

# **User Manual**

020-000807-02

## **H Series, HS Series, GS Series (700, 850) Warping and Blending**



## NOTICES

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- h. Problems or damage caused by use of a product on a motion platform or other movable device where such product has not been designed, modified or approved by Christie for such use.
- i. Problems or damage caused by use of a projector in the presence of an oil-based fog machine or laser-based lighting that is unrelated to the projector.
- j. For LCD projectors, the warranty period specified in the warranty applies only where the LCD projector is in "normal use" which means the LCD projector is not used more than 8 hours a day, 5 days a week.
- k. Except where the product is designed for outdoor use, problems or damage caused by use of the product outdoors unless such product is protected from precipitation or other adverse weather or environmental conditions and the ambient temperature is within the recommended ambient temperature set forth in the specifications for such product.
- l. Defects caused by normal wear and tear or otherwise due to normal aging of a product.

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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.

CAN ICES-3 (A) / NMB-3 (A)

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### ENVIRONMENTAL

The product is designed and manufactured with high-quality materials and components that can be recycled and reused. This symbol  means that electrical and electronic equipment, at their end-of-life, should be disposed of separately from regular waste. Please dispose of the product appropriately and according to local regulations. In the European Union, there are separate collection systems for used electrical and electronic products. Please help us to conserve the environment we live in!

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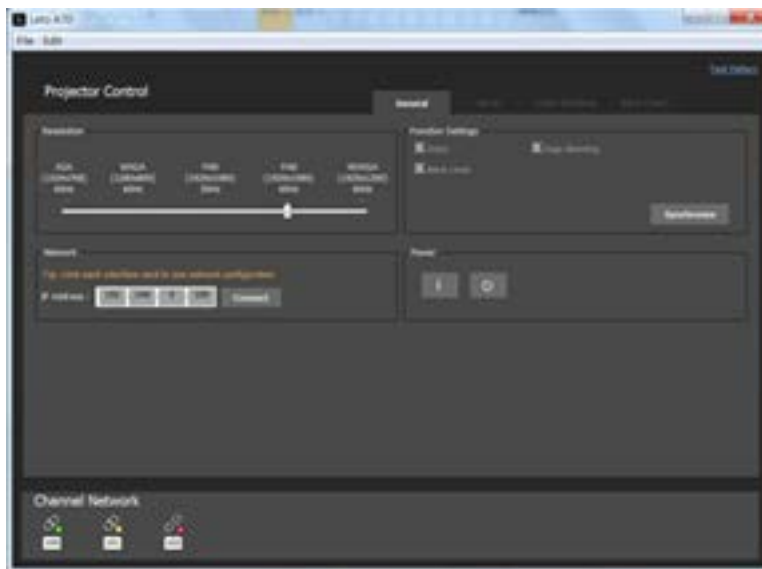
# Warping and blending

The projector provides three major functions: warp, edge blending, and black leveling.

## Operating a single projector

Use the New Multi-Function feature to operate a single projector.



To enable New Multi-Function, from the File menu, select New Multi-Function.  
The Projector Control dialog appears.



## Channel Network indicators

The Channel Network icons provide information about the connection to the Channel Network.

Icon	Description
	Indicates disconnection from the channel network.
	Indicates connection to the channel network. The selected channel appears in a blue box.

Icon	Description
	Indicates the connection to the channel network is asleep.
	Indicates the selected channel.

## Deleting a selected channel

If a channel is no longer required, delete it.

1. In the Projector Control dialog, select the channel to delete.
2. On the keyboard, press **Delete**.  
The selected channel is deleted.

## Changing General settings

The General settings control the resolution and network information such as the IP address.

1. In the Projector Control dialog, switch to the **General** tab.
2. In the Resolution section, use the slider to select the appropriate resolution.
3. To change the IP address, in the IP Address field, type the IP address.
4. Click **Connect**.
5. To enable various functions, click **Apply**.



6. To apply default settings, click **Reset**.
7. To apply the current settings to the projector, click **Reconfigure**.

## Enabling warping

Use warping to project images on any surface shape.

1. In the Projector Control dialog, switch to the **Warp** tab.



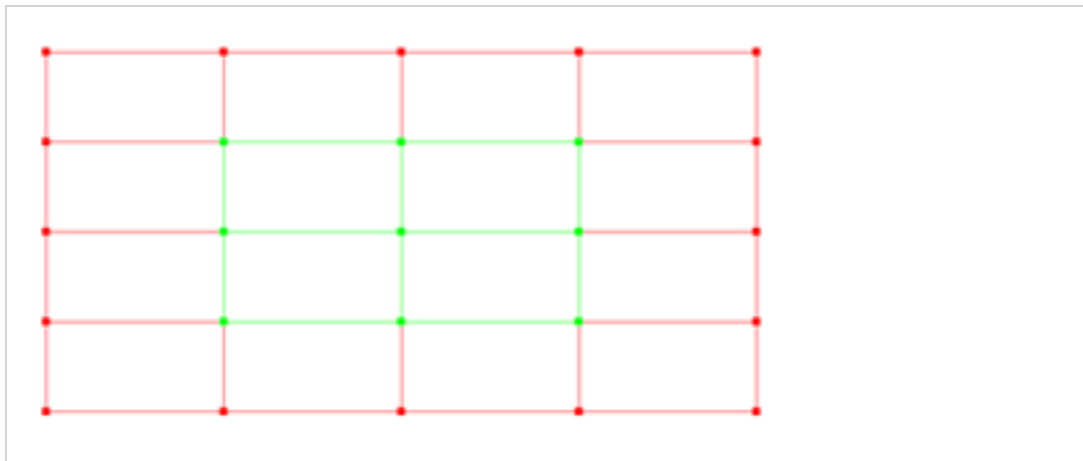
2. To change the cursor color, in the Cursor section, right click on **Color** and select the color.

3. In the Warp section select the warp type: **Curve** or **Linear**.
4. To increase or decrease the grid number, use the Grid Number slider.  
You can also use **Ctrl+** or **Ctrl-**.
5. To increase or decrease the move pitch, use the Move Pitch slider.  
You can also use **Ctrl+** or **Ctrl-**.
6. To select the cursor, click in the grid or type W, A, S, or D.  
The selected cursor changes to orange.
7. To move the cursor, use the arrow keys.
8. To revert to the previous warp table, click **Undo**.

## Adjusting cursors

Adjust the inner and outer cursors after enabling warping.

1. Start with a minimal number of grids and gradually increase the number of grids.  
Christie recommends starting with a 2x2 setup. Using fewer grids allows for less warping.
2. Adjust the outer cursors as shown in red below.
3. Adjust the inner cursors as shown in green below.  
Adjusting the outer cursors after adjusting the inner cursors, removes the inner cursor settings.



## Enabling edge blending

Combine several projected images into one single, seamless image with edge blending.

The warping adjustment determines if the blending area matches another blending area.

1. In the Projector Control dialog, switch to the **Edge Blending** tab.



2. To enable edge blending, select **Enable**.
3. In the Start list, enter the start of the blending area and press **Enter**.
4. In the Width list, enter the width of the blending area and press **Enter**.  
When setting the blending width make sure the edge blending marker is superimposed on the other blending marker.
5. To enable the marker function, select **Enable Marker**.
6. To change the marker of the blending area, right-click on the **Start** color box and select a color.
7. Right-click on the **End** color box and select a color.  
The blending area is set in the center box.
8. Repeat steps 2 to 7 for the Left, Right, and Bottom edge blending areas.
9. To enable the gamma function, in the Gamma section, select **Enable**.
10. To control the gamma curve of the blending area, enter a value and press **Enter**.  
For adjacent projectors make sure the gamma value is the same.
11. To revert to the default settings, click **Reset**.

## Enabling test patterns

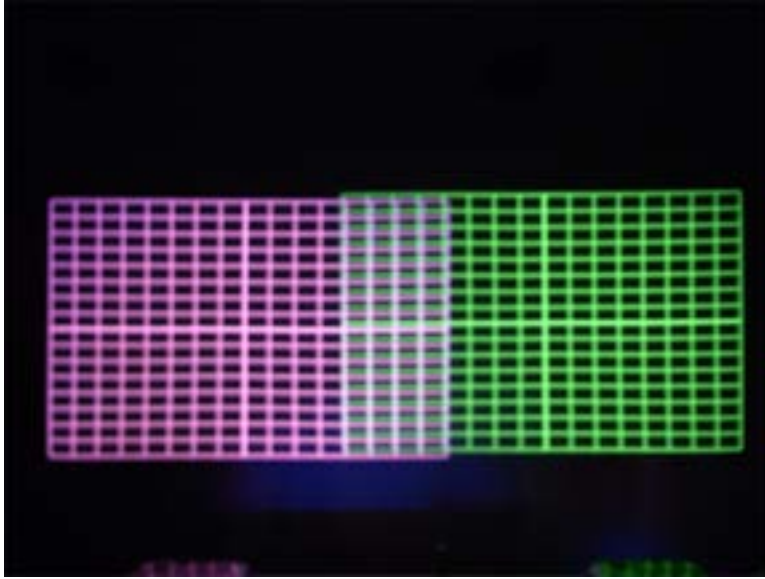
Use the test patterns to assist with tuning edge blending.

1. In the Projector Control dialog, switch to the **Edge Blending** tab.
2. In the Test Pattern section, select **Enable**.
3. To change the color of the test pattern, right-click on one of the color boxes and select a color.
4. Repeat step 3 for the other color box.

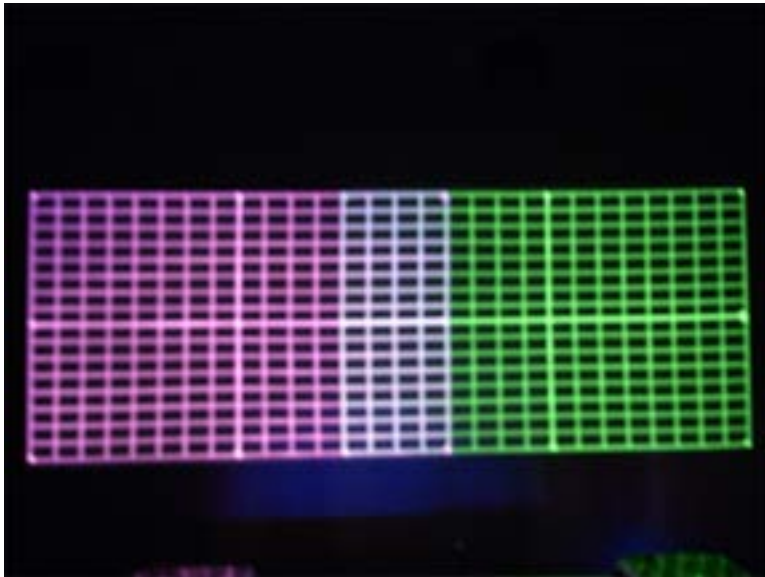
## Example edge blends using a test pattern

A test pattern can help to tune edge blending.

### Before adjustment



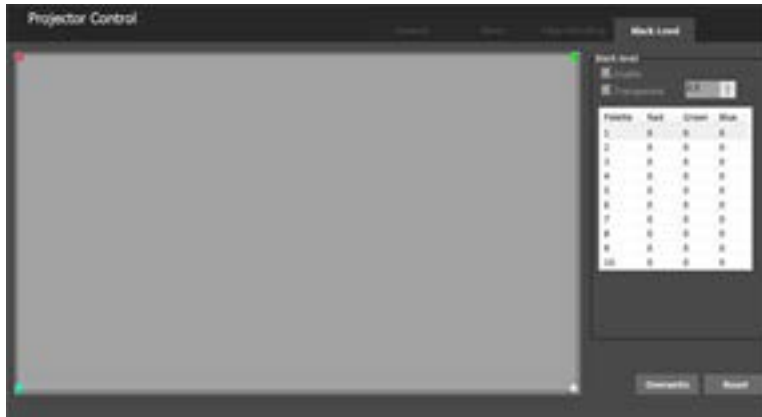
### After adjustment



## Enabling black leveling

Use black leveling to modify the pixels in the bright overlapping areas that result from the overlapping of two or more images.

1. In the Projector Control dialog, switch to the **Black Level** tab.



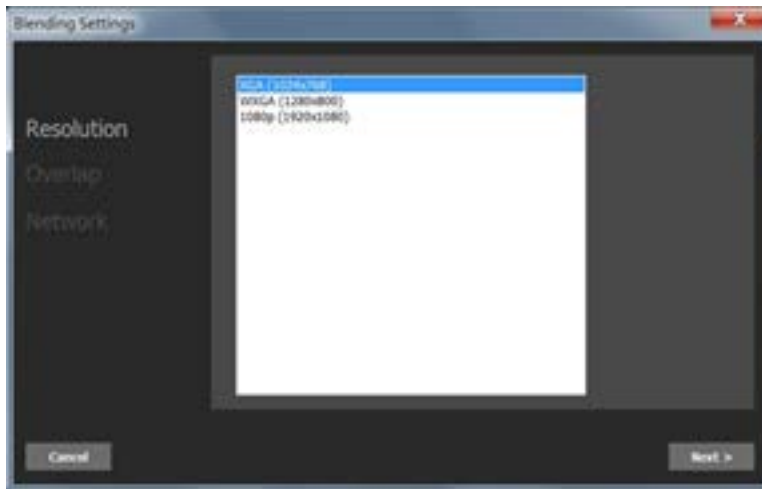
2. To enable black leveling, select **Enable**.
3. To select a control point, type **W**, **A**, **S**, or **D**.
4. Use the mouse to drag and position the control point at the required location.
5. To fine tune the position, use the arrow keys.
6. To set the color of the selected area, click on the first row of the palette.
7. In the Color Palette dialog, select a color and click **OK**.
8. To control the transparency of the black level area, enter a transparency value.
9. To apply the settings, click **Overwrite**.

## Operating multiple projectors

Use the New Blending feature to operate multiple projectors.

To enable New Multi-Function, from the File menu, select **New Blending**.

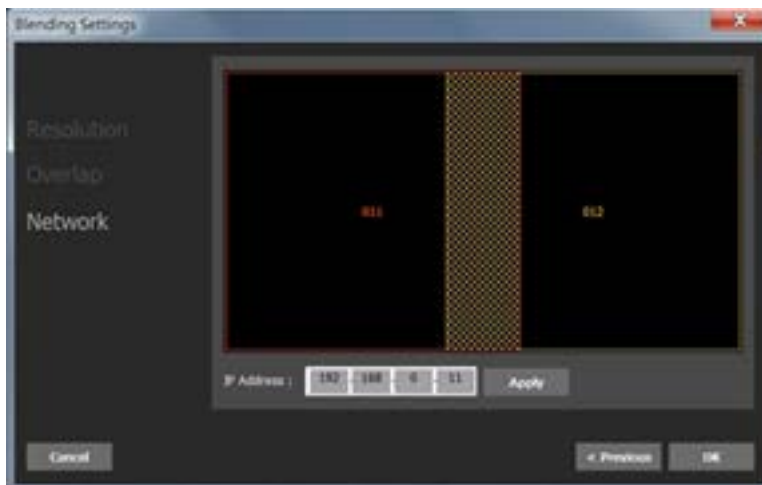
The Blending Settings dialog appears.



## Configuring blending settings for multiple projectors

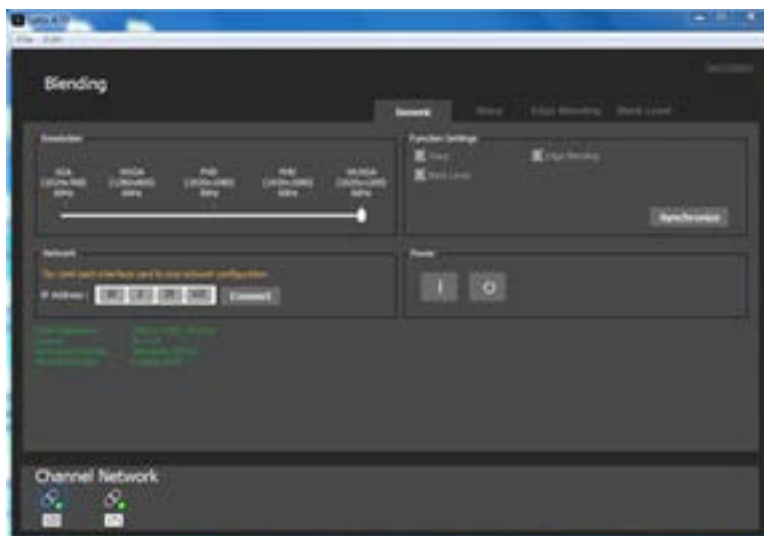
Combine several projected images into one single, seamless image with edge blending, for multiple projectors.

1. In the Blending Settings dialog, select a resolution.
2. Click **Next**.
3. In the Overlap tab, select a layout.
4. To change the percentage of the horizontal overlap, use the Horizontal Overlap slider or enter a pixel value.
5. To change the percentage of the vertical overlap, use the Vertical Overlap slider or enter a pixel value.
6. Click **Next**.
7. In the Network tab, to select the projector you want to control, click on the box.



8. In the IP Address field, type the IP address of the projector.
9. To apply the change, click **Apply**
10. For the remaining projectors, repeat steps 7 to 9.

11. Click **OK**.
12. To view the settings, select **File > New Multi-Function**.  
The settings are displayed.



## Saving current settings

Save your settings once you have them configured.

1. Make any adjustments required for warping, edge blending, or black leveling, or modify the general settings.
2. From the File menu, select **Save**.

## Opening previously saved settings

After starting a new session, instead of creating new warping, edge blending, or black leveling settings, you can open the previously saved settings.

From the File menu, select **Open**.

## Applying previously saved settings

If you modified the general settings or made adjustments for warping, edge blending, or black leveling, you can revert to the previously saved settings.

1. From the File menu, select **Open**.
2. Switch to the **General** tab.
3. In the Network section, enter the required IP address.
4. Click **Connect**.
5. To apply the previous settings, click **Synchronize**.

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