NOTICES
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GENERAL
Every effort has been made to ensure accuracy, however in some cases changes in the products or availability could occur which may not be reflected in this document. Christie reserves the right to make changes to specifications at any time without notice. Performance specifications are typical, but may vary depending on conditions beyond Christie's control such as maintenance of the product in proper working conditions. Performance specifications are based on information available at the time of printing. Christie makes no warranty of any kind with regard to this material, including, but not limited to, implied warranties of fitness for a particular purpose. Christie will not be liable for errors contained herein or for incidental or consequential damages in connection with the performance or use of this material. Manufacturing facilities in Canada and China are ISO 9001 certified. Manufacturing facilities in Canada are also ISO 14001 certified.

WARRANTY
Products are warranted under Christie's standard limited warranty, the complete details of which are available by contacting your Christie dealer or Christie. In addition to the other limitations that may be specified in Christie's standard limited warranty and, to the extent relevant or applicable to your product, the warranty does not cover:

a. Problems or damage occurring during shipment, in either direction.
b. Problems or damage caused by combination of a product with non-Christie equipment, such as distribution systems, cameras, DVD players, etc., or use of a product with any non-Christie interface device.
c. Problems or damage caused by misuse, improper power source, accident, fire, flood, lightning, earthquake, or other natural disaster.
d. Problems or damage caused by improper installation/alignment, or by equipment modification, if by other than Christie service personnel or a Christie authorized repair service provider.
e. Use of third party product enclosures for environmental protection during outside use must be approved by Christie.
f. 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.
g. 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.
h. Defects caused by normal wear and tear or otherwise due to normal aging of a product.

The warranty does not apply to any product where the serial number has been removed or obliterated. The warranty also does not apply to any product sold by a reseller to an end user outside of the country where the reseller is located unless (i) Christie has an office in the country where the end user is located or (ii) the required international warranty fee has been paid.

The warranty does not obligate Christie to provide any on site warranty service at the product site location.

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
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.

ENVIRONMENTAL
The product is designed and manufactured with high-quality materials and components that can be recycled and reused. This symbol \( \text{\textcopyright} \) 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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Safety precautions

Learn about the safety precautions related to the Christie CP2320-RGB projector. This projector is intended for use in a cinema environment.

General safety precautions

Read all safety and warning guidelines before installing or operating the projector.

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

- 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.
- 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.
- Install the product so users and the audience cannot enter the restricted area at eye level.
- ELECTRICAL and BURN HAZARD! Use caution when accessing internal components.
- High leakage current present when connected to IT power systems.
- FIRE AND SHOCK HAZARD! Use only the attachments, accessories, tools, and replacement parts specified by Christie.
- FIRE HAZARD! Do not use a power cord, harness, or cable that appears damaged.
- HAZARDOUS SUBSTANCE! Use caution when handling the product as it contains ethylene glycol. Do not ingest coolant. For information on safe handling, refer to the Safety Data Sheet (SDS) for the coolant.
- A minimum of four people or appropriately rated lift equipment is required to safely lift, install, or move the product.
- Do not install or operate the projector in any position that does not meet the stated product specifications for alignment and orientation.

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

- Only Christie qualified technicians are permitted to open product enclosures.
Laser safety precautions

Read all safety and warning guidelines before operating the projector laser.

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

- Do not operate the cinema projector without all of its covers in place.
- **LASER RADIATION HAZARD!** This projector has a built-in Class 4 laser module. Never attempt to disassemble or modify the laser module.
- Do not look directly into the lens when the light source is on. The extremely high brightness can cause permanent eye damage.
- Possible hazardous optical radiation emitted from this product. (Risk group 3)

AC/power precautions

Read all safety and warning guidelines before connecting to AC power.

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

- **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!** A dedicated, protected ground or earth wire must be installed on the product by Christie qualified technicians or electricians before it can be connected to power.
- **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.
- Always connect the ground or earth first to reduce shock hazard.
- A certified electrician must be present during installation to ensure the installation meets the local electrical code.

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

- Use an appropriately sized strain relief connector with the knockout plate provided, to ensure adequate environmental sealing and to prevent the AC supply cable from accidentally being torn out or rubbing against the knockout plate.
- **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!** Power supply uses double pole/neutral fusing.
Light intensity hazard distance

This projector has been classified as Risk Group 3 as per the IEC 62471:2006 standard due to possible hazardous optical and thermal radiation being emitted.

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


- PERMANENT/TEMPORARY BLINDNESS HAZARD! Operators must control access to the beam within the hazard distance or install the product at the height that prevents exposure of spectators’ eyes within the hazard distance. The hazard zone must be no lower than 2.5 meters (US installations) or 2.0 meters (global installations) above any surface upon which any persons are permitted to stand and the horizontal clearance to the hazard zone must be a minimum 1.0 meters.

- EXTREME BRIGHTNESS! Do not place reflective objects in the product light path.

The following diagram and table show the zones for ocular and skin hazard distances:

- **A**—Hazard zone. The region of space where the projection light from the laser-illuminated projector is above emission limits for Risk Group 2. The light intensity may cause eye damage after a momentary or brief exposure (before a person can avert his or her eyes away from the light source). The light may cause skin burns to occur.

- **B**—Hazard distance. Operators must control access to the beam within the hazard distance or install the product preventing potential exposure of the spectators' eyes from being in the hazard distance.

- **C**—No access zone. Horizontal clearance of the no access zone must be a minimum of 1.0 meters.

- **D**—Vertical distance to hazard zone. The hazard zone must be no lower than 2.5 meters (US installations) or 2.0 meters (global installations) above any surface upon which any persons are permitted to stand.

- **E**—Represents the top view of the projector.
- F—Represents the side view of the projector.

For US market only, hazard distances based upon FDA guidance document 1400056, *Classification and Requirements for Laser Illuminated Projectors (LIPs)*, dated February 18, 2015.

<table>
<thead>
<tr>
<th>Projection Lens Part Number</th>
<th>Hazard Distance (m)</th>
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<tbody>
<tr>
<td>1.05:1 DLP Cine HB zoom lens 108-319104-XX</td>
<td>1.2</td>
</tr>
<tr>
<td>1.2-1.75:1 DLP Cine HB zoom lens 108-350109-XX</td>
<td>1.8</td>
</tr>
<tr>
<td>1.39-1.9:1 DLP Cine HB zoom lens 108-327103-XX</td>
<td>2.1</td>
</tr>
<tr>
<td>1.5-2.2:1 DLP Cine HB zoom lens 108-329105-XX</td>
<td>2.3</td>
</tr>
<tr>
<td>1.75-2.4:1 DLP Cine HB zoom lens 108-321107-XX</td>
<td>2.6</td>
</tr>
<tr>
<td>1.9-3.0:1 DLP Cine HB zoom lens 108-328104-XX</td>
<td>3.2</td>
</tr>
<tr>
<td>2.4-3.9:1 DLP Cine HB zoom lens 108-322108-XX</td>
<td>4.1</td>
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</table>


<table>
<thead>
<tr>
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<tr>
<td>2.4-3.9 DLP Cine HB zoom lens 108-322108-XX</td>
<td>4.1</td>
</tr>
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For Installations in the United States

The following must be in place for laser-illuminated projector installations in the United States:

- The projection room shall be clearly identified by the posting of laser warning and restricted access signs, and by restricting entry through physical means. The projection room sign must display the warning "No direct exposure to beam shall be permitted".

- The Christie Laser Projection System Installation Checklist must be fully completed after the installation and sent to lasercompliance@christiedigital.com. A copy can remain on-site. This checklist can be found as a separate document in the accessory box with the manual.

- Certain US states have additional laser regulatory requirements. Go to www.christiedigital.com for additional regulatory requirements.
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.

<table>
<thead>
<tr>
<th>Fire and Shock Hazard</th>
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</thead>
<tbody>
<tr>
<td>![Fire icon] ![Shock icon]</td>
</tr>
<tr>
<td>To prevent fire or shock hazards, do not expose this product to rain or moisture.</td>
</tr>
<tr>
<td>Do not alter the power plug, overload the power outlet, or use it with extension cords.</td>
</tr>
<tr>
<td>Do not remove the product enclosure.</td>
</tr>
<tr>
<td>Only Christie qualified technicians are authorized to service the product.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Electrical Hazard</th>
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</thead>
<tbody>
<tr>
<td>![Electrical hazard icon]</td>
</tr>
<tr>
<td>Risk of electric shock.</td>
</tr>
<tr>
<td>Do not remove the product enclosure.</td>
</tr>
<tr>
<td>Only Christie qualified technicians are authorized to service the product.</td>
</tr>
</tbody>
</table>

General hazard.

Electrocution hazard. To avoid personal injury, always disconnect all power sources before performing maintenance or service procedures.

Hot surface hazard. To avoid personal injury, allow the product to cool for the recommended cool down time before performing maintenance or service.

Burn hazard. To avoid personal injury, allow the product to cool for the recommended cool down time before performing maintenance or service.

Optical radiation hazard. To avoid personal injury, never look directly at the light source.

Moving parts hazard. To avoid personal injury, keep hands clear and loose clothing tied back.

Fan hazard. To avoid personal injury, keep hands clear and loose clothing tied back. Always disconnect all power sources before performing maintenance or service procedures.

Laser hazard. To avoid personal injury, avoid eye or skin exposure to direct or scattered radiations.
Voltage hazard. To avoid personal injury, always disconnect all power sources before performing maintenance or service procedures.

Not for household use.

Mandatory action

Consult the service manual.

Disconnect all power sources before performing maintenance or service procedures.

Electrical labels

Indicates the presence of a protective earth ground.

Indicates the presence of an earth ground.

Additional hazard labels

Indicates Class 4 laser radiation when open. Avoid eye or skin exposure to direct or scattered radiation.

CLASS 1 LASER PRODUCT IEC 60825-1
Wavelengths: 450 nm - 656 nm

FDA laser variance (US projectors only)
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 3 according to IEC 60825-1:2014 and IEC 62471:2006

Indicates high leakage current. Earth connection essential before connecting the power supply.

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

This manual is intended for operators of Christie CP2320-RGB projection systems. For complete production documentation and technical support, go to www.christiedigital.com.

Product documentation

For installation, setup, and user information, see the product documentation available on the Christie Digital Systems USA Inc. website. Read all instructions before using or servicing this product.

1. Access the documentation from the Christie website:
   - 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.

- **CP2320-RGB Installation and Setup Guide (P/N: 020-102773-XX)**
- **Cinema 2K-RGB Service Guide (P/N: 020-102770-XX)**
- **CineLife Serial Commands Guide (P/N: 020-102774-XX)**
- **CP2320-RGB Specifications Guide (P/N: 020-102777-XX)**

Projector overview

The Christie CP2320-RGB is a low brightness, RGB laser, digital cinema projector.
Contact your dealer

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

<table>
<thead>
<tr>
<th>Purchase record</th>
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<tbody>
<tr>
<td>Dealer:</td>
</tr>
<tr>
<td>Dealer or Christie Sales/Service contact phone number:</td>
</tr>
<tr>
<td>Serial number:</td>
</tr>
<tr>
<td>The serial number can be found on the license label located on the display panel.</td>
</tr>
<tr>
<td>Purchase date:</td>
</tr>
<tr>
<td>Installation date:</td>
</tr>
</tbody>
</table>

Key features

Understand the important features of the projector.

- Solid-state Christie RealLaser™ RGB laser illumination
- Three-chip 0.98 inch CFB DC2K light engine
- Christie CineLife™ Series 3 electronics
- LiteLOC™ color lock feature for constant image brightness and color
- Direct-coupled laser module integrated in the projector chassis
- Compact form to fit in existing projection booths
- Exhaust air extraction (using optional accessory)
Understanding the Christie touch panel interface

Use the touch panel to control the projector and perform functions such as turning the light on or off, selecting channels, and viewing status information.

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Left navigation menu. Your access permissions determine the available options.</td>
</tr>
<tr>
<td>B</td>
<td>Current access permissions.</td>
</tr>
<tr>
<td>C</td>
<td>Projector name and IP address.</td>
</tr>
<tr>
<td>D</td>
<td>Current date and time.</td>
</tr>
<tr>
<td>E</td>
<td>System status. To display all alarms, tap the colored icon.</td>
</tr>
<tr>
<td>F</td>
<td>Turns the projector on or off.</td>
</tr>
<tr>
<td>G</td>
<td>Turns the light on or off.</td>
</tr>
<tr>
<td>H</td>
<td>Opens and closes the shutter.</td>
</tr>
<tr>
<td>I</td>
<td>Turns test patterns on or off.</td>
</tr>
<tr>
<td>J</td>
<td>Displays channels.</td>
</tr>
<tr>
<td>K</td>
<td>Displays macros.</td>
</tr>
<tr>
<td>L</td>
<td>Playback controls. See Loading and playing content (on page 38).</td>
</tr>
</tbody>
</table>
Operating the projector

Learn how to operate the projector and adjust projector settings.

Projector power modes

The CP2320-RGB projectors track laser operation hours for the laser optical sub-system (LOS).

The projector operates with the following power modes:

<table>
<thead>
<tr>
<th>Mode</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projector on</td>
<td>• CineLife™ electronics and light engine are on</td>
</tr>
<tr>
<td></td>
<td>• Laser optical sub-system (LOS) and thermo-electric cooler (TEC) devices are off</td>
</tr>
<tr>
<td>Light source</td>
<td>• CineLife™ electronics and light engine are on</td>
</tr>
<tr>
<td></td>
<td>• LOS and TEC are on</td>
</tr>
<tr>
<td></td>
<td>• Fans run at full speed</td>
</tr>
<tr>
<td>Standby</td>
<td>• CineLife™ electronics remain on standby with the light engine off</td>
</tr>
<tr>
<td></td>
<td>• LOS and TEC are off</td>
</tr>
<tr>
<td></td>
<td>• Fans run at reduced speed</td>
</tr>
</tbody>
</table>

Turning the projector on or off

Turn on the projector to display content, or turn off the projector to conserve energy.

To operate the projector, the circuit breakers must be in the ON position. If you are servicing the projector or removing the protective covers, ensure that the MAIN and UPS circuit breakers are in the off position.

- In the right toolbar, tap and hold Power.

If the light source is on when turning off the projector, the light source enters a ten-minute cool-down period automatically.

Logging on to the projector

Log on to the projector to access projector menus.

1. Tap Login.
2. In the User list, select a user name.
3. Enter your password.
4. Tap Login.
Logging out of the projector
Log out of the projector to restrict access to projector menus or to change access permissions.
- Tap Logout.

Turning the touch panel on or off
Turn the touch panel on to view projector menus, or turn the touch panel off to conserve energy.
- To turn the touch panel on or off, press the power button (A) on the top of the touch panel.

Calibrating the touch panel display
Calibrate the touch panel to improve its appearance and responsiveness to touch commands.
1. Log on to the projector.
2. In the left navigation menu, tap Service Setup > Preferences.
3. Tap Touch Panel.
4. To calibrate the touch panel, tap Start Calibration.
5. Tap and hold the center of each point as they appear.
   The screen is dismissed after all points are calibrated.

Turning the light source on or off
Turn the light source on to display content or view test patterns, turn the light off to extend the life of the lasers.
- To turn the light source on or off, in the right toolbar, tap and hold Light.
  If you turn on the light source when the projector power is off, power is turned on automatically.
  Allow the projector to cool down for 10 minutes after turning it off.
Opening or closing the shutter

Open the shutter (douser) to display light on the screen, or close the shutter to remove light from the screen.

1. In the right toolbar, tap and hold Shutter.

2. To permit activation of the light source when the shutter sensor is not functioning, tap Service Setup > Preferences > Lens/ILS and enable the Shutter option Permit light source activation when shutter is nonfunctional.
   To avoid damage to the projector, only enable this option when the shutter can be verified as open.

Selecting a channel

Create channels to store customized projector settings for different inputs.

1. In the right toolbar, tap Channels.
   The Channels window displays the available channels.

2. Tap a channel.
   In the Channel Setup panel, a green checkmark indicates the active channel.

Adding a network time protocol server

Add a network time protocol (NTP) server to synchronize the time on all installed projectors in the same region.

1. In the left navigation menu, tap Service Setup > Time Setup.

2. Switch to the NTP Server tab.

3. Tap the Time Sync using NTP Server slider.
   The color of the slider changes to green to indicate it is active.


5. Select a local or a public NTP server:
   - To use a local NTP server, tap Local Server and type the IP address in the IP Address field.
   - To use a public NTP server, tap Public Server and complete the Country and Server fields.

6. To test the connection, tap Test.

7. Tap Add.

Deleting a network time protocol server

Remove a network time protocol (NTP) server if you do not need to synchronize the time on all installed projectors in the same region.

1. In the left navigation menu, tap Service Setup > Time Setup.

2. Switch to the NTP Server tab.
3. If network time protocol (NTP) time synchronization is not active, tap the **Time Sync using NTP Server** slider.
   The color of the slider changes to green to indicate it is active.
4. In the NTP Server Address list, tap an NTP server.
5. Tap **Delete**.
6. At the confirmation dialog, tap **Delete**.

**Changing the time zone**

Change the time zone settings to make the projector time match the local time zone.

1. In the left navigation menu, tap **Service Setup > Time Setup**.
2. Tap the **Time Zone** tab.
3. In the Region list, select a region.
4. In the Time Zone list, select the time zone.
5. Tap **Save**.

**Changing the time format**

You can use the 12-hour or 24-hour format to display projector time. The 24-hour format reduces ambiguity.

1. In the left navigation menu, tap **Service Setup > Preferences**.
2. Tap **General**.
3. In the System area, select a time format option:
   - To use the 12-hour format, tap **12 Hours**.
   - To use the 24-hour format, tap **24 Hours**.

**Automatically adjusting the time for Daylight Saving Time**

With automatically adjusted time settings, there is no need to update the projector time when Daylight Saving Time occurs.

1. In the left navigation menu, tap **Service Setup > Time Setup**.
2. Tap the **Time Zone** tab.
3. To automatically adjust the projector time to follow Daylight Saving Time, tap the **Automatically adjust for Daylight Saving Time** slider.
   The color of the slider changes to green to indicate it is active.
4. Tap **Save**.
Manually adjusting the time offset

You cannot manually adjust the time offset if network time protocol (NTP) time synchronization is active.

To turn off NTP time synchronization, select Service Setup > Time Setup, tap the NTP Servers tab, and then tap the Time Sync via NTP Server slider. The color of the slider changes to gray to indicate it is inactive.

1. In the left navigation menu, tap Service Setup > Time Setup.
2. Tap the SM Time Adjust tab.
3. Increase or decrease the time offset:
   - To increase the offset in minutes and seconds, tap Up. 🚶‍♂️
   - To decrease the offset in minutes and seconds, tap Down. 🚶‍♂️

   The Digital Cinema Initiatives (DCI) specification does not allow time offsets greater than six minutes in a calendar year.
4. Tap Save.

Changing the orientation of the projected image

Change the orientation of the projected image from normal to inverted to support multi-projector installations where deflection mirrors are used.

1. In the left navigation menu, tap Service Setup > Preferences.
2. Tap General.
3. From the Projected Image Orientation list, select the required orientation for the projected image.

<table>
<thead>
<tr>
<th>Orientation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal Front</td>
<td>Projection from behind the audience with the projector in the normal, upright position.</td>
</tr>
<tr>
<td>Inverted Front</td>
<td>Projection from behind the audience with the projector in an inverted position (upside down). Inverted positioning is not supported for CP2320-RGB projectors. For more information, see the CP2320-RGB Installation and Setup Guide (P/N: 020-102773-XX).</td>
</tr>
<tr>
<td>Normal Rear</td>
<td>Projection from behind the screen with the projector in the normal, upright position.</td>
</tr>
<tr>
<td>Inverted Rear</td>
<td>Projection from behind the screen with the projector in an inverted position (upside down). Inverted positioning is not supported for CP2320-RGB projectors. For more information, see the CP2320-RGB Installation and Setup Guide (P/N: 020-102773-XX).</td>
</tr>
</tbody>
</table>
Changing the projector host name

Change the projector host name to make it easier to identify.

1. In the left navigation menu, tap Service Setup > Preferences.
2. Tap General.
3. In the Projector Hostname field, type a name.
4. Tap Update.

Changing the temperature display

Set the touch panel to display temperatures in Celsius or Fahrenheit degrees.

1. In the left navigation menu, tap Service Setup > Preferences.
2. Tap General.
3. In the Temperature Units list, select Celsius or Fahrenheit.
Managing the light source

Learn how to configure a laser file and use the projector's LiteLOC™ feature. The laser file allows you to control the power settings of the red, green, and blue (RGB) lasers. The LiteLOC™ feature ensures that color and brightness are held at the level you set.

You can create multiple laser files to manage varying screen sizes, brightness requirements, room temperatures in the projection booth, and types of content (such as 2D, 3D, and alternative content).

Creating a new laser file

Create a laser file to store the power settings for the RGB laser light source and the maximum expected room temperature for the projection booth.

The maximum (MAX) power limit for Red and Green changes according to the value set for the maximum expected room temperature. For Red, Green, and Blue power levels, system stability may be affected if levels are set below the minimum (MIN) power limit shown.

To ensure color and brightness are held at the required levels for your installation, Christie recommends that you enable LiteLOC™ for each laser file you create.

When refining the laser power settings, the amount of time required to re-stabilize the projector depends on the size of the adjustment. For very small adjustments to the expected room temperature
or power settings, the projector requires only 1 or 2 minutes to re-stabilize. For larger adjustments, the projector may require up to 15 minutes to re-stabilize.

1. In the left navigation pane, tap **Laser Settings > Laser Power/LiteLOC Setup**.
2. To activate the controls, tap the **Display White Test Pattern** slider.
3. To create a new laser file, tap **Create**.
4. In the Create dialog, type a name for the new laser file and tap **Create**.
5. If the laser file will be associated with a 3D channel, tap the **3D Sync** slider.
6. Under Maximum Expected Room Temperature, tap the plus and minus signs (or drag the temperature slider) to indicate the maximum expected room temperature in the projection booth.

   The system uses the maximum expected room temperature to calculate the light output. The default maximum expected room temperature setting is 25°C. A lower room temperature generally results in increased brightness and better efficiency. A higher room temperature will reduce the maximum power setting available for the lasers. The maximum expected room temperature setting must reflect actual operating conditions.

   If you set a maximum expected room temperature that is below the existing ambient room temperature, the system displays a warning.

7. Set the approximate Red, Green, and Blue power levels as required for your projection environment and allow the projector to stabilize for 15 minutes.

   System stability may be affected if you set a power level below the minimum power level recommended.

   When setting the Red or Green power level, Christie recommends setting a level below the maximum (MAX) limit shown. A value below the maximum limit ensures an optimal brightness that can be maintained over time.

8. If color or brightness is not at the target level, refine the Red, Green, and Blue power settings to achieve the target, and then allow the projector to re-stabilize for an additional 3 to 5 minutes.

   The projector is considered stable when there are no further adjustments and you obtain the same screen state results after two sets of measurements, 5 minutes apart.

9. Once the correct color and brightness are achieved and the projector has stabilized, tap the **LiteLOC** slider to lock the settings.

   The color of the slider turns to green to indicate the settings are locked. The projector’s LiteLOC™ system maintains the brightness and color levels.

10. To save the new laser file, tap **Save**.

    Color sensor (CSense) data are displayed on the interface to provide feedback on the current color sensor information.

### Modifying an existing laser file

Modify the settings in the laser file to change the laser power settings or the maximum expected room temperature.

When refining the laser power settings, the amount of time required to re-stabilize the projector depends on the size of the adjustment. For very small adjustments to the expected room temperature
or power settings, the projector requires only 1 or 2 minutes to re-stabilize. For larger adjustments, the projector may require up to 15 minutes to re-stabilize.

1. In the left navigation pane, tap **Laser Settings > Laser Power/LiteLOC Setup**.
2. To begin modifying the settings, tap the **Display White Test Pattern** slider.
3. From the Laser File list, select the laser file to edit.
4. To unlock the file, tap the **LiteLOC** slider. The color of the slider turns to gray to indicate the settings are unlocked.
5. Adjust the Maximum Expected Room Temperature and the power levels for Red, Green, and Blue as required to achieve the correct color and brightness on screen.
6. Once the correct color and brightness are achieved and the projector has stabilized, tap the **LiteLOC** slider to lock the settings. The color of the slider turns to green to indicate the settings are locked.
7. To save the new settings, tap **Save**.

### Copying existing laser settings to a new file

Copy an existing laser file when you want to create a new file with similar settings.

1. In the left navigation pane, tap **Laser Settings > Laser Power/LiteLOC Setup**.
2. Tap the **Display White Test Pattern** slider.
3. From the Laser File list, select the file you want to copy.
4. To save the new laser file, tap **Save As**.
5. Type a new name for the laser file and then tap **Save**.
6. Adjust the maximum expected temperature and power settings as required for the new configuration.

### Deleting a laser file

Delete a laser file when the configuration is no longer required.

1. In the left navigation menu, tap **Laser Settings > Laser Power/LiteLOC Setup**.
2. Tap the **Display White Test Pattern** slider.
3. In the Laser File list, select the file to delete.
4. Tap **Delete**.
5. To confirm the deletion, tap **Delete**.
Managing user accounts

Learn how to create new user accounts, how to modify the properties of those accounts, and how to remove the accounts. A user account is a set of credentials consisting of both a user name and password that allows access to a projector settings.

Default user access permissions

This table lists the Christie touch panel access permissions.

<table>
<thead>
<tr>
<th>Permission</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>installer</td>
<td>Can define Ethernet settings (IP network address), restore backup files, and upgrade the system software.</td>
</tr>
<tr>
<td>manager</td>
<td>Can activate channels and test patterns, view detailed diagnostic logs for in-depth troubleshooting and view server errors. This is the default level.</td>
</tr>
<tr>
<td>marriage</td>
<td>Can access all touch panel windows. Can authorize projector marriage.</td>
</tr>
<tr>
<td>operator</td>
<td>Can view basic projector status, diagnostic information and software version information. This is the default level for Serial Communication sessions.</td>
</tr>
<tr>
<td>service</td>
<td>Can access all touch panel windows. Cannot authorize projector marriage.</td>
</tr>
</tbody>
</table>

Adding a user account

Adding a user account allows users to access projector menus.

1. In the left navigation menu, tap Service Setup > User Accounts.
2. Tap + Add User.
3. Complete the Name, Permissions, New Password, and Confirm Password fields.
4. Tap Add.

Changing user account permissions

Change user account permissions to limit or increase access to projector menus and functionality.

1. In the left navigation menu, tap Service Setup > User Accounts.
2. In the left pane, tap a user account.
3. In the Permissions list, select a new permissions setting.
4. Tap Save.
Changing a user account password

Periodically change a user account password to limit access to projector menus and functionality to authorized users.

1. In the left navigation menu, tap Service Setup > User Accounts.
2. In the left pane, tap a user account.
3. Tap Change password.
5. Tap Save.

Deleting a user account

Delete a user account to prevent access to projector menus and functionality.

1. In the left navigation menu, tap Service Setup > User Accounts.
2. In the left pane, tap a user account.
3. Tap Delete.
4. To confirm the deletion, tap Delete.
Network settings

Learn how to connect the projector to media devices and wired networks.

The system provides the MAC address of the projector automatically.

Connecting the projector to the theater network

Connect the projector to the theater network to control it remotely and allow it to communicate with other network devices.

1. Connect the Ethernet cable from the theater network to the Management port on the input panel.
2. In the left navigation menu, tap Service Setup > Network Settings.
3. In the Port list, tap Management.
4. Enter the network settings:
   - To obtain the network settings automatically, tap Automatic.
   - To enter the settings manually, tap Manual and complete these fields:

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IP Address</td>
<td>The IP address of the projector.</td>
</tr>
<tr>
<td>Subnet Mask</td>
<td>The subnet mask to which the IP address belongs.</td>
</tr>
<tr>
<td>Gateway</td>
<td>The IP address for the network gateway.</td>
</tr>
<tr>
<td>Primary DNS</td>
<td>The IP address of the primary DNS server.</td>
</tr>
<tr>
<td>Secondary DNS</td>
<td>The IP address of the secondary DNS server.</td>
</tr>
</tbody>
</table>

5. Tap Save.

Connecting the projector to network attached storage

To ingest and play content, a network attached storage (NAS) device must be connected to the projector.

1. Connect the NAS device to the NAS port on the input panel.
2. In the left navigation menu, tap Service Setup > Network Settings.
3. In the Port list, tap Content-NAS.
4. Enter the network settings:
   - To obtain the network settings automatically, tap Automatic.
• To enter the settings manually, tap Manual and complete the IP Address and Subnet Mask fields.

5. Tap Save.

Connecting the projector to a media or content network

Connect the projector to a media or content network to play content.

1. In the left navigation menu, tap Service Setup > Network Settings.
2. In the Port list, tap Media.
3. Enter the network settings:
   • To obtain the network settings automatically, tap Automatic.
   • To enter the settings manually, tap Manual and complete the IP Address and Subnet Mask fields.
4. Tap Save.

Activating SNMP

Activate the Simple Network Management Protocol (SNMP) to monitor the theater network for conditions that indicate communication or hardware failures.

On CP2320-RGB projectors, SNMP is enabled by default.

1. In the left navigation menu, tap Service Setup > Network Settings.
2. Tap the SNMP tab.
3. Tap the SNMP slider.
   The color of the slider changes to green to indicate it is active.
4. In the SNMP Settings area, select the SNMP version.
5. Complete the Trap Receiver IP fields.
   A trap receiver captures, displays, and logs SNMP traps. Traps are event notices that are sent immediately to the trap receiver from a network device. The SNMP device does not need to use resources to poll for these event notices.
6. In the Blocked SNMP Traps area, select the SNMP traps you want to block.
7. Tap Save.

Downloading MIB information

A Management Information Base (MIB) file contains the definitions for the device being managed by the SNMP protocol.

1. In the left navigation menu, tap Service Setup > Network Settings.
2. Tap the SNMP tab.
3. Tap Download MIB.
4. Browse to the location where you want to save the MIB file.
5. In the Name field, type a name for the MIB file.
6. Tap **Accept**.
7. Tap **OK**.
Setting up an integrated media block

You can configure CP2320-RGB projectors to work with different models of integrated media blocks (IMB).

Selecting IMB preferences

Choose from the available options to set the type of integrated media block (IMB).

1. To set the type of IMB, tap Service Setup > Preferences.
2. Tap IMB.
3. In the Type list, select from the available IMB models.
4. When the system prompts you to reboot the projector, tap Reboot.
5. After the projector has restarted, log in with your user account.

Activating IMB marriage

After selecting the IMB type, you must install the IMB and complete marriage to display secure content. You cannot complete marriage remotely.

The marriage wizard requires you to confirm that the IMB has not been tampered with.

1. Install the IMB in the available slot on the projector.
   For more information, see the Christie IMB-S3 Installation and Setup Manual (P/N: 020-102582-XX) or the documentation provided by the IMB manufacturer.
2. In the left navigation menu, tap Service Setup > Marriage Setup.
3. Tap Start and confirm that the security manager (SM), service door, and marriage ring are secure.
4. Tap Next and complete the marriage checklist.
5. Tap Next and enter the Marriage user and password credentials.
6. Tap Login.
7. To start the marriage process, press the Marriage button on the projector within 30 seconds. The system starts the marriage process and indicates when the process is completed successfully.
8. Tap Finish.
Managing content

Use the procedures in this section to manage content and keys.

Content manager icons

These icons appear in the content manager.

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLAT</td>
<td>The content is presented in flat format.</td>
</tr>
<tr>
<td>SCOPE</td>
<td>The content is presented in scope format.</td>
</tr>
<tr>
<td>2D</td>
<td>2D content identifier.</td>
</tr>
<tr>
<td>3D</td>
<td>3D content identifier.</td>
</tr>
<tr>
<td>SUBS</td>
<td>A subtitle file is included with the content.</td>
</tr>
<tr>
<td>CC</td>
<td>A closed captioning file is included with the content.</td>
</tr>
<tr>
<td>2K</td>
<td>2K content identifier.</td>
</tr>
<tr>
<td>4K</td>
<td>4K content identifier.</td>
</tr>
<tr>
<td>ATMOS</td>
<td>The content includes a Dolby Atmos audio file.</td>
</tr>
<tr>
<td>HFR</td>
<td>High frame rate identifier.</td>
</tr>
<tr>
<td>EDR</td>
<td>Extended Dynamic Range (EDR) content.</td>
</tr>
</tbody>
</table>

Ingesting content and keys

To ingest content, an ingest device must be connected to the projector. The ingest device must be properly configured and operating correctly.

If an ingest device is not connected to the projector, the Content Manager menu is not displayed.

1. In the left navigation menu, tap Content Manager.
2. Tap the Ingestible Content tab.
3. In the Source list, select a source for the content.
   Ingest devices connected to the projector are automatically added to the Source list.
4. In the Show list, select the content type.
5. Select the checkbox to the left of the content you want to ingest, or select the empty check box at the top of the column to select all content.
6. Tap Ingest.
7. To view the ingest progress, tap the Progress tab.

**Canceling an ingest**

Cancel an ingest if the ingest is taking too long, or if the content has been ingested previously.

1. Through the Content Manager, run an operation to ingest content and keys. See *Ingesting content and keys* (on page 35).
2. Tap the Progress tab.
3. Select the checkbox to the left of the content.
4. Tap Cancel.

**Viewing remaining NAS storage capacity**

View the remaining NAS storage capacity to determine if additional storage is required.

1. In the left navigation menu, tap Content Manager.
2. Review the remaining storage capacity displayed on the Local Content tab.

**Filtering content by type**

Filter content by type to locate content of a specific type or reduce the return results.

1. In the left navigation menu, tap Content Manager.
2. On the Local Content tab in the Show list, select the content type.

**Viewing available keys**

Keys are required to play encrypted content.

1. In the left navigation menu, tap Content Manager.
2. To view the available keys, tap the Keys tab.

**Filtering the key list**

Filter the key list to locate keys of a specific type.

1. In the left navigation menu, tap Content Manager.
2. Tap the Keys tab.
3. In the Show list, select one of the following options for filtering the list:
   - All Keys
   - Not Yet Valid
   - Valid
• Expiring Soon
• Expired

In the column heading, tap Resize.

Deleting local content
Delete local content to increase local storage space.

1. In the left navigation menu, tap Content Manager.
2. Select the check box to the left of the content on the Local Content tab, or select the empty check box at the top of the column to select all content.
3. Tap Delete.
4. To confirm the deletion, tap Delete.

Deleting keys
Delete keys when they are no longer required.

Key Delivery Message (KDM) keys are automatically deleted when they expire.

1. In the left navigation menu, tap Content Manager.
2. Tap the Keys tab.
3. Select the check box to the left of the keys.
4. Tap Delete.
5. To confirm the deletion, tap Delete.

Collapsing or expanding columns
Expand or collapse columns to display more or less information.

• In the column heading, tap Resize.

Viewing content details
The Properties panel provides detailed information about the selected content.
1. In the left navigation menu, tap Content Manager.
2. Tap the Local Content tab.
3. Tap Details.
Playback controls

The controls for content playback are located on the lower toolbar of the touch panel interface.

<table>
<thead>
<tr>
<th>Control</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Play</td>
<td>Plays the selected content.</td>
</tr>
<tr>
<td>Pause</td>
<td>Temporarily stops playback at the current point in the content. Resuming playback starts playing the content from the same point.</td>
</tr>
<tr>
<td>Skip to previous</td>
<td>Skips the current content item and moves to the previous item in the playlist.</td>
</tr>
<tr>
<td>Rewind</td>
<td>Rewinds the content in 30 second increments.</td>
</tr>
<tr>
<td>Open playlist tray</td>
<td>Opens the tray that displays available playlists.</td>
</tr>
<tr>
<td>Close playlist tray</td>
<td>Closes the tray that displays available playlists.</td>
</tr>
<tr>
<td>Cancel intermission</td>
<td>Stops the intermission and resumes playback of the primary playlist. This control is available only when an intermission is included in the playlist and when the intermission content is running.</td>
</tr>
<tr>
<td>Forward</td>
<td>Advances the content in 30 second increments.</td>
</tr>
<tr>
<td>Skip to next</td>
<td>Skips the current content item and moves to the next item in the playlist.</td>
</tr>
<tr>
<td>Stop</td>
<td>Stops playback of content. Tapping Play starts at the beginning of the content.</td>
</tr>
<tr>
<td>Load</td>
<td>Loads the selected playlist or locally stored content.</td>
</tr>
<tr>
<td>Unload</td>
<td>Unloads the active playlist or locally stored content.</td>
</tr>
</tbody>
</table>

Loading and playing content

To play content it must be loaded first.

1. In the left navigation menu, tap **Content Manager**.
2. Tap and hold **Load**.
3. Load local content or a playlist:
   - To load a playlist, tap the **Playlists** tab.
• To load locally stored content, tap the **Local Content** tab.
4. Tap to select the playlist or content.
5. Tap **Load**.

   The Loading Media dialog displays progress information.
6. To start playback, tap and hold **Play**.

### Viewing an active content item

View the details of content that is playing currently.

   If no content is playing, the **Open Playlist Tray** button is not available for selection.

1. In the left navigation menu, tap **Content Manager**.
2. When the content item is playing, tap **Open Playlist Tray**.
3. View details about the content item that is playing.
4. To dismiss the panel, tap **Close Playlist Tray**.

### Looping content

The Loop option provides continuous playback of the selected content item.

   To avoid conflicts with scheduled events, the Loop option is not available when the Scheduler is on. In addition, when the Scheduler is enabled, the Loop option is disabled on any content items where it was set.

1. After loading content, open the playlist tray to edit the content item.
2. In the top right corner of the item, tap the Loop button.

   The button color changes to blue to indicate the Loop option is enabled. The looping icon displays in the bottom left corner of the touch panel interface.
3. Close the playlist tray.

   The selected content plays on a continuous loop until you remove the loop setting.

### Unloading content

Unload content when it has finished playing and is no longer required.

1. Stop or pause playback.
2. Tap **Unload**.
Managing playlists

Use the procedures in this section to manage playlists. A playlist is a list of content files and automated events that play in an order that you define.

Creating a new playlist

A playlist is a list of content files and automated events that play in an order that you define.

To manage minor time gaps between content files, Christie recommends inserting a short period of black screen with no audio. To achieve this, you can insert a BLACK MOS clip into the playlist. BLACK MOS clips are small, silent compositions and are set in varying lengths to accommodate different projection requirements. The clips are available from content distributors.

1. In the left navigation menu, tap Playlist Editor.
2. In the right pane, tap New Playlist.
3. In the Create New Playlist dialog, type a name for the playlist and tap Create.
4. Add content or an automation event to the playlist:
   • To add content to the playlist, tap the content item shown under the Local Content tab.
   • To add an automation event or macro to the playlist, select a content item in the playlist and then switch to the Automation tab. Tap the automation event or macro item to add it to the playlist.
5. In the right pane, tap Save.

Reordering playlist content

Reorder the playlist content to change the time when content plays.

1. In the left navigation menu, tap Playlist Editor.
2. In the upper right pane, select a playlist from the list.
3. Tap the content or a macro in the playlist.
4. To select a new position for the content or macro, tap the down arrow and select the number for the new position. For example, selecting 1 moves the item to the top of the playlist.
5. Tap Save.

Adding a time offset to a macro

An offset identifies when a macro plays in a playlist.

1. In the left navigation menu, tap Playlist Editor.
2. In the upper right pane, select a playlist.
3. Tap a macro in the playlist and then tap Edit.

4. In Edit Automation dialog, select one of these options from the Offset Type list:
   a) To run a macro at a time you define that is offset from the start of the macro you selected in step 3, select **After Clip Start**.
   b) To run a macro at a time you define that is offset from the end of the content you selected in step 3, select **Before Clip End**.
   c) To pause playback, select **Before Clip Start**. Playback does not resume until the system runs all of the input cues or macros with a time offset value of Before Clip Start. If **Before Clip Start** is not selected, playback is not paused.
      If the content contains an FFMC (First Frame Moving Credits) marker, you can also choose the **FFMC** option to set actions associated with the final credits roll.

5. Under Offset Time, adjust the time the automation occurs.

6. Tap **Update**.

### Replacing playlist content

Replace playlist content when content has been added in error, or you want to add new content to an existing playlist.

1. In the left navigation menu, tap **Playlist Editor**.
2. In the upper right pane, select a playlist from the list.
3. Tap the content in the playlist.
4. Tap **Replace Content**.
5. In the Replace Content dialog, select the new content.
6. Tap **Replace**.
7. Tap **Save**.

### Removing playlist content

Remove playlist content when content has been added in error, or you want to update an existing playlist.

1. In the left navigation menu, tap **Playlist Editor**.
2. In the playlist list in the upper right pane, select the playlist you want to update.
3. Tap content in the playlist.
4. Tap **Remove Content**.
5. Tap **Save**.
Copying a playlist

Copy a playlist when you want to quickly create a playlist with similar content.

1. In the left navigation menu, tap Playlist Editor.
2. In the playlist list in the upper right pane, select the playlist you want to copy.
3. Tap the menu and then tap Save As.
4. In the Save Playlist dialog, type a new name for the playlist.
5. Tap Save.

Opening an intermission playlist

Open an intermission playlist from the top level playlist.

1. In the left navigation menu, tap Playlist Editor.
2. Select the playlist with the intermission item to open.
3. In the right pane, tap the intermission item and then tap Open Intermission Playlist.

The intermission playlist items are displayed in the right pane.

Viewing an active playlist

View the details of a playlist that is running currently.

If no playlist is running, the Open Playlist Tray button is not available for selection.

1. When the playlist is running, tap Open Playlist Tray.
2. View details about the playlist that is running.
3. To dismiss the panel, tap Close Playlist Tray.

Viewing details about playlist content

The Details dialog provides detailed information about the selected content.

1. In the left navigation menu, tap Playlist Editor.
2. Under the Local Content tab, to the right of the content, tap Details.

Importing a playlist

Import a playlist from another projector or computer on the network.

1. In the left navigation menu, tap Playlist Editor.
2. In the right pane, tap the menu and then tap Import Playlists.
3. In the Import dialog, navigate to the playlist you want to import and select it.
   A filter of *.ply is applied automatically to display available playlist files.
4. Tap Accept.

Exporting a playlist
Export an existing playlist to another projector or computer on the network.
1. In the left navigation menu, tap Playlist Editor.
2. In the right pane, select the playlist you want to export.
3. Tap the menu and then tap Export Playlists.
4. In the Export dialog, navigate to the location you want to export to.
5. Tap Export.

Deleting a playlist
Delete a playlist when it is no longer required or when the content has expired.
1. In the left navigation menu, tap Playlist Editor.
2. In the playlist list in the upper right pane, select the playlist you want to delete.
3. Tap the menu and then tap Delete.
4. To confirm the deletion, tap Delete.
Working with channels

Create channels to store customized projector settings for different inputs.

Adding a channel for HDMI input

Create a channel to store customized projector settings for input devices connected to the HDMI port.

1. In the left navigation menu, tap Channel Setup.
2. Tap + Add Channel.
3. Complete these fields:

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>The channel name.</td>
</tr>
<tr>
<td>Input Type</td>
<td>Select one of:</td>
</tr>
<tr>
<td></td>
<td>• HDMI Input A</td>
</tr>
<tr>
<td></td>
<td>• HDMI Input B</td>
</tr>
<tr>
<td></td>
<td>• HDMI 3D LR</td>
</tr>
<tr>
<td></td>
<td>• Addon Card</td>
</tr>
<tr>
<td></td>
<td>• IMB</td>
</tr>
<tr>
<td>Data Format</td>
<td>The source color depth (8-10-12 bit) for the channel. If the HDMI source is 2K or greater, select one of:</td>
</tr>
<tr>
<td></td>
<td>• 4K 4:4:4 (RGB) 8 bits</td>
</tr>
<tr>
<td></td>
<td>• 4K 4:2:2 (YCbCr) 12 bits</td>
</tr>
<tr>
<td></td>
<td>• 4K 4:2:2 (YCbCr) 10 bits</td>
</tr>
<tr>
<td></td>
<td>• 4K 4:2:2 (YCbCr) 8 bits</td>
</tr>
<tr>
<td>Scan Type</td>
<td>The video scan type. The default is Auto.</td>
</tr>
<tr>
<td>3D Sync Input Mode</td>
<td>Specifies whether a specific frame of input data has left eye or right eye data. The default is Auto.</td>
</tr>
<tr>
<td>Color Space</td>
<td>The method of color decoding for the current source. The default is Unity RGB for all HDMI sources.</td>
</tr>
<tr>
<td>ILS File</td>
<td>The ILS file associated with the channel.</td>
</tr>
<tr>
<td>2D Lamp File</td>
<td>The 2D lamp file associated with the channel. Any changes made to the lamp file settings are applied to all channels that use this lamp file.</td>
</tr>
<tr>
<td>3D Lamp File</td>
<td>The 3D lamp file associated with the channel. Any changes made to the lamp file settings are applied to all channels that use this lamp file.</td>
</tr>
<tr>
<td>2D MCGD File</td>
<td>The Measured Color Gamut Data file associated with the 2D image.</td>
</tr>
</tbody>
</table>
Adding a channel for IMB input

Create a channel to store customized projector settings for input devices connected to the IMB.

1. In the left navigation menu, tap Channel Setup.
2. Tap + Add Channel.
3. Complete these fields:

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>The channel name.</td>
</tr>
<tr>
<td>Input Type</td>
<td>Select IMB.</td>
</tr>
</tbody>
</table>
| 3D Sync Input Mode                | For third party IMBs, specifies how 3D input data is encoded. The default setting is 2D.  
  - 2D Mode: No 3D synchronization is applied.  
  - 3D Frame Interleaved: For input that contains left eye data followed by right eye data.  
  - 3D Frame Interleaved Inverted: For input that contains right eye data followed by left eye data.  
  - 3D White Line/Blue Line: For input that includes metadata describing the 3D encoding.  
  - 3D White Line/Blue Line Inverted: For inverted input that includes metadata describing the 3D encoding.  
  - 3D Line Interleaved: The left eye and right eye data are sent on alternating lines.  
  3D Sync Input Mode is not required when using the Christie IMB. For GDC IMB devices, the recommended setting is 3D Line Interleaved. |
### Field Name | Description
--- | ---
ILS File | The ILS file associated with the channel.
2D Lamp File | The 2D lamp file associated with the channel. Any changes made to the lamp file settings are applied to all channels that use this lamp file.
3D Lamp File | The 3D lamp file associated with the channel. Any changes made to the lamp file settings are applied to all channels that use this lamp file.
2D MCGD File | The Measured Color Gamut Data file associated with the 2D image.
3D MCGD Left Eye File | The Measured Color Gamut Data file associated with the left 3D image.
3D MCGD Right Eye File | The Measured Color Gamut Data file associated with the right 3D image.
TCGD File | The Target Color Gamut Data file associated with the channel.
Screen File | The screen type, masking, cropping, and lens settings for the channel.
Gamma File | The gamma correction required for the proper tonal range of the source material.
Clut File | Applies a 3D color cube for increased color accuracy.
3D File | The 3D settings file associated with the channel.
Source File | The resolution and aspect ratio for the channel.
Christie Pureformity Color™ Correction File | The color correction file associated with the channel. The default value is Bypass.

4. Tap **Save**.

## Editing an existing channel

Edit an existing channel when the parameters of the input device change.

1. In the left navigation menu, tap **Channel Setup**.
2. In the left pane, tap a channel.
3. Edit the channel settings.
4. Tap **Save**.

## Copying existing channel settings to a new channel

Copy a channel to create a new channel with similar settings.

1. In the left navigation menu, tap **Channel Setup**.
2. In the left pane, tap a channel.
3. Tap **Save As**.
4. Type a name for the new channel and tap **Save**.
**Viewing the channel list**

The channel list displays all of the available channels.

- In the left navigation menu, tap **Channel Setup**. Under **Channel Setup**, the available channels are displayed in the left pane. A green checkmark indicates the active channel. Alternatively in the right toolbar, tap **Channels**. The All Channels window displays the available channels and the active channel is highlighted.

**Moving a channel up or down the channel list**

If a channel is selected frequently, move it to the top of channel list to make it easier to access. If the channel is not selected frequently, move it to the bottom of the channel list.

1. In the left navigation menu, tap **Channel Setup**.
2. In the left pane, tap a channel.
3. To move the channel up or down the list, tap ▲ or ▼.

**Deleting a channel**

Delete a channel when the settings for the input device are no longer required.

1. In the left navigation menu, tap **Channel Setup**.
2. In the left pane, tap a channel.
3. Tap **Delete**.
4. To confirm the deletion, tap **Delete**.
Managing color setting files

Use the procedures in this section to manage color setting files. When associated with a channel, a color setting file defines the color output for the content.

Creating a MCGD file

Create Measured Color Gamut Data (MCGD) files to correct on-screen colors. A colorimeter is required to complete this procedure.

1. Turn on the light source and allow it to operate for 20 minutes.
2. In the left navigation menu, tap Color Settings > MCGD File Setup.
3. Tap Create MCGD File.
4. Type a name for the MCGD file and tap Create.
5. If the MCGD file will be associated with a 3D channel, tap the 3D Sync slider and select a frame rate.
6. In the red area of the chromaticity image, tap the empty circle.
   The test pattern is automatically displayed.
7. Measure the red chromaticity with the colorimeter.
8. Type the red chromaticity value in the X field.
9. Tap Next and type the red chromaticity value in the Y field.
10. Repeat steps 7 to 9 for the green, blue, white (center circle), and black chromaticity measurements.
11. Tap Save.

Editing an existing MCGD file

Edit an existing Measured Color Gamut Data (MCGD) file when on-screen color readings change.

1. In the left navigation menu, tap Color Settings > MCGD File Setup.
2. In the MCGD File list, select a MCGD file.
3. Edit the measured color values.
4. Tap Save.
Copying existing MCGD file settings to a new file

Copy an existing Measured Color Gamut Data (MCGD) file when you want to create a new MCGD file with similar settings.

1. In the left navigation menu, tap **Color Settings > MCGD File Setup**.
2. In the MCGD File list, select a MCGD file.
3. Tap **Save As**.
4. Type a name for the MCGD file and tap **Save**.

Deleting a MCGD file

Delete a Measured Color Gamut Data (MCGD) file when it is no longer required.

1. In the left navigation menu, tap **Color Settings > MCGD File Setup**.
2. In the **MCGD File** list, select a MCGD file.
3. Tap **Delete**.
4. To confirm the deletion, tap **Delete**.

Creating a TCGD file

Typically, Target Color Gamut Data (TCGD) file settings are defined by the content provider and are not modified. A colorimeter is required to complete this procedure.

1. Turn on the light source and allow it to operate for 20 minutes.
2. In the left navigation menu, tap **Color Settings > TCGD File Setup**.
3. Tap the **Create TCGD File**.
4. Type a name for the TCGD file and tap **Create**.
5. To display test clips automatically when you select a color in the chromaticity image, select **Automatically Display Test Clip**.
6. To modify the white clipping values and improve image detail in very bright areas of the image, select **Use White Clip**.
7. Tap the option button in the red area of the chromaticity image to display the red test pattern.
8. Measure the red chromaticity with the colorimeter.
9. Type the red chromaticity values in the **Red X** and **Red Y** fields.
10. Adjust the **Gain** value to modify the color brightness.
11. Repeat steps 8 to 10 for the magenta, blue, cyan, white, yellow, and green chromaticity measurements.
12. To adjust the color of the white light in a specific area of the screen, select **White Tolerance** and a screen area.
13. Tap **Save**.
Editing an existing TCGD file

Edit an existing Target Color Gamut Data (TCGD) file when color readings change.

1. In the left navigation menu, tap Color Settings > TCGD File Setup.
2. In the TCGD File list, select a TCGD file.
3. Edit the TCGD file settings.
4. Tap Save.

Copying existing TCGD file settings to a new file

Copy an existing Target Color Gamut Data (TCGD) file when you want to create a new TCGD file with similar settings.

1. In the left navigation menu, tap Color Settings > TCGD File Setup.
2. In the TCGD File list, select a TCGD file.
3. Tap Save As.
4. Type a name for the TCGD file and tap Save.

Deleting a TCGD file

Delete a Target Color Gamut Data (TCGD) file when it is no longer required.

1. In the left navigation menu, tap Color Settings > TCGD File Setup.
2. In the TCGD File list, select a TCGD file.
3. Tap Delete.
4. To confirm the deletion, tap Delete.
Adjusting the image size and position

Learn how to enable and modify projector image settings.

Activating the Intelligent Lens System

Activate the Intelligent Lens System (ILS) to automatically adjust the position of the lens.

On CP2320-RGB projectors, the ILS is enabled by default.

1. In the left navigation menu, tap Service Setup > Preferences.
2. Tap Lens/ILS.
3. In the right pane, tap the ILS Installed slider.
   The color of the slider changes to green to indicate the ILS is active.

Creating a new ILS file

Create an Intelligent Lens System (ILS) file to set the X, Y, zoom, and focus positions of the lens.

1. In the left navigation menu, tap Image Settings > ILS File Setup.
2. Tap Create ILS File.
3. Type a name for the ILS file and tap Create.
4. In the Lens position area, tap the forward, backward, left, or right arrow icons to move the position of the image on the screen.
5. In the Focus area, tap Up (▲) or Down (▼) to increase or decrease image focus.
6. In the Zoom area, tap Up (▲) or Down (▼) to increase or decrease image zoom.
7. Tap Save.

Automatically calibrating the ILS

Use the Auto Calibrate feature of the Intelligent Lens System (ILS) to find and compensate for motor backlash, and to determine the movement range for the currently installed lens.

1. In the left navigation menu, tap Image Settings > ILS File Setup.
2. Tap Create.
3. Type a name for the ILS file and tap Create.
   To calibrate an existing ILS file, open the file through Image Settings.
4. Tap **Auto Calibrate**.
5. In the confirmation dialog, tap **Continue**.

**Editing ILS file settings**

Edit Intelligent Lens System (ILS) file settings when content requirements change.
1. In the left navigation menu, tap **Image Settings > ILS File Setup**.
2. In the ILS File list, select an ILS file.
3. Modify the ILS file settings.
4. Tap **Save**.

**Copying existing ILS file settings**

To duplicate Intelligent Lens System (ILS) file settings quickly, copy the settings of an existing file to a new ILS file.
1. In the left navigation menu, tap **Image Settings > ILS File Setup**.
2. In the ILS File list, select the ILS file you want to copy.
3. Tap **Save As**.
4. Type a name for the ILS file and tap **Save**.

**Deleting an ILS file**

Delete an Intelligent Lens System (ILS) file when it is no longer required.
1. In the left navigation menu, tap **Image Settings > ILS File Setup**.
2. In the ILS File list, select the ILS file you want to delete.
3. Tap **Delete**.
4. To confirm the deletion, tap **Delete**.

**Resetting the lens**

Use the Reset Lens feature to have the Intelligent Lens System (ILS) find the home position flags that allow the ILS to compensate for drift over time, or move to its proper position after it has been manually adjusted.
1. In the left navigation menu, tap **Image Settings > ILS File Setup**.
2. In the ILS File list, select an ILS file.
3. Tap **Reset Lens**.
4. In the confirmation dialog, tap **Continue**.
Creating a source file
Create source files to store resolution, offset, and aspect ratio settings for input devices. When the Auto Square Pixels file is selected, the incoming video format is automatically detected.

1. In the left navigation menu, tap **Image Settings > Source File Setup**.
2. Tap **Create Source File**.
3. Type a name for the source file and tap **Create**.
4. In the Source Media Resolution area, adjust the width and height of the source media.
5. Select an aspect ratio or type a custom aspect ratio for the source media.
6. In the Position area, adjust the horizontal and vertical position of the source media.
7. Tap **Save**.

Editing source file settings
Edit source file settings when the settings of the input device change.

1. In the left navigation menu, tap **Image Settings > Source File Setup**.
2. In the Source File list, select a source file.
3. Modify the source file settings.
4. Tap **Save**.

Copying existing source file settings to a new source file
To duplicate existing source file settings quickly, copy the settings of an existing file to a new source file.

1. In the left navigation menu, tap **Image Settings > Source File Setup**.
2. In the Source File list, select the source file you want to copy.
3. Tap **Save As**.
4. Type a name for the source file and tap **Save**.

Deleting a source file
Delete a source file when it is no longer required.

1. In the left navigation menu, tap **Images Settings > Source File Setup**.
2. In the Source File list, select the source file you want to delete.
3. Tap **Delete**.
4. To confirm the deletion, tap **Delete**.
Creating a screen file

Use screen files to define the size of the display panel and image cropping. You can assign the same screen file to multiple input devices.

1. In the left navigation menu, tap Image Settings > Screen File Setup.
2. Tap Create Screen File.
3. Type a name for the screen file and tap Create.
4. To crop the image in a specific location, tap one of the screen icons.
5. To adjust the amount of cropping on the X or Y axis, move the slider up or down.
6. To display all image data and maintain the aspect ratio, tap the Letterbox slider. The color of the slider changes to green to indicate it is active.
7. If required, adjust the Anamorphic Lens Factor value to match the lens installed.
8. Tap Save.

Editing screen file settings

Edit screen file settings when the image parameters change.

1. In the left navigation menu, tap Image Settings > Screen File Setup.
2. In the Screen File list, select a screen file.
3. Modify the screen file settings.
4. Tap Save.

Copying existing screen file settings to a new screen

To duplicate screen file settings quickly, copy the settings of an existing file to a new screen file.

1. Tap Image Settings > Screen File Setup.
2. In the Screen File list, select the screen file you want to copy.
3. Tap Save As.
4. Type a name for the source file and tap Save.

Deleting a screen file

Delete a screen file when it is no longer required.

1. In the left navigation menu, tap Image Settings > Screen File Setup.
2. In the Screen File list, select the screen file you want to delete.
3. Tap Delete.
4. To confirm the deletion, tap **Delete**.

**Performing digital convergence**

Perform digital convergence to improve the quality of the on-screen image.

1. In the left navigation menu, tap **Image Settings > Digital Convergence**.
2. Tap the up, down, left, or right arrows to adjust the position of the red, green, or blue digital micromirrors (DMDs).

**Resetting digital convergence to the default settings**

Reset digital convergence to the default settings when image parameters change.

1. In the left navigation menu, tap **Image Settings > Digital Convergence**.
2. Tap **Reset Defaults**.
Adjusting the image

Adjust the projector image. Christie recommends warming the lens before completing these procedures as focus may change as the lens warms.

Correcting vignetting

An image that is brighter at the center than it is at the sides needs vignetting correction.

If your image suffers from vignetting, the lens has reached the end of its offset travel range.

If your installation does not allow the image to be centered with the center of the screen, move the entire projector in the direction of lens travel.

Correcting keystone effect

Learn how to adjust the image to correct keystone effect.

Keystone effect occurs when you project an image onto the screen at an angle. As a result, the image appears distorted and resembles a trapezoid.

When making the adjustments, set the light source to minimum power.

<table>
<thead>
<tr>
<th>Horizontal keystone</th>
<th>Vertical keystone</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Horizontal keystone diagram]</td>
<td>![Vertical keystone diagram]</td>
</tr>
</tbody>
</table>

1. If the image suffers from slight keystone effect, it can be corrected with electronic cropping.
2. If the keystone effect is severe, you can unevenly adjust the feet to compensate for projector tilt.
It is recommended that you use lens offset to align the center of the image to the center of the screen before you correct the keystone effect.

3. If one side of the image is longer than another, adjust the tilt and level of the projector.

**Masking the screen edges**

Conceal the unused edges of a screen with top or side masking. Typically, you install top and side masking to allow a greater range of adjustment.

1. To create top masking:
   a) Install movable flat black panels or curtains along the top edge of the screen.
   b) Raise the curtain for flat images or lower the curtain for scope images.

<table>
<thead>
<tr>
<th>Top masking theater (1.85 screens)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A 1.85 image</td>
</tr>
<tr>
<td>B 2.39 image</td>
</tr>
<tr>
<td>C Masking moved up</td>
</tr>
<tr>
<td>D Top masking to hide screen top</td>
</tr>
</tbody>
</table>

2. To create side masking:
   a) Install movable flat black panels or curtains along each side of the screen.
   b) Close the curtain for flat images or open the curtain and zoom for scope images.
Side masking theater (2.39 screens)

A Side masking to hide screen edges
B 1.85:1 image (flat)
C 2.39:1 image (scope)
D Masking moved aside
Test patterns

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

Displaying a test pattern

Display a test pattern to refine and adjust the projected image, or to diagnose and correct image issues.

1. In the right toolbar, tap **Test Patterns**.
2. Tap **Full Screen** or **Uncorrected Colors**.
3. Tap a test pattern.
   When a test pattern is active, a blue bar appears below the test pattern icon in the right pane.
4. To display a 2D test pattern in 3D mode, select the **3D Sync** option.
   The **3D Sync** option is selected automatically for 3D test patterns. 3D test patterns cannot be displayed in 2D mode.
5. To change the frame rate of the test pattern display, select from the available Frame Rate options:
   • For 2D test patterns, the available frame rates are 24, 30, 48, and 60 Frames Per Second (FPS). The default value is 24 FPS.
   • For 3D test patterns, the available frame rates are 48 and 60 FPS. The default value is 48 FPS.

   Changing the frame rate of the display can assist with color measurement when working with corrected colors.
   When you change the frame rate option, that option is applied to the next test pattern you select unless it is not available for that pattern. If a selected frame rate is not available, the default frame rate is applied for the test pattern display.

Turning off a test pattern

Turn off a test pattern when adjustment of the projected image is complete.

1. In the right toolbar, tap **Test Patterns**.
2. Tap **Test Pattern Off**.
Importing a test pattern

Import custom test patterns to meet the specific requirements of your viewing environment.

1. In the right toolbar, tap Test Patterns.
2. In the upper right corner, tap Edit.
3. Tap Import.
4. Browse to the location of the test pattern file.
5. Tap the test pattern file.
6. Tap Accept.
7. In the upper right corner, tap Done.

Deleting a test pattern

Delete a test pattern that is no longer required. A test pattern with RGB in the name cannot be deleted.

1. In the right toolbar, tap Test Patterns.
2. In the upper right corner, tap Edit.
3. Tap a test pattern.
4. Tap Delete.
5. To confirm the deletion, tap Delete.
6. In the upper right corner, tap Done.
Working with the scheduler

Use the scheduler to schedule playlists and automated events to play automatically on a specific date at a specific time.

Scheduling a playlist, content, or automation

Schedule a playlist, content, or automation to run automatically on a specific date and time.

On CP2320-RGB projectors, the scheduler is enabled by default.

To avoid conflicts with scheduled events, the Loop option is not available when the Scheduler is on. In addition, when the Scheduler is enabled, the Loop option is disabled on any content items where it was set.

1. In the left navigation menu, tap **Scheduler**.
2. To enable scheduled events, tap the **Scheduler is off** slider. The color of the slider changes to green to indicate it is active.
3. To select a date for the scheduled event, tap **Calendar**.
4. Select the week.
5. Tap a square below the date and next to the time that you want the event to run.
6. Tap **+ New Event**.
7. Tap **Playlist, Content, or Automation**.
8. Tap a playlist, content, or automation item.
9. Select the start time.
10. Select the start date.
11. To repeat the event daily, weekly, or monthly:
   a) Tap the **Recurrence** slider.
   b) Select the frequency of the recurrence. The options are daily, weekly, or monthly.
   c) Select the days or months that you want the playlist, content, or automation event to play.
   d) To select an end date for the schedule, tap **Calendar**.
12. To prevent the scheduled event from being overwritten, tap the **Lock Event** slider. Locked events cannot be overwritten by pasted events.
13. Tap **Create Event**.
Editing a scheduled event

Edit a scheduled event to modify the run time and date.

1. In the left navigation menu, tap **Scheduler**.
2. In the calendar view, tap the scheduled event.
3. Tap **Edit**.
4. Edit the scheduled event settings.
5. Tap **Update Event**.

Copying and pasting an existing scheduled event

To run a scheduled event at a different date and time, copy and paste it.

1. In the left navigation menu, tap **Scheduler**.
2. In the calendar view, tap the scheduled event.
3. Tap **Copy**.
4. Tap a square below the date and next to the time that you want the event to run.
5. Tap **Paste**.
6. Adjust the any settings for the scheduled event.
7. Tap **Paste Event**.

Copying and pasting scheduled events for an entire day

To run an existing full day of scheduled events on a different date, copy and paste the entire day of scheduled events.

1. In the left navigation menu, tap **Scheduler**.
2. At the top of the calendar, tap the day with the events you want to copy.
3. Tap **Copy**.
4. At the top of the calendar, tap the new target day.
5. Tap **Paste**.
   Only unlocked events are copied to the new day.

Cutting and pasting a scheduled event

To move an existing scheduled event to a different date and time, cut and paste it.

1. In the left navigation menu, tap **Scheduler**.
2. In the calendar view, tap the scheduled event.
3. Tap **Cut**.
4. Tap the new date in the calendar.
5. Tap **Paste**.
6. Adjust the settings for the scheduled event.
7. Tap **Paste Event**.
   Only unlocked events are copied.

### Deleting a scheduled event
Delete an individual schedule event when it is no longer required.
1. In the left navigation menu, tap **Scheduler**.
2. In the calendar view, tap the scheduled event.
3. Tap **Delete**.
4. To confirm the deletion, tap **Delete**.

### Deleting scheduled events for an entire day
Delete the scheduled events for an entire day when they are no longer required.
1. In the left navigation menu, tap **Scheduler**.
2. At the top of the calendar, tap the target day.
3. Tap **Clear Day**.
4. To confirm the change, tap **Clear Day**.

### Changing the day of the week the scheduler starts
Change the start day of the scheduler to match the schedule of the theater.
1. In the left navigation menu, tap **Service Setup > Preferences**.
2. Tap **General**.
3. In the Scheduler area, select the day of the week to start the scheduler.

### Turning the scheduler off
Turn the scheduler off when you do not want scheduled events to run automatically on a specific date and time.
1. In the left navigation menu, tap **Scheduler**.
2. To disable scheduled events, tap the **Scheduler is on** slider.
   The color of the slider changes to gray to indicate it is inactive.
Managing storage devices

Learn how to add, edit, and remove external storage devices and ingest sources.

Adding a new storage device

Add a new storage device to store and play content.

1. In the left navigation menu, tap **Service Setup > Storage Device Setup**.
2. Tap **+ New Storage Device**.
3. Complete these fields:
   - Name—The name of the storage device.
   - IP Address—The IP address of the storage device.
   - Username—The user account or ID (if required to connect to the storage device).
   - Password—The password for the user account (if required to connect to the storage device).
   - Share Folder—The folder where content is stored.
   - Drive Type—Select Content Drive or Ingest Drive.
4. To make the content drive the primary storage drive, tap the **Set as Primary Drive** slider. The color of the slider changes to green to indicate it is active.
5. To test the connection to the storage device, tap **Test Connection**.
6. Tap **Save**.

Editing storage device settings

Edit storage device settings when device or communication settings change.

1. In the left navigation menu, tap **Service Setup > Storage Device Setup**.
2. Tap a storage device in the left pane.
3. Edit the settings in the right pane.
4. Tap **Save**.

Setting a storage device as a primary drive

A primary drive is the device that is the primary source of content.

1. In the left navigation menu, tap **Service Setup > Storage Device Setup**.
2. Tap a storage device in the left pane.
3. To make the new storage device the primary storage drive, tap the Set as Primary Drive slider.
   The color of the slider changes to green to indicate it is active.
4. Tap Save.

Deleting a storage device
Delete a storage device when it is no longer required.
1. In the left navigation menu, tap Service Setup > Storage Device Setup.
2. In the left pane, tap a storage device.
3. Tap Delete.
4. To confirm the deletion, tap Delete.

Adding a remote ingest source
Add a remote ingest source to uploaded content from a remote storage device.
1. In the left navigation menu, tap Service Setup > Remote Ingest Setup.
2. Tap + New Ingest Source.
3. In the Name field, type a name for the ingest source.
4. In the IP Address field, type an IP address for the ingest source.
5. In the Port field, type the port number for the ingest source.
   By default, the port value is 21.
6. Tap Add.
7. In the Username field, type the user name if required for the ingest source.
8. In the Password field, type the password if required for the ingest source.
9. Tap the Type list and select the device type.
10. To test the connection to the ingest source, tap Test Connection.
11. To save the configuration, tap Save.

Editing remote ingest source settings
Edit the settings of remote ingest sources when device or communication settings change.
1. In the left navigation menu, tap Service Setup > Remote Ingest Setup.
2. In the left pane, tap a remote ingest source.
3. Edit the settings displayed in the right pane.
4. Tap Save.
Deleting a remote ingest source

Delete a remote ingest source when it is no longer required.

1. In the left navigation menu, tap **Service Setup > Remote Ingest Setup**.
2. In the left pane, tap a remote ingest source.
3. Tap **Delete**.
4. To confirm the deletion, tap **Delete**.
Managing projector setting files

Projector setting files store projector settings. When a projector setting file is associated with a channel, the projector settings are automatically adjusted to match the requirements of the content.

Creating a 3D file

Create a 3D file if you are playing 3D content on a single projector or using active 3D with multiple projectors.

1. In the left navigation menu, tap Image Settings > 3D File Setup.
2. Tap Create 3D File.
3. Type a name for the 3D file and tap Create.
4. In the General Settings area, complete these fields:
   • **3D Delay**—Creates a delay to allow the 3D system to synchronize the output and reduce on screen artifacts.
   • **Invert 3D Sync Polarity**—Reverses 3D stereo sync output (left eye = right eye and right eye = left eye).
5. In the Frame Rate Settings area, complete these fields:
   • **Dark Time**—Creates a blank time interval in microseconds (μs) between left and right frames to allow for LCD shutter glasses, Z screen, or rotating 3D wheel to synchronize the output.
   • **Output Delay**—The time interval in microseconds (μs) when an image is not displayed. Offset 3D stereo sync output in relation to the dark time interval. A positive offset adds a delay and a negative offset starts playback early.
   • **Phase Delay**—The degree of reference between the left and right sync output.
   • **Multiplier**—Sets the number of frames to display per number of frames that form one complete image. You can increase the display frame rate to reduce flicker from your source.
6. Tap Save.

Editing an existing 3D file

Edit an existing 3D file to match the settings of the 3D hardware.

1. In the left navigation menu, tap Image Settings > 3D File Setup.
2. In the 3D File list, select a file.
3. Edit the 3D file settings.
4. Tap Save.

Copying a 3D file

Copy an existing 3D file to create a new 3D file with similar settings.
1. In the left navigation menu, tap Image Settings > 3D File Setup.
2. In the 3D File list, select a file.
3. Tap Save As.
4. Type a new name for the file.
5. Tap Save.

Deleting a 3D file

Delete a 3D file when it is no longer required.
1. In the left navigation menu, tap Image Settings > 3D File Setup.
2. In the 3D File list, select a file.
3. Tap Delete.
4. To confirm the deletion, tap Delete.
Managing audio settings

Learn how to enable and modify projector audio settings.

Setting the global audio delay

The global audio delay setting increases or decreases the audio delay.

1. In the left navigation menu, tap Service Setup > Audio Setup.
2. On the Global Settings tab, in the Global Audio Delay area, select one of these options:
   - To increase the audio delay, tap Up.
   - To decrease the audio delay, tap Down.

Setting the audio output rate

Adjust the audio output rate to match the output of the audio device.

1. In the left navigation menu, tap Service Setup > Audio Setup.
2. On the Global Settings tab, in the Audio Output Rate area, select one of these options:
   - Automatic
   - 48 kHz
   - 96 kHz

Mapping channels

Use the Channel Mapping tab to map the Digital Cinema Package (DCP) audio channels to the AES outputs. Interop is the most common audio setting.

1. In the left navigation menu, tap Service Setup > Audio Setup.
2. Tap the Channel Mapping tab.
3. In the Channel Format list, select an audio format.
   The selection in the Channel Format list does not determine the audio format. The content determines the audio format. For example, if you select SMPTE 7.1 DS and Interop is specified in the content, the Interop audio settings are applied when the content plays.
4. Select the channel that matches the speaker specified in the Interop Channel Mapping Guide.
5. For any speakers not being used, select Not Used.
6. To test the channel mapping setting, tap Test.
Enabling Dolby Atmos

To play content with Dolby Atmos audio, enable Dolby Atmos.

1. Tap Service Setup > Audio Setup.
2. Tap the Dolby Atmos Configuration tab.
3. Tap the Enable Dolby Atmos slider. The color of the slider changes to green to indicate it is active.
4. In the Control IP field, type the control IP address.
5. In the Input IP field, type the input IP address.
6. To test Dolby Atmos connectivity, tap Test Connection.
7. Tap Save.

Editing Dolby Atmos settings

Edit Dolby Atmos settings when device settings change.

1. Tap Service Setup > Audio Setup.
2. Tap the Dolby Atmos Configuration tab.
3. Edit the Control IP and Input IP fields.
4. To test Dolby Atmos connectivity, tap Test Connection.
5. Tap Save.

Disabling Dolby Atmos

Disable Dolby Atmos when Dolby Atmos audio playback is no longer required.

1. Tap Service Setup > Audio Setup.
2. Tap the Dolby Atmos Configuration tab.
3. Tap the Enable Dolby Atmos slider. The color of the slider changes to gray to indicate it is inactive.
4. Tap Save.
Setting up multiple projectors

Learn how to add, modify, and remove master projectors and slave projectors.

### Enabling multiple projectors

Enable multiple projectors to display 3D or HDR content.

1. In the left navigation menu, tap **Service Setup > Multi-Projector Setup**.
2. Tap the **Multi-Projector Control** slider.
   The color of the slider changes to green to indicate it is active.
3. Tap the **Active 3D Glasses** slider if you are using active 3D glasses and want to send left and right images to multiple projectors.
   If you select this option, you cannot change the eye selection setting.
4. In the Master Eye Selection list, select **Right** or **Left** for the master projector.
   This option is not available when **Active 3D Glasses** is selected.
5. If using a Christie NAS device, tap the **Multi-Projector Sync of Content** slider to automatically synchronize ingested content on the master projector to all slave projectors.
   The color of the slider changes to green to indicate it is active.

   For more information on synchronizing content using multiple NAS devices, see the **Christie NAS-S3 Installation and Setup Instruction Sheet P/N: 020-102537-XX**.

### Adding a slave projector

Add a slave projector to display 3D or HDR content.

1. In the left navigation menu, tap **Service Setup > Multi-Projector Setup**.
2. Tap **New Slave Projector**.
   This option is available only when the **Multi-Projector Control** slider is selected.
3. Type a name and IP address for the projector.
4. Tap **Add**.
5. In the Eye Selection column, select **Right** or **Left**.
   This option is not available when **Active 3D Glasses** is selected.
Disabling multiple projectors

Disable multi-projector settings when the second projector is not required to display content.

1. In the left navigation menu, tap **Service Setup > Multi-Projector Setup**.
2. Tap the **Multi-Projector Control** slider.
   The color of the slider changes to gray to indicate it is inactive.

Disabling a slave projector

Disable a slave projector when it is no longer required or when it is replaced by another projector.

1. In the left navigation menu, tap **Service Setup > Multi-Projector Setup**.
2. Tap the slider in the **Enabled** column of the slave projector you want to disable.
   The color of the slider changes to gray to indicate it is inactive.

Deleting a slave projector

Delete a slave projector from a multi-projector configuration when it is no longer required or when it is replaced by another projector.

1. In the left navigation menu, tap **Service Setup > Multi-Projector Setup**.
2. In the Delete column of the slave projector you want to delete, tap **Delete**.
3. To confirm the deletion, tap **Delete**.
Automation

You use automation to control playback, the projector, and external devices. This section provides instructions for managing and defining:

- **Macros** - A macro is a list of actions that you define. For example, opening the curtains or turning on the house lights at the end of playback. A macro can be activated by a global trigger, or it can be added to a playlist.

- **Device Input Triggers** - Input cues wait for events such as a general purpose input (GPI) state change or an Ethernet message received on TPC port 5111. An input cue in a playlist delays playback until an event occurs.

- **Global Triggers** - A global trigger combines an input cue with a macro. When the predefined event for the input cue occurs, the output macro is triggered. For example, a fire alarm input signal could cause playback to stop and the house lights to come on. A global trigger is always active and is not dependent on specific playlist definitions.

### Available macro actions

These are the macro actions that are available to control automated events:

<table>
<thead>
<tr>
<th>Action Item</th>
<th>Available Actions</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automation</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Set Global</td>
<td>Allows you to set a global variable that can be used in automation scripting (intended for advanced scripting by Christie)</td>
</tr>
<tr>
<td></td>
<td>Print</td>
<td>Generates a projector log entry when an automation macro runs</td>
</tr>
<tr>
<td></td>
<td>Get Global</td>
<td>Allows the automation script to read the value of a global variable (intended for advanced scripting by Christie)</td>
</tr>
<tr>
<td></td>
<td>Set GPO</td>
<td>Sets the specified GPO pin to high or low</td>
</tr>
<tr>
<td></td>
<td>Pulse GPO</td>
<td>Pulses the specified GPO pin</td>
</tr>
<tr>
<td></td>
<td>Get GPI</td>
<td>Allows an automation script to read the GPI state (intended for advanced scripting by Christie)</td>
</tr>
<tr>
<td></td>
<td>Delay</td>
<td>Delays macro execution</td>
</tr>
<tr>
<td></td>
<td>Wait On GPI</td>
<td>Pauses the automation script and waits for the specified GPI event to enter the specified state</td>
</tr>
<tr>
<td>Playback</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pause</td>
<td>Pauses playback</td>
</tr>
<tr>
<td></td>
<td>Stop</td>
<td>Stops playback</td>
</tr>
<tr>
<td></td>
<td>Play</td>
<td>Starts or resumes playback</td>
</tr>
<tr>
<td></td>
<td>Toggle</td>
<td>Pauses playback if content is playing OR resumes playback if content is paused</td>
</tr>
</tbody>
</table>
### Action Item

<table>
<thead>
<tr>
<th>Action Item</th>
<th>Available Actions</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projector</td>
<td>Disable Subtitle</td>
<td>Disables subtitles for the current content and onward</td>
</tr>
<tr>
<td></td>
<td>Jog</td>
<td>Moves content forward by the time specified</td>
</tr>
<tr>
<td></td>
<td>Douser Open</td>
<td>Opens the douser (shutter)</td>
</tr>
<tr>
<td></td>
<td>Douser Close</td>
<td>Closes the douser (shutter)</td>
</tr>
<tr>
<td></td>
<td>Light On</td>
<td>Turns the light on</td>
</tr>
<tr>
<td></td>
<td>Light Off</td>
<td>Turns the light off</td>
</tr>
<tr>
<td></td>
<td>Standby</td>
<td>Puts the projector in standby mode</td>
</tr>
<tr>
<td></td>
<td>Channel</td>
<td>Selects a specific projector channel</td>
</tr>
<tr>
<td></td>
<td>Revert Warp File</td>
<td>Reverts a modified warp file to the default settings</td>
</tr>
<tr>
<td></td>
<td>Full Power</td>
<td>Places the projector in full power mode (shutter open, light on)</td>
</tr>
<tr>
<td></td>
<td>Wait</td>
<td>Delays the execution of a macro</td>
</tr>
</tbody>
</table>

### Fire alarm macro

By default, the projector is configured with a macro that uses a building fire alarm as the trigger. If the projector is connected to the building's fire alarm system (recommended installation), the default FIRE_ALARM macro performs the following actions in sequence:

1. Stops the playback of content.
2. Puts the projector into Standby mode.

You can also create a custom macro that uses the fire alarm trigger or edit the default fire alarm macro to perform other actions as needed.

### Christie ACT actions

These are the available built-in commands for the Christie ACT:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buzzer</td>
<td>Activates the buzzer for the specified time (in milliseconds)</td>
</tr>
<tr>
<td>Button</td>
<td>Simulates pressing or holding the ACT button</td>
</tr>
<tr>
<td>Pulse Relay</td>
<td>Sends a pulse to a specific relay</td>
</tr>
<tr>
<td>Open Relay</td>
<td>Opens a specific relay</td>
</tr>
<tr>
<td>Close Relay</td>
<td>Closes a specific relay</td>
</tr>
<tr>
<td>Pulse GPO</td>
<td>Sends a pulse to a specific GPO pin</td>
</tr>
<tr>
<td>Set All GPOs</td>
<td>Sets the values for all GPO pins</td>
</tr>
<tr>
<td>Run Script</td>
<td>Runs a script on the Christie ACT</td>
</tr>
</tbody>
</table>
**JNIOR actions**

These are the available built-in commands for JNIOR devices:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash LED</td>
<td>Causes a specific LED to flash</td>
</tr>
<tr>
<td>Set All LEDs</td>
<td>Sets values for all of the LEDs</td>
</tr>
</tbody>
</table>

You can create macros on the JNIOR device and call them using the `Execute Macro` command. Make sure you use `\0D` for a carriage return and `\0A` for a line feed.

To create and run macros on the JNIOR, use the JNIOR Support Tool to enable and configure the Cinema.JNIOR application. It is recommended that you install Cinema.JNIOR version 2.22.1115.1501 or later. For additional information, see INTEG Process Group (www.integpg.com). Port 9200 is the default Ethernet port for sending automation commands to the JNIOR.

**Dolby Cinema processor actions**

These are the available built-in commands for Dolby CP650, CP750, and CP850 devices:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mute On/Mute Off</td>
<td>Enables or disables muting</td>
</tr>
<tr>
<td>Set Format (CP650 only)</td>
<td>Selects the format</td>
</tr>
<tr>
<td>Set Fader Level</td>
<td>Sets the fader level</td>
</tr>
<tr>
<td>Send Message (CP850 only)</td>
<td>Sends the specified message</td>
</tr>
</tbody>
</table>

If you need to control additional functions and a built-in command is not available, send a command string in a macro. For example, send this command to enable surround boost on the Dolby CP750: `cp750.sys.surround_boost 1\0D`

Make sure that you include a carriage return (`\0D`) at the end of each command. For more information about controlling other features with serial commands, see the Dolby CP750 documentation.

The default Ethernet port for sending automation commands to the Dolby CP650 is port 61412. For Dolby CP750 and CP850, the default Ethernet port is port 61408.
SKA-3D actions

These are the available built-in commands for SKA-3D devices:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set Audio Input Channel</td>
<td>Sets the audio input channel</td>
</tr>
<tr>
<td>Mute On/Mute Off</td>
<td>Enables or disables muting</td>
</tr>
<tr>
<td>Set Master Volume</td>
<td>Sets the master volume for the system</td>
</tr>
<tr>
<td>Set Video Input Channel</td>
<td>Sets the video input channel</td>
</tr>
<tr>
<td>Active Trigger Input</td>
<td>Controls eight SKA-3D presets</td>
</tr>
</tbody>
</table>

To use this command, a trigger input must be associated with each of the SKA-3D presets.

Creating a macro

Create a macro to make the projector perform a specific list of actions.

1. In the left navigation menu, tap Automation > Macro Editor.
2. In the right pane, tap Create New Macro.
3. Type a name for the macro. The Name field cannot contain spaces.
4. Select the macro type.
5. Tap Create.
6. Add an action item to the macro:
   a) In the left pane, expand the My Auditorium list.
   b) Select the type of device the macro will apply to.
   c) Tap the action item.
   d) Under Automation, Playback, or Projector, select the action item.
7. To save the macro, tap Save.
8. To test the macro, tap Test.

Running a macro

Run a macro to have the projector perform a specific list of actions.

1. In the right toolbar, tap Run Macro.
2. Tap a macro.
Adding an action item to an existing macro

Add an action item to a macro to have the projector perform an additional action when the macro runs.

1. In the left navigation menu, tap Automation > Macro Editor.
2. In the top right pane, select a macro from the list.
3. Add an action item to the macro:
   a) In the left pane, expand the My Auditorium list.
   b) Under Automation, Playback, or Projector, select the action item.
4. To save the macro, tap Save.
5. To test the macro, tap Test.

Adding a macro to an existing macro

Combine macros to have the projector complete a complex set of actions.

1. In the left navigation menu, tap Automation > Macro Editor.
2. From the list in the top right pane, select a macro.
3. In the left pane, expand the macro list.
4. Tap a macro.
5. Tap Save.

Deleting a macro

Delete macros when they are no longer required.

1. In the left navigation menu, tap Automation > Macro Editor.
2. From the list in the top right pane, select a macro.
3. Tap Delete.
4. To confirm the deletion, tap Delete.

Adding an automation device to your auditorium

Add an automation device so it can be controlled remotely and can communicate with other theater hardware.

1. In the left navigation menu, tap Automation > My Auditorium Devices.
2. Tap + New Device.
3. In the Name field, type a name for the device.
4. In the Device Type list, select the device type.
5. In the Select Device list, select the device.
6. Tap Add.

7. Complete these fields:
   - IP Address—The IP address of the automation device.
   - Port—The port used by the automation device to communicate with the projector.
   - Username—The username used to access the automation device.
   - Password—The password used to access the automation device.
   - Keep Alive Message—The message value that is sent to the automation device to ensure the projector is not disconnected when inactive.
   - Keep Alive Interval (ms)—The time interval (in milliseconds) for sending the Keep Alive Message to the automation device.

8. Tap Save.
The added device is displayed in the list of auditorium devices in the Macro Editor.

**Modifying automation device settings**

Modify the settings of automation devices when parameters such as the user name or password change. If the settings are not updated, the automation device might be unable to communicate with other theater hardware or be controlled remotely.

1. In the left navigation menu, tap Automation > My Auditorium Devices.
2. In the left pane, select an automation device.
3. Modify these fields:
   - IP Address—The IP address of the automation device.
   - Port—The port used by the automation device to communicate with the projector.
   - Username—The username used to access the automation device.
   - Password—The password used to access the automation device.
   - Keep Alive Message—The message value that is sent to the automation device to ensure the projector is not disconnected when inactive.
   - Keep Alive Interval (ms)—The time interval (in milliseconds) for sending the Keep Alive Message to the automation device.
4. Tap Save.

**Removing an automation device from your auditorium**

Remove an automation device when it is no longer required, or it has been physically removed from the theater.

1. In the left navigation menu, tap Automation > My Auditorium Devices.
2. In the left pane, select an automation device.
3. Tap Delete.
4. To confirm the deletion, tap Delete.
Creating a new playlist trigger

Create new playlist triggers to activate an automation device in a playlist.

1. In the left navigation menu, tap Automation > Device Input Triggers.
2. Tap the Playlist Trigger tab.
3. Tap + New Playlist Trigger.
4. Complete the Name, Device Source, and Resume Playback On fields.
   The Name field cannot contain spaces.
5. Tap Add.

Editing existing playlist trigger settings

Edit playlist trigger settings to change the playlist trigger behavior.

1. In the left navigation menu, tap Automation > Device Input Triggers.
2. Tap the Playlist Triggers tab.
3. To the right of the playlist trigger you want to edit, tap Edit. 
4. Edit the playlist trigger settings.
5. Tap Save.

Deleting a playlist trigger

Delete a playlist trigger when it is no longer required.

1. Tap Automation > Device Input Triggers.
2. Tap the Playlist Triggers tab.
3. To the right of the playlist trigger, tap Delete.
4. To confirm the deletion, tap Delete.

Creating a new global trigger

Create a global trigger to trigger an output macro. For example, a fire alarm input signal could cause playback to stop and the house lights to come on. A global trigger is always active and is not dependent on specific playlist definitions.

1. In the left navigation menu, tap Automation > Device Input Triggers.
2. Tap the Global Triggers tab.
3. Tap + New Global Trigger.
4. Complete the Name, Source, and Trigger Event fields.
   The Name field cannot contain spaces.
5. In the Macro Name list, tap the macro that will run on trigger detection.
6. Tap Add.
Editing existing global trigger settings

Edit the settings of an existing global trigger to change its behavior.

1. In the left navigation menu, tap Automation > Device Input Triggers.
2. Tap the Global Triggers tab.
3. To the right of the global trigger you want to edit, tap Edit.
4. Edit the global trigger settings.
5. Tap Save.

Deleting a global trigger

Delete a global trigger when it is no longer required.

1. In the left navigation menu, tap Automation > Device Input Triggers.
2. Tap the Global Triggers tab.
3. To the right of the global trigger, tap Delete.
4. To confirm the deletion, tap Delete.

Importing a device library

A device library contains commands that are used to control a specific device.

1. In the left navigation menu, tap Automation > Device Libraries.
2. Tap Import Device Library.
3. Browse to the location of the device library file.
4. Tap the file and tap Accept.

Viewing a device library

View device libraries to determine if a library exists for the network device.

1. Import the device library.
2. In the left navigation menu, tap Automation > Device Libraries.
3. To the right of the device in the View Library column, tap View Library.
   Review the list of actions available for the device.

Deleting a device library

Delete a device library when it is no longer required.

1. In the left navigation menu, tap Automation > Device Libraries.
2. To the right of the device library, tap Delete.

3. To confirm the deletion, tap Delete.
Enhancements and licensing

Learn about importing licenses and activating product enhancements.

Enabling an enhancement

After importing a license, it must be enabled to activate the new functionality.

1. Tap Service Setup > Enhancements.
2. In the Enable column, tap the Enhancement slider.
   The color of the slider changes to green to indicate it is active.

Enabling RealD 3D EQ

If you are using RealD technology to display 3D content, you must enable the RealD 3D EQ configuration file.

1. Obtain the license file from RealD.
2. Tap Image Settings > RealD 3D EQ File Setup.
3. To upload the RealD license file, tap Browse and navigate to the file location.
4. To open the license file, select the file (.reald) and tap Accept.

Importing a rental license file

If your projector is a rental unit provided by a vendor, you must import a rental license to enable certain features.

Depending on your customer rental agreement, the vendor may provide access to the following features:

- illumination
- HDMI

Your entitlement to use the features may be unrestricted, or may be assigned for a specified date range or number of hours. To obtain the rental license, download the file provided by the vendor.

1. In the right toolbar, tap Rental Mode Key.
2. In the Rental Licenses window, tap Import License.
3. In the Open File dialog, navigate to the folder containing the license ZIP file and select the file from the list.
4. To import the license ZIP file, tap **Accept**. The license file is extracted and the following customer information is added to the projector's system:

- Name
- Address
- Phone number
- Email

The system displays the entitlement information for illumination and HDMI. When an entitlement is nearing expiration, the system displays an alert on the Rental Mode Key icon.
Backing up, restoring, and upgrading files

Learn how to back up, restore, and upgrade projector files.

Creating a new backup file

Create a new backup file to restore projector settings if a failure occurs.

1. In the left navigation menu, tap Service Setup > Backup and Restore.
2. Tap New Backup.
3. Type a name for the backup file and tap Backup.

Exporting a backup file

A disaster recovery plan can include exporting backup files to another location.

1. In the left navigation menu, tap Service Setup > Backup and Restore.
2. Insert a USB flash drive into the Management USB port on the projector communication board.
3. Select a backup file and tap Export.
4. Tap to move up through the file directory.
5. Tap to create a new folder.
6. In the Name field, type a name for the backup file.
7. Tap Accept.

Importing a backup file

Import a backup file to restore projector settings.

1. In the left navigation menu, tap Service Setup > Backup and Restore.
2. Insert a USB flash drive into the Management USB port on the projector communication board.
3. Tap Import Backup.
4. Browse to the location of the file or enter a name for the backup file in the Name field.
5. Select the file and tap Accept.
6. If the file already exists, in the confirmation dialog tap Overwrite.
Sorting backup files by name and date created

Locate a backup file with a specific name or creation date.

1. In the left navigation menu, tap Service Setup > Backup and Restore.
2. Sort the backup files:
   • To sort the backup files by name, tap the Backup File Name heading.
   • To sort the files by the date they were created, tap the Date Created heading.

Deleting a backup file

Delete a backup file if it is no longer required or is uploaded in error.

1. In the left navigation menu, tap Service Setup > Backup and Restore.
2. Select a backup file and tap Delete.
3. To confirm, tap Delete.

Adding an upgrade package

An upgrade package is used to upgrade the projector software.

A maximum of 10 upgrade packages can be stored. When you add an upgrade package that exceeds this limit, the system deletes the upgrade package that was last used.

1. In the left navigation menu, tap Service Setup > System Upgrade.
   A list of upgrade files appears in the left pane.
2. Tap + Add New Package.
3. Browse to the location of the upgrade package.
4. Type a name for the upgrade package and tap Accept.

Installing an upgrade package

Install an upgrade package to update the projector software.

1. In the left navigation menu, tap Service Setup > System Upgrade.
2. In the list of packages, tap an upgrade package.
3. In the right pane, select one of these options:
   • **Upgrade Differences Only**—Upgrades system components that are newer or older than the currently installed version.
   • **Force Upgrade All**—Upgrades all components in the upgrade package.
   • **Factory Upgrade**—Removes all existing configurations and upgrades all components.
4. Tap Upgrade.
5. To confirm, tap Upgrade.
Comparing upgrade packages

Compare upgrade packages to view the differences between them.

1. In the left navigation menu, tap Service Setup > System Upgrade.
2. In the list of packages, tap an upgrade package.
   The differences between the current and the selected upgrade package are displayed in the right pane. Differences are identified with a yellow exclamation mark.

Deleting an upgrade package

Delete an upgrade package that is no longer required.

1. In the left navigation menu, tap Service Setup > System Upgrade.
2. In the list of packages, tap an upgrade package.
3. Tap Delete.
4. To confirm the deletion, tap Delete.

Restoring settings from a backup file

Restore projector settings from a backup file.

1. In the left navigation menu, tap Service Setup > Backup and Restore.
2. Select a backup file and tap Restore.
3. Select the settings you want to restore and tap Restore.
4. Tap OK.

Restoring factory default settings

Restoring factory settings removes all custom projector settings.

1. In the left navigation menu, tap Service Setup > Backup and Restore.
2. Tap Factory Restore.
3. Select the settings you want to restore and tap Restore.
4. Tap OK.
Accessing projector diagnostics

Learn how to access projector system logs and run diagnostic utilities.

Retrieving and downloading system logs

System logs can aid with the identification and correction of projector faults.

1. In the left navigation menu, tap **Diagnostics > System Logs/Interrogator**.
2. In the From list, select a start date for the logs.
3. In the To list, select an end date for the logs.
4. In the Log Source list, select a log type. For example, **Projector**.
5. Tap **Search**.
6. To sort log files by type, message, or date, tap a column heading.
7. To download the Security Manager (SM) report:
   a) Tap **Download SM Report**. The system generates the report.
   b) Browse to the location where you want to save the report file.
   c) Type a name for the report file in the Name field.
   d) Tap **Accept**.

Running the projector interrogator

Run the interrogator to identify and correct projector faults.

1. Insert a USB flash drive in the **Management USB** port on the projector communication board.
2. In the left navigation menu, tap **Diagnostics > System Logs/Interrogator**.
3. Tap **Run Interrogator**.
4. In the confirmation dialog, tap **Interrogate**.
5. Browse to the location where you want the interrogator file to be saved.
6. In the Name field, type a name for the interrogator file.
7. Tap **Accept**.
Viewing laser diagnostic information

Find diagnostic information on the laser optical sub-system.

1. In the left navigation menu, tap **Laser Settings > Laser Diagnostics**.
2. Review the detailed information for the following:
   - model
   - version
   - serial numbers
   - power health
   - drivers
   - temperature

Downloading a certificate

Use a certificate to request Key Delivery Message (KDM) keys.

1. In the left navigation menu, tap **About**.
2. In the certificate list, select one of the following certificates:
   - Projector Certificate
   - SMS Certificate
   - SM Certificate (used by distributors to generate KDM keys)
   - Log Signer Certificate
3. Tap **Download**.
4. In the Name field, type a name for the certificate file.
5. Tap **Accept**.
Regulatory

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

Safety

- IEC 62471 – Photobiological safety of lamps and lamp systems

Electro-magnetic compatibility

Emissions

- CAN ICES-003 (A)/NMB-003 (A) – Information Technology Equipment (Including Digital Apparatus) – Limits and Methods of Measurement
- FCC CFR47, Part 15, Subpart B, Class A – Unintentional Radiators
- 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 24/EN55024 EMC Requirements – Information Technology Equipment
Environmental

- 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).

- 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).

- EU Directive (2012/19/EU) on waste and electrical and electronic equipment (WEEE) and the applicable official amendment(s).

- Regulation (EC) No. 1907/2006 on the registration, evaluation, authorization and restriction of chemicals (REACH) and the applicable official amendment(s).