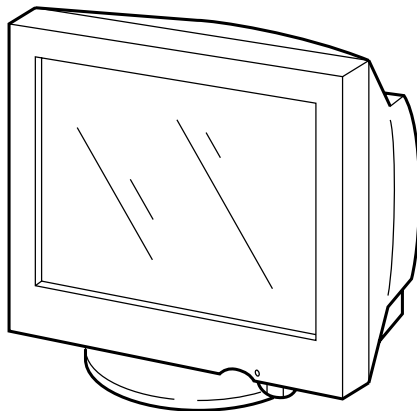


CPD-E200E

SERVICE MANUAL

AEP Model
Chassis No. SCC-L31C-A



D99C CHASSIS

SPECIFICATIONS

CRT	0.24 mm aperture grille pitch (center) 17 inches measured diagonally 90-degree deflection FD Trinitron	Mass Plug and Play Supplied accessories	Approx. 20 kg (44 lb 1 oz) DDC1/DDC2B/DDC2Bi Power cord (1) Windows Monitor Information Disk (1) Warranty card (1) Notes on cleaning the screen's surface (1) This instruction manual (1)
Viewable image size	Approx. 327 × 243 mm (w/h) (12 ⁷ / ₈ × 9 ⁵ / ₈ inches) 16.0" viewing image		
Resolution			
Maximum	Horizontal: 1600 dots Vertical: 1200 lines	* Recommended horizontal and vertical timing condition	
Recommended	Horizontal: 1024 dots Vertical: 768 lines	• Horizontal sync width should be more than 1.0 μsec. • Horizontal blanking width should be more than 3.0 μsec. • Vertical blanking width should be more than 500 μsec.	
Standard image area	Approx. 312 × 234 mm (w/h) (12 ³ / ₈ × 9 ¹ / ₄ inches)		
Deflection frequency*	Horizontal: 30 to 85 kHz Vertical: 48 to 120 Hz		
AC input voltage/current	100 to 240 V, 50 - 60 Hz, Max. 1.7 A		
Power consumption	120 W		
Dimensions	Approx. 404 × 413.5 × 419.5 mm (w/h/d) (16 × 16 ³ / ₈ × 16 ⁵ / ₈ inches)		

Design and specifications are subject to change without notice.



TRINITRON® COLOR COMPUTER DISPLAY
SONY®

DIAGNOSIS

Failure	Power LED
HV/+B Failure	Blink Amber (On 0.5 sec, Off 0.5 sec)
H Stop or V Stop 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)


TIMING SPECIFICATION

PRIMARY MODE MODE AT PRODUCTION	MODE 1	MODE 2	MODE 3	MODE 4	MODE 5	MODE 6	MODE 7	MODE 8
RESOLUTION (HXV)	640 X 480	800 X 600	832 X 624	1024 X 768	1024 X 768	720 X 400	640 X 480	1280 X 1024
CLOCK	25.175 MHz	56.250 MHz	57.283 MHz	78.750 MHz	94.500 MHz	28.322 MHz	36.000 MHz	135.000 MHz
— HORIZONTAL —								
H-FREQ	31.469 kHz	53.674 kHz	49.725 kHz	60.023 kHz	68.677 kHz	31.469 kHz	43.269 kHz	79.976 kHz
	usec	usec	usec	usec	usec	usec	usec	usec
H. TOTAL	31.778	18.631	20.111	16.660	14.561	31.777	23.111	12.504
H. BLK	6.356	4.409	5.586	3.657	3.725	6.355	5.333	3.022
H. FP	0.636	0.569	0.559	0.203	0.508	0.636	1.556	0.119
H. SYNC	3.813	1.138	1.117	1.219	1.016	3.813	1.556	1.067
H. BP	1.907	2.702	3.910	2.235	2.201	1.907	2.222	1.837
H. ACTIV	25.422	14.222	14.524	13.003	10.836	25.422	17.778	9.481
— VERTICAL —								
V. FREQ(HZ)	59.940 Hz	85.061 Hz	74.550 Hz	75.029 Hz	84.997 Hz	70.087 Hz	85.008 Hz	75.025 Hz
	lines	lines	lines	lines	lines	lines	lines	lines
V. TOTAL	525	631	667	800	808	449	509	1066
V. BLK	45	31	43	32	40	49	29	42
V. FP	10	1	1	1	1	12	1	1
V. SYNC	2	3	3	3	3	2	3	3
V. BP	33	27	39	28	36	35	25	38
V. ACTIV	480	600	624	768	768	400	480	1024
— SYNC —								
INT(G)	NO	NO	NO	NO	NO	NO	NO	NO
EXT(H/V)/POLARITY	YES -/-	NO +/+	YES -/-	YES +/+	YES +/+	YES -/+	YES -/-	YES +/+
EXT(CS)/POLARITY	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

Power saving function

This monitor meets the power-saving guidelines set by VESA, ENERGY STAR, and NUTEK. If the monitor is connected to a computer or video graphics board that is DPMS (Display Power Management Signaling) compliant, the monitor will automatically reduce power consumption in three stages as shown right.

* “Sleep” and “deep sleep” are power saving modes defined by the Environmental Protection Agency.
 ** When your computer is in a power saving mode, MONITOR IS IN POWER SAVE MODE appears on the screen if you press any button on the monitor. After a few seconds, the monitor enters the power saving mode again.

Power mode	Power consumption	 (power) indicator
normal operation	≤ 120 W	green
1 standby	≤ 15 W	green and orange alternate
2 suspend (sleep)*	≤ 15 W	green and orange alternate
3 active off** (deep sleep)*	≤ 3 W	orange
power off	0 W	off

SAFETY CHECK-OUT

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

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

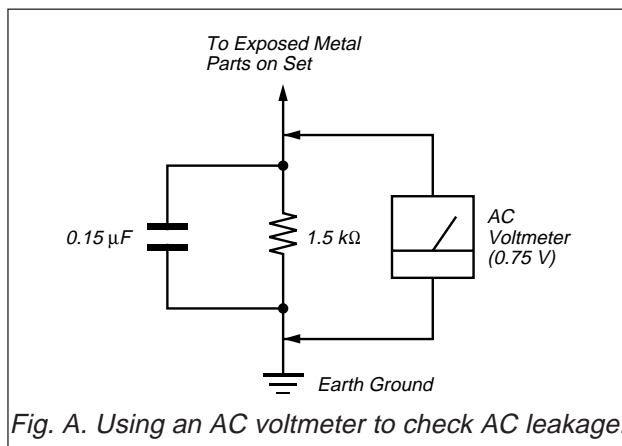


Fig. A. Using an AC voltmeter to check AC leakage.

LEAKAGE TEST

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

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

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

WARNING!!

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

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

TABLE OF CONTENTS

<i>Section</i>	<i>Title</i>	<i>Page</i>
1. GENERAL	1-1
2. DISASSEMBLY		
2-1.	Cabinet, EMI Shield Removal	2-1
2-2.	A and D Boards Removal	2-2
2-3.	Service Position	2-2
2-4.	Picture Tube Removal	2-3
2-5.	H Board Removal	2-4
3. SAFETY RELATED ADJUSTMENT	3-1
4. ADJUSTMENTS	4-1
5. DIAGRAMS		
5-1.	Block Diagrams	5-1
5-2.	Circuit Boards Location	5-5
5-3.	Schematic Diagrams and Printed Wiring Boards	5-6
(1)	Schematic Diagram of D Board	5-7
(2)	Schematic Diagram of H Board	5-18
(3)	Schematic Diagram of A Board	5-19
5-4.	Semiconductors	5-22
6. EXPLODED VIEWS		
6-1.	Chassis	6-1
6-2.	Picture Tube	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.

Precautions

Warning on power connections

- Use the supplied power cord. If you use a different power cord, be sure that it is compatible with your local power supply.
For the customers in the UK
If you use the monitor in the UK, be sure to use the supplied UK power cable.

Example of plug types



for 100 to 120 V AC for 200 to 240 V AC for 240 V AC only

- Before disconnecting the power cord, wait at least 30 seconds after turning off the power to allow the static electricity on the screen's surface to discharge.
- After the power is turned on, the screen is demagnetized (degaussed) for about 5 seconds. This generates a strong magnetic field around the screen which may affect data stored on magnetic tapes and disks placed near the monitor. Be sure to keep magnetic recording equipment, tapes, and disks away from the monitor.

The equipment should be installed near an easily accessible outlet.

Installation

Do not install the monitor in the following places:

- on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies, etc.) that may block the ventilation holes
- near heat sources such as radiators or air ducts, or in a place subject to direct sunlight
- in a place subject to severe temperature changes
- in a place subject to mechanical vibration or shock
- on an unstable surface
- near equipment which generates magnetism, such as a transformer or high voltage power lines
- near or on an electrically charged metal surface

Maintenance

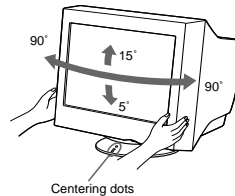
- Clean the screen with a soft cloth. If you use a glass cleaning liquid, do not use any type of cleaner containing an anti-static solution or similar additive as this may scratch the screen's coating.
- Do not rub, touch, or tap the surface of the screen with sharp or abrasive items such as a ballpoint pen or screwdriver. This type of contact may result in a scratched picture tube.
- Clean the cabinet, 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.

Transportation

When you transport this monitor for repair or shipment, use the original carton and packing materials.

Use of the tilt-swivel

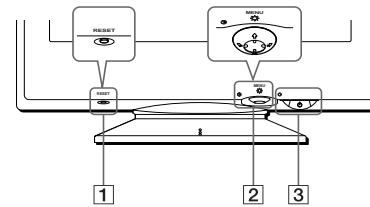
This monitor can be adjusted within the angles shown below. To find the center of the monitor's turning radius, align the center of the monitor's screen with the centering dots on the stand. Hold the monitor at the bottom with both hands when you turn it horizontally or vertically. Be careful not to pinch your fingers at the back of the monitor when you tilt the monitor up vertically.



Identifying parts and controls

See the pages in parentheses for further details.

Front



1 RESET button (page 12)

This button resets the adjustments to the factory settings.

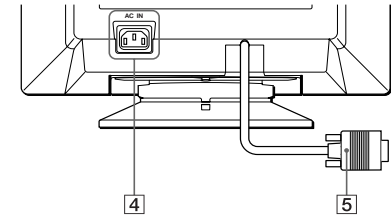
2 Control button (page 9)

The control button is used to display the menu and make adjustments to the monitor, including brightness and contrast adjustments.

3 (power) switch and indicator (pages 7, 13, 16)

This button turns the monitor on and off. The power indicator lights up in green when the monitor is turned on, and either flashes in green and orange, or lights up in orange when the monitor is in power saving mode.

Rear

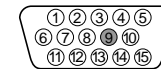


4 AC IN connector (page 6)

This connector provides AC power to the monitor.

5 Video input connector (HD15) (page 6)

This connector inputs RGB video signals (0.700 Vp-p, positive) and sync signals.



Pin No.	Signal
1	Red
2	Green (Sync on Green)
3	Blue
4	ID (Ground)
5	DDC Ground*
6	Red Ground
7	Green Ground
8	Blue Ground
9	-
10	Ground
11	ID (Ground)
12	Bi-Directional Data (SDA)*
13	H. Sync
14	V. Sync
15	Data Clock (SCL)*

* DDC (Display Data Channel) is a standard of VESA.

GB

Setup

Before using your monitor, check that the following accessories are included in your carton:

- Power cord (1)
- Windows Monitor Information Disk (1)
- Warranty card (1)
- Notes on cleaning the screen's surface (1)
- This instruction manual (1)

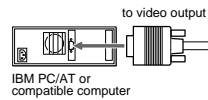
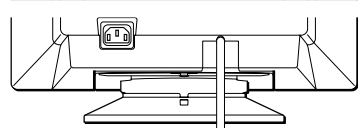
Step 1: Connect your monitor to your computer

Turn off the monitor and computer before connecting.

Note

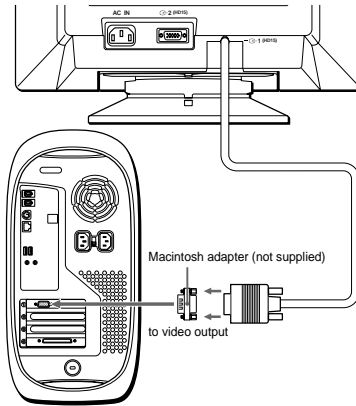
Do not touch the pins of the video cable connector as this might bend the pins.

■ Connecting to an IBM PC/AT or compatible computer



■ Connecting to a Macintosh or compatible computer

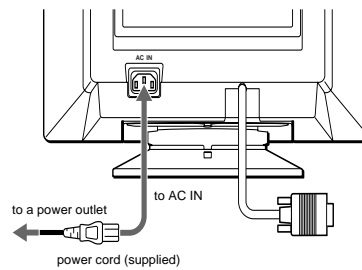
You will need a Macintosh adapter (not supplied).



Macintosh or compatible computer

Step 2: Connect the power cord

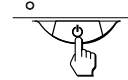
With the monitor and computer switched off, first connect the power cord to the monitor, then connect it to a power outlet.



power cord (supplied)

Step 3: Turn on the monitor and computer

First turn on the monitor, then turn on the computer.



The installation of your monitor is complete.

If necessary, use the monitor's controls to adjust the picture.

If no picture appears on your screen

- Check that the monitor is correctly connected to the computer.
- If NO INPUT SIGNAL appears on the screen, confirm that the video signal cable is properly connected and all plugs are firmly seated in their sockets.
- If MONITOR IS IN POWER SAVE MODE appeared on the screen, try pressing any key on the computer keyboard.
- If you are replacing an old monitor with this model and OUT OF SCAN RANGE appears on the screen, reconnect the old monitor. Then adjust the computer's graphic board so that the horizontal frequency is between 30 – 85 kHz, and the vertical frequency is between 48 – 120 Hz.

For more information about the on-screen messages, see "Trouble symptoms and remedies" on page 14.

For customers using Windows 95/98

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

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

For customers using Windows NT4.0

Monitor setup in Windows NT4.0 is different from Windows 95/98 and does not involve the selection of monitor type. Refer to the Windows NT4.0 instruction manual for further details on adjusting the resolution, refresh rate, and number of colors.

Adjusting the monitor's resolution and color number

Adjust the monitor's resolution and color number by referring to your computer's instruction manual. The color number may vary according to your computer or video board. The color palette setting and the actual number of colors are as follows:

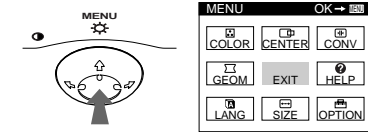
- High Color (16 bit) → 65,536 colors
 - True Color (24 bit) → about 16.77 million colors
- In true color mode (24 bit), speed may be slower.

Selecting the on-screen menu language (LANG)

English, French, German, Spanish, Italian, Dutch, Swedish, Russian and Japanese versions of the on-screen menus are available. The default setting is English.

1 Press the center of the control button.

See page 9 for more information on using the control button.



2 Move the control button to highlight LANG and press the center of the control button again.



GB

3 Move the control button ↓/↑ to select a language.

- ENGLISH
- FRANÇAIS: French
- DEUTSCH: German
- ESPAÑOL: Spanish
- ITALIANO: Italian
- NEDERLANDS: Dutch
- SVENSKA: Swedish
- РУССКИЙ: Russian
- 日本語: Japanese

To close the menu

Press the center of the control button once to return to the main MENU, and twice to return to normal viewing. If no buttons are pressed, the menu closes automatically after about 30 seconds.

To reset to English

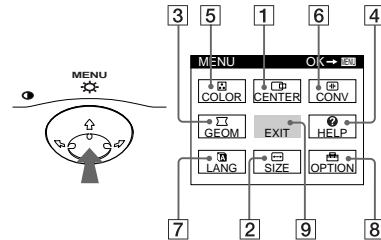
Press the RESET button while the LANGUAGE menu is displayed on the screen.

Customizing Your Monitor

You can make numerous adjustments to your monitor using the on-screen menu.

Navigating the menu

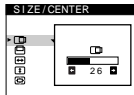
Press the center of the control button to display the main MENU on your screen. See page 9 for more information on using the control button.



Use the control button to select one of the following menus.

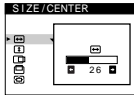
1 CENTER (page 9)

Selects the CENTER menu to adjust the picture's centering, size or zoom.



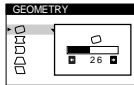
2 SIZE (page 9)

Selects the SIZE menu to adjust the picture's size, centering or zoom.



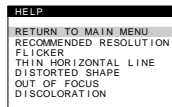
3 GEOM (page 10)

Select the GEOM menu to adjust the picture's rotation and shape.



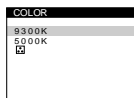
4 HELP (page 12)

Select the HELP menu to display helpful hints and information about this monitor.



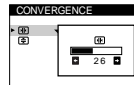
5 COLOR (page 10)

Select the COLOR menu to adjust the picture's color temperature. You can use this to match the monitor's colors to a printed picture's colors.



6 CONV (page 10)

Select the CONV menu to adjust the picture's horizontal and vertical convergence.



7 LANG (page 7)

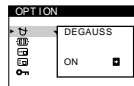
Select LANG to choose the on-screen menu's language.



8 OPTION (page 11)

Select OPTION to adjust the monitor's options. The options include:

- degaussing the screen
- adjusting the moire cancellation level
- changing the on-screen menu position
- locking the controls

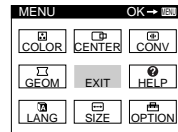


9 EXIT

Select EXIT to close the menu.

■ Displaying the current input signal

The horizontal and vertical frequencies of the current input signal are displayed in the main MENU. If the signal matches one of this monitor's factory preset modes, the resolution is also displayed.

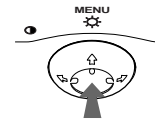


the resolution of the current input signal (68.7kHz / 85Hz) the horizontal and vertical frequencies of the current input signal (1024x768)

■ Using the control button

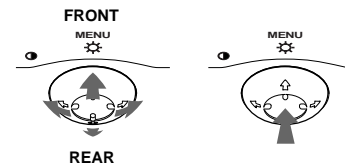
1 Display the main MENU.

Press the center of the control button to display the main MENU on your screen.



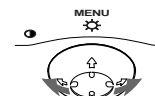
2 Select the menu you want to adjust.

Highlight the desired menu by moving the control button towards the rear to go up (↑), towards the front to go down (↓), and left (←) or right (→) to move sideways.



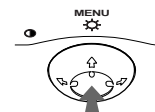
3 Adjust the menu.

Move the control button left (←) or right (→) to make the adjustment.



4 Close the menu.

Press the center of the control button once to return to the main MENU, and twice to return to normal viewing. If no buttons are pressed, the menu closes automatically after about 30 seconds.



■ Resetting the adjustments

Press the RESET button. See page 12 for more information on resetting the adjustments.



Adjusting the brightness and contrast

Brightness and contrast adjustments are made using a separate BRIGHTNESS/CONTRAST menu. These settings are stored in memory for all input signals.

1 Move the control button in any direction.

The BRIGHTNESS/CONTRAST menu appears on the screen.



2 Move the control button ↑/↓ to adjust the brightness (☉), and ←/→ to adjust the contrast (☉).

The menu automatically disappears after about 3 seconds.

Adjusting the centering of the picture (CENTER)

This setting is stored in memory for the current input signal.

GB

1 Press the center of the control button.

The main MENU appears on the screen.

2 Move the control button to highlight [] CENTER and press the center of the control button again.

The SIZE/CENTER menu appears on the screen.

3 First move the control button ↓/↑ to select [] for horizontal adjustment, or [] for vertical adjustment. Then move the control button ←/→ to adjust the centering.

Adjusting the size of the picture (SIZE)

This setting is stored in memory for the current input signal.

1 Press the center of the control button.

The main MENU appears on the screen.




2 Move the control button to highlight [] SIZE and press the center of the control button again.

The SIZE/CENTER menu appears on the screen.

3 First move the control button ↓/↑ to select [] for horizontal adjustment, or [] for vertical adjustment. Then move the control button ←/→ to adjust the size.

Enlarging or reducing the picture (ZOOM)

This setting is stored in memory for the current input signal.


- 1 Press the center of the control button.**
The main MENU appears on the screen.
- 2 Move the control button to highlight  SIZE or  CENTER and press the center of the control button again.**
The SIZE/CENTER menu appears on the screen.
- 3 Move the control button \downarrow/\uparrow to select  (zoom), and move \leftarrow/\rightarrow to enlarge or reduce the picture.**


Notes






- Adjustment stops when either the horizontal or vertical size reaches its maximum or minimum value.
- The horizontal adjustment value is not displayed in the menu.

Adjusting the shape of the picture (GEOM)

The GEOM settings allow you to adjust the rotation and shape of the picture.

The  (rotation) setting is stored in memory for all input signals. All other settings are stored in memory for the current input signal.



- 1 Press the center of the control button.**
The main MENU appears on the screen.
- 2 Move the control button to highlight  GEOM and press the center of the control button again.**
The GEOMETRY menu appears on the screen.
- 3 First move the control button \downarrow/\uparrow to select the desired adjustment item. Then move the control button \leftarrow/\rightarrow to make the adjustment.**

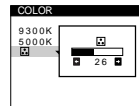
Select	To
	rotate the picture
	expand or contract the picture sides
	shift the picture sides to the left or right
	adjust the picture width at the top of the screen
	shift the picture to the left or right at the top of the screen

Adjusting the color of the picture (COLOR)

The COLOR settings allow you to adjust the picture's color temperature by changing the color level of the white color field. Colors appear reddish if the temperature is low, and bluish if the temperature is high. This adjustment is useful for matching the monitor's colors to a printed picture's colors.

This setting is stored in memory for all input signals.

- 1 Press the center of the control button.**
The main MENU appears on the screen.
- 2 Move the control button to highlight  COLOR and press the center of the control button again.**
The COLOR menu appears on the screen.
- 3 Move the control button \downarrow/\uparrow to select a color temperature.**
The preset color temperatures are 5000K and 9300K. Since the default setting is 9300K, the whites will change from a bluish hue to a reddish hue as the temperature is lowered to 5000K.
- 4 If necessary, fine tune the color temperature.**
You can select your own color temperature between 9300K and 5000K.
First move the control button \downarrow/\uparrow to select . Then move the control button \leftarrow/\rightarrow to adjust the color temperature.






Adjusting the convergence (CONV)

The CONV settings allow you to adjust the quality of the picture by controlling the convergence. The convergence refers to the alignment of the red, green, and blue color signals.


If you see red or blue shadows around letters or lines, adjust the convergence.

These settings are stored in memory for all input signals.

- 1 Press the center of the control button.**
The main MENU appears on the screen.
- 2 Move the control button to highlight  CONV and press the center of the control button again.**
The CONVERGENCE menu appears on the screen.
- 3 First move the control button \downarrow/\uparrow to select  for horizontal adjustment, or  for vertical adjustment. Then move the control button \leftarrow/\rightarrow to adjust the convergence.**


Additional settings (OPTION)

You can manually degauss (demagnetize) the monitor, adjust the moire cancellation level, change the menu position, and lock the controls.

- 1 Press the center of the control button.**
The main MENU appears on the screen.
- 2 Move the control button to highlight  OPTION and press the center of the control button again.**
The OPTION menu appears on the screen.
- 3 Move the control button \downarrow/\uparrow to select the desired adjustment item.**
Adjust the selected item according to the following instructions.

Degaussing the screen


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

To manually degauss the monitor, first move the control button \downarrow/\uparrow to select  (DEGAUSS). Then move the control button \rightarrow .

The screen is degaussed for about 5 seconds. If a second degauss cycle is needed, allow a minimum interval of 20 minutes for the best result.

Adjusting the moire*

If elliptical or wavy patterns appear on the screen, adjust the moire cancellation level.

To adjust the amount of moire cancellation, first move the control button \downarrow/\uparrow to select  (MOIRE ADJUST). Then move the control button \leftarrow/\rightarrow until the moire effect is at a minimum.



* Moire is a type of natural interference which produces soft, wavy lines on your screen. It may appear due to interference between the pattern of the picture on the screen and the phosphor pitch pattern of the monitor.

Example of moire







Changing the menu's position


Change the menu's position if it is blocking an image on the screen.

To change the menu's on-screen position, first move the control button \downarrow/\uparrow to select  (OSD H POSITION) for horizontal adjustment, or  (OSD V POSITION) for vertical adjustment. Then move the control button \leftarrow/\rightarrow to shift the on-screen menu.

Locking the controls

To protect adjustment data by locking the controls, first move the control button \downarrow/\uparrow to select  (CONTROL LOCK). Then move the control button \rightarrow , to select ON. Only the  (power) switch, EXIT, and  (CONTROL LOCK) of the OPTION menu will operate. If any other items are selected, the  mark appears on the screen.

To cancel the control lock

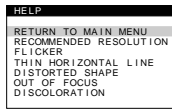
Repeat the procedure above and set  (CONTROL LOCK) to OFF.

Helpful hints and information (HELP)

The HELP menu contains helpful hints and information about this monitor. If your monitor is displaying symptoms that match those listed in the HELP menu, follow the on-screen instructions to resolve the problem. If the symptoms do not match those listed in the HELP menu or if the problem persists, see "Trouble symptoms and remedies" on page 14.

- 1 Press the center of the control button.
The main MENU appears on the screen.

- 2 Move the control button to highlight **HELP** and press the center of the control button again.
The following HELP menu appears on the screen.

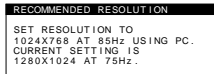


- 3 Move the control button \downarrow/\uparrow to select a HELP menu item and press the center of the control button again.

Instructions or information to resolve the problem appears on the screen. An explanation of each menu item is given below.

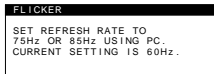
RECOMMENDED RESOLUTION

If the picture does not fill the screen to the edges or if the picture appears too large for the screen, adjust the resolution to the figures shown in the menu using your computer. If the input signal matches one of this monitor's factory preset modes, the resolution and refresh rate of the current input signal are displayed.



FLICKER

If the picture is flickering, adjust the refresh rate to figures shown in the menu. If the input signal matches one of this monitor's factory preset modes, the refresh rate of the current input signal is displayed.



THIN HORIZONTAL LINE

The lines that appear on your screen are damper wires. See page 13 for more information about the damper wires.

DISTORTED SHAPE

If the shape of the picture on the screen seems distorted, try adjusting the picture's geometry. Move the control button \rightarrow to jump directly to the GEOMETRY menu.

OUT OF FOCUS

The picture may seem to be out of focus when the red and blue color signals are not aligned properly, causing red or blue shadows to appear around letters and lines. Try adjusting the picture's convergence to make the shadows disappear. Move the control button \rightarrow to jump directly to the CONVERGENCE menu. When the CONVERGENCE menu is displayed, the contrast, brightness and moire adjustment settings are automatically reset for all input signals.

DISCOLORATION

If the picture's color appears abnormal in certain areas of the screen, first check for any loose signal cables. After you have checked the cables, try degaussing (demagnetizing) the screen manually. Move the control button \rightarrow to jump directly to the OPTION menu, then select \curvearrowright (DEGAUSS).

Resetting the adjustments

This monitor has the following three reset methods. Use the RESET button to reset the adjustments.

RESET



Resetting a single adjustment item

Use the control button to select the adjustment item you want to reset, and press the RESET button.

Resetting all of the adjustment data for the current input signal

Press the RESET button when no menu is displayed on the screen. Note that the following items are not reset by this method:

- on-screen menu language (page 7)
- on-screen menu position (page 11)
- control lock (page 11)

Resetting all of the adjustment data for all input signals

Press and hold the RESET button for more than two seconds.

Note

The RESET button does not function when ON (CONTROL LOCK) is set to ON.

Technical Features

Preset and user modes

When the monitor receives an input signal, it automatically matches the signal to one of the factory preset modes stored in the monitor's memory to provide a high quality picture at the center of the screen. (See Appendix for a list of the factory preset modes.) For input signals that do not match one of the factory preset modes, the digital Multiscan technology of this monitor ensures that a clear picture appears on the screen for any timing in the monitor's frequency range (horizontal: 30 – 85 kHz, vertical: 48 – 120 Hz). If the picture is adjusted, the adjustment data is stored as a user mode and automatically recalled whenever the same input signal is received.

Note for Windows users

For Windows users, check your video board manual or the utility program which comes with your graphic board and select the highest available refresh rate to maximize monitor performance.

Power saving function

This monitor meets the power-saving guidelines set by VESA, ENERGY STAR, and NUTEK. If the monitor is connected to a computer or video graphics board that is DPMS (Display Power Management Signaling) compliant, the monitor will automatically reduce power consumption in three stages as shown below.

Power mode	Power consumption	(power) indicator
normal operation	≤ 120 W	green
1 standby	≤ 15 W	green and orange alternate
2 suspend (sleep)*	≤ 15 W	green and orange alternate
3 active off** (deep sleep)*	≤ 3 W	orange
power off	0 W	off

* "Sleep" and "deep sleep" are power saving modes defined by the Environmental Protection Agency.

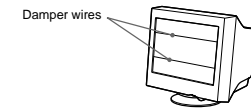
** When your computer is in a power saving mode, MONITOR IS IN POWER SAVE MODE appears on the screen if you press any button on the monitor. After a few seconds, the monitor enters the power saving mode again.

Troubleshooting

Before contacting technical support, refer to this section.

If thin lines appear on your screen (damper wires)

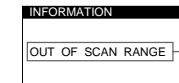
The lines you are experiencing on your screen are normal for the Trinitron monitor and are not a malfunction. These are shadows from the damper wires used to stabilize the aperture grille and are most noticeable when the screen's background is light (usually white). The aperture grille is the essential element that makes a Trinitron picture tube unique by allowing more light to reach the screen, resulting in a brighter, more detailed picture.



On-screen messages

If no picture appears on the screen, one of the following messages appears on the screen. To solve the problem, see "Trouble symptoms and remedies" on page 14.

GB



Input signal condition

The input signal condition

OUT OF SCAN RANGE

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

NO INPUT SIGNAL






indicates that no signal is input.

MONITOR IS IN POWER SAVE MODE

indicates that the computer is in power saving mode. This message is displayed only when your computer is in a power saving mode and you press any one of the buttons on the monitor.

Trouble symptoms and remedies

If the problem is caused by the connected computer or other equipment, please refer to the connected equipment's instruction manual. Use the self-diagnosis function (page 16) if the following recommendations do not resolve the problem.

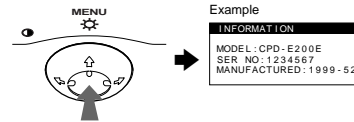
Symptom	Check these items
No picture	
If the  (power) indicator is not lit	<ul style="list-style-type: none"> Check that the power cord is properly connected. Check that the  (power) switch is in the "on" position.
If the NO INPUT SIGNAL message appears on the screen, or if the  (power) indicator is either orange or alternating between green and orange	<ul style="list-style-type: none"> Check that the video signal cable is properly connected and all plugs are firmly seated in their sockets (page 6). Check that the HD15 video input connector's pins are not bent or pushed in. <p>■ Problems caused by the connected computer or other equipment</p> <ul style="list-style-type: none"> Check that the computer's power is "on." Check that the graphic board is completely seated in the proper bus slot.
If the MONITOR IS IN POWER SAVE MODE message appeared on the screen, or if the  (power) indicator is either orange or alternating between green and orange	<p>■ Problems caused by the connected computer or other equipment</p> <ul style="list-style-type: none"> The computer is in power saving mode. Try pressing any key on the computer keyboard. Check that the computer's power is "on." Check that the graphic board is completely seated in the proper bus slot.
If the OUT OF SCAN RANGE message appears on the screen	<p>■ Problems caused by the connected computer or other equipment</p> <ul style="list-style-type: none"> Check that the video frequency range is within that specified for the monitor. If you replaced an old monitor with this monitor, reconnect the old monitor and adjust the frequency range to the following. Horizontal: 30 – 85 kHz Vertical: 48 – 120 Hz
If no message is displayed and the  (power) indicator is green or flashing orange	<ul style="list-style-type: none"> Use the Self-diagnosis function (page 16).
If using Windows 95/98	<ul style="list-style-type: none"> If you replaced an old monitor with this monitor, reconnect the old monitor and do the following. Install the Windows Monitor Information Disk (page 7) and select this monitor ("CPD-E200E") from among the Sony monitors in the Windows 95/98 monitor selection screen.
If using a Macintosh system	<ul style="list-style-type: none"> Check that the Macintosh adapter (not supplied) and the video signal cable are properly connected (page 6).
Picture flickers, bounces, oscillates, or is scrambled	<ul style="list-style-type: none"> Isolate and eliminate any potential sources of electric or magnetic fields such as other monitors, laser printers, electric fans, fluorescent lighting, or televisions. Move the monitor away from power lines or place a magnetic shield near the monitor. Try plugging the monitor into a different AC outlet, preferably on a different circuit. Try turning the monitor 90° to the left or right. <p>■ Problems caused by the connected computer or other equipment</p> <ul style="list-style-type: none"> Check your graphics board manual for the proper monitor setting. Confirm that the graphics mode (VESA, Macintosh 16" Color, etc.) and the frequency of the input signal are supported by this monitor (Appendix). Even if the frequency is within the proper range, some video boards may have a sync pulse that is too narrow for the monitor to sync correctly. Adjust the computer's refresh rate (vertical frequency) to obtain the best possible picture.
Picture is fuzzy	<ul style="list-style-type: none"> Adjust the brightness and contrast (page 9). Degauss the monitor* (page 11). Select MOIRE ADJUST and adjust the moire cancellation effect (page 11).

Symptom	Check these items
Picture is ghosting	<ul style="list-style-type: none"> Eliminate the use of video cable extensions and/or video switch boxes. Check that all plugs are firmly seated in their sockets.
Picture is not centered or sized properly	<ul style="list-style-type: none"> Adjust the size (page 9) or centering (page 9). Note that some video modes do not fill the screen to the edges.
Edges of the image are curved	<ul style="list-style-type: none"> Adjust the geometry (page 10).
Wavy or elliptical pattern (moire) is visible	<ul style="list-style-type: none"> Select MOIRE ADJUST and adjust the moire cancellation effect (page 11). <p>■ Problems caused by the connected computer or other equipment</p> <ul style="list-style-type: none"> Change your desktop pattern.
Color is not uniform	<ul style="list-style-type: none"> Degauss the monitor* (page 11). If you place equipment that generates a magnetic field, such as a speaker, near the monitor, or if you change the direction the monitor faces, color may lose uniformity.
White does not look white	<ul style="list-style-type: none"> Adjust the color temperature (page 10).
Letters and lines show red or blue shadows at the edges	<ul style="list-style-type: none"> Adjust the convergence (page 10).
Monitor buttons do not operate	<ul style="list-style-type: none"> If the control lock is set to ON, set it to OFF (page 11).
A hum is heard right after the power is turned on	<ul style="list-style-type: none"> This is the sound of the auto-degauss cycle. When the power is turned on, the monitor is automatically degaussed for five seconds.

* If a second degauss cycle is needed, allow a minimum interval of 20 minutes for the best result. A humming noise may be heard, but this is not a malfunction.

Displaying this monitor's name, serial number, and date of manufacture.

While the monitor is receiving a video signal, press and hold the center of the control button for more than five seconds to display this monitor's information box.



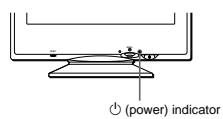
If the problem persists, call your authorized Sony dealer and give the following information.

- Model name: CPD-E200E
- Serial number
- Name and specifications of your computer and graphics board.

GB

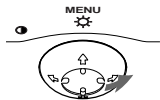
Self-diagnosis function

This monitor is equipped with a self-diagnosis function. If there is a problem with your monitor or computer, the screen will go blank and the ⏻ (power) indicator will either light up green or flash orange. If the ⏻ (power) indicator is lit in orange, the computer is in power saving mode. Try pressing any key on the keyboard.



If the ⏻ (power) indicator is green

- 1 Disconnect the video input cable or turn off the connected computer.
- 2 Press the ⏻ (power) button twice to turn the monitor off and then on.
- 3 Move the control button → for 2 seconds before the monitor enters power saving mode.



If all four color bars appear (white, red, green, blue), the monitor is working properly. Reconnect the video input cable and check the condition of your computer.

If the color bars do not appear, there is a potential monitor failure. Inform your authorized Sony dealer of the monitor's condition.

If the ⏻ (power) indicator is flashing orange

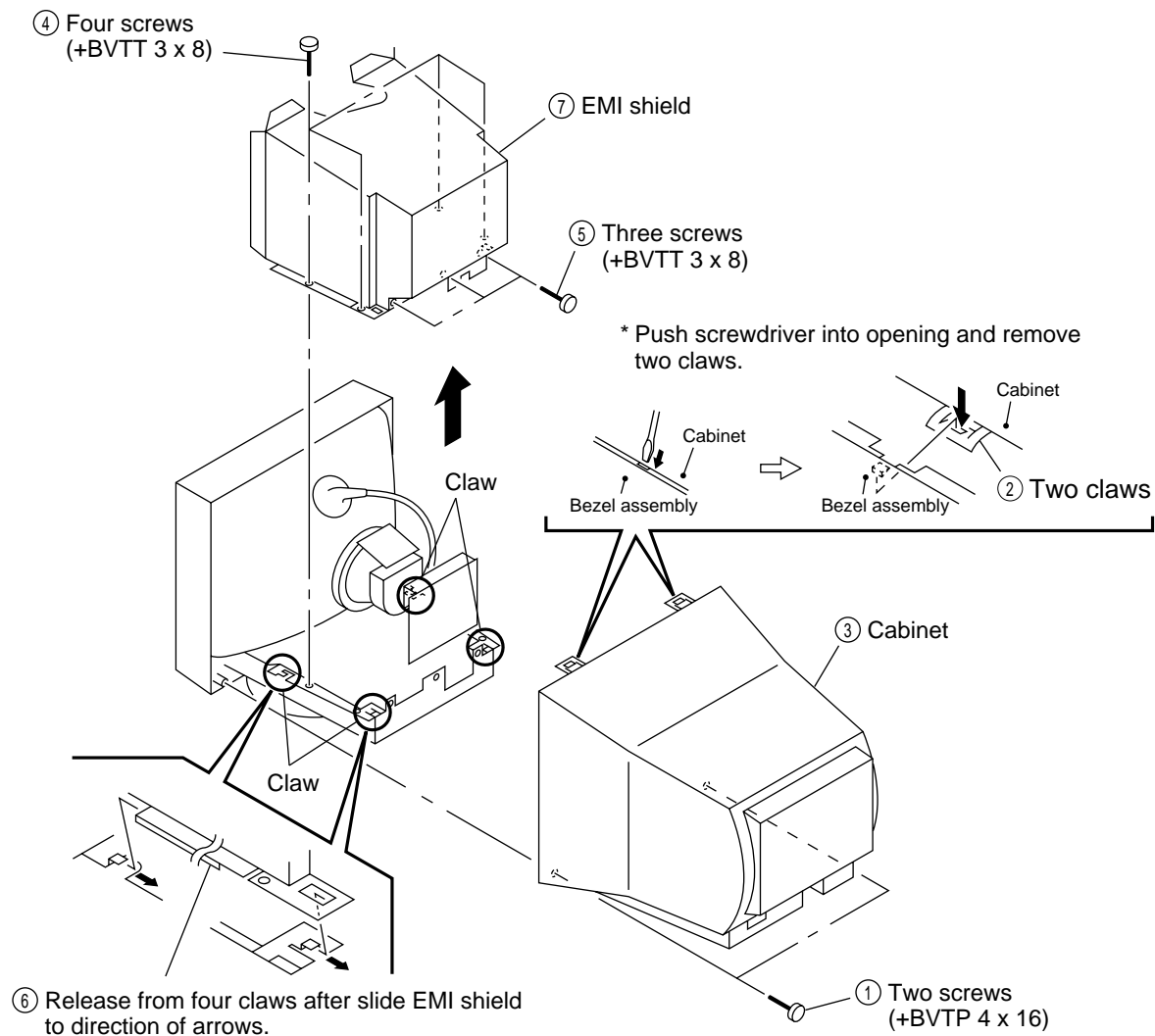
Press the ⏻ (power) button twice to turn the monitor off and then on.

If the ⏻ (power) indicator lights up green, the monitor is working properly.

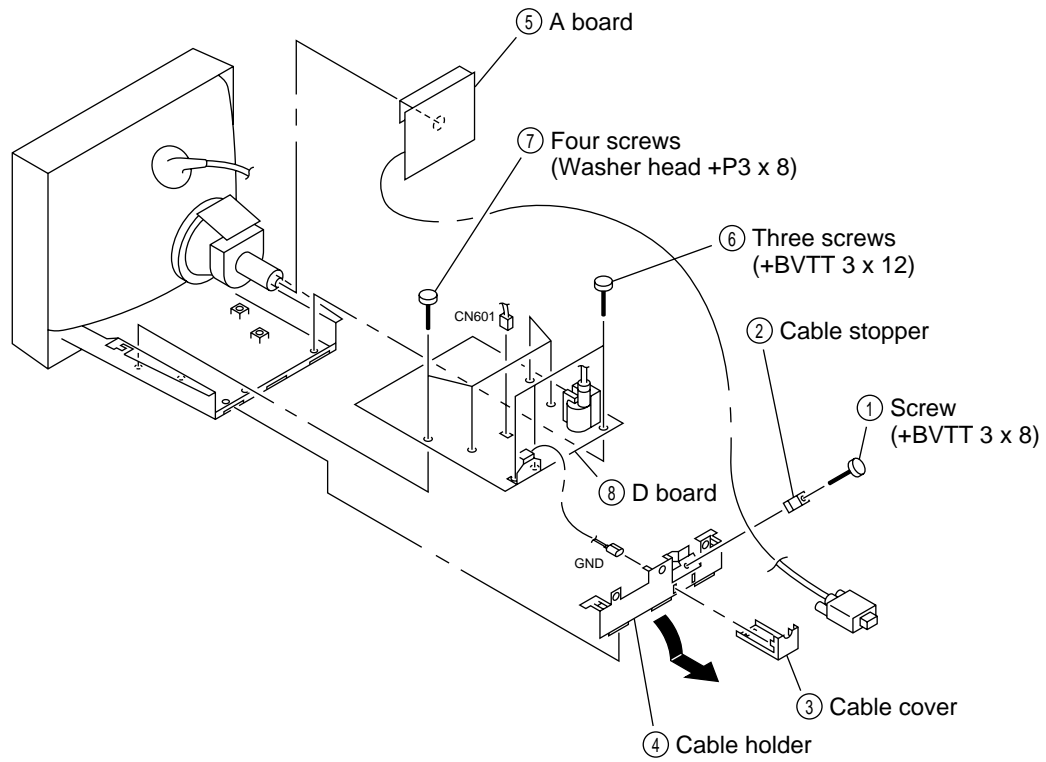
If the ⏻ (power) indicator is still flashing, there is a potential monitor failure. Count the number of seconds between orange flashes of the ⏻ (power) indicator and inform your authorized Sony dealer of the monitor's condition. Be sure to note the model name and serial number of your monitor. Also note the make and model of your computer and video board.

SECTION 2 DISASSEMBLY

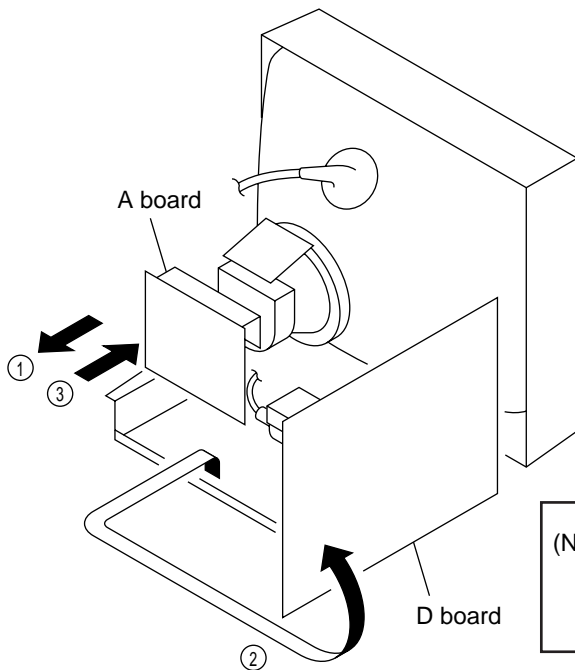
2-1. CABINET, EMI SHIELD REMOVAL



2-2. A AND D BOARDS REMOVAL

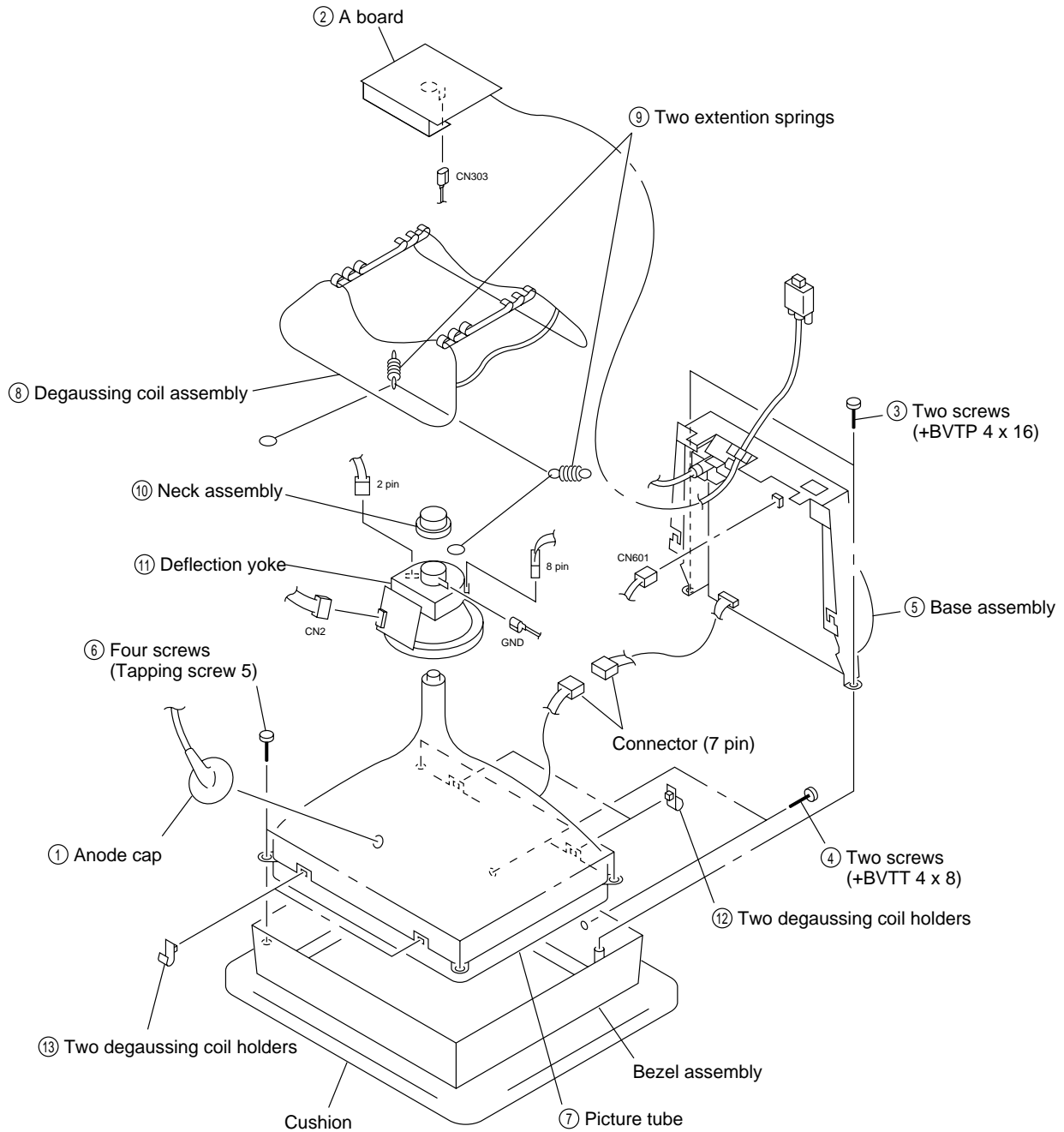


2-3. SERVICE POSITION



(Note) The electric potential of heat sink of IC401 is not GND. So please do not touch it absolutely to the base chassis and etc., which make an ultimate cause of the bad movement or break.

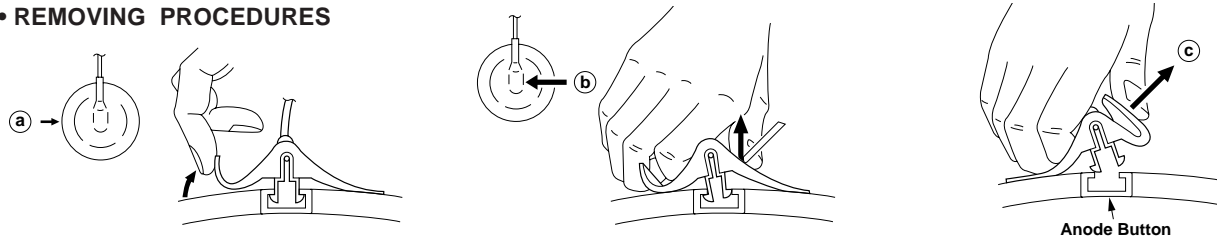
2-4. PICTURE TUBE REMOVAL



• 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.

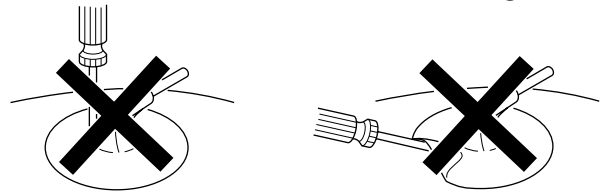
• REMOVING PROCEDURES



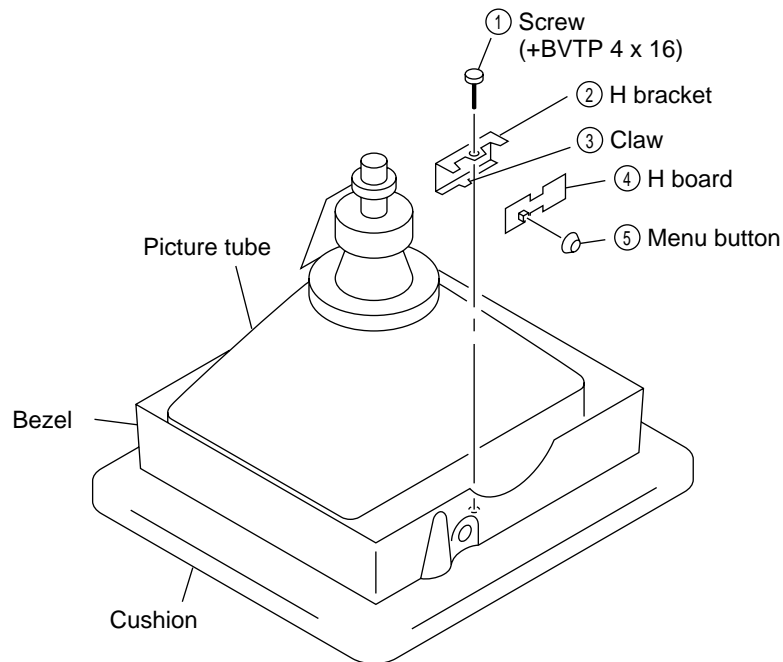
- ① Turn up one side of the rubber cap in the direction indicated by the arrow (a).
- ② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow (b).
- ③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber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

• HOW TO HANDLE AN ANODE-CAP

- ① Don't scratch the surface of anode-caps with sharp material!
- ② Don't press the rubber hard not to damage 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 hardy! The shatter-hook terminal will stick out or damage the rubber.



2-5. H BOARD REMOVAL



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

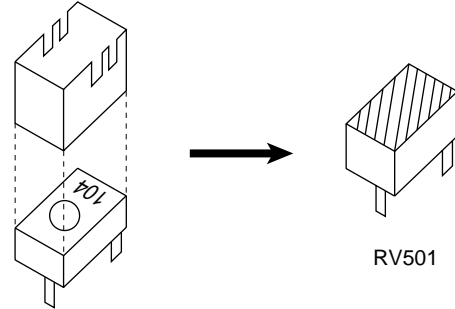
	Part Replaced (▣)
HV Regulator Circuit Check	D board IC501, C532, C534, C539, C553, C554, C555, C556, C558, C561, R541, R542, R544, R564, R567, R568, RV501, T501 (FBT)
HV Protector Circuit Check	D board IC607, IC901, D515, D517, C540, C542, C544, R510, R543 R547, R549, R552, R595, T501 (FBT)
Beam Current Protector Circuit Check	D board IC605, IC607, IC901, C535, C541, R545, R546, R548, R550, R596, R934, T501 (FBT)

* Confirm one minute later turning on the power.

• HV Regulator Check

- 1) Input cross hatch signal (white lines on black).
: fH = 69.0kHz
- 2) CONT maximum and BRT center.
- 3) Cut off Screen VR (G2).
- 4) Input voltage : 120 ± 2 VAC
- 5) Confirm that the voltage is within the voltage range shown below.
Standard voltage : $27.0\text{kV} \pm 0.2\text{kV}$ DC
- 6) When replacing components identified by ▣, make sure to recheck the High Voltage.
- 7) Verify the High Voltage as shown above ($27.0 \text{ kV} \pm 0.2\text{kV}$) is within specification. If not, set H. SIZE data at minimum (-127) and then adjust RV501 on "D" Board.

- 8) After adjusting the High Voltage within specification, put the RV cover on RV501 as shown below and apply sufficient amount of RTV around RV501.



• HV Protector Circuit Check

Using an external DC Power Supply, apply the voltage shown below between cathode of D517 on D board and GND, and confirm that the HV HOLD DOWN circuite works. (TV Raster disappears)

Standard voltage : 35.80 ± 0.01 V DC

Check Condition

- Input voltage : 120 ± 2 V AC
- Input signal : White cross hatch at 69.0kHz
- Beam control : CONT : min, BRT : min

• Beam Current Protector Check

An ammeter in series between FBT pin ⑩ on D board and GND, then, decrease gradually the resistance of the variable resistor from maximum to minimum, and confirm that the Beam Current Protector Circuite works (TV Raster disappears). The current must be within the range shown below.

• Standard current : $1.55^{+0.00}_{-0.10}$ mA

Check Condition

- Input voltage : 120 ± 2 V AC
- Input signal : White cross hatch at 31.0kHz
- Beam control : CONT : min, BRT : min

• B+ Voltage Check

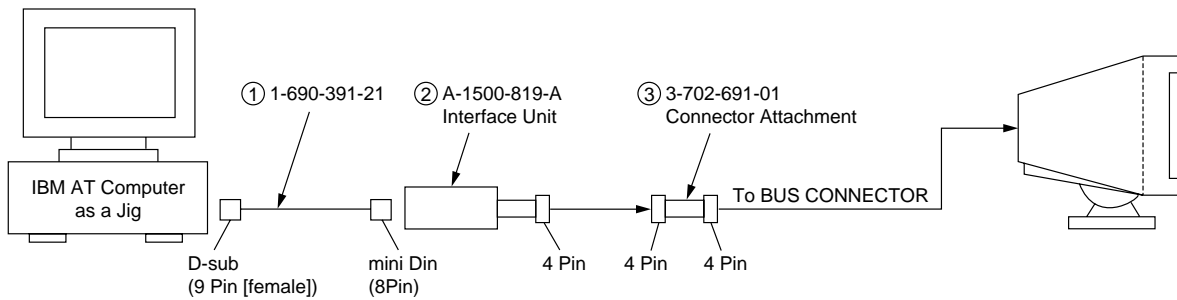
Standard voltage : 179.0 ± 3.0 V DC

Check Condition

- Input voltage : 120 ± 2 V AC
Note : Use NF power supply or make sure that distortion factor is 3% or less.
- Input signal : White cross hatch at 69.0 kHz
- Beam control : CONT : max, BRT : center

SECTION 4 ADJUSTMENTS

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.

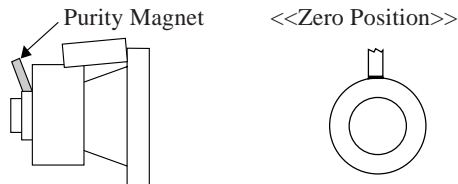
• Landing Rough Adjustment

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

Note: "TILT" shall be set at 0

• Landing Fine Adjustment

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

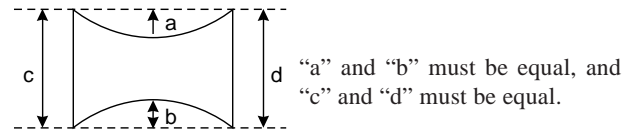
L/D control specification

± 5	± 7	± 5
± 5	± 7	± 5
± 5	± 7	± 5

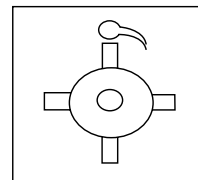
6. Adjust the DY position and purity, and the DY tilt.
7. Fasten DY with screw.

Note: Torque 22 ±2kgcm (2.2 ± 0.2 Nm)

8. Adjust each top and bottom pins by two wedges and then not swing DY neck right and left. Adjust H. Trap to become horizontal trapezoid(c = d).
(When fixing DY with wedges, insert wedges completely so that the DY does not shake.)



<How to drive in wedges>



9. If the L/D is not within the standards adjust purity magnet and in front and behind of DY to satisfy L/D adjustment standards. If the corner is not within the standards, adjust disc magnet to satisfy L/D adjustment standards.

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.

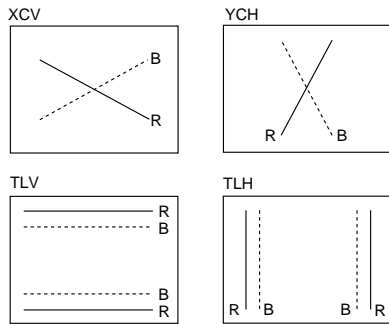
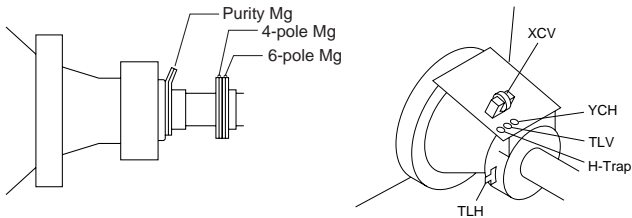
• **Convergence Rough Adjustment**

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.

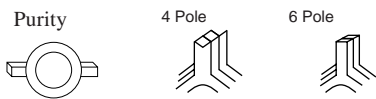
• **Convergence Adjustment**

(1) Static convergence

1. Receive the crosshatch of R and B.
 2. Adjust H. STAT and V. STAT by 4 pole magnet.
 3. Recieve the white crosshatch signal.
 4. Adjust HMC and VMC by 6 pole magnet.
 5. Recieve the crosshatch of R and B.
- Note: Adjust H. STAT and V. STAT in the beggining by 4 pole magnet not adjust them by register immediately.
6. Insert to TLH correction board and correct H. TILT.
 7. Correct XCV by XCV core.
 8. Correct V. TILT by TLV-VR.
 9. Adjust Y cross by YCH-VR.
 10. Correct to get the most suitable convergence pattern.
When necessary, adjust above mentioned from step 1 to step 9 reiterate.
 11. Paint lock TLH corection board, neck assy 4 and 6 pole magnet.



<<Neck Assy's Zero Position>>

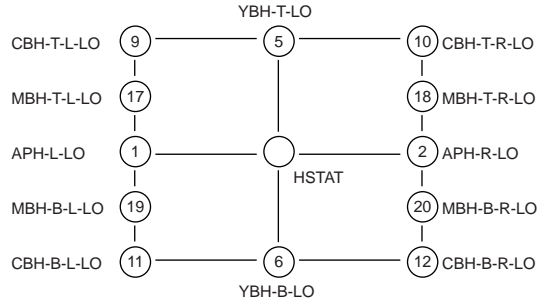


(2) Digital Convergence

Convergence (Low) Mode

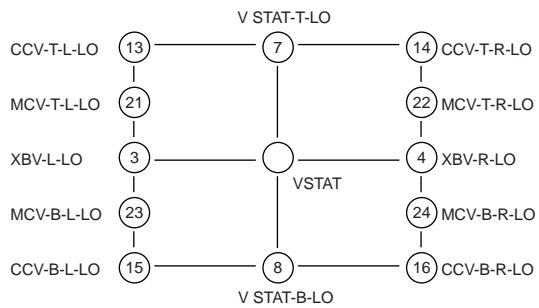
1. Adjust the H. STAT and V. STAT with "HSTAT" and "VSTAT".

A. Horizontal Convergence



Adjust each misconvergence point in sequence.

B. Vertical Convergence



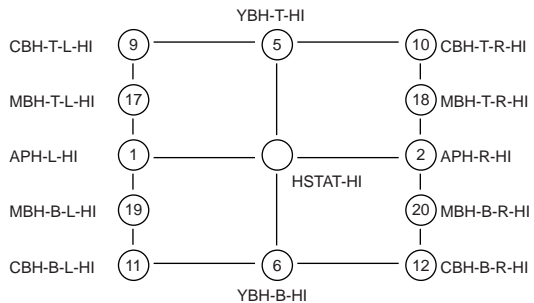
Adjust each misconvergence point in sequence.

2. Repeat the procedure of A and B so that the convergence of the entire screen is within the specification.

Convergence (Hight) Mode

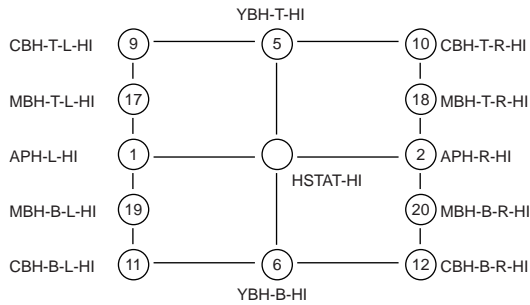
1. Adjust the H. STAT and V. STAT with "HSTAT-HI" and "VSTAT-HI".

A. Horizontal Convergence



Adjust each misconvergence point in sequence.

B. Vertical Convergence

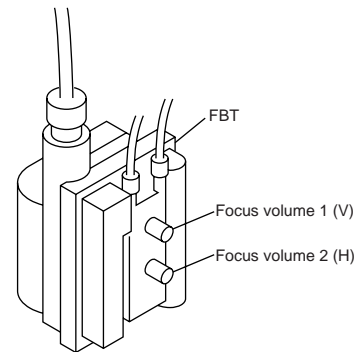


Adjust each misconvergence point in sequence.

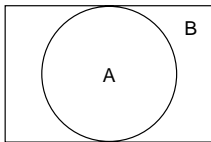
- Repeat the procedure of A and B so that the convergence of the entire screen is within the specification.

• Focus adjustment

Adjust the focus volume 1 and 2 for the optimum focus.
Standard: HMC, VMC ± 0.1 mm (In the center of screen)



• Convergence Specification

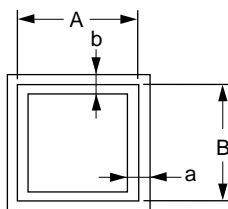


MODE	All mode
A	0.20 mm
B	0.24 mm

• White Balance Adjustment Specification

- 9300K
 $x = 0.283 \pm 0.005$
 $y = 0.298 \pm 0.005$
- 5000K
 $x = 0.346 \pm 0.005$
 $y = 0.359 \pm 0.005$

• Vertical and Horizontal Position and Size Specification



$a \leq 1.8 \text{ mm}$
 $b \leq 1.8 \text{ mm}$

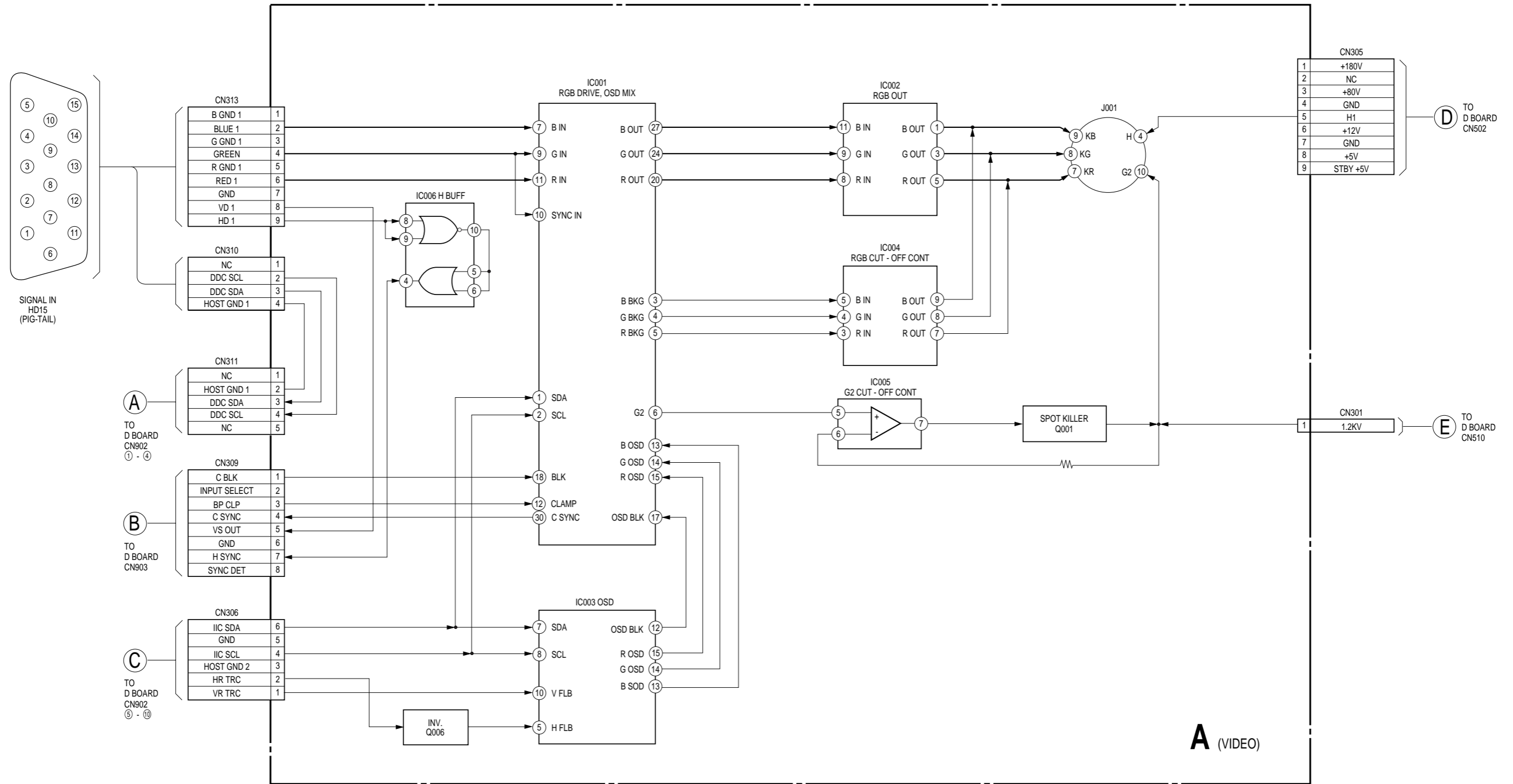
MODE	All mode
A	312 mm
B	234 mm

MEMO

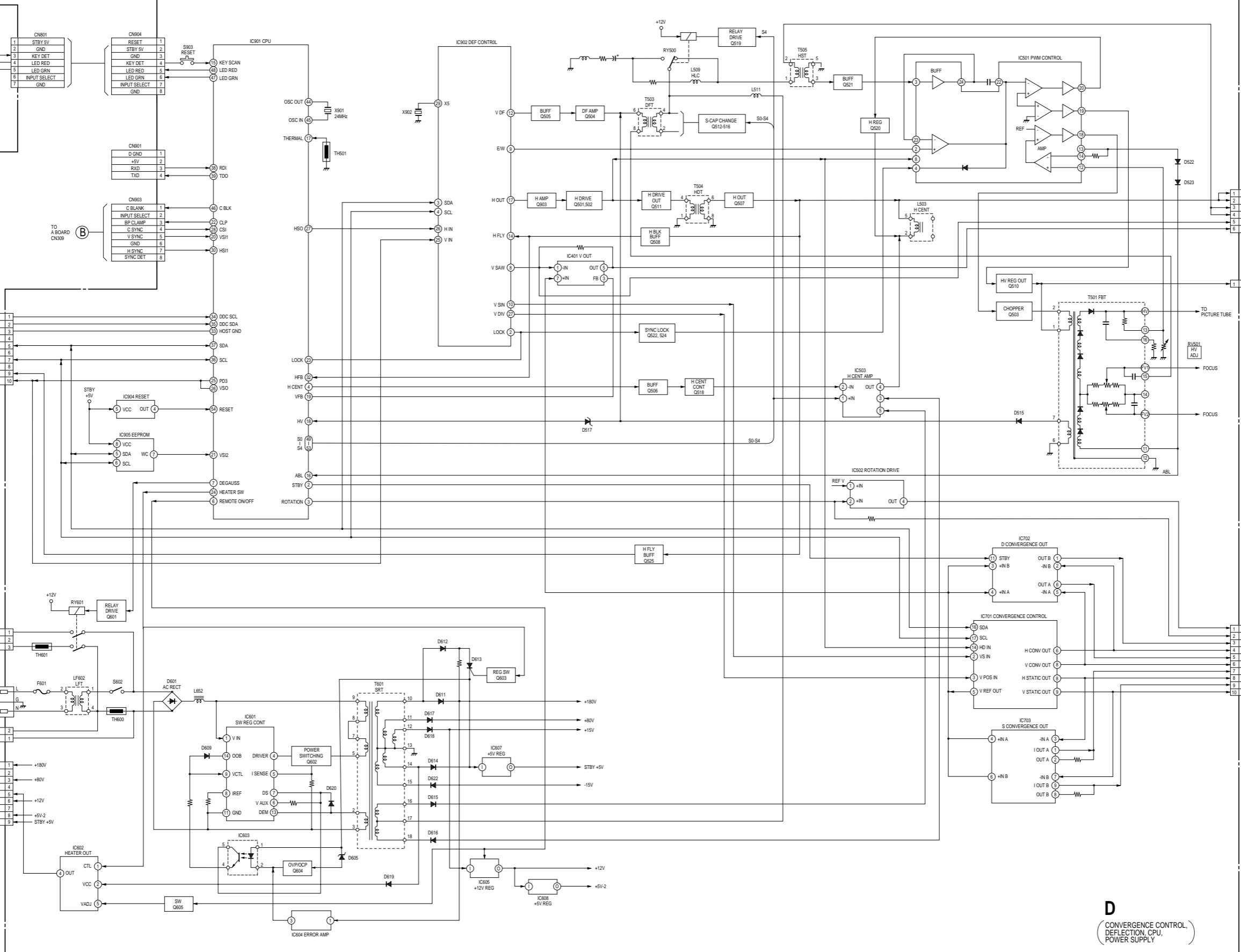
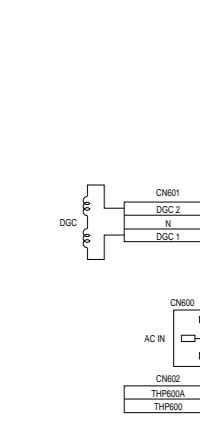
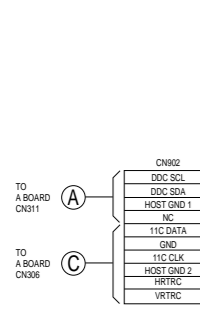
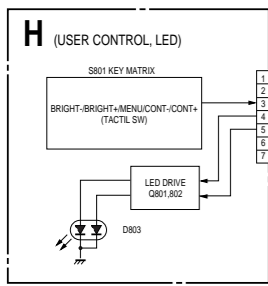
Dotted lines for writing.

SECTION 5 DIAGRAMS

5-1. BLOCK DIAGRAMS

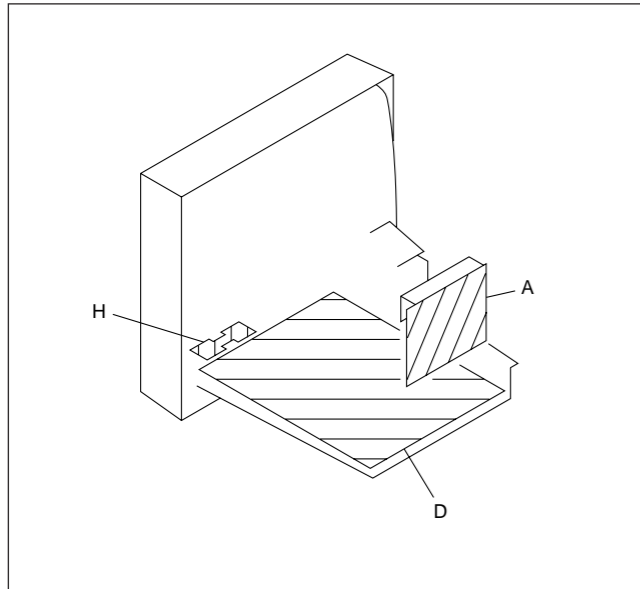


B-SS3497<J...>-BD1-24



D
 CONVERGENCE CONTROL,
 DEFLECTION CPU,
 POWER SUPPLY

5-2. CIRCUIT BOARDS LOCATION



5-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

Note:

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

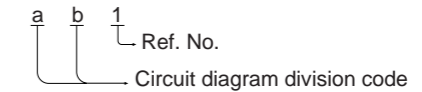
Pitch: 5 mm
Rating electrical power 1/4 W (CHIP : 1/10 W)

- 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 Ω 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.

	Part Replaced ()
HV ADJ	RV501

	Part Replaced ()
HV Regulator Circuit Check	D board IC501, C532, C534, C539, C553, C554, C555, C556, C558, C561, R541, R542, R544, R564, R567, R568, RV501, T501 (FBT)
HV Protector Circuit Check	D board IC607, IC901, D515, D517, C540, C542, C544, R510, R543, R547, R549, R552, R595, T501 (FBT)
Beam Current Protector Circuit Check	D board IC605, IC607, IC901, C535, C541, R545, R546, R548, R550, R596, R934, T501 (FBT)

- Divided circuit diagram
One sheet of D board circuit diagram is divided into four sheets, each having the code D- $\text{\textcircled{a}}$ to D- $\text{\textcircled{d}}$. For example, the destination $\text{\textcircled{ab1}}$ on the D- $\text{\textcircled{a}}$ sheet is connected to $\text{\textcircled{ab1}}$ on the D- $\text{\textcircled{b}}$ sheet.



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

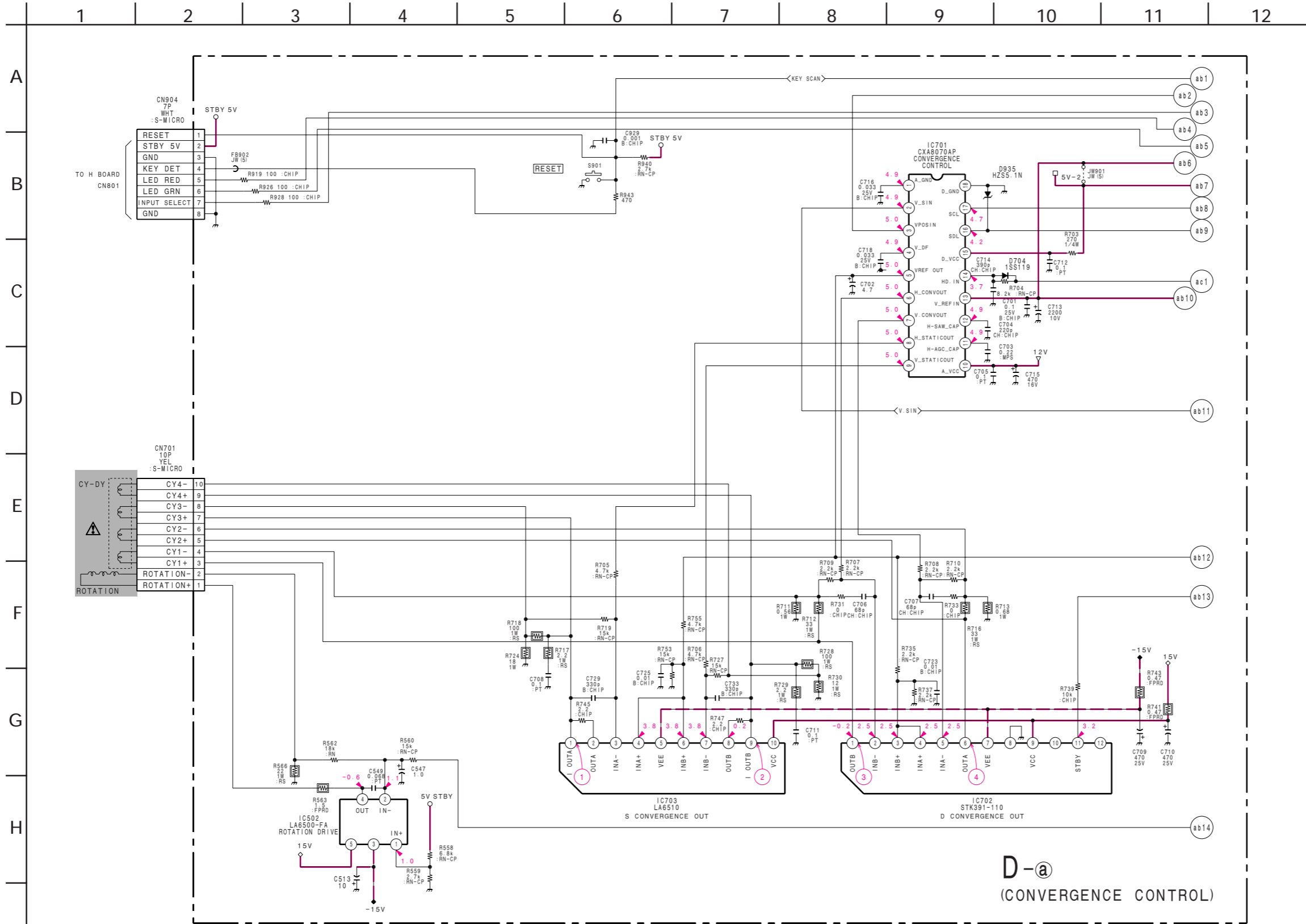
	Device	Printed symbol	Terminal name	Circuit
①	Transistor		Collector Base Emitter	
②	Transistor		Collector Base Emitter	
③	Diode		Cathode Anode	
④	Diode		Cathode Anode (NC)	
⑤	Diode		Cathode Anode (NC)	
⑥	Diode		Common Anode Cathode	
⑦	Diode		Common Anode Cathode	
⑧	Diode		Common Anode Anode	
⑨	Diode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

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

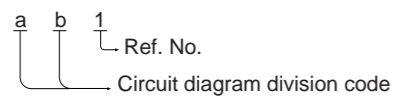
Ver.1.6

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

(1) Schematic Diagram of D (a-d) Boards



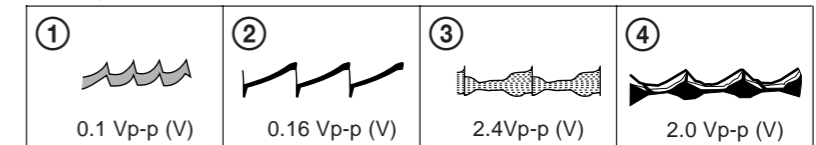
- Divided circuit diagram
One sheet of D board circuit diagram is divided into four sheets, each having the code D-ⓐ to D-ⓓ. For example, the destination (ab1) on the D-ⓐ sheet is connected to (ab1) on the D-ⓑ sheet.



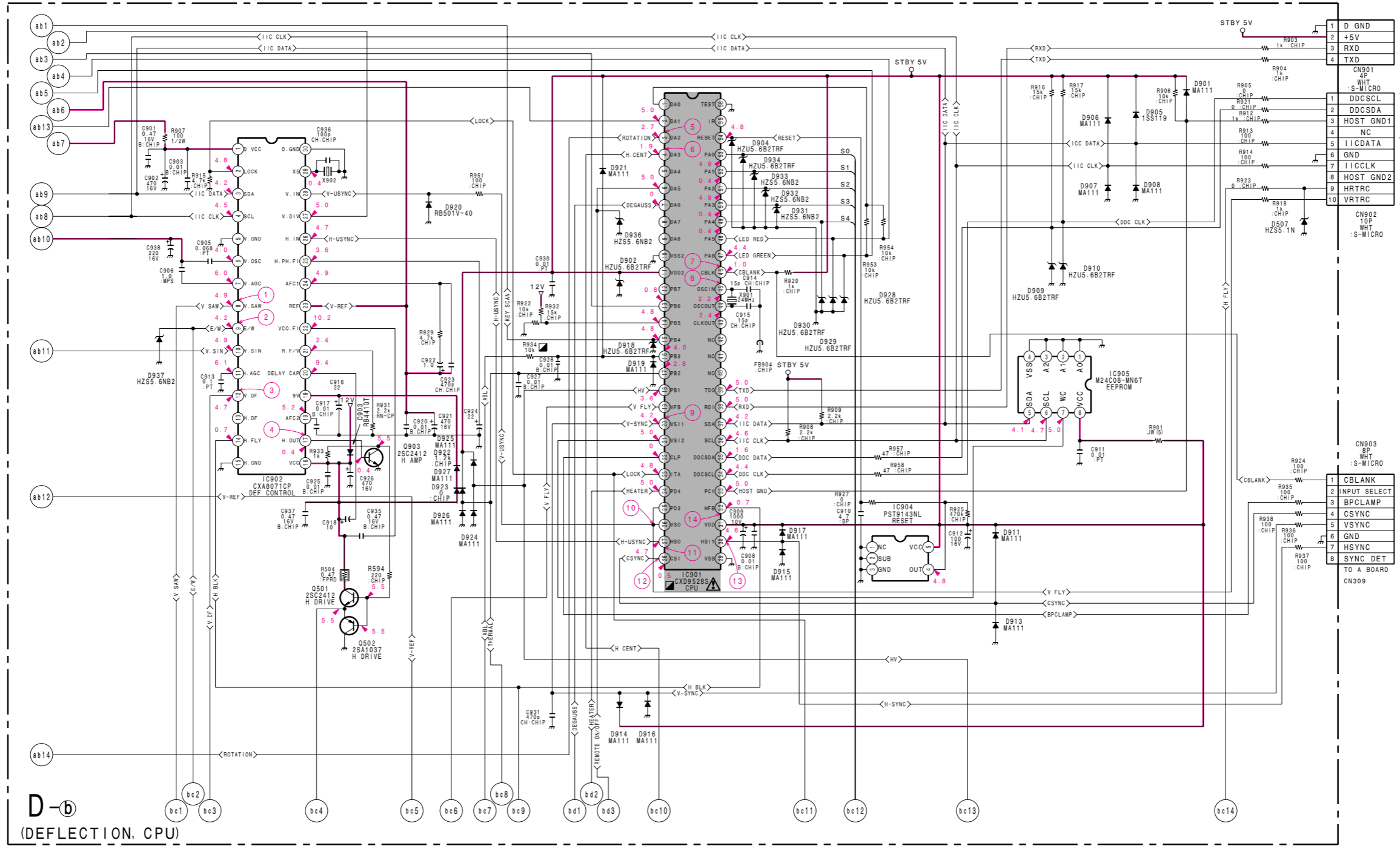
Schematic diagram

D -a board →

• D -a BOARD WAVEFORMS



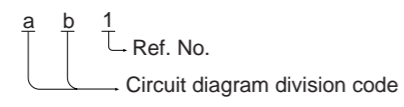
A
B
C
D
E
F
G
H



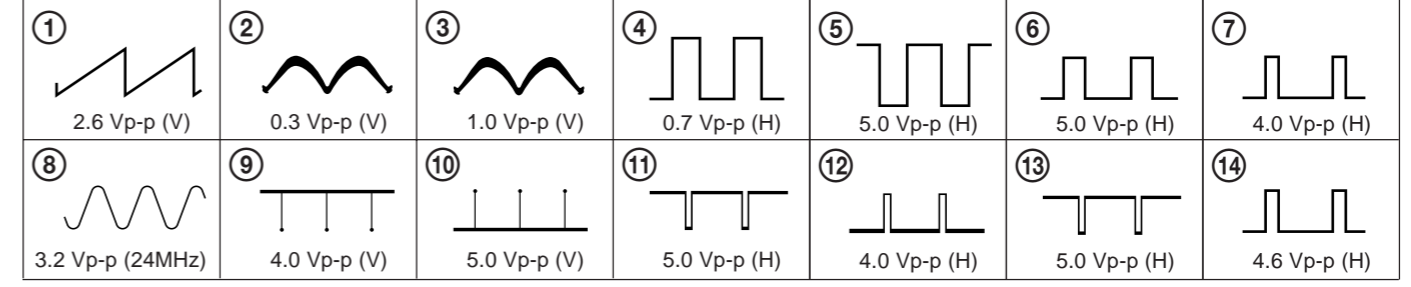
D-b
(DEFLECTION, CPU)

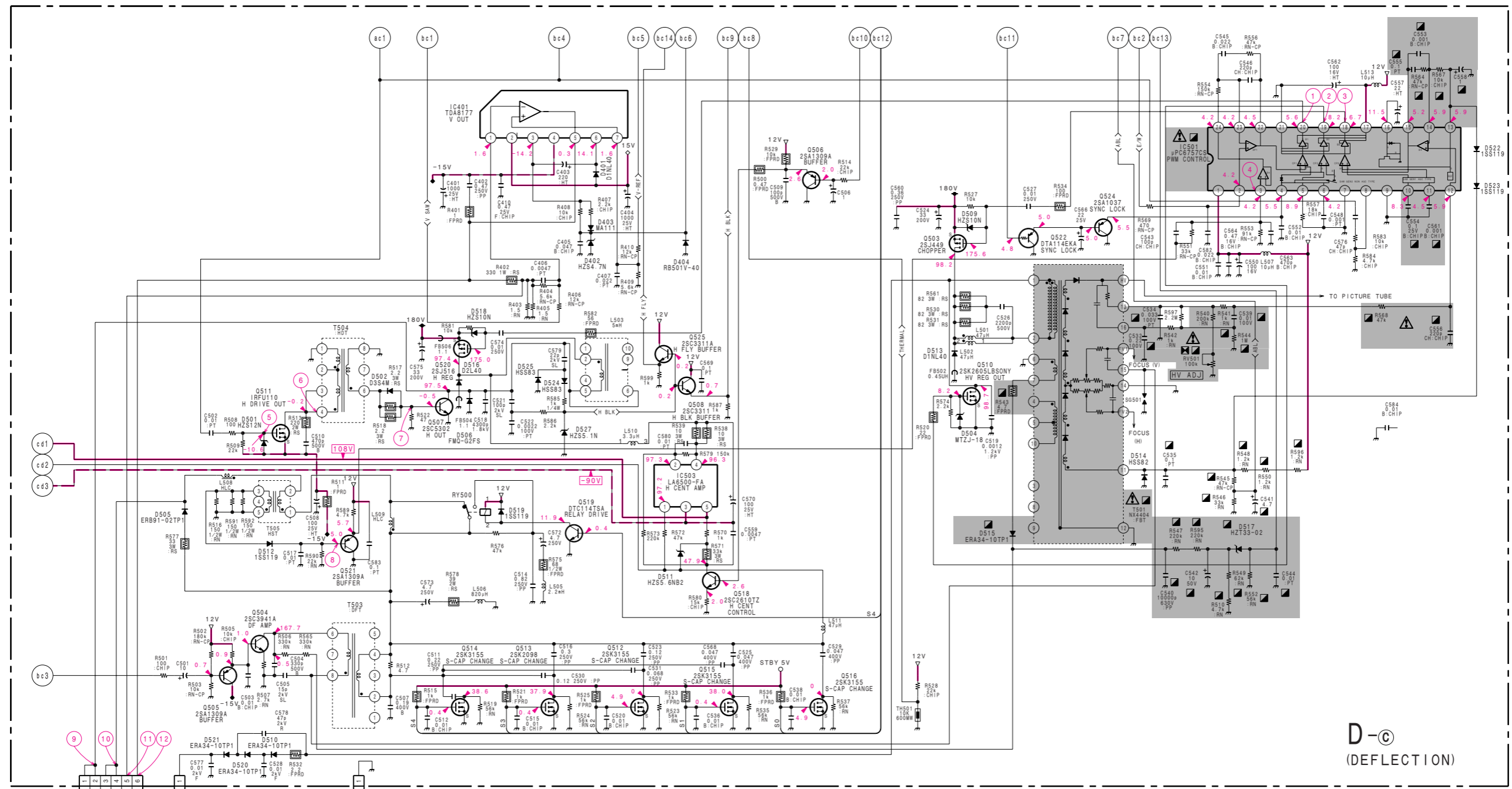
8-SS3497CJ -> D - P2 1241

• Divided circuit diagram
One sheet of D board circuit diagram is divided into four sheets, each having the code D-ⓐ to D-ⓓ. For example, the destination (ab1) on the D-ⓐ sheet is connected to (ab1) on the D-ⓓ sheet.



• D - ⓐ BOARD WAVEFORMS

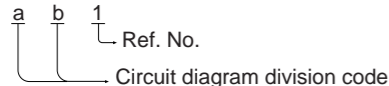




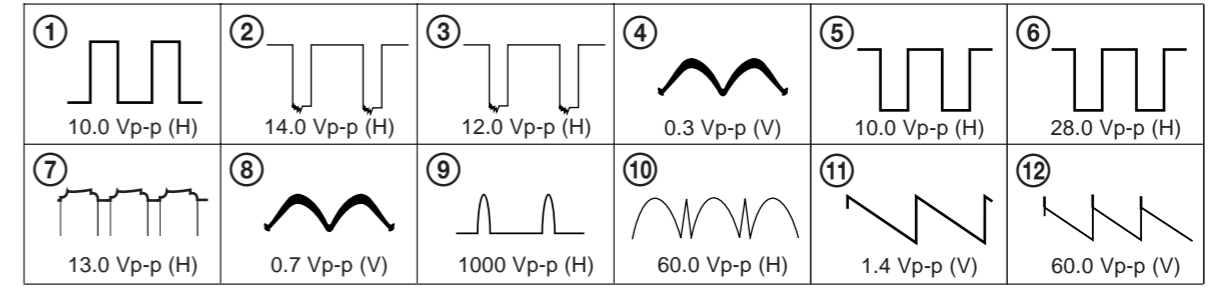
D-C
(DEFLECTION)

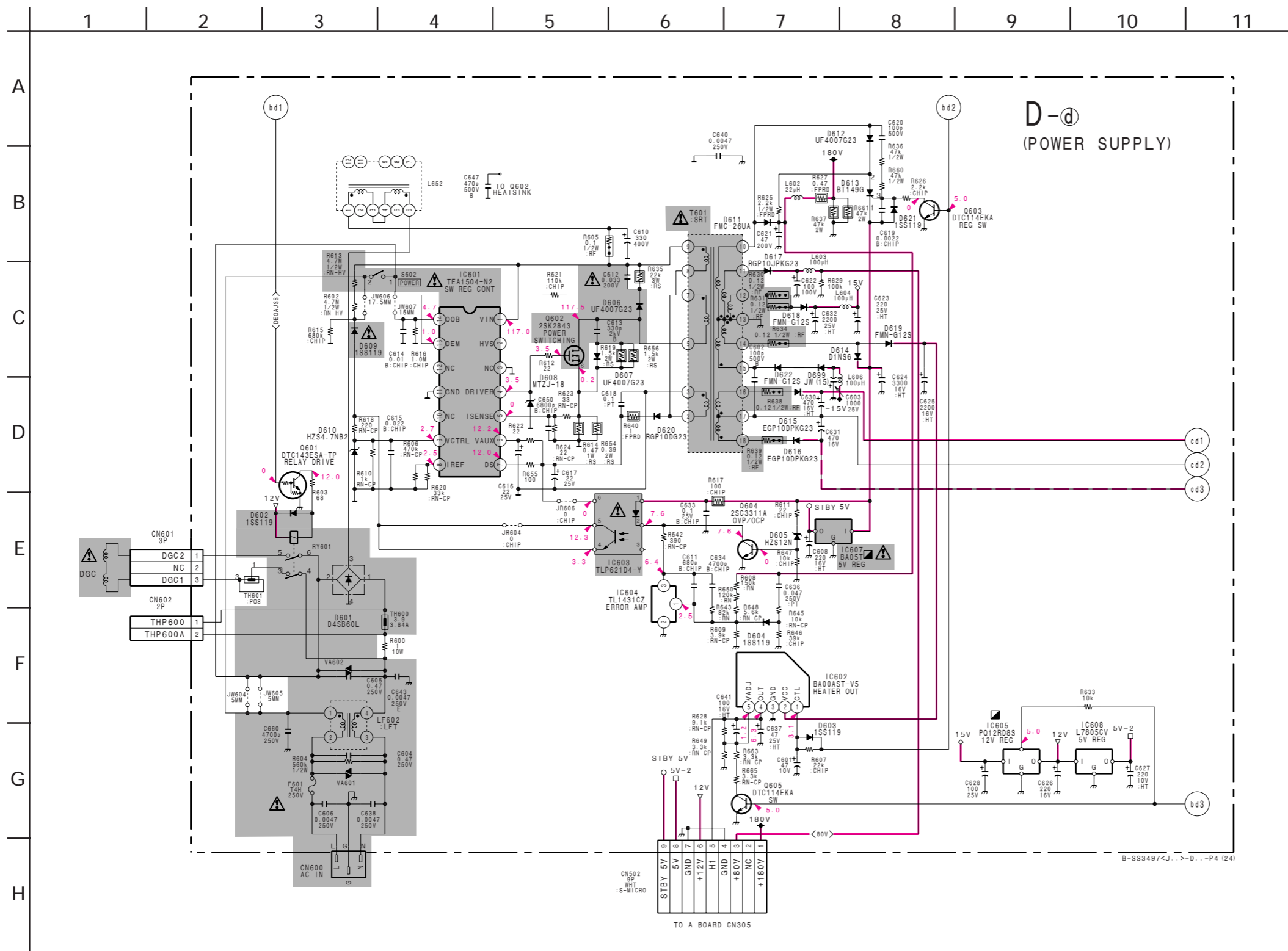
B-SS3497<J...>-D...-P3 (24)

• Divided circuit diagram
One sheet of D board circuit diagram is divided into four sheets, each having the code D-ⓐ to D-ⓓ. For example, the destination (ab1) on the D-ⓐ sheet is connected to (ab1) on the D-ⓑ sheet.

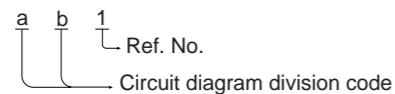


• D-C BOARD WAVEFORMS





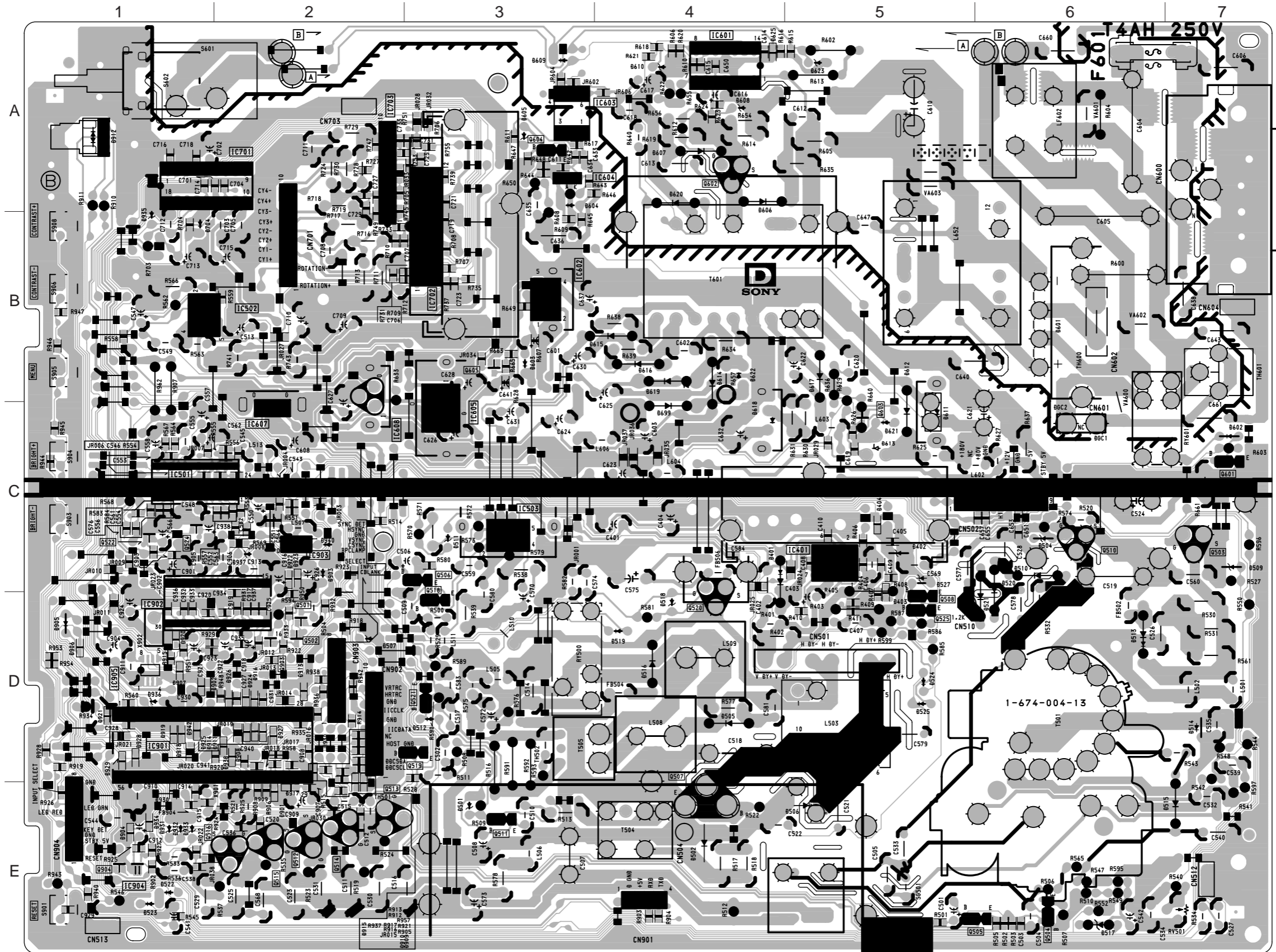
- Divided circuit diagram
One sheet of D board circuit diagram is divided into four sheets, each having the code D-ⓐ to D-ⓓ. For example, the destination (ab1) on the D-ⓐ sheet is connected to (ab1) on the D-ⓓ sheet.





[CONVERGENCE CONTROL, DEFLECTION, CPU, POWER SUPPLY]

— D BOARD —



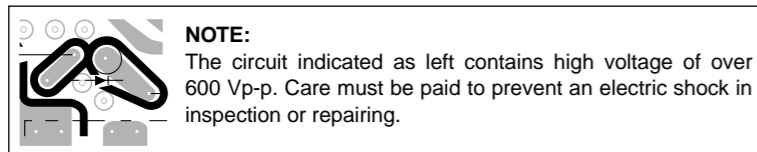
Schematic diagram

← D -Ⓢ board

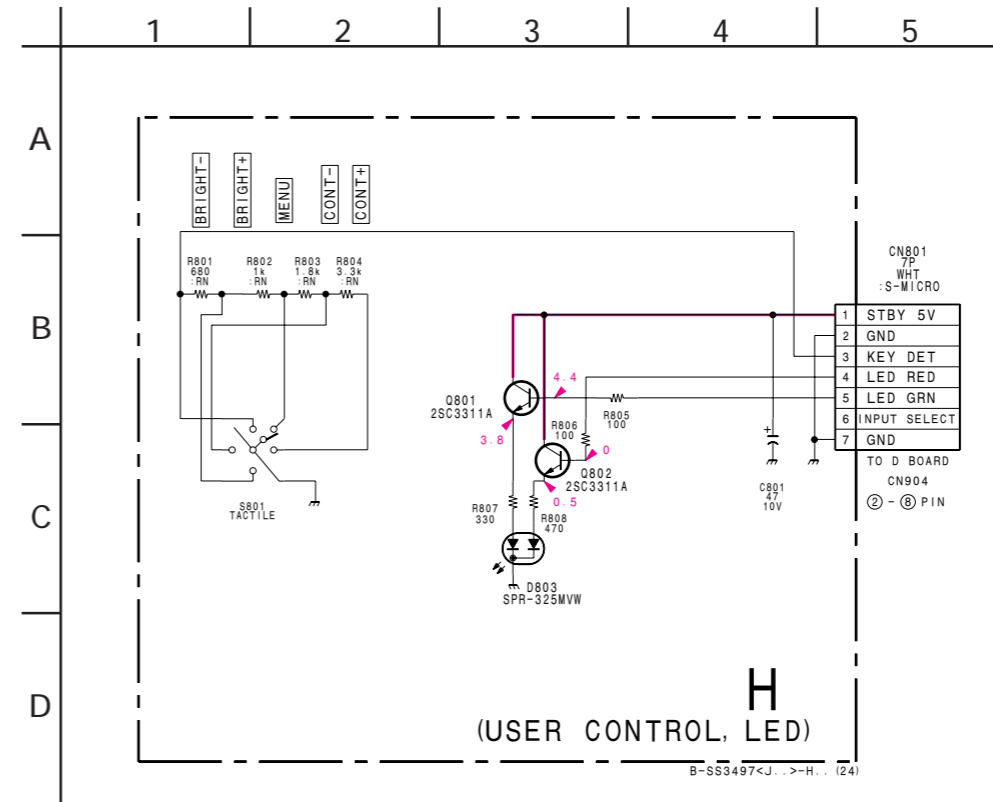
• **D BOARD
SEMICONDUCTOR LOCATION**

IC		DIODE		D704		B-1		-	
IC401	C-5	D401	C-4	-	-	D901	E-2	③	-
IC501	C-1	D402	C-5	-	*	D902	D-1	③	-
IC502	B-1	D403	D-5	③	-	D903	C-2	-	-
IC503	C-3	D404	C-5	③	-	D904	E-1	③	-
IC601	A-4	D501	E-3	-	-	D905	D-1	-	-
IC602	B-3	D502	E-4	-	-	D906	D-1	③	-
IC603	A-3	D504	C-6	-	-	D907	D-1	③	-
IC604	A-3	D505	D-4	-	-	D908	D-2	③	-
IC605	C-3	D506	E-5	-	-	D909	D-2	③	-
IC607	C-2	D507	D-2	-	-	D910	D-2	③	-
IC608	C-2	D509	C-7	-	-	D911	D-2	③	-
IC701	A-2	D510	C-6	-	-	D913	D-2	③	-
IC702	B-3	D511	C-3	-	-	D914	D-2	③	-
IC703	A-2	D512	D-3	-	-	D915	D-2	③	-
IC901	D-1	D513	D-6	-	-	D916	D-2	③	-
IC902	D-1	D514	D-7	-	-	D917	E-2	③	-
IC904	E-1	D515	E-7	-	-	D918	D-1	③	-
IC905	D-1	D516	D-4	-	-	D919	D-1	③	-
				D517	E-6	-	D920	D-1	③
				D518	D-4	-	D921	D-1	③
				D519	D-4	-	D924	D-2	③
				D520	C-6	-	D925	D-2	③
				D521	C-6	-	D926	D-2	③
				D522	E-1	-	D927	D-2	③
				D523	E-1	-	D928	D-1	③
				D524	D-5	-	D929	D-1	③
				D525	D-5	-	D930	E-1	③
				D527	C-5	-	D931	E-1	-
				D601	B-6	-	D932	E-1	-
				D602	C-7	-	D933	E-1	-
				D603	B-3	-	D934	E-1	③
				D604	A-3	-	D935	B-1	-
				D605	A-3	-	D936	D-1	-
				D606	A-4	-	D937	C-2	-
				D607	A-4	-			
				D608	A-4	-			
				D609	A-3	-			
				D610	A-4	-			
				D611	C-5	-			
				D612	B-5	-			
				D613	C-5	-			
				D614	B-4	-			
				D615	B-4	-			
				D616	B-4	-			
				D617	B-5	-			
				D618	C-4	-			
				D619	B-4	-			
				D620	A-4	-			
				D621	C-5	-			
				D622	B-4	-			
				VARIABLE RESISTOR					
				RV501		E-7			
				CRYSTAL					
				X901		E-1			
				X902		D-1			

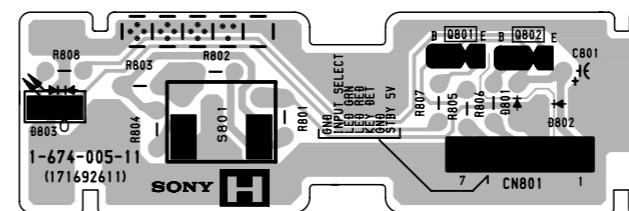
*: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 5-6)



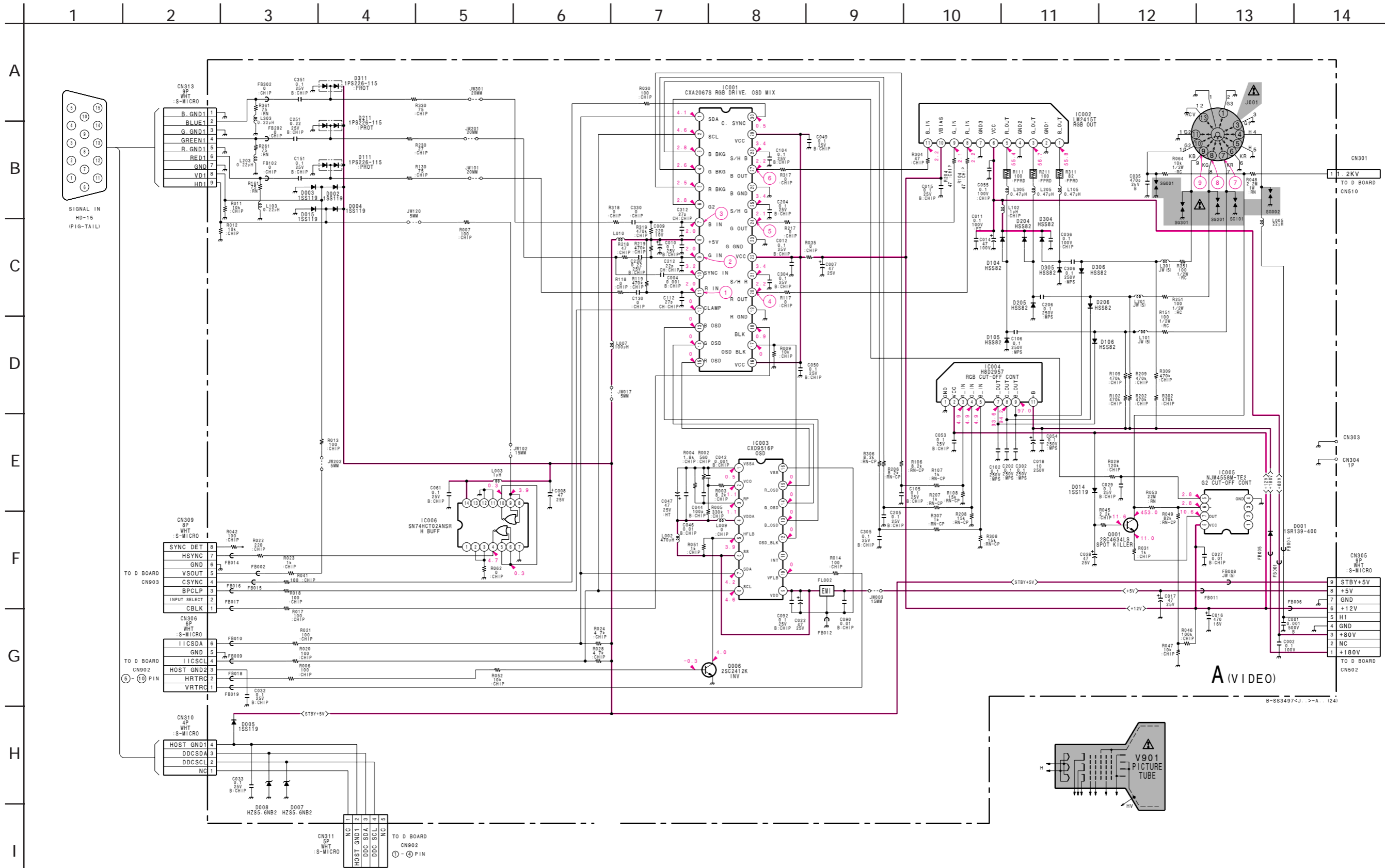
(2) Schematic Diagram of H Board



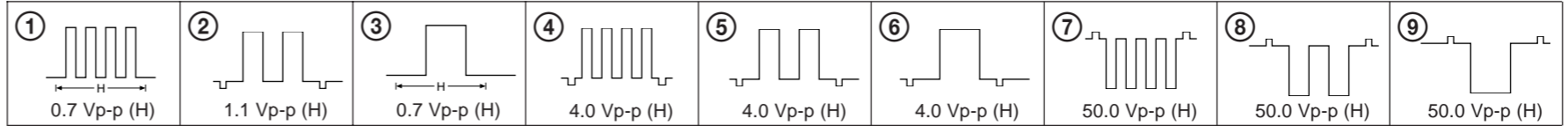
— H BOARD —



(3) Schematic Diagram of A Board

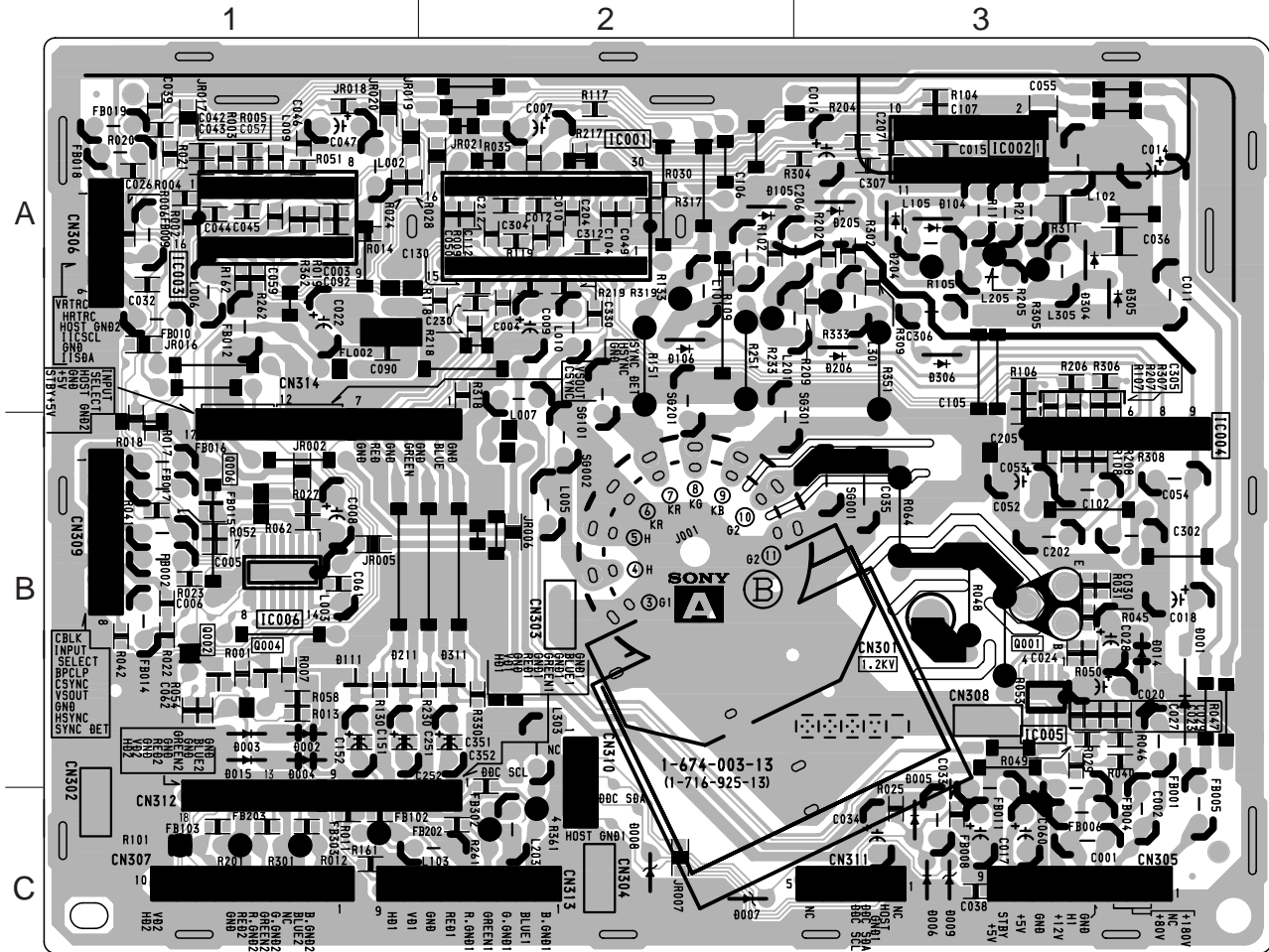


• A BOARD WAVEFORMS



A [VIDEO]

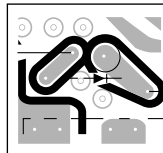
— A BOARD —



• A BOARD SEMICONDUCTOR LOCATION

IC	D002	B-1	—
	D003	B-1	—
	D004	B-1	—
IC001	A-2	—	—
IC002	A-3	—	—
IC003	A-1	—	—
IC004	B-3	—	—
IC005	B-3	—	—
IC006	B-1	—	—
TRANSISTOR			
Q001	B-3	*	—
Q006	B-1	①	—
DIODE			
D001	B-3	*	—
	D002	B-1	—
	D003	B-1	—
	D004	B-1	—
	D005	C-3	—
	D007	C-2	—
	D008	C-2	—
	D014	B-3	—
	D015	B-1	—
	D104	A-3	—
	D105	A-2	—
	D106	A-2	—
	D111	B-1	⑥
	D204	A-3	—
	D205	A-3	—
	D206	A-3	—
	D211	B-1	⑥
	D304	A-3	—
	D305	A-3	—
	D306	A-3	—
	D311	B-2	⑥

*: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 5-6)

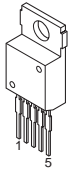


NOTE:

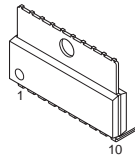
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

5-4. SEMICONDUCTORS

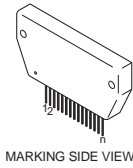
**BA00AST
LA6500FA**



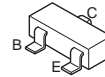
LA6510



STK391-110



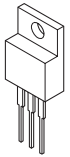
**DTA114EKA-T146
DTC114EK
DTC114EKA-T146
2SA1037AK-T146-QR
2SA1037AK-T146-R
2SC1623-L5L6
2SC2412K-T-146-QR**



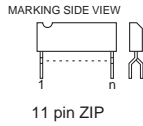
2SC5302-SONY-CC



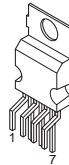
**BA05T
L7805CV
TA7805S**



LM2415T



TDA8177



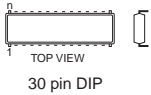
**DTC143ESA
DTC143TSA**



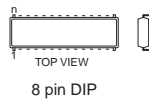
**2SC2610
2SC3941A-Q**



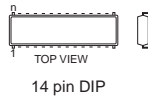
**CXA2067S
CXA8071CP**



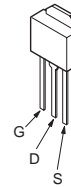
M24C08-MN6T



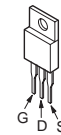
TEA1504-N2



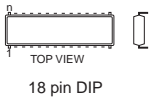
**IRFU110
IRFU110A
2SK2843LBS2SONY
2SK3155-01**



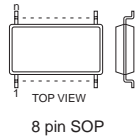
**2SK2098-01MR-F119
2SK2605LBS2SONY
2SJ449**



CXA8070AP



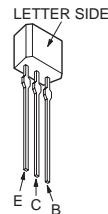
**NJM4558M
UPC4558G2**



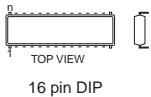
TL1431CZ



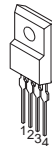
**2SA1175-HFE
2SA1309A-QRSTA
2SC2785-HFE
2SC3311A-QRSTA**



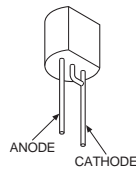
CXD9516P



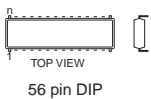
PQ12RD8S



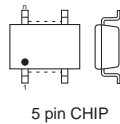
UPC574J



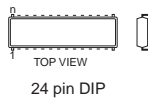
CXD9528S



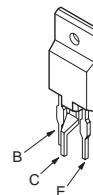
PST9143NL



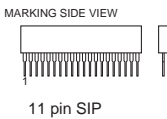
UPC6757CS



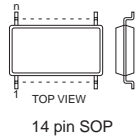
2SC4634LS-CB11



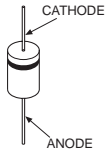
H8D2957



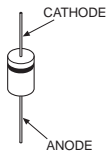
SN74HC02ANSR



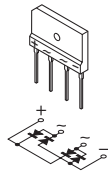
D1NL40-TA
 D1NS6
 D2L40-TA
 ERA34-10
 ERB91-02
 HSS82
 HSS83TD
 HZS5.1NB2
 HZT33-02
 RGP02-20EL-6394
 RGP10DG23



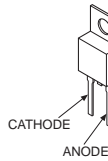
D3S4M
 EGP10D
 ERC81-004
 RH-1A
 RGP10JPKG23



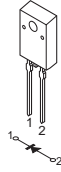
D4SB60L



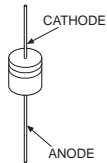
FMC-26UA
 FMN-G12S



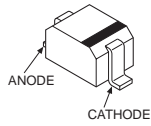
FMQ-G2FS



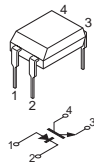
HZS10NB2
 HZS12NB2
 HZS4.7NB2
 HZS5.6NB2
 MTZJ-T-77-18
 RB4410QT-77
 RD10ES-B2
 RD12ES-B2
 RD18ES-B2
 RD5.1ES-B2
 RD5.6ES-B2
 1SR139-400
 1SS119-25



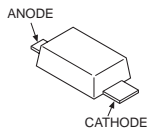
HZU5.6B2TRF
 MA111



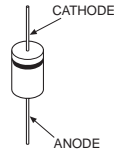
TLP621D4



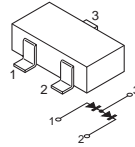
RBV501F-40



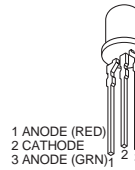
UF4007G23



1PS226-115



SPR-325MVW



SECTION 6 EXPLODED VIEWS

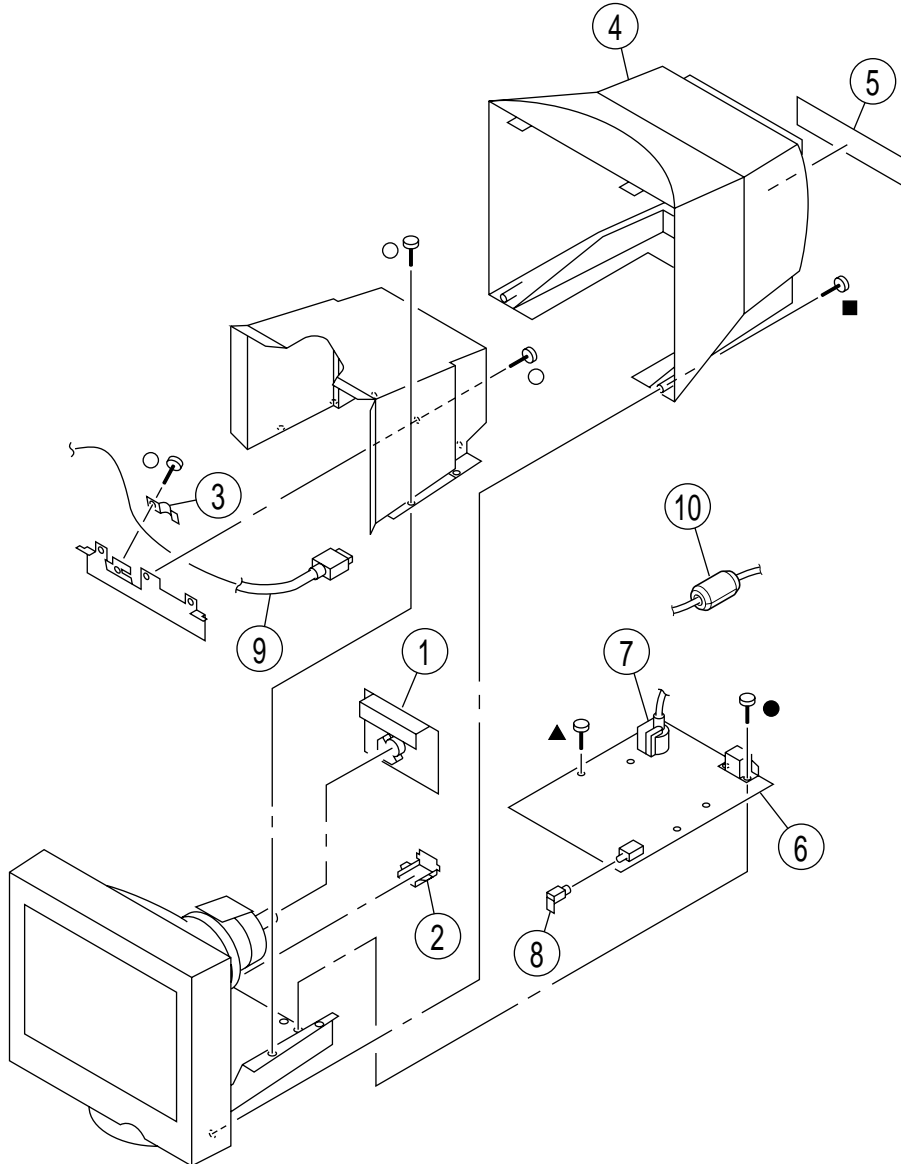
NOTE:

- 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 mark \triangle are critical for safety. Replace only with part number specified.

6-1. CHASSIS

- 7-685-874-09 +BVTT 3X12
- 7-685-872-09 +BVTT 3X8
- ▲ 7-685-646-79 Screw (washer head) +P3X8
- 7-685-663-71 +BVTP 4X16

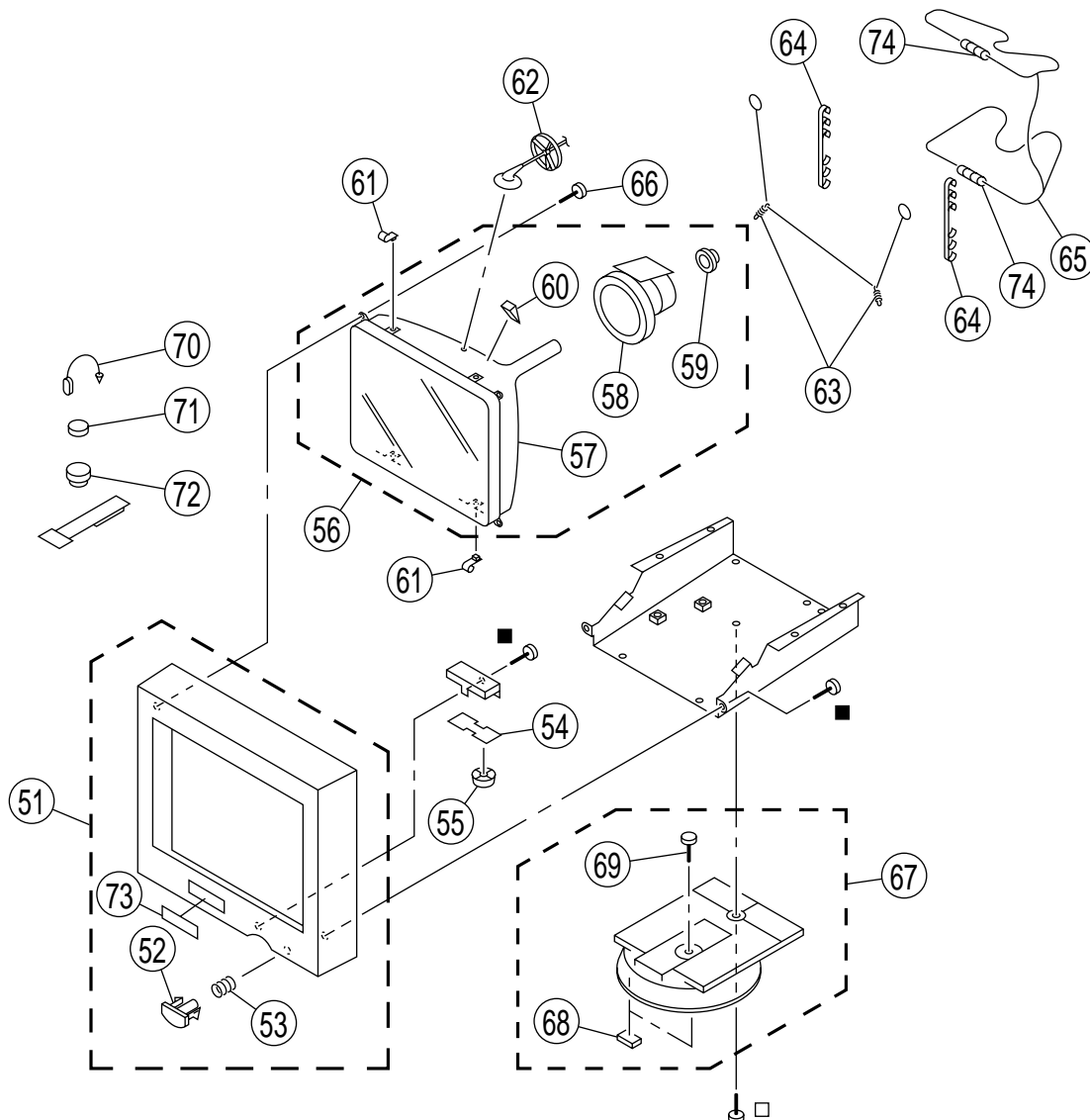


REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
1	*A-1294-806-A	A BOARD, COMPLETE		6	*A-1346-877-A	D BOARD, COMPLETE	7
2	4-070-679-02	COVER, CABLE		7	\triangle X-4560-154-1	TRANSFORMER ASSY, FLYBACK (NX-4404/J1L4)	
3	*4-045-131-01	STOPPER, CABLE		8	4-070-680-02	CAP, POWER	
4	4-072-384-01	CABINET		9	1-791-490-11	CABLE ASSY(15PD-SUB CONNECTOR)	
5	4-072-313-11	LABEL, INFORMATION		10	1-543-798-11	FILTER, CLAMP (FERRITE CORE)	

6-2. PICTURE TUBE

- 7-685-663-71 +BVTP 4X16
- 7-685-881-09 +BVTT 4X8

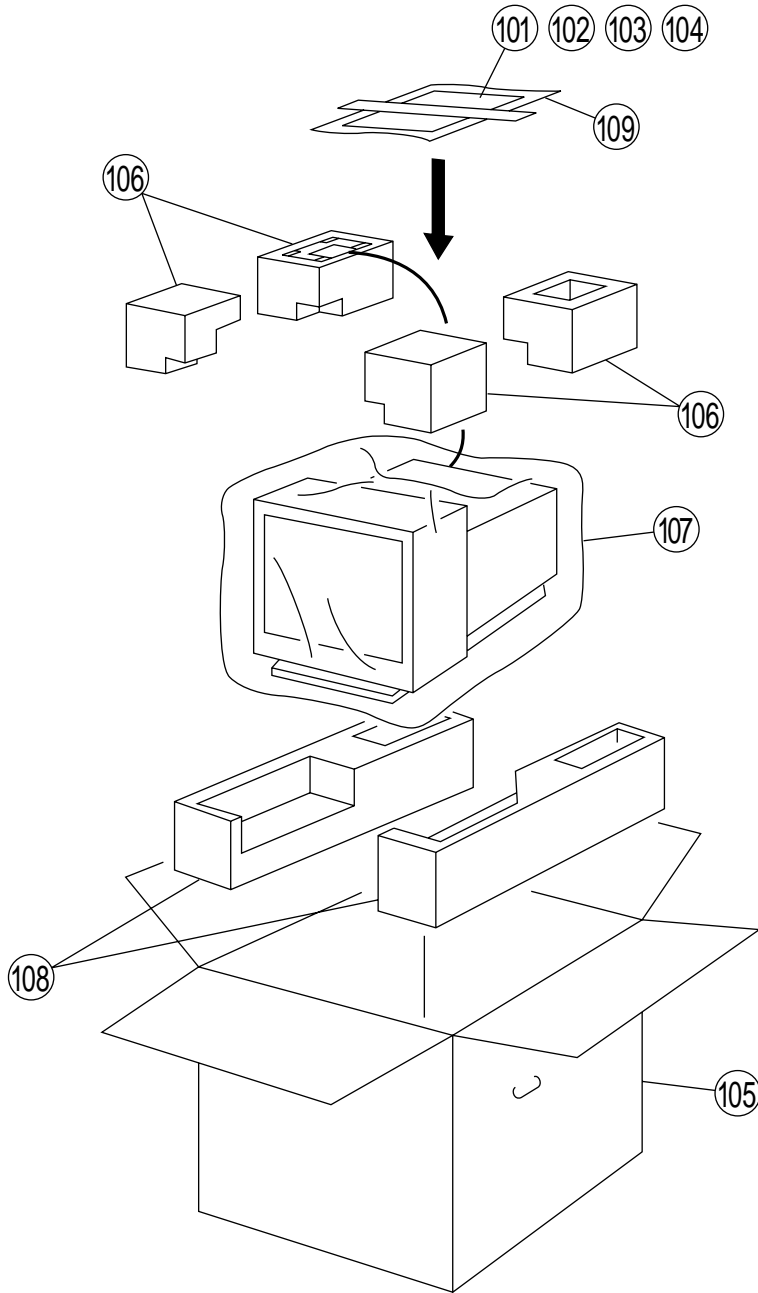
The components identified by mark Δ are critical for safety. Replace only with part number specified.



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
51	X-4037-102-1	BEZEL ASSY	52,53,73	64	* 4-369-319-00	BAND, COIL	
52	4-070-660-01	BUTTON, POWER		65	Δ 1-419-255-12	COIL, DEGAUSSING	
53	3-653-339-01	SPRING, COMPRESSION		66	4-365-808-01	SCREW (5), TAPPING	
54	* A-1372-712-A	H BOARD, COMPLETE		67	X-4037-104-1	STAND ASSY	68,69
55	4-070-665-02	BUTTON, MENU		68	* 4-061-996-01	CUSHION	
56	Δ 8-738-550-61	ITC ASSY (17TKB-R1)	57-60	69	4-384-096-01	SCREW (4X16), TAPPING, +P	
57	Δ 8-738-550-00	PICTURE TUBE (17TKB) (NORTH)		70	4-308-870-00	CLIP, LEAD WIRE	
58	Δ 8-451-435-12	DEFLECTION YOKE (Y17TKJ-M)		71	1-452-032-00	MAGNET, DISC ; 10mm ϕ	
59	Δ 1-452-923-41	NECK ASSEMBLY (NA-2915)		72	1-452-094-00	MAGNET, ROTATABLE DISK; 15mm ϕ	
60	2-162-100-21	SPACER, DY		73	4-042-353-11	EMBLEM (NO. 7), SONY	
61	4-045-123-01	HOLDER, DEGAUSSING COIL		74	4-069-264-01	CUSHION (95X50)	
62	3-704-372-01	HOLDER, HV CABLE					
63	* 4-047-316-01	SPRING, EXTENSION					

6-3. PACKING MATERIALS

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



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
101	1-772-398-11	DISK, INFORMATION (FOR WINDOWS)		106	*4-070-062-01	CUSHION (UPPER) (ASSY)	
102	Δ 1-765-719-31	CORD SET, POWER		107	*4-041-927-31	BAG, POLYETHYLENE	
103	1-785-512-31	D-SUB CONNECTOR (15P CHANGER)		108	*4-070-063-02	CUSHION (LOWER) (ASSY)	
104	3-867-657-11	MANUAL, INSTRUCTION		109	3-701-625-00	BAG, POLYETHYLENE (ACCESSORY)	
105	*4-071-985-01	INDIVIDUAL CARTON					

SECTION 7

ELECTRICAL PARTS LIST



NOTE:

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

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

The components identified by \boxtimes 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
	* A-1294-806-A	A BOARD, COMPLETE *****		C105	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
	4-382-854-11	SCREW (M3X10), P, SW (+) (IC002)		C106	1-137-528-11	MYLAR 0.1MF	10% 250V
	<CAPACITOR>			C112	1-163-237-11	CERAMIC CHIP 27PF	5% 50V
C001	1-162-318-11	CERAMIC 0.001MF	10% 500V	C130	1-216-295-91	SHORT 0	
C002	1-106-220-00	MYLAR 0.1MF	10% 100V	C151	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C004	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C202	1-137-528-11	MYLAR 0.1MF	10% 250V
C007	1-104-664-11	ELECT 47MF	20% 25V	C204	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C008	1-104-664-11	ELECT 47MF	20% 25V	C205	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C009	1-126-934-11	ELECT 220MF	20% 10V	C206	1-137-528-11	MYLAR 0.1MF	10% 250V
C010	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C212	1-163-235-11	CERAMIC CHIP 22PF	5% 50V
C011	1-106-220-00	MYLAR 0.1MF	10% 100V	C230	1-115-340-11	CERAMIC CHIP 0.22MF	10% 25V
C012	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C251	1-115-340-11	CERAMIC CHIP 0.22MF	10% 25V
C014	1-107-932-11	ELECT 47MF	20% 100V	C302	1-137-528-11	MYLAR 0.1MF	10% 250V
C015	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C304	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C016	1-128-528-11	ELECT 470MF	20% 16V	C305	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C017	1-104-664-11	ELECT 47MF	20% 25V	C306	1-137-528-11	MYLAR 0.1MF	10% 250V
C018	1-107-961-91	ELECT 10MF	20% 250V	C312	1-163-235-11	CERAMIC CHIP 22PF	5% 50V
C022	1-104-664-11	ELECT 47MF	20% 25V	C330	1-216-295-91	SHORT 0	
C027	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V	C351	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C028	1-104-664-11	ELECT 47MF	20% 25V	<CONNECTOR>			
C029	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	CN301	1-506-108-41	PIN, CONNECTOR (TERMINAL PIN)	
C032	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	CN303	1-695-915-11	TAB (CONTACT)	
C033	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	CN304	1-695-915-11	TAB (CONTACT)	
C035	1-162-134-11	CERAMIC 470PF	10% 2KV	CN305*	1-564-512-11	PLUG, CONNECTOR 9P	
C036	1-104-503-12	CERAMIC CHIP 0.1MF	10% 100V	CN306*	1-564-509-11	PLUG, CONNECTOR 6P	
C042	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	CN309*	1-564-511-11	PLUG, CONNECTOR 8P	
C044	1-163-251-11	CERAMIC CHIP 100PF	5% 50V	CN310*	1-564-507-11	PLUG, CONNECTOR 4P	
C046	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V	CN311*	1-564-508-11	PLUG, CONNECTOR 5P	
C047	1-104-664-11	ELECT 47MF	20% 25V	CN313*	1-564-512-11	PLUG, CONNECTOR 9P	
C049	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	<DIODE>			
C050	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	D001	8-719-970-02	DIODE 1SR139-400T31	
C053	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	D002	8-719-911-19	DIODE 1SS119-25	
C054	1-137-528-11	MYLAR 0.1MF	10% 250V	D003	8-719-911-19	DIODE 1SS119-25	
C055	1-104-503-12	CERAMIC CHIP 0.1MF	10% 100V	D004	8-719-911-19	DIODE 1SS119-25	
C061	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	D005	8-719-911-19	DIODE 1SS119-25	
C090	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V	D007	8-719-109-89	ZENER DIODE RD5.6ESB2	
C092	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	D008	8-719-109-89	ZENER DIODE RD5.6ESB2	
C102	1-137-528-11	MYLAR 0.1MF	10% 250V	D014	8-719-911-19	DIODE 1SS119-25	
C104	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	D015	8-719-911-19	DIODE 1SS119-25	
				D104	8-719-970-83	DIODE HSS82	

CPD-E200E









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

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
D105	8-719-970-83	DIODE HSS82		JR016	1-216-296-91	SHORT	0
D106	8-719-970-83	DIODE HSS82					
D111	8-719-062-51	DIODE 1PS226-115		JR017	1-216-296-91	SHORT	0
D204	8-719-970-83	DIODE HSS82		JR018	1-216-295-91	SHORT	0
D205	8-719-970-83	DIODE HSS82		JR019	1-216-296-91	SHORT	0
D206	8-719-970-83	DIODE HSS82		JR020	1-216-296-91	SHORT	0
D211	8-719-062-51	DIODE 1PS226-115		JR021	1-216-296-91	SHORT	0
D304	8-719-970-83	DIODE HSS82					
D305	8-719-970-83	DIODE HSS82					
D306	8-719-970-83	DIODE HSS82					
D311	8-719-062-51	DIODE 1PS226-115					
	<FERRITE BEAD>						
FB001	1-412-911-11	FERRITE		L002	1-412-911-11	FERRITE	
FB002	1-412-911-11	FERRITE		L003	1-408-397-00	INDUCTOR 1UH	
FB004	1-412-911-11	FERRITE		L005	1-412-529-11	INDUCTOR 22UH	
FB005	1-412-911-11	FERRITE		L007	1-410-482-31	INDUCTOR 100UH	
FB006	1-412-911-11	FERRITE		L009	1-216-295-91	SHORT	0
FB009	1-412-911-11	FERRITE					
FB010	1-412-911-11	FERRITE		L010	1-412-911-11	FERRITE	
FB011	1-412-911-11	FERRITE		L102	1-412-052-21	INDUCTOR CHIP 1UH	
FB012	1-412-911-11	FERRITE		L103	1-414-137-31	INDUCTOR 0.22UH	
FB014	1-412-911-11	FERRITE		L105	1-410-750-41	INDUCTOR 0.47UH	
FB015	1-412-911-11	FERRITE		L203	1-414-137-31	INDUCTOR 0.22UH	
FB016	1-412-911-11	FERRITE					
FB017	1-412-911-11	FERRITE		L205	1-410-750-41	INDUCTOR 0.47UH	
FB018	1-412-911-11	FERRITE		L303	1-414-137-31	INDUCTOR 0.22UH	
FB019	1-412-911-11	FERRITE		L305	1-410-750-41	INDUCTOR 0.47UH	
FB102	1-216-295-91	SHORT	0				
FB202	1-216-295-91	SHORT	0				
FB302	1-216-295-91	SHORT	0				
	<FILTER>						
FL002	1-412-911-11	FERRITE					
	<IC>						
IC001	8-752-090-63	IC CXA2067S					
IC002	8-759-593-11	IC LM2415					
IC003	8-759-589-35	IC CXD9516P					
IC004	8-749-016-27	IC H8D2957					
IC005	8-759-100-96	IC uPC4558G2					
IC006	8-759-269-07	IC SN74HCT02ANSR					
	<JACK>						
J001	Δ 1-251-598-11	SOCKET, PICTURE TUBE					
	<CHIP CONDUCTOR>						
JR002	1-216-296-91	SHORT	0				
JR005	1-216-296-91	SHORT	0				
JR006	1-216-296-91	SHORT	0				
JR007	1-216-296-91	SHORT	0				
				R002	1-216-043-91	RES,CHIP	560 5% 1/10W
				R003	1-216-071-00	RES,CHIP	8.2K 5% 1/10W
				R004	1-216-055-00	RES,CHIP	1.8K 5% 1/10W
				R005	1-216-109-00	RES,CHIP	330K 5% 1/10W
				R006	1-216-025-91	RES,CHIP	100 5% 1/10W
				R007	1-216-025-91	RES,CHIP	100 5% 1/10W
				R009	1-216-073-00	RES,CHIP	10K 5% 1/10W
				R011	1-216-073-00	RES,CHIP	10K 5% 1/10W
				R012	1-216-073-00	RES,CHIP	10K 5% 1/10W
				R013	1-216-025-91	RES,CHIP	100 5% 1/10W
				R014	1-216-025-91	RES,CHIP	100 5% 1/10W
				R017	1-216-025-91	RES,CHIP	100 5% 1/10W
				R018	1-216-025-91	RES,CHIP	100 5% 1/10W
				R020	1-216-025-91	RES,CHIP	100 5% 1/10W
				R021	1-216-025-91	RES,CHIP	100 5% 1/10W
				R022	1-216-033-00	RES,CHIP	220 5% 1/10W
				R023	1-216-049-91	RES,CHIP	1K 5% 1/10W
				R024	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
				R028	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
				R029	1-216-099-00	RES,CHIP	120K 5% 1/10W
				R030	1-216-025-91	RES,CHIP	100 5% 1/10W
				R031	1-216-049-91	RES,CHIP	1K 5% 1/10W
				R035	1-216-295-91	SHORT	0
				R041	1-216-025-91	RES,CHIP	100 5% 1/10W
				R042	1-216-025-91	RES,CHIP	100 5% 1/10W
				R045	1-216-057-00	RES,CHIP	2.2K 5% 1/10W

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R046	1-216-097-91	RES,CHIP	100K 5% 1/10W	SG201	 1-517-499-21	GAP, SPARK	
R047	1-216-073-00	RES,CHIP	10K 5% 1/10W	SG301	 1-517-499-21	GAP, SPARK	
R048	1-219-398-51	METAL	2.2M 5% 1W				
R049	1-216-697-91	METAL CHIP	82K 0.50%1/10W				
R051	1-216-049-91	RES,CHIP	1K 5% 1/10W	*****			
R052	1-216-073-00	RES,CHIP	10K 5% 1/10W	* A-1346-877-A D BOARD, COMPLETE			
R053	1-219-621-91	METAL	22M 10% 1/4W	*****			
R062	1-216-295-91	SHORT	0	4-382-854-01 SCREW (M3X8), P, SW (+)			
R064	1-202-830-00	SOLID	10K 20% 1/2W	(IC401, IC503, IC602, IC605, IC607, IC608, Q503, Q510, Q520, Q602, D601)			
R102	1-216-113-00	RES,CHIP	470K 5% 1/10W	4-382-854-11 SCREW (M3X10), P, SW (+) (Q507, D506)			
R104	1-216-017-91	RES,CHIP	47 5% 1/10W	4-382-854-21 SCREW (M3X14), P, SW (+) (IC702)			
R106	1-216-673-11	METAL CHIP	8.2K 0.50%1/10W	<CAPACITOR>			
R107	1-216-651-11	METAL CHIP	1K 0.50%1/10W	C401	1-107-914-11	ELECT 1000MF	20% 25V
R108	1-216-679-11	METAL CHIP	15K 0.50%1/10W	C402	1-117-667-31	MYLAR 0.47MF	5% 250V
R109	1-216-113-00	RES,CHIP	470K 5% 1/10W	C403	1-107-911-11	ELECT 220MF	20% 50V
R111	1-249-405-11	CARBON	100 5% 1/4W F	C404	1-107-914-11	ELECT 1000MF	20% 25V
R117	1-216-295-91	SHORT	0	C405	1-104-760-11	CERAMIC CHIP 0.047MF	10% 50V
R118	1-216-295-91	SHORT	0	C406	1-137-368-11	MYLAR 0.0047MF	5% 50V
R119	1-216-113-00	RES,CHIP	470K 5% 1/10W	C407	1-137-372-11	MYLAR 0.022MF	5% 50V
R130	1-216-022-00	RES,CHIP	75 5% 1/10W	C410	1-164-005-11	CERAMIC CHIP 0.47MF	25V
R151	1-202-549-00	SOLID	100 20% 1/2W	C501	1-126-964-11	ELECT 10MF	20% 50V
R161	1-215-394-00	METAL	75 1% 1/4W	C502	1-137-370-11	MYLAR 0.01MF	5% 50V
R202	1-216-113-00	RES,CHIP	470K 5% 1/10W	C503	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V
R204	1-216-017-91	RES,CHIP	47 5% 1/10W	C504	1-102-030-00	CERAMIC 330PF	10% 500V
R206	1-216-673-11	METAL CHIP	8.2K 0.50%1/10W	C505	1-109-878-11	CERAMIC 15PF	5% 2KV
R207	1-216-651-11	METAL CHIP	1K 0.50%1/10W	C506	1-126-960-11	ELECT 1MF	20% 50V
R208	1-216-679-11	METAL CHIP	15K 0.50%1/10W	C507	1-131-653-11	FILM 0.19MF	5% 400V
R209	1-216-113-00	RES,CHIP	470K 5% 1/10W	C508	1-128-526-91	ELECT 100MF	20% 25V
R211	1-249-405-11	CARBON	100 5% 1/4W F	C509	1-162-117-00	CERAMIC 100PF	10% 500V
R217	1-216-295-91	SHORT	0	C510	1-102-228-00	CERAMIC 470PF	10% 500V
R218	1-216-017-91	RES,CHIP	47 5% 1/10W	C511	1-117-663-31	FILM 0.22MF	5% 250V
R219	1-216-113-00	RES,CHIP	470K 5% 1/10W	C512	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V
R220	1-216-011-00	RES,CHIP	27 5% 1/10W	C513	1-128-744-91	ELECT 10MF	20% 50V
R251	1-202-549-00	SOLID	100 20% 1/2W	C514	1-117-670-31	FILM 0.82MF	5% 250V
R261	1-215-394-00	METAL	75 1% 1/4W	C515	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V
R302	1-216-113-00	RES,CHIP	470K 5% 1/10W	C516	1-119-862-11	FILM 0.3MF	5% 250V
R304	1-216-017-91	RES,CHIP	47 5% 1/10W	C517	1-137-370-11	MYLAR 0.01MF	5% 50V
R306	1-216-673-11	METAL CHIP	8.2K 0.50%1/10W	C518	1-117-954-21	FILM 4300PF	3% 1.8KV
R307	1-216-651-11	METAL CHIP	1K 0.50%1/10W	C519	1-117-621-11	FILM 1200PF	3% 1.2KV
R308	1-216-679-11	METAL CHIP	15K 0.50%1/10W	C520	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V
R309	1-216-113-00	RES,CHIP	470K 5% 1/10W	C521	1-107-444-11	CERAMIC 100PF	5% 2KV
R311	1-249-404-11	CARBON	82 5% 1/4W F	C522	1-136-684-51	MYLAR 0.0022MF	10% 100V
R317	1-216-295-91	SHORT	0	C523	1-117-660-31	FILM 0.12MF	5% 250V
R318	1-216-295-91	SHORT	0	C524	1-110-641-51	ELECT 33MF	20% 200V
R319	1-216-113-00	RES,CHIP	470K 5% 1/10W	C525	1-136-060-91	FILM 0.047MF	5% 400V
R330	1-216-022-00	RES,CHIP	75 5% 1/10W	C526	1-164-646-11	CERAMIC 2200PF	10% 500V
R351	1-202-549-00	SOLID	100 20% 1/2W	C527	1-117-879-91	MYLAR 0.01MF	10% 250V
R361	1-215-394-00	METAL	75 1% 1/4W	C528	1-115-349-51	CERAMIC 0.01MF	2KV
		<SPARK GAP>		C529	1-136-060-91	FILM 0.047MF	5% 400V
SG001	 1-519-422-11	GAP, SPARK		C530	1-117-660-31	FILM 0.12MF	5% 250V
SG002	 1-517-499-21	GAP, SPARK		C531	1-119-858-31	FILM 0.068MF	5% 250V
SG101	 1-517-499-21	GAP, SPARK		C532	 1-137-401-11	MYLAR 0.22MF	10% 100V



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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C534	Δ 1-137-419-11	MYLAR 0.033MF	10% 100V	C613	Δ 1-162-115-00	CERAMIC 330PF	10% 2KV
C535	1-130-495-00	MYLAR 0.1MF	5% 50V	C614	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V
C536	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V	C615	1-163-037-11	CERAMIC CHIP 0.022MF	10% 50V
C538	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V	C616	1-107-907-11	ELECT 22MF	20% 25V
C539	Δ 1-137-150-11	MYLAR 0.01MF	10% 100V	C617	1-107-907-11	ELECT 22MF	20% 25V
C540	Δ 1-136-203-11	FILM 10000PF	5% 630V	C618	1-130-495-00	MYLAR 0.1MF	5% 50V
C541	1-126-963-11	ELECT 4.7MF	20% 50V	C619	1-164-161-11	CERAMIC CHIP 0.0022MF	10% 50V
C542	Δ 1-126-964-11	ELECT 10MF	20% 50V	C620	1-162-117-00	CERAMIC 100PF	10% 500V
C543	1-163-251-11	CERAMIC CHIP 100PF	5% 50V	C621	1-104-712-11	ELECT 47MF	0 200V
C544	Δ 1-137-370-11	MYLAR 0.01MF	5% 50V	C622	1-128-763-91	ELECT 100MF	20% 100V
C545	1-163-037-11	CERAMIC CHIP 0.022MF	10% 50V	C623	1-107-889-11	ELECT 220MF	20% 25V
C546	1-163-259-91	CERAMIC CHIP 220PF	5% 50V	C624	1-126-936-11	ELECT 3300MF	20% 16V
C547	1-128-740-91	ELECT 1MF	20% 50V	C625	1-128-339-11	ELECT 2200MF	20% 16V
C548	1-130-471-00	MYLAR 0.001MF	5% 50V	C626	1-104-653-91	ELECT 220MF	20% 16V
C549	1-137-375-11	MYLAR 0.068MF	5% 50V	C627	1-107-889-11	ELECT 220MF	20% 10V
C550	1-126-933-11	ELECT 100MF	20% 16V	C628	1-128-526-91	ELECT 100MF	20% 25V
C551	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V	C630	1-126-935-11	ELECT 470MF	20% 16V
C552	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V	C631	1-126-935-11	ELECT 470MF	20% 16V
C553	Δ 1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C632	1-115-792-11	ELECT 0.0022F	20% 25V
C554	Δ 1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C633	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C555	Δ 1-130-495-00	MYLAR 0.1MF	5% 50V	C634	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C556	Δ 1-163-259-91	CERAMIC CHIP 220PF	5% 50V	C636	1-113-979-51	MYLAR 0.047MF	5% 1.5KV
C557	1-128-745-91	ELECT 22MF	20% 50V	C637	1-128-726-91	ELECT 47MF	20% 25V
C558	Δ 1-126-960-11	ELECT 1MF	20% 50V	C638	Δ 1-117-703-51	CERAMIC 0.0047MF	20% 250V
C559	1-137-368-11	MYLAR 0.0047MF	5% 50V	C640	1-117-703-11	CERAMIC 0.0047MF	20% 250V
C560	1-119-859-71	FILM 0.36MF	5% 250V	C641	1-107-882-91	ELECT 100MF	20% 16V
C561	Δ 1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C643	Δ 1-117-703-51	CERAMIC 0.0047MF	20% 250V
C562	1-128-526-11	ELECT 100MF	20% 16V	C647	1-102-228-00	CERAMIC 470PF	10% 500V
C563	1-163-005-11	CERAMIC CHIP 470PF	10% 50V	C650	1-163-019-00	CERAMIC CHIP 0.0068MF	10% 50V
C564	1-107-823-11	CERAMIC CHIP 0.47MF	10% 16V	C660	Δ 1-117-703-51	CERAMIC 0.0047MF	20% 250V
C566	1-128-551-11	ELECT 22MF	20% 25V	C701	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C568	1-136-060-91	FILM 0.047MF	5% 400V	C702	1-126-963-11	ELECT 4.7MF	20% 50V
C569	1-130-495-00	MYLAR 0.1MF	5% 50V	C703	1-136-169-00	MYLAR 0.22MF	5% 50V
C570	1-128-526-91	ELECT 100MF	20% 25V	C704	1-163-259-91	CERAMIC CHIP 220PF	5% 50V
C572	1-107-651-11	ELECT 4.7MF	20% 250V	C705	1-130-495-00	MYLAR 0.1MF	5% 50V
C573	1-107-651-11	ELECT 4.7MF	20% 250V	C706	1-163-113-00	CERAMIC CHIP 68PF	5% 50V
C574	1-117-879-91	MYLAR 0.01MF	10% 250V	C707	1-163-113-00	CERAMIC CHIP 68PF	5% 50V
C575	1-110-641-51	ELECT 33MF	20% 200V	C708	1-130-495-00	MYLAR 0.1MF	5% 50V
C576	1-163-243-11	CERAMIC CHIP 47PF	5% 50V	C709	1-126-941-11	ELECT 470MF	20% 25V
C577	1-115-349-51	CERAMIC 0.01MF	2KV	C710	1-126-941-11	ELECT 470MF	20% 25V
C578	1-107-974-11	CERAMIC 47PF	5% 2KV	C711	1-130-495-00	MYLAR 0.1MF	5% 50V
C579	1-109-879-11	CERAMIC 22PF	5% 2KV	C712	1-130-495-00	MYLAR 0.1MF	5% 50V
C580	1-137-370-11	MYLAR 0.01MF	5% 50V	C713	1-126-927-11	ELECT 2200MF	20% 10V
C582	1-163-037-11	CERAMIC CHIP 0.022MF	10% 50V	C714	1-163-131-00	CERAMIC CHIP 390PF	5% 50V
C583	1-130-495-00	MYLAR 0.1MF	5% 50V	C715	1-126-935-11	ELECT 470MF	20% 16V
C584	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V	C716	1-163-989-11	CERAMIC CHIP 0.033MF	10% 25V
C601	1-104-664-11	ELECT 47MF	20% 10V	C718	1-163-989-11	CERAMIC CHIP 0.033MF	10% 25V
C602	1-162-117-00	CERAMIC 100PF	10% 500V	C723	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V
C603	1-126-942-61	ELECT 1000MF	20% 25V	C725	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V
C604	Δ 1-104-708-51	MYLAR 0.47MF	20% 250V	C729	1-163-003-11	CERAMIC CHIP 330PF	10% 50V
C605	Δ 1-104-708-51	MYLAR 0.47MF	20% 250V	C733	1-163-003-11	CERAMIC CHIP 330PF	10% 50V
C606	Δ 1-117-703-51	CERAMIC 0.0047MF	20% 250V	C901	1-107-823-11	CERAMIC CHIP 0.47MF	10% 16V
C608	1-104-653-91	ELECT 220MF	20% 16V	C902	1-126-935-11	ELECT 470MF	20% 16V
C610	1-107-852-11	ELECT (BLOCK)330MF	20% 400V	C903	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V
C611	1-163-007-11	CERAMIC CHIP 680PF	10% 50V	C905	1-137-375-11	MYLAR 0.068MF	5% 50V
C612	Δ 1-106-379-12	MYLAR 0.033MF	10% 200V	C906	1-136-177-00	MYLAR 1MF	5% 50V

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C908	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V	D513	8-719-052-90	DIODE D1NL40-TA2	
C909	1-126-926-11	ELECT 1000MF	20% 10V	D514	8-719-970-83	DIODE HSS82	
C910	1-107-713-11	ELECT 4.7MF	20% 50V	D515 Δ	8-719-018-82	DIODE RGP02-20EL-6394	
C911	1-137-370-11	MYLAR 0.01MF	5% 50V	D516	8-719-052-86	DIODE D2L40-TA	
C912	1-126-933-11	ELECT 100MF	20% 16V	D517 Δ	8-759-157-40	IC uPC574J	
C913	1-130-495-00	MYLAR 0.1MF	5% 50V	D518	8-719-110-17	ZENER DIODE RD10ESB2	
C914	1-163-231-11	CERAMIC CHIP 15PF	5% 50V	D519	8-719-911-19	DIODE 1SS119-25	
C915	1-163-231-11	CERAMIC CHIP 15PF	5% 50V	D520	8-719-018-82	DIODE RGP02-20EL-6394	
C916	1-126-965-11	ELECT 22MF	20% 50V	D521	8-719-018-82	DIODE RGP02-20EL-6394	
C917	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V	D522	8-719-911-19	DIODE 1SS119-25	
C918	1-126-964-11	ELECT 10MF	20% 50V	D523	8-719-911-19	DIODE 1SS119-25	
C920	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V	D524	8-719-051-85	DIODE HSS83TD	
C921	1-126-935-11	ELECT 470MF	20% 16V	D525	8-719-051-85	DIODE HSS83TD	
C922	1-107-712-11	ELECT 3.3MF	20% 50V	D527	8-719-109-85	ZENER DIODE RD5.1ESB2	
C923	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	D601 Δ	8-719-510-63	DIODE D4SB60L-F	
C924	1-126-965-11	ELECT 22MF	20% 50V	D602	8-719-911-19	DIODE 1SS119-25	
C925	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V	D603	8-719-911-19	DIODE 1SS119-25	
C926	1-126-935-11	ELECT 470MF	20% 16V	D604	8-719-911-19	DIODE 1SS119-25	
C927	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V	D605	8-719-110-31	ZENER DIODE RD12ESB2	
C928	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V	D606 Δ	8-719-053-19	DIODE UF4007G23	
C929	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	D607	8-719-053-19	DIODE UF4007G23	
C930	1-137-370-11	MYLAR 0.01MF	5% 50V	D608	8-719-110-49	ZENER DIODE RD18ESB2	
C931	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	D609 Δ	8-719-911-19	DIODE 1SS119-25	
C935	1-107-823-11	CERAMIC CHIP 0.47MF	10% 16V	D610	8-719-928-85	ZENER DIODE HZS4.7NB2	
C936	1-163-251-11	CERAMIC CHIP 100PF	5% 50V	D611	8-719-067-68	DIODE FMC-26UA	
C937	1-107-823-11	CERAMIC CHIP 0.47MF	10% 16V	D612	8-719-053-19	DIODE UF4007G23	
C938	1-126-934-11	ELECT 220MF	20% 16V	D613	8-719-076-20	DIODE BT149G-412-OT359	
<CONNECTOR>				D614	8-719-032-12	DIODE D1NS6	
CN501*	1-580-798-11	CONNECTOR PIN (DY) 6P		D615	8-719-979-58	DIODE EGP10D	
CN502*	1-564-512-11	PLUG, CONNECTOR 9P		D616	8-719-979-58	DIODE EGP10D	
CN600 Δ	1-251-644-11	INLET, AC 3P (WITH NOISE FILTER)		D617	8-719-947-06	DIODE RGP10JPKG23	
CN601*	1-691-960-11	PIN, CONNECTOR (PC BOARD) 3P		D618	8-719-058-38	DIODE FMN-G12S	
CN602*	1-506-371-00	PIN, CONNECTOR 2P		D619	8-719-058-38	DIODE FMN-G12S	
CN701*	1-564-513-11	PLUG, CONNECTOR 10P		D620	8-719-300-76	DIODE RH-1A	
CN901*	1-508-879-11	BASE POST		D621	8-719-911-19	DIODE 1SS119-25	
CN902*	1-564-513-11	PLUG, CONNECTOR 10P		D622	8-719-058-38	DIODE FMN-G12S	
CN903*	1-564-511-11	PLUG, CONNECTOR 8P		D704	8-719-911-19	DIODE 1SS119-25	
CN904*	1-564-510-11	PLUG, CONNECTOR 7P		D901	8-719-073-01	DIODE MA111-(K8).S0	
<DIODE>				D902	8-719-047-98	ZENER DIODE HZU5.6B2TRF	
D401	8-719-052-90	DIODE D1NL40-TA2		D903	8-719-050-84	DIODE RB441Q-40T-77	
D402	8-719-928-85	ZENER DIODE HZS4.7NB2		D904	8-719-047-98	ZENER DIODE HZU5.6B2TRF	
D403	8-719-073-01	DIODE MA111-(K8).S0		D905	8-719-911-19	DIODE 1SS119-25	
D404	8-719-058-24	DIODE RB501V-40TE-17		D906	8-719-073-01	DIODE MA111-(K8).S0	
D501	8-719-110-31	ZENER DIODE RD12ESB2		D907	8-719-073-01	DIODE MA111-(K8).S0	
D502	8-719-981-00	DIODE ERC81-004		D908	8-719-073-01	DIODE MA111-(K8).S0	
D504	8-719-110-49	ZENER DIODE RD18ESB2		D909	8-719-047-98	ZENER DIODE HZU5.6B2TRF	
D505	8-719-941-74	DIODE ERB91-02		D910	8-719-047-98	ZENER DIODE HZU5.6B2TRF	
D506	8-719-075-18	DIODE FMQ-G2FS		D911	8-719-073-01	DIODE MA111-(K8).S0	
D507	8-719-109-85	ZENER DIODE RD5.1ESB2		D913	8-719-073-01	DIODE MA111-(K8).S0	
D509	8-719-110-17	ZENER DIODE RD10ESB2		D914	8-719-073-01	DIODE MA111-(K8).S0	
D510	8-719-018-82	DIODE RGP02-20EL-6394		D915	8-719-073-01	DIODE MA111-(K8).S0	
D511	8-719-109-89	ZENER DIODE RD5.6ESB2		D916	8-719-073-01	DIODE MA111-(K8).S0	
D512	8-719-911-19	DIODE 1SS119-25		D917	8-719-073-01	DIODE MA111-(K8).S0	
				D918	8-719-047-98	ZENER DIODE HZU5.6B2TRF	
				D919	8-719-073-01	DIODE MA111-(K8).S0	
				D920	8-719-058-24	DIODE RB501V-40TE-17	



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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
D921	8-719-073-01	DIODE MA111-(K8).S0		JR007	1-216-295-91	SHORT	0
D922	1-216-051-00	RES,CHIP 1.2K	5% 1/10W	JR008	1-216-296-91	SHORT	0
D923	1-216-295-91	SHORT	0	JR009	1-216-295-91	SHORT	0
D924	8-719-073-01	DIODE MA111-(K8).S0		JR010	1-216-296-91	SHORT	0
D925	8-719-073-01	DIODE MA111-(K8).S0		JR011	1-216-296-91	SHORT	0
D926	8-719-073-01	DIODE MA111-(K8).S0		JR012	1-216-295-91	SHORT	0
D927	8-719-073-01	DIODE MA111-(K8).S0		JR013	1-216-295-91	SHORT	0
D928	8-719-047-98	ZENER DIODE HZU5.6B2TRF		JR014	1-216-296-91	SHORT	0
D929	8-719-047-98	ZENER DIODE HZU5.6B2TRF		JR015	1-216-295-91	SHORT	0
D930	8-719-047-98	ZENER DIODE HZU5.6B2TRF		JR016	1-216-295-91	SHORT	0
D931	8-719-109-89	ZENER DIODE RD5.6ESB2		JR017	1-216-295-91	SHORT	0
D932	8-719-109-89	ZENER DIODE RD5.6ESB2		JR018	1-216-295-91	SHORT	0
D933	8-719-109-89	ZENER DIODE RD5.6ESB2		JR019	1-216-296-91	SHORT	0
D934	8-719-047-98	ZENER DIODE HZU5.6B2TRF		JR020	1-216-296-91	SHORT	0
D935	8-719-109-85	ZENER DIODE RD5.1ESB2		JR021	1-216-296-91	SHORT	0
D936	8-719-109-89	ZENER DIODE RD5.6ESB2		JR022	1-216-295-91	SHORT	0
D937	8-719-109-89	ZENER DIODE RD5.6ESB2		JR023	1-216-295-91	SHORT	0
		<FUSE>		JR024	1-216-296-91	SHORT	0
F601	Δ 1-576-231-11	FUSE (H.B.C.) (4A/250V)		JR025	1-216-296-91	SHORT	0
		1-533-223-11 CLIP, FUSE ; F601		JR027	1-216-296-91	SHORT	0
		<FERRITE BEAD>		JR028	1-216-296-91	SHORT	0
FB502	1-412-473-51	FERRITE 0.45UH		JR029	1-216-295-91	SHORT	0
FB504	1-412-911-11	FERRITE		JR030	1-216-295-91	SHORT	0
FB506	1-412-911-11	FERRITE		JR032	1-216-296-91	SHORT	0
FB904	1-543-961-22	FERRITE		JR033	1-216-296-91	SHORT	0
		<IC>		JR034	1-216-295-91	SHORT	0
IC401	8-759-339-59	IC TDA8177		JR038	1-216-296-91	SHORT	0
IC501	Δ 8-759-570-29	IC μ PC6757CS		JR604	1-216-295-91	SHORT	0
IC502	8-759-803-42	IC LA6500-FA		JR606	1-216-295-91	SHORT	0
IC503	8-759-803-42	IC LA6500-FA					
IC601	Δ 8-759-594-75	IC TEA1504/N2					
IC602	8-759-592-79	IC BA00AST-V5					
IC603	Δ 8-749-016-35	IC TLP621D4-Y-LF2T					
IC604	8-759-586-17	IC TL1431CZ-AP					
IC605	8-759-637-83	IC PQ12RD8S					
IC607	Δ 8-759-450-47	IC BA05T					
IC608	8-759-231-53	IC TA7805S					
IC701	8-759-595-52	IC CXA8070AP					
IC702	8-749-015-00	IC STK391-110					
IC703	8-759-822-38	IC LA6510					
IC901	Δ 8-759-596-69	IC CXD9528S					
IC902	8-759-594-40	IC CXA8071CP					
IC904	8-759-352-91	IC PST9143NL					
IC905	8-759-527-76	IC M24C08-MN6T					
		<CHIP CONDUCTOR>					
JR001	1-216-296-91	SHORT	0				
JR003	1-216-295-91	SHORT	0				
JR004	1-216-295-91	SHORT	0				
JR006	1-216-295-91	SHORT	0				
		<COIL>					
				L501	1-406-663-21	INDUCTOR 47UH	
				L502	1-406-663-21	INDUCTOR 47UH	
				L503	1-411-594-41	INDUCTOR 5mH	
				L505	1-412-552-11	INDUCTOR 2.2mH	
				L506	1-412-548-31	INDUCTOR 820UH	
				L507	1-414-856-11	INDUCTOR 10UH	
				L508	1-419-198-21	COIL, HORIZONTAL LINEARITY	
				L509	1-419-198-21	COIL, HORIZONTAL LINEARITY	
				L510	1-416-367-11	COIL, HORIZONTAL CENTER	
				L511	1-414-187-11	INDUCTOR 47UH	
				L513	1-414-856-11	INDUCTOR 10UH	
				L602	1-412-529-11	INDUCTOR 22UH	
				L603	1-412-537-31	INDUCTOR 100UH	
				L604	1-406-665-11	INDUCTOR 100UH	
				L606	1-406-665-11	INDUCTOR 100UH	
				L652	1-419-177-11	INDUCTOR	
		<FILTER>					
				LF602	Δ 1-429-180-11	TRANSFORMER, LINE FILTER	

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
<TRANSISTOR>				R514	1-216-081-00	RES,CHIP 22K	5% 1/10W
Q501	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R515	1-249-417-11	CARBON 1K	5% 1/4W F
Q502	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R		R516	1-214-844-81	METAL 150	1% 1/2W
Q503	8-729-035-54	TRANSISTOR 2SJ449		R517	1-216-393-00	METAL OXIDE 2.2	5% 3W F
Q504	8-729-031-89	TRANSISTOR 2SC3941A-Q(TA)		R518	1-216-393-00	METAL OXIDE 2.2	5% 3W F
Q505	8-729-119-76	TRANSISTOR 2SA1175-HFE		R519	1-215-463-00	METAL 56K	1% 1/4W
Q506	8-729-119-76	TRANSISTOR 2SA1175-HFE		R520	1-249-397-11	CARBON 22	5% 1/4W F
Q507	8-729-049-17	TRANSISTOR 2SC5302-SONY-CC		R521	1-249-417-11	CARBON 1K	5% 1/4W F
Q508	8-729-119-78	TRANSISTOR 2SC2785-HFE		R522	1-249-401-11	CARBON 47	5% 1/4W
Q510	8-729-046-60	TRANSISTOR 2SK2605LBSONY		R523	1-215-463-00	METAL 56K	1% 1/4W
Q511	8-729-042-34	TRANSISTOR IRFU110A		R524	1-215-463-00	METAL 56K	1% 1/4W
Q512	8-729-047-72	TRANSISTOR 2SK3155-01		R525	1-249-417-11	CARBON 1K	5% 1/4W F
Q513	8-729-043-41	TRANSISTOR 2SK2098-01MR-F119		R527	1-249-429-11	CARBON 10K	5% 1/4W
Q514	8-729-047-72	TRANSISTOR 2SK3155-01		R528	1-216-081-00	RES,CHIP 22K	5% 1/10W
Q515	8-729-047-72	TRANSISTOR 2SK3155-01		R529	1-249-429-11	CARBON 10K	5% 1/4W F
Q516	8-729-047-72	TRANSISTOR 2SK3155-01		R530	1-216-474-11	METAL OXIDE 82	5% 3W F
Q518	8-729-301-46	TRANSISTOR 2SC2610		R531	1-216-474-11	METAL OXIDE 82	5% 3W F
Q519	8-729-029-68	TRANSISTOR DTC114TSA		R532	1-249-385-11	CARBON 2.2	5% 1/4W F
Q520	8-729-048-51	TRANSISTOR 2SJ516LBS2SONY		R533	1-249-417-11	CARBON 1K	5% 1/4W F
Q521	8-729-119-76	TRANSISTOR 2SA1175-HFE		R534	1-249-405-11	CARBON 100	5% 1/4W F
Q522	8-729-027-23	TRANSISTOR DTA114EKA-T146		R535	1-215-463-00	METAL 56K	1% 1/4W
Q524	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R		R536	1-249-417-11	CARBON 1K	5% 1/4W F
Q525	8-729-119-78	TRANSISTOR 2SC2785-HFE		R537	1-215-463-00	METAL 56K	1% 1/4W
Q601	8-729-029-92	TRANSISTOR DTC143ESA		R538	1-215-905-11	METAL OXIDE 10	5% 3W F
Q602 Δ	8-729-048-61	TRANSISTOR 2SK2843LBS2SONY		R539	1-215-905-11	METAL OXIDE 10	5% 3W F
Q603	8-729-900-53	TRANSISTOR DTC114EK		R540 Δ	1-215-476-91	METAL 200K	1% 1/4W
Q604	8-729-119-78	TRANSISTOR 2SC2785-HFE		R541 Δ	1-215-421-00	METAL 1K	1% 1/4W
Q605	8-729-900-53	TRANSISTOR DTC114EK		R542 Δ	1-215-421-00	METAL 1K	1% 1/4W
Q903	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R543 Δ	1-249-389-11	CARBON 4.7	5% 1/4W F
<RESISTOR>				R544 Δ	1-247-903-00	CARBON 1M	5% 1/4W
R401	1-249-381-11	CARBON 1	5% 1/4W F	R545	1-216-691-11	METAL CHIP 47K	0.50%1/10W
R402	1-215-866-11	METAL OXIDE 330	5% 1W F	R546	1-215-457-00	METAL 33K	1% 1/4W
R403	1-214-661-21	METAL 1.5	1% 1/4W	R547 Δ	1-215-477-00	METAL 220K	1% 1/4W
R404	1-216-669-11	METAL CHIP 5.6K	0.50%1/10W	R548	1-215-423-00	METAL 1.2K	1% 1/4W
R405	1-214-661-21	METAL 1.5	1% 1/4W	R549 Δ	1-215-464-00	METAL 62K	1% 1/4W
R406	1-216-677-11	METAL CHIP 12K	0.50%1/10W	R550	1-215-423-00	METAL 1.2K	1% 1/4W
R407	1-216-057-00	RES,CHIP 2.2K	5% 1/10W	R551	1-216-687-11	METAL CHIP 33K	0.50%1/10W
R408	1-216-073-00	RES,CHIP 10K	5% 1/10W	R552 Δ	1-215-463-00	METAL 56K	1% 1/4W
R409	1-216-669-11	METAL CHIP 5.6K	0.50%1/10W	R553	1-216-698-11	METAL CHIP 91K	0.50%1/10W
R410	1-216-677-11	METAL CHIP 12K	0.50%1/10W	R554	1-218-756-11	METAL CHIP 150K	0.50%1/10W
R500	1-249-377-11	CARBON 0.47	5% 1/4W F	R555	1-216-691-11	METAL CHIP 47K	0.50%1/10W
R501	1-216-025-91	RES,CHIP 100	5% 1/10W	R557	1-216-079-00	RES,CHIP 18K	5% 1/10W
R502	1-218-758-11	METAL CHIP 180K	0.50%1/10W	R558	1-216-671-11	METAL CHIP 6.8K	0.50%1/10W
R503	1-216-675-91	METAL CHIP 10K	0.50%1/10W	R559	1-216-661-11	METAL CHIP 2.7K	0.50%1/10W
R504	1-249-377-11	CARBON 0.47	5% 1/4W F	R560	1-216-679-11	METAL CHIP 15K	0.50%1/10W
R505	1-216-073-00	RES,CHIP 10K	5% 1/10W	R561	1-216-474-11	METAL OXIDE 82	5% 3W F
R506	1-215-481-00	METAL 330K	1% 1/4W	R562	1-215-451-00	METAL 18K	1% 1/4W
R507	1-215-431-00	METAL 2.7K	1% 1/4W	R563	1-249-383-11	CARBON 1.5	5% 1/4W F
R508	1-247-807-31	CARBON 100	5% 1/4W	R564 Δ	1-216-089-91	RES,CHIP 47K	5% 1/10W
R509	1-247-863-91	CARBON 22K	5% 1/4W	R565	1-215-481-00	METAL 330K	1% 1/4W
R510 Δ	1-215-437-00	METAL 4.7K	1% 1/4W	R566	1-215-859-00	METAL OXIDE 22	5% 1W F
R511	1-249-381-11	CARBON 1	5% 1/4W F	R567 Δ	1-216-073-00	RES,CHIP 10K	5% 1/10W
R512	1-249-389-11	CARBON 4.7	5% 1/4W	R568 Δ	1-249-437-11	CARBON 47K	5% 1/4W
R513	1-215-888-00	METAL OXIDE 220	5% 2W F	R569	1-216-643-11	METAL CHIP 470	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



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R572	1-249-437-11	CARBON	47K 5% 1/4W	R633	1-249-429-11	CARBON	10K 5% 1/4W
R573	1-247-887-00	CARBON	220K 5% 1/4W	R634 Δ	1-211-874-71	FUSIBLE MELF	0.12 10% 1/2W
R574	1-249-421-11	CARBON	2.2K 5% 1/4W	R635	1-215-925-11	METAL OXIDE	22K 5% 3W F
R575	1-260-314-11	CARBON	68 5% 1/2W	R636	1-260-119-11	CARBON	47K 5% 1/2W
R576	1-249-437-11	CARBON	47K 5% 1/4W	R637	1-215-902-11	METAL OXIDE	47K 5% 2W F
R577	1-215-908-00	METAL OXIDE	33 5% 3W F	R638 Δ	1-211-874-71	FUSIBLE MELF	0.12 10% 1/2W
R578	1-216-448-11	METAL OXIDE	39 5% 2W F	R639 Δ	1-211-874-71	FUSIBLE MELF	0.12 10% 1/2W
R579	1-247-883-00	CARBON	150K 5% 1/4W	R640	1-249-381-11	CARBON	1 5% 1/4W F
R580	1-216-077-91	RES,CHIP	15K 5% 1/10W	R642	1-216-641-11	METAL CHIP	390 0.50%1/10W
R581	1-249-429-11	CARBON	10K 5% 1/4W	R643	1-215-467-00	METAL	82K 1% 1/4W
R582	1-249-402-11	CARBON	56 5% 1/4W F	R645	1-216-675-91	METAL CHIP	10K 0.50%1/10W
R583	1-216-073-00	RES,CHIP	10K 5% 1/10W	R646	1-216-689-11	RES,CHIP	39K 5% 1/10W
R584	1-216-065-91	RES,CHIP	4.7K 5% 1/10W	R647	1-216-073-00	RES,CHIP	10K 5% 1/10W
R585	1-249-417-11	CARBON	1K 5% 1/4W	R648	1-216-669-11	METAL CHIP	5.6K 0.50%1/10W
R586	1-249-421-11	CARBON	2.2K 5% 1/4W	R649	1-216-663-11	METAL CHIP	3.3K 0.50%1/10W
R587	1-249-417-11	CARBON	1K 5% 1/4W	R650	1-215-471-00	METAL	120K 1% 1/4W
R589	1-249-425-11	CARBON	4.7K 5% 1/4W	R654	1-216-364-11	METAL OXIDE	0.39 5% 2W F
R590	1-215-453-00	METAL	22K 1% 1/4W	R655	1-247-807-31	CARBON	100 5% 1/4W
R591	1-214-844-81	METAL	150 1% 1/2W	R656	1-215-893-11	METAL OXIDE	1.5K 5% 2W F
R592	1-214-844-81	METAL	150 1% 1/2W	R660	1-260-119-11	CARBON	47K 5% 1/2W
R594	1-216-033-00	RES,CHIP	220 5% 1/10W	R661	1-215-902-11	METAL OXIDE	47K 5% 2W F
R595 Δ	1-215-477-00	METAL	220K 1% 1/4W	R663	1-216-663-11	METAL CHIP	3.3K 0.50%1/10W
R596	1-215-423-00	METAL	1.2K 1% 1/4W	R665	1-216-663-11	METAL CHIP	3.3K 0.50%1/10W
R597	1-259-880-11	CARBON	2.2M 5% 1/4W	R703	1-249-410-11	CARBON	270 5% 1/4W
R599	1-249-417-11	CARBON	1K 5% 1/4W	R704	1-216-673-11	METAL CHIP	8.2K 0.50%1/10W
R600	1-205-998-11	CEMENTED	1 5% 10W	R705	1-216-667-11	METAL CHIP	4.7K 0.50%1/10W
R602	1-219-513-11	CARBON	4.7M 5% 1/2W	R706	1-216-667-11	METAL CHIP	4.7K 0.50%1/10W
R603	1-249-403-11	CARBON	68 5% 1/4W	R707	1-216-659-11	METAL CHIP	2.2K 0.50%1/10W
R604 Δ	1-220-827-91	REGISTER	560K 5% 1/2W	R708	1-216-659-11	METAL CHIP	2.2K 0.50%1/10W
R605	1-202-933-61	FUSIBLE	0.1 10% 1/2W	R709	1-216-659-11	METAL CHIP	2.2K 0.50%1/10W
R606	1-218-768-11	METAL CHIP	470K 0.50%1/10W	R710	1-216-659-11	METAL CHIP	2.2K 0.50%1/10W
R607	1-216-081-00	RES,CHIP	22K 5% 1/10W	R711	1-216-346-00	METAL OXIDE	0.56 5% 1W F
R608	1-215-473-00	METAL	150K 1% 1/4W	R712	1-215-860-11	METAL OXIDE	33 5% 1W F
R609	1-216-665-11	METAL CHIP	3.9K 0.50%1/10W	R713	1-216-347-11	METAL OXIDE	0.68 5% 1W F
R610	1-216-651-11	METAL CHIP	1K 0.50%1/10W	R716	1-215-860-11	METAL OXIDE	33 5% 1W F
R611	1-216-009-91	RES,CHIP	22 5% 1/10W	R717	1-216-353-00	METAL OXIDE	2.2 5% 1W F
R612	1-247-791-91	CARBON	22 5% 1/4W	R718	1-215-863-11	METAL OXIDE	100 5% 1W F
R613 Δ	1-219-513-11	CARBON	4.7M 5% 1/2W	R719	1-216-679-11	METAL CHIP	15K 0.50%1/10W
R614	1-216-345-11	METAL OXIDE	0.47 5% 1W F	R724	1-216-422-11	METAL OXIDE	18 5% 1W F
R615	1-216-117-00	RES,CHIP	680K 5% 1/10W	R727	1-216-679-11	METAL CHIP	15K 0.50%1/10W
R616	1-216-121-91	RES,CHIP	1M 5% 1/10W	R728	1-215-863-11	METAL OXIDE	100 5% 1W F
R617	1-216-025-91	RES,CHIP	100 5% 1/10W	R729	1-216-353-00	METAL OXIDE	2.2 5% 1W F
R618	1-216-635-11	METAL CHIP	220 0.50%1/10W	R730	1-216-421-11	METAL OXIDE	12 5% 1W F
R619	1-215-893-11	METAL OXIDE	1.5K 5% 2W F	R731	1-216-295-91	SHORT	0
R620	1-216-687-11	METAL CHIP	33K 0.50%1/10W	R733	1-216-295-91	SHORT	0
R621	1-216-098-00	RES,CHIP	110K 5% 1/10W	R735	1-216-659-11	METAL CHIP	2.2K 0.50%1/10W
R622	1-247-791-91	CARBON	22 5% 1/4W	R737	1-216-659-11	METAL CHIP	2.2K 0.50%1/10W
R623	1-216-615-91	METAL CHIP	33 0.50%1/10W	R739	1-216-073-00	RES,CHIP	10K 5% 1/10W
R624	1-216-611-11	METAL CHIP	22 0.50%1/10W	R741	1-249-377-11	CARBON	0.47 5% 1/4W F
R625	1-260-332-51	CARBON	2.2K 5% 1/2W	R743	1-249-377-11	CARBON	0.47 5% 1/4W F
R626	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	R745	1-216-298-00	RES,CHIP	2.2 5% 1/10W
R627	1-249-377-11	CARBON	0.47 5% 1/4W F	R747	1-216-298-00	RES,CHIP	2.2 5% 1/10W
R628	1-216-674-11	METAL CHIP	9.1K 0.50%1/10W	R753	1-216-679-11	METAL CHIP	15K 0.50%1/10W
R629	1-249-441-11	CARBON	100K 5% 1/4W	R755	1-216-667-11	METAL CHIP	4.7K 0.50%1/10W
R630 Δ	1-211-874-71	FUSIBLE MELF	0.12 10% 1/2W	R903	1-216-049-91	RES,CHIP	1K 5% 1/10W
R631 Δ	1-211-874-71	FUSIBLE MELF	0.12 10% 1/2W	R904	1-216-049-91	RES,CHIP	1K 5% 1/10W

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

The components identified by \boxtimes 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.

CPD-E200E



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R905	1-216-295-91	SHORT	0			<SPARK GAP>	
R906	1-216-073-00	RES,CHIP	10K	5%	1/10W		
R907	1-260-087-81	CARBON	100	5%	1/2W	SG501 1-519-422-11	GAP, SPARK
R908	1-216-057-00	RES,CHIP	2.2K	5%	1/10W		
R909	1-216-057-00	RES,CHIP	2.2K	5%	1/10W		
R912	1-216-049-91	RES,CHIP	1K	5%	1/10W		
R913	1-216-025-91	RES,CHIP	100	5%	1/10W	T501 Δ X-4560-154-1	TRANSFORMER ASSY, FLYBACK (NX-4404//J1L4)
R914	1-216-025-91	RES,CHIP	100	5%	1/10W	T503 1-433-979-11	TRANSFORMER, FERRITE (DFT)
R915	1-216-065-91	RES,CHIP	4.7K	5%	1/10W	T504 1-433-978-11	TRANSFORMER, HORIZONTAL DRIVE
R916	1-216-077-91	RES,CHIP	15K	5%	1/10W	T505 1-431-413-11	TRANSFORMER, FERRITE (HST)
R917	1-216-077-91	RES,CHIP	15K	5%	1/10W	T601 Δ 1-433-847-14	TRANSFORMER, CONVERTER (SRT)
R918	1-216-049-91	RES,CHIP	1K	5%	1/10W		
R919	1-216-025-91	RES,CHIP	100	5%	1/10W		
R920	1-216-049-91	RES,CHIP	1K	5%	1/10W		
R921	1-216-295-91	SHORT	0			TH501 1-807-796-11	THERMISTOR
R922	1-216-073-00	RES,CHIP	10K	5%	1/10W	TH600 Δ 1-803-339-11	THERMISTOR, NTC
R923	1-216-295-91	SHORT	0			TH601 1-803-540-11	THERMISTOR
R924	1-216-025-91	RES,CHIP	100	5%	1/10W		
R925	1-216-113-00	RES,CHIP	470K	5%	1/10W		
R926	1-216-025-91	RES,CHIP	100	5%	1/10W		
R927	1-216-295-91	SHORT	0				
R928	1-216-025-91	RES,CHIP	100	5%	1/10W	VA601 Δ 1-801-268-51	VARISTOR TNR14V471K660
R929	1-216-057-00	RES,CHIP	2.2K	5%	1/10W	VA602 Δ 1-801-268-51	VARISTOR TNR14V471K660
R931	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W		
R932	1-216-077-91	RES,CHIP	15K	5%	1/10W		
R933	1-249-417-11	CARBON	1K	5%	1/4W		
R934	1-249-429-11	CARBON	10K	5%	1/4W		
R935	1-216-025-91	RES,CHIP	100	5%	1/10W		
R936	1-216-025-91	RES,CHIP	100	5%	1/10W		
R937	1-216-025-91	RES,CHIP	100	5%	1/10W		
R938	1-216-025-91	RES,CHIP	100	5%	1/10W		
R940	1-216-661-11	METAL CHIP	2.7K	0.50%	1/10W		
R943	1-249-413-11	CARBON	470	5%	1/4W		
R951	1-216-025-91	RES,CHIP	100	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		
R957	1-216-017-91	RES,CHIP	47	5%	1/10W		
R958	1-216-017-91	RES,CHIP	47	5%	1/10W		
		<VARIABLE RESISTOR>					
\boxtimes RV501	Δ 1-241-767-21	RES, ADJ, CERMET 100K (HV ADJ)					
		3-710-578-01 COVER, VOLUME, 6 MOLD ; RV501					
		<RELAY>					
RY500	1-515-669-21	RELAY					
RY601	Δ 1-755-279-11	RELAY					
		<SWITCH>					
S602	Δ 1-771-757-11	SWITCH, AC POWER PUSH					
S901	1-692-431-21	SWITCH, TACTILE (RESET)					
		<THERMISTOR>					
		TH501 1-807-796-11	THERMISTOR				
		TH600 Δ 1-803-339-11	THERMISTOR, NTC				
		TH601 1-803-540-11	THERMISTOR				
		<VARISTOR>					
		VA601 Δ 1-801-268-51	VARISTOR TNR14V471K660				
		VA602 Δ 1-801-268-51	VARISTOR TNR14V471K660				
		<CRYSTAL>					
X901	1-767-826-21	VIBRATOR, CRYSTAL					
X902	1-767-933-11	OSCILLATOR, CERAMIC					

		* A-1372-712-A	H BOARD, COMPLETE				

		<CAPACITOR>					
C801	1-104-664-11	ELECT	47MF	20%	10V		
		<CONNECTOR>					
CN801	*1-564-510-11	PLUG, CONNECTOR 7P					
		<DIODE>					
D803	8-719-064-11	DIODE SPR-325MVW					
		<TRANSISTOR>					
Q801	8-729-119-78	TRANSISTOR 2SC2785-HFE					
Q802	8-729-119-78	TRANSISTOR 2SC2785-HFE					
		<RESISTOR>					
R801	1-215-417-00	METAL	680	1%	1/4W		
R802	1-215-421-00	METAL	1K	1%	1/4W		
R803	1-215-427-00	METAL	1.8K	1%	1/4W		

CPD-E200E



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R804	1-215-433-00	METAL	3.3K	1%	1/4W		
R805	1-247-807-31	CARBON	100	5%	1/4W		
R806	1-247-807-31	CARBON	100	5%	1/4W		
R807	1-249-411-11	CARBON	330	5%	1/4W		
R808	1-249-413-11	CARBON	470	5%	1/4W		
						<SWITCH>	
				S801	1-771-734-11	SWITCH, TACTILE (BRIGHT/MENU/CONT)	

CPD-E200E

9-978-669-01 2000AL24126-1