

3. OPERATION

This section describes how to select a computer or video source, how to adjust the picture, and how to customize the menu or projector settings.

General Controls

Before you turn on your projector, ensure that the computer or video source is turned on and that your lens cap is removed.

1. Turn on the Projector

Plug the supplied power cable in the wall outlet. The projector will go into its standby mode and the power indicator will glow orange.

Only after you press the “On” button on the remote control (“ON/STAND BY” button on the projector cabinet) will the power indicator turn to green and the projector become ready to use.

NOTE: To turn the projector on by plugging in the power cable, use the menu and enable the “Auto Start” feature. (See page E-37.)

2. Select the Computer, Video Source or PC Card Viewer

Press a source button on the remote control or the projector cabinet to select “Video” (VCR, document camera, or laser disc player), “S-Video”, “RGB 1 or 2” (computer or DVD with component output) or “PC Card Viewer” to display the image.

Or press the “Menu” button on the remote control or the cabinet and use the menu to select your video source: “Video”, “S-Video”, “RGB1 or 2”, or “PC Card Viewer”.

3. Adjust the Image Size and the Focus

Use the Zoom lever to adjust the image size, then use the Focus ring to obtain the best focus.

Use the “Magnify” button (+) or (-) on the remote control to make the image larger up to 400%.

4. Turning off the Projector

First press the “off” button on the remote control (“ON/STAND BY” button on the projector cabinet) for a minimum of two seconds. The power indicator will glow orange. Then, unplug the power cable. The power indicator will go out.

IMPORTANT:

- The projector should be unplugged if it will not be used for an extended period.
- To turn off the image and sound briefly (five minutes or less), use the “Picture Mute” button instead of turning the projector off and on.
- The projector will display a black, blue image or logo if no input signal is present.
- Do not turn the projector off and then immediately back on. The projector needs to cool for a minute before it can be restarted.

After the projector turns off, the cooling fans keep operating for a full minute.

Do not disconnect the power cable during this time.

Using the Menus

NOTE: The on-screen menu may not be displayed correctly while interlaced motion video image is projected.

1. Press the “Menu” button on the remote control or projector cabinet to display the Main Menu.

NOTE: When using a USB mouse, click the mouse button to display the main menu. For other operations, do the same way as you use your PC mouse.

2. Press the ▲▼ buttons on the remote control or the projector cabinet to highlight the menu for the item you want to adjust or set.

3. Press the ► button or the “Enter” button on the projector cabinet or the remote control to select a submenu or item.

4. Adjust the level or turn the selected item on or off by using “Select” ◀ or ▶ buttons on the cabinet or the remote control. The on-screen slide bar will show you the amount of increase or decrease.

5. Changes are stored until you adjust it again.

ENTER Stores the setting or adjustments.

CANCEL Return to the previous screen without storing settings or adjustments.

NOTE: You can close the main and sub menus simultaneously by pressing the PJ button to cancel the Projector mode.

6. Repeat steps 2-5 to adjust an additional item, or press “Cancel” on the projector cabinet or the remote control to quit the menu display.

Using a USB Mouse

Using a USB mouse gives you a smooth operation. A commercially available USB mouse is required.

NOTE: There may be some brands of USB mouse that the projector does not support.

Operate the Menus using the USB mouse:

Mouse Cursor:

When connecting a USB mouse to the projector, you get a mouse cursor on the screen.

Unless you use your USB mouse within 10 seconds, the mouse cursor disappears.

Menu Display:

Clicking with a mouse button displays the main menu.

Clicking ► displays the pull-down menu.

To close the menu, click anywhere in the background.

Adjusting and Setting Display:

You can select a menu item and click with a mouse button to make adjustments and setting.

Examples:

Click (or press and hold) the mouse button ◀ or ▶ to adjust the brightness.

Or click and drag the mouse button on the slide bar horizontally to adjust it.

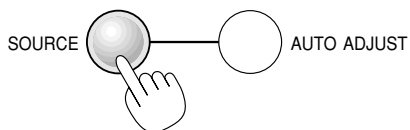
To save the adjustments, click ✕. The display is closed.

If you click anywhere in the background while displaying adjustment and setting menu or dialog box, you will get the main menu at the clicking point.

NOTE: The MOUSE OUTPUT port on the projector is not compatible with the USB mouse.

Basic Operation

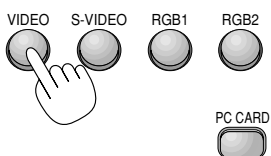
Selecting the computer or video source:



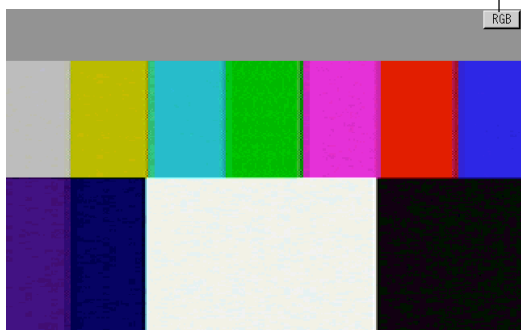
Each time the Source button is pressed, the input source will change as follows:

→ RGB1 → RGB2 → Video → S-Video → PC Card Viewer →

If no input signal is present, the input will be skipped.

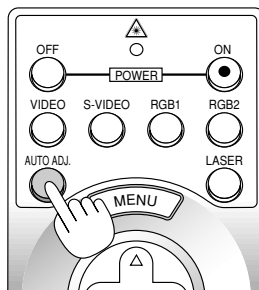


Source display

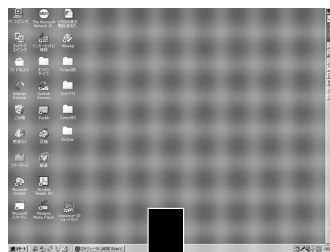


Adjust the Image Using Auto Adjust

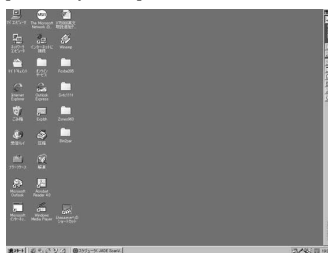
The Auto Adjust function automatically optimizes the image in RGB mode.



[Poor picture]



[Normal picture]



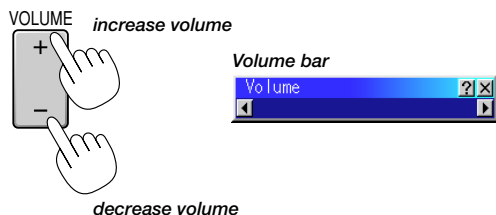
Press the Auto Adjust button to fine-tune the computer image or to remove any vertical banding that might appear and to reduce video noise, dot interference or cross talk (this is evident when part of your image appears to be shimmering). This function adjusts the clock frequencies that eliminate the horizontal banding in the image. This function also adjusts the clock phase to reduce video noise, dot interference or cross talk. (This is evident when part of your image appears to be shimmering.)

This adjustment may be necessary when you connect your computer for the first time.

NOTE: The Auto Adjust function does not work for component signal.

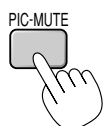
Volume control:

Sound level from the speaker on the projector can be adjusted.



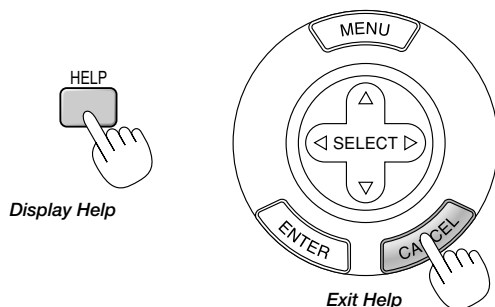
Turning off picture and sound:

Press the Picture Mute button to turn off the image and sound for a short period of time. Press again to restore the image and sound.



Getting Help about how to operate the projector:

You get the contents about Help.

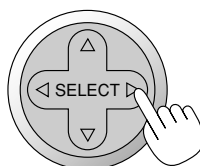
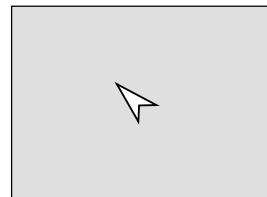


Using Pointer

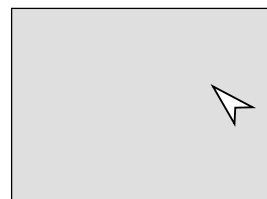
You can use one of eight pointers to draw your audience's attention to the portion of a projected image you want.



Press the Pointer button to display the pointer.



Use the Select button to move the pointer.

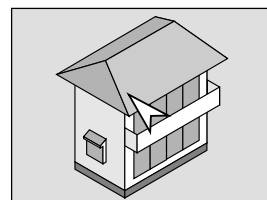


Enlarging and Moving a Picture

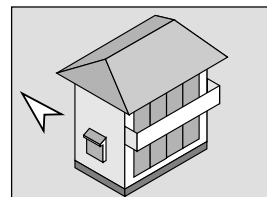
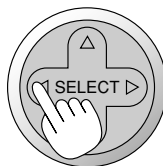
You can enlarge the area you want up to 400 percent.

To do so:

1. Press the Pointer button to display the pointer.

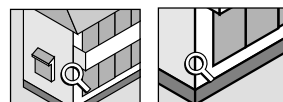
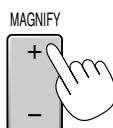


2. Move the pointer to the area you want to enlarge.

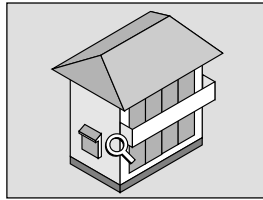
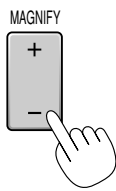


3. Enlarge the selected area.

When the Magnify (+) button is pressed, the pointer is changed to a magnifying glass. To move the magnifying glass, use the Select button.

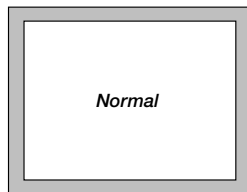
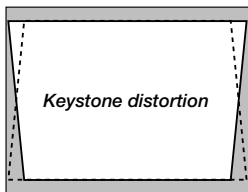


4. Return the image to the original size.



Correcting Keystone distortion

Press (+) or (-) to correct keystone (trapezoidal) distortion to make the top or bottom of the screen longer or shorter so that the projected image is rectangular.



NOTE: The maximum keystone angle that can be corrected is 40 degrees upward and 20 degrees downward with the projector placed horizontally on the ground plane.

Depending on the type of graphics being used, the picture may get blurred or keystone correction may not be possible when excessive keystone correction is used.

The idea is, the closer you are to native resolution, the better image you will see.

Freezing a picture

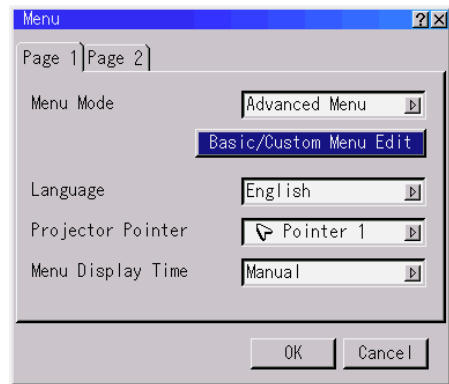
Press the Freeze button to freeze a picture. Press again to resume motion.



Customizing Basic/Custom Menu

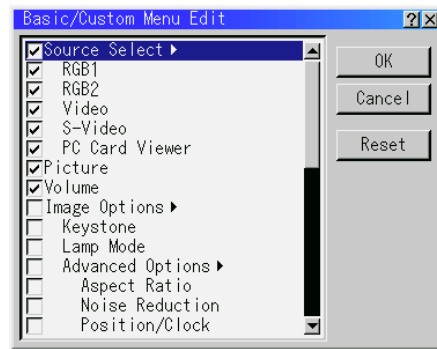
The Basic/Custom menu can be customized to meet your requirements. Selecting a menu item from the "Basic/Custom Menu Edit" list, allows you to custom tailor the menu items to your needs.

1. Select "Basic/Custom Menu Edit" to display the "Basic/Custom Menu Edit" screen.



2. Use the ▲ or ▼ button to highlight your selection and press the Enter button to place a check mark next to an option. This action enables that feature.

Press the Enter button again to clear the check box.



If you select an item with a solid triangle ► and press the Enter button on the remote control or the projector cabinet, you can enable all the items within that submenu. Also you can turn on an item within the submenu without placing a check mark on the main menu item.

NOTE: Up to 12 main menu items (within Basic/Custom Menu Edit, not including submenu items) can be selected.

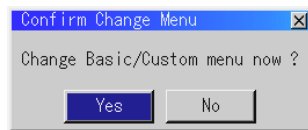
3. In order for the changes to take effect, use the ◀ or ▶ button on the remote control or the projector cabinet to highlight "OK", then press the Enter button. To cancel the changes, use the ▲ or ▼ buttons to highlight "Cancel" and press the "Enter" button. To return to the factory default, select "Reset" then press the "Enter" button.

The default Basic/Custom Menu items are:

Source Select (RGB1/2, Video, S-Video and PC Card Viewer), Picture, Volume, Image Options (Keystone and Lamp Mode), Projector Options (Menu and Setup), Tools (Capture, PC Card Files and ChalkBoard) and Help (Contents and Information)

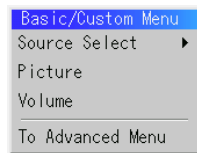
NOTE: Once you have selected OK on the Basic/Custom Menu Edit screen, you cannot cancel the changes on the Menu screen. However, you can re-edit the menu items over again as described in the steps above.

NOTE: If the "Advanced Menu" item has been selected on the Menu mode, you get the "Confirmation Change Menu" upon completion of "Basic/Custom Menu" editing. In this case, selecting "Yes" then "Enter" will close all the menus and apply the changes from the Advanced menu to the Basic/Custom Menu. If you select "No" then "Enter" functions, then all menu items will return to the Advanced menu, but your changes will still be available within the "Basic/Custom Menu" selection. To display the previously tailored Basic/Custom Menu, select "Basic/Custom Menu" from the "Menu Mode".

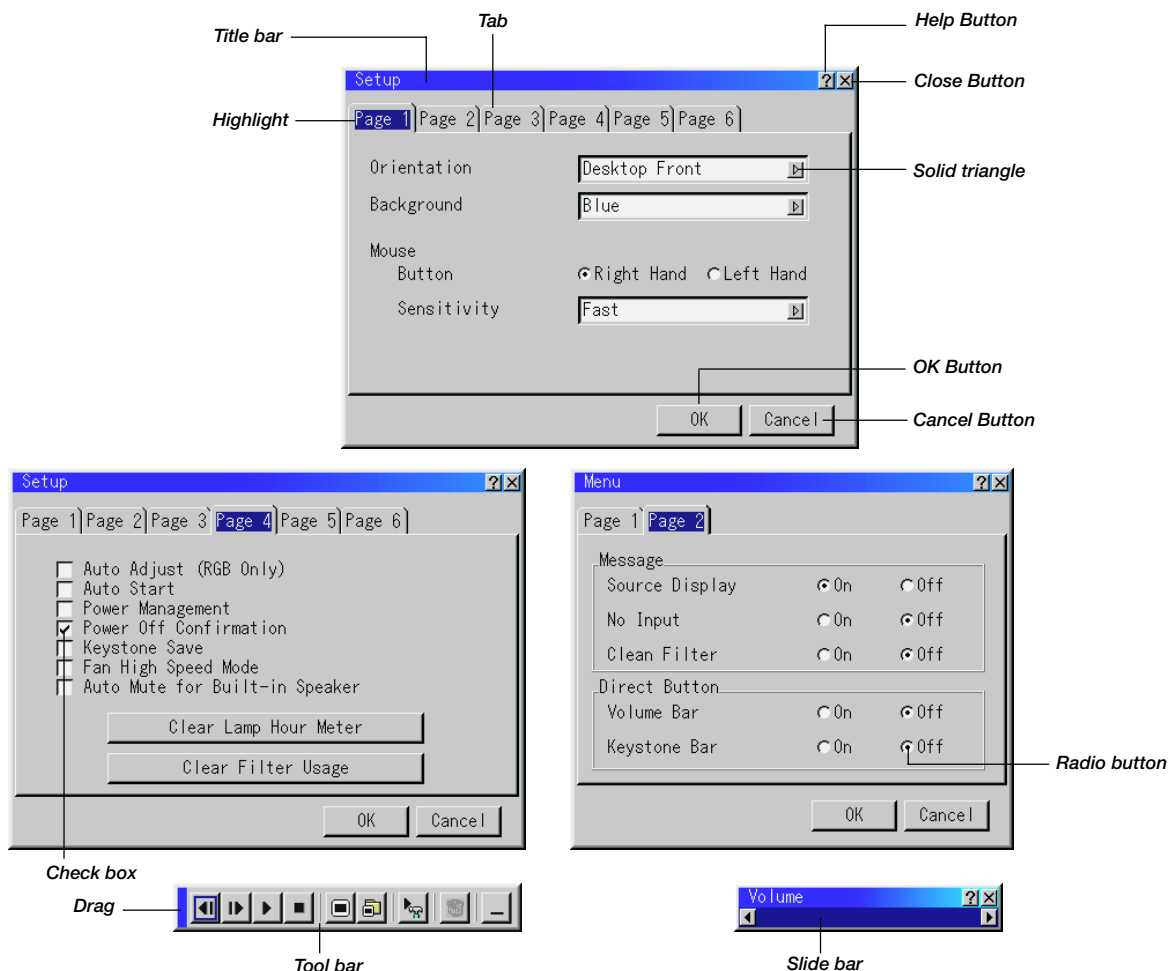


An item "To Advanced Menu" will be added to the bottom of the Basic/Custom Menu.

Selecting this item and pressing the "Enter" button will display the "Advanced Menu" features.



Menu Elements

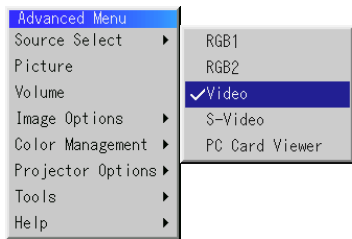


Menu windows or dialog boxes typically have the following elements:

- Title bar: Indicates the menu title.
- Highlight: Indicates the selected menu or item.
- Solid triangle: Indicates further choices are available. A highlighted triangle indicates the item is active.
- Tab: Indicates a group of features in a dialog box. Selecting on any tab brings its page to the front.
- Radio button: Use this round button to select an option in a dialog box.
- Check box: Place a checkmark in the square box to turn the option On.
- Slide bar: Indicates settings or the direction of adjustment.
- OK button: Press to confirm your setting. You will return to the previous menu.
- Cancel button: Press to cancel your setting. You will return to the previous menu.
- Close button: Click to close the window with saving changes. (USB mouse only)
- Help button: Indicates that help about that feature is available (USB mouse only). Press the Help button on the remote control to display help.
- Toolbar: Contains several icons for specific tasks. It is also referred to as "launcher".
- Drag: Point the mouse here, and click and drag to move a toolbar.

Menu Descriptions & Functions

Source Select



Enables you to select a video source such as a VCR, DVD player, laser disc player, computer or document camera depending on what is connected to your inputs.
Press the "Select" button on the projector cabinet or your remote control to highlight the menu for the item you want to adjust.

RGB1 / RGB2

Selects the computer connected to your RGB or component signal.

NOTE: An optional component cable (Component V or ADP-CV1 cable) is needed for a component signal.

Video

Selects what is connected to your Video input-VCR, laser disc player, DVD player or document camera.

S-Video

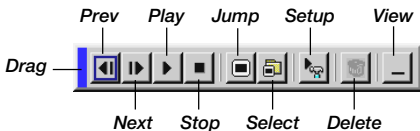
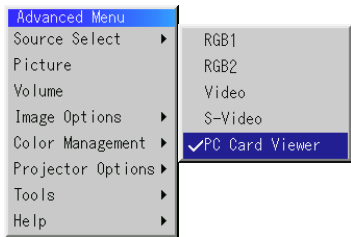
Selects what is connected to your S-Video input-VCR, DVD player, or laser disc player.

NOTE: A frame may freeze for a brief period of time when a video is played back in fast-forward or fast-rewind with a Video or S-Video source.

PC Card Viewer

This feature enables you to make presentations using a PC card that contains captured images and slides created with the exclusive PC Card Viewer Utility contained in the CD-ROM. See page E-41 for installing the PC Card Viewer Utility. The starting screen for the PC Card Viewer varies depending on the settings of the Setup's Page 2. See Setup on page E-36.

NOTE: Even if you switch the current PC Card Viewer source to another source, the current slide is retained. When you return back to the PC Card Viewer, you will get the slide that has been retained. A launcher will appear when you press the MENU button.



A press of the MENU button displays the toolbar; a press of the MENU button again displays the Menu and hereafter each press of the MENU button switches displaying between the Menu and the toolbar.

The launcher is a tool bar including the following buttons:

- Drag Drags to move the tool bar. (for USB mouse operation only)
- Prev Returns to the previous slide or folder.
- Next Advances to the next slide or folder.
- Play Plays back automatically or manually depending on the setting on PC Card Viewer Options of the menu. This allows you to move on to the next slide when "Manual Play" is selected.
- Stop Stops Auto Play while you are playing back and to resume playing from the selected slide or folder when "Auto Play" is selected.
- Jump Displays a list of slides while you are playing back.
- Select Displays a list of folders while you are playing back.
- Setup Displays the PC Card Viewer Options dialog box on Page 2 of the Setup dialog box.
- Delete Deletes a captured slide(s) or all the captured slides in the selected folder.
- View Hides the tool bar while you are playing back. Clicking with the right button of a mouse shows it again.

Picture



Provides access to controls for your image. Use ▲▼ buttons on the projector cabinet or the remote control to highlight the menu for the item you want to adjust.

- Brightness ... Adjusts the brightness level or the back raster intensity.
- Contrast Adjusts the intensity of the image according to the incoming signal.
- Color Increases or decreases the color saturation level (not valid for RGB).
- Hue Varies the color level from +/- green to +/-blue. The red level is used as reference. This adjustment is only valid for Video and Component inputs (not valid for RGB).
- Sharpness Controls the detail of the image for Video (Not valid for RGB and Component).

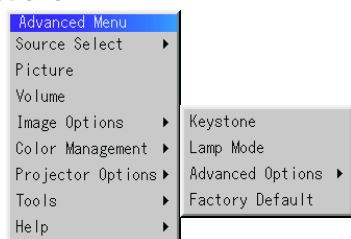
Volume



Adjusts the sound level of the projector.

NOTE: You can also display the volume bar without opening the menu. See "Volume Bar (Direct Button)" on page E-36 for more details.

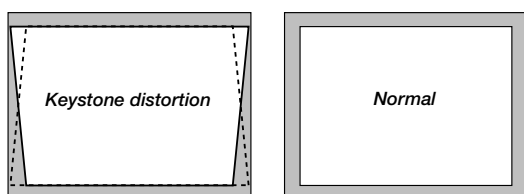
Image Options



Keystone



This feature corrects the keystone (trapezoidal) distortion to make the top of the screen longer or shorter to be the same as the bottom. Use the ◀ or ▶ buttons on the slide bar to correct the keystone (trapezoidal) distortion.

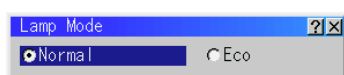


NOTE: The maximum keystone angle that can be corrected is 40 degrees upward and 20 degrees downward with the projector placed horizontally on the ground plane.

Depending on the type of graphics being used, the picture may get blurred or keystone correction may not be possible when excessive keystone correction is used.

The idea is, the closer you are to native resolution, the better image you will see.

Lamp Mode



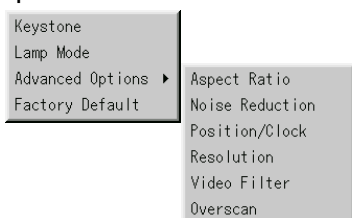
This feature enables you to select two brightness modes of the lamp: Normal and Eco modes. The lamp life can be extended up to 2500 hours by using the Eco mode.

Normal Mode This is the default setting.

Eco Mode Select this mode to increase the lamp life.

NOTE: If you have selected the Eco mode, the lamp lights in Normal mode for 3 minutes after the projector is turned on. After 3 minutes the lamp will change to Eco mode.

Advanced Options



Aspect Ratio



You can select the aspect ratio for input signal and display area respectively. Select the appropriate aspect ratio using the Select ◀, ▶, ▲, or ▼ button.

NOTE: When "Resolution" is set to "Native" (See page E-34) and/or "S-Video Mode Select" is set to "S2" (See page E-38), this feature is not available, and the stored settings and adjustments are invalid.

The screen size (width-to-height) is set for input signal and display area respectively.

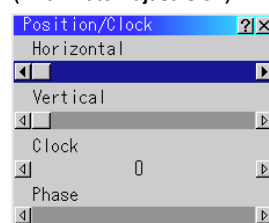
Noise Reduction



You can select three levels of video noise reduction.

NOTE: The lower the Noise Reduction level, the better the image quality by way of higher video bandwidth.

Position/ Clock (when Auto Adjust is off)



This allows you to manually adjust the image horizontally and vertically, and adjust Clock and Phase.

Horizontal/Vertical Position

..... Adjusts the image location horizontally and vertically using the ◀ and ▶ buttons.

This adjustment is made automatically when the Auto Adjust is turned on.

Clock Use this item to fine tune the computer image or to remove any vertical banding that might appear. This function adjusts the clock frequencies that eliminate the horizontal banding in the image.

Press the ◀ and ▶ buttons until the banding disappears.

This adjustment may be necessary when you connect your computer for the first time. This adjustment is made automatically when the Auto Adjust is turned on.

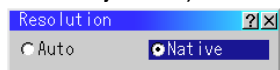
Phase Use this item to adjust the clock phase or to reduce video noise, dot interference or cross talk. (This is evident when part of your image appears to be shimmering.) Use the ◀ and ▶ buttons to adjust the image.

See "Auto Adjust (RGB Only)" on page E-37 for turning on or off the Auto Adjust feature.

Use "Phase" only after the "Clock" is complete.

This adjustment is made automatically when the Auto Adjust is turned on.

Resolution (when Auto Adjust is off)



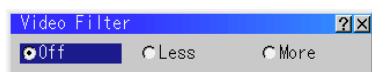
This allows you to activate or deactivate the Advanced AccuBlend feature.

- Auto Turns on the Advanced AccuBlend feature. The projector automatically reduces or enlarges the current image to fit the full screen.
- Native Turns off the Advanced AccuBlend feature. The projector displays the current image in its true resolution.

See "Auto Adjust (RGB Only)" on page E-37 for turning on or off the Auto Adjust feature.

NOTE: While you are displaying an image with higher resolution than the projector's native resolution, even when you are in the Native mode, the image is displayed full screen using the Advanced AccuBlend feature.

Video Filter (when Auto Adjust is off)

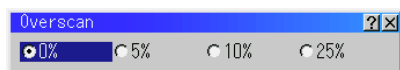


This function reduces video noise.

- Off The low-pass filter is not applied.
- Less The low-pass filter is applied partially.
- More The low-pass filter is applied fully.

Screen adjustments are possible even when the filter is on.

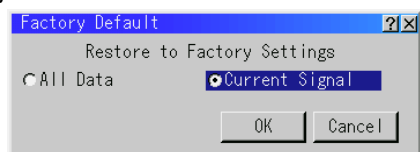
Overscan



You can select an overscan percentage for the RGB signal. Select the appropriate option using the Select ◀ or ▶ button.

NOTE: When "Resolution" is set to "Native", this feature is not available, and the stored settings and adjustments are invalid.

Factory Default



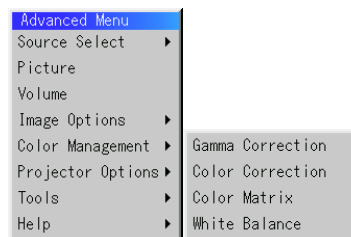
Changes all adjustments and setting to the factory preset for each source individually except Remaining Lamp Time, Lamp Hour Meter, Filter Usage, Projector Usage, Language and Communication Speed. (To reset the lamp usage time, see "Clear Lamp Hour Meter" on page E-37.)

- All Data Reset all the adjustments and settings for all the signals to the factory preset.
- Current Signal Resets the adjustments for the current signal to the factory preset levels.

All the items in "Picture", "Advanced Options" and "Color Management" can be reset.

NOTE: The Volume, Keystone, Lamp Mode and all the items in the Projector Options can be reset only when "All Data" is selected.

Color Management



Gamma Correction



Use the ◀ or ▶ button to choose "Normal" when in a lighted room and "Natural 1&2" when in a darkened room. "Natural 1" for better flesh tone; "Natural 2" for true reproduction of middle tones.

Each mode is recommended for :

- Normal For the regular picture
- Natural 1 For true color reproduction of natural tones
- Natural 2 For dark portions of a picture

Color Correction



This option allows you to adjust neutral tint for yellow, cyan or magenta. There are 4 factory presets optimized for various types of images, or you can set 2 user adjustable settings.

Color Correction

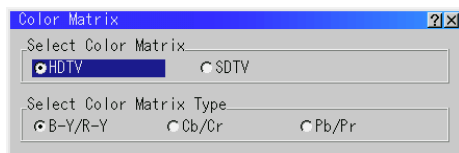
- OFF Turns off the Color Correction. You obtain the brightest image.
- Mode 1 Recommended for true flesh tones
- Mode 2 Recommended for turf color
- Mode 3 Recommended for deep red
- sRGB Standard color values
- User 1 User adjustable
- User 2 User adjustable

When selecting User 1 or 2, the submenu below will be displayed. You can customize each color or tint.

Color Correction (User Adjust)

- Color Tune Adjusts the Tint on whole screen for RGB.
- Yellow Adjusts yellow to obtain reddish yellow or greenish yellow
- Magenta Adjusts magenta or purple to obtain reddish magenta or bluish magenta.
- Cyan Adjusts cyan or light greenish blue to obtain greenish or bluish cyan.
- White(On/Off) . Select "On" for a bright white image; "Off" for a natural white image.

Color Matrix



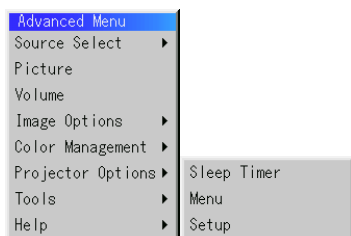
First select an appropriate color matrix to fit your component signal for HDTV or SDTV. Then select an appropriate matrix type from B-Y/R-Y, Cb/Cr or Pb/Pr.

White Balance

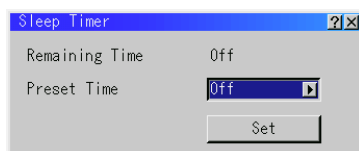


This allows you to adjust the white balance. Brightness for each color (RGB) is used to adjust the black level of the screen; Contrast for each color (RGB) to adjust the white level of the screen. First use the ▲ or ▼ buttons to select R, G, or B for the brightness and the contrast. Next use the ◀ ▶ buttons to adjust the level.

Projector Options



Sleep Timer

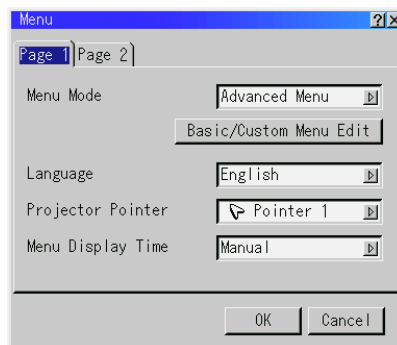


1. Select your desired time between 30 minutes and 2 hours in 30 minute increments.
2. Select Set and press the ENTER button on the remote control.
3. The remaining time starts counting down.
4. The projector will turn off after the countdown is complete.

NOTE:

- To cancel the preset time, set "Off" for the preset time or turn off the power.
- When the remaining time reaches 3 minutes before the projector is turned off, the "Projector will turn off in 3 minutes" message will be displayed on the bottom of the screen.

Menu



Allows you to set preferences for the on-screen menu. Press "OK" to save your changes for all the features of Page 1 and Page 2.

[Page 1]

Menu Mode:

This feature allows you to select two menu modes: Advanced Menu and Basic/Custom Menu.

Advanced Menu This is the menu that contains all the available menus and commands.

Basic/Custom Menu This is the menu that you can customize using the Basic/Custom Menu Edit to fit your needs.

The factory default Basic/Custom menu includes:

Source Select (RGB1/2, Video, S-Video and PC Card Viewer), Picture, Volume, Image Options (Keystone and Lamp Mode), Projector Options (Menu and Setup), Tools (Capture, PC Card Files and ChalkBoard) and Help (Contents and Information). See page E-28 for instructions about how to customize the Basic/Custom Menu.

Language:

You can choose one of seven languages for on-screen instructions. The options are: English, German, French, Italian, Spanish, Swedish and Japanese.

Projector Pointer:

This enables you to select from eight different Pointer icons for the "Pointer" button on your remote control.

After moving your Pointer icon to the area you want on the screen, press the Magnify button on the remote control to enlarge the selected area on the screen. See page E-27 for more details.



NOTE: There may be cases where the Pointer function is not available (ex. a non-interlace signal at 15kHz such as video game.)

Menu Display Time :

This option allows you to select how long the projector waits after the last touch of a button to turn off the menu.

The preset choices are "Manual", "Auto 5 sec", "Auto 15 sec", and "Auto 45 sec". The "Auto 45 sec" is the factory preset.

Manual The menu can be turned off manually.

Auto 5 sec The menu will automatically be turned off in 5 seconds if no buttons are pressed within 5 seconds.

Auto 15 sec .. The menu will automatically be turned off in 15 seconds if no buttons are pressed within 15 seconds.

Auto 45 sec .. The menu will automatically be turned off in 45 seconds if no buttons are pressed within 45 seconds.

NOTE: If no buttons on the remote control are pressed within 10 seconds, the PJ button's light goes out to indicate that you are in the Computer mode. To enable the projector menu operation again, press the PJ button again to light red.

[Page2]



Message:

You can choose the desired information to be displayed on the screen.

On The message will be displayed.

Off The message will not be displayed.

Source Display: You can turn on and off the information for input name such as VIDEO and RGB 1/2. When this option is on, the current input will be displayed each time you switch sources or turn on the projector.

No Input: This option turns on or off the "No Input" message to be displayed in the top right corner on the screen.

Clean Filter: This option turns on or off the "Please clean the filters" message each time you turn on the projector if the projector has been used in excess of 100 hours of use.

To reset the filter usage, see page E-37.

Direct Button:

Volume Bar: This option turns on or off the volume bar when you adjust the sound volume using VOLUME +/- button on the remote control.

On You can increase or decrease the sound volume with the volume bar on screen.

Off You can increase or decrease the sound volume without having to use the volume bar.

Keystone Bar: This option turns on or off the keystone bar when you adjust the keystone using KEYSTONE +/- button on the remote control.

On You can increase or decrease the level with the keystone bar on screen.

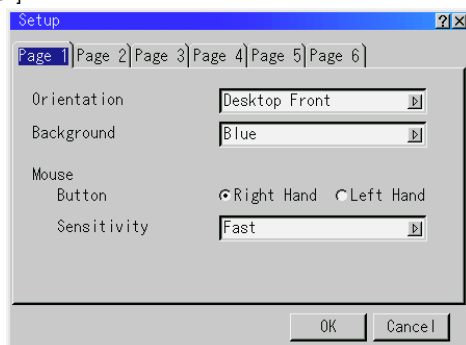
Off You can increase or decrease the level without having to use the keystone bar.

Setup

Enables you to set operating options.

Press "OK" to save your changes for all the features of Page1, Page2, Page3, Page4, Page5 and Page6.

[Page1]



Orientation:

This reorients your image for your type of projection.

The options are: desktop front projection, ceiling rear projection, desktop rear projection, and ceiling front projection.

Background:

Use this feature to display a blue/ black screen or logo when no signal is available. The default background is blue. You can change the logo screen using the PC Card Files feature. See page E-39.

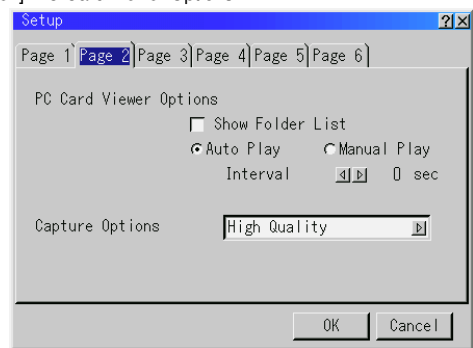
Mouse Settings:

This option lets you to change your USB mouse settings. The mouse settings feature is available for USB mouse only. Choose the settings you want:

Mouse Button "Right Hand" or "Left Hand"

Mouse Sensitivity "Fast", "Medium" or "Slow"

[Page2] PC Card Viewer Options



Show Folder List:

If this option is checked, when PC Card Viewer input is selected on the projector, the folder lists will be displayed and allows you to select the presentation from a PC card.

Auto Play:

If this option is checked, any given slide will start to play automatically.

Auto Play Interval:

You can specify interval time between 5 and 300 seconds.

NOTE: The Auto Play Interval time set on the PC Card Viewer Utility overrides the one set here.

Manual Play:

Views a slide manually when PC Card Viewer input is selected.

NOTE: The Auto Play and Manual Play options determine the behavior of the Play/Stop [] / [] icon on the Viewer toolbar.

NOTE: If you check "Auto Play" and select "PC Card Viewer" on the projector, the slides will automatically start to play back from any given slide.

Capture Options: (available for JPEG only)

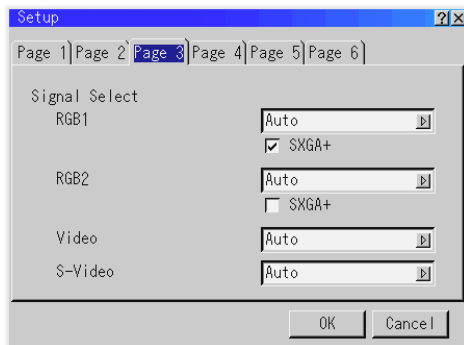
These options are used for the Capture function that you can select from Tools. You have three options for JPEG compression quality: High quality, Normal and High Compression.

High Quality Gives quality of JPEG a priority.

Normal Gives normal JPEG quality.

High Compression Gives compression a priority.

[Page3] Signal Select



RGB1/2:

Allows you to choose "RGB" for an RGB source such as a computer, or "Component" for a component video source such as a DVD player. Normally select "Auto" and the projector automatically detects a component signal. However there may be some component signals that the projector is unable to detect. If this is the case, select "Component".

SXGA+:

To project an SXGA+ signal (1400 × 1050@60Hz) to fill the screen, select the check box. This can be done to both RGB 1 and 2 separately.

NOTE: If an SXGA+ signal is projected with the check box unselected, several lines of information on the edges will be lost. This is because both SXGA@60Hz and SXGA+ have the same frequency and the projector identifies the SXGA+ signal as SXGA.

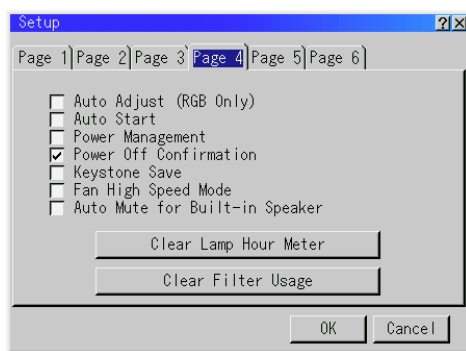
VIDEO and S-VIDEO:

This feature enables you to select composite video standards manually. Normally select "Auto".

Select the video standard from the pull-down menu.

This must be done for Video and S-Video separately.

[Page4]



Auto Adjust (RGB Only):

When "Auto Adjust" is set to "On", the projector automatically determines the best resolution for the current RGB input signal to project an image using NEC's Advanced AccuBlend Intelligent Pixel Blending Technology. The image can be automatically adjusted for position and stability; "Horizontal Position", "Vertical Position", "Clock" and "Phase".

On Automatically adjusts image "Horizontal Position", "Vertical Position", "Clock" and "Phase".

Off User can adjust the image display functions ("Horizontal Position", "Vertical Position", "Clock" and "Phase") manually.

Auto Start:

Turns the projector on automatically when the power cable is inserted into an active power outlet. This eliminates the need to always use the "Power" button on the remote control or projector cabinet.

Power Management:

When this option is on and there is no RGB input for five minutes or more, the projector will automatically turn itself off.

Power Off Confirmation:

This option determines whether a confirmation dialog for turning off the projector will appear or not.

NOTE: When the confirmation message is displayed, you must be in the Projector mode to operate your projector using the remote control. If not, press the PJ button on the remote control to change your projector to the Projector mode. The button lights to indicate that you are in the Projector mode.

Keystone Save:

This option enables you to save your current keystone settings.

Saving your change once affects all sources. The changes are saved when you turn off the projector.

Fan High Speed Mode:

This option allows you to select two modes for fan speed: high-speed mode and normal speed mode.

When you wish to cool down the temperature inside the projector quickly, check this box. This is convenient especially when the projector is installed on the ceiling.

Auto Mute for Built-in Speaker:

This option allows you to mute the built-in speakers automatically when you connect an audio cable to the AUDIO OUT terminal.

Clear Lamp Hour Meter:

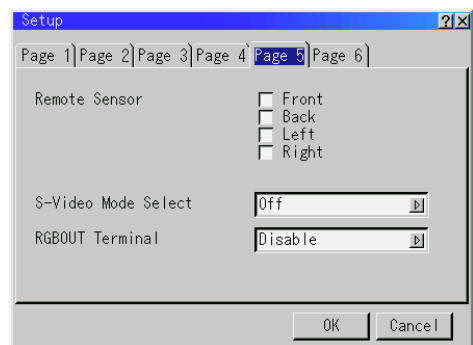
Resets the lamp clock back to zero. Pressing this button appears a confirmation dialog box. To reset the lamp usage hour, press "OK".

NOTE: The projector will turn off and go into standby mode after 1600 hours (up to 2600 hours in Eco mode) of service. If this happens, press the "Help" button on the remote control for ten seconds to reset the lamp clock back to zero. Do this only after replacing the lamp.

Clear Filter Usage:

Resets the filter usage back to zero. Pressing this button appears a confirmation dialog box. To reset the filter usage hour, press "OK".

[Page5]



Remote Sensor:

This option determines which remote sensors on the projector are enabled in wireless mode.

The options are: front, rear, right, or left. All checked boxes indicate that they can accept the infrared signal from the supplied remote control.

S-Video Mode Select:

This feature is used to select the S-Video signal detection mode. This allows identifying of the S-Video signals with different aspect ratio (16:9 and 4:3).

S2 Identifies the 16:9 or 4:3 signal.
OFF Does not identify any S-video signal.

RGBOUT Terminal:

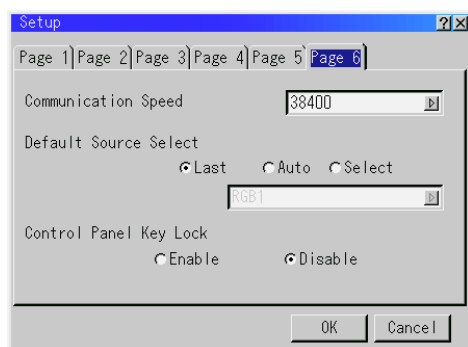
This option allows you to determine which RGB source is output from the RGBOUT terminal when the Video, S-Video or Viewer source is selected.

Disable Neither RGB 1 nor RGB 2 is output from the RGBOUT terminal.

RGB 1 The signal from RGB 1 is output from the RGBOUT terminal.
RGB 2 The signal from RGB 2 is output from the RGBOUT terminal.

NOTE: The AUDIO OUT mini jack outputs sound for the source that the projector currently selects independently of setting "RGB OUT Terminal".

[Page6]



Communication Speed:

This feature sets the baud rate of the PC Control port (Mini DIN 8 Pin). It supports data rates from 4800 to 38400 bps. The default is 38400 bps. Select the appropriate baud rate for your equipment to be connected (depending on the equipment, a lower baud rate may be recommended for long cable runs).

Default Source Select:

You can set the projector to default to any one of its inputs each time the projector is turned on.

Last Sets the projector to default to the previous or last active input each time the projector is turned on.

Auto Searches for an active source in order of RGB1 → RGB2 → Video → S-Video → PC Card Viewer → RGB1 and displays the first found source.

Select Displays the selected source input every time the projector is started up. Select an input from the pull-down menu.

Control Panel Key Lock:

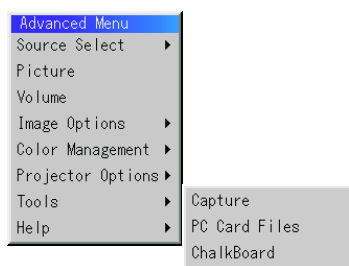
This option turns on or off the Control Panel Key Lock function.

NOTE:

* This Control Panel Key Lock does not affect the remote control and the PC Control functions.

* When the cabinet buttons are disabled, pressing and holding the CANCEL button for about 10 seconds will change the setting to enabled.

Tools



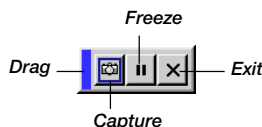
Provides tools for capturing images, displaying files in a PC Card and drawing.

NOTE: The "Capture" and "PC Card Files" features are required for a PC card.

Capture:

Allows you to capture an image from a source that is currently being displayed. The image is saved as JPEG in the PC card.

When you select Capture from the menu, you will get a tool bar. You can capture an image directly using the tool bar when the menu is not displayed.



The tool bar includes the following buttons:

Drag Drags to move the tool bar. (for USB mouse operation only)
Capture Captures an image and save it as a JPEG file in a PC card.

Freeze Freezes and unfreezes images.

Exit Exits the Capture function.

Unless a PC card is inserted into the PC Card slot of the projector, the Capture feature is not available.

The "Card Error" display means that the free space of the PC card is insufficient for saving images. Make more space available on the card by erasing unwanted images with your PC. The number of images that can be captured depends on the size of the PC card.

NOTE: Be sure not to turn off the power or remove the PC card while capturing an image. Doing so could cause a loss of the data in the PC card or damage to the card itself.

NOTE: Captured images with higher resolution than the projector's native resolution cannot be displayed correctly.

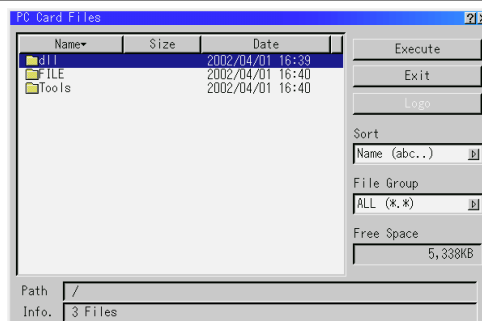
PC Card Files:

Displays a list of all the files stored in the PC card so that you can select a file you want to display. You can also sort files by file name or date, or display the file.

Although a list of all the files in the PC card is displayed, you can view files in idx, text, HTML, JPEG and BMP format only.

Selecting BMP and JPEG files automatically switches to the PC Card Viewer source.

NOTE: When an image with a resolution of XGA (1024×768) or higher is projected, the PC Card Files screen may not be correctly displayed.



Selecting "Execute" displays the file you selected. When you select a JPEG or BMP file and press the Enter button on the remote or the cabinet, or "Execute" on the above, you will get a toolbar. This toolbar is used to return to the PC Card Files screen.



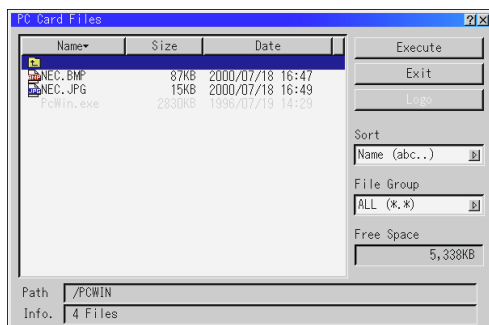
Drag Drags to move the tool bar. (for USB mouse operation only)
Return Returns to the PC Card Files screen.
Close Close the toolbar.

Changing Background Logo:

The Logo button allows you to select a background logo from graphic files on a PC card and change the background to the new background logo.

NOTE: File size must be 64KB or less. Other file formats than JPEG and BMP are not available.

1. Use the ▲ or ▼ button to select a JPEG or BMP file for your background logo.



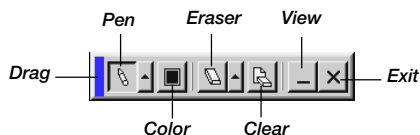
2. Use the ► and then ▼ button to select "Logo".
3. Press the Enter on the remote control or the cabinet. You will get the confirmation dialog box.



4. Select "OK" and press the Enter button. This completes changing a logo for the background.

* Once you have changed the background from the NEC logo to another, you cannot return the logo to background even by using Factory Default. To do so, repeat the above steps. The NEC logo file is included on the supplied CD-ROM (logo/nec_b_x.jpg).

ChalkBoard: (available only when using with USB mouse)
Provides the tool bar for producing freehand drawings.



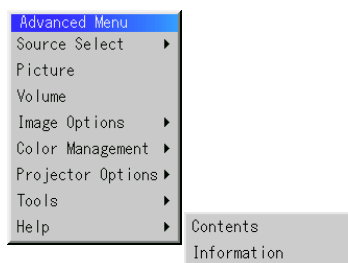
Drag Drags to move the tool bar. (for USB mouse operation only)
Pen Left-click and drag to draw. Left-click [▲] or right-click the pen icon to display the pen palette containing four lines of different thickness from which you can select a line you prefer by left-clicking.

Color Selects a color. Left-click to display the color palette from which you can select a color you prefer by left-clicking.
Eraser Left-click and drag to erase part of a drawing. Left-click [▲] or right-click the eraser icon to display the eraser palette containing four eraser of different thickness from which you can select an eraser you prefer by left-clicking.
Clear Left-click to clear the drawing completely from the ChalkBoard screen.
View Hides the tool bar by left-clicking. Right-clicking anywhere on the screen displays the ChalkBoard tool bar again.
Exit Clears the complete drawing and exits the ChalkBoard.

NOTE:

- * The ChalkBoard feature is available only when a USB mouse is used. Free-hand drawings cannot be saved or captured.
- * The menu is not available while you display the ChalkBoard screen.
- * The Capture function is not available on ChalkBoard screen.
- * Switching slides clears a drawing completely.

Help



Contents:

Provides an online help about how to use the menus. An underlined link means that you can move to an adjustment item directly. Selecting the underlined link and pressing ENTER moves to the corresponding adjustment item.

NOTE: The Help Menu may not be displayed correctly when a UXGA signal is displayed.

Information:

Displays the status of the current signal, and the lamp and the projector usage hours. This dialog box has three pages.

The information included are as follows:

[Page 1]	[Page 2]
Source Name	Signal Type
Input Terminal	Video Type
Horizontal Frequency	Sync Type
Vertical Frequency	Interlace
Sync Polarity	
[Page 3]	
Remaining Lamp Time (%)	
Lamp Hour Meter (H)	
Filter Usage (H)	
Projector Usage (H)	

NOTE: The progress indicator shows the percentage of remaining bulb life. The value informs you of the amount of lamp and projector usage respectively.

Remaining Lamp Time Display:

When the remaining lamp time reaches 0, the Remaining Lamp Time bar indicator changes from 0% to 100 Hours and starts counting down.

If the remaining lamp time reaches 0 hours, the projector will not turn on regardless of whether the lamp mode is set to Normal or Eco.

Using the PC Card Viewer function

NOTE: When using the supplied software (CD-ROM)

The software is designed to use with a personal computer only. Do not play the software on CD player. Doing so could cause damage to speakers.

Features

The Viewer feature allows slides stored on a PC memory card (referred to as PC card in this manual) to be displayed on the projector. Even if no computer is available, presentations can be conducted simply with the projector. This feature is convenient for holding presentations at meetings and in offices, as well as for playing images taken on digital cameras.

Easy to use

- Presentations can be started immediately simply by inserting a PC card (not supplied)
- Easy slide switching
- Remote control operation
- Jumping to list of slides or any specific slide

High quality images

- High resolution up to 1024×768 dots
- 24-bit full color playback
- Viewing of digital camera images

Simple utility software (for computer)

- PC Card Viewer Utility operable on Windows 95 / 98 / Me / NT4.0 (SP3 or later) / 2000
- Slides can be created by capturing the currently displayed image
- Control screen for displaying lists of slides and editing
- PC Card Viewer PPT Converter 1.0 [Add-In Version] converts files created with Microsoft PowerPoint 95/97/2000/2002 (hereafter referred to as PowerPoint) into indexes playable with PC Card Viewer

* Microsoft, Windows and PowerPoint are registered trademarks of Microsoft Corporation.

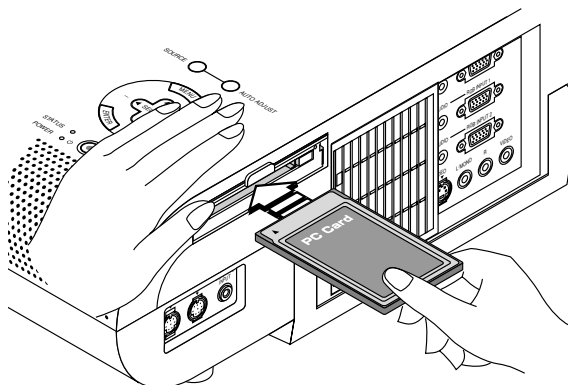
Inserting and Ejecting a PC Card

A PC card is used to view presentation data prepared on the computer and to capture and play images projected with the projector.

Inserting the PC Card

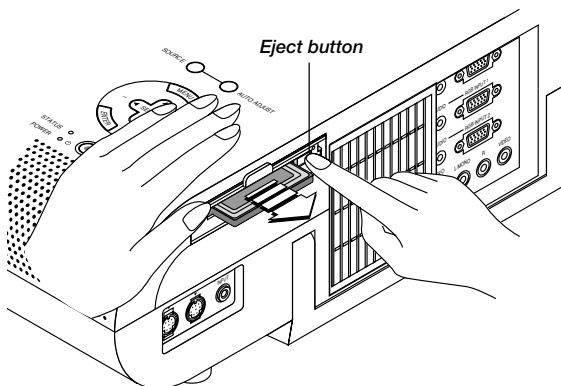
- Hold the PC card horizontally and insert it slowly into the card slot with its top facing up.
- The eject button pops out once the PC card is fully inserted. Check that the PC card is fully inserted.

NOTE: Do not try to force the PC card into the slot.



Ejecting the PC Card

Press the eject button. The PC card pops out a little. Grasp the edges of the PC card and pull it out. Do not eject the PC card while its data is being accessed.



Direction for Inserting the PC Card

The PC card has a top and bottom and must be inserted into the PC card slot in a specific direction. It cannot be inserted backwards or upside-down. Attempting to force it into the slot in the wrong direction may break the internal pin and damage the card slot. Refer to the PC card's operating instructions for the proper direction of insertion.

PC Card Type

The PC Card slot accepts PCMCIA Type II only.

Installing the PC Card Viewer Software

Before Installing

Perform the following before installing the PC Card Viewer software:

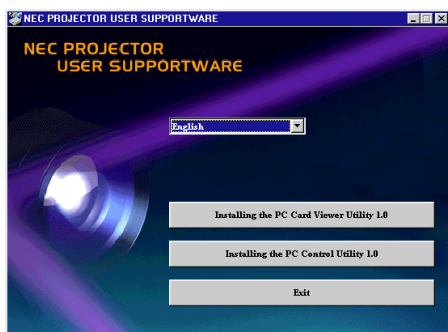
- If Windows is already started, exit all applications. Installation may not be performed properly if any applications are running.

Installation

Install the viewer software as described below.

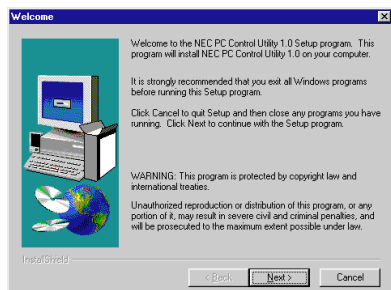
To quit installation before it is completed, press the "Cancel" button then follow the instructions in the dialog box.

1. Start up Windows.
2. Insert the CD-ROM into the CD-ROM drive.
The auto CD play function automatically starts the CD-ROM's program and the contents screen appears.



- * The auto CD play function operates if the "Auto insert notification" box in the computer's CD-ROM control panel is checked. (The box is checked by default.)

3. Click [Installing the PC Card Viewer Utility 1.0]
The setup dialog appears.



- * Follow the instructions in the setup dialog to complete the installation.

For instructions on uninstalling the PC Card Viewer software, see page E-45.

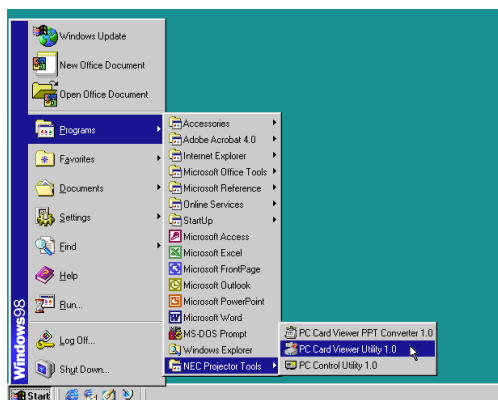
Starting Up the PC Card Viewer Software on your PC

(PC Card Viewer Utility 1.0)

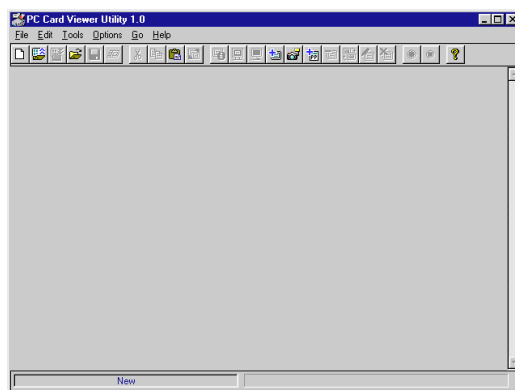
Use the PC Card Viewer Utility 1.0 for creating viewer slides.

To start the PC Card Viewer software:

- * Select [Start]-[Programs]-[NEC Projector Tools]-[PC Card Viewer Utility 1.0].



Refer to online help for instructions on using the PC Card Viewer software.



Contents of the English version PC Card Viewer software (PC Card Viewer Utility 1.0)

This is the software used for creating PC Card Viewer slides. In this manual it is referred to as the "PC Card Viewer software".

PC Card Viewer PPT Converter 1.0

This is an application that converts files created with Microsoft PowerPoint 95/97/2000/2002 into indexes so that they can be played directly with the PC Card Viewer Utility 1.0.

PC Card Viewer PPT Converter is installed automatically when you install the PC Card Viewer Utility.

To start PC Card Viewer PPT Converter:

- * Select PC Card Viewer PPT Converter from NEC Projector Tools.

Basic Operation of the PC Card Viewer Software

PC Card Viewer Utility is an application for editing documents, converting them into slides and storing them on PC cards as playback data (indexes) for presentations using projectors.

Operating the PC Card Viewer Function from the Projector (playback)

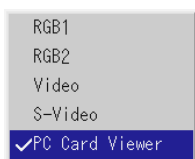
This section describes the operation for showing slides of presentation documents created using the PC Card Viewer function with the projector.

It is also possible to make slides directly from the images projected with the projector.

Projecting slides

1. Insert a PC card into the card slot.
Insert the PC card with the side with the insertion direction arrow on the top.
* Press the eject button to eject the card.

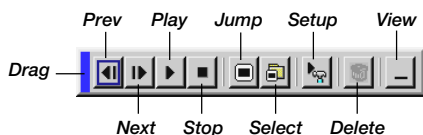
2. Select the "PC Card Viewer" from the Source Select menu.



3. Project slides.

Checking "Show Folder List", means that selecting PC Card Viewer input displays a list of the folders in the PC card and if "Auto Play" is checked the projector automatically starts to play slides at the first slide of the folder you have selected.

A tool bar will appear when you press the MENU button on the remote control or the projector cabinet or clicking with the right button of a mouse.



The tool bar includes the following buttons:

- Drag Drags to move the tool bar (for USB mouse operation only).
- Prev Returns to the previous slide or folder. Or this lets you play slides back in reverse.
- Next Advances to the next slide or folder. Or this lets you play slides back.
- Play Plays back automatically or manually depending on the setting on PC Card Viewer Options of the menu. This allows you to move on to the next slide when "Manual Play" is selected.
- Stop This allows you to stop Auto Play while you are playing back and to resume playing from the selected slide or folder when "Auto Play" is selected.
- Jump Displays a list of slides while you are playing back.
- Select Displays a list of folders while you are playing back.
- Setup Displays the PC Card Viewer Options dialog box on Page 2 of the Setup dialog box.

Delete Deletes a captured slide(s) or all the captured slides in the Capture – specific folder.

View Hides the tool bar while you are playing back. Pressing the MENU button or clicking with the right button of a mouse shows it again.

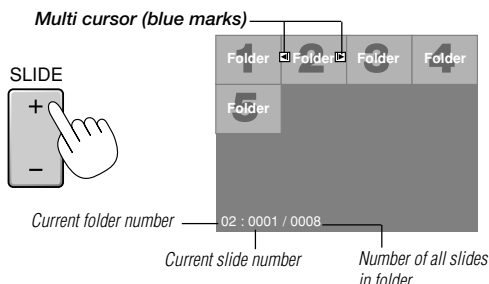
NOTE: If no PC card is inserted in the PC CARD slot, there is no signal, and a black, blue or logo background is displayed, depending on the setting.

Playback is stopped when SLIDE +/- on the remote control or ◀ / ▶ button on the cabinet is pressed in Auto Play mode.

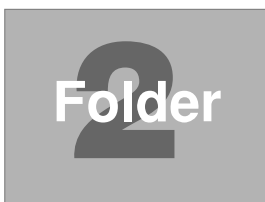
NOTE: Up to 12 indexes can be displayed on the list of folders. The folder in the right bottom is always a folder exclusively for captured images, but is only displayed when images have been captured. To display the list of folders when there are 13 or more indexes stored on the PC card, select "Edit index" from the PC Card Viewer software's "File" menu and move the index you want to display to within 12 indexes from the top of the folder index. For details on indexes, refer to the PC Card Viewer software's help folder.

When the tool bar is not displayed:

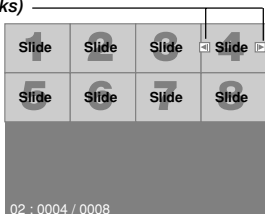
Press the FOLDER LIST button on the remote control to display folders from a PC card in the projector's PC Card slot.



Use the SLIDE +/- button to advance to the next folder or return to the previous folder.



Slide(Table) cursor (green marks)

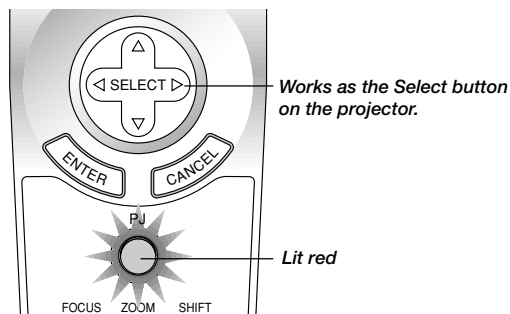


Use the SLIDE +/- button to advance to the next slide or return to the previous slide.



NOTE: You can also use the ◀ and ▶ button on the remote control to select folders or slides.

If you use the ◀ and ▶ button on the remote control for PC Card Viewer operation, press the PJ button to switch to the Projector mode and the PJ button lights red.



Auto Play Mode

- If the "Auto Play" option is selected in "PC Card Viewer Options" of the menu, any given slide will start to play automatically. You can also specify Auto Play Intervals between 5 and 300 seconds.

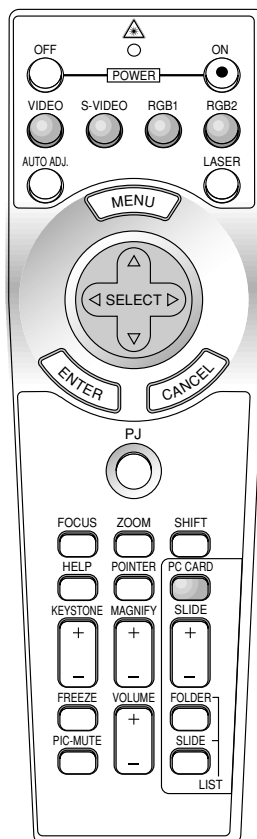
Switching to Slides Directly from Other Input Modes

With this function it is possible to switch directly to a slide when the picture of a VCR or computer is being projected.

Example:

When conducting presentations using a combination of slides and moving pictures from a VCR, etc., it is possible to switch from a PC Card Viewer slide to the video picture then back to the PC Card Viewer slide simply by using a source button and PC CARD button.

NOTE: Even if you switch the current PC Card Viewer source to another source, the current slide is retained. When you return back to the PC Card Viewer, you will get the slide that has been retained.



NOTE: The PC card editing operation cannot be performed from the projector. Do so using the PC Card Viewer software.

Capturing Images Displayed on the Projector

Storing images displayed on the projector on the PC card

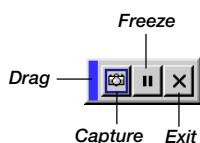
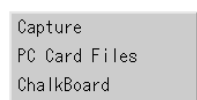
Preparations:

Insert the PC card into the card slot.

Insert the PC card (side with the insertion direction arrow) facing the top of the projector.

* Press the eject button to eject the card.

1. Project the image you wish to store on the projector.
2. Select the "Capture" from the Tools menu.



3. A tool bar will appear.

The tool bar includes the following buttons:

- Drag Drags to move the tool bar (for USB mouse operation only).
- Capture Captures an image and save it as a JPEG file in a PC card.
- Freeze Freezes and unfreezes images.
- Exit Exits the Capture function. Another option to exit the Capture function is to press MENU or CANCEL button on the remote control or projector cabinet.

NOTE: You can compress a captured file (JPEG) using the Capture Options in the Setup dialog. See page E-36.

NOTE: Captured images with higher resolution than the projector's native resolution cannot be displayed correctly.

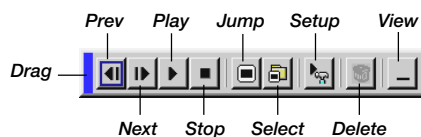
NOTE:

- File size of the captured image varies depending on the resolution of an input signal.
 - Since an image data is compressed with the JPEG format, the image is slightly degraded.
-

NOTE: An hourglass indicating that an image is being captured appears on the projector's display. Do not eject the PC card or turn off the projector's power while this icon is displayed. Doing so will damage the PC card data. If the PC card data is damaged, use a computer to repair the data.

NOTE: The folder in the right bottom is always a folder exclusively for captured images. To display the list of folders when there are 13 or more indexes stored on the PC card, select "Edit index" from the PC Card Viewer software's "File" menu and move the index you want to display to within 12 indexes from the top of the folder index. For details on indexes, refer to the PC Card Viewer software's help file.

Deleting Captured Images



Using the Delete button on the tool bar for PC Card Viewer can delete captured images.

To delete captured images:

1. Select PC Card Viewer.
2. Use ► button to select the Capture folder in the right bottom of the screen.
3. Press the MENU button to display the tool bar.
4. Use the ◀ or ▶ button to select the Delete icon and press the ENTER button or click with a mouse button.

Viewing Digital Images

Digital images can be played with the PC Card Viewer if the following conditions are met:

- If the image can be stored on an MS-DOS format PC card
- If the image can be stored in a format supported by the PC Card Viewer.
With the PC Card Viewer, images on the card are searched for in directories and images in JPEG or BMP format are recognized as slides.
Searchable directories are directories within two steps from the root directory, and searchable images are images within the first 12 files in the directory. Only file and slide switching are possible.

NOTE: The maximum number of images recognized as slides within one directory is 128.

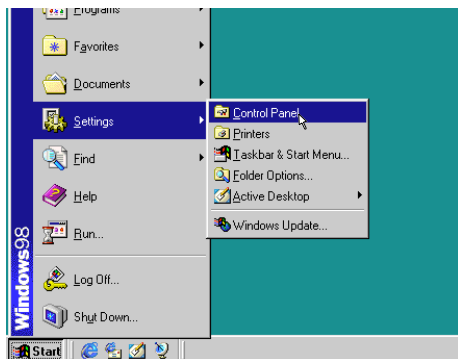
Uninstalling the PC Card Viewer Software

Even if you do not know the PC Card Viewer software's file names or where they are stored, the PC Card Viewer software files can be easily removed from the system using the "Install/Uninstall Applications" control panel in Windows. (Normally there is no need to perform this operation.)

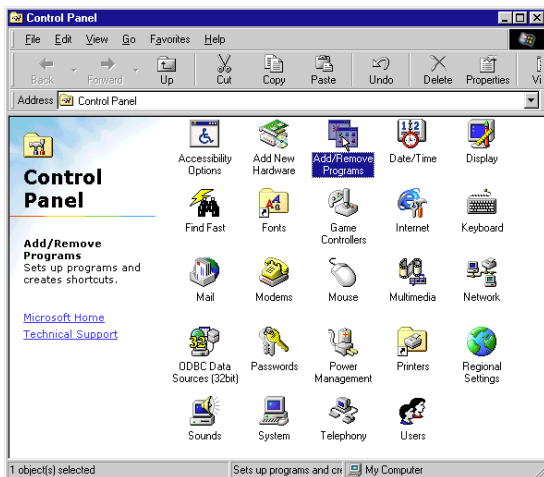
Uninstalling the software

Use the procedure described below to uninstall the PC Card Viewer software files.

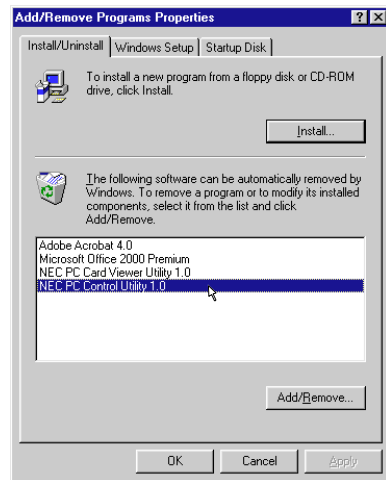
1. From the "Start" menu, select "Settings" then "Control Panels".



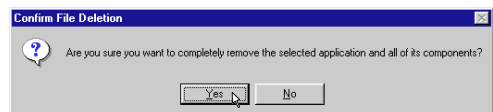
2. In the "Control Panels" dialog box, double-click on "Add/Remove Programs".



3. In the "Add/Remove Programs Properties" dialog box, click the "Setup/Remove" tab, then select "PC Card Viewer Utility 1.0" from the list of applications and click on "Add/Remove".



4. In the "Confirm File Deletion" dialog box, click "Yes".



5. Once the application is uninstalled, click on "OK" in the "Remove Program From Your Computer" dialog box.

Terminology

PC card	This is the name of a card currently being standardized by the Japan Electronic Industry Association (JEIDA) and PCMCIA (Personal Computer Memory Card Interface Association) of the United States.
ATA card	A type of PC card. ATA was originally a type of interface between computers and fixed disk devices. The ATA card is a standard card-type recording medium.
CompactFlash	CompactFlash card is a small removable card conforming to ATA specifications. It is one-fourth the volume of a PCMCIA card.
TYPE (I, II and III)	PCMCIA 2.1 PC cards are divided into three types according to their thickness: Type I (3.3 mm), Type II (5.0 mm) and Type III (10.5 mm).
BMP	A type of image format. The standard Windows Bit Map format used for MS-DOS/Windows-compatible computers.
JPEG	A type of image format. "JPEG" is the abbreviation of Joint Photographic Experts Group. JPEG compression offers efficient data storage. The data not required for displaying the image is identified and deleted. Since the data is deleted, JPEG algorithms are said to be irreversible. This means that once the image is compressed, the decompressed image it is not the same as the original image.

4. MAINTENANCE

This section describes the simple maintenance procedures you should follow to replace the lamp and clean the filter.

Replacing the Lamp

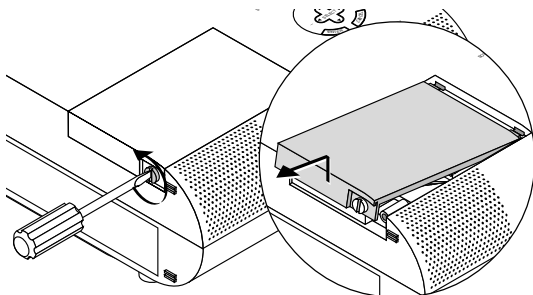
After your lamp has been operating for 1500 hours (up to 2500 hours : Eco mode) or longer, the "Status" light in the cabinet will go on and the message will appear. Even though the lamp may still be working, replace it at 1500 (up to 2500 hours : Eco mode) hours to maintain optimal projector performance.

CAUTION

- DO NOT TOUCH THE LAMP immediately after it has been used. It will be extremely hot. Turn the projector off, wait a full minute, and then disconnect the power cable. Allow at least one hour for the lamp to cool before handling.
- DO NOT REMOVE ANY SCREWS except the lamp cover screw and two lamp housing screws. You could receive an electric shock.
- The projector will turn off and go into stand by mode after 1600 (up to 2600 hours : Eco mode) hours of service. If this happens, be sure to replace the lamp. If you continue to use the lamp after 1500 hours (up to 2500 hours : Eco mode) of use, the lamp bulb may shatter, and pieces of glass may be scattered in the lamp housing. Do not touch them as the pieces of glass may cause injury. If this happens, contact your NEC dealer for lamp replacement.

To replace the lamp:

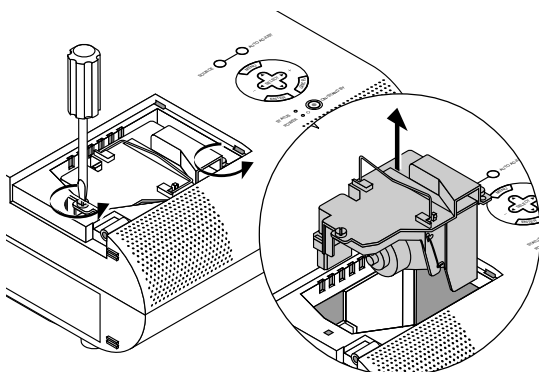
1. Loosen the lamp cover screw until the screwdriver goes into a freewheeling condition and remove the lamp cover. The lamp cover screw is not removable.



2. Loosen the two screws securing the lamp housing until the screwdriver goes into a freewheeling condition. The two screws are not removable.

Remove the lamp housing by pulling out the handle.

NOTE: There is an interlock on this case to prevent the risk of electrical shock. Do not attempt to circumvent this interlock.

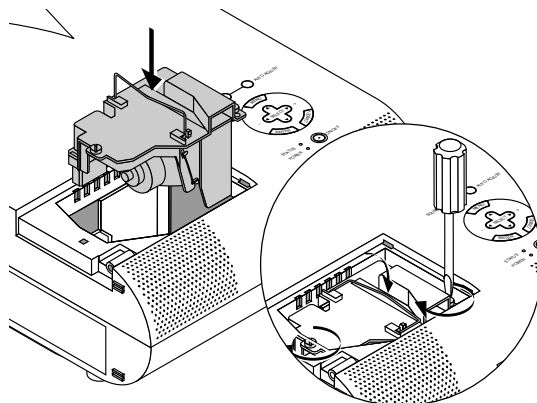


3. Insert a new lamp housing.

CAUTION: Do not use a lamp other than the NEC replacement lamp (MT50LP). Order this from your NEC dealer.

Secure it in place with the two screws.

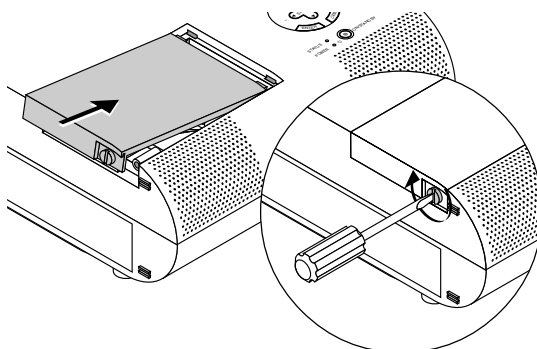
Be sure to tighten the screws.



4. Reattach the lamp cover.

Tighten the lamp cover screw.

Be sure to tighten the screw.



5. After you install a new lamp, select [Menu] → [Projector Options] → [Setup] → [Page 4] → [Clear Lamp Hour Meter] to reset the lamp usage hours.

NOTE: When the lamp exceeds 1600 hours (up to 2600 hours : Eco mode) of service, the projector cannot turn on and the message is not displayed. If this happens, press the Help button on the remote control for a minimum of 10 seconds while in standby mode. When the lamp time clock is reset to zero, the STATUS indicator goes out.

Cleaning or Replacing the Filters

The air-filter sponge keeps the inside of the MT1056 Projector free from dust or dirt and should be cleaned after every 100 hours of operation (more often in dusty conditions). If the filter is dirty or clogged, your projector may overheat.

CAUTION

- Turn off the power and unplug the projector before replacing the filter.
- Only clean the outside of the filter cover with a vacuum cleaner.
- Do not attempt to operate the projector without a filter cover.
- Your projector will not operate unless the filter cover is installed correctly.

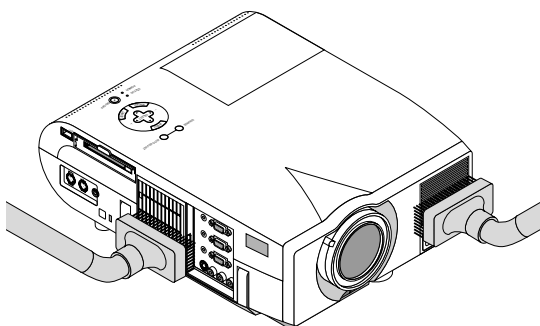
To clean the air-filter:

When "Clean Filter" option is turned on, the "Please clean the filters" message will be displayed each time the project or is turned on after it has been used in excess of 100 hours. Should this message appear, clean the filters.

- The message can be turned on or off using the "Menu" - "Filter Clean Message" option on the Setup menu. See page E-36.
- After cleaning the filters and resetting the filter usage time to zero, the message will not be displayed.

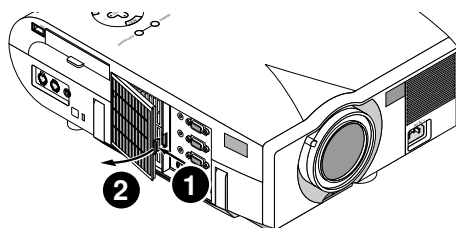
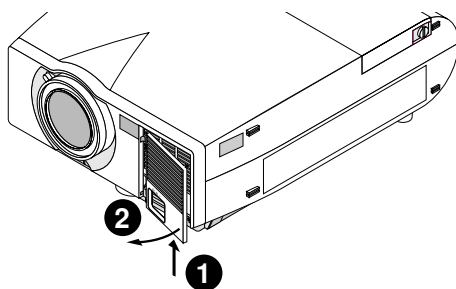
See page E-37 for resetting the filter usage time.

Vacuum the filter-through the filter cover.



To replace the air-filter:

1. Remove the filter cover by pushing up on the catch of the cover until you feel it detach.



2. Reinstall the new filter cover.

NOTE: Do not detach the sponge from the filter cover. Do not wash the filter cover with soap and water. Soap and water will damage the filter membrane. Before replacing the filter cover, remove dust and dirt from the projector cabinet. Keep out dust and during filter replacement.

NOTE: When you replace the lamp, it is also wise to replace the filters. The filters come in the same package with your replacement lamp.

5. TROUBLESHOOTING

This section helps you resolve problems you may encounter while setting up or using the projector.

Power/ Status Light Messages

Condition	Power Indicator	Status Indicator	Note
Standby	Steady orange	—	—
Cooling down	Blinking green	—	Blinks green for 60 seconds
Lamp in Normal mode	Steady green	—	—
Lamp in Eco mode	Steady green	Steady green	—
3 minutes after lamp is turned on in Eco mode	Steady green	Blinking green	Fixed at Normal mode. Lamp mode can be changed on the menu
Lamp has reached its end of life (Normal: 1500 hours or over) (Eco: 2500 hours or over)	Steady green	Steady red (Normal mode)/ Steady orange (Eco mode)	Message appears on screen during 1500–1600 hours (2500–2600 hours: Eco mode) of lamp usage. The projector reaches its end of life. Please replace the lamp as soon as possible.
Lamp life has reached its end of life (Normal: 1600 hours or over) (Eco: 2600 hours or over)	Steady orange	Steady red	The projector is in standby mode and cannot be turned on.
Lamp or filter cover error (3 locations)	Steady orange	Blinking red (1 sec interval)	The projector is in standby mode and cannot be turned on.
Temperature error	Steady orange	Blinking red (4 sec interval)	The projector is in standby mode and cannot be turned on.
Fan error	Steady orange	Blinking red (8 sec interval)	The projector is in standby mode and cannot be turned on.
Lamp error	Steady orange	Blinking red (12 sec interval)	The projector is in standby mode and cannot be turned on.

Common Problems & Solutions

Problem	Check These Items
Does not turn on	- Check that the power cable is plugged in and that the power button on the projector cabinet or the remote control is on. - Ensure that the lamp cover is installed correctly. See page E-47. - Check to see if the projector has overheated or the lamp usage exceeds 1600 hours (up to 2600 hours in Eco mode). If there is insufficient ventilation around the projector or if the room where you're presenting is particularly warm, move the projector to a cooler location.
No picture	- Use the menu to select your source (Video, S-Video, RGB1, RGB2 or PC Card Viewer). See page E-32. - Ensure your cables are connected properly. - Use menus to adjust the brightness and contrast. See page E-32. - Remove the lens cap. - Reset the settings or adjustments to factory preset levels using the Factory Default on the Image Options Menu in Advanced menu. See page E-34.
Image isn't square to the screen	- Reposition the projector to improve its angle to the screen. See page E-14. - Use the Keystone to correct the trapezoid distortion. See page E-28 or 33.
Picture is blurred	- Adjust the focus. See page E-25. - Reposition the projector to improve its angle to the screen. See page E-14. - Ensure that the distance between the projector and screen is within the adjustment range of the lens. See page E-17.
Image is scrolling vertically, horizontally or both	Use menus or a source button on the remote control or the cabinet to select the source you want to input.
Remote control does not work	- Install new batteries. See page E-12. - Make sure there are no obstacles between you and the projector. - Stand within 22 feet (7 m) of the projector. See page E-12. - Make sure that you are in the Projector mode or the PJ button lights in red. If not, press the PJ button.
Status indicator is lit or blinking	See the Power/ Status Light messages above.
Cross color in RGB mode	If Auto Adjust is off, turn it on. If Auto Adjust is on, turn it off and balance the image with the Position and Clock Adjust on the Image Options Menu. See page E-33.

When using the PC Card Viewer function

Condition	Status
No picture	• Is "PC Card Viewer" selected from the Source menu? • Is the PC card seated in the PC CARD slot completely? • Is slide data stored in the PC card? • Have the contents of the PC card been destroyed?
Part of a slide is not displayed	• While an image with over 1024×768 dots is projected, several lines of information will be lost. Use the supplied software to change the image to 1024×768 dots in size.
Contents of PC Card are damaged	• Use a computer, etc., to repair the data.

For more information contact your dealer.

6. SPECIFICATIONS

This section provides technical information about the MT1056 performance.

Model Number MT1056

Optical

LCD Panel	1.3" p-Si TFT active-matrix with Micro Lens Array 1024×768 pixels up UXGA with Advanced AccuBlend
Lens	Manual zoom, manual focus F1.8 – 2.2 f=49.3 – 59.3 mm
Lamp	200W NSH lamp (160W in Eco mode) The lamp, under normal operating conditions, is warranted for 1500 hours of operating time or six months, whichever comes first.
Image Size	30 – 300 inches (762 – 7620 mm) diagonal
Projection Distance	4.3 – 36.9 ft (1.3 – 11.3 m)

Electrical

Inputs	2 RGB, 1 S-Video, 1 Video, 1 PC Card, 2 Stereo Mini Audio, 1 USB, 1 Remote
Outputs	1 RGB, 1 Stereo Mini Audio, 1 PC Control, 1 Mouse
Video Compatibility	NTSC, NTSC4.43, PAL, PAL-60, SECAM, HDTV: 1080i, 720p, 480p, 480i(w/optional cable), Y/Cb/Cr component (w/optional cable)
Scan Rate	Horizontal : 15 to 100 kHz (non-interlaced) Vertical : 50 to 120Hz
Video Bandwidth	RGB: 80 MHz
Color	Reproduction Full color, 16.7 million colors simultaneously.
Horizontal Resolution	550 TV lines : NTSC, PAL, NTSC4.43, Y/Cb/Cr 350 TV lines : SECAM RGB :1024 dots horizontal, 768 dots vertical
Power Requirement	100 – 120 / 200 – 240 VAC, 50 / 60 Hz
Input Current	3.5 A (100 – 120 VAC) / 1.7A (200 – 240 VAC)

Mechanical

Dimensions	11.1" (W)×4.8" (H)×14.9" (D) / 281mm (W)×121mm (H)×376mm (D) (not including lens and feet)
Net Weight	13.3 lbs / 6.0 kg
Environmental Considerations	Operational Temperatures: 32° – 95°F (0° to 35°C), 20 – 80% humidity (non-condensing) Storage Temperatures: 14° – 122°F (-10° to 50°C), 20 – 80% humidity (non-condensing)
Regulations	UL Approved (UL 1950, CSA 950) Meets DOC Canada Class B requirements Meets FCC Class B requirements Meets AS/NZS3548 Class B Meets EMC Directive (EN55022, EN55024, EN61000-3-2, EN61000-3-3) Meets Low Voltage Directive (EN60950, TUV GS Approved)



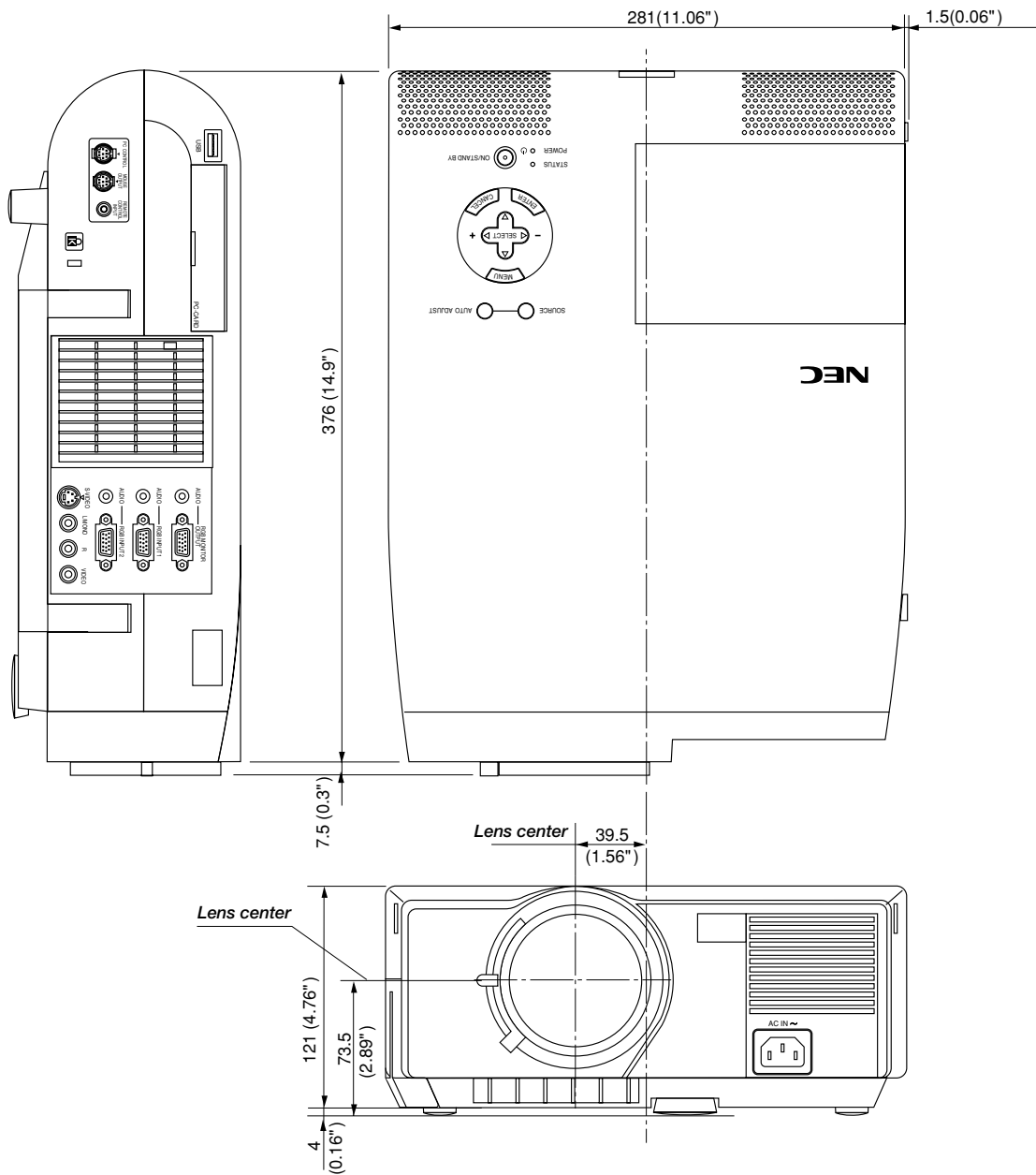
For additional information visit:
US: <http://www.necvisualsystems.com>
Europe: <http://www.nec-europe.com/>
Global: <http://www.nec-pj.com/>

LCD panels are inherently susceptible to pixel defects.
For additional information regarding pixel data, please contact your local NEC sales office.

The specifications are subject to change without notice.

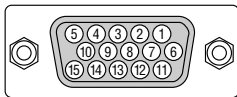
Cabinet Dimensions

MT1056



Unit = mm (inch)

D-Sub Pin Assignments
Mini D-Sub 15 Pin Connector



Signal Level
Video signal : 0.7Vp-p (Analog)
Sync signal : TTL level
* RGB Input 1 only

Pin No.	RGB Signal (Analog)	YCbCr Signal
1	Red	Cr
2	Green or Sync on Green	Y
3	Blue	Cb
4	Ground	
5	Ground	
6	Red Ground	Cr Ground
7	Green Ground	Y Ground
8	Blue Ground	Cb Ground
9	No Connection	
10	Sync Signal Ground	
11	Ground	
12	Bi-directional DATA (SDA)*	
13	Horizontal Sync or Composite Sync	
14	Vertical Sync	
15	Data Clock*	

Compatible Input Signal List

Signal	Resolution (Dots)	Frequency H. (kHz)	Refresh Rate (Hz)	Dot Clock (MHz)
NTSC	—	15.734	60	—
PAL	—	15.625	50	—
SECAM	—	15.625	50	—
VESA	640 × 480	31.47	59.94	25.175
IBM	640 × 480	31.47	60	25.175
MAC	640 × 480	31.47	60	25.175
MAC	640 × 480	34.97	66.67	31.334
MAC	640 × 480	35	66.67	30.24
VESA	640 × 480	37.86	72.81	31.5
VESA	640 × 480	37.5	75	31.5
IBM	640 × 480	39.375	75	31.49
VESA	640 × 480	43.269	85.01	36
IBM	720 × 350	31.469	70.09	28.322
VESA	720 × 400	37.927	85.04	35.5
IBM	720 × 350	39.44	87.85	35.5
IBM	720 × 400	39.44	87.85	35.5
VESA	800 × 600	35.16	56.25	36
VESA	800 × 600	37.879	60.32	40
VESA	800 × 600	48.077	72.19	50
VESA	800 × 600	46.88	75	49.5
VESA	800 × 600	53.674	85.06	56.25
MAC	832 × 624	49.725	74.55	57.283
VESA	1024 × 768	35.5	43 Interlaced	44.9
VESA	1024 × 768	48.363	60	65
VESA	1024 × 768	56.476	70.07	75
MAC	1024 × 768	60.241	74.93	80
VESA	1024 × 768	60.023	75.03	78.75
VESA	1024 × 768	68.677	85	94.5
# VESA	1152 × 864	67.5	75	108
# MAC	1152 × 870	68.681	75.06	100
# SUN	1152 × 900	61.796	65.95	92.94
# SGI	1152 × 900	71.736	76.05	105.6
# VESA	1280 × 960	60	60	108
# VESA	1280 × 1024	63.981	60.02	108
# MAC	1280 × 1024	69.89	65.2	118.5
# HP	1280 × 1024	78.125	72.01	135
# SUN	1280 × 1024	81.13	76.11	135
# VESA	1280 × 1024	79.976	75.03	135
# VESA	1280 × 1024	91.146	85.02	157.5
# HDTV (1080i)(1125i)	1920 × 1080	33.75	60 Interlace	74.25
# HDTV (1080i)(1125i)	1920 × 1080	28.13	50 Interlace	74.25
# HDTV (720p)(750p)	1280 × 720	45	60 Progressive	74.25
# SDTV (480p)(525p)	—	31.47	59.94 Progressive	27
# VESA	1600 × 1200	75.0	60	162
# VESA	1600 × 1200	81.3	65	175.5
# VESA	1600 × 1200	87.5	70	189
# VESA	1600 × 1200	93.75	75	202.5
DVD YCbCr	—	15.734	59.94 Interlaced	—
DVD YCbCr	—	15.625	50 Interlaced	—

#: Images in above flagged with # are compressed with Advanced AccuBlend.

NOTE 1: Some composite sync signals may not be displayed correctly.

NOTE 2: Signals other than those specified in the table above may not be displayed correctly. If this should happen, change the refresh rate or resolution on your PC. Refer to Display Properties help section of your PC for procedures.

NOTE 3: UXGA can be supported for separate sync signal only.

PC Control Codes

Function	Code Data
POWER ON	02H 00H 00H 00H 00H 02H
POWER OFF	02H 01H 00H 00H 00H 03H
INPUT SELECT RGB 1	02H 03H 00H 00H 02H 01H 01H 09H
INPUT SELECT RGB 2	02H 03H 00H 00H 02H 01H 02H 0AH
INPUT SELECT VIDEO	02H 03H 00H 00H 02H 01H 06H 0EH
INPUT SELECT S-VIDEO	02H 03H 00H 00H 02H 01H 0BH 13H
INPUT SELECT PC CARD VIEWER	02H 03H 00H 00H 02H 01H 1FH 27H
PICTURE MUTE ON	02H 10H 00H 00H 00H 12H
PICTURE MUTE OFF	02H 11H 00H 00H 00H 13H
SOUND MUTE ON	02H 12H 00H 00H 00H 14H
SOUND MUTE OFF	02H 13H 00H 00H 00H 15H
ON SCREEN MUTE ON	02H 14H 00H 00H 00H 16H
ON SCREEN MUTE OFF	02H 15H 00H 00H 00H 17H

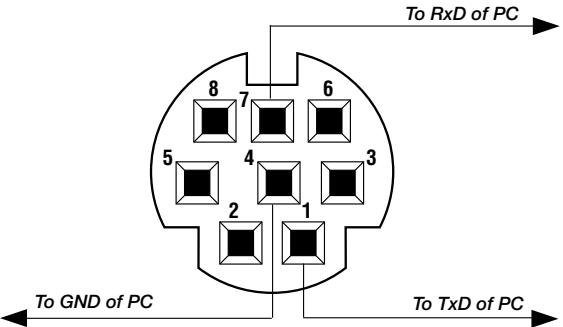
NOTE: Contact your local dealer for a full list of the PC Control Codes if needed.

Cable Connection

Communication Protocol
Baud rate: 38400 bps
Data length: 8 bits
Parity: No parity
Stop bit: One bit
X on/off: None
Communications Full duplex
procedure:

NOTE: Depending on the equipment, a lower baud rate may be recommended for long cable runs.

PC Control Connector (DIN-8P)



NOTE: Pins 2, 3, 5, 6 and 8 are used inside the projector.