

# Inspire Series 4K



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For the most current technical documentation and office contact information, visit www.christiedigital.com.

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Products are warranted under Christie's standard limited warranty, the details of which are available at https://www.christiedigital.com/help-center/warranties/or by contacting your Christie dealer or Christie.

### PREVENTATIVE MAINTENANCE

Preventative maintenance is an important part of the continued and proper operation of your product. Failure to perform maintenance as required, and in accordance with the maintenance schedule specified by Christie, will void the warranty.

## **REGULATORY** (if applicable)

The product has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the product is operated in a commercial environment. The product 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 the product in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at the user's own expense. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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If printing this document, consider printing only the pages you need and select the double-sided option.

Please help us to conserve the environment we live in!

### **NOTATION**

Learn the hazard and information symbols used in the product documentation.



**Danger!** If not avoided, the following could result in death or serious injury.



Warning! If not avoided, the following could result in death or serious injury.



**Caution!** If not avoided, the following could result in minor or moderate injury.



**Notice.** If not avoided, the following may result in equipment or property damage.

# **CHKISTIE**°

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## **CHKISTIE**°

# Introduction

This manual is intended for Christie qualified installers and trained operators of Inspire Series 4K projection systems.

For complete Inspire Series 4K product documentation and technical support, go to www.christiedigital.com.

This projector is intended for use in a non-cinema environment.

# **Models**

The following models are supported for the Inspire Series 4K.

- 4K860-iS
- 4K860A-iS



# Safety and warning guidelines

Read all safety and warning guidelines before installing or operating the projector. This projector must be operated in an environment that meets the operating range specification. Use only the attachments and/or accessories recommended by Christie. Use of others may result in the risk of fire, shock, or personal injury.



Warning! If not avoided, the following could result in death or serious injury.

- Do not expose the product to moisture.
- Do not operate the product without all of its covers in place.
- This product must be installed within a restricted access location not accessible by the general public.
- Only personnel who are trained on the precautions for the restricted access location can be granted entry to the area.
- FIRE HAZARD! Keep hands, clothes, and all combustible material away from the concentrated light beam of the projector.
- TRIP OR FIRE HAZARD! Position all cables where they cannot contact hot surfaces, be pulled, be tripped over, or damaged by persons walking on or objects rolling over the cables.
- SHOCK HAZARD! Disconnect the product from AC before installing, moving, servicing, cleaning, removing components, or opening any enclosure.
- OPTICAL RADIATION HAZARD! Disconnect the power plug from the AC outlet if the product is not being used for an extended period of time.
- Do not allow anything to rest on the power cord.
- Do not use under the following conditions:
- In extremely hot, cold or humid environments.
- (i) Ensure that the ambient room temperature is within 5°C (41°F) to 40°C (104°F) (storage -10°C (14°F) to 60°C (140°F))
- (ii) Relative humidity is 10% to 85% RH (storage 5% to 90%RH).
- In areas susceptible to excessive dust and dirt.
- Near any appliance generating a strong magnetic field.
- In direct sunlight.



Caution! If not avoided, the following could result in minor or moderate injury.

- Always provide proper ventilation for the product to prevent overheating.
- Only Christie qualified technicians are permitted to open product enclosures.
- All procedures must be performed by Christie qualified technicians.



Notice. If not avoided, the following may result in equipment or property damage.

- Do not expose the product to moisture.
- Always use a lens plug when installing or moving the product. This prevents contaminants from entering the product.
- Only use cleaning solutions recommended by Christie. All other cleaning solutions may cause product damage and will void the warranty.



# **AC/power precautions**

Read all AC/power precautions before installing or operating the projector.



Warning! If not avoided, the following could result in death or serious injury.

- FIRE HAZARD! Do not use a power cord, harness, or cable that appears damaged.
- FIRE OR SHOCK HAZARD! Do not overload power outlets and extension cords.
- SHOCK HAZARD! Only use the AC power cord provided with the product or recommended by Christie.
- FIRE AND SHOCK HAZARD! Do not attempt operation unless the power cord, power socket, and power plug meet the appropriate local rating standards.
- SHOCK HAZARD! Do not attempt operation if the AC supply is not within the specified voltage and current, as specified on the license label.
- SHOCK HAZARD! The AC power cord must be inserted into an outlet with grounding.
- SHOCK HAZARD! Disconnect the product from AC before installing, moving, servicing, cleaning, removing components, or opening any enclosure.
- Install the product near an easily accessible AC receptacle.

# Installation safety and warning guidelines

Read all installation safety and warning guidelines before installing the projector.



**Warning!** If not avoided, the following could result in death or serious injury.

• High leakage current present when connected to IT power systems.



Caution! If not avoided, the following could result in minor or moderate injury.

- ELECTRICAL and BURN HAZARD! Use caution when accessing internal components.
- Only Christie qualified technicians are authorized to use the tools provided in the toolbox.

# Laser safety precautions

This product is classified as CLASS 1 LASER PRODUCT - RISK GROUP 2 according to IEC 60825-1: 2014, EN 60825-1: 2014+A11:2021complies with FDA regulations 21 CFR 1040.10 and 1040.11 as a Risk Group 2, LIP (Laser Illuminated Projector) as defined in IEC 62471-5: 2015. For more information see Laser Notice No. 57, dated May 8, 2019.



Warning! If not avoided, the following could result in death or serious injury.

- This projector has a built-in Class 4 laser module. Never attempt to disassemble or modify the projector.
- Any operation or adjustment not specifically instructed in the User manual creates the risk of hazardous laser radiation exposure.
- Do not open or disassemble the projector as this may cause damage or exposure to laser radiation.
- Do not stare into beam when the projector is on. The bright light may result in permanent eye damage
- When turning on the projector, make sure no one within projection range is looking into the lens.
- Follow all installation, operation, adjustment, and maintenance procedures to avoid possible exposure to hazardous laser radiation.



# **Batteries precautions**

Read the following precautions for your battery:



Caution! If not avoided, the following could result in minor or moderate injury.

- Keep new and used batteries away from children.
- Discontinue usage if leakage is found.
- EXPLOSION HAZARD! Dispose of the battery according to local area regulations.



Warning! If not avoided, the following could result in death or serious injury.

- CHEMICAL BURN HAZARD! Do not injest the battery.
- INTERNAL BURNS HAZARD! The product contains a coin cell battery and if swallowed can cause internal burns within two hours.
- INTERNAL BURN HAZARD! Seek medical attention if a battery has been swallowed or placed inside any part of the body.
- EXPLOSION OR FIRE HAZARD! Replacement battery must be of the correct type and replaced properly.
- EXPLOSION HAZARD! Do not mechanically cut or crush the battery or dispose of it in a fire or oven.

# 3D safety information

Follow all recommended warnings and precautions before using the 3D function.



**Caution!** If not avoided, the following could result in minor or moderate injury.

• Closely supervise children and teenagers viewing 3D images as they may be more susceptible to health issues associated with them.

## Photosensitive seizure warning and other health risks

Some viewers may experience discomfort when exposed to certain flashing images or lights contained in certain projector pictures or video games.

- Some viewers may experience an epileptic seizure or stroke when exposed to certain flashing
  images or lights contained in certain projector pictures or video games. If you suffer from, or
  have a family history of epilepsy or strokes, consult with a medical specialist before using the
  3D function. Those without a personal or family history of epilepsy or stroke may have an
  undiagnosed condition that can cause photosensitive epileptic seizures.
- Pregnant women, the elderly, sufferers of serious medical conditions, those who are sleep deprived, or those under the influence of alcohol should avoid using the 3D functionality.
- If experiencing any of the following symptoms, stop viewing 3D pictures immediately and consult a medical specialist:
  - · Altered vision
  - Lightheadedness
  - Dizziness
  - · Involuntary movements such as eye or muscle twitching
  - Confusion



- Nausea
- · Loss of awareness
- Convulsions
- Cramps
- Disorientation

Children and teenagers may be more likely than adults to experience these symptoms. Monitor children and ask if they are experiencing these symptoms.

- Watching 3D projection may also cause motion sickness, perceptual after effects, disorientation, eye strain and decreased postural stability. Christie recommends taking frequent breaks to lessen the potential of these effects. If your eyes show signs of fatigue or dryness or if experiencing any of the above symptoms, immediately discontinue use of this device and do not resume using it for at least thirty minutes after the symptoms have subsided.
- Watching 3D projection while sitting too close to the screen for an extended period of time may
  damage your eyesight. The ideal viewing distance should be at least three times the screen
  height. Christie recommends the viewer's eyes are level with the screen.
- Watching 3D projection while wearing 3D glasses for an extended period of time may cause a
  headache or fatigue. If experiencing a headache, fatigue, or dizziness, stop viewing the 3D
  projection and rest.
- Do not use the 3D glasses for any other purpose than for watching 3D projection.
- Wearing the 3D glasses for any other purpose (as general spectacles, sunglasses, protective goggles, and so on) may be physically harmful to you and weaken your eyesight.
- Viewing in 3D projection may cause disorientation for some viewers. Do not place the 3D projector near open stairwells, cables, balconies, or other objects that can be tripped over, run into, knocked down, broken, or fallen over.



## **Product labels**

Learn about the labels that may be used on the product. Labels on your product may be yellow or black and white.

## **General hazards**

Hazard warnings also apply to accessories once they are installed in a Christie product that is connected to power.

## Fire and Shock Hazard





To prevent fire or shock hazards, do not expose this product to rain or moisture.

Do not alter the power plug, overload the power outlet, or use it with extension cords.

Do not remove the product enclosure.

Only Christie qualified technicians are authorized to service the product.

## **Electrical Hazard**



Risk of electric shock.

Do not remove the product enclosure.

Only Christie qualified technicians are authorized to service the product.



**Notice!** If not avoided, the following could result in property damage.

General hazard.

## Laser labels





WARNING: MOUNT ABOVE THE HEADS OF CHILDREN."
Additional warning against eye exposure for close exposures less than 1 m.
"WARRINSSHEMT: INSTALLERA UDESSUS DE LA TÊTE DES ENFANTS."
Avertissement supplémentaire contre l'exposition oculaire pour des expositions à une distance de moins de 1 m.
"整告:安装在高于技造失现处"
英告:安装在高于技造失现处"
英言:安装在黑蛇兒園園部處。
針對 1 m 以下近距園間環境機夠即使告

Make sure to adjust the feet of the top projector before stacking to avoid damage to the lower projector 海袋形成的。 海袋形成的 開始上外底板的開始上下外泵板板面上,以后被向下外泵板板面上的下外泵板板面上,

Do not look into the projector lens when the laser is on. The bright light may result in permanent eye damage.

This projector has been classified as Class 1 Laser Product-Risk Group 2 according to the IEC 60825-1:2014 and IEC 62471- 5:2015 standard.

Indicates a light hazard. Do not look directly into the lens. The extreme high brightness can cause permanent eye damage.

Class 1 Laser Product-Risk Group 2 according to Class 1 IEC 60825-1:2014 and IEC 62471-5:2015.

Mount above the heads of children.

The use of a ceiling mount is recommended with this product to place it above the eyes of children.

Make sure to adjust the feet of the top projector before stacking to avoid damage to the lower projector.



# **Projector overview**

The Inspire Series 4K projector is a professional, WUXGA resolution projector system using Digital Light Processing (DLP™) technology from Texas Instruments. It provides high standard of image quality along with high degree of flexibility, providing great alternatives for fixed installation environments to enhance users visual experience.

# Contact your dealer

Record the information about your projector and keep this information with your records to assist with the servicing of your projector. If you encounter a problem with your Christie projector, contact your dealer.

Purchase record		
Dealer:		
Dealer or Christie Sales/Service contact phone number:		
Projector serial number:		
The serial number can be found on the license label located on the display panel		
Purchase date:		
Installation date:		
Ethernet settings		
Default gateway		
Projector IP address		
Subnet mask		

# **Key features**

Understand the important features of the projector.

- 4K resolution with high brightness performance
- Projection lens compatibility:

4K860-iS/4K860A-iS:

- Vertical offset ranges with half image size: +/-110%
- Horizontal offset ranges with half image size: +/-50%

Measurements comply with industry standards where offset is calculated as a ratio of the number of pixels shifted up or down to half image size.

- Christie Twist<sup>™</sup> and Mystique<sup>™</sup> allow for easy and quick blending and warping
   Support for Mystique<sup>™</sup> camera-based alignment system (sold separately)
- Full HD 3D technology with frame sequential up to 120Hz



- A wide range of connectivity including HDMI, VGA, HDBaseT, and 3D input/3D output
- 360 degrees projection enabled by laser light source
- Compatible with HDR content
- All video formats can be resized to full screen either horizontally or vertically while maintaining aspect ratio
- The projector can be operated using any of the following:
  - · Built-in keypad
  - · Infrared (IR) remote keypad
  - · Wired remote keypad
  - PC/device using serial communications (Ethernet or RS232)
  - A web page using Ethernet or from a PC or device using a wireless USB dongle (optional)

# How the projector works

The Inspire Series 4K projector accepts a variety of input signals for a wide range of commercial projection applications.

Designed with solid-state illumination light sources and phosphor technology, the red, green and blue color elements are segmented through a phosphor wheel and then modulated by one Digital Micromirror Device (DMD) panel responding to incoming data streams of digitized red, green and blue color information. As these digital streams flow from the source, light from the responding on pixels of the DMD panel is reflected, converged and then projected to the screen through projection lenses, where all pixel reflections are superimposed in sharp full-color images.

# List of components

This projector comes with all the items listed below. Check to make sure your package is complete. If anything is missing, contact your dealer.

- IR Remote
- · Product Safety Guide



# **Product documentation**

For installation, setup, and user information, see the product documentation available on the Christie Digital Systems USA Inc. website at <a href="https://www.christiedigital.com">www.christiedigital.com</a>. Read all instructions before using or servicing this product.

- 1. Access the documentation from the Christie website:
- Go to this URL: https://bit.ly/3fXJcI3 or https://www.christiedigital.com/products/projectors/all-projectors/inspire-series/
- Scan the QR code using a QR code reader app on a smartphone or tablet.



2. On the product page, select the model and switch to the **Downloads** tab.

## **Related documentation**

Additional information on the projector is available in the following documents.

- Christie Inspire Series 4K Product Safety Guide (P/N: 020-002096-XX)
- Christie Inspire Series 4K Installation and Setup Guide (P/N: 020-002097-XX)
- Christie Inspire Series 4K Service Manual (P/N: 020-002099-XX)
- Inspire Series 4K Serial API Commands Technical Reference (P/N: 020-103542-XX)

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# Installation and setup

Learn how to install, connect, and optimize the projector display.

# Site requirements

To safely install and operate the projector, the installation location must have restricted access for authorized personnel only and meet these minimum requirements.

# Physical operating environment

Provides specifications for the operating environment.

- Ambient temperature (operating): 0 to 40°C (32 to 104°F) up to 762 m (2500 feet)
- Humidity (non-condensing): 10% to 85% RH
- Operating altitude: 3048 m (10,000 feet) at 0 to 30°C (32 to 86°F) ambient temperature

## **Power connection**

The projector uses an AC power system that allows the projector to operate at full brightness with a power supply ranging from 100 to 240 VAC, depending on the models and regions. Operating the device outside of the voltage range may cause unsatisfactory operation or damage to the projector.

Christie recommends a 20 A rated wall breaker for the installation. To ensure safe operation, only use the AC power cord provided with the product or recommended by Christie.

# **Physical specifications**

Learn the dimensions and weight of the projector before installation.

- Projection size (L x W x H): 480 x 406 x 157 mm (18.8 x 15.9 x 6.1 inches)
- Shipping size (L x W x H): 650 x 570 x 380 mm (25.5 x 22.4 x 14.9 inches)
- Weight:
  - 4K860-iS/4K860A-iS: 14.7 kg (32.4 lbs)
- · Shipping weight:
  - 4K860-iS/4K860A-iS: 18.85 kg (41.4 lbs)

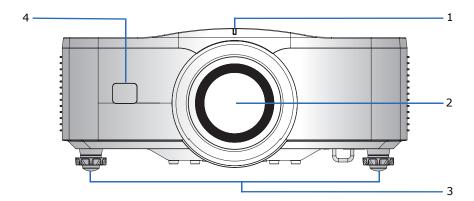


# **Projector components**

Identify the main components of the projector.

## **Front view**

Identify the main components on the front of the projector.

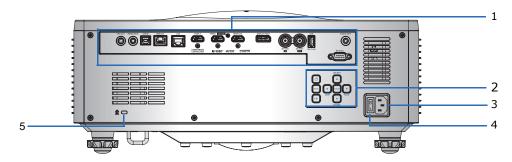


ID	Part name	Description	
1	LED status indicators	Displays the status of the projector.	
2	Projection lens	Allows powered and adjustment: vertical and horizontal offsets, zoom, an focus.	
3	Adjustable feet	Raises or lowers the feet to level the projector.	
4	Front IR sensor	Receives signals from the IR remote keypad. Keep the signal path to the sensors unobstructed for uninterrupted communication with the projector	



## **Rear view**

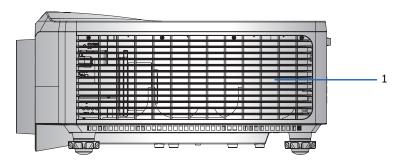
Identify the main components on the rear of the projector.



ID	Part name	Description	
1	Input/Output (I/O) panel	Connects the projector to external devices.	
2	Built-in keypad	Controls the projector.	
3	AC input	Connects to the supplied power adapter.	
4	Power button	Powers the projector on or off.  Secures the projector to counter tops, tables, and so on.	
5	Kensington lock		

## **Left view**

Identify the main components on the left side of the projector.

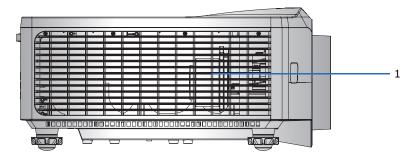


ID	Part name	Description	
1	Cooling air vents (intake)	Provides cooling to the projector. Keep these vents unobstructed to prevent the projector from overheating.	



# **Right view**

Identify the main components on the right side of the projector.

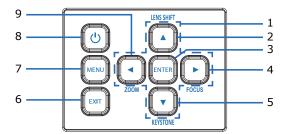


ID	Part name	Description
1	Cooling air vents (exhaust)	Provides cooling to the projector. Keep these vents unobstructed to prevent the projector from overheating.



# **Built-in keypad**

The built-in keypad controls the projector.

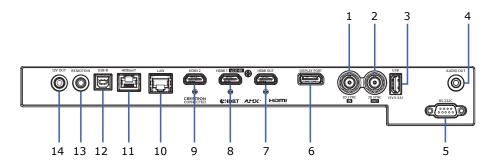


ID	Button	Description	
1	Four Directional Select Keys	Use $\blacktriangle \blacktriangledown \blacktriangleleft \blacktriangleright$ to select items or make adjustments to your selection.	
2	LENS SHIFT A	Adjusts the lens setting.	
3	ENTER	Confirms your item selection.	
4	FOCUS >	Adjusts the image focus.	
5	KEYSTONE ▼	Adjusts keystone.	
6	EXIT	Exits the current page and returns to the previous page.	
7	MENU	Select MENU to launch the on-screen display (OSD) menu. To exit the OSD, select MENU or EXIT again.	
8	Power <b>U</b>	Turns the projector on or off.	
9	ZOOM ◀	Adjusts the image size.	



# Input/Output (I/O) panel

Identify the components of the Input/Output (I/O) panel.



ID	Connector name	ID	Connector name
1	3D SYNC (IN)	8	HDMI1 (v2.0 4K)
2	3D SYNC (OUT)	9	HDMI2
3	USB (5V1.5A)	10	LAN
4	AUDIO OUT	11	HDBaseT
5	RS232-C	12	USB TYPE-B
6	DISPLAY PORT	13	REMOTE IN
7	HDMI OUT	14	12V OUT



# IR remote keypad

The IR remote keypad communicates with the projector by way of wireless communications.

If you choose to use a cable, not supplied, it must be 20 m (65.6 feet) or less. If the length of cable exceeds 20 m (65.6 feet), the IR remote keypad may not work correctly.



ID	Button	Description
1	SHUTTER	Displays or blanks the video image.
2	ON	Turns the projector on.
3	GAMMA	Adjusts the mid-range levels.



ID	Button	Description
4	BRIGHT	Adjusts the amount of light in the image.
5	PIP PBP	Turns picture-in-picture/picture-by-picture (PIP/PBP) on or off.
6	SIZE	Adjusts the PIP/PBP size.
7	Number keys	Enter a number, such as a channel, value, and so on. The on-screen display (OSD) indicates if a function is not supported.
8	HELP	Displays the instructions for source connection.
9	MENU	Displays the menus.
10	Arrow keys	Adjusts a setting up or down to navigate within a menu.
11	TEST	Displays a test pattern.
12	AUTO	Automatically synchronizes the projector to an input source.
13	OSD	Hides or shows OSD menus.
14	KEYSTONE H	Adjusts the horizontal keystone.
15	KEYSTONE V	Adjusts the vertical keystone.
16	STANDBY	Turns the projector off.
17	CONTR	Adjusts the difference between dark and light.
18	HOT KEY	Selects your preset key quickly.
19	SWAP	Swaps the main and PIP/PBP images.
20	LAYOUT	Adjusts the PIP/PBP layout.
21	FOCUS	Adjusts the focus to improve image clarity as required.
22	ZOOM	Adjusts the zoom to achieve a required image size.
23	PROJ	Changes the IR remote keypad ID.  • To assign an ID, select <b>PROJ</b> + < <b>1</b> to <b>9</b> >.  • To return to the universal IR remote ID, select <b>PROJ</b> + <b>0</b> .
24	EXIT	Returns to previous level or exit menus if at top level.
25	ENTER	Selects a highlighted menu item, or changes or accepts a value.
26	INPUT	Selects an input for the main or PIP/PBP image.
27	INFO	Displays the projector information.
28	LENS H	Adjusts the position of the image horizontally.
29	LENS V	Adjusts the position of the image vertically.

## **CHKISTIE**

# Adjusting the size and position

Adjust the projector's size and position. Christie recommends warming the lens before completing these procedures as focus may change as the lens warms.

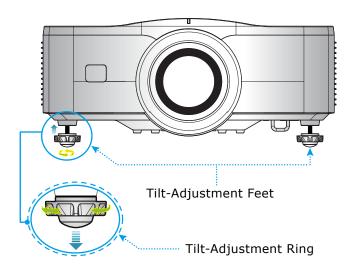
# **Adjusting the Projected Image**

Adjust the projected image's height and horizontal tilt for better viewing.

# **Adjusting the Projector's Height**

The projector is equipped with elevator feet for adjusting the image height.

- 1. Locate the adjustable foot you want to modify on the underside of the projector.
- 2. Rotate the adjustable ring clockwise to raise the projector or counter clockwise to lower it.
- 3. Repeat with the remaining feet as needed.





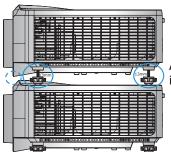


For stacking application, the elevator feet of the upper projector must be adjusted to increase the height of this projector to avoid the interference between two projectors. For more information on stacking projectors, refer to *Stacking Application* on page 26.

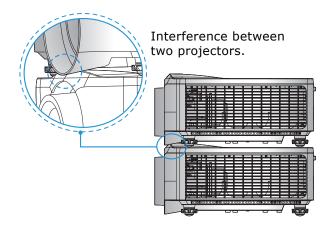
# **Stacking Application**

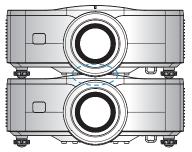
If two projectors are mounted on top of each other without using a frame, adjust the rubber feet of the upper projector to avoid the interference between the two projectors.

The maximum adjustable range of the rubber foot is 13 mm (0.5 inches).



Adjust the rubber feet to avoid interference.





Interference between two projectors.



# Setting the image size preset

Set the image size preset to display the image in its native resolution or to resize by maximizing the height, width, both height and width, or to the maximum size while keeping the original aspect ratio.

- 1. Select Menu > Size & Position > Size Presets.
- 2. Select the appropriate size preset:
  - Auto—Display with the detected size.
  - Native—Display in its native resolution.
  - **4:3**—Retain 4:3 aspect ratio.
  - **Letterbox**—Make the active content enlarge to the full screen.
  - **Full Size**—Fill the screen, regardless of the source.
  - Full Width—Fill display width and keep aspect ratio.
  - Full Height—Fill display height and keep aspect ratio.
  - **Custom**—Stretch the display horizontally and vertically without cutting the image display.
  - **3D Mode**—Display 3D content. All other items are grayed out, if 3D Mode is selected.
- 3. To confirm the selection, select **ENTER**.

# Setting the digital size of display image

These functions are similar technologies as in-camera image processing. Use Digital Horz Zoom or Digital Vert Zoom to enlarge or to compress the display image horizontally or vertically.

- 1. Select Menu > Size & Position > Digital Horz Zoom or Digital Vert Zoom.
- 2. Adjust the slider by arrow keys or select **ENTER** to input the value you selected.
- 3. After inputting the value, select **ENTER** to apply.

# Setting the digital position of display image

Change the position of the projector's display image horizontally or vertically.



Digital Horz Shift is only available after adjusting the Digital Horz Zoom, and Digital Vert Shift is only available after adjusting the Digital Vert Zoom.

- 1. Select Menu > Size & Position > Digital Horz Shift or Digital Vert Shift.
- 2. Adjust the slider by arrow keys or select **ENTER** to input the value you selected.
- 3. After inputting the value, select **ENTER** to apply.



# **Geometry correction**

Modify the geometry of the display image directly on the projector.

Connecting to Christie Twist and Mystique grays out the geometry correction settings on the projector. Uploading warp and blend from Twist and Mystique overwrites the currently applied geometry correction settings. See *Configuring warp and blend* on page 33 for more details.

# **Enabling geometry correction**

Enable or disable the geometry correction function including Warp, Blend, Keystone, Pincushion, 4-Corner, Auto Warp Filter, and Manual Warp Filter.

- 1. Select Menu > Size & Position > Geometry Correction > Geometry Enable.
- 2. To enable the setting, select **ENTER**.

# Saving geometry correction

Save the warp and blend settings to the projector memory. The blend memory saves the edge blend settings, while the warp memory saves the settings of Keystone, Pincushion, 4-Corner, Manual Warp Filter, and image warp.

- Select Menu > Size & Position > Geometry Correction > Warp Memory > Save Warp or Blend Memory > Save Blend.
- 2. To save the geometry setting, select a record.
  - One projector can save up to four warps and four blends.
- 3. To confirm the selection, select **ENTER**.

# **Applying geometry correction**

Apply the previously saved geometry setting to the projector.

- 1. Before applying the previous geometry setting, save the geometry setting to the projector. See *Saving geometry correction* on page 28 for more information.
- 2. Select Menu > Size & Position > Geometry Correction > Warp Memory > Apply Warp or Blend Memory > Apply Blend.
- 3. To apply the specific geometry setting, select the required record.
- 4. To confirm the selection, select **ENTER**.
- 5. To erase the applied geometry setting, select **Off**.



# **Enabling basic image blending**

Configure blends directly on the projector to increase or decrease the borders of an individual image, so it blends with a neighboring image to create a single, seamless image.

You can set blends on a projector when not using Christie Twist and Mystique. Connecting to Twist and Mystique grays out the blend settings on the projector. Applying blends from Twist and Mystique overwrites the blends directly set on the projectors.

- 1. Select Menu > Size & Position > Geometry Correction > Blend Area.
- 2. Choose a side to blend in with the other projectors.
- To set up the starting position, select Start Pixel.
- 4. Adjust the slider by arrow keys or select **ENTER** to input the starting position.
- 5. After inputting the starting position, select ENTER.
- 6. To set up the size of blend area, select Pixel Height.
- 7. Adjust the slider by arrow keys or select **ENTER** to input the width of blend area.
- 8. After inputting the size of blend area, select **ENTER**.
- 9. To set the gamma value of the blend area, select **Blend Gamma**.
- 10. After selecting a gamma value, select **ENTER**.
- 11. To apply the settings, select **Enable**.
- 12. Select ENTER.
- 13. To save the blend setting, select Menu > Size & Position > Geometry Correction > Blend Memory > Save Blend.
- 14. To set up the other side of blend area, repeat step 2 to 13.



# Blending multiple images

Use Christie Twist to manually configure edge blends and apply them to the projectors.

Christie Twist Premium and Twist Pro offer advanced blending options. Refer to the Christie website (www.christiedigital.com) for product information and documentation.

- 1. Connect the projector and computer to the same network and subnet.
- 2. To add a projector to a computer, from the Twist menu, select **Home > Add**.
  - To manually connect the projector with Twist, use port 3003.
  - Connecting to Twist grays out the Geometry Correction settings on the projector.
- 3. Select a record number to save the blend setting.

You can save up to four blend settings.

4. In Twist, configure edge blend settings.

Use the test patterns in Twist to assist in adjusting the blend area.

For more information about creating blend files in Twist, refer to *Twist User Guide (P/N: 020-101380-XX)*.

- 5. To send the blend settings to the projector, on the canvas, right-click a projector window and select **Send Blend**.
- 6. Repeat step 2 to 5 for the remaining projectors.

For multiple projectors, use Twist to identify the projectors.

- 7. To save the warp file on the projector, select **File > Save** or **Save As**.
  - When removing the projector from Twist, or closing the program, the projector automatically saves the currently applied blend settings to its blend memory.
- 8. To change the name when saving blends on the projector, or update the memory location of the blend, select **Properties**.

The changed name shows on both Twist and the projector.

# Downloading a blend from the projector memory

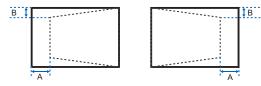
Use Twist to download the blend file saved on the projector memory.

- 1. Before downloading the previous blend file, save the blend setting to the projector memory.
- 2. On the canvas, select a projector window.
- 3. Select File > Blend/Mask/B.U.
- 4. In the **Download Blend** dialog, select the required record.
- 5. To download the selected blend setting, select **OK**.
- 6. To apply the blend setting to the projector, on the canvas, right-click a projector window and select **Send Blend**.



# Adjusting horizontal keystone

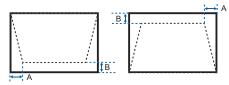
Use horizontal keystone to correct a keystoned image shape in which the left and right borders of the image are unequal in length, and the top and bottom are slanted to one of the sides.



- 1. Select Menu > Size & Position > Geometry Correction > Keystone > Horz Keystone.
- 2. To adjust the horizontal keystone, adjust the slider by arrow keys or select **ENTER** to input the value you selected.
- 3. After inputting the value, select **ENTER** to apply.

# Adjusting the vertical keystone

Use vertical keystone to correct a keystoned image shape in which the top and bottom borders of the image are unequal in length, and both sides of the image are inclined toward the top or bottom edge.



- 1. Select Menu > Size & Position > Geometry Correction > Keystone > Vert Keystone.
- 2. To adjust the vertical keystone, adjust the slider by arrow keys or select **ENTER** to input the value you selected.
- 3. After inputting the value, select **ENTER** to apply.

# Adjusting horizontal pincushion

Use horizontal pincushion to correct a pinched image shape in which the horizontal straight lines are curved inwards or horizontal straight lines are curved outwards from the center.



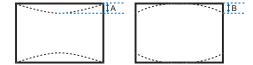


- 1. Select Menu > Size & Position > Geometry Correction > Pincushion > Horz Pincushion.
- 2. To adjust the horizontal pincushion, adjust the slider by arrow keys or select **ENTER** to input the value you selected.
- 3. After inputting the value, select **ENTER** to apply.



# Adjusting vertical pincushion

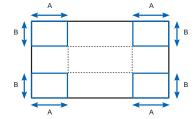
Use vertical pincushion to correct a pinched image shape in which the vertical straight lines are curved inwards or vertical straight lines are curved outwards from the center.



- 1. Select Menu > Size & Position > Geometry Correction > Pincushion > Vert Pincushion.
- 2. To adjust the vertical pincushion, adjust the slider by arrow keys or select **ENTER** to input the value you selected.
- 3. After inputting the value, select **ENTER** to apply.

# **Adjusting 4-corner**

Use 4-corner to correct the four corners of the projector's display image.



- 1. Select Menu > Size & Position > Geometry Correction > 4-Corner.
- 2. Select the corner and the direction to adjust.
- 3. To move the corner, adjust the slider by arrow keys or select ENTER to input the value.
- 4. After inputting the value, select **ENTER** to apply.
- 5. To adjust the other corner or direction, repeat step 2 to 4.

# **Enabling auto warp filter**

Improve the sharpness of the image and reduce the ghosting automatically after geometry correction, such as keystone, pincushion, 4-corner, and warping.

- 1. Select Menu > Size & Position > Geometry Correction > Auto Warp Filter.
- To enable the setting, select ENTER.

# Adjusting warp filter

Improve the sharpness of the image after geometry correction, such as keystone, pincushion, 4-corner, and warping. Adjust the warp filter manually to reduce the ghosting.

- 1. Select Menu > Size & Position > Geometry Correction > Manual Warp Filter.
- 2. To reduce the ghosting in different direction, select Horz Filter or Vert Filter.



- 3. Adjust the slider by arrow keys or select **ENTER** to input the value.
- 4. After inputting the value, select **ENTER** to apply.

# Resetting geometry correction setting

Reset all geometry correction parameters back to default, including warp and blend settings.

- 1. Select Menu > Size & Position > Geometry Correction > Reset to Default.
- 2. Select ENTER.

# Configuring warp and blend

By blending multiple images, you can combine several projectors to create a larger and seamless image. When the projection screen is not perfectly flat or rotated at an angle, warp the image to fit on the irregular surface.

# Warping an image

Christie Twist offer various manual warping options to adjust the image shape with minimal performance impact. Refer to the Christie website (www.christiedigital.com) for product information and documentation.

- 1. Connect the projector and computer to the same network and subnet.
- 2. To add a projector to a computer, from the Twist menu, select **Home > Add**.
  - To manually connect the projector with Twist, use port 3003.
  - Connecting to Twist grays out the Geometry Correction settings on the projector.
- 3. Select a record number to save the warp.

You can save up to four warp settings.

4. In Twist, configure warp settings.

Use the test patterns in Twist to help with image shaping.

For more information about creating warp files in Twist, refer to *Twist User Guide (P/N: 020-101380-XX)*.

- 5. To send the warp settings to the projector, on the canvas, right-click a projector window and select **Send Warp**.
- 6. To save the warp settings on the projector, select **File** > **Save** or **Save As**.
  - When removing the projector from Twist, or closing the program, the projector automatically saves the currently applied warp settings to its warp memory.
- 7. To change the name when saving warps on the projector, or update the memory location of the warp, select **Properties**.

The changed name shows on both Twist and the projector.





Christie Twist can be upgraded to Twist Premium and Twist Pro that provides more advanced warping features. Refer to the Christie website (www.christiedigital.com) for product information and documentation.

# Downloading a warp from the projector memory

Use Twist to download the warp file saved on the projector memory.

- 1. Before downloading the previous warp file, save the warp setting to the projector memory.
- 2. On the canvas, select a projector window.
- 3. Select File > Warp.
- 4. In the Download from Memory Location list, select the required record.
- 5. To download the selected warp setting, select **OK**.
- 6. To apply the warp setting to the projector, on the canvas, right-click a projector window and select **Send Warp**.

# Performing auto warp and blend

Use Mystique (sold separately) to perform automatic warp, blend, and more advanced geometry settings. Mystique is an automated camera-based alignment and recalibration solution that lets you quickly stage, install, align, calibrate, and maintain multi-projection systems.

Refer to the Christie website (www.christiedigital.com) for product information and documentation.

## **CHKISTIE**°

# Adjusting the image settings

Learn how to adjust the projector image.

# Adjusting the brightness

Adjust the intensity of the image.

- 1. Select Menu > Image Settings > Brightness.
- 2. Adjust the slider by arrow keys or select **ENTER** to input the value.
- 3. After inputting the value, select **ENTER** to apply.

# Adjusting the contrast

Adjust the degree of difference between the lightest and darkest parts of the image and changes the amount of black and white in the image.

- Select Menu > Image Settings > Contrast.
- 2. Adjust the slider by arrow keys or select **ENTER** to input the value.
- 3. After inputting the value, select **ENTER** to apply.



# Adjusting the color space

Determine how the color components are decoded for accurate color in the display.

- 1. Select Menu > Image Settings > Color Space.
- 2. If projector does not detect the correct input signal while **Auto** is enabled, disable **Auto** by selecting **ENTER** to select color space manually.
- 3. To match up with the input signal, select appropriate color space:
  - Auto
  - RGB
    - RGB Full
    - RGB Limited
  - YUV
    - REC709
    - REC601
- 4. To confirm the selection, select **ENTER**.

# Adjusting the image sharpness

Adjust the edge clarity of the image.

- 1. Select Menu > Image Settings > Detail.
- 2. Select the sharpness:
  - Maximum
  - High
  - Normal
  - Low
  - Minimum
- 3. To confirm the selection, select **ENTER**.



## Setting up 3D display

Use the functions in 3D Display menu to make the timing adjustment and environment necessary for displaying 3D images.

#### **Setting 3D format**

Set up the 3D format according to the 3D input signal.

- 1. Select Menu > Image Settings > 3D Display > 3D Enable.
- 2. Select the appropriate 3D format:
  - Auto
  - · Frame Packing
  - · Side by Side
  - Top and Bottom
  - · Frame Sequential
  - Dual Pipe
  - 4K 3D
  - 4K 3D Dual Pipe
  - Off
- 3. To confirm the selection, select **ENTER**.

#### **Inverting 3D signal**

3D images consist of a series of images (frames) that alternate quickly between two slightly different view points, corresponding to our left and right eyes. When these frames are displayed fast enough and viewed with 3D glasses synchronized to the left/right (L/R) changes, the resulting image appears with the same depth and perspective that is sensed in the real world.

If the projector generates the sync internally and content is displayed without 3D sync in the cable connected to the projector, there is a 50% chance that the content is displayed with the left/right eyes swapped. This function is used for swapping the sequence of the image to make the resulting image appear normally.

- 1. Select Menu > Image Settings > 3D Display > 3D Invert.
- 2. To swap, select **ENTER**.

#### Selecting the 3D sync input signal

This function is used for selecting the 3D sync input option.

- 1. Select Menu > Image Settings > 3D Display > 3D Sync In Select.
- 2. Select the appropriate 3D sync in setting.



• **Auto**—If an external 3D sync input is detected, the projector uses automatically the external sync input. If no external sync input is detected, the projector uses the internal 3D sync to display the content.



For multi-threaded applications, if the 3D enable function is set to Frame Sequential, Christie recommends to connect the source device to the projector using 3D Sync In port. The Frame Delay function makes sure a synchronized display for multiple projectors.

- **Internal**—The projector generates the 3D sync internally and content is displayed.
- External—The projector uses an external 3D sync input to display the content.
- 3. To confirm the selection, select **ENTER**.

#### Setting the 3D sync output signal

This function is used for controlling and processing the 3D sync output signal.

- 1. Select Menu > Image Settings > 3D Display > 3D Sync Out.
- 2. Select the appropriate 3D sync out setting.
  - **To Emitter**—If the 3D sync out port is connected to an emitter, select **To Emitter** to transmit 3D signal to emitter and give to 3D glasses.
  - **To Next Projector**—Multiple projectors 3D application only. Select **To Next Projector** when the 3D sync out port is not connected to an emitter.
- 3. To confirm the selection, select **ENTER**.

#### Setting the frame delay

Adjust the frame delay which eliminates the odd colors and cross talk caused by timing difference. Frame delay is the time difference between the first 3D signal being given and the result being executed from current projector.

- 1. Select Menu > Image Settings > 3D Display > Frame Delay.
- 2. Adjust the slider by arrow keys or select **ENTER** to input the value.
- 3. After inputting the value, select **ENTER** to apply.

#### Setting the sync delay

Adjust the sync delay which eliminates the odd colors and cross talk caused by timing difference. Sync delay is the time difference between the first 3D signal being given and the result being executed from the current projector.

- 1. Select Menu > Image Settings > 3D Display > Sync Delay.
- 2. Adjust the slider by arrow keys or select **ENTER** to input the value.
- 3. After inputting the value, select **ENTER** to apply.



## Configuring the video settings

Configure the video settings to optimize the image performance, such as applying color to black and white videos, reducing luminance component noise, and so on.

#### Adjusting black and white video

Adjust a video image from black and white to fully saturated color. This feature is for video sources only.

- 1. Select Menu > Image Settings > Video Options > Color.
- 2. Adjust the slider by arrow keys or select **ENTER** to input the value.
- 3. After inputting the value, select **ENTER** to apply.

#### Adjusting the color balance

Adjust the red-green color balance in NTSC video images. NTSC, named after the National Television System Committee, is the analog video color system used in North America and most of the South America countries. This feature is for NTSC video sources only.

- Select Menu > Image Settings > Video Options > Tint.
- 2. Adjust the slider by arrow keys or select **ENTER** to input the value.
- 3. After inputting the value, select **ENTER** to apply.

## Setting the input levels

If the image is displayed by an analog signal, such as VGA signal, the image may have odd color on the screen. These functions are used to adjust gain and offset error and correct the color.

#### Adjusting the color gain

Set the color gain to correct the color intensity of the image. This function is used when the image is displayed by VGA or component and the color is incorrect.

- 1. Select Menu > Image Settings > Input Levels.
- 2. Select appropriate color gain:
  - · Red Gain
  - · Green Gain
  - Blue Gain
- 3. Adjust the slider by arrow keys or select **ENTER** to input the value.
- 4. After inputting the value, select **ENTER** to apply.



#### Adjusting the color offset

Set the color gain to correct the degree of color difference of the image. This function is used when the image is displayed by VGA signal and the color is incorrect.

- 1. Select Menu > Image Settings > Input Levels.
- 2. Select appropriate color offset:
  - Red Offset
  - Green Offset
  - Blue Offset
- 3. Adjust the slider by arrow keys or select **ENTER** to input the value.
- 4. After inputting the value, select **ENTER** to apply.

#### Resetting the input levels

Reset all input levels parameters back to default.

- 1. Select Menu > Image Settings > Input Levels > Reset to Default.
- 2. Select ENTER.



## **Configuring picture settings**

Depending on display content, choose the most suitable picture settings. Different picture settings have different color temperature, brightness, and so on.

- 1. Select Menu > Image Settings > Picture Settings.
- 2. Select the appropriate picture setting:
  - Video—Used for theater application. It sets the color temperature to 6300K with 60% of maximum brightness.
  - **Bright**—Used for large size or high brightness application. It sets the color temperature to 7500K with 100% brightness.
  - **Enhanced**—Used for images with richly saturated and vivid color. It is based on brightness mode.
  - **REC709**—Used for high-definition television. It sets the color temperature to 6500K with 80% of the maximum brightness.
  - **DICOM SIM**—Used for high contrast content, such as X-ray diagram. It sets the color temperature to 7500K with 100% brightness.
  - **Blending**—Used for multiple projector application. It sets the color temperature to 7500K with 90% of maximum brightness.
  - HDR—Displays High Dynamic Range (HDR) content.
  - **3D**—Plays 3D videos.
  - High Frame Rate—Used for displaying 2D input signal at 240Hz.
  - **User**—Customized picture setting. See *Editing customized picture setting* on page 42 for more details of creating a customized picture setting.
- 3. To confirm the selection, select **ENTER**.



## Applying customized user configuration setting

Apply the previously saved user customized picture setting to the projector.

- Before applying the customized picture setting, adjust the picture setting and save it using Menu > Image Settings > Picture Settings > User option.
- 2. Select **Menu** > **Image Settings** > Apply to **User**.
  - User Video
  - User Bright
  - User Enhanced
  - User REC709
  - User DICOM SIM
  - User Blending
  - User HDR
  - User 3D
  - User High Frame Rate
- 3. To apply the specific picture setting, select the required setting.
- 4. To confirm the selection, select **ENTER**.

## Editing customized picture setting

Edit the previously saved customized picture setting.

- 1. Select Menu > Image Settings > User configuration.
- 2. Select the customized image setting you want to modify:
  - User-Video
  - User-Bright
  - User-Enhanced
  - User-REC709
  - User-DICOM SIM
  - User-Blending
  - User-HDR
  - User-3D
  - User-High Frame Rate
- 3. Select ENTER.



## **Setting the contrast ratio**

Use contrast enhancement function to raise the contrast ratio.

- 1. Select Menu > Image Settings > Contrast Enhancement.
- 2. Select the appropriate calculation method for contrast ratio:
  - **Dynamic Black**<sup>TM</sup>—Enable the function to automatically adjust the contrast ratio for video sources. It improves the black level in dark scenes by reducing the light output.
  - **Speed**—Adjust the speed of the light source correction. The value ranges from 1 to 15. A lower value makes the correction slower and less aggressive while a higher value results in the faster correction.
  - **Strength**—Set the strength of the dynamic contrast adjustment. The value ranges from 0 to 3, the higher the value the stronger the correction.
  - **Level**—Adjust the light source when the brightness level of the current content gets lower than the set value. The value ranges from 50% to 100%. The higher the value, the larger the range to adjust the light source.
  - **Real Black**—Enable the function to automatically increase the contrast ratio by turning off the laser light when black image is detected.
  - **Lights Out Timer**—Set a timer for the laser light to turn off after detecting black content. The set value ranges from 0s to 20s.
  - **Lights Out Signal Level**—Set a black level value as the threshold for the Real Black function. The value can be selected from 0 to 5, with 0 being the darkest black and 5 being the brightest.
  - **Lights On Threshold**—Sets the lights on value to eliminate the Real Black effect. The function is activated when the screen brightness is higher than the value of both the Lights On Threshold and the Lights Out Signal Level. The Lights on Threshold value ranges from 0 to 127.
  - Reset to Default—Reset the function settings to factory default values.
- To confirm the selection, select ENTER.

## **Enabling the image freeze**

Pause the display screen despite any change in the source device.

- 1. Select Menu > Image Settings > Image Freeze.
- 2. To pause the screen, select **Image Freeze**.
- 3. To unfreeze the screen, select any button on the keypad or remote control.
- 4. Select Yes.



## Setting the high dynamic range

High dynamic range (HDR) is set to increase the dynamic range which allows the full spectrum of the image to be seen. HDR significantly expands the range of contrast ratio and color to show a more realistic and natural image. After enabling this function, you can see details in the dark, at the same time, the bright part of the image is still visible.

- 1. Select Menu > Image Settings > HDR.
- 2. Select appropriate setting for HDR:
  - Auto—Auto detect HDR content or off to disable it.
  - HDR1—Low HDR effect, used for bright images to increase the color saturation.
  - **HDR2**—Medium HDR effect, used for standard images to make them look more realistic and natural.
  - HDR3—Medium HDR effect, used for video content to improve image details.
  - **HDR4**—Strong HDR effect, used to improve image details in dark scenes.
- 3. To confirm the selection, select **ENTER**.

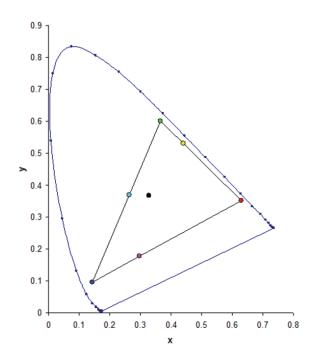


## Adjust the color of the image

Calibrate the accuracy of primary colors and the wall color, which can change because of lighting and environmental factors. Lighting and other environmental factors may slightly change how these colors appear on your screen. While the change is negligible in most cases, you may prefer to recover the originally intended color performance before trying to match colors from several projectors.

#### **Adjusting primary colors**

To achieve consistency use a color meter to measure the native primary colors-red, green, blue, and white, as they appear on the screen. Use hue, saturation and gain (HSG) to adjust each color component to essentially calibrate a projector to its surroundings, compensating for factors such as screen type, lamp and/or ambient lighting, and improves color accuracy and consistency in a group of projectors. It ensures a good starting point for further customizing and matching; however, is not critical for all installations.



- 1. Select Menu > Image Settings > Color Matching > HSG Adjustment.
- 2. To enable HSG adjustment, select **HSG Enable**.
- 3. Select one primary color (red, green, blue, cyan, magenta, or yellow).
- 4. To view a specific color while adjusting, select ENTER to enable Auto Test Pattern.
- 5. To edit hue of the primary color, adjust the slider or enter the color values of the primary color component you selected until you are satisfied with the colors.

Hue values reflect the number of degrees of rotation around the wheel from the original color of the pixel. Increasing the value indicates counterclockwise rotation and decreasing the value indicates clockwise rotation.



- 6. To confirm the selection, select **ENTER**.
- 7. To edit saturation of the primary color, adjust the slider or enter the color values of the primary color component you selected until you are satisfied with the colors.
  - Saturation values reflect the color shifting away from the primary color or toward white.
- 8. To confirm the selection, select **ENTER**.
- 9. To edit gain of the primary, adjust the slider or enter the color values of the primary color component you selected until you are satisfied with the colors.
  - Increasing value indicates increasing the lightness, and decreasing the value indicates decreasing it to black.
- 10. To confirm your selection, select **ENTER**.
- 11. Repeat steps 3 to 9 for each primary color component, except white.
- 12. To edit the color of white by three components—red, blue and green—adjust the slider or enter the values until you are satisfied with the white.
- 13. To confirm your selection, select **ENTER**.
- 14. To reset the primary colors to their defaults, select **Reset to Default**.
- 15. To reset back to default setting, select **ENTER**.

#### **Setting the wall color**

Set the wall color so the projector can enhance the color performance customized for the specific wall.

- 1. Select Menu > Image Settings > Color Matching > Wall Color.
- 2. Select the preferred setting:
  - White
  - Gray 130
  - · Light Yellow
- Select ENTER.

#### Setting the wall color automatically

Set the wall color automatically so the projector can enhance the color performance customized for the specific wall.



- Auto wall color option is disabled and grayed out if the picture mode is set to 3D or High Frame Rate with the current source or change to no source status. (The camera does not support 1x color wheel speed.)
- Auto wall color option is also disabled and grayed out if the camera is not detected.
- Select Menu > Image Settings > Color Matching > Auto Wall Color.
- 2. Select ENTER.



## Adjusting the image settings automatically

Adjust various image settings automatically, including focus, wall color, and color uniformity.

#### Adjusting the image with automatic focus

Adjust the image focus automatically with camera kit.



- Auto focus option is disabled and grayed out if the picture mode is set to 3D or High Frame Rate
  with the current source or change to no source status.
  (The camera does not support 1x color wheel speed.)
- Auto focus option is also disabled and grayed out if the camera is not detected or lens lock option is enabled.
- 1. Display an image or test pattern that can be used to analyze image focus.
- 2. Select Menu > Image Settings > Auto Image Settings > Auto Focus.
- Select ENTER.

#### Setting the wall color automatically

Set the wall color automatically so the projector can enhance the color performance customized for the specific wall.



- Auto wall color option is disabled and grayed out if the picture mode is set to 3D or High Frame
  Rate with the current source or change to no source status. (The camera does not support 1x color
  wheel speed.)
- Auto wall color option is also disabled and grayed out if the camera is not detected.
- 1. Select Menu > Image Settings > Auto Image Settings > Auto Wall Color.
- Select ENTER.

#### Balancing the image color automatically

Balance the image color automatically with auto color uniformity.



- Image color calibration option is disabled and grayed out if the auto color uniformity option is disabled/unchecked and the picture mode is set to 3D or High Frame Rate with the current source or change to no source status. (The camera does not support 1x color wheel speed.)
- Target selection and reset options are disabled and grayed out if the auto color uniformity option is disabled/unchecked.
- Select Menu > Image Settings > Auto Image Settings > Auto Color Uniformity.
- 2. Select appropriate option for image color uniformity:
  - **Enable**—Enables or disables the auto color uniformity function.
  - Calibration—Starts adjusting the image color.
  - Target Selection—Selects a calibration target.
  - Reset—Restores factory settings.
- Select ENTER.



## Adjusting advanced image settings

Adjust the color value based on gamma, white peaking, color temperature, and save user settings for data recovery.

#### Adjusting the color value based on gamma setting

Adjust the color values to give a more detailed displayed image.

- 1. Select Menu > Image Settings > Advanced Image Settings > Gamma.
- 2. Select the appropriate option:
  - Video
  - Film
  - Bright
  - CRT
  - DICOM
- 3. Select ENTER.

#### Adjusting the white peaking

Use white peaking to adjust the color of white. The maximum value of white peaking, 100, can increase the brightness of white to near 100%.

- 1. Select Menu > Image Settings > Advanced Image Settings > White Peaking.
- 2. Adjust the slider by arrow keys or select **ENTER** to input the value.
- 3. Select ENTER.

#### Adjusting the color temperature

Adjust the color temperature as expressed in degrees Kelvin.

- 1. Select Menu > Image Settings > Advanced Image Settings > Color Temperature.
- 2. Select appropriate color temperature:
  - Warmest—Set the color temperature to 5500K.
  - Warm—Set the color temperature to 6500K.
  - **Cool**—Set the color temperature to 7500K.
- Select ENTER.



#### Saving user settings for data recovery

Create a recovery copy of all the user data. This information can be used later to recover settings if necessary.

- 1. Select Menu > Image Settings > Advanced Image Settings > Backup Restore > Save.
- 2. To save the user data, select an empty record.
  - One projector can save up to five backups.
- 3. To confirm the selection, select **ENTER**.
- 4. Select Menu > Image Settings > Advanced Image Settings > Backup Restore > Restore.
- 5. To restore a specific backup, select the required record.
- 6. To start restoring data, select **ENTER**.



- The recovery copy does not include information about the source and functions that can be operated directly from the remote control and do not save the value after the next power on. For example, Image Freeze.
- All other function values are saved to the recovery copy, except for the following:
- Configuration > Lens Settings
- Configuration > Communications > LAN/WLAN
- Size & Position > Geometry Correction
- Configuration > Menu Preferences > PIN Protect
- Configuration > Date and Time
- Configuration > Schedule

#### **CHKISTIE**®

# Configuring system settings

Learn how to configure the system settings.

## Changing the language

Choose the language you want displayed on projector display panel and on-screen display.

- Select Menu > Configuration > Language.
   You can also select Menu > Language.
- 2. Select the appropriate language.
- 3. Select ENTER.

## **Adjusting lens settings**

Adjust various lens settings including the lens type, zoom, focus, lens position, memorizing lens position and locking the lens motors.

#### Aligning the image with focus, zoom, and auto focus

Ensure that the image reflected from the digital micromirror device (DMD) is parallel and centered with the lens and screen.

- 1. Display an image or test pattern that can be used to analyze image focus and geometry.
- 2. Select **FOCUS** on keypad or remote control.

You can also select Menu > Configuration > Lens Settings > Focus.

- 3. Use the up and down arrow keys to zoom in or out of the image.
- 4. To exit the menu, select **EXIT**.
- 5. Select **ZOOM** on keypad or remote control.

You can also select Menu > Configuration > Lens Settings > Zoom.

6. Use the up and down arrow keys to adjust the focus of the image.



- 7. To exit the menu, select **EXIT**.
- 8. To refine your adjusts, repeat steps 2 to 7.

#### Adjusting the image with automatic focus

Adjust the image focus automatically with camera kit.



- Auto focus option is disabled and grayed out if the picture mode is set to 3D or High Frame Rate
  with the current source or change to no source status.
  (The camera does not support 1x color wheel speed.)
- Auto focus option is also disabled and grayed out if the camera is not detected or lens lock option is enabled.
- 1. Display an image or test pattern that can be used to analyze image focus.
- 2. Select Menu > Configuration > Lens Settings > Auto Focus.
- 3. Select ENTER.

#### **Adjusting lens position**

Shift the lens to the specific position.

- 1. Display an image or test pattern that can be used to analyze image location.
- 2. Select **LENS** on keypad or **LENS H/LENS V** on remote control.

You can also select Menu > Configuration > Lens Settings > Lens Shift.

- 3. Use the arrow keys to adjust the lens position.
- 4. To exit the menu, select EXIT.

#### Saving lens setting

Save the lens position, zoom and focus. One projector can save maximum up to five lens settings.

- Select Menu > Configuration > Lens Settings > Lens Shift Memory > Save Current Settings.
- 2. To save the lens setting, select an empty record.
- 3. To confirm the selection, select **ENTER**.

#### Applying the previous lens setting

Apply the previous lens setting.

- 1. Before applying the previous lens setting, you must save the lens setting.
  - See Saving lens setting on page 51 for more details.
- 2. Select Menu > Configuration > Lens Settings > Lens Shift Memory > Apply Position.
- 3. To apply specific lens setting, select the required record.
- 4. To confirm the selection, select **ENTER**.



#### Locking the lens motor

Prevent all lens motors from moving. It disables the zoom, focus, and offset settings, locking out any changes and overriding all other lens features. This feature prevents accidental lens position changes in multiple projectors installations.

- 1. Select Menu > Configuration > Lens Settings > Lock all Lens Motors.
- 2. To enable locking of all lens motors, select **Locked**.
- 3. To unlock all lens motors, select **Allow**.
- 4. To confirm the selection, select **ENTER**.

#### Resetting the lens to home position

Set the lens offset back to the home position.



To make sure the lens shift is functioning properly, Christie recommends calibrating the lens every time the lens are changed.

1. Select Menu > Configuration > Lens Settings > Lens Calibration.

You can also select **LENS** on keypad or **LENS H/LENS V** on remote control.

- 2. To start the lens calibration, select **ENTER**.
- 3. To start the lens calibration, select **OK**.

## Selecting screen image orientation

Specify the orientation to use for the image. The projector supports front projection, rear projection, front projection inverted, or rear projection inverted.

- To invert the projection image, select Menu > Configuration > Ceiling Mount.
- 2. Select appropriate ceiling mount settings:
  - Auto—Detect the orientation automatically.
  - Off—Disable the ceiling mount setting.
  - On—Enable the ceiling mount setting.
- To confirm the image orientation, select ENTER.
- 4. To do a rear projection, select **Menu** > **Configuration** > **Rear Projection**.
- 5. To swap, select **ENTER**.



## Adjusting on-screen display menus

Adjust various on-screen display (OSD) settings including the position, OSD transparency and timing for OSD to disappear.

#### Determining the on-screen display position

Adjust the location of the on-screen display (OSD) menus.

- Select MENU > Configuration > Menu Preferences > Menu Horz Offset or Menu Vert
  Offset.
- 2. To determine the location on the screen where you want OSD to appear, adjust the slider by arrow keys or select **ENTER** to input the value.
- 3. After inputting the value, select **ENTER** to apply.

#### **Showing messages**

Enable or disable the on screen message dialogs. For example, input source, IP Address, Slot information, Gamma information, and so on.

- 1. Select Menu > Configuration > Menu Preferences > Show Messages.
- 2. To swap, select ENTER.

#### Setting the transparency of the on-screen display position

Change the on-screen display (OSD) menus background to be transparent. As the value increases, more of the image behind the menu is visible.

- 1. Select MENU > Configuration > Menu Preferences > Menu Transparency.
- 2. Adjust the slider by arrow keys or select **ENTER** to input the value.
- 3. After inputting the value, select **ENTER** to apply.

#### Changing the splash screen

Select splash screen which is the screen with no source is displayed.

- 1. Select Menu > Configuration > Menu Preferences > Splash Screen Setup.
- 2. Select the appropriate splash screen:
  - Factory Logo
  - Blue
  - Black
  - White
- 3. Select ENTER.



#### Setting time out for on-screen display

Adjust the time for on-screen display to disappear.

- 1. Select Menu > Configuration > Menu Preferences > Menu Time Out.
- 2. Select the appropriate time:
  - Off
  - 1 Min
  - 3 Min
- 3. Select ENTER.

#### Setting up password protection

Protect your projector with a password. Once enabled, you must enter the password before you can project an image. If the projector is powered on with password protection, you must enter the password to use the projector.

- 1. Select Menu > Configuration > Menu Preferences > PIN Protect.
- 2. Enter a password by number keys.
- 3. To confirm the password, select **OK**.

#### **Changing password**

Change the current password to a new password.

- 1. Select Menu > Configuration > Menu Preferences > Change PIN.
- 2. Enter current password by number keys.
- 3. Select **OK**.
- 4. Enter new password by number keys.
- Select OK
- 6. To confirm the password, enter new password again by number keys.
- 7. Select OK.



## Setting up power mode

Adjust various projector's power settings including the shutdown time, sleep timer, and standby mode.

#### Setting the standby mode

Determine which standby mode the projector is in when AC power on.



Communication mode is the projector's default standby mode. After performing factory reset, manually set the standby mode to 0.5W mode to have less power consumption (<0.5W).

- 1. Select Menu > Configuration > Power Management > Standby Mode.
- 2. Select the appropriate mode:
  - **0.5W mode**—Less power consumption (<0.5W) which does not have the ability to monitor the projector over a network cable.
  - **Communication mode**—More power consumption in standby mode which allows you to monitor the projector over a network cable.
- Select ENTER.

#### **Setting the AC power**

Enable or disable this function to power on the projector directly or not when AC power is on.

- 1. Select Menu > Configuration > Power Management > AC Power On.
- 2. To swap, select **ENTER**.

#### Setting the time for auto shutdown

Set up a time for automatically turns off the projector after no signal is detected for a preset number of minutes. If an active signal is received before the projector powers down, the image is displayed.

- 1. Select Menu > Configuration > Power Management > Auto Shutdown.
- 2. Select the appropriate time to automatically turn off the projector when no signal exists.
- 3. To confirm the selection, select **ENTER**.

#### Setting the sleep timer

Set up a time for automatically power off the projector, after it has been on for a specified amount of time.

- 1. Select Menu > Configuration > Power Management > Sleep Timer.
- 2. Select the appropriate time to automatically turn off the projector.
- 3. To confirm the selection, select **ENTER**.



## **Enabling high altitude setting**

Enable high altitude mode when altitudes >/= 2000 m. The fan operates at high speed to ensure sufficient air flow for high altitudes; however, the noise level of the projector is increased.

- 1. Select Menu > Configuration > High Altitude.
- 2. To swap, select **ENTER**.

## Setting the projector communication

Enable the receivers and the wired keypad to communicate with the projector from the remote. The front and top IR sensors receive transmissions from the IR remote. Keep the transmission path to these sensors unobstructed for uninterrupted communications with the projector.

- 1. Select Menu > Configuration > IR Control.
- 2. To enable the top IR sensor, select **Top**.
- 3. To confirm the selection, select **ENTER**.
- 4. To enable the front IR sensor, select Front.
- 5. To confirm the selection, select **ENTER**.
- 6. To enable the signal from the HDBaseT Box, select HDBaseT.
- 7. To confirm the selection, select **ENTER**.

## **Enabling 12V Trigger**

When enabled, the projector screen is automatically raised or lowered when the projector is turned on or off. This function only works when the projector is connected to an electrical projector screen.

- 1. Select Menu > Configuration > 12V Trigger.
- 2. Select to turn on or off 12V trigger.
- 3. To confirm the selection, select **ENTER**.

## Setting audio settings

Control audio settings.

- 1. Select Menu > Configuration > Audio Settings.
- 2. Select to audio mute or adjust the volume.
- 3. To confirm the selection, select **ENTER**.

#### **CHKISTIE**°

## **Configuring communications**

Define and control how single or multiple projectors are linked with each other and with controlling device.

## Setting network environment

Determine the communication settings such as network setup, serial port information, and so on.

#### **Adjusting LAN setting**

Set up network configuration for wire networking.

- 1. Select Menu > Configuration > Communications > LAN.
- 2. Set up the appropriate setting:
  - MAC Address—Display the network MAC address value.
  - Network Status—Connect or disconnect Network status.
  - LAN Interface—Choose from RJ-45 or HDBaseT.
  - **DHCP**—Enable or disable the DHCP to automatically get IP address, subnet mask, and so on.
  - IP Address—Assign the network IP address.
  - **Subnet Mask**—Assign the network subnet mask.
  - **Default Gateway**—Assign the network default gateway.
  - **Primary DNS**—Assign the primary DNS.
  - **Secondary DNS**—Assign the secondary DNS.
- 3. To apply the LAN settings, select **Apply**.



#### Using the web interface

To control the projector through the web interface, do the following:

- 1. Start up the web browser on your computer or mobile devices.
- 2. Enter the IP address set on the projector into the URL of the web browser.
- 3. Enter the user name and password to login. After a successful login, you can control the projector over the web interface.

#### Logging on to the web user interface

Log into to the web user interface by following the steps below.

- 1. Connect the projector to AC and power it on.
- 2. When the network is available, connect the projector and computer to the same network.
  - To check the projector address in a wired network, select Menu > Configuration > Communications > LAN > IP Address.
  - b. To check the projector address in a wireless network, select Menu > Configuration > Communications > WLAN > Default Gateway.
- 3. If the network is unavailable, connect the projector to the computer with an RJ45 cable.
  - a. Set the Default Gateway and Subnet Mask of the computer to match the projector.
  - b. Set the IP address of the computer to match the first three numbers of the projector. For example, if the projector IP address is 192.168.000.100, set the computer IP address to 192.168.000.xxx, where xxx is not 100.
- 4. Open a web browser and type the projector address in the browser address bar.
- 5. In the Username field, enter the username.
  - The default username is admin.
- 6. In the Password field, enter the password.
  - The default password is admin.
- 7. Select Login.



## Setting the system notification

Configure the Simple Network Management Protocol (SNMP) settings for receiving notifications from the system directly to the email. SNMP provides network administrators with a common way to manage their network devices from a single remote location. Administrators can use the SNMP interface to query a number of devices to see their current status or configuration. Operators can change configuration values and configure trap notifications to be sent when certain events occur (for example, loss of signal, power state change, and so on).

Emails are sent to the mail server configured in the projector settings. Up to two user email accounts can be selected. Important information regarding the event is located in the body content of the email.

SNMP traps are notifications sent from the projector. They are only received by a trap receiver (MIB Browser) in the computer.

- 1. From the web user interface, select **Network** > **Notification**.
  - See *Using the web interface* on page 58 for further information.
- 2. Set up the appropriate SNMP setting:
  - **SNMP Read Community**—Plain text password that must also be entered in the MIB browser. This password allows various settings in the projector to be gueried.
  - **SNMP Location**—Use as a description to where a projector is located in a building. SNMP emails sent specify this location.
  - **Trap IP Address**—Fill in this field with the IP address of the computer, on which you want to view received traps from the projector.
  - **Sender Email**—Set the email account as the source of the system notifications.
  - **SMTP Server**—Enter the IP address of the mail server.
  - Recipient—Enter up to two email accounts to receive the system notification.
- 3. Set the SNMP actions for the system events:
  - **Disabled**—Disable email notification
  - **SNMP Trap**—Send the notification to the trap receiver (MIB Browser).
  - **Email**—Send the notification to the email recipient.
  - **SNMP Trap and Email**—Send the notification to the trap receiver and the email recipient.
- 4. To apply the notification settings, select **Save**.

#### Using the RS-232C interface

To control the projector through the RS-232C interface, do the following:

- 1. Connect your computer and the projector directly using the RS-232 cable.
- 2. Set the same baud rate in both your computer and projector. Use commands to control the projector.



#### Re-connecting the network

After the network is disconnected and timeout using RJ-45/HDBaseT/Wifi, the browser refreshes the page automatically and show HTTP404 (Not Found) error message.

If user wants to re-control the projector, the user must login in the control page with the account and password again.

#### **Adjusting WLAN setting**

Set up network configuration for wireless networking.

- 1. Select Menu > Configuration > Communications > WLAN.
- 2. Set up the appropriate setting:
  - **SSID**—Display the SSID of the wireless network.
  - Enable—Enable or disable the wireless functionality.
  - **Start IP**—Assign the start IP address of the wireless network.
  - End IP—Assign the end IP address of the wireless network.
  - **Subnet Mask**—Assign the subnet mask of the wireless network.
  - **Default Gateway**—Assign the gateway of the wireless network.
- 3. To apply the WLAN settings, select **Apply**.

#### Adjusting network setting

Set up network configuration setting, such as reset back to default.

- 1. Select Menu > Configuration > Communications > Network.
- 2. Set up the appropriate network setting:
  - Show Network Message—Enable or disable to display of the network message.
  - Reset to Default—Reset the network configuration setting, including LAN setting and
  - · WLAN setting, back to default.
- 3. To apply the network configuration, select **ENTER**.

#### Setting serial port baud rate

Select the serial port and baud rate.

- 1. Select Menu > Configuration > Communications > Serial Port Baud rate.
- 2. Set up the appropriate baud rate.
- 3. To confirm the selection, select **ENTER**.



#### **Enabling serial port echo**

Enable or disable to allow the CLI command pass through.

- 1. Select Menu > Configuration > Communications > Serial Port Echo.
- 2. To swap, select **ENTER**.

#### Setting the projector address

Assign an address to the projector for IR remote connection.

- To set the projector address, select Menu > Configuration > Communications > Projector Address.
- 2. Select specific number for this projector from 0 to 9.
- 3. To match up with the projector address, select **PROJ** and specific number key. The projector responds to the IR remote set to the same address as the projector or to the IR remote set to address 0.

## Adjusting the back light settings

Control the back light behavior and timeout setting for the keypad and status LED.

- 1. Select Menu > Configuration > Backlight Preferences > Status LED.
- 2. Select the appropriate setting for status LED.
- 3. To confirm the selection, select **ENTER**.

## Setting the hot key

To directly call out a function without going through the layers of the on-screen display (OSD) menus, select a specific function for a hot key. User can call this function by selecting the HOT KEY on remote control.

- 1. Select Menu > Configuration > Hot-Key Settings.
- 2. Select the one function for the hot key:
  - Size Presets
  - Picture Settings
  - Default Value
  - Detail
  - · Contrast Enhancement
  - · Light Source Mode
  - · Image Freeze
  - Information



- Disable Warp/Blend
- Audio Mute
- Audio Volume

## Configuring date and time settings

Configure the date and time settings of the projector. Make sure these settings are accurate if you want to use the schedule feature.

- 1. Select Menu > Configuration > Date and Time.
- 2. Set up the appropriate setting:
  - Clock Mode—Sets the clock mode to Local or Network. A NTP Server is required if the clock mode is set to Network.
  - **Date**—Sets a date for the projector. The date format is Year/Month/Date.
  - **Time**—Sets the time for the projector.
  - Daylight Saving Time—Configures the daylight saving settings if required.
  - NTP Server—Selects a NTP Server for the network clock mode.
  - **Time Zone**—Selects an appropriate time zone for the network clock mode.
  - **Update Interval**—Sets the date and time update interval.
- 3. To apply the date and time settings, select **Apply**.

## **Scheduling events**

Schedule feature allows you to schedule various projector functions at the given date and time.

- 1. Select Menu > Configuration > Schedule.
- 2. View or set up the appropriate setting:
  - Date and Time—Adjusts the date and time for the projector.
  - Schedule Mode—Enables the schedule mode if you want to schedule projector functions.
  - View Today—Displays events scheduled for the current day.
  - Monday to Sunday—Sets up schedule for days of a week.
    - **Event 01-016**—See step 5 in *Setting up a schedule* on page 63 for a full list of available actions.
    - Copy Events To—If several days of a week have the same schedule, create a fully scheduled day, select Copy Events To, and select these days of the week where you want to copy the full schedule.
  - **Reset Schedule**—Resets all of the schedule settings to the factory defaults.



#### Setting up a schedule

- 1. Select Menu > Configuration > Schedule.
- 2. Select the appropriate day of the week when you want to schedule events and select **ENTER**. The schedule table for the selected day is shown.
- 3. Select the first event slot and select **ENTER**. The event submenu is shown.
- 4. Select the **Time** when the chosen event must occur, for example at 11 AM.
- 5. Select the appropriate action to take place:
  - Power Settings
    - Off/On
    - Power On
    - 0.5W Mode
    - Communication Mode
  - Input Source
    - Off
    - HDMI1
    - HDMI2
    - Display Port
    - 12G-SDI
    - HDBaseT
  - Light Source Mode
    - Off
    - Constant Power
    - Constant Intensity
    - ECO 1
    - ECO 2
  - Shutter
    - Off
    - Shutter On
    - Shutter Off
- 6. To confirm the selection, select **ENTER**.
- 7. Select **EXIT** and return to the schedule table of the selected day.
- 8. Repeat steps 2 to 7 to schedule more events for the selected day. You can schedule up to 16 events per day. To access the events on the next page, select the arrow keys.



9.	To schedule events for other days, select <b>EXIT</b> to return to the main Schedule menu and repeat
	steps 2 to 8.

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## Configuring light settings

Learn how to configure the light settings.

## Setting light source mode

Set up the light source to control the projector brightness.

- 1. Select Menu > Light Source > Light Source Mode.
- 2. Set up the appropriate light source model:
  - Constant Power—Enable Constant Power to set the projector brightness to a specific level controlled by the laser diode power. See Adjusting the light power on page 66 for more details of setting the laser diode power.
  - **Constant Intensity**—After enabling Constant Power, select Constant Intensity to maintain current constant brightness and color settings. This function can remain at the current setting for longer period of time than Constant Power mode.



- Light sensor calibration must be performed before enabling Constant Intensity and is used for long-term projecting or blending purposes.
- When Constant Intensity is enabled, Dynamic Black and Real Black functions are automatically disabled.
- When Picture Settings is changed under Constant Intensity, the light source mode automatically changes to Constant Power.
- **ECO 1 (80%)**—Set the projector to 80% constant brightness and color settings.
- **ECO 2 (50%)**—Set the projector to 50% constant brightness and color settings.
- 3. Select ENTER.



## Adjusting the light power

Set the value of the laser diode power. The power levels can be managed to obtain the brightest picture or longest light source life. The minimum setting of the light power is 30% brightness and color setting, and the maximum is 100% brightness and color setting.

- 1. Select Menu > Light Source > Constant Power.
- 2. Adjust the slider from 1 to 100 by arrow keys or select **ENTER** to input the value you selected.
- 3. After inputting the value, select **ENTER** to apply.

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## Diagnostic tools

Follow these procedures to help diagnose issues with Inspire Series 4K projectors.

## Viewing projector information

View the status of the projector, source information, light source information, and communication information. The information is read-only.

- 1. To view the status of the projector, such as model name, serial number, and so on, select **Menu** > **Information** > **Status Info**.
- 2. To view source information, such as active source, signal format, and so on, select **Menu** > **Information** > **Source Info**.
- 3. To view backup input information, such as backup input status, backup input change, and so on, select **Menu** > **Information** > **Backup Input Info**.
- 4. To view the communication information, such as network status, projector's IP address, subnet, and so on, select **Menu** > **Information** > **Communications Info**.
- 5. To view the light source information, such as total projector hours and laser diode (LD) hours, select **Menu** > **Information** > **Light Source Info**.
- 6. To view the firmware information, such as firmware (FW) version, and so on, select **Menu** > **Information** > **Firmware Version Info**.

## Selecting a test pattern

Use the projector's test patterns to assist with configuration of the projector and to diagnose any issues that may occur.

- 1. Select Test Pattern on remote control.
  - You can also select the test patterns from Menu > Test Pattern.
- 2. Scroll through the list of test patterns by left and right arrow keys on remote control.
- 3. Select the required test pattern.
- 4. To confirm your selection, select **ENTER**.



## **Restoring factory default settings**

Restoring factory settings removes all custom device settings.



To avoid warranty violation, only Christie-qualified technicians can reset factory defaults.

- 1. Select **MENU** > **Configuration** > **Service**.
- 2. Enter the service password.
- 3. Select **Factory Reset**.

All customized settings are set to the default factory settings.

4. At the confirmation prompt, select **OK**.

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# Configuring input settings

Learn how to configure the input source and picture-in-picture (PIP)/picture-by-picture (PBP) settings.

## Setting the main input source

Set up the active input to be used as the main image.

- 1. Select Menu > Input Switching & PIP > Main Input.
- 2. To select the active input, select **ENTER**.

## Setting the second input source

Select an active input to be used as the picture-in-picture (PIP)/picture-by-picture (PBP).

- 1. Select Menu > Input Switching & PIP > PIP/PBP Input.
- 2. To select another active input, select **ENTER**.

## **Enabling the second input source**

To activate the picture-in-picture (PIP)/picture-by-picture (PBP) setting, switch on this function.

- 1. Select Menu > Input Switching & PIP > PIP/PBP Enable.
- 2. To swap, select **ENTER**.

## Swapping the main input and second input source

Switch the main input source with second input source.

- 1. Select Menu > Input Switching & PIP > Swap.
- 2. To swap, select **ENTER**.



## Setting the size of second input source

Set the size of picture-in-picture (PIP)/picture-by-picture (PBP). See *Input sources layout and size* on page 70 for more details of the layout and size.

- 1. Select Menu > Input Switching & PIP > Size.
- 2. Select the appropriate size, small, medium or large, for PIP/PBP input source.
- 3. To confirm the selection, select **ENTER**.

## Setting the display layout with two input sources

Set the display location for main input source and second input source on the screen. See *Input sources layout and size* on page 70 for more details of the layout and size.

- 1. Select Menu > Input Switching & PIP > Layout.
- 2. Select the appropriate layout.
- 3. To confirm the selection, select **ENTER**.

#### Input sources layout and size

A P indicates the primary source region (lighter color) and an asterisk (\*) indicates both regions are the same size.

PIP/PBP layout	PIP/PBP size		
	Small	Medium	Large
PBP, Main Left	Р	Р	*
PBP, Main Top	P	Р	*
PBP, Main Right	Р	Р	*
PBP, Main Bottom	P	P	*
PIP, Sub Bottom Right	P	Р	P
PIP, Sub Bottom Left	P	P	P



PIP/PBP layout	PIP/PBP size		
	Small	Medium	Large
PIP, Sub Top Left	P	P	P
PIP, Sub Top Right	P	P	P

## Setting the timing detection mode

Set timing detection mode to enhanced or normal to support additional PC timings. When the projected picture is not completed, this function is used to adjust the picture.

- 1. Select Menu > Input Switching & PIP > Auto Image Resync.
- 2. Select the appropriate mode:
  - **Normal**—If the input signal source has been plugged to the same port on the projector and not been replugged, then the projector can process the signal at a faster speed.
  - **Enhanced**—Every time the projector receives the signal, it will analyze the source signal profoundly and verify the integrity. This ensures the optimal image quality but consumes more time.
- 3. To confirm the selection, select **ENTER**.

## Setting the input searching method

Set the most suited method for searching input source.

- 1. Select Menu > Input Switching & PIP > Input key.
- 2. Select the appropriate searching method:
  - **Change Sources**—Change the source manually by selecting **INPUT** on the keypad or remote control.
  - List all Sources—Select to list all the sources and then select the input source you want.
  - Auto Sources—Automatically search the source.
- 3. To confirm the selection, select **ENTER**.



## Setting up the backup input

Use the Backup Input function to set up two input sources with the same timing specification using the HDMI switch/splitter. Upon loss of one input source due to the damaged cable, the projector automatically switches to the other source. The switching time is less than 1 second.

- 1. Select Menu > Input Switching & PIP > Backup Input.
- 2. Set up the appropriate setting:
  - **Auto Switch**—Selects the checkbox to enable automatically switch to backup input source when the current signal fails.
  - Current Signal—Shows the current active signal.
  - **First Input**—Selects the first input. When the selected source is activated, the on-screen display (OSD) menu displays the signal's Resolution, Horz Refresh, and Color Space.
  - **Second Input**—Selects the second input. When the selected source is activated, the OSD menu displays the signal's Resolution, Horz Refresh, and Color Space.

## Adjusting the sub image

Adjust the image related settings for the sub source in PIP mode.

- Select Menu > Input Switching & PIP > Adjust Sub Image.
- 2. Set up the appropriate setting for sub source:
  - Brightness—Adjust the brightness of the sub image to adapt to various ambient light.
  - **Contrast**—Adjust the contrast ratio of the sub image.
  - **Color Space**—Select a color space for the sub image.

## **Enabling low latency mode**

Enable the Low Latency Mode to minimize the input lag. This function is used for live broadcasting, streaming media, and similar installations.

- 1. Select Menu > Input Switching & PIP > Low Latency Mode.
- 2. Select the appropriate mode.
  - Normal—No functional restrictions but longer delay time.
  - Ultra—Reduces latency in 2D mode but sets restrictions when warping the image.



Ultra does not support 3D, input timings outside the range of 60fps, 120fps, and 240fps, PIP/PBP mode, and image freeze.

3. To confirm the selection, select **ENTER**.



### **Configuring the EDID setting**

Enable or disable the Extended Display Identification Data (EDID) for HDMI 2.0 to play videos from hardware devices, such as DVD players.

The most commonly used HDMI versions are HDMI 1.4 and 2.0, with differences in bandwidth. The projector is compatible with both HDMI 1.4 and HDMI 2.0. When the projector is connected to a hardware device supporting HDMI 1.4 only, disable the EDID for HDMI 2.0 to play the videos properly.

- 1. Select Menu > Input Switching & PIP > EDID.
- 2. Select the **HDMI 1**, **HDMI 2**, or **HDBaseT** item where you want to enable EDID.
- 3. Set **1.4** or **2.0**.
- 4. To confirm the setting, select **ENTER**.

#### **Configuring the HDMI output**

Set the default HDMI output port.



If multiple projectors are connected to each other in a daisy chain, the HDR signal output is determined by the first projector and PC handshake.

- 1. Select Menu > Input Switching & PIP > HDMI Out put.
- 2. Select **HDMI 1** or **HDMI 2** as the HDMI output.
- 3. To confirm the setting, select **ENTER**.

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# Signal connectivity specifications

Identify the signal connectivity specifications for Inspire Series 4K projector.

The list of formats listed below are not exhaustive and other formats may be supported. For more information, contact Christie Technical Support.



#### **HDMI1/HDMI2** video formats

Identify the video formats for the HDMI1/HDMI2 input.

Signal type	Signal format	Resolution			V sync (Hz)	RGB			YCbCr	YCbCr 4:2:2		
						8 bit	10 bit	12 bit	8 bit	10 bit	12 bit	8 bit
PC	XGA	1024 x 768	1.33	4:3	60	V	V	V	V	V	V	V
					70	V	V	V	V	V	V	V
	XGA	1024 x 768			75	V	V	V	V	V	V	V
					85	V	V	V	V	V	V	V
					120	V	V	V	V	V	V	V
	SXGA	1152 x 864			75	V	V	V	V	V	V	V
		1152 x 870	1.32		75	V	V	V	V	V	V	V
	WXGA	1280 x 768	1.67	5:3	60	V	V	V	V	V	V	V
					75	V	V	V	V	V	V	V
					85	V	V	V	V	V	V	V
		1280 x 800	1.6	16:10	60	V	V	V	V	V	V	V
					75	5 V V V V V	V	V	V			
					85	V	V	V	V	V	V	V
	SXGA	1280 x 960	1.33	4:3	60	V	V	V	V	V	V	V
					85	V	V	V	V	V	V	V
		1280 x 1024	1.25	5:4	60	V	V	V	V	V	V	V
					75	V	V	V	V	V	V	V
					85	V	V	V	V	V	V	V
	WXGA	1360 x 768	1.78	16:9	60	V	V	V	V	V	V	V
		1366 x 768				V	V	V	V	V	V	X
	SXGA+	1400 x 1050	1.33	4:3		V	V	V	V	V	V	V
	WXGA+	1440 x 900	1.6	16:10	60	V	V	V	V	V	V	V
					75	V	V	V	V	V	V	V
					85	V	V	V	V	V	V	V
	WXGA++	1600 x 900	1.78	16:9	60	V	V	V	V	V	V	V
	UXGA	1600 x 1200	1.33	4:3	50	V	V	V	V	V	V	V
					60	V	V	V	V	V	V	V
	WSXGA+	1680 x 1050	1.6	16:10		V	V	V	V	V	V	V
	WUXGA RB	1920 x 1200RB			50	V	V	V	V	V	V	V
					60	٧	V	V	V	V	V	V



Signal type	Signal format	Resolution	Aspect ratio		V sync (Hz)	RGB			YCbCr 4:4:4			YCbCr 4:2:2
						8 bit	10 bit	12 bit	8 bit	10 bit	12 bit	8 bit
TV	HDTV (1000)	1920 x 1080	1.78	16:9	50	V	V	V	V	V	V	V
	(1080i)				59.94	V	V	V	V	V	V	V
					60	V	V	V	V	V	V	V
	HDTV (720p)	1280 x 720			50	V	V	V	V	V	V	V
	(720p)				59.94	V	V	V	V	V	V	V
					60	V	V	V	V	V	V	V
					120	V	V	V	V	V	V	V
	HDTV (1080p)	1920 x 1080			23.98	V	V	V	V	V	V	V
					24	V	V	V	V	V	V	V
					25	V	V	V	V	V	V	V
					29.97	V	V	V	V	V	V	V
					30	V	V	V	V	V	V	V
					50	V	V	V	V	V	V	V
					59.94	V	V	V	V	V	V	V
					60	V	V	V	V	V	V	V
					120	V	V	V	V	V	V	V
Mandatory	Frame Packing (1080p)	1920 x 1080			23.98	V	V	V	V	V	V	V
3D					24	V	V	V	V	V	V	V
	Frame Packing (720p)	1280 x 720			50	V	V	V	V	V	V	V
					59.94	V	V	V	V	V	V	V
					60	V	V	V	V	V	V	V
	Side by Side	1920 x 1080			50	V	V	V	V	V	V	V
	(1080i)				59.94	V	V	V	V	V	V	V
					60	V	V	V	V	V	V	V
	Side by Side				24	V	V	V	V	V	V	V
	(1080p)				50	V	V	V	V	V	V	V
					59.9	V	V	V	V	V	V	V
					60	V	V	V	V	V	V	V
	Top and	1280 x 720			50	V	V	V	V	V	V	V
	Bottom (720p)				59.94	V	V	V	V	V	V	V
	(720p)				60	V	V	V	V	V	V	V



Signal type	Signal Resolution Aspect ratio format		t ratio	V sync (Hz)	RGB			YCbCr	YCbCr 4:2:2			
						8 bit	10 bit	12 bit	8 bit	10 bit	12 bit	8 bit
Mandatory	Top and	1920 x 1080	1.78	16:9	23.98	V	V	V	V	V	V	V
3D	Bottom (1080p)				24	V	V	V	V	V	V	V
	(1000)				59.9	V	V	V	V	V	V	V
					60	V	V	V	V	V	V	٧
Frame	XGA	1024 x 768	1.33	4:3	120	V	V	V	V	V	V	V
Sequential 3D	HDTV	1280 x 720	1.78	16:9		V	V	V	V	V	V	V
	1080p	1920 x 1080				V	V	V	V	V	V	V
					60	V	V	V	V	V	V	V
	WUXGA	1920 x 1200	1.6	16:10		V	V	V	V	V	V	V
4K	3840 x 2160	3840 x 2160	1.78	16:9	24	V	V	V	V	V	V	V
					25	V	V	V	V	V	V	٧
					30	V	V	V	V	V	V	V
					50	V	Х	Х	V	Х	Х	٧
					60	V	Х	Х	V	Х	Х	V
	4096x2160 SMPTE	4096 x 2160	1.90		24	V	V	V	V	V	V	V
					25	V	V	V	V	V	V	V
					30	V	V	V	V	V	V	V
					50	V	Х	Х	V	Х	Х	V
					60	V	Х	Х	V	Х	Х	V
Dual Pipe	1080p	1920x1080	1.78	16:9	60	V	V	V	V	V	V	V
4K 3D (Passive 3D)	3840x2160	3840x2160				V	X	Х	V	X	X	V
4K 3D Dual Pipe (Passive 3D)					60	V	X	X	V	X	X	V
High Frame Rate	1080p	1920×1080			240	V	Х	Х	V	Х	Х	V

(V): Video format is supported.

(X): Video format is Not supported.



#### **HDBaseT video formats**

Identify the video formats for the HDBaseT input.

Signal type	Signal format	Resolution	Aspect ratio		V Sync	RGB			YCbCr 4:4:4			YCbCr 4:2:2
					(Hz)	8 bit	10 bit	12 bit	8 bit	10 bit	12 bit	8 bit
PC	XGA	1024 x 768	1.33	4:3	60	V	V	V	V	V	V	V
					70	V	V	V	V	V	V	V
					75	V	V	V	V	V	V	V
					85	V	V	V	V	V	V	V
					120	V	V	V	V	V	V	V
	SXGA	1152 x 864			75	V	V	V	V	V	V	V
		1152 x 870	1.32		75	V	V	V	V	V	V	V
	WXGA	1280 x 768	1.67	5:3	60	V	V	V	V	V	V	V
					75	V	V	V	V	V	V	V
					85	V	V	V	V	V	V	V
		1280 x 800	1.6	16:10	60	V	V	V	V	V	V	V
					75	V	V	V	V	V	V	V
					85	V	V	V	V	V	V	V
TV	SXGA	1280 x 960	1.33	4:3	60	V	V	V	V	V	V	V
					85	V	V	V	V	V	V	V
		1280 x 1024	1.25	5:4	60	V	V	V	V	V	V	V
					75	V	V	V	V	V	V	V
					85	V	V	V	V	V	Х	V
	WXGA	1360 x 768	1.78	16:9	60	V	V	V	V	V	V	V
		1366 x 768				V	V	V	V	V	V	V
	SXGA+	1400 x 1050	1.33	4:3		V	V	V	V	V	V	V
	WXGA+	1440 x 900	1.6	16:10	60	V	V	V	V	V	V	V
					75	V	V	V	V	V	V	V
					85	V	V	V	V	V	V	V
	WXGA++	1600 x 900	1.78	16:9	60	V	V	V	V	V	V	V
	UXGA	1600 x 1200	1.33	4:3	50	V	V	V	V	V	V	V
					60	V	V	V	V	V	X	V
	WSXGA+	1680 x 1050	1.6	16:10		V	V	V	V	V	V	V
	WUXGA RB	1920 x 1200RB	-		50	V	V	V	V	V	V	V
					60	V	V	V	V	V	Х	V



Signal type	Signal format	Resolution	Aspect ratio		V Sync	RGB			YCbCr 4:4:4			YCbCr 4:2:2
				(Hz)		8 bit	10 bit	12 bit	8 bit	10 bit	12 bit	8 bit
TV	HDTV	1920 x 1080	1.78	16:9	50	V	V	V	V	V	V	V
	(1080i)				59.94	V	V	V	V	V	V	V
					60	V	V	V	V	V	V	V
	HDTV	1280 x 720			50	V	V	V	V	V	V	V
	(720p)				59.94	V	V	V	V	V	V	V
					60	V	V	V	V	V	V	V
					120	V	V	V	V	V	V	V
	HDTV (1080p)	1920 x 1080			23.98	V	V	V	V	V	V	V
					24	V	V	V	V	V	V	V
					25	V	V	V	V	V	V	V
					29.97	V	V	V	V	V	V	V
					30	V	V	V	V	V	V	V
					50	V	V	V	V	V	V	V
					59.94	V	V	V	V	V	V	V
					60	V	V	V	V	V	V	V
					120	V	V	V	V	V	V	V
Mandatory	Frame Packing (1080p)	1920 x 1080			23.98	V	V	V	V	V	V	V
3D					24	V	V	V	V	V	V	V
	Frame Packing (720p)	1280 x 720			50	V	V	V	V	V	V	V
					59.94	V	V	V	V	V	V	V
					60	V	V	V	V	V	V	V
	Side by Side	1920 x 1080			50	V	V	V	V	V	V	V
	(1080i)				59.94	V	V	V	V	V	V	V
					60	V	V	V	V	V	V	V
	Side by Side				24	V	V	V	V	V	V	V
	(1080p)				50	V	V	V	V	V	V	V
					59.9	V	V	V	V	V	V	V
					60	V	V	V	V	V	V	V
	Top and	1280 x 720			50	V	V	V	V	V	V	V
	Bottom (720p)				59.94	V	V	V	V	V	V	V
	(720þ)				60	V	V	V	V	V	V	V



Signal type	Signal format	Resolution	Aspect ratio		V Sync	RGB			YCbCr 4:4:4			YCbCr 4:2:2
					(Hz)	8 bit	10 bit	12 bit	8 bit	10 bit	12 bit	8 bit
Mandatory	Top and	1920 x 1080	1.78	16:9	23.98	V	V	V	V	V	V	V
3D	Bottom (1080p)				24	V	V	V	V	V	V	V
	(				59.9	V	V	V	V	V	V	V
					60	V	V	V	V	V	V	V
Frame	XGA	1024 x 768	1.33	3 4:3	120	V	V	V	V	V	V	V
Sequential 3D	HDTV	1280 x 720	1.78	16:9		V	V	V	V	V	V	V
	1080p	1920 x 1080				V	V	V	V	V	V	V
					60	V	V	V	V	V	V	V
	WUXGA	1920 x 1200	1.6	16:10		V	V	V	V	V	V	V
4K	3840 x 2160	3840 x 2160	1.78	16:9	24	V	V	V	V	V	V	V
					25	V	V	V	V	V	V	V
					30	V	V	V	V	V	V	V
					50	V	X	X	V	X	X	V
					60	V	X	X	V	X	X	V
	4096x2160 SMPTE	4096 x 2160	1.90		24	V	X	X	V	X	X	V
					25	V	X	X	V	X	X	V
					30	V	X	X	V	X	X	V
					50	V	X	X	V	X	X	V
					60	V	X	X	V	X	X	V
4K 3D (Passive 3D)	3840x2160	3840x2160	1.78	16:9	60	V	X	X	V	X	X	V
4K 3D Dual Pipe (Passive 3D)						V	X	X	V	X	X	V
High Frame Rate	1080p	1920×1080			240	V	X	X	V	X	X	V

(V): Video format is supported.

(X): Video format is not supported.



## Picture-in-picture/picture-by-picture (PIP/PBP) compatibility

The following table details the picture-in-picture/picture-by-picture (PIP/PBP) compatibility.

	HDMI-1	HDMI-2	Display Port	HDBaseT	12G-SDI
HDMI-1		V	V	V	V
HDMI-2	V		V	V	V
Display Port	V	V		V	V
HDBaseT	V	V	V		V
12G-SDI	V	V	V	V	

• (v): PIP/PBP combinations are enabled.

#### **CHKISTIE**®

## Regulatory

This product conforms to the following regulations related to product safety, environmental requirements and electromagnetic compatibility (EMC).

### **Safety**

- IEC 62368-1:2018 Audio/Video, Information And Communication Technology Equipment -Part 1: Safety Requirements
- IEC 62368-1:2014 Audio/Video, Information And Communication Technology Equipment -Part 1: Safety Requirements
- EN/BS 62368-1:2014 + A11: 2017 Audio/Video, Information And Communication Technology Equipment Part 1: Safety Requirements
- UL 62368-1:2019 R10.21 Audio/Video, Information And Communication Technology Equipment Part 1: Safety Requirements
- CSA C22.2 NO. 62368-1:19:2018 Audio/Video, Information And Communication Technology Equipment - Part 1: Safety Requirements

#### **Laser safety**

- IEC 60825-1:2014, EN 60825-1:2014+A11:2021 Safety of Laser Products Part 1: Equipment Classification and Requirements
- IEC/EN62471-5:2015 Photobiological safety of lamps and lamp systems Part 5: Image projectors
- FDA LN57: 2019 Classification and Requirements for Laser Illuminated Projectors (LIPs)



#### **Electro-magnetic compatibility**

#### **Emissions**

- FCC CFR47, Part 15, Subpart B/ANSI C63.4, Class A Unintentional Radiators
- CAN ICES-3 (A) / NMB-3 (A)
- CISPR 32:2015+A1:2019 / EN 55032:2015+A11:2020, Class A Information Technology
- IEC 61000-3-2/EN61000-3-2 Limits for Harmonic Current Emissions
- IEC 61000-3-3/EN61000-3-3 Limitations of Voltage Changes, Voltage Fluctuations, and Flicker

#### **Immunity**

 CISPR 35: 2016 modified / EN55035:2017+A11:2020 - EMC Requirements-Information Technology Equipment

#### **FCC**

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:

- (1)This device may not cause harmful interference,
- (2)This device must accept any interference receive; including interference that may cause undesired operation.

This Equipment has been tested and found to comply with the limits for a Class A 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 own expense.

#### **ISED**

The Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Standard.

Cet appareil numerique de la class A respecte toutes les exigences du Reglement sur le materiel brouilleur du Canada.



#### CE

This product is herewith confirmed to comply with the requirements set out in the Council Directives on the Approximation of the laws of the Member States relating to Electromagnetic Compatibility Directive 2004/108/EEC.



#### Warning!

- This product must not be used in residential areas.
- This product may cause interference if used in residential areas.

Such use must be avoided unless the user takes special measures to reduce electromagnetic emissions to prevent interference to the reception of radio and television broadcasts.

#### **Environmental**

- EU Directive (2011/65/EU) on the restriction of the uses of certain hazardous substances (RoHS) in electrical and electronic equipment and the applicable official amendment(s)
- Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) and the applicable official amendment(s)
- China Ministry of Information Industry (along with 7 other Government Agencies) Order No.32 (01/2016) on the control of pollution caused by electronic information products, hazardous substances concentration limits (GB/T 26572 2011), and the applicable product marking requirement (SJ/T 11364 2014).
  - International packaging recycling mark requirements.
- EU Directive (2012/19/EU) on waste and electrical and electronic equipment (WEEE) and the applicable official amendment(s).
- EU Directive (94/62/EC) on packaging and packaging waste.

#### **Declaration of Conformity for EU countries**

- EMC Directive 2014/30/EU (including amendments)
- Low Voltage Directive 2014/35/EU
- (RED) 2014/53/EU (if product has RF function)
- RoHS Directive 2011/65/EU



#### **WEEE**

This product is herewith confirmed to comply with the requirements set out in the Council Directives on the Approximation of the laws of the Member States relating to Electromagnetic Compatibility Directive 2004/108/EEC.

#### **Disposal instructions**

Do not throw this electronic device into the trash when discarding.

To minimize pollution and ensure utmost protection of the global environment, recycle it.

