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Usage Notice

-  **Warning-** Do not look into the lens. The bright light may hurt your eyes.
-  **Warning-** To reduce the risk of fire or electric shock, do not expose this product to rain or moisture.
-  **Warning-** Please do not open or disassemble the product as this may cause electric shock.
-  **Warning-** When changing the lamp, please allow unit to cool down, and follow all changing directions.
-  **Warning-** If the cooling fan is not working, switch off the power immediately. The product will be overheated without ventilation.
-  **Warning-** Before switching off the product, please keep the cooling fan running for a few minutes.

Precautions

Follow all warnings, precautions and maintenance as recommended in this user's manual to maximize the life of your unit.

Do:

- Turn off the product before cleaning.
- Use a soft cloth moistened with mild detergent to clean the display housing.
- Disconnect the power plug from AC outlet if the product is not used for a long period of time.

Don't:

- Block the slots and openings on the unit provided for ventilation.
- Use abrasive cleaners, waxes or solvents for your cleaning.
- Under the following conditions:
 - Extremely hot, cold or humid environment.
 - Areas susceptible to excessive dust and dirt.
 - Near any appliance generating a strong magnetic field.
 - Place in direct sunlight.

Introduction

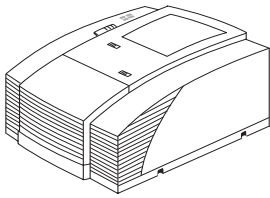
About the Product

This product is a SVGA data/video portable projection display. The outstanding features of it are listed as follows:

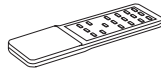
- ❑ 9.25 lbs (4.2 kg) lightweight compact design
- ❑ Single panel 6.4" TFT LCD projection system
- ❑ 800 x 600 SVGA addressable pixels
- ❑ Compression for 1024 x 768 XGA computer image
- ❑ 16.7M (24-bit) displayable colors
- ❑ XGA/ SVGA/ VGA/ VESA/ Mac/ NEC PC-98/ Fujitsu FM Towns compatible
- ❑ NTSC/ NTSC 4.43/ PAL/ SECAM composite video & S-Video
- ❑ Multifunction presentation & image control
- ❑ Multilingual OSD menu adjustments
- ❑ Built-in multimedia audio
- ❑ Advanced functions--
keystone correction/ zoom/ freeze/ curtain/ pointer

Package Overview

This projection display comes with all the items shown below. Check to make sure your unit is complete. Contact your dealer immediately if anything is missing.



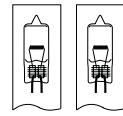
LCD Projection Display



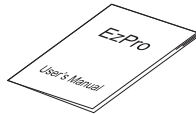
Remote Control



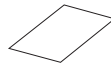
Battery x 2



EVD Lamps x 2



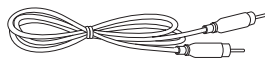
User's Manual



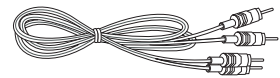
Warranty Card



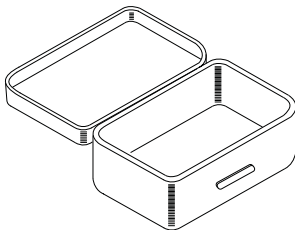
S-Video Cable



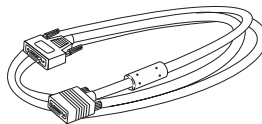
Composite Video Cable



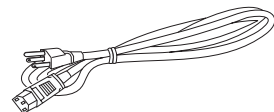
Audio Cable



Carrying Case



VGA Cable

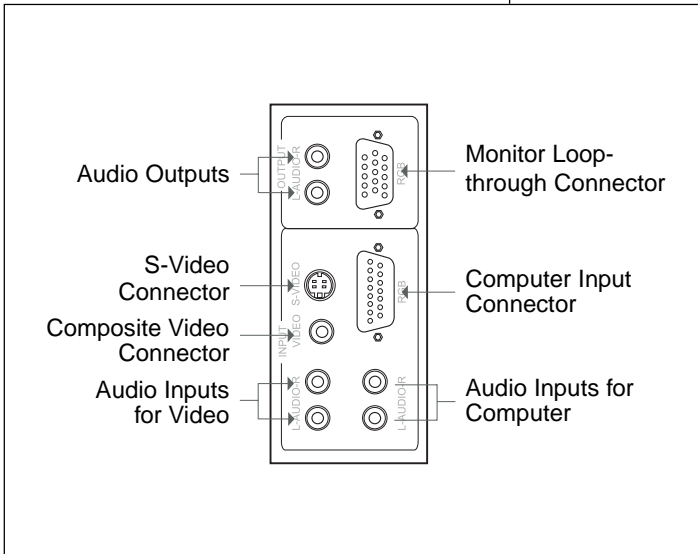
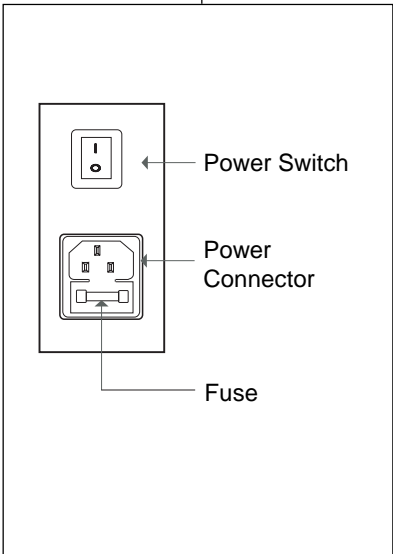
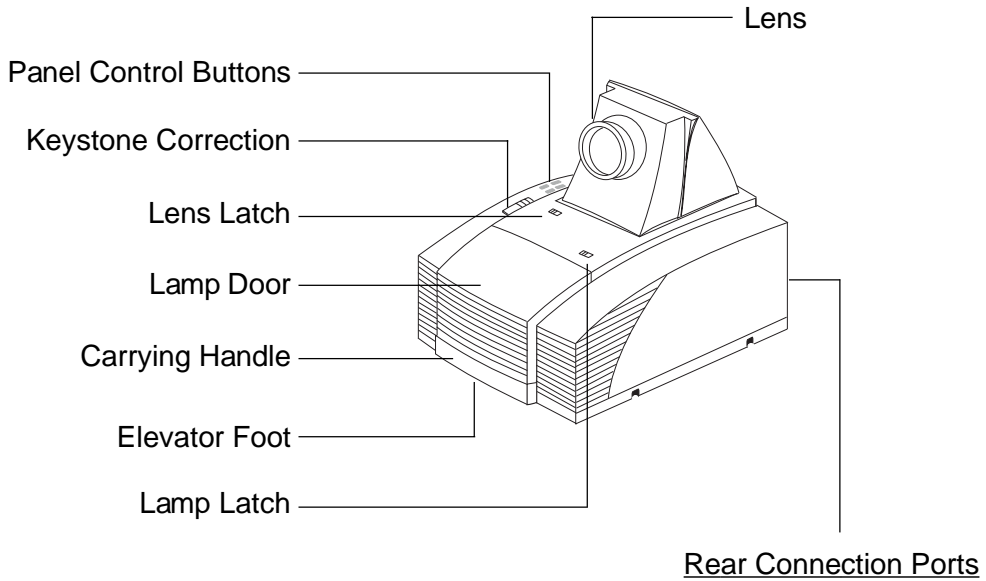


Power Cord

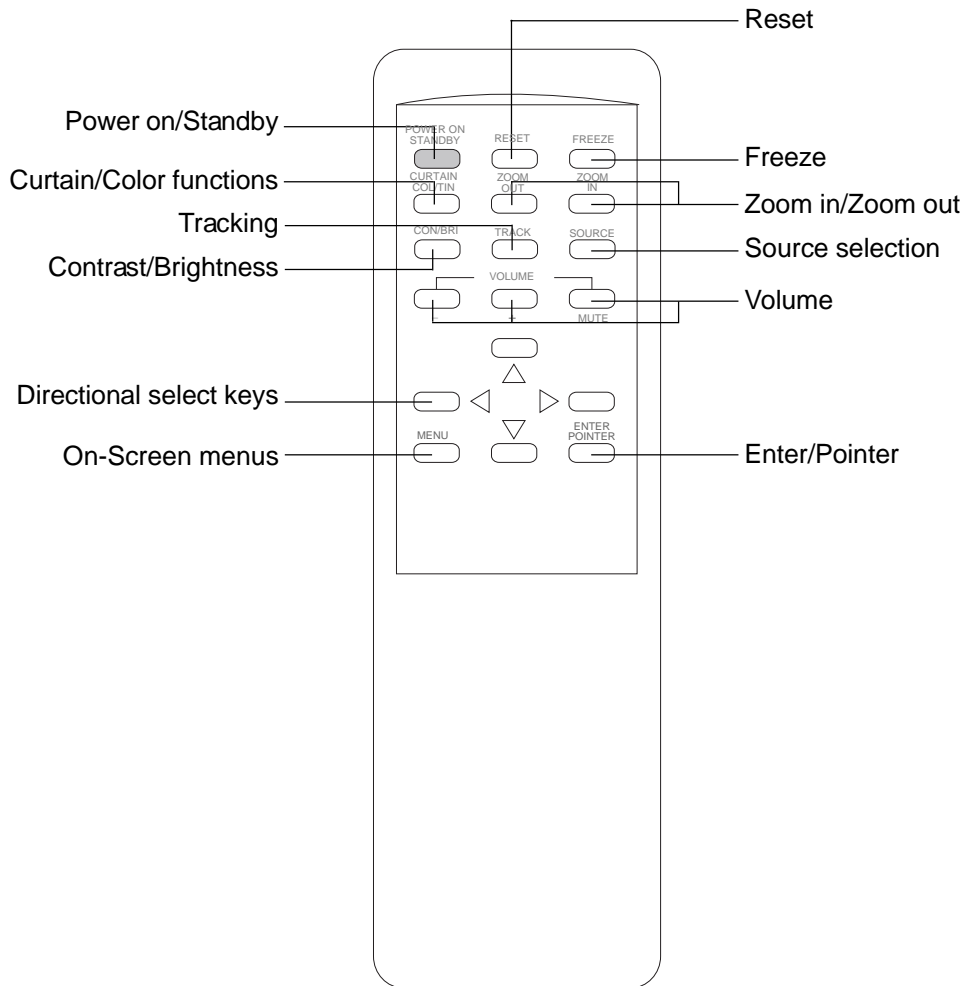
Installation

Product Overview

◆ Main Unit



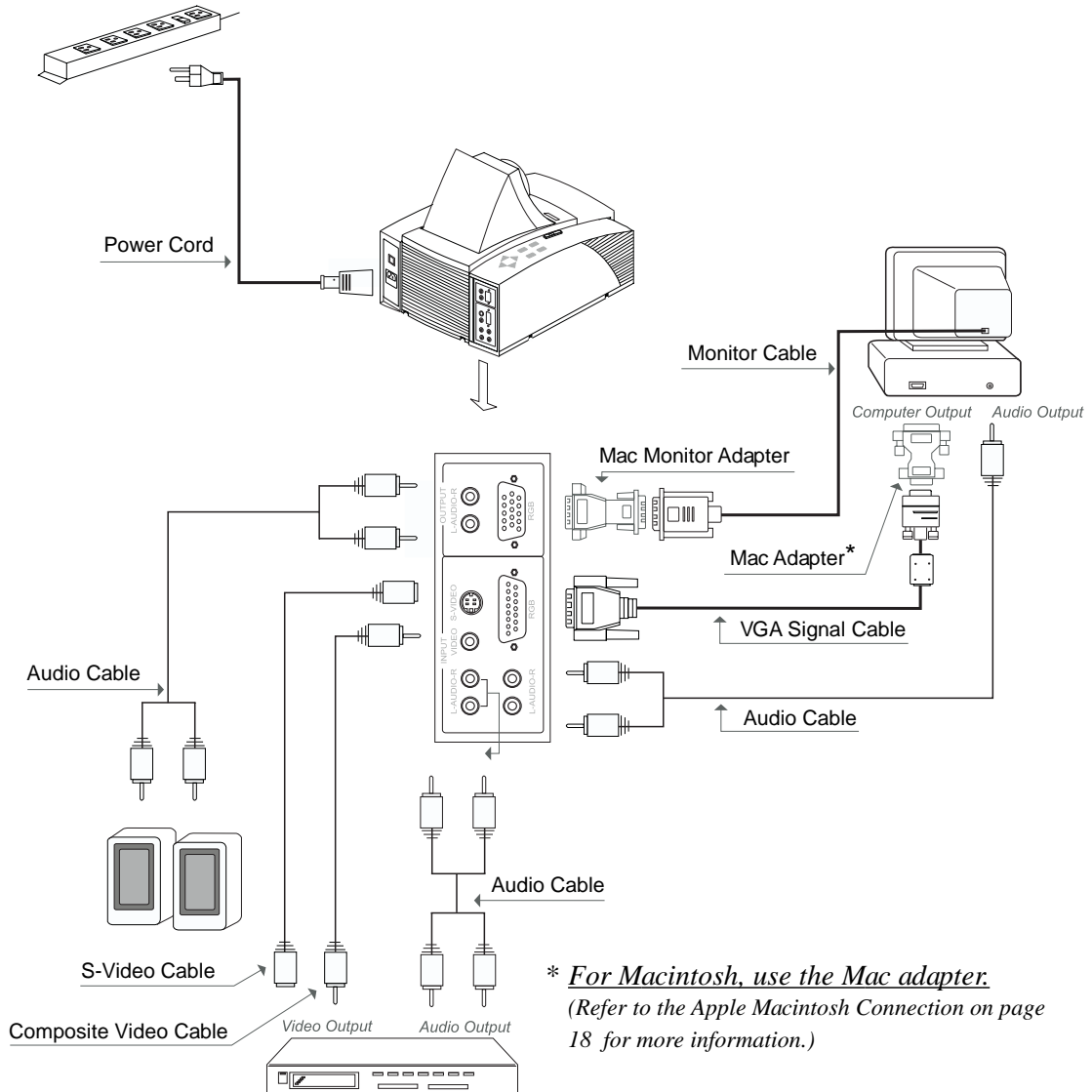
◆ Remote Control



Notice: For more detailed information, please refer to “Function descriptions” on page 13.

Start Your Installation

◆ Connecting the projection display



Notice: To ensure the projection display works well with your computer, please configure the display mode of your graphic card to make it less than or equal to 800 x 600 resolution and make sure timing of the display mode is compatible with the projection display. Refer to Compatibility Modes on page 22.

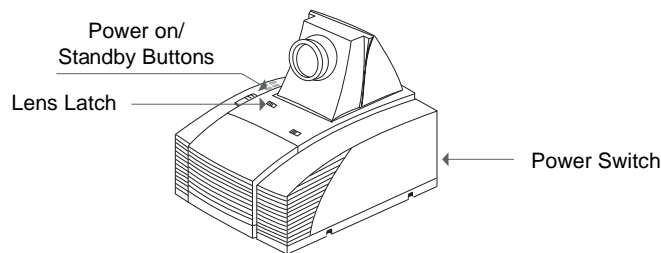
◆ Setting up the projection display

□ Positioning the projection display

Projection Distance	5 ft (1.5 m)	6.5 ft (2 m)	9.5 ft (3 m)	13 ft (4 m)	20 ft (6 m)
Image Size (diagonal)	40" (1.01m) (min.)	60" (1.52m)	80" (2.03m)	110" (2.79m)	160" (4.06m) (max.)

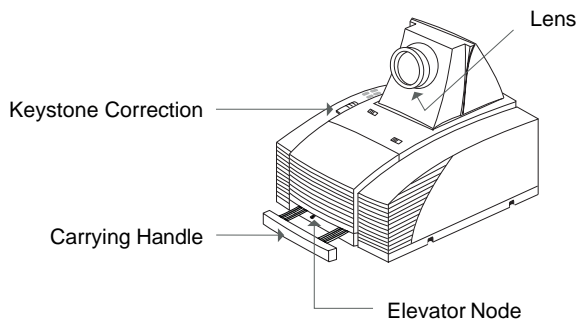
(projection distance and image size)

- Slide the lens latch and pop-up the projection lens. Switch on the power and press “Power on/Standby” button. (Either from the main unit or remote control)



□ Adjusting the screen image.

1. Rotate the projection lens to focus the image.
2. Slide the keystone correction button to adjust image shape.
3. Adjust the elevation:
 - (1) Pull out the carrying handle.
 - (2) Lift the projection display to the desired angle.
 - (3) Press down on the elevator node to loosen the elevator foot.

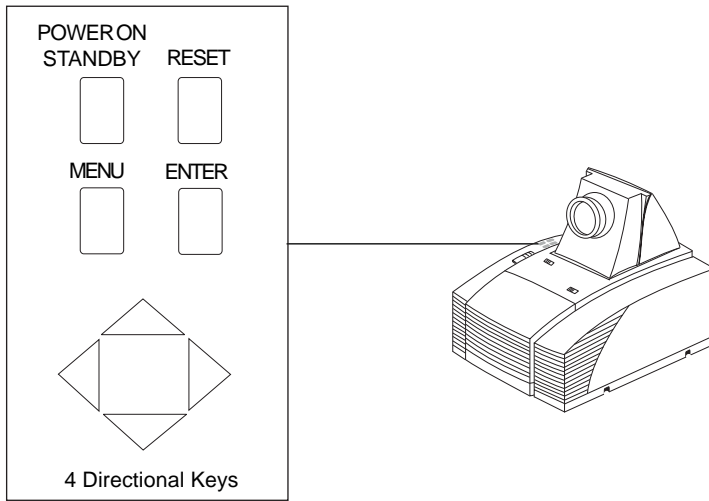


User Controls

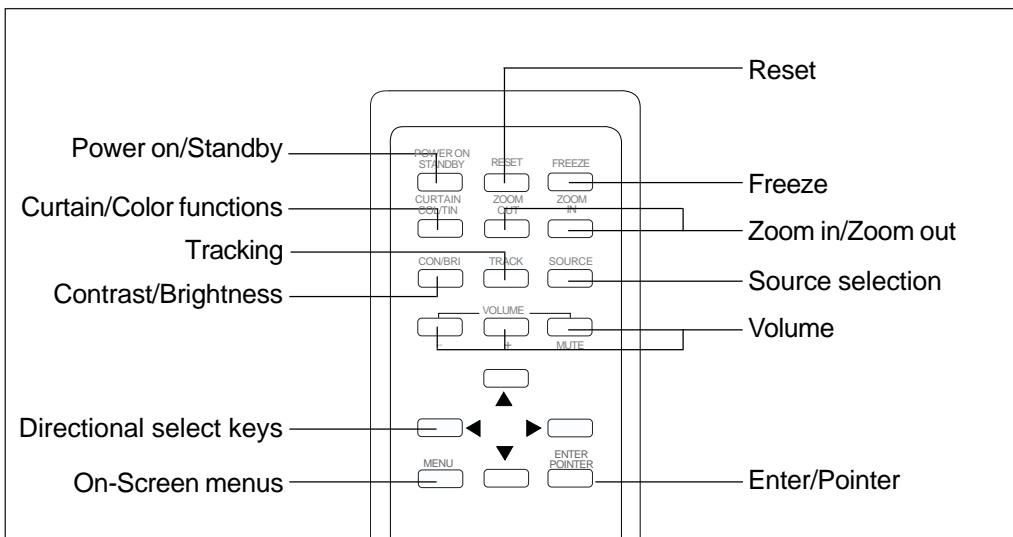
User Control Overview

We have two ways for you to control the functions: panel control and remote control.

◆ Panel control



◆ Remote control



◆ OSD Menus

The OSD (On-Screen Display) menu will allow you to easily adjust the display functions. Press the “MENU” button for the OSD menu options.

- ▶ When in computer sources, the OSD will be:

Language
Contrast
Tracking
Frequency
Custom Memory
Audio
Source
Rear Projection
Ceiling Projection
Auto Image
Exit

- ▶ When in video sources, the OSD will be:

Language
Contrast/Brightness
Color/Tint
Audio
Source
Rear Projection
Ceiling Projection
Exit

Function Descriptions

◆ Basic Functions:

- ▶ **Power On/Standby** Press the “Power On/Standby” button to turn on the projection lamp.
- ▶ **Menu** Press “Menu” button to pop up the OSD menu.
- ▶ **Reset** Press “Reset” to return the display parameters of the current mode to its factory default settings.
- ▶ **Enter** “Enter” is used for confirming your selection.
- ▶ **Four Directional Select Keys**
 - (1) Use ▲ or ▼ button to select items. Use ◀ or ▶ to make adjustments for your selection.
 - (2) Use ▲ or ▼ button to change vertical positioning of the image; and ◀ or ▶ button to change the horizontal positioning of the image.
- ▶ **Language** Choose “Language” item to select your choice of English, French, German, Spanish, Italian, Japanese, and Chinese.
- ▶ **Audio**
 - (1) Volume adjustments: “+”, “-”, “Mute”
 - (2) Audio adjustments: Bass, Treble, Balance, Volume, 4 sound modes.
- ▶ **Source** Use “ Source” control to choose between video and computer source.
- ▶ **Rear Projection** Choose this function from OSD menu for a rear projection.

▶ **Ceiling Projection** Choose this function from OSD menu for a ceiling mounted projection.

▶ **Exit** Choose “Exit” item to leave OSD menu.

◆ **Presentation Functions - computer source**

▶ **Pointer** Press the “Pointer” button to show a hand shape pointer. Use ▲, ▼, ◀ or ▶ button to move pointer around the projected image.

▶ **Freeze** Press the “Freeze” button to still the screen image.

▶ **Curtain** Press “Curtain” button to cover all the screen, then use ▲ or ▼ to pull up or down the curtain.

▶ **Zoom In/Zoom Out** Press “Zoom In” button to enlarge the projected image, “Zoom Out” to resume the image.

▶ **Contrast** Choose this function from OSD menu to adjust contrast of the image.

▶ **Tracking**

Choose “Tracking” item to synchronize the signal timing of the display to that of the graphic card. When you experience an unstable or flickering image, use this function to correct it.

▶ **Frequency**

“Frequency” is for changing the display data frequency to match the frequency of your computer’s graphic card. When you experience a vertical flickering bar, use this function to make an adjustment.

▶ **Custom Memory**

Language
Contrast
Tracking
Frequency
Custom Memory
Audio
Source
Rear Projection
Ceiling Projection
Auto Image
Exit

This function enables you to save your current settings for the computer source. To use this function, first choose “Custom Memory” from OSD menus, and go to the custom group you need (such as “Custom 3”), then select “Save” and press “Enter” to save your current settings; or choose “Open” and press “Enter” to load your preset settings. There are six groups of custom memories for your use.

If you want to come back to RGB standard source, go to the “RGB Standard” mode located before “Custom 1” in Custom Memory OSD menus.

* *When opening your preset custom setting, you may experience a “Invalid” message appearing on the screen. This means the computer you connected or the current setting is the wrong one, not what you preset in the projection display.*

* *The “Reset” function of this projection display only works in RGB Standard mode.*

▶ **Auto Image**

Choose “Auto Image” from OSD menus to obtain an optimum quality for your projected image.

* *“Auto Image” function will not support 1024 x 768 resolution.*

* *This feature could not perform well in case of input weak signal from VGA cable.*

◆ **Presentation Functions -- video source**

- ▶ **Contrast/Brightness** To adjust the contrast or brightness of the image, select “Contrast/Brightness” from OSD menus.

- ▶ **Color/Tint** To adjust the color or tint of the image, select “Color/Tint” from OSD menus.

- ▶ **Freeze** Press the “Freeze” button to still the screen image.

Appendices

Troubleshooting

If you are experiencing trouble with the projection display, refer to the follows. If the problem persists, please contact your local dealer or our service center.

Problem: No image appears on screen.

- ▶ Press “Power on/Standby” button.
- ▶ Ensure all the cables and power connections are correctly and securely connected as described in the “Installation” section.
- ▶ Ensure the pins of connectors are not crooked or broken.
- ▶ Check if the projection lamp has securely installed. Please refer to the “Changing the lamp” section.
- ▶ Ensure the cooling fan is on. If not, you may need to change the fuse. Please refer to the “Changing the fuse” section.

Problem: Partial, scrolling or incorrectly displayed image.

- ▶ If you are using a PC:
Resolution of your computer is higher than 800x600. Follow the steps outlined below to reset the resolution.

For Windows 3.x:

1. In the Windows Program Manager, click the “Windows Setup” icon in the Main group.
2. Verify that your Display resolution setting is less than or equal to 800x600.

For Windows 95:

1. Open “My Computer” icon, the “Control Panel” folder, and then double click the “Display” icon.
2. Select the “Setting” tab.
3. In the “Desktop Area” you will find the resolution setting. Verify that the resolution setting is less than or equal to 800x600 resolution.

If the projection display is still not projecting the whole image, you will need to also change the monitor display you are using. Refer to the following steps.

4. Follow above steps 1~2. Click on the “Change Display Type” button.
5. Select the “Change” button under the “Monitor Type” box.

6. Under “Manufacturers”, select “Standard monitor types”
 7. Verify that the resolution setting of the monitor display is less than or equal to 800x600.
- ▶ If you are using a Notebook PC:
 1. You are required to implement above steps of resolution setting of computer first.
 2. Switch the Notebook PC display to the “external display only” or “CRT only” mode.
 - ▶ If you are using an Apple Macintosh:

Resolution of your computer is higher than that of the projection display. You may need to change the Mac adapter of 800 x 600 resolution.
 - ▶ If you are using an Apple PowerBook:

Resolution of your PowerBook is higher than that of the projection display. You may need to change the Mac adapter of 800 x 600 resolution.
 - ▶ If you are experiencing difficulty in changing resolutions or your monitor freezes, restart all the equipment and the projection display.

Problem: The screen of the Notebook or PowerBook computer is not displaying your presentation.

- ▶ If you are using Notebook PC:

Some Notebook PCs may deactivate their own computers’ screens when a second display device is in use. Each of them has different way to be reactivated. Refer to your computer’s documentation for detailed information.
- ▶ If you are using an Apple PowerBook:

In Control Panels, open the PowerBook Display to select Video Mirroring “On”.

Problem: Image is unstable or flickering

- ▶ Use “Tracking” to correct it.
- ▶ Change the monitor color setting from your computer.

Problem: Image has vertical flickering bar.

- ▶ Use “Frequency” to make an adjustment.
- ▶ Check and reconfigure the display mode of your graphic card to make it compatible with the product.

The Apple Macintosh Connections

◆ Connecting a Macintosh Desktop Computer

▶ For 640 x 480 Resolution:

1. Connect the supplied 15-pin VGA signal cable to the unit.
2. Connect the supplied MAC (VGA) adapter between the VGA signal cable and the signal output of your computer.

▶ For 800 x 600 Resolution:

1. Connect the supplied 15-pin VGA signal cable to the unit.
2. Connect the supplied MAC 8x6 (SVGA) adapter between the VGA signal cable and the signal output of your computer.
3. Restart your computer.
4. In Control Panels, open the Monitors & Sound; set your Macintosh to 800 x 600 resolution.

** If you cannot find any 800 x 600 resolution, please contact your Macintosh dealer.*

◆ Connecting an Apple PowerBook Computer

▶ For 640 x 480 Resolution:

1. Connect the supplied 15-pin VGA signal cable to the unit.
2. Connect the supplied MAC (VGA) adapter between the VGA signal cable and the Mac external monitor cable of your PowerBook.

▶ For 800 x 600 Resolution:

1. Connect the supplied 15-pin VGA signal cable to the unit.
2. Connect the supplied MAC 8x6 (SVGA) adapter between the VGA signal cable and the Mac external monitor cable of your computer.
3. Restart your PowerBook.
4. In Control Panels, open the PowerBook Display; set the number of colors; click the Monitor 2 and set your PowerBook to 800 x 600 resolution.
5. Restart the PowerBook again.

** When using video mirroring and high color graphics, the projected image occasionally may turn black and white. If this happens, change the number of colors again on Monitors in the Control Panels.*

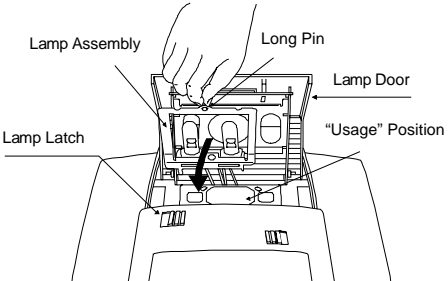
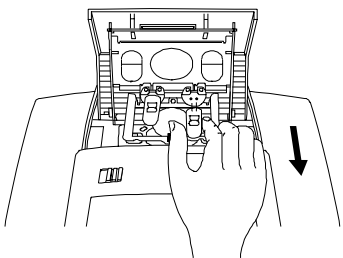
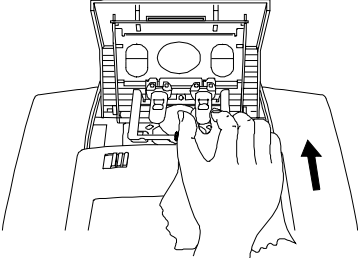
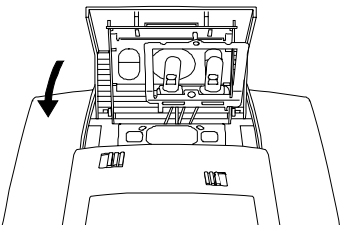
Maintenance

◆ Changing the lamp

Make sure the projection display has cooled for at least 30 minutes before changing the lamp. After you slide the lamp latch and open the lamp door, you will see two lamps inside; one is in “usage” position, the other is in “spare” position. Refer to the lamp changing directions below.

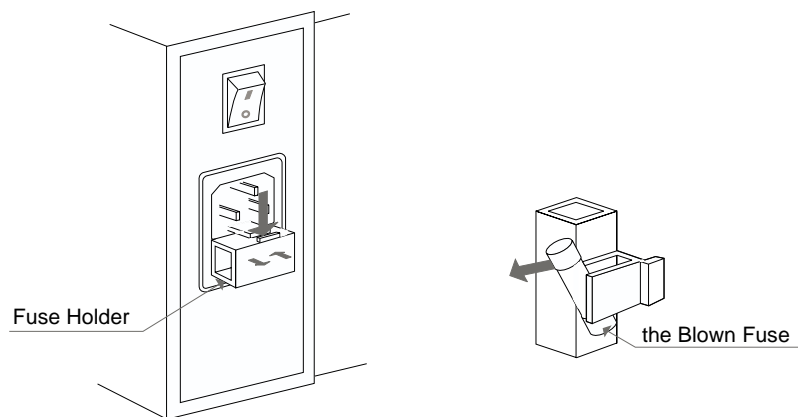
⚠ Warning: Lamp compartment is hot! Allow it to cool before changing lamps!

Lamp Changing Directions:

<p>1</p> <p>Slide the lamp latch; open the lamp compartment. Move the lamp assembly by the long pin.</p> 	<p>2</p> <p>Slide the lamp assembly sideways to place the spare lamp into the “usage” position. Remove the used lamp.</p> 
<p>Hold the new lamp with a plastic bag or clean cloth and then push it firmly into the socket. (Finger oil, dust or water will damage the lamp.)</p>  <p>3</p>	<p>Be sure the lamp assembly is set firmly back in position. Then close the lamp door.</p>  <p>4</p>

Notice: Use only USHIO or OSRAM HLX 64663T EVD 36V 400W lamp. Please contact your local supplier or service center.

◆ Changing the fuse



- ▶ Switch off the power and unplug the power cord.
- ▶ Pull out the fuse holder.
- ▶ Remove the blown fuse and then insert a new fuse.
- ▶ Put the fuse holder back in position.

Specifications

LCD panel	- active matrix TFT color LCD - 6.4" panel x 1 - tr=30ms, tf=50ms response time - 150:1 contrast ratio
Lamp	- 400 watt halogen
Display Resolution	- 800 pixels(H) x 600 lines(V)
Displayable Color	- 16.7M colors
Image Size	- 40" to 180" diagonal
Projection Distance	- 5 ft. to 20 ft. / 1.5 m to 6 m
Computer Compatibility	- IBM & VESA VGA 640 x 350, 70/85Hz 640 x 400, 70/85Hz 720 x 400, 70/85Hz 640 x 480, 60/72/75/85Hz VESASVGA 800 x 600, 56/60/72/75Hz VESAXGA 1024 x 768 compressed, 60/70/75Hz - Apple Macintosh 640 x 480, 67Hz (Extra SVGA/ VGA mode select) - NEC PC-98 series 640 x 400, 57/70Hz 640 x 480, 60Hz - Fujitsu FM Towns 640 x 400, 55Hz 640 x 480, 60Hz
Video Compatibility	- NTSC/NTSC4.43/PAL/SECAM compatible - composite video & S-Video capability
H. Frequency	- 15kHz~60kHz horizontal scan
V. Frequency	- 50Hz~85Hz vertical refresh
Multimedia Audio	- two internal speakers with 3 watt output - built-in amplifier with 3 watt x 2 output
Power Supply	- Auto switch - AC input 100~120/200~240V , 50~60Hz
I/O Connectors	- power: AC power input socket - computer input: 15-pin D-sub 2-row connector - computer output: VGA 15-pin D-sub connector - video input: composite video RCA jack x 1 / S-Video jack x 1 - audio input: 2 pairs of L/R RCA jacks - audio output: 1 pair of L/R RCA jacks
Weight	- 9.25 lbs / 4.2 kg
Dimensions (W x H x D)	- 10.2 x 6.4 x 12.5" / 259 x 162 x 317 mm
Environmental	- operating temperature: 10°~35°C/50°~95°F humidity: 80% maximum storage temperature: -20°~60°C/ -4°~140°F humidity: 80% maximum
Safety Regulation	- FCC class A, CE Mark, VCCI-I, UL, CUL, TÜV

Compatibility Modes

Mode	Resolution	H. Frequency (kHz)	V. Frequency (Hz)
IBM & VESA VGA	640 x 350	31.47	70.09
IBM & VESA VGA	640 x 350	37.86	85.08
IBM & VESA VGA	640 x 400	31.47	70.09
IBM & VESA VGA	640 x 400	37.86	85.08
IBM & VESA VGA	720 x 400	31.47	70.09
IBM & VESA VGA	720 x 400	37.93	85.04
IBM & VESA VGA	640 x 480	31.47	59.94
IBM & VESA VGA	640 x 480	37.86	72.81
IBM & VESA VGA	640 x 480	37.50	75.00
IBM & VESA VGA	640 x 480	43.27	85.00
VESA SVGA	800 x 600	35.16	56.25
VESA SVGA	800 x 600	37.88	60.32
VESA SVGA	800 x 600	48.08	72.19
VESA SVGA	800 x 600	46.88	75.00
* VESA XGA	1024 x 768	48.36	60.00
* VESA XGA	1024 x 768	56.48	70.07
* VESA XGA	1024 x 768	60.02	75.03
Apple Macintosh	640 x 480	34.97	66.61
Apple Macintosh	640 x 480	35.00	66.67
NEC PC-98 series	640 x 400	24.83	56.42
NEC PC-98 series	640 x 400	31.47	70.01
NEC PC-98 series	640 x 480	31.47	59.94
Fujitsu FM-Towns	640 x 400	24.37	55.38
Fujitsu FM-Towns	640 x 480	31.47	59.94

* XGA 1024 x 768 compression computer image.