K	1%	1/4W		
R548	1-215-423-00	METAL	1.2K	1%	1/4W		
R549	1-215-467-00	METAL	82K	1%	1/4W		
R550	1-215-423-00	METAL	1.2K	1%	1/4W		
R551	1-216-687-11	METAL CHIP	33K	0.50%	1/10W		
R552	1-215-463-00	METAL	56K	1%	1/4W		
R553	1-218-760-11	METAL CHIP	220K	0.50%	1/10W		
R554	1-218-756-11	METAL CHIP	150K	0.50%	1/10W		
R556	1-216-691-11	METAL CHIP	47K	0.50%	1/10W		
R557	1-216-681-11	METAL CHIP	18K	0.50%	1/10W		
R558	1-216-675-11	METAL CHIP	10K	0.50%	1/10W		
R559	1-216-661-11	METAL CHIP	2.7K	0.50%	1/10W		
R560	1-216-679-11	METAL CHIP	15K	0.50%	1/10W		
R561	1-216-474-11	METAL OXIDE	82	5%	3W	F	
R562	1-215-447-00	METAL	12K	1%	1/4W		
R563	1-249-383-11	CARBON	1.5	5%	1/4W	F	
R564	1-216-089-91	RES,CHIP	47K	5%	1/10W		
R565	1-215-479-00	METAL	270K	1%	1/4W		
R566	1-215-859-00	METAL OXIDE	22	5%	1W	F	
R567	1-216-073-00	RES,CHIP	10K	5%	1/10W		
R568	1-249-437-11	CARBON	47K	5%	1/4W		
R569	1-216-635-11	METAL CHIP	220	0.50%	1/10W		
R570	1-249-417-11	CARBON	1K	5%	1/4W		
R571	1-215-926-00	METAL OXIDE	33K	5%	3W	F	
R572	1-249-437-11	CARBON	47K	5%	1/4W		
R573	1-247-887-00	CARBON	220K	5%	1/4W		
R577	1-216-455-11	METAL OXIDE	560	5%	2W	F	
R578	1-216-447-00	METAL OXIDE	27	5%	2W	F	
R579	1-247-883-00	CARBON	150K	5%	1/4W		
R580	1-216-077-00	RES,CHIP	15K	5%	1/10W		
R581	1-249-429-11	CARBON	10K	5%	1/4W		
R582	1-249-402-11	CARBON	56	5%	1/4W	F	
R583	1-216-073-00	RES,CHIP	10K	5%	1/10W		
R584	1-216-065-91	RES,CHIP	4.7K	5%	1/10W		
R585	1-260-103-11	CARBON	2.2K	5%	1/2W		
R586	1-260-103-11	CARBON	2.2K	5%	1/2W		
R587	1-216-049-91	RES,CHIP	1K	5%	1/10W		
R589	1-249-425-11	CARBON	4.7K	5%	1/4W		
R590	1-215-453-00	METAL	22K	1%	1/4W		
R591	1-218-768-11	METAL CHIP	470K	0.50%	1/10W		
R595	9-910-999-31	METAL	150	1%	1/2W		
R596	1-249-421-11	CARBON	2.2K	5%	1/4W		
R597	1-249-377-11	CARBON	0.47	5%	1/4W	F	
R598	1-216-049-91	RES,CHIP	1K	5%	1/10W		
R599	1-249-377-11	CARBON	0.47	5%	1/4W	F	
R600	1-249-421-11	CARBON	2.2K	5%	1/4W		
R601	1-216-049-91	RES,CHIP	1K	5%	1/10W		
R602 Δ	1-205-998-11	CEMENTED	1	5%	10W		
R603	1-218-642-11	METAL OXIDE	100K	5%	1W	F	
R604	1-249-429-11	CARBON	10K	5%	1/4W		
R605	1-249-437-11	CARBON	47K	5%	1/4W		
R606	1-249-393-11	CARBON	10	5%	1/4W	F	
R607 Δ	1-102-882-91	SOLID	560K	20%	1/2W		
R608	1-249-389-11	CARBON	4.7	5%	1/4W	F	
R609	1-216-073-00	RES,CHIP	10K	5%	1/10W		
R610	1-216-381-11	METAL OXIDE	0.22	5%	3W	F	
R611	1-216-049-91	RES,CHIP	1K	5%	1/10W		
R614	1-249-377-11	CARBON	0.47	5%	1/4W	F	
R615	1-202-933-61	FUSIBLE	0.1	10%	1/2W	F	
R616	1-216-073-00	RES,CHIP	10K	5%	1/10W		
R617	1-216-065-91	RES,CHIP	4.7K	5%	1/10W		

CPD-101VS



The components identified by **D** 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.

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
R619	1-215-481-00	METAL	330K	1%	1/4W		
R620	1-216-049-91	RES,CHIP	1K	5%	1/10W		
R622	9-910-999-31	METAL	150	1%	1/2W		
R623	1-215-482-00	METAL	360K	1%	1/4W		
R624	1-215-479-00	METAL	270K	1%	1/4W		
R625	1-215-481-00	METAL	330K	1%	1/4W		
R626	1-216-081-00	RES,CHIP	22K	5%	1/10W		
R627	1-215-481-00	METAL	330K	1%	1/4W		
R628	1-215-481-00	METAL	330K	1%	1/4W		
R629	1-215-461-00	METAL	47K	1%	1/4W		
R630	1-249-421-11	CARBON	2.2K	5%	1/4W		
R631	1-218-642-11	METAL OXIDE	100K	5%	1W	F	
R632	1-218-642-11	METAL OXIDE	100K	5%	1W	F	
R633	1-216-073-00	RES,CHIP	10K	5%	1/10W		
R634	1-218-642-11	METAL OXIDE	100K	5%	1W	F	
R636	1-249-389-11	CARBON	4.7	5%	1/4W		
R637	1-249-389-11	CARBON	4.7	5%	1/4W		
R638	1-247-791-91	CARBON	22	5%	1/4W		
R639	1-247-791-91	CARBON	22	5%	1/4W		
R640	1-220-926-11	FUSIBLE	0.47	10%	1/2W	F	
R641	1-216-089-91	RES,CHIP	47K	5%	1/10W		
R642	1-247-807-31	CARBON	100	5%	1/4W		
R643	1-216-065-91	RES,CHIP	4.7K	5%	1/10W		
R644	1-216-081-00	RES,CHIP	22K	5%	1/10W		
R645	1-216-073-00	RES,CHIP	10K	5%	1/10W		
R646	1-216-073-00	RES,CHIP	10K	5%	1/10W		
R650	1-249-377-11	CARBON	0.47	5%	1/4W	F	
R651	1-249-377-11	CARBON	0.47	5%	1/4W	F	
R652	1-249-377-11	CARBON	0.47	5%	1/4W	F	
R653	1-249-381-11	CARBON	1	5%	1/4W	F	
R654	1-249-377-11	CARBON	0.47	5%	1/4W	F	
R655	1-249-377-11	CARBON	0.47	5%	1/4W	F	
R660	1-249-430-11	CARBON	12K	5%	1/4W	F	
R661	1-249-417-11	CARBON	1K	5%	1/4W		
R662	1-247-895-91	CARBON	470K	5%	1/4W		
R666	1-216-073-00	RES,CHIP	10K	5%	1/10W		
R667	1-249-429-11	CARBON	10K	5%	1/4W		
R669	1-249-425-11	CARBON	4.7K	5%	1/4W		
R670	1-216-065-91	RES,CHIP	4.7K	5%	1/10W		
R671	1-249-425-11	CARBON	4.7K	5%	1/4W		
R674	1-216-641-11	METAL CHIP	390	0.50%	1/10W		
R675	1-215-477-00	METAL	220K	1%	1/4W		
R676	1-216-049-91	RES,CHIP	1K	5%	1/10W		
R677	1-247-883-00	CARBON	150K	5%	1/4W		
R678	1-247-895-91	CARBON	470K	5%	1/4W		
R679	1-216-073-00	RES,CHIP	10K	5%	1/10W		
R680	1-216-073-00	RES,CHIP	10K	5%	1/10W		
R681	1-216-073-00	RES,CHIP	10K	5%	1/10W		
R901	1-247-807-31	CARBON	100	5%	1/4W		
R902	1-216-025-91	RES,CHIP	100	5%	1/10W		
R903	1-216-049-91	RES,CHIP	1K	5%	1/10W		
R904	1-216-049-91	RES,CHIP	1K	5%	1/10W		
R905	1-216-025-91	RES,CHIP	100	5%	1/10W		
R906	1-216-073-00	RES,CHIP	10K	5%	1/10W		
R907	1-260-087-11	CARBON	100	5%	1/2W		
R908	1-216-649-11	METAL CHIP	820	0.50%	1/10W		
R909	1-216-649-11	METAL CHIP	820	0.50%	1/10W		
R910	1-216-037-00	RES,CHIP	330	5%	1/10W		
R911	1-216-041-00	RES,CHIP	470	5%	1/10W		
R912	1-249-417-11	CARBON	1K	5%	1/4W		
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		
R916	1-216-077-00	RES,CHIP	15K	5%	1/10W		
R917	1-216-077-00	RES,CHIP	15K	5%	1/10W		
R918	1-216-049-91	RES,CHIP	1K	5%	1/10W		
R920	1-216-049-91	RES,CHIP	1K	5%	1/10W		
R921	1-216-025-91	RES,CHIP	100	5%	1/10W		
R922	1-216-073-00	RES,CHIP	10K	5%	1/10W		
R924	1-247-807-31	CARBON	100	5%	1/4W		
R925	1-216-065-91	RES,CHIP	4.7K	5%	1/10W		
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		
R929	1-216-065-91	RES,CHIP	4.7K	5%	1/10W		
R930	1-216-025-91	RES,CHIP	100	5%	1/10W		
R931	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W		
R932	1-216-025-91	RES,CHIP	100	5%	1/10W		
R933	1-216-053-00	RES,CHIP	1.5K	5%	1/10W		
R934	1-216-073-00	RES,CHIP	10K	5%	1/10W		
R935	1-216-025-91	RES,CHIP	100	5%	1/10W		
R936	1-216-025-91	RES,CHIP	100	5%	1/10W		
R937	1-216-049-91	RES,CHIP	1K	5%	1/10W		
R938	1-216-025-91	RES,CHIP	100	5%	1/10W		
R939	1-216-637-11	METAL CHIP	270	0.50%	1/10W		
R940	1-216-661-11	METAL CHIP	2.7K	0.50%	1/10W		
R941	1-216-643-11	METAL CHIP	470	0.50%	1/10W		
R942	1-216-643-11	METAL CHIP	470	0.50%	1/10W		
R943	1-216-647-11	METAL CHIP	680	0.50%	1/10W		
R944	1-216-651-11	METAL CHIP	1K	0.50%	1/10W		
R945	1-216-655-11	METAL CHIP	1.5K	0.50%	1/10W		
R946	1-216-661-11	METAL CHIP	2.7K	0.50%	1/10W		
R947	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W		
R948	1-216-025-91	RES,CHIP	100	5%	1/10W		
R949	1-216-073-00	RES,CHIP	10K	5%	1/10W		
R951	1-216-025-91	RES,CHIP	100	5%	1/10W		
R952	1-216-061-00	RES,CHIP	3.3K	5%	1/10W		
R953	1-216-073-00	RES,CHIP	10K	5%	1/10W		
R954	1-216-073-00	RES,CHIP	10K	5%	1/10W		
R956	1-216-025-91	RES,CHIP	100	5%	1/10W		
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	1-216-295-91	SHORT	0				
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		
<VARIABLE RESISTOR>							
▣ RV501 Δ 1-241-767-21 RES, ADJ, CERMET 100K (HV ADJ) 3-710-578-01 COVER, VOLUME, 6 MOLD ; RV501							

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
		<RELAY>		C1610	1-163-005-11	CERAMIC CHIP 470PF	10% 50V
				C1611	1-163-003-11	CERAMIC CHIP 330PF	10% 50V
				C1612	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V
				C1615	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
				C1616	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
				C1618	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
				C1626	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
		<SWITCH>				<CONNECTOR>	
		S601 Δ 1-571-433-31 SWITCH, PUSH (AC POWER)				CN1600*1-774-512-11	CONNECTOR, BPARD TO BOARD 10P
		S901 1-692-431-21 SWITCH, TACTILE (CONT+)				<DIODE>	
		S903 1-692-431-21 SWITCH, TACTILE (VOLUME+)				D1604	8-719-977-81 ZENER DIODE DTZ33B
		S904 1-692-431-21 SWITCH, TACTILE (VOLUME-)				D1605	8-719-056-95 ZENER DIODE Udz-TE-17-22B
		S905 1-692-431-21 SWITCH, TACTILE (GPE)				D1610	8-719-404-49 DIODE MA111
		S906 1-692-431-21 SWITCH, TACTILE (RESET)				<IC>	
		S907 1-692-431-21 SWITCH, TACTILE (MUTE)				IC1601	8-759-462-65 IC TK75003D
		S910 1-692-431-21 SWITCH, TACTILE (CONT-)				IC1603	8-759-198-31 IC uPC1093J-1-T
		S911 1-692-431-21 SWITCH, TACTILE (MENU)				<CHIP CONDUCTOR>	
		<SPARK GAP>		JR1601	1-216-295-91	SHORT	0
		SG501 1-519-422-11 GAP, SPARK		JR1602	1-216-295-91	SHORT	0
		<TRANSFORMER>				<TRANSISTOR>	
		T501 Δ X-4035-935-1 TRANSFORMER ASSY, FLYBACK		Q1603	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
		(NX-4431//J1K4)		Q1604	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
		T503 1-429-109-11 TRANSFORMER, FERRITE (DFT)		Q1605	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
		T504 1-429-103-11 TRANSFORMER, FERRITE (HDT)		Q1606	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
		T505 1-426-998-11 TRANSFORMER, FERRITE (HST)				<RESISTOR>	
		T601 1-416-286-21 COIL, CHOKE 515UH		R1603	1-216-673-11	METAL CHIP	8.2K 0.50%1/10W
		T602 Δ 1-431-386-11 TRANSFORMER, CONVERTER (PIT)		R1607	1-216-105-91	RES,CHIP	220K 5% 1/10W
		T603 1-429-992-11 TRANSFORMER, CONVERTER (PRT)		R1608	1-216-017-91	RES,CHIP	47 5% 1/10W
		<THERMISTOR>		R1609	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
		TH401 1-803-114-11 THERMISTOR, POSITIVE		R1611	1-216-081-00	RES,CHIP	22K 5% 1/10W
		TH501 1-807-796-11 THERMISTOR		R1614	1-216-089-91	RES,CHIP	47K 5% 1/10W
		TH601 Δ 1-810-990-11 THERMISTOR		R1615	1-216-089-91	RES,CHIP	47K 5% 1/10W
		TH602 1-809-827-11 THERMISTOR, POSITIVE		R1620	1-216-073-00	RES,CHIP	10K 5% 1/10W
		<VARISTOR>		R1621	1-216-671-11	METAL CHIP	6.8K 0.50%1/10W
		VA602 Δ 1-801-268-51 VARISTOR TNR14V471K660		R1622	1-216-073-00	RES,CHIP	10K 5% 1/10W
		<CRYSTAL>		R1623	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
		X901 1-767-641-11 VIBRATOR, CRYSTAL		R1624	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
		X902 1-767-933-11 OSCILLATOR, CERAMIC		R1641	1-216-073-00	RES,CHIP	10K 5% 1/10W
		*****				*****	
		* 8-933-240-00 DA BOARD, COMPLETE					

		<CAPACITOR>					
		C1608 1-163-275-11 CERAMIC CHIP 0.001MF	5% 50V				
		C1609 1-164-004-11 CERAMIC CHIP 0.1MF	10% 25V				

CPD-101VS



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
	* 8-933-329-00	U BOARD, COMPLETE *****				<CONNECTOR>	
	4-382-854-11	SCREW (M3X10), P, SW (+) (IC5201)				CN5200*1-564-506-11 PLUG, CONNECTOR 3P CN5202*1-564-508-11 PLUG, CONNECTOR 5P CN5204*1-564-509-11 PLUG, CONNECTOR 6P CN5601*1-564-508-11 PLUG, CONNECTOR 5P CN5605 1-695-915-11 TAB (CONTACT)	
		<CAPACITOR>				CN5606 1-695-915-11 TAB (CONTACT) CN5607 1-695-915-11 TAB (CONTACT)	
C5201	1-163-038-91	CERAMIC CHIP 0.1MF	25V			CN5606 1-695-915-11 TAB (CONTACT) CN5607 1-695-915-11 TAB (CONTACT)	
C5202	1-126-964-11	ELECT 10MF	20% 50V				
C5203	1-126-964-11	ELECT 10MF	20% 50V				
C5205	1-107-698-11	ELECT 10MF	20% 25V				
C5206	1-107-698-11	ELECT 10MF	20% 25V			<DIODE>	
C5207	1-164-695-11	CERAMIC CHIP 0.0022MF	5% 50V			D5200 8-719-404-49 DIODE MA111 D5201 8-719-404-49 DIODE MA111 D5202 8-719-404-49 DIODE MA111 D5203 8-719-404-49 DIODE MA111 D5204 8-719-404-49 DIODE MA111	
C5208	1-164-695-11	CERAMIC CHIP 0.0022MF	5% 50V				
C5209	1-164-344-11	CERAMIC CHIP 0.068MF	10% 25V				
C5210	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V				
C5211	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V				
C5212	1-163-038-91	CERAMIC CHIP 0.1MF	25V			D5205 8-719-510-46 DIODE D1NL20 D5206 8-719-404-49 DIODE MA111 D5211 8-719-404-49 DIODE MA111 D5212 8-719-404-49 DIODE MA111 D5401 8-719-977-28 ZENER DIODE DTZ10B	
C5213	1-126-965-11	ELECT 22MF	20% 50V				
C5214	1-104-664-11	ELECT 47MF	20% 25V				
C5215	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V				
C5217	1-163-989-11	CERAMIC CHIP 0.033MF	10% 25V				
C5218	1-104-663-11	ELECT 33MF	20% 25V			D5402 8-719-404-49 DIODE MA111 D5403 8-719-404-49 DIODE MA111 D5404 8-719-404-49 DIODE MA111 D5601 8-719-404-49 DIODE MA111 D5602 8-719-404-49 DIODE MA111	
C5219	1-163-038-91	CERAMIC CHIP 0.1MF	25V				
C5220	1-164-344-11	CERAMIC CHIP 0.068MF	10% 25V				
C5221	1-126-941-11	ELECT 470MF	20% 25V				
C5223	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V				
C5230	1-104-664-11	ELECT 47MF	20% 10V			D5608 8-719-404-49 DIODE MA111	
C5236	1-104-664-11	ELECT 47MF	20% 16V				
C5240	1-126-965-11	ELECT 22MF	20% 50V			<IC>	
C5257	1-126-960-11	ELECT 1MF	20% 50V			IC5200 8-759-273-12 IC TDA7315D013TR IC5201 8-759-980-43 IC TDA2009A IC5202 8-759-100-96 IC uPC4558G2 IC5204 8-759-100-96 IC uPC4558G2 IC5601 8-759-168-19 IC TA78L09F-TE12L	
C5258	1-104-664-11	ELECT 47MF	20% 16V				
C5260	1-125-959-11	ELECT 4700MF	25V				
C5263	1-125-959-11	ELECT 4700MF	25V				
C5264	1-163-038-91	CERAMIC CHIP 0.1MF	25V				
C5266	1-163-038-91	CERAMIC CHIP 0.1MF	25V				
C5275	1-136-165-00	FILM 0.1MF	5% 50V			<JACK>	
C5276	1-136-165-00	FILM 0.1MF	5% 50V				
C5279	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V			J5401 1-563-330-11 JACK	
C5280	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V				
C5281	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V				
C5282	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V			<COIL>	
C5283	1-126-963-11	ELECT 4.7MF	20% 50V			L5201 1-410-435-21 INDUCTOR 220UH L5202 1-410-435-21 INDUCTOR 220UH	
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			<IC LINK>	
C5298	1-126-964-11	ELECT 10MF	20% 50V				
C5303	1-126-963-11	ELECT 4.7MF	20% 50V			PS5200 Δ 1-532-984-91 LINK, IC (2A/90V AC, 60V DC)	
C5304	1-126-963-11	ELECT 4.7MF	20% 50V				
C5310	1-163-989-11	CERAMIC CHIP 0.033MF	10% 25V			<TRANSISTOR>	
C5402	1-126-964-11	ELECT 10MF	20% 50V				
C5403	1-126-960-11	ELECT 1MF	20% 50V			Q5001 8-729-422-27 TRANSISTOR 2SD601A-Q Q5201 8-729-216-22 TRANSISTOR 2SA1162-G Q5202 8-729-216-22 TRANSISTOR 2SA1162-G Q5205 8-729-216-22 TRANSISTOR 2SA1162-G	
C5405	1-115-339-11	CERAMIC CHIP 0.1MF	10% 50V				
C5616	1-126-964-11	ELECT 10MF	20% 50V				
C5620	1-125-960-11	ELECT 4700MF	25V				



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
Q5206	8-729-322-37	TRANSISTOR 2SJ175		R5307	1-240-075-21	RES,CHIP 2.2K	5% 1/10W
Q5207	8-729-422-27	TRANSISTOR 2SD601A-Q		R5309	1-240-052-21	RES,CHIP 27	5% 1/10W
Q5215	8-729-920-21	TRANSISTOR DTC314TK-T-146		R5310	1-216-651-11	RES,CHIP 1K	5% 1/10W
Q5216	8-729-920-21	TRANSISTOR DTC314TK-T-146		R5311	1-240-052-21	RES,CHIP 27	5% 1/10W
Q5401	8-729-027-38	TRANSISTOR DTA144EKA-T146		R5325	1-216-675-11	RES,CHIP 10K	5% 1/10W
Q5402	8-729-920-21	TRANSISTOR DTC314TK-T-146		R5326	1-216-675-11	RES,CHIP 10K	5% 1/10W
<RESISTOR>				R5328	1-216-081-00	RES,CHIP 22K	5% 1/10W
R5201	1-216-001-00	RES,CHIP 10	5% 1/10W	R5401	1-216-081-00	RES,CHIP 22K	5% 1/10W
R5202	1-240-095-21	RES,CHIP 100K	5% 1/10W	R5404	1-216-049-91	RES,CHIP 1K	5% 1/10W
R5203	1-240-095-21	RES,CHIP 100K	5% 1/10W	R5406	1-216-089-91	RES,CHIP 47K	5% 1/10W
R5204	1-240-095-21	RES,CHIP 100K	5% 1/10W	R5407	1-216-295-91	SHORT 0	
R5205	1-240-095-21	RES,CHIP 100K	5% 1/10W	R5408	1-216-295-91	SHORT 0	
R5206	1-240-099-21	RES,CHIP 220K	5% 1/10W	*****			
R5207	1-240-103-21	RES,CHIP 470K	5% 1/10W	* 1-669-820-11 J BOARD			
R5208	1-240-099-21	RES,CHIP 220K	5% 1/10W	*****			
R5209	1-240-103-21	RES,CHIP 470K	5% 1/10W	<CAPACITOR>			
R5210	1-216-651-11	RES,CHIP 1K	5% 1/10W	C6001	1-115-339-11	CERAMIC CHIP 0.1MF	10% 50V
R5211	1-216-651-11	RES,CHIP 1K	5% 1/10W	<CONNECTOR>			
R5213	1-216-295-91	SHORT 0		CN6001	1-695-915-11	TAB (CONTACT)	
R5214	1-249-377-11	CARBON 0.47	5% 1/4W F	CN6002	*1-564-508-11	PLUG, CONNECTOR 5P	
R5216	1-216-073-00	RES,CHIP 10K	5% 1/10W	CN6003	*1-564-507-11	PLUG, CONNECTOR 4P	
R5217	1-216-025-91	RES,CHIP 100	5% 1/10W	<DIODE>			
R5218	1-216-017-91	RES,CHIP 47	5% 1/10W	D6000	8-719-404-49	DIODE MA111	
R5219	1-240-082-21	RES,CHIP 8.2K	5% 1/10W	D6001	8-719-404-49	DIODE MA111	
R5222	1-216-025-91	RES,CHIP 100	5% 1/10W	<JACK>			
R5223	1-240-082-21	RES,CHIP 8.2K	5% 1/10W	J6002	1-568-267-11	JACK	
R5225	1-216-081-00	RES,CHIP 22K	5% 1/10W	<TRANSISTOR>			
R5229	1-216-651-11	RES,CHIP 1K	5% 1/10W	Q6001	8-729-920-21	TRANSISTOR DTC314TK-T-146	
R5230	1-216-651-11	RES,CHIP 1K	5% 1/10W	Q6002	8-729-920-21	TRANSISTOR DTC314TK-T-146	
R5232	1-216-651-11	RES,CHIP 1K	5% 1/10W	<RESISTOR>			
R5233	1-216-651-11	RES,CHIP 1K	5% 1/10W	R6000	1-215-863-11	METAL OXIDE 100	5% 1W F
R5239	1-216-295-91	SHORT 0		R6001	1-215-863-11	METAL OXIDE 100	5% 1W F
R5241	1-216-651-11	RES,CHIP 1K	5% 1/10W	R6002	1-249-397-11	CARBON 22	5% 1/4W F
R5246	1-249-389-11	CARBON 4.7	5% 1/4W F	R6003	1-249-397-11	CARBON 22	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				
R5270	1-216-093-00	RES,CHIP 68K	5% 1/10W				
R5271	1-216-089-91	RES,CHIP 47K	5% 1/10W				
R5272	1-216-089-91	RES,CHIP 47K	5% 1/10W				
R5276	1-240-075-21	RES,CHIP 2.2K	5% 1/10W				
R5277	1-240-075-21	RES,CHIP 2.2K	5% 1/10W				
R5281	1-240-091-21	RES,CHIP 47K	5% 1/10W				
R5282	1-240-091-21	RES,CHIP 47K	5% 1/10W				
R5283	1-216-683-11	RES,CHIP 22K	5% 1/10W				
R5284	1-216-683-11	RES,CHIP 22K	5% 1/10W				
R5298	1-216-675-11	METAL CHIP 10K	0.50%1/10W				
R5299	1-216-675-11	METAL CHIP 10K	0.50%1/10W				
R5300	1-240-082-21	RES,CHIP 8.2K	5% 1/10W				
R5301	1-240-082-21	RES,CHIP 8.2K	5% 1/10W				
R5303	1-216-295-91	SHORT 0					
R5304	1-216-295-91	SHORT 0					
R5306	1-240-075-21	RES,CHIP 2.2K	5% 1/10W				

