

## SERVICE MANUAL



*D1025TM*  
*US Model*  
*Canadian Model*  
*Japan Model*  
*S. Hemisphere Model*  
*Chassis No. SCC-L07D-A*

## D-1H CHASSIS

### SPECIFICATIONS

Picture tube	0.25 mm aperture grill pitch 17 inches measured diagonally 90-degree deflection	Power Consumption Maximum Nominal	120W 100W, 341 BTU/h
Video image area	(16" maximum viewing image) Approx. 329.5 x 243 mm (w/h) (13 x 9 <sup>5</sup> / <sub>8</sub> inches)	Deflection frequency	Horizontal: 30 to 85 KHz Vertical: 50 to 120 Hz
Logical resolution	Horizontal: Max. 1280 dots Vertical: Max. 1024 lines	AC input voltage / current	100 to 120 V, 50/60 Hz, 1.8 A 220 to 240V, 50/60Hz, 1A
Physical resolution	Horizontal: Max. 1024 dots Vertical: Max. 768 lines	Dimensions	406 x 432 x 420 (w/h/d) (16 x 17 <sup>1</sup> / <sub>8</sub> x 16 <sup>5</sup> / <sub>8</sub> inches)
Standard image area	Approx. 312 x 234 mm (w/h) (12 <sup>3</sup> / <sub>8</sub> x 9 <sup>1</sup> / <sub>4</sub> inches)	Mass	Approx. 18.0 kg (39 lb 11 oz)
Input signal		Design and specifications are subject to change without notice.	
Video	Analog RGB (75 ohms typical) 0.7 Vp-p, Positive		
Sync	External HD/VD, Composite Polarity Free TTL Video Composite (Sync on Green) 0.3 Vp-p, Negative		



COLOR MONITOR  
**DELL**®

## POWER SAVING FUNCTION

This monitor has three Power Saving modes. By sensing the absence of a video signal from the computer, it reduces power consumption as follows:

**NOTE:** If no video signal is input to the monitor, the "NO INPUT SIGNAL" message appears. After about 30 seconds, the Power Saving function automatically puts the monitor into active-off mode and the indicator lights up orange. Once the monitor detects horizontal and vertical sync signals, the monitor automatically resumes normal operation mode.

	State	Power consumption	Required recovery time	⏻ Power indicator
1.	Normal Operation	≤ 110W	——	Green on
2.	Standby (1st mode)	≤ 15W	approx. 3 sec.	Green and orange alternate
3.	Suspend (2nd mode)	≤ 15W	Approx. 3 sec.	Green and orange alternate
4.	Active-off (3rd mode)	≤ 8W	Approx. 10 sec.	Orange
5.	Power-off	0W	——	Off
6.	Failure mode	——	——	Orange flashing

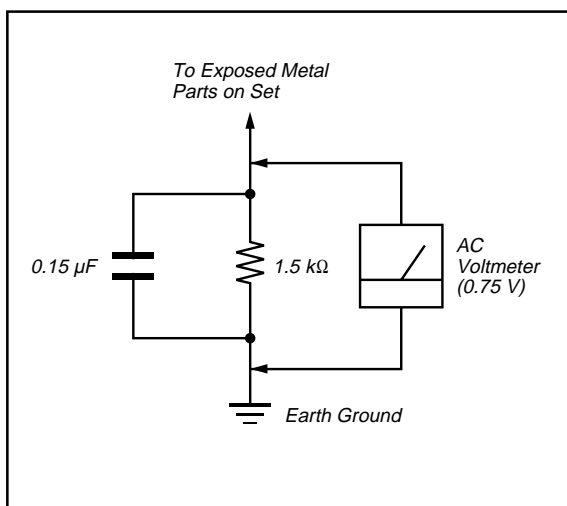
## TIMING SPECIFICATION

MODE	1	2	3	4	5	6	7	8	9	10
Resolution (H x V) Dot Clock (MHz)	640X480 25.175	720X400 28.321	640X480 36.000	800X600 49.500	800X600 56.250	1024X788 65.000	1024X768 78.750	1024X768 94.500	1280X1024 108.000	1280X1024 135.000
<b>HORIZONTAL</b>										
Hor. Freq. (kHz)	31.469	31.468	43.269	46.875	53.674	48.363	60.023	68.677	63.981	79.976
H-Total	31.778	31.779	23.111	21.333	18.631	20.677	16.660	14.561	15.630	12.504
H-Blanking	6.356	6.356	5.333	5.172	4.409	4.923	3.657	3.725	3.778	3.022
H-Front Porch	0.636	0.636	1.556	0.323	0.569	0.369	0.203	0.508	0.444	0.119
H-Sync.	3.813	3.178	1.556	1.616	1.138	2.092	1.219	1.016	1.037	1.067
H-Back Porch	1.907	2.542	2.222	3.232	2.702	2.462	2.235	2.201	2.296	1.837
H-Active (μsec)	25.422	25.423	17.778	16.162	14.222	15.754	13.003	10.836	11.852	9.481
<b>VERTICAL</b>										
Ver. Freq. (Hz)	59.940	70.084	85.008	75.000	85.061	60.004	75.029	84.997	60.020	75.025
V-Total	525	449	509	625	631	806	800	808	1066	1066
V-Blanking	45	49	29	25	31	38	32	40	42	42
V-Front Porch	10	13	1	1	1	3	1	1	1	1
V-Sync.	2	2	3	3	3	6	3	3	3	3
V-Back Porch	33	34	25	21	27	29	28	36	38	38
V-Active (lines)	480	400	480	600	600	768	768	768	1024	1024
<b>SYNC.</b>										
Int(G)	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Ext (H/V)/Polarity	YES -/-	YES -/+	YES -/-	YES +/-	YES +/-	YES -/-	YES +/-	YES +/-	YES +/-	YES +/-
Ext (CS)/Polarity	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Int / Non Int	Non Int	Non Int	Non Int	Non Int	Non Int	Non Int	Non Int	Non Int	Non Int	Non Int

## SAFETY CHECK-OUT (US Model only)

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

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




### 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 microampere). 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 instructions.
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's 250 and Sanwa SH-63Trd are examples of passive VOMs that are suitable. Nearly all battery operated digital multimeters that have a 2V 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.

### AVERTISSEMENT!!

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

**ATTENTION AUX COMPOSANTS RELATIFS A LA SECURITE!!**

**LES COMPOSANTS IDENTIFIES PAR UNE TRAME ET PAR UNE MARQUE  SUR LES SCHEMAS DE PRINCIPE, LES VUES EXPLOSEES ET LES LISTES DE PIECES SONT D'UNE IMPORTANCE CRITIQUE POUR LA SECURITE DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMERO DE PIECE EST INDIQUE DANS LE PRESENT MANUEL OU DANS DES SUPPLEMENTS PUBLIES PAR SONY. LES REGLAGES DE CIRCUIT DONT L'IMPORTANCE EST CRITIQUE POUR LA SECURITE DU FONCTIONNEMENT SONT IDENTIFIES DANS LE PRESENT MANUEL. SUIVRE CES PROCEDURES LORS DE CHAQUE REMPLACEMENT DE COMPOSANTS CRITIQUES, OU LORSQU'UN MAUVAIS FONCTIONNEMENT SUSPECTE.**

## TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>
<b>1. GENERAL</b>		5
<b>2. DISASSEMBLY</b>		
2-1.	Cabinet Removal	10
2-2.	Service Position	10
2-3.	D and A Board Removal	10
2-4.	Picture Tube Removal	11
<b>3. SAFETY RELATED ADJUSTMENT</b>		12
<b>4. ADJUSTMENTS</b>		13
<b>5. DIAGRAMS</b>		
5-1.	Block Diagram	15
5-2.	Circuit Boards Location	18
5-3.	Schematic Diagrams and Printed Wiring Boards	18
1.	D Board - Schematic Diagram	19
2.	A Board - Schematic Diagram	23
5-4.	Semiconductors	27
<b>6. EXPLODED VIEWS</b>		
6-1.	Chassis (US, CND)	29
6-2.	Chassis (Japan, S. Hemisphere)	30
6-3.	Packing Materials	31
<b>7. ELECTRICAL PARTS LIST</b>		32

The instructions given here are partial abstracts from the Operating Instruction Manual. The page numbers shown reflect those of the Operating Instruction Manual.

## SECTION 1 GENERAL

### Getting Started

## Table of Contents

Read First! .....	3	Graphic Enhancement Mode (GEM) .....	10
Damper Wire .....	3	Specifications .....	10
Setup .....	3	Monitor Information .....	11
Quick Specifications .....	3	Power Saving Function and LED Indicators .....	11
Precautions .....	4	Preset and User Modes .....	11
Plug and Play .....	4	Warning Messages .....	12
Parts and Controls .....	5	Troubleshooting .....	12
The OSD (On-screen Display) System .....	6	Dell Computer Corporation's Environmental Program ..	14
Resetting the Adjustments .....	9	Appendix .....	109

## 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 that generates magnetism, such as a converter, 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 ball point pen or screwdriver. This type of contact may scratch the picture tube.

### Warning on Power Connection

- Use an appropriate power cord for your local power supply.
- For customers in the U.S.A.  
If you do not use an appropriate power cord, the monitor will not conform to mandatory FCC standards.

Examples of plug types:



- Before disconnecting the power cord, wait for 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 monitor. Place magnetic recording equipment, tapes and disks away from this monitor.

The socket should be installed near the equipment and be easily accessible.

## Plug and Play

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

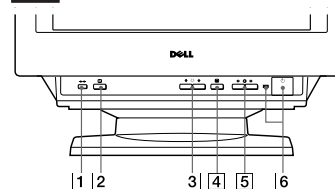
DDC™ is a trademark of Video Electronics Standard Association.

- Your monitor operates according to DDC2B. Only computers that support the same guidelines and operate at the same or higher level can make use of this feature.
- If your computer does not support the relevant guidelines, you can still use your monitor and computer. You may need to manually specify the appropriate resolution in the computer.
- The highest resolution automatically selected may not give the best result. You may need to manually select the most suitable resolution in the computer.

### Getting Started

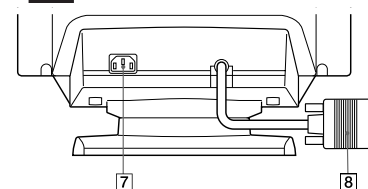
## Parts and Controls

### Front



- ← (RESET) button (pages 6 and 9)**  
Resets the adjustments to the factory settings.
- Ⓜ (GEM) button (page 10)**  
Selects the Graphic Enhancement Mode.
- ☀ (BRIGHTNESS) ↓/↑ buttons (page 6)**  
Adjust the picture brightness.  
Operate as the ↓/↑ buttons when adjusting other items.
- Ⓜ (MENU) button (pages 6 and 11)**  
Displays the MENU OSD.
- Ⓜ (CONTRAST) ←/→ buttons (page 6)**  
Adjust the contrast.  
Operate as the ←/→ buttons when adjusting other items.

### Rear

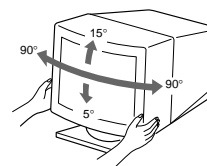


- Ⓜ (POWER) switch and indicator (page 11)**  
Turns the monitor on and off.  
The indicator lights up green when the monitor is on, and lights up orange when the monitor is in Power Saving mode.
- AC IN connector**  
Provides AC power to the monitor.
- Video input connector (HD15)**  
Inputs RGB video signals and SYNC signals.

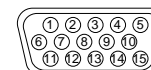
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## Use of the Tilt/Swivel

With the tilt/swivel, you can adjust this monitor to any desired angle within 180° horizontally and 20° vertically. To turn the monitor vertically and horizontally, hold it at the bottom with both hands as shown below.



## Video Connector



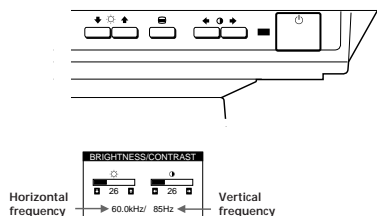
Pin No.	Signal	Pin No.	Signal
1	Red	8	Blue Ground
2	Green (Composite Sync on Green)	9	Not used (no pin)
3	Blue	10	Ground
4	Ground	11	Ground
5	CPU Sense	12	SDA (serial data)
6	Red Ground	13	Horizontal Sync
7	Green Ground	14	Vertical Sync
		15	SCL (serial clock)

## Customizing Your Monitor

## Adjusting the Picture Brightness and Contrast

- 1 Press the (BRIGHTNESS)  $\downarrow/\uparrow$  or (CONTRAST)  $\leftarrow/\rightarrow$  buttons.

The BRIGHTNESS/CONTRAST OSD appears.



- 2 To adjust the brightness  
Press the (BRIGHTNESS)  $\downarrow/\uparrow$  buttons.  
To adjust the contrast  
Press the (CONTRAST)  $\leftarrow/\rightarrow$  buttons.

## The OSD (On-screen Display) System

## Introducing the OSD System

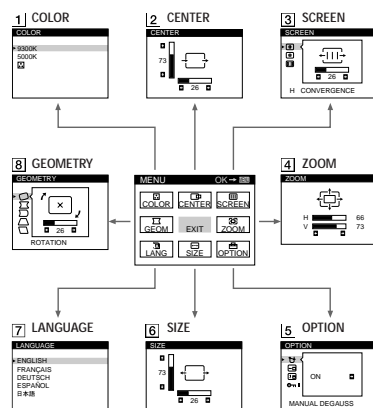
You can adjust most of the monitor's settings using the OSDs (On-screen Display). All of the OSDs numbered in this illustration are described on the following pages in order. You can access any of these OSDs from the MENU OSD. To adjust monitor settings using the OSDs, follow the steps below:

## Basic controls:

- Use the (MENU) button to display the MENU OSD and to select menu items.
- Use the (BRIGHTNESS)  $\downarrow/\uparrow$  and (CONTRAST)  $\leftarrow/\rightarrow$  buttons to highlight menu items and to adjust settings.

## To adjust the monitor settings:

- 1 Press the MENU button to display the MENU OSD.
  - 2 Highlight the desired OSD using the BRIGHTNESS and CONTRAST buttons and press the MENU button again.
  - 3 If necessary, use the BRIGHTNESS buttons to select a specific item.
  - 4 Adjust the monitor setting using the BRIGHTNESS and CONTRAST buttons.
    - To reset the current item to its original setting, press the  $\rightarrow\leftarrow$  (RESET) button while the item's adjustment OSD is displayed.
  - 5 When you finish adjusting the setting, press the MENU button to return to the MENU OSD.  
Press the MENU button twice to return to normal viewing.
- Resetting: If you press the RESET button while an OSD is displayed, only the current adjustment item is reset. For additional information on using the reset function, see the "Resetting the Adjustments" section on page 9.
- The OSD automatically disappears after 30 seconds.



## Customizing Your Monitor

## Adjusting the Settings

## 1 Using the COLOR OSD

You can adjust the monitor's color temperature using the COLOR OSD. For example, you can adjust the monitor to match the colors of a printed picture.  
You can adjust the color temperature from 9300K (blue-white) to 5000K (warm red).  
This setting is stored in memory for all input signals.

- 1 Press the MENU button to display the MENU OSD.
- 2 Highlight the COLOR OSD using the BRIGHTNESS and CONTRAST buttons and press the MENU button again.
- 3 Press the (BRIGHTNESS)  $\downarrow/\uparrow$  buttons to select either the 9300K, 5000K or variable option.
  - The 9300K and 5000K options display accurate preset color temperatures.
  - The variable option allows you to adjust the monitor using the full range of color temperatures. Adjust to the desired color temperature using the BRIGHTNESS and CONTRAST buttons.
- 4 Press the MENU button once to return to the MENU OSD, or press it twice to return to normal viewing.

## Note

If you are using one of the GEMs (Graphic Enhancement Mode), you can only adjust the color temperature from 11,000K to 9300K.

For more information on GEMs refer to the "Graphic Enhancement Mode (GEM)" section on page 10.

## 2 Using the CENTER OSD

You can adjust the picture centering using the CENTER OSD. This setting is stored in memory for the current input signal.

- 1 Press the MENU button to display the MENU OSD.
- 2 Highlight the CENTER OSD using the BRIGHTNESS and CONTRAST buttons and press the MENU button again.
- 3 To adjust vertical centering, press the (BRIGHTNESS)  $\downarrow/\uparrow$  buttons.
- 4 To adjust horizontal centering, press the (CONTRAST)  $\leftarrow/\rightarrow$  buttons.
- 5 Press the MENU button once to return to the MENU OSD, or press it twice to return to normal viewing.

## 3 Using the SCREEN OSD

You can adjust the convergence of the picture and cancel the picture's moire using the SCREEN OSD.

**Convergence** is the alignment of the Red, Green and Blue electron beams on the screen. When convergence is not aligned, red or blue shadows may be noticeable (especially with text) which can affect the clarity or focus of the image.

**Moire** is a wavy or elliptical pattern which may appear on the screen. The moire cancel adjustment is provided to eliminate moire.

This setting is stored in memory for all input signals.

- 1 Press the MENU button to display the MENU OSD.
- 2 Highlight the SCREEN OSD using the BRIGHTNESS and CONTRAST buttons and press the MENU button again.
- 3 Press the (BRIGHTNESS)  $\downarrow/\uparrow$  buttons to select the desired adjustment item.
- 4 Press the (CONTRAST)  $\leftarrow/\rightarrow$  buttons to adjust the item.
- 5 Press the MENU button once to return to the MENU OSD, or press it twice to return to normal viewing.

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Select	To
H CONVERGENCE	adjust the horizontal convergence
V CONVERGENCE	adjust the vertical convergence
CANCEL MOIRE	eliminate elliptical or wavy lines on the screen
MOIRE ADJUST	adjust the degree of moire cancellation

\* CANCEL MOIRE must be "ON" for " (MOIRE ADJUST)" to appear on the screen.

**4 Using the ZOOM OSD**

You can enlarge or reduce the picture size using the ZOOM OSD.  
This setting is stored in memory for the current input signal.

- 1 Press the MENU button to display the MENU OSD.
- 2 Highlight the ZOOM OSD using the BRIGHTNESS and CONTRAST buttons and press the MENU button again.
- 3 Press the **0** (CONTRAST) **◀/▶** buttons to enlarge or reduce the picture size.
- 4 Press the MENU button once to return to the MENU OSD, or press it twice to return to normal viewing.

**Note**

You can enlarge or reduce the picture size until either the horizontal or vertical size reaches its maximum or minimum value.

**5 Using the OPTION OSD**

You can manually degauss (demagnetize) the CRT, move the OSD position and lock the user controls using the OPTION OSD.

- 1 Press the MENU button to display the MENU OSD.
- 2 Highlight the OPTION OSD using the BRIGHTNESS and CONTRAST buttons and press the MENU button again.
- 3 Press the **0** (BRIGHTNESS) **↓/↑** buttons to select the desired adjustment item.
- 4 Press the **0** (CONTRAST) **◀/▶** buttons to activate the manual degauss, move the OSD position or lock the user controls.
- 5 Press the MENU button once to return to the MENU OSD, or press it twice to return to normal viewing.

**Degauss:** If a second degauss cycle is needed, allow a minimum interval of 20 minutes for the best result.

**OSD Position Change:** To change the OSD position, press the **0** (BRIGHTNESS) **↓/↑** buttons to select the direction (horizontal or vertical), then press the **0** (CONTRAST) **◀/▶** buttons to move the OSD in the selected direction.

**User Control Lock:** Once you select "ON" to lock the user controls, you cannot select any item except "EXIT" and "OPTION" in the MENU OSD. If you try to access any other OSD, the **🔒** mark appears on the screen.

**To cancel the Control Lock:** Repeat the above procedure and set Control Lock to "OFF."

**6 Using the SIZE OSD**

You can adjust the picture size using the SIZE OSD.  
This setting is stored in memory for the current input signal.

- 1 Press the MENU button to display the MENU OSD.
- 2 Highlight the SIZE OSD using the BRIGHTNESS and CONTRAST buttons and press the MENU button again.
- 3 To adjust the vertical size press the **0** (BRIGHTNESS) **↓/↑** buttons.
- 4 To adjust the horizontal size press the **0** (CONTRAST) **◀/▶** buttons.
- 5 Press the MENU button once to return to the MENU OSD, or press it twice to return to normal viewing.

**7 Using the LANGUAGE OSD**






You can set the OSD language to English, German, French, Spanish or Japanese using the LANGUAGE OSD.  
To reset to English, press the RESET button while the LANGUAGE OSD is displayed.

- 1 Press the MENU button to display the MENU OSD.
- 2 Highlight the LANGUAGE OSD using the BRIGHTNESS and CONTRAST buttons and press the MENU button again.
- 3 Press the **0** (BRIGHTNESS) **↓/↑** buttons to select the desired language.
- 4 Press the MENU button once to return to the MENU OSD, or press it twice to return to normal viewing.

**8 Using the GEOMETRY OSD**

You can adjust the picture's geometry using the GEOMETRY OSD.  
This setting is stored in memory for the current input signal.

- 1 Press the MENU button to display the MENU OSD.
- 2 Highlight the GEOMETRY OSD using the BRIGHTNESS and CONTRAST buttons and press the MENU button again.
- 3 Press the **0** (BRIGHTNESS) **↓/↑** buttons to select the desired geometry adjustment.
- 4 Press the **0** (CONTRAST) **◀/▶** buttons to adjust the geometry.
- 5 Press the MENU button once to return to the MENU OSD, or press it twice to return to normal viewing.

Select	To
 ROTATION	adjust the picture rotation
 PINCUSHION	adjust the picture sides
 PIN BALANCE	adjust the picture side balance
 KEYSTONE	adjust the trapezoidal distortion
 KEY BALANCE	adjust the picture shape balance

**Resetting the Adjustments****Resetting a specific adjustment:**

- 1 Press the MENU button to display the MENU OSD
- 2 Highlight the OSD containing the adjustment you want to reset using the BRIGHTNESS and CONTRAST buttons and press the MENU button again.
- 3 Press the **0** (BRIGHTNESS) **↓/↑** buttons to select the adjustment you want to reset.
- 4 Press the **→•←** (RESET) button to reset this specific adjustment.

**Resetting all of the adjustments for the current input signal**


While there is no OSD displayed, press the **→•←** (RESET) button.  
All of the adjustments for the current input signal are reset to the factory settings.  
Adjustments not affected by changes in the input signal (such as OSD language, OSD position and the Control Lock function) are not reset to the factory settings.


**Resetting all of the adjustments for all input signals**

Press and hold the **→•←** (RESET) button for more than two seconds.  
All of the adjustments, including the brightness and contrast, are reset to the factory settings.

Customizing Your Monitor

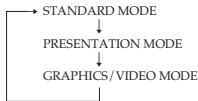
Graphic Enhancement Mode (GEM)

You can automatically change the characteristics of the picture to match the way you use your monitor with the Graphic Enhancement Mode (GEM). Simply press the  (GEM) button to cycle through the three modes.

- 1 Turn on the monitor and computer.
- 2 Press the  (GEM) button to set the mode.



Each time you press the  (GEM) button, the mode changes and appears on the screen as follows.



The STANDARD MODE is ideal for spreadsheets, word processing, and other text oriented applications.

The PRESENTATION MODE is useful for presentation programs that require vivid colors.

The GRAPHICS/VIDEO MODE gives movies and games enhanced visual appeal by increasing the sharpness and brightness.

The selected mode indication appears on the screen for about three seconds.

If the screen appears too white, adjust the color temperature (see "Using the COLOR OSD" on page 7).

**Note**  
The PRESENTATION MODE and GRAPHICS/VIDEO MODE may produce ghost images when displaying text oriented applications. These modes change the brightness of the picture dynamically according to changes in moving pictures. If ghost images appear, set the GEM to STANDARD MODE.

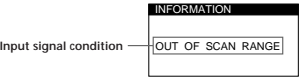
Additional Information

Warning Messages

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

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. The message disappears after about 30 seconds.



To solve these problems, see the "Troubleshooting" section below.

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
<b>No picture</b>	
If the  indicator is not lit	<ul style="list-style-type: none"><li>• Make sure the power cord is properly connected.</li><li>• Make sure the  (POWER) switch is in the "ON" position.</li></ul>
If the "NO INPUT SIGNAL" message appears on the screen, or if the  indicator is either orange or alternating between green and orange	<ul style="list-style-type: none"><li>• Try pressing any key on the computer keyboard.</li><li>• Make sure your computer is turned on.</li><li>• Make sure the video signal cable is properly connected and all plugs are firmly seated in their sockets.</li><li>• Make sure none of the HD15 video input connector pins are bent or pushed in.</li><li>• Make sure the video board is completely seated in the proper bus slot.</li></ul>
If the "OUT OF SCAN RANGE" message appears on the screen	<ul style="list-style-type: none"><li>• Make sure the video frequency range is within that specified for the monitor. Horizontal: 30 ~ 70 kHz Vertical: 50 ~ 120 Hz Refer to your computer system's instruction manual to adjust the video frequency range.</li><li>• If you are using a video signal cable adapter, make sure it is the correct type.</li></ul>
If no message is displayed and the  indicator is green or flashing orange	<ul style="list-style-type: none"><li>• Run the SELF TEST function: 1. Turn off the monitor and disconnect the video cable from the computer. 2. Turn on the monitor and wait five seconds. The "NO INPUT SIGNAL" message should appear with a color bar pattern. The message and pattern are displayed for 30 seconds. If the monitor displays White, Red, Green and Blue colors, the monitor is functioning properly.</li><li>• Make sure none of the HD15 video input connector pins are bent or pushed in.</li></ul>
Picture is scrambled	<ul style="list-style-type: none"><li>• Check your video board manual for the proper monitor setting.</li><li>• Check this manual and make sure the monitor supports the graphics mode and the frequency at which you are trying to operate. Even if the frequency is within the proper range, some video boards may have a sync pulse that is too narrow for the monitor to sync correctly.</li></ul>
Color is not uniform	<ul style="list-style-type: none"><li>• Degauss the monitor (page 8). If you place equipment which generates a magnetic field, such as a loudspeaker, near the monitor, or you change the direction of the monitor, the color may not be uniform. 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.</li></ul>

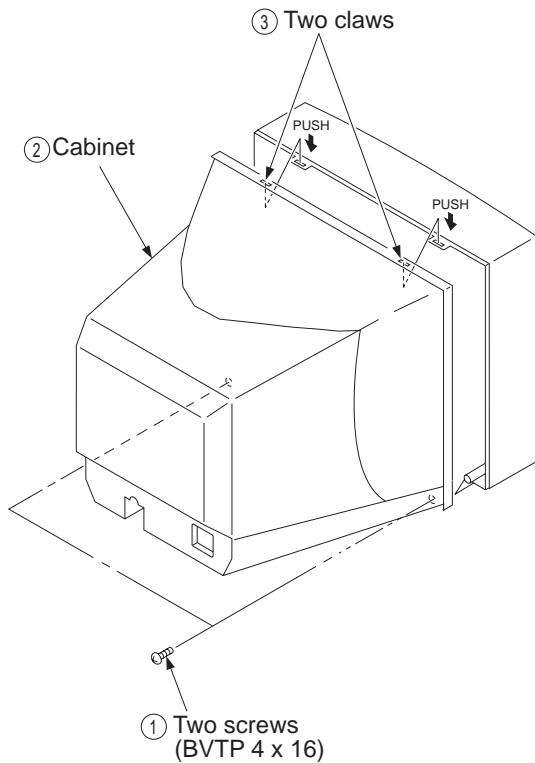


## Additional Information

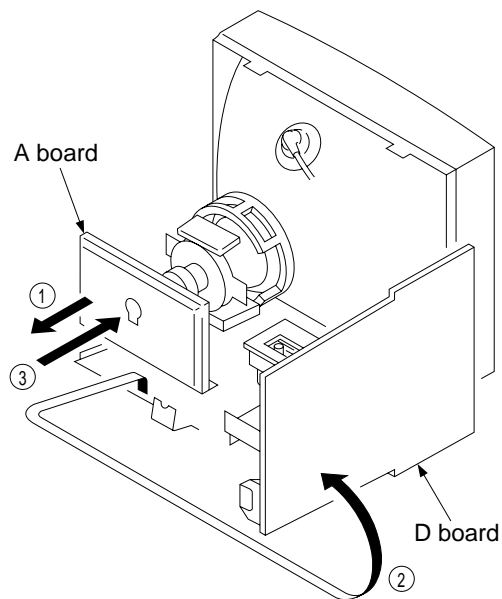
Symptom	Check these items
You cannot adjust the monitor with the buttons on the front panel	<ul style="list-style-type: none"> <li>If the Control Lock function is set to "ON," set it to "OFF" using the OPTION OSD (page 8).</li> </ul>
Screen image is not centered or sized properly	<ul style="list-style-type: none"> <li>Adjust the size (page 8) or centering (page 7).</li> <li>Some video modes do not fill the screen to the edges. This problem tends to occur with certain video boards.</li> </ul>
Edges of the image are curved	<ul style="list-style-type: none"> <li>Adjust the geometry (page 9).</li> </ul>
White lines show red or blue shadows at edges	<ul style="list-style-type: none"> <li>Adjust the convergence using the SCREEN OSD (page 7).</li> </ul>
Picture is fuzzy	<ul style="list-style-type: none"> <li>Adjust the contrast and brightness (page 6).</li> <li>Degauss the monitor using the OPTION OSD (page 8). If you place equipment which generates a magnetic field, such as a loudspeaker, near the monitor, or you change the direction of the monitor, the color may not be uniform. 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.</li> <li>If red or blue shadows appear along the edges of images, adjust the convergence using the SCREEN OSD (page 7).</li> <li>If the moire is cancelled, the picture may become fuzzy. Decrease the moire cancellation effect using the SCREEN OSD (page 7).</li> </ul>
Picture bounces or has wavy oscillations	<ul style="list-style-type: none"> <li>Isolate and eliminate any potential sources of electric or magnetic fields. Common causes for this symptom are electric fans, fluorescent lighting and laser printers.</li> <li>If you have another monitor close to this monitor, increase the distance between them to reduce the interference.</li> <li>Try plugging the monitor into a different AC outlet, preferably on a different circuit.</li> <li>Try using the monitor with a different computer in a different room.</li> </ul>
Picture is flickering	<ul style="list-style-type: none"> <li>Refer to your computer system's manual and change your display refresh rate settings so they match the monitor's capabilities.</li> </ul>
Picture appears to be ghosting	<ul style="list-style-type: none"> <li>Eliminate the use of video cable extensions and/or video switch boxes. Excessive cable length or a weak connection can produce this symptom.</li> </ul>
Wavy or elliptical (moire) pattern is visible	<ul style="list-style-type: none"> <li>Cancel the moire using the SCREEN OSD (page 7). The moire may be modified depending on the connected computer.</li> <li>Due to the relationship between resolution, monitor dot pitch and the pitch of some image patterns, certain screen backgrounds sometimes show moire. Change your desktop pattern.</li> </ul>
One fine horizontal line (wire) is visible	<ul style="list-style-type: none"> <li>This wire stabilizes the vertically striped aperture grille (page 3). This aperture grille allows more light to pass through to the screen giving the Trinitron CRT more color and brightness.</li> </ul>
Hum is heard right after the power is turned on	<ul style="list-style-type: none"> <li>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.</li> </ul>
White does not look white	<ul style="list-style-type: none"> <li>Adjust the color temperature using the COLOR OSD (page 7).</li> </ul>

## SECTION 2 DISASSEMBLY

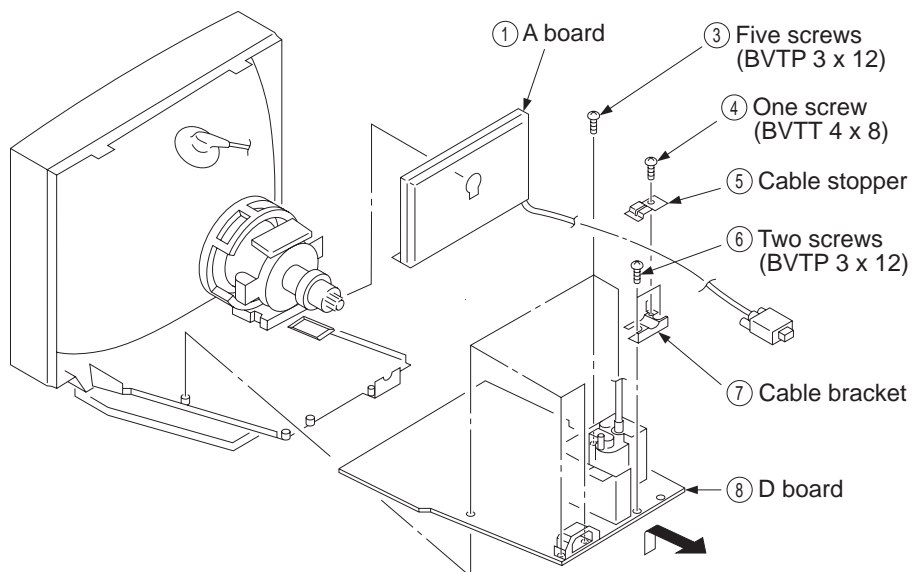
### 2-1. CABINET REMOVAL



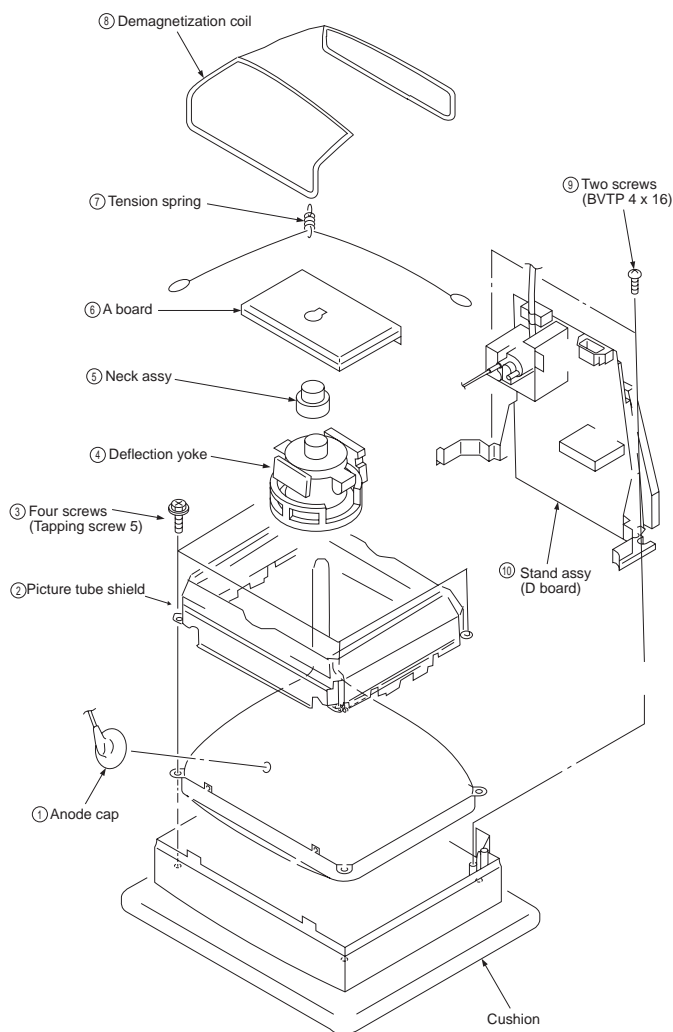
### 2-2. SERVICE POSITION



### 2-3. D and A BOARD REMOVAL



## 2-4. PICTURE TUBE REMOVAL



### REMOVAL OF THE ANODE-CAP

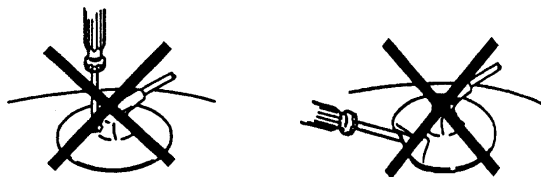
NOTE: Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon painted on the CRT, after removing the anode.

### REMOVAL PROCEDURES

- 
- ① Turn up one side of the rubber cap in the direction indicated by arrow ①.
  - ② Use your thumb to pull the rubber cap firmly in the direction indicated by arrow ②.
  - ③ When one side of the rubber cap separates from the anode button, the anode-cap can be removed by turning the rubber cap and pulling it in the direction of arrow ③.

### HOW TO HANDLE AN ANODE-CAP

- ① Do not use sharp objects which may cause damage to the surface of the anode-cap.
- ② Do not squeeze the rubber covering too hard to avoid damaging the anode-cap. A material fitting called a shatter-hook terminal is built into the rubber.
- ③ Do not force turn the foot of the rubber cover. This may cause the shatter-hook terminal to protrude and damage the rubber.



## SECTION 3

### SAFETY RELATED ADJUSTMENT

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

D - BOARD
Part Replaced (☒)
RV501
Part Replaced (☑)
RV501, T501, R545, R546, R548, R550, R547, R549, R552, D517, IC605, IC901, C540, C542, C544, C541, C535, IC501, C558, R567, R564, C555, C553, C554, C561

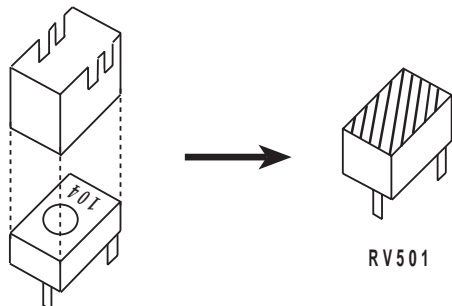
※ Allow the unit to warm up for one minute prior to checking the following conditions:

#### a) HV Regulator Check

- 1) Input white cross hatch signal. (fH = 64 kHz)
- 2) Minimum CONT and BRT controls.
- 3) Cut off Screen VR (G2).
- 4) Input voltage:  $120 \pm 2$  VAC
- 5) Confirm that the voltage is within the voltage range shown below.

Standard voltage:  $25.0KV \pm 0.5KV$

- 6) When replacing components identified by ☑, make sure to recheck the High Voltage.
- 7) Verify the High Voltage as shown above ( $25.0KV \pm 0.5KV$ ) is within specification. If not, set H. SIZE data at minimum (-127) and then adjust RV501 on "D" Board.
- 8) After adjusting the High Voltage within specification, put the RV cover on RV501 as shown below and apply sufficient amount of RTV around RV501.



#### b) HV Hold-Down Check

- 1) Using an external DC Power supply, apply the voltage shown below between cathode of D517 on "D" Board and GND, and confirm that the HV Hold-Down circuit works. (Raster disappears)  
Apply DC Voltage:  $31.4 \pm 0.01$  VDC

##### Check Condition

- Input voltage :  $120 \pm 2$  VAC
- Input signal : (fH = 64 kHz), White Cross Hatch
- Controls : CONT (max) & BRT (center)
- B+ Voltage :  $185 \pm 3.0$  VDC

#### c) Beam Protector Check (Software logic)

- 1) Using an external DC power supply, apply the voltage  $8.8 \pm 0.01$  VDC between pin ⑪ of FBT (T501) and GND, and confirm that the voltage across C541 is 3.7 VDC or less.

##### Check Condition

- Input voltage :  $120 \pm 2$  VAC
- Input signal : (fH = 64 kHz), White Cross Hatch
- Controls : CONT (max) & BRT (center)

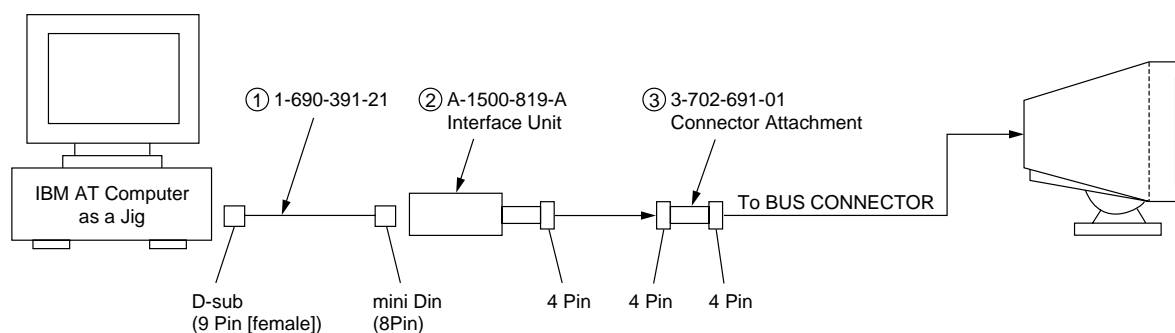
#### d) B+ MAX. Check

- 1) Input white cross hatch (fH = 64 kHz) signal.
- 2) CONT (max) & BRT (center)
- 3) Input voltage:  $120 \pm 2$  VAC  
**Note:** Use NF power supply or make sure that distortion factor is 3% or less.
- 4) Confirm that the voltage is within the voltage range shown below.

Standard voltage:  $185 \pm 3.0$  VDC

## SECTION 4 ADJUSTMENTS

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



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

※ Allow a 30 minute warm-up period prior to making the following adjustments:

### ● Landing Rough Adjustment

1. Enter the full white signal.
2. Adjust the contrast to the maximum.
3. Input full green signal.
4. Moving the DY backward, 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 pure green.
6. Adjust the tilt of DY, and tighten lightly with a clamp.

### ● Landing Fine Adjustment

1. Place the set in the Helmholtz coil.
2. Enter a green signal only.
3. Degauss the entire screen with hand-degausser. Then auto-degauss it.
4. Attach a wobbling coil to the specified position of CRT neck.
5. Attach a landing adjuster sensor on the CRT.
6. Using a landing checker, adjust the DY position, purity, tilt of DY.
7. Clamp the DY screw.

Clamping torque:  $22 \pm 2$  kgcm ( $2.2 \pm 0.2$  N.m)

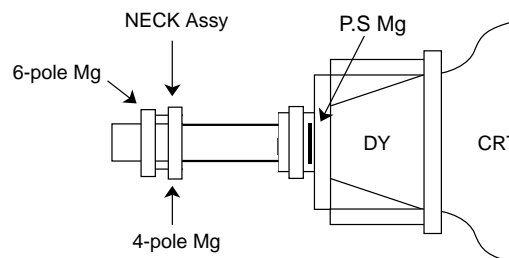
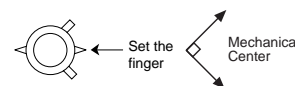
### ● Convergence Rough Adjustment

1. All digital convergence data should be zero by MCP.
2. Enter the white crosshatch signal.
3. Adjust roughly the horizontal and vertical convergence at four-pole magnet.
4. Adjust roughly HMC and VMC at six-pole magnet.

### ● Convergence Fine Adjustment

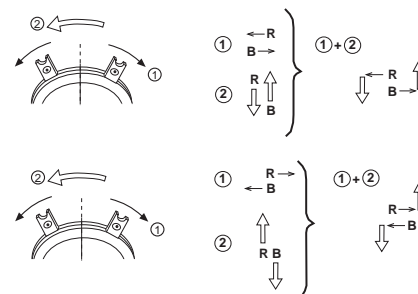
Set DY four-pole magnet to mechanical center before adjustment.

This should be prime mode.



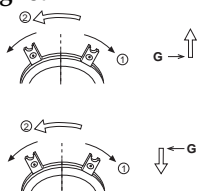
1. Receive R.B. cross-hatch.
2. Adjust H.STAT and V.STAT at four-pole magnet.

### 4 Pole Magnet



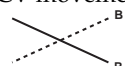
3. Receive White cross-hatch.
4. Adjust HMC and VMC at six-pole magnet.

**< 6 Pole Magnet >**



5. Receive R.B. cross-hatch.
6. Adjust H.TILT by swinging the DY neck right and left.
7. Adjust XCV with XCV core.

XCV movement



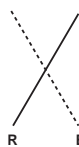
8. Adjust V.TILT with TLV VR.

TLV movement



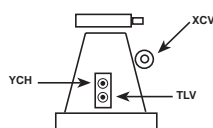
9. Adjust Y.CROSS with YCH VR.

YCH movement



10. Paint lock the four-pole and six-pole Mg.

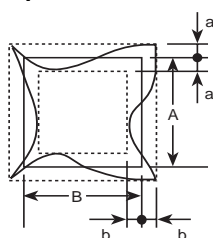
**VR Adjustment on DY**



**Zero Position NECK Ass'y**



**● Vertical and Horizontal Position and Size Specification**

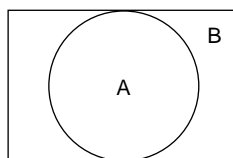


$a < 2.5 \text{ mm}$   
 $b < 2.5 \text{ mm}$

A	B
202	270

**● Convergence Specification**

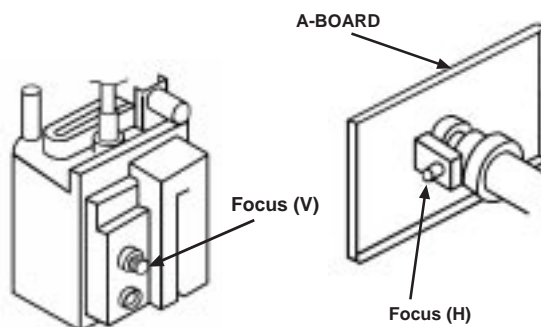
Horizontal and Vertical



$A \leq 0.30 \text{ mm}$   
 $B \leq 0.30 \text{ mm}$

**● Focus adjustment**

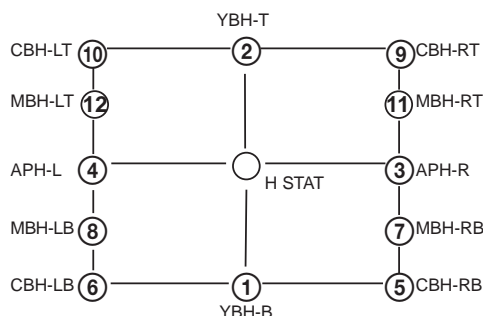
Adjust focus (V) and focus (H) for optimum focus.



**FBT**

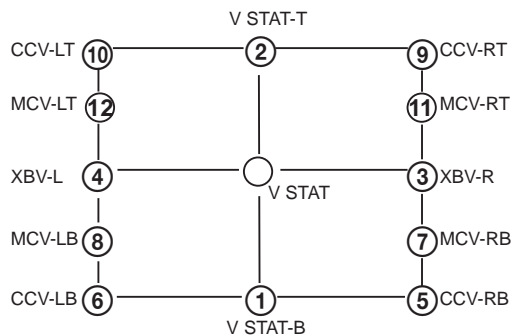
11. Digital Convergence Adjustment

**A. Horizontal Convergence**



Adjust each misconvergence point in sequence.

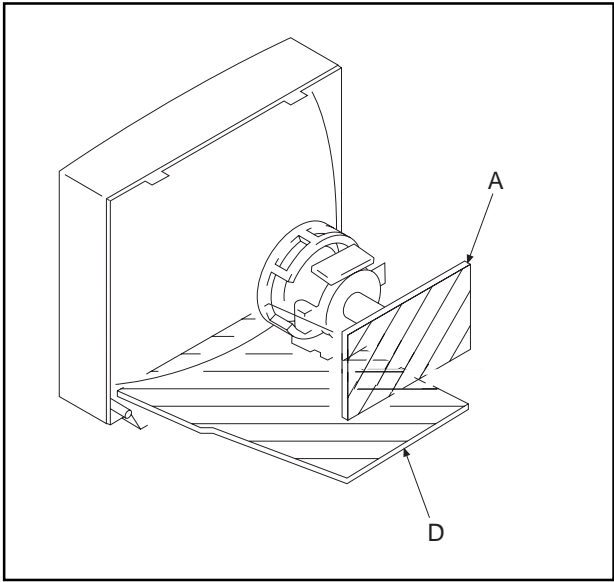
**B. Vertical Convergence**



Adjust each misconvergence point in sequence.

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

5-2. CIRCUIT BOARDS LOCATION










5-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

Note:

- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$ :  $\mu\mu\text{F}$  50 WV or less are not indicated except for electrolytic.
- 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.
- $\Delta$  : 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 by using RV501 ( ) as indicated. (See page 12)

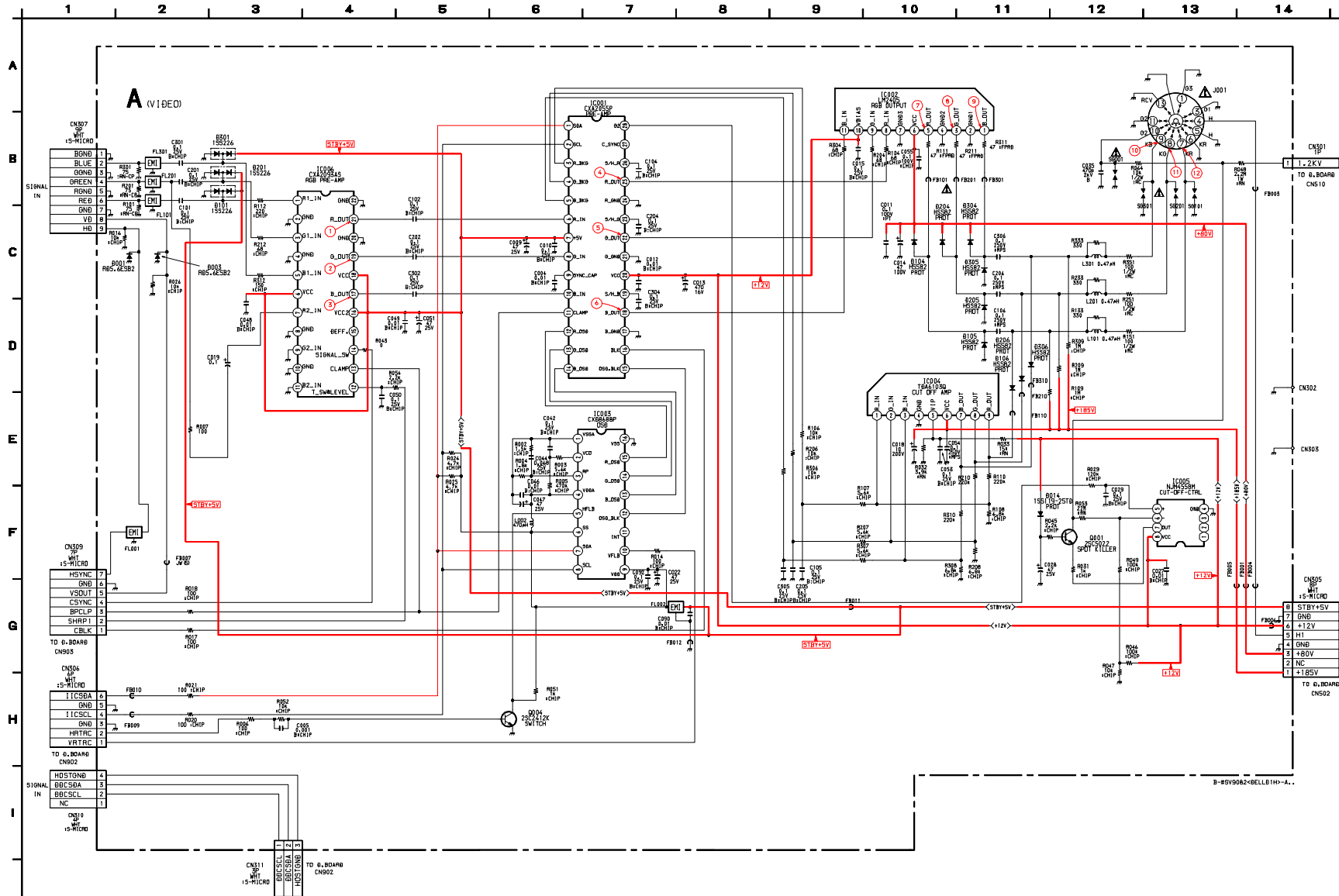
**Note: The components identified by shading and mark  $\Delta$  are critical for safety. Replace only with part number specified.**

**Note: Les composants identifiés par un trame et une marque  $\Delta$  sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.**

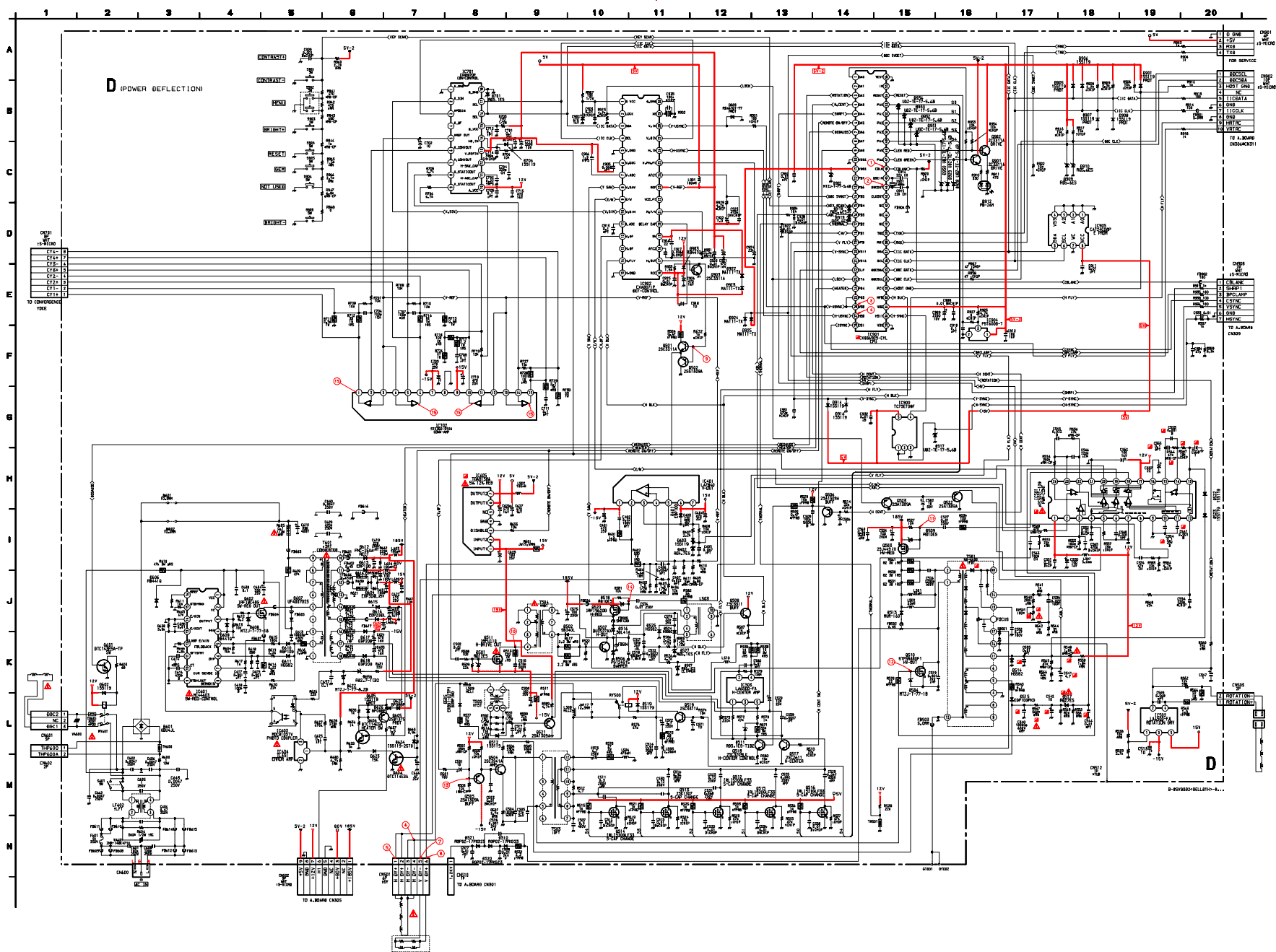
- When replacing parts shown in the table below, be sure to perform the safety related adjustment.

D - BOARD
Part Replaced (  )
RV501
Part Replaced (  )
RV501, T501, R545, R546, R548, R550, R547, R549, R552, D517, IC605, IC901, C540, C542, C544, C541, C535, IC501, C558, R567, R564, C555, C553, C554, C561

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







## SECTION 6 EXPLODED VIEWS

• Items with no part number and no description are not stocked because they are seldom required for routine service.

• The component parts of an assembly are indicated by the reference numbers in the remarks column.

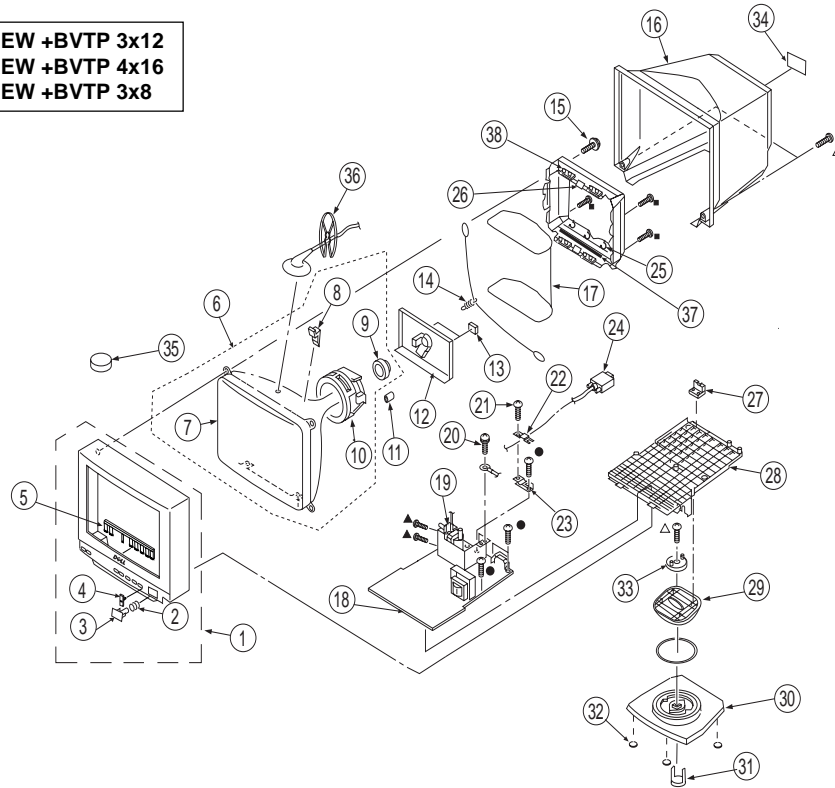
• Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

### Note:

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

### 6-1. CHASSIS (US/CANADA MODEL)

- 7-685-648-79 SCREW +BVTP 3x12
- △ 7-685-663-71 SCREW +BVTP 4x16
- 7-685-646-79 SCREW +BVTP 3x8



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
1	X-4035-217-2	BEZEL ASSY	2-5	21	7-685-881-09	SCREW + BVTT 4x8 (S)	
2	3-653-339-21	SPRING, COMPRESSION		22	* 4-045-131-01	STOPPER, CABLE	
3	4-061-777-01	BUTTON, POWER		23	* 4-045-130-01	BRACKET, CABLE	
4	4-061-776-01	GUIDE, LIGHT		24	* 1-782-837-11	CABLE ASSY VIDEO (15P D-SUB)	
5	* 4-062-431-02	BUTTON, MULTI		25	4-041-021-02	HOLDER, DEGAUSSING COIL (6)	
6	△ 8-738-733-83	ITC ASSY, 17FRFM-R3	7-10	26	4-041-758-02	HOLDER, DEGAUSSING COIL (2)	
7	△ 8-738-733-00	CRT, 17FRFM		27	* 4-060-542-11	COVER, CABLE	
8	4-040-897-01	SPACER, DY		28	* 4-060-541-11	BRACKET, CHASSIS	
9	△ 1-452-923-21	NECK ASSY		29	4-060-534-11	SLIDER	
10	△ 8-451-490-11	DY Y17FRJ3-M		30	X-4035-185-1	STAND BASE, ASSY	
11	1-500-386-11	FILTER CLAMP (FERRITE CORE)		31	4-041-621-21	STOPPER (B)	
12	* A-1298-187-A	A BOARD, COMPLETE		32	* 4-060-533-01	CUSHION	
13	* 4-061-571-01	CUSHION (A)		33	4-060-531-01	STOPPER (A)	
14	* 4-061-573-01	SPRING, TENSION		34	* 4-063-306-01	LABEL, INFORMATION (9082, U/C)	
15	4-365-808-01	SCREW (5), TAPPING		34	* 4-062-529-01	LABEL, INFORMATION (9049, U/C)	
16	* 4-061-061-11	CABINET		35	1-452-032-00	MAGNET, DISC	
17	△ 1-416-282-21	COIL, DEMAGNETIZATION		36	3-704-372-31	HOLDER, HV CABLE	
18	* A-1346-693-A	D BOARD, COMPLETE		37	* 4-062-746-01	ABSORBER	
19	△ 1-453-241-11	TRANSFORMER ASSY, FLYBACK (NX-4400//X4L4)		38	* 4-056-260-01	SPACER, DEGAUSSER COIL	
20	4-389-025-01	SCREW (M4x8)(EXT. TOOTHWASHER)					

• Items with no part number and no description are not stocked because they are seldom required for routine service.

• The component parts of an assembly are indicated by the reference numbers in the remarks column.

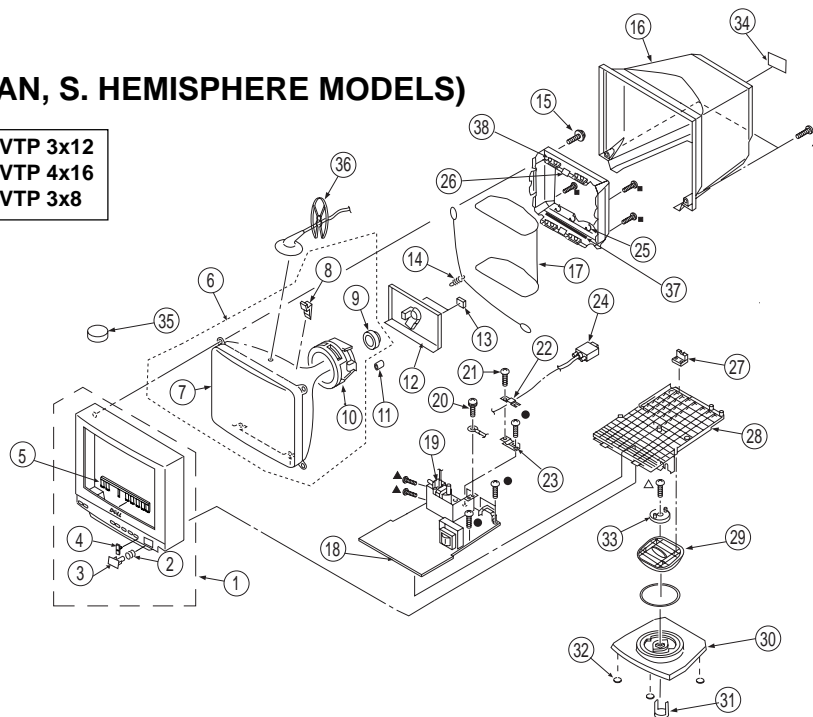
• Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

**Note:**

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

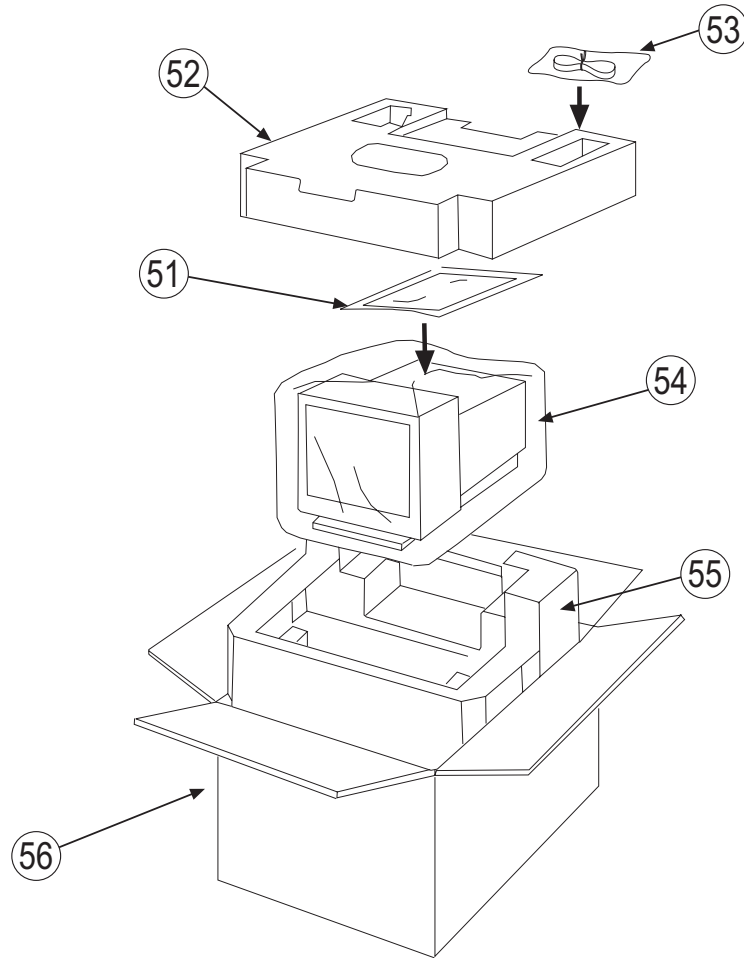
**6-2. CHASSIS (JAPAN, S. HEMISPHERE MODELS)**

- 7-685-648-79 SCREW +BVTP 3x12  
 △ 7-685-663-71 SCREW +BVTP 4x16  
 ■ 7-685-646-79 SCREW +BVTP 3x8



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
1	X-4035-217-2	BEZEL ASSY (J)	2-5	19	△ 1-453-241-11	TRANSFORMER ASSY, FLYBACK (NX-4400/X4L4)	
1	X-4035-344-1	BEZEL ASSY (SH)	2-5	20	4-389-025-01	SCREW (M4x8)(EXT.TOOTHWASHER)	
2	3-653-339-21	SPRING, COMPRESSION (J)		21	7-685-881-09	SCREW + BVTT 4x8 (S)	
2	3-653-339-01	SPRING, COMPRESSION (SH)		22	* 4-045-131-01	STOPPER, CABLE	
3	4-061-777-01	BUTTON, POWER (J)		23	* 4-045-130-01	BRACKET, CABLE	
3	4-062-873-01	BUTTON, POWER (SH)		24	* 1-782-837-11	CABLE ASSY VIDEO (15P D-SUB)	
4	4-061-776-01	GUIDE, LIGHT (J)		25	4-041-021-02	HOLDER, DEGAUSSING COIL (6)	
4	4-062-874-01	GUIDE, LIGHT (SH)		26	4-041-758-02	HOLDER, DEGAUSSING COIL (2)	
5	* 4-062-431-02	BUTTON, MULTI (J)		27	* 4-060-542-11	COVER, CABLE (J)	
5	* 4-062-872-01	BUTTON, MULTI (SH)		27	* 4-063-360-01	COVER, CABLE (SH)	
6	△ 8-738-733-83	ITC ASSY, 17FRFM-R3 (J)	7-10	28	* 4-060-541-11	BRACKET, CHASSIS (J)	
6	△ 8-738-728-81	ITC ASSY, 17FRFM-RS2 (SH)	7-10	28	* 4-061-987-01	BRACKET, CHASSIS (SH)	
7	△ 8-738-733-00	CRT, 17FRFM (J)		29	4-060-534-11	SLIDER (J)	
7	△ 8-738-728-05	CRT, 17FRFM (M41LKN15X) (SH)		29	4-063-361-01	SLIDER (SH)	
8	4-040-897-01	SPACER, DY		30	X-4035-185-1	STAND BASE, ASSY (J)	
9	△ 1-452-923-21	NECK ASSY (J)		30	X-4035-259-1	STAND BASE, ASSY (SH)	
9	△ 1-452-912-11	NECK ASSY (NA-2914) (SH)		31	4-041-621-21	STOPPER (B) (J)	
10	△ 8-451-490-11	DY Y17FRJ3-M		32	* 4-060-533-01	CUSHION (J)	
11	1-500-386-11	FILTER CLAMP (FERRITE CORE)		32	* 4-061-996-01	CUSHION (SH)	
12	* A-1298-187-A	A BOARD, COMPLETE (J)		33	4-060-531-01	STOPPER (A) (J)	
12	* A-1298-460-A	A BOARD, COMPLETE (SH)		33	4-060-340-01	STOPPER (A) (SH)	
13	* 4-061-571-01	CUSHION (A) (J)		34	* 4-062-529-01	LABEL, INFORMATION (J)	
13	* 4-050-329-01	CUSHION (A) (SH)		34	* 4-063-115-01	LABEL, INFORMATION (SH)	
14	4-061-573-01	SPRING, TENSION (J)		35	1-452-032-00	MAGNET, DISC	
14	4-047-316-01	SPRING, TENSION (SH)		36	3-704-372-31	HOLDER, HV CABLE (J)	
15	4-365-808-01	SCREW (5), TAPPING		36	3-704-372-01	HOLDER, HV CABLE (SH)	
16	* 4-061-061-11	CABINET (J)		37	* 4-062-746-01	ABSORBER (J)	
16	* 4-061-989-11	CABINET (SH)		38	* 4-056-260-01	SPACER, DEGAUSSER COIL	
17	△ 1-416-282-21	COIL, DEMAGNETIZATION (J)					
17	△ 1-416-282-11	COIL, DEMAGNETIZATION (SH)					
18	* A-1346-693-A	D BOARD, COMPLETE (J)					
18	* A-1346-718-A	D BOARD, COMPLETE (SH)					

### 6-3. PACKING MATERIALS (FOR ALL MODELS)



REF.NO.	PART NO.	DESCRIPTION	REMARK
51	3-861-661-11	MANUAL, INSTRUCTION (US,CND,J)	
51	3-861-661-21	MANUAL, INSTRUCTION (SH)	
52 *	4-062-365-01	CUSHION (UPPER) (US, CND,J)	
52 *	4-063-118-01	CUSHION (UPPER) (SH)	
53 ▲	1-776-027-51	CORD SET, POWER (US, CND)	
53 ▲	1-575-181-11	CORD SET, POWER (J)	
54 *	4-041-927-11	BAG, POLYETHYLENE (US, CND, J)	
54 *	4-041-927-31	BAG, POLYETHYLENE (SH)	
55 *	4-062-366-01	CUSHION (LOWER) (US, CND,J)	
55 *	4-063-119-01	CUSHION (LOWER) (SH)	
56 *	4-062-367-01	INDIVIDUAL CARTON (US,CND,J)	
56 *	4-063-117-01	INDIVIDUAL CARTON ( SH)	



## SECTION 7

### ELECTRICAL PARTS LIST

**Note:**

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

**Note:**

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

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

- 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

**CAPACITORS**

- MF =  $\mu$ F

**INDUCTORS**

- UH =  $\mu$ H, MMH = mH

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

REF.NO.	PART NO.	DESCRIPTION	REMARK
<div><div>A</div></div>			
* A-1298-187-A COMPLETE PC BOARD, A (U/C, J)			
* A-1298-460-A COMPLETE PC BOARD, A (SH)			
4-382-854-11 SCREW (M3X10), P, SW (+)			
<u>CAPACITOR</u>			
C004	1-164-232-11	CERAMIC CHIP	0.01MF 10% 50V
C005	1-163-009-11	CER 2AMIC CHIP	0.001MF 10% 50V
C009	1-104-664-11	ELECT	47MF 20% 25V
C010	1-164-004-11	CERAMIC CHIP	0.1MF 10% 25V
C011	1-106-220-00	MYLAR	0.1MF 10% 100V
C012	1-164-232-11	CERAMIC CH IP	0.01 10% 100V
C013	1-128-528-11	ELECT	470MF 20% 16V
C014	1-128-562-11	ELECT	47MF 20% 100V
C015	1-164-004-11	CERAMIC CHIP	0.1MF 10% 25V
C018	1-107-652-11	ELECT	10MF 20% 200V
C019	1-137-399-11	FILM	0.1MF 5% 50V
C022	1-104-664-11	ELECT	47MF 20% 25V
C027	1-164-232-11	CERAMIC CHIP	0.01MF 10% 50V
C028	1-104-664-11	ELECT	47MF 20% 25V
C029	1-164-004-11	CERAMIC CHIP	0.1MF 10% 25V
C035	1-162-134-11	CERAMIC	470PF 10% 2KV
C042	1-164-004-11	CERAMIC CHIP	0.1MF 10% 25V
C044	1-164-344-11	CERAMIC CHIP	0.068MF 10% 25V
C046	1-164-232-11	CERAMIC CHIP	0.01MF 10% 50V
C047	1-104-664-11	ELECT	47MF 20% 25V
C048	1-164-232-11	CERAMIC CHIP	0.01MF 10% 50V
C049	1-164-232-11	CERAMIC CHIP	0.01MF 10% 50V
C050	1-164-004-11	CERAMIC CHIP	0.1MF 10% 25V
C051	1-104-664-11	ELECT	47MF 20% 25V
C053	1-164-004-11	CERAMIC CHIP	0.1MF 10% 25V
C054	1-137-528-11	FILM	0.1MF 10% 250V
C055	1-104-503-12	CERAMIC CHIP	0.1MF 10% 100V
C090	1-164-232-11	CERAMIC CHIP	0.01MF 10% 50V

REF.NO.	PART NO.	DESCRIPTION	REMARK
C092	1-164-004-11	CERAMIC CHIP	0.1MF 10% 25V
C101	1-164-004-11	CERAMIC CHIP	0.1MF 10% 25V
C102	1-164-004-11	CERAMIC CHIP	0.1MF 10% 25V
C104	1-164-004-11	CERAMIC CHIP	0.1MF 10% 25V
C105	1-164-004-11	CERAMIC CHIP	0.1MF 10% 25V
C106	1-137-528-11	FILM	0.1MF 10% 250V
C201	1-164-004-11	CERAMIC CHIP	0.1MF 10% 25V
C202	1-164-004-11	CERAMIC CHIP	0.1MF 10% 25V
C204	1-164-004-11	CERAMIC CHIP	0.1MF 10% 25V
C205	1-164-004-11	CERAMIC CHIP	0.1MF 10% 25V
C206	1-137-528-11	FILM	0.1MF 10% 250V
C301	1-164-004-11	CERAMIC CHIP	0.1MF 10% 25V
C302	1-164-004-11	CERAMIC CHIP	0.1MF 10% 25V
C304	1-164-004-11	CERAMIC CHIP	0.1MF 10% 25V
C305	1-164-004-11	CERAMIC CHIP	0.1MF 10% 25V
C306	1-137-528-11	FILM	0.1MF 10% 250V
<u>CONNECTOR</u>			
CN301	1-506-108-41	PIN, CONNECTOR (TERMINAL PIN)	
CN302	1-695-915-11	TAB (CONTACT)	
CN303	1-695-915-11	TAB (CONTACT)	
CN305	1-564-511-11	PLUG, CONNECTOR 8P	
CN306 *	1-564-509-11	PLUG, CONNECTOR 6P	
CN307 *	1-564-512-11	PLUG, CONNECTOR 9P	
CN309 *	1-564-510-11	PLUG, CONNECTOR 7P	
CN310 *	1-564-507-11	PLUG, CONNECTOR 4P	
CN311 *	1-564-506-11	PLUG, CONNECTOR 3P	
<u>DIODE</u>			
D001	8-719-109-89	DIODE RD5.6ESB2	
D003	8-719-109-89	DIODE RD5.6ESB2	
D014	8-719-911-19	DIODE 1SS119-25	
D101	8-719-800-76	DIODE 1SS226	
D104	8-719-970-83	DIODE HSS82	

Note:

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

Note:

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



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
D105	8-719-970-83	DIODE HSS82		<u>COIL</u>			
D106	8-719-970-83	DIODE HSS82		L002	1-410-682-31	INDUCTOR 470UH	
D201	8-719-800-76	DIODE 1SS226		L101	1-410-750-41	INDUCTOR 0.47UH	
D204	8-719-970-83	DIODE HSS82		L201	1-410-750-41	INDUCTOR 0.47UH	
D205	8-719-970-83	DIODE HSS82		L301	1-410-750-41	INDUCTOR 0.47UH	
D206	8-719-970-83	DIODE HSS82		<u>TRANSISTOR</u>			
D301	8-719-800-76	DIODE 1SS226		Q001	8-729-032-61	TRANSISTOR 2SC5022-02	
D304	8-719-970-83	DIODE HSS82		Q004	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	
D305	8-719-970-83	DIODE HSS82		<u>RESISTOR</u>			
D306	8-719-970-83	DIODE HSS82		R002	1-216-053-00	RES,CHIP 1.5K 5% 1/10W	
<u>FERRITE BEAD</u>				R003	1-216-067-00	RES,CHIP 5.6K 5% 1/10W	
FB001	1-412-911-11	FERRITE		R004	1-216-055-00	RES,CHIP 1.8K 5% 1/10W	
FB003	1-412-911-11	FERRITE		R005	1-216-113-00	RES,CHIP 470K 5% 1/10W	
FB004	1-412-911-11	FERRITE		R006	1-216-025-91	RES,CHIP 100 5% 1/10W	
FB005	1-412-911-11	FERRITE		R007	1-216-025-91	RES,CHIP 100 5% 1/10W	
FB006	1-412-911-11	FERRITE		R014	1-216-025-91	RES,CHIP 100 5% 1/10W	
FB009	1-412-911-11	FERRITE		R016	1-216-073-00	RES,CHIP 10K 5% 1/10W	
FB010	1-412-911-11	FERRITE		R017	1-216-025-91	RES,CHIP 100 5% 1/10W	
FB011	1-412-911-11	FERRITE		R018	1-216-025-91	RES,CHIP 100 5% 1/10W	
FB012	1-412-911-11	FERRITE		R020	1-216-025-91	RES,CHIP 100 5% 1/10W	
FB101 $\Delta$	1-216-295-91	SHORT		R021	1-216-025-91	RES,CHIP 100 5% 1/10W	
FB110	1-412-911-11	FERRITE		R024	1-216-065-00	RES,CHIP 4.7K 5% 1/10W	
FB201 $\Delta$	1-216-295-91	SHORT		R025	1-216-065-00	RES,CHIP 4.7K 5% 1/10W	
FB210	1-412-911-11	FERRITE		R026	1-216-073-00	RES,CHIP 10K 5% 1/10W	
FB301 $\Delta$	1-216-295-91	SHORT		R029	1-216-099-00	RES,CHIP 120K 5% 1/10W	
FB310	1-412-911-11	FERRITE		R031	1-216-049-91	RES,CHIP 1K 5% 1/10W	
<u>FILTER</u>				R032	1-216-063-91	RES,CHIP 3.9K 5% 1/10W	
FL001	1-421-928-11	FILTER, NOISE		R033	1-216-077-00	RES,CHIP 15K 5% 1/10W	
FL002	1-412-911-11	FERRITE		R043	1-216-295-91	SHORT 0	
FL101	1-414-793-21	FERRITE		R045	1-216-057-00	RES,CHIP 2.2K 5% 1/10W	
FL201	1-414-793-21	FERRITE		R046	1-216-097-91	RES,CHIP 100K 5% 1/10W	
FL301	1-414-793-21	FERRITE		R047	1-216-073-00	RES,CHIP 10K 5% 1/10W	
<u>IC</u>				R048	1-211-885-21	METAL 2.2M 5% 1W	
IC001	8-752-076-89	IC CXA2055P		R049	1-216-097-91	RES,CHIP 100K 5% 1/10W	
IC002	8-759-435-33	IC LM2405T		R051	1-216-049-91	RES,CHIP 1K 5% 1/10W	
IC003	8-759-478-65	IC CXD8688P		R052	1-216-073-00	RES,CHIP 10K 5% 1/10W	
IC004	8-759-434-40	IC TDA6103Q/N3,112		R053	1-219-621-91	METAL 22M 10% 1/4W	
IC005	8-759-100-96	IC UPC4558G2		R054	1-216-057-00	RES,CHIP 2.2K 5% 1/10W	
IC006	8-752-082-65	IC CXA2093S		R064	1-202-830-00	SOLID 10K 20% 1/2W	
<u>JACK</u>				R101	1-215-394-00	METAL 75 1% 1/4W	
J001 $\Delta$	1-251-598-11	SOCKET, CRT		R104	1-216-021-00	RES,CHIP 68 5% 1/10W	
				R106	1-216-073-00	RES,CHIP 10K 5% 1/10W	
				R107	1-216-067-00	RES,CHIP 5.6K 5% 1/10W	
				R108	1-216-069-00	RES,CHIP 6.8K 5% 1/10W	



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

**Note:** Les composants identifiés par un trame et une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R109	1-216-121-91	RES,CHIP	1M 5% 1/10W	<b>CAPACITOR</b>			
R110	1-215-477-00	METAL	220K 1% 1/4W	C401	1-126-941-11	ELECT	470MF 20% 25V
R111	1-249-401-11	CARBON	47 5% 1/4W F	C402	1-106-228-00	MYLAR	0.22MF 10% 100V
R112	1-216-033-00	RES,CHIP	220 5% 1/10W	C403	1-126-969-11	ELECT	220MF 20% 50V
R133	1-249-411-11	CARBON	330 5% 1/4W	C404	1-126-941-11	ELECT	470MF 20% 25V
R151	1-202-549-00	SOLID	100 20% 1/2W	C405	1-137-374-11	FILM	0.047MF 5% 50V
R201	1-215-394-00	METAL	75 1% 1/4W	C406	1-137-368-11	FILM	0.0047MF 5% 50V
R204	1-216-021-00	RES,CHIP	68 5% 1/10W	C407	1-137-372-11	FILM	0.022MF 5% 50V
R206	1-216-073-00	RES,CHIP	10K 5% 1/10W	C501	1-126-964-11	ELECT	10MF 20% 50V
R207	1-216-067-00	RES,CHIP	5.6K 5% 1/10W	C502	1-137-370-11	FILM	0.01MF 5% 50V
R208	1-216-069-00	RES,CHIP	6.8K 5% 1/10W	C503	1-164-232-11	CERAMIC CHIP	0.01MF 10% 50V
R209	1-216-121-91	RES,CHIP	1M 5% 1/10W	C504	1-164-645-11	CERAMIC	1000PF 10% 500V
R210	1-215-477-00	METAL	220K 1% 1/4W	C505	1-109-879-11	CERAMIC	22PF 5% 2KV
R211	1-249-401-11	CARBON	47 5% 1/4W F	C506	1-126-960-11	ELECT	1MF 20% 50V
R212	1-216-021-00	RES,CHIP	68 5% 1/10W	C507	1-117-964-11	FILM	0.3MF 5% 400V
R233	1-249-411-11	CARBON	330 5% 1/4W	C508	1-104-665-11	ELECT	100MF 20% 25V
R251	1-202-549-00	SOLID	100 20% 1/2W	C509	1-162-117-00	CERAMIC	100PF 10% 500V
R301	1-215-394-00	METAL	75 1% 1/4W	C510	1-102-228-00	CERAMIC	470PF 10% 500V
R304	1-216-021-00	RES,CHIP	68 5% 1/10W	C511	1-119-862-11	FILM	0.3MF 5% 200V
R306	1-216-073-00	RES,CHIP	10K 5% 1/10W	C512	1-164-232-11	CERAMIC CHIP	0.01MF 10% 50V
R307	1-216-067-00	RES,CHIP	5.6K 5% 1/10W	C513	1-126-964-11	ELECT	10MF 20% 50V
R308	1-216-069-00	RES,CHIP	6.8K 5% 1/10W	C514	1-119-861-11	FILM	0.91MF 5% 200V
R309	1-216-121-91	RES,CHIP	1M 5% 1/10W	C515	1-164-232-11	CERAMIC CHIP	0.01MF 10% 50V
R310	1-215-477-00	METAL	220K 1% 1/4W	C516	1-117-206-21	FILM	0.36MF 5% 250V
R311	1-249-401-11	CARBON	47 5% 1/4W F	C517	1-137-370-11	FILM	0.01MF 5% 50V
R312	1-216-029-00	RES,CHIP	150 5% 1/10W	C518	1-117-954-11	FILM	4300PF 3% 1.8KV
R333	1-249-411-11	CARBON	330 5% 1/4W	C519	1-136-538-11	FILM	0.001MF 3% 2KV
R351	1-202-549-00	SOLID	100 20% 1/2W	C520	1-164-232-11	CERAMIC CHIP	0.01MF 10% 50V
<b>SPARK GAP</b>				C521	1-107-444-11	CERAMIC	100PF 5% 2KV
SG001 $\Delta$	1-519-422-11	GAP, SPARK		C522	1-136-481-11	MYLAR	0.0022MF 10% 100V
SG101 $\Delta$	1-517-499-21	GAP, SPARK		C523	1-115-511-11	FILM	0.12MF 5% 250V
SG201 $\Delta$	1-517-499-21	GAP, SPARK		C524	1-107-955-11	ELECT	100MF 20% 200V
SG301 $\Delta$	1-517-499-21	GAP, SPARK		C525	1-119-860-11	FILM	0.082MF 5% 200V
<b>D</b>				C526	1-164-646-11	CERAMIC	2200PF 10% 500V
* A-1346-693-A D BOARD, COMPLETE (U/C, J)				C527	1-117-879-91	CAPACITOR	0.01MF 10% 250V
* A-1346-718-A D BOARD, COMPLETE (SH)				C528	1-115-349-51	CERAMIC	0.01MF 2KV
1-533-223-11 CLIP, FUSE				C529	1-136-060-00	FILM	0.047MF 5% 400V
2-371-561-00 BUSHING (P), INSULATING				C530	1-115-511-11	FILM	0.12MF 5% 250V
* 4-060-552-01 HOLDER, LED				C531	1-115-509-11	FILM	0.068MF 5% 250V
4-060-555-01 SHEET, INSULATOR				C532	1-137-426-11	FILM	0.47MF 10% 100V
4-389-025-01 SCREW (M4) (EXT TOOTH WASHER)				C535	1-137-370-11	FILM	0.01MF 5% 50V
4-382-854-11 SCREW (M3X10), P, SW (+)				C536	1-164-232-11	CERAMIC CHIP	0.01MF 10% 50V
				C538	1-164-232-11	CERAMIC CHIP	0.01MF 10% 50V
				C539	1-137-418-11	FILM	0.022MF 10% 100V
				C540	1-136-203-11	FILM	10000PF 5% 630V
				C541	1-126-963-11	ELECT	4.7MF 20% 50V

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

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REF.NO.	PART NO.	DESCRIPTION	REMARK				REF.NO.	PART NO.	DESCRIPTION	REMARK			
C542	1-126-964-11	ELECT	10MF	20%	50V		C620	1-128-563-11	ELECT	100MF	20%	100V	
C543	1-102-973-00	CERAMIC	100PF	5%	50V		C621	1-126-942-61	ELECT	1000MF	20%	25V	
C544	1-137-370-11	FILM	0.01MF	5%	50V		C622	1-126-941-11	ELECT	470MF	20%	25V	
C545	1-163-037-11	CERAMIC CHIP	0.022MF	10%	50V		C623	1-126-942-61	ELECT	1000MF	20%	25V	
C546	1-163-259-91	CERAMIC CHIP	220PF	5%	50V		C624	1-126-935-11	ELECT	470MF	20%	16V	
C547	1-126-960-11	ELECT	1MF	20%	50V		C625	1-137-399-11	FILM	0.1MF	5%	50V	
C548	1-137-364-11	FILM	0.001MF	5%	50V		C626	1-126-935-11	ELECT	470MF	20%	16V	
C549	1-137-375-11	FILM	0.068MF	5%	50V		C627	1-126-935-11	ELECT	470MF	20%	16V	
C550	1-126-933-11	ELECT	100MF	20%	16V		C628	1-104-665-11	ELECT	100MF	20%	25V	
C551	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V		C629	1-113-900-11	CERAMIC	470PF	10%	250V	
C552	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V		C630	1-137-399-11	FILM	0.1MF	5%	50V	
C553	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V		C632	1-126-935-11	ELECT	470MF	20%	16V	
C554	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V		C633	1-126-935-11	ELECT	470MF	20%	16V	
C555	1-137-399-11	FILM	0.1MF	5%	50V		C634	1-126-940-11	ELECT	330MF	20%	25V	
C556	1-163-259-91	CERAMIC CHIP	220PF	5%	50V		C635	1-137-370-11	FILM	0.01MF	5%	50V	
C557	1-126-965-11	ELECT	22MF	20%	50V		C637	1-137-399-11	FILM	0.1MF	5%	50V	
C558	1-126-960-11	ELECT	1MF	20%	50V		C640	1-117-703-11	CERAMIC	0.0047MF	20%	250V	
C559	1-137-368-11	FILM	0.0047MF	5%	50V		C642 $\Delta$	1-117-703-11	CERAMIC	0.0047MF	20%	250V	
C560	1-117-206-21	FILM	0.36MF	5%	250V		C643 $\Delta$	1-117-703-11	CERAMIC	0.0047MF	20%	250V	
C561	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V		C644	1-104-664-11	ELECT	47MF	20%	25V	
C562	1-126-933-11	ELECT	100MF	20%	16V		C701	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V	
C563	1-163-005-11	CERAMIC CHIP	470PF	10%	50V		C702	1-126-964-11	ELECT	10MF	20%	50V	
C570	1-104-665-11	ELECT	100MF	20%	25V		C703	1-136-169-00	FILM	0.22MF	5%	50V	
C571	1-126-964-11	ELECT	10MF	20%	50V		C704	1-163-259-91	CERAMIC CHIP	220PF	5%	50V	
C572	1-107-651-11	ELECT	4.7MF	20%	250V		C705	1-137-399-11	FILM	0.1MF	5%	50V	
C573	1-107-651-11	ELECT	4.7MF	20%	250V		C706	1-102-973-00	CERAMIC	100PF	5%	50V	
C574	1-117-879-91	CAPACITOR	0.01MF	10%	250V		C707	1-102-973-00	CERAMIC	100PF	5%	50V	
C575	1-107-955-11	ELECT	100MF	20%	200V		C708	1-137-399-11	FILM	0.1MF	5%	50V	
C576	1-163-243-11	CERAMIC CHIP	47PF	5%	50V		C709	1-126-941-11	ELECT	470MF	20%	25V	
C577	1-115-349-51	CERAMIC	0.01MF		2KV		C710	1-126-941-11	ELECT	470MF	20%	25V	
C578	1-117-214-11	CERAMIC	0.001MF	10%	2KV		C711	1-137-399-11	FILM	0.1MF	5%	50V	
C579	1-109-879-11	CERAMIC	22PF	5%	2KV		C712	1-137-399-11	FILM	0.1MF	5%	50V	
C580	1-137-370-11	FILM	0.01MF	5%	50V		C713	1-126-927-11	ELECT	2200MF	20%	10V	
C582	1-126-964-11	ELECT	10MF	20%	50V		C714	1-163-131-00	CERAMIC CHIP	390PF	5%	50V	
C601 $\Delta$	1-117-693-11	CERAMIC	100PF	10%	250V		C715	1-126-935-11	ELECT	470MF	20%	16V	
C602 $\Delta$	1-117-703-11	CERAMIC	0.0047MF	20%	250V		C902	1-126-935-11	ELECT	470MF	20%	16V	
C604 $\Delta$	1-104-708-11	FILM	0.47MF	20%	250V		C903	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C605 $\Delta$	1-107-533-11	FILM	1MF	20%	250V		C905	1-137-375-11	FILM	0.068MF	5%	50V	
C606 $\Delta$	1-117-703-11	CERAMIC	0.0047MF	20%	250V		C906	1-136-177-00	FILM	1MF	5%	50V	
C608 $\Delta$	1-117-693-11	CERAMIC	100PF	10%	250V		C908	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C610	1-109-984-11	ELECT(BLOCK)	390MF	20%	400V		C909	1-126-927-11	ELECT	2200MF	20%	10V	
C613	1-136-203-11	FILM	10000PF	5%	630V		C910	1-137-399-11	FILM	0.1MF	5%	50V	
C614	1-136-177-00	FILM	1MF	5%	50V		C911	1-137-370-11	FILM	0.01MF	5%	50V	
C615	1-137-364-11	FILM	0.001MF	5%	50V		C912	1-126-933-11	ELECT	100MF	20%	16V	
C616	1-102-824-00	CERAMIC	470PF	5%	50V		C913	1-137-399-11	FILM	0.1MF	5%	50V	
C617	1-137-364-11	FILM	0.001MF	5%	50V		C914	1-102-514-11	CERAMIC	22PF	5%	50V	
C618	1-102-106-00	CERAMIC	100PF	10%	50V		C915	1-102-514-11	CERAMIC	22PF	5%	50V	
C619	1-125-700-11	ELECT(BLOCK)	220MF	20%	200V		C916	1-126-965-11	ELECT	22MF	20%	50V	





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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C917	1-163-019-00	CERAMIC CHIP	0.0068MF 10% 50V	D511	8-719-109-85	DIODE RD5.1ESB2	
C918	1-126-964-11	ELECT	10MF 20% 50V	D512	8-719-911-19	DIODE 1SS119-25	
C920	1-164-232-11	CERAMIC CHIP	0.01MF 10% 50V	D513	8-719-066-40	DIODE MUR160	
C921	1-126-935-11	ELECT	470MF 20% 16V	D514	8-719-970-83	DIODE HSS82	
C922	1-126-960-11	ELECT	1MF 20% 50V	D515	8-719-979-58	DIODE EGP10D	
C923	1-163-133-00	CERAMIC CHIP	470PF 5% 50V	D516	8-719-051-97	DIODE 3DL41A(LC6-15)	
C924	1-126-965-11	ELECT	22MF 20% 50V	D517 △	8-719-110-67	DIODE RD27ESB2	
C925	1-164-232-11	CERAMIC CHIP	0.01MF 10% 50V	D518	8-719-110-17	DIODE RD10ESB2	
C926	1-126-935-11	ELECT	470MF 20% 16V	D519	8-719-911-19	DIODE 1SS119-25	
C927	1-164-232-11	CERAMIC CHIP	0.01MF 10% 50V	D520	8-719-028-72	DIODE RGP02-17EL-6433	
C928	1-164-232-11	CERAMIC CHIP	0.01MF 10% 50V	D521	8-719-028-72	DIODE RGP02-17EL-6433	
C929	1-163-009-11	CERAMIC CHIP	0.001MF 10% 50V	D522	8-719-911-19	DIODE 1SS119-25	
C930	1-137-370-11	FILM	0.01MF 5% 50V	D523	8-719-911-19	DIODE 1SS119-25	
C931	1-163-133-00	CERAMIC CHIP	470PF 5% 50V	D524	8-719-970-83	DIODE HSS82	
C932	1-164-232-11	CERAMIC CHIP	0.01MF 10% 50V	D525	8-719-970-83	DIODE HSS82	
C933	1-137-370-11	FILM	0.01MF 5% 50V	D527	8-719-109-85	DIODE RD5.1ESB2	
C934	1-102-852-91	CERAMIC	47PF 5% 50V	D601 △	8-719-025-88	DIODE GBU4JL-6088	
C935	1-102-973-00	CERAMIC	100PF 5% 50V	D602	8-719-911-19	DIODE 1SS119-25	
<b>CONNECTOR</b>				D604	8-719-979-50	DIODE EGP30D	
CN501 *	1-580-798-11	CONNECTOR PIN (DY) 6P		D605	8-719-911-19	DIODE 1SS119-25	
CN502 *	1-564-512-11	PLUG, CONNECTOR 9P		D606	8-719-986-73	DIODE RB441Q	
CN510 *	1-900-802-12	CONNECTOR, 1P MINI		D607	8-719-053-19	DIODE UF4007G23	
CN512	1-695-915-11	TAB (CONTACT)		D608	8-719-110-49	DIODE RD18ESB2	
CN600 △	1-251-227-11	INLET, AC		D609	8-719-986-73	DIODE RB441Q	
CN601	1-691-960-11	PIN, CONNECTOR (PC BOARD) 3P		D610	8-719-302-43	DIODE EL1Z	
CN602 *	1-506-371-00	PIN, CONNECTOR 2P		D611	8-719-970-83	DIODE HSS82	
CN701	1-564-511-11	PLUG, CONNECTOR 8P		D612	8-719-067-68	DIODE FMC-26UA	
CN901 *	1-508-879-11	BASE POST 4P			4-382-854-11	SCREW (M3X10), P, SW (+) (FOR D612)	
CN902	1-564-513-11	PLUG, CONNECTOR 10P		D613	8-719-979-58	DIODE EGP10D	
CN903 *	1-564-510-11	PLUG, CONNECTOR 7P		D614	8-719-979-50	DIODE EGP30D	
<b>DIODE</b>				D615	8-719-048-61	DIODE EGP20DL-6349 (U/C, J)	
D401	8-719-979-58	DIODE EGP10D		D615	8-719-979-84	DIODE EGP20DPKG23 (SH)	
D402	8-719-109-81	DIODE RD4.7ESB2		D616	8-719-048-61	DIODE EGP20DL-6349	
D403	8-719-911-19	DIODE 1SS119-25		D617	8-719-979-84	DIODE EGP20DPKG23	
D501	8-719-110-31	DIODE RD12ESB2		D618	8-719-979-84	DIODE EGP20DPKG23	
D502	8-719-975-77	DIODE SB340		D622	8-719-110-08	DIODE RD8.2ESB2	
D504	8-719-110-49	DIODE RD18ESB2		D623	1-215-449-00	METAL 15K 1% 1/4W	
D505	8-719-941-74	DIODE ERB91-02		D624	8-719-911-19	DIODE 1SS119-25	
D506	4-382-854-11	SCREW (M3X10), P, SW (+)		D625	8-719-908-03	DIODE GP08D	
D506	8-719-061-21	DIODE FMQ-G5FMS		D626	8-719-908-03	DIODE GP08D	
D507	8-719-109-85	DIODE RD5.1ESB2		D654	8-719-109-60	DIODE RD2.7ESB2	
D509	8-719-110-17	DIODE RD10ESB2		D701	8-719-109-85	DIODE RD5.1ES-T1B2	
D510	8-719-028-72	DIODE RGP02-17EL-6433		D704	8-719-911-19	DIODE 1SS119-25	
				D901	8-719-911-19	DIODE 1SS119-25	
				D902	8-719-109-89	DIODE RD5.6ESB2	
				D903	8-719-986-73	DIODE RB441Q	

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REF.NO.	PART NO.	DESCRIPTION	REMARK
D905	8-719-911-19	DIODE 1SS119-25	
D906	8-719-911-19	DIODE 1SS119-25	
D907	8-719-911-19	DIODE 1SS119-25	
D908	8-719-911-19	DIODE 1SS119-25	
D909	8-719-109-89	DIODE RD5.6ESB2	
D910	8-719-109-89	DIODE RD5.6ESB2	
D912	8-719-045-19	DIODE SPB-26MVWF	
D914	8-719-911-19	DIODE 1SS119-25	
D916	8-719-911-19	DIODE 1SS119-25	
D917	8-719-158-15	DIODE RD5.6SB	
D918	8-719-109-89	DIODE RD5.6ESB2	
D919	8-719-109-89	DIODE RD5.6ESB2	
D920	8-719-986-73	DIODE RB441Q	
D922	8-719-404-49	DIODE MA111	
D923	8-719-404-49	DIODE MA111	
D924	8-719-404-49	DIODE MA111	
D925	8-719-404-49	DIODE MA111	
D928	8-719-158-15	DIODE RD5.6SB	
D929	8-719-158-15	DIODE RD5.6SB	
D930	8-719-158-15	DIODE RD5.6SB	
D931	8-719-158-15	DIODE RD5.6SB	
D932	8-719-158-15	DIODE RD5.6SB	
D933	8-719-158-15	DIODE RD5.6SB	
D934	8-719-158-15	DIODE RD5.6SB	

#### FUSE

F601  $\Delta$  1-576-231-11 FUSE (H.B.C.) 4A/250V

#### FERRITE BEAD

FB502	1-410-396-41	FERRITE	0.45UH
FB504	1-412-911-11	FERRITE	
FB506	1-412-911-11	FERRITE	
FB601	1-410-396-41	FERRITE	0.45UH
FB602	1-410-396-41	FERRITE	0.45UH
FB603	1-412-911-11	FERRITE	
FB604	1-412-911-11	FERRITE	
FB605	1-412-911-11	FERRITE	
FB606	1-410-396-41	FERRITE	0.45UH
FB607	1-412-911-11	FERRITE	

FB608  $\Delta$  1-412-911-11 FERRITE

FB609  $\Delta$  1-412-911-11 FERRITE

FB610  $\Delta$  1-412-911-11 FERRITE

FB611  $\Delta$  1-412-911-11 FERRITE

FB612  $\Delta$  1-412-911-11 FERRITE

FB613  $\Delta$  1-412-911-11 FERRITE

REF.NO.	PART NO.	DESCRIPTION	REMARK
FB614 $\Delta$	1-412-911-11	FERRITE	
FB615 $\Delta$	1-412-911-11	FERRITE	
FB616	1-412-911-11	FERRITE	
FB617	1-412-911-11	FERRITE	
FB902	1-247-807-31	CARBON	100 5% 1/4W
FB904	1-543-961-11	FERRITE	

#### TERMINAL

GT001 \* 1-537-738-21 TERMINAL, EARTH

GT002 \* 1-537-738-21 TERMINAL, EARTH

#### IC

IC401	8-759-444-83	IC LA7840L	
	4-382-854-11	SCREW (M3X10), P, SW (+)	(FOR IC401)
IC501 $\Delta$	8-759-478-76	IC UPC5021-109	
IC502	8-759-803-42	IC LA6500-FA	
IC503	8-759-803-42	IC LA6500-FA	
	4-382-854-11	SCREW (M3X10), P, SW (+)	(FOR IC503)
IC601 $\Delta$	8-759-399-821	IC MC44603P	
IC603 $\Delta$	8-749-012-59	IC MOC8105TV	
IC604 $\Delta$	8-759-908-15	IC TL431CLP	
IC605 $\Delta$	8-759-072-98	IC TDA8138A	
	4-382-854-11	SCREW (M3X10), P, SW (+)	(FOR IC605)
IC701	8-759-478-66	IC CXA8070P	
	4-382-854-21	SCREW (M3X14), P, SW (+)	(FOR IC701)
IC702	8-749-014-32	IC STK392-910A	
IC900	8-759-525-10	IC TC7SET08F(TE85L)	
IC901	8-759-531-39	IC CXD8692S-CYL(OTP)	
IC902	8-759-478-68	IC CXA8071P	
IC904	8-759-165-81	IC PST600D-T	
IC905	8-759-370-34	IC ST24C08FB6	

#### CHIP CONDUCTOR

JR001	1-216-296-91	SHORT	
JR002	1-216-296-91	SHORT	
JR003	1-216-296-91	SHORT	
JR004	1-216-296-91	SHORT	
JR005	1-216-296-91	SHORT	
JR006	1-216-296-91	SHORT	
JR007	1-216-296-91	SHORT	
JR008	1-216-296-91	SHORT	
JR009	1-216-296-91	SHORT	
JR010	1-216-296-91	SHORT	
JR011	1-216-296-91	SHORT	
JR012	1-216-296-91	SHORT	



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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
JR013	1-216-296-91	SHORT		Q510	8-729-042-45	TRANSISTOR STP5NA80FI	
JR014	1-216-296-91	SHORT		4-382-854-11	SCREW (M3X10), P, SW (+) (FOR Q510)		
JR015	1-216-296-91	SHORT		Q511 $\Delta$	8-729-042-34	TRANSISTOR IRFU110A	
JR016	1-216-296-91	SHORT		Q512	8-729-043-16	TRANSISTOR IRLI520GLF33	
JR017	1-216-296-91	SHORT		Q513	8-729-021-79	TRANSISTOR 2SK1307	
JR018	1-216-296-91	SHORT		Q514	8-729-041-93	TRANSISTOR IRLI530GLF33	
JR019	1-216-296-91	SHORT		Q515	8-729-043-16	TRANSISTOR IRLI520GLF33	
JR020	1-216-296-91	SHORT		Q516	8-729-043-16	TRANSISTOR IRLI520GLF33	
JR021	1-216-296-91	SHORT		Q517	8-729-326-11	TRANSISTOR 2SC2611	
JR022	1-216-296-91	SHORT		Q518	8-729-140-50	TRANSISTOR 2SC3209LK	
JR023	1-216-296-91	SHORT		Q519	8-729-119-78	TRANSISTOR 2SC2785-HFE	
JR024	1-216-296-91	SHORT		Q520	8-729-042-23	TRANSISTOR IRFI9620GSLF35	
JR025	1-216-296-91	SHORT		Q521	8-729-119-76	TRANSISTOR 2SA1175-HFE	
JR026	1-216-296-91	SHORT		Q522	8-729-119-76	TRANSISTOR 2SA1175-HFE	
JR027	1-216-296-91	SHORT		Q523	8-729-119-76	TRANSISTOR 2SA1175-HFE	
<u>COIL</u>				Q601	8-729-029-92	TRANSISTOR DTC143ESA	
L501	1-412-531-31	INDUCTOR 33UH		Q602 $\Delta$	8-729-926-79	TRANSISTOR IRFIBC40	
L502	1-412-531-31	INDUCTOR 33UH		4-382-854-11	SCREW (M3X10), P, SW (+) (FOR Q602)		
L503	1-411-594-41	INDUCTOR		Q604 $\Delta$	8-729-029-66	TRANSISTOR DTC114ESA	
L505	1-412-552-11	INDUCTOR 2.2MMH		Q605	8-729-141-83	TRANSISTOR 2SB1094-LK	
L506	1-412-545-11	INDUCTOR 470UH		Q606	8-729-029-66	TRANSISTOR DTC114ESA	
L508	1-416-394-11	COIL, HORIZONTAL LINEARITY		Q901	8-729-119-78	TRANSISTOR 2SC2785-HFE	
L509	1-416-393-11	COIL, HORIZONTAL LINEARITY		Q902	8-729-119-78	TRANSISTOR 2SC2785-HFE	
L510	1-416-367-11	COIL, HORIZONTAL CENTER		Q903	8-729-119-78	TRANSISTOR 2SC2785-HFE	
L603	1-412-537-31	INDUCTOR 100UH		<u>RESISTOR</u>			
L604	1-412-537-31	INDUCTOR 100UH		R401	1-249-383-11	CARBON 1.5	5% 1/4W F
L605	1-406-665-11	INDUCTOR		R402	1-215-866-11	METAL OXIDE 330	5% 1W F
L606	1-406-665-11	INDUCTOR		R403	1-214-796-00	METAL 1.5	1% 1/2W
L901	1-412-537-31	INDUCTOR 100UH		R404	1-215-439-00	METAL 5.6K	1% 1/4W
L902	1-412-537-31	INDUCTOR 100UH		R405	1-214-796-00	METAL 1.5	1% 1/2W
<u>FILTER</u>				R406	1-215-447-00	METAL 12K	1% 1/4W
LF602 $\Delta$	1-429-180-11	TRANSFORMER, LINE FILTER		R407	1-249-421-11	CARBON 2.2K	5% 1/4W
<u>TRANSISTOR</u>				R408	1-216-073-00	RES,CHIP 10K	5% 1/10W
Q501	8-729-119-78	TRANSISTOR 2SC2785-HFE		R409	1-216-671-11	METAL CHIP 6.8K	0.50% 1/10W
Q502	8-729-119-76	TRANSISTOR 2SA1175-HFE		R410	1-215-447-00	METAL 12K	1% 1/4W
Q503	8-729-035-54	TRANSISTOR 2SJ449		R411	1-216-688-11	METAL CHIP 36K	0.50% 1/10W
Q504	4-382-854-11	SCREW (M3X10), P, SW (+) (FOR Q503)		R500	1-249-377-11	CARBON 0.47	5% 1/4W F
Q504	8-729-031-89	TRANSISTOR 2SC3941A-Q(TA)		R501	1-247-807-31	CARBON 100	5% 1/4W
Q505	8-729-119-76	TRANSISTOR 2SA1175-HFE		R502	1-218-758-11	METAL CHIP 180K	0.50% 1/10W
Q506	8-729-119-76	TRANSISTOR 2SA1175-HFE		R503	1-216-675-11	METAL CHIP 10K	0.50% 1/10W
Q507	8-729-041-64	TRANSISTOR BU2527AX-ON5020		R504	1-249-377-11	CARBON 0.47	5% 1/4W F
Q507	4-382-854-11	SCREW (M3X10), P, SW (+) (FOR Q507)		R505	1-216-073-00	RES,CHIP 10K	5% 1/10W
Q508	8-729-119-78	TRANSISTOR 2SC2785-HFE		R506	1-215-481-00	METAL 330K	1% 1/4W
				R507	1-215-431-00	METAL 2.7K	1% 1/4W
				R508	1-247-807-31	CARBON 100	5% 1/4W

## Note:

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

## Note:

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REF.NO.	PART NO.	DESCRIPTION	REMARK				REF.NO.	PART NO.	DESCRIPTION	REMARK			
R509	1-247-863-91	CARBON	22K	5%	1/4W		R557	1-216-079-00	RES,CHIP	18K	5%	1/10W	
R510	1-216-081-00	RES,CHIP	22K	5%	1/10W		R558	1-215-445-00	METAL	10K	1%	1/4W	
R511	1-249-381-11	CARBON	1	5%	1/4W F		R559	1-215-431-00	METAL	2.7K	1%	1/4W	
R512	1-249-389-11	CARBON	4.7	5%	1/4W		R560	1-215-449-00	METAL	15K	1%	1/4W	
R513	1-215-888-00	METAL OXIDE	220	5%	2W F								
R514	1-216-081-00	RES,CHIP	22K	5%	1/10W		R561	1-216-474-11	METAL OXIDE	82	5%	3W F	
							R562	1-215-447-00	METAL	12K	1%	1/4W	
R515	1-249-417-11	CARBON	1K	5%	1/4W F		R563	1-249-383-11	CARBON	1.5	5%	1/4W F	
R516	9-910-999-31	METAL	150	1%	1/2W		R564	1-216-089-91	RES,CHIP	47K	5%	1/10W	
R517	1-216-393-00	METAL OXIDE	2.2	5%	3W F		R565	1-215-481-00	METAL	330K	1%	1/4W	
R518	1-216-393-00	METAL OXIDE	2.2	5%	3W F								
R519	1-216-089-91	RES,CHIP	47K	5%	1/10W		R566	1-215-859-00	METAL OXIDE	22	5%	1W F	
							R567	1-216-073-00	RES,CHIP	10K	5%	1/10W	
R520	1-249-397-11	CARBON	22	5%	1/4W F		R568	1-249-437-11	CARBON	47K	5%	1/4W	
R521	1-249-417-11	CARBON	1K	5%	1/4W F		R569	1-216-643-11	METAL CHIP	470	0.50%	1/10W	
R522	1-249-401-11	CARBON	47	5%	1/4W		R570	1-249-417-11	CARBON	1K	5%	1/4W	
R523	1-216-089-91	RES,CHIP	47K	5%	1/10W								
R524	1-216-089-91	RES,CHIP	47K	5%	1/10W		R571	1-215-926-00	METAL OXIDE	33K	5%	3W F	
							R572	1-249-437-11	CARBON	47K	5%	1/4W	
R525	1-249-417-11	CARBON	1K	5%	1/4W F		R573	1-247-887-00	CARBON	220K	5%	1/4W	
R526	1-249-425-11	CARBON	4.7K	5%	1/4W		R574	1-249-429-11	CARBON	10K	5%	1/4W	
R527	1-249-429-11	CARBON	10K	5%	1/4W		R575	1-260-314-11	CARBON	68	5%	1/2W	
R528	1-247-863-91	CARBON	22K	5%	1/4W								
R529	1-249-429-11	CARBON	10K	5%	1/4W F		R576	1-249-437-11	CARBON	47K	5%	1/4W	
							R577	1-216-447-00	METAL OXIDE	27	5%	2W F	
R530	1-216-474-11	METAL OXIDE	82	5%	3W F		R578	1-216-447-00	METAL OXIDE	27	5%	2W F	
R531	1-216-474-11	METAL OXIDE	82	5%	3W F		R579	1-247-883-00	CARBON	150K	5%	1/4W	
R532	1-249-385-11	CARBON	2.2	5%	1/4W F		R580	1-216-077-00	RES,CHIP	15K	5%	1/10W	
R533	1-249-417-11	CARBON	1K	5%	1/4W F								
R534	1-249-405-11	CARBON	100	5%	1/4W F		R581	1-249-429-11	CARBON	10K	5%	1/4W	
							R582	1-249-402-11	CARBON	56	5%	1/4W F	
R535	1-216-089-91	RES,CHIP	47K	5%	1/10W		R583	1-216-073-00	RES,CHIP	10K	5%	1/10W	
R536	1-249-417-11	CARBON	1K	5%	1/4W F		R584	1-216-065-00	RES,CHIP	4.7K	5%	1/10W	
R537	1-216-089-91	RES,CHIP	47K	5%	1/10W		R585	1-260-099-11	CARBON	1K	5%	1/2W	
R538	1-215-905-11	METAL OXIDE	10	5%	3W F								
R539	1-215-905-11	METAL OXIDE	10	5%	3W F		R586	1-260-103-11	CARBON	2.2K	5%	1/2W	
							R587	1-216-049-91	RES,CHIP	1K	5%	1/10W	
R540	1-215-476-00	METAL	200K	1%	1/4W		R589	1-249-425-11	CARBON	4.7K	5%	1/4W	
R541	1-215-421-00	METAL	1K	1%	1/4W		R590	1-215-453-00	METAL	22K	1%	1/4W	
R542	1-215-421-00	METAL	1K	1%	1/4W		R591	9-910-999-31	METAL	150	1%	1/2W	
R543	1-249-389-11	CARBON	4.7	5%	1/4W F								
R544	1-215-493-00	METAL	1M	1%	1/4W		R592	9-910-999-31	METAL	150	1%	1/2W	
							R600 $\Delta$	1-205-998-11	CEMENTED	1	5%	10W	
R545 $\Delta$	1-216-691-11	METAL CHIP	47K	0.50%	1/10W		R603	1-249-403-11	CARBON	68	5%	1/4W	
R546 $\Delta$	1-215-457-00	METAL	33K	1%	1/4W		R604 $\Delta$	1-202-847-00	SOLID	560K	20%	1/2W	
R547 $\Delta$	1-215-487-00	METAL	560K	1%	1/4W		R605 $\Delta$	1-202-933-61	FUSIBLE	0.1	10%	1/2W F	
R548 $\Delta$	1-216-657-11	METAL CHIP	1.8K	0.50%	1/10W								
R549 $\Delta$	1-215-467-00	METAL	82K	1%	1/4W		R609	1-215-927-00	METAL OXIDE	47K	5%	3W F	
							R610	1-215-927-00	METAL OXIDE	47K	5%	3W F	
R550 $\Delta$	1-215-427-00	METAL	1.8K	1%	1/4W		R611	1-215-445-00	METAL	10K	1%	1/4W	
R551	1-215-453-00	METAL	22K	1%	1/4W		R612	1-249-392-11	CARBON	8.2	5%	1/4W	
R552 $\Delta$	1-215-463-00	METAL	56K	1%	1/4W		R613	1-249-429-11	CARBON	10K	5%	1/4W	
R553	1-216-699-11	METAL CHIP	100K	0.50%	1/10W								
R554	1-218-756-11	METAL CHIP	150K	0.50%	1/10W		R614	1-216-381-11	METAL OXIDE	0.22	5%	3W F	
							R615	1-247-885-00	CARBON	180K	5%	1/4W	
R556	1-216-691-11	METAL CHIP	47K	0.50%	1/10W		R617	1-249-417-11	CARBON	1K	5%	1/4W	



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

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

REF.NO.	PART NO.	DESCRIPTION			REMARK
R618	1-215-411-00	METAL	390	1%	1/4W
R619	1-249-421-11	CARBON	2.2K	5%	1/4W
R620	1-247-863-91	CARBON	22K	5%	1/4W
R621 $\Delta$	1-211-761-11	FUSIBLE	0.1	10%	1/2W
					(U/C, J)
R621 $\Delta$	1-211-874-11	FUSIBLE	0.12	10%	1/2W
					(SH)
R622 $\Delta$	1-211-874-11	FUSIBLE	0.12	10%	1/2W
R623 $\Delta$	1-211-874-11	FUSIBLE	0.12	10%	1/2W
R624 $\Delta$	1-219-154-11	FUSIBLE	0.12	10%	1/4W
R625 $\Delta$	1-219-154-11	FUSIBLE	0.12	10%	1/4W
R626	1-215-405-00	METAL	220	1%	1/4W
R627	1-247-895-91	CARBON	470K	5%	1/4W
R628	1-215-479-00	METAL	270K	1%	1/4W
R629	1-223-480-11	RES, ADJ, CERMET	5K		
R630	1-215-437-00	METAL	4.7K	1%	1/4W
R631	1-215-405-00	METAL	220	1%	1/4W
R632	1-216-049-91	RES,CHIP	1K	5%	1/10W
R633	1-249-429-11	CARBON	10K	5%	1/4W
R634	1-249-431-11	CARBON	15K	5%	1/4W
R635	1-249-417-11	CARBON	1K	5%	1/4W
R636	1-249-417-11	CARBON	1K	5%	1/4W
R637	1-216-351-00	METAL OXIDE	1.5	5%	1W F
R638	1-215-435-00	METAL	3.9K	1%	1/4W
R639 $\Delta$	1-211-761-11	FUSIBLE	0.1	10%	1/2W
					(U/C, J)
R639 $\Delta$	1-211-874-11	FUSIBLE	0.12	10%	1/2W
					(SH)
R641	1-249-429-11	CARBON	10K	5%	1/4W F
R642	1-260-127-11	CARBON	220K	5%	1/2W
R643	1-215-435-00	METAL	3.9K	1%	1/4W
R644	1-215-441-00	METAL	6.8K	1%	1/4W
R645	1-215-461-00	METAL	47K	1%	1/4W
R703	1-260-092-11	CARBON	270	5%	1/2W
R704	1-215-445-00	METAL	10K	1%	1/4W
R705	1-249-425-11	CARBON	4.7K	5%	1/4W
R706	1-249-425-11	CARBON	4.7K	5%	1/4W
R707	1-249-429-11	CARBON	10K	5%	1/4W
R708	1-249-429-11	CARBON	10K	5%	1/4W
R709	1-249-429-11	CARBON	10K	5%	1/4W
R710	1-249-429-11	CARBON	10K	5%	1/4W
R711	1-216-346-00	METAL OXIDE	0.56	5%	1W F
R712	1-215-860-11	METAL OXIDE	33	5%	1W F
R713	1-216-347-11	METAL OXIDE	0.68	5%	1W F
R716	1-215-860-11	METAL OXIDE	33	5%	1W F
R717	1-216-353-00	METAL OXIDE	2.2	5%	1W F
R718	1-215-863-11	METAL OXIDE	100	5%	1W F
R719	1-249-431-11	CARBON	15K	5%	1/4W

REF.NO.	PART NO.	DESCRIPTION			REMARK
R724	1-216-423-11	METAL OXIDE	27	5%	1W F
R727	1-249-431-11	CARBON	15K	5%	1/4W
R728	1-215-863-11	METAL OXIDE	100	5%	1W F
R729	1-216-353-00	METAL OXIDE	2.2	5%	1W F
R730	1-215-860-11	METAL OXIDE	33	5%	1W F
R903	1-249-417-11	CARBON	1K	5%	1/4W
R904	1-249-417-11	CARBON	1K	5%	1/4W
R906	1-216-073-00	RES,CHIP	10K	5%	1/10W
R907	1-260-087-11	CARBON	100	5%	1/2W
R908	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R909	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R910	1-249-411-11	CARBON	330	5%	1/4W
R911	1-249-413-11	CARBON	470	5%	1/4W
R912	1-249-417-11	CARBON	1K	5%	1/4W
R913	1-247-807-31	CARBON	100	5%	1/4W
R914	1-247-807-31	CARBON	100	5%	1/4W
R915	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R916	1-216-077-00	RES,CHIP	15K	5%	1/10W
R917	1-216-077-00	RES,CHIP	15K	5%	1/10W
R918	1-249-417-11	CARBON	1K	5%	1/4W
R919	1-249-417-11	CARBON	1K	5%	1/4W
R920	1-216-049-91	RES,CHIP	1K	5%	1/10W
R922	1-216-073-00	RES,CHIP	10K	5%	1/10W
R925	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R927	1-216-295-91	SHORT	0		
R929	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R931	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W
R933	1-249-419-11	CARBON	1.5K	5%	1/4W
R934	1-249-429-11	CARBON	10K	5%	1/4W
R935	1-247-807-31	CARBON	100	5%	1/4W
R936	1-247-807-31	CARBON	100	5%	1/4W
R937	1-249-417-11	CARBON	1K	5%	1/4W
R938	1-247-807-31	CARBON	100	5%	1/4W
R940	1-215-431-00	METAL	2.7K	1%	1/4W
R941	1-216-643-11	METAL CHIP	470	0.50%	1/10W
R942	1-215-413-00	METAL	470	1%	1/4W
R943	1-216-647-11	METAL CHIP	680	0.50%	1/10W
R944	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R945	1-215-425-00	METAL	1.5K	1%	1/4W
R946	1-215-431-00	METAL	2.7K	1%	1/4W
R947	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W
R949	1-216-296-91	SHORT	0		
R951	1-216-025-91	RES,CHIP	100	5%	1/10W
R953	1-216-073-00	RES,CHIP	10K	5%	1/10W
R954	1-216-073-00	RES,CHIP	10K	5%	1/10W
R957	1-216-017-91	RES,CHIP	47	5%	1/10W
R958	1-216-017-91	RES,CHIP	47	5%	1/10W
R959	1-247-843-11	CARBON	3.3K	5%	1/4W



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

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

REF.NO.	PART NO.	DESCRIPTION	REMARK
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### VARIABLE RESISTOR

$\boxtimes$ RV501 $\Delta$	1-241-767-21	RES, ADJ, CERMET 100K	
	3-710-578-01	COVER, VOLUME, 6 MOLD (FOR RV501)	

### RELAY

RY500	1-755-137-11	RELAY	
RY601 $\Delta$	1-755-031-11	RELAY	

### SWITCH

S601 $\Delta$	1-571-433-21	SWITCH, PUSH (AC POWER)	
S901	1-692-431-21	SWITCH, TACTILE	
S902	1-762-816-11	SWITCH, TACTIL	
S903	1-692-431-21	SWITCH, TACTILE	
S904	1-692-431-21	SWITCH, TACTILE	
S905	1-692-431-21	SWITCH, TACTILE	
S906	1-692-431-21	SWITCH, TACTILE	
S909	1-692-431-21	SWITCH, TACTILE	

### SPARK GAP

SG501 $\Delta$	1-519-422-11	GAP, SPARK	
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### TRANSFORMER

T501 $\Delta$	1-453-241-11	FBT ASSY, (NX-4400//X4L4)	
T503	1-429-109-11	TRANSFORMER, FERRITE (DFT)	
T504 $\Delta$	1-429-103-11	TRANSFORMER, FERRITE (HDT)	
T505	1-429-211-11	TRANSFORMER, FERRITE (HST)	
T601 $\Delta$	1-431-534-11	TRANSFORMER, CONVERTER (SRT)	

### THERMISTOR

TH501	1-807-796-11	THERMISTOR	
TH600 $\Delta$	1-809-827-11	THERMISTOR	
TH601 $\Delta$	1-809-827-11	THERMISTOR, POSITIVE	

### VARISTOR

VA600 $\Delta$	1-810-622-11	VARISTOR	
VA601 $\Delta$	1-810-271-21	VARISTOR ZNR-14DK471U	

REF.NO.	PART NO.	DESCRIPTION	REMARK
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### CRYSTAL

X901	1-767-641-11	VIBRATOR, CRYSTAL	
X902	1-577-611-11	OSCILATOR, CERAMIC	

### MISCELLANEOUS

$\Delta$	8-738-733-83	ITC ASSY, 17FRFM-R3 (U/C,J)	
$\Delta$	8-738-728-81	ITC ASSY, 17FRFM-RS2 (SH)	
$\Delta$	8-738-733-00	CRT, 17FRFM (U/C,J)	
$\Delta$	8-738-728-05	CRT, 17FRFM (M41LKN15X) (SH)	
	4-040-897-01	SPACER, DY	
$\Delta$	1-452-923-21	NECK ASSY (U/C,J)	
$\Delta$	1-452-912-11	NECK ASSY (NA-2914) (SH)	
$\Delta$	8-451-490-11	DY Y17FRJ3-M	
	3-861-661-11	MANUAL, INSTRUCTION (US,CND,J)	
	3-861-661-21	MANUAL, INSTRUCTION (SH)	
$\Delta$	1-776-027-51	CORD SET, POWER (US, CND)	
$\Delta$	1-575-181-11	CORD SET, POWER (J)	
$\Delta$	1-453-241-11	TRANSFORMER ASSY, FLYBACK (NX-4400//X4L4)	
	1-500-386-11	FILTER CLAMP (FERRITE CORE)	
$\Delta$	1-416-282-21	COIL, DEMAGNETIZATION (U/C,J)	
$\Delta$	1-416-282-11	COIL, DEMAGNETIZATION (SH)	
	4-812-134-11	RIVET (U/C,J)	
	4-812-134-21	RIVET (SH)	

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