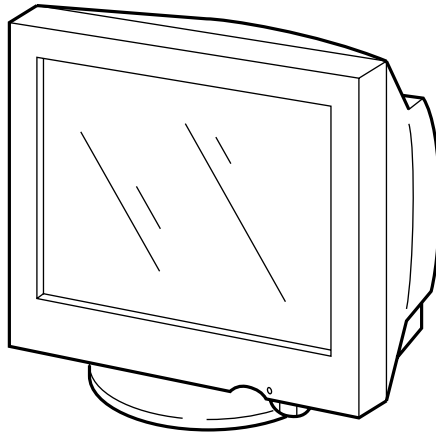


CPD-G500

SERVICE MANUAL



*US Model
Canadian Model*

AEP Model

Chassis No. SCC-L22C-A

S.Hemisphere Model

Chassis No. SCC-L22G-A

Equator Model

Chassis No. SCC-L22F-A

G1 CHASSIS

SPECIFICATIONS

CRT	0.24 mm aperture grille pitch 21 inches measured diagonally 90-degree deflection FD Trinitron	Deflection frequency*	Horizontal: 30 to 121 kHz Vertical: 48 to 160 Hz
Viewable image size	Approx. 403.8 × 302.2 mm (w/h) (16 × 12 inches) 19.8" viewing image	AC input voltage/current Power consumption	100 to 240 V, 50 – 60 Hz, 2.0 – 1.0 A Approx. 145 W
Resolution		Dimensions	Approx. 497 × 480 × 478 mm (w/h/d) (19 ⁵ / ₈ × 19 × 18 ⁷ / ₈ inches)
Maximum	Horizontal: 2048 dots Vertical: 1536 lines	Mass	Approx. 32 kg (70 lb 9 oz)
Recommended	Horizontal: 1600 dots Vertical: 1200 lines	Plug and Play	DDC1/2B/2Bi, GTF**
Standard image area	Approx. 388 × 291 mm (w/h) (15 ³ / ₈ × 11 ¹ / ₂ inches) or Approx. 364 × 291 mm (w/h) (14 ³ / ₈ × 11 ¹ / ₂ inches)		

- * Recommended horizontal and vertical timing condition
- Horizontal sync width duty should be more than 4.8% of total horizontal time or 0.8 μs, whichever is larger.
 - Horizontal blanking width should be more than 2.3 μsec.
 - Vertical blanking width should be more than 450 μsec.
- ** If the input signal is Generalized Timing Formula (GTF) compliant, the GTF feature of the monitor will automatically provide an optimal image for the screen.

Design and specifications are subject to change without notice.

TRINITRON® COLOR COMPUTER DISPLAY

SONY®

SAFETY CHECK-OUT

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

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

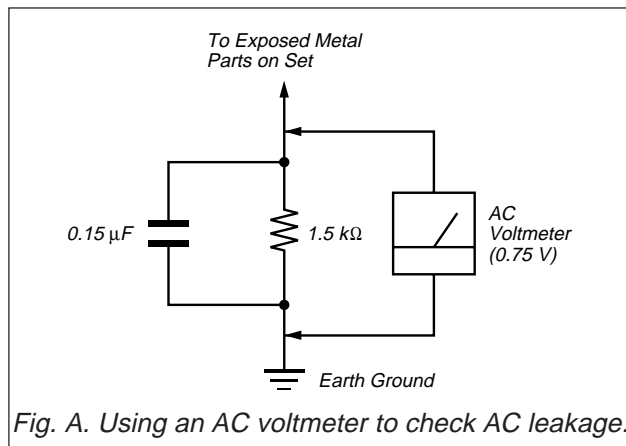


Fig. A. Using an AC voltmeter to check AC leakage.

LEAKAGE TEST

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

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

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

WARNING!!

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

SAFETY-RELATED COMPONENT WARNING!!

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

AVERTISSEMENT!!

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

ATTENTION AUX COMPOSANTS RELATIFS À LA SÉCURITÉ!!

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

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.

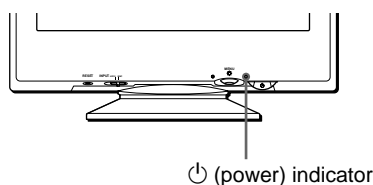
Power mode	Power consumption	⏻ (power) indicator
normal operation	≤ 145 W	green
1 standby	≤ 100 W	green and orange alternate
2 suspend (sleep)*	≤ 15 W	green and orange alternate
3 active off** (deep sleep)*	Approx. 1 W	orange
power off	0 W	off

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

** When your computer enters a power saving mode, the input signal is cut and NO INPUT SIGNAL appears on the screen. After a few seconds, the monitor enters a power saving mode.

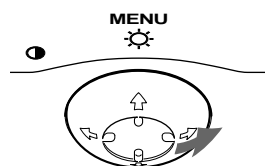
DIAGNOSIS

This monitor is equipped with a self-diagnosis function. If there is a problem with your monitor or computer(s), 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 Remove any plugs from the video input 1 and 2 connectors, or turn off the connected computer(s).
- 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 cables and check the condition of your computer(s).

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.

TIMING SPECIFICATION

MODE AT PRODUCTION	MODE 1	MODE 2	MODE 3	MODE 4
RESOLUTION	1600 X 1200	1920 X 1440	1800 X 1440	1800 X 1350
CLOCK	229.500 MHz	297.000 MHz	299.436 MHz	300.000 MHz
— HORIZONTAL —				
H-FREQ	106.250 kHz	112.500 kHz	120.740 kHz	120.968 kHz
	usec	usec	usec	usec
H. TOTAL	9.412	8.889	8.282	8.267
H. BLK	2.440	2.424	2.271	2.267
H. FP	0.279	0.485	0.668	0.480
H. SYNC	0.837	0.754	0.481	0.667
H. BP	1.325	1.185	1.122	1.120
H. ACTIV	6.972	6.465	6.011	6.000
— VERTICAL —				
V. FREQ(HZ)	85.000 Hz	75.000 Hz	80.120 Hz	85.009 Hz
	lines	lines	lines	lines
V. TOTAL	1250	1500	1507	1423
V. BLK	50	60	67	73
V. FP	1	1	1	1
V. SYNC	3	3	3	3
V. BP	46	56	63	69
V. ACTIV	1200	1440	1440	1350
— SYNC —				
INT(G)	NO	NO	NO	NO
EXT(H/V)/POLARITY	YES P/P	YES P/P	YES P/P	YES P/P
EXT(CS) /POLARITY	NO	NO	NO	NO
INT/NON INT	NON INT	NON INT	NON INT	NON INT

99.07.02 VER.

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Note: Hand degauss must be used on stand-by or power-off condition.

This model has an automatic earth magnetism correction function by using an earth magnetism sensor and a LCC coil. When using a hand degauss while monitor (LCC coil) is being operated, it sometimes gets magnetized, and the system may not work properly as a result.

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.

SECTION 1 GENERAL

Precautions

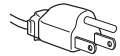
Warning on power connections

- Use the supplied power cord. If you use a different power cord, be sure that it is compatible with your local power supply.

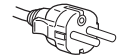
For the customers in the U.S.A.

If you do not use the appropriate cord, this monitor will not conform to mandatory FCC standards.

Example of plug types



for 100 to 120 V AC



for 200 to 240 V AC

- 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 2 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.

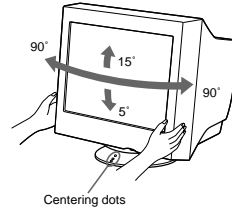
Transportation

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.

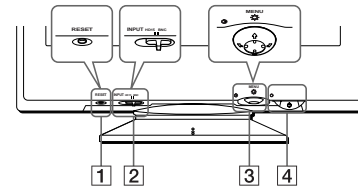
Hold the monitor at the bottom with both hands when you turn it horizontally or vertically. Be careful not to pinch your fingers at the back of the monitor when you tilt the monitor up vertically.



Identifying parts and controls

See the pages in parentheses for further details.

Front



1 RESET (reset) button (page 16)

This button resets the adjustments to the factory settings.

2 INPUT (input) switch (page 8)

This switch selects the HD15 or BNC video input signal.

3 Control button (page 10)

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

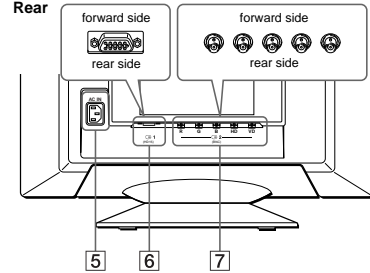
4 (power) switch and indicator (pages 7, 16, 20)

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.

5 AC IN connector (page 7)

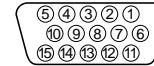
This connector provides AC power to the monitor.

Rear



6 Video input 1 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	DDC + 5V*
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.

7 Video input 2 connector (BNC) (page 6)

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

US

Setup

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

- Power cord (1)
- HD15 video signal cable (1)
- Macintosh adapter (1)
- Windows Monitor Information Disk (1)
- Warranty card (1)
- Notes on cleaning the screen's surface (1)
- This instruction manual (1)

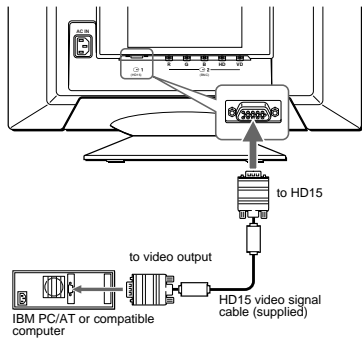
Step 1: Connect your monitor to your computer

Turn off the monitor and computer before connecting.

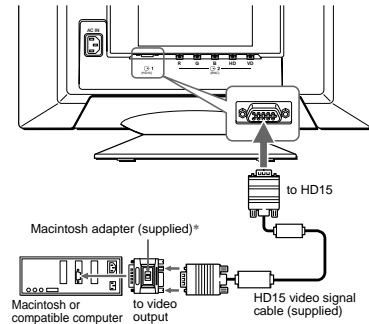
Notes

- Do not touch the pins of the video signal cable connector as this might bend the pins.
- When connecting the video signal cable, check the alignment of the HD15 connector. Do not force the connector in the wrong way or the pins might bend.

■ Connecting to an IBM PC/AT or compatible computer

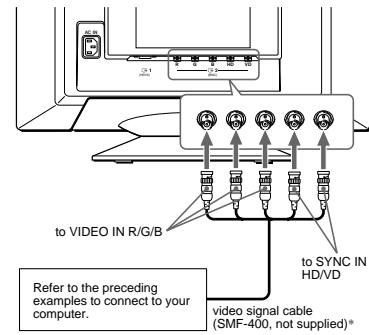


■ Connecting to a Macintosh or compatible computer



* Connect the supplied Macintosh adapter to the computer before connecting the cable. This adapter is compatible with Macintosh LC, Performa, Quadra, Power Macintosh and Power Macintosh G3 series computers (sold before January, 1999). If you are connecting to a Power Macintosh G3 series that sold after January 1999, you will need a different adapter (not supplied). Macintosh II series and some older versions of PowerBook models may need an adapter with micro switches (not supplied).

■ Connecting to the five BNC connectors



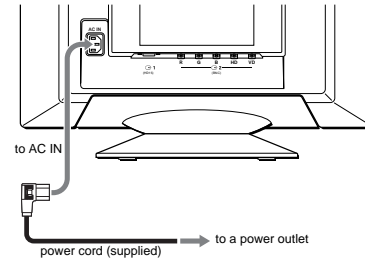
* Connect the cables from left to right in the following order: Red-Green-Blue-HD-VD.

Note

Plug & Play (DDC) does not apply to the five BNC connectors. If you want to use Plug & Play, connect your computer to the HD15 connector using the supplied video signal cable.

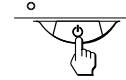
Step 2: Connect the power cord

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



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, try changing the input signal (page 8), and confirm that your computer's graphic board is completely seated in the correct bus slot.
- 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 – 121 kHz, and the vertical frequency is between 48 – 160 Hz.

For more information about the on-screen messages, see "Trouble symptoms and remedies" on page 18.

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.

US

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:

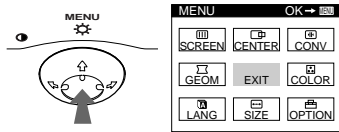
- High Color (16 bit) → 65,536 colors
- True Color (24 bit) → about 16.77 million colors

In true color mode (24 bit), speed may be slower.

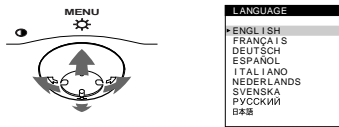
Selecting the on-screen menu language (LANG)

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 10 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.**



- 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

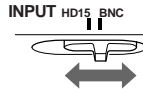
Press the RESET button while the LANGUAGE menu is displayed on the screen.

Selecting the input signal

You can connect two computers to this monitor using the HD15 and BNC connectors. To select one of the two computers, use the INPUT switch.

Move the INPUT switch.

The selected connector appears on the screen for 3 seconds.



"HD15" or "BNC" appears on the screen.

Note

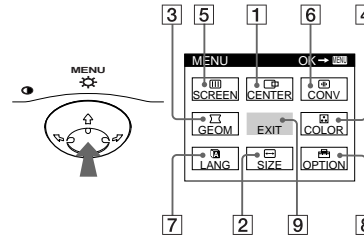
If no signal is input to the selected connector, NO INPUT SIGNAL appears on the screen. After a few seconds, the monitor enters the power saving mode. If this happens, switch to the other connector.

Customizing Your Monitor

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

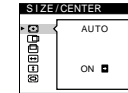
Navigating the menu

Press the center of the control button to display the main MENU on your screen. See page 10 for more information on using the control button.

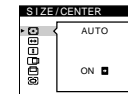


Use the control button to select one of the following menus.

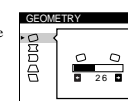
- 1 **CENTER (page 11)**
Selects the CENTER menu to adjust the picture's centering, size or zoom.



- 2 **SIZE (page 11)**
Selects the SIZE menu to adjust the picture's size, centering or zoom.



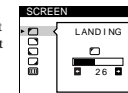
- 3 **GEOM (page 12)**
Selects the GEOM menu to adjust the picture's rotation and shape.



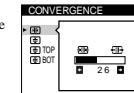
- 4 **COLOR (page 13)**
Selects the COLOR menu to adjust the picture's color temperature. You can use this to match the monitor's colors to a printed picture's colors.



- 5 **SCREEN (page 13)**
Selects the SCREEN menu to adjust the picture's quality. You can adjust the landing and moire cancellation effect.



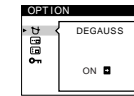
- 6 **CONV (page 12)**
Selects the CONV menu to adjust the picture's horizontal and vertical convergence.



- 7 **LANG (page 8)**
Select LANG to choose the on-screen menu's language.



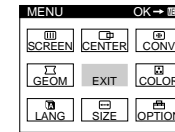
- 8 **OPTION (page 15)**
Selects OPTION to adjust the monitor's options. The options include:
 - degaussing the screen
 - changing the on-screen menu position
 - locking the controls



- 9 **EXIT**
Selects 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.



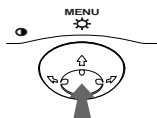
the resolution of the current input signal
 the horizontal and vertical frequencies of the current input signal

US

■ Using the control button

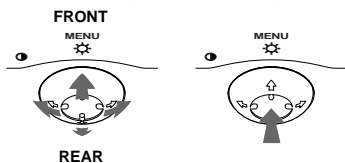
1 Display the main MENU.

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



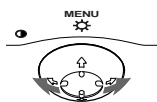
2 Select the menu you want to adjust.

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.



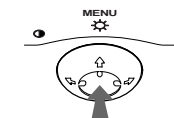
3 Adjust the menu.

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 16 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 the signals from the currently selected input connector.

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 (☉).

If you are using the sRGB mode

If you selected the sRGB mode in the COLOR menu, the following BRIGHTNESS/CONTRAST menu appears on the screen.



For more information about using the sRGB mode, see "Adjusting the color of the picture (COLOR)" on page 13.

The menu automatically disappears after about 3 seconds.

Automatically sizing and centering the picture (AUTO)

You can easily adjust the picture to fill the screen by using the (AUTO) item in the SIZE/CENTER menu.

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 First move the control button ↓/↑ to select (AUTO). Then move the control button →.

The picture automatically fills the screen.



Notes

- This function is intended for use with a computer running Windows or similar graphic user interface software that provides a full-screen picture. It may not work properly if the background color is dark or if the input picture does not fill the screen to the edges (such as an MS-DOS prompt).
- Pictures with an aspect ratio of 5:4 (resolution: 1280 × 1024, 1600 × 1280) are displayed at their actual resolution and do not fill the screen to the edges.
- The displayed image moves for a few seconds while this function is performed. This is not a malfunction.

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 or 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 (zoom), and move ←/→ to enlarge or reduce the picture.

Adjusting the centering of the picture (CENTER)

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 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 (zoom), and move ←/→ to adjust the centering.

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 ↓/↑ to select (zoom), and move ←/→ to enlarge or reduce the picture.


Note


Adjustment stops when either the horizontal or vertical size reaches its maximum or minimum value.






US

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 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 the desired adjustment item. Then move the control button \leftarrow/\rightarrow to make the adjustment.**


Select	To
	horizontally shift red or blue shadows
	vertically shift red or blue shadows
	vertically shift red or blue shadows at the top of the screen
	vertically shift red or blue shadows at the bottom of the screen








Adjusting the quality of the picture (SCREEN)

The SCREEN settings allow you to adjust the quality of the picture by controlling the moire and landing.

- If the color is irregular at the corners of the screen, adjust the landing.
- If elliptical or wavy patterns appear on the screen, cancel the moire.

The CANCEL MOIRE and MOIRE ADJUST settings are stored in memory for the current input signal. All other 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  SCREEN and press the center of the control button again.**
The SCREEN 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
	reduce any color irregularities in the screen's top left corner to a minimum.
	reduce any color irregularities in the screen's top right corner to a minimum.
	reduce any color irregularities in the screen's bottom left corner to a minimum.
	reduce any color irregularities in the screen's bottom right corner to a minimum.
	turn the moire cancellation function ON or OFF.  (MOIRE ADJUST) appears in the menu when you select ON.
	adjust the degree of moire cancellation until the moire 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




Note

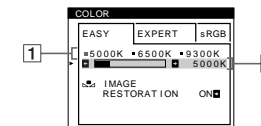
The picture may become fuzzy when CANCEL MOIRE is set to ON.

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 color to a printed picture's colors.

- 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 \leftarrow/\rightarrow to select the adjustment mode.**
There are three types of adjustment modes, EASY, EXPERT and sRGB.
- 4 First move the control button \downarrow/\uparrow to select the desired adjustment item. Then move the control button \leftarrow/\rightarrow to make the adjustment.**
Adjust the selected mode according to the following instructions.

EASY mode



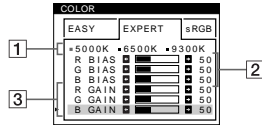
- 1 Move the control button \downarrow/\uparrow to select the color temperature row **1**. Then move the control button \leftarrow/\rightarrow to select a color temperature.**
The preset color temperatures are 5000K, 6500K, and 9300K. Since the default setting is 9300K, the whites will change from a bluish hue to a reddish hue as the temperature is lowered to 6500K and 5000K.
- 2 If necessary, fine tune the color temperature. Move the control button \downarrow/\uparrow to select the color temperature row **2**. Then move the control button \leftarrow/\rightarrow to fine tune the color temperature.**
If you fine tune the color temperature, the new color settings are stored in memory for each of the three color temperatures and item **1** of the on-screen menu changes as follows.
 - [5000K] \rightarrow [1]
 - [6500K] \rightarrow [2]
 - [9300K] \rightarrow [3]

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(continued)

EXPERT mode

You can make additional adjustments to the color in greater detail by selecting the EXPERT mode.



- 1 Move the control button \uparrow/\downarrow to select the color temperature row [1]. Then move the control button \leftarrow/\rightarrow to select a color temperature.
- 2 Move the control button \uparrow/\downarrow to select the adjustment item [2]. Then move the control button \leftarrow/\rightarrow to adjust the BIAS (black level). This adjusts the dark areas of an image.
- 3 Move the control button \uparrow/\downarrow to select the adjustment item [3]. Then move the control button \leftarrow/\rightarrow to adjust the GAIN (white level). This adjusts the light areas of an image.

You can adjust the R (red), G (green), B (blue) component of the input signal when making changes to items [2] and [3].

If you fine tune the color temperature, the new color settings are stored in memory for each of the three color temperatures and item [1] of the on-screen menu change as follows.

- [5000K] \rightarrow [1] 1
- [6500K] \rightarrow [1] 2
- [9300K] \rightarrow [1] 3

Setting the color temperature for each of the video input connectors

You can set the fine tuning of the color temperature in EASY or EXPERT mode for each of the video input connectors (HD15 and BNC).

- 1 Select the same adjustment mode and color temperature in the COLOR menu for both HD15 and BNC.
- 2 Fine tune the color temperature in each menu for HD15 and BNC.
The settings are stored in memory for each of the HD15 and BNC connectors.

For information on how to select the connector, see page 8.

sRGB mode

The sRGB color setting is an industry standard color space protocol designed to correlate the displayed and printed colors of sRGB compliant computer products. To adjust the colors to the sRGB profile, simply select the sRGB mode in the COLOR menu. However, in order to display the sRGB colors correctly ($\gamma=2.2$, 6500K), you must set your computer to the sRGB profile and adjust the brightness (\odot) and contrast (\bullet) to the numbers shown in the menu. For information on how to change the brightness (\odot) and contrast (\bullet), see page 10.

Note

Your computer and other connected products (such as a printer), must be sRGB compliant.



Restoring the color from the EASY or sRGB menus

The colors of most display monitors tend to gradually lose brilliance over several years of service. The IMAGE RESTORATION feature found in the EASY and sRGB menus allows you to restore the color to the original factory quality levels. The explanation below explains how to restore the monitor's color from the EASY menu.

- 1 Move the control button \leftarrow/\rightarrow to select EASY or sRGB mode.
- 2 First move the control button \uparrow/\downarrow to select IMAGE RESTORATION . Then move the control button \rightarrow .
The picture disappears while the color is being restored (about 2 seconds). After the color is restored, the picture reappears on the screen again.

Notes

- Before using this feature, the monitor must be in normal operation mode (green power indicator on) for at least 30 minutes. If the monitor goes into power saving mode, you must return the monitor to normal operation mode and wait for 30 minutes for the monitor to be ready. You may need to adjust your computer's power saving settings to keep the monitor in normal operation mode for the full 30 minutes. If the monitor is not ready, the following message will appear.



- The monitor may gradually lose its ability to perform this function due to the natural aging of the picture tube.

Additional settings (OPTION)

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

The screen is degaussed for about 2 seconds. If a second degauss cycle is needed, allow a minimum interval of 20 minutes for the best result.

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 \uparrow/\downarrow 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

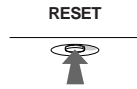
To protect adjustment data by locking the controls, first move the control button \uparrow/\downarrow to select CONTROL LOCK . Then move the control button \rightarrow , to select ON. Only the OPTION (power) switch, EXIT, and CONTROL LOCK of the OPTION menu will operate. If any other items are selected,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

To cancel the control lock

Repeat the procedure above and set CONTROL LOCK to OFF.

Resetting the adjustments

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



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 8)
- adjustment mode in the COLOR menu (EASY, EXPERT, sRGB) (page 13)
- on-screen menu position (page 15)
- control lock (page 15)

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  (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 - 121 kHz, vertical: 48 - 160 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	≤ 145 W	green
1 standby	≤ 100 W	green and orange alternate
2 suspend (sleep)*	≤ 15 W	green and orange alternate
3 active off** (deep sleep)*	Approx. 1 W	orange
power off	0 W	off

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

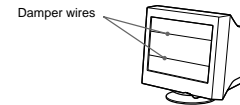
** When your computer enters a power saving mode, the input signal is cut and NO INPUT SIGNAL appears on the screen. After a few seconds, the monitor enters a power saving mode.

Troubleshooting

Before contacting technical support, refer to this section.

If thin lines appear on your screen (damper wires)

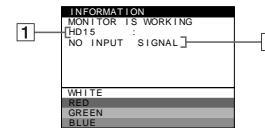
The lines you are experiencing on your screen are normal for the Trinitron monitor and are not a malfunction. These are shadows from the damper wires used to stabilize the aperture grille and are most noticeable when the screen's background is light (usually white). The aperture grille is the essential 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 there is something wrong with the input signal, one of the following messages appears on the screen.

If NO INPUT SIGNAL appears on the screen



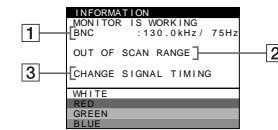
1 The selected connector

This message shows the currently selected connector (HD15 or BNC).

2 The input signal condition NO INPUT SIGNAL

This indicates that no signal is input, or that no signal is input from the selected connector.

If OUT OF SCAN RANGE appears on the screen



1 The selected connector and the frequencies of the current input signal

This message shows the currently selected connector (HD15 or BNC). If the monitor recognizes the frequencies of the current input signal, the horizontal and vertical frequencies are also displayed.

2 The input signal condition OUT OF SCAN RANGE

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

3 The remedies





CHANGE SIGNAL TIMING appears on the screen. If you are replacing an old monitor with this monitor, reconnect the old monitor. Then adjust the computer's graphic board so that the horizontal frequency is between 30 - 121 kHz, and the vertical frequency is between 48 - 160 Hz.


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For more information, see "Trouble symptoms and remedies" on page 18.

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 20) if the following recommendations do not resolve the problem.

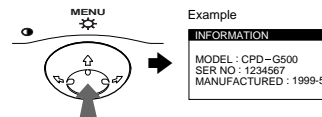
Symptom	Check these items
No picture	
If the  (power) indicator is not lit	<ul style="list-style-type: none"> Check that the power cord is properly connected. Check that the  (power) switch is in the "on" position.
If the NO INPUT SIGNAL message appears on the screen, or if the  (power) indicator is 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. If you are using the five BNC connectors, connect them in the correct order (from left to right: Red-Green-Blue-HD-VD) (page 6). Check that the INPUT switch setting is correct (page 8). 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"> 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 – 121 kHz Vertical: 48 – 160 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 20).
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-G500/G500J") from among the Sony monitors in the Windows 95/98 monitor selection screen. If you choose to select "Plug and Play," connect the monitor to the computer with the HD15 video signal cable. You cannot use the five BNC connectors.
If using a Macintosh system	<ul style="list-style-type: none"> Check that the Macintosh adapter 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 21" 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 10). Degauss the monitor* (page 15). If CANCEL MOIRE is ON, the picture may become fuzzy. Decrease the moire cancellation effect or set CANCEL MOIRE to OFF (page 13).

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"> Perform the  (AUTO) function (page 11). Adjust the size (page 11) or centering (page 11). 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 12).
Wavy or elliptical pattern (moire) is visible	<ul style="list-style-type: none"> Set CANCEL MOIRE to ON and adjust the degree of moire cancellation until the moire is at a minimum (page 13). <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 15). 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. Adjust the landing (page 13).
White does not look white	<ul style="list-style-type: none"> Adjust the color temperature (page 13). Check that the five BNC connectors are connected in the correct order (from left to right: Red-Green-Blue-HD-VD) (page 6).
Letters and lines show red or blue shadows at the edges	<ul style="list-style-type: none"> Adjust the convergence (page 12).
Monitor buttons do not operate (O=M appears on the screen)	<ul style="list-style-type: none"> If the control lock is set to ON, set it to OFF (page 15).
COLOR RETURN function does not operate	<ul style="list-style-type: none"> Before using this function, the monitor must be in normal operation mode (green power indicator on) for at least 30 minutes. For more information on using the IMAGE RESTORATION function, see page 15. Adjust the computer's power saving settings to keep the monitor in normal operation mode for more than 30 minutes. The monitor may gradually lose its ability to perform this function due to the natural aging of the picture tube.
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 two 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.





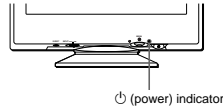
If the problem persists, call your authorized Sony dealer and give the following information.

- Model name: CPD-G500
- Serial number
- Name and specifications of your computer and graphics board.



US

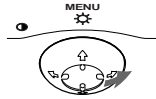
Self-diagnosis function

This monitor is equipped with a self-diagnosis function. If there is a problem with your monitor or computer(s), 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 Remove any plugs from the video input 1 and 2 connectors, or turn off the connected computer(s).
- 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 cables and check the condition of your computer(s).

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.

Specifications

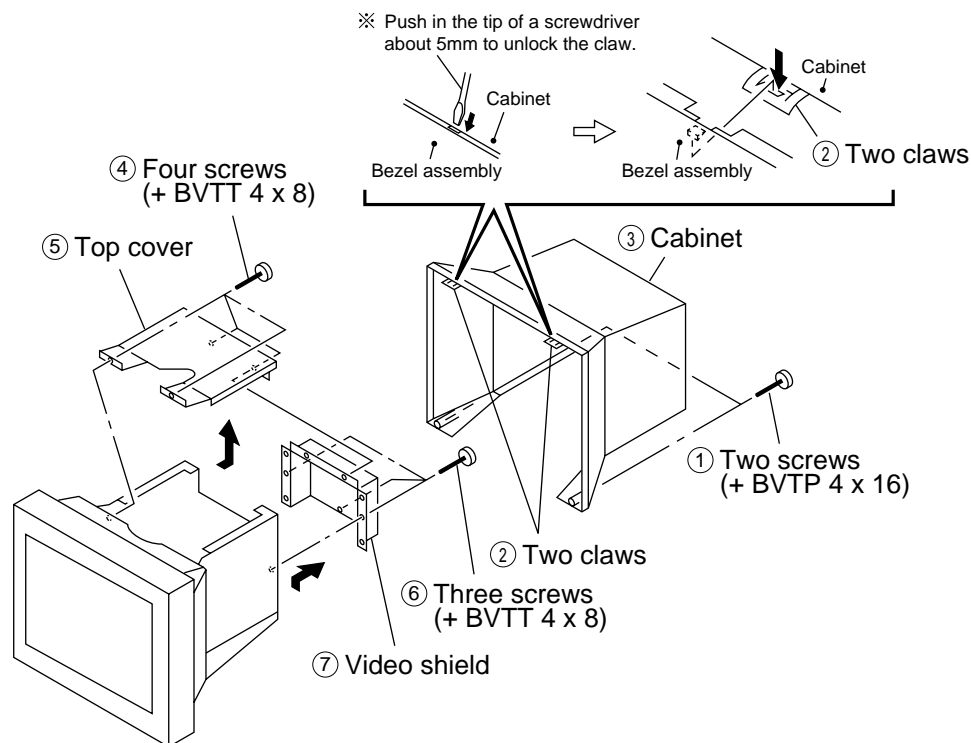
CRT	0.24 mm aperture grille pitch 21 inches measured diagonally 90-degree deflection FD Trinitron
Viewable image size	Approx. 403.8 × 302.2 mm (w/h) (16 × 12 inches) 19.8" viewing image
Resolution	Maximum Horizontal: 2048 dots Vertical: 1536 lines Recommended Horizontal: 1600 dots Vertical: 1200 lines
Standard image area	Approx. 388 × 291 mm (w/h) (15 ³ / ₈ × 11 ¹ / ₂ inches) or Approx. 364 × 291 mm (w/h) (14 ³ / ₈ × 11 ¹ / ₂ inches)
Deflection frequency*	Horizontal: 30 to 121 kHz Vertical: 48 to 160 Hz
AC input voltage/current	100 to 240 V, 50 – 60 Hz, 2.0 – 1.0 A
Power consumption	Approx. 145 W
Dimensions	Approx. 497 × 480 × 478 mm (w/h/d) (19 ³ / ₈ × 19 × 18 ⁷ / ₈ inches)
Mass	Approx. 32 kg (70 lb 9 oz)
Plug and Play	DDC1/2B/2Bi, GTF**
Supplied accessories	See page 6

- * Recommended horizontal and vertical timing condition
- Horizontal sync width duty should be more than 4.8% of total horizontal time or 0.8 μs, whichever is larger.
 - Horizontal blanking width should be more than 2.3 μsec.
 - Vertical blanking width should be more than 450 μsec.
- ** If the input signal is Generalized Timing Formula (GTF) compliant, the GTF feature of the monitor will automatically provide an optimal image for the screen.

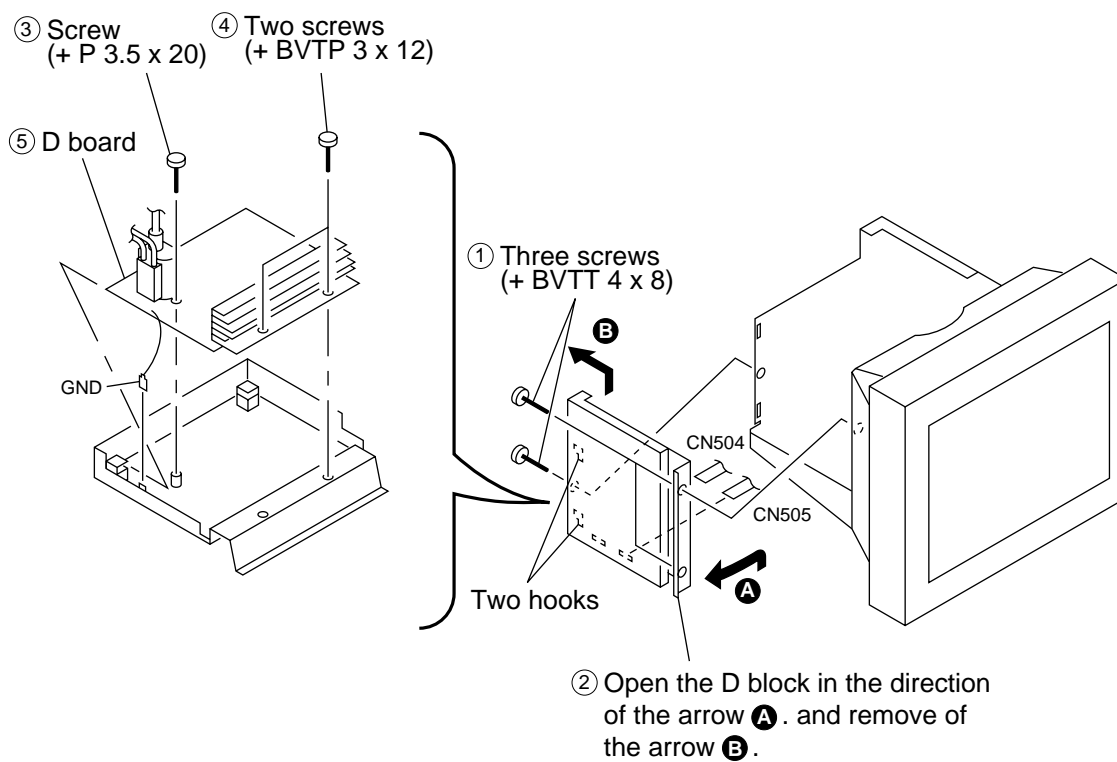
Design and specifications are subject to change without notice.

SECTION 2 DISASSEMBLY

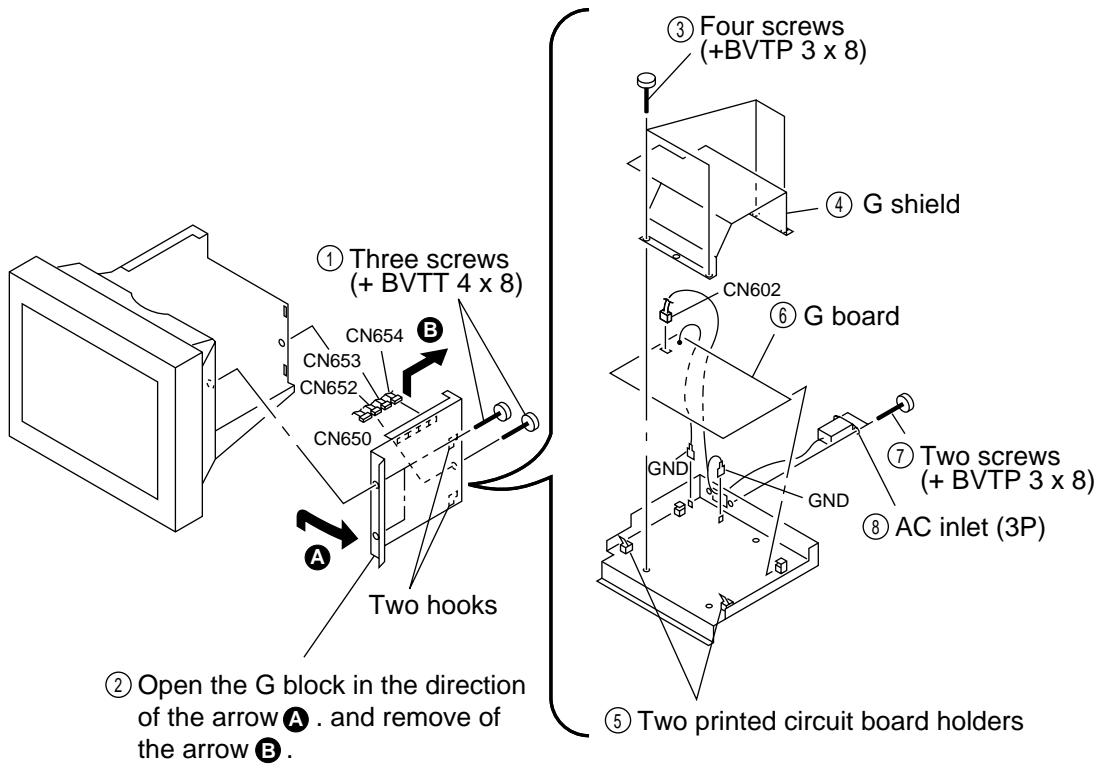
2-1. CABINET REMOVAL



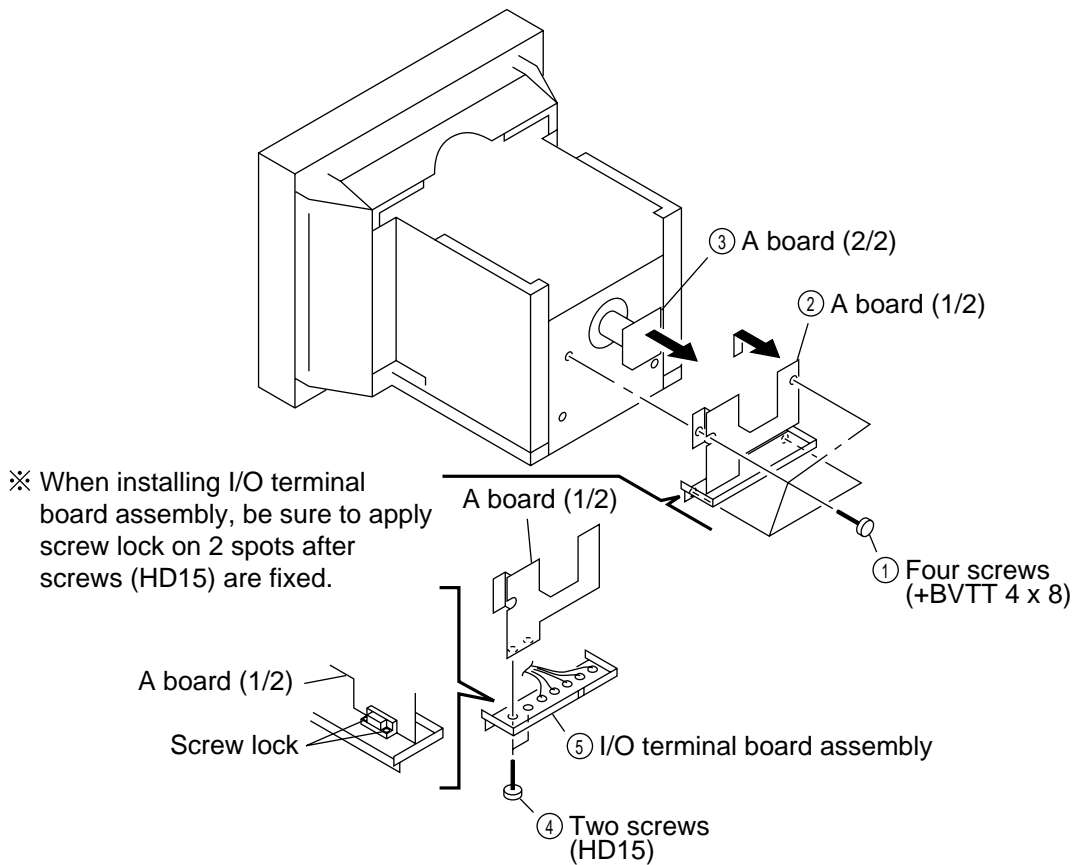
2-2. D BOARD REMOVAL



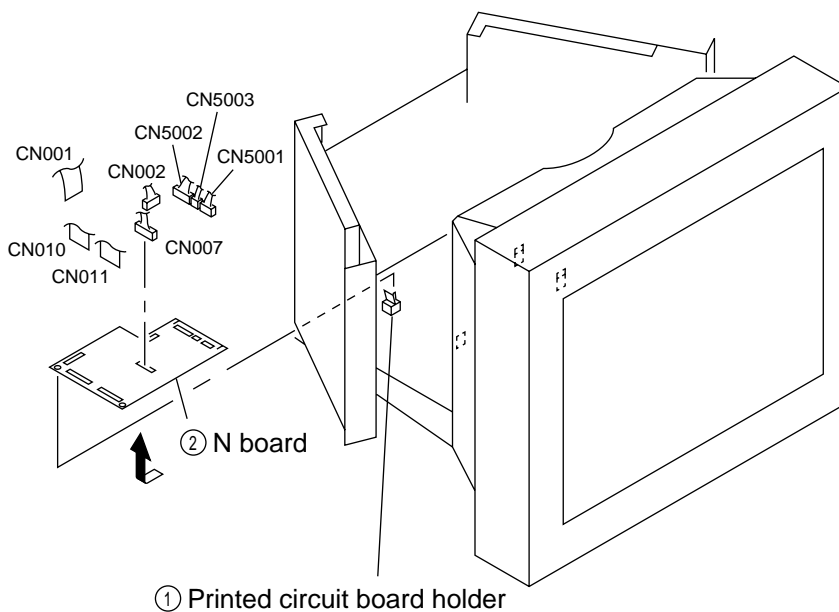
2-3. G BOARD REMOVAL



2-4. A BOARD, I/O TERMINAL BOARD ASSEMBLY REMOVAL

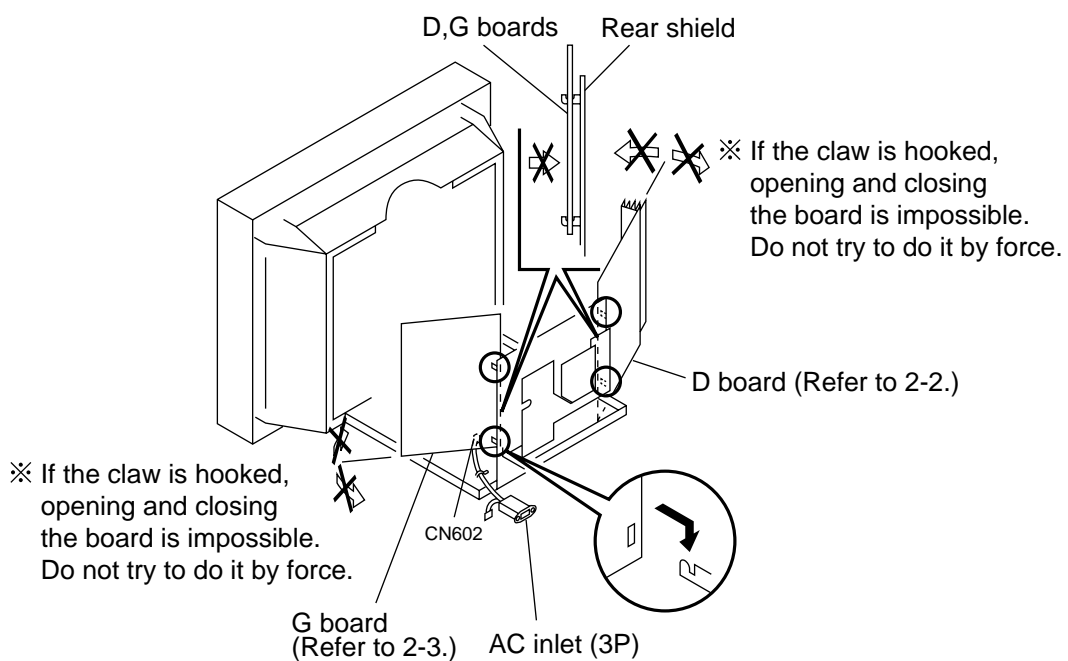


2-5. N BOARD REMOVAL



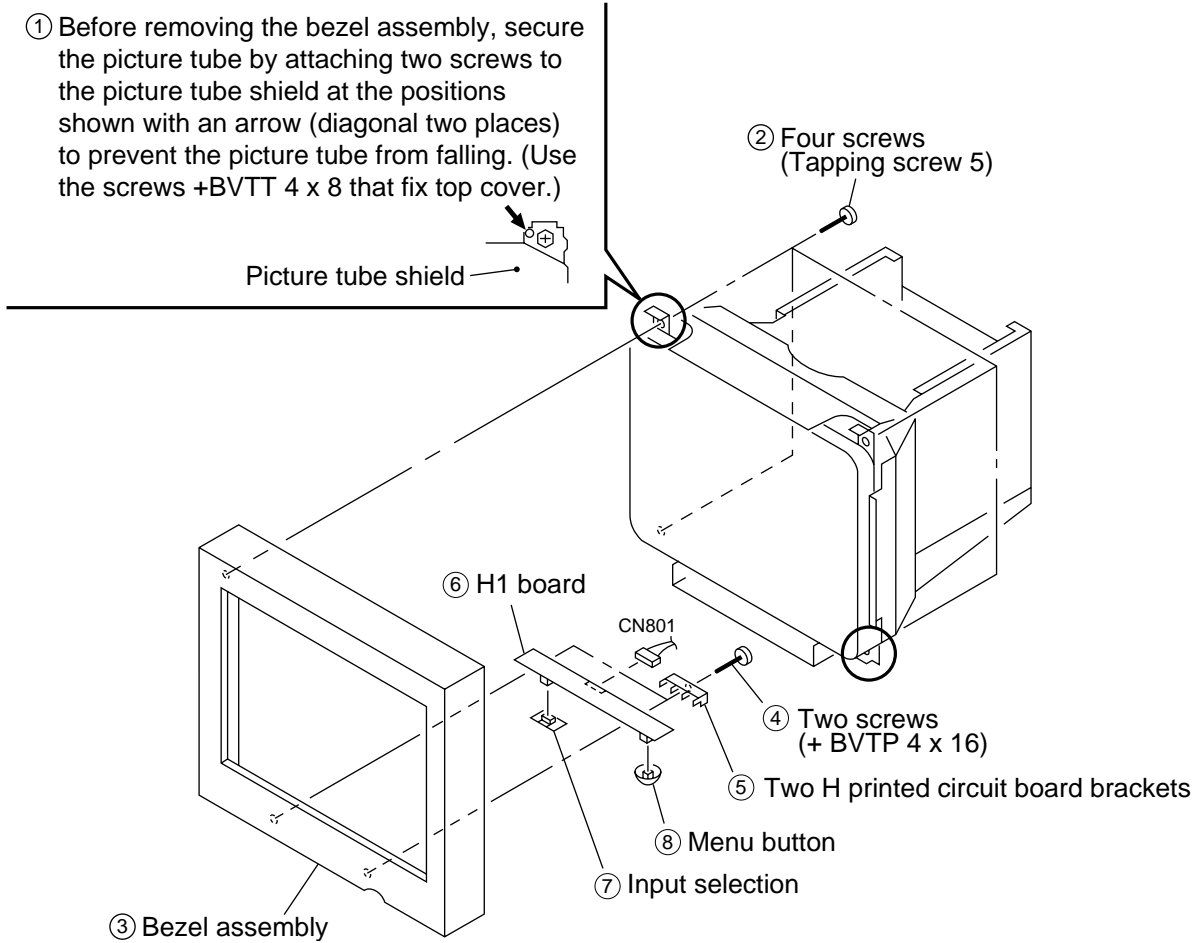
2-6. SERVICE POSITION

CAUTION : SHORT

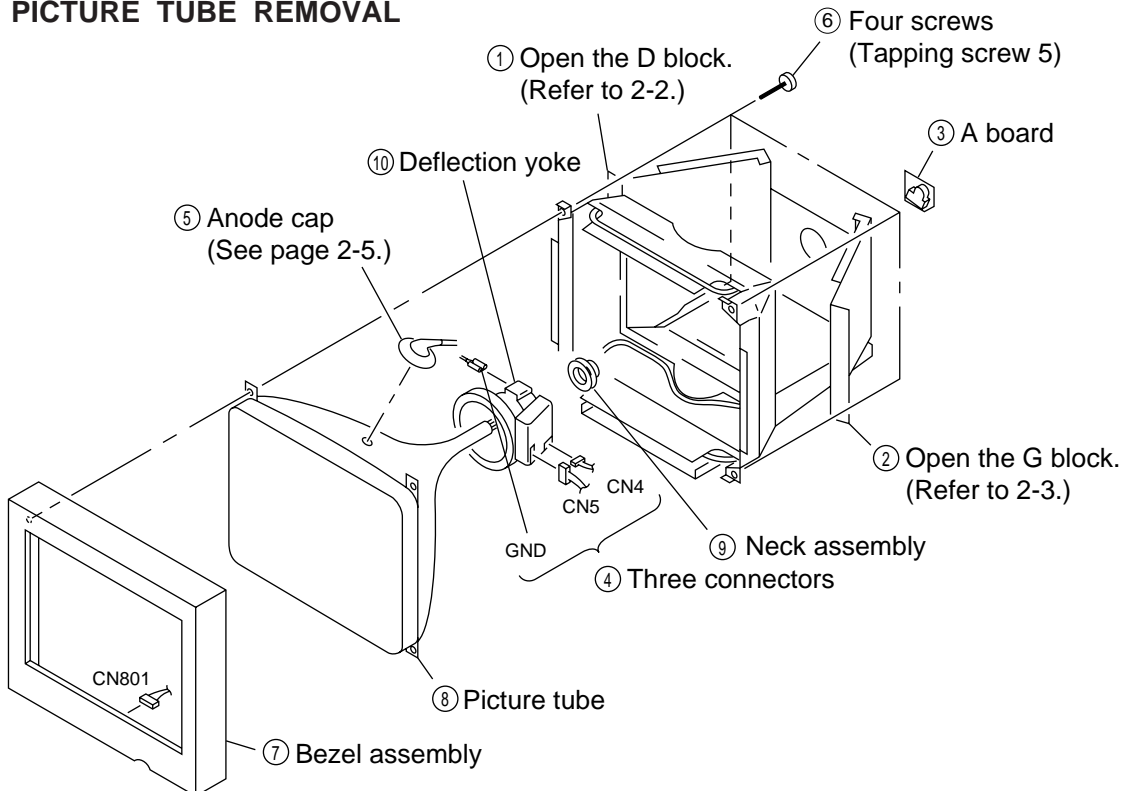


2-7. BEZEL ASSEMBLY, H1 BOARD REMOVAL

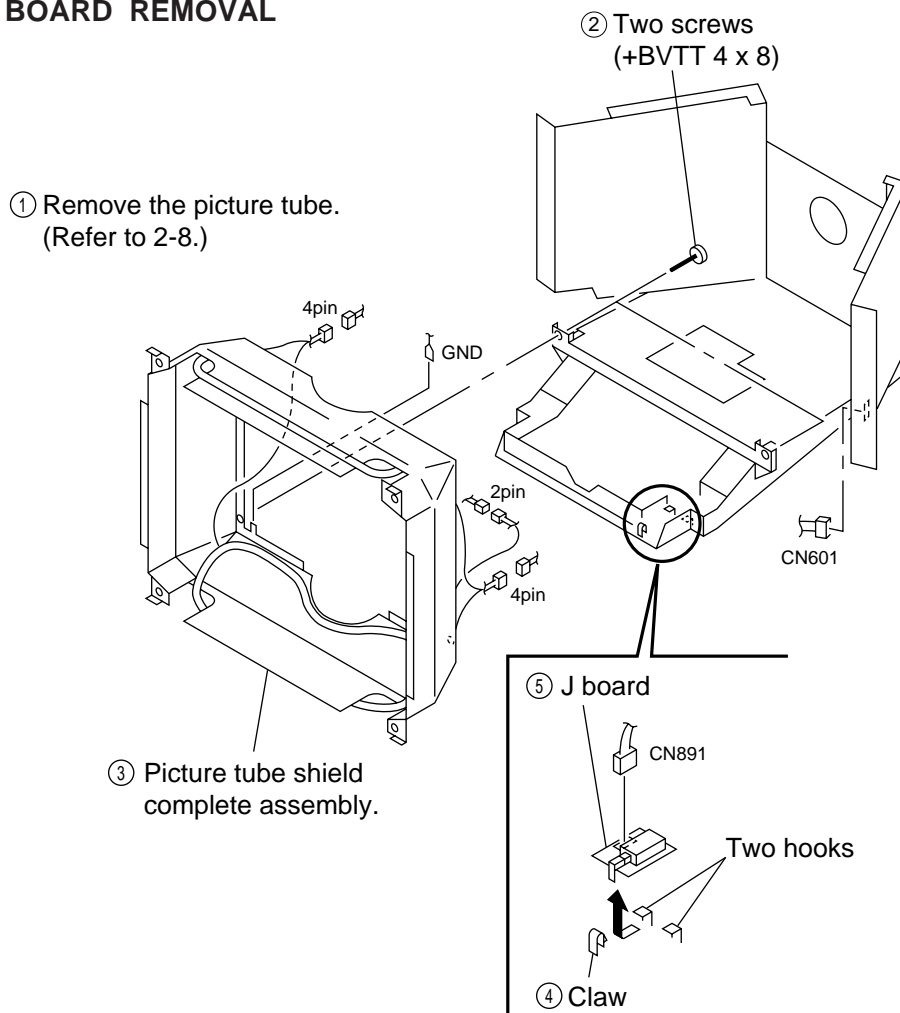
- ① Before removing the bezel assembly, secure the picture tube by attaching two screws to the picture tube shield at the positions shown with an arrow (diagonal two places) to prevent the picture tube from falling. (Use the screws +BVTT 4 x 8 that fix top cover.)



2-8. PICTURE TUBE REMOVAL



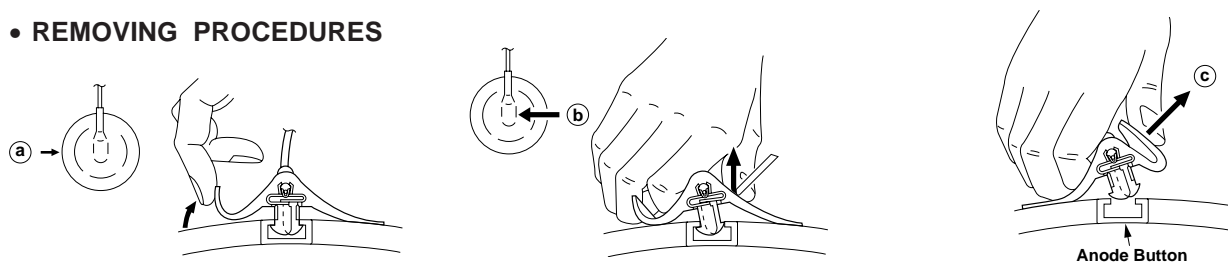
2-9. J BOARD REMOVAL



• 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.

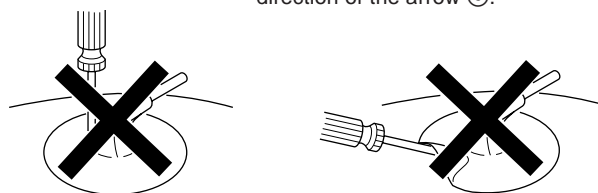
• REMOVING PROCEDURES



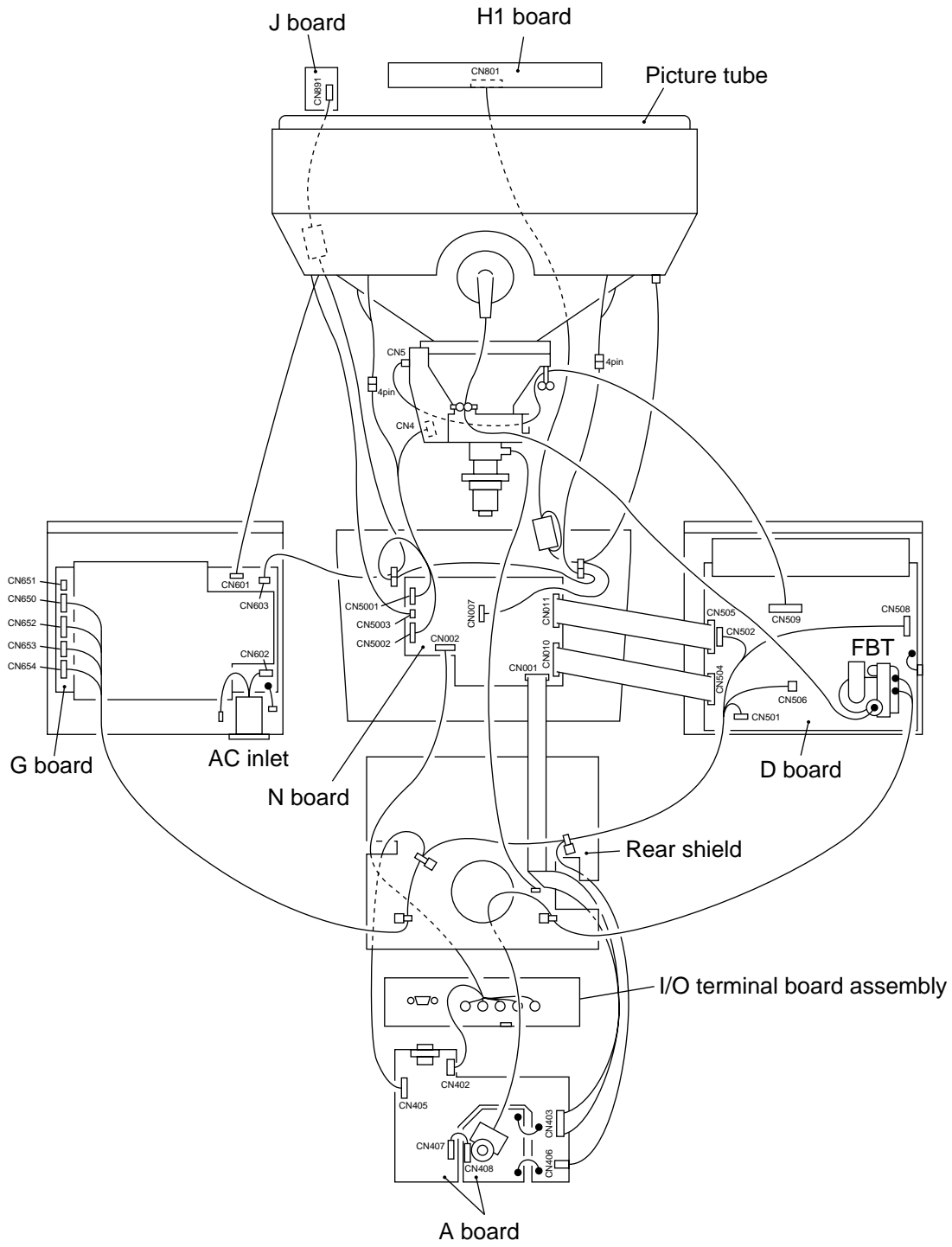
- ① Turn up one side of the rubber cap in the direction indicated by the arrow (a).
- ② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow (b).
- ③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber 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 shaped material!
- ② Don't press the rubber hardy 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 hardly!
The shatter-hook terminal will stick out or damage the rubber.



2-10. HARNESS LOCATION



SECTION 3 SAFETY RELATED ADJUSTMENT

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

Part Replaced (☒)
HV ADJ
RV901

Part Replaced (▣)	
HV Regulator Circuit Check	D Board C920, IC901, R923, R924, R929, R945, RV901, T902(FBT) • Mounted D Board
HV Protector Circuit Check	D Board C922, C925, C926, D912, D914, D915, D921, Q907, Q908, R921, R922, R932, R937, R939, T902(FBT) • Mounted D Board
Beam Current Protector Circuit Check	D Board C910, C921, C933, D901, D902, D913, IC503, IC901, R901, R920, R928, R930, R931, R940, R941, T902(FBT) • Mounted D Board G Board IC652 • Mounted G Board N Board IC001, R031, R032 • Mounted N Board

* Confirm one minute later turning on the power.

a) HV Regulator Circuit Check

- 1) Enter black crosshatch signal (black on white background), and check that high voltage is in the specified range.
[Specification]: 27.00 ±0.10 kV
- 2) Check that the voltage of D912 cathode on the D board is 27.0 V or more.

b) HV Protector Circuit Check

- 1) Enter black crosshatch signal (black on white background).
- 2) Apply the specified voltage to the D912 cathode on the D board, and check that high voltage is 0.1 kV or less.
[Specification]: 31.90 +0.00/−0.05 V

c) Beam Current Protector Circuit Check

(1st Protector): D Board

- 1) Apply 4.5 V DC to CN504 ⑩ pin on the D board, and check high voltage value.
- 2) Connect constant current source to a section between T902 (FBT) ⑪ pin and ⑫ pin (GND) on the D board, and check that high voltage checked in 1) lowers by 1.50 kV or more when the specified current flows to the ⑪ pin.
[Specification]: 2.00 +0.00/−0.01 mA

d) Beam Current Protector Circuit Check

(2nd Protector): D Board

- 1) Connect constant current source to a section between T902 (FBT) ⑪ pin and ⑫ pin (GND) on the D board, and check that the voltage of CN504 ⑩ pin becomes 0 V or less when the specified current flows to the ⑪ pin.
[Specification]: 1.70 +0.00/−0.01 mA

e) Beam Current Protector Circuit Check

: G Board

- 1) Apply 264 V AC.
- 2) Enter about 5 V to CN650 ④ pin on the G board, and check that the output voltage of CN653 ② pin is about 15 V.
- 3) Enter about 0±0.2 V to CN654 ④ pin, and check that the output voltage of CN653 ② pin becomes 1.0 V or less.

f) Beam Current Protector Circuit Check

: N Board

- 1) Check that the protector operates, when the voltage of CN010 ⑩ pin on the N board is lowered to 0 V or less (for more than 2 seconds).

SECTION 4 ADJUSTMENTS

Note: Hand degauss must be used on stand-by or power-off condition.
This model has an automatic earth magnetism correction function by using an earth magnetism sensor and a LCC coil. When using a hand degauss while monitor (LCC coil) is being operated, it sometimes gets magnetized, and the system may not work properly as a result.

• **Landing Rough Adjustment**

1. Enter the full white signal. (or the full black dots signal).
 2. Adjust the contrast to the maximum.
 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. Adjust the tilt of DY, and fix lightly with a clamp.
- Note: "TILT" = "128".

• **Landing Fine Adjustment**

1. Put the set inside the Helmholtz coil. ("LCC SW" = "12")
 2. Input the single green signal and set the "CONTRAST" = "255".
- Note: After the W/B adjustment with 9300K, measure an average of ΣI_k when a full white signal is entered in the CONT MAX/BRT CENT status. Then make adjustment so that the specified screen can be attained after aging for 2 hours with I_k equivalent to 30% of the average value.
3. Demagnetize the metal part of the chassis with the hand degausser and coil degausser, and the CRT surface with the hand degausser.
 Input AC 230V to AC IN, turn on and off the power to perform auto degaussing. (Perform auto degaussing by setting "FUNCTION SW"=1. Return to the original value after use.)
 Demagnetize the CRT surface with the hand degausser again.

Note:

- (1) Hand degauss must be used on stand-by or power-off condition.
 This model has an automatic earth magnetism correction function by using an earth magnetism sensor and a LCC coil. When using a hand degauss while monitor (LCC coil) is being operated, it sometimes gets magnetized, and the system may not work properly as a result.
- (2) Adjust in a non-magnetic field.
- (3) If adjusting in a magnetic fields, add the shift from the non-magnetic field in your estimation.
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.

6. Adjust the DY position and purity, and the DY tilt, and landing of the center and 4 corners with the landing checker.
 After adjustment, set "LCC SW" to "13".
- Write terrestrial magnetism sensor reading VX and VY to "LCC VX" and "LCC VY" respectively. Adjust the landing by moving "LCC NS", "LCC LT", "LCC LB", "LCC RT" and "LCC RB". However, the register adjustment must be limited within the following range.

"LCC NS"	128 ± 15
"LCC LT", "LCC LB", "LCC RT", "LCC RB"	128 ± 40

 Save the service data.

<Specifications>

Adjust so that the green is within the specification given right.
 4 corner adjust target : within ± 1

(μm)		
0 ± 3	0 ± 7.5	0 ± 3
0 ± 3	0 ± 7.5	0 ± 3
0 ± 3	0 ± 7.5	0 ± 3

The red and blue must be within the specification given right with respect to the green.

(μm)		
± 6	± 6	± 6
± 6	± 6	± 6
± 6	± 6	± 6

A difference between red and blue must be within the specification given right.

(μm)		
10	10	10
10	7	10
10	10	10

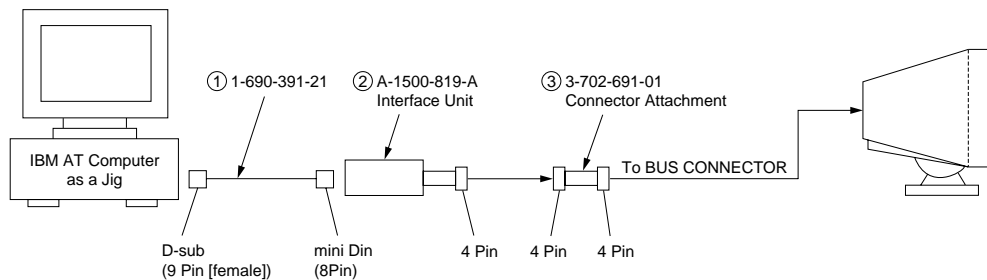
* Adjustment and measurement should be made at the points one inch inside the fluorescent screen.

7. For the up/down swing, swing the DY and insert a wedge so that the up and down pins are equal at the top and bottom. Adjust the H.TRP VR of DY so that the horizontal trapezoid is equal at the left and right. Insert the wedge firmly so that the DY does not shake.
8. Check the landing of each corner, and if it does not satisfy the specification, adjust the landing of four corners using "LCC LT", "LCC LB", "LCC RT" and "LCC RB".
 However, the register adjustment must be limited within the following range.

"LCC NS"	128 ± 15
"LCC LT", "LCC LB", "LCC RT", "LCC RB"	128 ± 40

 After adjustment, save the service data.
9. Remove the sensor and wobbling coil.
10. Switch the signal to R.G.B., and check that each color is pure.
11. Check that the DY is not tilting, and fix the purity Mg with a white pen. Fix wedges with RTV.

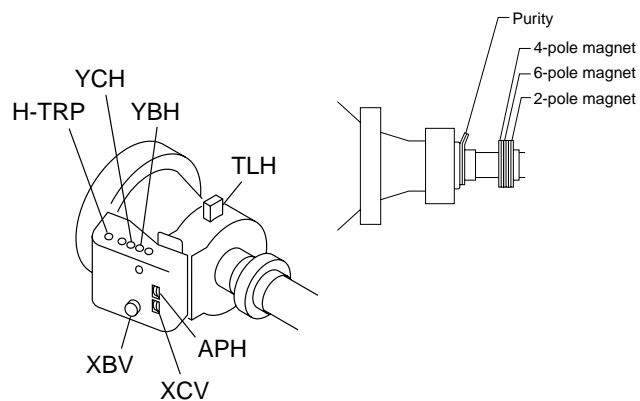
Connect the communication cable of the computer to the connector located on the D board. Run the service software and then follow the instruction.



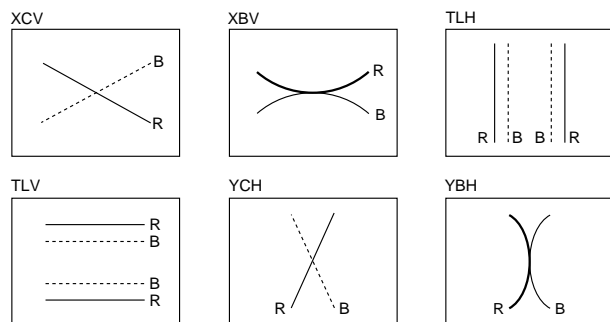
*The parts above (1) ~ (3) are necessary for DAS adjustment.

• **Convergence Rough Adjustment**

- (1) Receive an image of the white crosshatch signals (white lines on black).
- (2) Place the protrusions of the 6-fold poles magnet attached to the CRT neck upon each other.
- (3) Make rough adjustment of the H and V direction convergence by using 4-fold poles magnet.



* Set so that the protruding parts of the 2 magnet rings agree with each other.



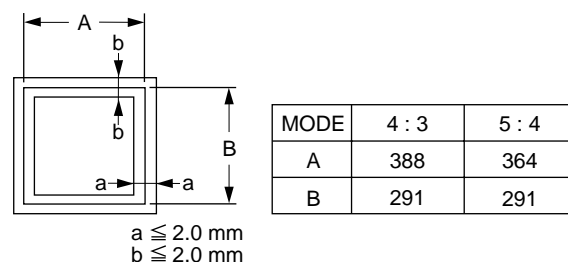
• **Convergence Specification**

V	A	B	fH	60kHz ≤	60kHz >
			A	0.20 mm	0.24 mm
			B	0.24 mm	0.28 mm

• **White Balance Adjustment Specification**

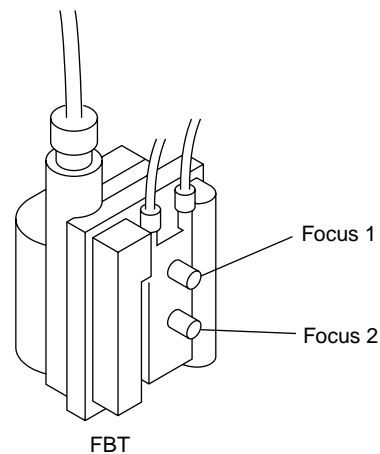
1. 9300K
 $x=0.283 \pm 0.005$
 $y=0.298 \pm 0.005$
 (All White)
2. 6500K
 $x=0.313 \pm 0.005$
 $y=0.329 \pm 0.005$
 (All White)
3. 5000K
 $x=0.346 \pm 0.005$
 $y=0.359 \pm 0.005$
 (All White)

• **Vertical and Horizontal Position and Size Specification**



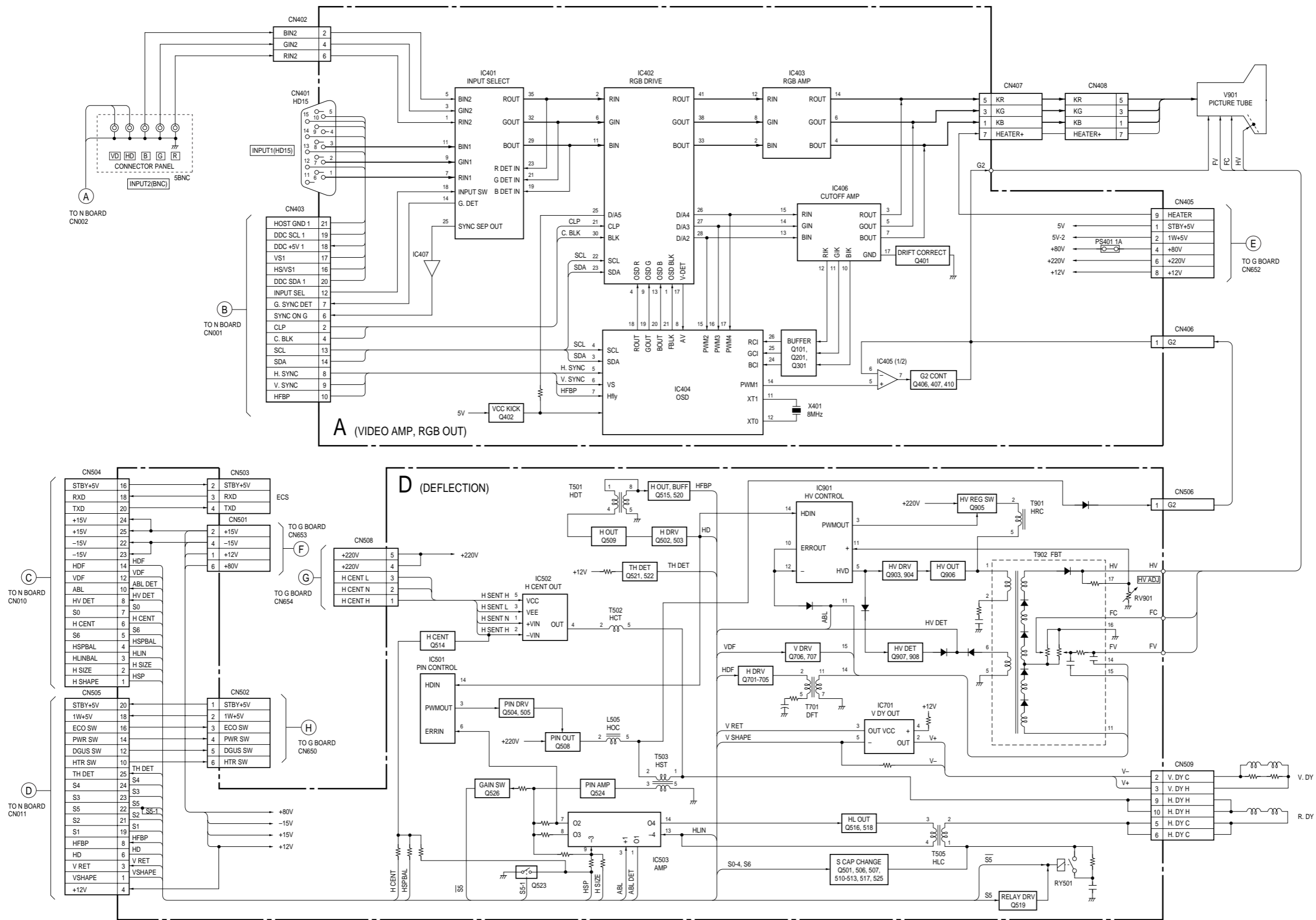
• **Focus adjustment**

Adjust the focus volume 1 and 2 for the optimum focus.

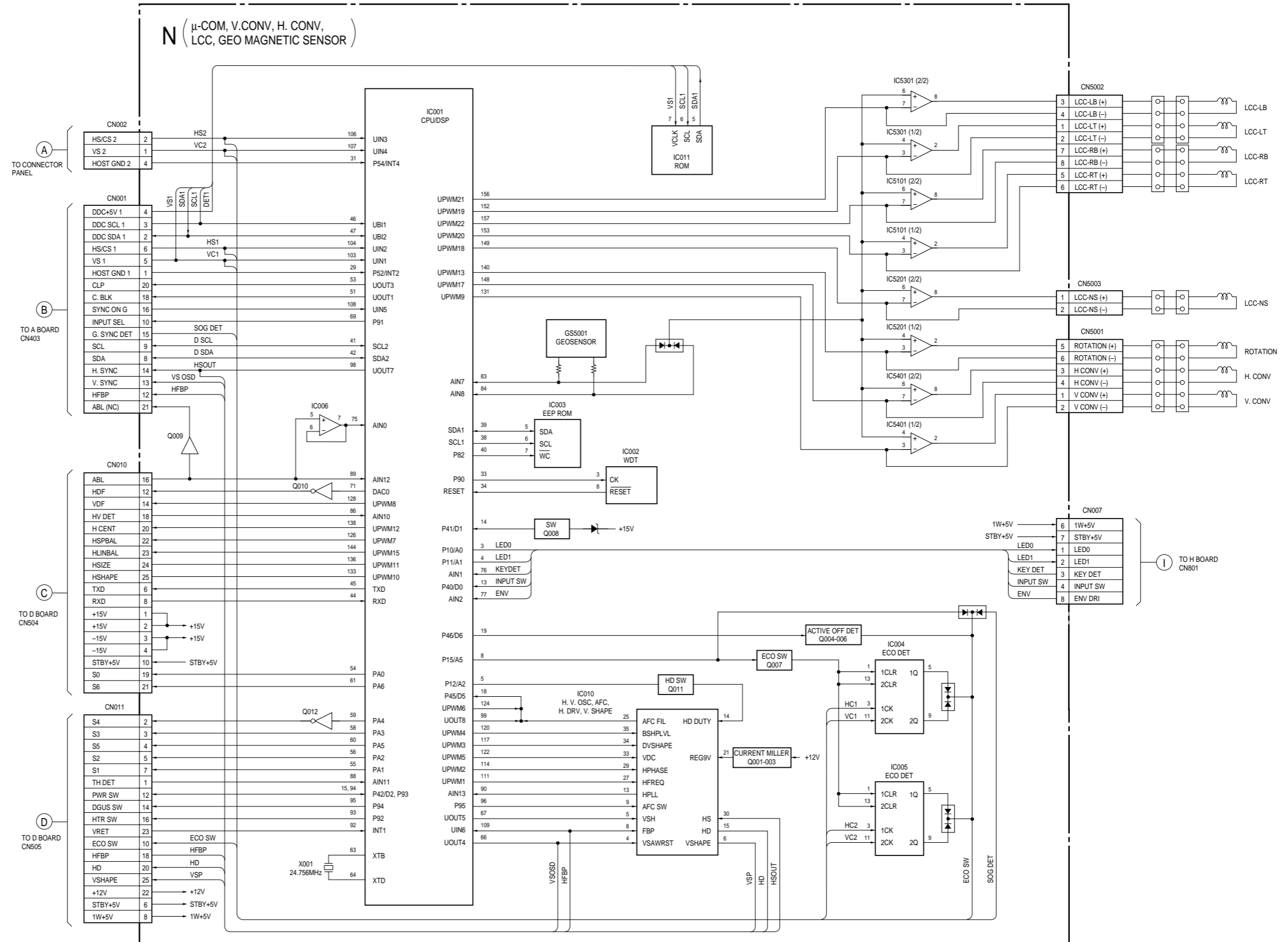


SECTION 5 DIAGRAMS

5-1. BLOCK DIAGRAMS

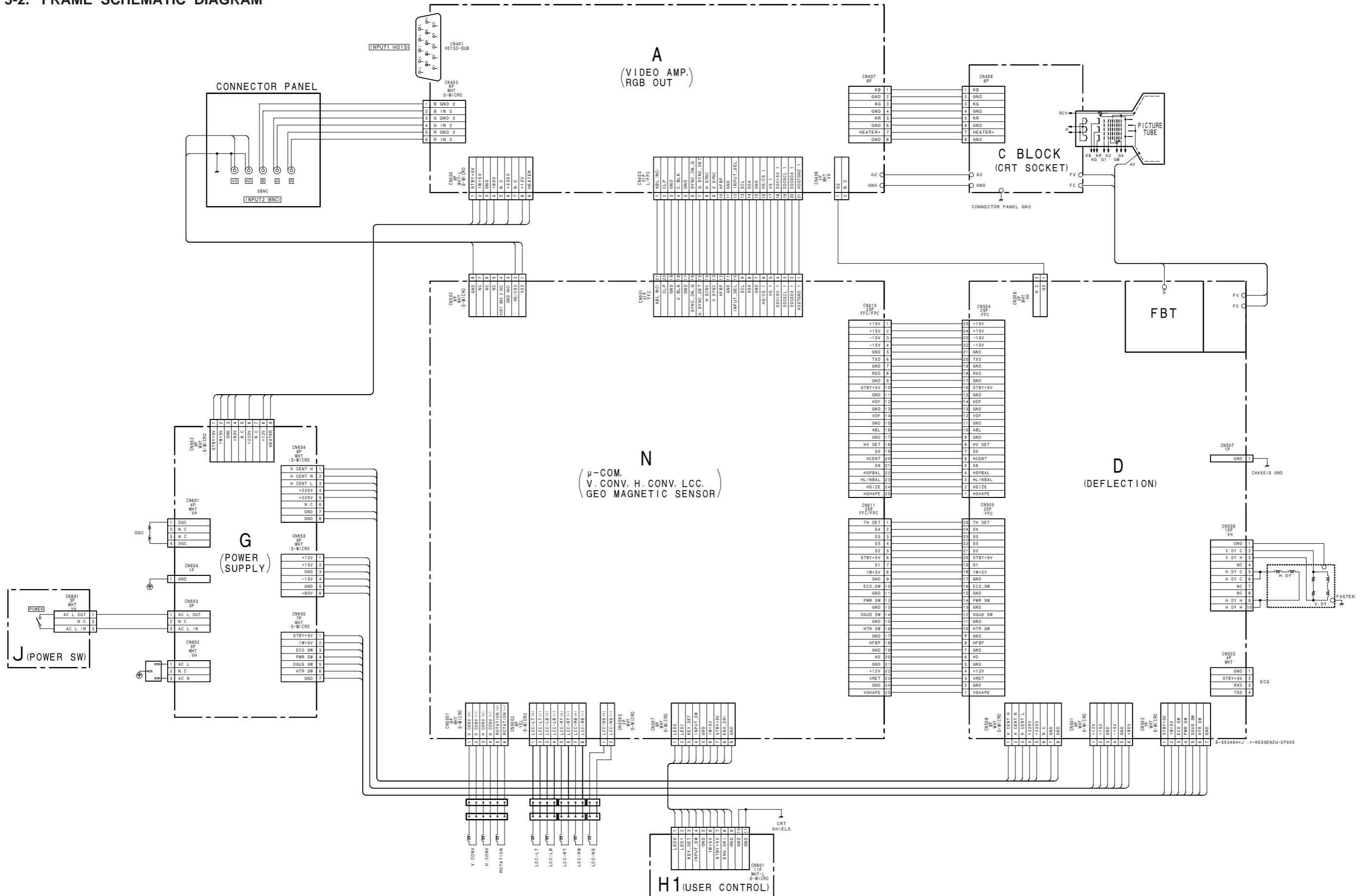


B-SS3484 <J> -BD1-EP905

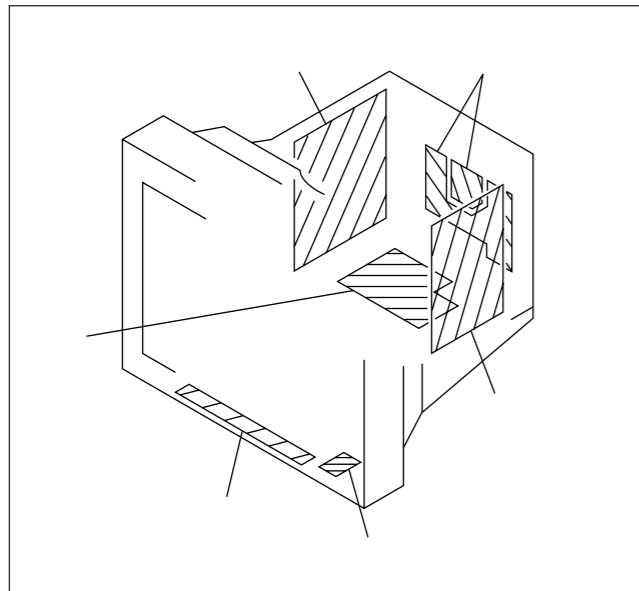


B-SS3484 <J.> -BD2-EP505

5-2. FRAME SCHEMATIC DIAGRAM



5-3. CIRCUIT BOARDS LOCATION



5-4. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

Note:

- All capacitors are in μF unless otherwise noted. (pF: μF) 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)

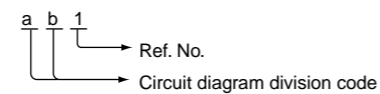
- All resistors are in ohms.
- : nonflammable resistor.
- : fusible resistor.
- Δ : internal component.
- : panel designation, and adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- \perp : earth-ground.
- : earth-chassis.
- The components identified by in this basic schematic diagram have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.
- When replacing components identified by , make the necessary adjustments indicated. (See page 3-1)
- When replacing the part in below table, be sure to perform the related adjustment.

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

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

- All voltages are in V.
- Readings are taken with a 10 M digital multimeter.
- Readings are taken with a color-bar signal input.
- Voltage variations may be noted due to normal production tolerances.
- * : Can not be measured.
- Circled numbers are waveform references.
- : B + bus.
- : B - bus.

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



	Part Replaced ()
HV ADJ	RV901

	Part Replaced ()
HV Regulator Circuit Check	D Board C920, IC901, R923, R924, R929, R945, RV901, T902(FBT) • Mounted D Board
HV Protector Circuit Check	D Board C922, C925, C926, D912, D914, D915, D921, Q907, Q908, R921, R922, R932, R937, R939, T902(FBT) • Mounted D Board
Beam Current Protector Circuit Check	D Board C910, C921, C933, D901, D902, D913, IC503, IC901, R901, R920, R928, R930, R931, R940, R941, T902(FBT) • Mounted D Board G Board IC652 • Mounted G Board N Board IC001, R031, R032 • Mounted N Board

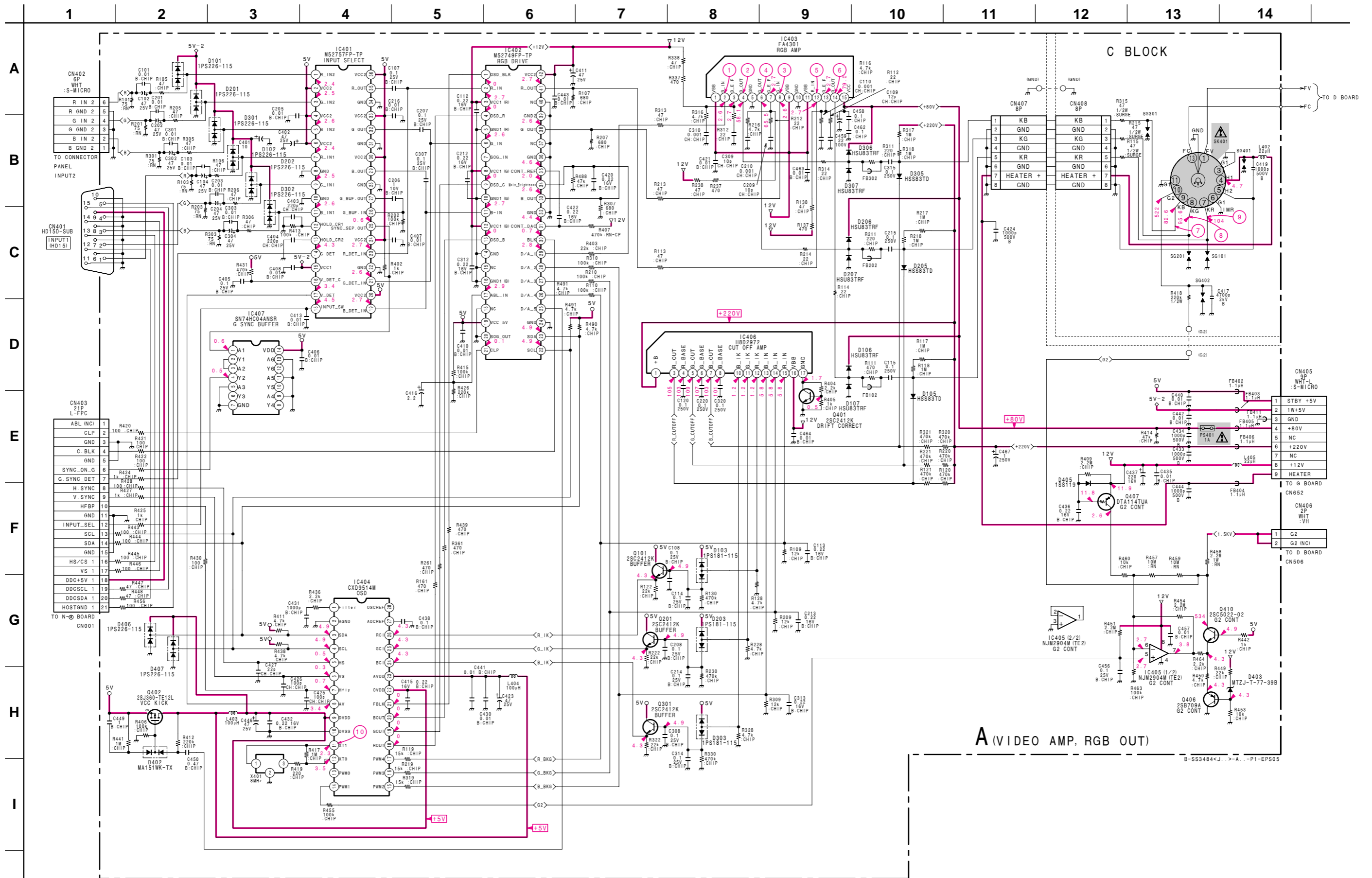
Terminal name of semiconductors in silk screen printed circuit (*)

	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 Cathode 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.)

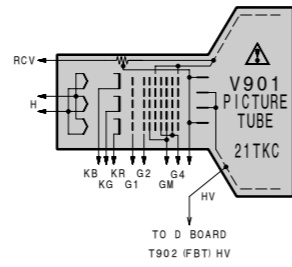
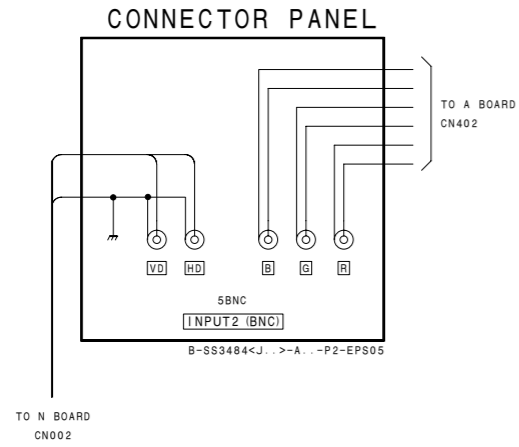
Ver.1.5

(1) Schematic Diagram of A Board

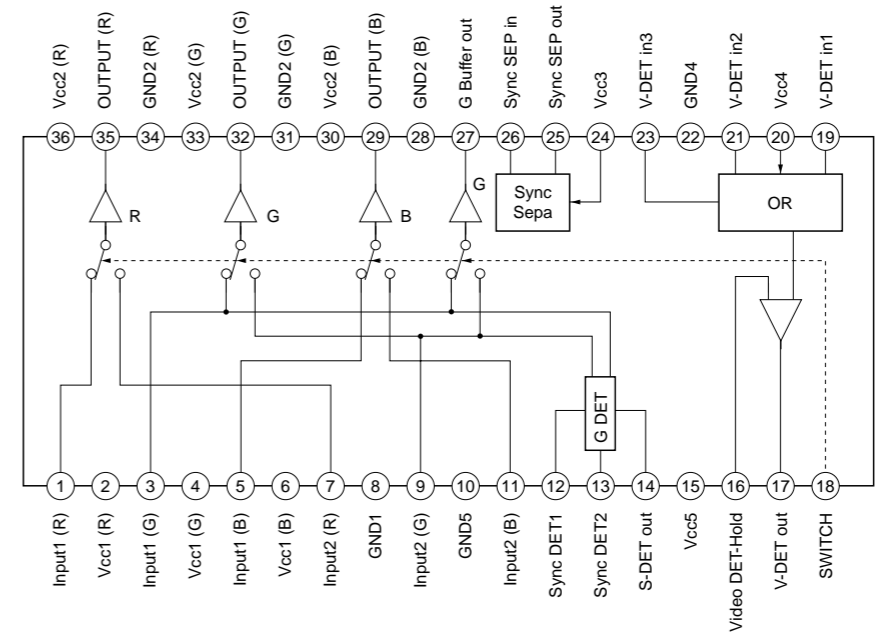


Schematic diagram

A board →

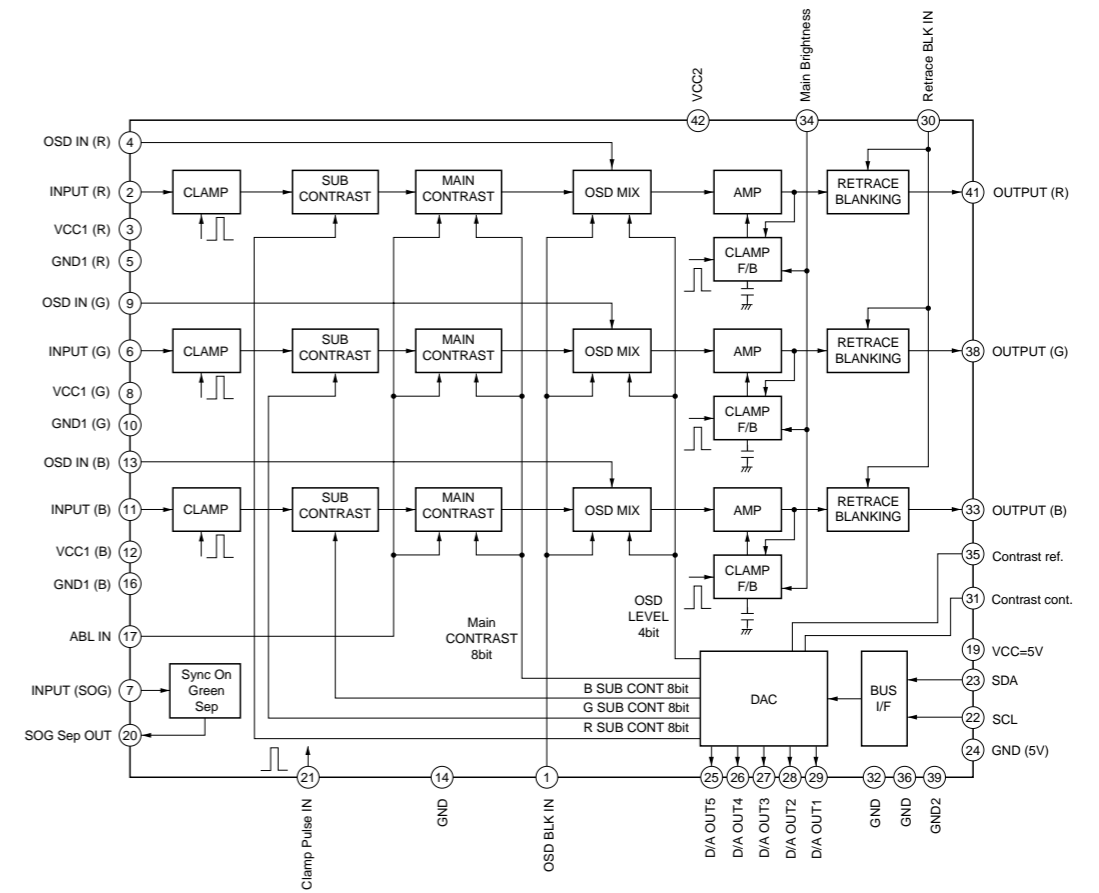
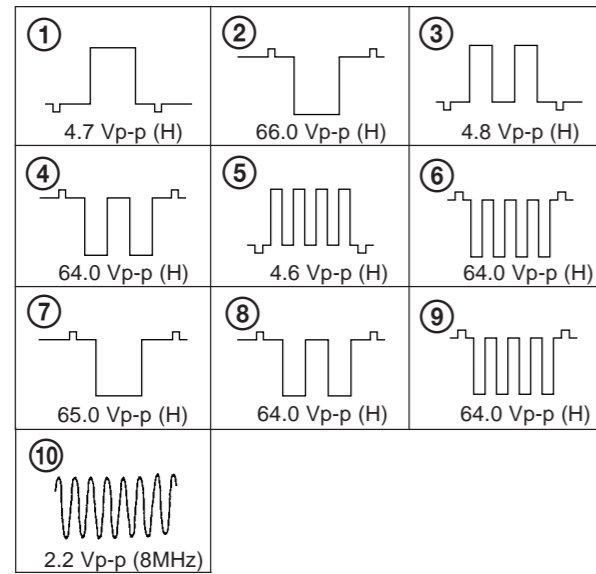


• A BOARD IC401 M52757FP



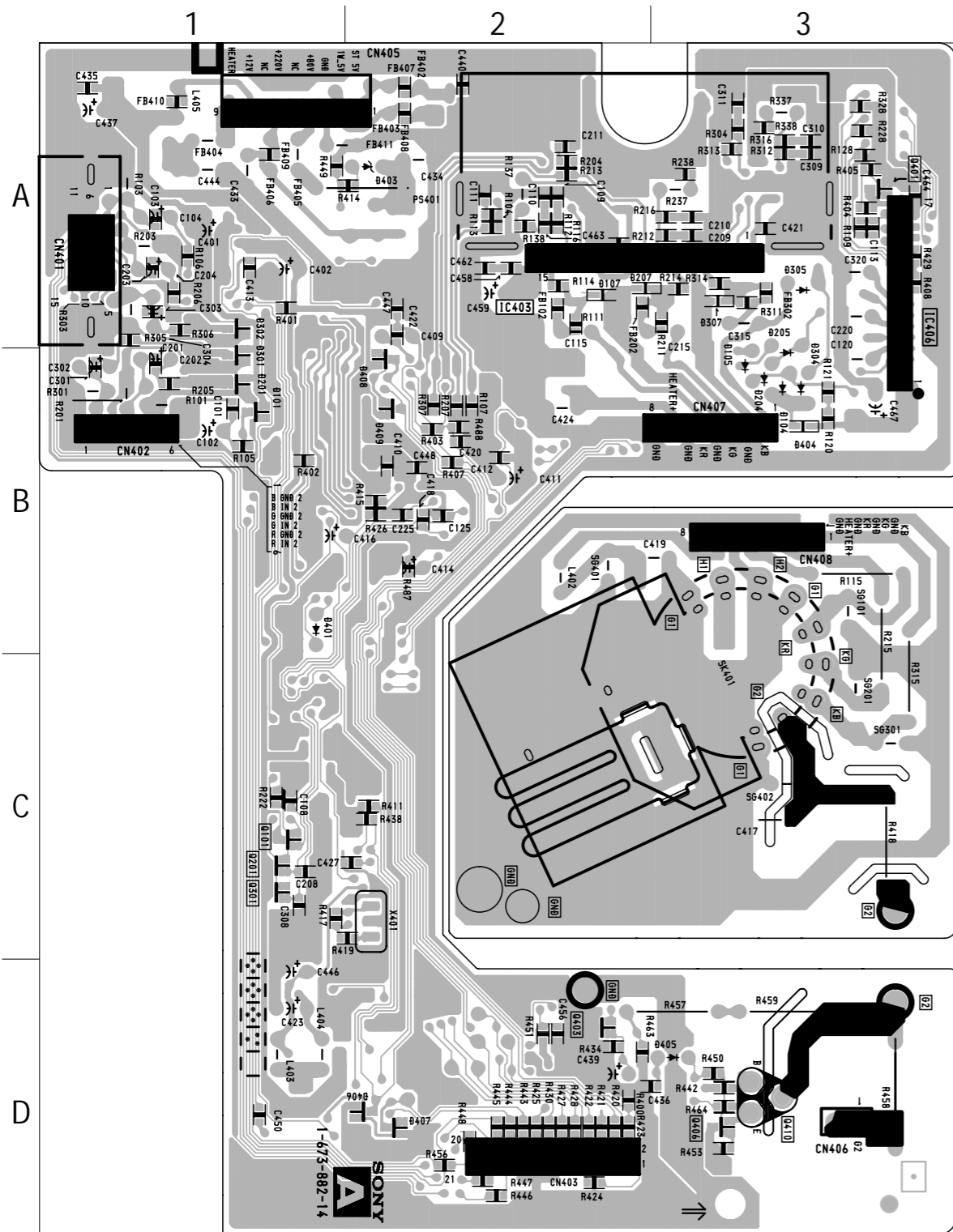
• A BOARD IC402 M52749FP

• A BOARD WAVEFORMS



A VIDEO AMP
RGB OUT

— A BOARD (Conductor Side) —



• A BOARD
SEMICONDUCTOR
LOCATION

IC		(Conductor Side)	(Component Side)
IC401			B-3
IC402			B-2
IC403		A-2	A-2
IC404			C-3
IC405			D-2
IC406		A-3	A-1
IC407			D-2

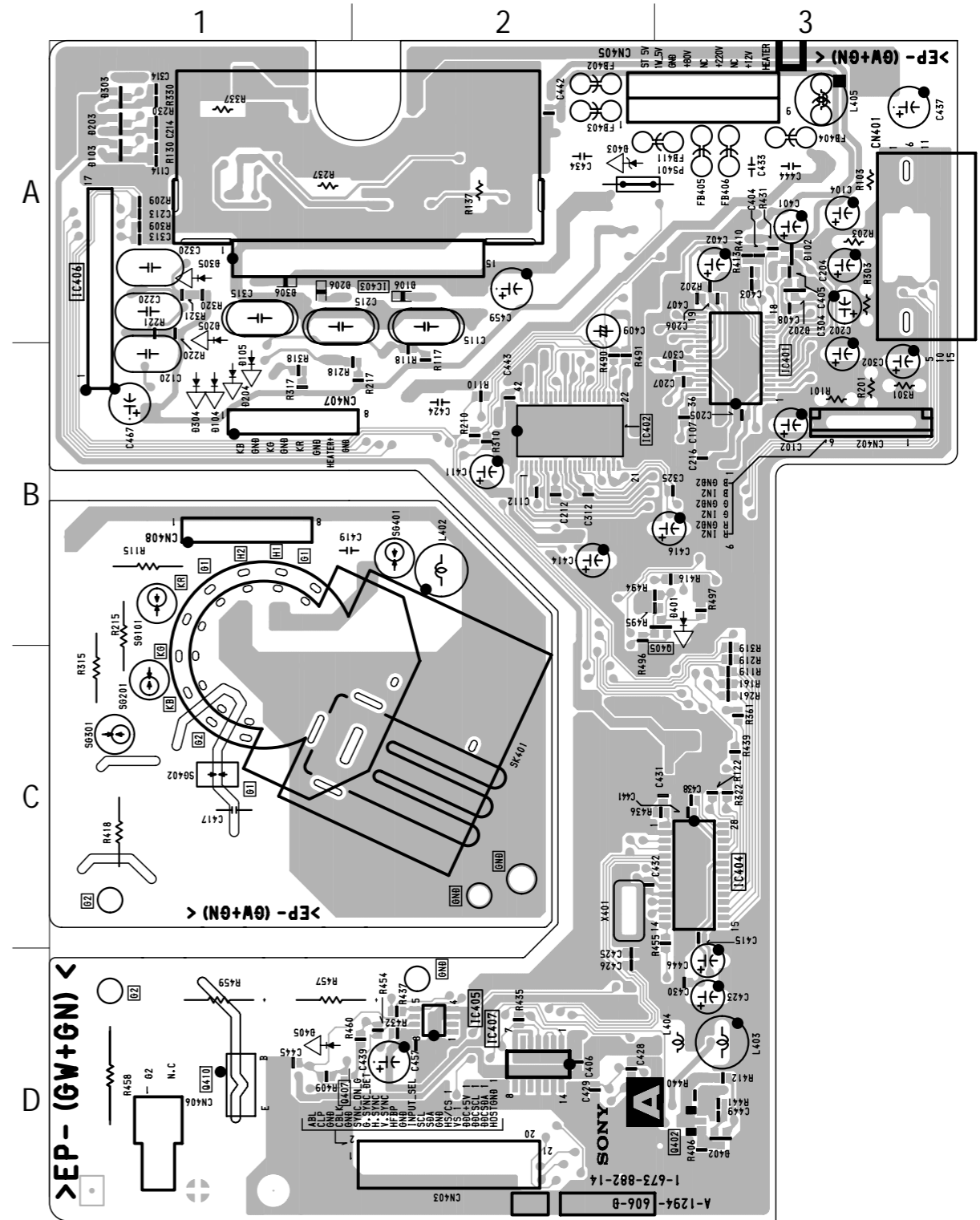
TRANSISTOR		(Conductor Side)	(Component Side)	*
Q101		C-1		①
Q201		C-1		②
Q301		C-1		③
Q401		A-3		④
Q402			D-3	⑤
Q406		D-3		⑥
Q407		D-2		⑦
Q410		D-3	D-1	⑧

DIODE		(Conductor Side)	(Component Side)	*
D101		B-1		①
D102			A-3	②
D103			A-1	③
D105		B-3	B-1	④
D106			A-2	⑤
D107		A-2		⑥
D201		B-1		⑦
D202			A-3	⑧
D203			A-1	⑨
D205		B-3	A-1	⑩
D206			A-1	⑪
D207		A-2		⑫
D301		B-1		⑬
D302		A-1		⑭
D303			A-1	⑮
D305		A-3	A-1	⑯
D306		A-2	A-1	⑰
D307		A-3		⑱
D402			D-3	⑲
D403		A-2	A-2	⑳
D405		D-3	D-1	㉑
D406		D-2		㉒
D407		D-2		㉓

CRYSTAL		(Conductor Side)	(Component Side)
X401		C-2	C-2

*: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 5-10)

— A BOARD (Component Side) —

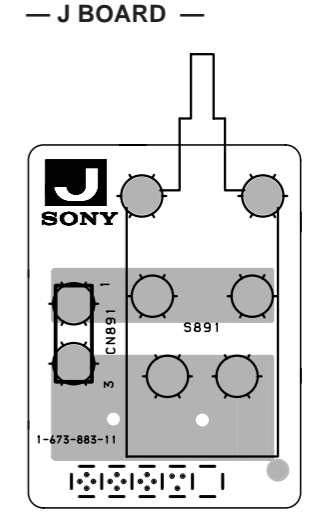
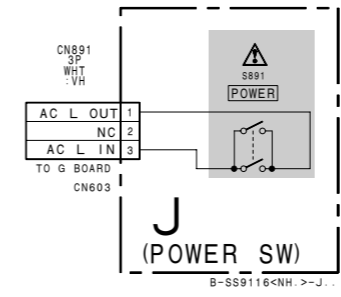
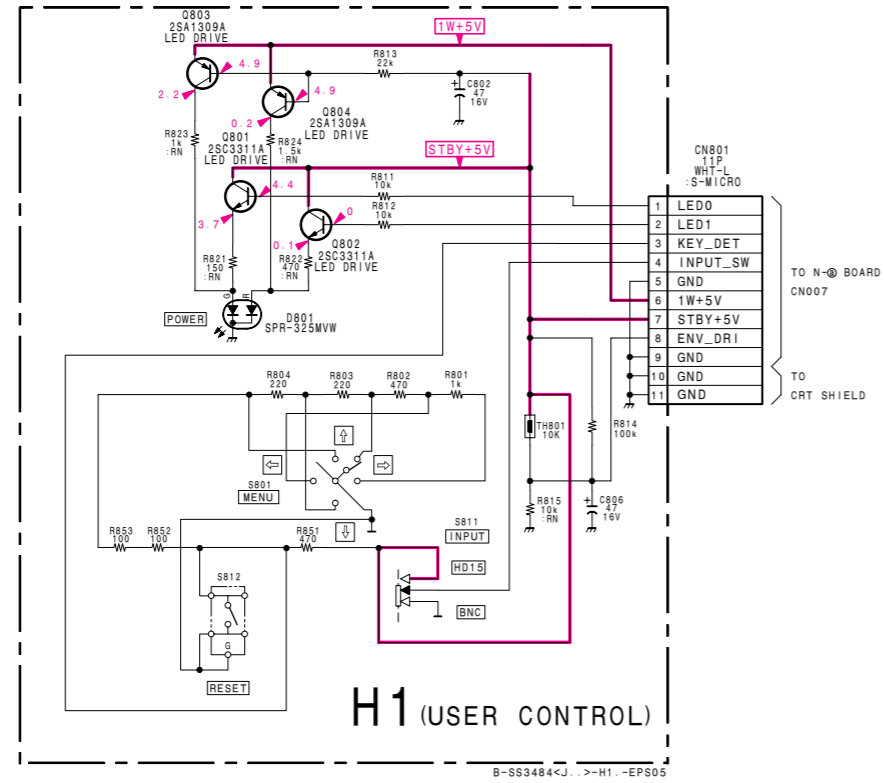


NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

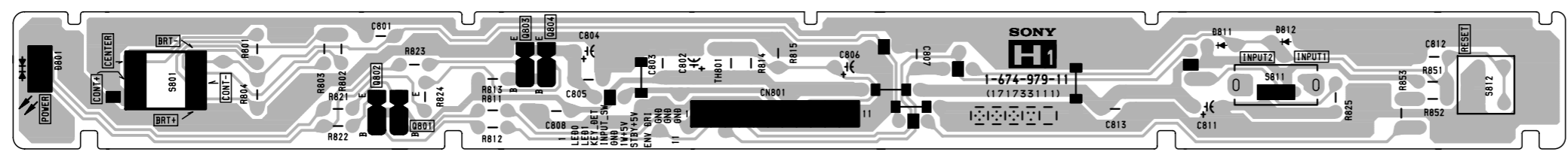
(2) Schematic Diagrams of H1, J Boards

1 2 3 4 5 6 7 8 9 10 11 12 13 14

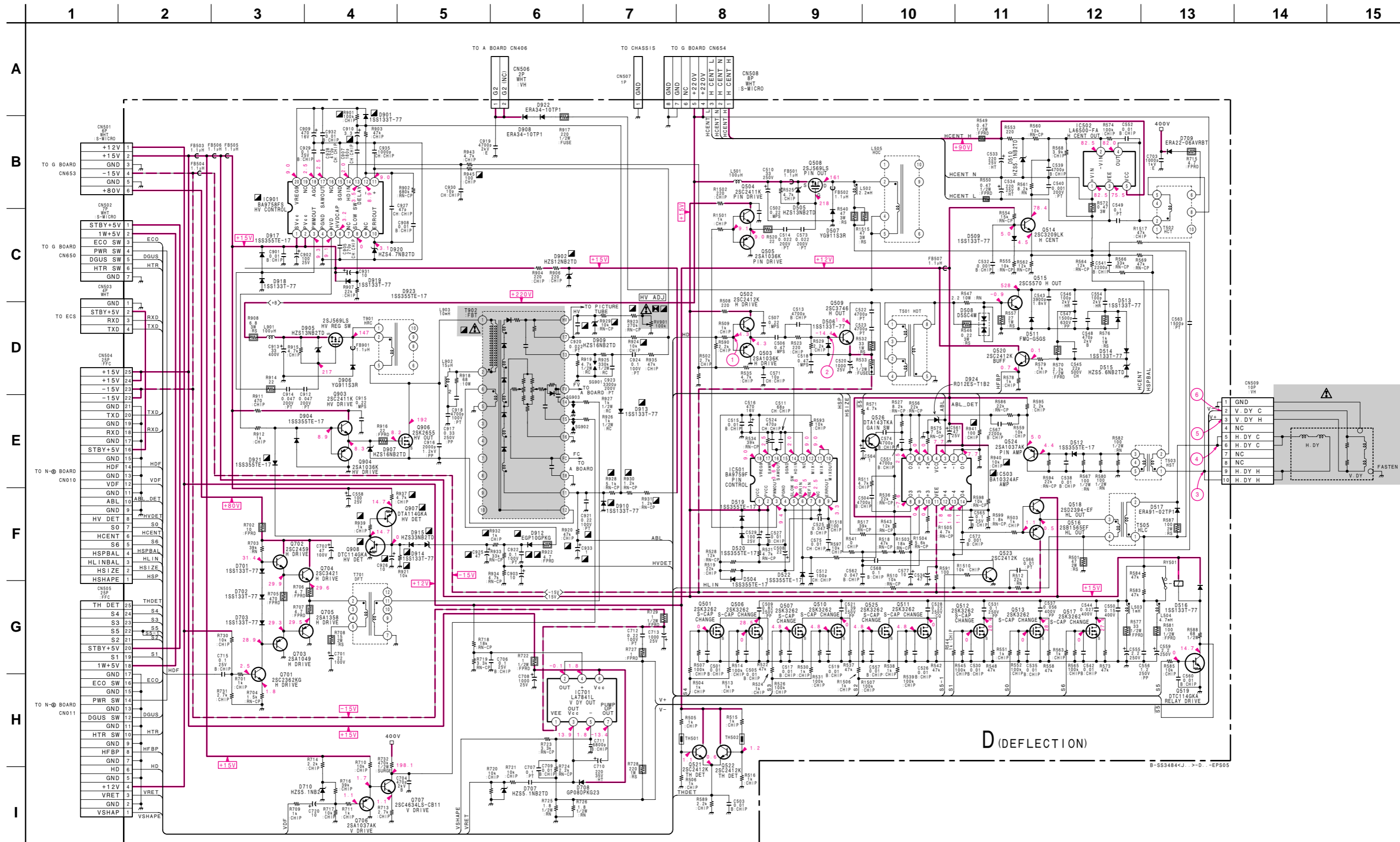
A
B
C
D
E
F
G
H
I
J



— H1 BOARD —



(3) Schematic Diagram of D Board



Schematic diagrams

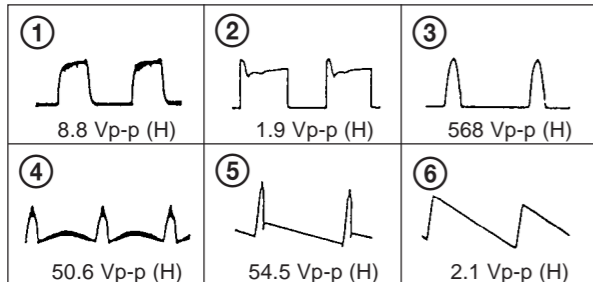
← H1 J boards

Schematic diagram

D board →

D [DEFLECTION]

D BOARD WAVEFORMS

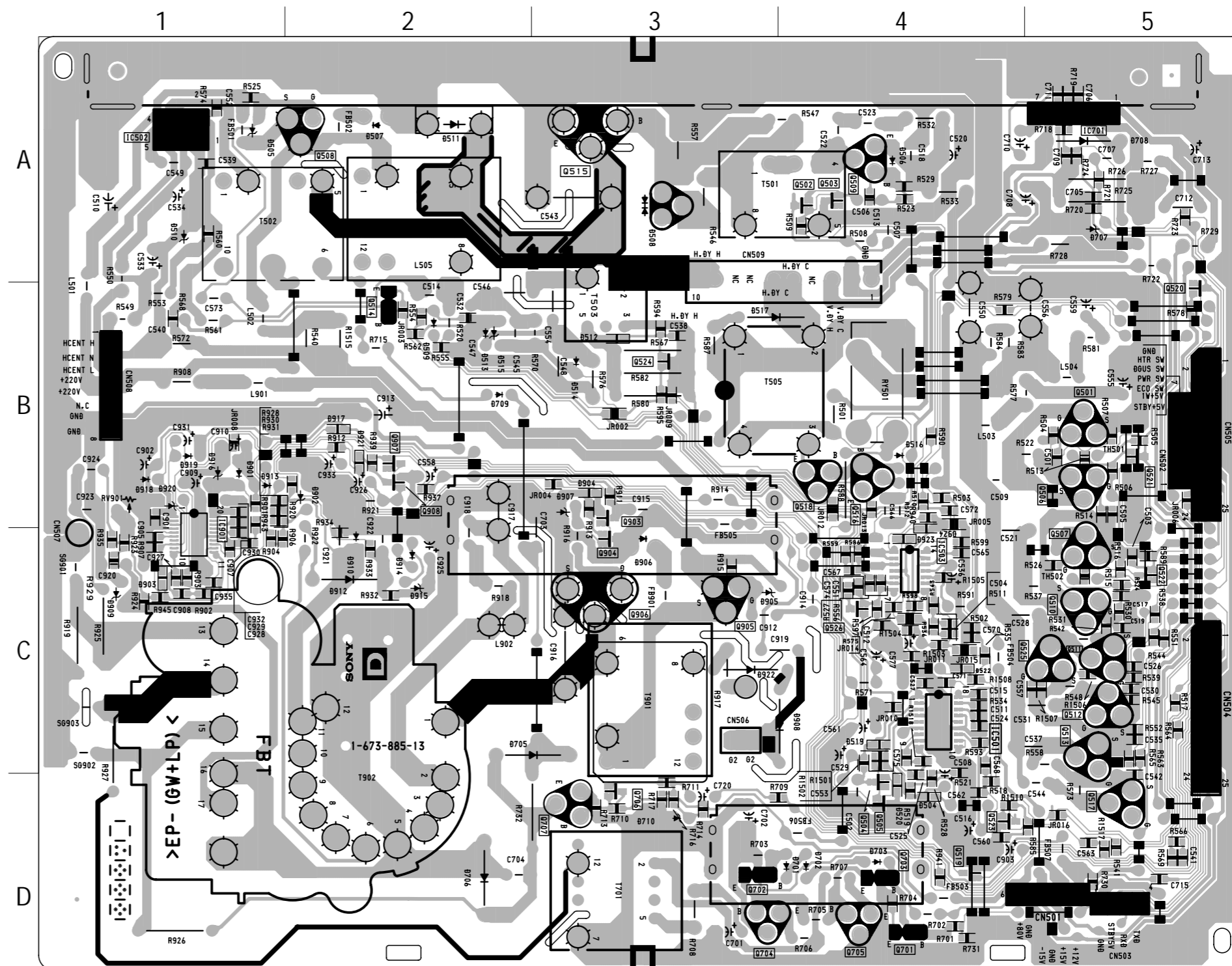


D BOARD SEMICONDUCTOR LOCATION

IC		DIODE		
IC501	C-4			*
IC502	A-1	D504	D-4	③
IC503	C-4	D505	A-1	-
IC701	A-5	D506	A-4	-
IC901	C-1	D507	A-2	-
TRANSISTOR		D508	A-3	-
		D509	B-2	-
		D510	A-1	-
		D511	A-2	-
		D512	B-3	③
		D513	B-2	-
		D514	B-3	-
		D515	B-2	-
		D516	B-4	-
		D517	B-3	-
		D519	C-4	③
		D520	D-4	③
		D522	C-4	③
		D701	D-4	-
		D702	D-4	-
		D703	D-4	-
		D707	A-5	-
		D708	A-5	-
		D709	B-2	-
		D710	D-3	-
		D901	B-1	-
		D902	B-2	-
		D904	B-3	③
		D905	C-3	-
		D906	C-3	-
		D907	B-3	-
		D908	C-3	-
		D909	C-1	-
		D910	C-2	-
		D912	C-2	-
		D913	B-1	-
		D914	C-2	-
		D915	C-2	-
		D917	B-2	③
		D918	B-1	-
		D919	B-1	-
		D920	B-1	-
		D921	B-2	③
		D922	C-3	-
		D924	C-4	③
VARIABLE RESISTOR				
		RV901	B-1	

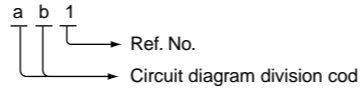
*: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 5-10)

- D BOARD -

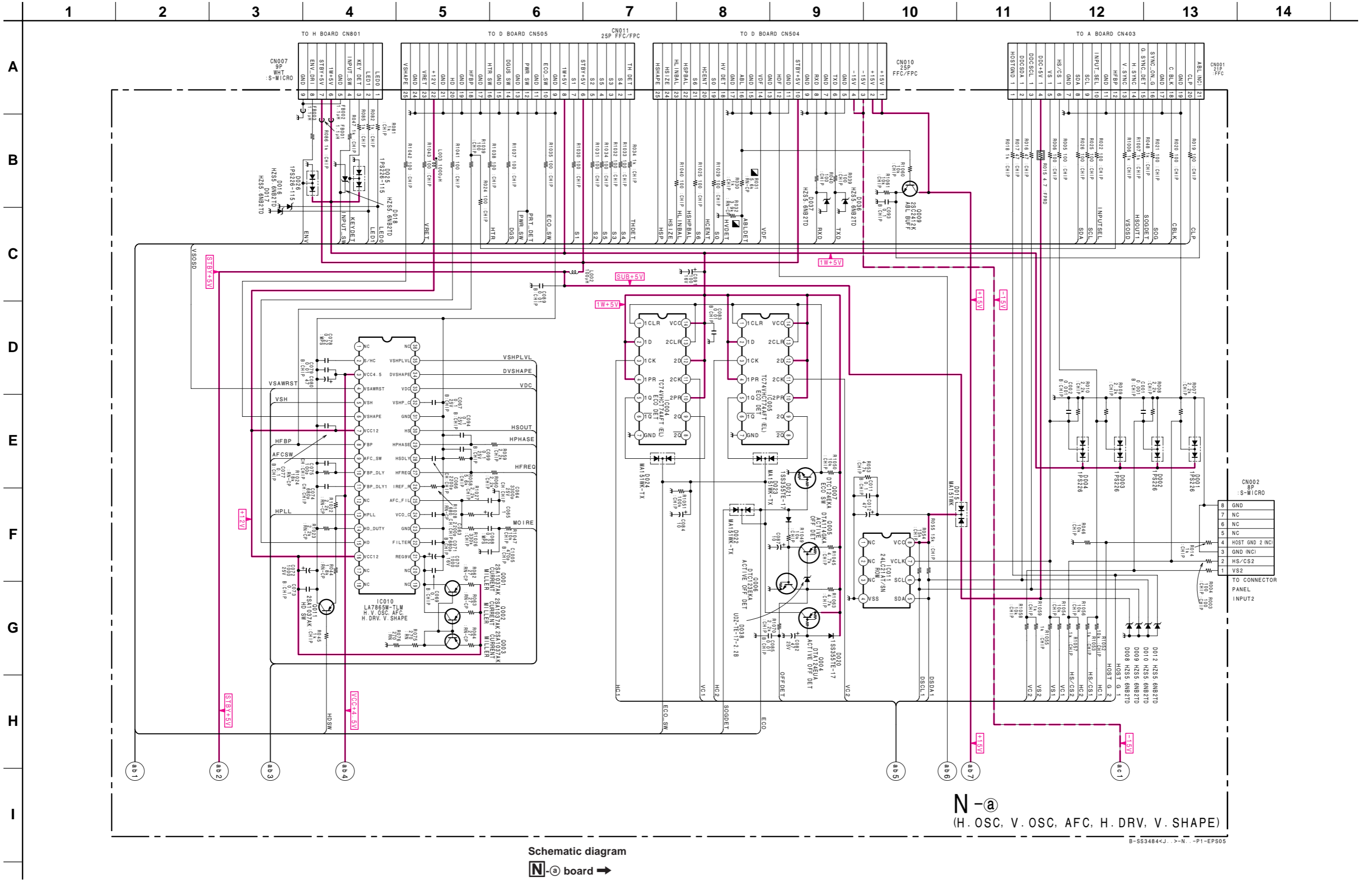


NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

- Divided circuit diagram
- One sheet of N board circuit diagram is divided into three sheets, each having the code N-Ⓐ to N-Ⓒ. For example, the destination (ab1) on the code N-Ⓐ sheet is connected to (ab1) on the N-Ⓑ sheet.



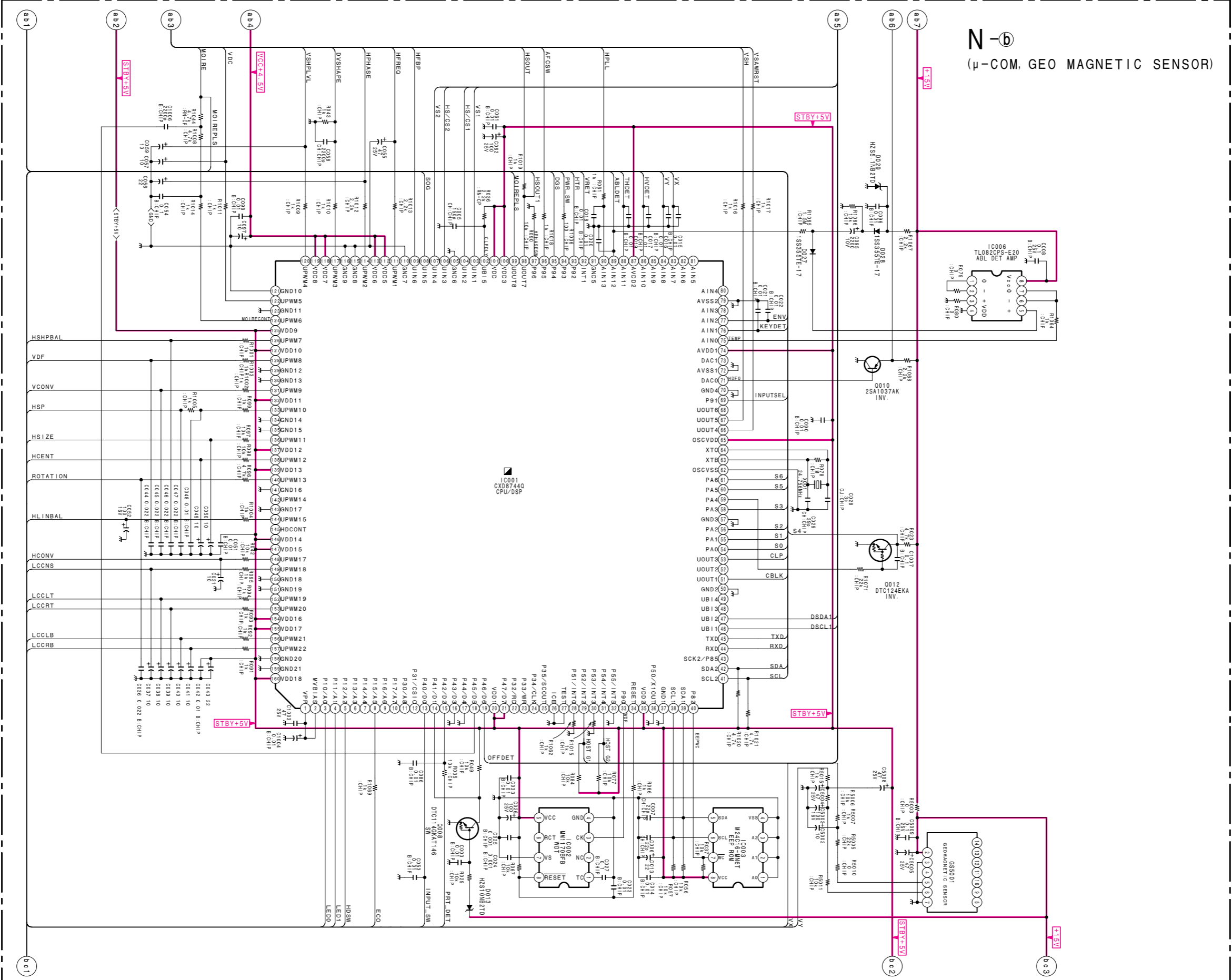
(4) Schematic Diagrams of N (Ⓐ, Ⓑ, Ⓒ) Board

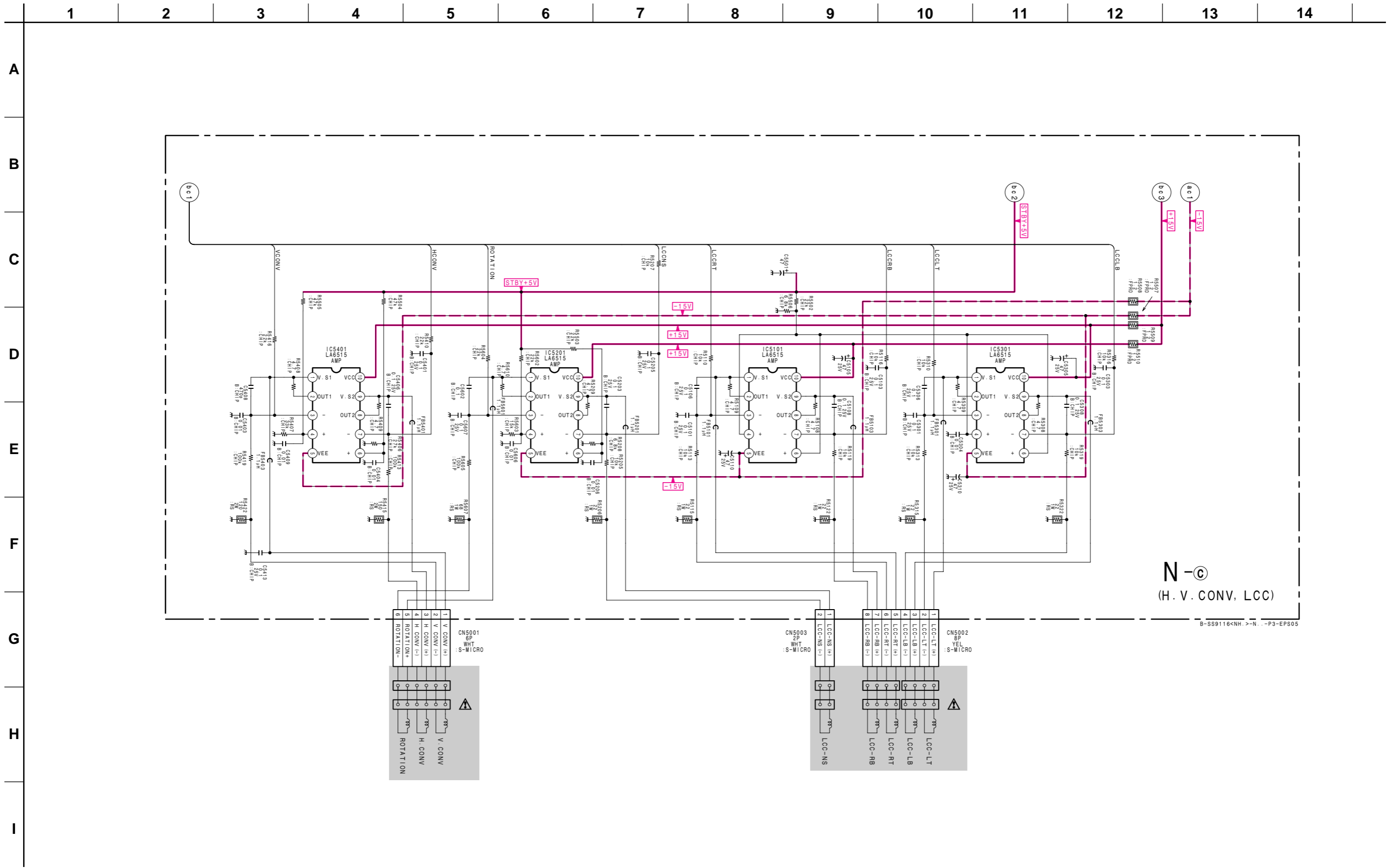


N-Ⓐ
(H. OSC, V. OSC, AFC, H. DRV, V. SHAPE)

Schematic diagram
N-Ⓐ board →

N-b
μ-COM, GEO MAGNETIC SENSOR

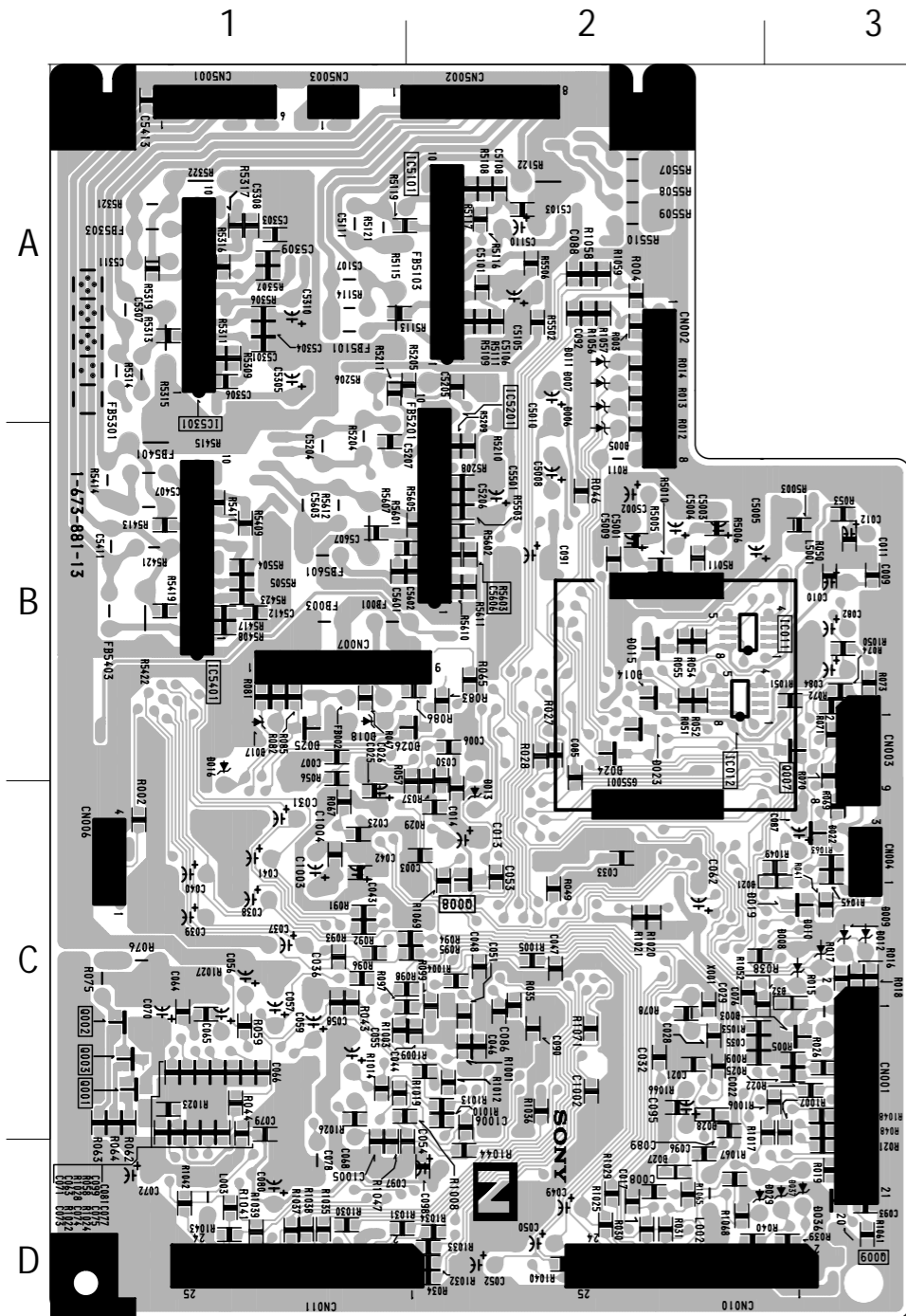




Schematic diagram
 ← **N** -⊙ board

Schematic diagram
N -⊙ board →

— N BOARD (Conductor Side) —



• N BOARD SEMICONDUCTOR LOCATION

IC		(Conductor Side)	(Component Side)
IC001	C-2		
IC002	C-2		
IC003	C-2		
IC004	B-2		
IC005	B-2		
IC006	D-1		
IC010	C-2		
IC011	B-2		
IC5101	A-2	A-2	
IC5201	B-2	B-2	
IC5301	A-1	A-2	
IC5401	B-1	B-2	

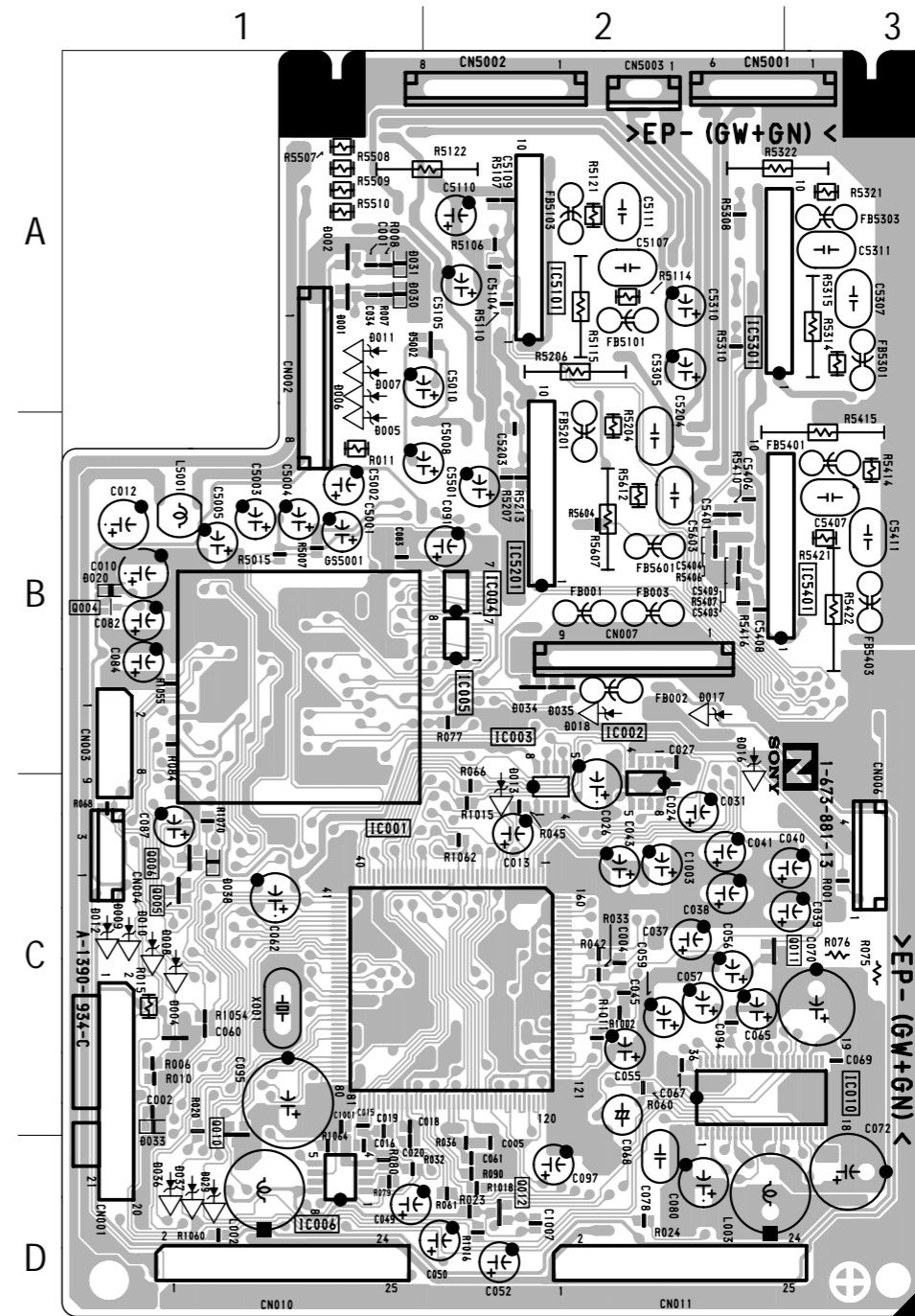
TRANSISTOR		(Conductor Side)	(Component Side)	*
Q001	C-1		①	
Q002	C-1		①	
Q003	C-1		①	
Q004		B-1	②	
Q005		C-1	②	
Q006		C-1	②	
Q007	B-3		①	
Q008	C-2		①	
Q009	D-3		①	
Q010		C-1	①	
Q011		C-2	②	
Q012		D-2	②	

DIODE		(Conductor Side)	(Component Side)	*
D001	A-1		⑦	
D002	A-1		⑦	
D003	C-3		⑥	
D004		C-1	⑦	
D008	C-3		-	
D009	C-3		-	
D010	C-3		-	
D012	C-3		-	
D013	C-2		-	
D015	B-2		⑧	
D016	B-1		-	
D017	B-1		-	
D018	B-1		-	
D020		B-1	⑧	
D021	C-3		⑧	
D022	C-3		⑧	
D023	B-2		⑧	
D024	B-2		⑧	
D025	B-1		⑧	
D026	B-2		⑧	
D027	D-2		⑧	
D028	D-2		⑧	
D029	D-3		-	
D036	D-3		-	
D037	D-3		-	
D038		C-1	⑨	

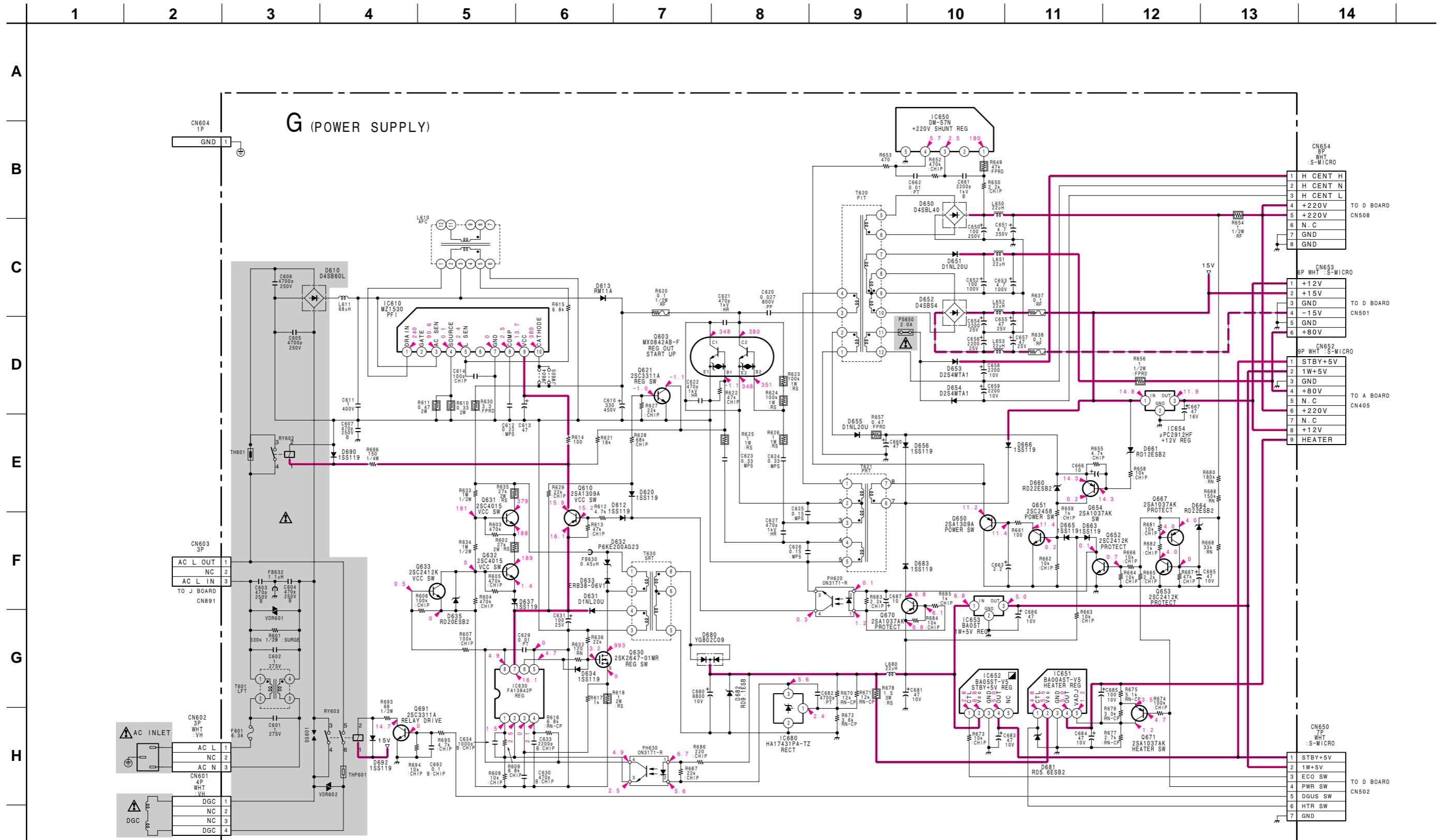
CRYSTAL		(Conductor Side)	(Component Side)
X001	C-2		C-1

※: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 5-10)

— N BOARD (Component Side) —



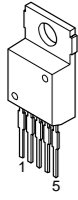
(5) Schematic Diagram of G Board



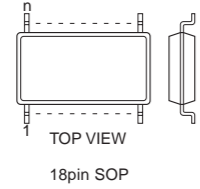
Schematic diagram
G board →

5-5. SEMICONDUCTORS

BA00AST-V5
BA05ST-V5
LA6500-FA



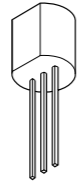
BA9759F-E2



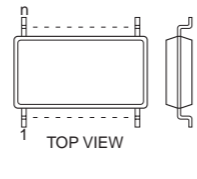
TOP VIEW

18pin SOP

HA17431PA
HA17431PA-TZ



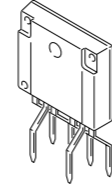
M52749FP-TP



TOP VIEW

42pin SOP

MX0842AB-F



2SC4015TV2

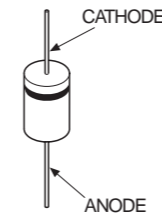


E

C

B

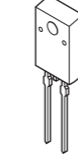
D1NL20U-TR
D2S4MF
D2S4MTA1



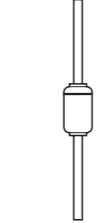
CATHODE

ANODE

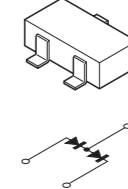
FMQ-G5GS



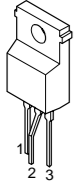
RD9.1ES-L2
RD9.1ES-T1B



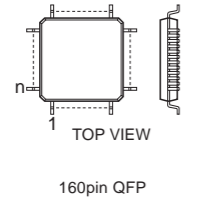
1PS226-115



BA05T



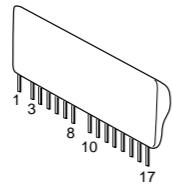
CXD8744Q



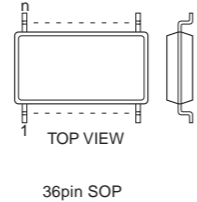
TOP VIEW

160pin QFP

H8D2972



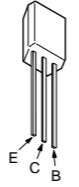
M52757FP-TP



TOP VIEW

36pin SOP

2SA1049-GR
2SA1049TP-GR
2SC2458-YGR
2SC2458TP-YGR

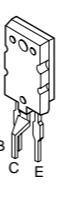


E

C

B

2SC5570(LBSONY)

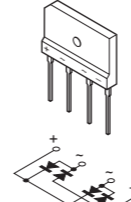


B

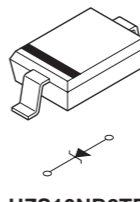
C

E

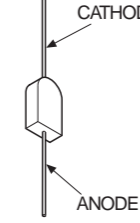
D4SB60L
D4SBL40
D4SBS4
D4SBS4-F



HSU83TRF



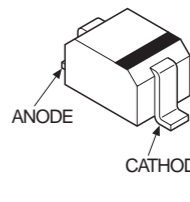
RM11A
RM11C



CATHODE

ANODE

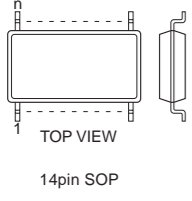
1SS355TE-17



ANODE

CATHODE

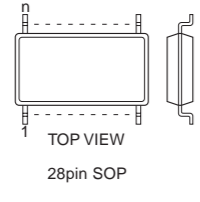
BA10324AF-E2
SN74HC04ANS
SN74HC04ANSR
TC74VHCT74AFT(EL)
XRA10324AF



TOP VIEW

14pin SOP

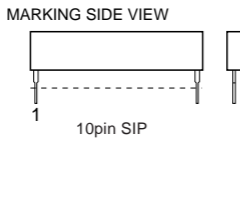
CXD9514M



TOP VIEW

28pin SOP

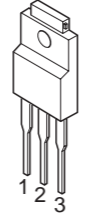
LA6515



MARKING SIDE VIEW

10pin SIP

μPC2912HF (12)

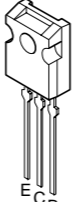


1

2

3

2SA1358-Y
2SC3421-Y

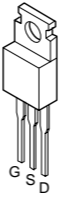


E

C

B

2SD2394-EF



G

S

D

2SJ569LS-CB11
2SK2655-01R-F165
2SK3262-01MR-F119

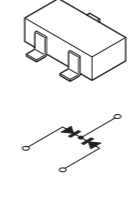


D

S

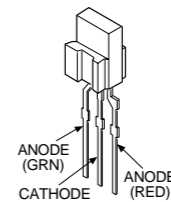
G

D5SC4M
MA151WK-TX
1SS184



HZS10NB2TD
HZS12NB2TD
HZS13NB2TD
HZS16NB2TD
HZS33NB2
HZS33NB2TD
HZS4.7NB2
HZS4.7NB2TD
HZS5.1NB2TD
HZS5.6NB2TD
MTZJ-T-77-39B
MTZJ-39B
RD10ESB2
RD12ES-B2
RD12ES-T1B2
RD13ES-B2
RD20ES-B2
RD20ES-T1B2
RD22ES-B2
RD22ES-T1B2
RD5.1ESB2
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RD6.8ES-B2
1SS119-25
1SS119-25TD
1SS133T-77

SPR-325MVW

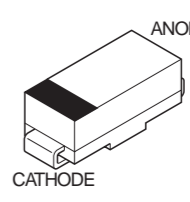


ANODE (GRN)

CATHODE

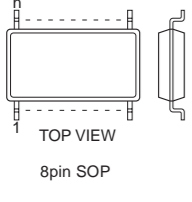
ANODE (RED)

1SS376TE-17



CATHODE

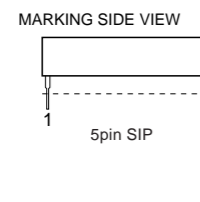
NJM2904M
NJM2904M(Te2)
TL082CPS-E20
TL082M
24LC21AT/SN



TOP VIEW

8pin SOP

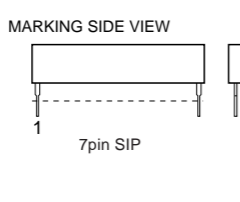
DM-57N



MARKING SIDE VIEW

5pin SIP

LA7841L

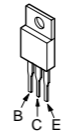


MARKING SIDE VIEW

7pin SIP

DTA114GKAT146
DTA114TUA-T106
DTA124EUA-T106
DTC114GKA
DTC114GKAT146
DTC124EK
DTC124EKA-T146
2SA1036K-Q
2SA1036K-T-146-Q
2SA1037AK-T146-QR
2SA1037AK-T146-R
2SA1162-G
2SB709A-QRS-TX
2SC1623-L5L6
2SC2411K-CQ
2SC2411K-T-146-CQ
2SC2412K-T-146-QR

2SB1565EF
2SC3746
2SC5022-02

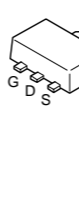


B

C

E

2SK2103T100

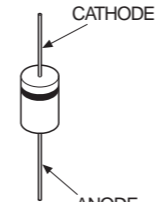


G

D

S

EGP10D
EGP10GPKG23
ERA91-02
ERA91-02TP1



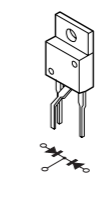
CATHODE

ANODE

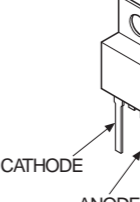
CATHODE

ANODE

YG802C09



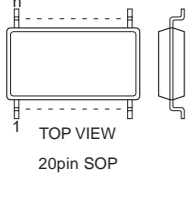
YG911S3R



CATHODE

ANODE

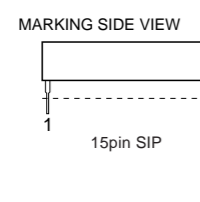
BA9758FS-E2



TOP VIEW

20pin SOP

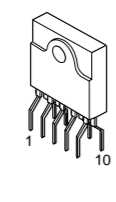
FA4301



MARKING SIDE VIEW

15pin SIP

MZ1530



DTA124ESA
DTA124ESA-TP
2SA1175-HFE
2SA1309A-QRSTA
2SC2459-GR-TPE4
2SC2784
2SC2785-HFE
2SC3311A-QRSTA

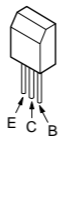
LETTER SIDE

E

C

B

2SC3209LK
2SC3209LK-TP

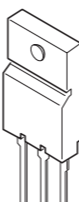


E

C

B

2SK2647-01MR-F91

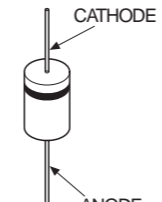


G

D

S

ERA22-06AVRBT
ERA22-08
ERA34-10TP1
ERB38-06V1
GP08D
GP08DPKG23
HSS83TD
P6KE200AG23
RD2.2M-T1B
RGP02-20EL-6394



CATHODE

ANODE

SECTION 6 EXPLODED VIEWS

- 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.

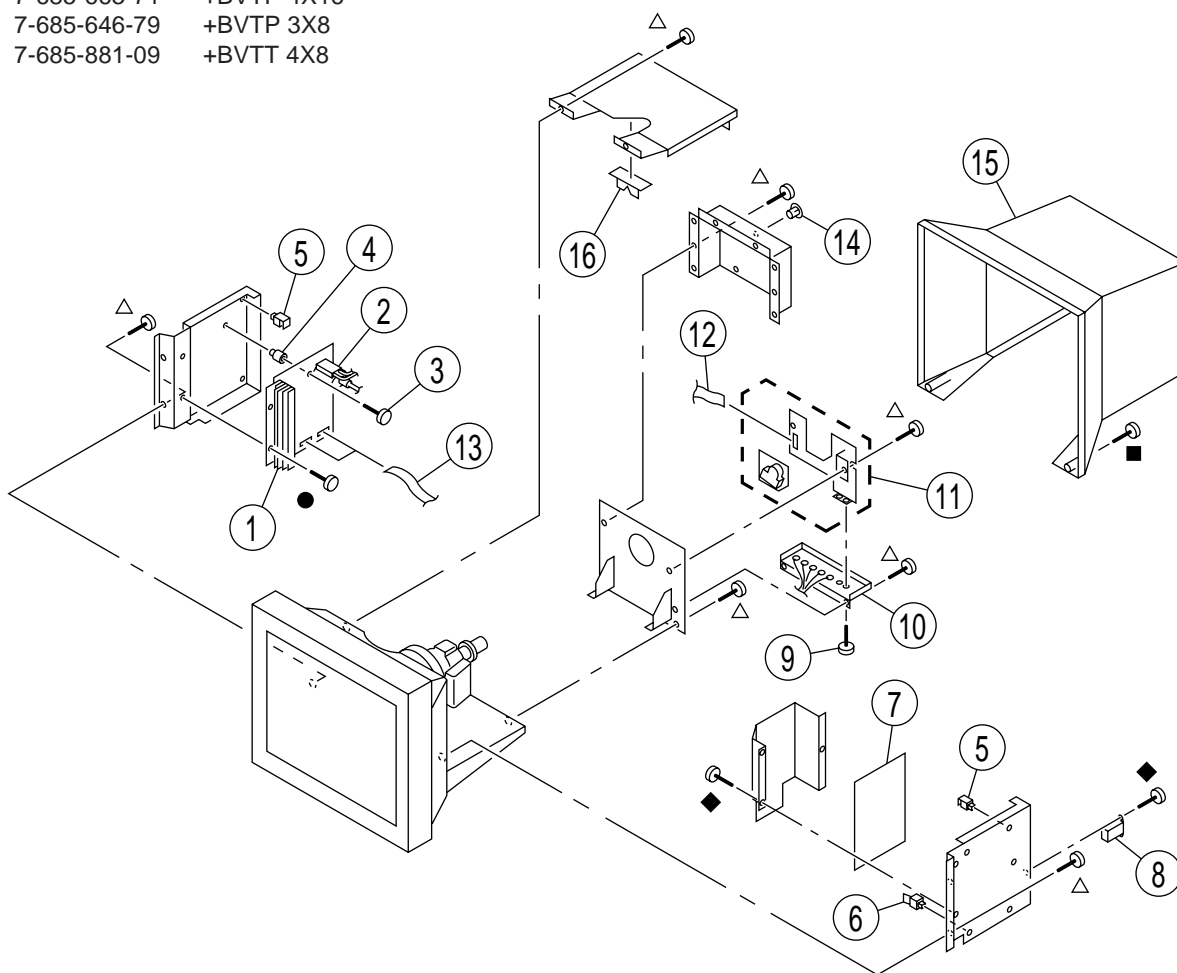
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified \triangle marked are critical for safety.
Replace only with the part number specified.

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

6-1. CHASSIS

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



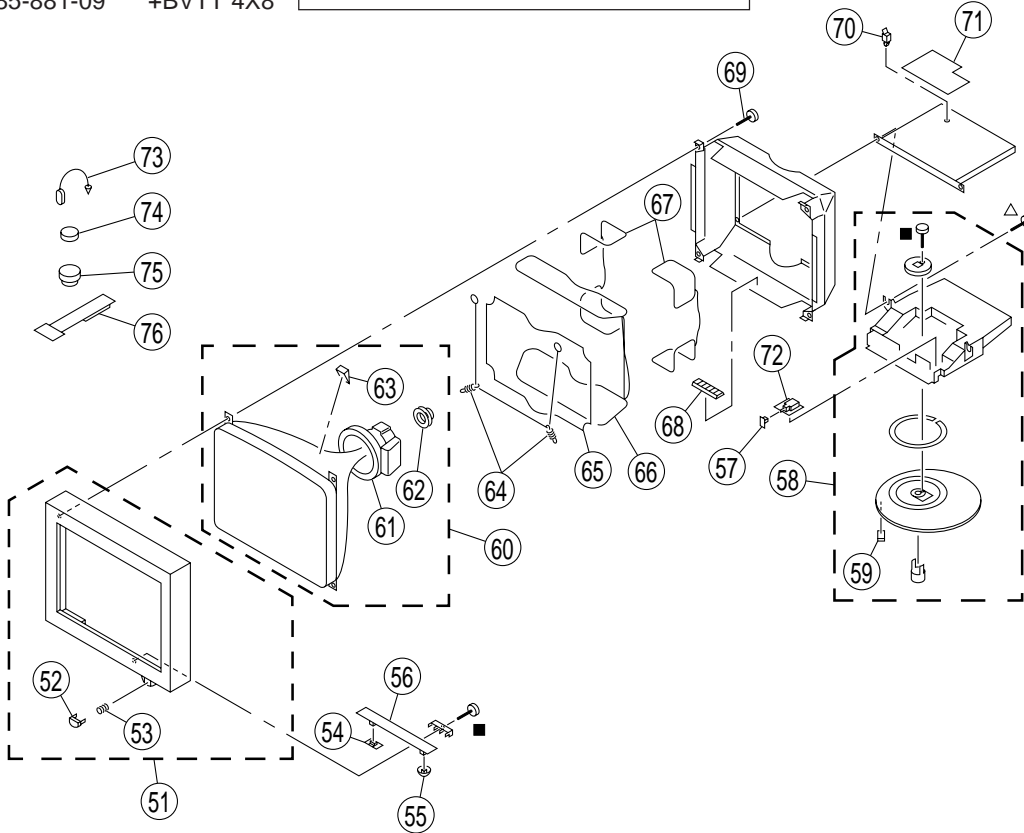
REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
1	* A-1346-827-B	D BOARD, COMPLETE	2	8	\triangle 1-251-382-31	INLET, AC 3P (WITH NOISE FILTER)	
		[U/C, AEP, SH, EQ for Japan-made set]		9	4-070-122-01	SCREW (HD15)	
1	* A-1346-860-A	D BOARD, COMPLETE	2	10	1-694-569-11	TERMINAL BOARD ASSY, I/O	
		[U/C for Mexico-made set]		11	* A-1298-874-D	A BOARD, COMPLETE	
1	* A-1346-859-A	D BOARD, COMPLETE	2	11	* A-1298-992-A	A BOARD, COMPLETE	[U/C for Mexico-made set]
		[AEP for UK-made set]		11	* A-1298-988-A	A BOARD, COMPLETE	[AEP for UK-made set]
2	\triangle X-4560-175-1	TRANSFORMER ASSY, FLYBACK		12	1-900-246-08	CONNECTOR ASSY (F)	
		(NX4502//J1D4)		13	1-900-246-07	CONNECTOR ASSY (F)	
3	4-062-115-01	SCREW +P 3.5X20 TYPE2		14	* 4-069-570-01	SPACER, PRINTED CIRCUIT BOARD	
4	* 4-060-359-01	HOLDER, PRINTED CIRCUIT BOARD		15	4-071-116-01	CABINET	[U/C, AEP, SH, EQ for Japan-made set]
5	* 3-701-903-11	HOLDER, PRINTED CIRCUIT BOARD		15	4-071-493-01	CABINET [U/C for Mexico-made set]	
6	4-070-730-01	HOLDER, PRINTED CIRCUIT BOARD		15	4-071-452-01	CABINET [AEP for UK-made set]	
7	* A-1316-443-B	G BOARD, COMPLETE		16	* 4-063-711-01	SUPPORT, HV CABLE	
		[U/C, AEP, SH, EQ for Japan-made set]					
7	* A-1316-481-A	G BOARD, COMPLETE					
		[U/C for Mexico-made set]					
7	* A-1316-480-A	G BOARD, COMPLETE					
		[AEP for UK-made set]					

6-2. PICTURE TUBE

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

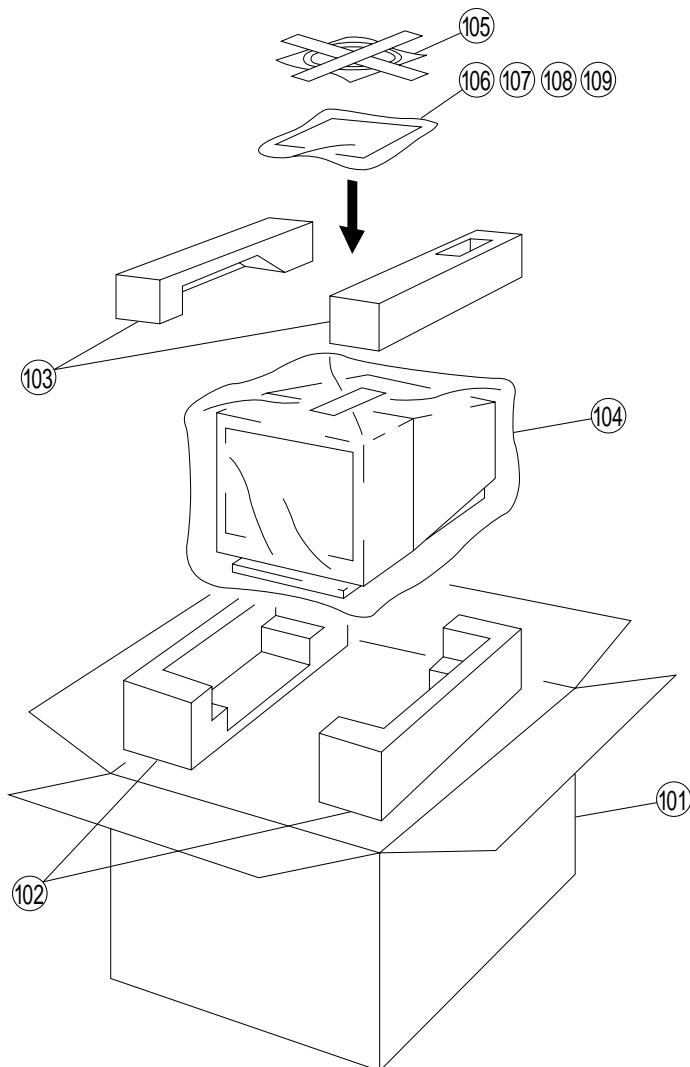
Les composants identifiés par la marque △ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

The components identified △ marked are critical for safety.
Replace only with the part number specified.



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
51	X-4036-843-1	BEZEL ASSY [U/C, AEP, SH, EQ for Japan-made set]	52, 53	59	* 4-061-996-11	CUSHION	
51	X-4036-928-1	BEZEL ASSY [U/C for Mexico-made set]	52, 53	60	8-738-813-61	ITC ASSY (21TKC-R1) [U/C, AEP]	61-63
51	X-4036-914-1	BEZEL ASSY [AEP for UK-made set]	52, 53	60	8-738-821-61	ITC ASSY (21TKC-RS1) [SH, EQ for Japan-made set]	61-63
52	4-070-660-01	BUTTON, POWER [U/C, AEP, SH, EQ for Japan-made set]		61	8-451-509-11	DEFLECTION YOKE (Y21TKM-M)	
52	4-071-152-01	BUTTON, POWER [U/C for Mexico-made set]		62	△ 1-452-912-61	NECK ASSEMBLY (NA-2914)	
52	4-204-957-01	BUTTON, POWER [AEP for UK-made set]		63	2-162-100-21	SPACER, DEFLECTION YOKE	
53	3-635-339-01	SPRING, COMPRESSION [Except U/C for Mexico-made set]		64	* 4-047-316-01	SPRING, EXTENSION [Except U/C for Mexico-made set]	
53	3-653-339-21	SPRING, COMPRESSION [U/C for Mexico-made set]		64	* 4-061-573-01	SPRING, TENSION [U/C for Mexico-made set]	
54	4-071-112-01	SELECTION, INPUT [U/C, AEP, SH, EQ for Japan-made set]		65	△ 1-419-130-21	COIL, LANDING CORRECTION	
54	4-071-489-01	SELECTOR, INPUT [U/C for Mexico-made set]		66	△ 1-419-128-21	COIL, DEGAUSSING	
54	4-071-453-01	KNOB, INPUT SELECTION [AEP for UK-made set]		67	△ 1-419-129-21	COIL, LANDING CORRECTION	
55	4-070-665-01	BUTTON, MENU [U/C, AEP, SH, EQ for Japan-made set]		68	4-062-670-01	SPACER, PICTURE TUBE	
55	4-071-155-01	BUTTON, MENU [U/C for Mexico-made set]		69	4-365-808-01	SCREW (5), TAPPING	
55	4-204-970-01	BUTTON, MENU [AEP for UK-made set]		70	4-070-730-01	HOLDER, PRINTED CIRCUIT BOARD	
56	* A-1372-682-A	H1 BOARD, COMPLETE [U/C, AEP, SH, EQ for Japan-made set]		71	* A-1394-946-C	N BOARD, COMPLETE [U/C, AEP, SH, EQ for Japan-made set]	
56	* A-1372-691-A	H1 BOARD, COMPLETE [U/C for Mexico-made set]		71	* A-1394-951-A	N BOARD, COMPLETE [U/C for Mexico-made set]	
56	* A-1372-690-A	H1 BOARD, COMPLETE [AEP for UK-made set]		71	* A-1394-950-A	N BOARD, COMPLETE [AEP for UK-made set]	
57	* 4-394-972-21	CAP, POWER		72	* A-1388-250-A	J BOARD, COMPLETE [U/C, AEP, SH, EQ for Japan-made set]	
58	X-4036-844-2	STAND ASSY	59	72	* A-1388-261-A	J BOARD, COMPLETE [U/C for Mexico-made set]	
				72	* A-1388-260-A	J BOARD, COMPLETE [AEP for UK-made set]	
				73	4-308-870-00	CLIP, LEAD WIRE	
				74	1-452-032-00	MAGNET, DISK; 10mm φ	
				75	1-452-094-00	MAGNET, ROTATABLE DISK; 15mm φ	
				76	4-051-736-21	PIECE A(90), CONV. CORRECT	

6-3. PACKING MATERIALS



The components identified \triangle marked are critical for safety. Replace only with the part number specified.

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

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
101	* 4-071-736-01	INDIVIDUAL CARTON [U/C, SH, EQ for Japan-made set]		104	* 4-047-293-01	BAG, POLYETHYLENE [U/C for Mexico-made set]	
101	* 4-071-779-01	INDIVIDUAL CARTON [AEP for UK-made set]		105	1-793-504-11	CABLE ASSY (15P DSUBX2 CONNECTOR)	
101	* 4-072-126-01	INDIVIDUAL CARTON [AEP for Japan-made set]		106	3-867-232-12	MANUAL, INSTRUCTION [U/C, SH, EQ for Japan-made set]	
101	* 4-072-874-01	INDIVIDUAL CARTON [U/C for Mexico-made set]		106	3-867-232-21	MANUAL, INSTRUCTION [AEP for Japan-made set]	
102	* 4-071-731-01	CUSHION (LOWER) (ASSY) [U/C, AEP, SH, EQ for Japan-made set]		106	3-867-232-31	MANUAL, INSTRUCTION [U/C for Mexico-made set]	
102	* 4-071-781-01	CUSHION (LOWER) (ASSY) [AEP for UK-made set]		106	3-867-232-41	MANUAL, INSTRUCTION [AEP for UK-made set]	
102	* 4-072-876-01	CUSHION (LOWER) (ASSY) [U/C for Mexico-made set]		107	1-772-380-11	DISK, INFORMATION	
103	* 4-071-730-01	CUSHION (UPPER) (ASSY) [U/C, AEP, SH, EQ for Japan-made set]		108	\triangle 1-785-429-11	ADAPTOR, CONVERSION for Macintosh [Except AEP]	
103	* 4-071-780-01	CUSHION (UPPER) (ASSY) [AEP for UK-made set]		108	1-785-512-31	CONNECTOR, D SUB (15P CHANGER) for Macintosh new G3 [AEP]	
103	* 4-072-875-01	CUSHION (UPPER) (ASSY) [U/C for Mexico-made set]		109	\triangle 1-782-783-31	CORD SET POWER [U/C]	
104	* 4-041-927-31	BAG, POLYETHYLENE [U/C, AEP, SH, EQ for Japan-made set]		109	\triangle 1-782-784-21	CORD SET POWER [AEP, EQ]	
104	* 4-368-079-01	BAG, POLYETHYLENE [AEP for UK-made set]		109	\triangle 1-782-785-11	CORD, AC POWER [SH for Japan-made set]	

MEMO

A series of horizontal dotted lines for writing.

SECTION 7 ELECTRICAL PARTS LIST



NOTE:

The components identified Δ marked are critical for safety. Replace only with the part number specified.

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

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

The components identified by \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.

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

RESISTORS

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

• All resistors are in ohms
• F : nonflammable

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
* A-1298-874-D		A BOARD, COMPLETE [U/C, AEP, SH, EQ for Japan-made set]		C304	1-104-664-11	ELECT 47 μ F	20% 25V
* A-1298-992-A		A BOARD, COMPLETE [U/C for Mexico-made set]		C307	1-164-004-11	CERAMIC CHIP0.1 μ F	10% 25V
* A-1298-988-A		A BOARD, COMPLETE [AEP for UK-made set] *****		C308	1-164-004-11	CERAMIC CHIP0.1 μ F	10% 25V
7-682-950-01		SCREW +PSW 3X12 (IC403)		C309	1-163-227-11	CERAMIC CHIP 10pF	0.5pF 50V
		<CAPACITOR>		C310	1-163-275-11	CERAMIC CHIP0.001 μ F	5% 50V
C101	1-163-021-91	CERAMIC CHIP0.01 μ F	10% 50V	C312	1-164-489-11	CERAMIC CHIP0.22 μ F	10% 16V
C102	1-104-664-11	ELECT 47 μ F	20% 25V	C313	1-164-489-11	CERAMIC CHIP0.22 μ F	10% 16V
C103	1-163-021-91	CERAMIC CHIP0.01 μ F	10% 50V	C314	1-164-004-11	CERAMIC CHIP0.1 μ F	10% 25V
C104	1-104-664-11	ELECT 47 μ F	20% 25V	C315	1-104-341-11	FILM 0.1 μ F	10% 250V
C107	1-164-004-11	CERAMIC CHIP0.1 μ F	10% 25V	C320	1-104-341-11	FILM 0.1 μ F	10% 250V
C108	1-164-004-11	CERAMIC CHIP0.1 μ F	10% 25V	C401	1-126-964-11	ELECT 10 μ F	20% 50V
C109	1-163-229-11	CERAMIC CHIP 12pF	5% 50V	C402	1-104-664-11	ELECT 47 μ F	20% 25V
C110	1-163-275-11	CERAMIC CHIP0.001 μ F	5% 50V	C403	1-163-259-91	CERAMIC CHIP220pF	5% 50V
C112	1-164-489-11	CERAMIC CHIP0.22 μ F	10% 16V	C404	1-163-259-91	CERAMIC CHIP220pF	5% 50V
C113	1-164-489-11	CERAMIC CHIP0.22 μ F	10% 16V	C405	1-164-004-11	CERAMIC CHIP0.1 μ F	10% 25V
C114	1-164-004-11	CERAMIC CHIP0.1 μ F	10% 25V	C406	1-163-021-91	CERAMIC CHIP0.01 μ F	10% 50V
C115	1-104-341-11	FILM 0.1 μ F	10% 250V	C407	1-163-021-91	CERAMIC CHIP0.01 μ F	10% 50V
C120	1-104-341-11	FILM 0.1 μ F	10% 250V	C408	1-163-021-91	CERAMIC CHIP0.01 μ F	10% 50V
C201	1-163-021-91	CERAMIC CHIP0.01 μ F	10% 50V	C410	1-163-021-91	CERAMIC CHIP0.01 μ F	10% 50V
C202	1-104-664-11	ELECT 47 μ F	20% 25V	C411	1-104-664-11	ELECT 47 μ F	20% 25V
C203	1-163-021-91	CERAMIC CHIP0.01 μ F	10% 50V	C413	1-163-021-91	CERAMIC CHIP0.01 μ F	10% 50V
C204	1-104-664-11	ELECT 47 μ F	20% 25V	C415	1-164-489-11	CERAMIC CHIP0.22 μ F	10% 16V
C205	1-163-021-91	CERAMIC CHIP0.01 μ F	10% 50V	C416	1-126-961-11	ELECT 2.2 μ F	20% 50V
C206	1-109-982-11	CERAMIC CHIP 1 μ F	10% 10V	C417	1-104-574-11	CERAMIC 0.0047 μ F	10% 2KV
C207	1-164-004-11	CERAMIC CHIP0.1 μ F	10% 25V	C419	1-162-318-11	CERAMIC 0.001 μ F	10% 500V
C208	1-164-004-11	CERAMIC CHIP0.1 μ F	10% 25V	C420	1-164-489-11	CERAMIC CHIP0.22 μ F	10% 16V
C209	1-163-227-11	CERAMIC CHIP 10pF	0.5pF 50V	C421	1-163-021-91	CERAMIC CHIP0.01 μ F	10% 50V
C210	1-163-275-11	CERAMIC CHIP0.001 μ F	5% 50V	C422	1-164-489-11	CERAMIC CHIP0.22 μ F	10% 16V
C212	1-164-489-11	CERAMIC CHIP0.22 μ F	10% 16V	C423	1-104-664-11	ELECT 47 μ F	20% 25V
C213	1-164-489-11	CERAMIC CHIP0.22 μ F	10% 16V	C424	1-162-318-11	CERAMIC 0.001 μ F	10% 500V
C214	1-164-004-11	CERAMIC CHIP0.1 μ F	10% 25V	C425	1-163-251-11	CERAMIC CHIP 100pF	5% 50V
C215	1-104-341-11	FILM 0.1 μ F	10% 250V	C426	1-163-251-11	CERAMIC CHIP 100pF	5% 50V
C216	1-163-021-91	CERAMIC CHIP0.01 μ F	10% 50V	C427	1-163-235-11	CERAMIC CHIP22pF	5% 50V
C220	1-104-341-11	FILM 0.1 μ F	10% 250V	C430	1-163-021-91	CERAMIC CHIP0.01 μ F	10% 50V
C301	1-163-021-91	CERAMIC CHIP0.01 μ F	10% 50V	C431	1-163-275-11	CERAMIC CHIP0.001 μ F	5% 50V
C302	1-104-664-11	ELECT 47 μ F	20% 25V	C432	1-164-489-11	CERAMIC CHIP0.22 μ F	10% 16V
C303	1-163-021-91	CERAMIC CHIP0.01 μ F	10% 50V	C433	1-162-318-11	CERAMIC 0.001 μ F	10% 500V
				C434	1-162-318-11	CERAMIC 0.001 μ F	10% 500V
				C435	1-163-021-91	CERAMIC CHIP0.01 μ F	10% 50V
				C436	1-164-489-11	CERAMIC CHIP0.22 μ F	10% 16V
				C437	1-126-934-11	ELECT 220 μ F	20% 16V
				C438	1-115-339-11	CERAMIC CHIP0.1 μ F	10% 50V
				C440	1-163-021-91	CERAMIC CHIP0.01 μ F	10% 50V



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

The components identified Δ marked are critical for safety.
Replace only with the part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C441	1-163-021-91	CERAMIC CHIP0.01 μ F	10% 50V	FB404	1-412-911-11	FERRITE 1.1 μ H	
C442	1-163-021-91	CERAMIC CHIP0.01 μ F	10% 50V	FB405	1-412-911-11	FERRITE 1.1 μ H	
C443	1-163-021-91	CERAMIC CHIP0.01 μ F	10% 50V	FB406	1-412-911-11	FERRITE 1.1 μ H	
C444	1-162-318-11	CERAMIC 0.001 μ F	10% 500V	FB411	1-412-911-11	FERRITE 1.1 μ H	
C446	1-104-664-11	ELECT 47 μ F	20% 25V				
C449	1-109-982-11	CERAMIC CHIP1 μ F	10% 10V		<IC>		
C450	1-107-823-11	CERAMIC CHIP0.47 μ F	10% 16V				
C456	1-164-004-11	CERAMIC CHIP0.1 μ F	10% 25V	IC401	8-759-584-87	IC M52757FP-TP	
C457	1-163-021-91	CERAMIC CHIP0.01 μ F	10% 50V	IC402	8-759-584-86	IC M52749FP-TP	
C458	1-115-339-11	CERAMIC CHIP0.1 μ F	10% 50V	IC403	8-749-015-91	IC FA4301	
				IC404	8-759-585-72	IC CXD9514M	
C459	1-128-560-11	ELECT 22 μ F	20% 100V	IC405	8-759-701-01	IC NJM2904M	
C462	1-115-339-11	CERAMIC CHIP0.1 μ F	10% 50V				
C463	1-163-021-91	CERAMIC CHIP0.01 μ F	10% 50V	IC406	8-749-015-92	IC H8D2972	
C464	1-163-021-91	CERAMIC CHIP0.01 μ F	10% 50V	IC407	8-759-925-74	IC SN74HC04ANS	
C467	1-107-957-11	ELECT 1 μ F	20% 250V				
					<COIL>		
	<CONNECTOR>			L402	1-412-529-11	INDUCTOR 22 μ H	
CN401	1-793-183-11	CONNECTOR, D SUB 15P		L403	1-412-537-31	INDUCTOR 100 μ H	
CN402*	1-564-509-11	PLUG, CONNECTOR 6P		L404	1-414-940-21	INDUCTOR 100 μ H	
CN403	1-784-463-11	CONNECTOR, FFC/FPC 21P		L405	1-412-529-11	INDUCTOR 22 μ H	
CN405*	1-564-524-11	PLUG, CONNECTOR 9P					
CN406*	1-766-179-11	PIN, CONNECTOR (PC BOARD) 2P			<IC LINK>		
	<DIODE>						
D101	8-719-062-51	DIODE 1PS226-115			<TRANSISTOR>		
D102	8-719-062-51	DIODE 1PS226-115		Q101	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
D103	8-719-066-10	DIODE 1PS181-115		Q201	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
D105	8-719-051-85	DIODE HSS83TD		Q301	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
D106	8-719-052-12	DIODE 1SS376TE-17		Q401	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
				Q402	8-729-050-41	TRANSISTOR 2SJ360TE12L	
D107	8-719-052-12	DIODE 1SS376TE-17					
D201	8-719-062-51	DIODE 1PS226-115		Q406	8-729-216-22	TRANSISTOR 2SA1162-G	
D202	8-719-062-51	DIODE 1PS226-115		Q407	8-729-028-74	TRANSISTOR DTA114TUA-T106	
D203	8-719-066-10	DIODE 1PS181-115		Q410	8-729-032-61	TRANSISTOR 2SC5022-02	
D205	8-719-051-85	DIODE HSS83TD					
D206	8-719-052-12	DIODE 1SS376TE-17			<RESISTOR>		
D207	8-719-052-12	DIODE 1SS376TE-17		R101	1-215-394-00	METAL 75 1% 1/4W	
D301	8-719-062-51	DIODE 1PS226-115		R103	1-215-394-00	METAL 75 1% 1/4W	
D302	8-719-062-51	DIODE 1PS226-115		R105	1-216-017-91	RES,CHIP 47 5% 1/10W	
D303	8-719-066-10	DIODE 1PS181-115		R106	1-216-017-91	RES,CHIP 47 5% 1/10W	
				R107	1-216-045-00	RES,CHIP 680 5% 1/10W	
D305	8-719-051-85	DIODE HSS83TD					
D306	8-719-052-12	DIODE 1SS376TE-17		R109	1-216-075-00	RES,CHIP 12K 5% 1/10W	
D307	8-719-052-12	DIODE 1SS376TE-17		R110	1-216-097-91	RES,CHIP 100K 5% 1/10W	
D402	8-719-801-78	DIODE 1SS184		R111	1-216-041-00	RES,CHIP 470 5% 1/10W	
D403	8-719-982-36	ZENER DIODE MTZJ-39B		R112	1-216-009-91	RES,CHIP 22 5% 1/10W	
				R113	1-216-017-91	RES,CHIP 47 5% 1/10W	
D405	8-719-911-19	DIODE 1SS119-25					
D406	8-719-062-51	DIODE 1PS226-115		R114	1-216-009-91	RES,CHIP 22 5% 1/10W	
D407	8-719-062-51	DIODE 1PS226-115		R115	1-219-742-11	CARBON 47 5% 1/2W	
				R116	1-216-065-91	RES,CHIP 4.7K 5% 1/10W	
	<FERRITE BEAD>			R117	1-216-121-91	RES,CHIP 1M 5% 1/10W	
FB102	1-500-419-22	FERRITE		R118	1-216-121-91	RES,CHIP 1M 5% 1/10W	
FB202	1-500-419-22	FERRITE					
FB302	1-500-419-22	FERRITE		R119	1-216-077-91	RES,CHIP 15K 5% 1/10W	
FB402	1-412-911-11	FERRITE 1.1 μ H		R120	1-216-113-00	RES,CHIP 470K 5% 1/10W	
FB403	1-412-911-11	FERRITE 1.1 μ H		R121	1-216-113-00	RES,CHIP 470K 5% 1/10W	
				R122	1-216-081-00	RES,CHIP 22K 5% 1/10W	



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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
SG402	1-519-422-11	GAP, SPARK		C655	1-104-664-11	ELECT 47 μ F	20% 25V
	<SOCKET>			C656	1-126-943-11	ELECT 2200 μ F	20% 25V
SK401	Δ 1-451-499-11	SOCKET, PICTURE TUBE		C657	1-104-664-11	ELECT 47 μ F	20% 25V
	<CRYSTAL>			C658	1-126-927-11	ELECT 2200 μ F	20% 10V
X401	1-781-472-21	VIBRATOR, CERAMIC (8MHZ)		C659	1-128-339-11	ELECT 2200 μ F	20% 10V
*****				C660	1-126-967-11	ELECT 47 μ F	20% 50V
	* A-1316-443-B	G BOARD, COMPLETE		C661	1-107-429-11	CERAMIC 0.0022 μ F	10% 1KV
		[U/C, AEP, SH, EQ for Japan-made set]		C662	1-137-370-11	FILM 0.01 μ F	5% 50V
	* A-1316-481-A	G BOARD, COMPLETE		C663	1-126-961-11	ELECT 2.2 μ F	20% 50V
		[U/C for Mexico-made set]		C665	1-107-909-11	ELECT 47 μ F	20% 10V
	* A-1316-480-A	G BOARD, COMPLETE		C666	1-126-964-11	ELECT 10 μ F	20% 50V
		[AEP for UK-made set]		C667	1-107-909-11	ELECT 47 μ F	20% 16V
		*****		C680	1-115-747-51	ELECT 0.0068F	20% 10V
	1-533-223-11	HOLDER, FUSE (F601)		C681	1-104-664-11	ELECT 47 μ F	20% 10V
	4-382-854-11	SCREW (M3X10), P, SW (+)		C682	1-137-368-11	FILM 0.0047 μ F	5% 50V
		(D610,D652,D680,IC610,IC654,Q603,Q630)		C683	1-104-664-11	ELECT 47 μ F	20% 10V
	<CAPACITOR>			C684	1-107-909-11	ELECT 47 μ F	20% 10V
C601	Δ 1-113-513-11	FILM 1 μ F	20% 275V	C685	1-128-526-11	ELECT 100 μ F	20% 10V
C602	Δ 1-113-513-11	FILM 1 μ F	20% 275V	C686	1-104-664-11	ELECT 47 μ F	20% 10V
C603	Δ 1-113-900-51	CERAMIC 470pF	10% 250V	C687	1-126-964-11	ELECT 10 μ F	20% 50V
C604	Δ 1-113-900-51	CERAMIC 470pF	10% 250V	C692	1-115-339-11	CERAMIC CHIP 0.1 μ F	10% 50V
C605	Δ 1-113-926-91	CERAMIC 0.0047 μ F	250V		<CONNECTOR>		
C606	Δ 1-113-926-91	CERAMIC 0.0047 μ F	250V	CN601*	1-580-689-11	PIN, CONNECTOR (PC BOARD) 4P	
C607	1-113-900-11	CERAMIC 470pF	10% 250V	CN602*	1-691-960-11	PIN, CONNECTOR (PC BOARD) 3P	
C610	1-117-849-11	ELECT 330 μ F	20% 450V	CN603*	1-691-960-11	PIN, CONNECTOR (PC BOARD) 3P	
C611	1-137-479-11	FILM 1 μ F	10% 400V	CN650*	1-564-510-11	PLUG, CONNECTOR 7P	
C612	1-136-169-00	FILM 0.22 μ F	5% 50V	CN652*	1-564-512-11	PLUG, CONNECTOR 9P	
C613	1-126-967-11	ELECT 47 μ F	20% 50V	CN653*	1-564-509-11	PLUG, CONNECTOR 6P	
C614	1-163-251-11	CERAMIC CHIP 100pF	5% 50V	CN654*	1-564-511-11	PLUG, CONNECTOR 8P	
C620	1-128-990-11	FILM 27000pF	5% 800V		<DIODE>		
C621	1-104-330-91	CERAMIC 470pF	10% 1KV	D610	Δ 8-719-510-53	DIODE D4SB60L	
C622	1-104-330-91	CERAMIC 470pF	10% 1KV	D612	8-719-911-19	DIODE 1SS119-25	
C623	1-136-171-00	FILM 0.33 μ F	5% 50V	D613	8-719-304-63	DIODE RM11C	
C624	1-136-171-00	FILM 0.33 μ F	5% 50V	D620	8-719-911-19	DIODE 1SS119-25	
C625	1-136-167-00	FILM 0.15 μ F	5% 50V	D631	8-719-063-73	DIODE D1NL20U-TR	
C626	1-136-167-00	FILM 0.15 μ F	5% 50V	D632	8-719-059-23	DIODE P6KE200AG23	
C627	1-104-330-91	CERAMIC 470pF	10% 1KV	D633	8-719-069-63	DIODE ERB38-06V1	
C629	1-137-370-11	FILM 0.01 μ F	5% 50V	D634	8-719-911-19	DIODE 1SS119-25	
C630	1-163-005-11	CERAMIC CHIP 470pF	10% 50V	D635	8-719-110-53	ZENER DIODE RD20ESB2	
C631	1-104-665-11	ELECT 100 μ F	20% 25V	D637	8-719-911-19	DIODE 1SS119-25	
C633	1-164-161-11	CERAMIC CHIP 0.0022 μ F	10% 50V	D650	8-719-064-49	DIODE D4SBL40	
C634	1-163-009-11	CERAMIC CHIP 0.001 μ F	10% 50V	D651	8-719-063-73	DIODE D1NL20U-TR	
C650	1-107-656-11	ELECT 100 μ F	20% 250V	D652	8-719-052-91	DIODE D4SBS4-F	
C651	1-107-651-11	ELECT 4.7 μ F	20% 250V	D653	8-719-022-97	DIODE D2S4MF	
C652	1-128-563-11	ELECT 100 μ F	20% 100V	D654	8-719-022-97	DIODE D2S4MF	
C653	1-128-581-11	ELECT 4.7 μ F	20% 100V	D655	8-719-063-73	DIODE D1NL20U-TR	
C654	1-126-943-11	ELECT 2200 μ F	20% 25V	D656	8-719-911-19	DIODE 1SS119-25	
				D660	8-719-110-57	ZENER DIODE RD22ESB2	
				D661	8-719-110-31	ZENER DIODE RD12ESB2	
				D663	8-719-911-19	DIODE 1SS119-25	
				D664	8-719-110-57	ZENER DIODE RD22ESB2	
				D665	8-719-911-19	DIODE 1SS119-25	

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D666	8-719-911-19	DIODE 1SS119-25		Q650	8-729-119-76	TRANSISTOR 2SA1175-HFE	
D680	8-719-989-87	DIODE YG802C09		Q651	8-729-230-45	TRANSISTOR 2SC2458-YGR	
D681	8-719-109-89	ZENER DIODE RD5.6ESB2		Q652	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
D682	8-719-121-26	ZENER DIODE RD9.1ESL2		Q653	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
D683	8-719-911-19	DIODE 1SS119-25		Q654	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
D690	8-719-911-19	DIODE 1SS119-25		Q667	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
D692	8-719-911-19	DIODE 1SS119-25		Q670	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
		<FUSE>		Q671	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
F601	Δ 1-576-233-11	FUSE (H.B.C.) (6.3A/250V)		Q691	8-729-119-78	TRANSISTOR 2SC2785-HFE	
		<FERRITE BEAD>				<RESISTOR>	
FB630	1-410-396-41	FERRITE	0.45 μ H	R601	Δ 1-220-825-91	CARBON	330K 5% 1/2W
FB632	Δ 1-410-397-31	FERRITE	1.1 μ H	R602	1-216-465-11	METAL OXIDE	27K 5% 2W F
		<IC>		R603	1-247-895-91	CARBON	470K 5% 1/4W
IC610	8-749-015-89	IC MZ1530		R604	1-216-113-00	RES,CHIP	470K 5% 1/10W
IC630	8-759-535-32	IC FA13842P		R605	1-216-113-00	RES,CHIP	470K 5% 1/10W
IC650	8-749-012-49	IC DM-57N		R606	1-216-097-91	RES,CHIP	100K 5% 1/10W
IC651	8-759-592-79	IC BA00AST-V5		R607	1-216-097-91	RES,CHIP	100K 5% 1/10W
IC652	8-759-496-15	IC BA05ST-V5		R608	1-216-073-00	RES,CHIP	10K 5% 1/10W
IC653	8-759-450-47	IC BA05T		R609	1-216-069-00	RES,CHIP	6.8K 5% 1/10W
IC654	8-759-643-66	IC μ PC2912HF(12)		R610	1-217-152-00	METAL	0.33 10% 2W
IC680	8-759-321-95	IC HA17431PA		R611	1-217-153-00	METAL	0.47 10% 2W
		<COIL>		R612	1-249-425-11	CARBON	4.7K 5% 1/4W
L610	1-419-126-21	COIL, CHOKE (AFC)	216 μ H	R613	1-216-089-91	RES,CHIP	47K 5% 1/10W
L611	1-411-674-11	INDUCTOR	68 μ H	R614	1-247-807-31	CARBON	100 5% 1/4W
L650	1-414-742-21	INDUCTOR	22 μ H	R615	1-249-427-11	CARBON	6.8K 5% 1/4W
L651	1-414-742-21	INDUCTOR	22 μ H	R616	1-216-671-11	METAL CHIP	6.8K 0.50%1/10W
L652	1-412-529-11	INDUCTOR	22 μ H	R617	1-249-417-11	CARBON	1K 5% 1/4W
L653	1-412-529-11	INDUCTOR	22 μ H	R618	1-216-369-00	METAL OXIDE	1 5% 2W F
L680	1-414-742-21	INDUCTOR	22 μ H	R620	1-202-933-61	FUSIBLE	0.1 10% 1/2W F
		<PHOTO COUPLER>		R621	1-249-432-11	CARBON	18K 5% 1/4W
PH620	8-749-924-35	PHOTO COUPLER ON3171-R		R622	1-216-089-91	RES,CHIP	47K 5% 1/10W
PH630	8-749-924-35	PHOTO COUPLER ON3171-R		R623	1-218-642-11	METAL OXIDE	100K 5% 1W F
		<IC LINK>		R624	1-218-642-11	METAL OXIDE	100K 5% 1W F
PS650	Δ 1-533-593-31	LINK, IC (2A/90V AC, 60V DC)		R625	1-216-349-00	METAL OXIDE	1 5% 1W F
		<TRANSISTOR>		R626	1-216-349-00	METAL OXIDE	1 5% 1W F
Q603	8-729-045-39	TRANSISTOR MX0842AB-F		R627	1-216-683-11	METAL CHIP	22K 0.50%1/10W
Q610	8-729-119-76	TRANSISTOR 2SA1175-HFE		R628	1-216-695-11	METAL CHIP	68K 0.50%1/10W
Q621	8-729-119-78	TRANSISTOR 2SC2785-HFE		R629	1-216-683-11	METAL CHIP	22K 0.50%1/10W
Q630	8-729-045-03	TRANSISTOR 2SK2647-01MR-F91		R630	1-249-387-11	CARBON	3.3 5% 1/4W F
Q631	8-729-041-66	TRANSISTOR 2SC4015TV2		R632	1-215-399-00	METAL	120 1% 1/4W
Q632	8-729-041-66	TRANSISTOR 2SC4015TV2		R633	1-260-135-11	CARBON	1M 5% 1/2W
Q633	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R634	1-260-135-11	CARBON	1M 5% 1/2W
				R635	1-216-465-11	METAL OXIDE	27K 5% 2W F
				R636	1-247-863-91	CARBON	22K 5% 1/4W
				R637	1-219-134-11	FUSIBLE	0.1 10% 1/4W
				R638	1-219-134-11	FUSIBLE	0.1 10% 1/4W
				R649	1-249-437-11	CARBON	47K 5% 1/4W F
				R650	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
				R652	1-216-113-00	RES,CHIP	470K 5% 1/10W
				R653	1-249-413-11	CARBON	470 5% 1/4W
				R654	1-211-796-11	FUSIBLE	1 5% 1/2W F
				R655	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
				R656	1-260-292-11	CARBON	1 5% 1/2W
				R657	1-249-443-11	CARBON	0.47 5% 1/4W F



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R658	1-216-073-00	RES,CHIP	10K 5% 1/10W	<VARISTOR>			
R659	1-216-049-91	RES,CHIP	1K 5% 1/10W	VDR601	Δ 1-801-268-51	VARISTOR TNR14V471K660	
R661	1-247-807-31	CARBON	100 5% 1/4W	VDR602	Δ 1-810-622-11	VARISTOR	
R662	1-216-073-00	RES,CHIP	10K 5% 1/10W	*****			
R663	1-216-073-00	RES,CHIP	10K 5% 1/10W	* A-1346-827-B D BOARD, COMPLETE			
R664	1-216-073-00	RES,CHIP	10K 5% 1/10W	[U/C, AEP, SH, EQ for Japan-made set]			
R665	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	* A-1346-860-A D BOARD, COMPLETE			
R666	1-216-073-00	RES,CHIP	10K 5% 1/10W	[U/C for Mexico-made set]			
R667	1-216-089-91	RES,CHIP	47K 5% 1/10W	* A-1346-859-A D BOARD, COMPLETE			
R668	1-215-457-00	METAL	33K 1% 1/4W	[AEP for UK-made set]			
R670	1-216-677-11	METAL CHIP	12K 0.50%1/10W	*****			
R671	1-216-677-11	METAL CHIP	12K 0.50%1/10W	3-710-578-01		COVER, VOLUME, 6 MOLD (RV901)	
R672	1-216-664-11	METAL CHIP	3.6K 0.50%1/10W	4-070-828-01		INSULATING SHEET (Q515)	
R673	1-216-073-00	RES,CHIP	10K 5% 1/10W	4-070-829-02		INSULATING SHEET (IC502)	
R674	1-216-097-91	RES,CHIP	100K 5% 1/10W	4-070-830-01		INSULATING SHEET (IC701)	
R675	1-216-668-11	METAL CHIP	5.1K 0.50%1/10W	4-382-854-11		SCREW (M3X10), P, SW (+)	(IC701,Q704,Q705,Q905,Q906,R918)
R676	1-216-663-11	METAL CHIP	3.3K 0.50%1/10W	7-685-647-79		SCREW +BVTP 3X10 TYPE2 TT(B)	(D511,IC502,Q508,Q515,R547)
R677	1-216-661-11	METAL CHIP	2.7K 0.50%1/10W	<CAPACITOR>			
R678	1-216-391-11	METAL OXIDE	1.5 5% 3W F	C501	1-126-964-11	ELECT 10 μ F	20% 50V
R680	1-215-475-00	METAL	180K 1% 1/4W	C502	1-136-169-00	FILM 0.22 μ F	5% 50V
R681	1-216-073-00	RES,CHIP	10K 5% 1/10W	C503	1-163-021-91	CERAMIC CHIP 0.01 μ F	10% 50V
R682	1-216-049-91	RES,CHIP	1K 5% 1/10W	C504	1-163-017-00	CERAMIC CHIP 0.0047 μ F	10% 50V
R683	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	C505	1-126-964-11	ELECT 10 μ F	20% 50V
R684	1-216-073-00	RES,CHIP	10K 5% 1/10W	C506	1-137-194-81	FILM 0.47 μ F	5% 50V
R685	1-216-049-91	RES,CHIP	1K 5% 1/10W	C507	1-136-169-00	FILM 0.22 μ F	5% 50V
R686	1-216-033-00	RES,CHIP	220 5% 1/10W	C508	1-126-965-11	ELECT 22 μ F	20% 50V
R687	1-216-081-00	RES,CHIP	22K 5% 1/10W	C509	1-115-521-11	FILM 0.82 μ F	5% 250V
R688	1-215-473-00	METAL	150K 1% 1/4W	C510	1-117-398-11	ELECT 33 μ F	20% 250V
R689	1-260-085-11	CARBON	68 5% 1/2W	C511	1-163-113-00	CERAMIC CHIP 68pF	5% 50V
R694	1-216-073-00	RES,CHIP	10K 5% 1/10W	C512	1-163-251-11	CERAMIC CHIP 100pF	5% 50V
R695	1-216-065-91	RES,CHIP	4.7K 5% 1/10W	C513	1-163-017-00	CERAMIC CHIP 0.0047 μ F	10% 50V
R696	1-249-407-11	CARBON	150 5% 1/4W	C514	1-106-375-12	MYLAR 0.022 μ F	99% 200V
<RELAY>				C515	1-163-021-91	CERAMIC CHIP 0.01 μ F	10% 50V
RY602	Δ 1-755-318-11	RELAY, POWER		C516	1-126-935-11	ELECT 470 μ F	20% 16V
RY603	Δ 1-755-067-21	RELAY		C517	1-163-021-91	CERAMIC CHIP 0.01 μ F	10% 50V
<SPARK GAP>				C518	1-137-194-81	FILM 0.47 μ F	5% 50V
SG601	Δ 1-533-982-11	GAP, SPARK		C519	1-163-021-91	CERAMIC CHIP 0.01 μ F	10% 50V
<TRANSFORMER>				C520	1-107-914-11	ELECT 1000 μ F	20% 25V
T601	Δ 1-429-180-11	TRANSFORMER, LINE FILTER		C521	1-117-666-71	FILM 0.39 μ F	5% 250V
T620	1-433-894-11	TRANSFORMER, CONVERTER (PIT)		C522	1-137-368-11	FILM 0.0047 μ F	5% 50V
T621	1-429-992-11	TRANSFORMER, CONVERTER (PRT)		C523	1-137-368-11	FILM 0.0047 μ F	5% 50V
T630	1-433-895-31	TRANSFORMER, CONVERTER (SRT)		C524	1-163-133-00	CERAMIC CHIP 470pF	5% 50V
<THERMISTOR>				C525	1-104-760-11	CERAMIC CHIP 0.047 μ F	10% 50V
TH601	Δ 1-809-260-11	THERMISTOR, POWER		C526	1-163-021-91	CERAMIC CHIP 0.01 μ F	10% 50V
THP601	Δ 1-809-827-31	THERMISTOR, POSITIVE		C527	1-163-021-91	CERAMIC CHIP 0.01 μ F	10% 50V
				C528	1-115-514-11	FILM 0.22 μ F	5% 250V
				C529	1-104-665-11	ELECT 100 μ F	20% 25V
				C530	1-163-021-91	CERAMIC CHIP 0.01 μ F	10% 50V
				C531	1-107-846-11	FILM 0.1 μ F	5% 250V



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
D513	8-719-991-33	DIODE 1SS133T-77				<CHIP CONDUCTOR>	
D514	8-719-991-33	DIODE 1SS133T-77					
D515	8-719-109-89	ZENER DIODE RD5.6ESB2		JR002	1-216-296-91	SHORT	0
D516	8-719-991-33	DIODE 1SS133T-77		JR003	1-216-295-91	SHORT	0
				JR004	1-216-295-91	SHORT	0
D517	8-719-951-30	DIODE ERA91-02		JR005	1-216-296-91	SHORT	0
D519	8-719-988-61	DIODE 1SS355TE-17		JR006	1-216-295-91	SHORT	0
D520	8-719-988-61	DIODE 1SS355TE-17					
D522	8-719-988-61	DIODE 1SS355TE-17		JR008	1-216-295-91	SHORT	0
D701	8-719-991-33	DIODE 1SS133T-77		JR009	1-216-295-91	SHORT	0
				JR010	1-216-295-91	SHORT	0
D702	8-719-991-33	DIODE 1SS133T-77		JR011	1-216-295-91	SHORT	0
D703	8-719-991-33	DIODE 1SS133T-77		JR012	1-216-296-91	SHORT	0
D707	8-719-109-85	ZENER DIODE RD5.1ESB2					
D708	8-719-908-03	DIODE GP08D		JR013	1-216-295-91	SHORT	0
D709	8-719-948-45	DIODE ERA22-08		JR014	1-216-296-91	SHORT	0
				JR015	1-216-296-91	SHORT	0
D710	8-719-109-85	ZENER DIODE RD5.1ESB2		JR016	1-216-295-91	SHORT	0
D901	8-719-991-33	DIODE 1SS133T-77		JR017	1-216-296-91	SHORT	0
D902	8-719-110-31	ZENER DIODE RD12ESB2					
D904	8-719-988-61	DIODE 1SS355TE-17				<COIL>	
D905	8-719-110-36	ZENER DIODE RD13ESB2					
D906	8-719-063-89	DIODE YG911S3R		L501	1-412-537-31	INDUCTOR	100µH
D907	8-719-930-97	ZENER DIODE HZS16NB2TD		L502	1-406-673-11	COIL, CHOKE	2.2mH
D908	8-719-018-82	DIODE RGP02-20EL-6394		L503	1-406-671-11	COIL, CHOKE	1mH
D909	8-719-930-97	ZENER DIODE HZS16NB2TD		L504	1-406-675-11	COIL, CHOKE	4.7mH
D910	8-719-991-33	DIODE 1SS133T-77		L505	1-416-401-31	COIL, CHOKE	5mH
D912	8-719-979-58	DIODE EGP10D		L901	1-412-537-31	INDUCTOR	100µH
D913	8-719-991-33	DIODE 1SS133T-77		L902	1-406-660-41	COIL, CHOKE	15µH
D914	8-719-991-33	DIODE 1SS133T-77				<TRANSISTOR>	
D915	8-719-929-72	ZENER DIODE HZS33NB2					
D917	8-719-988-61	DIODE 1SS355TE-17					
D918	8-719-991-33	DIODE 1SS133T-77		Q501	8-729-048-49	TRANSISTOR 2SK3262-01MR-F119	
D919	8-719-991-33	DIODE 1SS133T-77		Q502	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
D920	8-719-928-85	ZENER DIODE HZS4.7NB2		Q503	8-729-901-97	TRANSISTOR 2SA1036K-Q	
D921	8-719-988-61	DIODE 1SS355TE-17		Q504	8-729-901-87	TRANSISTOR 2SC2411K-CQ	
D922	8-719-018-82	DIODE RGP02-20EL-6394		Q505	8-729-901-97	TRANSISTOR 2SA1036K-Q	
D924	8-719-110-31	ZENER DIODE RD12ES-B2		Q506	8-729-048-49	TRANSISTOR 2SK3262-01MR-F119	
				Q507	8-729-048-49	TRANSISTOR 2SK3262-01MR-F119	
				Q508	8-729-048-53	TRANSISTOR 2SJ569LS-CB11	
				Q509	8-729-820-73	TRANSISTOR 2SC3746	
				Q510	8-729-048-49	TRANSISTOR 2SK3262-01MR-F119	
				Q511	8-729-048-49	TRANSISTOR 2SK3262-01MR-F119	
				Q512	8-729-048-49	TRANSISTOR 2SK3262-01MR-F119	
				Q513	8-729-048-49	TRANSISTOR 2SK3262-01MR-F119	
				Q514	8-729-140-50	TRANSISTOR 2SC3209LK	
				Q515	8-729-048-48	TRANSISTOR 2SC5570 (LBSONY)	
				Q516	8-729-024-95	TRANSISTOR 2SB1565EF	
				Q517	8-729-048-49	TRANSISTOR 2SK3262-01MR-F119	
				Q518	8-729-019-01	TRANSISTOR 2SD2394-EF	
				Q519	8-729-033-25	TRANSISTOR DTC114GKA	
				Q520	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
				Q521	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
				Q522	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
				Q523	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
				Q524	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
				Q525	8-729-048-49	TRANSISTOR 2SK3262-01MR-F119	
				Q526	8-729-027-35	TRANSISTOR DTA143TKA-T146	
				Q701	8-729-800-32	TRANSISTOR 2SC2362K-G	
						<FERRITE BEAD>	
FB501	1-410-397-21	FERRITE	1.1µH				
FB502	1-410-397-21	FERRITE	1.1µH				
FB503	1-412-911-11	FERRITE	1.1µH				
FB504	1-412-911-11	FERRITE	1.1µH				
FB505	1-412-911-11	FERRITE	1.1µH				
FB506	1-410-397-21	FERRITE	1.1µH				
FB507	1-410-397-21	FERRITE	1.1µH				
FB901	1-410-397-21	FERRITE	1.1µH				
						<IC>	
IC501	8-759-585-82	IC BA9759F-E2					
IC502	8-759-803-42	IC LA6500-FA					
IC503	8-759-058-50	IC XRA10324AF					
IC701	8-759-444-82	IC LA7841L					
IC901	8-759-585-81	IC BA9758FS-E2					



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
Q702	8-729-178-43	TRANSISTOR 2SC2784-E		R542	1-249-437-11	CARBON 47K	5% 1/4W
Q703	8-729-204-91	TRANSISTOR 2SA1049-GR		R543	1-216-677-11	METAL CHIP 12K	0.50%1/10W
Q704	8-729-207-82	TRANSISTOR 2SC3421-Y		R544	1-216-049-91	RES,CHIP 1K	5% 1/10W
Q705	8-729-207-89	TRANSISTOR 2SA1358-Y		R545	1-216-097-91	RES,CHIP 100K	5% 1/10W
Q706	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R		R546	1-216-381-11	METAL OXIDE 0.22	5% 3W F
Q707	8-729-046-80	TRANSISTOR 2SC4634LS-CB11		R547	1-219-726-11	METAL 2.2	5% 10W
Q903	8-729-901-87	TRANSISTOR 2SC2411K-CQ		R548	1-249-437-11	CARBON 47K	5% 1/4W
Q904	8-729-901-97	TRANSISTOR 2SA1036K-Q		R549	1-260-288-11	CARBON 0.47	5% 1/2W
Q905	8-729-048-53	TRANSISTOR 2SJ569LS-CB11		R550	1-260-288-11	CARBON 0.47	5% 1/2W
Q906	8-729-044-21	TRANSISTOR 2SK2655-01R-F165		R551	1-216-049-91	RES,CHIP 1K	5% 1/10W
Q907	8-729-033-26	TRANSISTOR DTA114GKAT146		R552	1-216-097-91	RES,CHIP 100K	5% 1/10W
Q908	8-729-033-25	TRANSISTOR DTC114GKA		R553	1-247-815-91	CARBON 220	5% 1/4W
		<RESISTOR>		R554	1-216-679-11	METAL CHIP 15K	0.50%1/10W
R501	1-215-884-11	METAL OXIDE 47	5% 2W F	R555	1-216-675-91	METAL CHIP 10K	0.50%1/10W
R502	1-216-059-00	RES,CHIP 2.7K	5% 1/10W	R556	1-216-683-11	METAL CHIP 22K	0.50%1/10W
R503	1-216-049-91	RES,CHIP 1K	5% 1/10W	R557	1-216-423-11	METAL OXIDE 27	5% 1W F
R504	1-216-049-91	RES,CHIP 1K	5% 1/10W	R558	1-249-437-11	CARBON 47K	5% 1/4W
R505	1-216-049-91	RES,CHIP 1K	5% 1/10W	R559	1-216-073-00	RES,CHIP 10K	5% 1/10W
R506	1-216-049-91	RES,CHIP 1K	5% 1/10W	R560	1-216-675-91	METAL CHIP 10K	0.50%1/10W
R507	1-216-097-91	RES,CHIP 100K	5% 1/10W	R561	1-215-443-00	METAL 8.2K	1% 1/4W
R508	1-247-815-91	CARBON 220	5% 1/4W	R562	1-216-677-11	METAL CHIP 12K	0.50%1/10W
R509	1-216-049-91	RES,CHIP 1K	5% 1/10W	R563	1-216-049-91	RES,CHIP 1K	5% 1/10W
R510	1-216-675-91	METAL CHIP 10K	0.50%1/10W	R564	1-216-677-11	METAL CHIP 12K	0.50%1/10W
R511	1-216-065-91	RES,CHIP 4.7K	5% 1/10W	R565	1-216-097-91	RES,CHIP 100K	5% 1/10W
R512	1-215-453-00	METAL 22K	1% 1/4W	R566	1-216-687-11	METAL CHIP 33K	0.50%1/10W
R513	1-216-049-91	RES,CHIP 1K	5% 1/10W	R567	1-214-840-00	METAL 100	1% 1/2W
R514	1-216-097-91	RES,CHIP 100K	5% 1/10W	R568	1-216-665-11	METAL CHIP 3.9K	0.50%1/10W
R515	1-216-049-91	RES,CHIP 1K	5% 1/10W	R569	1-216-691-11	METAL CHIP 47K	0.50%1/10W
R516	1-216-049-91	RES,CHIP 1K	5% 1/10W	R570	1-260-332-51	CARBON 2.2K	5% 1/2W
R517	1-216-689-11	METAL CHIP 39K	0.50%1/10W	R571	1-249-425-11	CARBON 4.7K	5% 1/4W
R518	1-216-691-11	METAL CHIP 47K	0.50%1/10W	R572	1-216-385-11	METAL OXIDE 0.47	5% 3W F
R519	1-216-081-00	RES,CHIP 22K	5% 1/10W	R573	1-249-437-11	CARBON 47K	5% 1/4W
R520	1-247-791-91	CARBON 22	5% 1/4W	R574	1-216-097-91	RES,CHIP 100K	5% 1/10W
R521	1-216-667-11	METAL CHIP 4.7K	0.50%1/10W	R575	1-216-672-11	METAL CHIP 7.5K	0.50%1/10W
R522	1-249-437-11	CARBON 47K	5% 1/4W	R576	1-215-869-11	METAL OXIDE 1K	5% 1W F
R523	1-216-033-00	RES,CHIP 220	5% 1/10W	R577	1-260-310-71	CARBON 33	5% 1/2W
R524	1-216-049-91	RES,CHIP 1K	5% 1/10W	R578	1-216-049-91	RES,CHIP 1K	5% 1/10W
R525	1-216-065-91	RES,CHIP 4.7K	5% 1/10W	R579	1-216-049-91	RES,CHIP 1K	5% 1/10W
R526	1-216-097-91	RES,CHIP 100K	5% 1/10W	R580	1-214-840-00	METAL 100	1% 1/2W
R527	1-216-673-11	METAL CHIP 8.2K	0.50%1/10W	R581	1-260-316-51	CARBON 100	5% 1/2W
R528	1-216-677-11	METAL CHIP 12K	0.50%1/10W	R582	1-214-840-00	METAL 100	1% 1/2W
R529	1-216-057-00	RES,CHIP 2.2K	5% 1/10W	R583	1-249-437-11	CARBON 47K	5% 1/4W
R530	1-216-049-91	RES,CHIP 1K	5% 1/10W	R584	1-249-437-11	CARBON 47K	5% 1/4W
R531	1-216-097-91	RES,CHIP 100K	5% 1/10W	R585	1-216-073-00	RES,CHIP 10K	5% 1/10W
R532	1-215-860-11	METAL OXIDE 33	5% 1W F	R586	1-216-683-11	METAL CHIP 22K	0.50%1/10W
R533	1-211-796-11	FUSIBLE 1	5% 1/2W F	R587	1-215-886-11	METAL OXIDE 100	5% 2W F
R534	1-216-689-11	METAL CHIP 39K	0.50%1/10W	R588	1-260-085-11	CARBON 68	5% 1/2W
R535	1-216-065-91	RES,CHIP 4.7K	5% 1/10W	R589	1-216-057-00	RES,CHIP 2.2K	5% 1/10W
R536	1-216-683-11	METAL CHIP 22K	0.50%1/10W	R590	1-216-057-00	RES,CHIP 2.2K	5% 1/10W
R537	1-249-437-11	CARBON 47K	5% 1/4W	R591	1-247-807-31	CARBON 100	5% 1/4W
R538	1-216-049-91	RES,CHIP 1K	5% 1/10W	R593	1-216-073-00	RES,CHIP 10K	5% 1/10W
R539	1-216-097-91	RES,CHIP 100K	5% 1/10W	R594	1-216-683-11	METAL CHIP 22K	0.50%1/10W
R540	1-215-909-11	METAL OXIDE 47	5% 3W F	R595	1-216-659-11	METAL CHIP 2.2K	0.50%1/10W
R541	1-216-295-91	SHORT 0		R597	1-216-073-00	RES,CHIP 10K	5% 1/10W
				R598	1-216-675-91	METAL CHIP 10K	0.50%1/10W
				R599	1-216-657-11	METAL CHIP 1.8K	0.50%1/10W

CPD-G500



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

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

The components identified **Δ** marked are critical for safety. Replace only with the part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R701	1-216-049-91	RES,CHIP	1K 5% 1/10W	R930	1-216-653-11	METAL CHIP	1.2K 0.50%1/10W
R702	1-249-393-11	CARBON	10 5% 1/4W F	R931	1-216-653-11	METAL CHIP	1.2K 0.50%1/10W
R703	1-215-459-00	METAL	39K 1% 1/4W	R932	1-216-049-91	RES,CHIP	1K 5% 1/10W
R704	1-216-655-11	METAL CHIP	1.5K 0.50%1/10W	R933	1-216-687-11	METAL CHIP	33K 0.50%1/10W
R705	1-249-413-11	CARBON	470 5% 1/4W F	R934	1-216-667-11	METAL CHIP	4.7K 0.50%1/10W
R706	1-249-389-11	CARBON	4.7 5% 1/4W F	R935	1-216-089-91	RES,CHIP	47K 5% 1/10W
R707	1-249-389-11	CARBON	4.7 5% 1/4W F	R937	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
R708	1-215-881-11	METAL OXIDE	15 5% 2W F	R939	1-216-049-91	RES,CHIP	1K 5% 1/10W
R709	1-216-049-91	RES,CHIP	1K 5% 1/10W	R940	1-216-073-00	RES,CHIP	10K 5% 1/10W
R710	1-216-073-00	RES,CHIP	10K 5% 1/10W	R941	1-216-025-91	RES,CHIP	100 5% 1/10W
R711	1-216-049-91	RES,CHIP	1K 5% 1/10W	R943	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
R713	1-216-059-00	RES,CHIP	2.7K 5% 1/10W	R945	1-216-025-91	RES,CHIP	100 5% 1/10W
R714	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	R1501	1-216-049-91	RES,CHIP	1K 5% 1/10W
R715	1-249-389-11	CARBON	4.7 5% 1/4W F	R1502	1-216-033-00	RES,CHIP	220 5% 1/10W
R716	1-216-689-11	RES,CHIP	39K 5% 1/10W	R1503	1-216-681-11	METAL CHIP	18K 0.50%1/10W
R717	1-216-073-00	RES,CHIP	10K 5% 1/10W	R1504	1-216-669-11	METAL CHIP	5.6K 0.50%1/10W
R718	1-216-681-11	METAL CHIP	18K 0.50%1/10W	R1505	1-216-667-11	METAL CHIP	4.7K 0.50%1/10W
R719	1-216-663-11	METAL CHIP	3.3K 0.50%1/10W	R1506	1-216-049-91	RES,CHIP	1K 5% 1/10W
R720	1-216-073-00	RES,CHIP	10K 5% 1/10W	R1507	1-216-097-91	RES,CHIP	100K 5% 1/10W
R721	1-216-073-00	RES,CHIP	10K 5% 1/10W	R1510	1-216-073-00	RES,CHIP	10K 5% 1/10W
R722	1-260-292-11	CARBON	1 5% 1/2W	R1515	1-215-909-11	METAL OXIDE	47 5% 3W F
R723	1-216-663-11	METAL CHIP	3.3K 0.50%1/10W	R1517	1-216-089-91	RES,CHIP	47K 5% 1/10W
R724	1-216-659-11	METAL CHIP	2.2K 0.50%1/10W	R1518	1-216-025-91	RES,CHIP	100 5% 1/10W
R725	1-214-798-21	METAL	1.8 1% 1/2W				
R726	1-214-798-21	METAL	1.8 1% 1/2W				
R727	1-249-381-11	CARBON	1 5% 1/4W F		<VARIABLE RESISTOR>		
R728	1-215-865-11	METAL OXIDE	220 5% 1W F	RV901	Δ1-241-767-21	RES, ADJ, CERMET	100K (HVADJ)
R729	1-260-292-11	CARBON	1 5% 1/2W				
R730	1-216-073-00	RES,CHIP	10K 5% 1/10W		<RELAY>		
R731	1-216-059-00	RES,CHIP	2.7K 5% 1/10W	RY501	1-755-198-11	RELAY	
R732	1-219-510-11	CARBON	470K 5% 1/2W		<SPARK GAP>		
R901	1-216-097-91	RES,CHIP	100K 5% 1/10W	SG901	1-517-499-21	GAP, SPARK	
R902	1-216-117-00	RES,CHIP	680K 5% 1/10W	SG902	1-519-422-11	GAP, SPARK	
R903	1-216-089-91	RES,CHIP	47K 5% 1/10W	SG903	1-519-422-11	GAP, SPARK	
R904	1-216-033-00	RES,CHIP	220 5% 1/10W				
R906	1-216-033-00	RES,CHIP	220 5% 1/10W		<TRANSFORMER>		
R907	1-216-081-00	RES,CHIP	22K 5% 1/10W	T501	1-435-070-11	TRANSFORMER, HORIZONTAL DRIVE	
R908	1-216-399-00	METAL OXIDE	6.8 5% 3W F	T502	1-429-301-11	TRANSFORMER, FERRITE (HCT)	
R911	1-216-041-00	RES,CHIP	470 5% 1/10W	T503	1-431-413-21	TRANSFORMER, FERRITE (HST)	
R912	1-216-049-91	RES,CHIP	1K 5% 1/10W	T505	1-419-127-11	COIL, HORIZONTAL LINEARITY	
R914	1-247-791-91	CARBON	22 5% 1/4W	T701	1-431-414-11	TRANSFORMER, FERRITE (DFT)	
R915	1-216-065-91	RES,CHIP	4.7K 5% 1/10W	T901	1-416-402-11	INDUCTOR 500μH	
R916	1-249-397-11	CARBON	22 5% 1/4W F	T902	Δ X-4560-175-1	TRANSFORMER ASSY, FLYBACK (NX-4502//J1D4)	
R917	1-211-824-71	FUSIBLE	220 5% 1/2W F				
R918	1-219-727-11	METAL	68 5% 10W		<THERMISTOR>		
R919	1-219-748-11	CARBON	4.7K 5% 1/2W	TH501	1-807-796-11	THERMISTOR	
R920	1-216-089-91	RES,CHIP	47K 5% 1/10W	TH502	1-807-796-11	THERMISTOR	
R921	1-249-429-11	CARBON	10K 5% 1/4W				
R922	1-249-389-11	CARBON	4.7 5% 1/4W F				
R923	1-218-762-11	METAL CHIP	270K 0.50%1/10W				
R924	1-216-073-00	RES,CHIP	10K 5% 1/10W				
R925	1-220-825-11	CARBON	330K 5% 1/2W				
R926	1-219-746-11	CARBON	1K 5% 1/2W				
R927	1-219-746-11	CARBON	1K 5% 1/2W				
R928	1-216-668-11	METAL CHIP	5.1K 0.50%1/10W				
R929	1-216-675-91	METAL CHIP	10K 0.50%1/10W				



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C024	1-163-009-11	CERAMIC CHIP0.001μF	10% 50V	C087	1-126-964-11	ELECT 10μF	20% 50V
C025	1-163-009-11	CERAMIC CHIP0.001μF	10% 50V	C089	1-163-021-91	CERAMIC CHIP0.01μF	10% 50V
C026	1-104-665-11	ELECT 100μF	20% 25V	C090	1-163-021-91	CERAMIC CHIP0.01μF	10% 50V
C027	1-115-339-11	CERAMIC CHIP0.1μF	10% 50V	C091	1-126-933-11	ELECT 100μF	20% 16V
C028	1-163-220-11	CERAMIC CHIP3pF	0.25pF 50V	C093	1-115-339-11	CERAMIC CHIP0.1μF	10% 50V
C029	1-163-241-11	CERAMIC CHIP39pF	5% 50V	C094	1-164-004-11	CERAMIC CHIP0.1μF	10% 25V
C031	1-126-964-11	ELECT 10μF	20% 50V	C095	1-117-722-11	ELECT 2200μF	20% 10V
C033	1-163-021-91	CERAMIC CHIP0.01μF	10% 50V	C096	1-163-021-91	CERAMIC CHIP0.01μF	10% 50V
C036	1-163-037-11	CERAMIC CHIP0.022μF	10% 50V	C097	1-126-964-11	ELECT 10μF	20% 50V
C037	1-126-964-11	ELECT 10μF	20% 50V	C098	1-163-021-91	CERAMIC CHIP0.01μF	10% 50V
C038	1-126-964-11	ELECT 10μF	20% 50V	C099	1-164-004-11	CERAMIC CHIP0.1μF	10% 25V
C039	1-126-964-11	ELECT 10μF	20% 50V	C1003	1-104-664-11	ELECT 47μF	20% 25V
C040	1-126-964-11	ELECT 10μF	20% 50V	C1004	1-163-021-91	CERAMIC CHIP0.01μF	10% 50V
C041	1-126-964-11	ELECT 10μF	20% 50V	C1005	1-163-005-11	CERAMIC CHIP470pF	10% 50V
C042	1-163-021-91	CERAMIC CHIP0.01μF	10% 50V	C1006	1-164-161-11	CERAMIC CHIP0.0022μF	10% 50V
C043	1-126-965-11	ELECT 22μF	20% 50V	C1007	1-115-339-11	CERAMIC CHIP0.1μF	10% 50V
C044	1-163-037-11	CERAMIC CHIP0.022μF	10% 50V	C5002	1-126-964-11	ELECT 10μF	20% 50V
C045	1-163-037-11	CERAMIC CHIP0.022μF	10% 50V	C5003	1-126-933-11	ELECT 100μF	20% 16V
C046	1-163-037-11	CERAMIC CHIP0.022μF	10% 50V	C5004	1-104-664-11	ELECT 47μF	20% 25V
C047	1-163-037-11	CERAMIC CHIP0.022μF	10% 50V	C5005	1-104-664-11	ELECT 47μF	20% 25V
C048	1-163-021-91	CERAMIC CHIP0.01μF	10% 50V	C5008	1-104-664-11	ELECT 47μF	20% 25V
C049	1-126-964-11	ELECT 10μF	20% 50V	C5009	1-164-004-11	CERAMIC CHIP0.1μF	10% 25V
C050	1-126-964-11	ELECT 10μF	20% 50V	C5101	1-164-004-11	CERAMIC CHIP0.1μF	10% 25V
C051	1-163-021-91	CERAMIC CHIP0.01μF	10% 50V	C5103	1-164-004-11	CERAMIC CHIP0.1μF	10% 25V
C052	1-126-933-11	ELECT 100μF	20% 16V	C5105	1-104-664-11	ELECT 47μF	20% 25V
C053	1-163-021-91	CERAMIC CHIP0.01μF	10% 50V	C5106	1-164-004-11	CERAMIC CHIP0.1μF	10% 25V
C054	1-115-339-11	CERAMIC CHIP0.1μF	10% 50V	C5108	1-164-004-11	CERAMIC CHIP0.1μF	10% 25V
C055	1-104-664-11	ELECT 47μF	20% 25V	C5110	1-104-664-11	ELECT 47μF	20% 25V
C056	1-126-965-11	ELECT 22μF	20% 50V	C5203	1-164-004-11	CERAMIC CHIP0.1μF	10% 25V
C057	1-126-964-11	ELECT 10μF	20% 50V	C5205	1-164-004-11	CERAMIC CHIP0.1μF	10% 25V
C058	1-164-690-91	CERAMIC CHIP0.0022μF	5% 50V	C5206	1-163-021-91	CERAMIC CHIP0.01μF	10% 50V
C059	1-126-964-11	ELECT 10μF	20% 50V	C5301	1-164-004-11	CERAMIC CHIP0.1μF	10% 25V
C061	1-163-021-91	CERAMIC CHIP0.01μF	10% 50V	C5303	1-164-004-11	CERAMIC CHIP0.1μF	10% 25V
C062	1-104-665-11	ELECT 100μF	20% 25V	C5304	1-163-021-91	CERAMIC CHIP0.01μF	10% 50V
C063	1-164-690-91	CERAMIC CHIP0.0022μF	5% 50V	C5305	1-104-664-11	ELECT 47μF	20% 25V
C064	1-115-419-11	CERAMIC CHIP3300pF	5% 25V	C5306	1-164-004-11	CERAMIC CHIP0.1μF	10% 25V
C065	1-126-960-11	ELECT 1μF	20% 50V	C5308	1-164-004-11	CERAMIC CHIP0.1μF	10% 25V
C066	1-164-690-91	CERAMIC CHIP0.0022μF	5% 50V	C5310	1-104-664-11	ELECT 47μF	20% 25V
C067	1-164-004-11	CERAMIC CHIP0.1μF	10% 25V	C5401	1-164-004-11	CERAMIC CHIP0.1μF	10% 25V
C068	1-136-169-00	FILM 0.22μF	5% 50V	C5403	1-163-021-91	CERAMIC CHIP0.01μF	10% 50V
C069	1-115-339-11	CERAMIC CHIP0.1μF	10% 50V	C5404	1-163-021-91	CERAMIC CHIP0.01μF	10% 50V
C070	1-126-767-11	ELECT 1000μF	20% 16V	C5406	1-164-004-11	CERAMIC CHIP0.1μF	10% 25V
C071	1-163-007-11	CERAMIC CHIP680pF	10% 50V	C5408	1-163-005-11	CERAMIC CHIP470pF	10% 50V
C072	1-126-942-61	ELECT 1000μF	20% 25V	C5409	1-163-021-91	CERAMIC CHIP0.01μF	10% 50V
C073	1-115-339-11	CERAMIC CHIP0.1μF	10% 50V	C5413	1-164-004-11	CERAMIC CHIP0.1μF	10% 25V
C074	1-163-137-00	CERAMIC CHIP680pF	5% 50V	C5501	1-126-967-11	ELECT 47μF	20% 50V
C075	1-163-251-11	CERAMIC CHIP100pF	5% 50V	C5602	1-115-339-11	CERAMIC CHIP0.1μF	10% 50V
C077	1-115-339-11	CERAMIC CHIP0.1μF	10% 50V	C5606	1-163-021-91	CERAMIC CHIP0.01μF	10% 50V
C078	1-136-169-00	FILM 0.22μF	5% 50V	C5607	1-164-004-11	CERAMIC CHIP0.1μF	10% 25V
C079	1-163-021-91	CERAMIC CHIP0.01μF	10% 50V				
C080	1-126-967-11	ELECT 47μF	20% 50V			<CONNECTOR>	
C082	1-104-664-11	ELECT 47μF	20% 25V	CN001	1-784-500-11	CONNECTOR, FFC/FPC 21P	
C083	1-163-021-91	CERAMIC CHIP0.01μF	10% 50V	CN002*	1-564-511-11	PLUG, CONNECTOR 8P	
C084	1-126-964-11	ELECT 10μF	20% 50V	CN007*	1-564-512-11	PLUG, CONNECTOR 9P	
C085	1-163-021-91	CERAMIC CHIP0.01μF	10% 50V	CN010	1-784-504-11	CONNECTOR, FFC/FPC 25P	
C086	1-163-021-91	CERAMIC CHIP0.01μF	10% 50V	CN011	1-784-504-11	CONNECTOR, FFC/FPC 25P	



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
CN5001*	1-564-509-11	PLUG, CONNECTOR 6P		IC004	8-759-491-55	IC TC74VHCT74AFT(EL)	
CN5002*	1-564-511-11	PLUG, CONNECTOR 8P		IC005	8-759-491-55	IC TC74VHCT74AFT(EL)	
CN5003*	1-564-505-11	PLUG, CONNECTOR 2P		IC006	8-759-981-48	IC TL082M	
<DIODE>				IC010	8-759-585-70	IC LA7865M-TLM	
D001	8-719-062-51	DIODE 1PS226-115		IC011	8-759-442-20	IC 24LC21AT/SN	
D002	8-719-062-51	DIODE 1PS226-115		IC5101	8-759-822-07	IC LA6515	
D003	8-719-062-51	DIODE 1PS226-115		IC5201	8-759-822-07	IC LA6515	
D004	8-719-062-51	DIODE 1PS226-115		IC5301	8-759-822-07	IC LA6515	
D008	8-719-109-89	ZENER DIODE RD5.6ESB2		IC5401	8-759-822-07	IC LA6515	
D009	8-719-109-89	ZENER DIODE RD5.6ESB2		<COIL>			
D010	8-719-109-89	ZENER DIODE RD5.6ESB2		L002	1-406-665-11	COIL, CHOKE 100μH	
D012	8-719-109-89	ZENER DIODE RD5.6ESB2		L003	1-406-671-11	COIL, CHOKE 1mH	
D013	8-719-110-17	ZENER DIODE RD10ESB2		<TRANSISTOR>			
D015	8-719-801-78	DIODE 1SS184		Q001	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
D016	8-719-109-89	ZENER DIODE RD5.6ESB2		Q002	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
D017	8-719-109-89	ZENER DIODE RD5.6ESB2		Q003	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
D018	8-719-109-89	ZENER DIODE RD5.6ESB2		Q004	8-729-028-83	TRANSISTOR DTA124EUA-T106	
D020	8-719-988-61	DIODE 1SS355TE-17		Q005	8-729-033-26	TRANSISTOR DTA114GKAT146	
D021	8-719-988-61	DIODE 1SS355TE-17		Q006	8-729-027-49	TRANSISTOR DTC123EKA-T146	
D022	8-719-801-78	DIODE 1SS184		Q007	8-729-901-00	TRANSISTOR DTC124EK	
D023	8-719-801-78	DIODE 1SS184		Q008	8-729-033-25	TRANSISTOR DTC114GKA	
D024	8-719-801-78	DIODE 1SS184		Q009	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
D025	8-719-062-51	DIODE 1PS226-115		Q010	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
D026	8-719-062-51	DIODE 1PS226-115		Q011	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
D027	8-719-988-61	DIODE 1SS355TE-17		Q012	8-729-901-00	TRANSISTOR DTC124EK	
D028	8-719-988-61	DIODE 1SS355TE-17		<RESISTOR>			
D029	8-719-109-85	ZENER DIODE RD5.1ESB2		R003	1-216-025-91	RES,CHIP 100 5% 1/10W	
D036	8-719-109-89	ZENER DIODE RD5.6ESB2		R004	1-216-025-91	RES,CHIP 100 5% 1/10W	
D037	8-719-109-89	ZENER DIODE RD5.6ESB2		R005	1-216-025-91	RES,CHIP 100 5% 1/10W	
D038	8-719-045-99	ZENER DIODE RD2.2M-T1B		R006	1-216-025-91	RES,CHIP 100 5% 1/10W	
<FERRITE BEAD>				R007	1-216-057-00	RES,CHIP 2.2K 5% 1/10W	
FB001	1-410-397-21	FERRITE 1.1μH		R008	1-216-057-00	RES,CHIP 2.2K 5% 1/10W	
FB002	1-410-397-21	FERRITE 1.1μH		R009	1-216-057-00	RES,CHIP 2.2K 5% 1/10W	
FB003	1-410-397-21	FERRITE 1.1μH		R010	1-216-057-00	RES,CHIP 2.2K 5% 1/10W	
FB5101	1-412-911-11	FERRITE 1.1μH		R014	1-216-049-91	RES,CHIP 1K 5% 1/10W	
FB5103	1-412-911-11	FERRITE 1.1μH		R015	1-249-389-11	CARBON 4.7 5% 1/4W F	
FB5201	1-412-911-11	FERRITE 1.1μH		R016	1-216-017-91	RES,CHIP 47 5% 1/10W	
FB5301	1-412-911-11	FERRITE 1.1μH		R017	1-216-017-91	RES,CHIP 47 5% 1/10W	
FB5303	1-412-911-11	FERRITE 1.1μH		R018	1-216-049-91	RES,CHIP 1K 5% 1/10W	
FB5401	1-412-911-11	FERRITE 1.1μH		R019	1-216-025-91	RES,CHIP 100 5% 1/10W	
FB5403	1-412-911-11	FERRITE 1.1μH		R020	1-216-025-91	RES,CHIP 100 5% 1/10W	
FB5601	1-412-911-11	FERRITE 1.1μH		R021	1-216-025-91	RES,CHIP 100 5% 1/10W	
<SENSOR>				R022	1-216-025-91	RES,CHIP 100 5% 1/10W	
GS50018	610-154-92	SENSOR, MAGNETIC MIV-212		R023	1-216-065-91	RES,CHIP 4.7K 5% 1/10W	
<IC>				R024	1-216-025-91	RES,CHIP 100 5% 1/10W	
IC001	8-759-650-17	IC CXD8744Q-0004 (Ver. 1.00)		R025	1-216-025-91	RES,CHIP 100 5% 1/10W	
IC002	8-759-162-80	IC MM1170BFB		R026	1-216-025-91	RES,CHIP 100 5% 1/10W	
IC003	8-759-527-77	IC M24C16-MN6T		R029	1-216-073-00	RES,CHIP 10K 5% 1/10W	
				R030	1-216-049-91	RES,CHIP 1K 5% 1/10W	
				R031	1-216-669-11	METAL CHIP 5.6K 0.50%1/10W	

CPD-G500



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R032	1-216-665-11	METAL CHIP	3.9K	0.50%1/10W	R1008	1-216-667-11	METAL CHIP 4.7K 0.50%1/10W
R034	1-216-049-91	RES,CHIP	1K	5% 1/10W	R1009	1-216-049-91	RES,CHIP 1K 5% 1/10W
R035	1-216-073-00	RES,CHIP	10K	5% 1/10W	R1010	1-216-049-91	RES,CHIP 1K 5% 1/10W
R036	1-216-659-11	METAL CHIP	2.2K	0.50%1/10W	R1011	1-216-049-91	RES,CHIP 1K 5% 1/10W
R039	1-216-025-91	RES,CHIP	100	5% 1/10W	R1012	1-216-057-00	RES,CHIP 2.2K 5% 1/10W
R040	1-216-025-91	RES,CHIP	100	5% 1/10W	R1013	1-216-057-00	RES,CHIP 2.2K 5% 1/10W
R042	1-216-073-00	RES,CHIP	10K	5% 1/10W	R1014	1-216-049-91	RES,CHIP 1K 5% 1/10W
R043	1-216-049-91	RES,CHIP	1K	5% 1/10W	R1015	1-216-049-91	RES,CHIP 1K 5% 1/10W
R044	1-216-657-11	METAL CHIP	1.8K	0.50%1/10W	R1016	1-216-049-91	RES,CHIP 1K 5% 1/10W
R045	1-216-049-91	RES,CHIP	1K	5% 1/10W	R1017	1-216-049-91	RES,CHIP 1K 5% 1/10W
R046	1-216-073-00	RES,CHIP	10K	5% 1/10W	R1018	1-216-049-91	RES,CHIP 1K 5% 1/10W
R047	1-216-049-91	RES,CHIP	1K	5% 1/10W	R1019	1-216-049-91	RES,CHIP 1K 5% 1/10W
R048	1-216-049-91	RES,CHIP	1K	5% 1/10W	R1020	1-216-065-91	RES,CHIP 4.7K 5% 1/10W
R049	1-216-073-00	RES,CHIP	10K	5% 1/10W	R1021	1-216-065-91	RES,CHIP 4.7K 5% 1/10W
R053	1-216-065-91	RES,CHIP	4.7K	5% 1/10W	R1022	1-216-659-11	METAL CHIP 2.2K 0.50%1/10W
R054	1-216-077-91	RES,CHIP	15K	5% 1/10W	R1023	1-216-659-11	METAL CHIP 2.2K 0.50%1/10W
R055	1-216-077-91	RES,CHIP	15K	5% 1/10W	R1024	1-216-681-11	METAL CHIP 18K 0.50%1/10W
R056	1-216-073-00	RES,CHIP	10K	5% 1/10W	R1025	1-216-025-91	RES,CHIP 100 5% 1/10W
R057	1-216-073-00	RES,CHIP	10K	5% 1/10W	R1026	1-216-109-00	RES,CHIP 330K 5% 1/10W
R058	1-216-067-00	RES,CHIP	5.6K	5% 1/10W	R1027	1-216-659-11	METAL CHIP 2.2K 0.50%1/10W
R059	1-216-057-00	RES,CHIP	2.2K	5% 1/10W	R1028	1-216-647-11	METAL CHIP 680 0.50%1/10W
R060	1-216-057-00	RES,CHIP	2.2K	5% 1/10W	R1029	1-216-025-91	RES,CHIP 100 5% 1/10W
R061	1-216-049-91	RES,CHIP	1K	5% 1/10W	R1030	1-216-025-91	RES,CHIP 100 5% 1/10W
R062	1-216-613-11	METAL CHIP	27	0.50%1/10W	R1031	1-216-025-91	RES,CHIP 100 5% 1/10W
R063	1-216-613-11	METAL CHIP	27	0.50%1/10W	R1032	1-216-025-91	RES,CHIP 100 5% 1/10W
R064	1-216-613-11	METAL CHIP	27	0.50%1/10W	R1033	1-216-025-91	RES,CHIP 100 5% 1/10W
R066	1-216-049-91	RES,CHIP	1K	5% 1/10W	R1034	1-216-025-91	RES,CHIP 100 5% 1/10W
R067	1-216-073-00	RES,CHIP	10K	5% 1/10W	R1035	1-216-025-91	RES,CHIP 100 5% 1/10W
R075	1-215-407-00	METAL	270	1% 1/4W	R1036	1-216-025-91	RES,CHIP 100 5% 1/10W
R076	1-215-407-00	METAL	270	1% 1/4W	R1037	1-216-025-91	RES,CHIP 100 5% 1/10W
R077	1-216-073-00	RES,CHIP	10K	5% 1/10W	R1038	1-216-025-91	RES,CHIP 100 5% 1/10W
R078	1-216-121-91	RES,CHIP	1M	5% 1/10W	R1039	1-216-025-91	RES,CHIP 100 5% 1/10W
R079	1-216-295-91	SHORT	0		R1040	1-216-025-91	RES,CHIP 100 5% 1/10W
R080	1-216-295-91	SHORT	0		R1041	1-216-025-91	RES,CHIP 100 5% 1/10W
R081	1-216-049-91	RES,CHIP	1K	5% 1/10W	R1042	1-216-025-91	RES,CHIP 100 5% 1/10W
R082	1-216-049-91	RES,CHIP	1K	5% 1/10W	R1043	1-216-025-91	RES,CHIP 100 5% 1/10W
R084	1-216-073-00	RES,CHIP	10K	5% 1/10W	R1044	1-216-667-11	METAL CHIP 4.7K 0.50%1/10W
R085	1-216-049-91	RES,CHIP	1K	5% 1/10W	R1045	1-216-065-91	RES,CHIP 4.7K 5% 1/10W
R086	1-216-049-91	RES,CHIP	1K	5% 1/10W	R1047	1-216-073-00	RES,CHIP 10K 5% 1/10W
R090	1-216-073-00	RES,CHIP	10K	5% 1/10W	R1049	1-216-073-00	RES,CHIP 10K 5% 1/10W
R091	1-216-049-91	RES,CHIP	1K	5% 1/10W	R1050	1-216-073-00	RES,CHIP 10K 5% 1/10W
R092	1-216-049-91	RES,CHIP	1K	5% 1/10W	R1051	1-216-097-91	RES,CHIP 100K 5% 1/10W
R093	1-216-049-91	RES,CHIP	1K	5% 1/10W	R1052	1-216-073-00	RES,CHIP 10K 5% 1/10W
R094	1-216-049-91	RES,CHIP	1K	5% 1/10W	R1053	1-216-049-91	RES,CHIP 1K 5% 1/10W
R095	1-216-049-91	RES,CHIP	1K	5% 1/10W	R1054	1-216-073-00	RES,CHIP 10K 5% 1/10W
R096	1-216-065-91	RES,CHIP	4.7K	5% 1/10W	R1055	1-216-049-91	RES,CHIP 1K 5% 1/10W
R097	1-216-073-00	RES,CHIP	10K	5% 1/10W	R1056	1-216-073-00	RES,CHIP 10K 5% 1/10W
R098	1-216-073-00	RES,CHIP	10K	5% 1/10W	R1057	1-216-049-91	RES,CHIP 1K 5% 1/10W
R099	1-216-049-91	RES,CHIP	1K	5% 1/10W	R1058	1-216-073-00	RES,CHIP 10K 5% 1/10W
R1001	1-216-049-91	RES,CHIP	1K	5% 1/10W	R1059	1-216-049-91	RES,CHIP 1K 5% 1/10W
R1002	1-216-049-91	RES,CHIP	1K	5% 1/10W	R1060	1-216-073-00	RES,CHIP 10K 5% 1/10W
R1003	1-216-049-91	RES,CHIP	1K	5% 1/10W	R1061	1-216-073-00	RES,CHIP 10K 5% 1/10W
R1004	1-216-049-91	RES,CHIP	1K	5% 1/10W	R1062	1-216-049-91	RES,CHIP 1K 5% 1/10W
R1005	1-216-049-91	RES,CHIP	1K	5% 1/10W	R1063	1-216-065-91	RES,CHIP 4.7K 5% 1/10W
R1006	1-216-049-91	RES,CHIP	1K	5% 1/10W	R1064	1-216-049-91	RES,CHIP 1K 5% 1/10W
R1007	1-216-049-91	RES,CHIP	1K	5% 1/10W	R1065	1-216-125-00	RES,CHIP 1.5M 5% 1/10W



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R1066	1-216-073-00	RES,CHIP	10K 5% 1/10W	R5605	1-216-097-91	RES,CHIP	100K 5% 1/10W
R1067	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	R5607	1-215-862-11	METAL OXIDE	68 5% 1W F
R1068	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	R5610	1-216-308-00	RES,CHIP	4.7 5% 1/10W
R1069	1-216-049-91	RES,CHIP	1K 5% 1/10W				
R1070	1-216-057-00	RES,CHIP	2.2K 5% 1/10W			<CRYSTAL>	
R1071	1-216-081-00	RES,CHIP	22K 5% 1/10W	X001	1-760-682-21	VIBRATOR, CRYSTAL	(24.756MHz)
R5003	1-216-295-91	SHORT	0				
R5005	1-216-081-00	RES,CHIP	22K 5% 1/10W				
R5006	1-216-073-00	RES,CHIP	10K 5% 1/10W				
R5007	1-216-049-91	RES,CHIP	1K 5% 1/10W				
R5010	1-216-295-91	SHORT	0				
R5011	1-216-073-00	RES,CHIP	10K 5% 1/10W				
R5015	1-216-049-91	RES,CHIP	1K 5% 1/10W				
R5108	1-216-308-00	RES,CHIP	4.7 5% 1/10W				
R5109	1-216-308-00	RES,CHIP	4.7 5% 1/10W				
R5110	1-216-073-00	RES,CHIP	10K 5% 1/10W				
R5113	1-216-073-00	RES,CHIP	10K 5% 1/10W				
R5115	1-215-859-00	METAL OXIDE	22 5% 1W F				
R5116	1-216-073-00	RES,CHIP	10K 5% 1/10W				
R5119	1-216-073-00	RES,CHIP	10K 5% 1/10W				
R5122	1-215-859-00	METAL OXIDE	22 5% 1W F				
R5205	1-216-073-00	RES,CHIP	10K 5% 1/10W				
R5206	1-215-859-00	METAL OXIDE	22 5% 1W F				
R5207	1-216-073-00	RES,CHIP	10K 5% 1/10W				
R5208	1-216-069-00	RES,CHIP	6.8K 5% 1/10W				
R5209	1-216-308-00	RES,CHIP	4.7 5% 1/10W				
R5308	1-216-308-00	RES,CHIP	4.7 5% 1/10W				
R5309	1-216-308-00	RES,CHIP	4.7 5% 1/10W				
R5310	1-216-073-00	RES,CHIP	10K 5% 1/10W				
R5313	1-216-073-00	RES,CHIP	10K 5% 1/10W				
R5315	1-215-859-00	METAL OXIDE	22 5% 1W F				
R5316	1-216-073-00	RES,CHIP	10K 5% 1/10W				
R5319	1-216-073-00	RES,CHIP	10K 5% 1/10W				
R5322	1-215-859-00	METAL OXIDE	22 5% 1W F				
R5406	1-216-083-00	RES,CHIP	27K 5% 1/10W				
R5407	1-216-085-00	RES,CHIP	33K 5% 1/10W				
R5408	1-216-308-00	RES,CHIP	4.7 5% 1/10W				
R5409	1-216-308-00	RES,CHIP	4.7 5% 1/10W				
R5410	1-216-081-00	RES,CHIP	22K 5% 1/10W				
R5413	1-216-097-91	RES,CHIP	100K 5% 1/10W				
R5415	1-215-887-00	METAL OXIDE	150 5% 2W F				
R5416	1-216-081-00	RES,CHIP	22K 5% 1/10W				
R5419	1-216-097-91	RES,CHIP	100K 5% 1/10W				
R5422	1-216-451-11	METAL OXIDE	120 5% 2W F				
R5502	1-216-081-00	RES,CHIP	22K 5% 1/10W				
R5503	1-216-081-00	RES,CHIP	22K 5% 1/10W				
R5504	1-216-089-91	RES,CHIP	47K 5% 1/10W				
R5505	1-216-089-91	RES,CHIP	47K 5% 1/10W				
R5506	1-216-069-00	RES,CHIP	6.8K 5% 1/10W				
R5507	1-249-382-11	CARBON	1.2 5% 1/4W F				
R5508	1-249-382-11	CARBON	1.2 5% 1/4W F				
R5509	1-249-382-11	CARBON	1.2 5% 1/4W F				
R5510	1-249-382-11	CARBON	1.2 5% 1/4W F				
R5602	1-216-081-00	RES,CHIP	22K 5% 1/10W				
R5603	1-216-077-91	RES,CHIP	15K 5% 1/10W				
R5604	1-216-081-00	RES,CHIP	22K 5% 1/10W				

