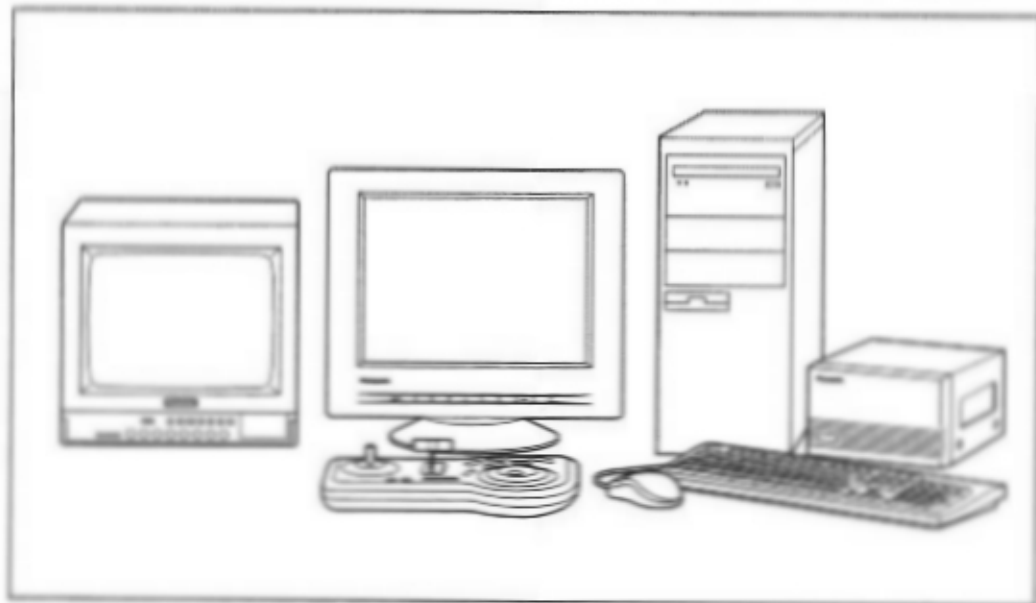


Installation Manual



Nonlinear Editing System
Control Panel Kit
AY-RP500



Panasonic®

Before attempting to connect or operate this product, please read these instructions completely.

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 <div style="display: inline-block; text-align: center; margin: 0 20px;"> CAUTION <small>RISK OF ELECTRIC SHOCK DO NOT OPEN</small> </div> 
<p>CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.</p>

For U.S.A.

Warning:
 This equipment generates and uses radio frequency energy and if not installed and used properly, i.e., in strict accordance with the instruction manual, may cause harmful interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment.



SA 1965

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



SA 1966

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

The serial number of this product may be found on the bottom of the unit.
 You should note the serial number of this unit in the space provided and retain this book as a permanent record of your purchase to aid identification in the event of theft.

Model No. AY-RP500

Serial No. _____

WARNING:
 TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

PREFACE

The AY-RP500 Nonlinear Editing System is a combination of powerful hardware, flexible software and a custom human interface; developed for professional post-production. With the AY-RP500 Nonlinear Editing System, nonlinear editing is a creative process that finishes your videos to high standards while maintaining production budgets.

OPERATING CONDITIONS

The AY-AS501 application software is prerequisite.

FEATURES

- **Simultaneous playback of two channels**

This system can playback video on two channels, with excellent image quality.

- **DVCPRO system**

The DVCPRO system is used for video compression and decompression.

- **A user interface suited for video production**

Because icons are used for stills representing each scene, editing is more intuitive and efficient in comparison with earlier VCR editing controllers. The video editing process can be conducted with even greater efficiency by using the JOGPAD.

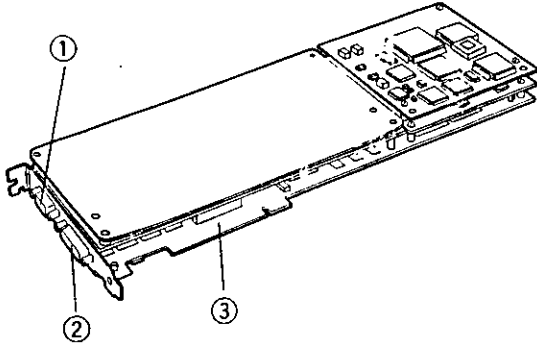
- **The system uses outline fonts for titles of the highest quality**

PRECAUTIONS

- Do not expose the main unit and JOGPAD to rain or moisture, and do not try to operate the equipment in wet areas. Do not operate the main unit and JOGPAD if it becomes wet.
- Do not attempt to disassemble the main unit or JOGPAD. In order to prevent electric shock, do not remove screws or covers.
There are no user-serviceable parts inside.
- Do take immediate action if ever the main unit or JOGPAD should become wet. Turn the power off and have the unit checked by an authorized service facility.
- Do not interrupt the Vent Hole on the front panel. The main unit will heat and it will cause the damage or a fire.
- Be sure to remove the plug by grasping the plug and not the cord itself.
- Do not initial the built-in hard disk.
- Use the main unit or JOGPAD in an environment where the temperature is within 32°F - 95°F (0°C - + 35°C), and the relative humidity is within 10 - 90%.
- Handle the unit with care.
Do not abuse the main unit or JOGPAD. Avoid striking, shaking, etc. It could be damaged by improper handling or storage.
- Do not use strong or abrasive detergents when cleaning the unit and JOGPAD.
Do use a dry cloth to clean the unit when dirty.
In case the dirt is hard to remove, use a mild detergent and wipe gently.
- The input power source is 120V AC 60 Hz.

MAJOR OPERATING CONTROLS AND THEIR FUNCTION

■ VIDEO COMPRESSION BOARD (TARGA2000DV BOARD)



1. S-VGA connector (15 pins)

This connector is used to connect the personal computer monitor via a special cable.

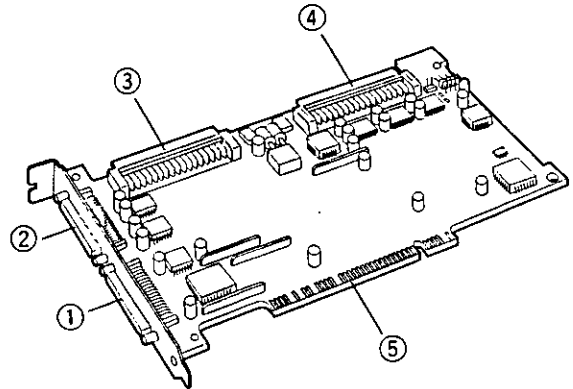
2. Analog I/O cable connector (60 pins)

This connector is used to connect analog video and analog audio inputs and outputs via a special cable.

3. PCI connector

This connector is used to connect the personal computer.

■ SCSI BOARD



1. Channel A (Ch A) connector for external connections

This connector is used to connect the hard disk box via a special cable.

2. Channel B (Ch B) connector for external connections

This connector is used to connect the hard disk box via a special cable.

3. Channel A (Ch A) connector for internal connections

This connector is used to connect the hard disk housed in the personal computer via a flat cable (accessory) with SCSI board.

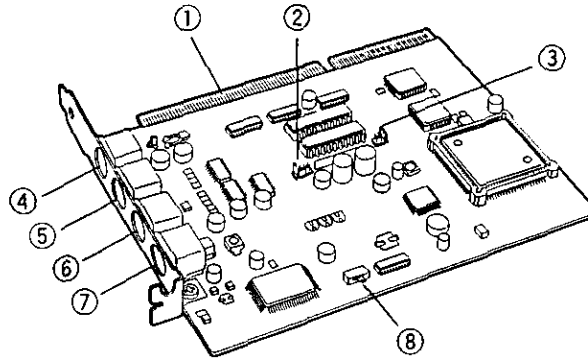
4. Channel B (Ch B) connector for internal connections

This connector is used to connect the hard disk housed in personal computer via a flat cable (accessory) with SCSI board.

5. PCI connector

This connector is used to connect the personal computer.

■ JOG BOARD



1. ISA connector

This connector is used to connect the personal computer.

2. Interrupt number (IRQ) setting jumper (P9)

Set the interrupt number (IRQ) where the jumper pin is inserted.

3. I/O port setting jumper (P12)

Set the I/O address where the jumper pin is inserted.

4. RS422 control connector 1 (RS422-1)

This connector is used to connect a device that can be controlled through a RS422 interface via the special cable (accessory). This connection can be used to control recording and playback on a VCR.

5. RS422 control connector 2 (RS422-2)

This connector is used to connect a device that can be controlled through a RS422 interface via the special cable (accessory). This connection can be used to control recording and playback on a VCR.

6. JOGPAD connector (JOGPAD)

This connection is used to connect a JOGPAD via the special cable (accessory).

7. Time code, reference input/output connector (LTC/REF)

This connector is used to connect, via the special time code and reference I/O cable (accessory), with the time code input and output on a VCR, etc., and with equipment that inputs an external signal for synched composites (horizontal sync only).

•Time code input and output

This connector is used to connect with the time code input and output on a VCR, etc. Make this connection only if the VCR has a time code signal (LTC) output. The time code output is not a loop-through of the signal that was input on the time code input.

Ver. 1.0 software does not support time code input and output.

•Reference input and output

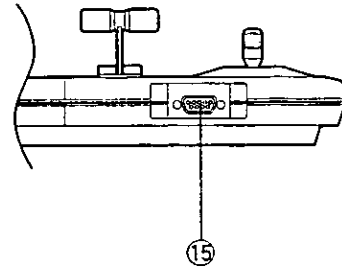
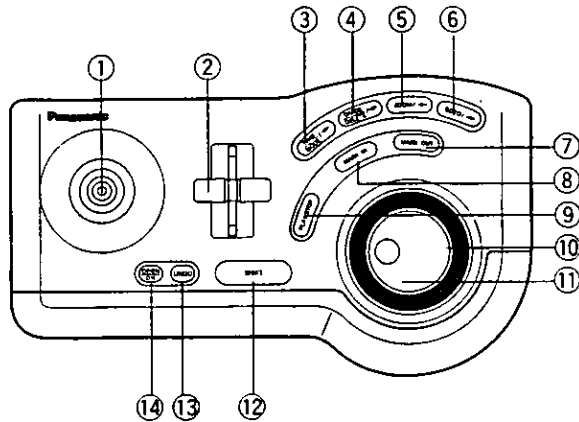
This connector is used to connect with equipment that inputs an external sync signal. Be sure to input the reference signal so as to maintain the frame precision. If a reference signal is not input, video, audio, and time code synchronization, and time code I/O operation, cannot be guaranteed. The reference code output is a loop-through of the signal that was input on the reference input.

8. Reference I/O 75-ohm terminator switch

No function.

When not using the REF OUT signal, turn off the switch and connect the termination (accessory) to the REF OUT cable. (See page 28.)

■ JOGPAD



1. Positioner

Sets the key position. Is ineffective with Ver. 1.0 software.

2. Wipe Lever

Controls the Wipe speed and audio volume.
Is ineffective with Ver. 1.0 software.

3. TRIM / MODE ◀

Used in Trim mode.
(SHIFT + TRIM/MODE) Turns Trim mode On/Off.

4. DIVIDE / DELETE ▶

Deletes a clip.
(SHIFT + DIVIDE / DELETE) Divides a clip.

5. ZOOM / ◀

Zooms in the time line
(SHIFT + ZOOM) Zooms out the time line.

6. GOTO / ▶

Jumps to the starting or editing mark
(SHIFT + GOTO) Jumps to the beginning or end of a sequence.

7. MARK OUT

Sets or cancels the ending mark.
(SHIFT + MARK OUT) Selects the grip of the OUT point.

8. MARK IN

Sets or cancels the starting mark.
(SHIFT + MARK IN) Selects the grip of the IN point.

9. PLAY / STOP

Plays back or stops.
(SHIFT + PLAY /STOP) Plays back between the starting and ending marks.

10. Shuttle Ring

Plays back video and audio forward (clockwise) or in reverse (counterclockwise) with variable speed.

11. JOG Dial

Plays back video and audio forward (clockwise) or in reverse (counterclockwise) frame by frame.

12. SHIFT

Switches button functions.

13. UNDO

Cancels the immediately previous operation.

14. OPEN / OK

Registers the Log in the Log List (when batch digitizer used).

15. JOGPAD Connector

Connects with the Main Unit by using the JOGPAD cable (accessory).

CABLE INFORMATION

Necessary cables for this system

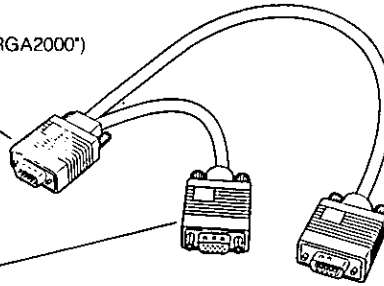
Cable	Use
VGA loop cable CA-206	This cable connects the video compression board and the personal computer monitor. This cable is provided with the video compression board.
Analog I/O cable CA-208	This cable connects the video compression board with the DVCPRO VCR (video, audio), the NTSC monitor, etc. This cable is provided with the video compression board.
VCR/JOGPAD cable E8-163J601	This cable connects the JOG board with the JOGPAD and the DVCPRO VCR (RS422). This cable is provided with the JOG board.
LTC/REF cable E9-165J600	This cable connects the JOG board with the DVCPRO VCR (Time code IN/OUT), and the external sync input. This cable is provided with the JOG board.
SCSI cable ACK/M-WP	This cable connects the SCSI board with the hard disk unit. This cable is manufactured by Adaptec.

VGA loop cable (CA-206)

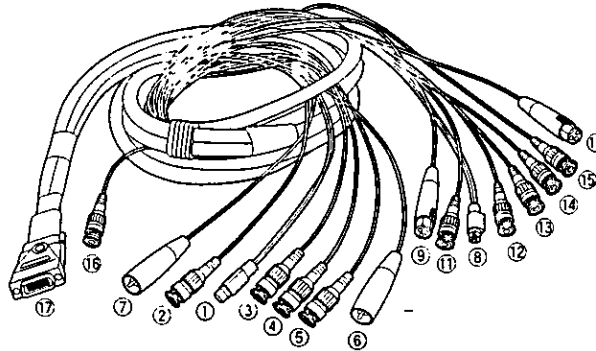
Connects to the VGA connector on the video compression board.
(15-pin male connector) (labelled "TARGA2000")

Connects to the cable for the personal computer monitor.
(15-pin female connector) (labelled "MONITOR")

Connects to the VGA connector on the computer.
(15-pin male connector) (labelled "VGA")

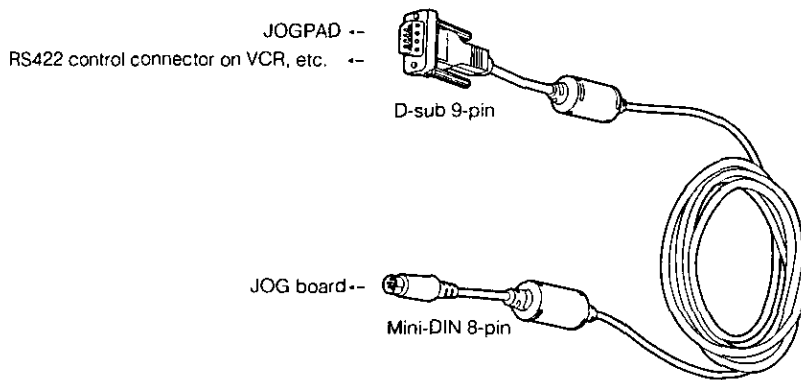


Analog I/O cable (CA-208)

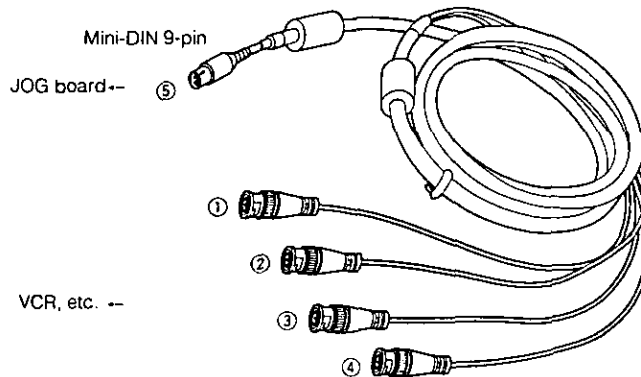


NO	Cable color	Label	Signal name	Connector
①	Gray/white	S-VIDEO IN	YC input	S connector
②	Red	R-Y/R IN	Component R-Y input	BNC
③	Blue	B-Y/B IN	Component B-Y input	BNC
④	Black	CV/CS IN	Composite input	BNC
⑤	Green	Y/G IN	Component Y input	BNC
⑥	Gray	R AUDIO IN	Audio R channel input	XLR
⑦	Black	L AUDIO IN	Audio L channel input	XLR
⑧	Gray/white	S-VIDEO OUT	YC output	S connector
⑨	Black	L AUDIO OUT	Audio L channel output	XLR
⑩	Gray	R AUDIO OUT	Audio R channel output	XLR
⑪	Black	CV/CS OUT	Composite output	BNC
⑫	Green	Y/G OUT	Component Y output	BNC
⑬	Blue	B-Y/B OUT	Component B-Y output	BNC
⑭	Red	R-Y/R OUT	Component R-Y output	BNC
⑮	Brown	KEY OUT	Not used	BNC
⑯	Black	REF IN	Reference signal input	BNC
⑰			Analog input/output connector	D-sub 60-pin

VCR/JOGPAD cable



LTC/REF cable



No	Cable color	Label	Signal name	Plug shape
1.	Red	Ref IN	External sync input	BNC
2.	Green	Ref OUT	Ref IN loop-through	BNC
3.	Blue	LTC IN	LTC input	BNC
4.	Black	LTC OUT	LTC output	BNC
5.			LTC/REF connector plug	Mini-DIN 9 pin

BOARD SETUP

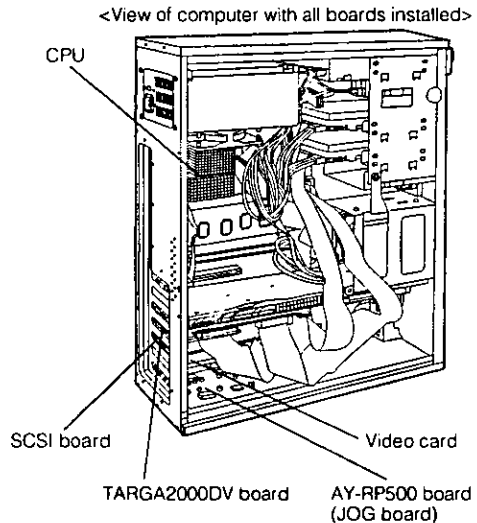
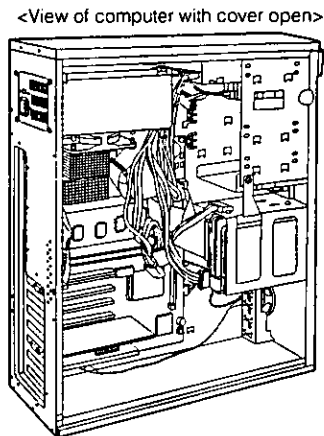
Install the boards in the computer.

There are three boards to be installed:

1. Video compression board (TARGA2000DV board)
2. SCSI board
3. JOG board [AY-RP500 board (JOG board)]

■ Preparation

1. Turn off the computer.
2. Open the case of the computer. For details on how to do so, refer to the instruction manual that was provided with the computer.
3. Confirm which PCI slot (the white connector on the motherboard) the video card is installed in. If the video card is already in the PCI slot that is the farthest from the CPU, you do not need to move the video card.
4. In all other cases, move the video card according to the procedure described in steps 5 through 8 below.
5. Remove the screws that secure the cover for the PCI slot that is farthest from the CPU, and then remove that cover.
6. Remove the screws that secure the cover for the video card, and then remove the video card.
7. Plug the video card into the PCI slot that is farthest from the CPU, and secure the cover in place with the screws.
8. Store the screws and cover that were removed in a safe place.



■ BIOS setup

1. This procedure sets up the motherboard BIOS.
2. Open the BIOS setup screen. (The method of calling up the BIOS setting screen varies depending on the computer. Refer to the user's manual of the computer.)
3. Set "Plug & Play OS" to "OFF". (The setting on your computer system may be "Disable" or "No.")
4. Set Power Management to "OFF". (This may be "Disable" or "NO".)
5. Save the settings, and quit the BIOS setup screen. The computer starts up automatically.
6. Once the computer has started up, confirm that it is operating normally; then quit WindowsNT and turn off the computer.

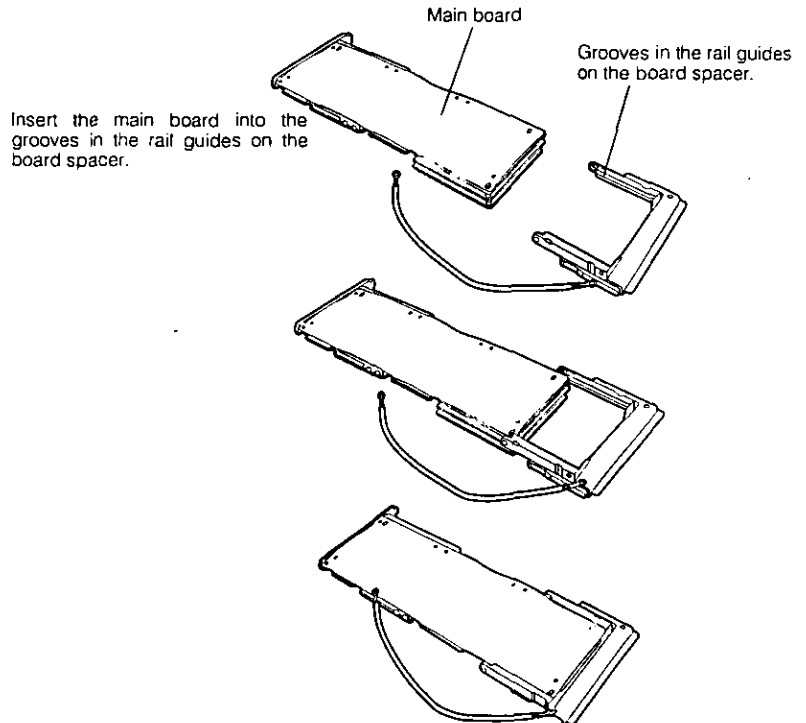
■ Installing the Video Compression board (TARGA2000DV board)

Note that due to structural differences, the installation location may differ depending on the model of computer used.

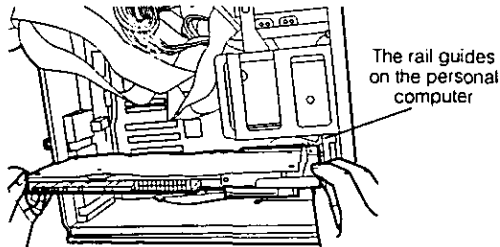
1. Remove the cover for the PCI slot (the white connector on the motherboard) that is closest to the CPU.

Note: The construction of some computers does not physically allow the TARGA2000DV board to be plugged into the PCI slot that is closest to the CPU. If this is the case with your computer, remove the cover for the adjacent PCI slot.

2. Carefully remove the TARGA2000DV board from its anti-static protective pack. If you need to set the board down, place it on top of this pack.
3. Attach the board spacer to the main board (the longest board) among the TARGA2000DV boards. (Refer to the diagram below.)



4. Plug the TARGA2000DV board into the PCI slot that is closest to the CPU (or the next closest slot, if the board will not physically fit into the closest slot). Here, firmly mount the board spacer between the guide rails on the personal computer. The assembly diagram shown below is intended as an example. The actual connection locations may differ depending on the model of computer used.



Insert the video compression board with board spacer attached.

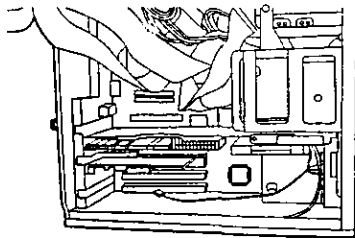
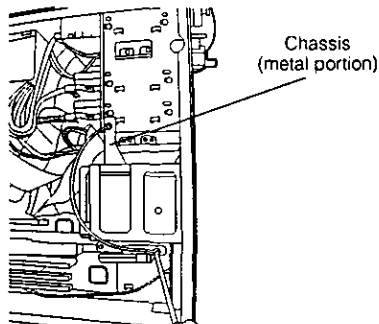


Illustration of image compression board inserted into PC



Connect the ground wire of the video compression board (board spacer) to the chassis (metal portion) of the system unit. (Unscrew the screw and then use it to secure the wire in place.)

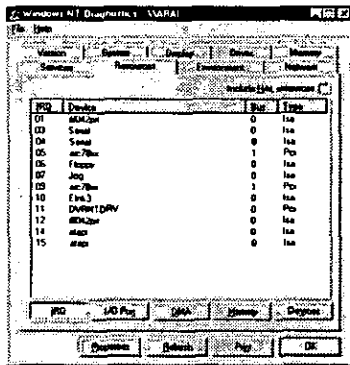
5. Connect the CA-206 cable that was provided with the TARGA2000DV board. Plug the connector labelled "TARGA2000" into the connector on the TARGA2000DV board, plug the connector labelled "VGA" into the connector on the video card, and connect the connector labelled "MONITOR" to the monitor cable.
See page 7 and 24 for the VGA loop cable (CA-206).
6. Store the screws and cover that were removed in a safe place.
7. Turn the power on and start up WindowsNT.
8. Next, install the driver. Load the CD-ROM of the software package, and execute "targa\disk1\setup.exe" of the File Manager. of the CD-ROM.
9. Follow the instructions to install the driver from the CD-ROM. Operate according to the procedures below.
 - 1) The window for Truevision TARGA2000DV V1.0 Setup appears. Click **Next**.
 - 2) The Product Type Inquiry window appears. Select the type of board to use, and click **Next**. For analog type, select "TARGA2000DV" (default). For SDI type, select "TARGA2000DV SDX". (When the type is selected, is displayed.)
 - 3) The Choose Destination Location window appears. Click **Next**.
 - 4) The Select Program Folder window appears. Click **Next**.
 - 5) Installation begins.
 - 6) The Readme window appears. Click on the upper-right of the window and close it.
 - 7) The Installation Completed Successfully window appears. Select "Yes, I want to restart my computer now". (When this is selected, is displayed.) Click **Finish**.
10. Restarts after installation.
At this point, remove the CD-ROM from which the driver was installed.

11. When WindowsNT has restarted, click "Start".

From Programs in the Start Menu, click "Administrative Tools" → "Windows NT Diagnostics". The program starts up.

12. The Windows NT Diagnostics Program window appears.

Click the "Resources" label. The resource list shown below appears (not in the same layout).



Note: "DVRNTDRV" indicates the TARGA2000DV board. Check which number is used for the IRQ. After checking, click to close the window.

13. Change the display driver.
 - 1) Open the "Control Panel" and double-click "Display".
 - 2) Select from "Display Properties" and click .
 - 3) Click in "Display Types".
 - 4) Click in "Display Modification".

- 5) The directory of the display driver is to be opened, so enter "c:\TARGA2KVD\WINNT\Display" and click .

- 6) Confirm that "Truevision DVR Display" is displayed on the screen and click .

- 7) The message "The drivers were successfully installed" appears. Click .

- 8) Click in "Display Types".

- 9) Click in "Screen Properties".

- 10) The message "You must restart your computer..." appears. Click .

- 11) WindowsNT starts up. When the Control Panel opens, close it.

When the message "A new graphics driver has been installed" appears, click .

- 12) Click and drag the mark on the frame of the desktop area in "Screen Properties" to adjust it for the resolution of 1152 x 870 pixels. Here, confirm that the font size is "Small Fonts", and that the Refresh Frequency is 75 Hz

- 13) Click , and click to enter test mode. The test screen appears.

- 14) If the test screen is displayed correctly, click .

- 15) Click in "Display Properties" to close this screen. The resolution will change.

Note: Be sure to modify the display and test it. Otherwise, the display will not be correct.

■ Installing the SCSI board

1. Remove the cover for the PCI slot (the white connector on the motherboard) that is adjacent to the slot where the TARGA2000DV board is plugged in (on the side away from the CPU).
2. Carefully remove the SCSI board from its anti-static protective pack. If you need to set the board down, place it on top of this pack.
3. Plug the SCSI board into the PCI slot adjacent to the TARGA2000DV board on the side away from the CPU, and secure the cover in place with the screws.
4. Store the screws and cover that were removed in a safe place.
5. For details on the cable connections, refer to the hard disk setup procedure. (Do not fail to connect the cables.)
6. Turn on the power and start up WindowsNT.
7. Open the Control Panel and click "SCSI Adapters".
8. Select "Driver" and click .
9. The manufacturer and the SCSI adapter list appear. Select "Adaptec" for the manufacturer, and "AHA-294x/AHA-394x or AIC-78xx PCI SCSI controller" for the adapter, and click .

Here, the WindowsNT CD-ROM is required, so load it and click .

The "Windows NT CD-ROM" window opens. This is not needed, so click the on the upper-right of the window to close it.

10. Specify the directory of the driver. For example, if the CD-ROM drive is drive E, enter E:\386, and click .
11. When installation is ended, the message "You must restart your computer..." appears. Click .

12. When WindowsNT has restarted, click "Start". From Programs in the Start Menu, click "Administrative Tools" → "WindowsNT Diagnostics". The program starts up.

13. The WindowsNT Diagnostics Program window appears. Click the "Resources" label. The resource list appears.

"aic78xx" indicates the SCSI board. Check which number is used for the IRQ.

"aic78xx" is displayed twice. Both numbers might be the same or they might not; it does not matter in either case.

After checking, click to close the window.

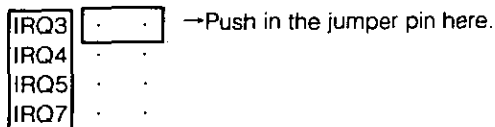
■ Installing the AY-RP500 board (JOG board)

1. Remove the cover from the ISA slot (the black connector on the motherboard) that is the farthest away from the CPU.
2. Carefully remove the AY-RP500 board (the JOG board) from its anti-static protective pack. If you need to set the board down, place it on top of this pack.
3. Use the jumper pins to set the IRQ and the I/O port.

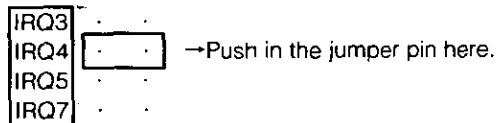
The permitted settings for the IRQ are 3, 4, 5, and 7; the permitted settings for the I/O port are 230H, 240H, 330H, and 340H.

For IRQ, insert the jumper pin into jumper P9 and set. (See item 2, page 4.)

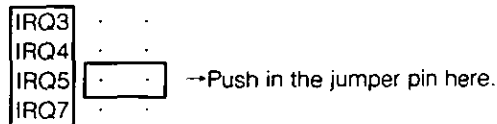
•To set "3" as the IRQ:



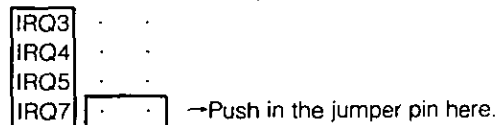
•To set "4" as the IRQ:



•To set "5" as the IRQ:

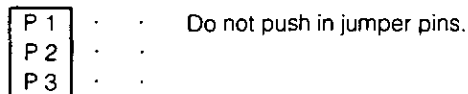


•To set "7" as the IRQ (Factory setting) :

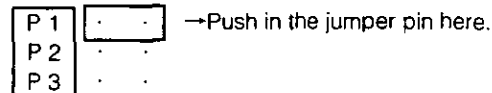


For the I/O port, insert the jumper pin into jumper P12 and set. (See item 3, page 4.)

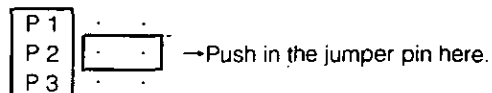
•To set "230H" as the I/O address (Factory setting):



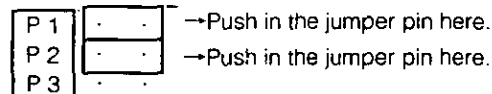
•To set "240H" as the I/O address:



•To set "330H" as the I/O address:



•To set "340H" as the I/O address:



Since the JOG board uses IRQ and I/O port exclusively, be certain to set a number that are not used by any other device.

Confirm settings of other devices using the Windows NT diagnostic program (pages 15).

Note on IRQ Settings :

"5" and "7" are recommended.

If "5" and "7" are being used by another device, set either "3" or "4". Because "3" and "4" are normally used for serial ports (COM1, COM2), either "3" or "4" must be disabled in the BIOS settings. (Set to "Disable" etc.) In this case, only one serial port can be used.

For details on how to set the BIOS, refer to the instruction manual that was provided with your computer.

Note on I/O port settings:

Make sure that the following I/O ports do not overlap so that the JOG board can perform 10-bit address decoding.

JOG board	Other devices			
230H	*230- *23F	*630- *63F	*A30- *A3F	*E30- *E3F
240H	*240- *24F	*640- *64F	*A40- *A4F	*E40- *E4F
330H	*330- *33F	*730- *73F	*B30- *B3F	*F30- *F3F
340H	*340- *34F	*740- *74F	*B40- *B4F	*F40- *F4F

(*: Number from 0 to F)

- Generally speaking, 0240-024F and 0F40-0F4F are often allocated to a Sound Blaster board.

4. Insert the JOG board into the ISA slot that is the farthest away from the CPU. At this point, insert each special cable securely into the LTC/REF connector and the RS422-1 connector. After positioning them, secure the cover in place using the screws.
5. Store the screws and cover that were removed in a safe place.
6. Turn on the power and start up WindowsNT.

7. Install the driver for the JOG board.
The JOG board driver is included in the CD-ROM of the software package. Refer to the user's manual of the software package for details on installation. When the software package is installed, the driver will be installed at the same time. The setting screens for the IRQ and I/O port will appear. Select the same values as the jumper pin settings. When installation ends, the Setup Complete window appears.
Select "Yes, I want to restart my computer now". (When this is selected, © is displayed.)
Click **Finish**. The computer will restart.

8. When WindowsNT has restarted, click "Start".

From Programs in the Start Menu, click "Administrative Tools" → "Windows NT Diagnostics". The program starts up.

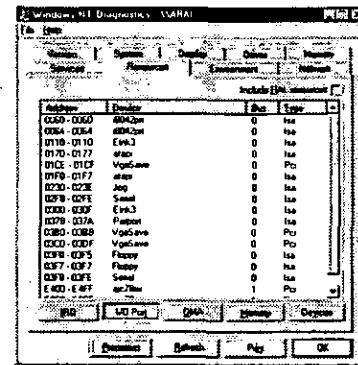
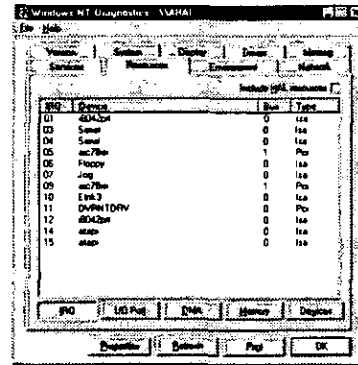
9. The Windows NT Diagnostics window appears.

Click the "Resources" label. The resource list appears.
(Refer to the diagram below)

10. Confirm that the AY-RP500 board (JOG board) IRQ , I/O port are the same number that was set with the jumper. "Jog" indicates the AY-RP500 board.

Note: For the following cases, modify the jumper settings for the JOG board's IRQ and the I/O port, and reinstall the JOG driver:

- "Jog" display cannot be found in the release list.
- The JOGPAD and RS422 control functions do not work with an application.



The Windows NT Diagnosis

HARD DISK SETUP

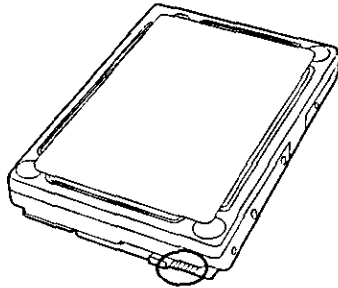
There are two different methods for hard disk setup. One is for installing a hard disk inside the personal computer, and one is for using an external hard disk unit (optional).

■ When installing a hard disk inside the personal computer

● SCSI-ID Setting

Set the SCSI-IDs as shown below. "0" is recommended. When setting another number and using an optional hard disk box, make sure that none of the SCSI-IDs are duplicated.

Note: Set SCSI ID to other than "7"

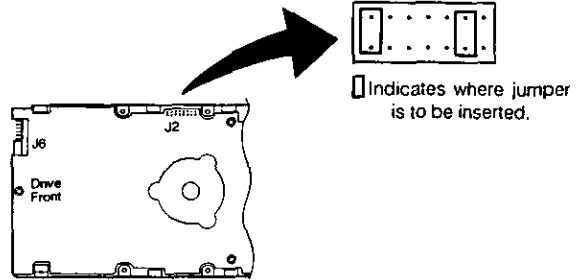


SCSI ID = 0	:	:	:	:	:	:
SCSI ID = 1	:	:	:	:	:	□
SCSI ID = 2	:	:	:	:	□	:
SCSI ID = 3	:	:	:	:	□	□
SCSI ID = 4	:	:	:	□	:	:
SCSI ID = 5	:	:	:	□	:	□
SCSI ID = 6	:	:	:	□	□	:
SCSI ID = 8	:	:	□	:	:	:
SCSI ID = 9	:	:	□	:	:	□
SCSI ID = 10	:	:	□	:	□	:
SCSI ID = 11	:	:	□	:	□	□
SCSI ID = 12	:	:	□	□	:	:
SCSI ID = 13	:	:	□	□	:	□
SCSI ID = 14	:	:	□	□	□	:
SCSI ID = 15	:	:	□	□	□	□

□ Push in the jumper pin here.

● Termination Setting

Set the termination as shown below. Insert jumpers



Note: When two hard disks are installed, make their settings for the SCSI-IDs and terminations the same.

● Installing the hard disk

Note: Only SCSI hard disk drives with a capacity of 2G or 4G can be installed inside the personal computer. Operation is not guaranteed if a hard disk with a larger capacity (for example, 9G) is installed. To install a hard disk with a larger capacity, use the hard disk box (optional).

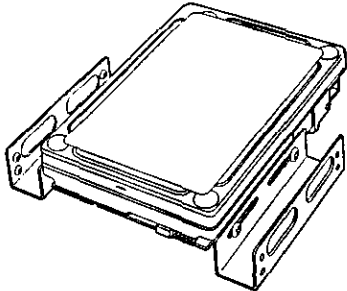
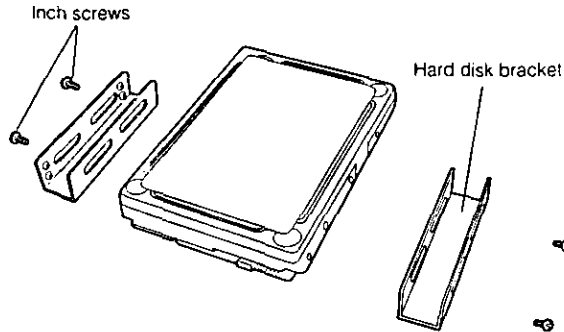
Note: Up to two SCSI hard disks can be installed inside the personal computer. Operation is not guaranteed if three or more hard disks are installed. Here, set the same number for the SCSI-IDs of both hard disks.

Installing the disk in a 3.5-inch bay

Use the screws (inch screws) provided to install the drive.

Installing the disk in a 5-inch bay

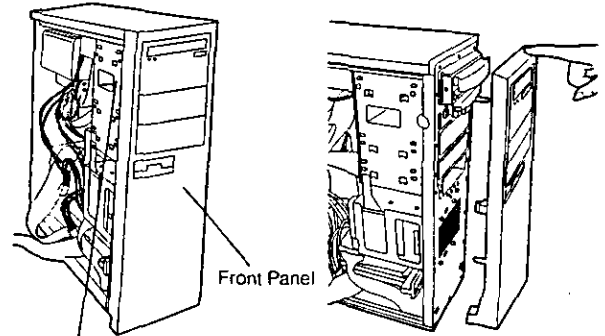
Use the brackets and screws (inch screws) provided to install the drive. (Refer to the diagram below.)



When bracket attached

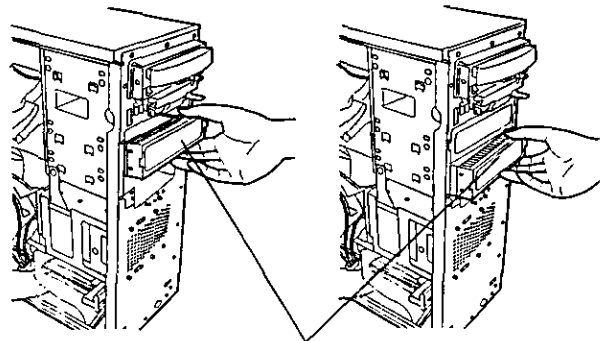
● Mounting and connecting the hard disk drive

1. Take off the front panel of the personal computer.
The assembly diagram shown below is intended as an example. The actual connection locations may differ depending on the model of computer used.

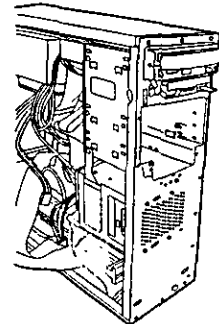


Press the metal release fittings (both sides at the same time).

2. Remove the brackets of the expansion bay.
The assembly diagram shown below is intended as an example. The actual connection locations may differ depending on the model of computer used.



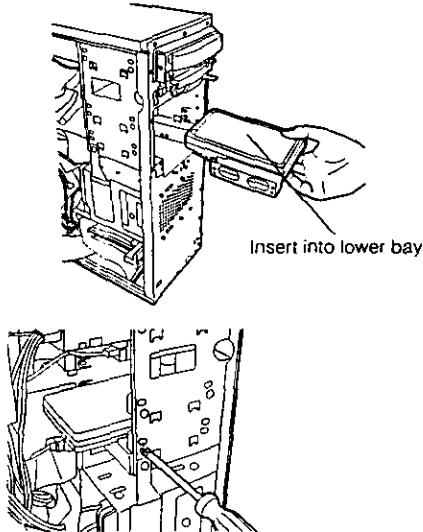
Remove the brackets above and below.



After removing

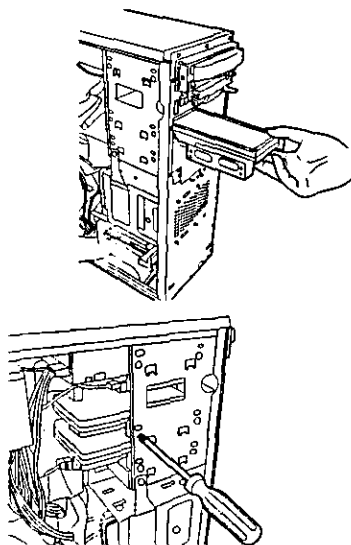
3. Insert the hard disk, and attach it with screws (in four places).

The assembly diagram shown below is intended as an example. The actual connection locations may differ depending on the model of computer used.



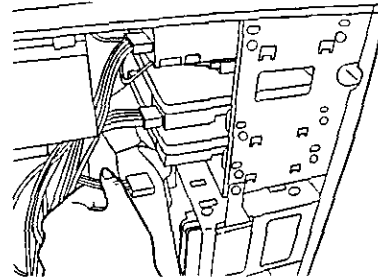
When installing another hard disk unit, remove the expansion bay brackets, insert the hard disk, and then secure it in place with screws. then secure it in place with screws (in four places). (Refer to the diagram below).

The assembly diagram shown below is intended as an example. The actual connection locations may differ depending on the model of computer used.



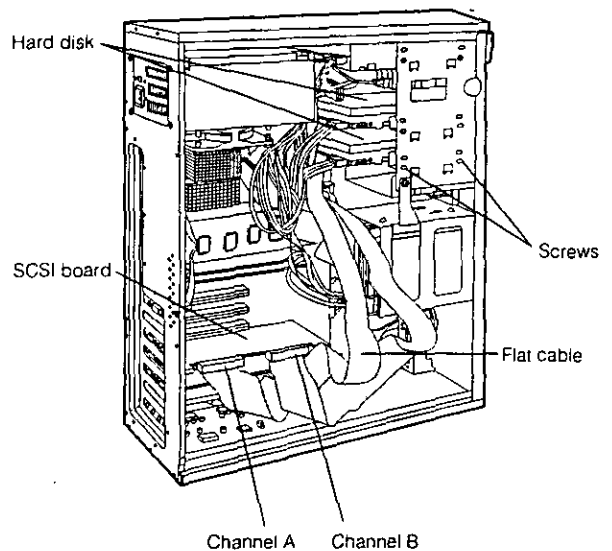
4. Use the flat cable (68-pin, Wide-SCSI) provided with the SCSI board. Connect one end to the connector on the hard disk, and connect the other end to the connector on the SCSI board. (Refer to the diagram below)

The assembly diagram shown below is intended as an example. The actual connection locations may differ depending on the model of computer used.



- When there is only one hard disk, connect to the A channel connector on the SCSI board.

- When there are two hard disks, connect one to the A channel connector on the SCSI board, and one to the B channel connector.
- Be sure to connect the power supply connector.



■ When installing a hard disk in a hard disk box (optional)

● Installing a hard disk

A hard disk with a capacity of 2G, 4G or 9G can be installed in a hard disk box. For details on how to install a hard disk in a hard disk box, refer to the "Hard Disk Box AY-EB500 Instruction Manual."

● Connecting the hard disk

A special SCSI cable (sold separately) is required in order to connect the SCSI board with the hard disk box.

When connecting just one hard disk box

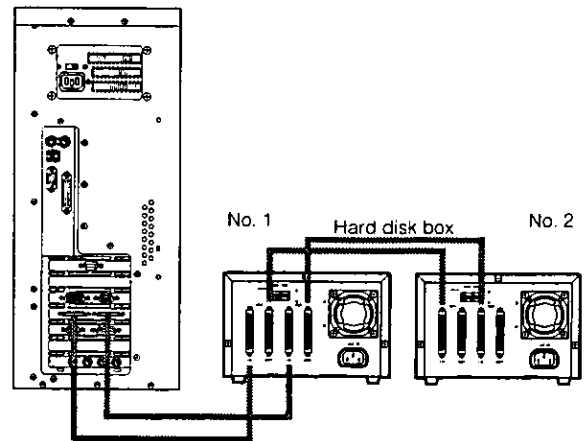
Connect the SCSI board to the SCSI IN connector on the hard disk box. Connect channel A on the SCSI board to channel A on the hard disk box, and connect channel B on the SCSI board to channel B on the hard disk box. For details on how to set the SCSI-IDs and the termination, refer to the "Hard Disk Box AY-EB500 Instruction Manual."

When connecting two or more hard disk boxes

When connecting two or more hard disk boxes, AY-CA68SR3 SCSI cables (sold separately) are needed.

Connect the SCSI OUT connector on the first hard disk box to the SCSI IN connector on the second hard disk box. When doing so, connect the channel A on the first hard disk box to channel A on the second hard disk box, and connect channel B on the first hard disk box to channel B on the second hard disk box. Connect a third and subsequent hard disk boxes in the same manner. (Refer to the diagram below.)

Don't fail to set the terminator only on the hard disk box that is at the farthest end of the chain from the SCSI board. Set the SCSI-IDs for each hard disk box so that each box has a unique ID. For details on how to set the SCSI-IDs and the termination, refer to the "Hard Disk Box AY-EB500 Instruction Manual."



● Number of hard disks that can be connected

When hard disk is housed in personal computer

Three optional hard disk boxes (two hard disks per box) and two internal hard disks, totalling eight.

When all hard disks are housed in optional hard disk box

Five optional hard disk boxes (two hard disks per box), totalling ten.

■ Setting up the hard disk

Once the hard disk is in place, it must be set up so that it can be used.

1. Turn on the power, and start up Windows NT.
2. Click "Start".
From Programs in the Start Menu, click "Administrative Tools" → "Disk Administrator". The program starts up.
3. When the Disk Administrator starts up, a list appears showing the bulk-storage devices such as hard disks and CD-ROM.
4. The contents displayed are as follows:

Disk 0: Always the IDE drive.

Disk 1 and after:



SCSI hard disks connected to Channel A, in order from the lowest SCSI-ID.

SCSI hard disks connected to Channel B, in order from the lowest SCSI-ID.

Last disk: CD-ROM


(No difference, whether inside or outside the computer.)

Note: When setting up the disk, if the audio or video hard disk display is for a logical drive (displayed in blue) rather than the primary partition (displayed in dark blue), the procedure described below must be performed in order to change to the primary partition.

- 1) Click on (select) the logical drive area (displayed in blue).
- 2) Click "Delete" in the "Partition" menu on the menu bar (at the top of the window).
- 3) When the "Confirm" message appears, click .
- 4) Click the right mouse button on the shaded area , and then click "Delete" in the menu that appears.
- 5) When the "Confirm" message appears, click .
- 6) The lines in the shaded area are now reversed.
- 7) With the lines sloping in this new direction () , perform the setup operation again.

■ When two SCSI hard disks are for video and one SCSI hard disk is for audio

1. Disk 0 is the IDE drive, and disks 1 through 3 are the SCSI hard disks. Two of the SCSI hard disks are for video and one is for audio. They are in the order as described in item 4 above.
2. Set up the disk for audio use. Do this according to the following procedure, as long as the disk is not indicated in crosshatch display.
 - 1) Click this area to select it. Once selected, the rectangular frame is displayed in bold lines.
 - 2) On the menu bar (above the window) click "Delete" in "Partition".
 - 3) At the message "Confirm", select .
 - 4) The area will be indicated in crosshatch display.
3. Click the crosshatched area of the disk to select it.
4. On the menu bar (above the window) click "Create" in "Partition".
5. The screen message will prompt you for the size of the partition to be created. Do not modify anything, but just click . When the confirmation message is displayed, click . The selected area will have the message "Unformatted".
6. In "Partition" on the menu bar, click "Commit Changes Now...".
7. At the message "Do you want to save changes?", click .
8. The message "Disks were updated successfully". Click .
9. The message of the unformatted area of the disk changes to "Unknown".
10. Click the "Unknown" area of the disk to select it.
11. In "Tools" on the menu bar, click "Format".
12. The format window opens. Click of "File system", and select "NTFS".
13. Click the format option "Quick format" to check it with the mark.
14. Click . The warning display appears, but click .
15. When the message "Format complete" appears, click . Then, click in the format window. The format window will close.
16. In "Tools" on the menu bar, click "Assign Drive Letter...". Select "Assign drive letter" (selection indicated by). Click to bring up the list of characters that can be assigned. Select one of these. The recommended character is "G". After selecting the character, click .
17. The message "Do you wish to continue?" appears. Click . The drive character will change.
18. Set up the hard disks for video. The remaining two hard disks will be the video hard disks.
19. If the disks are not indicated in crosshatch display, carry out the procedure described in item 2 above.
20. Click the crosshatched area of the disks to select them.
21. On the menu bar (above the window) click "Create" in "Partition".

22. The screen message will prompt you for the size of the partition to be created. Do not modify anything, but just click .
23. The selected area will have the message "Unformatted".
24. In "Partition" on the menu bar, click "Commit Changes Now...".
25. At the message "Do you want to save changes?", click .
26. The message "Disks were updated successfully". Click .
27. The message of the unformatted area of the disk changes to "Unknown".
28. Click the "Unknown" area of the disk to select it.
29. In "Tools" on the menu bar, click "Assign Drive Letter...". Select "Assign drive letter" (selection indicated by ). Click to bring up the list of characters that can be assigned. Select "0". After selecting the character, click .
30. The message "Do you wish to continue?" appears. Click "Yes". The drive character will change.
31. Set up the other hard disk according to the same procedure. However, assign "P" for the driver character.
32. When setup is finished, click "Exit" in "Partition" on the menu bar.

Note: A hard disk for video use should be left in "Unknown" status. Do not format the disk if it is to be used for this purpose.

●When four or more SCSI hard disks are for video

Set up the hard disks in the same way as for when two hard disks are to be used for video.

Assign the letters "O" "P" "Q" and "R" as the drive characters. For subsequent drive characters, assign them in the order S, T, U, V, W, X.

●When the hard disk for audio is IDE

1. C: drive of disk 0 is the area for system use.
C: drive contains the system, so must not be touched.

Note: For the IDE drive of disk 0, create the path before installing Windows NT so that separate areas can be made for system use and audio use. Otherwise, operation cannot be guaranteed.

When creating the path, leave at least 1G bytes for the system area (area for installing Windows NT).

2. The area other than C: drive of disk 0 will be for audio.

If this area is not indicated in crosshatch display, carry out the following procedure.

- 1) Click this area to select it. Once selected, the rectangular frame is displayed in bold lines.
 - 2) On the menu bar (above the window) click "Delete" in "Partition".
 - 3) At the message "Confirm", select .
 - 4) The area will be indicated in crosshatch display.
3. Click the crosshatched area of disk 0 to select it.

4. On the menu bar (above the window) click "Create" in "Partition".
5. The screen message "Do you want to continue and create the partition any way?" will appear. Select .
6. A screen message will prompt you for the size of the partition to be created. Do not modify anything, but just click .
7. The selected area will have the message "Unformatted".
8. In "Partition" on the menu bar, click "Commit Changes Now...".
9. At the message "Do you want to save changes?", click .
10. The message "Disks were updated successfully" appears. Click .
11. The message of the unformatted area of disk 0 changes to "Unknown".
12. Click the "Unknown" area of the disk to select it.
13. In "Tools" on the menu bar, click "Format".
14. The format window opens. Click of "File system", and select "NTFS".
15. Click the format option "Quick format" to check it with the mark.
16. Click . The warning display appears, but click .
17. When the message "Format complete" appears, click . Click in the format window. The format window will close.
18. In "Tools" on the menu bar, click "Assign Drive letter...". The drive name can be changed to any character.

Select "Assign drive letter" (selection indicated by). Click to bring up the list of characters that can be assigned. Select one of these. The recommended character is "G". After selecting the character, click .
19. The message "Do you wish to continue?" appears. Click . The drive character will change.

Note: Drive characters cannot be duplicated.

Note: After application software is installed, the contents of the video hard disks cannot be viewed using Explorer or File Manager. However, this is not a malfunction. Do not format the disks.

Note: After application software is installed, the contents of the audio hard disk can be viewed using Explorer or File Manager. However, do not delete the data or upload any other program or file. Doing so will cause the disk to stop operating.

Note: To determine whether the hard disk is for video or audio use, judge according to the order or capacity displayed in the Disk Administrator mentioned above.

SYSTEM CONNECTION

The following system connections should be made by qualified service personnel or system installers. The system connection diagram shown below is intended as an example. The actual connection locations may differ depending on the model of computer used.

■ Key Board, Mouse and JOG PAD Connections

Connect a keyboard, mouse, and personal computer monitor.

● Connecting the keyboard

Connect the keyboard to the keyboard connector on the rear of the personal computer.

● Connecting the mouse

Connect the mouse to the mouse connector on the rear of the personal computer.

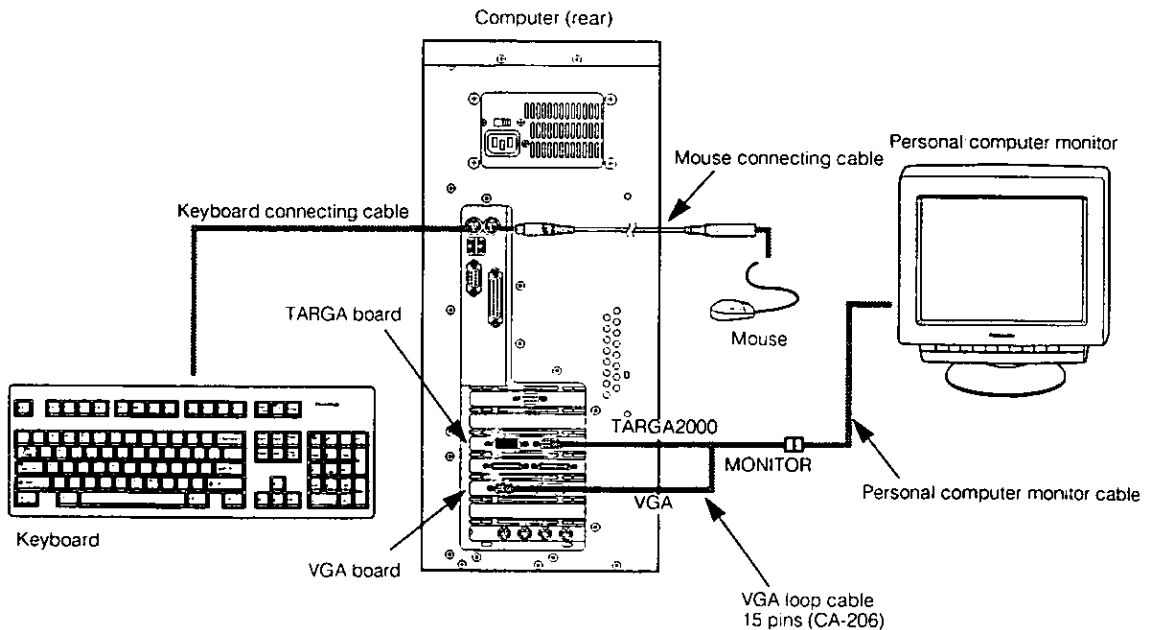
● Connecting the personal computer monitor (S-VGA) Connecting the mouse

Connect the personal computer monitor. Connect the male ends of the VGA loop cable (CA-206) to the TARGA board and to the VGA board, and connect the female end to the personal computer monitor cable. The monitor requirements are as follows:

Resolution: 1152 x 870 (max.)

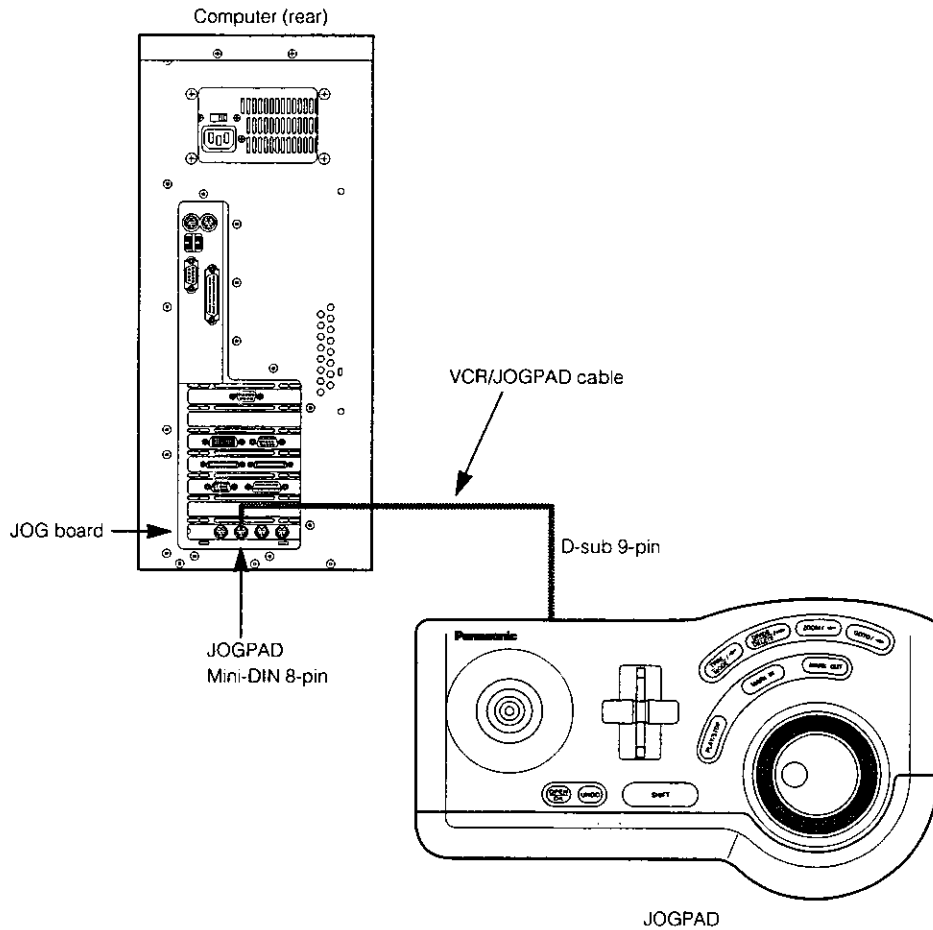
Horizontal scanning frequency: 68.025kHz (max.)

Vertical sync frequency: 75Hz (max.)



● Connecting the JOGPAD

Use the VCR/JOGPAD cable (accessory) to connect the D-sub 9-pin connector on the rear of the JOGPAD to the mini-DIN, 8-pin JOGPAD connector on the JOG board. Use the screws to secure the cable connector to the connector on the rear of the JOGPAD. Be sure to cut the power before connecting cables.



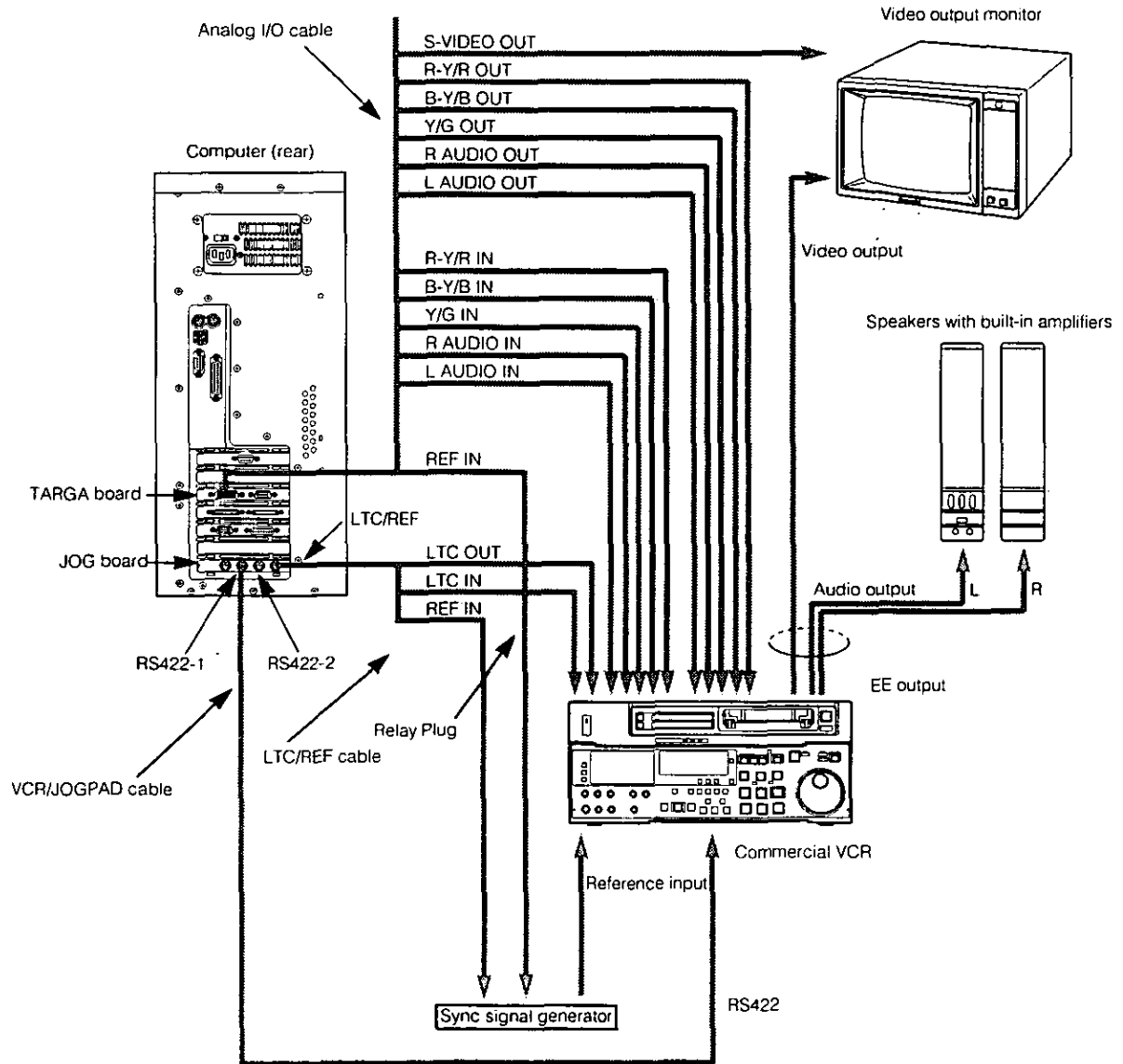
■ Connecting the VCR

Indicates an example of system connection.

The system connection diagram shown below is intended as an example. The actual connection locations may differ depending on the model of computer used.

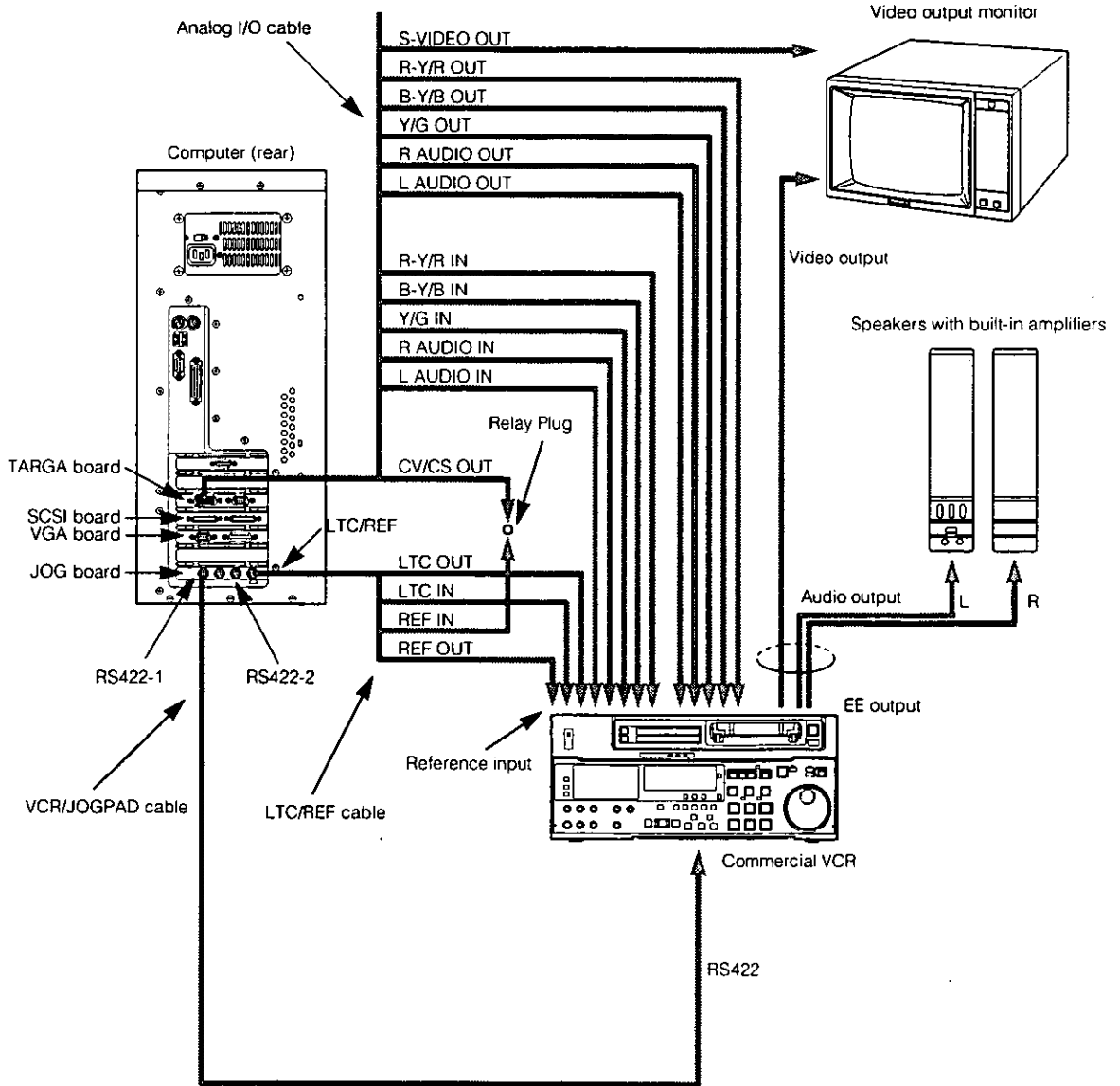
● When connecting a video cassette recorder designed for commercial applications

As in the figure below, [Genlock Input Control] is set to "Blackburst Genlock Input" if [REF IN] is input to the TARGA board. For details on setup, read the "Special" section in the software manual.



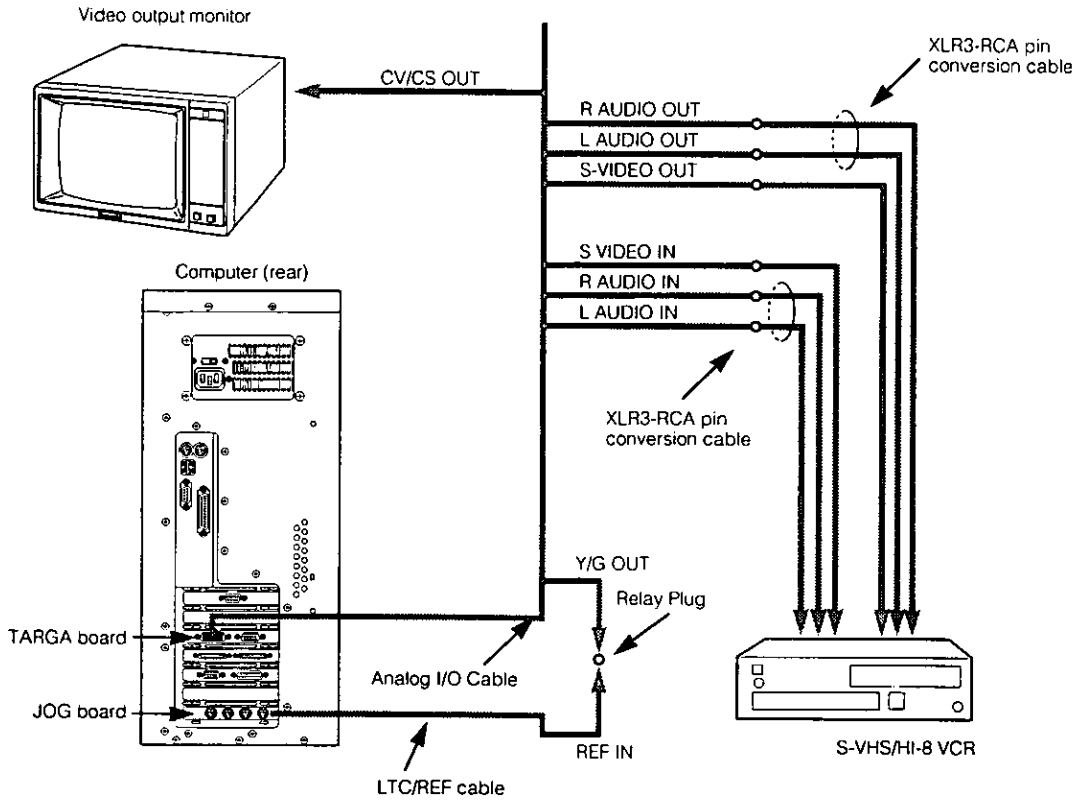
● **When connecting a video cassette recorder designed for commercial applications (2)**
(When there is no sync signal generator)

Set [Genlock Input Control] to "Disabled".



● **S-VHS VCR(No RS422 control)**

Set [Genlock Input Control] to "Disabled".



MEMO

- Use a coaxial relay plug when connecting two coaxial cables (with BNC connectors) together.



Coaxial relay plug

- When not using the REF OUT signal (loop-through) on the JOG board, turn off the 75Ω terminator switch on the JOG board; and connect the termination (accessory) to the REF OUT cable.



REF OUT cable

Termination

- If a DVCPRO series VCR is used, the EE output from the VCR lags the input signal by about five frames.

POWERING MAIN UNIT ON AND OFF

■ Turning on the power switches

1. Turn on the power switches on the peripheral equipment first. If using an external hard disk unit, turn on the power switch on the hard disk unit.
The power indicator of the hard disk box lights red.
2. Turn on the power switch on the computer.
Windows NT starts up.

■ Turning off the power switches

Note: Before turning off the power, be certain to first quit any application programs and Windows NT according to the procedures described on the following page. If the power switch for a hard disk drive is turned off while the hard disk drive is being accessed, data on the hard disk drive could be lost and the hard disk drive itself could be damaged.

Note: When using an external hard disk unit, do not move the unit for at least 30 seconds after turning off the power for the hard disk unit. The motor in the hard disk unit may still rotate for up to 30 seconds after the power is turned off; if the hard disk unit is moved while the motor is still rotating, data on the hard disk drive could be lost and the hard disk drive itself could be damaged.

1. Quit all application programs and Windows NT.
2. Once the message, "It is now safe to turn off your computer" appears, turn off the computer power switch.
3. Turn off the power switches on the peripheral equipment. If using an external hard disk unit, turn off the power switch on the hard disk unit.

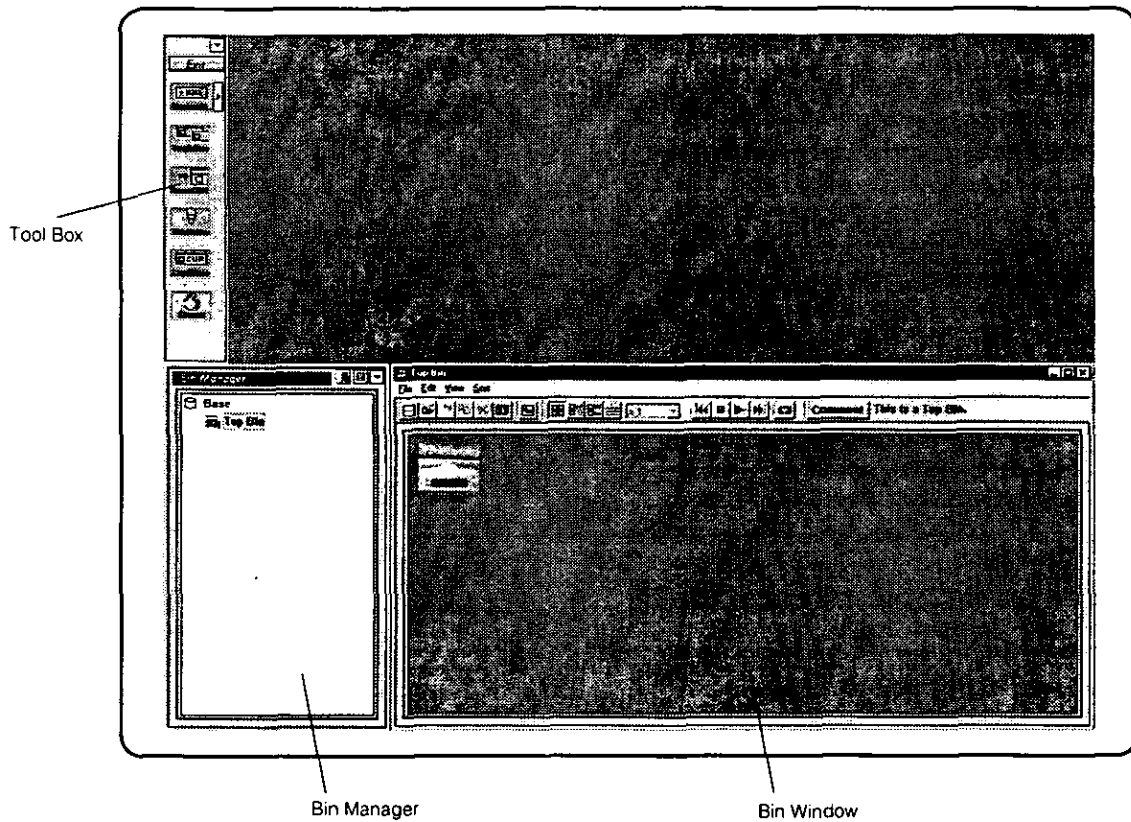
OPERATING PROCEDURES

Refer to the reference manual for details on how to store and edit video and audio material.

■ Starting the System

1. Turn on the power switches on the peripheral equipment, any hard disk units, and the computer, in that order.
2. Start up Windows NT. Double click DVEdit Shortcut.
3. After the application starts up, the initial screen (Tool Box, BIN Manager, and BIN window) is displayed on the personal computer's monitor.

Computer Display is shown below.



■ Closing the System

1. Click on the Tool Box.
2. If you wish to exit, click . The application shuts down.
3. Quit Windows NT. Once the message, "It's now safe to turn off your computer" appears, turn off the power switch for the computer, and then the power switches for peripherals, in that order.

■ Loading Software Package

To use the system, the application program on the CD-ROM supplied with the software package (AY-AS501) must be installed on the hard disk. This requires a keyboard, mouse, and personal computer monitor.

Install an Application Program

1. Connect the keyboard, mouse, and personal computer monitor to the personal computer, and turn on the power switches on the peripheral equipment and then on the personal computer. Windows NT starts up.
2. Insert the CD-ROM supplied with the software package (AY-AS501) into the CD-ROM drive.
3. Click "Start". Then start up Windows NT Explorer by clicking "Windows NT Explorer" in "Program".
4. Double-click the CD-ROM drive's `\dvedit\disk 1\setup.exe`. The Setup screen appears.
5. The Welcome window appears.
Click .
6. The User Information window appears.
Name: Enter your name.
Company: Enter your company's name.
Serial: Enter the product ID number printed on the label affixed to the case of the CD-ROM. Input all eight letters and all eight digits (and do not omit the "-").

When all items have been entered,
click .
7. The Choose Destination Location window appears.
Click .
8. The TARGA Product Information window appears.
Select the type of image compression board to use,
and click .

For analog type, select "TARGA2000DV".
For SDI type, select "TARGA2000DV SDX".
(When the type is selected, is displayed.)

9. The A/V Hard Disk Information window appears.
Enter the number of hard disk drives for video use.

To select two hard disk drives for video use, enter 2 at the Drives: prompt.

To select four hard disk drives for video use, enter 4 at the Drives: prompt.

After entering the number of drives, click .

Note: Note: Here, two or four hard disks can be set for video use. To use more hard disks, start up the application after setting it up, and use a utility.

10. The A/V Hard Disk Information window is still displayed.
Enter the name of the hard disk drives for video use.

To select two hard disk drives for video use:

Enter O: at the Drive 1: prompt, and click .

Enter P: at the Drive 2: prompt, and click .

To select four hard disk drives for video use:

Enter O: at the Drive 1: prompt, and click .

Enter P: at the Drive 2: prompt, and click .

Enter Q: at the Drive 3: prompt, and click .

Enter R: at the Drive 4: prompt, and click .

11. The A/V Hard Disk Information window is still displayed.

Enter the name and directory of the hard disk drives for audio use. The default is G for the drive name, and audiopools for the directory. Just modify the drive name.

For example, to select drive G for the hard disk drive for audio use, enter `g:\audioPools`. Then click .

12. The "Black Level Information" window appears.
Select the setup level to be used and click .
(is displayed at the selected level.)

13. The DVEdit JOGPAD board Information window appears.
Set the I/O address of the JOG board to be used.
Select the value of the jumper setting of the JOG board, and click **Next**. (When the value is selected, **Ⓢ** is displayed.) (The default is 230H)
14. The DVEdit JOGPAD board Information window is still displayed.
Set the IRQ No. of the JOG board to be used.
Select the value of the jumper setting of the JOG board, and click **Next**. (When the value is selected **Ⓢ** is displayed.) (The default is IRQ7)
15. The Select Program Folder window appears.
Click **Next**.
16. The Start Copying Files window appears.
The settings list appears. Confirm the contents and click **Next**.
17. Installation begins.
18. When installation ends, the Setup Complete window appears.
Select "Yes, I want to restart my computer now". (When this is selected, **Ⓢ** is displayed.) Click **Finish**.
. The computer will restart.
19. The Shortcut DVEdit is created.

■ Installing Fonts

1. Open the Control Panel, and double-click the "Fonts" icon. The "Fonts" panel appears.
2. Insert the software package CD-ROM in the CD-ROM drive.
3. Click "Install New Font" in "File" on the Menu bar (above the window) The "Add Font" panel appears.
4. Select the CD-ROM drive in "Drives:". Double-click the font (English font) or fontjp (Japanese font) directory in "Folders".
5. Click **Select All** or the name of the font to be installed. Then click **OK**.

The contents of the CD-ROM will be installed in Windows NT.

6. Activate an application, and double-click on "Special" in the Tool Box. The Setup panel appears.
7. Double-click "Font Setup" in the Setup panel.

Select the required font from "List of Windows Fonts" and click **Append**. The font will be installed in the application.

SPECIFICATIONS

Video

Video Input

Input Connector	1 source (selectable from Composite., Y/C, Y/P _B /P _R)
Composite:	1.0 V[p-p]/75 Ω (BNC)
Y/C:	Y: 1.0V[p-p]/75 Ω C: 0.286 V[p-p] 75 Ω (Y/C terminal)
Component:	Y: 1.0V[p-p]/75 Ω (BNC) P _B /P _R : 0.525V[p-p], or 0.756V[p-p] / selectable 0 setup/75 Ω (BNC) P _B /P _R : 0.486V[p-p] or 0.7V[p-p] / selectable 7.5 setup/75 Ω (BNC)

Video Output

Output Connector	1 output (simultaneously from Composite, Y/C, Y/P _B /P _R)
Composite:	1.0V[p-p]/75 Ω
Y/C:	Y: 1.0V[p-p]/75 Ω C: 0.286V[p-p]/75 Ω (Y/C terminal)
Component:	Y: 1.0V[p-p]/75 Ω (BNC) P _B /P _R : 0.525V[p-p] or 0.756V[p-p] / selectable 0 setup/75 Ω (BNC) P _B /P _R : 0.486V[p-p] or 0.7V[p-p] / selectable 7.5 setup/75 Ω (BNC)

Synchronization

Gen-Lock Input 1.0V[p-p]/75 Ω (BNC) x1

Audio Input

1 source +4dBm, 20KΩ balanced (XLR connector)

Audio Output

1 output +4dBm, Low Impedance, balanced (XLR connector)

VGA Output

D-SUB 15pin
Video Output 1.0V[p-p]/75 Ω
Horizontal Frequency 68.0251KHz (Max.)
Vertical Frequency 75Hz (Max.)
Resolution 640x480, 800x600, 1024x768, 1152x870

Other Inputs/Outputs

LTC Time Code Input x1 (BNC)
LTC Time Code Output x1 (BNC)
VCR Control Connector : RS422, 9 pin x2 (D-sub)
JOGPAD Connector: 9 pin x1 (D-sub)

Video Performance

S/N Ratio: More than 47dB (Y/P_B/P_R, Y/C, Composite)
Frequency Response: 5MHz, -2dB(Y/P_B/P_R), 4.2MHz-5dB(Composite)
Sampling Frequency: 13.5MHz, 4:1:1, 8 bit component
Compression: DVCPRO system
Recording Time: Approx. 5min/GB

Audio Performance

Dynamic Range: More than 65dB
Total Harmonic Distortion: Less than -70dB
Frequency Response: 20kHz, ±3dB, 20Hz, ±3dB
Sampling Frequency: 48kHz, 16 bit
Mixing: Stereo 2 ch output from monaural 6ch
Recording Time: Approx. 86 min/GB

General**AY-RP500**

Power Supply: 5V DC, -12V
Power Consumption: 2.1W
Ambient Operating Temperature: 5°C - 35°C
Ambient Operating Humidity: 10% - 90%
Weight: JOG Board: 0.3 kg
 JOGPAD: 1.15 kg
Supplied Accessory: JOGPAD Special Cable x1
 RS422 special cable x2
 LTC/REF Cable x1

AY-PB500

Power Supply: 5V DC, -12V
Power Consumption: 37.7W
Ambient Operating Temperature: 5°C - 35°C
Ambient Operating Humidity: 10% - 90%
Weight: 0.53 kg
Supplied Accessory: VGA Monitor Cable x1
 Video/Audio Cable x1
Dimensions: See dimensional drawings

Weight and dimensions indicated above are approximate.
Specifications are subject to change without notice.
This product might be subject, to export control regulations.

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