Rio Replay

User Guide

VERSION 10.4.0

ROSS

THANK YOU FOR CHOOSING ROSS VIDEO

You've made a great choice. We expect you will be very happy with your purchase of Ross Technology.

Our mission is to:

1. Provide a Superior Customer Experience
    - offer the best product quality and support
2. Make Cool Practical Technology
    - develop great products that customers love

Ross has become well known for the Ross Video Code of Ethics. It guides our interactions and empowers our employees. I hope you enjoy reading it below.

If anything at all with your Ross experience does not live up to your expectations be sure to reach out to us at *solutions@rossvideo.com*.

David Ross
CEO, Ross Video
david.ross@rossvideo.com

Ross Video Code of Ethics

Any company is the sum total of the people that make things happen. At Ross, our employees are a special group. Our employees truly care about doing a great job and delivering a high quality customer experience every day. This code of ethics hangs on the wall of all Ross Video locations to guide our behavior:

1. We will always act in our customers' best interest.
2. We will do our best to understand our customers' requirements.
3. We will not ship crap.
4. We will be great to work with.
5. We will do something extra for our customers, as an apology, when something big goes wrong and it's our fault.
6. We will keep our promises.
7. We will treat the competition with respect.
8. We will cooperate with and help other friendly companies.
9. We will go above and beyond in times of crisis. *If there's no one to authorize the required action in times of company or customer crisis - do what you know in your heart is right. (You may rent helicopters if necessary.)*

About This Guide

- Ross Part Number: **4600DR-100-05**
- Release Date: March 2026. Printed in Canada.
- Software Issue: **10.4.0**

This Guide contains information about the Rio Replay Server Chassis and Rio Replay Control Panel. The information contained in this Guide is subject to change without notice or obligation.

Copyright

Important Regulatory and Safety Notices to Service Personnel

Before using this product and any associated equipment, refer to the " **Important Safety Instructions** " listed in the front of this manual to avoid personnel injury and to prevent product damage.

Product may require specific equipment, and/or installation procedures to be carried out to satisfy certain regulatory compliance requirements. Notices have been included in this publication to call attention to these specific requirements.

Symbol Definitions

 **Protective Earth:** This symbol identifies a Protective Earth (PE) terminal, which is provided for connection of the supply system's protective earth (green or green/yellow) conductor.

 **Important:** This symbol on the equipment refers you to important operating and maintenance (servicing) instructions within the Product Manual Documentation. Failure to heed this information may present a major risk of damage or injury to persons or equipment.

 **Warning:** The symbol with the word " Warning " within the equipment manual indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

 **CAUTION:** The symbol with the word " Caution " within the equipment manual indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

 **Warning Hazardous Voltages:** This symbol is intended to alert the user to the presence of uninsulated “ dangerous voltage ” within the product enclosure that may be of sufficient magnitude to constitute a risk of shock to persons.

 **ESD Susceptibility:** This symbol is used to alert the user that an electrical or electronic device or assembly is susceptible to damage from an ESD event.

Important Safety Instructions

General Safety Instructions

1.  **Warning:** Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with manufacturer's instructions.
8. Do not install near heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Unplug this apparatus during lightning storms or when unused for long periods of time.
13. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as when the power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
14. Do not expose this apparatus to dripping or splashing, and ensure that no objects filled with liquids, such as vases, are placed on the apparatus.
15. To completely disconnect this apparatus from the AC Mains, disconnect the power supply cord plug from the AC receptacle.
16. The mains plug of the power supply cord shall remain readily operable.
17.  **Warning:** Indoor Use: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
18. The safe operation of this product requires that a protective earth connection be provided. A grounding conductor in the equipment's supply cord provides this protective earth. To reduce the risk of electrical shock to the operator and service personnel, this ground conductor must be connected to an earthed ground.

19.  **Warning:** This apparatus, when equipped with multiple power supplies, can generate high leakage currents. To reduce the risk of electric shock, ensure that each individual supply cord is connected to its own separate branch circuit with an earth connection.

20.  **CAUTION:** These service instructions are for use by qualified service personnel only. To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

21. Service barriers within this product are intended to protect the operator and service personnel from hazardous voltages. For continued safety, replace all barriers after servicing.

22. This product contains safety critical parts, which, if incorrectly replaced, may present a risk of fire or electrical shock. Components contained within the product's power supplies and power supply area are not intended to be customer-serviced and should be returned to the factory for repair.

23. Use only power cords specified for this product and certified for the country of use.

24. The safe operation of this equipment requires that the user heed and adhere to all installation and servicing instruction contained within the equipment's Setup Manuals.

25.  **CAUTION:** This product includes " Ethernet Ports " which allow this product to be connected to local area networks (LAN). Only connect to networks that remain inside the building. Do not connect to networks that go outside the building.

26. For use at altitude 2000m or lower.

27. For use in non-tropical locations.

28.  **CAUTION:** Do not make mechanical or electrical modifications to the equipment or add metallic items, such as metallic foil labels, to the printed circuit boards. Modifications can impair regulatory compliance, or performance and may void your warranty.

29.  **CAUTION: RISK OF ABNORMAL SUPPLY LOADING:** USB connected accessory loading not to exceed 5 USB unit loads. Each USB unit Load on Rear panel is limited to 250mA max.

30.  **CAUTION:** This apparatus contains a Lithium battery, which if replaced incorrectly, or with an incorrect type, may cause an explosion. Replace only with a CR2032 coin type lithium battery. Dispose of used batteries according to the manufacturer's instruction by qualified service personnel.

EMC Notices

United States of America — FCC Part 15

This equipment has been tested and found to comply with the limits for a class A Digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

 **Important:** Changes or modifications to this equipment not expressly approved by Ross Video Limited could void the user's authority to operate this equipment.

Canada

This Class " A " digital apparatus complies with Canadian ICES-003.

Cet appareil numerique de la classe “ A ” est conforme a la norme NMB-003 du Canada.

Korea - Class A Statement

이 기기는 업무용 환경에서 사용할 목적으로 적합성 평가를 받은 기기로서 가정용 환경에서 사용하는 경 우 전파간섭의 우려가 있습니다 .

This device has been evaluated for conformity for use in a business environment. When used in a home environment, there is a danger of interference.

Europe

This equipment is in compliance with the essential requirements and other relevant provisions of **CE Directive 93/68/EEC**.

International

This equipment has been tested to **CISPR 32:2015** along with amendment **AMD1:2019**, and found to comply with the limits for a Class A Digital device.

Important: This is a Class A product. In domestic environments, this product may cause radio interference, in which case the user may have to take adequate measures.

General Handling Guidelines

- Careful handling, using proper ESD precautions, must be observed.
- Power down the system before PCB removal.

A Word About Static Discharge

Throughout the many procedures in this manual, please observe all static discharge precautions.

CAUTION: Avoid handling the switcher circuit boards in high static environments such as carpeted areas, and when synthetic fiber clothing is worn. Touch the frame to dissipate static charge before removing boards from the frame, and exercise proper grounding precautions when working on circuit boards.

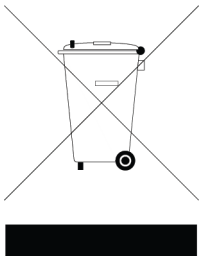
Environmental Information

Waste Electrical and Electronic Equipment Directive (WEEE Directive)

The equipment that you purchased required the extraction and use of natural resources for its production. It may contain hazardous substances that could impact health and the environment.

To avoid the potential release of those substances into the environment and to diminish the need for the extraction of natural resources, Ross Video encourages you to use the appropriate take-back systems. These systems will reuse or recycle most of the materials from your end-of-life equipment in an environmentally friendly and health conscious manner.

The crossed-out wheeled bin symbol invites you to use these systems.



If you need more information on the collection, reuse, and recycling systems, please contact your local or regional waste administration.

You can also contact Ross Video for more information on the environmental performances of our products.

Use of Hazardous Substances in Electrical and Electronic Products (China RoHS)

Ross Video Limited has reviewed all components and processes for compliance to:

“ Management Methods for the Restriction of the Use of Hazardous Substances in Electrical and Electronic Products ” also known as China RoHS.

The “ Environmentally Friendly Use Period ” (EFUP) and Hazardous Substance Tables have been established for all products. We are currently updating all of our Product Manuals. The Hazardous substances tables are available on our website at: http://www.rossvideo.com/about-ross/company-profile/green-practices/china-rohs.html

电器电子产品中有害物质的使用

Ross Video Limited 按照以下的标准对所有组件和 流程进行了审查：
″电器电子产品有害物质限制使用管理办法 ″ 也被称 为中国 RoHS。
所有产品都具有 ″环保使用期限 ″ (EFUP) 和有害物 质表。目前，我们正在 更新我们所有的产品手册。
有害物质表在我们的网站 :
http://www.rossvideo.com/about-ross/company-profile/green-practices/china-rohs.html

Power Information

To ensure safe operation and to guard against potential shock or risk of fire, ensure your AC power source for the system is within the required voltage range and frequency.

- Rio Replay Server Chassis Input AC Power Requirements:
  - 100-127VAC / 15.0-12.0A / 50-60Hz (x2)
  - 200-240VAC / 8.5-7.0A / 50-60Hz (x2)
- Rio Replay Control Panel Input AC Power Requirements:
  - 100-240VAC / 0.85A Max / 50-60Hz

Operating Environment

The optimum operating environment is within the following ranges:

- Rio Replay Server Chassis:
  - Recommended Operating Temperature: 13°C to 35°C (55°F to 95°F)
  - Recommended Operating Humidity: 20% to 80% non-condensing
- Rio Replay Control Panel:
  - Recommended Operating Temperature: 0°C to 40°C (32°F to 104°F)
  - Recommended Operating Humidity: 20% to 50% non-condensing

¬ High temperature/humidity should be avoided at all times.

Company Address

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General Business Office: (+1) 613 ● 652 ● 4886

Fax: (+1) 613 ● 652 ● 4425

E-mail (Technical Support): techsupport@rossvideo.com

E-mail (General Information): solutions@rossvideo.com

Website: http://www.rossvideo.com

Technical Support

At Ross Video, we take pride in the quality of our products, but if a problem does occur, help is as close as the nearest telephone.

Our 24-Hour Hot Line service ensures you have access to technical expertise around the clock. After-sales service and technical support are provided directly by Ross Video personnel. During business hours (eastern standard time), technical support personnel are available by telephone. Outside of normal business hours and on weekends, a direct emergency technical support phone line is available. If the technical support personnel who is on call does not answer this line immediately, a voice message can be left and the call will be returned shortly. Our Technical support staff are available to react to any problem and to do whatever is necessary to ensure customer satisfaction.

Contents

Introduction

A Word of Thanks

Thank you for choosing Ross Video Rio Replay as your replay server solution.

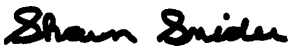
We are committed to providing you with the highest level of customer satisfaction possible. If, for any reason, you have questions or comments, please call Ross Video at +1-613-652-4886 or send us an e-mail at techsupport@rossvideo.com.

We hope that you visit our website www.rossvideo.com to stay up to date with ongoing software releases, join our customer forum, and learn more about the complete range of Ross Video products.

Note that software maintenance and extended warranties are available for your system to protect and extend the life of your investment. Our sales team is more than happy to provide further information on the plans available. Members of our sales team will promptly respond to e-mails sent to: solutions@rossvideo.com.

Again, thank you for your purchase of a Rio Replay solution from Ross Video. We are confident of your future pleasure with your choice.

Yours Sincerely,



Shawn Snider
Vice President of Production Workflow & Cloud Services

About This Guide

The Rio Replay User Guide serves as an in-depth guide to the product and covers all concepts users need to know in order to use Rio Replay. This guide is intended as a comprehensive reference manual for daily use in production workflows.

✶ **NOTE:**
The Rio Replay User Guide is intended for the sole use of authorized and licensed users of Rio Replay.

This guide contains the following chapters that cover the use of Rio Replay:

1. **Introduction** — Summarizes the guide and provides important terms and conventions.
2. **Getting Started** — Provides a broad overview of the server and included software.
3. **Server Configuration** — Summarizes how to configure the server depending on its hardware and user preferences.
4. **Replay Setup** — Summarizes how to set up the server to use the Control Panel and run replay events.
5. **Rio Replay Import** — Summarizes how to use the Rio Replay Import application to import media for use on the server.
6. **Rio Replay Explorer** — Summarizes how to use the Rio Replay Explorer application to operate the server during replay events.
7. **Channel Transport Control** — Summarizes how to use individual channel transports in the Rio Replay Explorer application.
8. **Clip Library** — Summarizes how to use the Clip Library in the Rio Replay Explorer application to manage media.
9. **Replay Overview** — Provides an overview of the Rio Replay Control Panel, as well as replay modes.
10. **Replay Events** — Summarizes how to create, open, and edit replay events.
11. **Replay Operation** — Summarizes how to load clips and use playlists.
12. **Replay Logger** — Summarizes how to use the web-based Logger UI.
13. **Export** — Summarizes how to export clips from the Clip Library.
14. **Remote Control Support** — Summarizes how to use external devices to remotely control the server.
15. **AsRun Log Report Creator** — Summarizes how to use the AsRun Log Report Creator application to generate a report of what clips were played on the server.
16. **Maintenance and Specifications** — Provides important information regarding the maintenance of the server.

✶ **NOTE:**
Certain features may or may not be visible in your interface depending on the features purchased by your organization or permissions assigned by your administrator. Contact your Rio Replay administrator to request permission changes, or to purchase additional features from Ross Video.

If you have questions pertaining to the operation of Rio Replay, please contact us at the numbers listed in the section **"Contacting Technical Support**" on page 1–3. Our technical staff is always available for consultation, training, or service.

Documentation Conventions

Special text formats are used in this guide to identify parts of the user interface, text that a user must enter, or a sequence of menus and sub-menus that must be followed to reach a particular command.

Interface Elements

Bold text is used to identify a user interface element such as a dialog box, menu item, or button. For example:

In the **Assets panel**, click **Delete**.

User Entered Text

Courier text is used to identify text that a user must enter. For example:

In the **Language** box, enter **`English`**.

Referenced Guides

Italic text is used to identify the titles of referenced guides, manuals, or documents. For example:

For more information, refer to the section "**Managing Large Projects**" in the ***Rio Replay User Guide***.

Menu Sequences

Menu arrows are used in procedures to identify a sequence of menu items that you must follow. For example, if a step reads "**File** > **Save As**," you would click the **File** menu and then click **Save As**.

Important Instructions

Star icons are used to identify important instructions or features. For example:

✶ **NOTE:**
After upgrading Rio Replay software, you must obtain feature licenses from Ross Video Technical Support before users can access Rio Replay features.

Contacting Technical Support

Technical Support is staffed by a team of experienced specialists ready to assist you with any question or technical issue.

Ross Video has technical support specialists strategically located around the globe to ensure a prompt response to technical inquiries. Our primary technical support center is located in Ottawa, Ontario, Canada. In addition, we have offices in The United Kingdom (London), Australia (Sydney), and Singapore with satellite locations in New York City, the Netherlands, and China. As we expand our presence globally, we are constantly evaluating other key locations to have a local technical support specialist in order to better service our customers.

North America

Our North America center located in Ottawa, Ontario, Canada and is open Monday to Friday 8:30 a.m. to 6:00 p.m. EST, with 24/7/365 on-call service after hours.

Our telephone number is: +1-613-686-1557

Toll free within North America: +1 833-859-0499

EMEA

Our EMEA center is open Monday to Friday 8:30 a.m. to 5:00 p.m. GMT. After hours support is provided by our North America location.

International toll free: +800 3540 3545

If the local support specialist is not available, your call will be transferred automatically to our North America center.

Australia

Our Sydney, Australia office is located in Alexandria, NSW.

Our local support telephone number is: 1300 007 677

If the local support specialist is not available, your call will be transferred automatically to our North America center.

Online

E-mail: techsupport@rossvideo.com

Website: Open a support ticket using the following link: https://support.rossvideo.com/

Getting Started

The server consists of a computer with advanced video processing, storage, and streaming capabilities. The server runs a Microsoft® Windows® IoT Enterprise LTSC operating system with pre-installed software applications for interacting with the video processing hardware.

Powering the System On/Off

The system powers on with the single power button located at the front of the chassis. When the power button is pressed, the system will boot up and launch Windows®.

To power the system off, perform the standard Windows® Shutdown procedure.

WARNING:
Even with the system powered off, hazardous voltages are present inside the chassis. Disconnect both the primary and secondary power supplies before opening up the chassis.

Logging in to Windows

The server comes with the Microsoft® Windows® operating system and all the required software pre-installed.

Refer to the Windows® help system for information on changing the password.

NOTE:
Once you have logged in to the system, the video channels and serial control are all active. If you are using an external serial controller, that controller can now be used to control the video channels (including loading and playing clips).

Reviewing the Pre-Installed Software

The server comes pre-installed with all the software needed for operation and setup:

- **Rio Replay Explorer** — Provides a graphical interface to the operation of the server.
- **Rio Replay Import** — Allows you to import media files into the server.
- **Rio Replay Config** — Allows you to configure the hardware of the server.
- **Rio Replay AsRunReport** — Allows you to create a Report that contains all media playout from all channels of the video server.

IMPORTANT:
Do not install any additional third party software applications onto the video server. Third party software applications that did not come pre-installed on your video server can place demands on system resources that may negatively impact real-time audio/video processing resulting in performance degradation in recording and/or playback. Install third party applications at your own risk.

Server Configuration

The Rio Replay Config application allows you to configure various aspects of your server. The number of channels, inputs, and outputs you have depends on the hardware installed in your server.

This chapter discusses the following topics:

- Configuring Channels
- Configuring Hardware Channels
- Configuring Video Formats
- Setting up Audio
- Setting up the Audio Router
- Setting up the Timecode
- Setting up the Channel Names
- Setting up the Quad Viewer
- Setting up TSL Tally

Configuring Channels

The hardware channels can be set up in various ways, depending on the task the server needs to perform. These configurations are applied to all the channels in a group (ChA-D, ChE-H, ChI-L).

The following tables show channel allocations for the first four channels on the server (ChA-D) but the remaining groups are configured in the same way.

Table 3.1 Video-Only / Video+Key

Mode	Description
V V V V (Mix)	Four (4) background channel transports (no alpha). This is the setting to use for UHDTV1 operation.
VK VK (Mix)	Two (2) keyer channel transports (video+alpha). Channel A carries the video and channel C carries the alpha for the first key and channel B carries the video and channel D carries the alpha for the second key.
VK V V (Mix)	One (1) keyer channel transport (video+alpha) and two (2) background channel transports. Channel A carries the video and channel B carries the alpha. This configuration also allows the two video (V) channels to playout a playlist with mix transitions.
VK V V	One (1) keyer channel transport (video+alpha) and two (2) background channel transports. Channel A carries the video and channel C carries the alpha.
V V VK	Two (2) background channel transports and one (1) keyer channel transport (video+alpha). Channel B carries the video and channel D carries the alpha.

Table 3.2 ISO / Replay Groups

Mode	Description
ISO2 + V V (Mix)	Two (2) 2D cameras are recorded to the same clip ID on channels A and B. Channels C and D are the playback channels.
ISO3 + V	Three (3) 2D cameras are recorded to the same clip ID on channels A-C. Channel D is the playback channel.
ISO4	Four (4) 2D cameras are recorded to the same clip ID. There are no playback channels.
ISO4	Four (4) 2D cameras are recorded to the same clip ID on channels A-D. Channels E and F are used for background channel transports. Channels G and H are playback channels. This configuration requires all eight (8) channels.
ISO4	Four (4) 2D cameras are recorded to the same clip ID on channels A-D. Channels E (video) and F (alpha) are used for a keyer channel transport. Channels G and H are playback channels. This configuration requires all eight (8) channels.
ISO5	Five (5) 2D cameras are recorded to the same clip ID on channels A-E. Channel F is uses for a background channel transport. Channels G and H are playback channels. This configuration requires all eight (8) channels.
ISO6	Six (6) 2D cameras are recorded to the same clip ID on channels A-F. Channels G and H are playback channels. This configuration requires all eight (8) channels.
ISO7	Seven (7) 2D cameras are recorded to the same clip ID on channels A-G. Channel H is the playback channel. This configuration requires all eight (8) channels.

Table 3.2 ISO / Replay Groups

Mode	Description
ISO8	Eight (8) 2D cameras are recorded to the same clip ID on channels A-H. There are no playback channels. This configuration requires all eight (8) channels.
ISO9	Nine (9) 2D camera are recording to the same clip ID on channels A-I. Channels J-L are playback channels. This configuration requires all twelve (12) channels.
ISO10	Ten (10) 2D camera are recording to the same clip ID on channels A-J. Channels K-L are playback channels. This configuration requires all twelve (12) channels.
ISO11	Eleven (11) 2D camera are recording to the same clip ID on channels A-K. Channel L is the playback channels. This configuration requires all twelve (12) channels.
ISO12	Twelve (12) 2D camera are recording to the same clip ID on channels A-L. There are no playback channels. This configuration requires all twelve (12) channels.

Table 3.3 Super Slow Motion Cameras

Mode	Description
2X Super Slow Motion Camera	One (1) 2-times slow motion channel transport.
3X Super Slow Motion Camera	One (1) 3-times slow motion channel transport.
4X Super Slow Motion Camera	One (1) 4-times slow motion channel transport.
6X Super Slow Motion Camera	One (1) 6-times slow motion channel transport. This configuration requires all eight (8) channels.
8X Super Slow Motion Camera	One (1) 8-times slow motion channel transport. This configuration requires all eight (8) channels.
SSM-2X ISO3	Two (2) slow motion camera inputs per channel with three (3) channels.
SSM-3X ISO2	Three (3) slow motion camera inputs per channel with two (2) channels.
SSM-2X ISO4	Two (2) slow motion camera inputs per channel with four (4) channels.
SSM-3X ISO3	Three (3) slow motion camera inputs per channel with three (3) channels.
SSM-2X ISO5	Two (2) slow motion camera inputs per channel with five (5) channels.

Configuring Hardware Channels

The number of hardware channels on your server depends on the configuration your organization purchased.

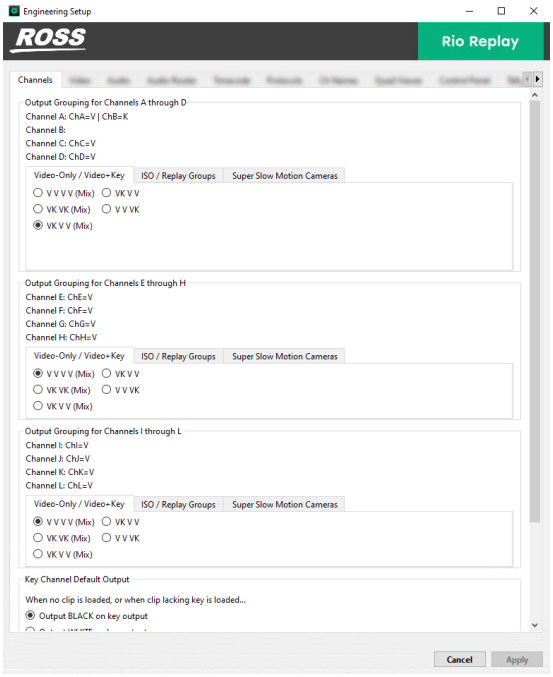
To Configure the Hardware Channels

1. Launch the **Rio Replay Config** application.

   A prompt may open to allow the program to make changes. Click **Yes**.

2. Click the **Channels** tab.

✶ **NOTE:**
Your selections may appear different, depending on the number of channels you have.



3. Select the video processing mode and how you want the channels grouped. Refer to the tables in "**Configuring Channels**" on page 3–2 for information about these options.
4. Select your preferred option that includes the default alpha (key) output that is used on a video, and the key channel transport when no alpha channel is present in the clip or no clip is loaded.
   - **Output BLACK on key output** — The key (alpha) channel outputs a full frame of internally generated black.
   - **Output WHITE on key output** — The key (alpha) channel outputs a full frame of internally generated white. Use this selection if the output is going to a switcher as an auto-select key. The full-frame white alpha will force the entire video image onscreen.
5. Select the default clip that will be used for unloaded channels.
   - **Internal Color Bars** — A frame of internally generated color bars.
   - **Internal Full Frame of Black** — A full frame of internally generated black.
   - **Stored Clip/Still from Clip Library** — Allows for a specific file to be chosen for use instead of color bars or a black frame.
   - **Auto Loop-Play Motion Clip** — A check box that can be selected to automatically loop the stored clip.
6. Click **Apply**.

Configuring Video Formats

Table 3.4 Available Video Formats

Format	Frequency
720p	50 / 59.94 Hz
1080i	50 / 59.94 Hz
1080p	50 / 59.94 Hz 60 / 30 / 29.97 / 25 / 24 / 23.98 Hz

✶ **NOTE:**
1080p 50 / 59.94 Hz supports 3G Level A. 3G Level B is not supported.

Configuring the Video Format

The server can only operate in one video format at a time. All channel transports will play and record in the same format.

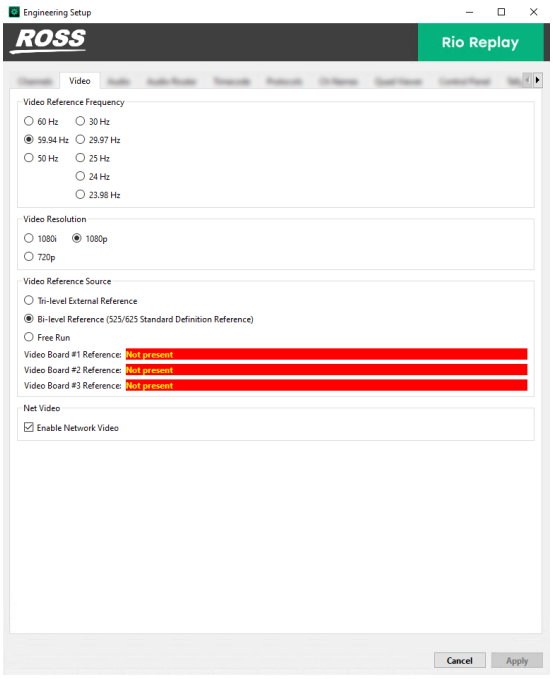
✶ **NOTE:**
Not all video resolutions and frequencies are compatible. Some selections will be grayed out if they are not compatible.

To Configure the Video Format

1. Launch the **Rio Replay Config** application.

   A prompt may open to allow the program to make changes. Click **Yes**.

2. Click the **Video** tab.



3. In the **Video Reference Frequency** area, select the frequency you want the server to operate in.
4. In the **Video Resolution** area, select the video resolution you want the server to operate in.

   The available resolutions depend on the frequency you have selected.

5. In the **Video Reference Source** area, select the type of input reference signal that the server is using. This is the video signal that is connected to the **REF IN HD-BNC** on the back of the server.

   The reference input should be connected to **Video Board #1**. The server will sync the reference to all boards internally.

✶ **NOTE:**
You should only use **Free Run** when the server is not receiving video from, or outputting video to, another device.

✶ **IMPORTANT:**
If you select **Tri-Level External Reference** or **Bi-Level External Reference** with no valid reference signal coming into the server, you will get corrupt video on all outputs.

6. In the **Horizontal Phase** area, select a timing offset for the video output relative to the reference timing.
7. In the **Net Video** area, check or uncheck the **Enable Network Video** box to select whether the server can share clips with other servers on the same network. All servers must have the same hardware and be operating in the same video format.

   Clips from another server can be loaded and included in a local playlist. Clips are not copied between servers. The clip is played across the network between servers. The network connection must be maintained to use the clip on a remote server.
8. Click **Restart Replay**. A confirmation dialog box opens.
9. Click **Restart Replay** to restart the server application and services with the new settings.
10. Click **OK** when the application and services have restarted to dismiss the window.

Setting up Audio

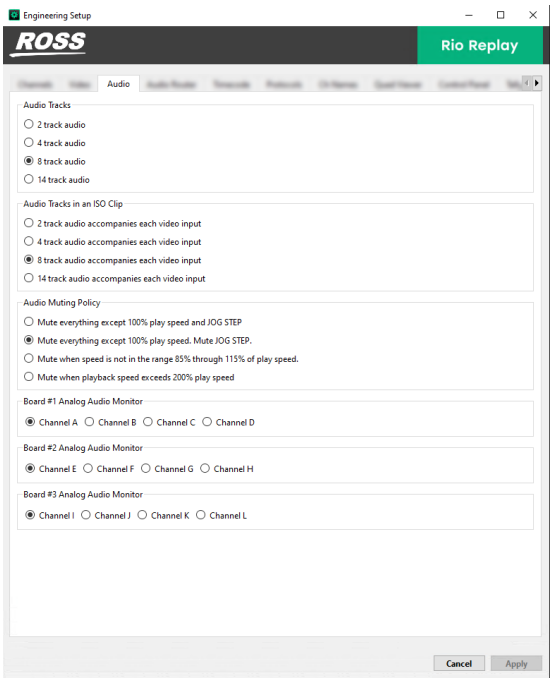
You can select the number of audio channels to record, which sources to use, and which audio channel to monitor from the analog audio out headphone jack. The number of AES digital audio inputs and outputs depends on the server your organization purchased.

Configuring the Audio Setup

To Configure the Audio Setup

1. Launch the **Rio Replay Config** application.

   A prompt may open to allow the program to make changes. Click **Yes**.
2. Click the **Audio** tab.



3. In the **Audio Tracks** area, select the number of audio tracks to record.
   - **2 track audio** — Record two tracks of audio.
   - **4 track audio** — Record four tracks of audio.
   - **8 track audio** — Record eight tracks of audio.
   - **14 track audio** — (Software option) Record fourteen tracks of audio.
4. In the **Audio Tracks in an ISO Clip** area, select the number of audio tracks to record per input channel when recording in ISO mode.
   - **2 track audio accompanies each video input** — Record two tracks of audio per input channel when recording in ISO mode.
   - **4 track audio accompanies each video input** — Record four tracks of audio per input channel when recording in ISO mode.
   - **8 track audio accompanies each video input** — Record eight tracks of audio per input channel when recording in ISO mode.
   - **14 track audio accompanies each video input** — Record fourteen tracks of audio per input channel when recording in ISO mode.
5. In the **Audio Muting Policy** area, select how the audio output (AES, embedded, and analog audio out) is muted during playback.
   - **Mute everything except 100% play speed and JOG STEP** — Audio is muted at all play speeds except 1× (100%) and during single-frame jogging.
   - **Mute everything except 100% play speed. Mute JOG STEP** — Audio is muted at all play speeds except 1× (100%).
   - **Mute when speed is not in the range 85% through 115% of play speed** — Audio is muted at all play speeds except in the range of 85% to 115% play speed.
   - **Mute when playback speed exceeds 200% play speed** — Audio is muted only when play speed exceeds 2× (200%).
6. In the **Analog Audio Monitor** area, select the channel transport audio that you want to monitor on the corresponding board's audio jack. Only audio channels 1 and 2 are available on the analog audio output port.
7. Click **Apply**.

Setting up the Audio Router

There are two integrated audio routers built into the server. An input router that sends audio from an audio input to any channel transport, and an output router that sends the audio from a channel transport to any audio output. The number of audio inputs and outputs depends on the options you have installed in your server.

Audio sources and destinations include embedded audio and AES audio on the TASCAM® AES-59 DB25 ports on the back of the server.

Configuring the Audio Router

The Audio Router tab contains two tabs. The Audio Input Router tab allows you to set the audio channel that is recorded on the server. The Audio Output Router tab allows you to set which audio channels are played from the server.

To Configure the Audio Router

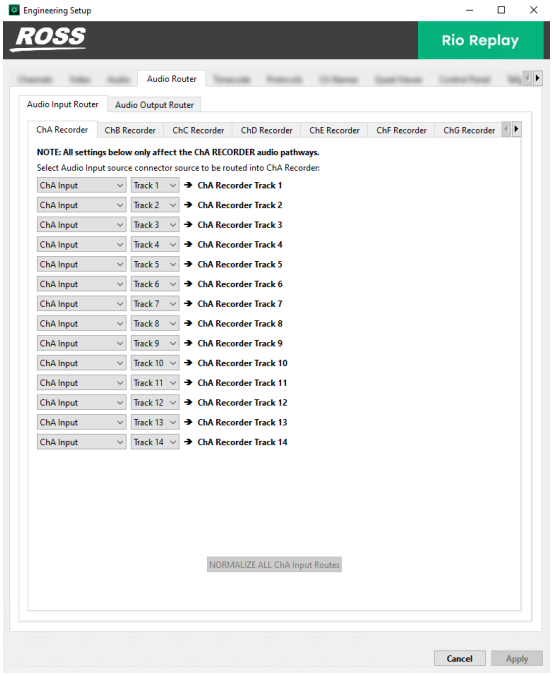
1. Launch the **Rio Replay Config** application.

   A prompt may open to allow the program to make changes. Click **Yes**.

2. Click the **Audio Router** tab.

   If the audio routing on an input or output has been changed, a dot is shown next to the name on the tab.

3. Click the **Audio Input Router** tab.



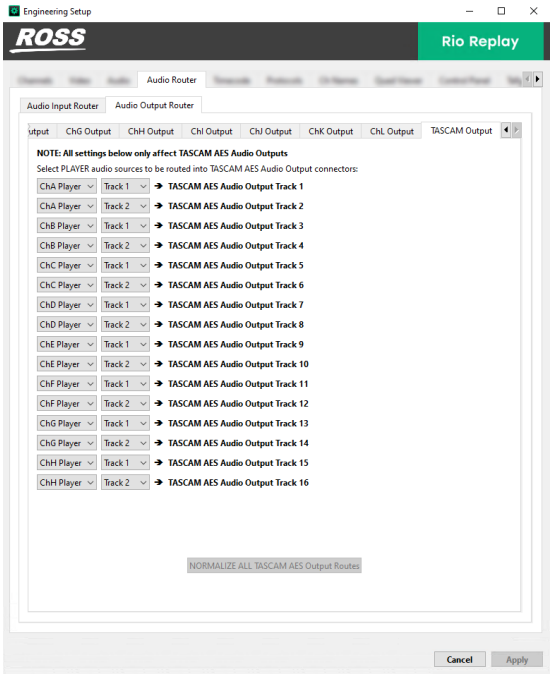
4. Click the tab for the record channel that you want to route the audio channel to.

5. In the **Ch*X* Recorder Track 1** row, select the source channel input (**Ch*X* Input or TASCAM AES Input**) and the audio channel (**Track #**) from the input that you want to record on channel 1 of the clip.

   Repeat this step for all of the remaining record channels.

✶ **TIP:**
Click **NORMALIZE ALL Ch*X* Input Routes** to reset all the input audio channels to their default record channel assignment.

6. Click the **Audio Output Router** tab.



7. Click the tab for the channel output into which you want to route audio channels.
8. In the **Ch*X* Audio Output Track 1** row, select the source channel player (**Ch*X* Player**) and the audio channel (**Track #**) from the player that you want to route to channel 1 of the output video stream.

   Repeat this step for all of the remaining output audio channels you want to assign a source to.

✶ **TIP:**
Click **NORMALIZE ALL Ch*X* Output Routes** to reset all the player audio tracks to their default output track assignment.

9. Click **Apply**.

Setting up the Timecode

The selected timecode information that is recorded with the video can be overlaid on the output video stream of the server. This can be the time of day linear timecode (LTC) coming into the server, or the embedded ancillary timecode (ATC) in the video stream being recorded.

✶ **IMPORTANT:**
When you turn the timecode overlay on, it is shown over the image on the video output.

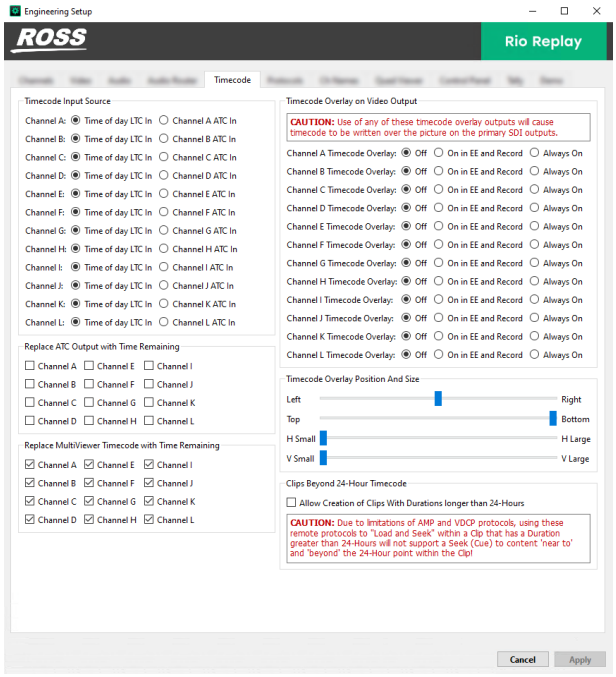
To Configure the Timecode

✶ **NOTE:**
The timecode overlay is only visible on the video output and will not appear in the recorded video.

1. Launch the **Rio Replay Config** application.

   A prompt may open to allow the program to make changes. Click **Yes**.

2. Click the **Timecode** tab.



3. In the **Timecode Input Source** area, select the timecode source for each channel.
   - **Time of Day LTC In** — The LTC signal coming into the server.
   - **ATC In** — The embedded digital timecode in the video source.
4. In the **Replace ATC Output with Time Remaining** area, select the video channels that you want the normal count-up ATC timecode to be replaced with the count-down (time-remaining) ATC timecode.
5. In the **Replace MultiViewer Timecode with Time Remaining** area, select the video channels that you want the normal timecode to be replaced with the count-down (time-remaining) timecode.
6. In the **Timecode Overlay on Video Output** area, select whether the timecode is displayed on the video output for each channel.
   - **Off** — The timecode is not shown on the video output stream.
   - **On in EE and Record** — The timecode is only shown when in EE mode or when the channel is recording.
   - **Always On** — The timecode is always shown on the video output stream.
7. In the **Timecode Overlay Position And Size** area, use the **Left/Right** and **Top/Bottom** sliders to position the timecode overlay on the background video source, and use the **H Small/H Large** and **V Small/V Large** sliders to adjust the size of the timecode text.
8. In the **Clips Beyond 24-Hour Timecode** area, select whether the server can record a clip that is longer than 24 hours in length.

✶ **NOTE:**
External devices controlling the server over VDCP or AMP will not support timecode over 24 hours. You will not be able to seek beyond the 24 hour point as the timecode restarts again.

9. Click **Apply**.

Setting up the Channel Names

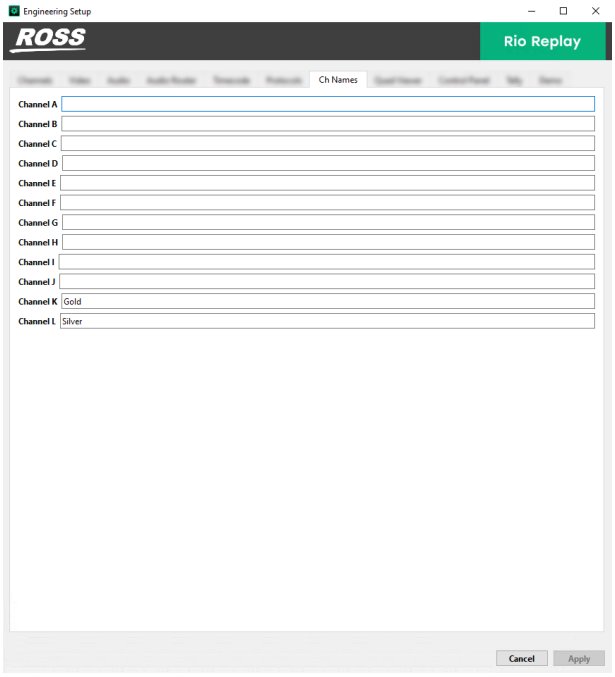
You can assign a custom name to each channel transport to help identify the server it is on or what it is used for. Names are shown at the far right of each channel transport in Rio Replay Explorer and on each box in the HD-SDI Quad Viewer output.

To Assign Names to Channels

1. Launch the **Rio Replay Config** application.

   A prompt may open to allow the program to make changes. Click **Yes**.

2. Click the **Ch Names** tab.



3. Enter a new name for each channel transport as required.

   Leave the name field blank to remove the channel name from the channel transport and Quad Viewer.

4. Click **Apply**.

Setting up the Quad Viewer

The Quad Viewer output can display either the Quad Viewer or a Count Down display. For the Quad Viewer display you can adjust the transparency of the overlay text on the Quad Viewer output.

✶ **NOTE:**
This setup information applies to the Quad Viewer external outputs only. The internal Multi-Viewer in the Rio Replay Explorer is not affected.

Quad Viewer Display

The Quad Viewer outputs show the audio and video output of each group of channel transports in the server. Channels A-D are shown on output Quad ABCD, channels E-H are shown on output Quad EFGH, and channels I-L are shown on output Quad IJKL. The appearance of the Quad Viewer depends on the number of channels installed and how they are configured.

- The channel, audio meters, and status are shown along the top of each quadrant.
- The clip name and timecode are shown along the bottom of each quadrant.
- The position of the channel label can be adjusted.
- The opacity of the overlay text can be adjusted.

Configuring the Count Down Display

The Count Down Display shows the program output for Live EE, Playback, or Playlist AIR.

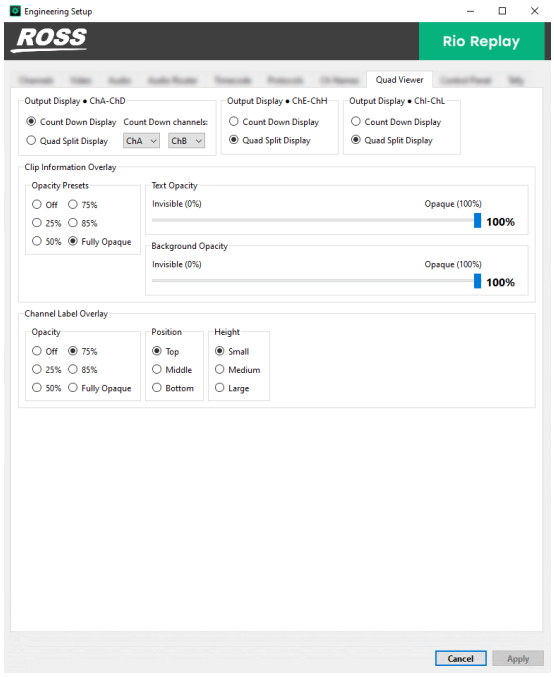
- The channel label and audio meters are shown at the top of the each box.
- The current timecode is shown at the bottom of each box.

To Configure the Count Down Display

1. Launch the **Rio Replay Config** application.

   A prompt may open to allow the program to make changes. Click **Yes**.

2. Click the **Quad Viewer** tab.



3. In the **Output Display** area, select **Count Down Display**.
4. In the drop-down boxes in the **Output Display** area, select which channels you want to show the Count Down Display.
5. In the **Clip Information Overlay** area, adjust the opacity of the clip information text and background of the text. These overlays are shown in the corners of each Quad Viewer quadrant.

   Select one of the **Overlay Presets** to quickly set both the text and background opacity.

   - Use the **Text Opacity** slider to adjust the transparency of the overlay text.
   - Use the **Background Opacity** slider to adjust the transparency of the background behind the overlay text.

6. In the **Channel Label Overlay** area, select the opacity, position, and size of the channel information text.

   - **Opacity** — Select the transparency of the label. Select **Off** to disable the channel label overlay.
   - **Position** — Select the position for the label in the quadrant.
   - **Height** — Select the size of the label.

7. Click **Apply**.

Setting up TSL Tally

The server can receive TSL messages from a downstream device to tally the channels on the server.

For example, when a production switcher takes the Channel A source from the server on-air, the switcher sends a signal back to the server telling it that Channel A is on-air and should be tallied.

✶ **NOTE:**
Tally information is shown on the Channel Label of a channel in Rio Replay Explorer and the Quad Viewer output. You must have a Channel Label assigned to the channel for the tally information for that channel to be displayed (refer to the section "**Setting up the Channel Names**" on page 3–10). The Channel Label overlay must be visible on the Quad Viewer output for the tally information to be visible (refer to the section "**Setting up the Quad Viewer**" on page 3–11)

The tally status is shown using the color of the background of the Channel Label.

- **Gray** — The channel is not on program or preview.
- **Red** — The channel is on program.
- **Green** — The channel is on preview.
- **Amber** — The channel is being recorded by a downstream device.

✶ **NOTE:**
TSL tally colors are set by how the protocol was implemented in the source device and may not be as listed above. Check with the device that is sending the TSL information to the server for information on how the protocol was implemented.

Configuring the TSL Tally Input

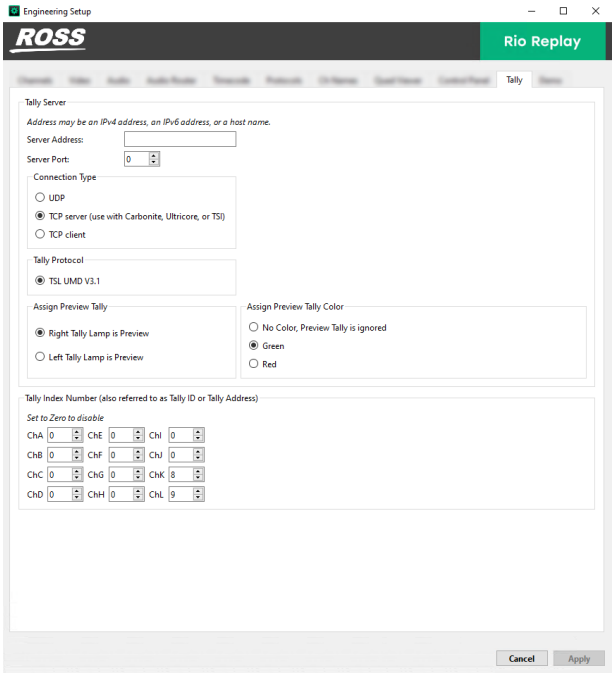
Tally information sent to the server over ethernet using the TSL protocol is used to show red, green, gray, and amber tallies on the channel labels. You will need the IP address and port of the device sending the tally information, as well as the screen mapping.

To Configure the TSL Tally Input

1. Launch the **Rio Replay Config** application.

   A prompt may open to allow the program to make changes. Click **Yes**.

2. Click the **Tally** tab.



3. In the **Server Address** field, enter the IP address of the device that is sending the TSL tally information.

4. In the **Server Port** field, enter the port number on the device that the server is listening to.
5. In the **Connection Type** area, select the type of ethernet communication you want to use.
   - **UDP** — Select if you connect to the tally system using the UDP protocol.
   - **TCP Server** — Select if you connect to the tally system as a server using the TCP protocol.
   - **TCP Client** — Select if you connect to the tally system as a client using the TCP protocol.
6. In the **Tally Protocol** area, select the TSL protocol the tally system is using.
   - **TSL UMD V3.1** — Select if the tally server is using the TSL tally protocol v3.1.
7. Set up the tally interface as required:

Protocol	Settings
TSL v3.1	
Assign Preview Tally	Select which indicator is lit when a channel transport is tallied on preview.
Assign Preview Tally Color	Select the color to use when a channel transport is tallied on preview.
Tally Index Number	Enter the tally ID that is assigned on the tally server to the input on the server. **TIP:** Refer to the device that you are receiving the tally information from for the ID that is assigned to the video input that is connected to the output of each channel on the server.

8. Click **Apply**.

Replay Setup

To operate the server as a replay server, you must configure channels in a replay (ISO) mode, connect a Control Panel, and open a replay event. Depending on the replay (ISO) mode you have selected and the number of channels in your server, you can run both server and replay operations at the same time.

This chapter discusses the following topics:

- Connecting the Control Panel
- Setting up the Server for Replay
- Configuring the User Setup

Connecting the Control Panel

The Control Panel powers on when the power cable has been connected and the power switch has been set to the **On** position. The Control Panel connects to the server through a standard CAT5e Ethernet cable. When the unit is connected, the LCD screens will illuminate. A connection to the server and an open replay event are both required to operate the Control Panel.

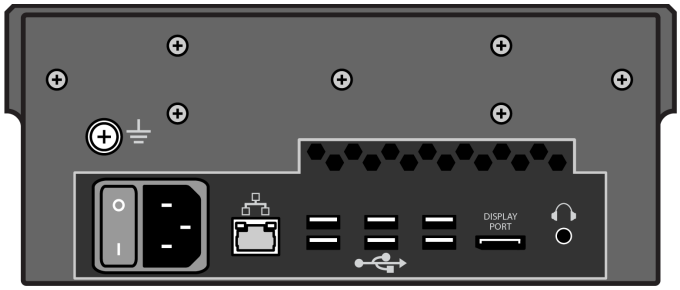


Figure 4.1 The rear panel of the Control Panel

Setting up the Server for Replay

You must configure the hardware channels for one of the ISO modes that meet your requirements. This configuration is based on the number of channels you have and how you want to use them.

Use the information in the following table to pick a mode.

Table 4.1 ISO Modes: 8-Channel

	Cameras	PGM/PVW Channels in Replay Mode
8-Channel		
ISO2	2	2
ISO3	3	2
ISO4	4	2
ISO5	5	2
ISO6	6	2
ISO7	7	1
ISO8	8	0

Table 4.2 ISO Modes: 12-Channel

	Cameras	PGM/PVW Channels in Replay Mode
12-Channel		
ISO2	2	2
ISO3	3	2
ISO4	4	2
ISO5	5	2
ISO6	6	2
ISO7	7	2
ISO8	8	2
ISO9	9	2
ISO10	10	2
ISO11	11	1
ISO12	12	0

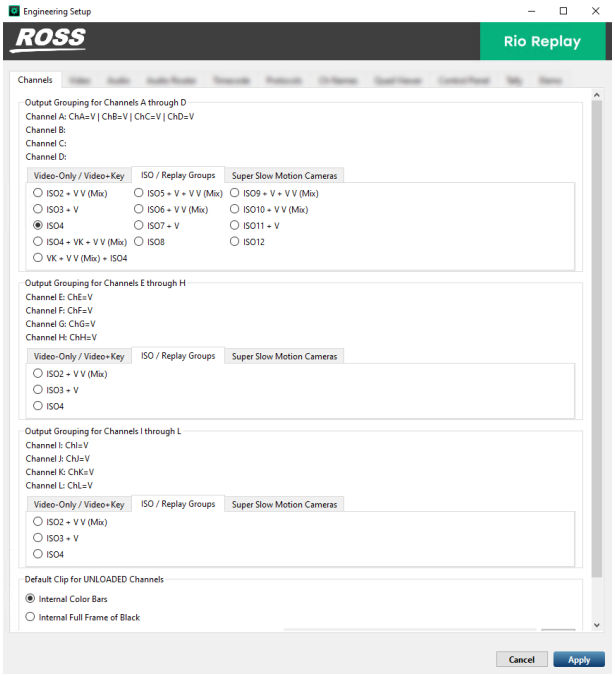
To Configure the Server for Replay

NOTE:
You must connect the Control Panel to the server before you try to configure the server. The server will detect the Control Panel and allow you to assign channels to it.

1. Launch the **Rio Replay Config** application.

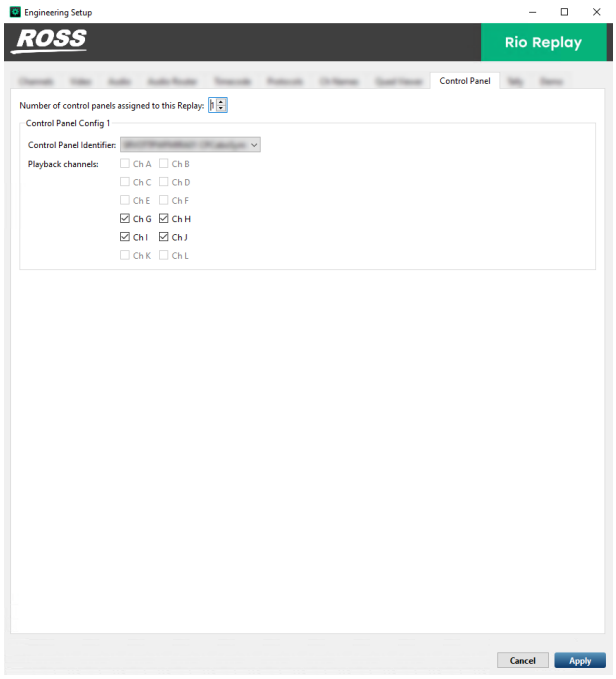
   A prompt may open to allow the program to make changes. Click **Yes**.

2. Click the **Channels** tab.



3. Select the ISO mode for the number of cameras and playout channels that you require.

4. Click **Apply**.
5. Click the **Control Panel** tab.



6. In the **Number of control panels assigned to this Replay** field, enter the number of Control Panels you want to use.
7. In the **Control Panel Config 1** area, click the **Control Panel Identifier** button and select the Control Panel that you want to assign to channels.

   Each Control Panel is identified by its MAC address, which can be found on a label located on the back of the unit.
8. In the **Playback channels** area, select the channels that you want to use for playout from this panel.
9. Repeat this for each Control Panel you want to connect to the server.
10. Click **Apply**.

Configuring the User Setup

In the Rio Replay Explorer application, the User Settings allow you to customize the replay function to the activity or sport you are recording and your own personal preferences.

Opening User Settings

To open the User Settings, press **SHIFT** + **MENU** on the Control Panel while a replay event is open. Use the jog wheel to highlight a setting, then press **ENTER** to change the **Current Value**. Press **SHIFT** + **MENU** again to close the User Settings.

The User Settings are listed in the following table:

Table 4.3 User Settings

Group	Parameter name	Default Value	Range	Description
PGM	LIVE EE - Auto Gang	OFF	OFF/ON	Whether GANG is automatically selected when LIVE-EE selected.
PGM	PGM Selection Release Gang	ON	OFF/ON	Whether GANG is automatically deselected when a playout channel is selected.
PGM	LIVE EE - Reset Cam	OFF	OFF/ON	Whether the preferred camera angle for each playout channel is selected when LIVE-EE is selected.
PGM	PGM/PVW Order	PGM/PVW	PGM/PVW PVW/PGM	Swaps the position of the PGM and PVW windows.
PGM	PGM1 Preferred CAM	CAM 1	CAM 1 to CAM 12	The preferred camera angle for playout channel 1.
PGM	PGM2 Preferred CAM	CAM 2	CAM 1 to CAM 12	The preferred camera angle for playout channel 2.
PGM	PGM3 Preferred CAM	CAM 3	CAM 1 to CAM 12	The preferred camera angle for playout channel 3.
PGM	PGM4 Preferred CAM	CAM 4	CAM 1 to CAM 12	The preferred camera angle for playout channel 4.
Clips	Auto Mark IN	00:00:03:00	00:00:00:01 to 00:59:55:00	The timecode that is subtracted from the POI timecode when saving a clip that has no in point.
Clips	Auto Mark Out	00:00:05:00	00:00:00:01 to 00:59:55:00	The timecode that is added to the POI timecode when saving a clip that has no out point.
Clips	Switch to IN - Clips	ON	ON/OFF	Whether, when using a softkey to switch to a clip, it cues to the IN point.

Table 4.3 User Settings

Group	Parameter name	Default Value	Range	Description
Clips	Clip Default Name	Empty	IN Timecode Empty Camera Angle Camera Name Camera # & Name	The source of the name that is applied to new clips.
Clips	Auto Export new Clips	OFF	OFF/ON	Whether new clips are automatically exported.
Clips & Replay	Take Transition	MIX	MIX/CUT	The type of transition that is applied when TAKE is pressed in Playlist mode.
Clips & Replay	Take Transition Duration	00:00:00:10	00:00:00:01 to 00:00:02:00	The duration of the transition.
Clips & Replay	Freeze on IN - Playback & Clips	OFF	OFF/ON	Whether the clip plays or not when the in point is reached.
Clips & Replay	Freeze on OUT - Playback & Clips	OFF	OFF/ON	Whether the clip stops playing on the frame before the out point.
Clips & Replay	OUT Point - Include Last Frame - Playback & Clips	ON	OFF/ON	Whether the last frame is shown when the Freeze on OUT setting is enabled.
Playlist Playout	Always use PVW/PGM for Playlist Playout	ON	OFF/ON	Whether a playlist will always play out of two channels (PVW/PGM) when on-air in PLAYLIST mode.
Playlist Playout	Enable Jog in Playlist Playout	ON	ON/OFF	Whether the Jog Wheel is enabled in Playlist Playout mode.
Playlists	Playlist Auto-Fill by Clip name	Auto Fill OFF	Auto Fill PL name and # Auto Fill PL name only Auto Fill PL # only	Choose if clips are automatically appended to a playlist if the clip's name is also in the playlist's name.

Table 4.3 User Settings

Group	Parameter name	Default Value	Range	Description
Playlists	Auto-Fill melt all Playlist	99	1 to 99	When a clip is saved and renamed, the clip is also saved to the selected playlist number.
Cameras	Number of primary camera windows	6	1 to 10	Sets the number of primary camera windows.
Cameras	Primary camera windows begin with	CAM 1	CAM 1 to CAM 12	Sets the CAM number assigned to primary camera windows.
Jog & T-Bar	JOG MAX Speed	10X	1X to 99X	The maximum speed multiplier for the Jog Wheel.
Jog & T-Bar	FAST JOG MAX Speed	15X	10X to 99X	The maximum speed multiplier for the Jog Wheel in Fast Jog mode.
Jog & T-Bar	Jog Brake	OFF	OFF/ON	When toggled ON, small movements of the Jog Wheel are ignored so that playback is not unintentionally stopped.
Jog & T-Bar	T-BAR Secondary Top Speed	2X	1X to 99X	The maximum speed multiplier for the T-bar when it is in the top position.
Jog & T-Bar	T-BAR Secondary Bottom Speed	0X	0X to -99X	The minimum speed multiplier for the T-bar when it is in the bottom position.
Keyboard	Keyboard - Auto Load Prev / Next Clip	OFF	OFF/ON	Whether the previous or next clip is automatically loaded when CLIP PLAY mode is active.
Keyboard	Keyboard - Space Bar - Play / Pause	OFF	OFF/ON	Whether the space bar on the keyboard can be used to play or pause clips.

Table 4.3 User Settings

Group	Parameter name	Default Value	Range	Description
Confirm Delete	Pop-up - Confirm Delete - Clips & PL items	ON	ON/OFF	Whether a pop-up notification will appear to confirm the deletion of clips and playlist items.
Confirm Delete	Pop-up - Confirm Delete - Clips Cut (CTRL+X)	OFF	OFF/ON	Whether a pop-up notification will appear to confirm that the selected clip will be cut using CTRL+X.
Confirm Delete	Pop-up - Confirm Delete - Playlists	ON	ON/OFF	Whether a pop-up notification will appear to confirm the deletion of playlists.
OSD	PGM1 Audio meter position	Right	Right or Left	The position of the Audio Meter for channel 1.
OSD	PGM2 Audio meter position	Right	Right or Left	The position of the Audio Meter for channel 2.
OSD	PGM3 Audio meter position	Right	Right or Left	The position of the Audio Meter for channel 3.
OSD	PGM4 Audio meter position	Right	Right or Left	The position of the Audio Meter for channel 4.
OSD	PGM1 Audio meter Opacity	50%	Off/25%/50%/75%/90%	The opacity of the Audio Meter for channel 1.
OSD	PGM2 Audio meter Opacity	50%	Off/25%/50%/75%/90%	The opacity of the Audio Meter for channel 2.
OSD	PGM3 Audio meter Opacity	50%	Off/25%/50%/75%/90%	The opacity of the Audio Meter for channel 3.
OSD	PGM4 Audio meter Opacity	50%	Off/25%/50%/75%/90%	The opacity of the Audio Meter for channel 4.
Audio	Headphones Monitor - Left	1	1 to 16	The audio track used for the left speaker on the headphone output.
Audio	Headphones Monitor - Right	2	1 to 16	The audio track used for the right speaker on the headphone output.

Table 4.3 User Settings

Group	Parameter name	Default Value	Range	Description
Audio	Headphones Monitor - Volume	80%	0% to 100%	The volume, as a percentage, for the headphone output.
Visibility	Panel Buttons Brightness	100	0 to 100	The brightness of the buttons and displays on the Control Panel.
Visibility	Inactive Windows Brightness	50	20 to 80	The amount windows will be dimmed when inactive.
PGM	PGM1 - Frame color	Red	14 options	The color of the frame around playout channel 1.
PGM	PGM2 - Frame color	Blue	14 options	The color of the frame around playout channel 2.
PGM	PGM3 - Frame color	Orange	14 options	The color of the frame around playout channel 3.
PGM	PGM4 - Frame color	Green	14 options	The color of the frame around playout channel 4.

Rio Replay Import

The Rio Replay Import application converts all imported media files to the current video output format that the server is operating in.

For example, if the server is currently operating in the 1080i 59.94Hz video format, then all imported media files are converted to 1080i 59.94Hz even if they are in a different video format.

✶ **NOTE:**
Ancillary data is preserved from the import of MXF files in systems with AVC-Intra native recording formats.

This chapter discusses the following topics:

- Supported Import Transcoding
- Importing Media Files
- Adding Watch Folders
- Configuring Rio Replay Import

Supported Import Transcoding

The Software Transcoder in Rio Replay Import uses FFmpeg™ for the decoding operation.

Supported Video and Audio Media Files

Table 5.1 Video and Audio Media Files for Import

Codec	Import	Transcoding
AVC-Intra	MXF Op1a / Native .clip	No – Native codec
ProRes 422	MXF Op1a / MOV	Yes
ProRes 422 HQ	MXF Op1a / MOV	Yes
ProRes 422 LT	MXF Op1a / MOV	Yes
ProRes 4444	MXF Op1a / MOV	Yes
DNxHD 120/145/240/290	MXF Op1a / MOV	Yes
XDCAM50 422	MXF Op1a / MOV	Yes
XDCAM EX	MXF Op1a / MOV	Yes
MPEG-4 10Mb/s AVI	No	Yes

✶ **NOTE:**
Other formats may be supported by Rio Replay Import, but have not been recently tested for compatibility.

Importing Media Files

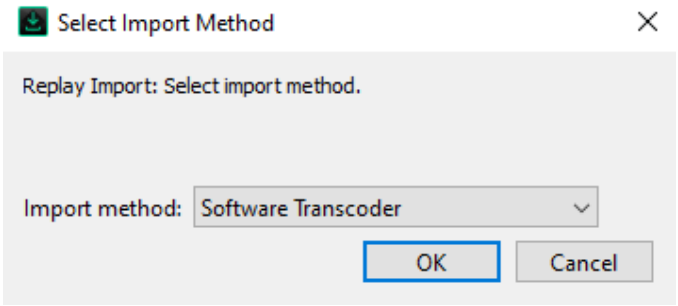
You can transcode a media file of a different format to a clip that can be played in the server.

✶ **NOTE:**
You can close the Rio Replay Import application at any point during an import to stop the process. When you start the Rio Replay Import application again, it will detect the import queue and prompt you to resume.

To Import Media Files

1. Launch the **Rio Replay Import** application.

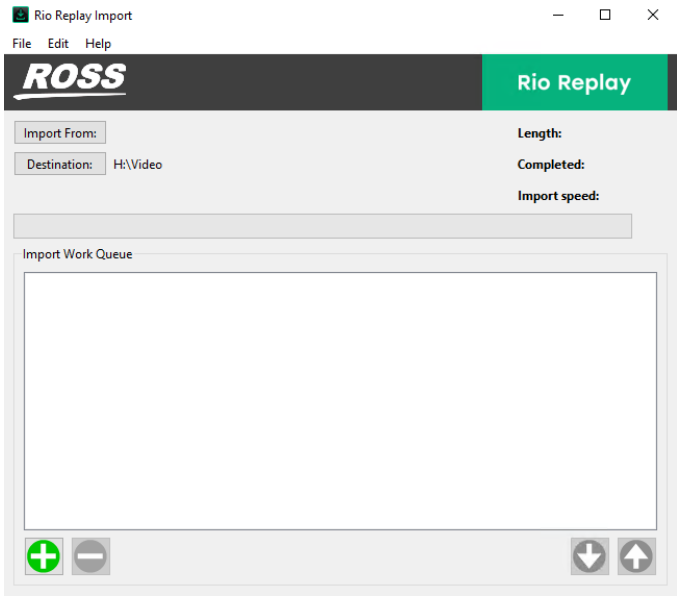
   The **Select Import Method** window opens.



2. In the **Import method** drop-down, select how you want to import the media file.
   - **Software Transcoder** — Use the software based transcoder to import the media file that is in a different media format than your hardware.
   - **Native Import Only: No Transcoding** — Import the media file that is in the native media format for your hardware. Select this if the file you are importing is in the **AVC-Intra 100.mov/.mxf** format or uses the **Software Transcoder** for any published codec. No channels are consumed for either of these operations.

- **AVC-Intra 100.mov/.mxf** — If your server is equipped with the AVC-Intra video hardware.

The **Rio Replay Import** window opens.



3. Click **Import From** and select the folder that the media files you want to import are located in.

   If you want to point the import application to a network drive, you must map that drive in Windows® before you can select it as a source.

4. Click **Select Folder**.

5. Click **Destination** and select the `H:\Video` folder, or a folder below it, on the media drive.

✶ **NOTE:**
The destination must be under the `H:\Video` folder on the media drive or the imported files will not be available to the server.

6. Click **Select Folder**.

7. Click the green add files (+) button. In the window that opens, select the media files that you want to import.

8. Click **Open**.

✶ **NOTE:**
If you want to remove files from the import list, select the files and click the red remove files (-) button. The files are not deleted, only removed from the import queue.

✶ **NOTE:**
You can change the order that the files are imported by selecting the file(s) you want to move and click the up or down arrow buttons on the right of the window. The file(s) are moved up or down in the list. You can also drag and drop the files to order the files.

Adding Watch Folders

You can create multiple watch folders that the import utility will monitor. It will automatically import any media files that are modified or copied into the watch folders.

✶ **NOTE:**
The **Rio Replay Import** application must be running for the watch folder functionality to work. You can set up the application to automatically launch and start the watch folder function when the server is powered on.

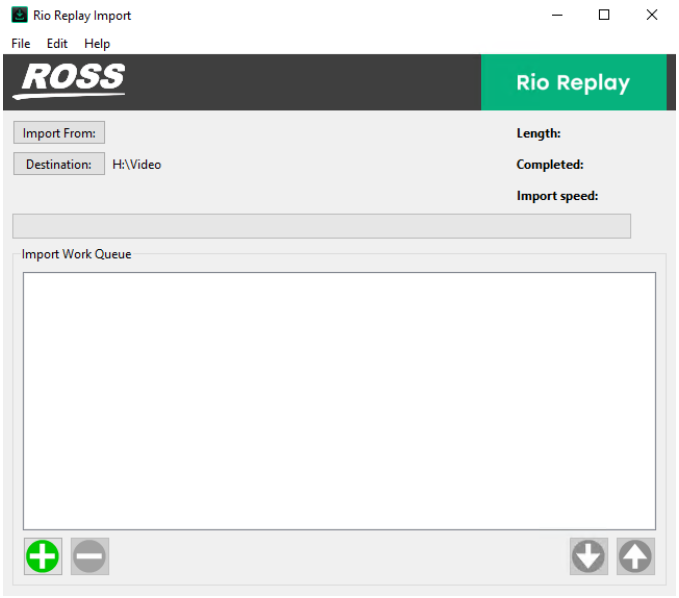
To Add a Watch Folder

1. Launch the **Rio Replay Import** application.
2. In the **Import Method** list, select the how you want to import the media file.
   - **Software Transcode** — Use the software based transcoder to import a media file that is in a different media format than your hardware.
   - **Native Import Only: No Transcoding** — Import a media file that is in the native media format for your hardware.

   Select **Native Import** Only if the file you are importing is one of the following. Otherwise, use **Software Transcode** for any published codec. No channels are consumed for either of these operations.

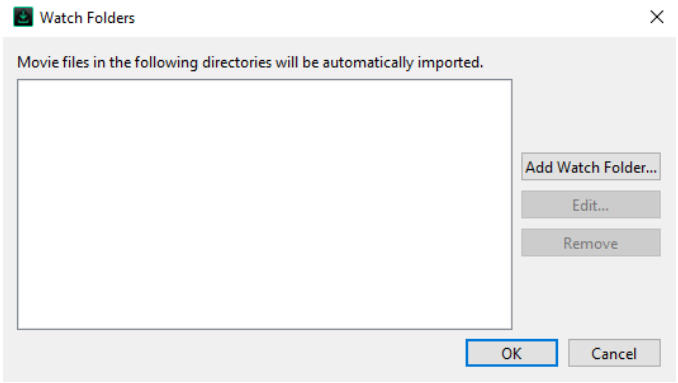
   - **AVC-Intra 100.mov/.mxf** — If your server is equipped with the AVC-Intra video hardware.

   The **Rio Replay Import** window is shown.

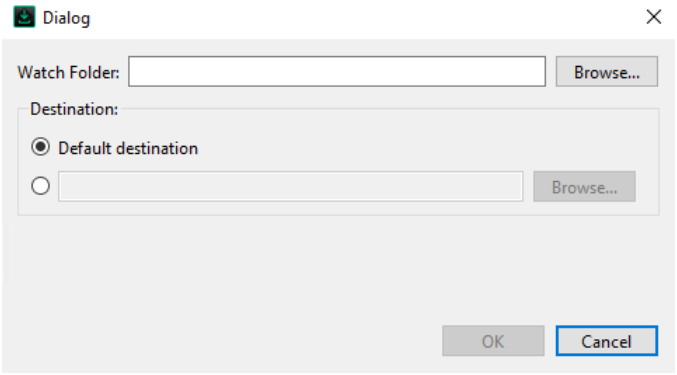


3. Click **File > Watch Folders...**.

   The Watch Folders window opens.



4. Click **Add Watch Folder...** to open a new window. Click **Browse...** to select the folder that you want **Rio Replay Import** to watch. The folder can be on the local media drive or a network drive.



5. Click **Select Folder** to add the folder to the watch list. Repeat for any additional folders you want **Rio Replay Import** to watch.

✶ **NOTE:**
You can remove a folder from the watch list by selecting it and clicking **Remove**.

6. Click **OK**.

7. Select **Enable Watch Folder** to start importing from the watch folders.

Configuring Rio Replay Import

The Rio Replay Import configuration menus allow you to change the destination folder, set how the RGB color space is interpreted, the raster size of the imported video, set up a watch folder, and set an autostart behavior.

To Configure Rio Replay Import

1. Launch the **Rio Replay Import** application.

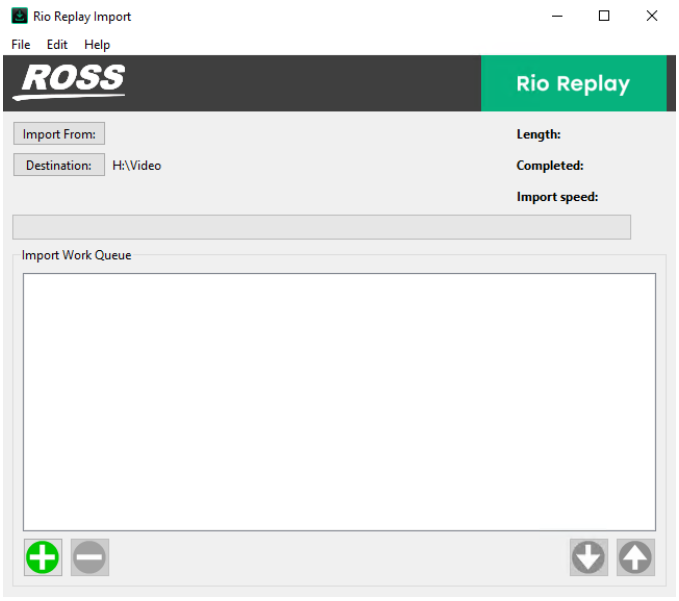
2. In the **Import Method** list, select the how you want to import the media file.

   - **Software Transcode** — Use the software based transcoder to import the media file that is in a different media format than your hardware.
   - **Native Import Only: No Transcoding** — Import the media file that is in the native media format for your hardware.

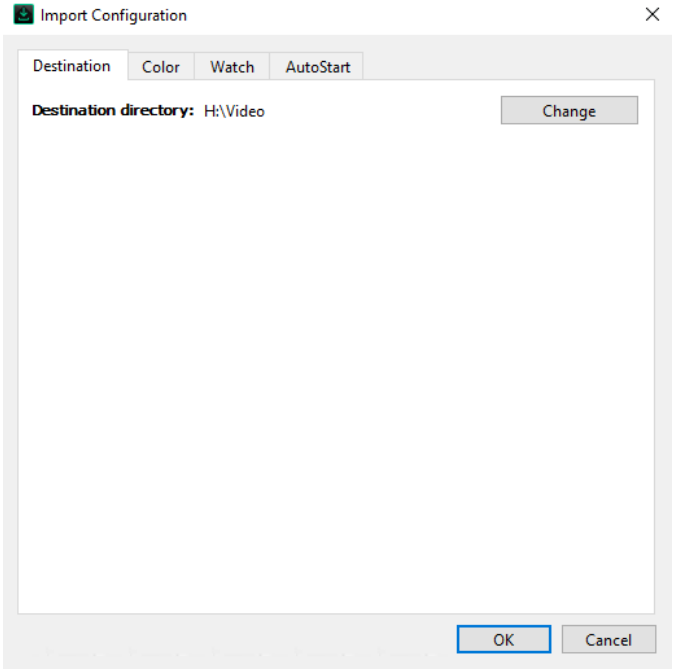
   Select **Native Import** Only if the file you are importing is one of the following or use the **Software Transcoder** for any published codec. No channels are consumed for either of these operations.

   - **AVC-Intra 100.mov/.mxf** — If your server is equipped with the AVC-Intra video hardware.

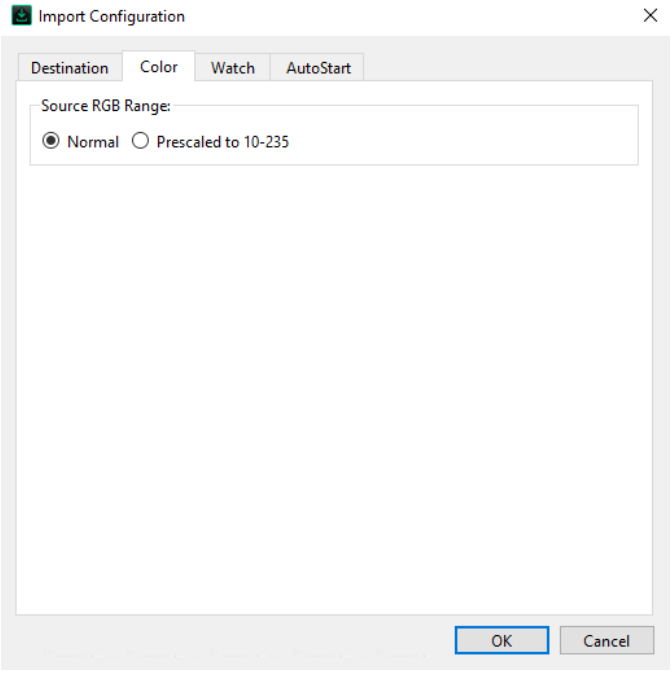
   The **Rio Replay Import** window is shown.



3. Click **Edit > Configure**.
4. The **Import Configuration** window opens.
5. Click the **Destination** tab and click **Change** to select a new destination folder for import.



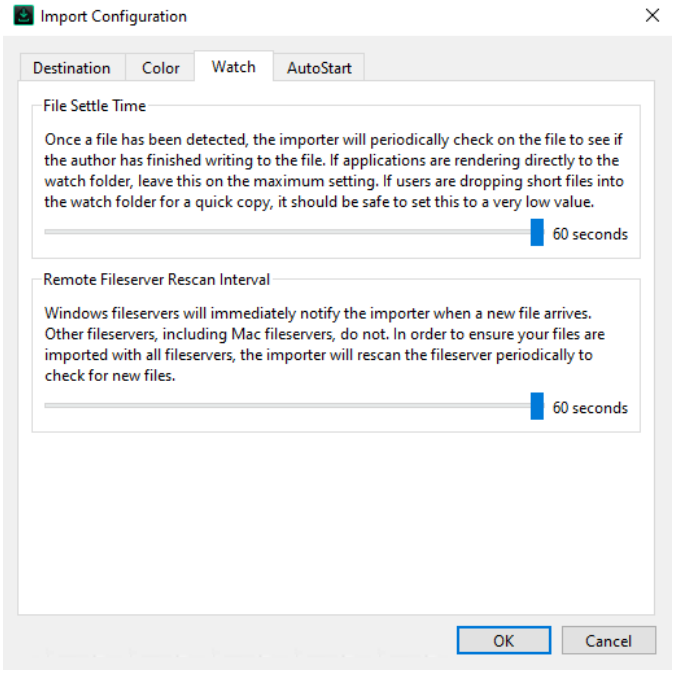
6. Click the **Color** tab and select how the RGB luminance color range is interpreted when a file is imported.



- **Normal** — Color luminance range is scaled from 0 to 255. Select this option if you are importing a media file with alpha (key). The alpha may not import properly otherwise.
- **Prescaled to 10-235** — Color luminance range is scaled from 10 to 235. Do not use this option when importing a clip with an alpha channel (VK clips). The alpha channel will not import properly. Use **Normal** when importing a clip with an alpha channel.

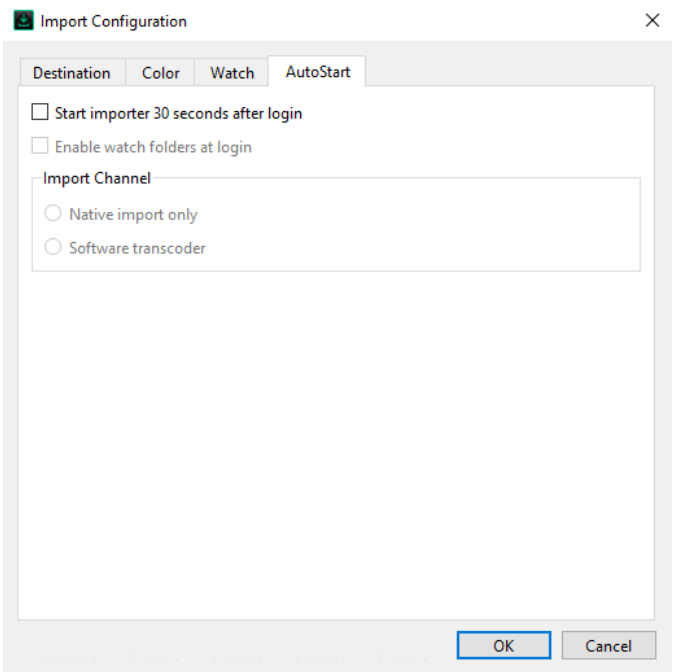
✶ **TIP:**
If the black levels of your imported media files appear crushed or the white levels do not appear as bright as expected, try selecting the opposite mode.

7. Click the **Watch** tab and set the amount of time the system will wait after it has detected a new file in the watch folder and how often it polls remote file servers. These settings are used in conjunction with the **AutoStart** configurations and the watch folder selection.



- **File Settle Time** — the length of time the import application will wait after a file has been modified before starting to import it. If the media files are being rendered directly into the watch folder, set a long wait time. If the watch folder is being used for drag and drop, set a short wait time.
- **Remote Fileserver Rescan Interval** — the length of time the import application waits to poll an external server for changes. This setting is ignored if the external server is running a Windows® operating system.

8. Click the **AutoStart** tab and select whether the **Rio Replay Import** application is started automatically, and whether the selected folders are watched.



- **Start importer 30 seconds after login** — The Rio Replay Import application will be started 30 seconds after you log into Windows®.
- **Enable watch folders at login** — The watch folder functionality will start automatically with Rio Replay Import.

- **Import Channel** — Select the channel transport to be used for import when the import application starts automatically.

Rio Replay Explorer

Rio Replay Explorer is a Windows® application that provides a graphical interface to the operation of the server. Although this application allows you to control the operation of the server, it does not need to be running for the server to operate. You can quit **Rio Replay Explorer** at any time without affecting any of the active real-time video and audio recording and playback operations.

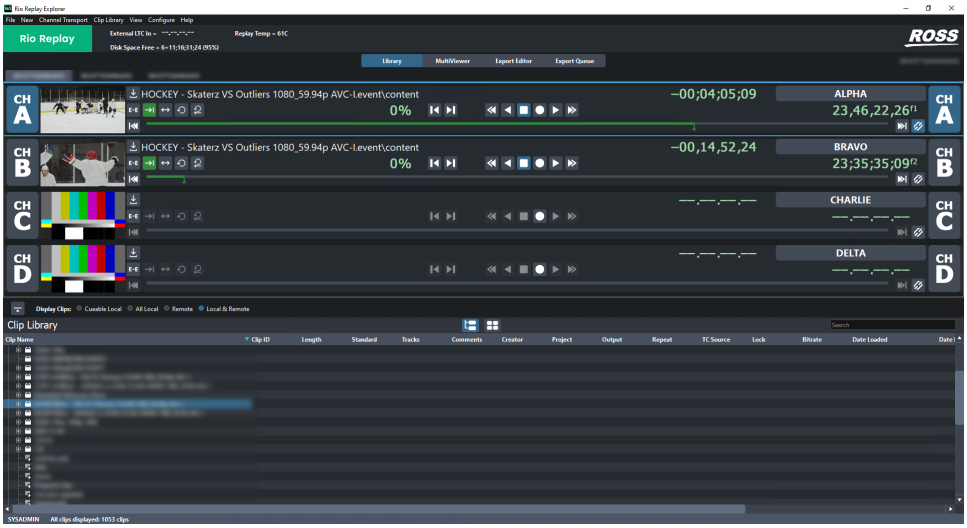


Figure 6.1 Rio Replay Explorer

The **Library**, **MultiViewer**, **Export Editor**, and **Export Queue** buttons at the top of the window allow you to quickly switch between the Clip Library, the MultiViewer, and the export modes. A bar will appear at the bottom of the window to provide status updates on various services running on the server.

This chapter discusses the following topics:

- Logging in to Rio Replay Explorer
- Managing Accounts
- Setting up Physical Channels
- Setting up Audio Meters

Logging in to Rio Replay Explorer

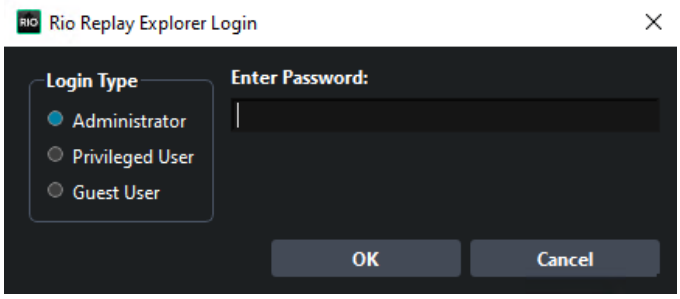
When you launch **Rio Replay Explorer**, you have the option of logging in as an administrator, privileged user, or guest user. Each of these users have specific privileges that are assigned by the administrator account.

- **Administrator** — Full access to all features of the application and can set the privileges for the other account types. This account is password protected by default.
- **Privileged User** — The default account type for using the application. This account is not password protected by default.
- **Guest User** — A secondary user account if you want to give limited access to the application. This account is not password protected by default.

To Log In to Replay Explorer

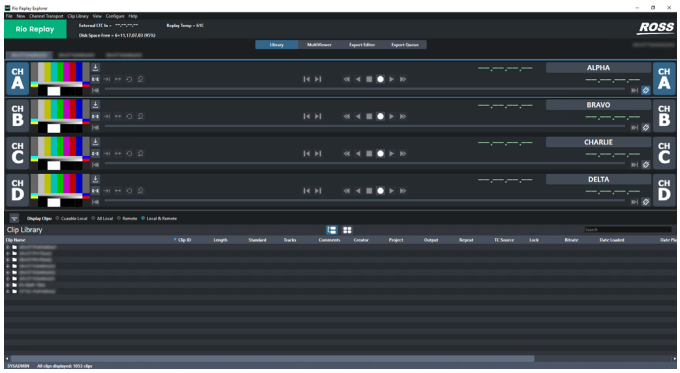
1. Open the **Rio Replay Explorer** application.

   The **Rio Replay Explorer Login** window opens.



2. In the **Login Type** box select the type of account you want to log in as.
   - **Administrator**
   - **Privileged User**
   - **Guest User**
3. If required, enter a password in the **Enter Password** field.
   - **Administrator** — The default password is `multiflex`.
   - **Privileged User** — There is no password by default.
   - **Guest User** — There is no password by default.
4. Click **OK**.

   The **Rio Replay Explorer** opens.



Managing Accounts

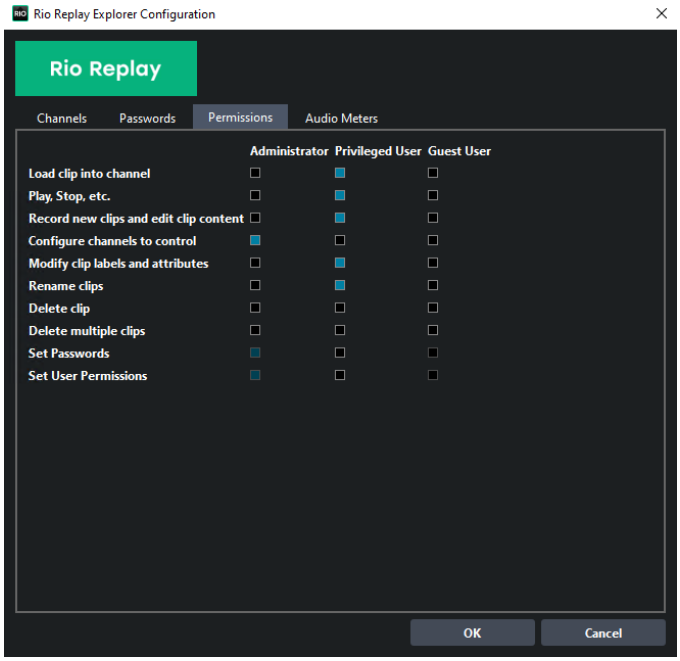
The administrator account has access to all of the features of the server, as well as the ability to assign privileges to the other accounts.

Setting Account Permissions

The different types of accounts can have different permissions. The Administrator account can set the permissions for other types of accounts.

To Set Account Permissions

1. Log into **Rio Replay Explorer** as the **Administrator**.
2. Click **Configure > General Configuration** and click the **Permissions** tab.



3. Select the permissions you want assigned to each account.

   The **Guest User** account cannot have permission to set passwords or set user permissions.

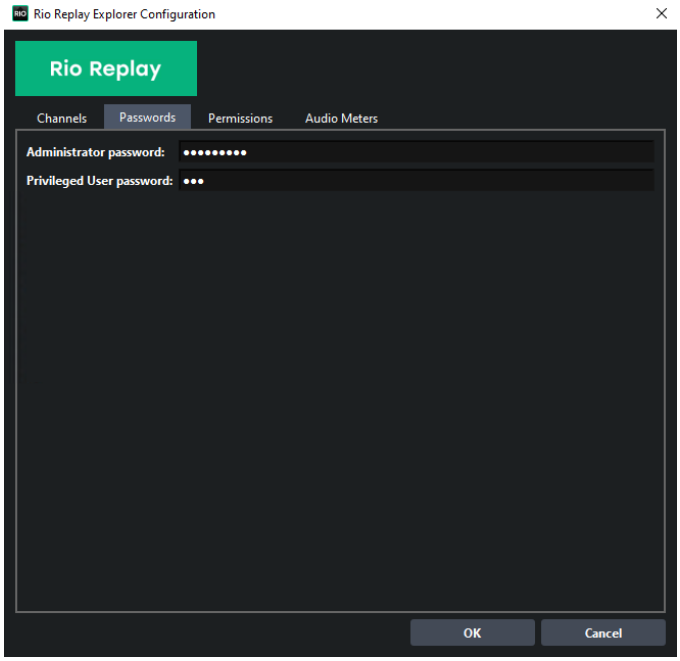
4. Click **OK** to save the changes.

Setting Account Passwords

Only the Administrator and Privileged User accounts can have a password.

To Set Account Passwords

1. Log into **Rio Replay Explorer** as the **Administrator**.
2. Click **Configure > General Configuration** and click the **Passwords** tab.



3. Enter the new password for the account you want to set the password for. Passwords can use letters, numbers, and special characters, and are case-sensitive.

   If the **Privileged User password** field is left blank, you will not be prompted to enter a password when logging in with that account.

4. Click **OK**.

Setting up Physical Channels

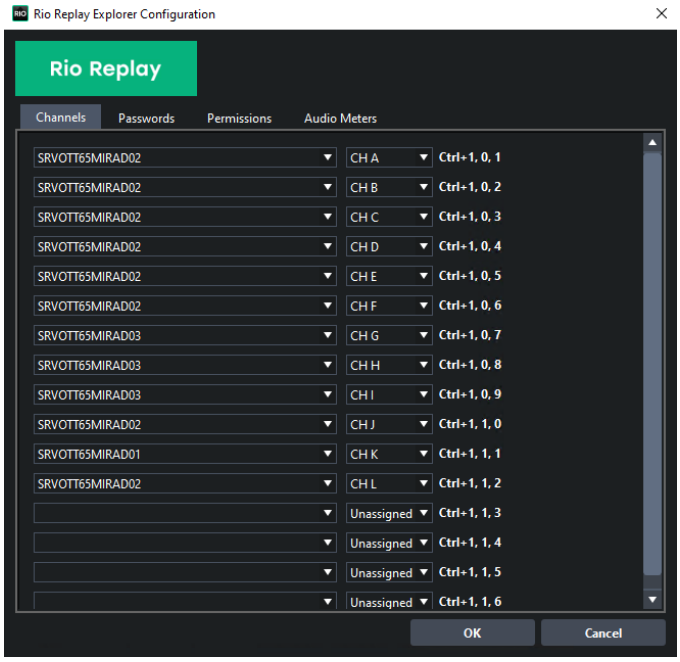
The server comes pre-configured with the channel transports assigned to physical channels on the same server. You can also assign physical channels from other servers to the channel transports on the server.

Assigning Channel Transports to Physical Channels

To Assign Channel Transports to Physical Channels

1. Click **Configure > General Configuration** and click the **Channels** tab.

   You may have to log in with a different account if your current account does not have the relevant permissions.



2. On the left side of the window, use the drop-down list to select the server that you want to assign a channel transport to. The number of channel transports that are available depends on the server model you have.
3. On the right side of the window, use the drop-down list to select the channel transport that you want to assign to the server.

Setting up Audio Meters

Audio meters can be shown as an overlay on the Multi-Viewer. You can adjust the position and transparency of the audio meters all at once, or individually.

✶ **NOTE:**
The number of channels shown in the audio meter depends on the number of audio channel in the clip. The number of audio channel in a clip is applied when the clip is recorded or imported and is based on the Audio Tracks settings from the Engineering Setup.

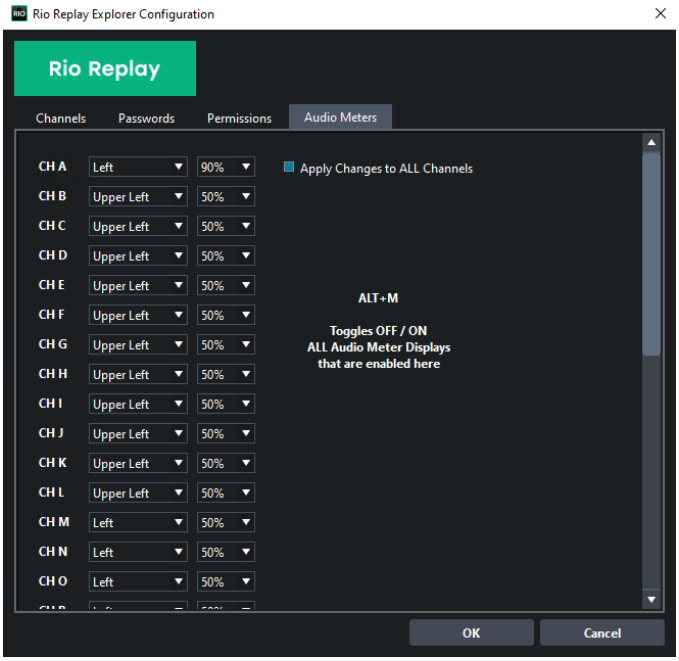
Configuring the Audio Meter for a Channel Transport

Each channel transport has an audio meter overlay on the Multi-Viewer output.

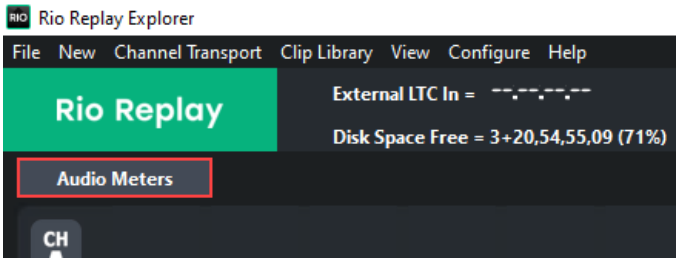
To Configure the Audio Meter for a Channel Transport

1. Click **Configure > General Configuration** and click the **Audio Meters** tab.

   You may have to log in with a different account if your current account does not have the relevant permissions.



You can also click **Audio Meters** on the top left corner of the **Multi-Viewer**. This does not require you to log in as an **administrator**.



To toggle audio meters on and off in the **Multi-Viewer**, press **ALT+M**.

2. Select the **Apply Changes to ALL Channels** box to have your selections applied to all channel transports.
3. Click the **Left** field and select where you want the audio meters to be positioned.
4. Click the **50%** field and select the opacity of the audio meters.
5. Select **Off** to have the audio meter not visible for that channel transport.

Channel Transport Control

Each channel in the server has a dedicated channel transport in Rio Replay Explorer that is used to load, play, record, and seek within clips. Clips are loaded into the channel transport from the Clip Library.

This chapter discusses the following topics:

- Using Channel Transports
- Loading Clips
- Trimming Clips
- Playing Clips
- Unloading Clips
- Using Clip Repeat Modes
- Recording Clips
- Locking Channel Transport Control
- Using Keyboard Shortcuts

Using Channel Transports

Channel transports are grouped into sets of four (4). Switch between groups by clicking the other tab at the top of the channel transport controls. The name shown on the tab is the computer name for the server the channels are on. By default this is the serial number of the server.

✶ **NOTE:**
When video channels are configured as ISO or 3D, the Video Windows for all channels included in the ISO or 3D are displayed in the master channel transport. Channel A will be the leftmost video window with the remaining channels in order.

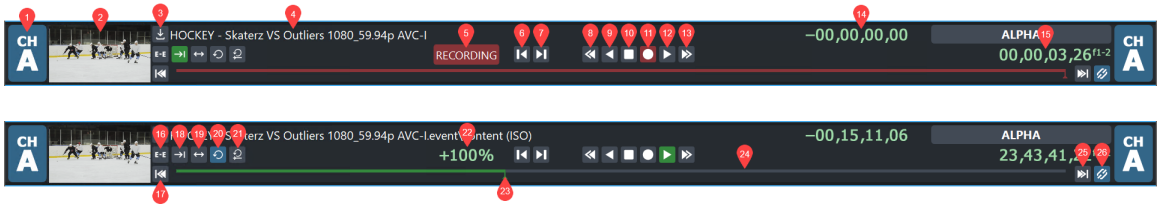


Figure 7.1 Channel Transport Controls

1. **Active Channel** — The channel transport that is currently selected. Keyboard commands and clip selections are applied to this channel.
2. **Video Window** — Shows the full-motion video output of the channel. This can be the clip that is currently playing or the live video input to the channel when EE is on.
3. **Load Clip** — Load the selected clip in the Clip Library into this channel. Press and hold the **Shift** key while pressing this button to eject the clip.
4. **Clip Name** — The name of the clip currently loaded into the channel transport.
5. **Activity Indicator** — Shows the current activity of the channel transport. It shows **RECORDING** when the channel transport is actively recording, **IMPORTING** when the channel transport is actively importing, and **EXPORTING** when the channel transport is actively exporting.
6. **Step Backward** — Jog backward by one frame/field in the active clip.
7. **Step Forward** — Jog forward by one frame/field in the active clip.
8. **Rewind** — Rewind the current clip at 30-times normal speed.
9. **Play Reverse** — Play the current clip in reverse at 1-times normal speed.
10. **Stop** — Stop playback or recording on the current channel transport.
11. **Record** — Open the **Record** Setup dialog to assist in recording a clip.
12. **Play** — Play the current clip forward at 1-times normal speed.
13. **Fast Forward** — Fast-Forward the current clip at 30-times normal speed.
14. **Count-Down Timer** — Shows the time remaining in the current clip. When the clip reaches the end the timer will show 00.00.00.00.
15. **Timecode** — Shows the timecode value of the current position in the clip. An **f1** or **f2** at the end of the timecode indicates Field playback (interlaced), and an **f1-2** indicates Frame playback (progressive).

    Double-click the timecode to enter a new timecode value manually. The channel transport immediately seeks to that timecode in the clip once you press **Enter**.

16. **EE** — Turn EE (Electronic to Electronic) mode On/Off for the selected channel transport. Also called bypass mode, where the video signal coming into the video channel is routed directly to the output without being stored and read from disk.

17. **Go to Start** — Seek to the first frame of the clip.

18. **Play Normal** — Normal play mode where the clip plays to the end and stops. Only one play repeat mode can be active at one time.

19. **Play Ping-Pong** — Ping-pong repeat mode where the clip plays back and forth between the in and out points stored in the clip.

20. **Play Loop** — Loop repeat mode where the clip starts playing again from the in point after it reaches the out point.

    If the channel transport is being controlled externally using the Odetics protocol, this button is disabled.

21. **3-Point Loop** — 3-Point Loop mode (also known as Multipoint repeat mode) where the clip can start playing from a point before the in point but starts playing again from the in point when it reaches the out point. The clip will continue to loop between the in point and out point from then on.

    Clicking **Play Repeat Normal** allows the clip to ignore the out point and play through to the end frame of the clip. This does not interrupt the loop play in progress.

22. **Play Speed** — Shows the current play speed of the clip.

    Double-click the play speed to enter a new play speed manually as a percentage. The clip will start playing at the new speed once you press **Enter**.

23. **Clip Position Slider Handle** — Indicates the current point in the clip that is being played. You can drag the handle back and forth to select a different point in the clip. Playback stops if you move the slider handle.

24. **Clip Position Slider Bar** — A graphical representation of the current clip. When the clip is playing or recording, the slider handle moves along the slider bar showing real-time progress through the clip. The slider handle and bar are green when playing and red when recording.

25. **Go to End** — Seek to the last frame of the clip.

26. **Chain** — Selects whether a channel transport is ganged with other channel transports. When Chain is turned on for a channel transport, that channel transport becomes linked to the other channel transports in the chain in Rio Replay Explorer. Within Rio Replay Explorer, any transport commands run on one channel transport in the chain are frame-accurately duplicated on all the other channel transports in the same chain. Commands sent to a channel transport from an external device over serial/ethernet control are not chained to the other channels.

✶ **NOTE:**
Record and Load/Eject Clip are not supported as chained commands and will only be performed on the channel transport that you run them on.

Loading Clips

The clip can start to play as soon as it is loaded into a channel transport. Ensure that you are using the right channel configuration for the clip you want to load.

To Load a Clip

1. Select the channel transport you want to load a clip into.

✶ **NOTE:**
If you are loading a VK (video + alpha) clip, ensure that the channel transport has been configured as VK as well.

2. Double-click the clip you want to load into the transport control. The clip must be in the same video format that the server is operating in. Alternatively, you can drag and drop the clip onto the channel transport area, or click the  **Load Clip** button next to the clip name in the transport control area.

   The clip is loaded into the channel transport and the transport control buttons become active. The first frame of the clip is shown in the preview window in the transport control area. If you are using a remote Rio Replay Explorer client, the preview window is not available.

✶ **NOTE:**
If the Auto Play feature is enabled (**Channel Transport > Enable Auto Play**), the clip will start to play as soon as it is loaded.

Trimming Clips

You can trim the head (beginning) and tail (ending) off of a clip to shorten it and change the frame the clip starts and ends on. Trimming a clip is not destructive and the entire clip can be restored at any time. You can also edit the trim information from the metadata of the clip.

If you know the timecode values for the head and tail trim points, you can set them directly in the metadata of the clip.

To Trim a Clip

1. Load the clip you want to edit into a channel transport.
2. Seek through the clip to the point where you want the clip to start. This will be the new starting field/frame of the clip.
3. Click **Channel Transport > Trim > Trim Head Off**.

   The portion of the clip before the trim point is hidden and the clip has been shortened.
4. Seek through the clip to the point where you want the clip to end. This will be the new last field/frame of the clip.
5. Click **Channel Transport > Trim > Trim Tail Off**.

   The portion of the clip after the trim point is hidden and the clip has been shortened.

The trim information is stored in the metadata of the clip and is used every time the clip is loaded.

✶ **TIP:**
You can restore the head or tail of the clip by clicking **Channel Transport** > **Trim** and selecting **Restore Head** or **Restore Tail**.

Playing Clips

Clips can play automatically once loaded, loop, or play at faster or slower speeds.

✶ **NOTE:**
If the Auto Play feature is enabled (**Channel Transport > Enable Auto Play**), a clip will start to play as soon as it is loaded into a channel. This feature applies to all channels and cannot be turned on or off for a particular channel transport.

To Play a Clip

1. Load the clip or playlist you want to play into the channel transport you want to play it out on.
2. Click the  **Play** button.

✶ **NOTE:**
You can add Cue Points to a clip that allow you to quickly seek to different points in the clip. Seek to the point in the clip that you want to add a cue point to and click **Channel Transport > Mark Cue Point**. Press the **Ctrl** key and use the left or right arrow keys to seek to the cue points before or after the current point in the clip. You can press **Ctrl+'** to delete the selected cue point, or click **Channel Transport > Clear All Cue Points** to clear all of the cue points in the clip.

The clip starts to play on the selected channel transport. If the selected channel transport is configured as V+K (Video+Alpha) and the loaded clip contains an alpha track, both video and alpha tracks from the clip are loaded and played simultaneously.

Unloading Clips

Remove a clip from the current channel transport.

To Unload a Clip

1. Select the channel transport you want to eject a clip from.
2. Click **Channel Transport > UnLoad**.

   You can also unload a clip by pressing and holding the **Shift** key and pressing **F1**.

   The clip is unloaded from the channel transport and color bars are loaded into the preview window and video output of the selected channel.

Using Clip Repeat Modes

There are a number of ways to have a clip continuously loop when playing out. These modes can be set in the metadata of a clip so that the clip always loads in this mode. They can also be set manually from the channel transport controls, or they can be set remotely from an external device.

Only one play repeat mode can be active at a time.

Repeat modes use Play Repeat IN and Play Repeat OUT points to determine what video to repeat. The default values for these points are stored in the metadata of the clip.

Normal (Off)

 **Play Normal** is the normal play mode where the clip plays to the end and stops. This mode is automatically set if you are controlling the channel transport from an external device, such as a switcher.

Loop

Play Loop mode starts the clip playing again from the in point again after it reaches the out point. When the clip starts playing, it immediately seeks to the **Play Repeat IN** point and plays until it reaches the **Play Repeat OUT** point. When it reaches the **Play Repeat OUT** point, it seeks back to the **Play Repeat IN** point and plays again. The clip will continue to play like this until stopped.

Ping-Pong

Play Ping-Pong mode plays the clip back and forth between the in and out points. When the clip starts playing, it immediately seeks to the **Play Repeat IN** point and plays until it reaches the **Play Repeat OUT** point. When it reaches the **Play Repeat OUT** point it starts playing in reverse until it reaches the **Play Repeat IN** point again. The clip will continue to play like this until stopped.

Loop to Play

3-Point Loop mode is a multipoint repeat mode that can start playing a clip from a point before the in point but starts playing again from the in point when it reaches the out point. The clip starts playing from the beginning, passing through the **Play Repeat IN** point, and continues playing until it reaches the **Play Repeat OUT** point. When it reaches the **Play Repeat OUT** point, it seeks back to the **Play Repeat IN** point and plays again. The clip will continue to play like this until stopped.

The portion of the clip before the **Play Repeat IN** point is only played the first time. This can be used if the repeating portion of the clip has a lead-in at the beginning. The lead-out portion of the clip can be played by switching the clip to the **Play Normal** mode after the last repeat has started. The clip will then play to the end.

Recording Clips

When recording a clip, you can record a new clip, append to the end of an existing clip, or overwrite an existing clip. Clips can be recorded to the root, or a sub-folder in the Clip Library.

✶ **TIP:**
If you want to quickly record a clip using the same settings as the last time you recorded, press and hold the **Shift** button and click the **Record** button.

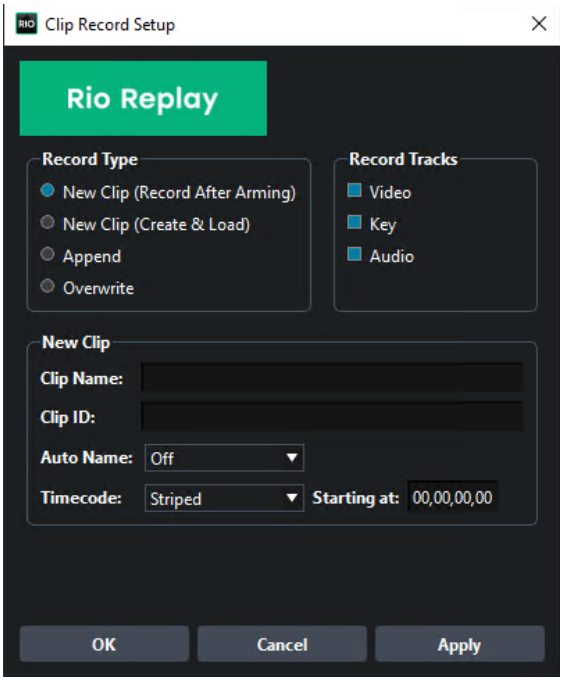
Recording New Clips

Use a channel transport to record the video signal coming into the server.

To Record a New Clip

1. Select the channel transport that you want to record a clip to. This is the channel for the BNC on the back of the server that the audio/video you want to record is coming in on. Not all channels will have an associated BNC input, depending on the model and configuration of your server.
2. Eject any clip that may already be loaded into the channel transport.
3. Click the **Record** button.

   The **Clip Record Setup** dialog box opens.



4. In the **Record Type** area, select the type of recording you want to do.
   - **New Clip (Record After Arming)** — Arms the channel transport for recording a new clip.
5. In the **Record Tracks** area, select which tracks you want to record.

✶ **NOTE:**
Audio is recorded depending on how the **Audio Input Source** is set in the **Rio Replay Config** application.

- **Video** — Record the video and any embedded audio coming into the Video In BNC, depending on the audio source.
- **Audio** — Record the digital audio coming into the AES ports or the embedded audio on the Video In BNC, depending on the audio source.

6. In the **New Clip** area, enter a name for the clip in the **Clip Name** field.

   If you want to record the clip into a sub-folder on the media drive you must include the folder path with the new. For example, `1080p Clips\Downtown-Fire` records the clip Downtown-Fire in the `1080p Clips` folder. The folder must already exist in the Clip Library to be able to record to it.
7. Enter an 8-character ID for the clip in the **Clip ID** field.

   If you are controlling the server from an external device, the clip ID is used on the external device to load a clip. If you do not assign a clip ID, the first 8 characters of the clip name can be used.
8. Turn **Auto Name** on if you want to create a series of clips with the same name plus an identifier.
   - **Off** — Overwrite any existing clip of the same name.
   - **Numeric Append** — Add a numeric digit to the end of the new clip name and increment it by one with each new clip of the same name.
   - **Time of Day** — Add the current date and time to the end of the clip name.
   - **LTC In** — Add a timecode stamp from the embedded timecode in the video signal being recorded.
9. Select a **Timecode** source for the new clip.
   - **Striped** — Use the internally generated timecode data. The starting point for the timecode is set in the **Starting at** field.
   - **External TC** — Use the timecode data embedded in the video signal being recorded.
10. Click **OK**.

The channel transport is now armed to record. The video window shows live video coming into the channel, the **EE** button is on, and the **Record** button is flashing.

11. Click the flashing **Record** button when you are ready to record.

    The server starts recording, the **EE** button goes off, and name of the new clip is shown at the top of the channel transport area, and the **RECORDING** indicator appears.

12. Click the **Stop** button to stop recording.

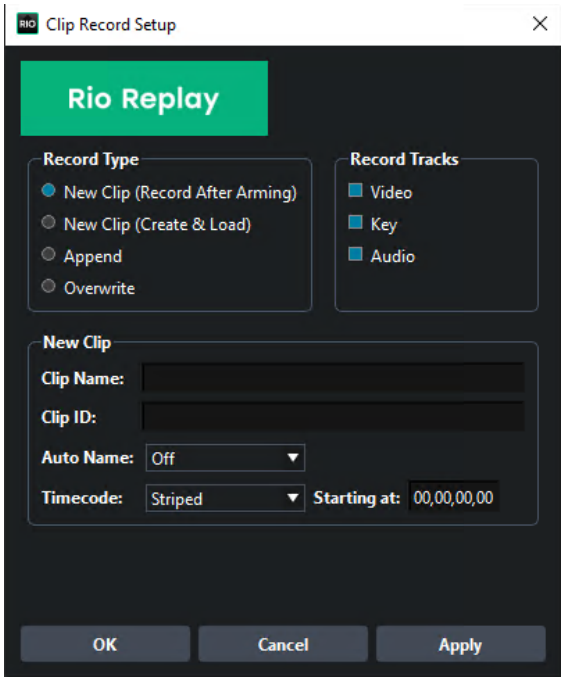
Overwriting or Appending a Clip

Add to the end of an existing clip, or overwrite the clip entirely.

To Overwrite or Append a Clip

1. Select the channel transport that you want to record a clip to. This is the channel for the BNC on the back of the server that the audio/video you want to record is coming in on. Not all channels will have an associated input BNC, depending on the model and configuration of your server.
2. Prepare the channel transport for the type of recording you want to do.
   - **Append** — Load the clip that you want to append the new recording to.
   - **Overwrite** — Load the clip that you want to overwrite and seek to the point in the clip that you want to start the new recording.
3. Click the **Record** button.

   The **Clip Record Setup** dialog box is shown.



4. In the **Record Type** area, select the type of recording you want to do.
   - **Append** — Arms the channel transport to start recording at the end of the current clip.
   - **Overwrite** — Arms the channel transport to start recording at the currently selected point in the exiting clip. Everything after this point in the clip will be overwritten.
5. In the **Record Tracks** area, select which tracks you want to record.

✶ **NOTE:**
Audio is recorded depending on how the **Audio Input Source** is set in the **Rio Replay Config** application.

- **Video** — Record the video and any embedded audio coming into the Video In BNC, depending on the audio source.
- **Key** — Record the alpha signal coming into the associated Video In BNC.
- **Audio** — Record the embedded audio on the Video In BNC, depending on the audio source.

6. Click **OK**.

   The channel transport is now armed to record. The video window shows live video coming into the channel, the E-E **EE** button is on, and the **Record** button is flashing.

7. Click the flashing **Record** button when you are ready to record.

   The server starts recording, the E-E **EE** button goes off, and name of the new clip is shown at the top of the channel transport area, and the **RECORDING** indicator appears.

8. Click the **Stop** button to stop recording.

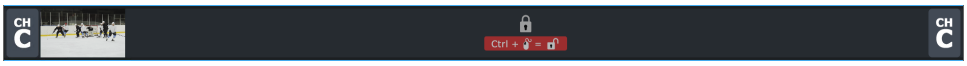
Locking Channel Transport Control

You can lock any channel transport control in Rio Replay Explorer. This prevents users from accidentally loading or ejecting a clip, or using any of the transport controls. Chained/Ganged channels are not affected by the lock.

✶ **NOTE:**
Locking a channel transport does not prevent the external control of that channel.

To Lock/Unlock a Channel Transport

1. Press and hold the **Ctrl** key and click the channel transport that you want to lock/unlock.



   A lock symbol is shown over the controls when the channel transport is locked.

2. Press and hold the Ctrl key and click the channel transport again to unlock it.

Using Keyboard Shortcuts

Keyboard shortcuts work on the currently selected video channel transport in the Rio Replay Explorer window.

Two or more video channel transports can be linked (Chained) together so that commands sent to one channel are also sent to the others. Not all keyboard shortcuts support Chain control.

Table 7.1 Rio Replay Explorer Keyboard Shortcuts

Function	Shortcut	Description	Chain
Full Screen	F11	(Windows® shortcut) Sets the Rio Replay Explorer window to full screen mode, or back to windowed mode.	No
Change Application	Alt+Tab	(Windows® shortcut) Switch between Windows® applications.	No
Select Channel A	Ctrl+1 1 A	Selects channel A as the active channel transport.	No
Select Channel B	Ctrl+1 1 B	Selects channel B as the active channel transport.	No
Select Channel C	Ctrl+1 1 C	Selects channel C as the active channel transport.	No
Select Channel D	Ctrl+1 1 D	Selects channel D as the active channel transport.	No
Select Channel E	Ctrl+1 1 E	Selects channel E as the active channel transport.	No
Select Channel F	Ctrl+1 1 F	Selects channel F as the active channel transport.	No
Select Channel G	Ctrl+1 1 G	Selects channel G as the active channel transport.	No
Select Channel H	Ctrl+1 1 H	Selects channel H as the active channel transport.	No
Chain Channel Transport Control	Ctrl+1 C C	**Clear all Channels** — Sets all channel chain controls to Off.	No
	Ctrl+1 C Y	**Chain Current Channel** — Turns channel chain control on for the selected channel transport.	No
	Ctrl+1 C N	**Unchain Current Channel** — Turns channel chain control off for the selected channel transport.	No
	Ctrl+1 C T	**Toggle Chain Current Channel** — Toggles the chain control on or off for the selected channel transport.	No
Stop/Play	Spacebar	Stop or Play on the selected channel transport.	Yes
EE	Ctrl+E Y	**EE On** — Turns EE (Electronic to Electronic) mode on for the selected channel transport. Also called bypass mode, where the video signal coming into the server is routed directly to the output without being stored and read from disk.	No
	Ctrl+E N	**EE Off** — Turns EE mode off for the selected channel transport. The video output comes from the disk.	No
	Ctrl+E T	**EE Toggle** — Toggles EE mode on or off for the selected channel transport.	No
Load	F1	Load the highlighted clip in the **Clip Library** into the selected channel transport.	No
Unload	Shift+F1	Unloads the clip from the selected channel transport and loads a color-bar test pattern.	No
Jog Reverse	F3	Reverses the clip in the selected channel transport by one frame/field. Press and hold the button to play the clip in reverse at 33% speed.	Yes

Table 7.1 Rio Replay Explorer Keyboard Shortcuts

Function	Shortcut	Description	Chain
Jog Forward	F4	Advances the clip in the selected channel transport forward by one frame/field. Press and hold the button to play the clip forward at 33% speed.	Yes
Rewind	F6	Rewinds the clip in the selected channel transport.	Yes
Play Reverse	F7	Plays the clip in the selected channel transport in reverse.	Yes
Stop	F8	Stops playing or recording the clip in the selected channel transport.	Yes
Play	F9	Plays the clip in the selected channel transport.	Yes
Fast Forward	F10	Fast-forwards the clip in the selected channel transport.	Yes
Seek to Start of Clip	Ctrl+F6	Seeks to the first frame of the clip in the selected channel transport and stops.	Yes
Seek to End of Clip	Ctrl+F10	Seeks to the last frame of the clip in the selected channel transport and stops.	Yes
Cue Points	Ctrl+'	Marks a cue point in the selected channel transport, or removes the current cue point.	No
	Ctrl+Left	Seeks backward to the next cue point in the selected channel transport.	No
	Ctrl+Right	Seeks forward to the next cue point in the selected channel transport.	No

Table 7.1 Rio Replay Explorer Keyboard Shortcuts

Function	Shortcut	Description	Chain
Variable Play	F12	**1× Forward** — Plays the clip in the selected channel transport forward at 1 times speed.	Yes
	F13	**3× Forward** — Plays the clip in the selected channel transport forward at 3 times speed.	Yes
	F14	**4× Forward** — Plays the clip in the selected channel transport forward at 4 times speed.	Yes
	F15	**8× Forward** — Plays the clip in the selected channel transport forward at 8 times speed.	Yes
	F16	**16× Forward** — Plays the clip in the selected channel transport forward at 16 times speed.	Yes
	F17	**30× Forward** — Plays the clip in the selected channel transport forward at 30 times speed.	Yes
	F18	**0.33× Forward** — Plays the clip in the selected channel transport forward at 33% of 1 times speed.	Yes
	Ctrl+F11	**0.33× Reverse** — Plays the clip in the selected channel transport backwards at 33% of 1 times speed.	Yes
	Ctrl+F12	**1× Reverse** — Plays the clip in the selected channel transport backwards at 1 times speed.	Yes
	Ctrl+F13	**3× Reverse** — Plays the clip in the selected channel transport backwards at 3 times speed.	Yes
	Ctrl+F14	**4× Reverse** — Plays the clip in the selected channel transport backwards at 4 times speed.	Yes
	Ctrl+F15	**8× Reverse** — Plays the clip in the selected channel transport backwards at 8 times speed.	Yes
	Ctrl+F16	**16× Reverse** — Plays the clip in the selected channel transport backwards at 16 times speed.	Yes
	Ctrl+F17	**30× Reverse** — Plays the clip in the selected channel transport backwards at 30 times speed.	Yes
Trim	Ctrl+T H	**Head** — Trims the head from the clip in the selected channel transport.	No
	Ctrl+T T	**Tail** — Trims the tail from the clip in the selected channel transport.	No
Gang All	Ctrl+G P	**Gang Play** — Plays all clips loaded in all channel transports.	Yes
	Ctrl+G S	**Gang Stop** — Stops all clips loaded in all channel transports.	Yes
	Ctrl+G R	**Gang Re-cue** — Re-cues all clips loaded in all channel transports.	Yes

Table 7.1 Rio Replay Explorer Keyboard Shortcuts

Function	Shortcut	Description	Chain
Record	Ctrl+2 N	**New Clip Record** — Creates a new clip in the Clip Library, loads it into the selected channel transport, selects LIVE EE mode, and starts recording to that clip.	No
	Ctrl+2 C	**Create and Load New Clip** — Creates a new clip in the selected channel transport with a 1-frame duration and parks on the first frame. It does not start recording.	No
	Ctrl+2 A	**Append Record** — Seeks to the end of the clip loaded in the selected channel transport, selects LIVE EE mode, and starts recording to that clip. A clip must be loaded into the selected channel transport before running this command.	No
	Ctrl+2 O	**Overwrite Record** — Selects LIVE EE mode and starts recording over the clip loaded in the selected channel transport. The server starts recording over the current clip at the location the selected channel transport is parked.	No
List Play	Ctrl+L A	**Move Cursor to On-Air Item** — Selects the item that is currently airing on the on-air playlist.	No
	Ctrl+L B	**Move Cursor to Next On-Air Item** — Selects the preview item on the on-air playlist.	No
	Ctrl+L 1 to L 9	**Move Cursor to On-Air Item X** — Selects item *X* (1 to 9) on the on-air playlist.	No
	Ctrl+L L Y	**List Play Loop Mode ON** — Turns looping on for the on-air playlist. The entire contents of the playlist is looped.	No
	Ctrl+L L N	**List Play Loop Mode OFF** — Turns looping off for the on-air playlist.	No
	Enter	**Take** — Takes the next item on the on-air playlist. The **Enter** button found with the numeric keypad of your keyboard does not work for this command.	No
Apply Clip Name to all Angles	Shift+Enter Shift+F1	With a clip selected, type the new clip name and press the **Shift** + **Enter** or **Shift** + **F1** keys to apply the name to all angles.	No

Clip Library

The Clip Library appears on the bottom half of the Rio Replay Explorer window and shows all the media file clips that are currently available to the server. These clips can be located on the internal media drive of the Rio Replay server or on the media drive of a separate Rio Replay server.

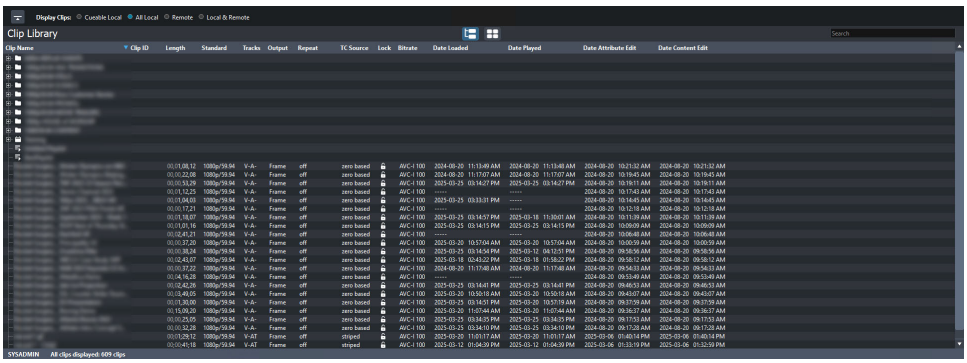


Figure 8.1 The Clip Library

This chapter discusses the following topics:

- Displaying Clips
- Searching for Clips
- Using Playlists
- Creating Folders
- Using Clip Library Columns
- Editing Clip Metadata
- Using Parent and Child Clips
- Deleting Clips
- Locking and Unlocking Clips
- Using Timecode Chase Lists

Displaying Clips

You can change the width and position of each column in the list, as well as sort the list based on the information in any column. You can select which columns are shown by navigating to the top of the Clip Library and selecting an option from **Display Clips**:

- **Cueable Local** — Only shows clips that are in the same video format that the server is operating in and are stored on the local media drive.
- **All Local** — Shows all clips that are stored on the local media drive. Clips that are not in the same video format that the server is operating in are displayed, but cannot be loaded.
- **Remote** — Only show clips that are located on a remote server. You can only load the clips from a remote server that is on the same network and operating in the same video format. Remote servers appear as folders in the Clip Library.
- **Local & Remote** — Shows all clips that are stored on the local media drive and on remote servers.

Searching for Clips

You can search the Clip Library for clip names that contain a specific word.

Enter the name of a clip you want to find in the **search** field located to the right of the Clip Library title bar. The Clip Library will only show those clips that match your search criteria and the number of clips shown is indicated in a yellow notification at the bottom of the screen.

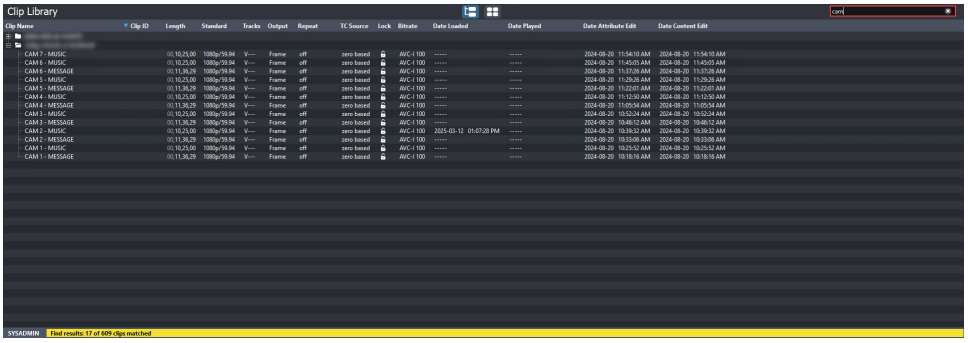


Figure 8.2 Clip Library Search

Using Playlists

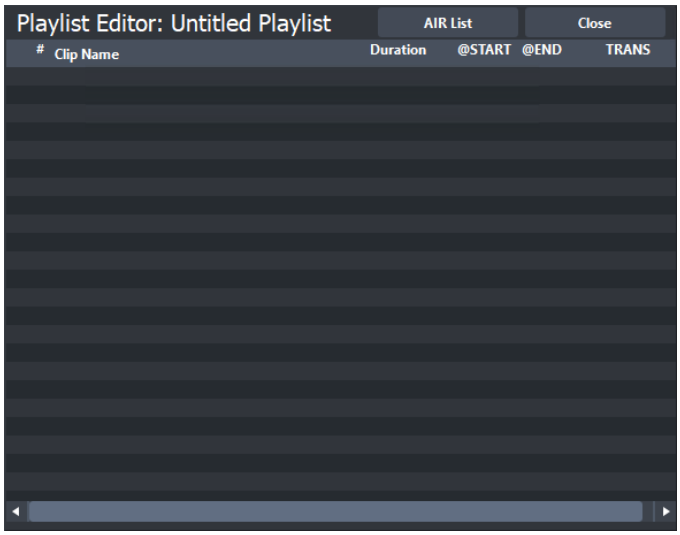
A playlist is a collection of clips that are sorted into the order you want them played. Playlists are created and edited within the Clip Library.

Creating and Editing Playlists

To Create and Edit a Playlist

1. If you are creating a new playlist, click **New > New Playlist**. The playlist will appear in the Clip Library as `Untitled Playlist`. Enter a name for the new playlist before proceeding. If you are editing an existing playlist, proceed to the next step.
2. Double-click the name of the playlist.

   The **Playlist Editor** opens to the right of the **Clip Library**.

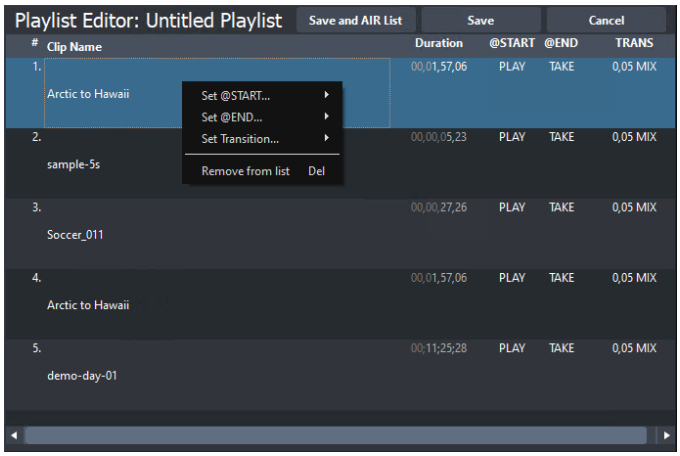


3. Drag and drop clips from the Clip Library to the playlist.

✶ **NOTE:**
Right-click a clip and select **Remove from list** to remove the clip from the playlist.

4. Drag and drop clips within the playlist to order them how you want them to play out.

5. Set a different behavior for the start (**@START**) of a clip by right-clicking on the clip and selecting **Set @START...**.



- **Play** — The clip plays out automatically when the playlist transitions to this clip in ON-AIR mode. This is the default setting.
- **Pause** — The clip is paused on the first frame when the playlist transitions to this clip in ON-AIR mode.

6. Set a different behaviour for the end (**@END**) of a clip by right-clicking on the clip and selecting **Set @END...**.

- **Take** — The playlist transitions to the next clip in ON-AIR mode. This is the default setting.
- **Pause** — The clip is paused on the last frame when it reaches the end of the clip in ON-AIR mode. You must click **TAKE** to transition to the next clip.

  You can press **Enter** on the keyboard to transition to the next clip, instead of clicking **TAKE**.
- **Loop** — The clip is looped when it reaches the end of the clip in ON-AIR mode. You must click **TAKE** to transition to the next clip.

7. Set a different transition length (**TRANS**) for the transition between the current clip and next by right-clicking on the clip and selecting **Set Transition...**.

✶ **NOTE:**
The dissolve transitions (MIX) require two channel transports (PGM/PVW) to be able to transition from one channel to the other (one clip to the other). The dissolve is applied between the two clips.

- **CUT** — A cut is performed between the clips.
- **0.05 MIX** — A 5-frame dissolve is performed between clips.
- **0.10 MIX** — A 10-frame dissolve is performed between clips.
- **0.15 MIX** — A 15-frame dissolve is performed between clips.
- **0.20 MIX** — A 20-frame dissolve is performed between clips.
- **1.00 MIX** — A 1-second dissolve is performed between clips.

8. Click **Save** to save the changes to the playlist.

   Click **Save and AIR List** to save the changes to the playlist and load it into the selected channel transport.

Taking a Playlist On-air

Take the playlist on-air to play each clip in order with the set transitions.

✶ **TIP:**
If you want to use mix transitions between the clips in the playlist, you must use two channel transports. Depending on the channel transport you select, the following channel transport is used for preview.

To Take a Playlist On-air

1. Double-click the playlist you want to air in the Clip Library.
2. Select the channel transport that you want to play the playlist on.

   Select a channel (**ChA**, **ChC**, **ChE**, or **ChG**, **ChI**, **ChK**) if you want to use a mix transition. Channels B, D, F, etc. are used as the preview channels for ChA, ChC, CHE etc.
3. Click **AIR List** in the **Playlist Editor** window.

   The **Playlist Editor** window changes to the **PLAYLIST ON-AIR** window. The first clip in the playlist is highlighted red and is loaded into the selected channel transport.

4. If you want to dissolve (mix) from one clip to the next in the playlist, select the transition channels (**ChB > ChA, ChD > ChC, ChF > ChE, ChH > ChG, ChJ > ChI, ChL > ChK**). If not selected, the playlist will cut from one clip to the next.

   You are prompted whether you want to load the list in PGM/PVW mode. Click **Yes**. The next clip in the playlist (highlighted green) is loaded into the second (PVW) channel transport.

5. Click the  **Play** button to start playing the playlist.

Click the **Play Loop** to have the playlist start again at the beginning when it finishes the last clip. It is recommended that you set **@START** to **PLAY** and **@END** to **TAKE** to fully automate the loop.

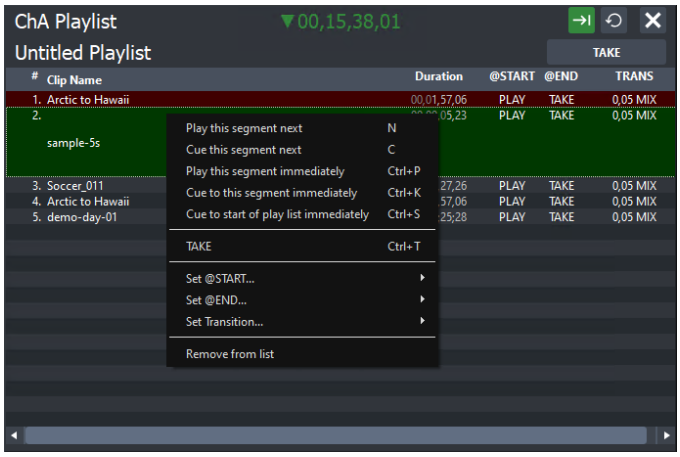
The first clip starts to play out and execute the @Start, @End, and transition tags of the current clip. When the clip is close to the end (3 seconds) the next clip is highlighted, indicating that the PVW channel is about to go on-air as part of the transition.

✶ **NOTE:**
When you are finished using the playlist feature, click **EXIT** to take the playlist off-air and free up the channel transports for other uses.

Using Playlist Commands

As a playlist is playing out, you can skip items, cue up segments with manual or immediate playout, or re-cue to the start of the playlist. When you jump to a new location in the playlist, the server continues to play the clips from the new location.

To access the list of commands, right-click the clip you want to cue or play.



- **Play this segment next** — Play the selected clip after the currently playing clip finishes on the PGM channel. The clip is highlighted green and is played next.
- **Cue this segment next** — Cue the selected clip after the currently playing clip finishes on the PGM channel. The clip is highlighted green and is cued next. The clip pauses at the first frame and must be played manually.

  You can manually play the clip by pressing the **Spacebar** on the keyboard.
- **Play this segment immediately** — Immediately load and play the selected clip on the PGM channel.
- **Cue to this segment immediately** — Immediately load and cue the selected clip on the PGM channel. The clip pauses at the first frame and must be played manually.
- **Cue to start of playlist immediately** — Immediately load and cue the first clip in the playlist on the PGM channel. The clip pauses at the first frame and must be played manually.

✶ **TIP:**
You can quickly take a different clip in the list by selecting the new clip and clicking the **TAKE** button or pressing **Enter** on the keyboard.

Creating Folders

Clips are stored on the media drive in the server, or on external servers connected to the server you are using. You can organise the clips into folders on the media drive either from Windows® Explorer or from the Clip Library.

✶ **IMPORTANT:**
You cannot delete a folder from the Clip Library. You can only delete a folder from Windows®.

To Create a Folder

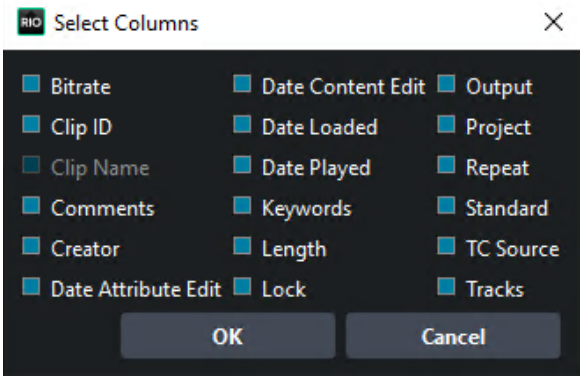
1. Right-click an empty line in the **Clip Library** and click **New Folder**.
2. Enter a name for the new folder.
3. Drag and drop clips into the new folder.

Using Clip Library Columns

You can set the Clip Library to show or hide specific columns. Any column, with the exception of the clip name column, can be shown or hidden.

To Change Clip Library Columns

1. Click **Clip Library > Select Columns...**.
2. Select which columns you want to show, or deselect the columns you want to hide.



3. Click **OK**.

Editing Clip Metadata

Clip metadata includes information like the name of the clip, the repeat mode, timecode source, and trim points. This information is stored with the clip and is copied to other servers with the clip.

✶ **NOTE:**
You cannot edit the metadata of a clip (Abekas® .CLIP) if it is locked. You must unlock the clip before you can edit the metadata.

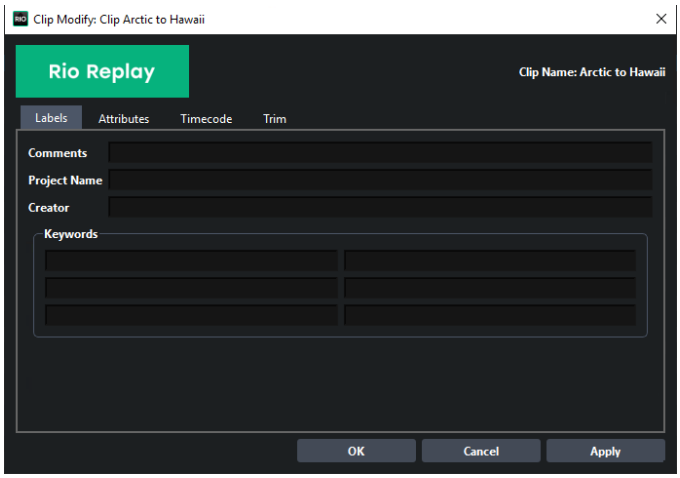
Most metadata shown in the Clip Library can be edited directly by double-clicking on the cell in the table and either entering the new data or selecting it from a drop-down list.

Editing the Label Metadata of a Clip

The label metadata is shown in the Clip Library and is used to sort and identify clips.

To Edit the Label Metadata of a Clip

1. Select the clip in the Clip Library you want to edit the metadata for.
2. Click **Clip Library > Modify...**.
3. Click the **Labels** tab.



4. Edit the metadata item you want to change.
   - **Comments** — A 255-character free form field.
   - **Project Name** — A 255-character free form field.
   - **Creator** — A 255-character free form field.
   - **Keywords** — 6 independent 35-character searchable words. A keyword can only be a single word or conjunction without spaces.
5. Click **OK**.

Editing the Attribute Metadata of a Clip

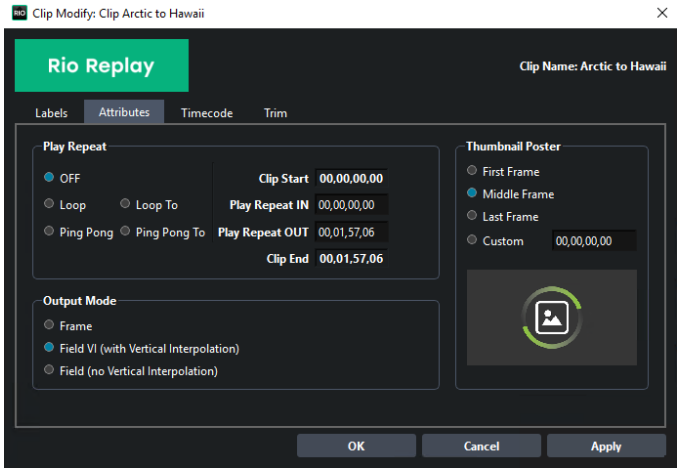
The attribute metadata sets the default output mode for the clip, as well as the repeat function.

To Edit the Attribute Metadata of a Clip

1. Select the clip in the Clip Library you want to edit the metadata for.

✶ **NOTE:**
You cannot edit the metadata of a clip if it is locked.

2. Click **Clip Library > Modify...**.
3. Click the **Attributes** tab.



4. In the **Play Repeat** area, select the repeat mode you want to use for the clip.
   - **OFF** — Play repeat is turned off by default when the clip is loaded.

- **Loop** — Play repeat loop is turned on by default when the clip is loaded. When the clip starts playing, it immediately seeks to the **Play Repeat IN** point and plays until it reaches the **Play Repeat OUT** point. When it reaches the **Play Repeat OUT** point it seeks back to the **Play Repeat IN** point and plays again.
- **Ping Pong** — Play repeat ping-pong is turned on by default when the clip is loaded. When the clip starts playing, it immediately seeks to the **Play Repeat IN** point and plays until it reaches the **Play Repeat OUT** point. When it reaches the **Play Repeat OUT** point it starts playing in reverse until it reaches the **Play Repeat IN** point again.
- **Loop To** — Play repeat loop to play is turned on by default when the clip is loaded. The clip starts playing from the beginning passing through the **Play Repeat IN** point and continues playing until it reaches the **Play Repeat OUT** point. When it reaches the **Play Repeat OUT** point it seeks back to the **Play Repeat IN** point and plays again.
- **Ping Pong To** — Play repeat ping pong is turned on by default when the clip is loaded. When the clip starts playing, it immediately seeks to the **Play Repeat IN** point and plays until it reaches the **Play Repeat OUT** point. When it reaches the **Play Repeat OUT** point it starts playing in reverse until it reaches the **Play Repeat IN** point again.

5. Use the **Play Repeat IN** and Play **Repeat OUT** fields to the set the timecode for the in and out points of the clip.
   - **Play Repeat IN** — The first inclusive field/frame of the repeated portion of the clip. By default this is the first field/frame of the clip.
   - **Play Repeat OUT** — The field/frame before the last field/frame of the repeated portion of the clip. By default this is one field/frame beyond the end of the clip.
6. In the **Output Mode** area, select the output video mode that you want to clip to play out in.
   - **Frame** — Select this option if the clip was shot in a progressive video format.
   - **Field VI** — Select this option if the clip was shot in an interlaced video format and you want to apply vertical interpolation (VI) to it. This mode is useful for clips that will be played out in slow motion or will be frequently paused. The VI helps to eliminate vertical hopping during slow motion playback and jagged edges in paused images.
   - **Field** — Select this option if the clip was shot in an interlaced video format and you don't want to apply vertical interpolation (VI) to it.

✶ **NOTE:**
The server does not support video format conversion. If a clip is in a different video format than the server is operating in you will not be able to load it into a channel transport.

7. Click **OK**.

Editing the Timecode Metadata of a Clip

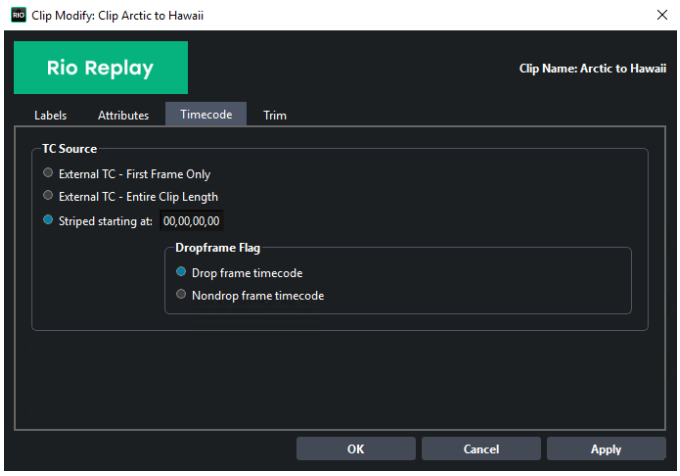
The timecode metadata sets the source of the timecode information for the clip.

To Edit the Timecode Metadata of a Clip

1. Select the clip in the Clip Library you want to edit the metadata for.

✶ **NOTE:**
You cannot edit the metadata of a clip if it is locked.

2. Click **Clip Library > Modify...**.
3. Click the **Timecode** tab.



4. In the **TC Source** area, select the timecode source.
   - **External TC - First Frame Only** — The clip uses the external timecode data of the first field/frame that was originally recorded with the clip. The timecode for the remainder of the clip is synthesized. This option is useful if there was a break or interruption in timecode data during recording.
   - **External TC - Entire Clip Length** — The clip uses the external timecode data that was originally recorded with the clip. This option is useful if the clip has different segments in it with different timecode ranges that you want to use.
   - **Striped** — The clip uses the internally generated, or synthesised, timecode starting at a defined point. Enter the numeric timecode value that you want to use for the start of the clip.
5. In the **Dropframe Flag** area, select if you want to use **Drop frame timecode** or **Nondrop frame timecode**.

   This option is only available if the clip was recorded in a 59.94Hz video format.
6. Click **OK**.

Editing the Trim Metadata of a Clip

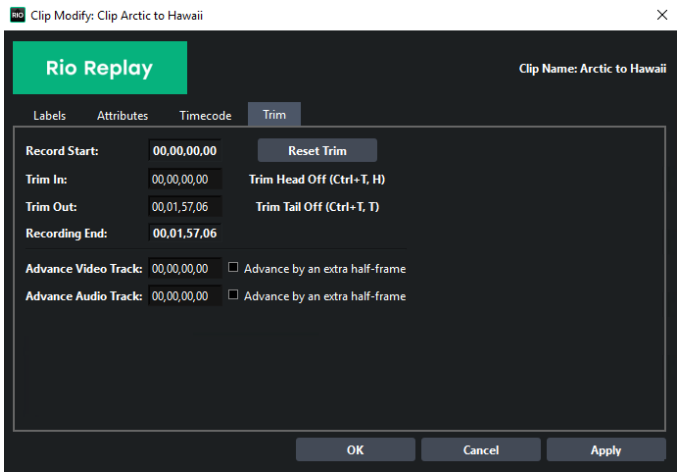
The trim metadata allows you to trim the head or tail off of the clip, setting a new start and end point for the clip. You can also offset a specific track in the clip.

To Edit the Trim Metadata of a Clip

1. Select the clip in the Clip Library you want to edit the metadata for.

✶ **NOTE:**
You cannot edit the metadata of a clip if it is locked.

2. Click **Clip Library > Modify...**.
3. Click the **Trim** tab.



4. In the **Trim In** field, enter the new starting timecode value for the clip. The **Record Start** field shows the timecode at the start of the clip.
5. In the **Trim Out** field, enter the new ending timecode value for the clip. The **Recording End** field shows the timecode at the end of the clip.
6. Use the **Advance** fields to slip the video, audio, or timecode track back in relation to the other tracks in the clip. Only those tracks that are present in the clip are shown.

   Any content slipped past the start of the clip will not be present in the output of the clip.

   Select **Advance by an extra half-frame** to slip that particular track back half of a field/frame.

   - **Advance Video Track** — Slip the video track back in time relative to all the other tracks.
   - **Advance Audio Track** — Slip the audio track back in time relative to all the other tracks.
7. Click **OK**.

Using Parent and Child Clips

You can create virtual copies of a clip. These child clips are pointers to the parent clip that use an independent set of metadata. This allows you to create a number of child clips that are trimmed differently from their parent and each other without taking up additional space on the media drive.

Once a child clip has been created, you cannot delete the parent clip until all the child clips have been deleted.

Creating a Child Clip

To Create a Child Clip

1. Right-click the clip that you want to create a child of.
2. Click **Create Child Clip**.

   The child clip appears in the clip list with the same name as the parent clip, with `- Child` appended to the end of the clip name.

Deleting Clips

Permissions can be set for all three User types so they can delete individual clips, delete multiple clips at once, or not be able to delete any clips. For more information, see “**Setting Account Permissions**” on page 6–3.

✶ **NOTE:**
You cannot delete a clip if it is locked. Unlock the clip first, and then you can delete it.

To Delete a Clip

1. Select the clip(s) that you want to delete.
2. Click **Clip Library > Delete**.

   A prompt opens to confirm the deletion. Click **Delete** to delete the clip(s).

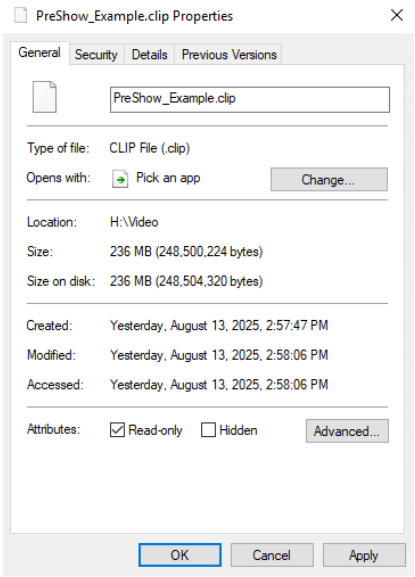
Locking and Unlocking Clips

Clips can only be locked or unlocked from Windows®. When a clip is locked, an orange lock icon is shown in the Locked column in the Clip Library.

To Lock or Unlock a Clip

1. Launch Windows® Explorer and navigate to the media drive on the server (`Media Data (H):`) and open the **Video** folder.
2. Locate the clip that you want to lock or unlock and right-click it.

   To lock or unlock multiple files at once, select multiple files and right-click one of them.
3. Click **Properties**.
4. Click the **General** tab and select (locked) or un-select (unlocked) **Read-only** in the **Attributes** section.



5. Click **OK**.

Using Timecode Chase Lists

A Timecode Chase list (TC Chase List) allows you create a playlist where each clip in the list can be triggered by a timecode value. For each clip in the list, you set the timcode value that you want to clip to start playing. You also have the option of setting a new in point, or offset, for the clip if you don't want the clip to start playing from the beginning.

✶ **NOTE:**
You must have a valid timecode signal connected to the **LINE IN** port at the back of the server.

✶ **TIP:**
Because the TC Chase List does not use the LTC IN port, you can still use the time of day LTC input separate from a TC Chase List.

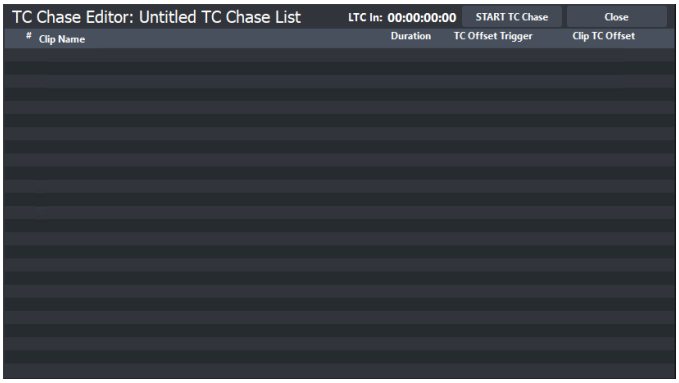
Creating a TC Chase List

You can add clips to the TC Chase List in the same way you add clips to a playlist. Once the clips have been added, you can set the timecode value for when each clip will start playing, as well as any offset to the input of the clip that you want to jump to.

To Create a TC Chase List

1. If you are creating a new TC Chase List, click **New > New TC Chase list** and enter a name for the new TC Chase List. If you are editing a TC Chase List, proceed to the next step.
2. Double-click the name of the TC Chase List. The **TC Chase Editor** opens to the right of the Clip Library.

   The current timecode coming into the server is shown at the top of the TC Chase List window.



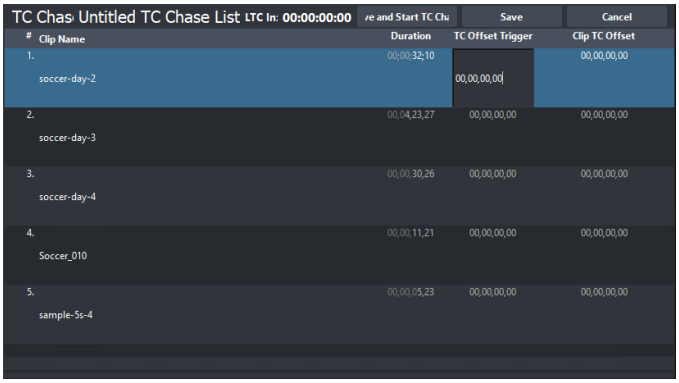
3. Drag and drop clips from the **Clip Library** to the **TC Chase List**.

✶ **NOTE:**
Right-click a clip and click **Remove from list** to remove the clip from the **TC Chase List**.

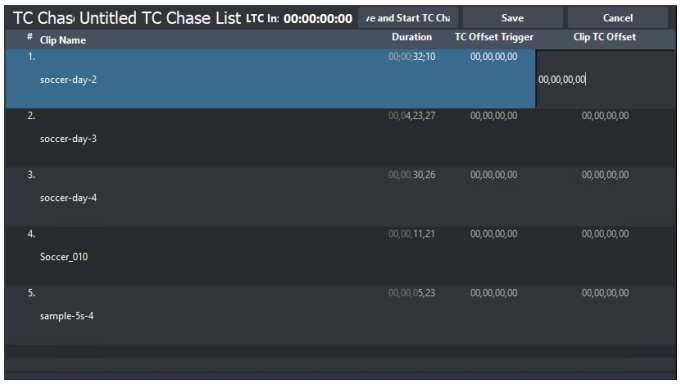
4. Drag and drop clips within the **TC Chase List** to order them how you want them to appear visually. The order of the clips in the list does not change the playout order. Clips are played according to their **TC Offset Trigger**.

   You can click **Save** at any time to save the current state of the **TC Chase List**.

5. Double-click the time in the **TC Offset Trigger** column for the clip you want to edit and enter the timecode value at which you want this clip to start playing. For example, if you want the clip to start playing at timecode 01,00,30,00, enter `01,00,30,00`.



6. If required, double-click the time in the **Clip TC Offset** column for the clip and enter the point in the clip at which you want it to start. This is an offset from the in point of the clip. For example, if you want the clip to start playing 5 seconds into the clip, enter `00,00,05,00`.



7. Repeat these steps for every clip in the TC Chase List.
8. Click **Save**.

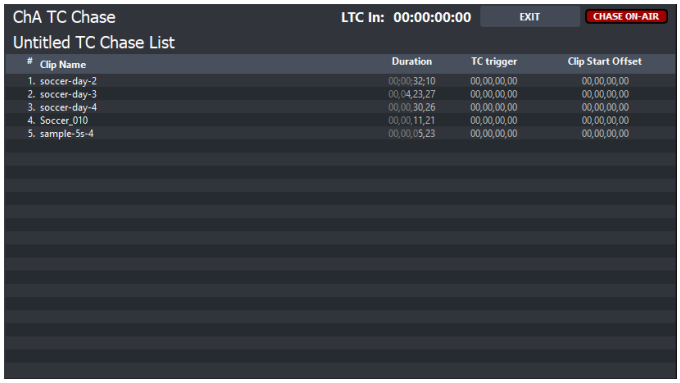
Taking a TC Chase List On-air

✶ **NOTE:**
A TC Chase List has no mix transition and only uses a single channel transport.

To Take a TC Chase List On-air

1. Double-click the TC Chase List you want to air in the Clip Library.
2. Select the channel transport that you want to play the TC Chase List on.
3. Click **START TC** Chase on the **TC Chase Editor** window.

   The **TC Chase Editor** window changes to the **TC Chase ON-AIR** window. As the timecode reaches the specified value for each clip, the clip is highlighted red and plays out on the channel transport. The channel transport outputs black if no clip is scheduled to play during the current timecode.



Replay Overview

Rio Replay's advanced control interface and software suite are designed to meet the demands of live sports production. The system focuses on leveraging the existing skill set of replay operators while providing high-end tools and controls for pre-game playback, instant replays, highlight packaging, social media contributions, and post-production archiving.

This chapter discusses the following topics:

- Overview
- Using the Control Panel
- Using System Modes
- Examining the Replay Window

Overview

The system includes a responsive Control Panel with tactile buttons, touchscreen LCD modules, and a customizable jog wheel and T-bar for precise navigation and editing. Users can personalize button layouts to match their workflow, while dynamic LCD screens update in real time to display the server status and available functions.

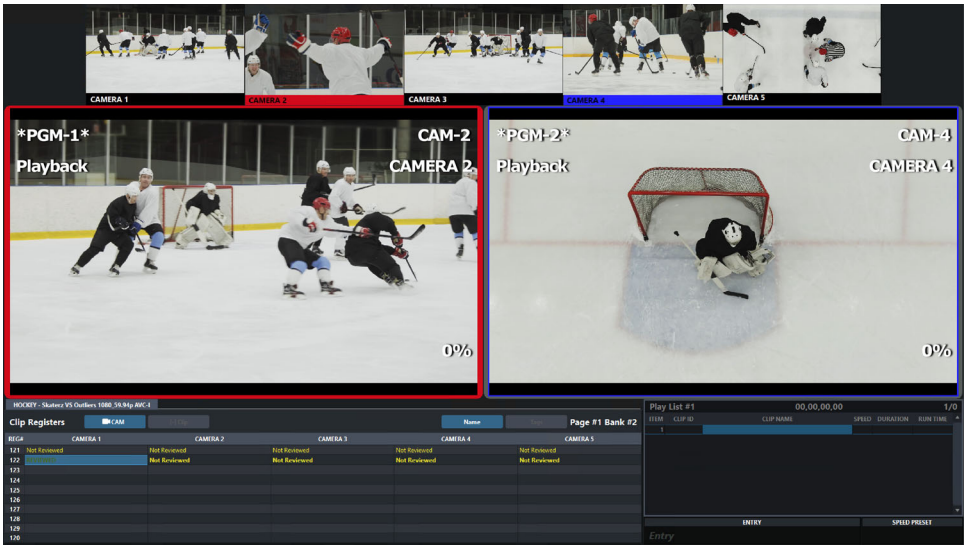


Figure 9.1 The Replay User Interface

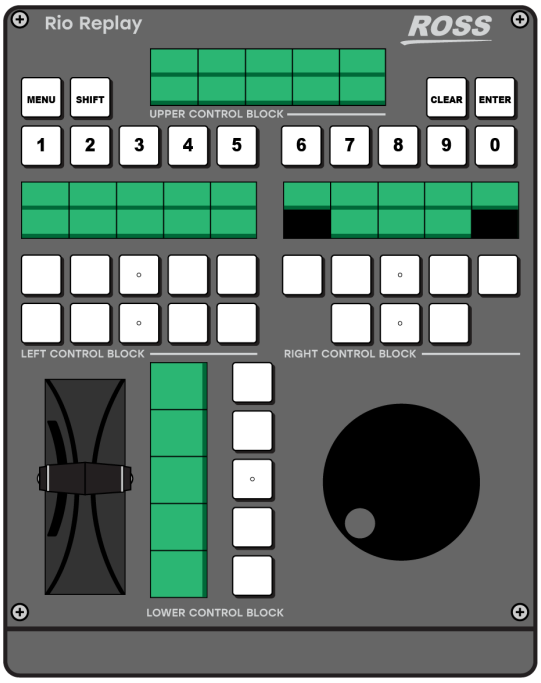


Figure 9.2 The Replay Control Panel

Using the Control Panel

The Control Panel has been designed to give you quick access to all the functions of the replay operation. The keys and controls found on the Control Panel are as follows:

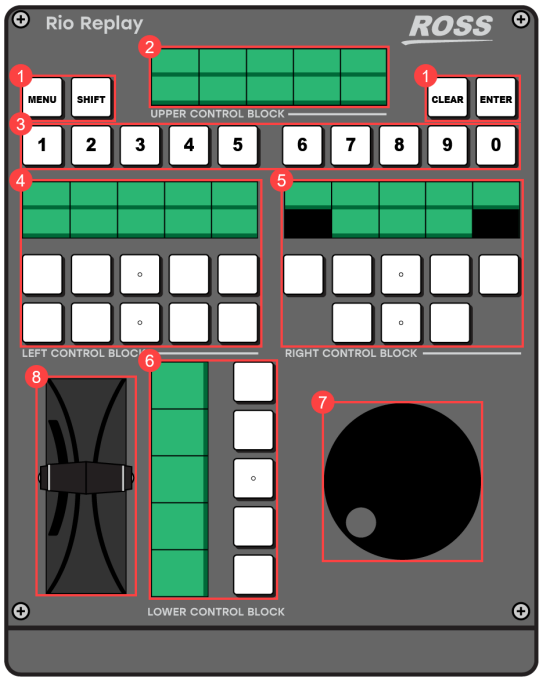


Figure 9.3 Sections of the Control Panel

Table 9.1 Sections of the Control Panel

Number	Name	Description
1	System Buttons	Used for different functionalities based on system status, either as a stand-alone button or in combination with other buttons.
2	Quickeys	Touch operated buttons that allow faster access to certain functions.
3	Number Buttons	Allows the operator to navigate Clips, Pages and Banks, as well as save and load clips. They can also be used enter numeric values in certain modes (for example, loading a clip by number).
4	Left Control Block	A set of buttons and a corresponding LCD display that changes functionality based on system mode.
5	Right Control Block	A set of buttons and a corresponding LCD display that changes functionality based on system mode.
6	Lower Control Block	A set of buttons and a corresponding LCD display that changes functionality based on system mode.
7	Jog Wheel	Browses media back and forth. Can also be used to navigate up and down different lists.
8	T-Bar	Controls the playback speed. Can also be used as a selection option in some modes.

Upper Control Block

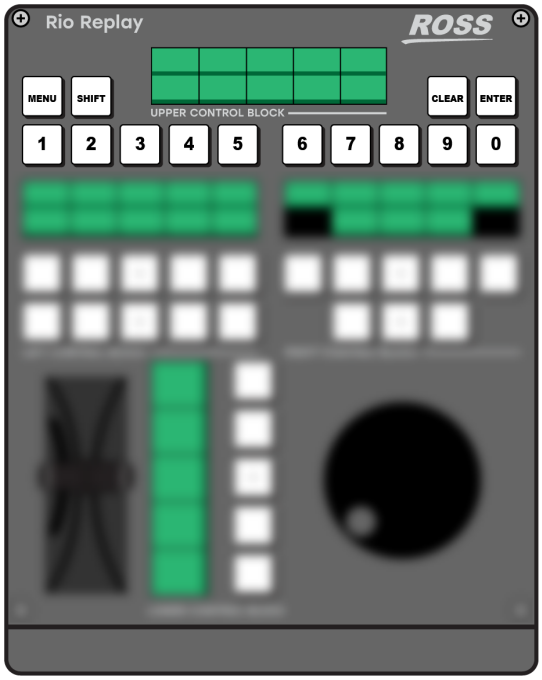


Figure 9.4 The Upper Control Block

- **1, 2, 3, 4, 5, 6, 7, 8, 9, 0** — The function of each number button is shown on the Upper Control Block LCD display. The number buttons are used in different ways, depending on the Control Panel's current mode of operation.
- **MENU** — Toggles between the clips list and the playlist.
- **SHIFT** — Allows the operator to access the shifted function for all the buttons on the Control Panel. By default, the main functions of the buttons will be illuminated brighter, while the shifted functions will be dimmed. When **SHIFT** is pressed, the shifted functions will be brighter while the default functions will be dimmed.

Figure 9.5 Default functions on the Lower Control Block (left) and shifted functions (right)

When you press a button, or press the **SHIFT** button again, the Control Panel returns to normal.

- **CLEAR** — Clears or deletes text entries, clips, or playlists, depending on the system state. Press **CLEAR** and the number button matching the clip number to delete that clip.
- **ENTER** — Confirms user selections and adds loaded clips into the active playlist.

T-Bar

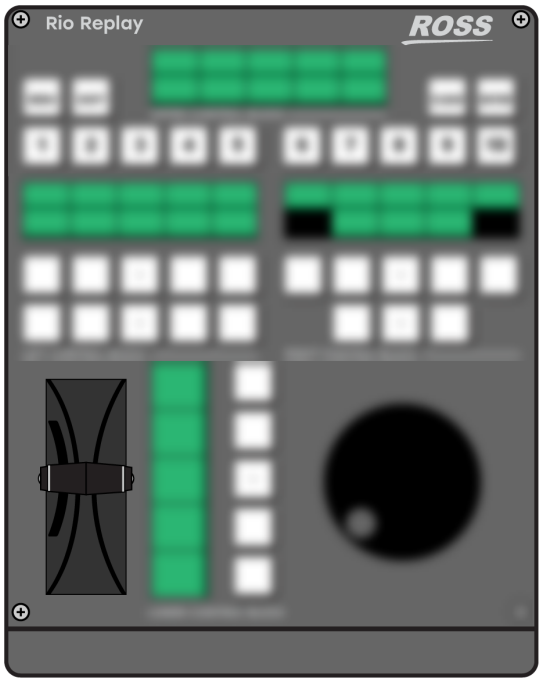


Figure 9.6 The T-Bar

- **T-Bar** — Allows the user to manually set the play speed of the clip playing out on the program channel. By default, the range is from 0% play-speed at the bottom and 100% play-speed at the top. The T-bar has a secondary range that can be specified by the user, ranging from -9,900% to 9,900%.

Using the Jog Wheel

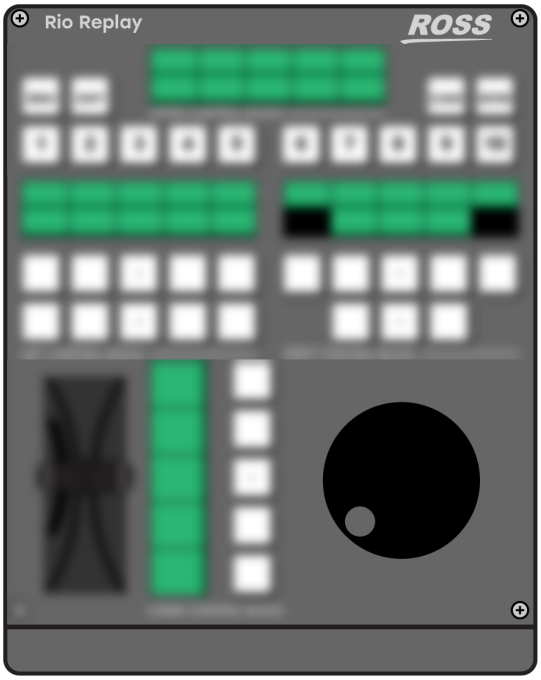


Figure 9.7 Jog Wheel

- **Jog Wheel** — Allows the user to navigate through the clip loaded on the selected output. Turning the jog wheel clockwise moves forward. while turning it counter-clockwise moves backward. It can also be used to browse lists.

Using System Modes

There are four main system modes and several other operational modes. In each mode, the Control Panel buttons will change their functionality and the LCD screen will dynamically change to reflect the functionality of each button.

Main Operational Modes

- Live and Replay
- Clips
- Playlist Editing
- Playlist Playout

Other Operational Modes

- Playlist Management
- Import
- Marks and Vue Marks

Live and Replay

Using the Upper Control Block - Live and Replay

- **1, 2, 3, 4, 5, 6, 7, 8, 9, 0** — Save or load clips, or switch pages and banks.
- **MENU** — Toggles between the clips list and the playlist.
- **SHIFT** — Allows the operator to access the shifted function for all the buttons on the Control Panel.
- **CLEAR** — Deletes clips. Press **CLEAR** and the number button matching the clip number to delete that clip.
- **ENTER** — Confirms popup confirmation screens.

To open settings

Press **SHIFT** + **MENU** to open the user settings.

Press **MENU** + **ENTER** to open the panel settings.

Using the Left Control Block - Live and Replay

Unshifted functions

- **PGM1** — Selects the first Playout Channel.
- **PGM2** — Selects the second Playout Channel.
- **PGM3** — Selects the third Playout Channel.
- **PGM4** — Selects the fourth Playout Channel.

✶ **NOTE:**
The numbered PGM buttons will only be shown for output channels that are assigned to the panel in the **Rio Replay Config** application.

- **Gang** — Ties PGM1 and PGM2 to run in sync.
- **Save Clip** — Create a new clip in the next available slot.
- **Import** — Switches the system to Import mode.

Shifted functions

- **Load Clip** — Depending on the previous action, load the last clip that was saved or the last clip that was loaded.
- **PGM+PVW** — Switch the Control Panel from MultiPGM to PGM/PVW mode.
- **Reset Cam** — Set controlled outputs to switch back to their default cameras. The default camera for each output can be set in the user settings.

Using the Right Control Block - Live and Replay

Unshifted functions

- **Play** — Plays the video loaded on the controlled outputs.
- **< Cue** — Loads the last created mark point (latest TC) and jumps up to earlier marks.
- **Cue >** — Loads the first created mark point (earliest TC) and jumps down to earlier marks.

✶ **NOTE:**
Cues are cyclic, so jumping up from the first cue will navigate back to the last cue.

- **Mark** — Sets a cue point on the incoming live timecode that can be recalled when required.
- **Live-EE** — Returns to the live input on the controlled output.

Shifted functions

- **Recall** — Load a clip by typing the clip number.
- **Fast Jog** — Allows the operator to jog through the clip at a faster speed using the Jog Wheel. The speed is set from the User Setup menu.

- **Page** — Enables a selection of the different clips pages.

Using the Lower Control Block - Live and Replay

Unshifted functions

- **PLST** — Loads the active playlist.
  Press **PLST** once to load the playlist in Edit mode.
  Press **PLST** a second time to load the playlist in Playlist mode, from the selected item.
  Press **PLST** a third time to cue the first item in the playlist.
- **Browse** — Loads the selected clip in the clips bank and allows the operator to use **< Clip** and **Clip >** in the Right Control Block to browse.
- **IN** — Sets a new IN point for the clip at the current timecode of the controlled output.
- **OUT** — Sets a new OUT point for the clip at the current timecode of the controlled output.
- **TAKE** — Opens and closes the camera selection menu on the Left Control Block.

Shifted functions

- **Goto IN** — Navigates to the selected IN point of the clip.
- **Goto OUT** — Navigates to the selected OUT point of the clip.
- **2nd T-Bar** — Switches to a secondary T-bar range. The default secondary range is 0-2X (0 to 200%).

Clips

Using the Upper Control Block - Clips

- **1, 2, 3, 4, 5, 6, 7, 8, 9, 0** — Loads clips or switches pages and banks. Once a clip is loaded, pressing the button again will cue the clip to its IN point.

✶ **NOTE:**
When a clip is loaded using the number buttons, the primary and secondary angles are loaded on the channel transports. If PGM1 and PGM2 or PGM and PVW are ganged, the primary angle loads on PGM1 or PGM and the secondary angle loads on PGM2 or PVW. If no channel transports are ganged, only the primary angle is loaded.

- **MENU** — Toggles between the clips list and the playlist.
- **SHIFT** — Allows the operator to access the shifted function for all the buttons on the Control Panel.
- **CLEAR** — Deletes clips. Press **CLEAR** and the number button matching the clip number to delete that clip.
- **ENTER** — Adds the loaded clip as the last item in the active playlist.

To open settings

Press **SHIFT** + **MENU** to open the user settings.

Press **MENU** + **ENTER** to open the panel settings.

Using the Left Control Block - Clips

Unshifted functions

- **PGM1** — Selects the first Playout Channel.
- **PGM2** — Selects the second Playout Channel.
- **PGM3** — Selects the third Playout Channel.
- **PGM4** — Selects the fourth Playout Channel.

✶ **NOTE:**
The numbered PGM buttons will only be shown for output channels that are assigned to the panel in the **Rio Replay Config** application.

- **Save Clip** — Saves a new clip into the next available slot. The **Export Cam** and **Append** buttons become available after pressing **Save Clip**.
- **Import** — Opens the Clip Library.

Shifted functions

- **Load Clip** — Loads the selected clip from the Clip Registers into the selected Playout Channel.
- **PGM+PVW** — Switches the playout channels to PGM+PVW mode. Pressing **MultiPGM** afterwards returns both playout channels to PGM mode.
- **Reset Cam** — Resets the selected Playout Channel to the start of the clip.
- **Set Cam** — Sets the clip angle in the selected Playout Channel to the primary or secondary angle.

✶ **NOTE:**
The primary or secondary angle can also be set with a mouse or a keyboard. With a mouse, right-click the selected angle and click **Set as Primary** or **Set as Secondary** in the context menu. With a keyboard, press the **F4** key to set the primary angle, or press the **Shift** + **F4** keys to set the secondary angle.

Using the Right Control Block - Clips

Unshifted functions

- **Play** — Plays the clip loaded on the controlled output.
- **Mark** — Sets a cue point on the incoming live timecode that can be recalled when required.
- **Live-EE** — Returns to the live input on the controlled output.
- **< Clip** — Loads the next clip on the controlled output.
- **Clip >** — Loads the previous clip on the controlled output.

Shifted functions

- **Recall** — Load a clip by typing the clip number.
- **Fast Jog** — Allows the operator to jog through the clip at a faster speed using the Jog Wheel. The speed is set from the User Setup menu.
- **Return** — Exits clip mode without changing the current timecode position.
- **Page** — Enables a selection of the different clips pages.

Using the Lower Control Block - Clips

Unshifted functions

- **PLST** — Loads the active playlist.
  Press **PLST** once to load the playlist in Edit mode.
  Press **PLST** a second time to load the playlist in Playlist mode, from the selected item.
  Press **PLST** a third time to cue the first item in the playlist.
- **Browse** — Opens the Clip Registers and allows the operator to use the Jog Wheel to browse up and down. The first frame of each clip is loaded.
- **IN** — Sets a new IN point for the clip loaded on the controlled output.
- **OUT** — Sets a new OUT point for the clip loaded on the controlled output.
- **TAKE** — Opens camera selection options on the Left Control Block.

Shifted functions

- **Loop** — Sets the clip play mode to loop. Loop mode will be enabled until the user presses **Live**, loads a playlist, or presses **SHIFT** + **Loop** to turn off loop mode.
- **Goto IN** — Navigates to the IN point of the clip.
- **Goto OUT** — Navigates to the OUT point of the clip.
- **2nd T-Bar** — Switches to a secondary T-bar range. The default secondary range is 0-2X (0 to 200%).

Playlist Editing

To load the active playlist for editing

1. With a playlist active, press the **PLST** button.

   The playlist loads on the active output, and the Control Panel's dynamic labeling shows Playlist Editing options.

Using the Upper Control Block - Playlist Editing

- **1, 2, 3, 4, 5, 6, 7, 8, 9, 0** — Loads clips or switches pages and banks. Once a clip is loaded, pressing the button again will cue the clip to its IN point.
- **MENU** — Toggles between the clips list and the playlist.
- **SHIFT** — Allows the operator to access the shifted function for all the buttons on the Control Panel.
- **CLEAR** — Deletes clips. Press **CLEAR** and the number button matching the clip number to delete that clip.
- **ENTER** — Confirms popup confirmation screens.

To open settings

Press **SHIFT** + **MENU** to open the user settings.

Press **MENU** + **ENTER** to open the panel settings.

Using the Left Control Block - Playlist Editing

Unshifted functions

- **Append** — Adds the highlighted clip angle at the end of the playlist.
- **Aux Audio** — Turns auxiliary audio on or off.
- **Insert** — Adds the highlighted clip angle before the current playlist item.
- **Speed** — Enables the user to change the selected item's playback speed. Speed can be pressed again to disable the function.
  To edit more items, Press **< Item** or **Item >** to navigate through the list and adjust their speed with the T-bar. Once completed, press **Speed** again.

✶ **NOTE:**
The adjusted speed of a playlist item will only take effect when playing from the Play button. T-bar playback will overrule the item's predefined speed.

- **Effect** — Changes the type of effect at the end of the item. Select **Mix** or **Cut**. To edit more items, Press **< Item** or **Item >** to navigate through the list and change the effect applied to them. Once completed, press **Effect** again.
- **FX Dur** — Changes the duration of the Mix effect. The T-bar can be used to adjust the effect duration, ranging from 0 to 2 seconds. **< Item** and **Item >** can be pressed to edit the playback speed of other items.

✶ **NOTE:**
When using **Speed**, **Effect**, or **FX Dur**, you can multi select or press the **CTRL+A** keys on the keyboard to apply the changes to multiple items at once.

- **Delete** — Deletes the selected item from the playlist.

Shifted functions

- **Export PL** — Exports the playlist.

Using the Right Control Block - Playlist Editing

Unshifted functions

- **Play** — Plays the clip loaded on the controlled output.
- **< Item** — Navigates to the previous item in the playlist.

- **Item >** — Navigates to the next item in the playlist.
- **Mark** — Sets a cue point on the incoming live timecode that can be recalled when required.
- **Live-EE** — Returns to the live input on the controlled output.

Shifted functions

- **Recall** — Load a clip by typing the clip number.
- **Fast Jog** — Allows the operator to jog through the clip at a faster speed using the Jog Wheel. The speed is set from the User Setup menu.
- **Return** — Exits clip mode without changing the current timecode position.

Using the Lower Control Block - Playlist Editing

Unshifted functions

- **PLST** — Loads the active playlist.
  Press **PLST** once to load the playlist in Edit mode.
  Press **PLST** a second time to load the playlist in Playlist mode, from the selected item.
  Press **PLST** a third time to cue the first item in the playlist.
- **Browse** — Allows the operator to use the Jog Wheel to browse up and down the playlist. The first frame of each clip is loaded.
- **IN** — Sets a new IN point for the clip loaded on the controlled output.
- **OUT** — Sets a new OUT point for the clip loaded on the controlled output.
- **TAKE** — Opens camera selection options on the Left Control Block.

Shifted functions

- **Loop** — Sets the clip play mode to loop. Loop mode will be enabled until the user presses **Live**, loads a playlist, or presses **SHIFT** + **Loop** to turn off loop mode.
- **Insert** — Adds the clip to the playlist that is being edited, before the current item.
- **Goto IN** — Navigates to the IN point of the clip.
- **Goto OUT** — Navigates to the OUT point of the clip.
- **2nd T-Bar** — Switches to a secondary T-bar range. The default secondary range is 0-2X (0 to 200%).

Playlist Playout

Using the Upper Control Block - Playlist Playout

- **1, 2, 3, 4, 5, 6, 7, 8, 9, 0** — Disabled while in playlist playout mode.
- **MENU** — Toggles between the clips list and the playlist.
- **SHIFT** — Allows the operator to access the shifted function for all the buttons on the Control Panel.
- **CLEAR** — Disabled while in playlist playout mode.
- **ENTER** — Disabled while in playlist playout mode.

To open settings

Press **SHIFT** + **MENU** to open the user settings.

Press **MENU** + **ENTER** to open the panel settings.

Using the Left Control Block - Playlist Playout

Unshifted functions

- **Next** — Instantly plays the next clip in the playlist.
- **Skip** — Plays the current clip to the end, bypass the next clip, and continue with the clip after that in the playlist.

- **Edit** — Exits playlist playout mode and returns to playlist editing mode.

Using the Right Control Block - Playlist Playout

Unshifted functions

- **Play** — Plays the loaded playlist from its current position.
- **Cursor Up** — Moves the playlist cursor up. The selected item will play next, once the currently playing item is finished.
- **Cursor Down** — Moves the playlist cursor down. The selected item will play next, once the currently playing item is finished.

✶ **NOTE:**
Cursor Down has the same functionality as **Skip**.

- **Mark** — Sets a cue point on the incoming live timecode that can be recalled when required.
- **Live-EE** — Exits Playlist Playout mode and returns to the live input on the active output.

Using the Lower Control Block - Playlist Playout

Unshifted functions

- **PLST** — Plays the first item in the playlist.

Shifted functions

- **Loop** — Sets the clip play mode to loop. Loop mode will be enabled until the user loads a playlist.
- **2nd T-Bar** — Switches to a secondary T-bar range. The default secondary range is 0-2X (0 to 200%).

Playlist Management

Playlists are a key feature for managing and sequencing clips. They enable operators to build structured packages for broadcast or review. The Rio Replay software suite enables the user to build up to 99 playlist per replay event, and each playlist can hold up to 999 clips.

To access existing playlists or create new ones, press **Active PL** from the programmable buttons.

Switching to Playlist Management Mode

After pressing **Active PL** in the Upper Control Block, the Playlist Library opens.

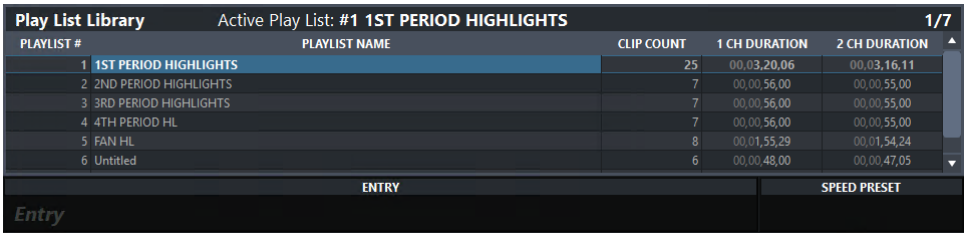


Figure 9.8 The Playlist Library

Using the Left Control Block - Playlist Management

Unshifted functions

- **New PL** — Adds a new playlist to the Playlist Library.
- **Load PL** — Loads the selected playlist to the active output.
- **Rename PL** — Enter a new name in the entry box, then press **Rename PL** or the **Enter** key on the keyboard to rename the playlist.

- **Duplicate** — Duplicates the selected playlist to the next available playlist number, including the name and all items.
- **Delete PL** — Deletes the selected playlist.
- **Ins to Act** — Adds all the selected playlist items before the last selected item of the active playlist.
- **App to Act** — Adds all the selected playlist items at the end of the active playlist.

Using the Right Control Block - Playlist Management

Unshifted functions

- **< PL** — Navigates to the previous item in the playlist.
- **PL >** — Navigates to the next item in the playlist.
- **Mark** — Sets a cue point on the incoming live timecode that can be recalled when required.
- **Live-EE** — Returns to the live input on the controlled output.

Import

The operator can import clips that are already available on the server into the Pages and Banks of a replay event.

To Import a Clip from the Clip Library

1. Press **Live**.
2. Press **Import**.
3. The Clip Library opens.
4. To navigate through the Clip Library, the operator can either:
   - Press the **< Clip** and **Clip >** buttons.
   - Press the **Browse** button and use the Jog Wheel to navigate up and down the list.
5. The following actions can be performed in the Clip Library:
   - Press **Page 0** to import the clip into Page 0.
   - Press **P.*X*** **B.*X*** (e.g., P.1 B.1) to import the clip into the active Bank.
   - Press **Aux Audio** to add the clip as auxiliary audio to the active playlist.
   - Press **Append** to add the clip to the end of the active playlist as an item.
   - Press **Insert** to add the clip to the active playlist before the current item.
   - Press **Preview** to preview the clip on the selected output.
6. Once finished, press **Import** or **Live-EE**.

Marks and Vue Marks

Marks

You can quickly create a mark point of the active camera to mark an event that you can come back to later. Creating the mark point automatically sets the mark point at that point in time and also sets an in-point and out-point based on the Auto-Mark IN/OUT setting of the User Setup.

You can create up to 999 mark points in a replay event.

Vue Marks

Unshifted functions

- **Save Clip** — Creates a new clip in the next available slot, using the default In and Out points set in the user settings.
- **< Cue** — Navigates to the previous item on the Cue list, starting from the last item.

- **Cue >** — Navigates to the next item on the Cue list, starting from the first.
- **Live-EE** — Go back to Live-EE on the selected outputs.

Examining the Replay Window

The Replay window allows you to quickly view all the playout channels and camera inputs for the server, as well as access Clip Registers, Playlists, and other menu items.

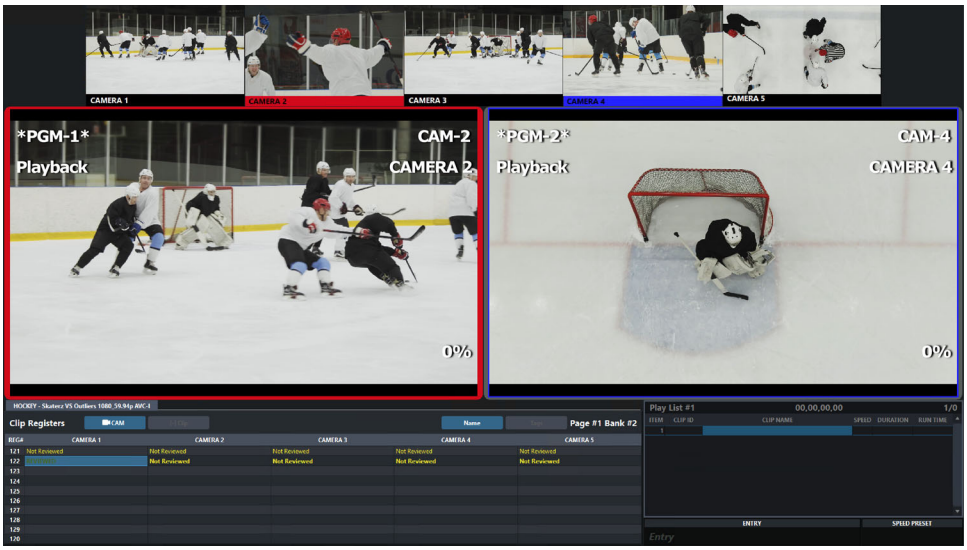


Figure 9.9 The Replay Window

Playout Channels

Figure 9.10 Playout Channel

The playout channels are shown below the camera inputs as the program outputs. The name that appears on each playout channel can be set from the user settings. You can select each playout channel using the **PGM** buttons on the Control Panel. Each playout channel has a custom color to help you identify it quickly. This color is applied to the entire border when a playout channel is selected, and in a thin line around the image when the playout channel isn't selected.

The playout mode, timecode, and playback speed are all shown as a text overlay on the box, but the visibility of each of these elements depends on the mode of the playout channel. The location and transparency of the audio meters is set from the **Rio Replay Explorer Configuration**, and is not visible in the image above.

Camera Inputs

Figure 9.11 Camera Inputs

Above the playout channels are the camera inputs. This is the live feed that is coming in from each camera at the event. Each camera input can be selected by pressing the corresponding softkey in the Upper Control Block of the Control Panel.

The camera inputs are tallied with the color of the playout channel they are selected on. In the example above, **CAMERA 2** is selected on the **PGM-1** playout channel. The **PGM-1** playout channel has been assigned the red color in the user settings, so the box around the **CAMERA 2** camera input is also red.

Lists and Menu

Figure 9.12 Lists and Menus

Below the playout channels are the Clip Registers and the Playlist/Menu interface. When one region is active, the other region is dimmed. The amount of dimming is set in the user settings.

Replay Events

A replay event puts the server into replay operation. The incoming video signals from the cameras are continuously being recorded for use in a replay. When an event you want to replay occurs, you can seek to the start of the action that you want to replay and play it out of one of the playout channels.

This chapter discusses the following topics:

- Creating and Editing Replay Events
- Opening a Replay Event on a Control Panel
- Creating and Editing a Replay Event Template

Creating and Editing Replay Events

A replay event puts the server into replay mode and optimizes the interface for a replay.

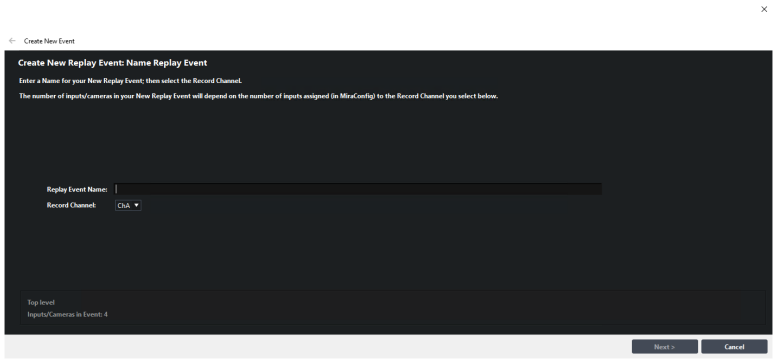
✶ **NOTE:**
The server must be configured into the ISO mode you want to use for your replay setup, and any Control Panels must be connected to the server and assigned to playout channels before you can create a replay event.

If you have already created a replay event, you can right-click the file in the Clip Library and click **Modify Replay Event**.

To Create/Edit a Replay Event

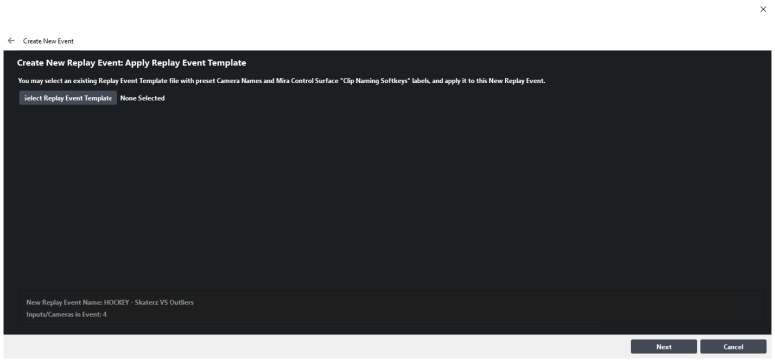
1. In **Rio Replay Explorer** click E-E on the ISO record channels to confirm the input video from the cameras.
2. In the **Clip Library**, right-click and select **New > New Replay Event**.

   The **Create New Event** window opens.



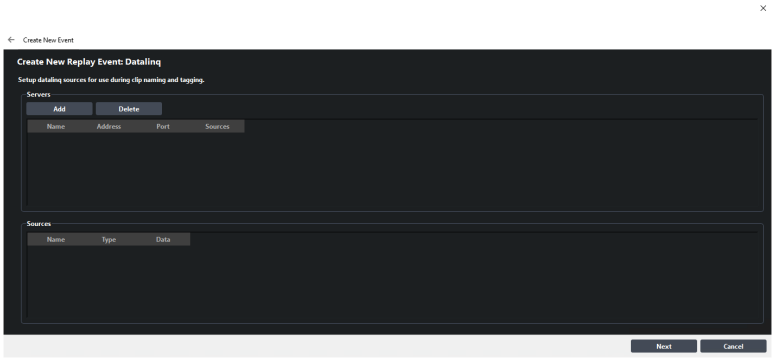
3. In the **Replay Event Name** field, enter a name for the replay event.
4. On the **Record Channel** list, select the channel transport that you want to use for the multi-channel ISO clip.

   The ISO mode records multiple video streams into a single clip and uses a single channel transport. In most cases this will be channel A (ChA).
5. Click **Next**.
6. Do you have a User Setup file for your Control Panel that you would like to use?
   - **Yes** – click **Select Replay Control Surface User Setup**, navigate to the file, and click **Open**.
   - **No** – proceed to the next step
7. Click **Next**.
8. Do you have a Replay Event Template that you would like to use?
   - **Yes** – click **Select Replay Event Template**, navigate to the file, and click **Open**.
   - **No** – proceed to the next step.



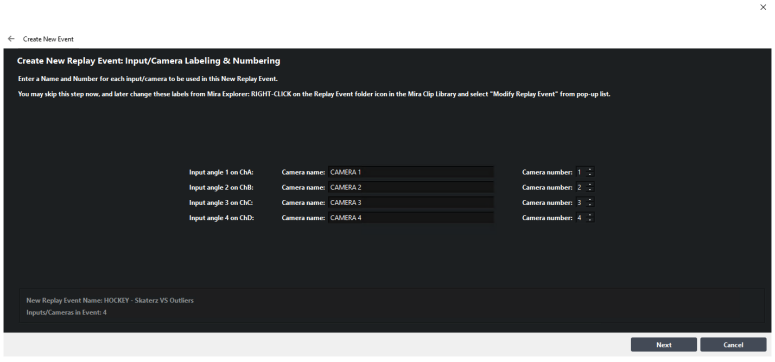
If any clips included in a playlist in the template have been moved or deleted, they will be listed as missing. Click **Select Path to Locate Missing Clips**, navigate to the new location for the clips and click **Select Folder**. If you want to save this new location for the clips select **Save New Paths back to original Replay Event Template**.

9. Click **Next**.
10. Do you have an XPression DataLinq server that you want to use to provide clip naming and tagging?

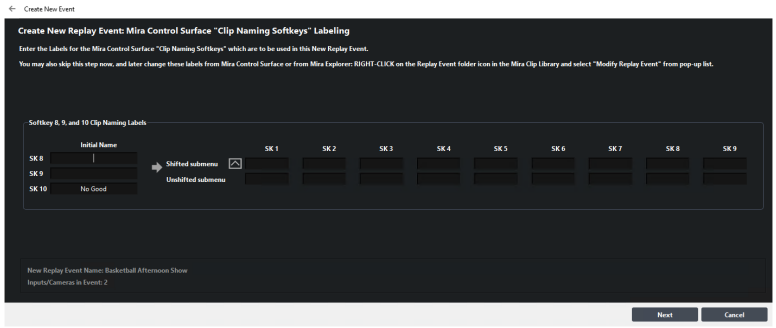


- **Yes** — click **Add** and enter the name (**Name**), IP address (**Address**), and port (**Port**) for the DataLinq server.
- **No** — proceed to the next step.

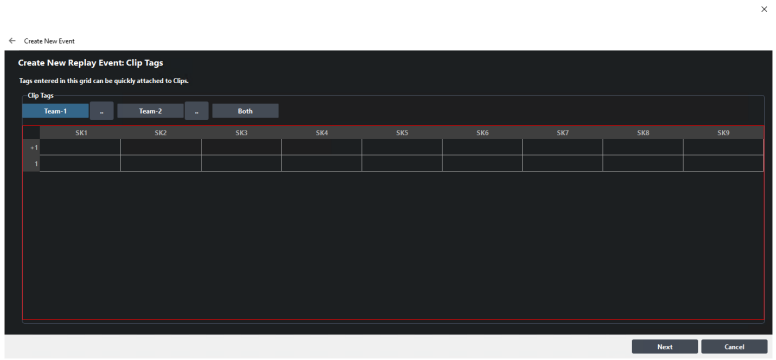
11. Click **Next**.
12. In the **Camera Name** field, enter a name for each camera feed.
13. On the **Camera Number** list, select the number you want to assign to each camera feed.



14. Click **Next**.
15. You can add Clip Naming Softkeys to be used in the replay event.



16. You can add preset tags that can be applied to replay clips for each individual team, or both, using the softkeys. Set the tags you would like to use as follows:



   a. Click the **…** next to the **Team-1** or **Team-2** to change the name of the team and the color. The box around the tags changes to the team color when the team name is selected.

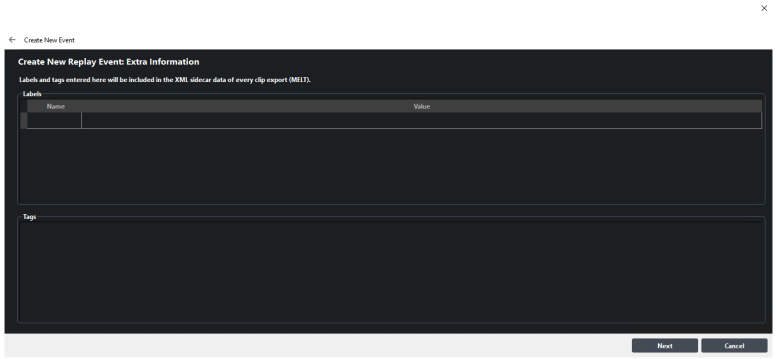
   b. Click the **Team-1**, **Team-2**, or **Both** to select which team you want to create a tag for.

   c. In the **SK 1** through **SK 9** columns, enter a shifted (**Shift** + **SK X**) and unshifted (**SK X**) tag.

      The shifted and unshifted tags allow you to be able to apply two different tags from the same softkey.

17. Click **Next**.

18. You can add preset tags that can be applied to replay clips for each individual team, or both, using the softkeys. Set the tags you would like to use as follows:



   a. Click the **…** next to the **Team-1** or **Team-2** to change the name of the team and the color. The box around the tags changes to the team color when the team name is selected.

   b. Click the **Team-1**, **Team-2**, or **Both** to select which team you want to create a tag for.

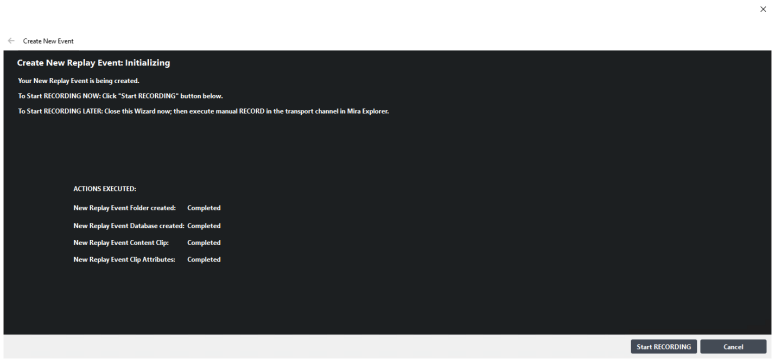
   c. In the **SK 1** through **SK 9** columns, enter a shifted (**Shift** + **SK X**) and unshifted (**SK X**) tag.

      The shifted and unshifted tags allow you to be able to apply two different tags from the same softkey.

19. Click **Next**.

20. Click **Create Event**.

    The replay event has been created in the Clip Library.

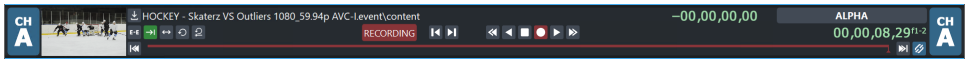


21. Click **Start RECORDING**.

    The replay event is now recording in the channel transport.

22. Click **Finish**.

    The recording channel shows it is recording the camera inputs.



With the event created and recording, you can now open the event on the Control Panel to launch the replay operation interface.

Opening a Replay Event on a Control Panel

Open a replay event on a Control Panel to activate the replay interface.

To Open a Replay Event on a Control Panel

1. In the Clip Library, right click the replay event you want to open and click **Event** > **Open on Control Panel**.

   Rio Replay Explorer searches for and connects to the Control Panel. Upon successfully connecting, the **Replay Event** window opens.

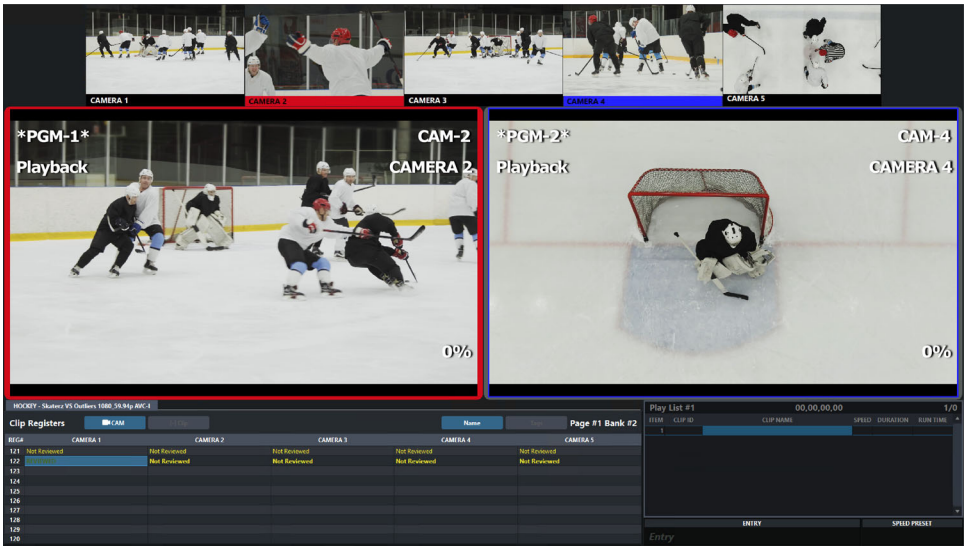


Figure 10.1 Replay Event Window

✶ **NOTE:**
When a replay event is loaded, the first and second channels will be ganged if they are available.

Creating and Editing a Replay Event Template

Replay event templates save camera names and numbers, clip naming preset softkeys, clip pointers, and clips that have been placed in the playlist for the replay event.

To Create/Edit a Replay Event Template

1. In the **Clip Library**, right-click the replay event that you want to save as a template. Select **Event** > **Save as Replay Event Template**.
2. In the **Template Name** field, enter a name for the template and click **Next**.

✶ **TIP:**
Select an already existing template to overwrite it with the new template settings.

3. Select the playlists that you want to include with the template.

   Any server clips in the playlist that is included in the template are assigned to the same playlist in the new replay event created from the template. For example, clips of player headshots are on a playlist called `Players` that is included in template. When that template is applied to a replay event, the `Players` playlist with the clips appears in the event.

4. Click **Create Template > Finish**.

Replay Operation

This chapter discusses the following topics:

- Loading Server Clips
- Using Playlists and Playlist Items
- Mouse Workflows

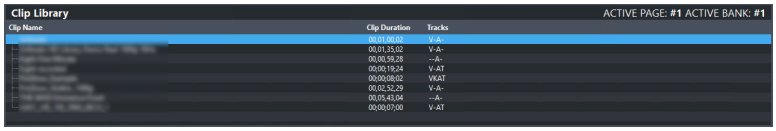
Loading Server Clips

Loading clips into the replay event allows you to quickly add them to a playlist or use them during a live replay. You can load server clips into a replay event where they can be trimmed, edited, cued, and saved to any of the replay event clip banks.

To Import a Clip from the Clip Library

1. Select the playout channel that you want to load the clip into.
2. Press **Live**.
3. Press **Import**.

   The Clip Library is shown at the bottom of the window.



   Only clips that are local and in the same video format that the server is operating in (cueable) are shown on the list.

4. Select the clip that you want to use in the replay event. Use either navigate the list:
   - Press the **< Clip** and **Clip >** buttons.
   - Alternatively, press the **Browse** button and use the Jog Wheel to navigate up and down the list.
5. Perform one of the following actions:
   - Press **Page 0** to import the clip into Page 0.
   - Press **P.*X* B.*X*** (e.g., **P.1 B.1**) to import the clip into the active Bank.
   - Press **Aux Audio** to add it as Auxiliary Audio to the active Playlist.
   - Press **Append** to add it to the end of the active Playlist as an item.
   - Press **Insert** to add it to the active playlist before the current item.
   - Press **Preview** to preview the item on the selected output.
6. Once done, press **Import** or **Live-EE**.

Using Playlists and Playlist Items

Playlists are a key feature for managing and sequencing clips. They enable operators to build structured packages for broadcast or review. Users can build up to 99 playlists per replay event, and each playlist can hold up to 999 clips.

Creating and Loading Playlists

Replay clips can be collected together into a playlist to be be taken on-air.

To create and load playlists

1. In the Upper Control Block, press Active PL.

   The Playlist Library opens.

   Playlist menu options are shown on the **Left** and **Right Control Block**.

2. Press **<PL** and **PL >** to navigate through the Playlist Library. Alternatively, press the **Up** and **Down** arrow keys on the keyboard.
3. Use the following buttons on the **Left Control Block** to perform playlist actions:
   - **New PL** — Adds a new playlist to the Playlist list.
   - **Load PL** — Loads the selected playlist to the active output.
   - **Rename PL** — After entering the name of the playlist in the box, press **Rename PL**. Alternatively, press the **Enter** key on the keyboard.
   - **Duplicate** — Duplicates the selected playlist to the next available playlist number.
   - **Delete PL** — Deletes the selected playlist. Requires confirmation.
   - **Ins to Act** — Adds all selected playlist items before the last selected item of the active playlist.
   - **App to Act** — Adds all the selected playlist items at the end of the active playlist.

Editing Playlists

To edit playlists

1. On the Control Block, press **PLST**.

   The playlist loads on the active output.
2. Different options are shown on the Left Control Block:
   - **Append** — Adds the selected clip angle at the end of the playlist.
   - **Aux Audio** — Turns auxiliary audio on or off.
   - **Insert** — Adds the selected clip angle before the current playlist item.
   - **Speed** — Enables the ability to change the item's playback speed. Once pressed, the button will blink and the T-bar can be used to set the playback speed. **< Item** and **Item >** can be pressed to edit the playback speed of other items. When Speed is pressed again, it disables the ability to change the item's playback speed.

✶ **NOTE:**
The speed of a playlist item will only be applied when played using the Play button. Playback using the T-bar will overrule the item's predefined speed.

   - **Effect** — Changes the effect type at the end of the item.
   - **FX Dur** — Changes the duration of the Mix effect. The T-bar can be used to adjust the effect duration, ranging from 0 to 2 seconds. **< Item** and **Item >** can be pressed to edit the playback speed of other items.

✶ **NOTE:**
When using **Speed**, **Effect**, or **FX Dur**, you can multi select or press the **CTRL+A** keys on the keyboard to apply the changes to multiple items at once.

   - **Delete** — Deletes the selected item from the playlist.

Mouse Workflows

If a mouse is connected to the Rio Replay server chassis through one of the USB-A ports, it can be used to perform various actions while a replay event is open, either by clicking or dragging and dropping different elements.

Using Context Menus with a Mouse

To use context menus with a mouse

1. In an open replay event, navigate to the Clip Registers or Playlist interface with the mouse.
2. Right-click a clip or playlist item.

   The context menu opens.

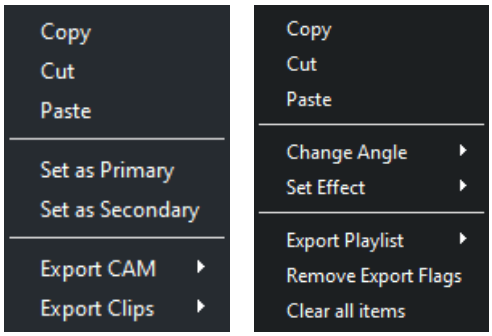


Figure 11.1 The context menu in the Clip Registers (left) and Playlist (right)

3. In the context menu, various functions can be performed that would otherwise require the use of a Control Panel.

   For example, after right-clicking a clip in the Clip Registers, it can be copied, cut, pasted, or exported by clicking the appropriate option.

Using a Mouse to Move Clips and Camera Angles

To move clips with a mouse

1. In an open replay event, navigate to the Clip Registers or Playlist/Menu interface with the mouse.
2. Click and hold a clip or playlist item, then move the mouse cursor to the desired location in the list.
3. Release the left mouse button to place the item.

   For example, a clip can be dragged and dropped from the Clip Registers to the active playlist.

To rearrange camera angles with a mouse

1. In an open replay event, navigate to the PGM and Camera windows.
2. Click and hold one of the Camera windows, then move the mouse cursor over one of the PGM windows.
3. Release the left mouse button to swap the angles.

Using a Mouse to Load Clips

To load clips and playlists with a mouse

1. In an open replay event, navigate to the Clip Registers or Playlist/Menu interface with the mouse.
2. Double-click the clip or playlist item.

   The clip or playlist is loaded into the active output.

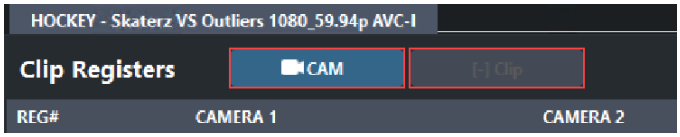
✶ **NOTE:**
Primary and secondary angles will be ignored when loading a clip using a mouse.

✶ **NOTE:**
To load a selected clip using a keyboard, press the **Enter** key. Primary and secondary angles will be ignored when loading a clip using a keyboard.

Using a Mouse to Switch Between Modes in the Clip Registers

To switch between Clip and CAM Modes with a mouse

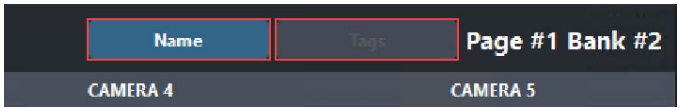
1. In an open replay event, navigate to the Clip Registers with the mouse.
2. Click the **Clip** or **CAM** button.



Either **Clip** mode or **CAM** mode is enabled, depending on the selection.

To sort by Name or Tags with a mouse

1. In an open replay event, navigate to the Clip Registers with the mouse.
2. Click the **Name** or **Tags** button.



The list is sorted by **Name** or **Tags**, depending on the selection.

Using a Mouse to Set a Primary or Secondary Angle

To set a primary or secondary angle with a mouse

1. In an open replay event, navigate to the Clip Registers with the mouse.
2. Select an angle, then right-click the selected angle.
3. In the context menu, click **Set as Primary** or **Set as Secondary**.

✶ **NOTE:**
The primary or secondary angle can also be set with a keyboard or the Rio Replay Control Panel. With a keyboard, press the **F4** key to set the primary angle, or press the **Shift** + **F4** keys to set the secondary angle. With the Rio Replay Control Panel, press the **Shift** + **Set Cam** keys to set the angle in the selected Playout Channel to the primary or secondary angle.

✶ **NOTE:**

In the Clip Registers, primary angles are marked with a * symbol, while secondary angles are marked with a = symbol.

Replay Logger

The Logger is a separate user interface. It is a tool for operators to perform multiple functions through rapid data entry, including applying keyword metadata to clips, searching for clips, and creating playlists. It is recommended that the Logger be opened on a different monitor than the Rio Replay Explorer application so that a different operator can use it.

This chapter discusses the following topics:

- Opening the web-based UI
- Setting up the Logger
- Using the Log Function
- Using the Search Function
- Enabling Dark or Light Mode

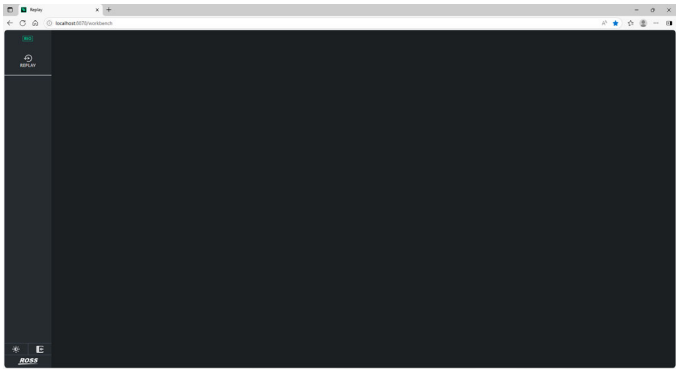
Opening the web-based UI

To open the web-based UI

1. In a supported web browser, enter the following URL:

   `http://localhost:8878/workbench`

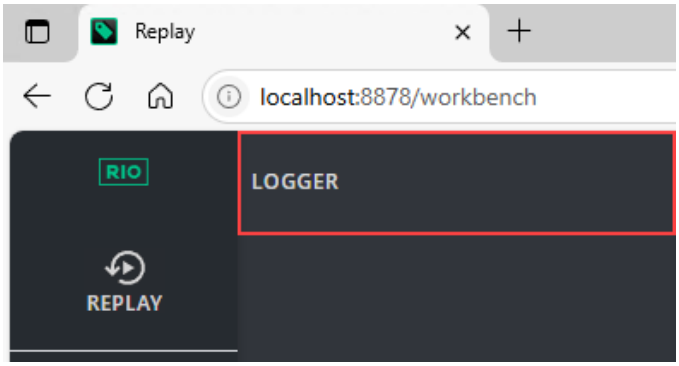
   The empty UI opens in the browser tab.



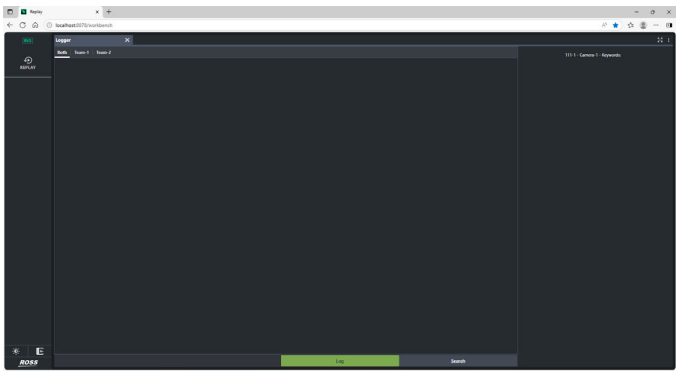
Setting up the Logger

To open the Logger

1. In the browser tab, click **Replay** on the menu bar.
2. In the pop-up menu, select **LOGGER**.

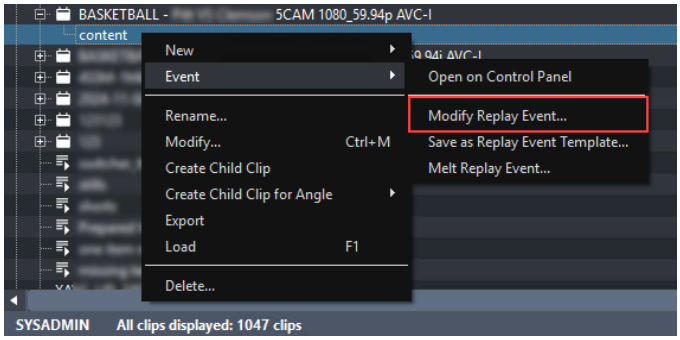


The **Logger** tab opens.

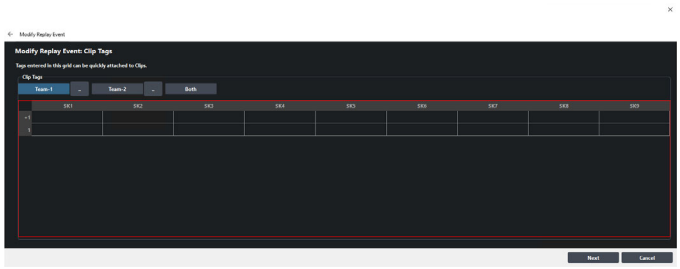


To create tags for the Logger

1. In the Replay Explorer application, right-click the desired replay event and select **Event** > **Modify Replay Event**.



2. In the Modify Replay Event window, make any desired changes until you reach the **Modify Replay Event: Clip Tags** page.



   a. Click the **…** next to the **Team-1** or **Team-2** to change the name of the team and the color. The box around the tags changes to the team color when the team name is selected.

   b. Click the **Team-1**, **Team-2**, or **Both** to select which team you want to create a tag for.

   c. In the **SK 1** through **SK 9** columns, enter a shifted (**Shift + SK X**) and unshifted (**SK X**) tag.

      The shifted and unshifted tags allow you to apply two different tags from the same softkey.

3. Continue through the Modify Replay Event window and close it when you are finished.

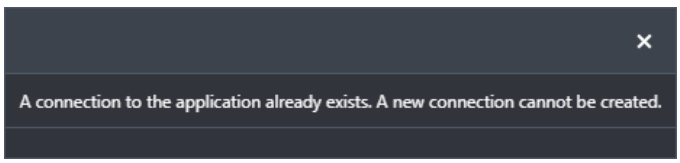
To create a remote connection from the same network

1. The Logger can be opened from a different device on the same network while a replay event is open. Enter the following URL in a supported browser on the device:

   `http://00.00.00.00:8878/workbench`

   When entering the URL, change the IP address from `00.00.00.00` to the IP address matching the server that is running the Rio Replay Explorer application.

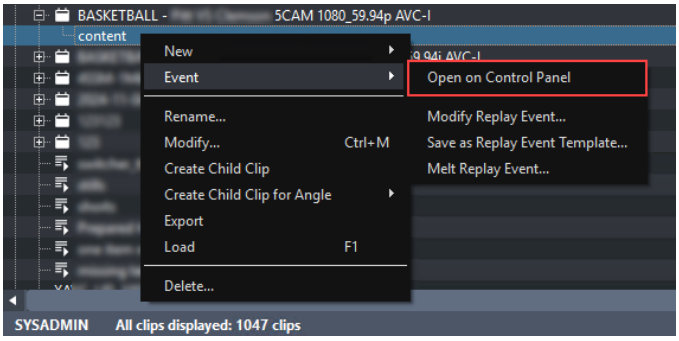
✶ **IMPORTANT:**
A device can only have one instance of the Logger open at a time. If a new Logger tab is opened while another tab already exists, the new tab displays an error message.



Using the Log Function

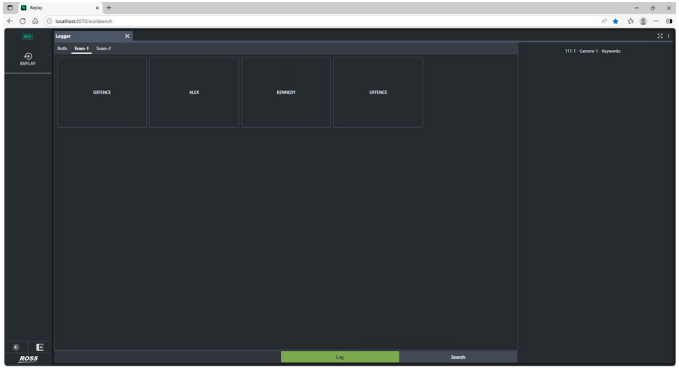
To tag clips

1. In the Rio Replay Explorer application, right-click the desired replay event and select **Event** > **Open on Control Panel**.

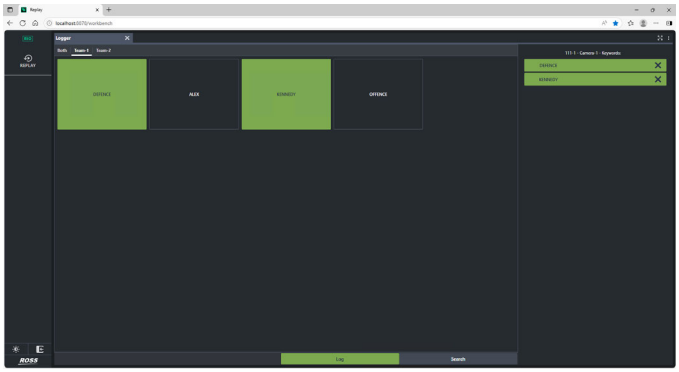


2. In the Logger, ensure that **Log** is selected on the lower menu bar. Refresh the window if the tags are not shown.

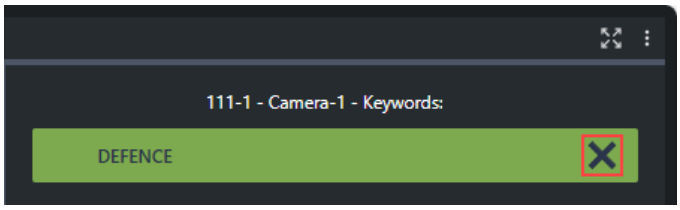
   The tags are shown as buttons in the interface.



3. When a clip is loaded in the replay event, one of the created tags can be selected in the Logger to apply that tag to the clip. Selected tags are highlighted green.



4. To remove a tag from a clip, click it again. Alternatively, select the  **X** symbol in the list on the right side of the screen.



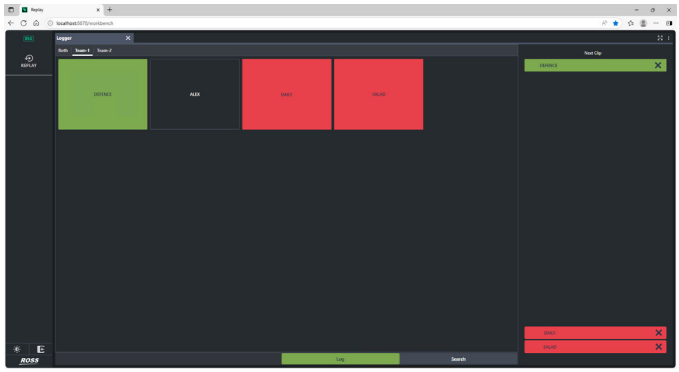
5. On the Rio Replay Control Panel, press **Save Clip** to save the applied tags.

   After successfully tagging a clip, keywords are cleared and must be selected again to tag another clip.

To use sticky keywords

1. In the Rio Replay Explorer application, ensure the controlled output is in Live-EE or Playlist mode.
2. In the Logger, ensure that **Log** is selected on the lower menu bar.
3. Double-click a tag to use it as a sticky keyword.

✶ **NOTE:**
Sticky keywords are highlighted red instead of green.



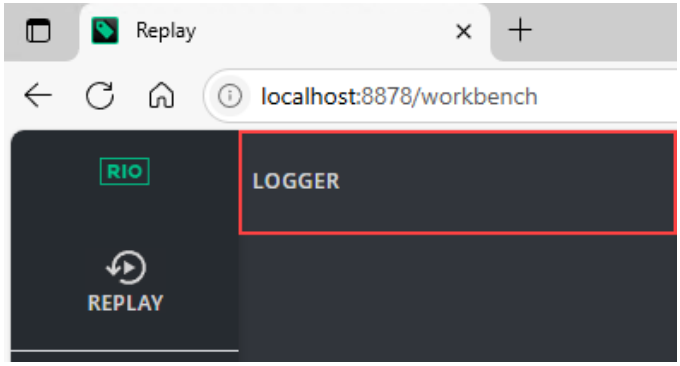
4. Click a sticky keyword a third time to remove it from the clip. Alternatively, select the **X** symbol in the list on the right side of the screen.
5. On the Rio Replay Control Panel, press **Save Clip** to save the applied tags.

   After successfully tagging a clip, sticky keywords remain selected and can be used to tag another clip.

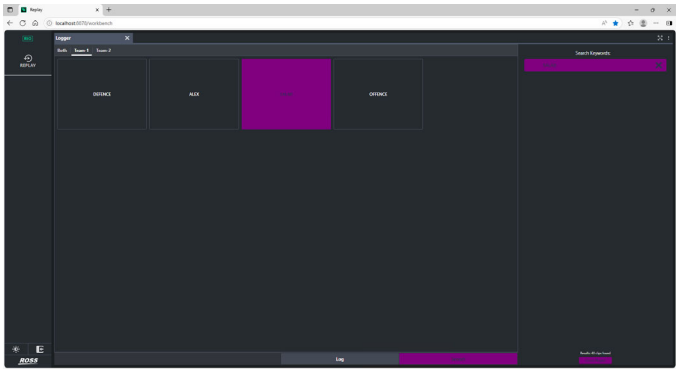
Using the Search Function

To search for tagged clips

1. In the Logger, click **REPLAY** on the left-side menu bar.
2. In the pop-up menu, select **LOGGER**.



3. In the lower menu bar, select **Search**.
4. Select the desired tags. Tags act as the **Search Keywords**, which appear on the right once selected. The number of found clips is displayed on the lower-right side of the screen.



5. To remove a Search Keyword, click it again. Alternatively, select the **X** symbol in the list on the right side of the screen.

To create a playlist using Search Keywords

1. Ensure that **Search** is selected on the lower menu bar.
2. With the desired Search Keywords selected, click the **Create Playlist** button at the bottom of the **Search Keywords** box on the right side of the Logger tab.

   A playlist is created in the Rio Replay Explorer application using the tagged clips.

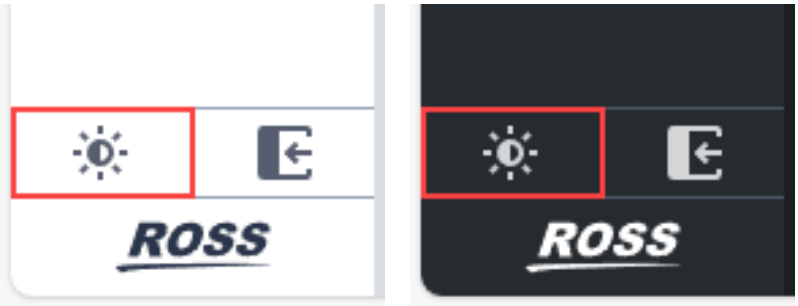
✶ **NOTE:**
As more keywords are selected during a Search, the number of Results found will decrease. The Search function only includes clips that have all the selected tags applied to them.

✶ **IMPORTANT:**
The number of found clips in the Logger may not accurately represent the amount of clips that will be added to a created playlist. The Results number includes every angle in the found clips, but clicking **Create Playlist** will only include the primary angle of each clip.
For example, if the Search finds 3 clips, each with 8 angles, the Search Results will show 24 clips but the created playlist will only include the 3 primary angle clips.

Enabling Dark or Light Mode

To enable dark or light mode

1. On the left-side menu, select the brightness icon.



   Either dark or light mode are enabled, depending on the prior selection.
2. To return to the previous theme, select the brightness icon again.

Export

You can export a clip from the Clip Library to a number of formats for use in an external device. Files are exported in the same video format that the server is operating in.

This chapter discusses the following topics:

- Supported Video and Audio Media Files
- Selecting an Export Destination
- Exporting Media Files
- Growing File Export

Supported Video and Audio Media Files

Table 13.1 Video and Audio Media Files for Export

Codec	Export	Transcoding
AVC-Intra	MXF Op1a / Native .clip	No – Native codec
ProRes 422	MXF Op1a / MOV	Yes
ProRes 422 HQ	MXF Op1a / MOV	Yes
ProRes 422 LT	MXF Op1a / MOV	Yes
DNxHD 120/145/240/290	MXF Op1a / MOV	Yes
XDCAM50 422	MXF Op1A	Yes
XDCAM EX	MXF Op1a / MOV	Yes
MPEG-4 10Mb/s AVI	AVI	Yes

✶ **NOTE:**
Other formats may be supported for export, but have not been tested for compatibility.

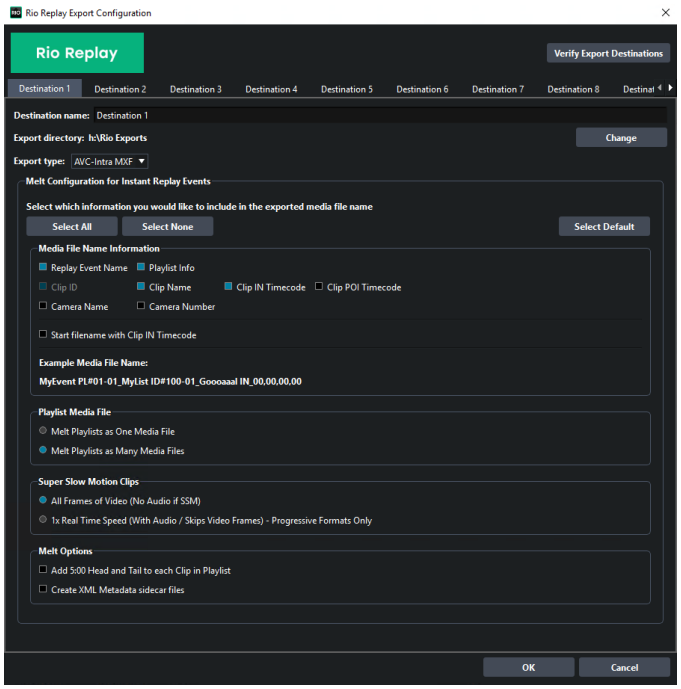
Selecting an Export Destination

You can set up to nine export destinations, each with a different export format. Destination folders should only be located on network drives or high-speed USB drives (USB 2.0/3.0/3.1) mounted on the server.

IMPORTANT:
Do not select an export destination on the system (**C:**) or media drive (**H:**) of the server. These drives are reserved for the operating system and media playout and recording. Exporting to either of these drives could cause video errors and system instability.

To Select an Export Destination

1. In **Rio Replay Explorer**, click **Configure** > **Export Configuration**.



2. Click the **Destination *X*** tab for the destination you want to set up or edit.
3. Select the **Enable this destination** check box to make the destination available for export. **Destination 1** is always available for export.
4. In the **Destination Name** field, enter a new name for the destination tab.
5. Click **Export Type** and select the codec you want to use for the export.

✶ **NOTE:**
All 1080i export formats are also available in 1080p, excluding XDCAM50.

6. Click **Change** and select the network drive or USB folder that you want to export to.
7. Click **Select Folder**.

   The selected folder is shown in the **Export directory** field.
8. Select the naming and melt option you want to use for the export.
   - **Media File Name Information** — Select the information you want to include in the name for the exported clip. An example of what the name will look like is shown at the bottom of the box.
   - **Playlist Media File** — Select whether the playlist is exported as a single or multiple files.
   - **Super Slow Motion Clips** — Select how super slow motion (SSM) clips are exported:
     - › **All Frames of Video (No Audio is SSM)** — Clips are exported with all frames but audio is stripped.
     - › **1x Real Time Speed (With Audio / Skips Video Frames) - Progressive Formats Only** — Clips are exported at normal speed with audio, but the extra frames for slow motion are stripped.
   - **Melt Options**
     - › **All Frames of Video (No Audio is SSM)** — Clips are exported with all frames but audio is stripped.
     - › **1x Real Time Speed (With Audio / Skips Video Frames) - Progressive Formats Only** — Clips are exported at normal speed with audio, but the extra frames for slow motion are stripped.
9. Select an additional export destination as required.
10. Click **Verify Export Destinations** to verify that all destinations can be found.

    A message is shown next to the button stating that all destination are valid, or that destinations are missing. The destinations that are missing are highlighted in orange.
11. Click **OK**.

Exporting Media Files

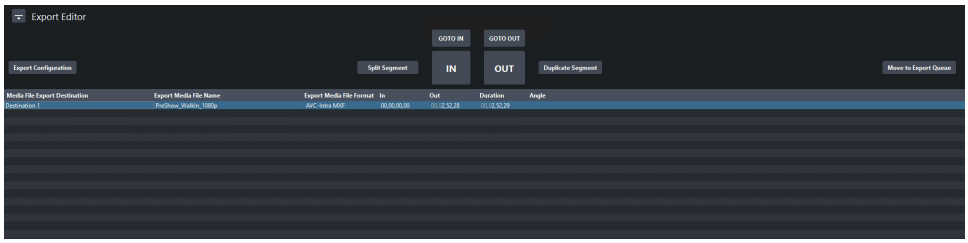
You can export media files from the server to another format that can be used by another device.

✶ **NOTE:**
Some export functions require a channel to export video. Ensure that the channel you want to use for exporting is not being used before you start the export.

To Export Media Files

1. Launch the **Rio Replay Explorer** application.
2. Click **Clip Library**.
3. Select the clip(s) that you want to export in the Clip Library.
4. Click **Clip Library > Export**.

   The **Export Editor** opens with the selected clips listed.



✶ **NOTE:**
To export/melt the clips from the playlists in a replay event, right-click the replay event you want to export the playlist from and click **Melt Replay Event**. Select the playlist(s) you want to export and click **Finish**. The **Export Editor** opens with the clips from the selected playlist(s).

5. To select a different destination for a clip, right-click the clip and click **Set Destination...** and select the new destination.
6. To export a different camera angle from a replay event clip, right-click the clip and click **Set angle...** and select which camera you want to export, or select **All Cams**.
7. To set a custom in-point and out-point, load the clip into the selected channel transport and use the transport controls to locate the new in-point or out-point and click **IN** or **OUT** to set that point. The timecode for the new in-point and out-point is shown in the table.

   To split the clip into segments, set the in-point to where you want the segment to end and click **Split Segment**. A new clip of the same name and export destination is created.

   To duplicate the segment, set the in-point and end-point to where you want to new clip to start and end and click **Duplicate Segments**. A new clip of the same name and export destination is created.
8. Select all the clips you want to export and click **Move to Export Queue**.

   The **Export Queue** opens with the selected clips listed.
9. Click **Start Export**.
10. If your export requires transcoding, in the **Channel to take offline** list, select the channel that you want to use for the export and click **OK**.

    The server starts exporting the clips to the destination folders.

✶ **NOTE:**
Click **Abort Export** to stop the export. The current clip is put back into the Export Queue with the remaining clips.

Growing File Export

You can constantly export any channel that is being recorded, including one or more angles of a replay event, to an export location on network drives or network attached storage (NAS). The growing files can then be imported into a non-linear editor where they can be worked on in near real-time as the file continues to grow. There is some delay in the export process relative to the live record point.

The Growing File Export service in Windows® needs permissions to access the NAS for the export. Once this is set up you can direct the Growing File Export to that network storage location.

Setting NAS Permissions for Growing File Export

To Set NAS Permissions for Growing File Export

1. Launch the **Services** application from Windows®.
2. In the **Services** list, locate **Abekas Growing File Export**.
3. Right click **Abekas Growing File Exporter** and click **Properties**.

4. Click the **Log On** tab.
5. Select **This account** and click **Browse**.

   The **Select User** dialog opens.
6. Click **Advanced**.

   A new **Select User** dialog opens.
7. Click **Find Now**.

   A list of valid User Accounts is shown.
8. Select the user account of the NAS you want to use for the Growing File Export and click **OK**.
9. Verify that the user account is now listed in the **Enter the object name to select** field and click **OK**.
10. Enter the password for the selected user account in the **Password** and **Confirm password** fields and click **OK**.
11. Click **OK** on the **Services** popup.
12. Select the **Abekas Growing File Exporter** and click **Restart** the service.

Creating Growing Export Files

The growing export works in real-time to export clips or replay events as they are being recorded. There is a separate growing file export for each record channel transport on the server.

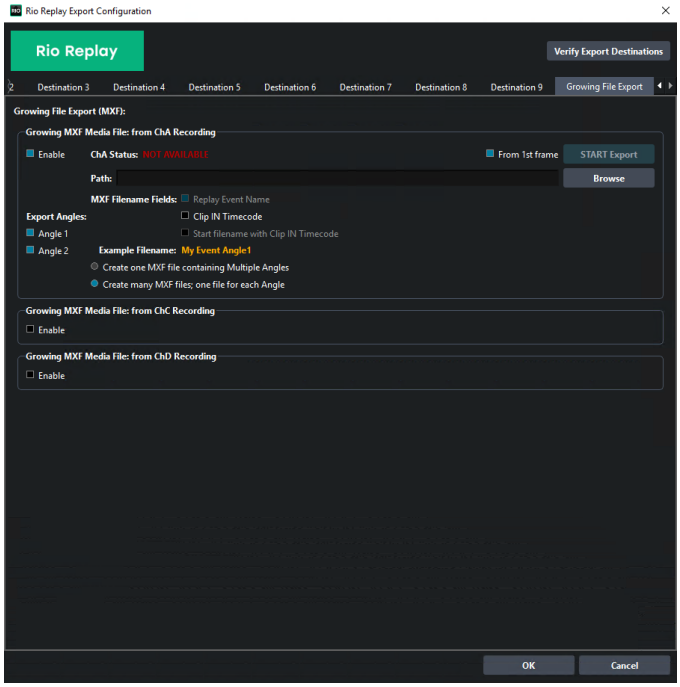
When exporting to a NAS, the Growing Export File service must have permissions to access the NAS and the NAS must be mapped to a network drive to be able to use the feature. Refer to Windows® documentation for information on mapping a network drive.

The configuration options that are available for export depend on the channel configuration of the server.

To Create Growing Export Files

1. Click **Configure > Export Configuration > Growing File Export**.
2. Select **Enable** for the record channel that you want to set up the growing export for.

   The options available depend on how the server is configured and whether the hardware channel has been set up for single-channel or multi-channel IOS operation.



3. Click **Browse** and select the network drive or USB folder that you want to export to.
4. Click **Select Folder**.

   The selected folder is shown in the **Path** field and the **Ch Status** line shows **IDLE** in green.
5. Select **From 1st frame** to have the export start with the first frame of the recording.
6. In the **Export Angles** area, select which camera angles you want to include in the export.
7. In the **MXF Filename Fields** area, select how you want the export file to be named. An example of how the name will appear will be shown.
8. Select how you want to export different camera angles:
   - **Create one MXF file containing Multiple Angles**
   - **Create many MXF files; one for each Angle**
9. Click **START Export** to start the growing file export operation.

   The growing file export starts about 40 seconds after the selected record channel starts recording. If the record channel is already recording, the growing file export starts about 40 seconds after you click **START Export**.
10. Click **OK**.

Remote Control Support

Use the information in this chapter to assist you in setting up an external device to control your server.

This chapter discusses the following topics:

- Using Remote Communications (RS-422)
- Clip ID Support

Using Remote Communications (RS-422)

Direct serial control of each channel transport on the server is available through the RJ45 ports on the breakout cable connected to the server. Ethernet communications can also be used to control a channel transport instead of the direct serial connection.

The first RJ45 port on the breakout cable provides control over channel transport A, the second port provides control over channel transport B, and so on.

✶ **NOTE:**
RJ45 to DB9 converters are provided in the installation kit if needed.

✶ **NOTE:**
The BVW-75 and Odetics protocols are not supported over ethernet at this time.

The procedure for setting up a room for external control depends on the protocol you want to use.

Configuring a Room for the BVW-75 Protocol

Set up a Room to use the BVW-75 protocol to control server channels.

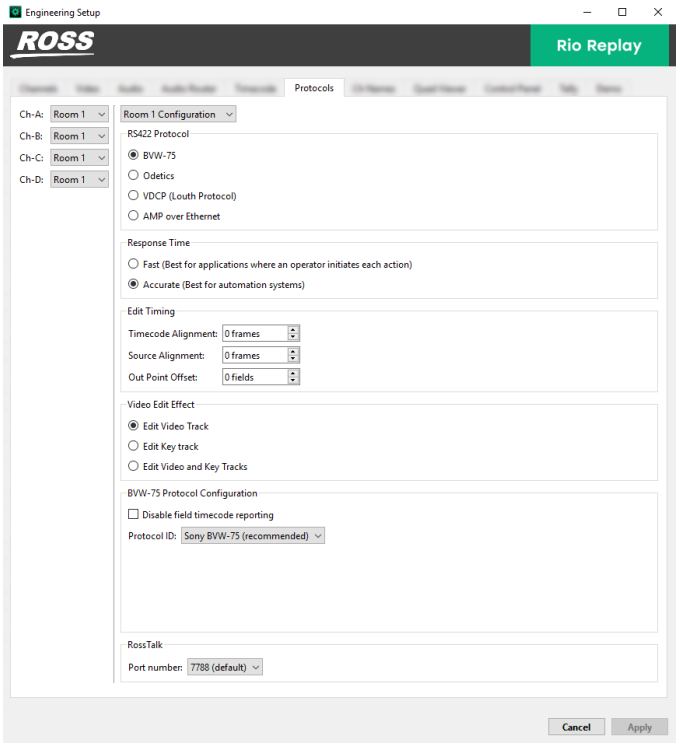
✶ **NOTE:**
The BVW-75 protocol does not support clip library listing or clip loading.

To Configure a Room for the BVW-75 Protocol

1. Launch the **Rio Replay Config** application.

   You may be prompted to allow the program to make changes on the computer, click **Yes**.

2. Click the **Protocols** tab.



3. Click **Room *X* Configuration** and select the room you want to configure. Later, you will assign this room to a channel.

4. In the **RS422 Protocol** area, select **BVW-75**.

5. In the **Response Time** area, select how quickly the server executes the Clip Play command after the Clip Load command.
   - **Fast** — Executes the play command immediately after the load command. This is recommended when controlling the server from an external switcher.
   - **Accurate** — Executes the play command only after receiving confirmation that the clip has loaded. This is recommended when controlling the server from an automation system.
6. In the **Edit Timing** area, select a timing offset for when you are controlling the server from an external editor over serial.
   - **Timecode Alignment** — Select the offset, in frames, of the timecode information that is sent to the editor during playout or record.
   - **Source Alignment** — Select the offset, in frames, of the timecode information that is sent to the editor during playout.
   - **Out Point Offset** — Select the offset, in fields, of the out-point timecode value that is sent to the editor during record.
7. In the **Video Edit Effect** area, select which tracks get recorded when an external editor issues the Video Record command to the server.
   - **Edit Video Track** — Only the video track is recorded.
   - **Edit Key Track** — Only the alpha (key) track is recorded.
   - **Edit Video and Key Tracks** — Both the video and alpha (key) tracks are recorded. The clip loaded into the VKA channel transport must have an alpha track.
8. In the **BVW-75 Protocol Configuration** area, select specific configurations for the protocol you are using.
   - Select **Disable field timecode reporting** to force the server to report timecode only once every video frame. If this option is not selected, the server reports timecode every field.
   - Select the **Protocol ID** that you want to use (**Abekas 6000**, **Sony BVW-75**, or **Generic DDR**).
9. Click the **Ch-*X*:** list on the left side of the window and select the room that you want to assign to the channel.
10. Click **Restart Replay**.

    A confirmation dialog box is displayed.
11. Click **Restart Rio Replay** to restart the server application and services with the new setting.
12. Click **OK** when the restart has completed to dismiss the window.

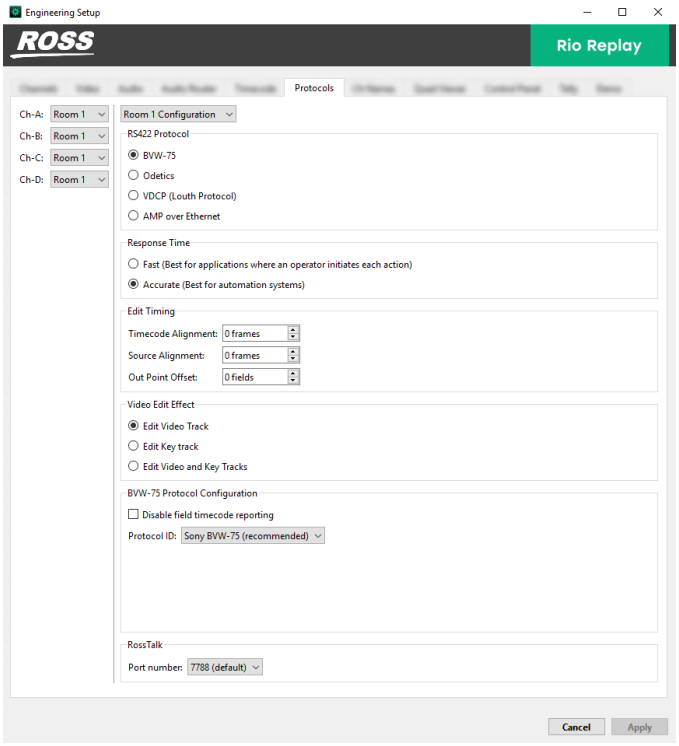
Configuring a Room for the Odetics Protocol

Set up a Room to use the Odetics protocol to control server channels.

To Configure a Room for the Odetics Protocol

1. Launch the **Rio Replay Config** application.

   You may be prompted to allow the program to make changes on the computer, click **Yes**.
2. Click the **Protocols** tab.



3. Click **Room X Configuration** and select the room you want to configure. Later you will assign this room to a channel.
4. In the **RS422 Protocol** area, select **Odetics**.
5. In the **Response Time** area, select how quickly the server executes the Clip Play command after the Clip Load command.
   - **Fast** — Executes the play command immediately after the load command. This is recommended when controlling the server from an external switcher.
   - **Accurate** — Executes the play command only after receiving confirmation that the clip has loaded. This is recommended when controlling the server from an automation system.
6. In the **Edit Timing** area, select a timing offset for when you are controlling the server from an external editor over serial.
   - **Timecode Alignment** — Select the offset, in frames, of the timecode information that is sent to the editor during playout or record.
   - **Source Alignment** — Select the offset, in frames, of the timecode information that is sent to the editor during playout.
   - **Out Point Offset** — Select the offset, in fields, of the out-point timecode value that is sent to the editor during record.
7. In the **Video Edit Effect** area, select which tracks get recorded when an external editor issues the Video Record command to the server.
   - **Edit Video Track** — Only the video track is recorded.
   - **Edit Key Track** — Only the alpha (key) track is recorded.
   - **Edit Video and Key Tracks** — Both the video and alpha (key) tracks are recorded. The clip loaded into the VKA channel transport must have an alpha track.
8. In the **Odetics Protocol Configuration** area, select specific configurations for the protocol you are using.
   - Select **Disable field timecode reporting** to force the server to report timecode only once every video frame. If this option is not selected, the server reports timecode every field.

- Select the **Protocol ID** that you want to use (**Abekas 6000**, **Sony BVW-75**, or **Generic DDR**).

9. Click the **Ch-*X*:** list on the left side of the window and select the room that you want to assign to the channel.
10. Click **Restart Replay**.

    A confirmation dialog box is displayed.
11. Click **Restart Replay** to restart the server application and services with the new setting.
12. Click **OK** when the restart has completed to dismiss the window.

Configuring a Room for the VDCP Protocol

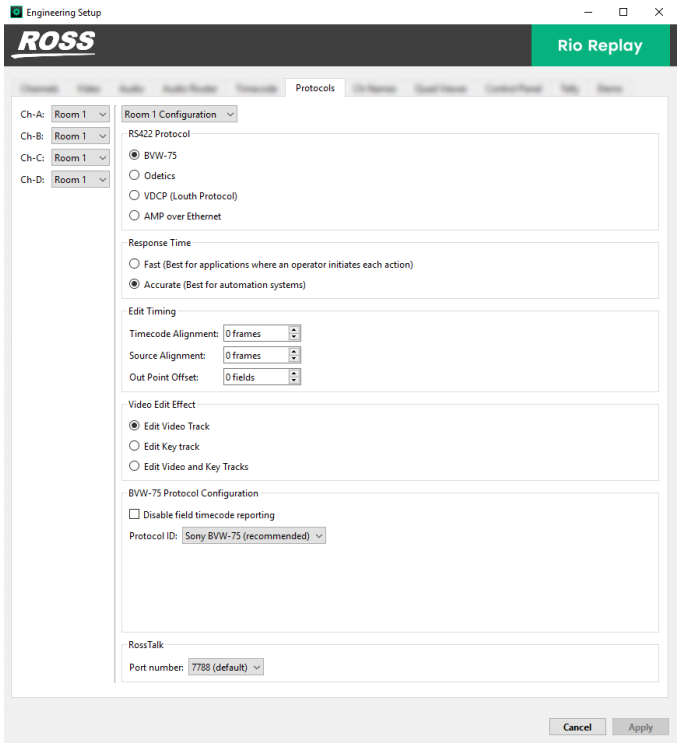
Set up a Room to use the VDCP (Louth) protocol to control server channels.

✶ **NOTE:**
When controlling the server from a remote device over ethernet, you must select the port on the server corresponding to the channel transport you want to send commands to. For example, channel transport A = port 8000, channel transport B = port 8001, and so on.

To Configure a Room for the VDCP Protocol

1. Launch the **Rio Replay Config** application.

   You may be prompted to allow the program to make changes on the computer, click **Yes**.
2. Click the **Protocols** tab.



3. Click **Room *X* Configuration** and select the room you want to configure. Later you will assign this room to a channel.
4. In the **RS422 Protocol** area, select **VDCP**.
5. In the **Restrict to Folder** area, select if you want to restrict remote control of the selected room to only seeing the contents of a specific folder, or all folders (**All Folders**).

6. In the **Response Time** area, select how quickly the server executes the Clip Play command after the Clip Load command.
   - **Fast** — Executes the play command immediately after the load command. This is recommended when controlling the server from an external switcher.
   - **Accurate** — Executes the play command only after receiving confirmation that the clip has loaded. This is recommended when controlling the server from an automation system.
7. In the **Channel Control Port** area, select whether you want to use the serial ports or ethernet connection for the channels assigned to the room.
8. In the **Edit Timing** area, select a timing offset for when you are controlling the server from an external editor over serial.
   - **Timecode Alignment** — Select the offset, in frames, of the timecode information that is sent to the editor during playout or record.
   - **Source Alignment** — Select the offset, in frames, of the timecode information that is sent to the editor during playout.
   - **Out Point Offset** — Select the offset, in fields, of the out-point timecode value that is sent to the editor during record.
9. In the **Video Edit Effect** area, select which tracks get recorded when an external editor issues the Video Record command to the server.
   - **Edit Video Track** — Only the video track is recorded.
   - **Edit Key Track** — Only the alpha (key) track is recorded.
   - **Edit Video and Key Tracks** — Both the video and alpha (key) tracks are recorded. The clip loaded into the VKA channel transport must have an alpha track.
10. In the **VDCP Configuration** area, select specific configurations for the protocol you are using.
    - Select **Louth Preview** to allow clips to be pre-cued in the background for seamless back-to-back transitions during playout.
    - Select **Allow playlist control** to allow a playlist to be cued and played from an external device just like a clip.
    - In the **Maximum length of Clip Name** field, select the maximum length of a clip name that is reported to the controlling device.
11. Click the **Ch-*X*:** list on the left side of the window and select the room that you want to assign to the channel.
12. Click **Restart Replay**.

    A confirmation dialog box is displayed.
13. Click **Restart Replay** to restart the server application and services with the new setting.
14. Click **OK** when the restart has completed to dismiss the window.

Configuring a Room for the AMP Protocol

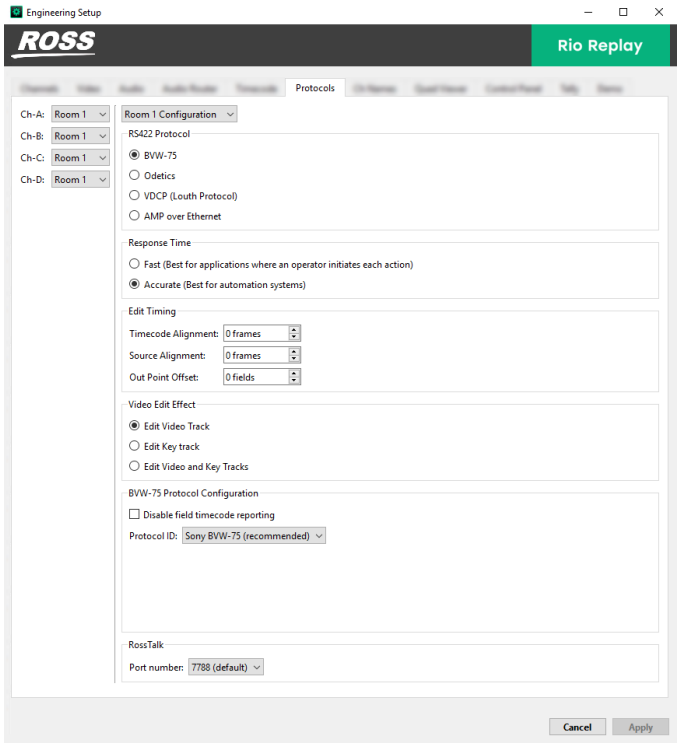
Set up a Room to use the AMP protocol to control server channels.

✶ **NOTE:**
When controlling the server from a remote device over ethernet, you must select the port as 3811 and then select the channel you want to send the commands to.

To Configure a Room for the AMP Protocol

1. Launch the **Rio Replay Config** application.

   You may be prompted to allow the program to make changes on the computer, click **Yes**.
2. Click the **Protocols** tab.



3. Click **Room *X* Configuration** and select the room you want to configure. Later you will assign this room to a channel.
4. In the **RS422 Protocol** area, select **AMP over Ethernet**.
5. In the **Response Time** area, select how quickly the server executes the Clip Play command after the Clip Load command.
   - **Fast** — Executes the play command immediately after the load command. This is recommended when controlling the server from an external switcher.
   - **Accurate** — Executes the play command only after receiving confirmation that the clip has loaded. This is recommended when controlling the server from an automation system.
6. In the **Edit Timing** area, select a timing offset for when you are controlling the server from an external editor over serial.
   - **Timecode Alignment** — Select the offset, in frames, of the timecode information that is sent to the editor during playout or record.
   - **Source Alignment** — Select the offset, in frames, of the timecode information that is sent to the editor during playout.
   - **Out Point Offset** — Select the offset, in fields, of the out-point timecode value that is sent to the editor during record.
7. In the **Video Edit Effect** area, select which tracks get recorded when an external editor issues the Video Record command to the server.
   - **Edit Video Track** — Only the video track is recorded.
   - **Edit Key Track** — Only the alpha (key) track is recorded.
   - **Edit Video and Key Tracks** — Both the video and alpha (key) tracks are recorded. The clip loaded into the VKA channel transport must have an alpha track.
8. In the **AMP Protocol Configuration** area at the bottom of the window, select specific configurations for the protocol you are using.
   - Select **Disable field timecode reporting** to force the server to report timecode only once every video frame. If this option is not selected, the server reports timecode every field.

- Select **Allow overlapped commands** to allow the server to accept overlapping commands.
- Select **Allow playlist control** to allow a playlist to be cued and played from an external device just like a clip.
- For the **Folder Format**, select **Ross** or **Sony**.
- Select the **Protocol ID** that you want to use (**Abekas 6000**, **Sony BVW-75**, or **Generic DDR**).

9. In the **RossTalk** area, select the **Port number** to use.
10. Click the **Ch-*X*:** list on the left side of the window and select the room that you want to assign to the channel.
11. Click **Restart Replay**.

    A confirmation dialog box is displayed.
12. Click **Restart Replay** to restart the server application and services with the new setting.
13. Click **OK** when the restart has completed to dismiss the window.

Clip ID Support

Devices using the VDCP or Odetics protocol can use the 8-character clip ID assigned to a clip. By default, the server does not assign a clip ID to the clip when it is recorded or imported. If there is no clip ID, the first 8 characters of the clip name are used instead.

AsRun Log Report Creator

The server keeps a log of stills and clips that have been played in their entirety on all channels of the server. This information can then be filtered and output into either a CSV file or a PDF report.

✶ **NOTE:**
Clips must be played out in their entirety to be added to the AsRun log.

This chapter discusses the following topic:

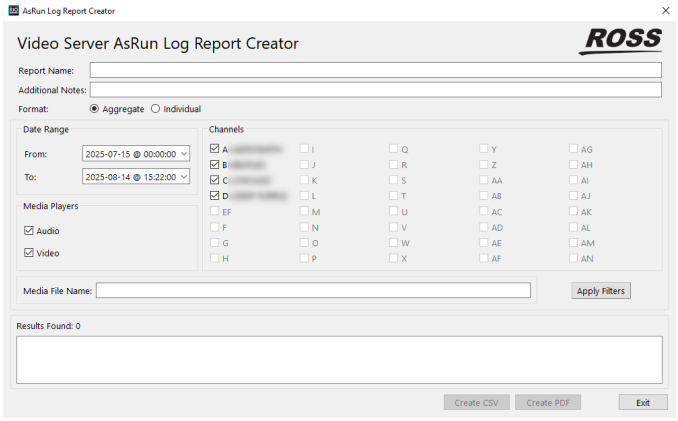
- Running an AsRun Report

Running an AsRun Report

Generate a PDF or CSV report of what clips and stills were played on the server.

To Run an AsRun Report

1. Launch the **AsRunReport** application on your server.

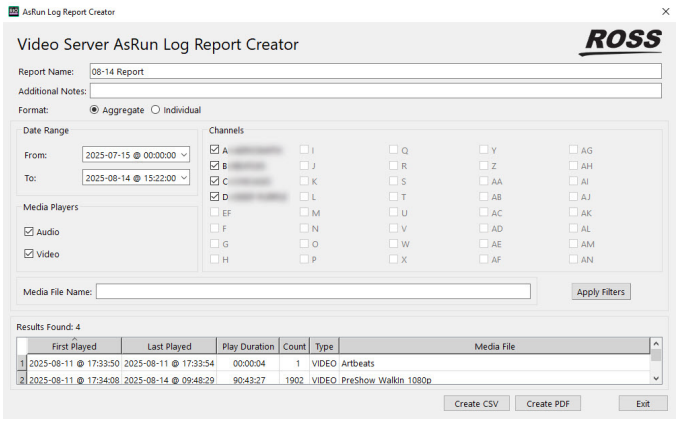


2. Set the parameters and filters you want to apply to the report.

   - **Report Name** — The name that appears on the report.
   - **Additional Notes** — Any additional notes that you want to appear on the report.
   - **Format** — Select how you want the report to be formatted.
     - **Aggregate** — Lists how many times each clip was played during the selected date range
     - **Individual** — Lists every instance that a clip was played, including the start and stop times, during the selected date range
   - **Date Range** — Set the from and to date range between which you want to generate the report.
   - **Channels** — Select which transport channels on the server that you want to generate the report for. Channels that are not present on your server are grayed out.
   - **Media Players** — Select whether you want to show only audio clips, only video clips, or both.
   - **Media File Name** — Enter a name or part of a name in the field, or leave the field blank. The clips that were played during the date range will be filter to only include those clip names that include the **Media File Name**. If no name is specified the filter will return all clip names.

3. Click **Apply Filter**.

   The table below lists the results of the filtered search.



   You can change the filter settings and click **Apply Filter** again to update the search results.

4. Click a **Create** button to generate the report file. You are prompted for a location to save the file.
   - **Create CSV** — Creates a standard comma segmented value (CSV) file.
   - **Create PDF** — Creates a formatted PDF report file.
5. Click **Exit**.

Maintenance and Specifications

Refer to the following information for best practices regarding maintaining your server.

✶ **NOTE:**
The information in this section is subject to change without notice.

This chapter discusses the following topics:

- Media Drives
- Resources
- Operating Temperature

Media Drives

The server uses a RAID array of media drives to store all media content.

Disk Space

The amount of free disk space that is available for clips is shown at the top of the Rio Replay Explorer window. The free space is shown in time (HH:MM:SS:FF) and percentage of free space on the drive. When the amount of free space goes below 10% the text is highlighted in yellow. If the amount of free disk space goes below 5% the text is highlighted in red.

When the amount of free disk space goes below 5% you should consider removing unused content in order to free-up media disk space. To assist you in locating older or unused content, the Clip Library contains Date Loaded and Date Played columns that can be used to sort content.

Resources

Table 16.1 Model Resources

Resource	8-Ch	12-Ch
Video Inputs	8	12
Video Outputs	8	12
AES Audio Inputs	16	16
AES Audio Outputs	16	16
Analog Audio Outputs	2	3

Operating Temperature

The system has been qualified at an operational temperature range of **13** to **35°C** (**55** to **95°F**) and a non-condensing humidity range of **20** to **80%**.

Table 16.2 Safe Operation and Non-operating Environmental Conditions

Environmental Condition	Operating Range	Non-operating Range
Temperature	Server Chassis: 13 to 35°C (55 to 95°F) Control Panel: 0 to 40°C (32 to 104°F)	-40 to 65°C (-40 to 149°F)
Relative Humidity	Server Chassis: 20 to 80% non-condensing Control Panel: 20 to 50% non-condensing	5 to 95% non-condensing
Max. Wet Bulb Temperature	29.5°C (85°F) non-condensing	35°C (95°F) non-condensing
Max. Temperature Gradient	15°C/hour (59°F/hour)	15°C/hour (59°F/hour)
Altitude Range	-300 to 2,000m (-984 to 6,561ft.)	-300 to 12,200m (-984 to 40,026ft.)

✶ **NOTE:**

- The operator is responsible for providing sufficient ventilation to maintain surface temperature below 40°C (104°F) at the center of the top cover of the server chassis.
- Non-condensing conditions should be maintained at all times.
- The maximum storage period inside the shipping package is one year.