

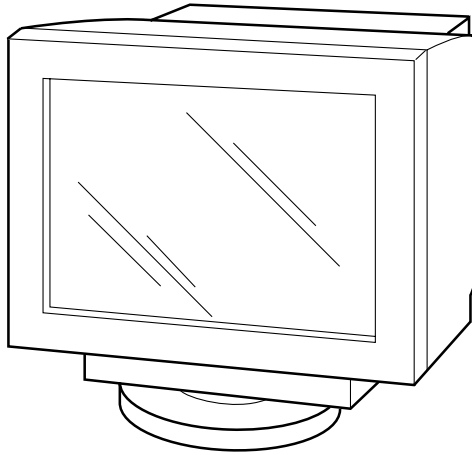
6551-T3N/6551-U3N

SERVICE MANUAL

AEP Model

Chassis No. SCC-L40A-A (6551-T3N)

Chassis No. SCC-L40B-A (6551-U3N)



F99 CHASSIS

SPECIFICATIONS

Picture tube	0.24 mm aperture grille pitch 19 inches measured diagonally 90-degree deflection
Viewable image size	Approx. 365 × 274 mm (w/h) (14 ³ / ₈ × 10 ⁷ / ₈ inches) 18.0" viewable diagonal
Resolution	Horizontal: Max. 1600 dots Vertical: Max. 1200 lines
Standard image area	Approx. 352 × 264 mm (w/h) (13 ⁷ / ₈ × 10 ¹ / ₂ inches)
Deflection frequency*	Horizontal: 30 to 107kHz Vertical: 48 to 120 Hz 256 < Total Line < 2048
AC input voltage/current	220 to 240 V, 50 – 60 Hz, Max. 1.0 A

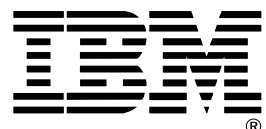
Power consumption	Max. 140 W
Operating temperature	10°C to 40°C
Dimensions	Approx. 462 × 462 × 474 mm (w/h/d) (18 ¹ / ₄ × 18 ¹ / ₄ × 18 ³ / ₄ inches)
Mass	Approx. 27 kg (59 lb 8 oz)

- * Recommended horizontal and vertical timing condition
- Horizontal sync width should be more than 1.0 μsec.
 - Horizontal blanking width should be more than 3.0 μsec.
 - Vertical blanking width should be more than 450 μsec.

Design and specifications are subject to change without notice.

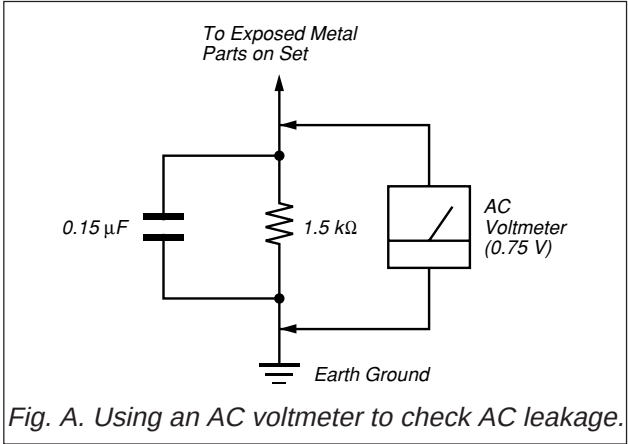
MODEL	SPEC.	
	BODY COLOR	DEST.
6551-T3N	WHITE TYPE	AEP
6551-U3N	BLACK TYPE	AEP

TRINITRON® COLOR GRAPHIC DISPLAY



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.



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 ⚠ 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.

POWER SAVING FUNCTION

This monitor meets the power-saving guidelines set by VESA and ENERGY STAR, as well as the more stringent NUTEK .

If the monitor is connected to a computer or video graphics board that is VESA DPMS (Display Power Management Signaling) compliant, the monitor will automatically reduce power consumption in three stages as shown below.

Notes

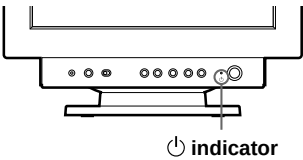
- When your computer is in a power saving mode, MONITOR IS IN POWER SAVE MODE appears on the screen if you press any button on the monitor (page 17). After a few seconds, the monitor enters the power saving mode again. Once the horizontal and vertical sync signals are detected, the monitor automatically resumes its normal operation mode.
- The power management feature is invoked when the computer recognizes that you have not used your mouse or keyboard for a user-definable period of time.
- IBM recommends that you switch off your monitor at the end of each working day, or whenever you expect to leave it unused for long periods during the day.

	Power consumption mode	Screen	Horizontal sync signal	Vertical sync signal	Power consumption	Recovery time	⏻ indicator
1	Normal operation	active	present	present	≤ 140 W	—	Green
2	Standby (1st mode)	blank	absent	present	≤ 15 W	Approx. 5 sec.	Green and orange alternate
3	Suspend (2nd mode) (sleep)*	blank	present	absent	≤ 15 W	Approx. 5 sec.	Green and orange alternate
4	Active-off (3rd mode) (deep sleep)*	blank	absent	absent	≤ 3 W	Approx. 15 sec.	Orange
5	Power-off	—	—	—	≤ 0.5 W	—	Off

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

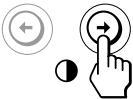
DIAGNOSIS

This monitor is equipped with a self-diagnosis function. If there is a problem with your monitor or computer, the screen will go blank and the ⏻ indicator will either light up green or flash orange.



If the ⏻ indicator is green

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



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

If the color bars do not appear, there is a potential monitor failure. Inform the IBM HelpCenter of the monitor's condition.

If the ⏻ indicator is flashing orange

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

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

If the ⏻ indicator is still flashing, there is a potential monitor failure. Inform the IBM HelpCenter 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 MODE AT PRODUCTION	TEST MODE MODE 1	MODE 2	MODE 3	MODE 4	MODE 5
RESOLUTION	640 X 480	640 X 480	800 X 600	800 X 600	1024 X 768
CLOCK	25.175 MHz	36.000 MHz	49.500 MHz	56.250 MHz	78.750 MHz
HORIZONTAL	31.469 kHz usec 31.778 6.356 0.636 3.813 1.907 25.422	43.269 kHz usec 23.111 5.333 1.556 1.556 2.222 17.778	46.875 kHz usec 21.333 5.172 0.323 1.616 3.232 16.162	53.674 kHz usec 18.631 4.409 0.569 1.138 2.702 14.222	60.023 kHz usec 16.660 3.657 0.203 1.219 2.235 13.003
H-FREQ					
H. TOTAL					
H. BLK					
H. FP					
H. SYNC					
H. BP					
H. ACTIV					
– VERTICAL –					
V. FREQ(HZ)	59.940 Hz lines 525 45 10 2 33 480	85.008 Hz lines 509 29 1 3 25 480	75.000 Hz lines 625 25 1 3 21 600	85.061 Hz lines 631 31 1 3 27 600	75.029 Hz lines 800 32 1 3 28 768
V. TOTAL					
V. BLK					
V. FP					
V. SYNC					
V. BP					
V. ACTIV					
– SYNC –					
INT(G)	NO YES N/N NO NON INT	NO YES N/N NO NON INT	NO YES P/P NO NON INT	NO YES P/P NO NON INT	NO YES P/P NO NON INT
EXT(H/V)/POLARITY					
EXT(CS) /POLARITY					
INT/NON INT					
SIZE	352 X 264 mm	352 X 264 mm	352 X 264 mm	352 X 264 mm	352 X 264 mm

MODE MODE AT PRODUCTION	TEST MODE MODE 6	MODE 7	MODE 8	MODE 9	MODE 10
RESOLUTION	1024 X 768	1280 X 1024	1280 X 1024	1600 X 1200	1600 X 1200
CLOCK	94.500 MHz	135.000 MHz	157.500 MHz	202.500 MHz	229.500 MHz
HORIZONTAL	68.677 kHz usec 14.561 3.725 0.508 1.016 2.201 10.836	79.976 kHz usec 12.504 3.022 0.119 1.067 1.837 9.481	91.146 kHz usec 10.971 2.844 0.406 1.016 1.422 8.127	93.750 kHz usec 10.667 2.765 0.316 0.948 1.501 7.901	106.250 kHz usec 9.412 2.440 0.279 0.837 1.325 6.972
H-FREQ					
H. TOTAL					
H. BLK					
H. FP					
H. SYNC					
H. BP					
H. ACTIV					
– VERTICAL –					
V. FREQ(HZ)	84.997 Hz lines 808 40 1 3 36 768	75.025 Hz lines 1066 42 1 3 38 1024	85.024 Hz lines 1072 48 1 3 44 1024	75.000 Hz lines 1250 50 1 3 46 1200	85.000 Hz lines 1250 50 1 3 46 1200
V. TOTAL					
V. BLK					
V. FP					
V. SYNC					
V. BP					
V. ACTIV					
– SYNC –					
INT(G)	NO YES P/P NO NON INT	NO YES P/P NO NON INT	NO YES P/P NO NON INT	NO YES P/P NO NON INT	NO YES P/P NO NON INT
EXT(H/V)/POLARITY					
EXT(CS) /POLARITY					
INT/NON INT					
SIZE	352 X 264 mm	330 X 264 mm	330 X 264 mm	352 X 264 mm	352 X 264 mm

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Precautions

Installation

- Prevent internal heat build-up by allowing adequate air circulation. Do not place the monitor on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies) that may block the ventilation holes.
- Do not install the monitor near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, excessive dust, mechanical vibration, or shock.
- Do not place the monitor near equipment which generates magnetism, such as a transformer or high voltage power lines.

Maintenance

- 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 benzine.
- 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 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.

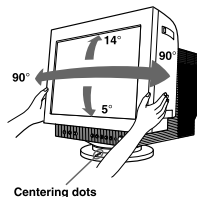
Transportation

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.



Note

Do not remove the tilt-swivel base from the monitor.

Warning on power connection

- Use an appropriate power cord for your local power supply.

Examples of plug types:



for 200 to 240 V AC



for 240 V AC only

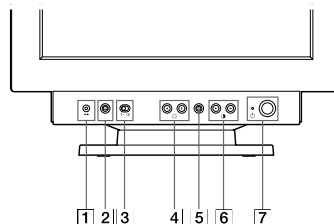
- Before disconnecting the power cord, wait at least 30 seconds after turning off the power to allow the static electricity on the CRT display surface to discharge.
- After the power has been turned on, the CRT is demagnetized (degaussed) for about 5 seconds. This generates a strong magnetic field around the metal frame, which may affect the data stored on magnetic tapes and disks near the bezel. Place magnetic recording equipment, tapes, and disks away from this monitor.

The equipment should be installed near an easily accessible electrical outlet.

Identifying Parts and Controls

See the pages in parentheses for further details.

Front



1 [Reset] button (page 15)

Resets the adjustments to the factory settings.

2 [Auto] button (page 5)

This button automatically adjusts the size and centering of the picture.

3 Input 1-2 switch (pages 5)

This switch selects the INPUT 1 (Video input 1 connector) or INPUT 2 (Video input 2 connector).

4 [Brightness] down and up (↑/↓) buttons (pages 6 – 15)

Adjust the picture brightness.

Function as the (↑/↓) buttons when adjusting other items.

5 [Menu] button (pages 6 – 15, 17)

Displays the MENU OSD.

6 [Contrast] left and right (←/→) buttons (pages 6 – 15, 20)

Adjust the contrast.

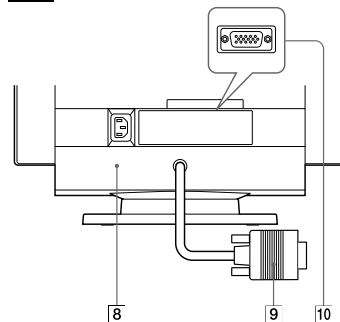
Function as the (←/→) buttons when adjusting other items.

7 [Power] switch and indicator (pages 16, 20)

Turns the monitor on or off.

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

Rear

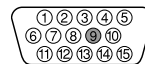


8 AC IN connector (page 4)

Provides AC power to the monitor.

9 Video input 1 connector (HD15) (page 4)

Inputs RGB video signals (0.700 Vp-p, positive) and SYNC signals.



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

* Display Data Channel (DDC) Standard of VESA

10 Video input 2 connector (HD15) (page 4)

Inputs RGB video signals (0.700 Vp-p, positive) and SYNC signals.

See the above table for the pin assignment.

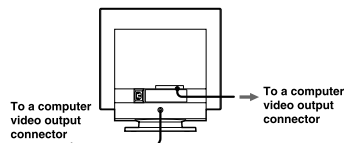
Setup

This monitor works with platforms running at horizontal frequencies between 30 and 107kHz.

Step 1: Make sure the computer and monitor are switched off

Step 2: Connect the monitor to the computer

Connect the video signal cable to the video output of the computer.

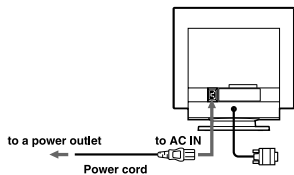


Note

Do not short the pins of the video signal cable.

Step 3: Connect the power cord

With the monitor switched off, connect one end of the proper power cord for your local supply to the monitor and the other end to a power outlet.



Step 4: Turn on the monitor and computer

Step 5: Adjust the monitor's controls according to your personal preference

The installation of your monitor is complete.

Note

If no picture appears on the screen and "OUT OF SCAN RANGE" or "MONITOR IS IN POWER SAVE MODE" appears on the screen, see "Warning Messages" on page 17.

Workplace Preparation

Positioning the Monitor

Choose a suitable place to position the monitor where it is not near fluorescent desk lighting or any equipment that produces magnetic fields that could cause interference. Ensure that the furniture or equipment can support the weight of the monitor. Allow at least 2 inches (50mm) ventilation space around the monitor.

Height

The monitor should be positioned so that the top of the screen is slightly below your eye level when you sit at your workstation.

Orientation

Choose a position that gives the least reflection from lights and windows, usually at a right angle to any windows. The monitor should be positioned directly in front of you so that you do not have to twist your body. Tilt the monitor to a comfortable viewing angle.

Working Practices

Rest

Take regular breaks. Vary your posture, and stand up and stretch occasionally as prolonged use of computer workstations can be tiring.

Back

You should sit back in the chair and use the backrest.

Hands

Use a light touch on the keyboard, keeping your hands and fingers relaxed. Allow a space in front of the keyboard to rest your wrists when not typing. Consider using a wristpad.

Eyesight

Working with monitors, in common with any kind of prolonged close work, can be visually demanding. Look away from the screen periodically and have your eyesight checked regularly.

Screen settings

Set the screen brightness and contrast to a comfortable level. You may have to adjust this as the lighting changes during the day. Many application programs let you select color combinations which can help you to view in comfort.

Selecting the Input Signal

You can connect two computers to this monitor using the video input 1 and video input 2 connectors. To select one of the two computers, use the Input 1-2 switch.

Move the Input 1-2 switch.

The selected connector appears on the screen for 3 seconds.



"INPUT 1" (video input 1 connector) or "INPUT 2" (video input 2 connector) 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.

Automatically Sizing and Centering the Picture

You can easily adjust the picture to fill the screen by pressing the  (auto sizing and centering) button.

Press the button.

The picture automatically fills the screen.



Notes

- This function is intended for use with a computer 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.
- Pictures with an aspect ratio of 5:4 (resolution: 1280 × 1024) are displayed at their actual resolution and do not fill the screen to the edges.
- The displayed image moves for a few seconds when the  button is pressed. This is not a malfunction.

Before adjusting

- Connect the monitor and the computer, and turn them on.

Selecting the On-screen Display Language

If you need to change the OSD language, see “Using the LANGUAGE  On-screen Display” on page 11. The default setting is English.

Adjusting the Picture Brightness and Contrast

Once the setting is adjusted, it will be stored in memory for all input signals received.

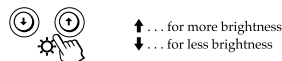
- Press the  (brightness)  or  (contrast)  buttons.

The BRIGHTNESS/CONTRAST OSD appears.



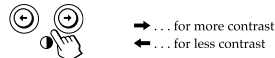
- For brightness adjustment

Press the   buttons.



For contrast adjustment

Press the   buttons.



The OSD automatically disappears after about 3 seconds.

To reset, press the  (reset) button while the OSD is on. The brightness and contrast are both reset to the factory settings.

If you set sRGB to “ON” on the color setting, the brightness () and contrast () are automatically set to “31” and “85” respectively.

For more information about sRGB, see “Using the COLOR  On-screen Display” on page 9.

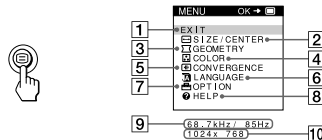
Introducing the On-screen Display System

Most adjustments are made using the MENU OSD.

MENU OSD

Press the  button to display the MENU OSD.

This MENU OSD contains links to the other OSDs described below.



- EXIT

Closes the MENU OSD.

-  SIZE/CENTER

Displays the SIZE / CENTER OSD for adjusting the picture's size, centering, or zoom.

-  GEOMETRY

Displays the GEOMETRY OSD for adjusting the picture rotation and pincushion, etc.

-  COLOR

Displays the COLOR OSD for adjusting the color temperature.

-  CONVERGENCE

Displays the CONVERGENCE OSD for adjusting the picture's horizontal and vertical convergence.

-  LANGUAGE

Displays the LANGUAGE OSD for selecting the language.

-  OPTION

Displays the OPTION OSD for adjusting the OSD position, degaussing the screen, etc.

-  HELP

Displays the HELP OSD for viewing helpful hints and information about this monitor.

- The horizontal and vertical frequencies of the current input signal

The horizontal and vertical frequencies of the current input signal are displayed.

- The resolution of the current input signal

If the signal matches one of this monitor's factory preset modes, the resolution is displayed.

Using the SIZE/CENTER On-screen Display

The SIZE / CENTER settings allow you to adjust the picture's size, centering, or zoom. Once the setting is adjusted, it will be stored in memory for the current input signal.

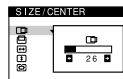
- Press the  button.

The MENU OSD appears.



- Press the  buttons to select “ SIZE/CENTER” and press the  button again.

The SIZE / CENTER OSD appears.



- Press the  buttons to select the item you want to adjust.



Select	To
 (Horizontal Centering)	adjust the horizontal centering of the picture
 (Vertical Centering)	adjust the vertical centering of the picture
 (Horizontal Sizing)	adjust the horizontal size of the picture
 (Vertical Sizing)	adjust the vertical size of the picture
 (Zoom)	enlarge or reduce the picture

- Press the  buttons to adjust the settings.



Select	To
 (Horizontal Centering)	 ... to move the picture right  ... to move the picture left
 (Vertical Centering)	 ... to move the picture up  ... to move the picture down
 (Horizontal Sizing)	 ... to increase picture width  ... to decrease picture width
 (Vertical Sizing)	 ... to increase picture height  ... to decrease picture height
 (Zoom)	 ... to enlarge the picture  ... to reduce the picture

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

To reset, press the  (reset) button while the OSD is on. The selected item is reset to the factory setting.

Note

The  (Zoom) adjustment stops when the horizontal or vertical size reaches its maximum or minimum value. The horizontal adjustment value is not displayed in the menu.

Using the GEOMETRY On-screen Display

The GEOMETRY settings allow you to adjust the shape and orientation of the picture.

Once the  (Rotation) is adjusted, it will be stored in memory for all input signals received. All other adjustments will be stored in memory for the current input signal.

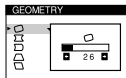
1 Press the button.

The MENU OSD appears.



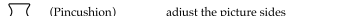
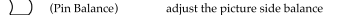
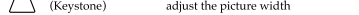
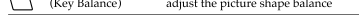
2 Press the / buttons to select "GEOMETRY" and press the button again.

The GEOMETRY OSD appears.



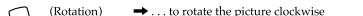
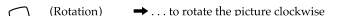
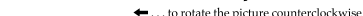
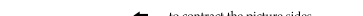
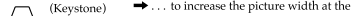
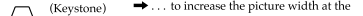
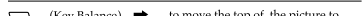
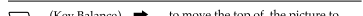
3 Press the / buttons to select the item you want to adjust.



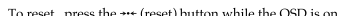
Select	To
	adjust the picture rotation
	adjust the picture sides
	adjust the picture side balance
	adjust the picture width
	adjust the picture shape balance

4 Press the / buttons to adjust the settings.



For	Press
 (Rotation)	 ... to rotate the picture clockwise  ... to rotate the picture counterclockwise
 (Pincushion)	 ... to expand the picture sides  ... to contract the picture sides
 (Pin Balance)	 ... to expand the picture sides to the right  ... to expand the picture sides to the left
 (Keystone)	 ... to increase the picture width at the top  ... to decrease the picture width at the top
 (Key Balance)	 ... to move the top of the picture to the right  ... to move the top of the picture to the left

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

To reset, press the  (reset) button while the OSD is on. The selected item is reset to the factory setting.

Using the COLOR On-screen Display

You can change the monitor's color temperature. For example, you can adjust or change the colors of a picture on the screen to match the actual colors of a printed picture. Once the setting is adjusted, it will be stored in memory for all input signals received.

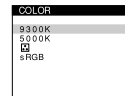
1 Press the button.

The MENU OSD appears.



2 Press the / buttons to select "COLOR" and press the button again.

The COLOR OSD appears.

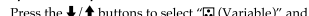


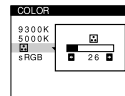
3 Press the / buttons to select the color temperature.

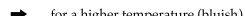


There are two color temperature modes in the OSD. The preset adjustment is 9,300K.

Selecting your own color temperature between 9,300K and 5,000K

Press the / buttons to select "Variable" and adjust by pressing the / buttons.



 ... for a higher temperature (bluish)

 ... for a lower temperature (reddish)

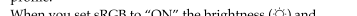
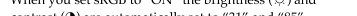
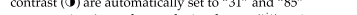
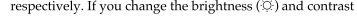
Press the  button once to return to the MENU OSD, and twice to return to normal viewing. If no buttons are pressed, the OSD closes automatically after about 30 seconds.

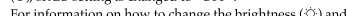
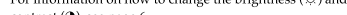
To reset, press the  (reset) button while the OSD is on. The selected color temperature is reset to the factory settings.

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 set the sRGB "ON" in the COLOR menu.

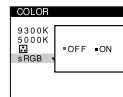
However, in order to display the sRGB colors correctly (γ = 2.2, 6500K), you must set your computer to the sRGB profile.

When you set sRGB to "ON" the brightness () and contrast () are automatically set to "31" and "85" respectively. If you change the brightness () and contrast () sRGB setting is changed to "OFF".

For information on how to change the brightness () and contrast () , see page 6.

Note

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



Using the CONVERGENCE On-screen Display

The CONVERGENCE 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.

Once the setting is adjusted, it will be stored in memory for all input signals received.

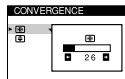
1 Press the button.

The MENU OSD appears.



2 Press the buttons to select "CONVERGENCE" and press the button again.

The CONVERGENCE OSD appears.



3 Press the buttons to select the item you want to adjust.



Select	To
 (Horizontal Convergence)	adjust the horizontal convergence
 (Vertical Convergence)	adjust the vertical convergence

4 Press the buttons to adjust the settings.



For	Press
 (Horizontal Convergence)	→ ... to shift red shadows to the right and blue shadows to the left ← ... to shift red shadows to the left and blue shadows to the right
 (Vertical Convergence)	→ ... to shift red shadows up and blue shadows down ← ... to shift red shadows down and blue shadows up

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

To reset, press the  (reset) button while the OSD is on. The selected item is reset to the factory setting.

Using the LANGUAGE On-screen Display

English, French, German, Spanish, Italian, Dutch, Swedish, Russian, and Japanese versions of the OSDs are available.

1 Press the button.

The MENU OSD appears.



2 Press the buttons to select "LANGUAGE" and press the button again.

The LANGUAGE OSD appears.



3 Press the buttons to select the desired language.



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

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

To reset to English, press the  (reset) button while the OSD is on.

Using the OPTION On-screen Display

The OPTION OSD allows you to manually degauss the screen, adjust the moiré cancellation level, and adjust the OSD position. It also allows you to lock the controls.

Degaussing the screen

The monitor screen is automatically degaussed (demagnetized) when the power is turned on. You can also manually degauss the monitor.

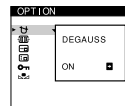
1 Press the button.

The MENU OSD appears.



2 Press the buttons to select "OPTION" and press the button again.

The OPTION OSD appears.



3 Press the buttons to select "DEGAUSS."



4 Press the button.

The screen is degaussed for about 5 seconds.



If you need to degauss the screen a second time, wait for at least 20 minutes before repeating the steps above.

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

Adjusting the moire

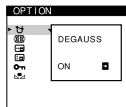
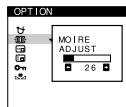
If elliptical or wavy patterns appear on the screen, adjust the moire cancellation level.

1 Press the button.

The MENU OSD appears.

2 Press the buttons to select "OPTION" and press the button again.

The OPTION OSD appears.

3 Press the buttons to select "MOIRE* ADJUST."4 Press the buttons to adjust the amount of moire cancellation until the moire effect is at a minimum.

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

Example of moire:



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

To reset, press the  (reset) button while the OSD is on.

Changing the on-screen display position

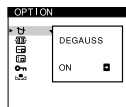
You can change the OSD position (for example, when you want to adjust the picture behind the OSD).

1 Press the button.

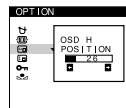
The MENU OSD appears.

2 Press the buttons to select "OPTION" and press the button again.

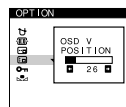
The OPTION OSD appears.

3 Press the buttons to select "OSD H POSITION)" or "OSD V POSITION)." (OSD H POSITION)" to adjust the horizontal position.

Select "OSD H POSITION)" to adjust the horizontal position.



Select "OSD V POSITION)" to adjust the vertical position.

4 Press the buttons to move the OSD to the desired position.

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

To reset, press the  (reset) button while the OSD is on.

Locking the controls

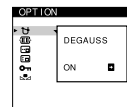
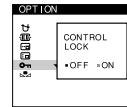
You can protect adjustment data by locking the controls.

1 Press the button.

The MENU OSD appears.

2 Press the buttons to select "OPTION" and press the button again.

The OPTION OSD appears.

3 Press the buttons to select "CONTROL LOCK)." (CONTROL LOCK)."
4 Press the button to select "ON."

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

Only the  (power) switch, EXIT, and  (CONTROL LOCK)" of the "OPTION" OSD will operate. If any other items are selected, the  mark appears on the screen.

To cancel the control lock

Repeat steps 1 through 3 above and press the  button to select "OFF."

Restoring the color

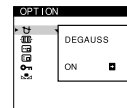
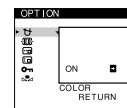
The colors of most display monitors tend to gradually lose brilliance over several years of service. The IMAGE RESTORATION feature allows you to restore the color to the original factory quality levels.

1 Press the button.

The MENU OSD appears.

2 Press the buttons to select "OPTION" and press the button again.

The OPTION OSD appears.

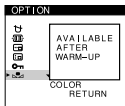
3 Press the buttons to select "IMAGE RESTORATION)." (IMAGE RESTORATION)."
4 Press the button to select "ON."

The picture disappears while the color is being restored (about 2 seconds). After the color is restored, the picture reappears on the screen again.

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

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.

Using the HELP On-screen Display

The HELP OSD contains helpful hints and information about this monitor. If your monitor is displaying symptoms that match those listed in the HELP OSD, follow the on-screen instructions to resolve the problem. If the symptoms do not match those listed in the HELP OSD or if the problem persists, see "Troubleshooting" on page 18.

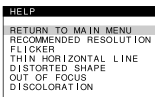
1 Press the button.

The MENU OSD appears.



2 Press the buttons to select "HELP" and press the button again.

The HELP OSD appears.



3 Press the buttons to select a HELP menu item.

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

**RECOMMENDED RESOLUTION**

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

FLICKER

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

THIN HORIZONTAL LINE

The lines that appear on your screen are damper wires. See page 16 for more information about the damper wires.

DISTORTED SHAPE

If the shape of the picture on the screen seems distorted, try adjusting the picture's geometry. Press the  button to jump directly to the GEOMETRY OSD.

OUT OF FOCUS

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

DISCOLORATION

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

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

Resetting the Adjustments

Resetting an adjustment item

- Press the  and  buttons to select the OSD containing the item you want to reset, and press the  button again.



- Press the  buttons to select the item you want to reset.



- Press the  (reset) button.



Resetting all of the adjustment data for the current input signal

When there is no OSD displayed, press the  (reset) button.

All of the adjustment data for the current input signal is reset to the factory settings.

Note that resetting the current signal does not affect brightness and contrast, OSD language, OSD position or control lock.



Resetting all of the adjustment data for all input signals

Press and hold the  (reset) button for more than two seconds.

All of the adjustment data, including the brightness and contrast, is reset to the factory settings.

**Note**

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

Power Saving Function

This monitor meets the power-saving guidelines set by VESA and ENERGY STAR, as well as the more stringent NUTEK .

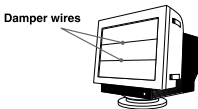
If the monitor is connected to a computer or video graphics board that is VESA DPMS (Display Power Management Signaling) compliant, the monitor will automatically reduce power consumption in three stages as shown below.

	Power consumption mode	Screen	Horizontal sync signal	Vertical sync signal	Power consumption	Recovery time	⏻ indicator
1	Normal operation	active	present	present	≤ 140 W	—	Green
2	Standby (1st mode)	blank	absent	present	≤ 15 W	Approx. 5 sec.	Green and orange alternate
3	Suspend (2nd mode) (sleep)*	blank	present	absent	≤ 15 W	Approx. 5 sec.	Green and orange alternate
4	Active-off (3rd mode) (deep sleep)*	blank	absent	absent	≤ 3 W	Approx. 15 sec.	Orange
5	Power-off	—	—	—	≤ 0.5 W	—	Off

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

Damper Wires

When viewing a white background, very thin horizontal lines may be visible on the screen as shown below. These lines are the shadows of the damper wires and are characteristic of CRTs that use aperture grilles. The wires are attached to the aperture grille on the inside of the Trinitron tube and prevent the vibration of the aperture grille.



Notes

- When your computer is in a power saving mode, MONITOR IS IN POWER SAVE MODE appears on the screen if you press any button on the monitor (page 17). After a few seconds, the monitor enters the power saving mode again. Once the horizontal and vertical sync signals are detected, the monitor automatically resumes its normal operation mode.
- The power management feature is invoked when the computer recognizes that you have not used your mouse or keyboard for a user-definable period of time.
- IBM recommends that you switch off your monitor at the end of each working day, or whenever you expect to leave it unused for long periods during the day.

Preset Modes

No.	Resolution (dots × lines)	Horizontal Frequency	Vertical Frequency	Graphics Mode
1	640 × 480	31.5 kHz	60 Hz	VGA
2	640 × 480	43.3 kHz	85 Hz	VESA
3	800 × 600	46.9 kHz	75 Hz	VESA
4	800 × 600	53.7 kHz	85 Hz	VESA
5	1024 × 768	60.0 kHz	75 Hz	VESA
6	1024 × 768	68.7 kHz	85 Hz	VESA
7	1280 × 1024	80.0 kHz	75 Hz	VESA
8	1280 × 1024	91.1 kHz	85 Hz	VESA
9	1600 × 1200	93.8 kHz	75 Hz	VESA
10	1600 × 1200	106.3 kHz	85 Hz	VESA

Displaying the Monitor's Information

You can display the model name, serial number and year of manufacture using the monitor's INFORMATION OSD.

Press and hold the  button for 3 seconds.

The INFORMATION OSD appears.

Example:



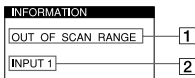
INFORMATION	
MODEL :	IBM P96
SER NO.:	12-34567
MANUFACTURED :	1999-52

The INFORMATION OSD includes the model name, serial number, and manufactured year.

The OSD automatically disappears after about 30 seconds.

Warning Messages

If no pictures appears on the screen, one of the following messages appears on the screen. To solve the problem, see “Troubleshooting” on page 18.



1 The input signal condition

OUT OF SCAN RANGE

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

NO INPUT SIGNAL

indicates that no signal is input.

MONITOR IS IN POWER SAVE MODE

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

2 The selected connector

This message shows the currently selected connector (INPUT 1 or INPUT 2).

Troubleshooting

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

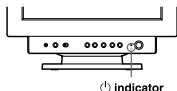
Symptom	Check these items
No picture	
If the  indicator is not lit	- Check that the power cord is properly connected. - Check that the  (power) switch is in the “on” position.
If the “NO INPUT SIGNAL” message appears on the screen, or if the  indicator is either orange or alternating between green and orange	- Check that your computer power switch is in the “on” position. - Check that the Input 1-2 switch settin is correct (page 5). - Check that the video signal cable is properly connected and all plugs are firmly seated in their sockets. - Ensure that no pins are bent or pushed in the video input connector. - Check that the graphic board is completely seated in the proper bus slot.
If the “MONITOR IS IN POWER SAVE MODE” message appears on the screen, or if the  indicator is either orange or alternating between green and orange	- The computer is in power saving mode. Try pressing any key on the computer keyboard, or moving the mouse. - Check that your computer power switch is in the “on” position. - Check that the graphic board is completely seated in the proper bus slot.
If the “OUT OF SCAN RANGE” message appears on the screen	- Check that the video frequency range is within that specified for the monitor. (Horizontal: 30 – 107kHz, Vertical: 48 – 120 Hz) - Refer to your computer’s instruction manual to adjust the video frequency range. - If you are using a video signal cable adapter, check that it is the correct one.
If no message is displayed and the  indicator is green or flashing orange	See “Self-diagnosis Function” (page 20).
Picture is scrambled	- Check your graphics board manual for the proper monitor setting. - Check this manual and confirm that the graphics mode and the frequency you are trying to operate at is supported. Even if the frequency is within the proper range, some graphic boards may have a sync pulse that is too narrow for the monitor to sync correctly.
Color is not uniform	- Degauss the monitor (page 11). - If you place equipment which generates a magnetic field, such as a loudspeaker, near the monitor, or you change the direction of the monitor, color may lose uniformity. The degauss function demagnetizes the metal frame of the CRT to obtain a neutral field for uniform color reproduction. If a second degauss cycle is needed, allow a minimum interval of 20 minutes for the best result.
You cannot adjust the monitor with the buttons on the front panel ( appears on the screen)	If the control lock function is set to ON, set it to OFF using the OPTION OSD (page 13).
White does not look white	Adjust the color temperature (page 9).

Symptom	Check these items
Screen image is not centered or sized properly	- Press  button (page 5). - Adjust the size or centering (page 7). Some video modes do not fill the screen to the edges. This problem tends to occur with certain graphic boards.
Edges of the image are curved	Adjust the geometry (page 8).
White lines show red or blue shadows at edges	Adjust the convergence (page 10).
Picture is fuzzy	- Adjust the contrast and brightness (page 6). - Degauss the monitor (page 11). If you place equipment which generates a magnetic field, such as a loudspeaker, near the monitor, or you change the direction of the monitor, color may lose uniformity. The degauss function demagnetizes the metal frame of the CRT to obtain a neutral field for uniform color reproduction. If a second degauss cycle is needed, allow a minimum interval of 20 minutes for the best result. - If red or blue shadows appear along the edges of images, adjust the convergence (page 10). - Select MOIRE ADJUST and adjust the moire cancellation effect (page 12).
Picture bounces or has wavy oscillations	- Isolate and eliminate any potential sources of electric or magnetic fields. Common causes for this symptom are electric fans, fluorescent lighting, or laser printers. - If you have another monitor close to this monitor, increase the distance between them to reduce the interference. - Try plugging the monitor into a different AC outlet, preferably on a different circuit. - Try the monitor on a different computer in a different room.
Picture is flickering	Set the refresh rate on the computer to obtain the best possible picture by referring to your computer’s manual.
Picture appears to be ghosting	Eliminate the use of video cable extensions and/ or video switch boxes if this symptom occurs. Excessive cable length or a weak connection can produce this symptom.
Wavy or elliptical (moire) pattern is visible	- Select MOIRE ADJUST and adjust the moire cancellation effect (page 12). The moire may be modified depending on the connected computer. - Change your desktop pattern. Due to the relationship between resolution, monitor dot pitch and the pitch of some image patterns, certain screen backgrounds sometimes show moire.
Two fine horizontal lines (wires) are visible	These wires stabilize the vertically striped aperture grille (page 16). This aperture grille allows more light to pass through to the screen giving the Trinitron CRT more color and brightness.
IMAGE RESTORATION function does not operate	- 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 “Restoring the color” on page 13. - 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.
Hum is heard right after the power is turned on	When the power is turned on, the auto-degauss cycle is activated. While the auto-degauss cycle is activated, a hum may be heard. The same hum is heard when the monitor is manually degaussed. This is not a malfunction.

- If the problem persists, call the IBM HelpCenter.
- Note the model name and the serial number of your monitor. Also note the make and name of your computer and graphic board.

Self-diagnosis Function

This monitor is equipped with a self-diagnosis function. If there is a problem with your monitor or computer, the screen will go blank and the  indicator will either light up green or flash orange.



If the  indicator is green

- 1 Disconnect the video input cable or turn off the connected computer.**
- 2 Press the  button twice to turn the monitor off and then on.**
- 3 Press and hold the  button for 2 seconds before the monitor enters power saving mode.**



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

If the color bars do not appear, there is a potential monitor failure. Inform the IBM HelpCenter of the monitor's condition.

If the  indicator is flashing orange

Press the  button twice to turn the monitor off and then on.

If the  indicator lights up green, the monitor is working properly.

If the  indicator is still flashing, there is a potential monitor failure. Inform the IBM HelpCenter 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

Picture tube	0.24 mm aperture grille pitch 19 inches measured diagonally 90-degree deflection
Viewable image size	Approx. 365 × 274 mm (w/h) (14 ³ / ₈ × 10 ⁷ / ₈ inches) 18.0" viewable diagonal
Resolution	Horizontal: Max. 1600 dots Vertical: Max. 1200 lines
Standard image area	Approx. 352 × 264 mm (w/h) (13 ⁷ / ₈ × 10 ¹ / ₂ inches)
Deflection frequency*	Horizontal: 30 to 107kHz Vertical: 48 to 120 Hz 256 < Total Line < 2048
AC input voltage/current	220 to 240 V, 50 – 60 Hz, Max. 1.0 A
Power consumption	Max. 140 W
Operating temperature	10°C to 40°C
Dimensions	Approx. 462 × 462 × 474 mm (w/h/d) (18 ¹ / ₄ × 18 ¹ / ₄ × 18 ³ / ₄ inches)
Mass	Approx. 27 kg (59 lb 8 oz)

* Recommended horizontal and vertical timing condition

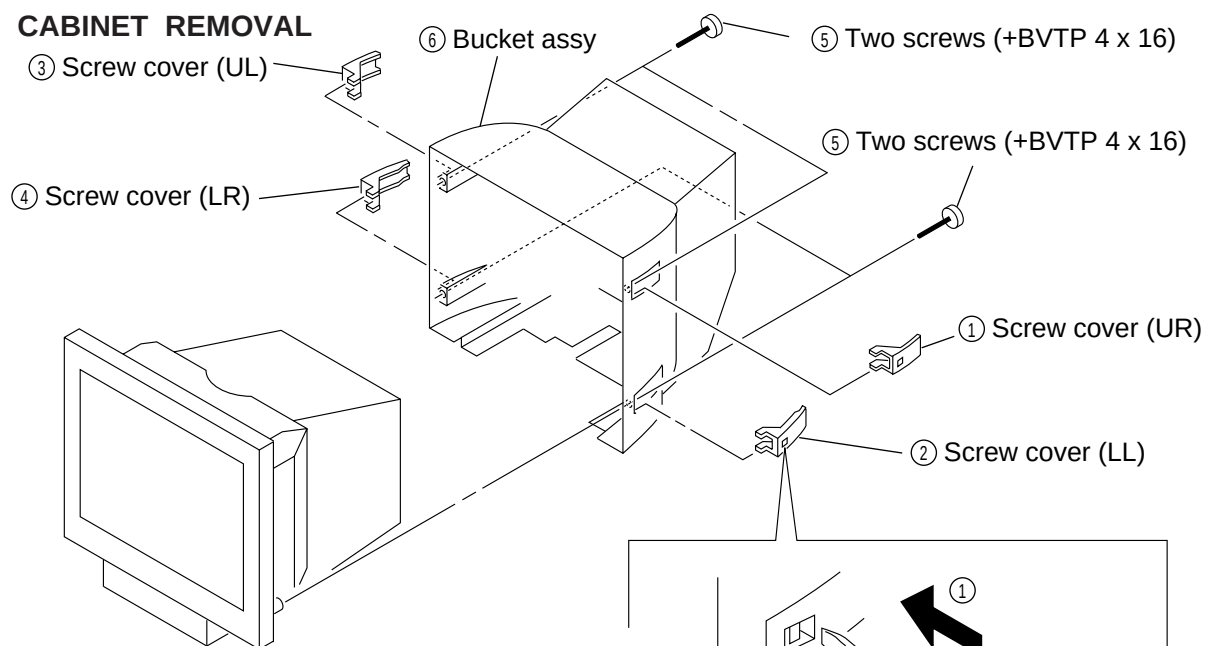
- Horizontal sync width should be more than 1.0 μ sec.
- Horizontal blanking width should be more than 3.0 μ sec.
- Vertical blanking width should be more than 450 μ sec.

Design and specifications are subject to change without notice.

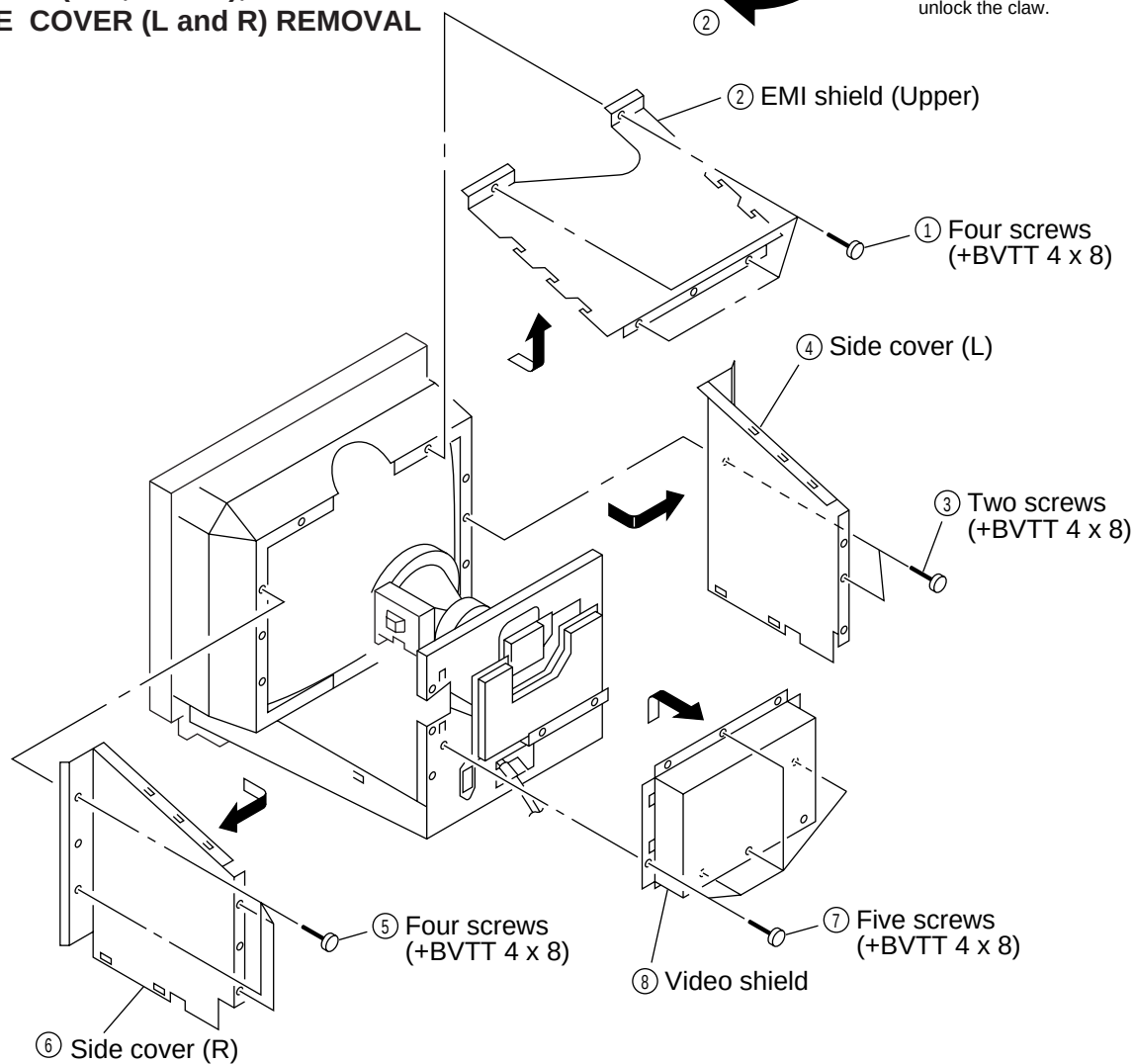
SECTION 2

DISASSEMBLY

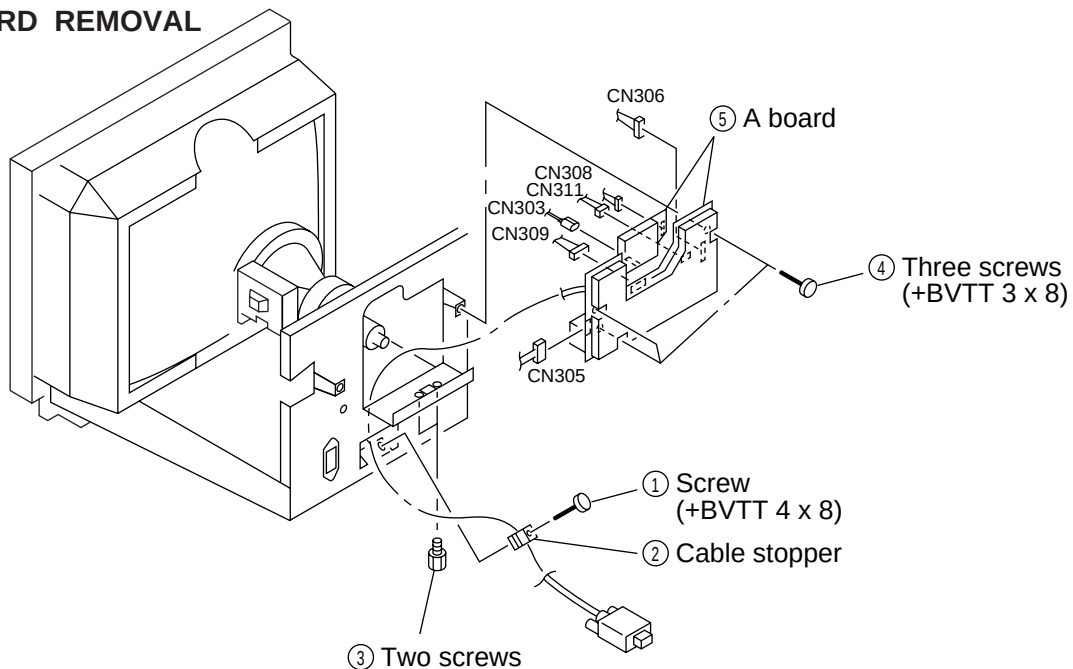
2-1. CABINET REMOVAL



2-2. SHIELD (EMI, VIDEO), SIDE COVER (L and R) REMOVAL

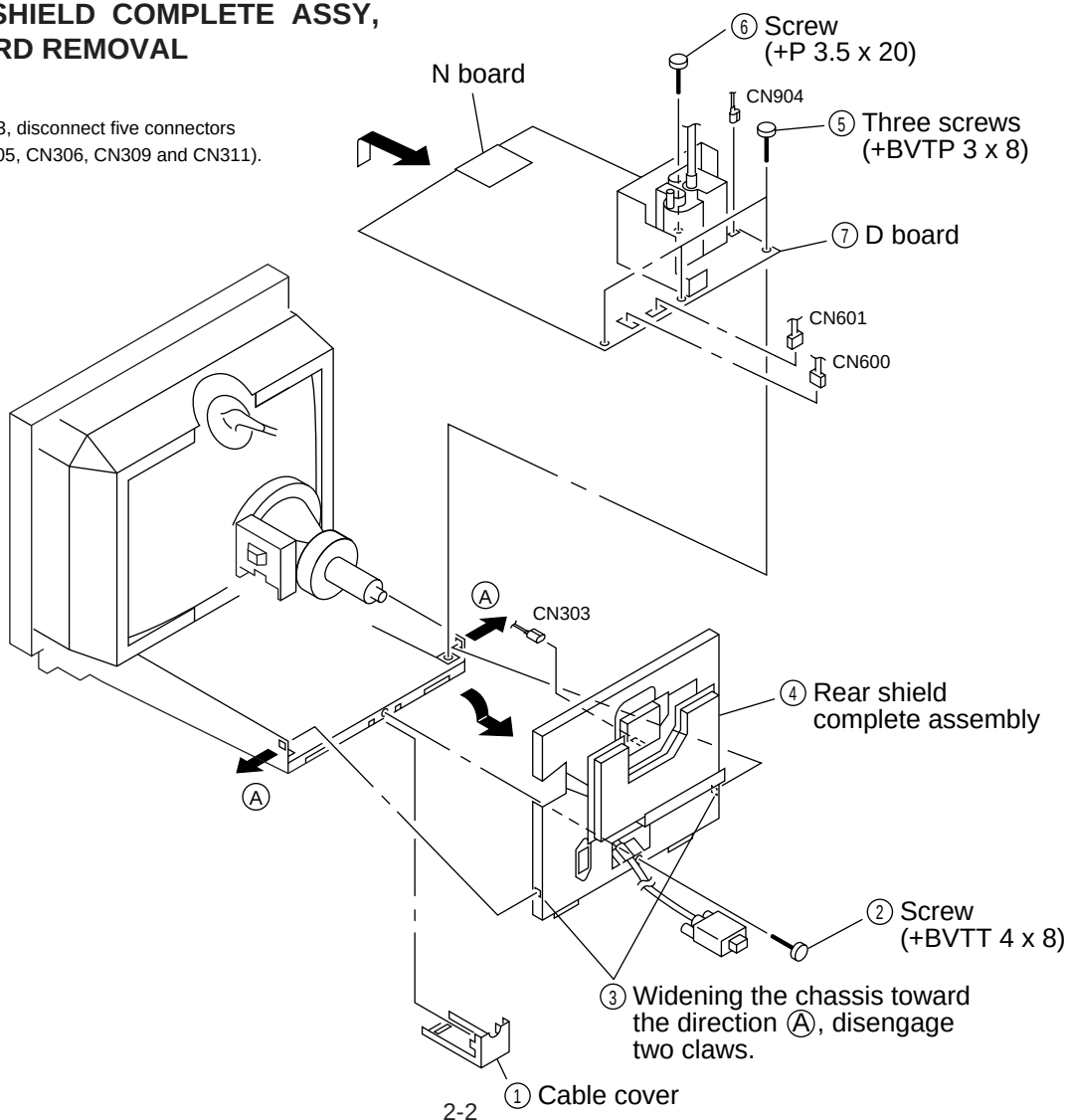


2-3. A BOARD REMOVAL

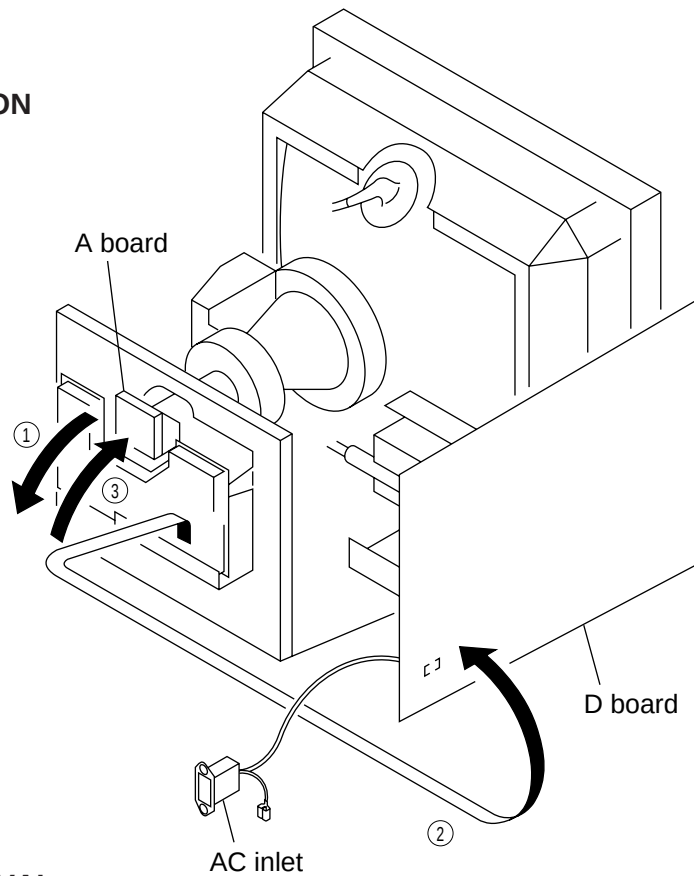


2-4. REAR SHIELD COMPLETE ASSY, D BOARD REMOVAL

※ Referring to 2-3, disconnect five connectors (CN303, CN305, CN306, CN309 and CN311).

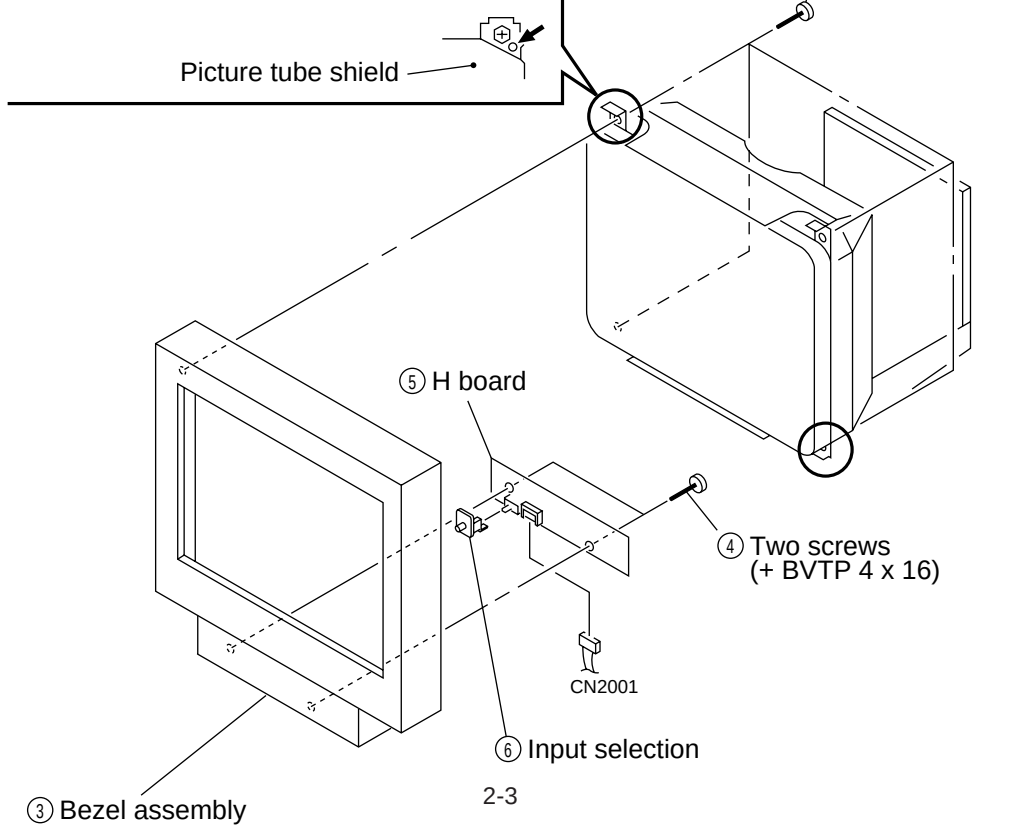


2-5. SERVICE POSITION

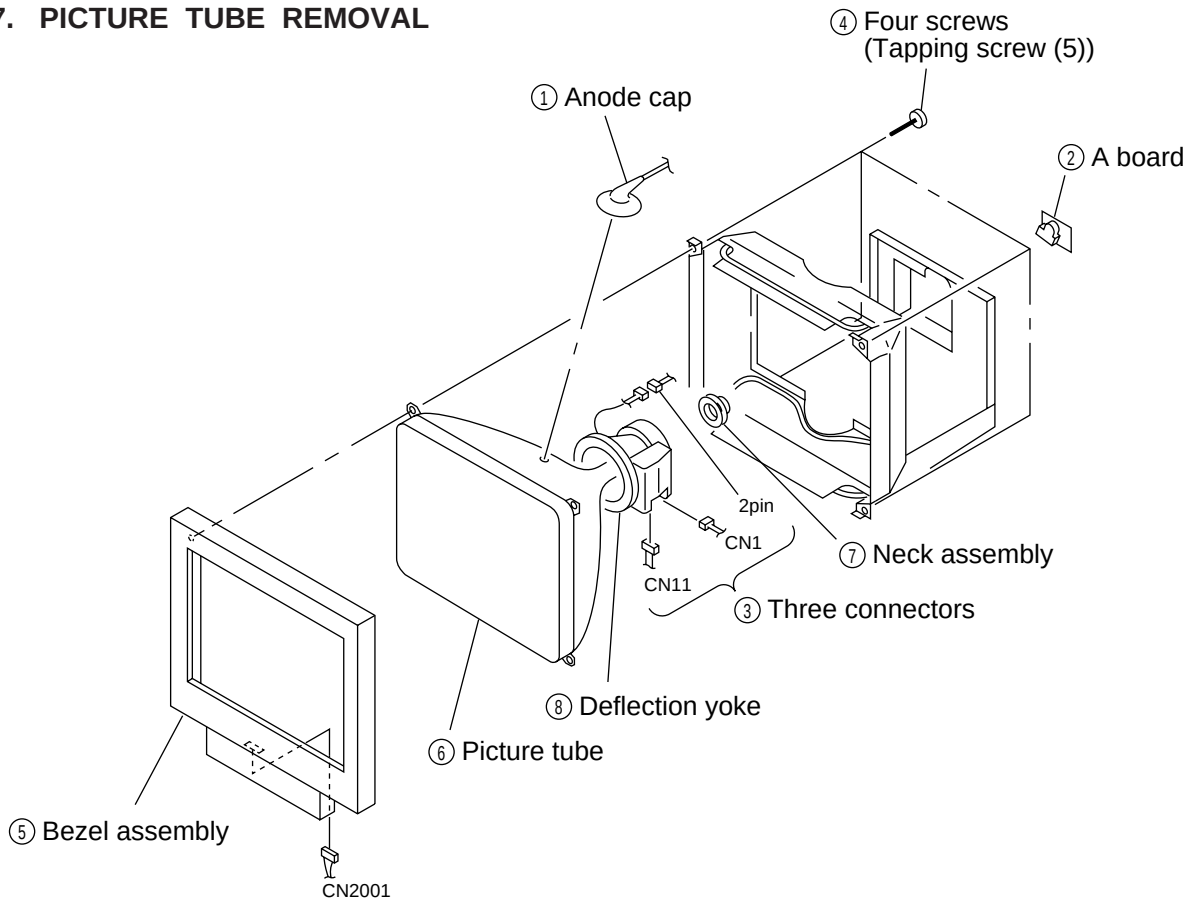


2-6. H BOARD REMOVAL

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



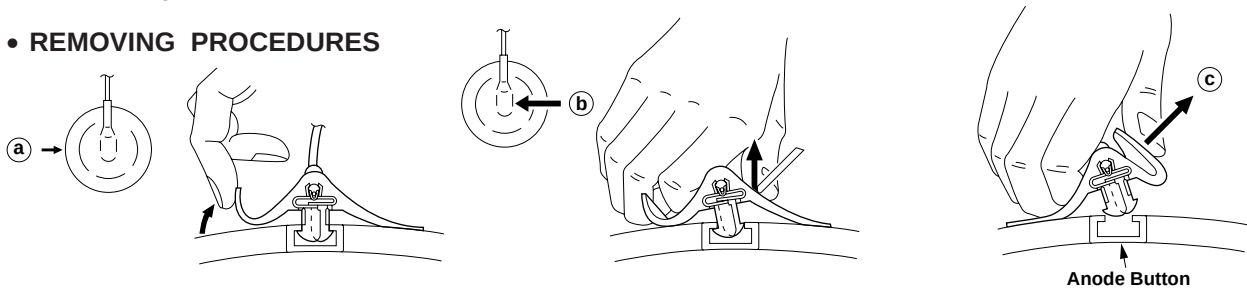
2-7. PICTURE TUBE REMOVAL



• REMOVAL OF ANODE-CAP

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

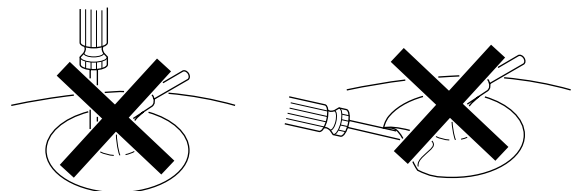
• REMOVING PROCEDURES

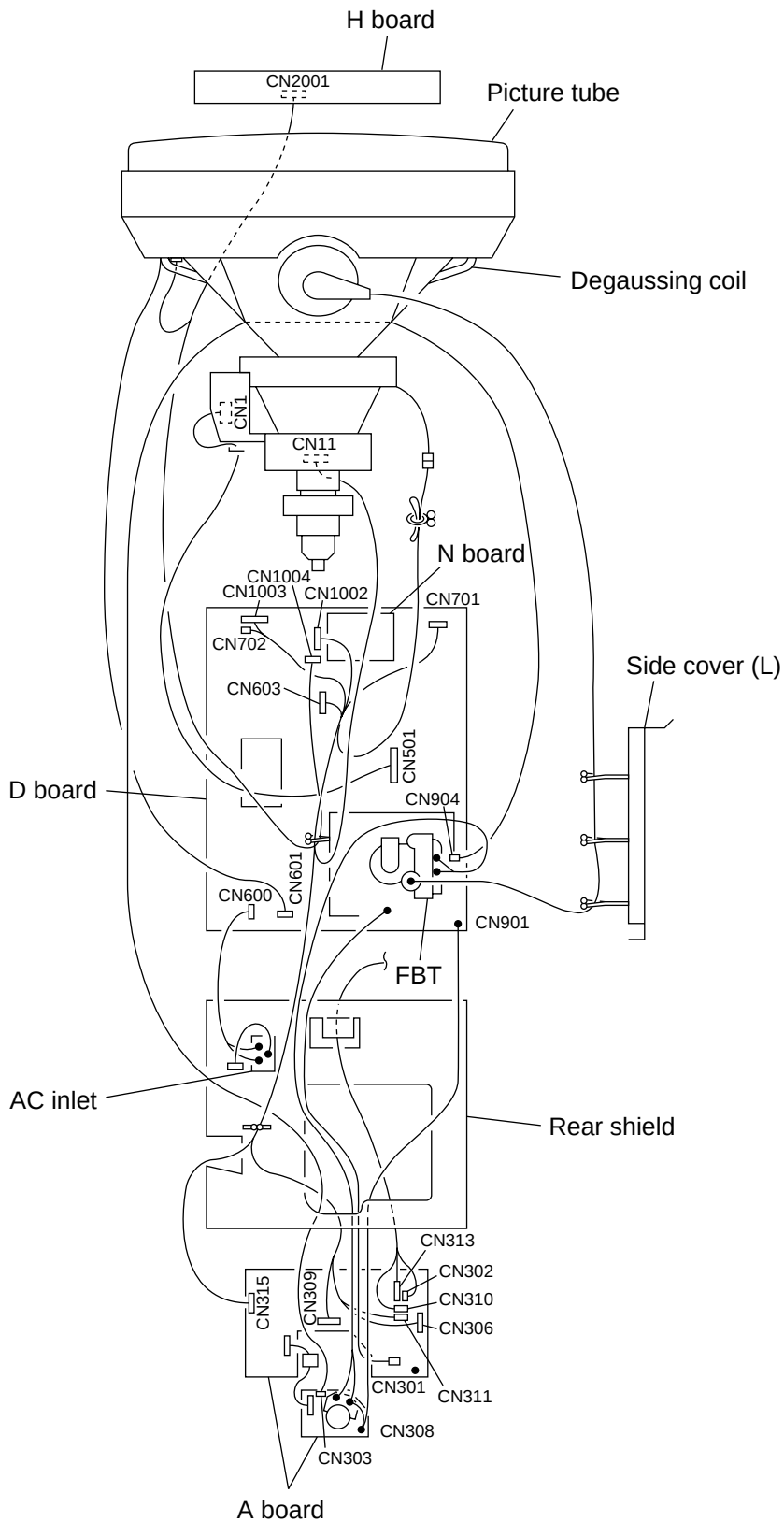


- ① Turn up one side of the rubber cap in the direction indicated by the arrow (a).
- ② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow (b).
- ③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber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

• HOW TO HANDLE AN ANODE-CAP

- ① Don't scratch the surface of anode-caps with sharp shaped material!
- ② Don't press the rubber hardly 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.





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 T901(FBT), IC901, R924, R925, RV901 • Mounted D board
HV Protector Circuit Check	D Board T901(FBT), R917, R918, R923, R920, R919, R1004, C920, D911, R912, • Mounted D board
Beam Current Protector Circuit Check	D Board R933, R932, R921, R1006, D915, D917, IC901, T901(FBT) • Mounted D board

* Confirm one minute after turning on the power.

a) High Voltage Adjustment

- 1) Adjust the high voltage $27.0 \text{ kV} \pm 0.2 \text{ kV}$ by the RV901.

Note: Perform high voltage adjustment after the rough adjustments were completed on PICTURE size and FOCUS.

b) High Voltage Hold-Down Function Check

- 1) Apply the voltage $21.1^{+0.00}_{-0.05}$ VDC between D912 cathode and GND shown on the right to confirm that the RASTER will vanish.

c) Beam Current Protector Function Check

- 1) Connect Power Supply 1.68 mA to between pin 11 ~ GND of FBT (T901).
- 2) Confirm that voltage on C922 (ABL DET.) is less than 2.25 V or monitor will shut down.

d) OCP Function Check

- 1) Turn ON Power Supply.
- 2) Connect 3 Z/20 W of Resistor between +200 V Line and GND, and make sure that OCP will function (Power LED will vanish and the sound “chi,chi,chi will be heard.), and cut-off AC input promptly.

e) Power Supply Operation Check

- 1) Apply AC100 V to the D Board.
- 2) Make sure that the line voltage at the both ends of C621 is $200 \pm 3.0 \text{ VDC}$.

SECTION 4
ADJUSTMENTS

• 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. Moving the DY forward, adjust so that an entire screen becomes monogreen.
 - 6. Adjust the tilt of DY. For the TILT component, use TLV of DY.

Note: Observe the following adjustment conditions:

- “TILT” = 0
 - “VPIN SAW TOP” = 0
 - “VPIN SAW BTM” = 0
- 7. Lock the DY lightly with a locking fitting.

• Landing Fine Adjustment

<Landing adjustment conditions>

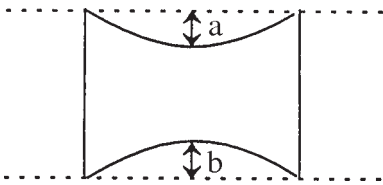
- a) Brightness: $\frac{1}{3} \sum IK$ ($\sum IK = 750 \mu A$)
 - b) Aging time: 2 hours or more.
 - c) Atmospheric temperature: 25 °C
 - d) magnetic Field:
 - BH = $0 \pm 2 \mu T$
 - BV = $45 \pm 2 \mu T$ (U/C, AEP)
 - 55 $\pm 2 \mu T$ (South Hemisphere)
 - 10 $\pm 2 \mu T$ (Equator destination)
 - e) Adjustment point:
 - 1-inch inside from the edge of CRT effective tube surface.
- 1. Put the set inside the Helmholtz coil.
 - 2. Set the TLH plate to “0” position.
 - 3. Set the purity magnet of Neck Assy in “0” position, and lock with a white pen.
 - 4. Set “VPIN SAW TOP” and “VPIN SAW BTM” to “0” position.
 - 5. Receive an image of the monogreen signal.
 - 6. Degauss the CRT and iron shield parts.

- Note: Iron bottom chassis and EMI shield should be degaussed before assembling the chassis.
- 7. Perform auto degaussing.
 - 8. Attach the wobbling coil to the designated part of the CRT neck.
 - 9. Attach the sensor of the landing adjustment unit on the CRT surface.
 - 10. Adjust the DY position and purity, and the DY tilt.

- Note: Use purity magnet on the DY.
- 11. Fasten DY with screw.
- Note: Torque $22 \pm 2 \text{ kg}\cdot\text{cm}$ ($2.2 \pm 0.2 \text{ Nm}$).
- 12. Perform auto degaussing.

- 13. Using two wedges, adjust vertical pins so as to attain $a=b$ as shown below. Further, insert two wedges as shown in the right figure, and lock the center so that DY does not fluctuate horizontally.

Note: Insert wedges completely so that the DY does not move.



- 14. If the corner landing is out of the specification, use the landing magnet so as to satisfy the specification.

<Specification>

a) Green	$x \pm 4$	$x \pm 7.5$	$x \pm 4$
	$x \pm 4$	$x \pm 7.5$	$x \pm 4$
	$x \pm 4$	$x \pm 7.5$	$x \pm 4$

[X] is bias value for a difference caused depending on whether the EMI shield and rear cover are present or not.

J Models : $x = 1.5 [\mu m]$

- b) Difference between Green and Red, and between Green and Blue.

± 5	± 5	± 5
± 5	± 5	± 5
± 5	± 5	± 5

[μm]

- c) Difference Red and Blue.

± 8	± 8	± 8
± 8	± 7	± 8
± 8	± 8	± 8

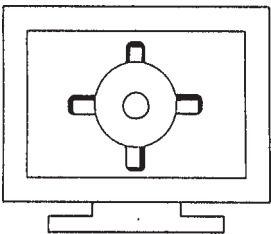
[μm]

Note:

- (1) Do not paste more than two magnets on one corner.
 - (2) Magnets will be placed in a range of 80 ~ 120 mm from the DY along the diagonal lines.
- 15. After placing magnets, absolutely degauss and check the results.
 - 16. Remove the sensor and wobbling coil.
 - 17. Check that the DY is not tilting, and fix the purity Mg with a white pen.

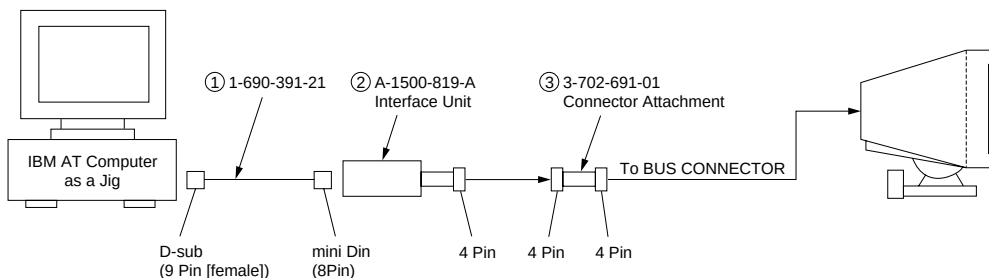
<RTV and wedge position>

- (1) Apply RTV to the shaded portions.
- (2) Lock CRT, wedges, and DY with RTV.



[Rear view]

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



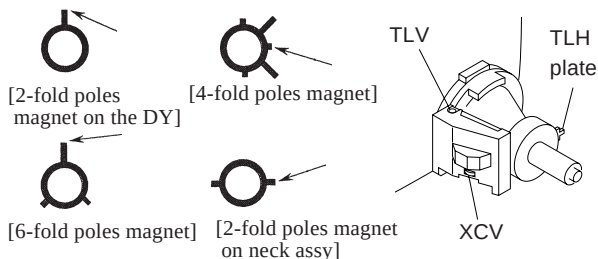
*The parts above (① ~ ③) are necessary for DAS adjustment.

• Convergence Rough Adjustment

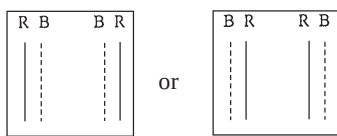
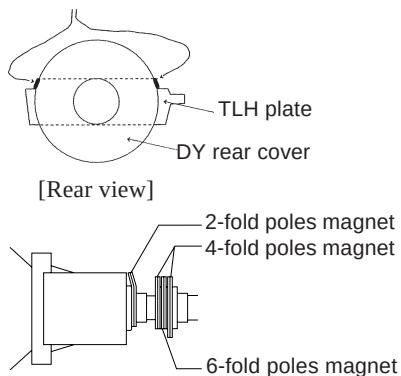
- (1) Receive an image of the white crosshatch signals (white lines on black).
- (2) Make rough adjustment of the H and V direction convergence by using 4-fold poles magnet.
- (3) Make rough adjustment of the HMC and VMC by using 6-fold poles magnet.

<“0” position of each magnet and TLH plate>

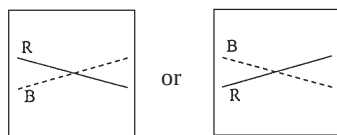
- a) Align the protrusion marked with an arrow.



- b) Flush the shaded portions of TLH plate with the DY rear cover, as shown below.

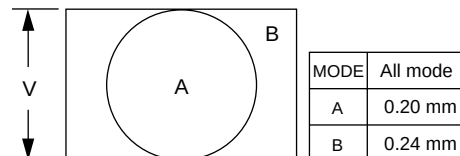


[Movements of TLH plate]



[Movements of XCV volume]

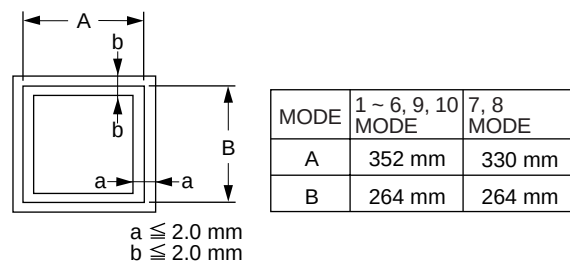
• Convergence Specification



• White Balance Adjustment Specification

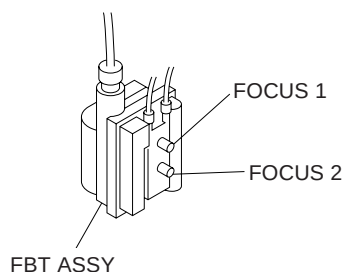
1. 9300 K
 $x = 0.283 \pm 0.005$
 $y = 0.298 \pm 0.005$
 (All White)
2. 5000 K
 $x = 0.346 \pm 0.005$
 $y = 0.359 \pm 0.005$
 (All White)
3. sRGB
 $x = 0.313 \pm 0.005$
 $y = 0.329 \pm 0.005$
 (All White)

• Vertical and Horizontal Position and Size Specification

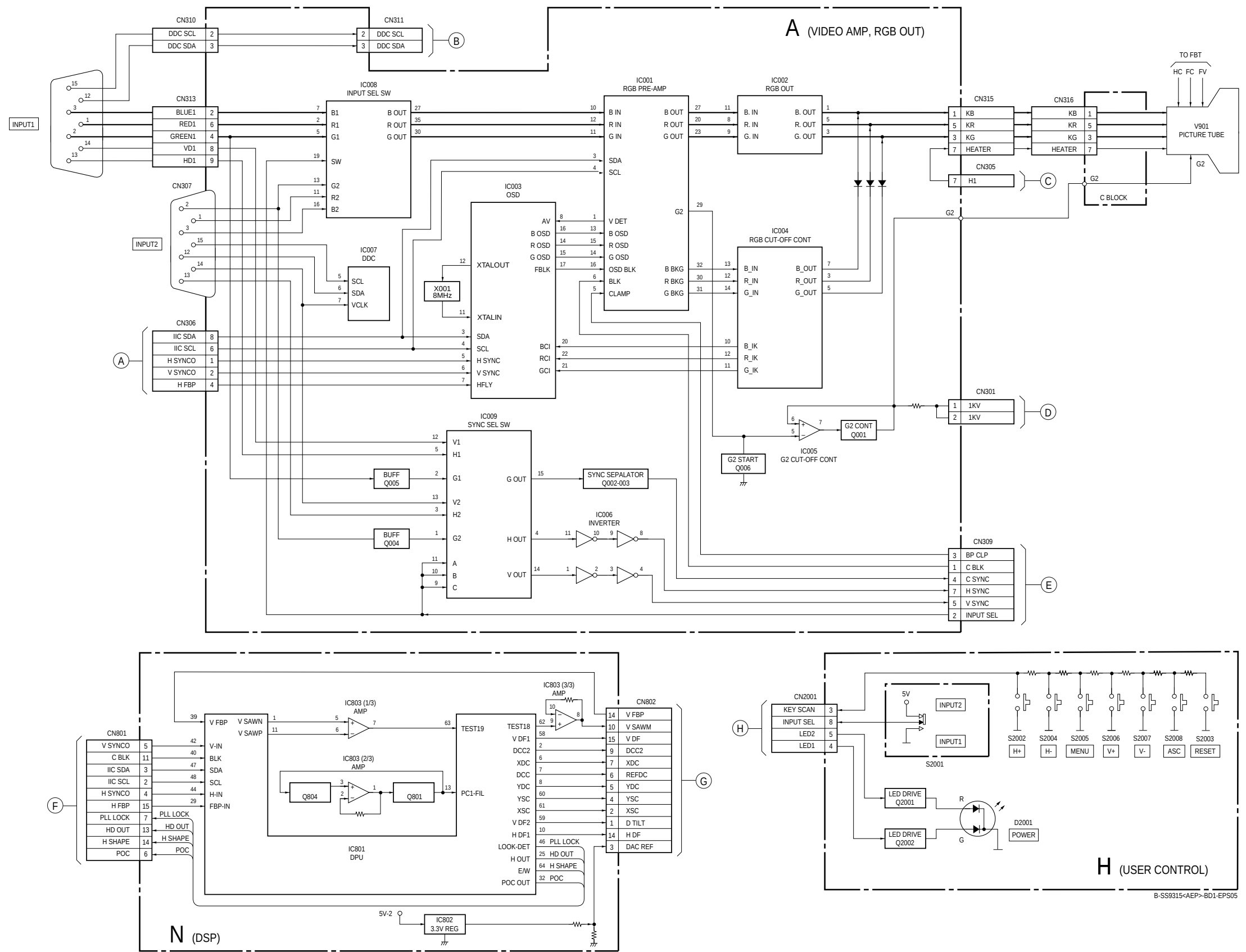


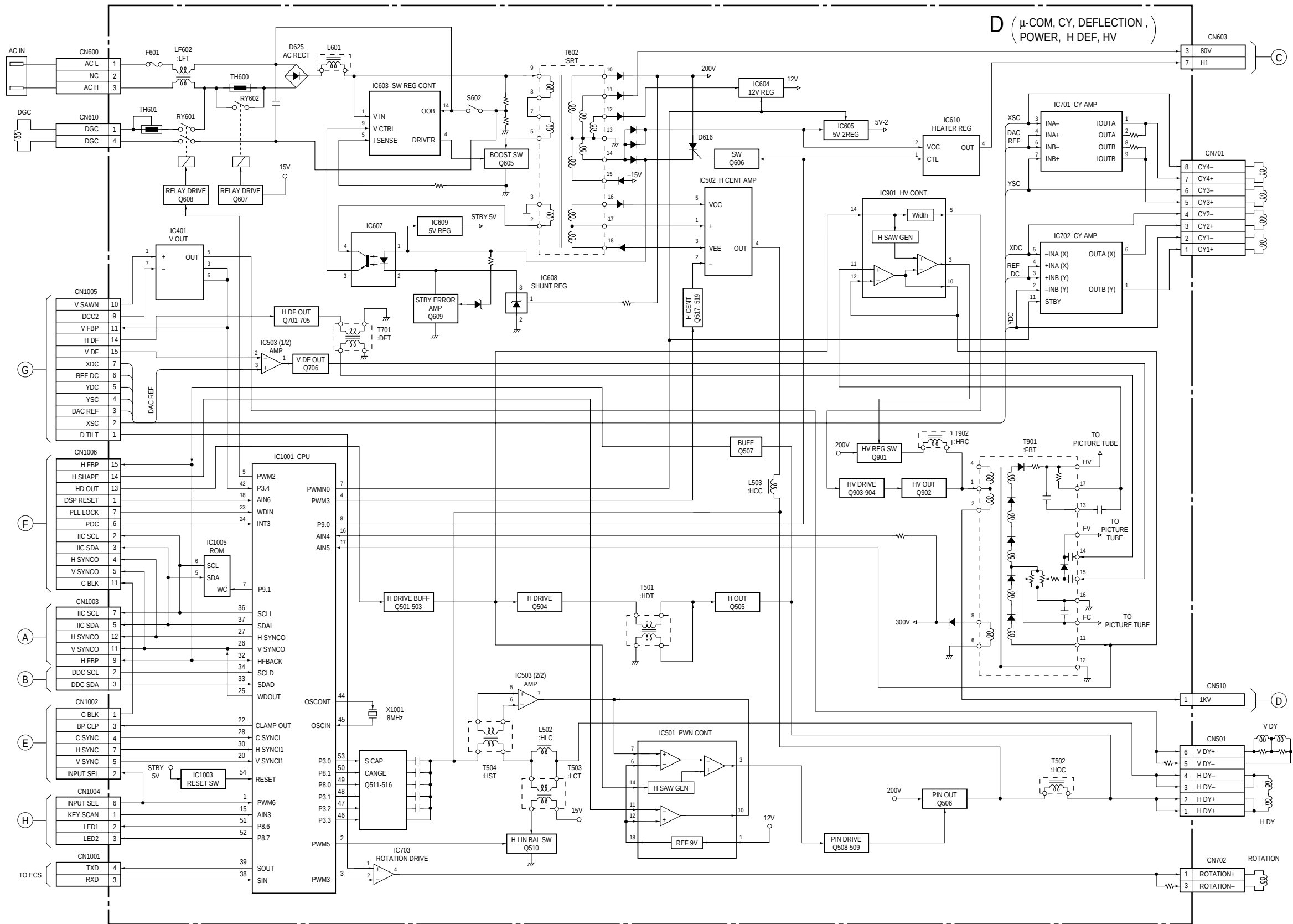
• Focus adjustment

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

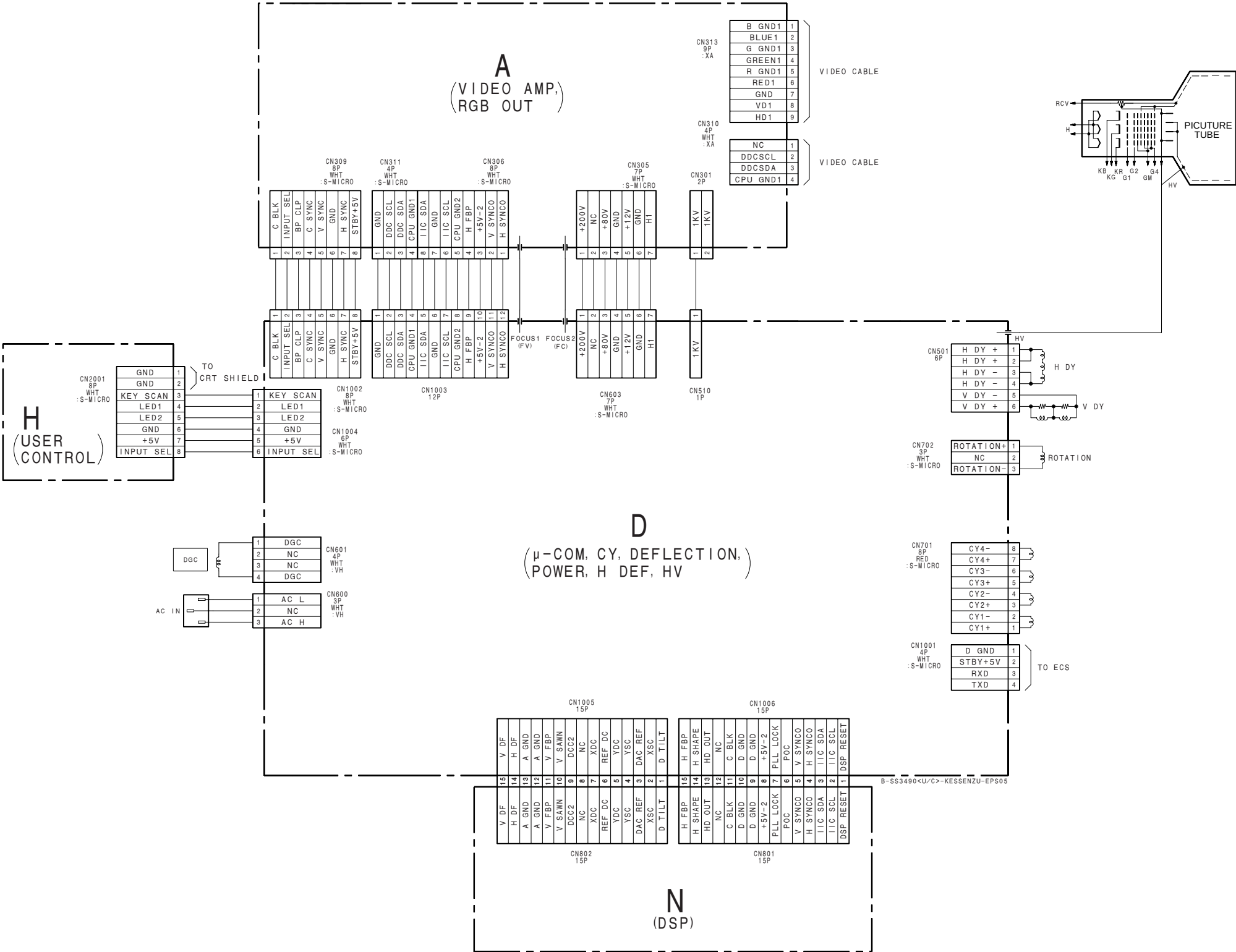


BLOCK DIAGRAMS

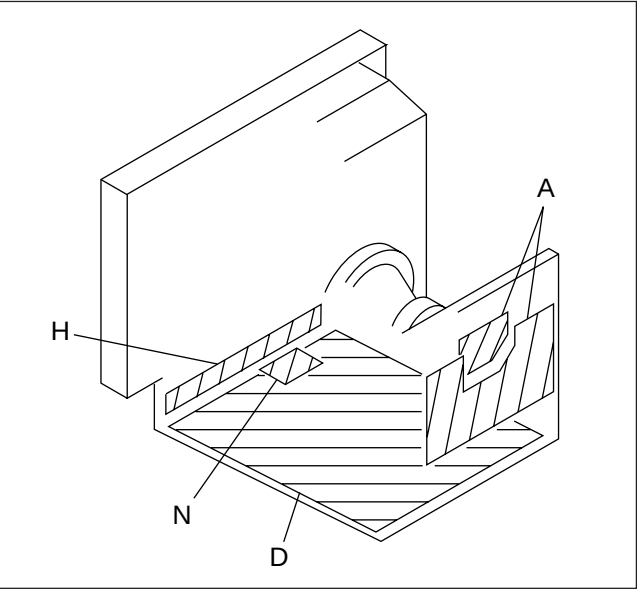




5-2. FRAME SCHEMATIC DIAGRAM



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.

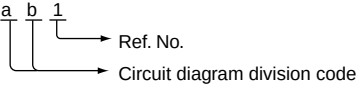
Pitch: 5 mm
Rating electrical power 1/4 W (CHIP : 1/10 W)

- 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.

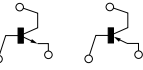
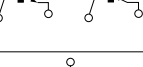
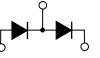
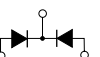
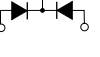
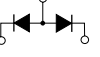
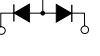
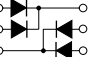
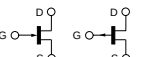
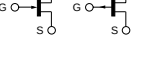
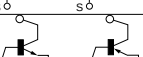
- All voltages are in V.
- Readings are taken with a 10 M digital multimeter.
- Readings are taken with a color-bar signal input.
- Voltage variations may be noted due to normal production tolerances.
- * : Can not be measured.
- Circled numbers are waveform references.
-  : B + bus.
-  : B – bus.

- Divided circuit diagram
One sheet of D board circuit diagram is divided into three sheets, each having the code D- to D-. For example, the destination  on the code D- sheet is connected to  on the D- sheet.



	Part Replaced ()		
HV ADJ	RV901		
	Part Replaced ()		
HV Regulator Circuit Check	D Board	T901 (FBT), IC901, R924, R925, RV901 • Mounted D board	
HV Protector Circuit Check	D Board	T901 (FBT), R917, R918, R923, R920, R919, R1004, C920, D911, D912 • Mounted D board	
Beam Current Protector Circuit Check	D Board	R933, R932, R921, R1006, D915, D917, IC901, T901 (FBT) • Mounted D board	

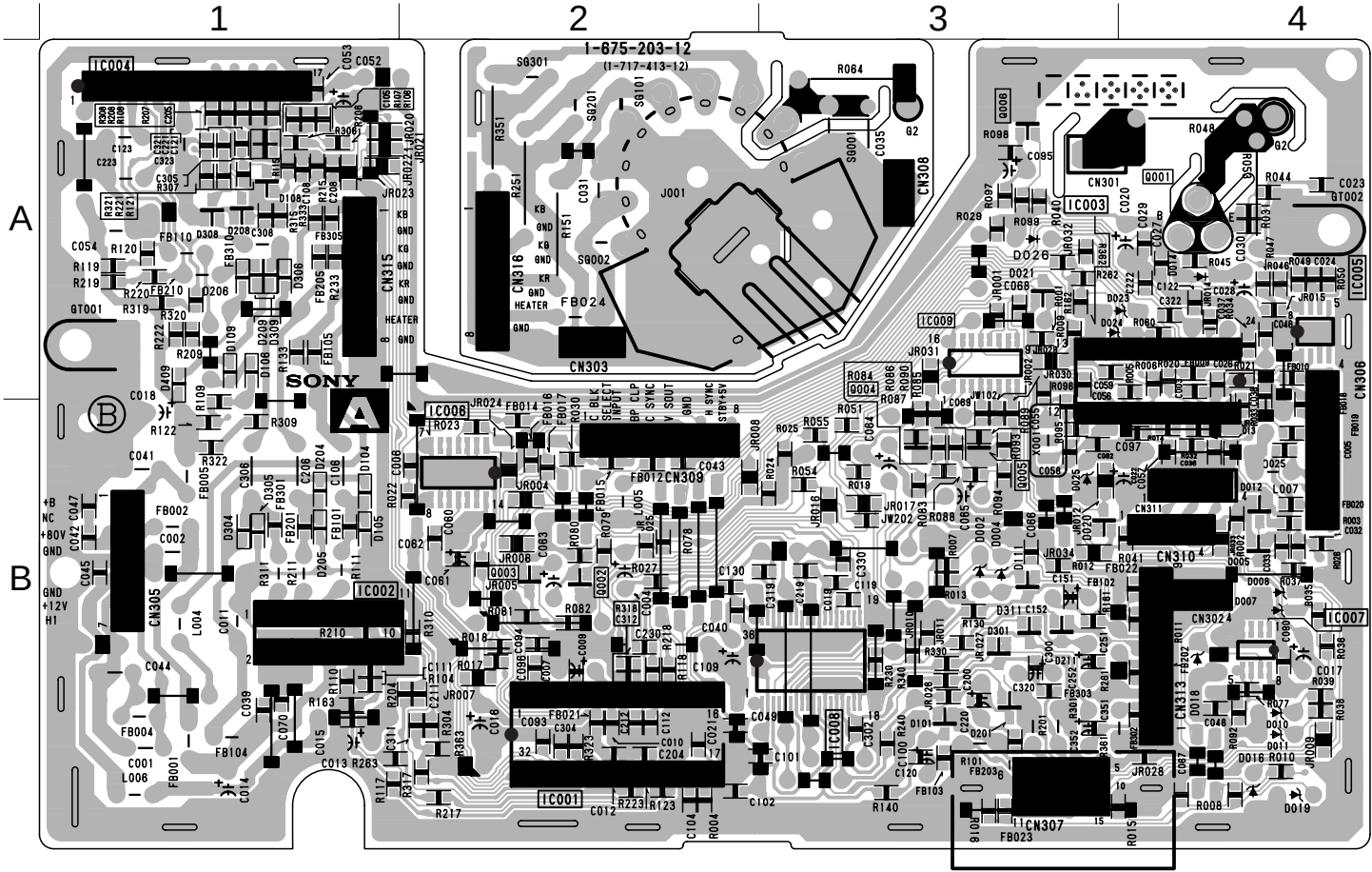
Terminal name of semiconductors in silk screen printed circuit (*)

	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 Anode Cathode Anode	
⑬	Transistor (FET)		Drain Gate	
⑭	Transistor (FET)		Drain Source Gate	
⑮	Transistor (FET)		Source Anode Drain Gate	
⑯	Transistor		Emitter Collector Base	
—	Discrete semiconductot			

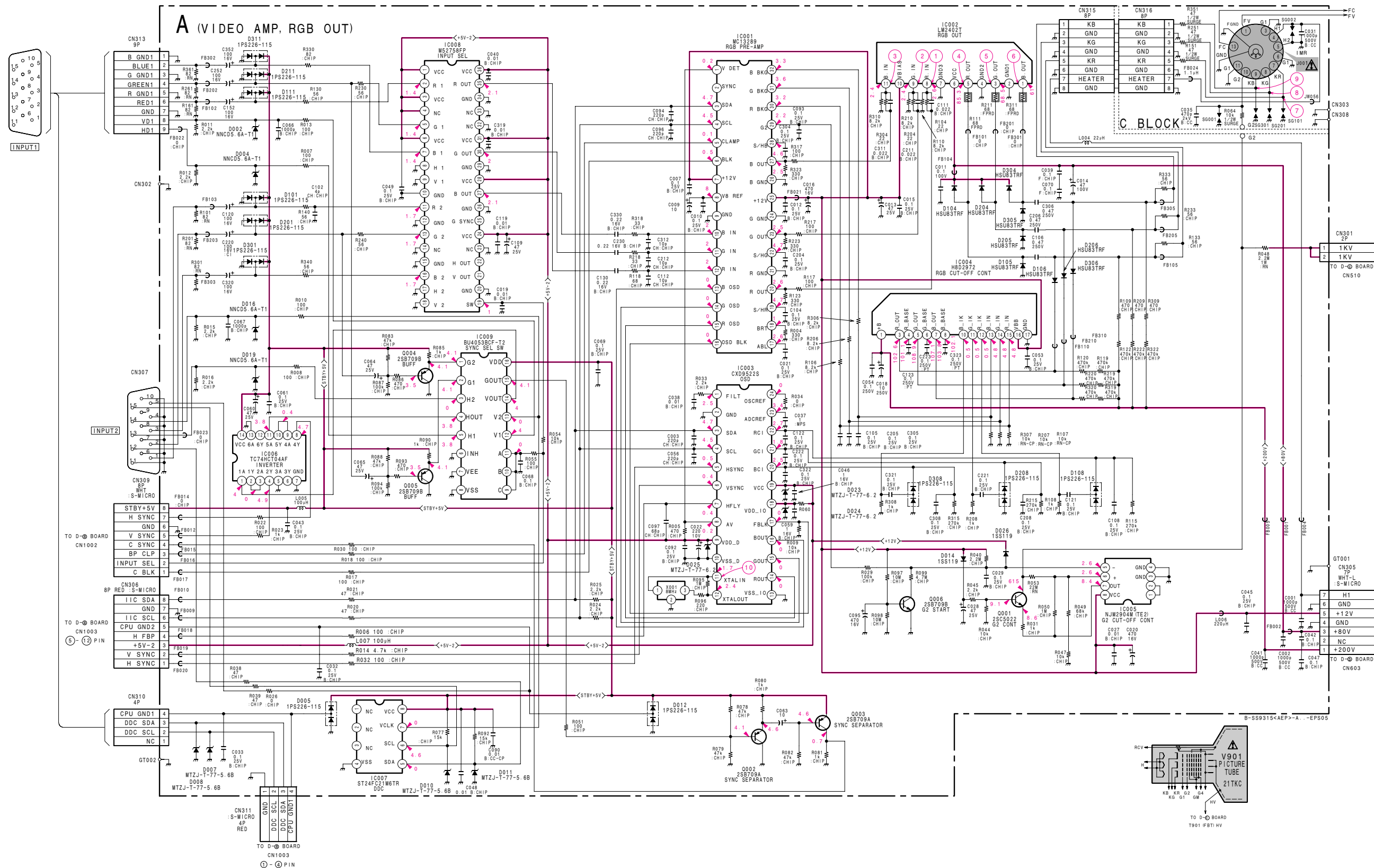
(Chip semiconductors that are not actually used are included.)

Ver.1.5

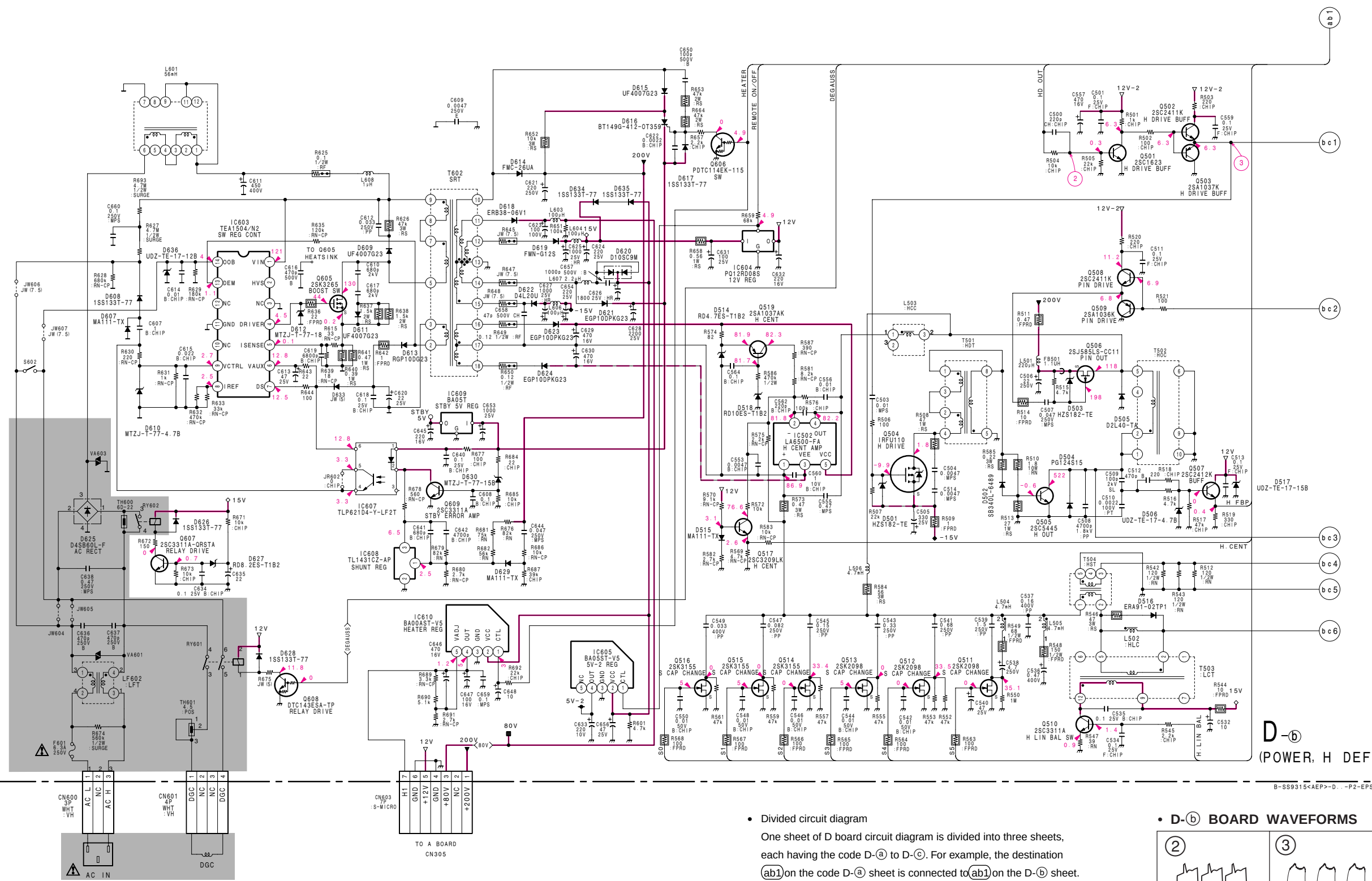
— A BOARD —



Schematic Diagram of A Board

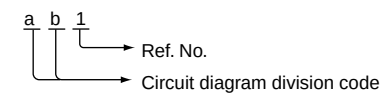




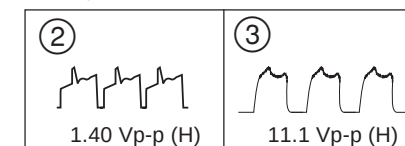


• Divided circuit diagram

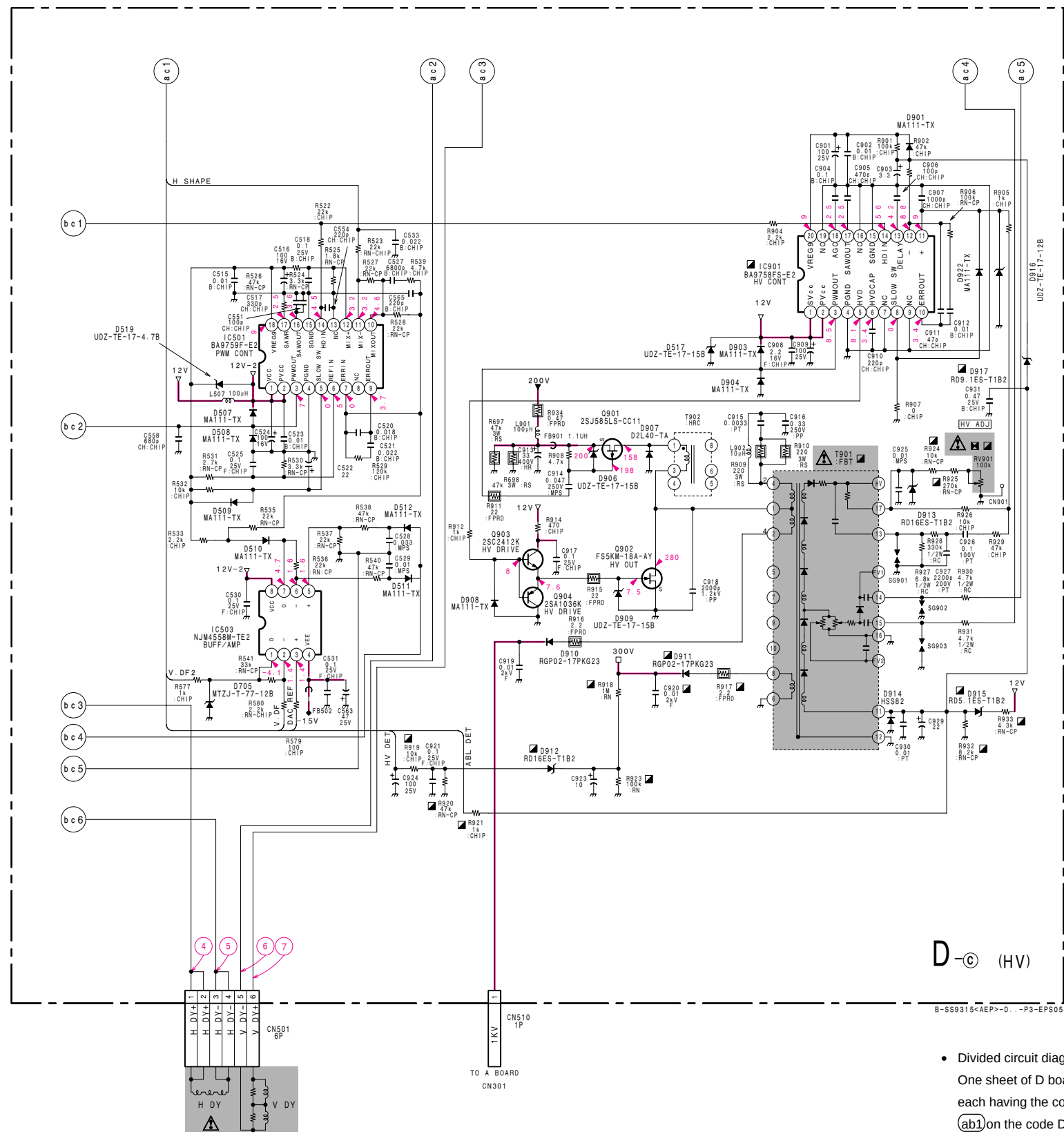
One sheet of D board circuit diagram is divided into three sheets, each having the code D-Ⓐ to D-Ⓒ. For example, the destination (ab1) on the code D-Ⓐ sheet is connected to (ab1) on the D-Ⓑ sheet.



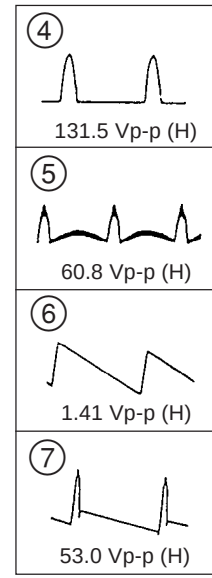
• D-Ⓑ BOARD WAVEFORMS



D-Ⓑ
(POWER, H DEF)



• D-Ⓢ BOARD WAVEFORMS

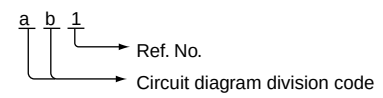


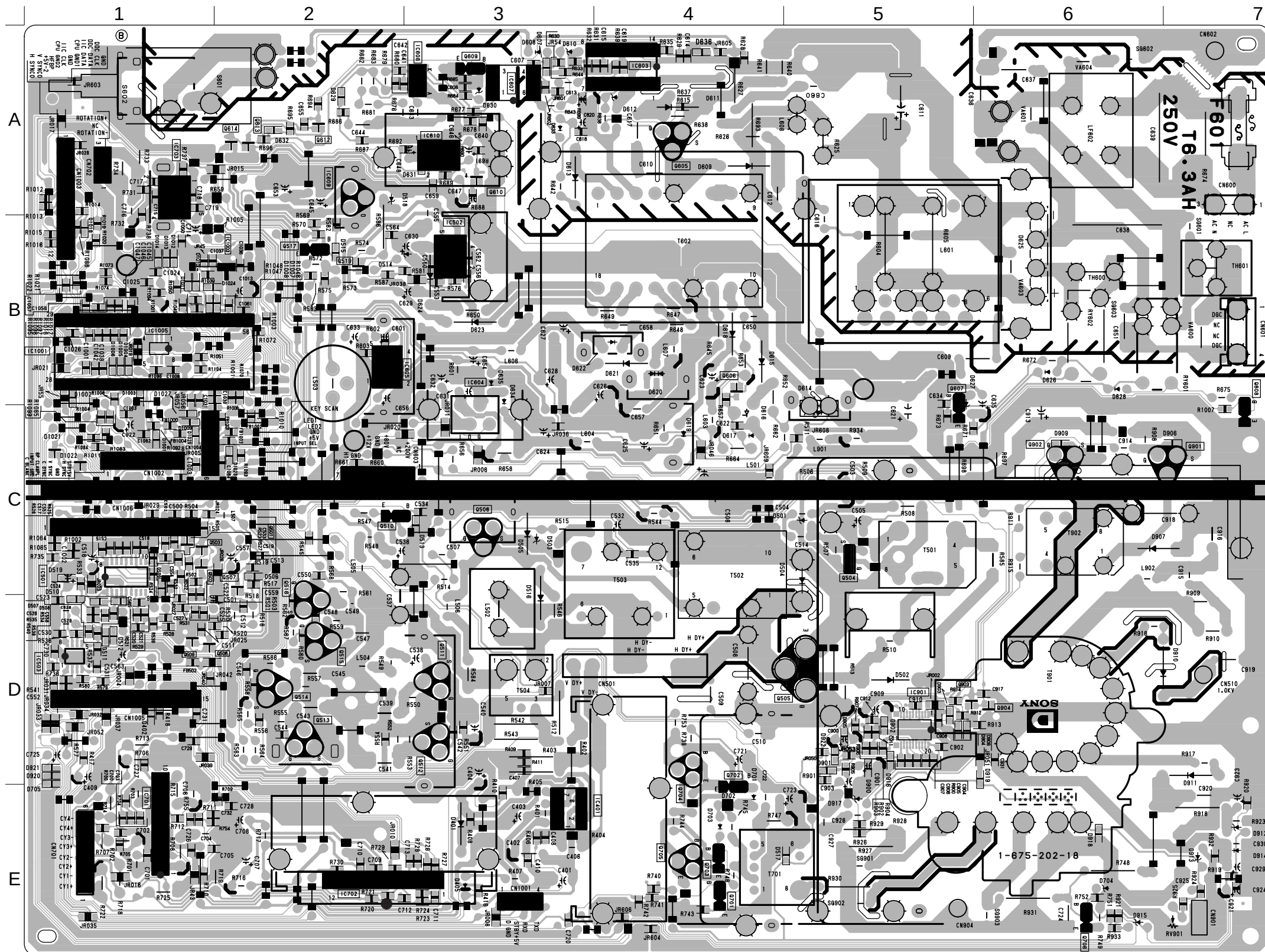
• D BOARD SEMICONDUCTOR LOCATION

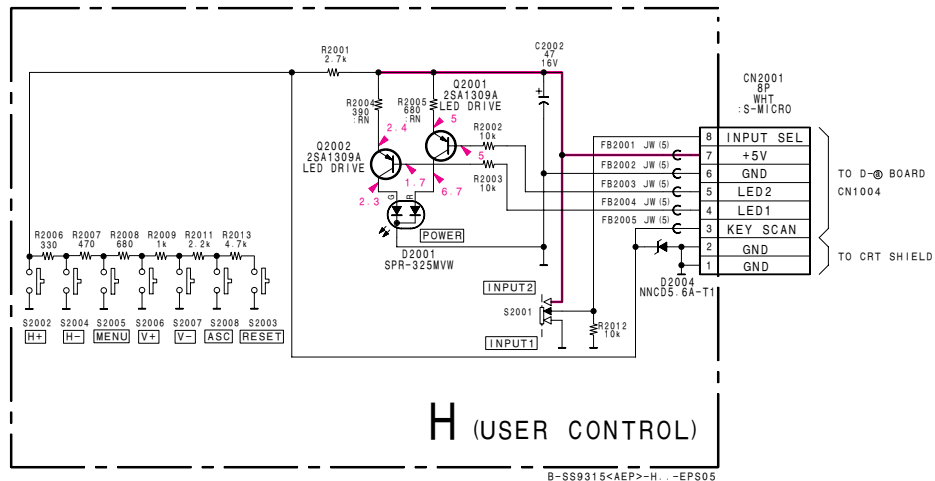
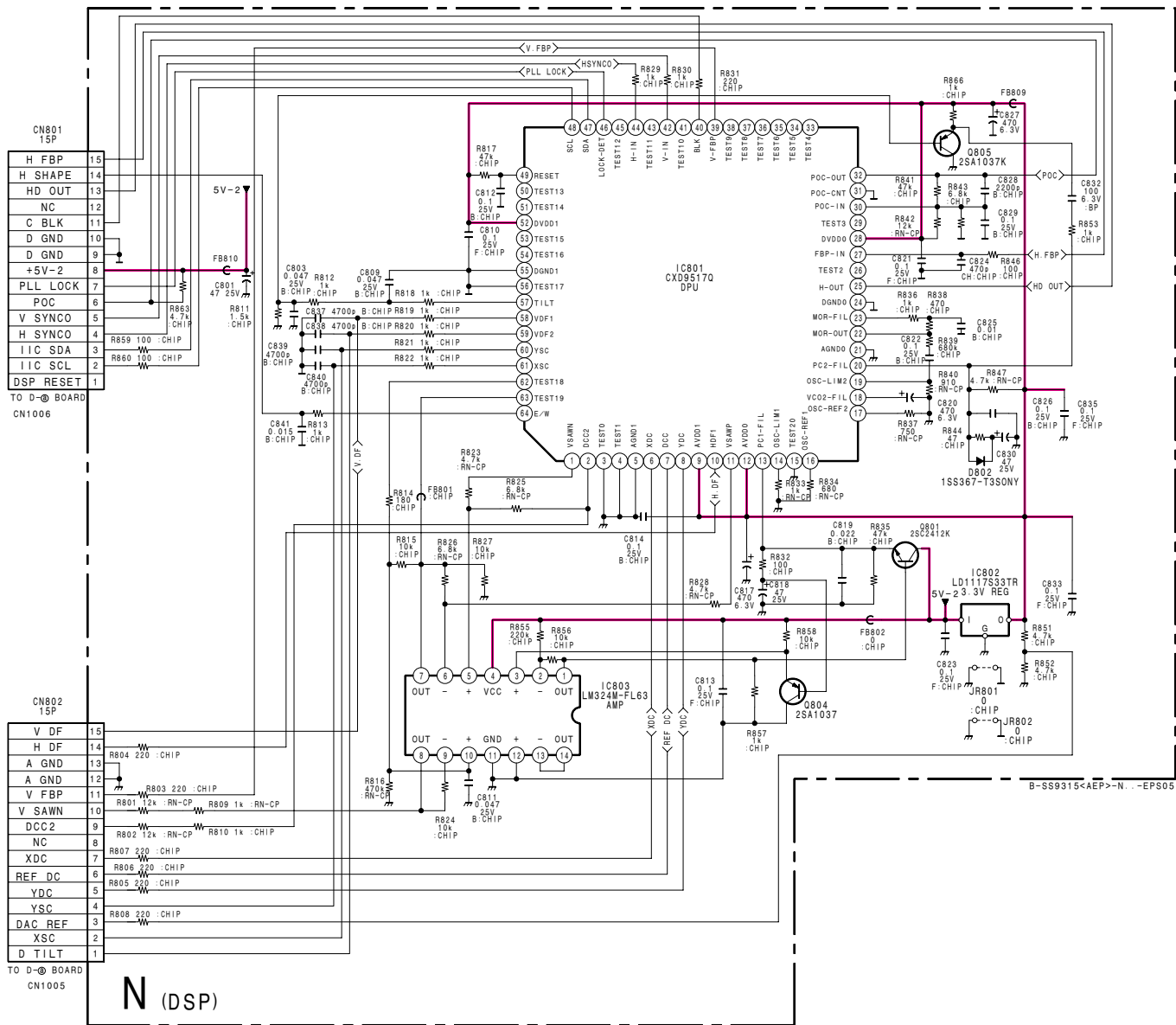
IC		Q706	E-6	—	D629	A-2	③
IC401	E-3	Q901	C-7	—	D630	A-3	—
IC501	C-1	Q902	C-6	—	D633	A-3	—
IC502	B-3	Q903	D-5	①	D634	C-3	—
IC503	D-1	Q904	D-6	①	D635	B-3	—
IC603	A-4	DIODE			D636	A-4	③
IC604	C-3				D701	E-4	—
IC605	B-2				D702	E-4	—
IC607	A-3				D703	E-4	—
IC608	A-3				D705	D-1	③
IC609	A-2	D401	E-3	—	D901	D-5	③
IC610	A-3	D402	D-1	③	D903	D-5	③
IC701	E-1	D405	E-3	—	D904	D-5	③
IC702	E-2	D501	C-5	—	D906	C-7	③
IC703	A-1	D502	D-5	—	D907	C-6	—
IC901	D-5	D503	C-3	—	D908	D-5	③
IC1001	B-1	D504	C-5	—	D909	C-6	③
IC1003	B-2	D505	C-3	—	D910	D-7	—
IC1005	B-1	D506	C-2	③	D911	D-7	—
TRANSISTOR		D507	D-1	③	D912	E-7	—
		D508	D-1	③	D913	E-7	—
Q501	C-1	D509	C-1	③	D914	E-7	—
	C-1	D510	D-1	③	D915	E-6	—
Q502	C-1	D511	D-1	③	D916	D-5	③
Q503	C-1	D512	D-1	③	D917	E-5	—
Q504	C-5	D514	B-3	③	D920	D-1	③
Q505	D-5	D515	B-2	③	D921	D-1	③
Q506	C-3	D516	D-3	③	D922	D-5	③
Q507	C-2	D517	E-5	③	D1003	B-1	③
Q508	D-1	D518	A-2	—	D1007	B-2	③
Q509	D-1	D519	C-1	③	D1008	B-1	③
Q510	C-2	D607	A-3	③	D1009	C-1	③
Q511	D-3	D608	A-3	—	D1010	B-1	③
Q512	D-3	D609	A-4	—	D1011	B-1	③
Q513	D-2	D610	A-3	—	D1012	B-1	③
Q514	D-2	D611	A-4	—	D1013	B-1	③
Q515	D-2	D612	A-4	—	D1014	B-1	③
Q516	D-2	D613	A-3	—	D1018	B-1	③
Q517	B-2	D614	B-5	—	D1021	C-1	③
Q519	B-2	D615	B-4	—	D1022	C-1	③
Q605	A-4	D616	C-4	—	D1024	B-1	③
Q606	B-4	D617	C-4	—	D1025	C-1	③
Q607	B-5	D618	B-4	—	D1027	C-1	③
Q608	C-7	D619	C-4	—	VARIABLE RESISTOR		RV901 E-7
Q609	A-3	D620	B-4	—			
Q701	E-4	D621	B-4	—	CRYSTAL		X1001 B-1
Q702	E-4	D622	B-4	—			
Q703	E-4	D623	B-3	—			
Q704	D-4	D624	B-3	—			
Q705	E-4	D625	B-6	—			
		D626	B-6	—			
		D627	B-5	—			
		D628	B-6	—			

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

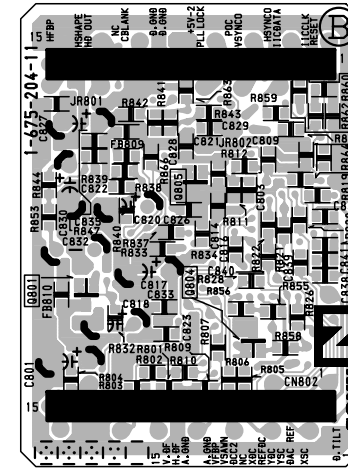
• Divided circuit diagram
One sheet of D board circuit diagram is divided into three sheets, each having the code D-Ⓢ to D-Ⓢ. For example, the destination (ab1) on the code D-Ⓢ sheet is connected to (ab1) on the D-Ⓢ sheet.



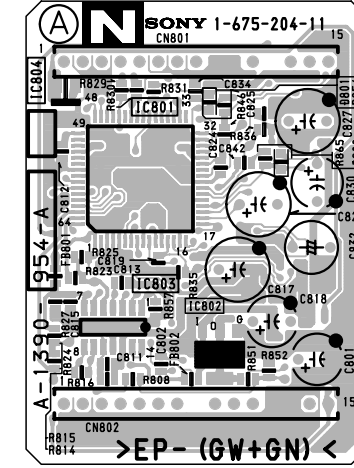




— N BOARD (Conductor Side) —



— N BOARD (Component Side) —



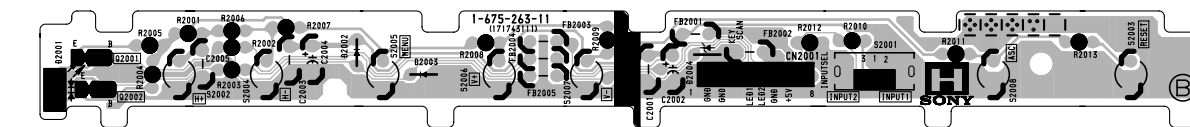
N BOARD

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

Ref.	*
Q801, Q804, Q805	①

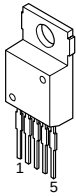
*: Refer to Terminal name of semiconductors
in silk screen printed circuit (see page 5-7)

— H BOARD —

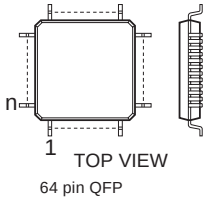


5-5. SEMICONDUCTORS

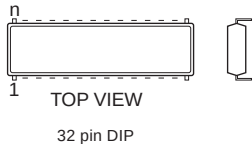
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BA05ST-V5
H8D2972
LA6500-FA



CXD9517Q



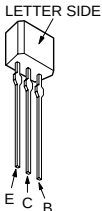
MC13289



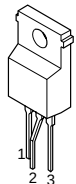
DTC144ESA-TP
PDT C114-EK-115
2SA1358-Y
2SC3421-Y



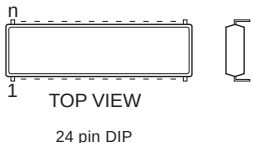
2SA1175-HFE
2SA1309A-QRSTA
2SC2459-GR-TPE4
2SC2784
2SC2784-E
2SC2785-HFE
2SC3311A-QRSTA
2SC3311A-RTA



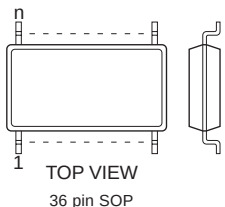
BA05T
LD1117S33TR



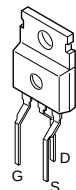
CXD9522S



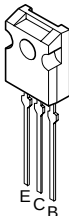
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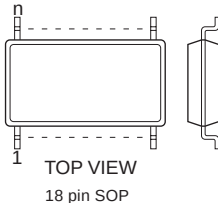
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FS5KM-18A-AY
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2SJ585LS-CC11
2SK3265LB2SONY



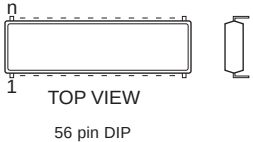
2SA1049-GR
2SA1049TP-GR



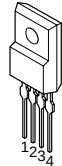
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BA9759F-E2



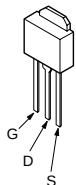
CXD9523S/JCN
ST92T175N1B1/JCJ



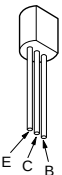
PQ12RD8S



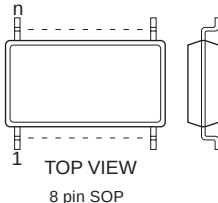
IRFU110
IRFU110A



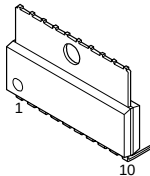
2SC2362K-G
2SC2362KG-AA



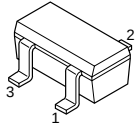
BR24C16F-E2
NJM2904M
NJM2904M(TE2)
NJM4558M-TE2
μPC4558G2
ST24FC21M6TR



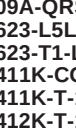
LA6510



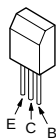
PST574CMT-T1



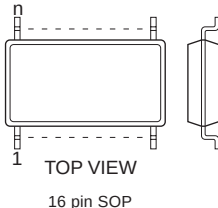
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2SA1036K-T-146-Q
2SA1037AK-T146-R
2SA1037K-T-146-QR
2SA1162-G
2SB709A-QRS-TX
2SC1623-L5L6
2SC1623-T1-L5L6
2SC2411K-CQ
2SC2411K-T-146-CQ
2SC2412K-T-146-QR



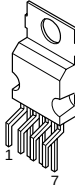
2SC3209LK
2SC3209LK-TP



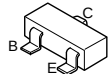
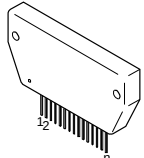
BU4053BCF-T2



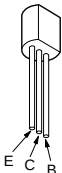
LA78040
LM2402T



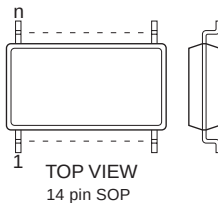
STK391-110



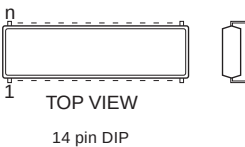
2SC3941A-Q(TA)



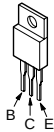
LM324M
LM324M-FL63
MC74HCT14AFEL



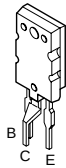
TEA1504/N2



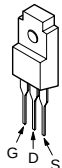
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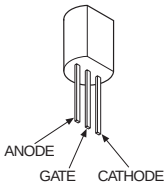
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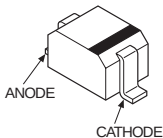
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2SK3155-01
2SK3157-01



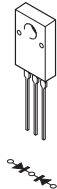
BT149G-412-OT359
TL1431CZ-AP



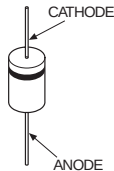
DTZ-TT11-15B
DTZ4.7C
MA111-(K8).S0
MA111-TX
RD12SB2
RD5.6S-B
UDZ-TE-17-12B
UDZ-TE-17-4.7B
UDZ-TE-17-5.6B



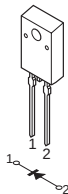
D10SC9M



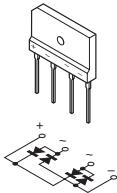
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MTZJ-T-77-5.6B
NNCD5.6A-T1
RGP02-17EL-6433
RGP02-17PKG23
RGP10DG23
UF4007G23
1SS133T-77
1SS367-T3SONY



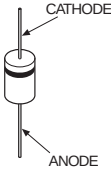
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PG124S15
YG911S2R



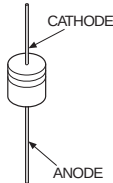
D4SB60L
D4SB60L-F



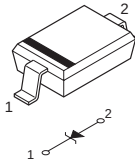
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ERA91-02TP1
RH-1A



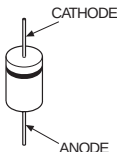
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MTZJ-T-77-15B
MTZJ-6.2B
MTZJ-T-77-4.7B
MTZJ-T-77-6.2
RD10ES-T1B2
RD10ESB2
RD15ES-B2
RD16ES-B3
RD16ES-T1B2
RD18ES-B2
RD18ESB
RD4.7ES-T1B2
RD4.7ESB2
RD5.1ES-B2
RD5.1ES-T1B2
RD5.6ESB2
RD8.2ES-B2
RD8.2ES-T1B2
RD9.1ES-T1B2
1SS119-25
1SS119-25TD



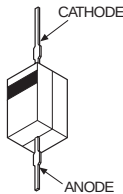
HSU83TRF



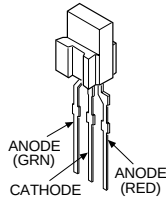
SB340



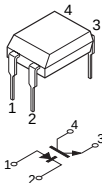
SB340L-6489



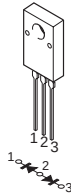
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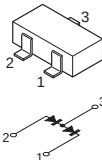
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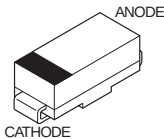
UDZ-TE-17-15B



1PS226-115



1SS376TE-17



EXPLODED VIEWS

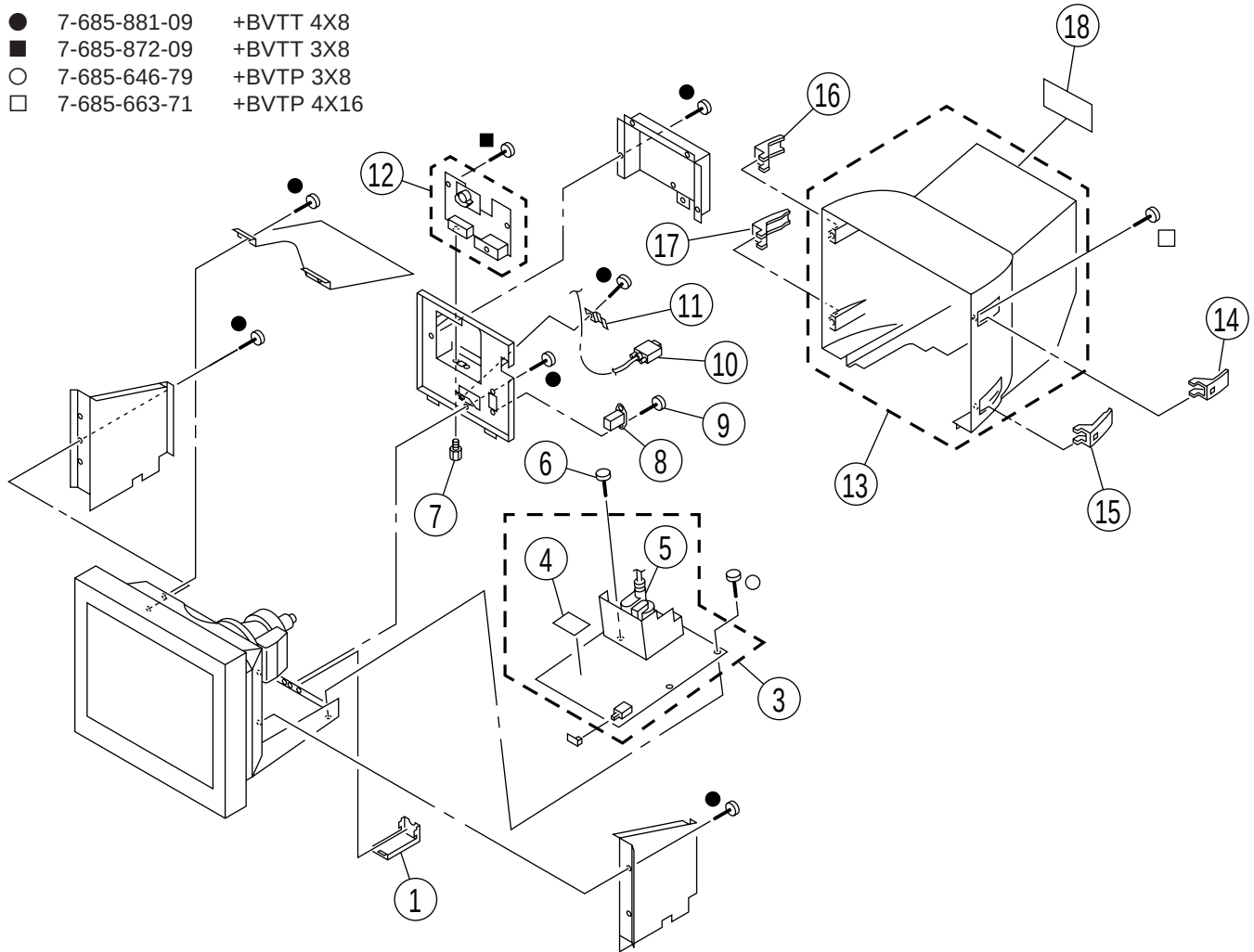
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.

- 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 ! marked are critical for safety.
Replace only with the part number specified.

6-1. CHASSIS

- 7-685-881-09 +BVTT 4X8
- 7-685-872-09 +BVTT 3X8
- 7-685-646-79 +BVTP 3X8
- 7-685-663-71 +BVTP 4X16



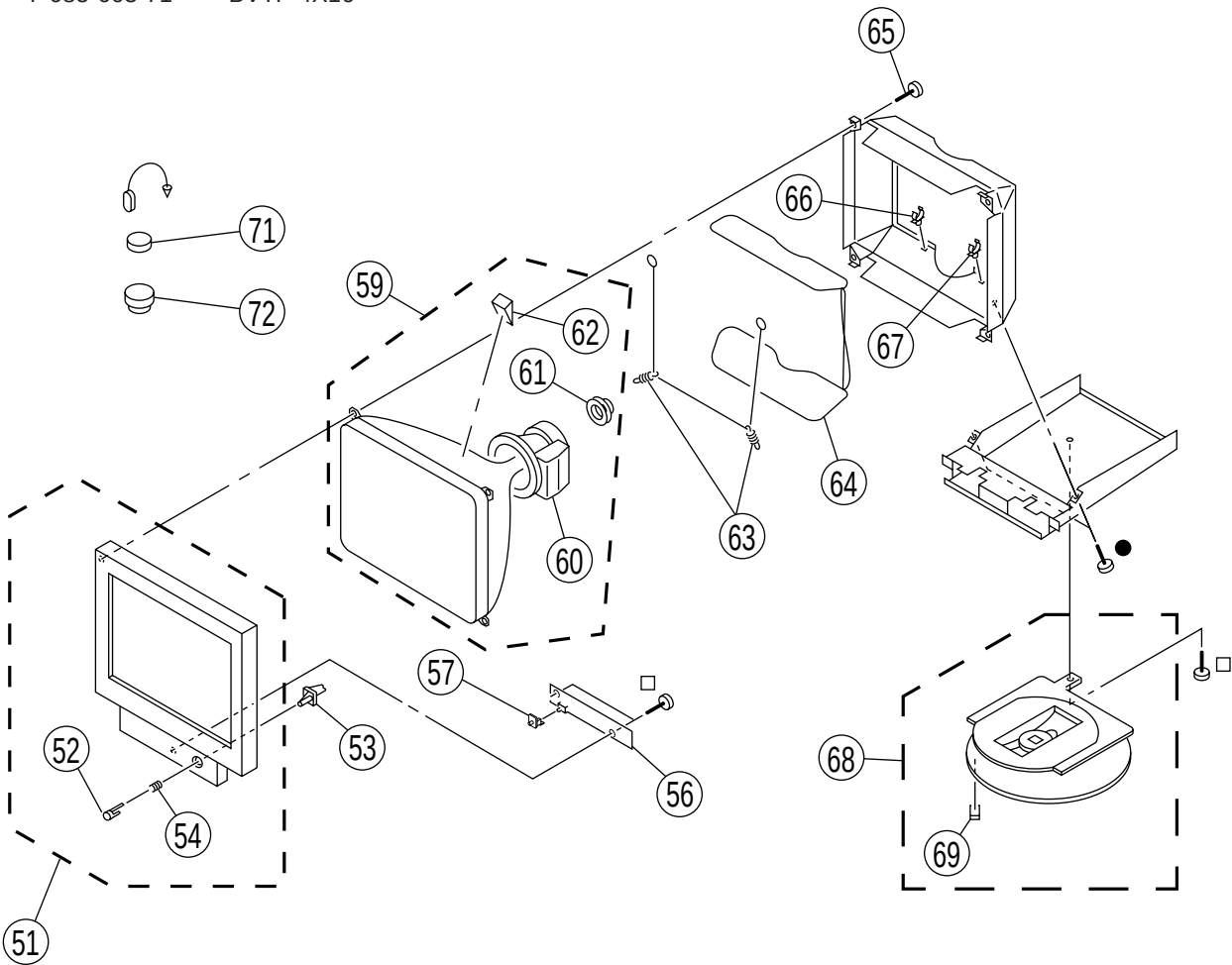
REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
1	4-072-290-01	COVER, CABLE (6551-T3N)		11	4-045-131-01	STOPPER, CABLE	
1	4-072-290-11	COVER, CABLE (6551-U3N)		12	8-933-422-00	A BOARD, COMPLETE	
3	8-933-463-00	D BOARD, COMPLETE	4, 5	13	X-4037-238-1	BUCKET ASSY (W), REAR (6551-T3N)	
4	8-933-426-00	N BOARD, COMPLETE		13	X-4037-241-1	BUCKET ASSY (B), REAR (6551-U3N)	
5	△ X-4560-174-1	TRANSFORMER ASSY, FLYBACK (NX4700//J1E4)		14	4-072-288-01	COVER (UR), SCREW (6551-T3N)	
6	4-062-115-01	SCREW +P 3.5X20 TYPE2		14	4-072-288-11	COVER (UR), SCREW (6551-U3N)	
7	4-070-122-01	SCREW (HD15)		15	4-072-287-01	COVER (LL), SCREW (6551-T3N)	
8	△ 1-251-382-31	INLET, AC 3P (WITH NOISE FILTER)		15	4-072-287-11	COVER (LL), SCREW (6551-U3N)	
9	4-052-345-01	SCREW, (3X8) (+K), TAPPING		16	4-072-289-01	COVER (UL), SCREW (6551-T3N)	
10	1-791-491-11	CABLE ASSY (15PD-SUB CONNECTOR) (6551-T3N)		16	4-072-289-11	COVER (UL), SCREW (6551-U3N)	
10	1-791-491-21	CABLE ASSY (15PD-SUB CONNECTOR) (6551-U3N)		17	4-072-286-01	COVER (LR), SCREW (6551-T3N)	
				17	4-072-286-11	COVER (LR), SCREW (6551-U3N)	
				18	* 4-073-923-81	LABEL, INFORMATION (6551-T3N)	
				18	* 4-073-923-91	LABEL, INFORMATION (6551-U3N)	

6-2. PICTURE TUBE

- 7-685-881-09

+BVTT 4X8
- 7-685-663-71

+BVTP 4X16



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-4037-242-1	BEZEL ASSY (W) (6551-T3N)	52, 54	62	2-162-100-21	SPACER, DEFLECTION YOKE	
51	X-4037-243-1	BEZEL ASSY (B) (6551-U3N)	52, 54	63	* 4-047-316-01	SPRING, EXTENSION	
52	4-072-982-01	BUTTON, POWER (6551-T3N)		64	△ 1-419-285-11	COIL, DEGAUSSING	
52	4-072-982-11	BUTTON, POWER (6551-U3N)		65	4-365-808-01	SCREW (5), TAPPING	
53	4-072-986-01	BAR, EXTENSION		66	4-071-175-01	HOLDER, DGC	
54	3-653-339-01	SPRING, COMPRESSION		67	4-041-021-02	HOLDER, DEGAUSSING COIL	
56	8-933-425-00	H BOARD, COMPLETE		68	X-4036-872-1	STAND ASSY (6551-T3N)	
57	4-072-987-01	COVER, SWITCH (6551-T3N)		68	X-4036-918-1	STAND ASSY (6551-U3N)	69
57	4-072-987-11	COVER, SWITCH (6551-U3N)		69	* 4-061-996-01	CUSHION	
59	△ 8-736-407-61	ITC ASSY (19TKC-R1)	60-62	71	1-452-032-00	MAGNET, DISC; 10mm φ	
60	△ 1-451-516-11	DEFLECTION YOKE (Y19TKK-K)		72	1-452-094-00	MAGNET, ROTATABLE DISC; 15mm φ	
61	△ 1-452-912-61	NECK ASSEMBLY (NA-2914)					

SECTION 7

ELECTRICAL PARTS LIST

**NOTE:**

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.

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.

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

RESISTORS

- All resistors are in ohms
- F : nonflammable

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
	* 8-933-422-00	A BOARD, COMPLETE *****		C049	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V
				C053	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V
				C054	1-104-341-11	MYLAR 0.1uF	10% 250V
	4-382-854-01	SCREW (M3X8), P, SW (+) (IC002)		C056	1-163-259-91	CERAMIC CHIP 220pF	5% 50V
				C059	1-164-346-11	CERAMIC CHIP 1uF	16V
	<CAPACITOR>			C060	1-104-664-11	ELECT 47uF	20% 25V
C001	1-162-318-11	CERAMIC 0.001uF	10% 500V	C061	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V
C002	1-162-318-11	CERAMIC 0.001uF	10% 500V	C063	1-126-964-11	ELECT 10uF	20% 50V
C003	1-163-259-91	CERAMIC CHIP 220pF	5% 50V	C064	1-104-664-11	ELECT 47uF	20% 25V
C007	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V	C065	1-104-664-11	ELECT 47uF	20% 25V
C009	1-126-964-11	ELECT 10uF	20% 50V	C066	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V
C010	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V	C067	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V
C011	1-106-220-00	MYLAR 0.1uF	10% 100V	C068	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V
C012	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V	C069	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V
C013	1-107-888-11	ELECT 47uF	20% 25V	C070	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C014	1-107-932-11	ELECT 47uF	20% 100V	C090	1-163-021-91	CERAMIC CHIP 0.01uF	10% 50V
C015	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V	C092	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V
C016	1-126-935-11	ELECT 470uF	20% 16V	C093	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V
C018	1-107-652-11	ELECT 10uF	20% 250V	C094	1-163-259-91	CERAMIC CHIP 220pF	5% 50V
C019	1-163-021-91	CERAMIC CHIP 0.01uF	10% 50V	C095	1-126-935-11	ELECT 470uF	20% 16V
C020	1-126-935-11	ELECT 470uF	20% 16V	C096	1-163-259-91	CERAMIC CHIP 220pF	5% 50V
C021	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V	C097	1-163-113-00	CERAMIC CHIP 68pF	5% 50V
C022	1-126-934-11	ELECT 220uF	20% 10V	C102	1-163-087-00	CERAMIC CHIP 4pF	0.25pF 50V
C027	1-163-021-91	CERAMIC CHIP 0.01uF	10% 50V	C104	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V
C028	1-104-664-11	ELECT 47uF	20% 25V	C105	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V
C029	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V	C106	1-117-450-11	MYLAR 0.47uF	10% 250V
C031	1-162-318-11	CERAMIC 0.001uF	10% 500V	C108	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V
C032	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V	C109	1-104-664-11	ELECT 47uF	20% 25V
C033	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V	C111	1-163-037-11	CERAMIC CHIP 0.022uF	10% 50V
C035	1-162-134-11	CERAMIC 470pF	10% 2KV	C112	1-163-227-11	CERAMIC CHIP 10pF	0.5pF 50V
C037	1-136-177-00	FILM 1uF	5% 50V	C119	1-163-021-91	CERAMIC CHIP 0.01uF	10% 50V
C038	1-163-021-91	CERAMIC CHIP 0.01uF	10% 50V	C120	1-126-933-11	ELECT 100uF	20% 16V
C039	1-165-319-11	CERAMIC CHIP 0.1uF	50V	C121	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V
C040	1-163-021-91	CERAMIC CHIP 0.01uF	10% 50V	C122	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V
C041	1-162-318-11	CERAMIC 1uF	16V	C123	1-136-189-00	MYLAR 0.1uF	10% 250V
C042	1-165-319-11	CERAMIC CHIP 0.1uF	50V	C130	1-164-489-11	CERAMIC CHIP 0.22uF	10% 16V
C043	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V	C152	1-126-933-11	ELECT 100uF	20% 16V
C045	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V	C204	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V
C046	1-164-346-11	CERAMIC CHIP 1uF	16V	C205	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V
C047	1-165-319-11	CERAMIC CHIP 0.1uF	50V	C206	1-117-450-11	MYLAR 0.47uF	10% 250V
C048	1-163-021-91	CERAMIC CHIP 0.01uF	10% 50V	C208	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V
				C211	1-163-037-11	CERAMIC CHIP 0.022uF	10% 50V
				C212	1-163-227-11	CERAMIC CHIP 10pF	0.5pF 50V



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C220	1-126-933-11	ELECT	100uF	20%	16V		
C221	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V		
C222	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V		
C223	1-104-341-11	MYLAR	0.1uF	10%	250V		
C230	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V		
C252	1-126-933-11	ELECT	100uF	20%	16V		
C304	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V		
C305	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V		
C306	1-117-450-11	MYLAR	0.47uF	10%	250V		
C308	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V		
C311	1-163-037-11	CERAMIC CHIP	0.022uF	10%	50V		
C312	1-163-227-11	CERAMIC CHIP	10pF	0.5pF	50V		
C319	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V		
C320	1-126-933-11	ELECT	100uF	20%	16V		
C321	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V		
C322	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V		
C323	1-104-341-11	MYLAR	0.1uF	10%	250V		
C330	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V		
C352	1-126-933-11	ELECT	100uF	20%	16V		
<CONNECTOR>							
CN301	1-764-101-11	PIN, CONNECTOR (PC BOARD)	2P				
CN302	1-695-915-11	TAB (CONTACT)					
CN303	1-695-915-11	TAB (CONTACT)					
CN305*	1-564-522-11	PLUG, CONNECTOR	7P				
CN306*	1-564-511-11	PLUG, CONNECTOR	8P				
CN307	1-793-183-11	CONNECTOR, D SUB	15P				
CN308	1-695-915-11	TAB (CONTACT)					
CN309*	1-564-511-11	PLUG, CONNECTOR	8P				
CN310*	1-564-507-11	PLUG, CONNECTOR	4P				
CN311*	1-564-507-11	PLUG, CONNECTOR	4P				
CN313*	1-564-512-11	PLUG, CONNECTOR	9P				
<DIODE>							
D002	8-719-109-89	ZENER DIODE	RD5.6ESB2				
D004	8-719-109-89	ZENER DIODE	RD5.6ESB2				
D005	8-719-062-51	DIODE	1PS226-115				
D007	8-719-109-89	ZENER DIODE	RD5.6ESB2				
D008	8-719-109-89	ZENER DIODE	RD5.6ESB2				
D010	8-719-109-89	ZENER DIODE	RD5.6ESB2				
D011	8-719-109-89	ZENER DIODE	RD5.6ESB2				
D012	8-719-062-51	DIODE	1PS226-115				
D014	8-719-911-19	DIODE	1SS119-25				
D016	8-719-109-89	ZENER DIODE	RD5.6ESB2				
D019	8-719-109-89	ZENER DIODE	RD5.6ESB2				
D023	8-719-921-54	DIODE	MTZJ-6.2B				
D024	8-719-921-54	DIODE	MTZJ-6.2B				
D025	8-719-921-54	DIODE	MTZJ-6.2B				
D026	8-719-911-19	DIODE	1SS119-25				
D101	8-719-062-51	DIODE	1PS226-115				
D104	8-719-052-12	DIODE	1SS376TE-17				
D105	8-719-052-12	DIODE	1SS376TE-17				
D106	8-719-052-12	DIODE	1SS376TE-17				
D108	8-719-062-51	DIODE	1PS226-115				
D111	8-719-062-51	DIODE	1PS226-115				
D201	8-719-062-51	DIODE	1PS226-115				
D204	8-719-052-12	DIODE	1SS376TE-17				
D205	8-719-052-12	DIODE	1SS376TE-17				
D206	8-719-052-12	DIODE	1SS376TE-17				
D208	8-719-062-51	DIODE	1PS226-115				
D211	8-719-062-51	DIODE	1PS226-115				
D301	8-719-062-51	DIODE	1PS226-115				
D304	8-719-052-12	DIODE	1SS376TE-17				
D305	8-719-052-12	DIODE	1SS376TE-17				
D306	8-719-052-12	DIODE	1SS376TE-17				
D308	8-719-062-51	DIODE	1PS226-115				
D311	8-719-062-51	DIODE	1PS226-115				
<FERRITE BEAD>							
FB001	1-412-911-31	FERRITE	1.1uH				
FB002	1-412-911-31	FERRITE	1.1uH				
FB004	1-412-911-31	FERRITE	1.1uH				
FB005	1-412-911-31	FERRITE	1.1uH				
FB009	1-414-231-22	INDUCTOR CHIP					
FB010	1-414-231-22	INDUCTOR CHIP					
FB012	1-414-231-22	INDUCTOR CHIP					
FB014	1-216-295-11	SHORT	0				
FB015	1-414-231-22	INDUCTOR CHIP					
FB016	1-414-231-22	INDUCTOR CHIP					
FB017	1-414-231-22	INDUCTOR CHIP					
FB018	1-414-231-22	INDUCTOR CHIP					
FB019	1-414-231-22	INDUCTOR CHIP					
FB020	1-414-231-22	INDUCTOR CHIP					
FB021	1-414-231-22	INDUCTOR CHIP					
FB022	1-216-295-11	SHORT	0				
FB023	1-216-295-11	SHORT	0				
FB024	1-412-911-31	FERRITE	1.1uH				
FB101	1-216-295-11	SHORT	0				
FB102	1-500-419-22	FERRITE					
FB103	1-500-419-22	FERRITE					
FB104	1-412-911-31	FERRITE	1.1uH				
FB105	1-500-419-22	FERRITE					
FB110	1-412-911-31	FERRITE	1.1uH				
FB201	1-216-295-11	SHORT	0				
FB202	1-500-419-22	FERRITE					
FB203	1-500-419-22	FERRITE					
FB205	1-500-419-22	FERRITE					
FB210	1-412-911-31	FERRITE	1.1uH				
FB301	1-216-295-11	SHORT	0				
FB302	1-500-419-22	FERRITE					
FB303	1-500-419-22	FERRITE					
FB305	1-500-419-22	FERRITE					
FB310	1-412-911-31	FERRITE	1.1uH				
<TERMINAL>							
GT001*	1-537-738-21	TERMINAL, EARTH					
GT002*	1-537-738-21	TERMINAL, EARTH					

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

6551-T3N/6551-U3N

A

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
<IC>				<TRANSISTOR>			
IC001	8-759-599-70	IC MC13289		Q001	8-729-032-61	TRANSISTOR 2SC5022-02	
IC002	8-759-591-40	IC LM2402T		Q002	8-729-216-22	TRANSISTOR 2SA1162-G	
IC003	8-759-639-50	IC CXD9522S		Q003	8-729-216-22	TRANSISTOR 2SA1162-G	
IC004	8-749-015-92	IC H8D2972		Q004	8-729-216-22	TRANSISTOR 2SA1162-G	
IC005	8-759-701-01	IC NJM2904M		Q005	8-729-216-22	TRANSISTOR 2SA1162-G	
IC006	8-759-233-66	IC TC74HCT04AFEL		Q006	8-729-216-22	TRANSISTOR 2SA1162-G	
IC007	8-759-661-55	IC ST24FC21M6TR					
IC008	8-759-541-25	IC M52758FP					
IC009	8-759-932-69	IC BU4053BCF-T2					
<JACK>				<RESISTOR>			
J001	△ 1-451-499-11	SOCKET, PICTURE TUBE		R004	1-216-037-00	RES-CHIP 330 5% 1/10W	
				R005	1-216-041-00	RES-CHIP 470 5% 1/10W	
				R006	1-216-025-11	RES-CHIP 100 5% 1/10W	
				R007	1-216-025-11	RES-CHIP 100 5% 1/10W	
				R008	1-216-025-11	RES-CHIP 100 5% 1/10W	
<CHIP CONDUCTOR>				R009	1-216-073-00	RES-CHIP 10K 5% 1/10W	
JR004	1-216-296-91	SHORT 0		R010	1-216-025-11	RES-CHIP 100 5% 1/10W	
JR005	1-216-295-11	SHORT 0		R011	1-216-057-00	RES-CHIP 2.2K 5% 1/10W	
JR006	1-216-296-91	SHORT 0		R012	1-216-057-00	RES-CHIP 2.2K 5% 1/10W	
JR007	1-216-296-91	SHORT 0		R013	1-216-025-11	RES-CHIP 100 5% 1/10W	
JR008	1-216-296-91	SHORT 0					
JR009	1-216-296-91	SHORT 0		R014	1-216-065-91	RES-CHIP 4.7K 5% 1/10W	
JR010	1-216-295-11	SHORT 0		R015	1-216-057-00	RES-CHIP 2.2K 5% 1/10W	
JR011	1-216-295-11	SHORT 0		R016	1-216-057-00	RES-CHIP 2.2K 5% 1/10W	
JR012	1-216-296-91	SHORT 0		R017	1-216-025-11	RES-CHIP 100 5% 1/10W	
JR013	1-216-295-11	SHORT 0		R018	1-216-025-11	RES-CHIP 100 5% 1/10W	
JR014	1-216-295-11	SHORT 0					
JR015	1-216-295-11	SHORT 0		R020	1-216-017-91	RES-CHIP 47 5% 1/10W	
JR016	1-216-296-91	SHORT 0		R021	1-216-017-91	RES-CHIP 47 5% 1/10W	
JR017	1-216-296-91	SHORT 0		R022	1-216-025-11	RES-CHIP 100 5% 1/10W	
JR020	1-216-296-91	SHORT 0		R023	1-216-049-11	RES-CHIP 1K 5% 1/10W	
JR021	1-216-296-91	SHORT 0		R024	1-216-061-00	RES-CHIP 3.3K 5% 1/10W	
JR022	1-216-296-91	SHORT 0					
JR023	1-216-296-91	SHORT 0		R025	1-216-061-00	RES-CHIP 3.3K 5% 1/10W	
JR024	1-216-296-91	SHORT 0		R026	1-216-295-11	SHORT 0	
JR025	1-216-295-11	SHORT 0		R029	1-216-097-11	RES-CHIP 100K 5% 1/10W	
JR026	1-216-295-11	SHORT 0		R030	1-216-025-11	RES-CHIP 100 5% 1/10W	
JR027	1-216-295-11	SHORT 0		R031	1-216-049-11	RES-CHIP 1K 5% 1/10W	
JR028	1-216-295-11	SHORT 0					
JR029	1-216-296-91	SHORT 0		R032	1-216-025-11	RES-CHIP 100 5% 1/10W	
JR030	1-216-295-11	SHORT 0		R033	1-216-057-00	RES-CHIP 2.2K 5% 1/10W	
JR031	1-216-296-91	SHORT 0		R034	1-216-295-11	SHORT 0	
JR032	1-216-295-11	SHORT 0		R038	1-216-017-91	RES-CHIP 47 5% 1/10W	
JR033	1-216-296-91	SHORT 0		R039	1-216-017-91	RES-CHIP 47 5% 1/10W	
JR034	1-216-296-91	SHORT 0					
				R040	1-216-129-00	RES-CHIP 2.2M 5% 1/10W	
				R044	1-216-073-00	RES-CHIP 10K 5% 1/10W	
				R045	1-216-057-00	RES-CHIP 2.2K 5% 1/10W	
				R047	1-216-073-00	RES-CHIP 10K 5% 1/10W	
				R048	1-219-398-51	METAL 2.2M 5% 1W	
				R049	1-216-093-91	RES-CHIP 68K 5% 1/10W	
				R050	1-216-121-11	RES-CHIP 1M 5% 1/10W	
				R051	1-216-025-11	RES-CHIP 100 5% 1/10W	
				R053	1-219-621-91	METAL 22M 10% 1/4W	
				R054	1-216-073-00	RES-CHIP 10K 5% 1/10W	
				R055	1-216-025-11	RES-CHIP 100 5% 1/10W	
				R060	1-414-231-22	INDUCTOR CHIP	
				R064	1-219-749-91	CARBON 10K 5% 1/2W	
				R077	1-216-077-91	RES-CHIP 15K 5% 1/10W	
				R078	1-216-089-11	RES-CHIP 47K 5% 1/10W	
<COIL>							
L004	1-412-529-11	INDUCTOR 22uH					
L005	1-412-537-31	INDUCTOR 100uH					
L006	1-412-541-41	INDUCTOR 220uH					
L007	1-408-615-31	INDUCTOR 100uH					



REF.NO.	PART NO.	DESCRIPTION	REMARK			REF.NO.	PART NO.	DESCRIPTION	REMARK		
R079	1-216-089-11	RES-CHIP	47K	5%	1/10W	R251	1-219-742-11	CARBON	47	5%	1/2W
R080	1-216-049-11	RES-CHIP	1K	5%	1/10W	R261	1-215-395-00	METAL	82	1%	1/4W
R081	1-216-049-11	RES-CHIP	1K	5%	1/10W	R301	1-215-395-00	METAL	82	1%	1/4W
R082	1-216-089-11	RES-CHIP	47K	5%	1/10W	R304	1-216-009-91	RES-CHIP	22	5%	1/10W
R083	1-216-089-11	RES-CHIP	47K	5%	1/10W						
						R306	1-216-071-00	RES-CHIP	8.2K	5%	1/10W
R085	1-216-049-11	RES-CHIP	1K	5%	1/10W	R307	1-216-675-91	METAL CHIP	10K	0.5%	1/10W
R086	1-216-041-00	RES-CHIP	470	5%	1/10W	R308	1-216-049-11	RES-CHIP	1K	5%	1/10W
R087	1-216-097-11	RES-CHIP	100K	5%	1/10W	R309	1-216-041-00	RES-CHIP	470	5%	1/10W
R088	1-216-089-11	RES-CHIP	47K	5%	1/10W	R310	1-216-071-00	RES-CHIP	8.2K	5%	1/10W
R090	1-216-049-11	RES-CHIP	1K	5%	1/10W						
						R311	1-249-403-11	CARBON	68	5%	1/4W F
R092	1-216-077-91	RES-CHIP	15K	5%	1/10W	R315	1-216-107-00	RES-CHIP	270K	5%	1/10W
R093	1-216-041-00	RES-CHIP	470	5%	1/10W	R317	1-216-025-11	RES-CHIP	100	5%	1/10W
R094	1-216-097-11	RES-CHIP	100K	5%	1/10W	R318	1-216-013-00	RES-CHIP	33	5%	1/10W
R095	1-216-121-11	RES-CHIP	1M	5%	1/10W	R319	1-216-113-00	RES-CHIP	470K	5%	1/10W
R096	1-216-033-00	RES-CHIP	220	5%	1/10W						
						R320	1-216-113-00	RES-CHIP	470K	5%	1/10W
R097	1-218-179-11	RES-CHIP	10M	5%	1/10W	R322	1-216-113-00	RES-CHIP	470K	5%	1/10W
R098	1-218-179-11	RES-CHIP	10M	5%	1/10W	R323	1-216-037-00	RES-CHIP	330	5%	1/10W
R099	1-208-291-11	RES-CHIP	4.7M	5%	1/10W	R330	1-216-023-00	RES-CHIP	82	5%	1/10W
R101	1-215-395-00	METAL	82	1%	1/4W	R333	1-216-019-00	RES-CHIP	56	5%	1/10W
R104	1-216-009-91	RES-CHIP	22	5%	1/10W						
						R340	1-216-019-00	RES-CHIP	56	5%	1/10W
R106	1-216-071-00	RES-CHIP	8.2K	5%	1/10W	R351	1-219-742-11	CARBON	47	5%	1/2W
R107	1-216-675-91	METAL CHIP	10K	0.5%	1/10W	R361	1-215-395-00	METAL	82	1%	1/4W
R108	1-216-049-11	RES-CHIP	1K	5%	1/10W						
R109	1-216-041-00	RES-CHIP	470	5%	1/10W						
R110	1-216-071-00	RES-CHIP	8.2K	5%	1/10W						
R111	1-249-403-11	CARBON	68	5%	1/4W F	SG001	1-519-422-11	GAP, SPARK			
R115	1-216-107-00	RES-CHIP	270K	5%	1/10W	SG002	1-576-354-21	GAP, DISCHARGE			
R117	1-216-025-11	RES-CHIP	100	5%	1/10W	SG101	1-576-354-21	GAP, DISCHARGE			
R118	1-216-021-00	RES-CHIP	68	5%	1/10W	SG201	1-576-354-21	GAP, DISCHARGE			
R119	1-216-113-00	RES-CHIP	470K	5%	1/10W	SG301	1-576-354-21	GAP, DISCHARGE			
R120	1-216-113-00	RES-CHIP	470K	5%	1/10W						
R122	1-216-113-00	RES-CHIP	470K	5%	1/10W						
R123	1-216-037-00	RES-CHIP	330	5%	1/10W						
R130	1-216-019-00	RES-CHIP	56	5%	1/10W						

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

6551-T3N/6551-U3N



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C407	1-164-182-11	CERAMIC CHIP 0.0033uF	10% 50V	C557	1-126-935-11	ELECT 470uF	20% 16V
C409	1-126-968-11	ELECT 100uF	20% 50V	C558	1-163-007-11	CERAMIC CHIP 680pF	10% 50V
C500	1-163-259-91	CERAMIC CHIP 220pF	5% 50V	C559	1-163-038-11	CERAMIC CHIP 0.1uF	25V
C501	1-163-038-91	CERAMIC CHIP 0.1uF	25V	C560	1-109-982-11	CERAMIC CHIP 1uF	10% 10V
C503	1-137-150-11	MYLAR 0.01uF	5% 50V	C562	1-163-001-11	CERAMIC CHIP 220pF	10% 50V
C504	1-137-368-11	MYLAR 0.0047uF	5% 50V	C563	1-113-340-11	ELECT 47uF	20% 25V
C505	1-128-729-91	ELECT 330uF	20% 25V	C564	1-115-339-11	CERAMIC CHIP 0.1uF	10% 50V
C506	1-127-810-51	ELECT MELF 22uF	20% 250V	C565	1-163-259-91	CERAMIC CHIP 220pF	5% 50V
C507	1-136-187-11	MYLAR 0.047uF	10% 250V	C607	1-109-982-11	CERAMIC CHIP 1uF	10% 10V
C508	1-117-959-11	FILM 4700pF	3% 1.8KV	C608	1-115-339-11	CERAMIC CHIP 0.1uF	10% 50V
C509	1-107-444-11	CERAMIC 100pF	5% 2KV	C609	1-113-912-11	CERAMIC 0.0047uF	20% 250V
C510	1-136-684-51	MYLAR 0.0022uF	10% 100V	C610	1-117-769-91	CERAMIC 680pF	10% 2KV
C511	1-163-038-11	CERAMIC CHIP 0.1uF	25V	C611	1-117-753-11	ELECT(BLOCK) 470uF	20% 450V
C512	1-102-114-00	CERAMIC 470pF	10% 50V	C612	1-131-985-21	FILM 0.033uF	5% 250V
C513	1-163-038-11	CERAMIC CHIP 0.1uF	25V	C613	1-104-664-11	ELECT 47uF	20% 25V
C514	1-137-368-11	MYLAR 0.0047uF	5% 50V	C614	1-163-021-91	CERAMIC CHIP 0.01uF	10% 50V
C515	1-163-021-91	CERAMIC CHIP 0.01uF	10% 50V	C615	1-163-037-11	CERAMIC CHIP 0.022uF	10% 50V
C516	1-126-382-11	ELECT 100uF	20% 16V	C616	1-102-228-00	CERAMIC 470pF	10% 500V
C517	1-163-263-11	CERAMIC CHIP 330pF	5% 50V	C617	1-117-769-91	CERAMIC 680pF	10% 2KV
C518	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V	C618	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V
C520	1-163-024-00	CERAMIC CHIP 0.018uF	10% 50V	C619	1-163-019-00	CERAMIC CHIP 0.0068uF	10% 50V
C521	1-163-037-11	CERAMIC CHIP 0.022uF	10% 50V	C620	1-128-551-11	ELECT 22uF	20% 25V
C522	1-126-965-11	ELECT 22uF	20% 50V	C621	1-131-723-21	ELECT(BLOCK) 220uF	20% 250V
C523	1-163-021-91	CERAMIC CHIP 0.01uF	10% 50V	C622	1-164-161-11	CERAMIC CHIP 0.0022uF	10% 50V
C524	1-126-382-11	ELECT 100uF	20% 16V	C623	1-107-933-11	ELECT 100uF	20% 100V
C525	1-163-038-91	CERAMIC CHIP 0.1uF	25V	C624	1-104-666-11	ELECT 220uF	20% 25V
C527	1-163-019-00	CERAMIC CHIP 0.0068uF	10% 50V	C625	1-115-789-11	ELECT 0.001F	20% 25V
C528	1-130-489-00	MYLAR 0.033uF	5% 50V	C626	1-115-791-11	ELECT 0.0018F	20% 25V
C529	1-137-150-11	MYLAR 0.01uF	5% 50V	C627	1-115-789-11	ELECT 0.001F	20% 25V
C530	1-163-038-11	CERAMIC CHIP 0.1uF	25V	C628	1-107-890-11	ELECT 2200uF	20% 25V
C531	1-163-038-11	CERAMIC CHIP 0.1uF	25V	C629	1-126-935-11	ELECT 470uF	20% 16V
C532	1-107-906-11	ELECT 10uF	20% 50V	C630	1-126-935-11	ELECT 470uF	20% 16V
C533	1-163-037-11	CERAMIC CHIP 0.022uF	10% 50V	C631	1-128-526-11	ELECT 100uF	20% 25V
C534	1-163-038-11	CERAMIC CHIP 0.1uF	25V	C632	1-104-653-11	ELECT 220uF	20% 16V
C535	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V	C633	1-126-934-11	ELECT 220uF	20% 10V
C536	1-107-665-11	ELECT 0.47uF	20% 400V	C634	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V
C537	1-107-770-11	FILM 0.16uF	3% 400V	C635	1-126-965-11	ELECT 22uF	20% 50V
C538	1-107-651-11	ELECT 4.7uF	20% 250V	C636 Δ	1-113-900-51	CERAMIC 470pF	10% 250V
C539	1-117-673-11	FILM 1.5uF	5% 250V	C637 Δ	1-113-900-51	CERAMIC 470pF	10% 250V
C540	1-107-888-11	ELECT 47uF	20% 25V	C638 Δ	1-104-708-51	MYLAR 0.47uF	20% 250V
C541	1-109-844-11	FILM 0.68uF	5% 250V	C640	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V
C542	1-163-021-91	CERAMIC CHIP 0.01uF	10% 50V	C641	1-163-007-11	CERAMIC CHIP 680pF	10% 50V
C543	1-117-665-11	FILM 0.33uF	5% 250V	C642	1-163-017-00	CERAMIC CHIP 0.0047uF	10% 50V
C544	1-163-021-91	CERAMIC CHIP 0.01uF	10% 50V	C644	1-136-187-11	MYLAR 0.047uF	10% 250V
C545	1-117-661-71	FILM 0.15uF	5% 250V	C645	1-126-934-11	ELECT 220uF	20% 16V
C546	1-163-021-91	CERAMIC CHIP 0.01uF	10% 50V	C646	1-107-882-91	ELECT 100uF	20% 16V
C547	1-119-860-11	FILM 0.082uF	5% 250V	C647	1-107-882-91	ELECT 100uF	20% 16V
C548	1-163-021-91	CERAMIC CHIP 0.01uF	10% 50V	C648	1-128-744-91	ELECT 10uF	20% 50V
C549	1-117-953-91	FILM 0.033uF	5% 400V	C650	1-162-117-00	CERAMIC 100pF	10% 500V
C550	1-163-021-91	CERAMIC CHIP 0.01uF	10% 50V	C653	1-126-942-61	ELECT 1000uF	20% 25V
C551	1-163-251-11	CERAMIC CHIP 100pF	5% 50V	C654	1-104-666-11	ELECT 220uF	20% 25V
C553	1-163-017-00	CERAMIC CHIP 0.0047uF	10% 50V	C656	1-104-664-11	ELECT 47uF	20% 25V
C554	1-163-259-91	CERAMIC CHIP 220pF	5% 50V	C657	1-162-318-11	CERAMIC 0.001uF	10% 500V
C555	1-137-194-81	MYLAR 0.47uF	5% 50V	C658	1-162-815-11	CERAMIC 47pF	5% 500V
C556	1-163-021-91	CERAMIC CHIP 0.01uF	10% 50V	C659	1-109-982-11	CERAMIC CHIP 1uF	10% 10V
				C660	1-136-189-00	MYLAR 0.1uF	10% 250V



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C701	1-163-003-11	CERAMIC CHIP 330pF	10% 50V	C930	1-137-150-11	MYLAR 0.01uF	5% 50V
C703	1-163-003-11	CERAMIC CHIP 330pF	10% 50V	C931	1-164-005-11	CERAMIC CHIP 0.47uF	25V
C704	1-130-495-00	MYLAR 0.1uF	5% 50V	C1001	1-163-251-11	CERAMIC CHIP 100pF	5% 50V
C705	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V				
C706	1-130-495-00	MYLAR 0.1uF	5% 50V	C1006	1-163-038-91	CERAMIC CHIP 0.1uF	25V
C707	1-126-942-61	ELECT 1000uF	20% 25V	C1013	1-126-926-11	ELECT 1000uF	20% 10V
C708	1-126-942-61	ELECT 1000uF	20% 25V	C1024	1-163-227-11	CERAMIC CHIP 10pF	0.5pF 50V
C711	1-163-113-00	CERAMIC CHIP 68pF	5% 50V	C1025	1-163-227-11	CERAMIC CHIP 10pF	0.5pF 50V
C712	1-163-113-00	CERAMIC CHIP 68pF	5% 50V	C1026	1-163-038-11	CERAMIC CHIP 0.1uF	25V
C713	1-163-021-91	CERAMIC CHIP 0.01uF	10% 50V	C1030	1-164-222-11	CERAMIC CHIP 0.22uF	25V
C714	1-126-960-11	ELECT 1uF	20% 50V	C1031	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V
C716	1-136-177-00	MYLAR 1uF	5% 50V	C1036	1-163-038-11	CERAMIC CHIP 0.1uF	25V
C717	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V	C1037	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V
C718	1-163-038-11	CERAMIC CHIP 0.1uF	25V	C1038	1-163-021-91	CERAMIC CHIP 0.01uF	10% 50V
C719	1-163-038-11	CERAMIC CHIP 0.1uF	25V	C1042	1-163-243-11	CERAMIC CHIP 47pF	5% 50V
C720	1-163-021-91	CERAMIC CHIP 0.01uF	10% 50V	C1046	1-163-243-11	CERAMIC CHIP 47pF	5% 50V
C721	1-128-562-11	ELECT 47uF	20% 100V	C1047	1-163-243-11	CERAMIC CHIP 47pF	5% 50V
C723	1-128-561-91	ELECT 33uF	20% 100V	C1050	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V
C724	1-162-134-11	CERAMIC 470pF	10% 2KV	C1056	1-163-243-11	CERAMIC CHIP 47pF	5% 50V
C725	1-126-965-11	ELECT 22uF	20% 50V	C1057	1-163-243-11	CERAMIC CHIP 47pF	5% 50V
C726	1-163-038-11	CERAMIC CHIP 0.1uF	25V	C1061	1-163-038-91	CERAMIC CHIP 0.1uF	25V
C727	1-163-038-11	CERAMIC CHIP 0.1uF	25V	C1062	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V
C728	1-163-017-00	CERAMIC CHIP 0.0047uF	10% 50V	C1063	1-115-339-11	CERAMIC CHIP 0.1uF	10% 50V
C729	1-163-017-00	CERAMIC CHIP 0.0047uF	10% 50V	C1064	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V
C730	1-163-017-00	CERAMIC CHIP 0.0047uF	10% 50V	<CONNECTOR>			
C731	1-163-017-00	CERAMIC CHIP 0.0047uF	10% 50V	CN501*	1-580-798-11	CONNECTOR PIN (DY)	6P
C732	1-163-021-91	CERAMIC CHIP 0.01uF	10% 50V	CN600*	1-691-960-11	PIN, CONNECTOR (PC BOARD)	3P
C900	1-128-744-91	ELECT 10uF	20% 50V	CN601*	1-580-689-11	PIN, CONNECTOR (PC BOARD)	4P
C901	1-104-665-11	ELECT 100uF	20% 25V	CN603*	1-564-510-11	PLUG, CONNECTOR	7P
C902	1-163-021-91	CERAMIC CHIP 0.01uF	10% 50V	CN701*	1-564-511-11	PLUG, CONNECTOR	8P
C903	1-107-904-11	ELECT 3.3uF	20% 50V	CN702*	1-564-506-11	PLUG, CONNECTOR	3P
C904	1-115-339-11	CERAMIC CHIP 0.1uF	10% 50V	CN901	1-695-915-11	TAB (CONTACT)	
C905	1-163-133-00	CERAMIC CHIP 470pF	5% 50V	CN1001*	1-508-879-11	BASE POST	
C906	1-163-251-11	CERAMIC CHIP 100pF	5% 50V	CN1002*	1-564-511-11	PLUG, CONNECTOR	8P
C907	1-163-275-11	CERAMIC CHIP 0.001uF	5% 50V	CN1003*	1-564-515-11	PLUG, CONNECTOR	12P
C908	1-164-505-11	CERAMIC CHIP 2.2uF	16V				
C909	1-104-665-11	ELECT 100uF	20% 25V	CN1004*	1-564-509-11	PLUG, CONNECTOR	6P
C910	1-163-259-91	CERAMIC CHIP 220pF	5% 50V	CN1005	1-793-585-11	PIN, CONNECTOR (PC BOARD)	15P
C911	1-163-243-11	CERAMIC CHIP 47pF	5% 50V	CN1006	1-793-586-11	PIN, CONNECTOR (PC BOARD)	15P
C912	1-163-021-91	CERAMIC CHIP 0.01uF	10% 50V	<DIODE>			
C913	1-119-748-11	ELECT 33uF	20% 400V	D401	8-719-979-58	DIODE EGP10D	
C914	1-136-187-11	MYLAR 0.047uF	10% 250V	D402	8-719-158-15	ZENER DIODE RD5.6SB	
C915	1-137-367-11	MYLAR 0.0033uF	5% 50V	D405	8-719-991-33	DIODE 1SS133T-77	
C916	1-117-665-11	FILM 0.33uF	5% 250V	D501	8-719-110-47	ZENER DIODE RD18ESB	
C917	1-163-038-91	CERAMIC CHIP 0.1uF	25V	D502	8-719-975-77	DIODE SB340	
C918	1-117-626-11	FILM 2000pF	3% 1.2KV	D503	8-719-110-47	ZENER DIODE RD18ESB	
C919	1-115-349-51	CERAMIC 0.01uF	2KV	D504	8-719-061-21	DIODE FMQ-G5FMS	
C920	1-115-349-51	CERAMIC 0.01uF	2KV	D505	8-719-052-86	DIODE D2L40-TA	
C921	1-163-038-91	CERAMIC CHIP 0.1uF	25V	D506	8-719-976-96	ZENER DIODE DTZ4.7C	
C922	1-126-963-11	ELECT 4.7uF	20% 50V	D507	8-719-073-01	DIODE MA111-(K8).S0	
C923	1-126-964-11	ELECT 10uF	20% 50V	D508	8-719-073-01	DIODE MA111-(K8).S0	
C924	1-104-665-11	ELECT 100uF	20% 25V	D509	8-719-073-01	DIODE MA111-(K8).S0	
C925	1-137-150-11	MYLAR 0.01uF	5% 50V	D510	8-719-073-01	DIODE MA111-(K8).S0	
C926	1-106-220-00	MYLAR 0.1uF	10% 100V	D511	8-719-073-01	DIODE MA111-(K8).S0	
C927	1-106-351-00	MYLAR 0.0022uF	20% 200V	D512	8-719-073-01	DIODE MA111-(K8).S0	
C929	1-126-965-11	ELECT 22uF	20% 50V				

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

6551-T3N/6551-U3N



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
D514	8-719-109-81	ZENER DIODE RD4.7ESB2		D1002	1-216-295-11	SHORT 0	
D515	8-719-073-01	DIODE MA111-(K8).S0		D1003	1-218-772-11	METAL CHIP 680K	0.5% 1/10W
D516	8-719-951-30	DIODE ERA91-02		D1007	8-719-158-15	ZENER DIODE RD5.6SB	
D517	8-719-978-65	ZENER DIODE DTZ-TT11-15B		D1008	8-719-158-15	ZENER DIODE RD5.6SB	
D518	8-719-110-17	ZENER DIODE RD10ESB2		D1009	8-719-158-15	ZENER DIODE RD5.6SB	
D519	8-719-976-96	ZENER DIODE DTZ4.7C		D1010	8-719-158-15	ZENER DIODE RD5.6SB	
D607	8-719-073-01	DIODE MA111-(K8).S0		D1011	8-719-158-15	ZENER DIODE RD5.6SB	
D608	8-719-991-33	DIODE 1SS133T-77		D1012	8-719-158-15	ZENER DIODE RD5.6SB	
D609	8-719-053-19	DIODE UF4007G23		D1013	8-719-158-15	ZENER DIODE RD5.6SB	
D610	8-719-921-40	DIODE MTZJ-4.7C		D1014	8-719-158-15	ZENER DIODE RD5.6SB	
D611	8-719-053-19	DIODE UF4007G23		D1018	8-719-073-01	DIODE MA111-(K8).S0	
D612	8-719-110-49	ZENER DIODE RD18ESB2		D1021	8-719-062-51	DIODE 1PS226-115	
D613	8-719-300-76	DIODE RH-1A		D1022	8-719-062-51	DIODE 1PS226-115	
D614	8-719-067-68	DIODE FMC-26UA		D1024	8-719-073-01	DIODE MA111-(K8).S0	
D615	8-719-053-19	DIODE UF4007G23		D1025	8-719-158-15	ZENER DIODE RD5.6SB	
D616	8-719-076-20	DIODE BT149G-412-OT359		D1027	1-216-065-91	RES-CHIP 4.7k	5% 1/10W
D617	8-719-991-33	DIODE 1SS133T-77			<FUSE>		
D618	8-719-069-63	DIODE ERB38-06V1		F601 △	1-576-233-11	FUSE (H.B.C.) (6.3A/250V)	
D619	8-719-058-38	DIODE FMN-G12S			<FERRITE BEAD>		
D620	8-719-510-41	DIODE D10SC9M		FB501	1-412-911-11	FERRITE 1.1uH	
D621	8-719-979-58	DIODE EGP10D		FB502	1-543-960-22	FERRITE	
D622	8-719-074-79	DIODE YG911S2R		FB901	1-412-911-11	FERRITE 1.1uH	
D623	8-719-979-58	DIODE EGP10D		FB1000	1-216-295-91	SHORT 0	
D624	8-719-979-58	DIODE EGP10D		FB1001	1-216-025-11	RES-CHIP 100	5% 1/10W
D625 △	8-719-510-63	DIODE D4SB60L-F		FB1002	1-216-025-11	RES-CHIP 100	5% 1/10W
D626	8-719-991-33	DIODE 1SS133T-77		FB1004	1-216-295-11	SHORT 0	
D627	8-719-110-08	ZENER DIODE RD8.2ESB2			<IC>		
D628	8-719-991-33	DIODE 1SS133T-77		IC401	8-759-593-28	IC LA78040	
D629	8-719-073-01	DIODE MA111-(K8).S0		IC501	8-759-585-82	IC BA9759F-E2	
D630	8-719-110-41	ZENER DIODE RD15ESB2		IC502	8-759-803-42	IC LA6500-FA	
D634	8-719-991-33	DIODE 1SS133T-77		IC503	8-759-100-96	IC uPC4558G2	
D635	8-719-991-33	DIODE 1SS133T-77		IC603	8-759-594-75	IC TEA1504/N2	
D636	8-719-158-49	ZENER DIODE RD12SB2		IC604	8-759-637-83	IC PQ12RD8S	
D701	8-719-991-33	DIODE 1SS133T-77		IC605	8-759-496-15	IC BA05ST-V5	
D702	8-719-991-33	DIODE 1SS133T-77		IC607	8-749-016-35	IC TLP621D4-Y-LF2T	
D703	8-719-991-33	DIODE 1SS133T-77		IC608	8-759-586-17	IC TL1431CZ-AP	
D705	8-719-158-49	ZENER DIODE RD12SB2		IC609	8-759-450-47	IC BA05T	
D901	8-719-073-01	DIODE MA111-(K8).S0		IC610	8-759-592-79	IC BA00AST-V5	
D903	8-719-073-01	DIODE MA111-(K8).S0		IC701	8-759-822-38	IC LA6510	
D904	8-719-073-01	DIODE MA111-(K8).S0		IC702	8-749-015-00	IC STK391-110	
D906	8-719-978-65	ZENER DIODE DTZ-TT11-15B		IC703	8-759-803-42	IC LA6500-FA	
D907	8-719-052-86	DIODE D2L40-TA		IC901	8-759-585-81	IC BA9758FS-E2	
D908	8-719-073-01	DIODE MA111-(K8).S0		IC1001	8-759-656-96	IC CXD9523S/JCN	
D909	8-719-978-65	ZENER DIODE DTZ-TT11-15B		IC1003	8-759-420-77	IC PST574CMT-T1	
D910	8-719-028-72	DIODE RGP02-17EL-6433		IC1005	8-759-641-86	IC BR24C16F-E2	
D911	8-719-028-72	DIODE RGP02-17EL-6433			<CHIP CONDUCTOR>		
D912	8-719-110-46	ZENER DIODE RD16ESB3		JR43	1-216-296-91	SHORT 0	
D913	8-719-110-46	ZENER DIODE RD16ESB3		JR45	1-216-295-11	SHORT 0	
D914	8-719-970-83	DIODE HSS82					
D915	8-719-109-85	ZENER DIODE RD5.1ESB2					
D916	8-719-158-49	ZENER DIODE RD12SB2					
D917	8-719-929-15	ZENER DIODE HZS9.1NB2					
D920	8-719-158-15	ZENER DIODE RD5.6SB					
D921	8-719-158-15	ZENER DIODE RD5.6SB					
D922	8-719-073-01	DIODE MA111-(K8).S0					



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
JR54	1-216-295-11	SHORT	0	L606	1-406-665-11	INDUCTOR	100uH
JR55	1-216-296-91	SHORT	0	L607	1-414-158-11	INDUCTOR	2.2uH
JR002	1-216-296-91	SHORT	0	L608	1-414-487-41	INDUCTOR	1uH
JR004	1-216-296-91	SHORT	0	L901	1-412-537-31	INDUCTOR	100uH
JR006	1-216-296-91	SHORT	0	L902	1-406-659-11	INDUCTOR	10uH
JR007	1-216-295-11	SHORT	0	<FILTER>			
JR008	1-216-296-91	SHORT	0	LF602 Δ 1-429-180-11 TRANSFORMER, LINE FILTER			
JR010	1-216-296-91	SHORT	0	<TRANSISTOR>			
JR011	1-216-296-91	SHORT	0	Q501	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
JR015	1-216-296-91	SHORT	0	Q502	8-729-901-87	TRANSISTOR 2SC2411K-CQ	
JR016	1-216-296-91	SHORT	0	Q503	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR	
JR017	1-216-296-91	SHORT	0	Q504	8-729-042-34	TRANSISTOR IRFU110A	
JR019	1-216-296-91	SHORT	0	Q505	8-729-050-12	TRANSISTOR 2SC5445(LBSONY1)	
JR020	1-216-296-91	SHORT	0	Q506	8-729-050-13	TRANSISTOR 2SJ585LS-CC11	
JR021	1-216-296-91	SHORT	0	Q507	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
JR023	1-216-296-91	SHORT	0	Q508	8-729-901-87	TRANSISTOR 2SC2411K-CQ	
JR024	1-216-295-11	SHORT	0	Q509	8-729-901-97	TRANSISTOR 2SA1036K-Q	
JR026	1-216-296-91	SHORT	0	Q510	8-729-423-33	TRANSISTOR 2SC3311A-QRSTA	
JR027	1-216-295-11	SHORT	0	Q511	8-729-043-41	TRANSISTOR 2SK2098-01MR-F119	
JR028	1-216-295-11	SHORT	0	Q512	8-729-043-41	TRANSISTOR 2SK2098-01MR-F119	
JR029	1-216-295-11	SHORT	0	Q513	8-729-043-41	TRANSISTOR 2SK2098-01MR-F119	
JR031	1-216-295-11	SHORT	0	Q514	8-729-047-72	TRANSISTOR 2SK3155-01	
JR032	1-216-296-91	SHORT	0	Q515	8-729-047-72	TRANSISTOR 2SK3155-01	
JR033	1-216-296-91	SHORT	0	Q516	8-729-047-72	TRANSISTOR 2SK3155-01	
JR034	1-216-296-91	SHORT	0	Q517	8-729-140-50	TRANSISTOR 2SC3209LK	
JR035	1-216-296-91	SHORT	0	Q519	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
JR036	1-216-295-11	SHORT	0	Q605	8-729-050-14	TRANSISTOR 2SK3265LB2SONY	
JR037	1-216-296-91	SHORT	0	Q606	8-729-043-27	TRANSISTOR PDTC114EK-115	
JR038	1-216-296-91	SHORT	0	Q607	8-729-423-33	TRANSISTOR 2SC3311A-QRSTA	
JR039	1-216-296-91	SHORT	0	Q608	8-729-029-92	TRANSISTOR DTC143ESA	
JR040	1-216-295-11	SHORT	0	Q609	8-729-119-78	TRANSISTOR 2SC2785-HFE	
JR042	1-216-296-91	SHORT	0	Q701	8-729-800-32	TRANSISTOR 2SC2362K-G	
JR046	1-216-296-91	SHORT	0	Q702	8-729-178-43	TRANSISTOR 2SC2784-E	
JR050	1-216-295-91	SHORT	0	Q703	8-729-204-91	TRANSISTOR 2SA1049-GR	
JR051	1-216-296-91	SHORT	0	Q704	8-729-207-82	TRANSISTOR 2SC3421-Y	
JR052	1-216-296-91	SHORT	0	Q705	8-729-207-89	TRANSISTOR 2SA1358-Y	
JR053	1-216-295-11	SHORT	0	Q706	8-729-031-89	TRANSISTOR 2SC3941A-Q (TA)	
JR057	1-216-295-11	SHORT	0	Q901	8-729-050-13	TRANSISTOR 2SJ585LS-CC11	
JR602	1-216-295-11	SHORT	0	Q902	8-729-041-45	TRANSISTOR FS5KM-16A	
JR603	1-216-295-11	SHORT	0	Q903	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
JR604	1-216-295-11	SHORT	0	Q904	8-729-901-97	TRANSISTOR 2SA1036K-Q	
JR606	1-216-295-11	SHORT	0	<RESISTOR>			
JR608	1-216-295-11	SHORT	0	R401	1-249-383-11	CARBON	1.5 5% 1/4W F
<COIL>				R402	1-215-866-11	METAL OXIDE	330 5% 1W F
L501	1-412-541-21	INDUCTOR	220uH	R403	1-214-796-00	METAL	1.5 1% 1/2W
L502	1-419-299-11	COIL, HORIZONTAL LINEARITY		R404	1-215-449-00	METAL	15K 1% 1/4W
L503	1-419-298-11	COIL, HORIZONTAL CENTER		R405	1-214-796-00	METAL	1.5 1% 1/2W
L504	1-406-675-11	INDUCTOR	4.7mH	R406	1-216-663-11	METAL CHIP	3.3K 0.5% 1/10W
L505	1-406-675-11	INDUCTOR	4.7mH	R407	1-249-397-11	CARBON	22 5% 1/4W F
L506	1-406-675-11	INDUCTOR	4.7mH	R408	1-216-081-00	RES-CHIP	22K 5% 1/10W
L507	1-412-537-31	INDUCTOR	100uH	R409	1-216-679-11	METAL CHIP	15K 0.5% 1/10W
L601	1-419-653-11	INDUCTOR	56mH				
L603	1-412-537-31	INDUCTOR	100uH				
L604	1-406-665-11	INDUCTOR	100uH				



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R410	1-216-663-11	METAL CHIP	3.3K 0.5% 1/10W	R557	1-249-437-11	CARBON	47K 5% 1/4W
R416	1-216-073-00	RES-CHIP	10K 5% 1/10W	R559	1-249-437-11	CARBON	47K 5% 1/4W
R417	1-216-113-00	RES-CHIP	470K 5% 1/10W	R561	1-249-437-11	CARBON	47K 5% 1/4W
R418	1-216-105-91	RES-CHIP	220K 5% 1/10W	R563	1-249-405-11	CARBON	100 5% 1/4W F
R501	1-216-049-91	RES-CHIP	1K 5% 1/10W	R564	1-249-405-11	CARBON	100 5% 1/4W F
R502	1-216-025-91	RES-CHIP	100 5% 1/10W	R565	1-249-405-11	CARBON	100 5% 1/4W F
R503	1-216-033-00	RES-CHIP	220 5% 1/10W	R566	1-249-405-11	CARBON	100 5% 1/4W F
R504	1-216-073-00	RES-CHIP	10K 5% 1/10W	R567	1-249-405-11	CARBON	100 5% 1/4W F
R505	1-216-081-00	RES-CHIP	22K 5% 1/10W	R568	1-249-405-11	CARBON	100 5% 1/4W F
R506	1-247-807-31	CARBON	100 5% 1/4W	R569	1-216-667-11	METAL CHIP	4.7K 0.5% 1/10W
R507	1-249-433-11	CARBON	22K 5% 1/4W	R570	1-216-674-11	METAL CHIP	9.1K 0.5% 1/10W
R508	1-215-861-00	METAL OXIDE	47 5% 1W F	R572	1-249-429-11	CARBON	10K 5% 1/4W
R509	1-249-381-11	CARBON	1 5% 1/4W F	R573	1-216-385-11	METAL OXIDE	0.47 5% 3W F
R510	1-219-677-11	METAL	1.8 5% 10W	R574	1-249-404-00	CARBON	82 5% 1/4W
R511	1-249-377-11	CARBON	0.47 5% 1/4W F	R575	1-216-659-11	METAL CHIP	2.2K 0.5% 1/10W
R512	1-214-842-11	METAL	120 1% 1/2W	R576	1-216-097-11	RES-CHIP	100K 5% 1/10W
R513	1-216-423-11	METAL OXIDE	27 5% 1W F	R577	1-216-049-11	RES-CHIP	1K 5% 1/10W
R514	1-249-393-11	CARBON	10 5% 1/4W F	R579	1-216-025-11	RES-CHIP	100 5% 1/10W
R515	1-249-425-11	CARBON	4.7K 5% 1/4W	R580	1-216-659-11	METAL CHIP	2.2K 0.5% 1/10W
R516	1-249-425-11	CARBON	4.7K 5% 1/4W	R581	1-216-673-11	METAL CHIP	8.2K 0.5% 1/10W
R517	1-216-089-11	RES-CHIP	47K 5% 1/10W	R582	1-216-661-11	METAL CHIP	2.7K 0.5% 1/10W
R518	1-216-033-00	RES-CHIP	220 5% 1/10W	R583	1-216-675-91	METAL CHIP	10K 0.5% 1/10W
R519	1-216-025-11	RES-CHIP	100 5% 1/10W	R584	1-216-473-11	METAL OXIDE	56 5% 3W F
R520	1-216-033-00	RES-CHIP	220 5% 1/10W	R585	1-216-381-11	METAL OXIDE	0.22 5% 3W F
R521	1-247-807-31	CARBON	100 5% 1/4W	R586	1-260-125-11	CARBON	150K 5% 1/2W
R522	1-216-057-00	RES-CHIP	2.2K 5% 1/10W	R587	1-216-641-11	METAL CHIP	390 0.5% 1/10W
R523	1-216-683-11	METAL CHIP	22K 0.5% 1/10W	R601	1-249-425-11	CARBON	4.7K 5% 1/4W
R524	1-216-663-11	METAL CHIP	3.3K 0.5% 1/10W	R615	1-216-615-91	METAL CHIP	33 0.5% 1/10W
R525	1-216-657-11	METAL CHIP	1.8K 0.5% 1/10W	R625	1-202-933-61	FUSIBLE	0.1 10% 1/2W
R526	1-216-691-11	METAL CHIP	47K 0.5% 1/10W	R626	1-215-927-00	METAL OXIDE	47K 5% 3W F
R527	1-216-683-11	METAL CHIP	22K 0.5% 1/10W	R627	1-219-513-11	CARBON	4.7M 5% 1/2W
R528	1-216-683-11	METAL CHIP	22K 0.5% 1/10W	R628	1-218-772-11	METAL CHIP	680K 0.5% 1/10W
R529	1-216-099-00	RES-CHIP	120K 5% 1/10W	R629	1-218-758-11	METAL CHIP	180K 0.5% 1/10W
R530	1-216-663-11	METAL CHIP	3.3K 0.5% 1/10W	R630	1-216-635-11	METAL CHIP	220 0.5% 1/10W
R531	1-216-661-11	METAL CHIP	2.7K 0.5% 1/10W	R631	1-216-651-11	METAL CHIP	1K 0.5% 1/10W
R532	1-216-073-00	RES-CHIP	10K 5% 1/10W	R632	1-218-758-11	METAL CHIP	180K 0.5% 1/10W
R533	1-216-057-00	RES-CHIP	2.2K 5% 1/10W	R633	1-216-687-11	METAL CHIP	33K 0.5% 1/10W
R535	1-216-683-11	METAL CHIP	22K 0.5% 1/10W	R635	1-218-754-11	METAL CHIP	120K 0.5% 1/10W
R536	1-216-683-11	METAL CHIP	22K 0.5% 1/10W	R636	1-249-397-11	CARBON	22 5% 1/4W F
R537	1-216-683-11	METAL CHIP	22K 0.5% 1/10W	R637	1-215-893-11	METAL OXIDE	1.5K 5% 2W F
R538	1-216-691-11	METAL CHIP	47K 0.5% 1/10W	R638	1-215-893-11	METAL OXIDE	1.5K 5% 2W F
R539	1-216-065-91	RES-CHIP	4.7K 5% 1/10W	R639	1-216-609-11	METAL CHIP	18 0.5% 1/10W
R540	1-216-691-11	METAL CHIP	47K 0.5% 1/10W	R640	1-216-344-00	METAL OXIDE	0.39 5% 1W F
R541	1-216-687-11	METAL CHIP	33K 0.5% 1/10W	R641	1-216-345-11	METAL OXIDE	0.47 5% 1W F
R542	1-214-842-11	METAL	120 1% 1/2W	R642	1-249-381-11	CARBON	1 5% 1/4W F
R543	1-214-842-11	METAL	120 1% 1/2W	R643	1-247-791-91	CARBON	22 5% 1/4W
R544	1-249-393-11	CARBON	10 5% 1/4W F	R644	1-247-807-31	CARBON	100 5% 1/4W
R545	1-216-057-00	RES-CHIP	2.2K 5% 1/10W	R649	1-211-874-71	FUSIBLE MELF	0.12 10% 1/2W
R546	1-215-909-11	METAL OXIDE	47 5% 3W F	R650	1-211-874-71	FUSIBLE MELF	0.12 10% 1/2W
R547	1-215-387-00	METAL	39 1% 1/4W	R651	1-249-441-11	CARBON	100K 5% 1/4W
R548	1-260-318-71	CARBON	150 5% 1/2W	R652	1-215-923-00	METAL OXIDE	10K 5% 3W F
R549	1-260-314-11	CARBON	68 5% 1/2W	R653	1-215-902-11	METAL OXIDE	47K 5% 2W F
R550	1-247-903-00	CARBON	1M 5% 1/4W	R657	1-216-057-00	RES-CHIP	2.2K 5% 1/10W
R552	1-249-437-11	CARBON	47K 5% 1/4W	R658	1-216-346-00	METAL OXIDE	0.56 5% 1W F
R553	1-249-437-11	CARBON	47K 5% 1/4W	R659	1-249-425-11	CARBON	4.7K 5% 1/4W
R555	1-249-437-11	CARBON	47K 5% 1/4W				



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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R664	1-215-902-11	METAL OXIDE 47K	5% 2W F	R735	1-216-057-00	RES-CHIP 2.2K	5% 1/10W
R671	1-216-073-00	RES-CHIP 10K	5% 1/10W	R736	1-216-049-91	RES-CHIP 1K	5% 1/10W
R672	1-249-407-11	CARBON 150	5% 1/4W	R737	1-216-049-91	RES-CHIP 1K	5% 1/10W
R673	1-216-073-00	RES-CHIP 10K	5% 1/10W	R738	1-216-071-00	RES-CHIP 8.2K	5% 1/10W
R674 Δ	1-220-827-91	REGISTER 560K	5% 1/2W				
R676	1-215-467-00	METAL 82K	1% 1/4W	R739	1-249-434-11	CARBON 27K	5% 1/4W
R677	1-216-025-11	RES-CHIP 100	5% 1/10W	R740	1-216-089-11	RES-CHIP 47K	5% 1/10W
R678	1-216-645-11	METAL CHIP 560	0.5% 1/10W	R741	1-216-049-11	RES-CHIP 1K	5% 1/10W
R679	1-215-467-00	METAL 82K	1% 1/4W	R742	1-216-067-00	RES-CHIP 5.6K	5% 1/10W
R680	1-216-661-11	METAL CHIP 2.7K	0.5% 1/10W	R743	1-216-037-00	RES-CHIP 330	5% 1/10W
R681	1-215-466-00	METAL 75K	1% 1/4W	R744	1-249-413-11	CARBON 470	5% 1/4W F
R682	1-215-463-00	METAL 56K	1% 1/4W	R745	1-249-389-11	CARBON 4.7	5% 1/4W F
R684	1-216-009-91	RES-CHIP 22	5% 1/10W	R746	1-249-389-11	CARBON 4.7	5% 1/4W F
R685	1-216-073-00	RES-CHIP 10K	5% 1/10W	R747	1-216-357-00	METAL OXIDE 4.7	5% 1W F
R686	1-216-675-91	METAL CHIP 10K	0.5% 1/10W	R748	1-219-752-11	CARBON 100K	5% 1/2W
R687	1-216-689-11	RES-CHIP 39K	5% 1/10W	R749	1-215-437-00	METAL 4.7K	1% 1/4W
R689	1-216-663-11	METAL CHIP 3.3K	0.5% 1/10W	R751	1-216-073-00	RES-CHIP 10K	5% 1/10W
R690	1-216-668-11	METAL CHIP 5.1K	0.5% 1/10W	R752	1-216-085-00	RES-CHIP 33K	5% 1/10W
R691	1-216-661-11	METAL CHIP 2.7K	0.5% 1/10W	R753	1-249-393-11	CARBON 10	5% 1/4W F
R692	1-216-081-00	RES-CHIP 22K	5% 1/10W	R754	1-216-677-11	METAL CHIP 12K	0.5% 1/10W
R693	1-219-513-11	CARBON 4.7M	5% 1/2W	R755	1-216-675-91	METAL CHIP 10K	0.5% 1/10W
R697	1-215-927-00	METAL OXIDE 47K	5% 3W F	R901	1-216-097-11	RES-CHIP 100K	5% 1/10W
R698	1-215-927-00	METAL OXIDE 47K	5% 3W F	R902	1-216-089-11	RES-CHIP 47K	5% 1/10W
R700	1-216-679-11	METAL CHIP 15K	0.5% 1/10W	R904	1-216-057-00	RES-CHIP 2.2K	5% 1/10W
R701	1-249-385-11	CARBON 2.2	5% 1/4W	R905	1-216-049-11	RES-CHIP 1K	5% 1/10W
R703	1-249-385-11	CARBON 2.2	5% 1/4W	R906	1-216-699-91	METAL CHIP 100K	0.5% 1/10W
R705	1-215-863-11	METAL OXIDE 100	5% 1W F	R907	1-216-073-00	RES-CHIP 10K	5% 1/10W
R706	1-216-423-11	METAL OXIDE 27	5% 1W F	R908	1-249-425-11	CARBON 4.7K	5% 1/4W
R707	1-216-679-11	METAL CHIP 15K	0.5% 1/10W	R909	1-215-913-11	METAL OXIDE 220	5% 3W F
R708	1-216-353-00	METAL OXIDE 2.2	5% 1W F	R910	1-215-913-11	METAL OXIDE 220	5% 3W F
R709	1-216-667-11	METAL CHIP 4.7K	0.5% 1/10W	R911	1-249-397-11	CARBON 22	5% 1/4W F
R710	1-216-691-11	METAL CHIP 47K	0.5% 1/10W	R912	1-216-049-11	RES-CHIP 1K	5% 1/10W
R711	1-216-675-91	METAL CHIP 10K	0.5% 1/10W	R914	1-216-041-00	RES-CHIP 470	5% 1/10W
R712	1-216-679-11	METAL CHIP 15K	0.5% 1/10W	R915	1-249-397-11	CARBON 22	5% 1/4W F
R713	1-215-858-00	METAL OXIDE 15	5% 1W F	R916	1-249-385-11	CARBON 2.2	5% 1/4W F
R714	1-215-863-11	METAL OXIDE 100	5% 1W F	R917	1-249-385-11	CARBON 2.2	5% 1/4W F
R715	1-216-353-00	METAL OXIDE 2.2	5% 1W F	R918	1-214-964-00	METAL 1M	1% 1/4W
R716	1-249-385-11	CARBON 2.2	5% 1/4W F	R919	1-216-073-00	RES-CHIP 10K	5% 1/10W
R717	1-249-377-11	CARBON 0.47	5% 1/4W F	R920	1-216-691-11	METAL CHIP 47K	0.5% 1/10W
R718	1-216-426-11	METAL OXIDE 82	5% 1W F	R921	1-216-049-11	RES-CHIP 1K	5% 1/10W
R719	1-216-369-00	METAL OXIDE 1	5% 2W F	R923	1-215-469-00	METAL 100K	1% 1/4W
R720	1-216-295-11	SHORT 0		R924	1-216-675-91	METAL CHIP 10K	0.5% 1/10W
R721	1-216-659-11	METAL CHIP 2.2K	0.5% 1/10W	R925	1-218-762-11	METAL CHIP 270K	0.5% 1/10W
R722	1-216-426-11	METAL OXIDE 82	5% 1W F	R926	1-216-073-00	RES-CHIP 10K	5% 1/10W
R723	1-216-295-11	SHORT 0		R927	1-220-823-91	CARBON 6.8K	5% 1/2W
R724	1-216-659-11	METAL CHIP 2.2K	0.5% 1/10W	R928	1-220-825-11	CARBON 330K	5% 1/2W
R725	1-216-369-00	METAL OXIDE 1	5% 2W F	R929	1-216-089-91	RES-CHIP 47K	5% 1/10W
R726	1-216-667-11	METAL CHIP 4.7K	0.5% 1/10W	R930	1-219-748-11	CARBON 4.7K	5% 1/2W
R727	1-216-666-11	METAL CHIP 4.3K	0.5% 1/10W	R931	1-219-748-11	CARBON 4.7K	5% 1/2W
R728	1-216-659-11	METAL CHIP 2.2K	0.5% 1/10W	R932	1-216-673-11	METAL CHIP 8.2K	0.5% 1/10W
R729	1-216-667-11	METAL CHIP 4.7K	0.5% 1/10W	R933	1-216-666-11	METAL CHIP 4.3K	0.5% 1/10W
R730	1-216-073-00	RES-CHIP 10K	5% 1/10W	R934	1-249-377-11	CARBON 0.47	5% 1/4W F
R731	1-216-081-00	RES-CHIP 22K	5% 1/10W	R1001	1-216-675-91	METAL CHIP 10K	0.5% 1/10W
R732	1-249-383-11	CARBON 1.5	5% 1/4W F	R1003	1-216-025-11	RES-CHIP 100	5% 1/10W
R733	1-215-859-00	METAL OXIDE 22	5% 1W F	R1004	1-216-033-00	RES-CHIP 220	5% 1/10W
R734	1-215-864-00	METAL OXIDE 150	5% 1W F	R1005	1-249-409-11	CARBON 220	5% 1/4W
				R1006	1-216-033-00	RES-CHIP 220	5% 1/10W

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

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

6551-T3N/6551-U3N



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R1007	1-216-049-11	RES-CHIP	1K 5% 1/10W	<SPARK GAP>			
R1008	1-216-049-11	RES-CHIP	1K 5% 1/10W	SG901	1-517-499-21	GAP, SPARK	
R1010	1-216-033-00	RES-CHIP	220 5% 1/10W	SG902	1-519-422-11	GAP, SPARK	
R1011	1-216-049-11	RES-CHIP	1K 5% 1/10W	SG903	1-519-422-11	GAP, SPARK	
R1012	1-216-017-91	RES-CHIP	47 5% 1/10W	<TRANSFORMER>			
R1013	1-216-017-91	RES-CHIP	47 5% 1/10W	T501	1-435-188-11	TRANSFORMER, FERRITE (HDT)	
R1014	1-216-025-11	RES-CHIP	100 5% 1/10W	T502	1-411-594-11	INDUCTOR 5mH	
R1015	1-216-033-00	RES-CHIP	220 5% 1/10W	T503	1-435-140-11	TRANSFORMER, FERRITE (LCT)	
R1016	1-216-033-00	RES-CHIP	220 5% 1/10W	T504	1-431-413-21	TRANSFORMER, FERRITE (HST)	
R1017	1-216-057-00	RES-CHIP	2.2K 5% 1/10W	T602	1-435-141-11	TRANSFORMER, CONVERTER (SRT)	
R1018	1-216-057-00	RES-CHIP	2.2K 5% 1/10W	T701	1-435-142-11	TRANSFORMER, FERRITE (DFT)	
R1019	1-216-017-91	RES-CHIP	47 5% 1/10W	T901 $\triangle$	X-4560-174-1	TRANSFORMER ASSY, FLYBACK (NX4700//J1E4)	
R1020	1-216-017-91	RES-CHIP	47 5% 1/10W	T902	1-419-345-11	COIL, CHOKE 500uH	
R1021	1-216-025-11	RES-CHIP	100 5% 1/10W	<THERMISTOR>			
R1022	1-216-025-11	RES-CHIP	100 5% 1/10W	TH600 $\triangle$	1-809-260-11	THERMISTOR, POWER	
R1039	1-216-065-91	RES-CHIP	4.7K 5% 1/10W	TH601 $\triangle$	1-803-540-11	THERMISTOR	
R1046	1-216-065-91	RES-CHIP	4.7K 5% 1/10W	<VARISTOR>			
R1047	1-216-065-91	RES-CHIP	4.7K 5% 1/10W	VA601 $\triangle$	1-801-268-51	VARISTOR TNR14V471K660	
R1048	1-216-065-91	RES-CHIP	4.7K 5% 1/10W	VA603 $\triangle$	1-801-268-51	VARISTOR TNR14V471K660	
R1049	1-216-065-91	RES-CHIP	4.7K 5% 1/10W	<CRYSTAL>			
R1050	1-216-065-91	RES-CHIP	4.7K 5% 1/10W	X1001	1-567-890-11	VIBRATOR, CRYSTAL (8MHz)	
R1051	1-216-065-91	RES-CHIP	4.7K 5% 1/10W	*****			
R1065	1-216-065-91	RES-CHIP	4.7K 5% 1/10W	* 8-933-426-00 N BOARD, COMPLETE			
R1070	1-216-065-91	RES-CHIP	4.7K 5% 1/10W	*****			
R1072	1-216-065-91	RES-CHIP	4.7K 5% 1/10W	<CAPACITOR>			
R1073	1-216-049-11	RES-CHIP	1K 5% 1/10W	C801	1-113-340-11	ELECT 47uF 20% 25V	
R1074	1-216-049-11	RES-CHIP	1K 5% 1/10W	C803	1-163-809-11	CERAMIC CHIP 0.047uF 10% 25V	
R1083	1-216-025-11	RES-CHIP	100 5% 1/10W	C809	1-163-809-11	CERAMIC CHIP 0.047uF 10% 25V	
R1084	1-216-041-00	RES-CHIP	470 5% 1/10W	C810	1-163-038-11	CERAMIC CHIP 0.1uF 25V	
R1085	1-216-025-11	RES-CHIP	100 5% 1/10W	C811	1-163-809-11	CERAMIC CHIP 0.047uF 10% 25V	
R1086	1-216-073-00	RES-CHIP	10K 5% 1/10W	C812	1-164-004-11	CERAMIC CHIP 0.1uF 10% 25V	
R1092	1-216-033-00	RES-CHIP	220 5% 1/10W	C813	1-163-038-11	CERAMIC CHIP 0.1uF 25V	
R1094	1-216-113-00	RES-CHIP	470K 5% 1/10W	C814	1-164-004-11	CERAMIC CHIP 0.1uF 10% 25V	
R1095	1-216-073-00	RES-CHIP	10K 5% 1/10W	C817	1-119-941-11	ELECT 470uF 20% 6.3V	
R1096	1-216-073-00	RES-CHIP	10K 5% 1/10W	C818	1-113-340-11	ELECT 47uF 20% 25V	
R1097	1-216-077-91	RES-CHIP	15K 5% 1/10W	C819	1-163-037-11	CERAMIC CHIP 0.022uF 10% 50V	
R1098	1-216-077-91	RES-CHIP	15K 5% 1/10W	C820	1-119-941-91	ELECT 470uF 20% 6.3V	
R1099	1-216-033-00	RES-CHIP	220 5% 1/10W	C821	1-163-038-11	CERAMIC CHIP 0.1uF 25V	
R1104	1-216-065-91	RES-CHIP	4.7K 5% 1/10W	C822	1-164-004-11	CERAMIC CHIP 0.1uF 10% 25V	
				C823	1-163-038-11	CERAMIC CHIP 0.1uF 25V	
<VARIABLE RESISTOR>							
$\boxtimes$ RV901 $\triangle$	1-241-767-21	RES, ADJ, CERMET	100K				
<RELAY>							
RY601 $\triangle$	1-755-067-21	RELAY, AC POWER					
RY602 $\triangle$	1-755-318-11	RELAY, POWER					
<SWITCH>							
S602 $\triangle$	1-771-757-11	SWITCH, PUSH (1KEY) (POWER)					



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C824	1-163-133-00	CERAMIC CHIP 470pF	5% 50V	R807	1-216-033-00	RES-CHIP 220	5% 1/10W
C825	1-163-021-91	CERAMIC CHIP 0.01uF	10% 50V	R808	1-216-033-00	RES-CHIP 220	5% 1/10W
C826	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V	R809	1-216-651-11	METAL CHIP 1K	0.5% 1/10W
C827	1-119-941-91	ELECT 470uF	20% 6.3V	R810	1-216-651-11	METAL CHIP 1K	0.5% 1/10W
C828	1-164-161-11	CERAMIC CHIP 0.0022uF	10% 50V				
C829	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V	R811	1-216-053-00	RES-CHIP 1.5K	5% 1/10W
C830	1-113-340-11	ELECT 47uF	20% 25V	R812	1-216-049-11	RES-CHIP 1K	5% 1/10W
C832	1-131-722-91	ELECT 100uF	20% 6.3V	R813	1-216-049-11	RES-CHIP 1K	5% 1/10W
C833	1-163-038-11	CERAMIC CHIP 0.1uF	25V	R814	1-216-031-00	RES-CHIP 180	5% 1/10W
C835	1-163-038-11	CERAMIC CHIP 0.1uF	25V	R815	1-216-073-00	RES-CHIP 10K	5% 1/10W
C837	1-163-017-00	CERAMIC CHIP 0.0047uF	10% 50V	R816	1-218-768-11	METAL CHIP 470K	0.5% 1/10W
C838	1-163-017-00	CERAMIC CHIP 0.0047uF	10% 50V	R817	1-216-089-11	RES-CHIP 47K	5% 1/10W
C839	1-163-017-00	CERAMIC CHIP 0.0047uF	10% 50V	R818	1-216-049-11	RES-CHIP 1K	5% 1/10W
C840	1-163-017-00	CERAMIC CHIP 0.0047uF	10% 50V	R819	1-216-049-11	RES-CHIP 1K	5% 1/10W
C841	1-163-023-00	CERAMIC CHIP 0.015uF	10% 50V	R820	1-216-049-11	RES-CHIP 1K	5% 1/10W
<CONNECTOR>				R821	1-216-049-11	RES-CHIP 1K	5% 1/10W
CN801	1-793-585-11	PIN, CONNECTOR (PC BOARD) 15P		R822	1-216-049-11	RES-CHIP 1K	5% 1/10W
CN802	1-793-586-11	PIN, CONNECTOR (PC BOARD) 15P		R823	1-216-667-11	METAL CHIP 4.7K	0.5% 1/10W
<DIODE>				R824	1-216-073-00	RES-CHIP 10K	5% 1/10W
D802	8-719-049-09	DIODE 1SS367-T3SONY		R825	1-216-671-11	METAL CHIP 6.8K	0.5% 1/10W
<FERRITE BEAD>				R826	1-216-671-11	METAL CHIP 6.8K	0.5% 1/10W
FB801	1-543-960-22	FERRITE		R827	1-216-073-00	RES-CHIP 10K	5% 1/10W
FB802	1-216-295-91	SHORT 0		R828	1-216-667-11	METAL CHIP 4.7K	0.5% 1/10W
FB809	1-543-963-22	FERRITE		R829	1-216-049-11	RES-CHIP 1K	5% 1/10W
FB810	1-543-963-22	FERRITE		R830	1-216-049-11	RES-CHIP 1K	5% 1/10W
<IC>				R831	1-216-033-00	RES-CHIP 220	5% 1/10W
IC801	8-759-589-56	IC CXD9517Q		R832	1-216-025-11	RES-CHIP 100	5% 1/10W
IC802	8-759-569-45	IC LD1117S33TR		R833	1-216-651-11	METAL CHIP 1K	0.5% 1/10W
IC803	8-759-502-82	IC LM324M		R834	1-216-647-11	METAL CHIP 680	0.5% 1/10W
<CHIP CONDUCTOR>				R835	1-216-089-11	RES-CHIP 47K	5% 1/10W
JR801	1-216-295-11	SHORT 0		R836	1-216-049-11	RES-CHIP 1K	5% 1/10W
JR802	1-216-295-11	SHORT 0		R837	1-216-648-11	METAL CHIP 750	0.5% 1/10W
<TRANSISTOR>				R838	1-216-041-00	RES-CHIP 470	5% 1/10W
Q801	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R839	1-216-117-00	RES-CHIP 680K	5% 1/10W
Q804	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR		R840	1-216-650-11	METAL CHIP 910	0.5% 1/10W
Q805	8-729-026-50	TRANSISTOR 2SA1037AK-T146-QR		R841	1-216-089-91	RES-CHIP 47K	5% 1/10W
<RESISTOR>				R842	1-216-677-11	METAL CHIP 12K	0.5% 1/10W
R801	1-216-677-11	METAL CHIP 12K	0.5% 1/10W	R843	1-216-069-00	RES-CHIP 6.8K	5% 1/10W
R802	1-216-677-11	METAL CHIP 12K	0.5% 1/10W	R844	1-216-017-91	RES-CHIP 47	5% 1/10W
R803	1-216-033-00	RES-CHIP 220	5% 1/10W	R846	1-216-025-11	RES-CHIP 100	5% 1/10W
R804	1-216-033-00	RES-CHIP 220	5% 1/10W	R847	1-216-667-11	METAL CHIP 4.7K	0.5% 1/10W
R805	1-216-033-00	RES-CHIP 220	5% 1/10W	R851	1-216-065-91	RES-CHIP 4.7K	5% 1/10W
R806	1-216-033-00	RES-CHIP 220	5% 1/10W	R852	1-216-065-91	RES-CHIP 4.7K	5% 1/10W
				R853	1-216-049-11	RES-CHIP 1K	5% 1/10W
				R855	1-216-105-91	RES-CHIP 220K	5% 1/10W
				R856	1-216-073-00	RES-CHIP 10K	5% 1/10W
				R857	1-216-049-11	RES-CHIP 1K	5% 1/10W
				R858	1-216-073-00	RES-CHIP 10K	5% 1/10W
				R859	1-216-025-11	RES-CHIP 100	5% 1/10W
				R860	1-216-025-11	RES-CHIP 100	5% 1/10W
				R863	1-216-065-91	RES-CHIP 4.7K	5% 1/10W
				R866	1-216-049-91	RES-CHIP 1K	5% 1/10W



REF.NO.	PART NO.	DESCRIPTION	REMARK
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* 8-933-425-00 H BOARD, COMPLETE

<CAPACITOR>

C2002	1-126-786-11	ELECT	47uF	20%	16V
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<CONNECTOR>

CN2001*	1-564-523-11	PLUG, CONNECTOR	8P
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<DIODE>

D2001	8-719-064-11	DIODE SPR-325MVW (POWER)
D2004	8-719-109-89	ZENER DIODE RD5.6ESB2

<TRANSISTOR>

Q2001	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q2002	8-729-119-76	TRANSISTOR 2SA1175-HFE

<RESISTOR>

R2001	1-249-422-11	CARBON	2.7K	5%	1/4W
R2002	1-249-429-11	CARBON	10K	5%	1/4W
R2003	1-249-429-11	CARBON	10K	5%	1/4W
R2004	1-215-411-00	METAL	390	1%	1/4W
R2005	1-215-417-00	METAL	680	1%	1/4W
R2006	1-249-411-11	CARBON	330	5%	1/4W
R2007	1-249-413-11	CARBON	470	5%	1/4W
R2008	1-249-415-11	CARBON	680	5%	1/4W
R2009	1-249-417-11	CARBON	1K	5%	1/4W
R2011	1-249-421-11	CARBON	2.2K	5%	1/4W
R2012	1-249-429-11	CARBON	10K	5%	1/4W
R2013	1-249-425-11	CARBON	4.7K	5%	1/4W

<SWITCH>

S2001	1-571-427-11	SWITCH, SLIDE (INPUT1/INPUT2)
S2002	1-762-196-21	SWITCH, TACT (H+)
S2003	1-762-196-21	SWITCH, TACT (RESET)
S2004	1-762-196-21	SWITCH, TACT (H-)
S2005	1-762-196-21	SWITCH, TACT (MENU)
S2006	1-762-196-21	SWITCH, TACT (V+)
S2007	1-762-196-21	SWITCH, TACT (V-)
S2008	1-762-196-21	SWITCH, TACT (ASC)