IN3144/IN3146/IN3148HD

User's Guide
Mode d'emploi
Benutzeranleitung
Руководство по пользователя

사용 설명서
Guía del usuario
Guia do Usuário
用户指南
用戶手冊

InFocus

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Trademark Recognition

Important Safety Information

> ⚠️ **_Important:_**
> _It is strongly recommended that you read this section carefully before using the projector. These safety and usage instructions will ensure that you enjoy many years of safe use of the projector._ **_Keep this manual for future reference._**

Symbols Used

Warning symbols are used on the unit and in this manual to alert you of hazardous situations.

The following styles are used in this manual to alert you to important information.

> **_Note:_**
> _Provides additional information on the topic at hand._

> ⚠️ **_Important:_**
> _Provides additional information that should not be overlooked._

> ⚠️ **_Caution:_**
> _Alerts you to situations that may damage the unit._

> ⚠️ **_Warning:_**
> _Alerts you to situations that may damage the unit, create a hazardous environment, or cause personal injury._

Throughout this manual, component parts and items in the OSD menus are denoted in bold font as in this example:
"Push the **Menu** button on the remote control to open the **Main** menu."

General Safety Information

➢ Do not open the unit case. Aside from the projection lamp, there are no user-serviceable parts in the unit. For servicing, contact qualified service personnel.

➢ Follow all warnings and cautions in this manual and on the unit case.

➢ The projection lamp is extremely bright by design. To avoid damage to eyes, do not look into the lens when the lamp is on.

➢ Do not place the unit on an unstable surface, cart, or stand.

➢ Avoid using the system near water, in direct sunlight, or near a heating device.

➢ Do not place heavy objects such as books or bags on the unit.

> **_Note:_**
> _As with any bright light source, do not stare into the beam, RG2 IEC 62471-5:2015_ ◁✹▷🔲 RG2

Projector Installation Notice

Place the projector in a horizontal position

The tilt angle of the projector should not exceed 15 degrees. In addition, the projector should not be installed in any other way except desktop and ceiling mount positions. Otherwise lamp life could decrease dramatically, and may lead to other ***unpredictable damage***.
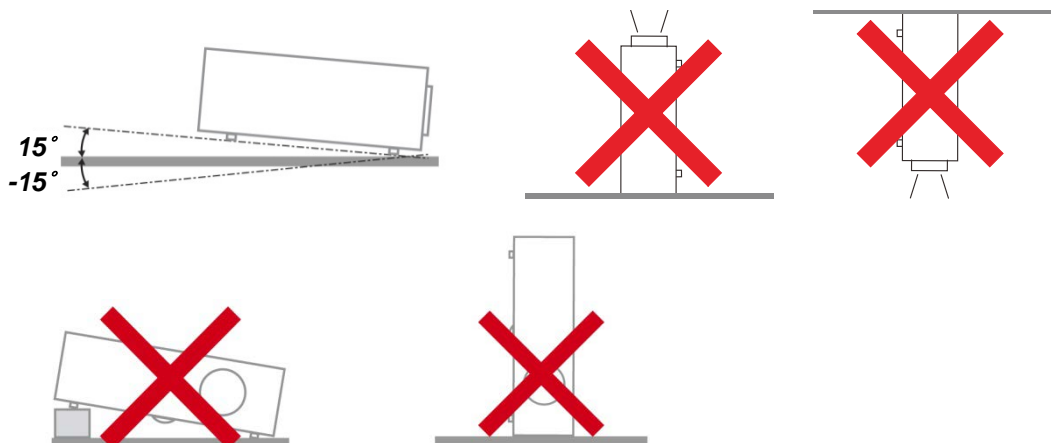
➢ Allow at least 50 cm (19.69 inch) clearance around the exhaust vent.
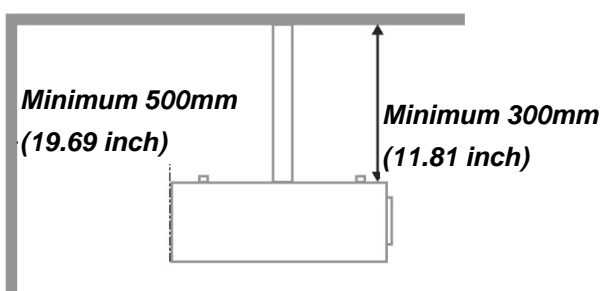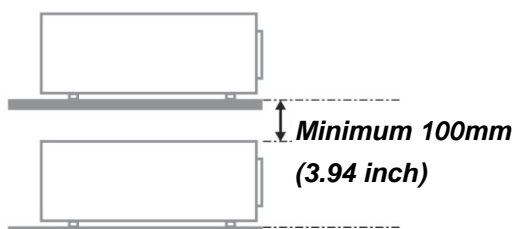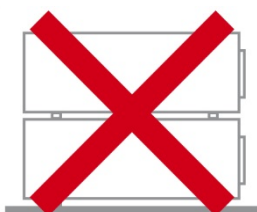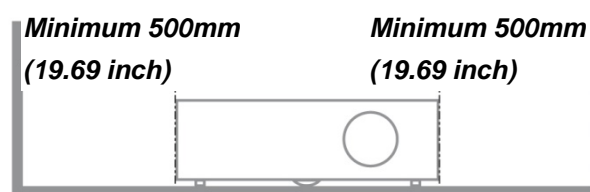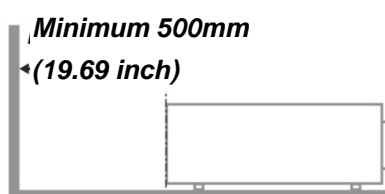
➢ Ensure that the intake vents do not recycle hot air from the exhaust vent.
➢ When operating the projector in an enclosed space, ensure that the surrounding air temperature within the enclosure does not exceed operation temperature while the projector is running, and the air intake and exhaust vents are unobstructed.
➢ All enclosures should pass a certified thermal evaluation to ensure that the projector does not recycle exhaust air, as this may cause the device to shutdown even if the enclosure temperature is with the acceptable operation temperature range.

Power Safety

➢ Only use the supplied power cord.

➢ Do not place anything on the power cord. Place the power cord where it will not be in the way of foot traffic.

➢ Remove the batteries from the remote control when storing or not in use for a prolonged period.

Replacing the Lamp

Replacing the lamp can be hazardous if done incorrectly. See *Replacing the Projection Lamp* on page 45 for clear and safe instructions for this procedure. Before replacing the lamp:

➢ Unplug the power cord.

➢ Allow the lamp to cool for about one hour.

Cleaning the Projector

➢ Unplug the power cord before cleaning. See *Cleaning the Projector* page 49.

➢ Allow the lamp to cool for about one hour.

Regulatory Warnings

Before installing and using the projector, read the regulatory notices in the *Regulatory Compliance* on page 63.

Important Recycle Instructions:

(Hg) Lamp(s) inside this product contain mercury. This product may contain other electronic waste that can be hazardous if not disposed of properly. Recycle or dispose in accordance with local, state, or federal Laws. For more information, contact the Electronic Industries Alliance at WWW.EIAE.ORG. For lamp specific disposal information check WWW.LAMPRECYCLE.ORG.

Symbol Explanations

DISPOSAL: Do not use household or municipal waste collection services for disposal of electrical and electronic equipment. EU countries require the use of separate recycling collection services.

About this Manual

This manual is intended for end users and describes how to install and operate the DLP projector. Wherever possible, relevant information—such as an illustration and its description—has been kept on one page. This printer-friendly format is both for your convenience and to help save paper, thereby protecting the environment. It is suggested that you only print sections that are relevant to your needs.

Table of Contents

GETTING STARTED

Packing Checklist

Carefully unpack the projector and check that the following items are included:
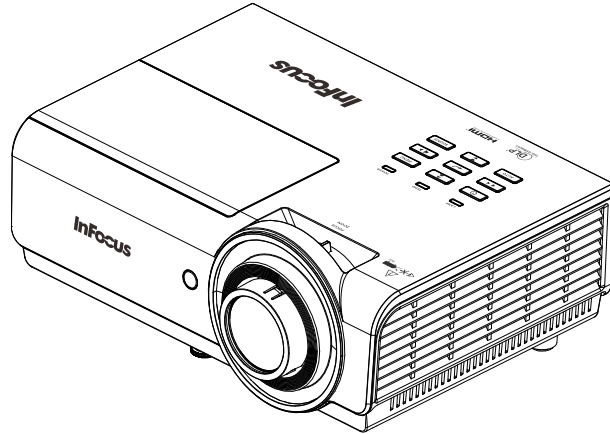
DLP PROJECTOR

REMOTE CONTROL
(BATTERIES NOT INCLUDED)
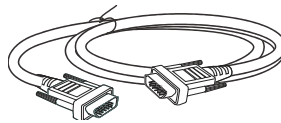
VGA CABLE
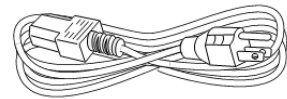
POWER CORD

CD-ROM
(THIS USER'S MANUAL)

QUICK START GUIDE

SAFETY & WARRANTY BOOKLET

Contact your dealer immediately if any items are missing, appear damaged, or if the unit does not work. It is recommended that you keep the original packing material in case you ever need to return the equipment for warranty service.

> ⚠️ *Caution:*
> *Do not place the project in direct sunlight, humid, greasy or dusty places or in places where the projector may come into contact with smoke or steam.*

Views of Projector Parts

Front-right View
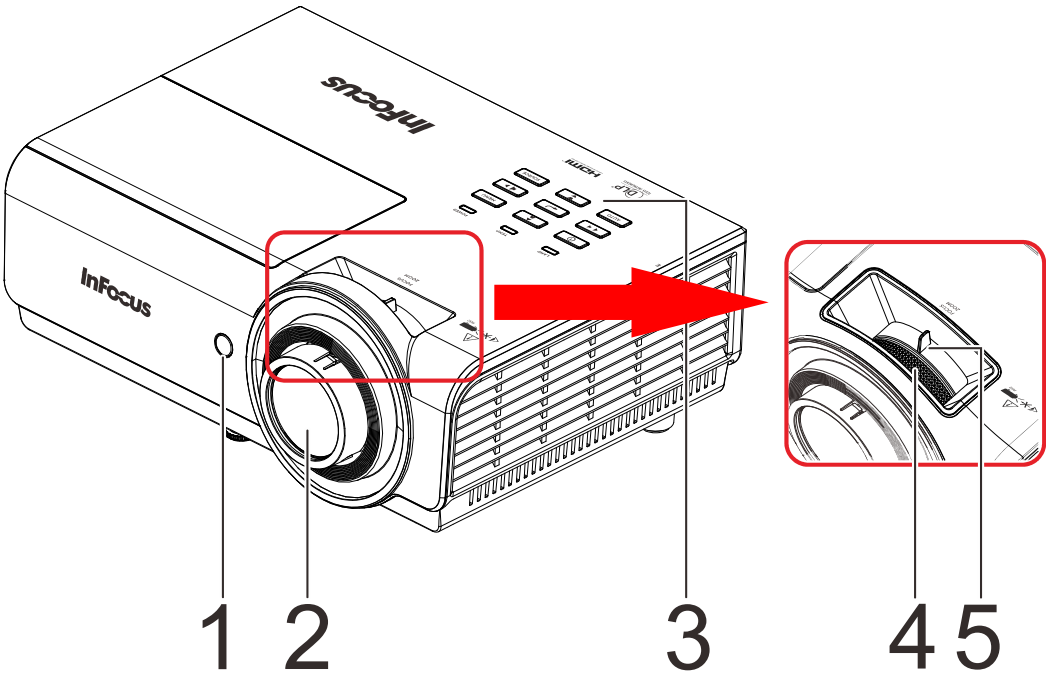
ITEM	LABEL	DESCRIPTION	SEE PAGE
1.	IR receiver	Receive IR signal from remote control.	
2.	Lens	Projection Lens.	
3.	Keypad	See Top view—Keypad and LEDs.	*3*
4.	Focus ring	Focuses the projected image.	*16*
5.	Zoom ring	Enlarges the projected image.	

⚠️ *Important:*
Do not block ventilation openings. Locate the projector in a well-ventilated area without obstructions to intake or exhaust vents. Do not place the projector on a tablecloth or other soft covering that may block the vents. Ventilation openings on the projector allow for good air circulation.

Top view—Keypad and LEDs
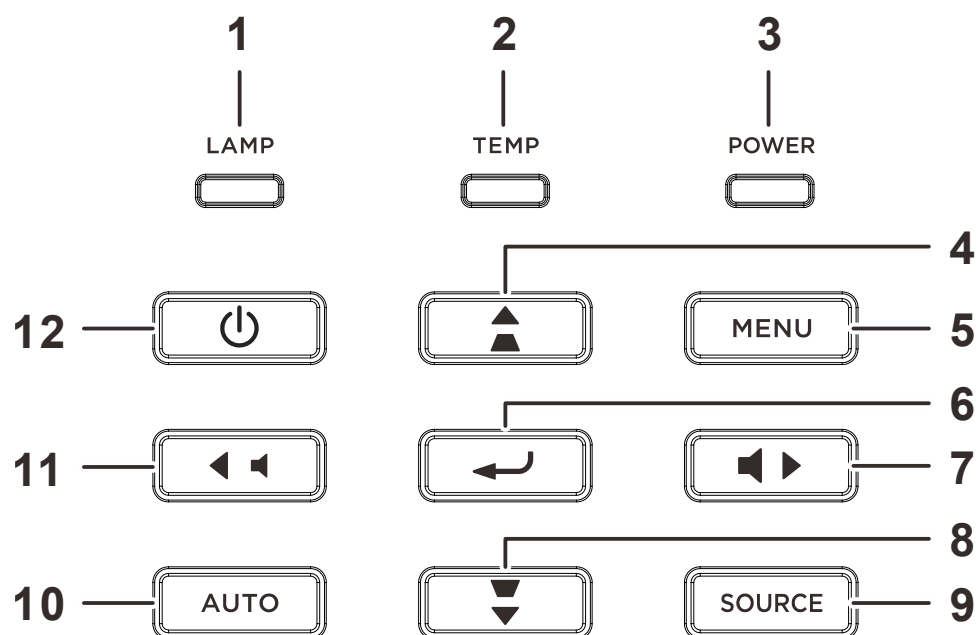
ITEM	LABEL	DESCRIPTION		SEE PAGE
1.	LAMP LED	Blinking Red	Error code	*53*
2.	TEMP LED	Red	Over Temperature T1	*53*
3.	POWER LED	Green	Lamp Ready	*53*
		Blinking Green	Start, Cooling or error code.	
4.	▲ ▲	Navigates the OSD. Quick Menu – For Keystone		*17*
5.	Menu	Open and exit OSD menus.		*17*
6.	↵	Enter or confirm highlighted OSD menu item.		*17*
7.	◀ ▶	Navigate and change settings in the OSD. Quick Menu – For Volume		*17*
8.	▼ ▼	Navigates the OSD. Quick Menu – For Keystone		*17*
9.	SOURCE	Enter the Source menu.		*17*
10.	AUTO	Optimizes image size, position, and resolution.		
11.	◀ ◀	Navigate and change settings in the OSD. Quick Menu – For Volume		*17*
12.	⏻	Turns the projector On or Off.		*17*

Rear view
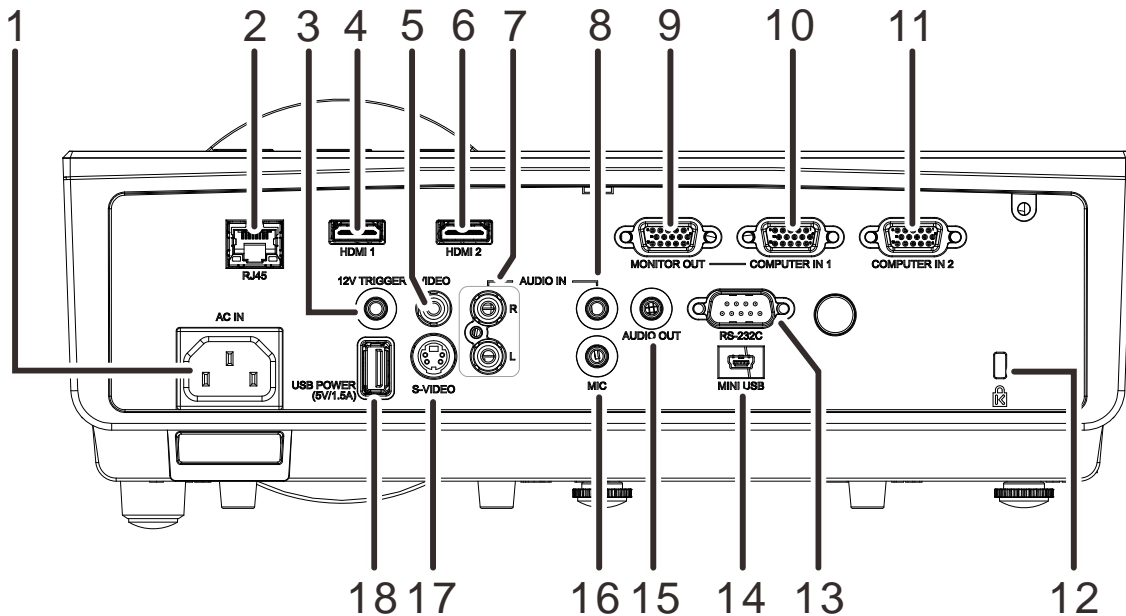
ITEM	LABEL	DESCRIPTION	SEE PAGE
1.	AC IN	Connect a POWER cable.	*11*
2.	RJ45	Connect a LAN cable from Ethernet.	
3.	12V TRIGGER	When connected to the screen through a commercially available cable, the screen deploys automatically on start up of the projector. The screen retracts when the projector is powered off (see notes below).	
4.	HDMI1	Connect an HDMI cable from a HDMI device.	
5.	VIDEO	Connect a COMPOSITE cable from a video device.	
6.	HDMI2	Connect the HDMI cable from a HDMI device.	
7.	AUDIO IN (L and R)	Connect an AUDIO cable from an audio device.	
8.	AUDIO IN	Connect an AUDIO cable from an audio device.	
9.	MONITOR OUT (COMPUTER IN 1)	Connect a RGB cable to an external monitor/display.	
10.	COMPUTER IN 1	Connect a RGB cable from a computer.	
11.	COMPUTER IN 2	Connect a RGB cable from a computer.	
12.	Kensington Lock	Secure to a permanent object with a Kensington® Lock system.	*50*
13.	RS-232C	Connect a RS-232 serial port cable for remote control.	
14.	MINI USB	Service use only.	
15.	AUDIO OUT	Connect an AUDIO cable to an audio amplifier.	
16.	MIC	Connect a Microphone for use. Note: All other audio sources are muted when MIC is On.	*28*

17.	S-VIDEO	Connect an S-VIDEO cable from a video device.
18.	USB POWER (5V/1.5A)	Connect an USB cable for power supply.

DC12V Trigger Note:
- *To use this feature, you must plug in the connector before turning on/off the projector.*
- *Screen controllers are supplied and supported by screen manufacturers.*
- *Do not use this jack for anything other than intended use.*

Connectivity Note:
If your video equipment has multiple connection options, please note that HDMI provides the highest quality image, followed by Component and then S-video. Composite provides the least quality image.

⚠ *Warning:*
As a safety precaution, disconnect all power to the projector and connecting devices before making connections.

Bottom view
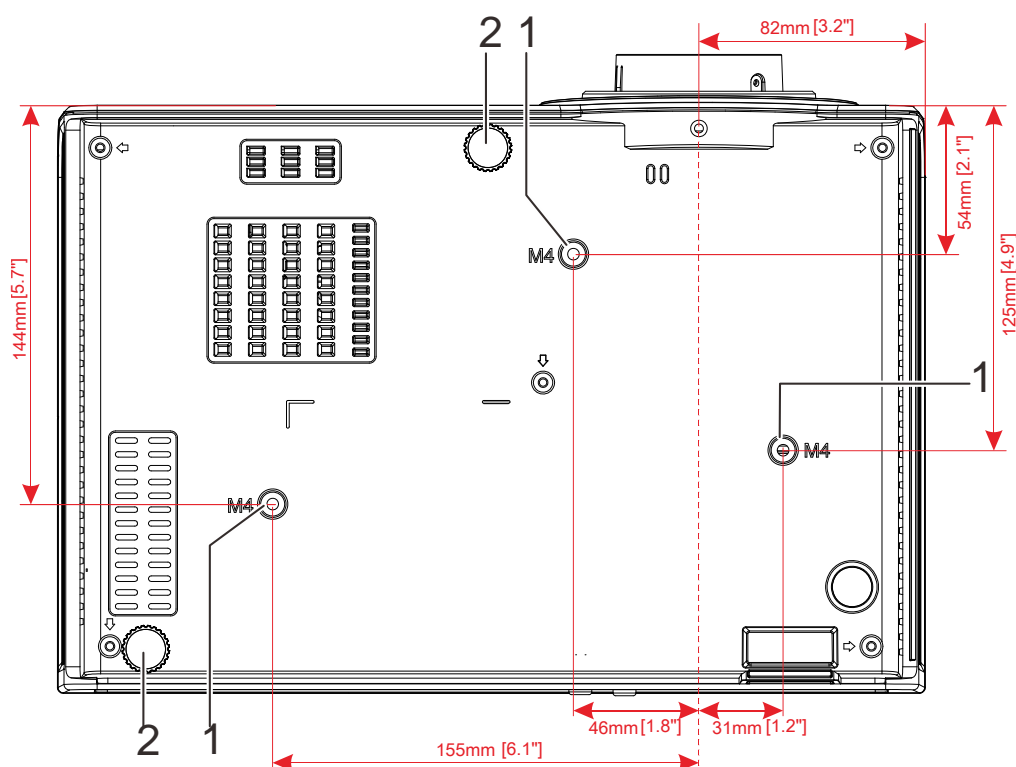
ITEM	LABEL	DESCRIPTION	SEE PAGE
1.	Ceiling support holes	Contact your dealer for information on mounting the projector on a ceiling.	
2.	Tilt adjustor	Rotate adjuster lever to adjust angle position.	*15*

Note:
It is recommended to use InFocus ceiling mount p/n PRJ-MNT-UNIV. Refer to the installation guide that comes with the mount for more information. The warranty does not cover any damage caused by use of non-approved ceiling mount kits or by installing in an improper location.

Remote Control Parts
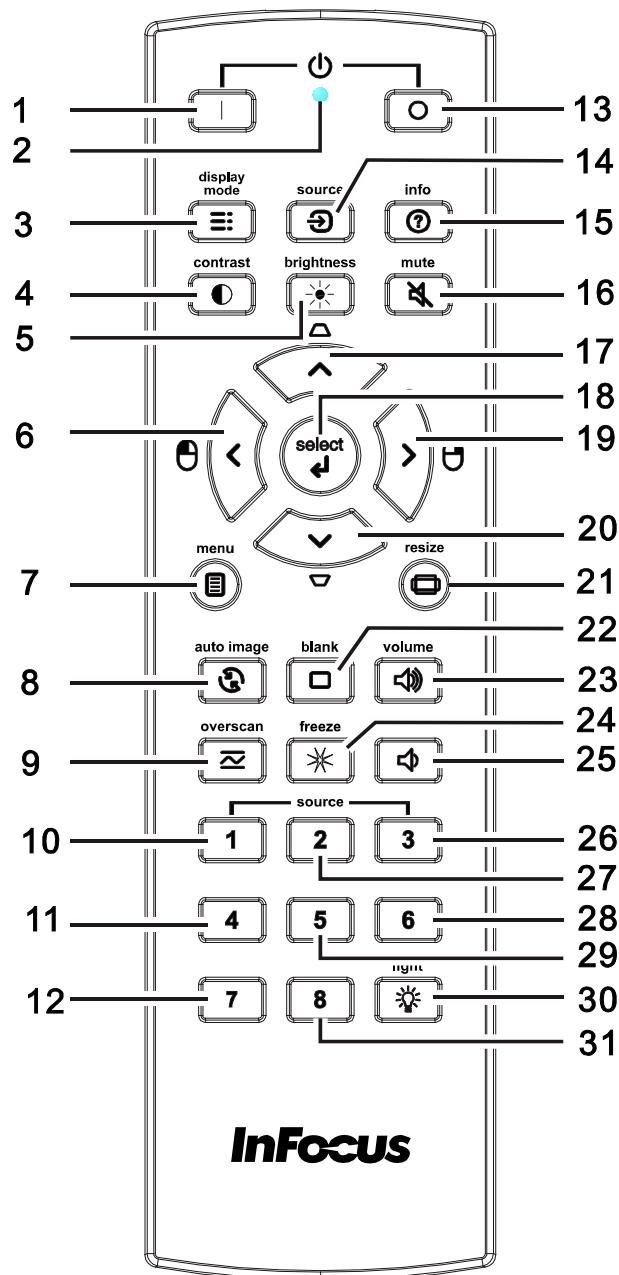
⚠️ **Important:**

1. Avoid using the projector with bright fluorescent lighting turned on. Certain high-frequency fluorescent lights can disrupt remote control operation.

2. Be sure nothing obstructs the path between the remote control and the projector. If the path between the remote control and the projector is obstructed, you can bounce the signal off certain reflective surfaces such as projector screens.

3. The buttons and keys on the projector have the same functions as the corresponding buttons on the remote control. This user's manual describes the functions based on the remote control.

ITEM	LABEL	DESCRIPTION	SEE PAGE
1.	Power ON	Turn the projector on.	*11*
2.	LED indicator	Only lights when the remote keys are pressed.	
3.	Display Mode	Choose a suitable preset mode for usage environment.	
4.	Contrast	Display the Contrast setting bar and use the right and left keys to adjust.	
5.	Brightness	Display the Brightness setting bar and use the right and left keys to adjust.	
6.	Left cursor	When the OSD is displayed, this button navigates to the left.	*17*
7.	Menu	Display the OSD menu.	
8.	Auto image	Re-synchronize the PC image.	
9.	Overscan	Display digital Zoom adjust bar.	
10.	Source-1	Computer In 1	
11.	Source-4	HDMI 2	
12.	Source-7	N/A	
13.	Power OFF	Turn the projector off.	*11*
14.	Source	Display the source menu.	*17*
15.	Info	Display projector information.	
16.	Mute	Mute the audio.	
17.	Up cursor / Keystone+	When the OSD is displayed, this button navigates up the menu. Otherwise it adjusts keystone.	*17*
18.	Select	Enter and confirm settings in the OSD.	
19.	Right cursor	When the OSD is displayed, this button navigates to the right.	
20.	Down cursor / Keystone -	When the OSD is displayed, this button navigates down the menu. Otherwise it adjusts keystone.	
21.	Resize	Change the image aspect ratio.	
22.	Blank	Blank the screen.	
23.	Volume+	Increase the volume.	*16*
24.	Freeze	Freeze video.	
25.	Volume-	Decrease the volume.	*16*
26.	Source-3	HDMI 1	
27.	Source-2	Computer In 2	
28.	Source-6	S-Video	
29.	Source-5	Composite Video	
30.	Light	Turns the remote control backlight on or off.	
31.	Source-8	N/A	

Note:
Mouse control function is not available in IN3144, IN3146 and IN3148HD.

Remote Control Operating Range

The remote control uses infrared transmission to control the projector. It is not necessary to point the remote directly at the projector. Provided you are not holding the remote perpendicular to the sides or the rear of the projector, the remote will function well within a radius of about 7 meters (23 feet) and 15 degrees above or below the projector level. If the projector does not respond to the remote control, move a little closer.

Projector and Remote Control Buttons

The projector can be operated using the remote control. All operations can be carried out with the remote control.

SETUP AND OPERATION

Inserting the Remote Control Batteries

1. Remove the battery compartment cover by sliding the cover in the direction of the arrow.
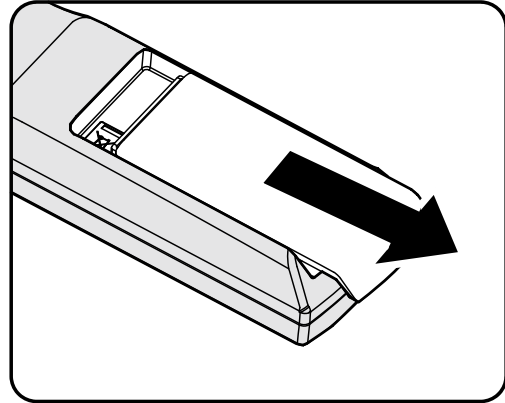
2. Insert batteries (not included) as shown in the illustration.
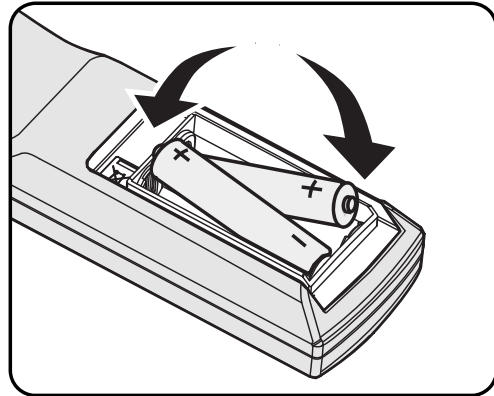
3. Replace the cover.
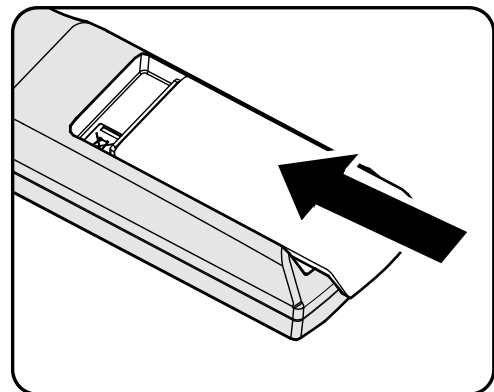
⚠️ *Caution:*
1. Only use AA batteries (Alkaline batteries are recommended).
2. Dispose of used batteries according to local ordinance regulations.
3. Remove the batteries when not using the projector for prolonged periods.
4. Do not mix old and new batteries, or mix battery types.

Note:
Batteries are not normally included with InFocus projectors.

Turning the projector on and off

1. Connect the power cord to the projector. Connect the other end to a wall outlet.
The ⏻ **POWER** LED on the projector light.
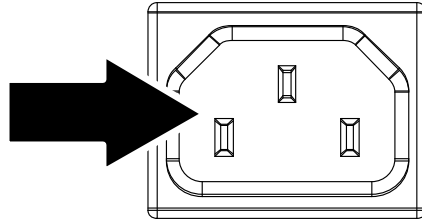
2. Turn on the connected devices.

3. Ensure the **POWER** LED is not flashing. Then press the ⏻ **POWER** button to turn on the projector.

The projector splash screen displays and connected devices are detected.

See *Setting an Access Password (Security Lock)* on page 13 if the security lock is enabled.

4. If more than one input device is connected, press the **SOURCE** button and use ▲▼ to scroll among the devices.
(Component is supported using a RGB to COMPONENT ADAPTER.)
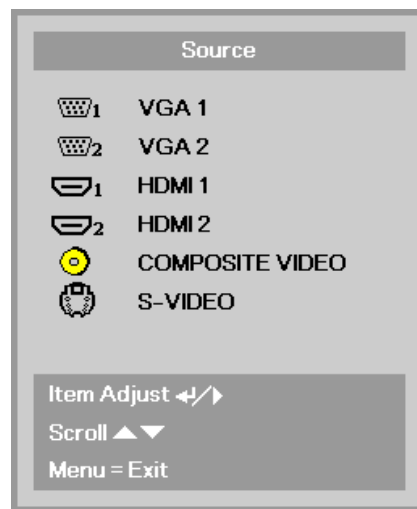
- VGA1 / VGA2: Analog RGB1 / RGB2
- HDMI1 / HDMI2: High-Definition Multimedia Interface
- Composite Video: Traditional composite video
- S-Video: Super video (Y/C separated)

5. To turn the projector off, press the **POWER OFF** button. When the "Power Off? Press Power again" message appears, press the **POWER OFF** button. The projector turns off.

⏻ Power Off?

Press Power again
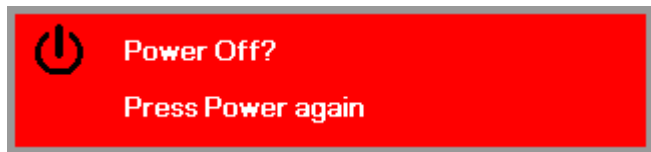
⚠ *Caution:*
Do not unplug the power cord until the POWER LED stops flashing–indicating the projector has cooled down.

Setting an Access Password (Security Lock)

You can use the four arrow buttons on the remote to set a password and prevent unauthorized use of the projector. When enabled, the password must be entered after you power on the projector. (See *Navigating the OSD* on page 17 and *Setting the OSD Language* on page 18 for help on using OSD menus.)

⚠️ *Important:*
Keep the password in a safe place. Without the password, you will not be able to use the projector. If you lose the password, contact InFocus Support for information on clearing the password.

1. Press the **MENU** button to open the OSD menu.

Image	Settings 1	Settings 2

Display Mode	Presentation
Brightness	50
Contrast	50
Computer	↵/▶
Auto Image	↵/▶
Advanced	↵/▶
Color Manager	↵/▶

| Menu = Exit | Menu Select ◀▶ | Scroll ▲▼ |
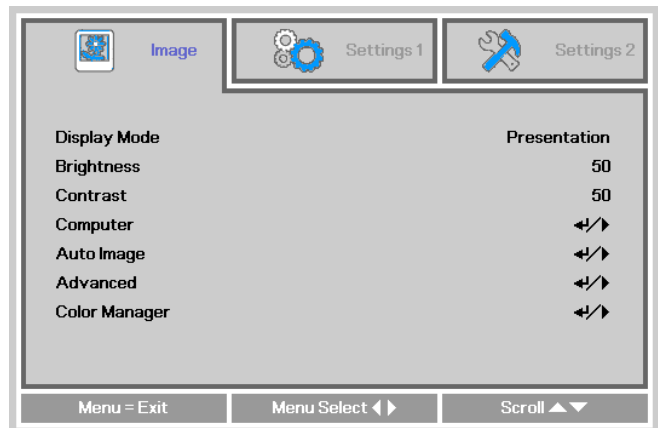
2. Press the ◀▶ buttons to move to the **Settings 1** menu. Press the ▲▼ buttons to select **Advanced 1**.

Image	Settings 1	Settings 2

Source	↵/▶
Projection	P
Aspect Ratio	Fill
Keystone	↵/▶
Digital Zoom	0
Audio	↵/▶
Advanced 1	↵/▶
Advanced 2	↵/▶

| Menu = Exit | Item Adjust ↵/▶ | Scroll ▲▼ |
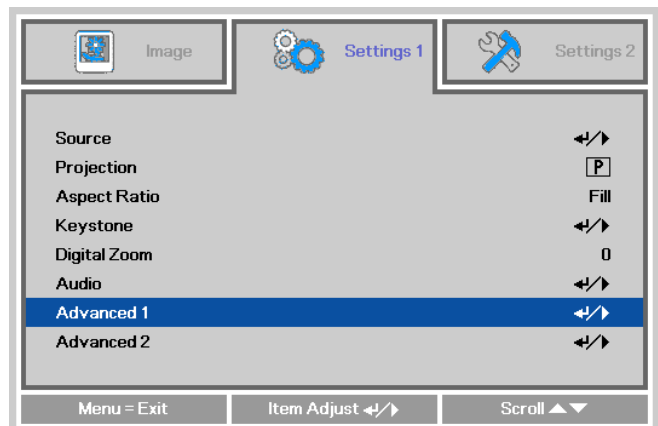
3. Press ↵ (Enter) or ▶ to enter the **Advanced 1** sub menu. Press the ▲▼ buttons to select **Security Lock**.

4. Press the ◀▶ buttons to enter and enable or disable security lock function.
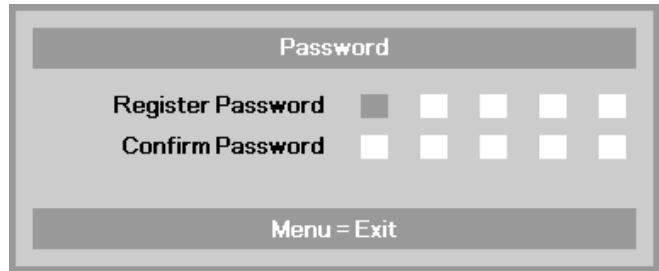
A password dialog box automatically appears.

Image	Settings 1	Settings 2

Settings 1 ▶ Advanced 1

Language	English
Security Lock	Off
Blank Screen	■
Splash Logo	Off
Closed Captioning	Off
Keypad Lock	Off
3D Setting	↵/▶

| Menu = Return | | Scroll ▲▼ |
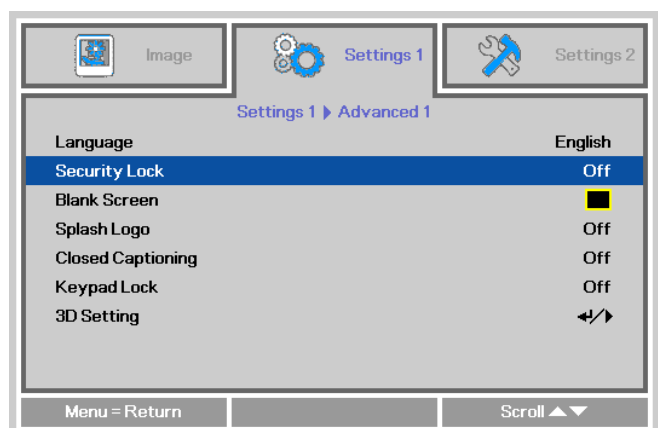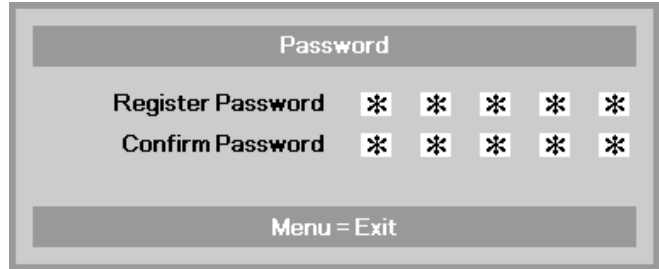
5. You can use the arrow buttons
▲ ▼ ◄ ►
either on keypad or IR remote control
for password entry. You can use any
combination including the same arrow
five times, but five characters must be
used.

Press the arrow buttons in any order to
set the password. Push the **MENU**
button to exit the dialog box.
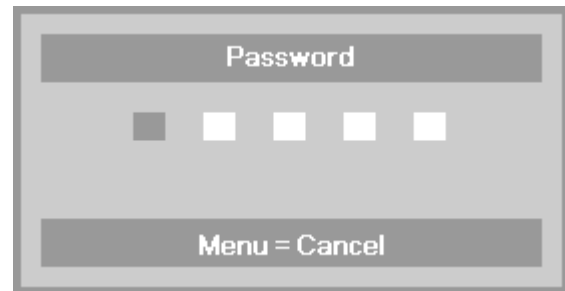
Password
Register Password ▣ ☐ ☐ ☐ ☐
Confirm Password ☐ ☐ ☐ ☐ ☐
Menu = Exit

Password
Register Password ✳ ✳ ✳ ✳ ✳
Confirm Password ✳ ✳ ✳ ✳ ✳
Menu = Exit

6. If the **Security Lock** is enabled, the
user will be prompted to enter a
password when the projector's power
button is pressed.
Enter the password in the order you
set it on step 5. If you forget the
password, please contact InFocus.
Visit our website at
www.infocus.com/support or call us.

Password
▣ ☐ ☐ ☐ ☐
Menu = Cancel

Adjusting the Projector Level

Take note of the following when setting up the projector:

- *The projector table or stand should be level and sturdy.*
- *Position the projector so that it is perpendicular to the screen.*
- *Ensure the cables are in a safe location. You could trip over them.*
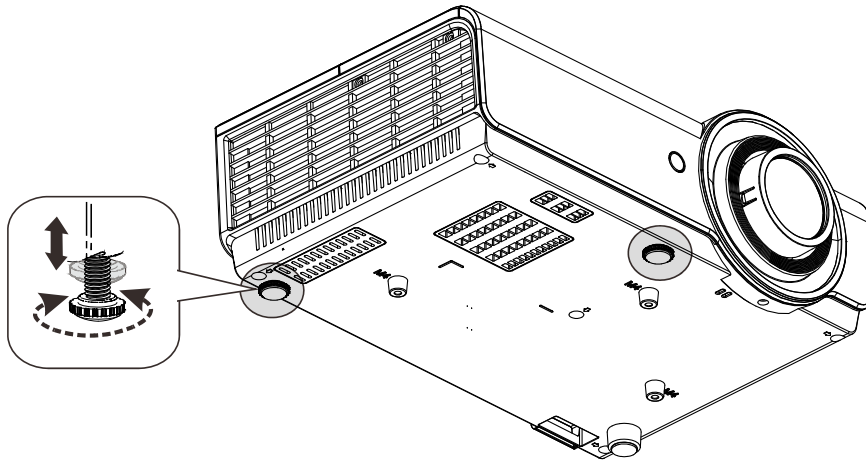
To adjust the angle of the picture, turn the tilt-adjuster right or left until the desired angle has been achieved.

Adjusting the Zoom, Focus and Keystone

1. Use the **Image-zoom** control (on the projector only) to resize the projected image and screen size **A**.

2. Use the **Image-focus** control (on the projector only) to sharpen the projected image **B**.
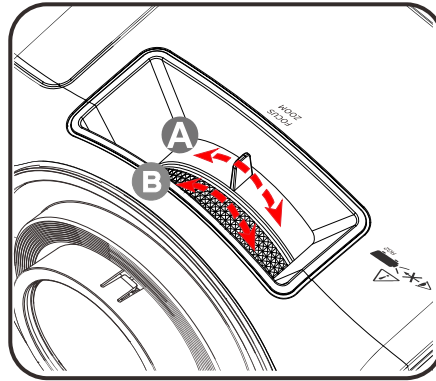
3. Use the **KEYSTONE** buttons on the remote control to correct trapezoid image issues (wider top or bottom).
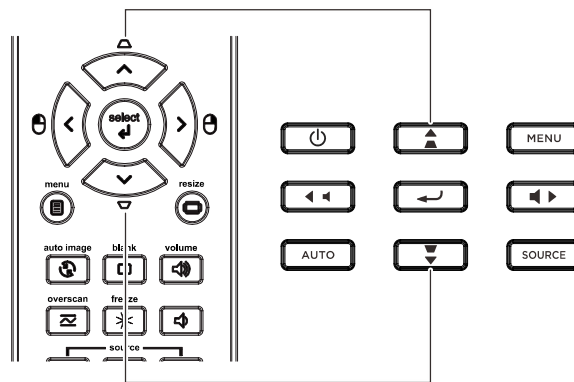
4. The keystone control appears on the display.

Keystone		0

Adjusting the Volume

1. Press the **Volume +/-** buttons on the remote control.
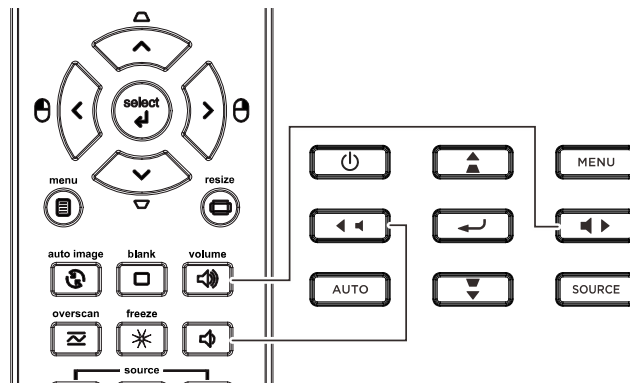
2. The volume control appears on the display.

Volume		5

3. Press the **MUTE** button on the remote control to turn off the volume.

ON-SCREEN DISPLAY (OSD) MENU SETTINGS

OSD Menu Controls

The projector has an OSD that lets you make image adjustments and change various settings.

Navigating the OSD

You can use the remote control arrow buttons to navigate and make changes to the OSD.
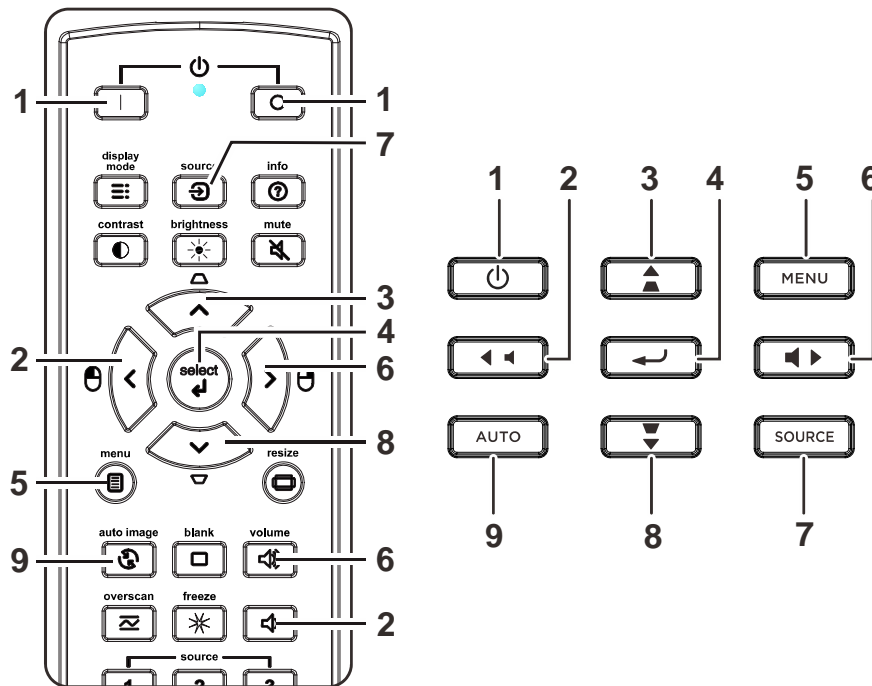
1. To enter the OSD, press the **MENU** button.

2. There are three menus. Press the ◄► buttons to move through the menus.

3. Press the ▲▼ buttons to move up and down in a menu.

4. Press the ◄► buttons to change setting values.

5. Press the **MENU** button to close the OSD or leave a submenu.
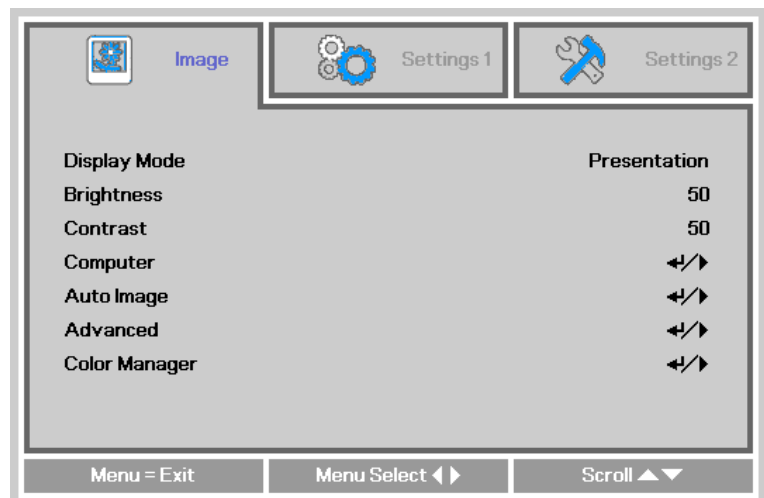
> **Note:**
> Depending on the video source, not all items in the OSD are available. For example, the **Horizontal/Vertical Position** items in the **Computer** menu can only be modified when connected to a PC. Items that are not available cannot be accessed and are grayed out.

Setting the OSD Language

Set the OSD language to your preference before continuing.

1. Press the **MENU** button. Press the ◄► buttons to navigate to **Settings 1**. Press the ▲▼ buttons to move to the **Advanced 1** menu.

	Image		Settings 1		Settings 2
Source					↵/►
Projection					P
Aspect Ratio					Fill
Keystone					↵/►
Digital Zoom					0
Audio					↵/►
Advanced 1					↵/►
Advanced 2					↵/►
Menu = Exit		Item Adjust ↵/►		Scroll ▲▼	
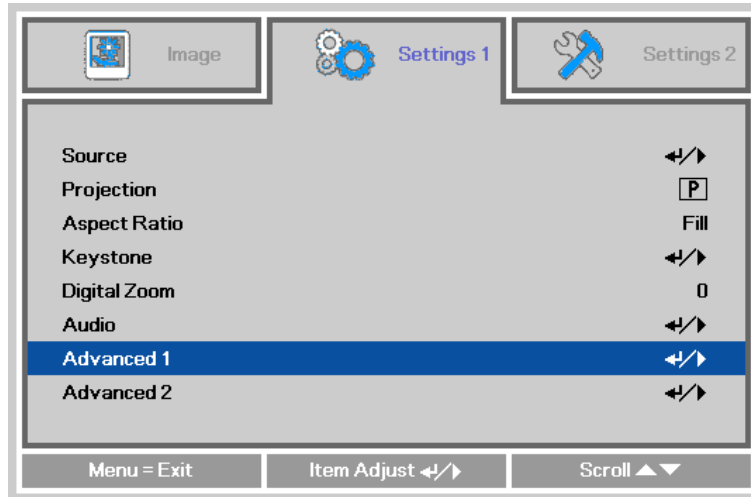
2. Press ↵ (Enter) or ► to enter the **Advanced 1** sub menu. Press the ▲▼ buttons until **Language** is highlighted.

	Image		Settings 1		Settings 2
		Settings 1 ▶ Advanced 1			
Language					English
Security Lock					Off
Blank Screen					■
Splash Logo					Off
Closed Captioning					Off
Keypad Lock					Off
3D Setting					↵/►
Menu = Return				Scroll ▲▼	
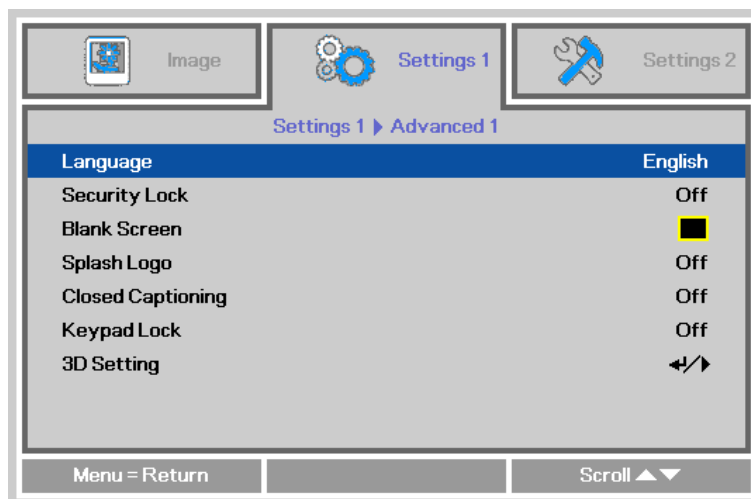
3. Press the arrow buttons until the language you want is highlighted.
4. Press the **MENU** button four times to close the OSD.

OSD Menu Overview

Use the following illustration to quickly find a setting or determine the range for a setting.

MAIN MENU	SUB MENU		SETTINGS
Image	Display Mode		Presentation, Bright, Game, Movie, TV, sRGB, Blackboard, User
	Brightness		0~100
	Contrast		0~100
	Computer	Horizontal Position	-5~5 (depend on Autolock)
		Vertical Position	-5~5 (depend on Autolock)
		Frequency	0~31
		Tracking	-5~5
	Auto Image		
	Advanced	Brilliant Color	0~10
		Sharpness	0~31
		Gamma	1.8, 2.0, 2.2, 2.4, B&W, Linear
		Color Temperature	Warm, Normal, Cold
		Video AGC	Off, On
		Video Saturation	0~100
		Video Tint	0~100
		White Balance	RGain 0~200
			GGain 0~200
			BGain 0~200
			ROffset -256~255
			GOffset -256~255
			BOffset -256~255
	Color Manager	Red	Hue, Saturation, Gain 0~100
		Green	Hue, Saturation, Gain 0~100
		Blue	Hue, Saturation, Gain 0~100
		Cyan	Hue, Saturation, Gain 0~100
		Magenta	Hue, Saturation, Gain 0~100
		Yellow	Hue, Saturation, Gain 0~100
		White	Red, Green, Blue 0~100

MAIN MENU	SUB MENU		SETTINGS
Settings 1	Source	Source	reference Input Source Select (IR/Keypad)
	Projection		Normal, Rear, Ceiling, Rear+Ceiling
	Aspect Ratio		Fill, 4:3, 16:9, Letter Box, Native, 2.35:1
	Keystone		-40~40
	Digital Zoom		-10~10
	Audio	Volume	0~10
		Mute	Off, On
		MIC	Off, On
	Advanced 1	Language	English, Français, Deutsch, Español, Português, 简体中文, 繁體中文, Italiano, Norsk, Svenska, Nederlands, Русский, Polski, Suomi, Dansk, 한국어, Magyar, Čeština, العربية, Türkçe, Việt, עברית, Indonesian, Română
		Security Lock	Off, On
		Blank Screen	Black, Red, Green, Blue, White
		Splash Logo	Off, On
		Closed Captioning	Off, On
		Keypad Lock	Off, On
		3D Setting	3D	Off, DLP-Link, IR
			3D Sync Invert	Off, On
			3D Format	Frame Sequential, Top/Bottom, Side-By-Side, Frame Packing (3D Frame Packing HDMI source only)
	Advanced 2	Test Pattern	None, Grid, White, Red, Green, Blue, Black
		H Image Shift	-50~50
		V Image Shift	-50~50

Main Menu	Sub Menu			Settings
Settings 2	Auto Source			Off, On
	No Signal Power Off			0~180
	Auto Power On			Off, On
	Lamp Mode			ECO , Normal, Smart ECO
	Reset All			
	Status	Active Source		
		Video Information		
		Lamp Hours(ECO, Normal, Smart ECO)		
		Software Version		
	Advanced 1	Menu Position		Center, Down, Up, Left, Right
		Translucent Menu		0%, 25%, 50%, 75%, 100%
		Low Power Mode		Off, Low Power, Network
		Fan Speed		Normal, High
		Lamp Hour Reset		
		Projector ID		0-98
		Network	Network State	Connect, Disconnect
			DHCP	On, Off
			IP Address	0~255, 0~255, 0~255. 0~255
			Subnet Mask	0~255, 0~255, 0~255. 0~255
			Gateway	0~255, 0~255, 0~255. 0~255
			DNS	0~255, 0~255, 0~255. 0~255
			Apply	Ok / Cancel
	Advanced 2	Sleep Timer		0~600
		Source Filter	VGA1	Disable, Enable
			VGA2	Disable, Enable
			HDMI1	Disable, Enable
			HDMI2	Disable, Enable
			COMPOSITE VIDEO	Disable, Enable
			S-VIDEO	Disable, Enable
		Wall Color		Off, Light Yellow, Pink, Light Green, Blue, Blackboard
		Color Space		Auto, RGB, YUV
		Quantization Range		Auto, Full, Limited

Image Menu

> ⚠️ **_Attention !_**
> _When image options are changed, the Display Mode changes to User._

Press the **MENU** button to open the **OSD** menu. Press the ◄► buttons to move to the **Image Menu**. Press the ▲▼ buttons to move up and down in the **Image** menu. Press the ◄► buttons to enter and change setting values.
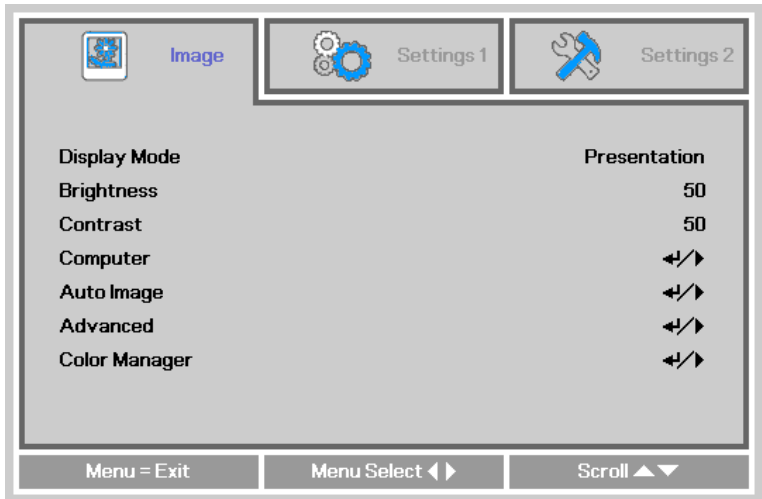
ITEM	DESCRIPTION
Display Mode	Press the ◄► buttons to enter and set the Display Mode. **Note**: Display Mode must be set to User in order to access the other Image menu items.
Brightness	Press the ◄► buttons to adjust the display brightness.
Contrast	Press the ◄► buttons to adjust the display contrast.
Computer	Press ◄┘ (Enter) or ► to enter the Computer menu. See _Computer Menu_ on page 23.
Auto Image	Press ◄┘ (Enter) or ► to automatically adjustment for phase, tracking, size and position.
Advanced	Press ◄┘ (Enter) or ► to enter the Advanced menu. See _Advanced Feature_ on page 24.
Color Manager	Press ◄┘ (Enter) or ► to enter the color manager menu. See page 26 for more information on _Color Manager_.

Computer Menu

Press the **MENU** button to open the **OSD** menu. Press the ◄► buttons to move to the **Image** menu. Press the ▲▼ buttons to move to the **Computer** menu and then press ◄┘ (Enter) or ►. Press the ▲▼ buttons to move up and down in the **Computer** menu.

Image	Settings 1	Settings 2

Image ▶ Computer

Horizontal Position	0
Vertical Position	0
Frequency	0
Tracking	0

Menu = Return   Scroll ▲▼

ITEM	DESCRIPTION
Horizontal Position	Press the ◄► buttons to adjust the display position to left or right.
Vertical Position	Press the ◄► buttons to adjust the display position to up or down.
Frequency	Press the ◄► buttons to adjust the A/D sampling clock.
Tracking	Press the ◄► buttons to adjust the A/D sampling phase.

Advanced Features

Press the **Menu** button to open the **OSD** menu. Press the ◄► buttons to move to the **Image** menu. Press the ▼▲ buttons to move to the **Advanced** menu and then press ◄┘ (Enter) or ►. Press the ▼▲ buttons to move up and down in the **Advanced** menu.

Image	Settings 1	Settings 2

Image ► Advanced	
Brilliant Color	5
Sharpness	16
Gamma	1.8
Color Temperature	Normal
Video AGC	Off
Video Saturation	50
Video Tint	50
White Balance	◄┘/►

Menu = Return		Scroll ▲▼

ITEM	DESCRIPTION
Brilliant Color	Press the ◄► buttons to adjust the Brilliant Color value.
Sharpness	Press the ◄► buttons to adjust the display sharpness.
Gamma	Press the ◄► buttons to adjust the gamma correction of the display.
Color Temperature	Press the ◄► buttons to adjust the color temperature.
Video AGC	Press the ◄► buttons to enter and enable or disable the Automatic Gain Control for video source.
Video Saturation	Press the ◄► buttons to adjust the video saturation.
Video Tint	Press the ◄► buttons to adjust the video tint/hue.
White Balance	Press the **ENTER/ ►** button to enter the **White Balance** sub menu. See *White Balance* on page 25

White Balance

Press the **ENTER** button to enter the **White Balance** sub menu.

Image	Settings 1	Settings 2

Image ▶ Advanced ▶ White Balance

R Gain	100
G Gain	100
B Gain	100
R Offset	100
G Offset	100
B Offset	100

Menu = Return   Scroll ▲▼

ITEM	DESCRIPTION
R Gain	Press the ◄► buttons to adjust the Red Gain.
G Gain	Press the ◄► buttons to adjust the Green Gain.
B Gain	Press the ◄► buttons to adjust the Blue Gain.
R Offset	Press the ◄► buttons to adjust the Red Offset.
G Offset	Press the ◄► buttons to adjust the Green Offset.
B Offset	Press the ◄► buttons to adjust the Blue Offset.

Color Manager

Press the **Menu** button to open the **OSD** menu. Press the ◄► buttons to move to the **Image** menu. Press the ▼▲ buttons to move to the **Color Manager** menu and then press ← (Enter) or ►. Press the ▼▲ buttons to move up and down in the **Color Manager** menu.
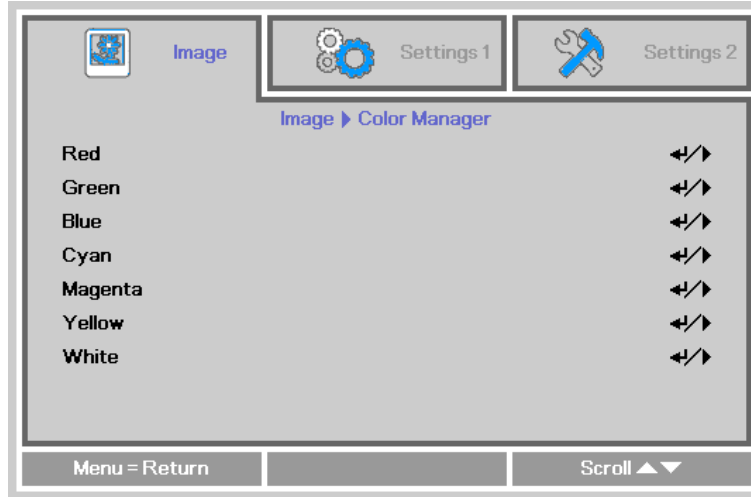
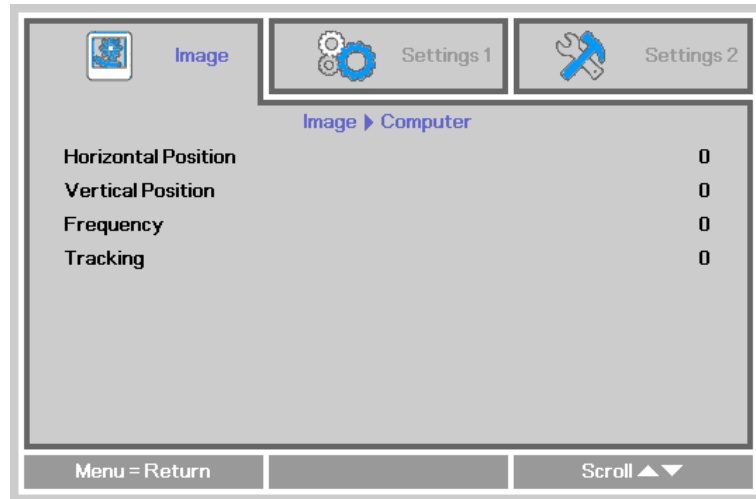| ITEM	DESCRIPTION
Red	Select to enter the Red Color Manager. Press the ◄► buttons to adjust the Hue, Saturation, and Gain.
Green	Select to enter the Green Color Manager. Press the ◄► buttons to adjust the Hue, Saturation, and Gain.
Blue	Select to enter the Blue Color Manager. Press the ◄► buttons to adjust the Hue, Saturation, and Gain.
Cyan	Select to enter the Cyan Color Manager. Press the ◄► buttons to adjust the Hue, Saturation, and Gain.
Magenta	Select to enter the Magenta Color Manager. Press the ◄► buttons to adjust the Hue, Saturation, and Gain.
Yellow	Select to enter the Yellow Color Manager. Press the◄► buttons to adjust the Hue, Saturation, and Gain.
White	Select to enter the White Color Manager. Press the ◄► buttons to adjust the Red, Green, and Blue.

Settings 1 Menu

Press the **MENU** button to open the **OSD** menu. Press the ◄► buttons to move to the **Settings 1** menu. Press the ▲▼ buttons to move up and down in the **Settings 1** menu. Press the ◄► buttons to enter and change setting values.
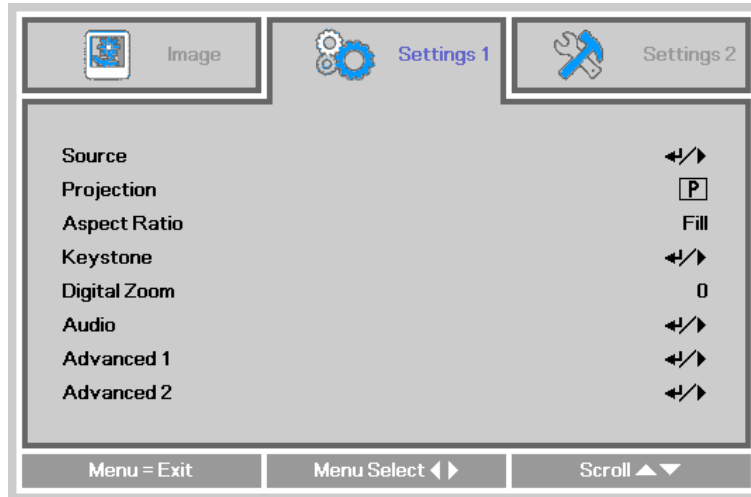
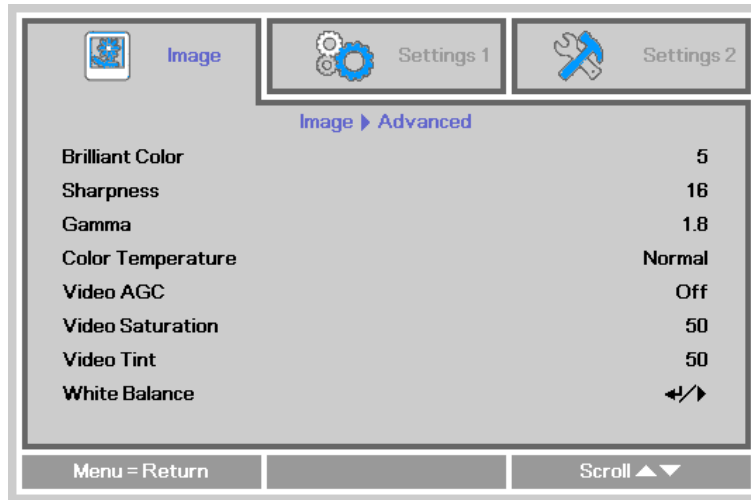| ITEM	DESCRIPTION
Source	Press the ◄► buttons to open source menu.
Projection	Press the ◄► buttons to enter and choose from four projection orientations.
Aspect Ratio	Press the ◄► buttons to adjust the video aspect ratio.
Keystone	Press the ◄► buttons to adjust the display keystone.
Digital Zoom	Press the ◄► buttons to adjust the Digital Zoom menu.
Audio	Press ◄┘ (Enter) or ► to enter the Audio menu. See *Audio* on page 28.
Advanced 1	Press ◄┘ (Enter) or ► to enter the Advanced 1 menu. See *Advanced 1 Features* on page 29.
Advanced 2	Press ◄┘ (Enter) or ► to enter the Advanced 2 menu. See *Advanced 2 Features* on page 31.

Audio

Press the **Menu** button to open the **OSD** menu. Press the ◄► buttons to move to the **Settings 1** menu. Press the ▼▲ buttons to move to the **Audio** menu and then press ◄┘ (Enter) or ►. Press the ▼▲ buttons to move up and down in the **Audio** menu.

Image	Settings 1	Settings 2

Settings 1 ▶ Audio

Volume	5
Mute	Off
MIC	Off

Menu = Return   Scroll ▲▼

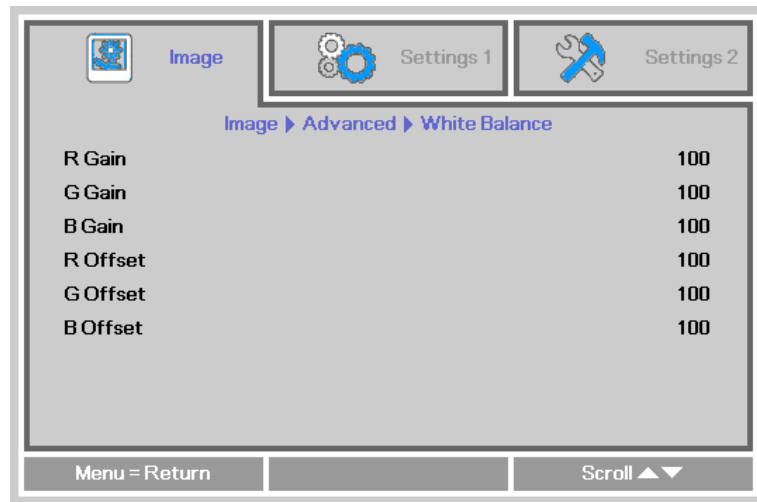| ITEM	DESCRIPTION
Volume	Press the ◄► buttons to enter and adjust the audio volume.
Mute	Press the ◄► buttons to enter and turn on or off the speaker.
MIC	Press the ◄► buttons to enter and turn MIC Mode Off or On. Note: MIC can only be turned on when a MIC is plugged in. Please connect a 3.5∅ mini jack cable microphone to the projector and condenser microphone is recommended to use as below. <table><tr><td rowspan="4">Microphone</td><td>Transducer principle</td><td>condenser</td></tr><tr><td>Impedance</td><td>600ohm~ 2.2Kohm</td></tr><tr><td>Frequency</td><td>100Hz~16KHz</td></tr><tr><td>Output</td><td>stereo</td></tr></table>

Advanced 1 Features

Press the **Menu** button to open the **OSD** menu. Press the ◄► buttons to move to the **Settings 1** menu. Press the ▲▼ buttons to move to the **Advanced 1** menu and then press ← (Enter) or ►. Press the ▲▼ buttons to move up and down in the **Advanced 1** menu. Press the ◄► buttons to enter and change setting values.

Image	Settings 1	Settings 2

Settings 1 ▶ Advanced 1

Language	English
Security Lock	Off
Blank Screen	■
Splash Logo	Off
Closed Captioning	Off
Keypad Lock	Off
3D Setting	←/►

Menu = Return		Scroll ▲▼

ITEM	DESCRIPTION
Language	Press the ◄► buttons to enter and select a different localization Menu.
Security Lock	Press the ◄► buttons to enter and enable or disable the security lock function.
Blank Screen	Press the ◄► buttons to enter and select a different blank screen color.
Splash Logo	Press the cursor ◄► button to enter and select splash logo.
Closed Captioning	Press the ◄► buttons to enter and enable or disable Closed Captioning
Keypad Lock	Press ◄► to enter and enable or disable the keypad keys.
3D Setting	Press ← (Enter) or ► to enter the 3D menu. See page 30 for more information on the *3D Setting*.

Note:
To enjoy the 3D function, first enable the Play Movie in 3D setting found in your Blu-Ray device under the 3D Disc Menu.

3D Setting

Image	Settings 1	Settings 2
	Settings 1 ▶ Advanced 1 ▶ 3D Setting	
3D		Off
3D Sync Invert		Off
3D Format		Frame Sequential
Menu = Return		Scroll ▲▼

ITEM	DESCRIPTION
3D	Press the ◀▶ buttons to enter and select different 3D modes.
3D Sync Invert	Press the ◀▶ buttons to enter and enable or disable 3D Sync Invert.
3D Format	Press the ◀▶ buttons to enter and enable or disable different 3D formats.

Note:

1. *By default, if no 3D source is detected, the 3D OSD menu items will not be available.*

2. *When the projector is connected to an appropriate 3D source, the 3D OSD menu items are available for selection.*

3. *Use 3D glasses to view a 3D image.*

4. *You need 3D content from a 3D Blu-Ray or 3D media file.*

5. *You need to enable the 3D source (some 3D Blu-Ray content may have a 3D on-off selection feature).*

6. *You need DLP link 3D glasses.*

7. *The OSD 3D mode needs to match the type of glasses (DLP link or IR).*

8. *Power on the glasses. Glasses normally have a power on -off switch.*
   Each type of glasses has their own configuration instructions. Please follow the configuration instructions that come with your glasses to finish the setup process.
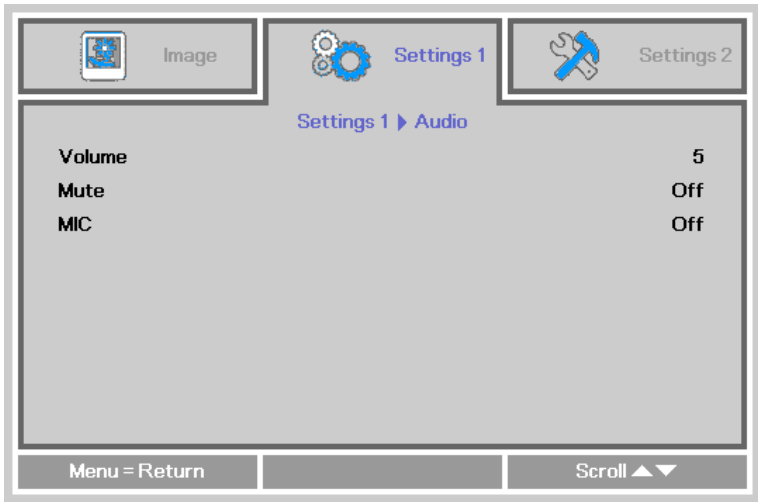
Advanced 2 Features

Press the **Menu** button to open the **OSD** menu. Press the ◄► buttons to move to the **Settings 1** menu. Press the ▲▼ buttons to move to the **Advanced 2** menu and then press ◄┘ (Enter) or ►. Press the ▲▼ buttons to move up and down in the **Advanced 2** menu. Press the ◄► buttons to enter and change setting values.

Image	Settings 1	Settings 2
	Settings 1 ▶ Advanced 2	
Test Pattern		None
H Image Shift		0
V Image Shift		0
Menu = Return		Scroll ▲▼
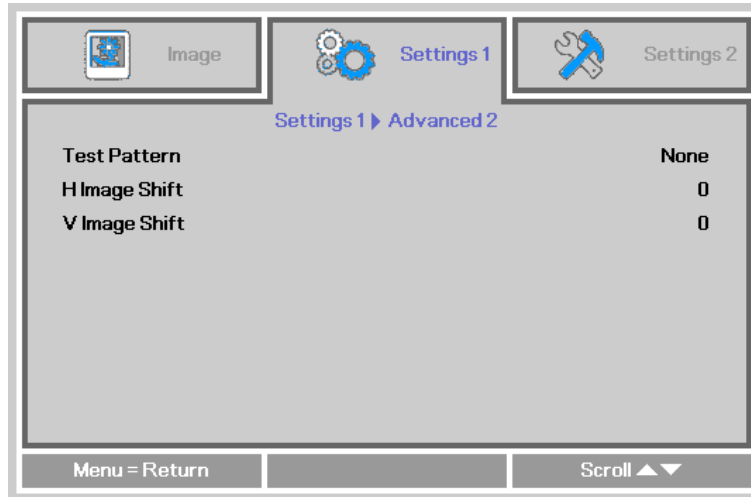
ITEM	DESCRIPTION
Test Pattern	Press the ◄► buttons to enter and select internal test pattern.
H Image Shift	Press the ◄► buttons to enter and select H Image Shift.
V Image Shift	Press the ◄► buttons to enter and select V Image Shift.

Settings 2 Menu

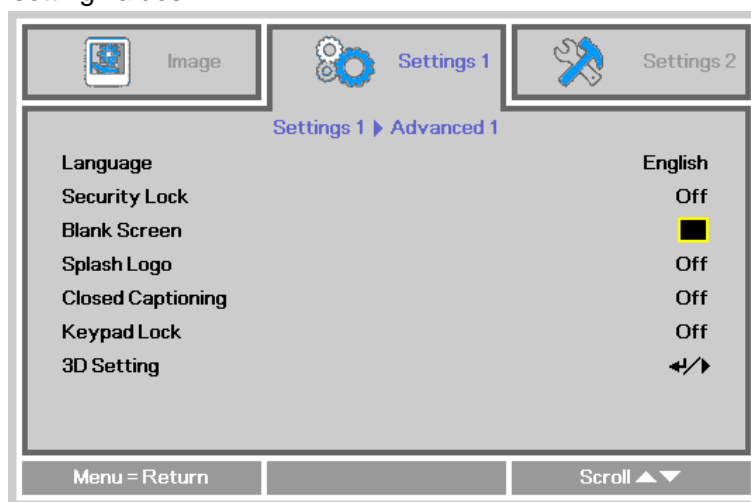Press the **MENU** button to open the **OSD** menu. Press the ◄► buttons to move to the **Settings 2** menu. Press the ▲▼ buttons to move up and down in the **Settings 2** menu.

🔳 Image	⚙️ Settings 1	🔧 Settings 2

Auto Source	Off
No Signal Power Off (min)	0
Auto Power On	Off
Lamp Mode	Normal
Reset All	↵/▶
Status	↵/▶
Advanced 1	↵/▶
Advanced 2	↵/▶

Menu = Exit	Menu Select ◀▶	Scroll ▲▼

ITEM	DESCRIPTION
Auto Source	Press the ◄► buttons to enter and enable or disable automatic source detection.
No Signal Power Off (min.)	Press the ◄► buttons to enter and enable or disable automatic shutdown of lamp when no signal is detected.
Auto Power On	Press the ◄► buttons to enter and enable or disable automatic power On when AC power is supplied.
Lamp Mode	Press the ◄► buttons to enter and select the lamp mode for higher brightness, or lower brightness if you wish to save lamp life.
Reset All	Press ↵ (Enter) or ► to reset all settings to default values.
Status	Press ↵ (Enter) or ► to enter the Status menu. See page 33 for more information on *Status*.
Advanced 1	Press ↵ (Enter) or ► to enter the Advanced 1 menu. See *Advanced 1 Features* on page 34.
Advanced 2	Press ↵ (Enter) or ► to enter the Advanced 2 menu. See *Advanced 2 Features* on page 43.

Note:
"Smart ECO": Press the Blank button to activate the Smart ECO feature, which will dim the lamp 30% when the image is black.

Status

Press the ▲▼ buttons to move up and down in the **Settings 2** menu. Select the **Status** menu and press ← (Enter) or ► to enter.

Image	Settings 1	Settings 2

Settings 2 ▶ Status

Active Source	VGA
Video Information	1024 x 768 @ 60 Hz
Lamp Hours(Eco , Normal ,Smart Eco)	0 0 0
Software Version	D01

Menu = Return
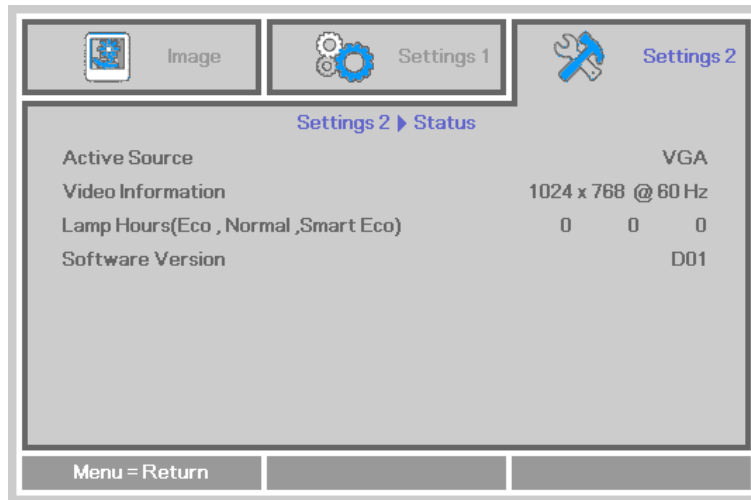
ITEM	DESCRIPTION
Active Source	Displays the current active source type.
Video Information	Displays resolution/video information for RGB sources and color standard for Video sources.
Lamp Hours	Lamp hour usage information is displayed. (Eco, Normal and Smart Eco)
Software version	Displays system software version.

Advanced 1 Features

Press the **Menu** button to open the **OSD** menu. Press the ◄► buttons to move to the **Settings 2** menu. Press the ▲▼ buttons to move to the **Advanced 1** menu and then press ↵ (Enter) or ►. Press the ▲▼ buttons to move up and down in the **Advanced 1** menu. Press the ◄► buttons to enter and change setting values.
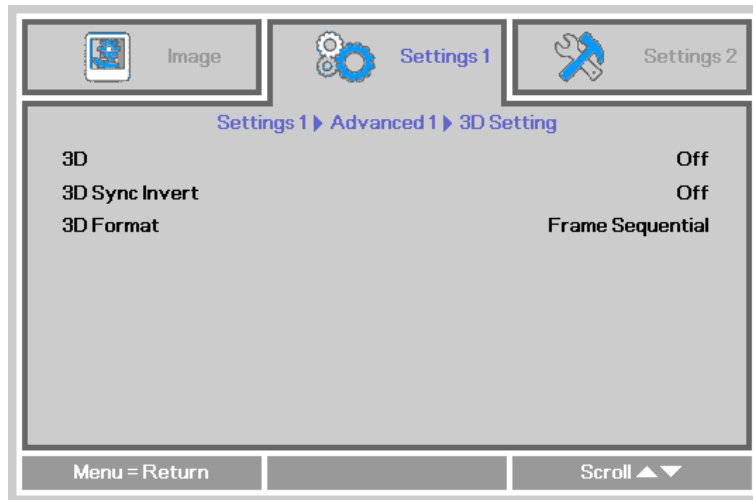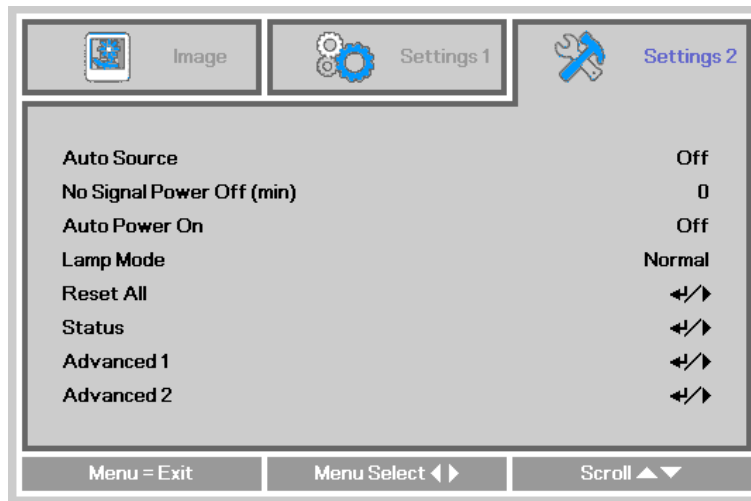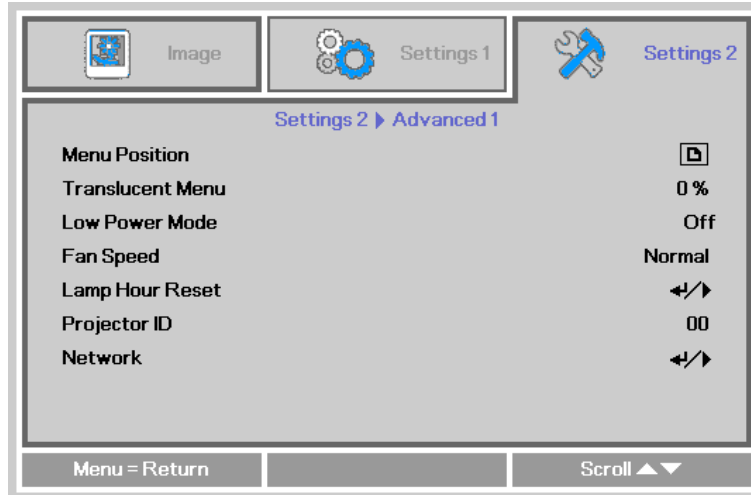
ITEM	DESCRIPTION
Menu Position	Press the ◄► buttons to enter and select different OSD location.
Translucent Menu	Press the ◄► buttons to enter and select OSD background translucent level.
Low Power Mode	Press the ◄► buttons to enter and turn Low Power Mode Off, Low Power, Network.
Fan Speed	Press the ◄► buttons to enter and toggle between Normal and High fan speeds. **Note**: We recommend selecting high speed in high temperatures, high humidity, or high altitude (higher than 1500m/4921ft) areas.
Lamp Hour Reset	After replacing the lamp, the lamp should be reset. See page 35 for more information on *Lamp Hour Reset*.
Projector ID	Press the ◄► buttons to enter and adjust the two digit projector ID from 00 through 98.
Network	Press ↵ (Enter) or ► to enter the Network menu. See page 35 for more information on *Network*.

Note:
*When "**Network**" is enabled, VGA Out is inactive when the projector is in standby mode.*
Both VGA OUT and Network control are active in standby when Low Power Mode is set to Off.

Lamp Hour Reset

Image	Settings 1	Settings 2

Settings 2 ▶ Advanced 1 ▶ Lamp Hour Reset

Please See User Manual ...

Menu = Return
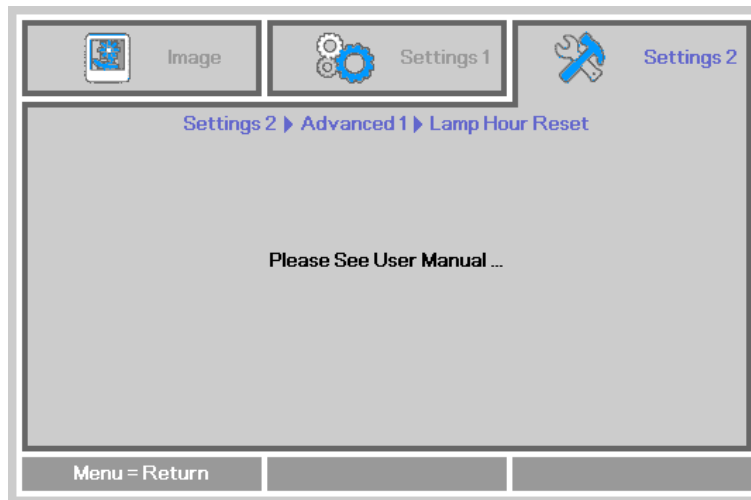
Please refer to *Resetting the Lamp Timer* on page 48 to reset the lamp hour counter.

Network

Image	Settings 1	Settings 2

Settings 2 ▶ Advanced 1 ▶ Network

Network State	Connect
DHCP	Off
IP Address	255.255.255.255
Subnet Mask	255.255.255.255
Gateway	255.255.255.255
DNS	255.255.255.255
Apply	↵/▶

Menu = Return   Scroll ▲▼
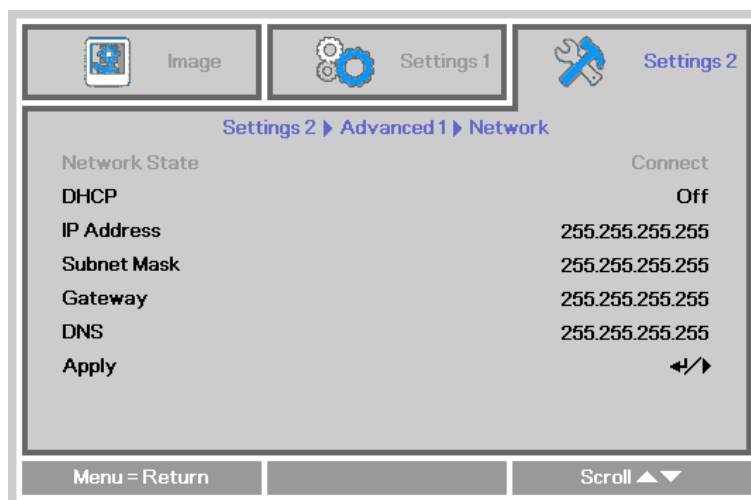
ITEM	DESCRIPTION
Network State	Displays the network connection status.
DHCP	Press ◄► to turn DHCP On or Off. **Note:** If DHCP is turned Off, complete the IP Address, Subnet Mask, Gateway, and DNS fields.
IP Address	Enter a valid IP address when DHCP is turned off.
Subnet Mask	Enter a valid Subnet Mask when DHCP is turned off.
Gateway	Enter a valid Gateway address when DHCP is turned off.
DNS	Enter a valid DNS name when DHCP is turned off.
Apply	Press ↵ (Enter) or ► to confirm settings.

LAN_RJ45
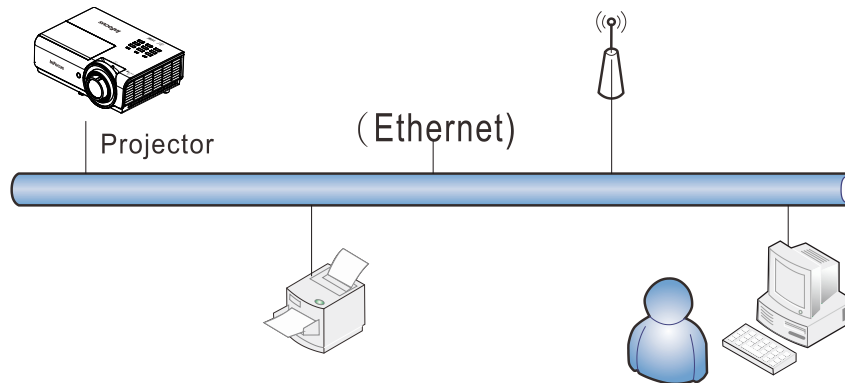
Wired LAN Terminal functionalites

Remote control and monitoring of a projector from a PC (or laptop) via wired LAN is also possible. Compatibility with AMX (Device Discovery) / Extron control boxes enables not only collective projector management on a network but also management from a control panel on a PC (or laptop) browser screen.

★ Extron is a registered trademark of Extron Electronics, Inc. of the United States.

★ AMX is a registered trademark of AMX LLC of the United States.

★ PJLink applied for trademark and logo registration in Japan, the United States of America, and other countries by JBMIA.

Supported External Devices

This projector supports specified controller commands and related software:

This projector supports AMX (Device Discovery).
  http://www.amx.com/

This projector supports Extron device(s).
  http://www.extron.com/

This projector supports all commands of PJLink Class1 (Version 1.00).
  http://pjlink.jbmia.or.jp/english/

For detailed information about the diverse types of external devices which can be connected to the LAN/RJ45 port to control the projector, as well as related control commands, go to www.infocus.com/support.

LAN RJ45

1. Connect an RJ45 cable to RJ45 ports on the projector and the PC (laptop).
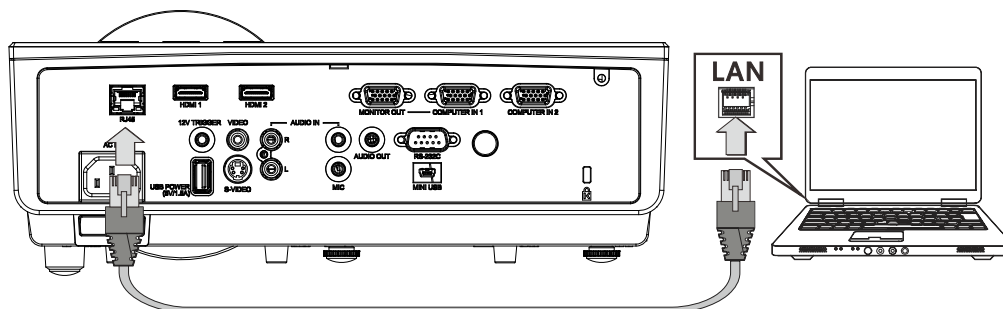
2. On the PC (laptop), select **Start** → **Control Panel** →**Network and Internet**.
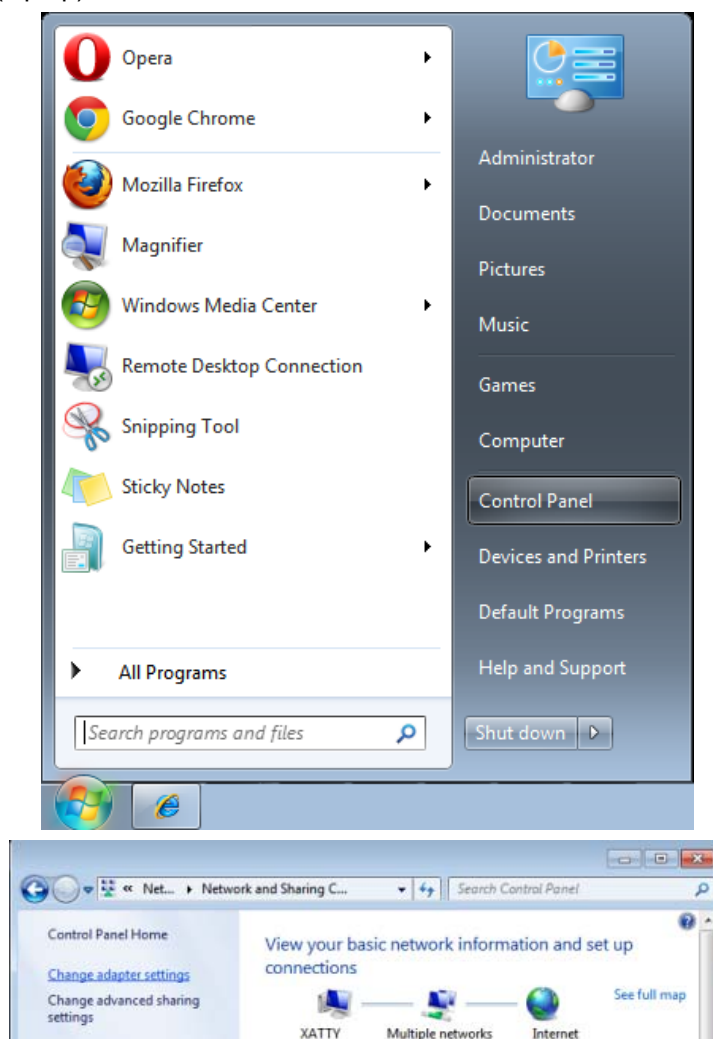
3. Right-click on **Local Area Connection**, and select **Properties**.
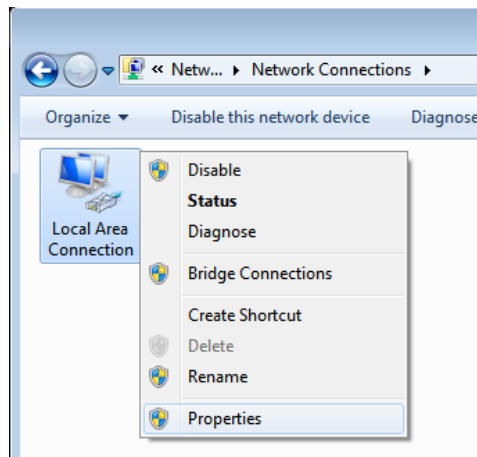
4. In the **Properties** window, select the **Networking** tab, and select **Internet Protocol (TCP/IP)**.
5. Click **Properties**.
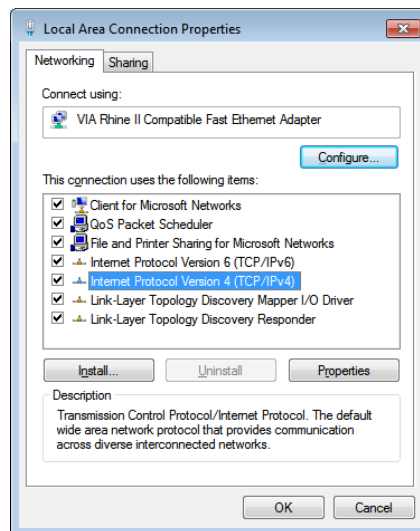
6. Click **Use the following IP address** and fill in the IP address and Subnet mask, then click **OK**.
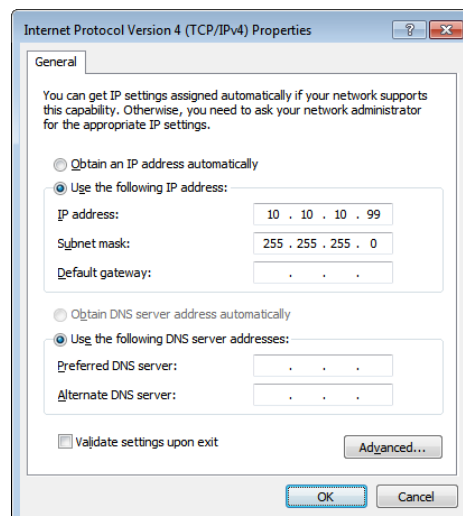
7. Press the **Menu** button on the projector.

8. Select **Settings2**→ **Advanced1** → **Network**

9. After getting into **Network**, input the following:

   ‣ DHCP: Off

   ‣ IP Address: 10.10.10.10

   ‣ Subnet Mask: 255.255.255.0

   ‣ Gateway: 0.0.0.0

   ‣ DNS Server: 0.0.0.0

10. Press ↵ (Enter) / ► to confirm settings.

    Open a web browser
    (for example, Microsoft Internet Explorer with Adobe Flash Player 9.0 or higher).
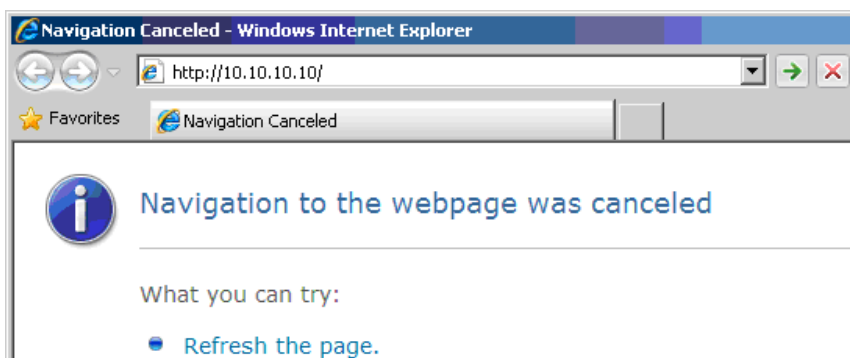
11. In the Address bar, input the IP address: 10.10.10.10.

12. Press ↵ (Enter) / ►.

    The projector is setup for remote management. The LAN/RJ45 function displays as follows.

RS232 by Telnet Function

Besides using Hyper-Terminal for projector control, you can also use RS232 by Telnet with the LAN/RJ45 interface.

Quick Start-Guide for "RS232 by TELNET"

1. Locate the IP address from the projector's OSD.

2. Make sure that the laptop/PC can access the projector's web page.

3. Make sure that the Windows firewall settings are disabled to prevent the laptop/PC from ignoring the Telnet commands.
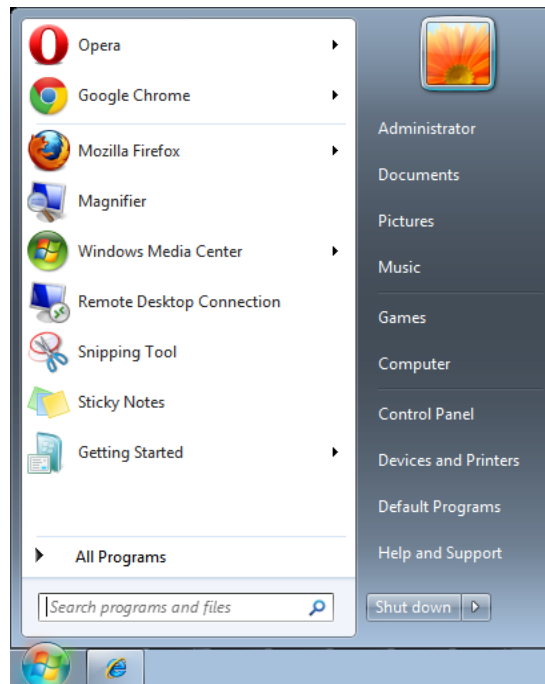
4. Go to Start => All Programs => Accessories => Command Prompt
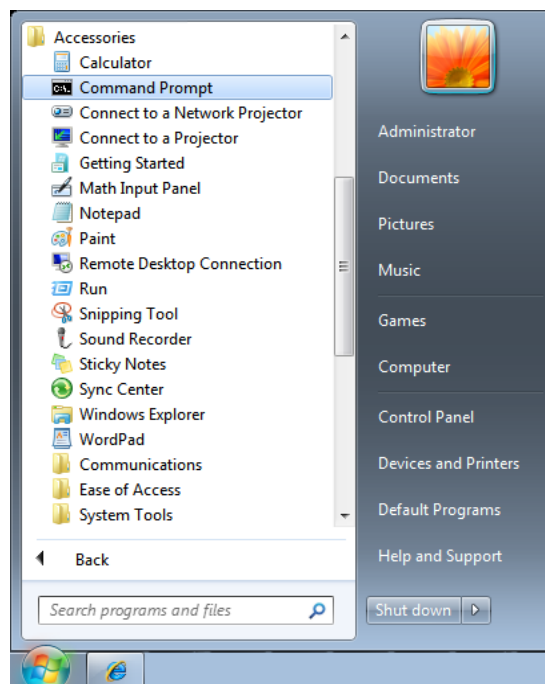
5. Type the Telnet command in the following format:

telnet ttt.xxx.yyy.zzz 23 ("Enter" key pressed)

(**ttt.xxx.yyy.zzz**: IP-Address of the projector)

6. When the Telnet connection is ready and you have input an RS232 command, press **Enter**.

Enabling Telnet in Windows 7/8/10

1. Telnet is not included by default in Windows 7, 8 or 10.

2. Open the **Control Panel**.

3. Open **Programs**.
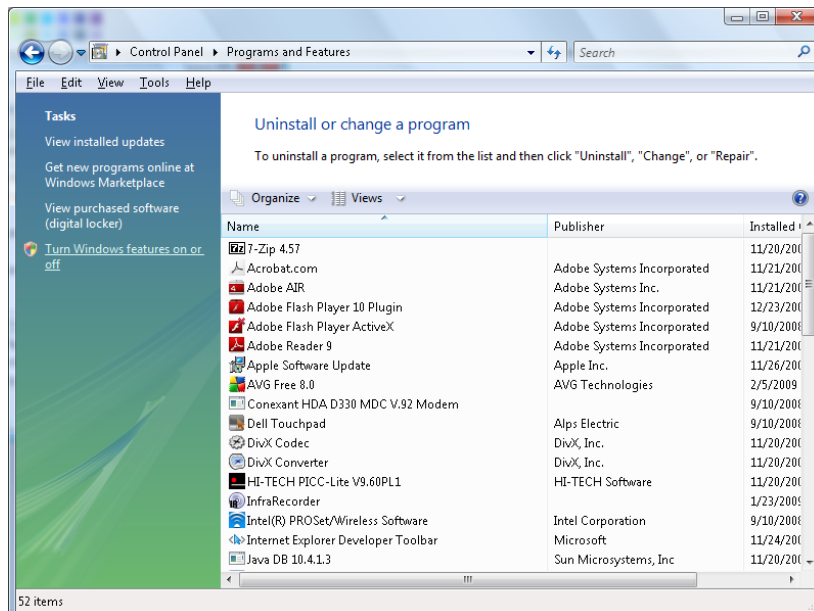
4. Select **Turn Windows features on or off**.
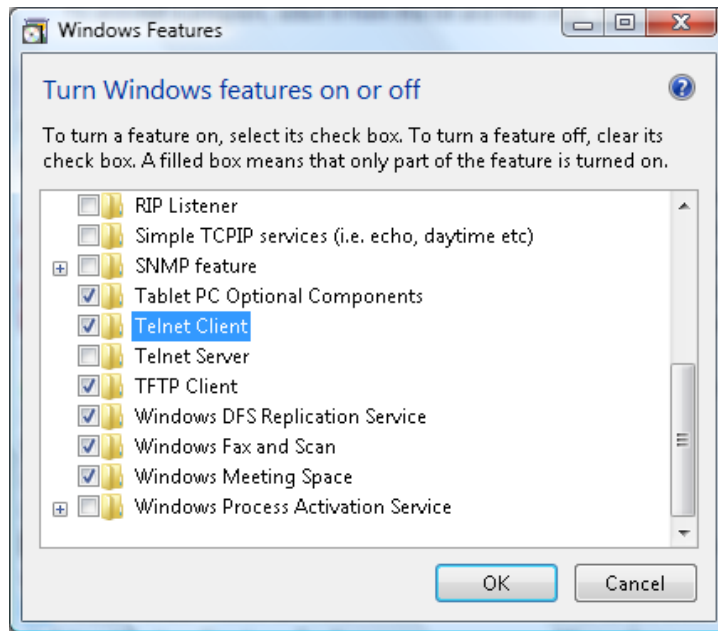
5. Select **Telnet Client**, and click OK.
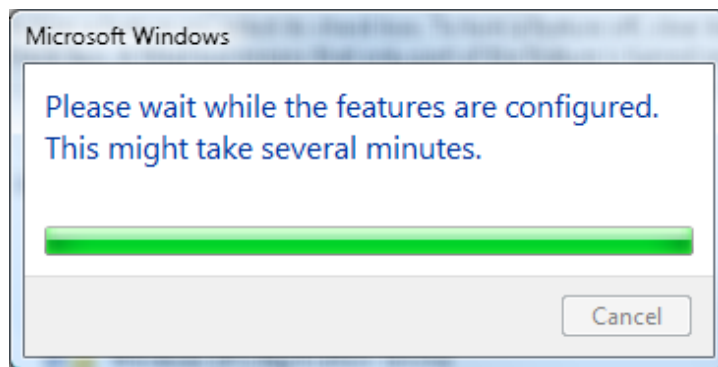
Telnet specifications

Telnet: TCP

Telnet port: 23

Telnet utility: Windows Telnet.exe (console mode)

Disconnecting Telnet when Telnet is active: Close Windows Telnet utility.

Telnet Limitations:

1. Less than 50 bytes are used for the successive network payload for the Telnet Control application.

2. Less than 26 bytes are used for one complete RS232 command for Telnet control.

3. There must be at least 200ms between RS232 commands.

Other: When using the Windows built-in Telnet utility, the Enter key causes a carriage return and starts a new line of code.

Advanced 2 Features

Press the **Menu** button to open the **OSD** menu. Press the ◄► buttons to move to the **Settings 2** menu. Press the ▲▼ buttons to move to the **Advanced 2** menu and then press ◄┘ (Enter) or ►. Press the ▲▼ buttons to move up and down in the **Advanced 2** menu. Press the ◄► buttons to enter and change setting values.

Image	Settings 1	Settings 2
	Settings 2 ▶ Advanced 2	
Sleep Timer (min)		0
Source Filter		◄┘/►
Wall Color		Off
Color Space		Auto
Quantization Range		Auto
Menu = Return		Scroll ▲▼
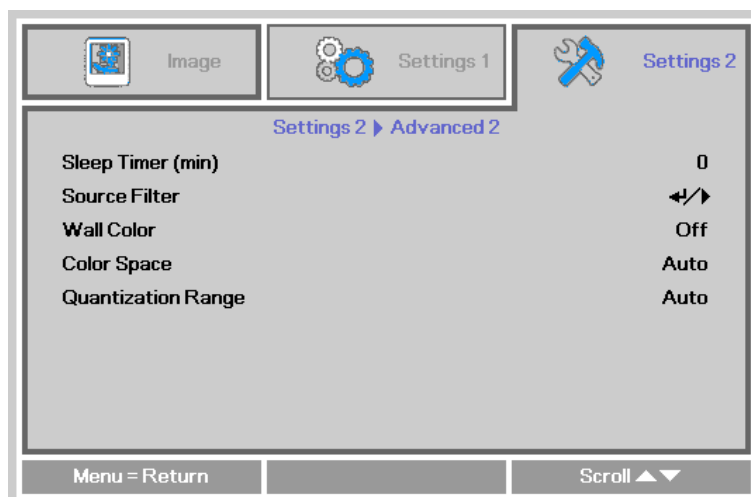
ITEM	DESCRIPTION
Sleep Timer	Press the ◄► buttons to enter and set the Sleep timer. The projector automatically turns off after the preset period of time.
Source Filter	Press ◄┘ (Enter) or ► to enter the Source Filter menu. See page 44 for more information on *Source Filter.*
Wall Color	Press the cursor ◄► button to enable or disable the wall color function.
Color Space	Press the cursor ◄► button to enter and adjust the Color Space.
Quantization Range	Press the cursor ◄► button to enter and adjust the Quantization Range

Source Filter

Press the **ENTER** button to enter the **Source Filter** sub menu. This sub menu allows you to enable and disable source inputs.

ITEM	DESCRIPTION
VGA 1	Press the ◄► buttons to enter and enable or disable the VGA1 source.
VGA 2	Press the ◄► buttons to enter and enable or disable the VGA2 source.
HDMI 1	Press the ◄► buttons to enter and enable or disable the HDMI 1 source.
HDMI 2	Press the ◄► buttons to enter and enable or disable the HDMI2 source.
Composite Video	Press the ◄► buttons to enter and enable or disable the Composite Video source.
S-Video	Press the ◄► buttons to enter and enable or disable the S-Video source.

MAINTENANCE AND SECURITY

Replacing the Projection Lamp

The projection lamp should be replaced when the lamp fails or reaches recommended lamp life hours. It should only be replaced with a certified replacement part, which you can order from your local dealer.

⚠️ *Important:*

a. The projection lamp used in this product contains a small amount of mercury.

b. Do not dispose this product with general household waste.

c. Disposal of this product must be carried out in accordance with the regulations of your local authority.

www.lamprecycle.org

⚠️ *Warning:*

Be sure to turn off and unplug the projector at least 60 minutes before replacing the lamp. Failure to do so could result in a severe burn.

⚠️ *Caution:*

In rare cases the lamp bulb may burn out during normal operation and cause glass dust or shards to be discharged outward from the rear exhaust vent.

Do not inhale or touch glass dust or shards. Doing so could result in injury.

Always keep your face away from the exhaust vent so that you do not suffer from the gas and broken shards of the lamp.

When removing the lamp from a ceiling-mounted projector, make sure that no one is under the projector. Glass fragments could fall if the lamp has burned out.

⚠️ *IF A LAMP RUPTURES*

If a lamp ruptures, the gas and broken shards may scatter inside the projector and may come out of the exhaust vent. The gas contains toxic mercury.

Open windows and doors for ventilation.

If you inhale the gas or the shards of the broken lamp enter your eyes or mouth, consult a doctor immediately.

---

1. Remove two screws on the lamp compartment cover.
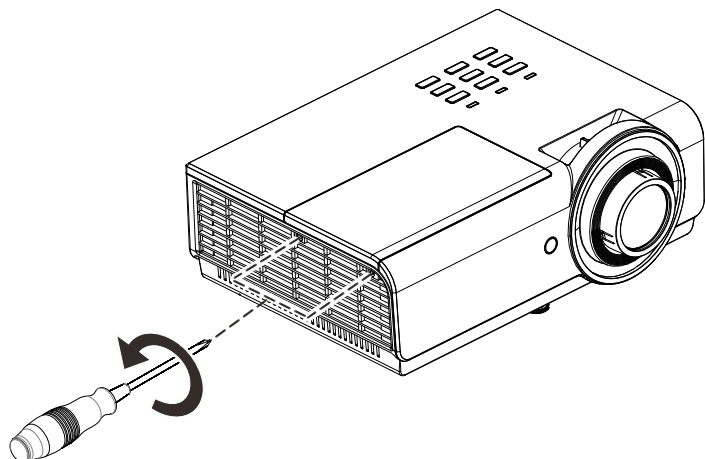
2. Remove the lamp compartment cover.
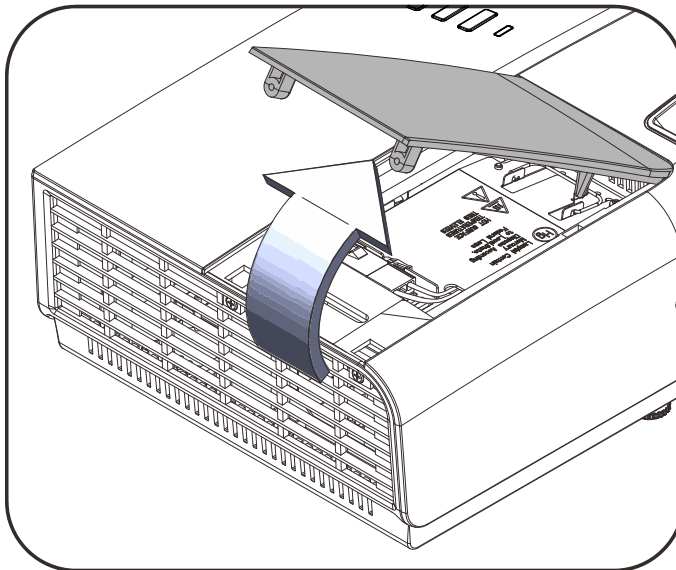
3. Disconnect the lamp connector
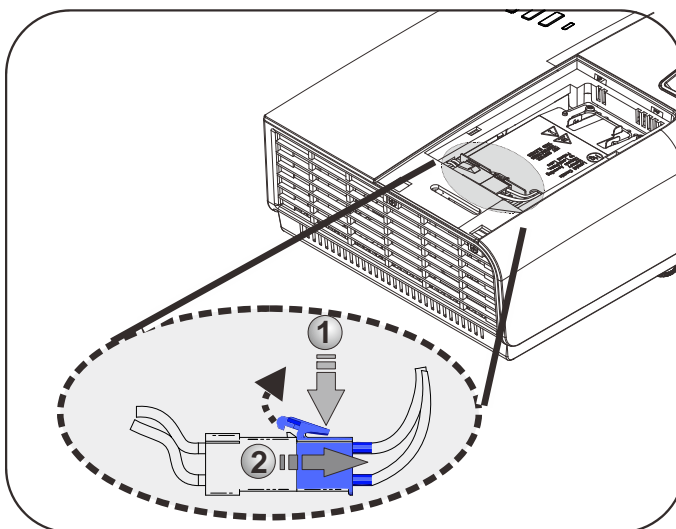
4. Remove the two screws from the lamp module.

5. Lift the module handle up.

6. Pull firmly on the module handle to remove the lamp module.
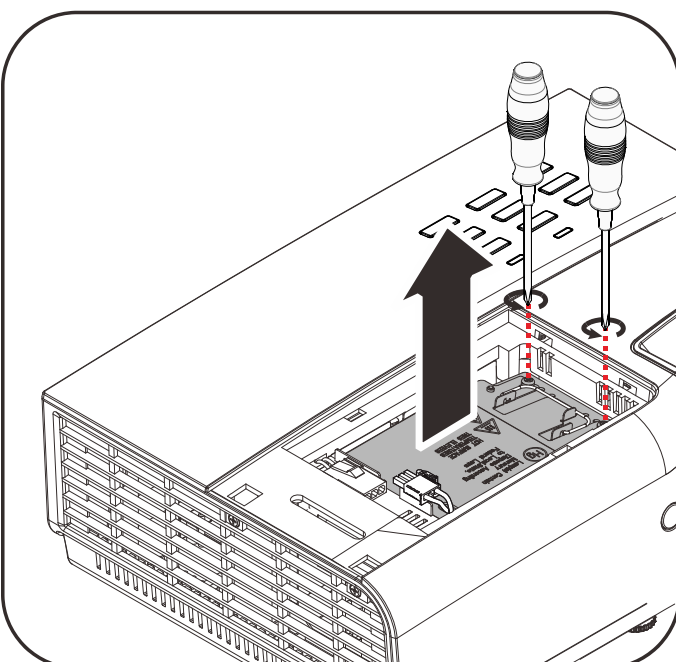
7. Reverse steps 1 to 6 to install the new lamp module.

Note:
The lamp module must sit securely in place and the lamp connector must be connected properly before tightening the screws.
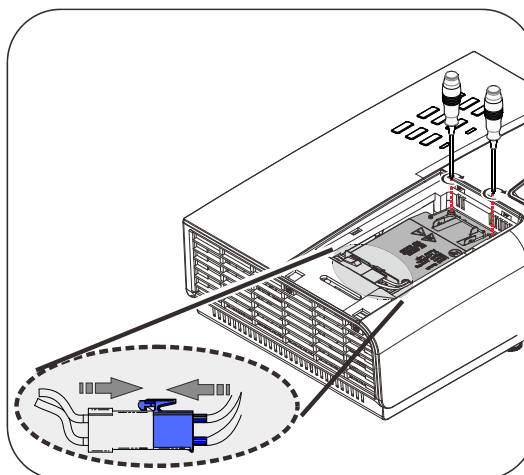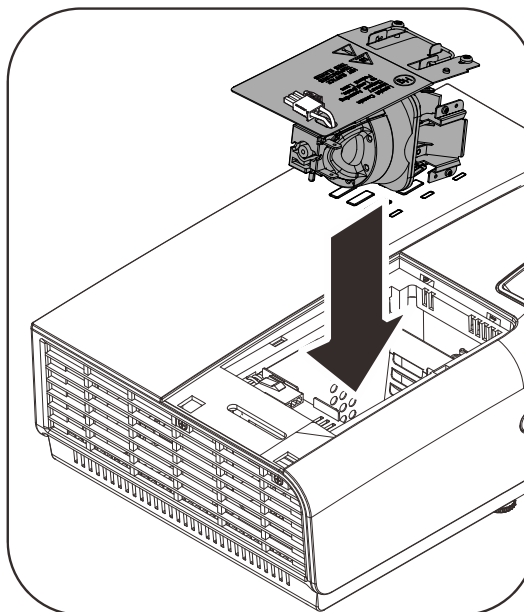
⚠ *Warning:*
Lamp Connector must be installed flush with the connector base as shown in the image below.
A gap between the Lamp Connector and the connector base will cause damage to the projector.
The following images illustrate correct and incorrect Lamp Connector installations.

No Gap

Correct

Gap
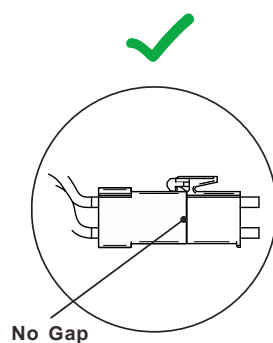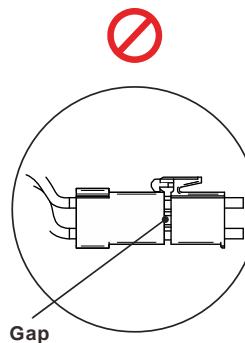
Incorrect

Resetting the Lamp Timer

After replacing the lamp, you should reset the lamp hour timer to zero. Refer to the following:

1. Press the **MENU** button to open the OSD menu.

2. Press the ◄► buttons to move to the **Settings 2** menu. Press the ▼ button to move down to **Advanced 1** and press enter.

Image	Settings 1	Settings 2
Auto Source		Off
No Signal Power Off (min)		0
Auto Power On		Off
Lamp Mode		Normal
Reset All		↵/►
Status		↵/►
Advanced 1		**↵/►**
Advanced 2		↵/►

Menu = Exit　　　Menu Select ◄►　　　Scroll ▲▼
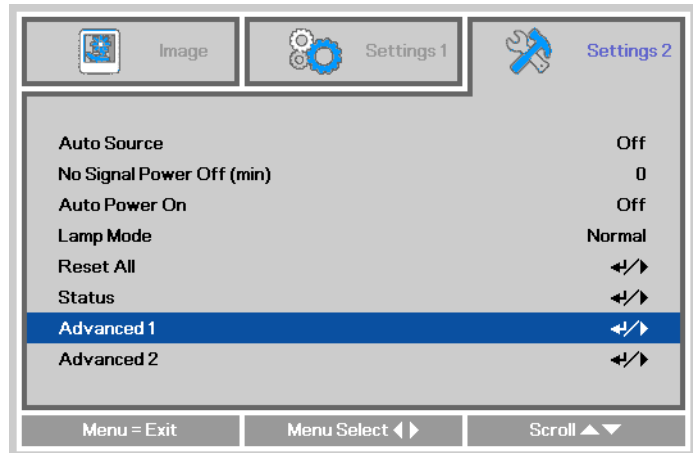
3. Press the ▼▲ buttons to move down to **Lamp Hour Reset**.

Image	Settings 1	Settings 2

Settings 2 ► Advanced 1

Menu Position	
Menu Position	▣
Translucent Menu	0 %
Low Power Mode	Off
Fan Speed	Normal
Lamp Hour Reset	**↵/►**
Projector ID	00
Network	↵/►

Menu = Return　　　　　　　Scroll ▲▼
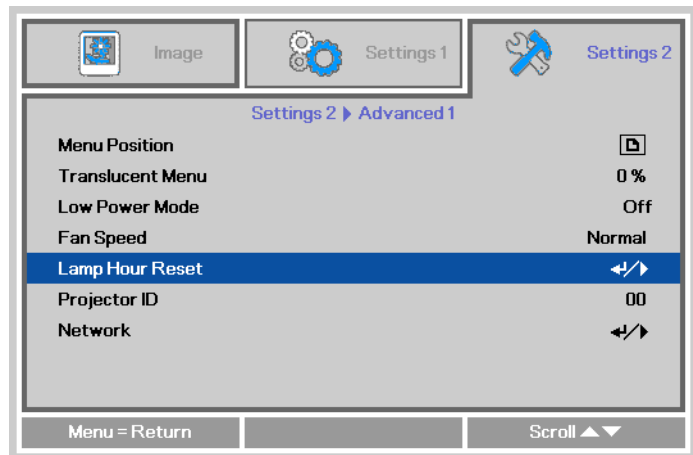
4. Press the ↵ (Enter) or ► button.

A message screen appears.

5. Press ↵↵▼▲◄► buttons in sequence to reset the lamp timer.

6. Press the **MENU** button to return to **Settings 2**.

Image	Settings 1	Settings 2

Settings 2 ► Advanced 1 ► Lamp Hour Reset

Please See User Manual ...

Menu = Return

Cleaning the Projector

Cleaning the projector to remove dust and grime will help ensure trouble-free operation.

> ⚠ *Warning:*
>
> *1. Be sure to turn off and unplug the projector at least 30 minutes before cleaning. Failure to do so could result in a severe burn.*
>
> *2. Only use a dampened cloth when cleaning. Do not allow water to enter the ventilation openings on the projector.*
>
> *3. If a little water gets into the projector interior while cleaning, leave the projector unplugged in a well-ventilated room for several hours before using.*
>
> *4. If a lot of water gets into the projector interior when cleaning, have the projector serviced.*

Cleaning the Lens

You can purchase optic lens cleaner from most camera stores. Refer to the following to clean the projector lens.

1. Apply a little optic lens cleaner to a clean soft cloth. (Do not apply the cleaner directly to the lens.)
2. Lightly wipe the lens in a circular motion.

> ⚠ *Caution:*
>
> *1. Do not use abrasive cleaners or solvents.*
>
> *2. To prevent discoloration or fading, avoid getting cleaner on the projector case.*

Cleaning the Case

Refer to the following to clean the projector case.

1. Wipe off dust with a clean dampened cloth.
2. Moisten the cloth with warm water and mild detergent (such as used to wash dishes), and then wipe the case.
3. Rinse all detergent from the cloth and wipe the projector again.

> ⚠ *Caution:*
>
> *To prevent discoloration or fading of the case, do not use abrasive alcohol-based cleaners.*

Using the Cable Lock System and Security Bar

Using the Cable Lock

If you are concerned about security, attach the projector to a permanent object with the Kensington slot and a security cable.
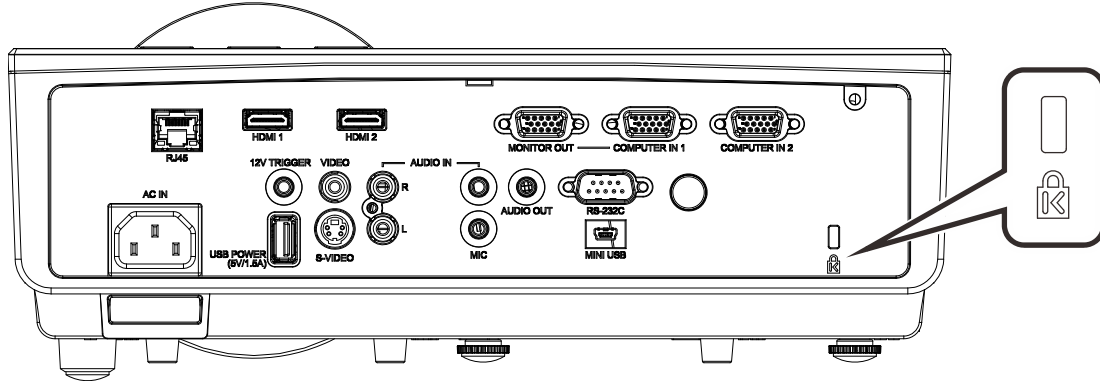
> **Note:**
> A Cable Lock System can be purchased from InFocus or your dealer. Refer to the information that comes with the lock for instructions on how to use it.
> The security lock slot corresponds to Kensington's MicroSaver Security System. If you have any questions or concerns, contact: Kensington, 2853 Campus Drive, San Mateo, CA 94403, U.S.A. Tel: 800-535-4242, *http://www.Kensington.com*.

Using the Security Bar

In addition to the password protection function and the Kensington lock, the Security Bar helps protect the projector from unauthorized removal. See the following picture.
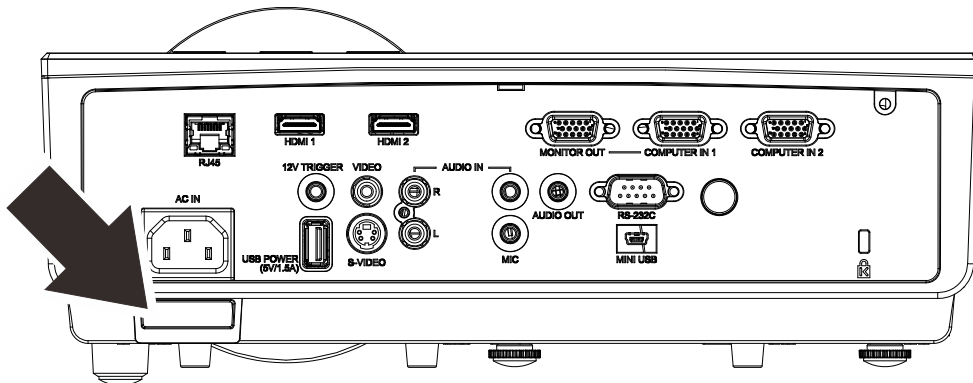
*T*ROUBLESHOOTING

Common problems and solutions

These guidelines provide tips to deal with problems you may encounter while using the projector. If the problem remains unsolved, contact your dealer for assistance.

After spending time troubleshooting, the problem can often be traced to something as simple as a loose connection. Check the following before proceeding to the problem-specific solutions.

- *Use some other electrical device to confirm that the electrical outlet is working.*
- *Ensure the projector is turned on.*
- *Ensure all connections are securely attached.*
- *Ensure the attached device is turned on.*
- *Ensure a connected PC is not in a suspended mode.*
- *Ensure a connected notebook computer is configured for an external display.*
  (This is usually done by pressing an Fn-key combination on the notebook.)

Tips for Troubleshooting

In each problem-specific section, try the steps in the order suggested. This may help you to solve the problem more quickly.

Try to pin point the problem and thus avoid replacing non-defective parts.
For example, if you replace batteries and the problem remains, put the original batteries back and go to the next step.

Keep a record of the steps you take when troubleshooting. The information may be useful when calling for technical support or for passing on to service personnel.

LED Error Messages

ERROR CODE MESSAGES	POWER LED GREEN	LAMP LED RED	TEMP LED RED
Lamp Ready	ON	OFF	OFF
Start	Flashing	OFF	OFF
Cooling	Flashing	OFF	OFF
Over Temperature T1	OFF	1 blinks	ON
Thermal Break Sensor error	4 blinks	OFF	OFF
G794 error	4 blinks	1 blinks	OFF
Lamp Re-Strike 6 times Failed	5 blinks	OFF	OFF
Lamp Temperature shut down(Ballast Temp)	5 blinks	1 blinks	OFF
Lamp Short circuit in output detected(Ballast circuit short)	5 blinks	2 blinks	OFF
Lamp End of lamp life detected	5 blinks	3 blinks	OFF
Lamp did not ignite	5 blinks	4 blinks	OFF
Lamp extinguished during normal operation	5 blinks	5 blinks	OFF
Lamp extinguished during run-up phase	5 blinks	6 blinks	OFF
Lamp voltage too low	5 blinks	7 blinks	OFF
Lamp Ballast Fail	5 blinks	8 blinks	OFF
Lamp Ballast COMM Fail	5 blinks	10 blinks	OFF
Lamp Ballast Over Temp	5 blinks	11 blinks	OFF
Lamp voltage too low	5 blinks	12 blinks	OFF
FAN1 error	6 blinks	1 blinks	OFF
FAN2 error	6 blinks	2 blinks	OFF
FAN3 error	6 blinks	3 blinks	OFF
FAN4 error	6 blinks	4 blinks	OFF
1W MCU detects scaler stops working	2 blinks	OFF	OFF
Case Open	7 blinks	OFF	OFF
DMD error	8 blinks	OFF	OFF
Color wheel error	9 blinks	OFF	OFF

In the event of an error, please disconnect the AC power cord and wait for one (1) minute before restarting the projector. If the Power or Lamp LEDs are still blinking or any other situation that isn't listed in the chart above, please contact InFocus Support.

Image Problems

Problem: No image appears on the screen

1. Verify the settings on your notebook or desktop PC.
2. Turn off all the equipment and power everything up again. The projector should be turned on last.

Problem: The image is blurred

1. Adjust the **Focus** on the projector.
2. Press the **Auto** button on the remote control.
3. Ensure the projector-to-screen distance is within the specified range.
4. Check that the projector lens is clean.

Problem: The image is wider at the top or bottom (trapezoid effect)

1. Position the projector so it is as perpendicular to the screen as possible.
2. Use the **Keystone** button on the remote control to correct the problem.

Problem: The image is reversed

Check the **Projection** setting on the **Settings 1** menu of the OSD.

Problem: The image is streaked

1. Set the **Frequency** and **Tracking** settings on the **Image->Computer** menu of the OSD to the default settings.
2. To ensure the problem is not caused by a connected PC's video card, connect to another computer.

Problem: The image is flat with no contrast

Adjust the **Contrast** setting on the **Image** menu of the OSD.

Problem: The color of the projected image does not match the source image.

Adjust the **Color Temperature** and **Gamma** settings on the **Image->Advanced** menu of the OSD.

Lamp Problems

Problem: There is no light from the projector

1. Check that the power cable is securely connected.
2. Ensure the power source is good by testing with another electrical device.
3. Restart the projector in the correct order and check that the Power LED is on.
4. If you have replaced the lamp recently, try resetting the lamp connections.
5. Replace the lamp module.
6. Put the old lamp back in the projector and have the projector serviced.

Problem: The lamp goes off

1. Power surges can cause the lamp to turn off. Re-plug power cord. When the Power LED is on, press the power button.
2. Replace the lamp module.
3. Put the old lamp back in the projector and have the projector serviced.

Remote Control Problems

Problem: The projector does not respond to the remote control

1. Direct the remote control towards remote sensor on the front of the projector.
2. Ensure the path between remote and sensor is not obstructed.
3. Turn off any fluorescent lights in the room.
4. Check the battery polarity.
5. Replace the battery.
6. Turn off other infrared-enabled devices in the vicinity.
7. Replace the remote control.

Audio Problems

Problem: There is no sound

1. Adjust the volume on the remote control.
2. Adjust the volume of the audio source.
3. Check the audio cable connection.
4. Test the source audio output with other speakers.
5. Have the projector serviced.

Problem: The sound is distorted

1. Check the audio cable connection.
2. Test the source audio output with other speakers.
3. Have the projector serviced.

Having the Projector Serviced

If you are unable to solve the problem, you should have the projector serviced. Pack the projector in the original carton and contact InFocus Support at www.infocus.com/support or call us.

HDMI Q & A

Q. What is the difference between a "Standard" HDMI cable and a "High-Speed" HDMI cable?

Recently, HDMI Licensing, LLC announced that cables would be tested as Standard or High-Speed cables.

˙Standard (or "category 1") HDMI cables have been tested to perform at speeds of 75Mhz or up to 2.25Gbps, which is the equivalent of a 720p/1080i signal.

˙High Speed (or "category 2") HDMI cables have been tested to perform at speeds of 340Mhz or up to 10.2Gbps, which is the highest bandwidth currently available over an HDMI cable and can successfully handle 1080p signals including those at increased color depths and/or increased refresh rates from the Source. High-Speed cables are also able to accommodate higher resolution displays, such as WQXGA cinema monitors (resolution of 2560 x 1600).

Q. How do I run HDMI cables longer than 10 meters(32.81ft)?

There are many HDMI Adopters working on HDMI solutions that extend a cable's effective distance from the typical 10 meter(32.81ft) range to much longer lengths. These companies manufacture a variety of solutions that include active cables (active electronics built into cables that boost and extend the cable's signal), repeaters, amplifiers as well as CAT5/6 and fiber solutions.

Q. How can I tell if a cable is an HDMI certified cable?

All HDMI products are required to be certified by the manufacturer as part of the HDMI Compliance Test Specification. However, there may be instances where cables bearing the HDMI logo are available but have not been properly tested. HDMI Licensing, LLC actively investigates these instances to ensure that the HDMI trademark is properly used in the market. We recommend that consumers buy their cables from a reputable source and a company that is trusted.

For more details, go to the HDMI website at: http://www.hdmi.org/learningcenter/faq.aspx#49

SPECIFICATIONS

Specifications

Model	IN3144	IN3146	IN3148HD
Display type	DLP 0.55 S450	DLP 0.65" S450	DLP 0.65" S600
Resolution	XGA 1024 X 768	WXGA 1280 X 800	1080p 1920x1080
Projection distance	1.2 ~ 10 m (3.94ft ~ 32.8ft)		
Projection screen size	21.5"~270" (54.6cm ~ 685.8cm)	25.3"~318" (64.3cm ~ 807.7cm)	25.3"~318" (64.3cm ~ 807.7cm)
Projection lens	Manual Focus/Manual Zoom		
Zoom ratio	1.5x		
Vertical keystone correction	+/- 40 degrees		
Projection methods	Front, Rear, Desktop/Ceiling (Rear, Front)		
Data compatibility	VGA, SVGA, XGA, SXGA, SXGA+, UXGA, WUXGA@60hz, Mac		
SDTV/EDTV/ HDTV	480i, 576i, 480p, 576p, 720p, 1080i, 1080p		
Video compatibility	NTSC (M, 3.58/4.43MHz), PAL (B,D,G,H,I,M,N), SECAM (B,D,G,K,K1,L)		
H-Sync	15, 31 ~ 91.4kHz		
V-Sync	24~30Hz, 47~120Hz		
Safety certification	FCC-B, cUL, UL, CE, C-tick, CB, CCC, CECP, CEL, PSB, TUV-Safety, KC, NOM, CU		
Operation temperature	5° ~ 40°C (41° ~ 104°F)		
Environmental Storage Condition	-10° ~ 60°C, 5% to 85% (No condensation)		
Dimensions	315 mm (W) x 218 mm (D) x 126 mm (H) (12.4" x 8.6" x 5")		
AC Input	AC Universal 100-240V		
Power consumption	Normal:410W, ECO:320W, Standby:<0.5W, Lan<2W		
Lamp	310W (Normal) / 245W (ECO)		
Audio speaker	10W mono speaker		
Input Terminals	VGA x 2		
	Composite x 1		
	S-Video x 1		
	HDMI x 2		
	PC Audio jack (3.5mm), Condenser x 1		
	RCA Stereo Audio LR x 1		
Output Terminals	VGA x 1		
	PC Audio jack(3.5mm) x 1		
	Microphone (Mini Jack) x1		
	USB Type A Power 1.5A Only x1		
Control Terminals	RS-232C		
	RJ45		
	Screen trigger: DC Jack x 1 (DC12V 200mA output function)		
	USB (Type mini B) - service only		
Security	Kensington lock / Security Bar		

Note:
InFocus reserves the right to alter product offerings and specifications at any time without notice.

Projection Distance vs. Projection Size (XGA)
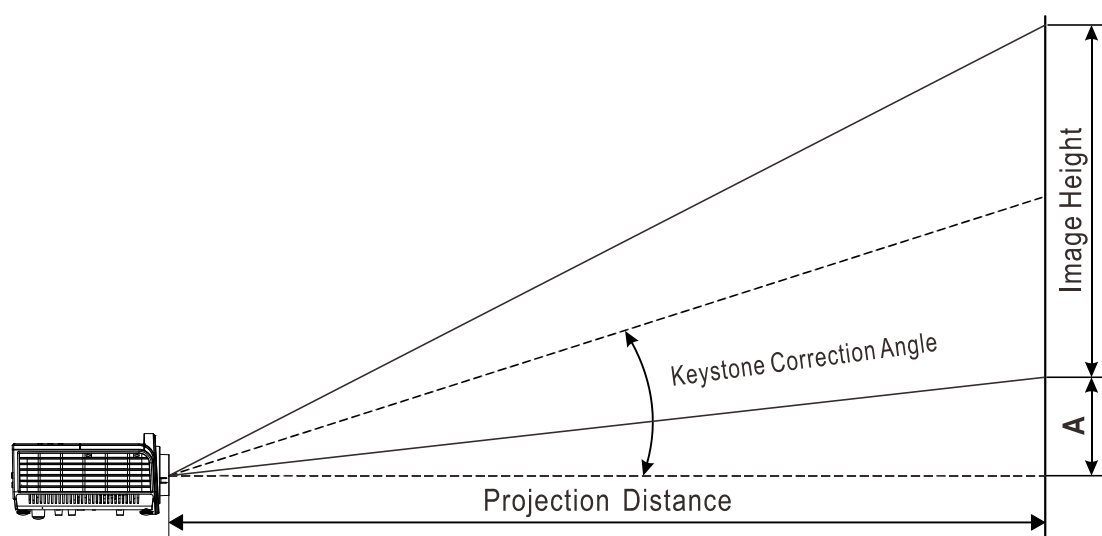
Projection Distance and Size Table

IN3144											
IMAGE DIAGONAL		**IMAGE WIDTH**		**IMAGE HEIGHT**		**PROJECTION DISTANCE FROM**		**PROJECTION DISTANCE TO**		**OFFSET-A**	
MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH
1,524	60	1,219.2	48.0	914.4	36.0	2231.1	87.8	3352.8	132.0	109.7	4.3
1,778	70	1,422.4	56.0	1,066.8	42.0	2603.0	102.5	3911.6	154.0	128.0	5.0
1,829	72	1,463.0	57.6	1,097.3	43.2	2677.4	105.4	4023.4	158.4	131.7	5.2
2,032	80	1,625.6	64.0	1,219.2	48.0	2974.8	117.1	4470.4	176.0	146.3	5.8
2,134	84	1,706.9	67.2	1,280.2	50.4	3123.6	123.0	4693.9	184.8	153.6	6.0
2,286	90	1,828.8	72.0	1,371.6	54.0	3346.7	131.8	5029.2	198.0	164.6	6.5
2,438	96	1,950.7	76.8	1,463.0	57.6	3569.8	140.5	5364.5	211.2	175.6	6.9
2,540	100	2,032.0	80.0	1,524.0	60.0	3718.6	146.4	5588.0	220.0	182.9	7.2
3,048	120	2,438.4	96.0	1,828.8	72.0	4462.3	175.7	6705.6	264.0	219.5	8.6
3,429	135	2,743.2	108.0	2,057.4	81.0	5020.1	197.6	7543.8	297.0	246.9	9.7
3,810	150	3,048.0	120.0	2,286.0	90.0	5577.8	219.6	8382.0	330.0	274.3	10.8
5,080	200	4,064.0	160.0	3,048.0	120.0	7437.1	292.8	11176.0	440.0	365.8	14.4

Projection Distance vs. Projection Size (WXGA)
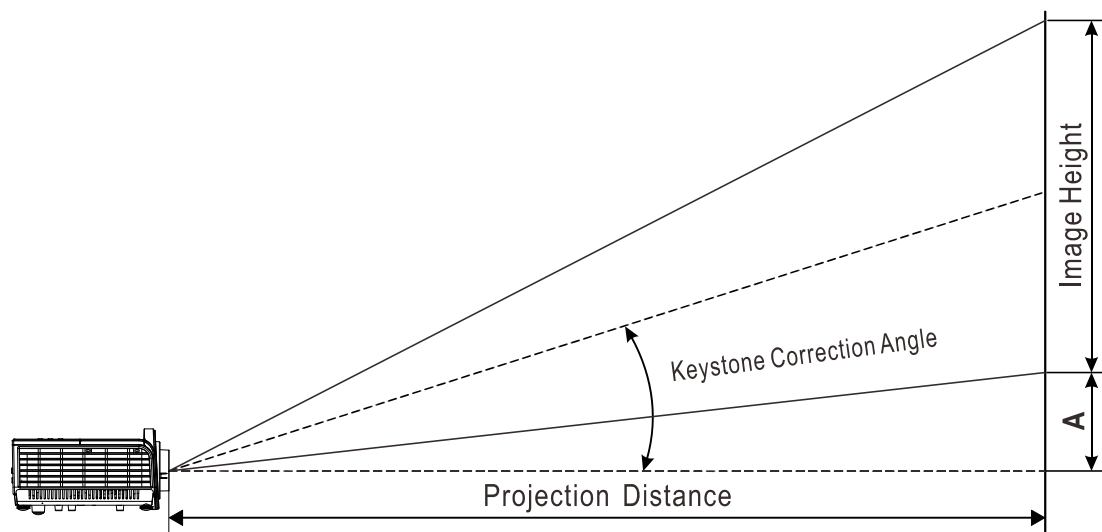
Projection Distance and Size Table

IN3146											
IMAGE DIAGONAL		**IMAGE WIDTH**		**IMAGE HEIGHT**		**PROJECTION DISTANCE FROM**		**PROJECTION DISTANCE TO**		**OFFSET-A**	
MM	**INCH**	**MM**	**INCH**	**MM**	**INCH**	**MM**	**INCH**	**MM**	**INCH**	**MM**	**INCH**
1524	60	1292.3	50.9	807.7	31.8	1886.8	74.3	2843.2	111.9	113.1	4.5
1778	70	1507.7	59.4	942.3	37.1	2201.3	86.7	3317.0	130.6	131.9	5.2
1829	72	1550.8	61.1	969.3	38.2	2264.2	89.1	3411.8	134.3	135.7	5.3
2032	80	1723.1	67.8	1077.0	42.4	2515.8	99.0	3790.9	149.2	150.8	5.9
2134	84	1809.3	71.2	1130.8	44.5	2641.6	104.0	3980.4	156.7	158.3	6.2
2286	90	1938.5	76.3	1211.6	47.7	2830.2	111.4	4264.8	167.9	169.6	6.7
2438	96	2067.8	81.4	1292.3	50.9	3018.9	118.9	4549.1	179.1	180.9	7.1
2540	100	2153.9	84.8	1346.2	53.0	3144.7	123.8	4738.6	186.6	188.5	7.4
3048	120	2584.7	101.8	1615.4	63.6	3773.7	148.6	5686.3	223.9	226.2	8.9
3429	135	2907.8	114.5	1817.4	71.5	4245.4	167.1	6397.1	251.9	254.4	10.0
3810	150	3230.9	127.2	2019.3	79.5	4717.1	185.7	7107.9	279.8	282.7	11.1
5080	200	4307.8	169.6	2692.4	106.0	6289.4	247.6	9477.2	373.1	376.9	14.8

Projection Distance vs. Projection Size (1080p)
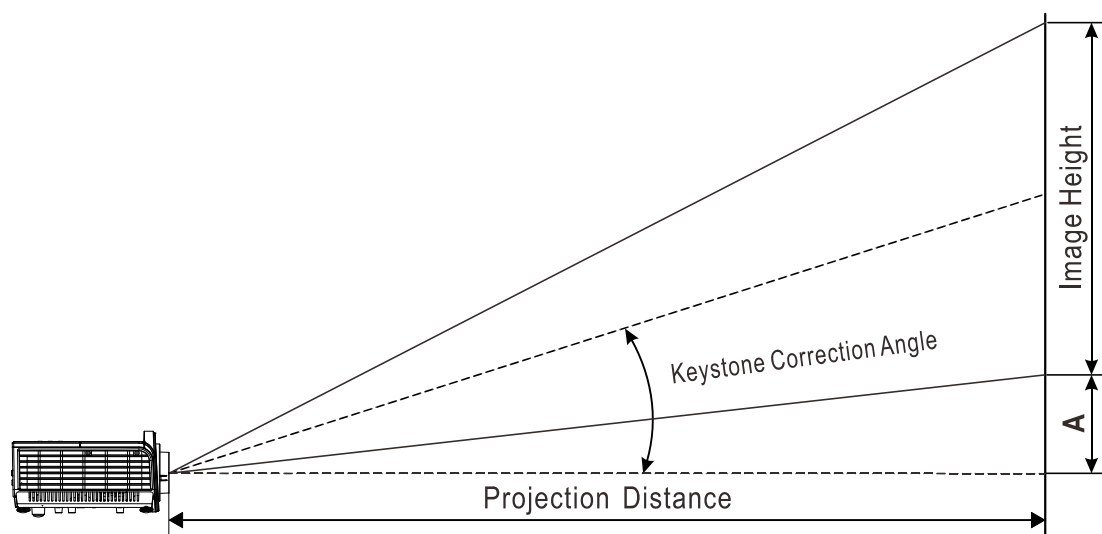
Projection Distance and Size Table

IN3148HD											
IMAGE DIAGONAL		IMAGE WIDTH		IMAGE HEIGHT		PROJECTION DISTANCE FROM		PROJECTION DISTANCE TO		OFFSET-A	
MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH
1524	60	1328.3	52.3	747.2	29.4	1,846.3	72.7	2,776.1	109.3	112.1	4.4
1778	70	1549.7	61.0	871.7	34.3	2,154.0	84.8	3,238.8	127.5	130.8	5.1
1829	72	1593.9	62.8	896.6	35.3	2,215.6	87.2	3,331.3	131.2	134.5	5.3
2032	80	1771.0	69.7	996.2	39.2	2,461.7	96.9	3,701.5	145.7	149.4	5.9
2134	84	1859.6	73.2	1046.0	41.2	2,584.8	101.8	3,886.6	153.0	156.9	6.2
2286	90	1992.4	78.4	1120.7	44.1	2,769.5	109.0	4,164.2	163.9	168.1	6.6
2438	96	2125.2	83.7	1195.5	47.1	2,954.1	116.3	4,441.8	174.9	179.3	7.1
2540	100	2213.8	87.2	1245.3	49.0	3,077.2	121.1	4,626.8	182.2	186.8	7.4
3048	120	2656.6	104.6	1494.3	58.8	3,692.6	145.4	5,552.2	218.6	224.1	8.8
3429	135	2988.6	117.7	1681.1	66.2	4,154.2	163.6	6,246.2	245.9	252.2	9.9
3810	150	3320.7	130.7	1867.9	73.5	4,615.8	181.7	6,940.3	273.2	280.2	11.0
5080	200	4427.6	174.3	2490.5	98.1	6154.4	242.3	9,253.7	364.3	373.6	14.7

Timing Mode Table

SIGNAL	RESOLUTION	H-SYNC (KHz)	V-SYNC (Hz)	COMPOSITE S_VIDEO	COMPONENT	RGB (ANALOG)	HDMI (DIGITAL)
NTSC	—	15.734	60	○	—	—	—
PAL/SECAM	—	15.625	50	○	—	—	—
VESA	720 x 400	31.5	70.1	—	—	○	○
	720 x 400	37.9	85.04	—	—	○	○
	640 x 480	31.5	60	—	—	○	○
	640 x 480	37.9	72.8	—	—	○	○
	640 x 480	37.5	75	—	—	○	○
	640 x 480	43.3	85	—	—	○	○
	800 x 600	35.2	56.3	—	—	○	○
	800 x 600	37.9	60.3	—	—	○	○
	800 x 600	46.9	75	—	—	○	○
	800 x 600	48.1	72.2	—	—	○	○
	800 x 600	53.7	85.1	—	—	○	○
	800 x 600	76.3	120	—	—	○	○
	1024 x 768	48.4	60	—	—	○	○
	1024 x 768	56.5	70.1	—	—	○	○
	1024 x 768	60	75	—	—	○	○
	1024 x 768	68.7	85	—	—	○	○
	1024 x 768	97.6	120	—	—	○	○
	1152 x 864	67.5	75	—	—	○	○
	1280 x 720	45	60	—	—	○	○
	1280 x 720	90	120	—	—	○	○
	1280 x 768	47.4	60	—	—	○	○
	1280 x 768	47.8	59.9	—	—	○	○
	1280 x 800	49.7	59.8	—	—	○	○
	1280 x 800	62.8	74.9	—	—	○	○
	1280 x 800	71.6	84.9	—	—	○	○
	1280 x 800	101.6	119.9	—	—	○	○
	1280 x 1024	64	60	—	—	○	○
	1280 x 1024	80	75	—	—	○	○
	1280 x 1024	91.1	85	—	—	○	○
	1280 x 960	60	60	—	—	○	○
	1280 x 960	85.9	85	—	—	○	○
	1366 x 768	47.7	60	—	—	○	○
	1400 x 1050	65.3	60	—	—	○	○
	1440 x 900	55.9	60	—	—	○	○

SIGNAL	RESOLUTION	H-SYNC (KHz)	V-SYNC (Hz)	COMPOSITE S_VIDEO	COMPONENT	RGB (ANALOG)	HDMI (DIGITAL)
	1440 x 900	70.6	75	—	—	○	○
	1600 x1200	75	60	—	—	○	○
	1680 x 1050	64.7	59.9	—	—	○	○
	1680 x 1050	65.3	60	—	—	○	○
	1920 x 1200	74	60	—	—	○	○
	1920 x 1080	67.5	60	—	—	○	○
Apple Macintosh	640 x 480	35	66.7	—	—	○	○
	832 x 624	49.7	74.5	—	—	○	○
	1024 x 768	60.2	74.9	—	—	○	○
	1152 x 870	68.7	75.1	—	—	○	○
SDTV	480i	15.734	60	—	○	—	○
	576i	15.625	50	—	○	—	○
EDTV	576p	31.3	50	—	○	—	○
	480p	31.5	60	—	○	—	○
HDTV	720p	37.5	50	—	○	—	○
	720p	45	60	—	○	—	○
	1080i	33.8	60	—	○	—	○
	1080i	28.1	50	—	○	—	○
	1080p	27	24	—	○	—	○
	1080p	28	25	—	○	—	○
	1080p	33.7	30	—	○	—	○
	1080p	56.3	50	—	○	—	○
	1080p	67.5	60	—	○	—	○

O：Frequency supported

—：Frequency not supported

Projector Dimensions

315mm [12.4"]

218mm [8.6"]

13mm [0.5"]

51mm [2"]

97mm [3.8"]

112mm [4.4"]

126mm [5"]
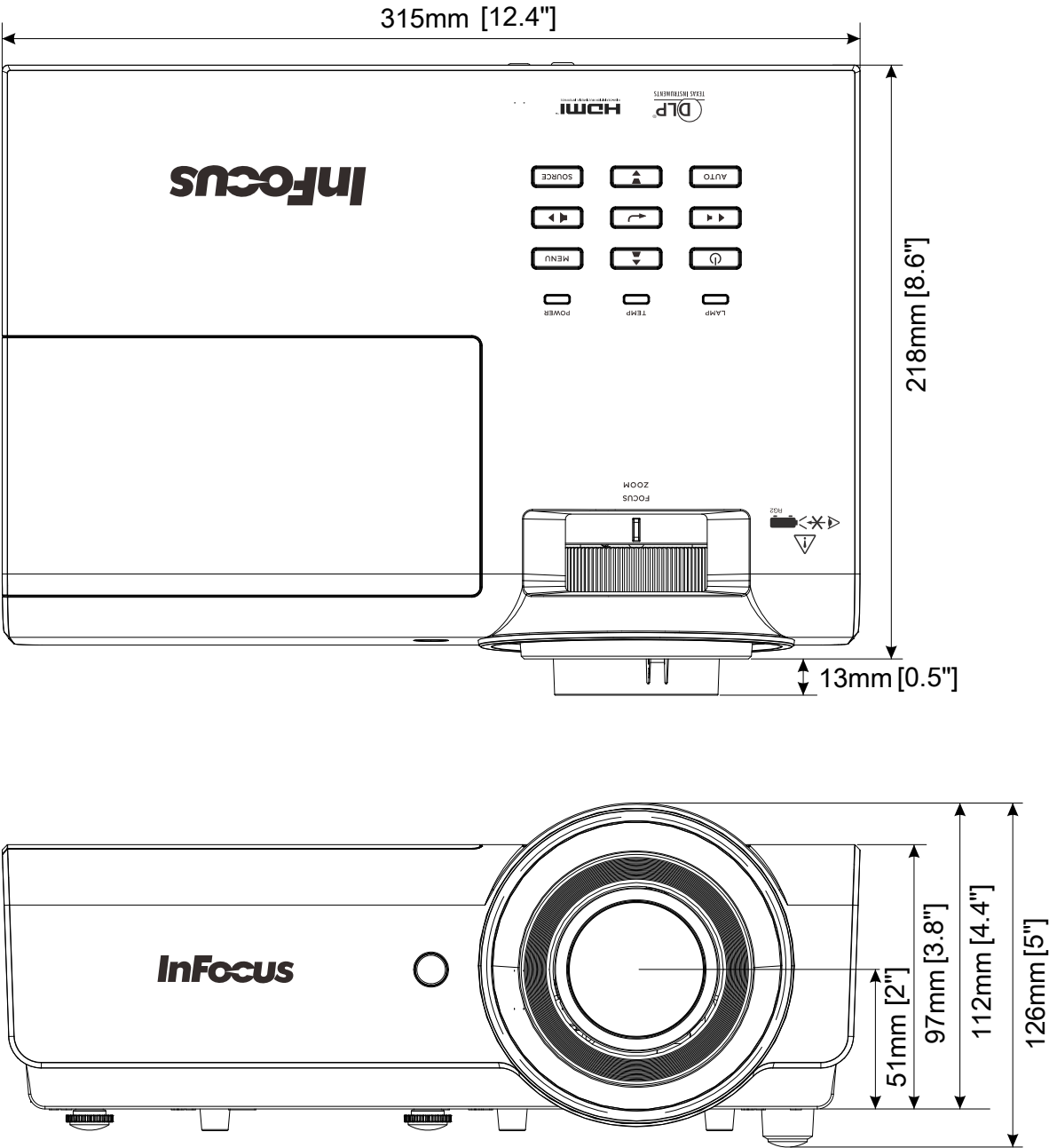
REGULATORY COMPLIANCE

FCC Warning

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his/her own expense.

Changes or modifications not expressly approved by the parties responsible for compliance could void the user's authority to operate the equipment.

Canada

This class B digital apparatus complies with Canadian ICES-003.

Safety Certifications

FCC-B, cUL, UL, CE, C-tick, CB, CCC, CECP, CEL, PSB, TUV-Safety, KC, NOM, CU

APPENDIX I

Serial Communication

The following table describes the serial communication configuration that should be used when interfacing to CLI via the serial port.

Windows HyperTerminal or ProComm are two tools that can be used to send CLI commands across the serial port.

Setting	Value
Bits per second	**19200**
Data bits	**8**
Parity	**None**
Stop bits	**1**
Flow control	**None**
Emulation	**VT100**

Control Command Structure

	Header code	Command code	Data code	End code
HEX	**28**	**Command**	**Data**	**29**
ASCII	**(**	**Command**	**Data**	**)**

RS232 pin assignment

Pin	Description	Pin	Description
1	NC	6	NC
2	RXD	7	RTS
3	TXD	8	CTS
4	NC	9	NC
5	GND		
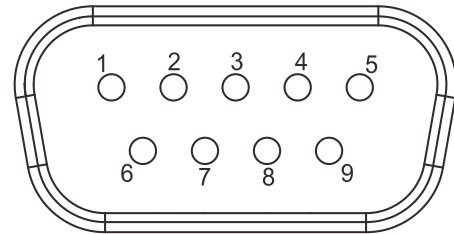
Item	Function	Command	Min	Max	Return	Note
1	Get projector power status	(PWR?)	0	1	(0-1,1)	0: Off
2	Set projector off / on	(PWR0)	0	1		1: On
3	Get which source connect	(SRC?)	--	--	(0-12,1)	0: VGA1
4	Set source	(SRCn)	0	12		1: VGA2 4: HDMI-1 5: HDMI-2 11: Composite Video 12: S-Video
5	Get Auto power on value	(APO?)	--	--	(0-1,1)	0: Off
6	Set Auto power on	(APO0)	0	1		1: On
7	Get Aspect ratio value	(ARZ?)	--	--	(0-5,1)	0: Fill
8	Set Aspect ratio	(ARZn)	0	5		1: 4:3 2: 16:9 3: Letter Box 4: Native 5: 2.35:1

Item	Function	Command	Min	Max	Return	Note
9	Do auto image	(AIM1)	--	--		
10	Get no signal power off timer	(AOT?)	--	--	(0-36,1)	
11	Set no signal power off timer	(AOTn)	0	36		Timer = n x 5 minutes
12	Get Auto source value	(ASC?)	--	--	(0-1,1)	0: Off
13	Set auto source off / on	(ASC0)	0	1		1: On
14	Get blank status	(BLK?)	--	--	(0-1,1)	0: Off
15	Set blank off	(BLK0)	0	1		1: On
16	Get brightness value	(BRT?)	--	--	(0-100,50)	
17	Set brightness value	(BRTn)	0	100		
18	Get ceiling value	(CEL?)	--	--	(0-3,1)	0: Desktop Front 1: Desktop Rear 2: Ceiling Front 3: Ceiling Rear
19	Set ceiling value	(CELn)	0	3		
20	Get close caption value	(CLC?)	--	--	(0-1,1)	0: Off
21	Set close caption value	(CLCn)	0	1		1: On
22	Get color saturation value	(CLR?)	--	--	(0-100,50)	
23	Set color saturation value	(CLRn)	0	100		
24	Get color temperature value	(TMP?)	--	--	(0-2,1)	0: Warm 1: Normal 2: Cold
25	Set color temperature value	(TMPn)	0	2		
26	Get contrast value	(CON?)	--	--	(0-100,50)	
27	Set contrast value	(CONn)	0	100		
28	Get digital zoom value	(DZM?)	--	--	(-10-10,1)	
29	Set digital zoom value	(DZMn)	-10	10		
30	Get error item	(ERR?)	--	--	(0-9,1)	0: No error 1: Lamp 3: Ballast 4: Fan 5: Temp 7: case open 8: DMD 9: Color wheel
31	Factory reset (user)	(RST1)	--	--		
32	Get Freeze status	(FRZ?)	--	--	(0-1,1)	0: Off 1: On
33	Set Freeze off	(FRZ0)	--	--		
34	Set Freeze on	(FRZ1)	--	--		
35	Get Gamma value	(GTB?)	--	--	(0-5,1)	0: 1.8 1: 2.0 2: 2.2 3: 2.4 4: B&W 5: Linear
36	Set Gamma value	(GTBn)	0	6		
37	Get H position value	(HPS?)	--	--	(-5-5,1)	
38	Set H position value	(HPSn)	0	5		
39	Get Lamp Normal mode hours	(LMO?)	--	--	(0-9999,0)	
40	Get Lamp Smart Eco mode hours	(LML?)	--	--	(0-9999,0)	
41	Get Lamp Eco mode hours	(LME?)	--	--	(0-9999,0)	
42	Reset lamp hours (User)	(LRT1)	--	--		
43	Get current Lamp hours	(LMP?)	--	--	(0-9999,0)	
44	Get lamp reset times	(LMR?)	--	--	(0-9999,0)	

Item	Function	Command	Min	Max	Return	Note
45	Get lamp total hours	(LMT?)	--	--	(0-9999,0)	
46	Get lamp life	(LIF?)	--	--	(0-2500,0)	
47	Get lamp mode	(IPM?)	--	--	(0-2,1)	0: Eco 1: Normal 2: Smart Eco
48	Set lamp mode	(IPMn)	0	2		0: Eco 1: Normal 2: Smart Eco
49	Get OSD language	(LAN?)	--	--	(0-23,0)	0: English 1: French 2: German 3: Spanish 4: Portuguese 5: Simplified Chinese 6: Traditional Chinese 7: Italian 8: Norwegian 9: Swedish 10: Dutch 11: Russian 12: Polish 13: Finnish 14: Danish 15: Korean 16: Hungarian 17: Czech 18: Arabic 19: Turkish 20: Vietnamese 21: Hebrew 22: Bahasa Indonesia 23: Romamian
50	Set OSD language	(LANn)	0	23		
51	Get OSD Menu on / off	(MNU?)	--	--	(0-1,0)	0: Off 1: On
52	Set Menu on/off	(MNUn)	0	1		
53	Remote key - Menu	(NAV0)	--	--		
54	Remote key - Up	(NAV1)	--	--		
55	Remote key - Down	(NAV2)	--	--		
56	Remote key - Enter	(NAV3)	--	--		
57	Remote key - Left	(NAV4)	--	--		
58	Remote key - Right	(NAV5)	--	--		
59	Get OSD transparency	(TOE?)	--	--	(0-4,0)	0: 0% 1: 25% 2: 50% 3: 75% 4: 100%
60	Set OSD transparency	(TOEn)	0	4		
61	Get mute status	(MTE?)	--	--	(0-1,0)	0: Off 1: On
62	Set Mute off	(MTE0)	--	--		
63	Set Mute on	(MTE1)	--	--		
64	Get phase value	(MSS?)	--	--	(0-31,0)	
65	Set phase	(MSSn)	0	xx		

Item	Function	Command	Min	Max	Return	Note
66	Get display mode	(PST?)	--	--	(0-7,0)	0: Presentaion 1: Bright 2: Game 3: Movie 4: TV 5: sRGB 6: BlackBoard 7: User
67	Set next display mode	(PST+)	--	--		
68	Set upper display mode	(PST-)	--	--		
69	Set display mode	(PSTn)	0	7		0: Presentaion 1: Bright 2: Game 3: Movie 4: TV 5: sRGB 6: BlackBoard 7: User
70	Get FW version	(FVS?)	--	--	("IN3148HD P01")	
71	Get projector info	(PRI1)	--	--		
72	Get Model name	(MDL?)	--	--	("IN3144")	
73	Get input resolution	(NRS?)	--	--	("1920x1080")	
74	Get blank screen	(DSU?)	--	--	(0-4,0)	0: Black
75	Set blank screen	(DSUn)	0	4		1: Red 2: Green 3: Blue 4: White
76	Get sharpness value	(SHP?)	--	--	(0-31,0)	
77	Set sharpness value	(SHPn)	0	31		
78	Get color tint value	(TNT?)	--	--	(0-100,50)	
79	Set color tint value	(TNTn)	0	100		
80	Get tracking value	(MTS?)	--	--	(-5-5,0)	
81	Set tracking +1	(MTS+)	--	--		
82	Set tracking -1	(MTS-)	--	--		
83	Set tracking value	(MTSn)	-5	5		
84	Get keystone value	(DKV?)	--	--	(-40-40,0)	
85	Set keystone	(DKVn)	-40	40		
86	Get V position value	(VPS?)	--	--	(-5-5,0)	
87	Set V positon +1	(VPS+)	--	--		
88	Set V position -1	(VPS-)	--	--		
89	Set V position value	(VPSn)	-5	5		
90	Get volume value	(VOL?)	--	--	(0-10,0)	
91	Set volume	(VOLn)	0	10		
92	Get Brilliant color value	(BCL?)	--	--	(0-10,0)	
93	Set Brilliant color	(BCLn)	0	10		