



















































## On Screen Display

*The Projector has a multilingual On Screen Display (OSD) that allows you to make image adjustments and change a variety of settings. The projector will automatically detect the source.*



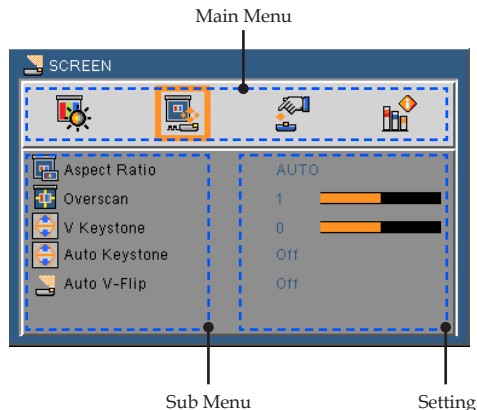
❖ When “Advanced”, “Signal”, or “Information” is selected for the sub menu, you cannot select any item in the main menu.

### How to operate

1. To open the OSD, press the MENU button on the Remote Control.
2. When OSD is displayed, use the ◀ ▶ buttons to select any item in the main menu. While making a selection on a particular page, press the ▼ button to enter sub menu.
3. Use the ▲ ▼ buttons to select the desired item in the sub menu and adjust the settings by using the ◀ or ▶ button.
4. If the setting has ↶ icon, you could press the ENTER button to enter another sub menu. Press the MENU button to close the sub menu after adjustment.
5. After adjusting the settings, press the MENU button to go back to the main menu.
6. To exit, press the MENU button again. The OSD will be closed and the projector will automatically save the new settings.











❖ If no button operation is made for 30 seconds, the OSD will be closed automatically.



# User Controls

## Menu Tree

Main Menu	Sub Menu	Settings
<b>IMAGE</b>	Picture Mode	Presentation / High-Bright / Video / Movie / sRGB / Blackboard / AdobeRGB / User
	Wall Color	Off / Red / Green / Blue / Cyan / Magenta / Yellow
	Brightness	0~100
	Contrast	0~100
	Sharpness	0~31
	Saturation	0~100
	Hue	0~100
	Advanced	
	Gamma	Film / Video / Graphics / PC / Blackboard
	BrilliantColor™	0~10
	Color Temp.	Low / Medium / High
<b>SCREEN</b>	Color Space	AUTO / RGB / YUV
	Input	HDMI / Computer / Video / Multimedia / Exit
	Exit	
	Aspect Ratio	AUTO / 4:3 / 16:9 / Fill
	Overscan	0~3
<b>SETTING</b>	V Keystone	-40 ~40
	Auto Keystone	Off / On
	Auto V-Flip	Off / On
	Language	English / Deutsch / Français / Italiano / Español / Português / Polski / Русский / Svenska / Norsk / Türkçe / Nederlands / ελληνικά / Čeština / عربي / 繁體中文 / 简体中文 / 日本語 / 한국어 / Indonesia / Suomi
	Image Flip	   
<b>SETTING</b>	Menu Location	   
	Signal	
	Phase	0~31
	Clock	-5~5
	H. Position	-10~10
<b>SETTING</b>	V. Position	-10~10
	Exit	
	Mute	Off / On
	Volume	#1 0~20
	Advanced	
<b>SETTING</b>	Logo	Off / On
	Closed Caption	Off / CC1 / CC2 / CC3 / CC4
	Video Level	AUTO / Normal / Enhance
	Exit	

# User Controls

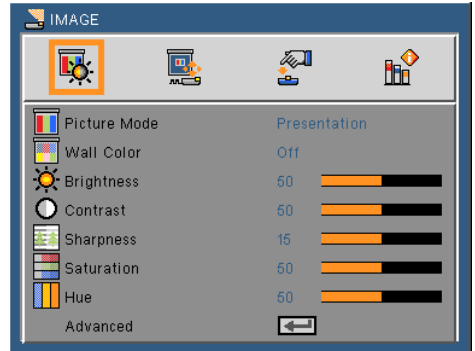
Main Menu	Sub Menu	Settings
<b>OPTIONS</b>	Input Search	Off / On
	Fan Mode	AUTO / High Speed
	Eco Mode	Off / On
	Information Hide	Off / On
	Background Color	Black / Blue
	Information	Model Name
		Serial Number
		Source
		Resolution
		Software Version
		Software2 Version
		Video Level
		Aspect Ratio
		Color Space
		Projector Hours Used
		Exit
	Advanced	Direct Power On
		Auto Power Off (min.)
		Off Timer (min.)
		Control Panel Lock
		Exit
	Reset	No / Yes



❖ Please note that the on-screen display (OSD) menus vary according to the signal type selected and the projector model you are using.

❖ (#1) 10 at factory default

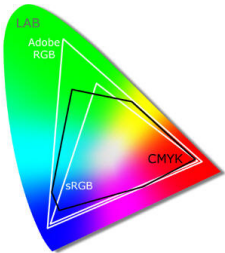
## IMAGE



### Picture Mode

There are many factory presets optimized for various types of images. Use the ◀ or ▶ button to select the item.

- ▶ Presentation: For computer or notebook.
- ▶ High-Bright: Maximum brightness from PC input.
- ▶ Video: This mode is recommended for typical TV program viewing.
- ▶ Movie: For home theater.
- ▶ sRGB: Standardized accurate color.
- ▶ Blackboard: This mode should be selected to achieve optimum color settings when projecting onto a blackboard (green).
- ▶ User: Memorize user's settings.
- ▶ AdobeRGB: AdobeRGB is an RGB color space developed by Adobe Systems. AdobeRGB is a wider gamut color space than sRGB. It is suitable for printing photos.



### Wall Color

Use this function to choose a proper color according to the wall. It will compensate the color deviation due to the wall color to show the correct image tone.

### Brightness

Adjust the brightness of the image.

- ▶ Press the ◀ button to darken image.
- ▶ Press the ▶ button to lighten the image.



❖ “Sharpness”, “Saturation” and “Hue” functions are only supported under Video mode.

## Contrast

The contrast controls the degree of difference between the lightest and darkest parts of the picture. Adjusting the contrast changes the amount of black and white in the image.

- ▶ Press the ◀ button to decrease the contrast.
- ▶ Press the ▶ button to increase the contrast.

## Sharpness

Adjust the sharpness of the image.

- ▶ Press the ◀ button to decrease the sharpness.
- ▶ Press the ▶ button to increase the sharpness.

## Saturation

Adjust a video image from black and white to fully saturated color.

- ▶ Press the ◀ button to decrease the amount of saturation in the image.
- ▶ Press the ▶ button to increase the amount of saturation in the image.

## Hue

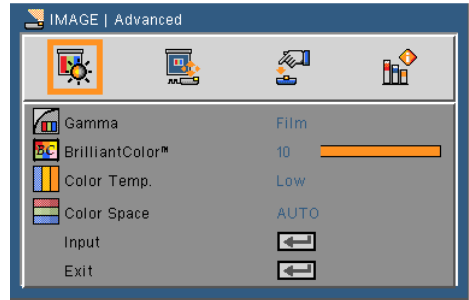
Adjust the color balance of red and green.

- ▶ Press the ◀ button to increase the amount of green in the image.
- ▶ Press the ▶ button to increase the amount of red in the image.

## Advanced

Refer to next page.

## IMAGE | Advanced



### Gamma

This allows you to choose a gamma table that has been fine-tuned to bring out the best image quality for the input.

- ▶ Film: for home theater.
- ▶ Video: for video or TV source.
- ▶ Graphics: for image source.
- ▶ PC: for PC or computer source.
- ▶ Blackboard: This mode should be selected to achieve optimum color settings when projecting onto a blackboard (green).

### BrilliantColor™

This adjustable item utilizes a new color-processing algorithm and system level enhancements to enable higher brightness while providing true, more vibrant colors. The range is from “0” to “10”. If you prefer a stronger enhanced image, adjust toward the maximum setting. For a smoother, more natural image, adjust toward the minimum setting.


### Color Temp.

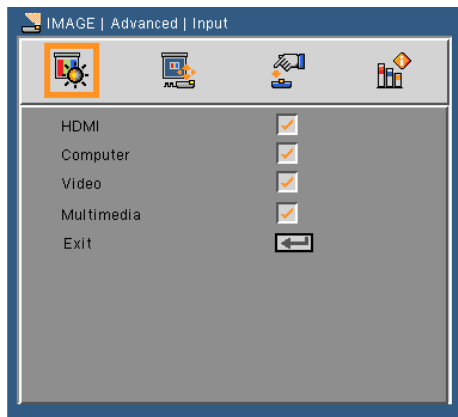
Adjust the color temperature. At higher temperature, the screen looks colder; at lower temperature, the screen looks warmer.

### Color Space


Select an appropriate color matrix type from AUTO, RGB or YUV.

## Input

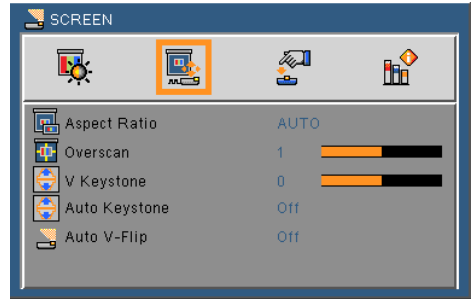
Use this option to enable / disable input sources. Press  to enter the sub menu and select which sources you require. Press the ENTER button to finalize the selection. The projector will not search for inputs that are not selected.



## Exit

Press  to return to the previous menu.

## SCREEN



### Aspect Ratio

Use this function to choose your desired aspect ratio.

- ▶ 4:3: This format is for 4×3 input sources.
- ▶ 16:9: This format is for 16×9 input sources, like HDTV and DVD enhanced for Wide screen TV.
- ▶ Fill: for Fullscreen.
- ▶ AUTO: Automatically selects the appropriate display format.

### Overscan

Overscan function removes the noise in a video image. Overscan the image to remove video encoding noise on the edge of video source.

### V Keystone

Press the ◀ or ▶ button to adjust image distortion vertically. If the image looks trapezoidal, this option can help make the image rectangular.

### Auto Keystone

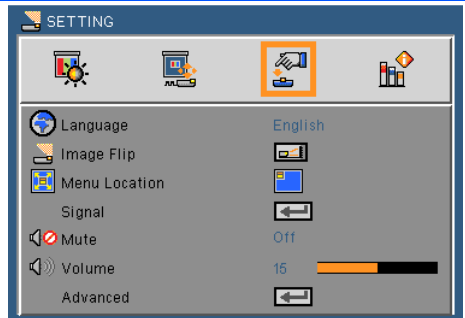
Automatically adjusts vertical image distortion.

### Auto V-Flip

Automatically flip vertical image.



## SETTING

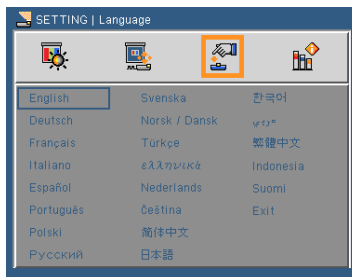


### Language





Choose the multilingual OSD menu. Press the ◀ or ▶ button into the sub menu and then use the ▲ or ▼ button to select your preferred language. Press ↵ to finalize the selection.







- ❖ The rear projection is to be used with a translucent screen.



### Image Filp

- ▶  Standard: Normal screen.
- ▶  H Flip: Horizontally flip the image.
- ▶  V Flip: Vertically flip the image.
- ▶  H+V Flip: Flip the image by horizontal and vertical.

# User Controls

Standard	V Flip
	
H Flip	H+V Flip
	

## Menu Location

Choose the menu location on the display screen.

## Signal

Refer to next page.

## Mute

- ▶ Choose “On” to turn mute on.
- ▶ Choose “Off” to turn mute off.

## Volume

- ▶ Press the ◀ button to decrease the volume.
- ▶ Press the ▶ button to increase the volume.

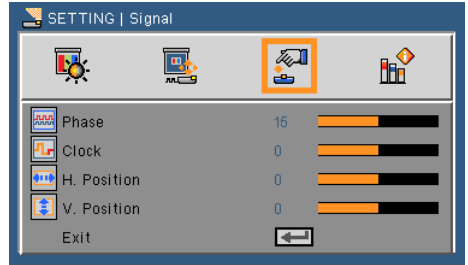
## Advanced

Refer to page 30.

## SETTING | Signal (RGB)



❖ “Signal” is only supported in Analog VGA (RGB) signal.



### Phase

Synchronize the signal timing of the display with the graphic card. If the image appears to be unstable or flickers, use this function to correct it.

### Clock

Change the display data frequency to match the frequency of your computer's graphic card. Use this function only if the image appears to flicker vertically.

### H. Position

- ▶ Press the ◀ button to move the image left.
- ▶ Press the ▶ button to move the image right.

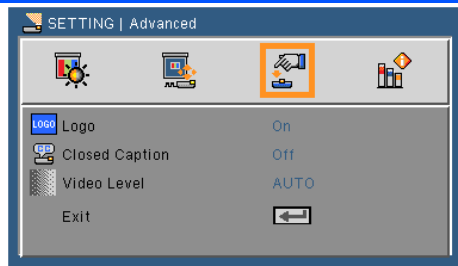
### V. Position

- ▶ Press the ◀ button to move the image down.
- ▶ Press the ▶ button to move the image up.

### Exit

Press ◀ to return to the previous menu.

## SETTING | Advanced



### Logo

Use this function to display the startup screen (NEC logo).

- ▶ On: Displays the NEC logo.
- ▶ Off: No logo is displayed.


### Closed Caption

Use this function to enable close caption and activate the closed caption menu. Select an appropriate closed captions option: Off, CC1, CC2, CC3 and CC4.

### Video Level

Select "AUTO" to automatically detect video level. If automatic detection may not work well, select "Normal" to disable the "Enhance" feature of your HDMI equipment or select "Enhance" to improve image contrast and increase detail in the dark areas.

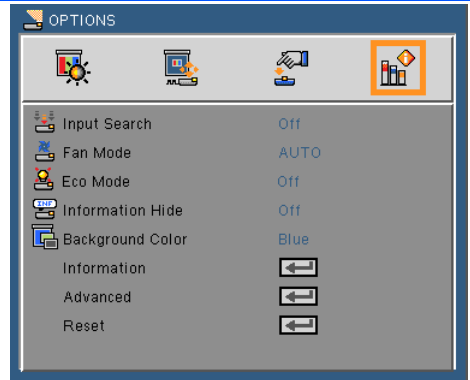
### Exit

Press  to return to the previous menu.



❖ "Video Level" is only supported under HDMI source.

## OPTIONS



### Input Search

- ▶ On: The projector will search for other signals if the current input signal is lost.
- ▶ Off: The projector will only search current input connection.

### Fan Mode

- ▶ AUTO: The built-in fans automatically run at a variable speed according to the internal temperature.
- ▶ High Speed: The built-in fans run at high speed.

The built-in fans run at a high speed. Select this option when using the projector at altitudes approximately 2500 feet/760 meters or higher.

### Eco Mode

- ▶ On: Dim the projector light source which will lower power consumption and extend the light source life.
- ▶ Off: Normal mode.

### Information Hide

- ▶ On: Choose "On" to hide the info message.
- ▶ Off: Choose "Off" to show the "searching" message.

### Background Color

Use this feature to display a "Black" or "Blue" screen when no signal is available.

# User Controls

## Information

Refer to next page.

## Advanced

Refer to page 34.

## Reset

Choose “Yes” to return the display parameters on all menus to the factory default settings.

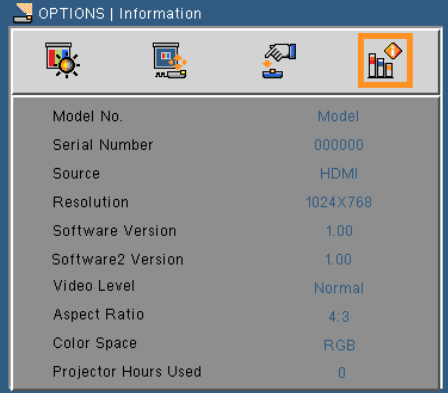
## OPTIONS | Information



- ❖ “Video Level”,  
“Aspect Ratio”, and  
“Color Space” are  
only supported un-  
der HDMI source.

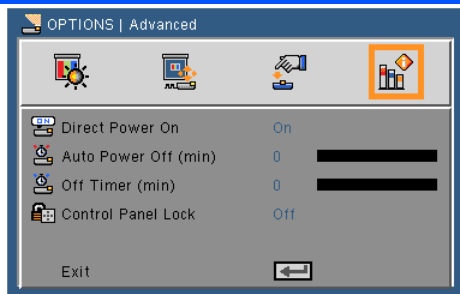
### Information

To display the projector information for source, resolution, and software version on the screen.




Model No.	Model
Serial Number	000000
Source	HDMI
Resolution	1024X768
Software Version	1.00
Software2 Version	1.00
Video Level	Normal
Aspect Ratio	4:3
Color Space	RGB
Projector Hours Used	0

## OPTIONS | Advanced



### Direct Power On

Choose "On" to activate Direct Power mode. The projector will automatically power on when AC power is supplied, without pressing the  button on the projector control panel or the POWER ON button on the remote control.

### Auto Power Off (min)

Sets the countdown timer interval. The countdown timer will start, when there is no signal being sent to the projector. The projector will automatically power off when the countdown has finished (in minutes).

### Off Timer (min)

Sets the countdown timer interval. The countdown timer will start, with or without a signal being sent to the projector. The projector will automatically power off when the countdown has finished (in minutes).

### Control Panel Lock

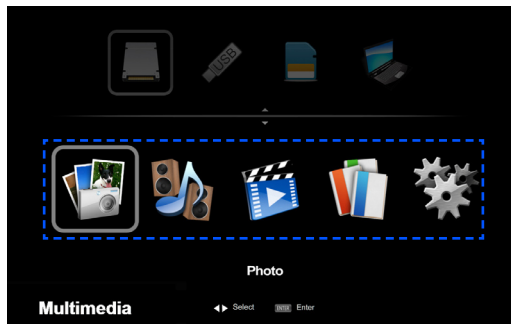
When the keypad lock function is "On", the control panel will be locked however, the projector can be operated by the remote control. By selecting "Off", you will be able to reuse the control panel. Press and hold the SOURCE button on the projector cabinet for about 10 seconds to turn off "Control Panel Lock".

## Using Multimedia

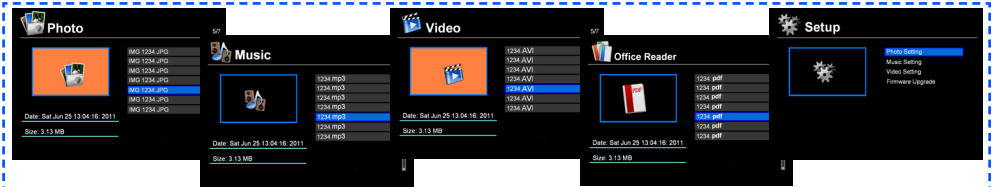
*Multimedia is an interactive PC-less presentation solution. It equipped several mode (Photo, Video, Music, Office Reader, and Setting) with user-friendly user interface.*

*To display the main menu of the Multimedia, press the USB-A, USB-B or SD button on the remote control or press the SOURCE button.*

Layer1: Main Menu



Layer2: Sub Menu



Layer3: Setting

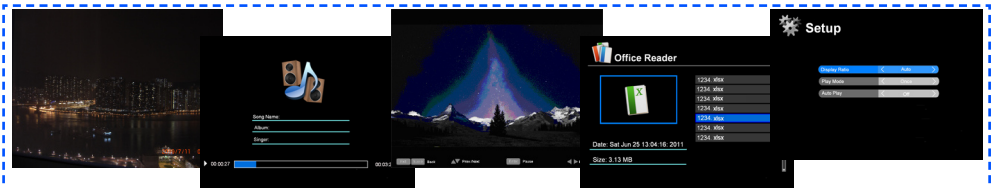


Photo	Min:64x64, Max: Over 4000x4000
Music	File size: Max. 2GB
Video	File size: Max. 2GB
OfficeReader	Support Word/Excel/PowerPoint/Adobe PDF playback
Settings	Photo/Music/Video/Office Reader settings

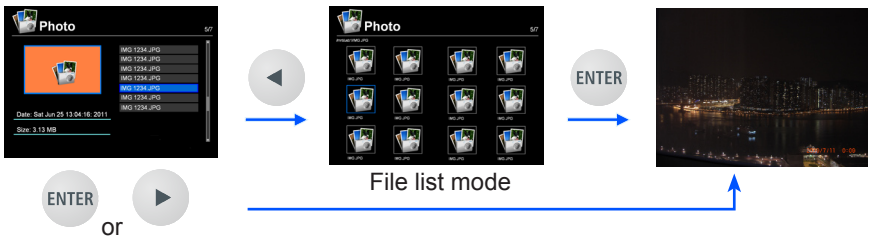
# User Controls

## How to operate

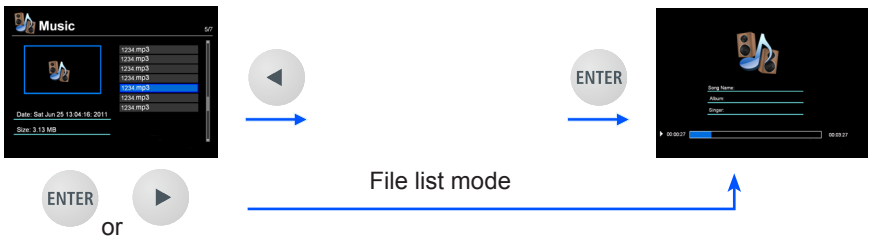
1. To open the OSD, press the MENU button on the Remote Control.
2. When OSD is displayed, use the ◀ ▶ buttons to select any item in the main menu. While making a selection on a particular page, press the ENTER button to enter sub menu.
3. Use the ▲ ▼ buttons to select the desired item in the sub menu and adjust the settings by using the ◀ or ▶ button.
5. After adjusting the settings, press the EXIT button to go back to the main menu.
6. To exit, press the MENU button again. The OSD will be closed and the projector will automatically save the new settings.



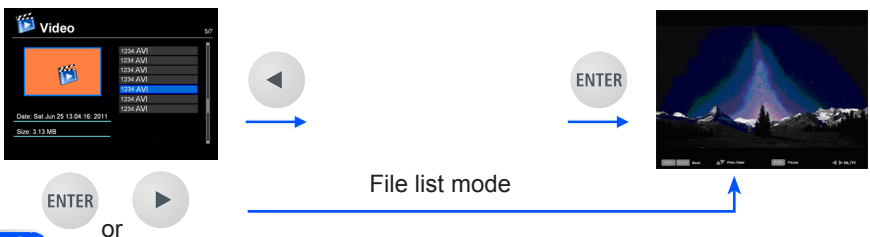
### Photo Viewer



### Music Player

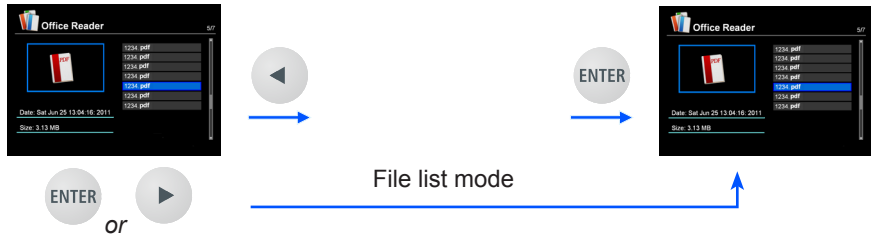


### Video Player

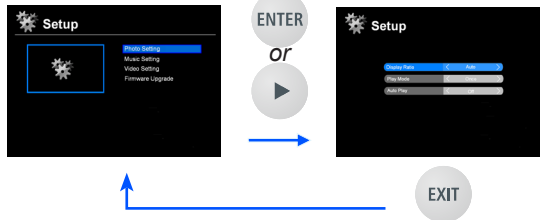


# User Controls

## Office Reader



## Setup



## Multimedia Menu Tree

Level 1	Level 2	Level 3	Level 4
Settings	Photo Setup	Display Ratio	Auto/Full
		Slideshow Duration	5 sec./15 sec./30 sec./1 min./5 min./15 min.
		Slideshow Repeat	On/Off
		Slideshow Effect	Random/Snake/Partition/Erase/Blinds/Lines/GridCross/Cross/Spiral/Rect/Off
	Music Setup	Play Mode	Once/Repeat Once/Repeat/Random
		Show Spectrum	On/Off
		Auto Play	On/Off
	Video Setup	Display Ratio	Auto/Original Size
		Play Mode	Once/Repeat Once/Repeat/Random
		Auto Play	On/Off
	Firmware Upgrade	Yes/No	



To upgrade the firmware, visit at: <http://www.nec-display.com/dl/en/index.html>

To check the version of your projector, from the menu, select [Options] -> [Information] -> [Software2 Version].

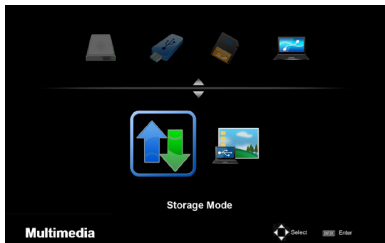
## Supported Formats

- Supported graphic formats:
  - JPG, BMP
  - JPG file supports JPEG Baseline and progressive JPEG.
  - BMP file supports full color only.
  - Some files supported by the above requirements may not be displayed
- Supported audio formats:
  - WAV, MP3, WMA
  - WAV supports PCM and AD-PCM.
  - Some files supported by the above requirements may not be played.
- Supported video formats:
  - AVI, MOV, MPG, MP4, WMV, MKV
  - Motion JPEG, MPEG2, MPEG4 (H.264, AAC), and Windows Media Video (VC-1) are supported.
  - Some files supported by the above requirements may not be played.
- Supported formats for Office Reader:
  - Microsoft Word  
97/2000/XP/2003/2007
  - Microsoft Excel  
97/2000/XP/2003/2007
  - Microsoft PowerPoint  
97/2000/XP/2003/2007
  - PDF  
1.0/1.1/1.2/1.3/1.4/1.5/1.6/1.7

## Using the Projector as a Storage Device

### Important:

- Use the projector's storage area as a temporary storage. Back up your data on your computer's hard disk drive before using the projector as a storage device. We will not be liable for any data loss or damage that could result from using the projector. If your data is not to be used for a long period time, delete them from the projector's storage area.
- We will not be liable for any data loss or damage that could result from the projector's failure or any cause, and we will not be liable for your loss of business arising from the data loss or damage. Our service includes hardware only (not including data recovery).



You can use part of the memory inside the projector as your storage device.

This memory area can be used for saving and loading your photos, audio, video, and Office Reader files.

1. Turn on the projector.
2. Display the Multimedia and select USB-B (Connect PC) source.
3. Use the supplied USB cable to connect the USB-B port of the projector and the USB port (A type) of your computer.
4. Select "Storage Mode" and then press "Enter".

Connecting PC...  
Unplug to stop connection.

When you see a message as left, the drive has been added to your computer. This allows you to read and write files to the drive of the projector.

5. Double clicks the drive of the projector on the Windows "My Computer" on your computer.

You can access the drive of the projector to read or write files.

### Note:

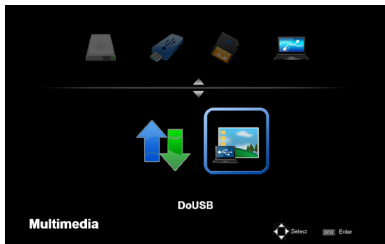
- Wait at least 5 seconds after disconnecting a USB memory device before reconnecting it and vice versa. The computer may not identify the USB memory device if it is repeatedly connected and disconnected in rapid intervals.
- To disconnect the USB cable from the projector, first click the USB icon on the Windows taskbar on your computer.
- Do not disconnect the power cord during data writing.
- Files in the drive of the projector will not be affected even when "Reset" is done from the menu.
- Data of up to 1GB can be stored in the drive of the projector.

## Projecting Your Computer's Screen Image from the Projector via the USB Cable (USB Display)

Using the supplied USB cable (or a commercially available USB cable compatible with USB 2.0 specifications) to connect the computer with the projector allows you to send your computer screen image to the projector for displaying. Power On/Off and source selection of the projector can be done from your computer without connecting a computer cable (VGA).

### Note:

- To make USB DISPLAY available on Windows XP, the Windows user account must have "Administrator" privilege.
- USB Display will not work in standby condition.



1. Turn on the projector.
2. Display the Multimedia and select USB-B (Connect PC) source.
3. Use the supplied USB cable to connect the USB-B port of the projector and the USB port (A type) of your computer.
4. Select "DoUSB" and then press "Enter".

Connecting PC...  
Unplug to stop connection.

When you see a message as left; Wait at least 10 seconds. This allows you to project your computer's screen image.

## Troubleshooting

*If you experience trouble with the projector, refer to the following information. If the problem persists, please contact your local dealer or service center.*

### **Problem: No image appears on screen**

- ▶ 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.
- ▶ Make sure the projector is switched on.

### **Problem: Partial, scrolling or incorrectly displayed image**

- ▶ Press “AUTO ADJ.” on the remote control.
- ▶ If you are using a PC:

For Windows 95, 98, 2000, XP, Windows 7:

1. From the “My Computer” icon, open the “Control Panel” folder, and double click the “Display” icon.
2. Select the “Settings” tab
3. Click on the “Advanced Properties”.

For Windows Vista:

1. From the “My Computer” icon, open the “Control Panel” folder, and double click the “Appearance and Personalization”
2. Select “Personalization”
3. Click “Adjust screen resolution” to display “Display Settings”.  
Click on the “Advanced Settings”.

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

4. Verify the resolution setting is less than or equal to 1280 x 1024 resolution.
5. Select the “Change” under the “Monitor” tab .

# Appendices

6. Click on "Show all devices". Next, select "Standard monitor types" under the SP box; choose the resolution mode you need under the "Models" box.
- If you are using a Notebook:
  1. First, follow the steps above to adjust resolution of the computer.
  2. Press the toggle output settings. example: [Fn]+[F4]

Compaq=>	[Fn]+[F4]	Hewlett	=>	[Fn]+[F4]
Dell =>	[Fn]+[F8]	Packard	=>	[Fn]+[F4]
Gateway=>	[Fn]+[F4]	NEC=>	[Fn]+[F3]	
IBM=>	[Fn]+[F7]	Toshiba =>	[Fn]+[F5]	

Macintosh Apple:  
System Preference-->Display-->Arrangement-->Mirror display

- If you experience difficulty changing resolutions or your monitor freezes, restart all equipment including the projector.

## **Problem: The screen of the Notebook or PowerBook computer is not displaying a presentation**

- If you are using a Notebook PC:

Some Notebook PCs may deactivate their own screens when a second display device is in use. Each has a different way to be reactivated. Refer to your computer's documentation for detailed information.

## **Problem: Image is unstable or flickering**

- Adjust the "Phase" to correct it. Refer to the "SETTING" section for more information.
- Change the monitor color setting from your computer.

## **Problem: Image has vertical flickering bar**

- Use "Clock" to make an adjustment.
- Check and reconfigure the display mode of your graphic card to make it compatible with the product.

## Problem: Image is out of focus

- ▶ Adjust the Focus Lever on the projector lens.
- ▶ Make sure the projection screen is between the required distance 20.5" to 118.1" / 52 to 300 mm from the projector (refer to page 18).

## Problem: The image is stretched when displaying 16:9 DVD

The projector automatically detects 16:9 DVD and adjusts the aspect ratio by digitizing to full screen with 4:3 default setting.

If the image is still stretched, you will also need to adjust the aspect ratio by referring to the following:

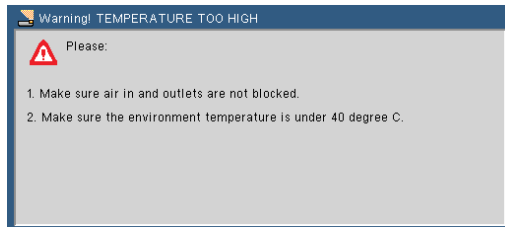
- ▶ Please select 4:3 aspect ratio type on your DVD player if you are playing a 16:9 DVD.
- ▶ If you can't select 4:3 aspect ratio type on your DVD player, please select 4:3 aspect ratio in the on screen menu.

## Problem: Image is reversed

- ▶ Select "SETTING-->Image Flip" from the OSD and adjust the projection direction.

## Problem: Message Reminders

- ▶ Over temperature - the projector has exceeded its recommended operating temperature and must be allowed to cool down before it may be used.



- ▶ Fan failed - the system fan is not working.



# Appendices

## Problem: Indicator lighting message

### Power Indicator

Indicator Condition			Projector Condition	Note
Off			The main power is off	--
Blinking light	Blue	0.5 sec On, 0.5 sec Off	The projector is getting ready to turn on.	Wait for a moment.
		2.5 sec On, 0.5 sec Off	Off Timer is enabled.	--
Steady light	Blue		The projector is turned on.	--
	Red		The projector is in standby.	--

### Status Indicator

Indicator Condition			Projector Condition	Note
Off			Normal	--
Blinking light	Red	1 cycle (0.5 sec On, 0.5 sec Off)	light source error	Light source fails to light. Wait for a moment.
		2 cycle (0.5 sec On, 0.5 sec Off)	Temperature error	The projector is overheated. Move the projector to a cooler location.
		4 cycle (0.5 sec On, 0.5 sec Off)	Fan error	Fans will not work correctly. Contact your dealer.
Steady light	Red		Control Panel Lock is enabled.	To disable Control Panel Lock, see page 34.

### LED Indicator

Indicator Condition			Projector Condition	Note
Off			Normal	--
Blinking light	Red		LED light source fails to light.	Try to turn on the projector again. If the problem still remains unsolved, contact your dealer.


## Specifications

Optical	
Projection System	Single DLP® chip (0.45", aspect ratio 16:10)
Resolution *1	1,039,680 pixels (similar to WXGA)
Lens	Fixed lens, manual focus
	F/15
Light Output *2*3	500 lumens
Contrast Ratio *3 (full white:full black)	2500:1
Image Size (Diagonal)	17 to 100 inches / 0.432 to 2.540 m
Projection Distance (mini. - max.)	20.5 to 118.1 inches / 52 to 300 mm
<p>*1 Effective pixels are more than 99.99%.</p> <p>*2 This is the light output value (lumens) when [Picture Mode] is set to [High-Bright] in the menu. If any other mode is selected as [Picture Mode], the light output value may drop slightly.</p> <p>*3 Compliance with ISO21118-200</p>	

Electrical	
Inputs	1 x RGB/Component (D-Sub 15P), 1 x HDMI (19P) HDCP supported *4, 1 x SD Slot, 1 x Video (RCA), 1 x USB Type-A, 1 x USB mini-B, 1 x Stereo Mini Audio
Service Port	1 x mini-B USB (for service purpose /shared with USB Display)
Color Reproduction	16.7 million colors simultaneously, Full color
Compatible Signals *5	Analog: VGA/SVGA/XGA/WXGA/Quad-VGA/SXGA/SXGA+/WSXGA+/480i/480p/576i/576p/720p/1080i/1080p HDMI: VGA/SVGA/XGA/WXGA/Quad-VGA/SXGA/SXGA+/WSXGA+/480p/576p/720p/1080i/1080p
Horizontal Resolution	540 TV lines: NTSC/NTSC4.43/PAL/PAL-M/PAL-N/PAL60 300 TV lines: SECAM
Scan Rate	Horizontal: 30kHz to 100kHz Vertical: 50 Hz to 85 Hz
Built-in Speaker	2W (monaural)
Power Requirement	100 - 240V AC, 50/60 Hz
Input Current	100 - 240V AC, 50-60Hz, 1.3-0.5A
Power Consumption	Eco Mode: Off 110W +/-25%@ 110V AC(100-130V) / 105W +/-25%@ 220V AC(200-240V) Eco Mode: On 75W +/-25% @ 110V AC(100-130V) / 70W +/-25% @ 220V AC(200-240V) Standby: <0.5W (100-130V)/ <0.5W (200-240V)

# Appendices

<b>Electrical</b>	
<p>*4 HDMI® (Deep Color) with HDCP          What is HDCP/HDCP technology?          HDCP is an acronym for High-bandwidth Digital Content Protection. High bandwidth Digital Content Protection (HDCP) is a system for preventing illegal copying of video data sent over a Digital Visual Interface (DVI). If you are unable to view material via the HDMI input, this does not necessarily mean the projector is not functioning properly. With the implementation of HDCP, there may be cases in which certain content is protected with HDCP and might not be displayed due to the decision/intention of the HDCP community (Digital Content Protection, LLC).</p> <p>*5 An image with any resolution will be displayed with scaling technology.</p>	

<b>Mechanical</b>	
Dimensions	8.89" (W) × 1.69" (H) × 6.87" (D) / 225.8 mm (W) × 43 mm (H) × 174.4 mm (D)
Weight	2.7 lb / 1.2 kg
Environmental Considerations	Operational Temperatures : 41° to 95°F (5° to 35°C), 20% to 80% humidity (non-condensing) Storage Temperatures : -4° to 140°F (-20° to 60°C), 20% to 80% humidity (non-condensing)
Regulations	UL/C-UL Approved (UL 60950-1, CSA 60950-1) Meets DOC Canada Class B requirements Meets FCC Class B requirements Meets AS/NZS CISPR.22 Class B Meets EMC Directive (EN55022, EN55024, EN61000-3-2, EN61000-3-3) Meets Low Voltage Directive (EN60950-1, TÜV GS Approved) 

## Compatibility Modes

### ► Analog RGB

Signal	Resolution (dots)	Aspect Ratio	Refresh Rate (Hz)
VGA	640x480	4:3	60/72/75/85
SVGA	800x600	4:3	56/60/72/75/85
XGA	1024x768	4:3	60/70/75/85
XGA+	1152x864	4:3	70/75/85
HD	1280x720	16:9	60
WXGA	1280x768	15:9	60/75/85
	1280x800	16:10	60
	1366x768	16:9	60
Quad-VGA	1280x960	4:3	60/75
SXGA	1280x1024	5:4	60/72/75
SXGA+	1400x1050	4:3	60
WXGA+	1440x900	16:10	60
WXGA++	1680x1050	16:10	60
	1920x1080	16:9	60
MAC 13"	640x480	4:3	60/67
MAC	800x600	4:3	60
MAC 19"	1024x768	4:3	60/75
MAC 21"	1152x870	4:3	75
MAC	1280x960	4:3	75

### ► Component

Signal	Resolution (dots)	Aspect Ratio	Refresh Rate (Hz)
HDTV(1080i)	1920x1080	16:9	50/60
HDTV(1080p)	1920x1080	16:9	60
HDTV(720p)	1280x720	16:9	50/60
SDTV(480p)	720x480	4:3/16:9	60
SDTV(576p)	720x576	4:3/16:9	50
SDTV(480i)	720x480	4:3/16:9	60
SDTV(576i)	720x576	4:3/16:9	50

## ► HDMI

Signal	Resolution (dots)	Aspect Ratio	Refresh Rate (Hz)
VGA	640x480	4:3	60/72/75/85
SVGA	800x600	4:3	56/60/72/75/85
XGA	1024x768	4:3	60/70/75/85
XGA+	1152x864	4:3	70/75/85
HDTV(1080p)	1920x1080	16:9	50/60
HDTV(1080i)	1920x1080	16:9	50/60
HDTV(720p)	1280x720	16:9	50/60
SDTV(480p)	720x480	4:3/16:9	60
SDTV(576p)	720x576	4:3/16:9	50
WXGA	1280x768	15:9	60/75/85
	1280x800	16:10	60
	1366x768	16:9	60
Quad-VGA	1280x960	4:3	60/75
SXGA	1280x1024	5:4	60/72/75
SXGA+	1400x1050	4:3	60
WXGA+	1440x900	16:10	60
WXGA++	1680x1050	16:10	60
	1920x1080	16:9	60

## ► Composite Video

Signal	Aspect Ratio	Refresh Rate (Hz)
NTSC	4:3	60
PAL	4:3	50
PAL60	4:3	60
SECAM	4:3	50

### TIP:

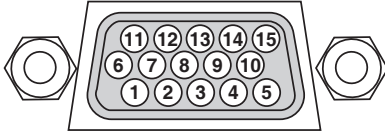
- An image with any resolution will be displayed with scaling technology.
- Sync on Green and Composite sync signals are not supported.
- Signals other than those specified in the table above may not be displayed correctly. If this should happen, change the refresh rate or resolution on your PC. Refer to Display Properties help section of your PC for procedures.





## Pin Assignments of D-Sub COMPUTER Input Connector

### Mini D-Sub 15 Pin Connector



Signal Level

Video signal : 0.7Vp-p (Analog)

Sync signal : TTL level

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

---

# Troubleshooting Check List

Before contacting your dealer or service personnel, check the following list to be sure repairs are needed also by referring to the "Troubleshooting" section in your user's manual. This checklist below will help us solve your problem more efficiently.

\* Print the following pages.

**Frequency of occurrence** ☐ always ☐ sometimes (How often? \_\_\_\_\_) ☐ other (\_\_\_\_\_)

## Power

---

- ☐ No power (POWER indicator does not light blue).
  - ☐ Power cable's plug is fully inserted into the wall outlet.
  - ☐ No power even though you press and hold the POWER button for a minimum of 1 second.
- ☐ Shut down during operation.
  - ☐ Power cable's plug is fully inserted into the wall outlet.
  - ☐ Power Management is turned off (only models with the Power Management function).

## Video and Audio

---

- ☐ No image is displayed from your PC or video equipment to the projector.
  - ☐ Still no image even though you connect the projector to the PC first, then start the PC.
  - ☐ Enabling your notebook PC's signal output to the projector.
    - A combination of function keys will enable/disable the external display. Usually, the combination of the "Fn" key along with one of the 12 function keys turns the external display on or off.
  - ☐ No image (blue background).
  - ☐ Still no image even though you press the AUTO ADJ. button.
  - ☐ Still no image even though you carry out [RESET] in the projector's menu.
  - ☐ Signal cable's plug is fully inserted into the input connector
  - ☐ A message appears on the screen.  
(\_\_\_\_\_)
  - ☐ The source connected to the projector is active and available.
  - ☐ Still no image even though you adjust the brightness and/or the contrast.
  - ☐ Input source's resolution and frequency are supported by the projector.
- ☐ Image is too dark.
  - ☐ Remains unchanged even though you adjust the brightness and/or the contrast.
- ☐ Image is distorted.
  - ☐ Image appears to be trapezoidal (unchanged even though you carry out the [KEystone] adjustment).
- ☐ Parts of the image are lost.
  - ☐ Still unchanged even though you press the AUTO ADJ. button.
  - ☐ Still unchanged even though you carry out [RESET] in the projector's menu.
- ☐ Image is shifted in the vertical or horizontal direction.
  - ☐ Horizontal and vertical positions are correctly adjusted on a computer signal.
  - ☐ Input source's resolution and frequency are supported by the projector.
  - ☐ Some pixels are lost.
- ☐ Image is flickering.
  - ☐ Still unchanged even though you press the AUTO ADJ. button.
  - ☐ Still unchanged even though you carry out [RESET] in the projector's menu.
  - ☐ Image shows flickering or color drift on a computer signal.
- ☐ Image appears blurry or out of focus.
  - ☐ Still unchanged even though you checked the signal's resolution on PC and changed it to projector's native resolution.
  - ☐ Still unchanged even though you adjusted the focus.
- ☐ No sound.
  - ☐ Audio cable is correctly connected to the audio input of the projector.
  - ☐ Still unchanged even though you adjusted the volume level.

## Other

---

- ☐ Remote control does not work.
  - ☐ No obstacles between the sensor of the projector and the remote control.
  - ☐ Projector is placed near a fluorescent light that can disturb the infrared remote controls.
  - ☐ Batteries are new and are not reversed in installation
- ☐ Buttons on the projector cabinet do not work.
  - ☐ [CONTROL PANEL LOCK] is not turned on in the menu.
  - ☐ Still unchanged even though you press and hold the SOURCE button on the cabinet for minimum of 10 seconds.

In the space below please describe your problem in detail.

Information on application and environment where your projector is used

Projector

Model number:

Serial No.:

Date of purchase:

Information on input signal:

Horizontal synch frequency [                    ] kHz

Vertical synch frequency [                    ] Hz

Synch polarity                    H ☐ (+) ☐ (-)

V ☐ (+) ☐ (-)

Synch type                                ☐ Separate ☐ Composite

☐ Sync on Green

STATUS Indicator:

Steady light/Flashing light [                    ] cycles

Remote control model number:

Installation environment

Screen size:                    inch

Screen type:                    ☐ White matte ☐ Beads ☐ Polarization

☐ Wide angle ☐ High contrast

Throw distance:                                feet/inch/m

Orientation:                    ☐ Desktop ☐ Other

Power outlet connection:

☐ Connected directly to wall outlet

☐ Connected to power cord extender or other (the number of connected equipment\_\_\_\_\_)

☐ Connected to a power cord reel or other (the number of connected equipment\_\_\_\_\_)

Computer

Manufacturer:

Model number:

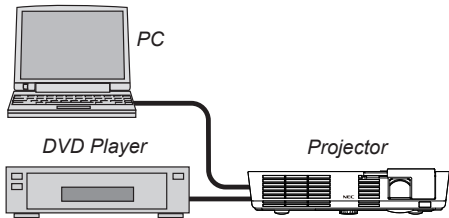
Notebook PC ☐ / Desktop ☐

Native resolution:

Refresh rate:

Video adapter:

Other:



Signal cable

NEC standard or other manufacturer's cable?

Model number:                                Length:                                inch/m

Distribution amplifier

Model number:

Switcher

Model number:

Adapter

Model number:

Video equipment

VCR, DVD player, Video camera, Video game or other

Manufacturer:

Model number:

# TravelCare Guide

TravelCare - a service for international travelers

This product is eligible for "TravelCare", NEC's unique international warranty and repair service.

For more information on TravelCare service, visit our website (in English only).

[http://www.nec-display.com/dl/en/pj\\_support/travel\\_care.html](http://www.nec-display.com/dl/en/pj_support/travel_care.html)

**NEC**