mRes™ Multi-Resolution Encode System

Powered by Pronology

Operations Manual

Revision 1.0

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How to Use This Guide

This document is the operations manual for the Pronology **mRes Multi-Resolution Encode System**. In this guide, you will find comprehensive information on how to use the program.

Please use this guide in the following order:

1. Review the **Introduction to mRes** section to learn the basics about **mRes** hardware, software, and the available codecs and wrappers. In addition, a comprehensive list of available frame rates and resolutions is provided.
2. Review **The mRes Monitor** section to learn the application that configures the **mRes** recorder's hardware — including video, audio and timecode settings. The application is also used for validating incoming signals and audio tracks.
3. Review the **mRes Clip Controller** section to learn the application that controls each **mRes** recording channel. The application creates clips, and based on your **Record Profiles**, stores the clips in designated media. The **Clip Controller** can run locally on the same computer as mRes, or remotely on a different computer.
4. Review the **Understanding mRes Setup** and **Configuring mRes Setup** sections to learn how to set up your **mRes** system for proper operation. Each of the following functions must be configured:
    - Channels
    - Storage
    - Record Profiles
    - Metadata Profiles
    - Clip Naming
    - Folder Naming
    - Wild Record Naming
    - General Settings

Terms and Conventions

The following terms and conventions are used in this guide:

- **Uncompressed** — a digital video signal (typically, an *original* signal) that has never been compressed or processed into another form or resolution, such as via resizing, rotation, transmission, or via lossy compression methods such as MPEG or H.264. Uncompressed video, which maintains the best image quality, can be conveyed over various types of baseband digital video interfaces, such as HDMI, DVI, DisplayPort and SDI.
- **Ingest Channel** — also called an **mRes Channel**. This is a *physical* channel within the mRes system that "inputs" video into the recording system. Each mRes system can have up to four (4) physical ingest channels, each of which is capable of recording an incoming stream of video. Using the **Server Setup** function, you will create *virtual* channels, consisting of names, servers, tape names and clip profiles, and assign these virtual channels to **mRes** physical channels.
- **Loop Recorder** — an uncompressed ingest channel within the **mRes** hardware that records continuously when the system is running. The **mRes** program is comprised of up to four (4) individual and independent **Loop Recorder** volumes. When inpoints and outpoint are specified along a loop, media is created in designated formats (e.g., DNX, ProRes, AVC, etc.) and exported to designated storage locations. When a specific **Loop Recorder** reaches the end of its configured volume, it *loops* back and starts recording from the start (head) of its volume.
- **Codec** — a combination of the words encoder (coder) and decoder. A codec is typically a software module that encodes (and often compresses) incoming video for storage, and decompress the encoded video for playback and editing. In the modern production and post-production workflow, many different types of codecs are required to accommodate multiple devices from multiple manufacturers.
- **Record Profile** — a comprehensive set of instructions (all stored under one name) that tells **mRes** how to create clips, which codecs and wrappers to use, and where to store each finished clip. You can create multiple **Record Profiles**, per the exact requirements of the event or production. Refer to the **Record Profile Setup** section for details.
- **Metadata Profile** — a set of standard and custom fields that can be added to a clip name, many of which can be set to increment automatically. Refer to the **Metadata Profile Setup** section for details.
- **Clip Naming Profile** — a set of standard and custom naming conventions for your recorded clips. Each naming convention is comprised of a set of variable fields plus separators that can be arranged in any desired order in a clip name. Refer to the **Clip Naming Setup** section for details.
- **Folder Naming Profile** — a set of standard and custom folder names that enable mRes to store your clips in the exact and logical destinations of your choice. This feature keeps your clips organized and easy to find on the destination storage locations. Refer to the **Folder Naming Setup** section for details.

Table of Contents

1. Introduction to mRes

What is mRes?

The **mRes Multi-Resolution Encode System** is a multi-channel high definition encoding system designed to create video clips for broadcast, corporate, social media, high-end post production and other video spaces. Ease of use, robustness, flexibility and an intuitive user interface are the key features that set mRes apart from similar recorders and encoders on the market today.

Please note the following important points:

- The **mRes** program utilizes an "always-on" uncompressed recording technology that captures every bit of video without compression. The program is comprised of four (4) individual ingest channels, each of which has its own uncompressed **Loop Recorder** volume, from which exported media is created.
- Each of these ingest channels can be set up independently and uniquely. Compressed clips are created from the original uncompressed media, so there is no loss of quality typically found in transcoding.
- The **mRes** program allows you, the recordist, to seamlessly create multiple tiers of video (multiple file types) per HD-SDI input channel without missing a frame of action. Each file type can be written to more than one external location simultaneously, such as a portable storage device, a network drive or a SAN (Storage Area Networks).
- For example, the following three tiers can be created from one HD-SDI input: (1) a high-resolution media file, (2) an edit proxy, and (3) a live, streamable web proxy. Various other combinations are also possible.
- The **mRes** program includes a high degree of resilience to network or storage latency issues. For example, when a file is being written and network traffic is encountered, the write speed slows down, but when traffic is reduced, **mRes** can accelerate and write to storage at faster-than-realtime speeds.

Codecs and Wrappers

The **mRes** program creates broadcast files in many of the codecs used by high-end editorial systems, including:

- Uncompressed
- AVC-intra
- DNxHD 145
- DNxHD 220
- DNxHD 220x
- DNxHR
- DNX 36-45
- JFIF
- XDCAM-HD422
- XDCAM 35
- ProRes HQ
- ProRes 422
- ProRes LT
- ProRes Proxy
- H.264

The following wrappers are supported:

- QuickTime Self-Contained
- MXF-OpAtom
- F4V
- QuickTime Reference
- HLS
- MXF-Op1a
- MP4
- MPEG-DASH

Pronology is committed to supporting new codecs and wrappers as industry technologies evolve.

Video Resolutions

The following video resolutions are supported:

- 4K
- 1080p
- 1080i
- 720p
- 480i
- 576i

Frame Rates

The following frame rates are supported:

- 23.98
- 24
- 25
- 29.97
- 29.97DF
- 30
- 50
- 59.94
- 60

Hardware

The hardware for *one* **mRes** program consists of a high-performance Windows™ server with either one (1) or two (2) video capture cards, one OS (Operating System) drive, up to four (4) high-performance storage drives or arrays, and an infrastructure tuned network architecture. Systems with *two* capture cards are the typical configuration.

On most systems, capture cards control two (2) ingest channels, for a total of four (4) available recording channels. This system, by itself, can ingest four channels of uncompressed video, and output multiple video clips to multiple destination drives that are *external* to the **mRes** system. Each **mRes** capture card also includes two (2) SDI outputs that are typically used to route video to a monitor wall in the studio or mobile unit. Thus, each **mRes** system has four (4) SDI monitor outputs.

When multiple **mRes** systems are tied together over a network, one recordist can control additional ingest channels and target output destinations. For example, if two mRes systems are controlled, you have access to eight (8) ingest channels and an even greater array of target clip destinations (as configured by you, the recordist).

Core Components

The two core components of the **mRes** program run as Windows services: **mRes Monitor** and **mRes Controller**. Once the server is booted, uncompressed recording begins. The mRes program is pre-configured on your desktop, and no installation is required.

Both services run concurrently. Closing one of the applications on the desktop does *not* terminate the service — it just closes the desktop application.

- The **mRes Monitor** is the application that configures the hardware of the **mRes** recorder, that is, the two (2) individual capture cards. To launch the **mRes Monitor**, double-click the **mRes Monitor Icon** on your desktop. Refer to **The mRes Monitor** section for details.

- The **mRes Controller** is the application that controls one or more **mRes** units, and creates clips. Within the application, you can configure channels, storage paths, record profiles, metadata and clip naming conventions. To launch the **mRes Controller**, double-click the **mRes Controller Icon** on your desktop. Refer to **The mRes Controller** section for details.

Tool Tips

The mRes program makes extensive use of tool tips, an example of which is shown below:

As you learn the various components of the **mRes Monitor** and **mRes Controller**, ensure that you make full use of these tool tips.

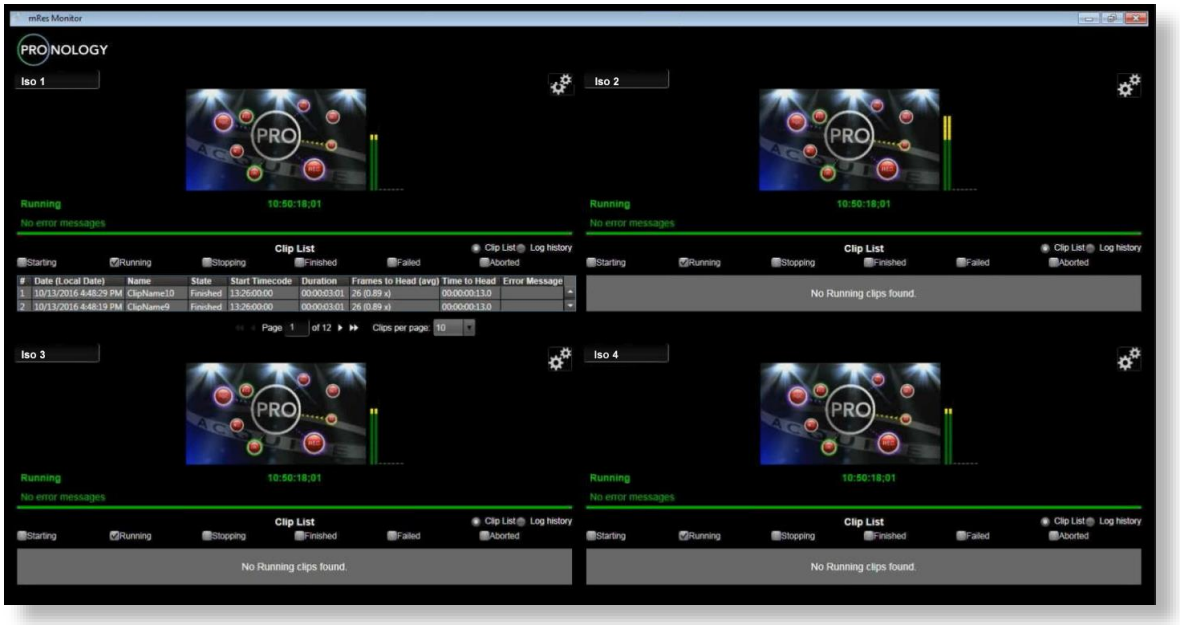
2. The mRes Monitor

The **mRes Monitor** is the application that configures the hardware of the **mRes Recorder**, including video, audio and timecode settings. The application is also used for validating incoming signals and audio tracks. The monitor is typically set up at ESU, an event's Electronic Setup Day.

Please note:

- The **mRes Monitor** sets the ingest parameters for each of the system's **Loop Recorders**.
- The **mRes Monitor** application is *primarily* an engineering setup function, but it is important for you (the recordist) to understand each control that is available.

The figure below illustrates a sample **mRes Monitor** display.



mRes Monitor (sample)

Your local **mRes** system's ingest channels can be displayed simultaneously, and each channel can be set up individually. Each channel has a Preview Monitor, a clip list, an audio channel display, and setup controls. Refer to the **Channel Components** section for details.

Note
The **mRes Monitor** can only set up the hardware and display video for your *local* ingest channels. If you are controlling additional **mRes** systems, the **Monitor** cannot be used to set up those channels, nor can it display those channel's video. Hardware setup for those channels must be performed on the external systems themselves.

Channel Components

The components of each **mRes Monitor** channel are shown below. Remember that each channel has identical controls, and each channel can be set up independently.

mRes Monitor Channel (sample)

1) **Channel Name**	2) **Preview Monitor**	3) **Setup Button**
4) **Audio Tracks**	5) **Channel Status**	6) **Clip List and Log History**

Each component is described below:

1) **Channel Name**

Each ingest channel can be named as desired, per the requirements of the event (e.g., **PGM Clean**, **PGM Dirty**, **Iso 1**, **Iso 2**, etc.). To name a channel, click in the field, type the desired name, and press **Enter**. An adjacent comments field (for engineering notes) may appear here in a future **mRes** version.

Note
The **Channel Name** is global for *this* **mRes** server. The name that you enter here also appears in the **Server Setup Menu**. Similarly, if you change the channel name in the **Server Setup Menu**, it appears here. Refer to the **Server Setup** section for details.

2) **Preview Monitor**

Each channel has a **Preview Monitor** that shows a live thumbnail of the incoming video. The size of the thumbnail is fixed, and cannot be changed.

3) **Setup Button**

Click the **Setup** button to access the **Channel Setup Menu** for that specific channel. Each channel has an identical setup menu, and each can be displayed simultaneously. Refer to the **Channel Setup Menu** section for details.

Once clicked, the **Setup** button changes to the **Monitor** button. Click the **Monitor** button to close the **Channel Setup Menu**.

4) **Audio Tracks**

The number of audio tracks configured for the specific channel are displayed to the right of the **Preview Monitor**. VU meters are displayed for actual incoming audio, and small dashes (**-**) are displayed for additional configured audio tracks. Refer to the **Audio Channels Count** section for details.

5) **Channel Status**

The status of the current channel, along with the incoming timecode, is displayed below the **Preview Monitor**. Timecode is displayed in standard HH:MM:SS;FF format.

The color of the status text is important:

- **Green**: Timecode is valid, and is running properly.
- **Yellow**: The channel is updating with a new configuration.
- **Red**: An error condition exists.

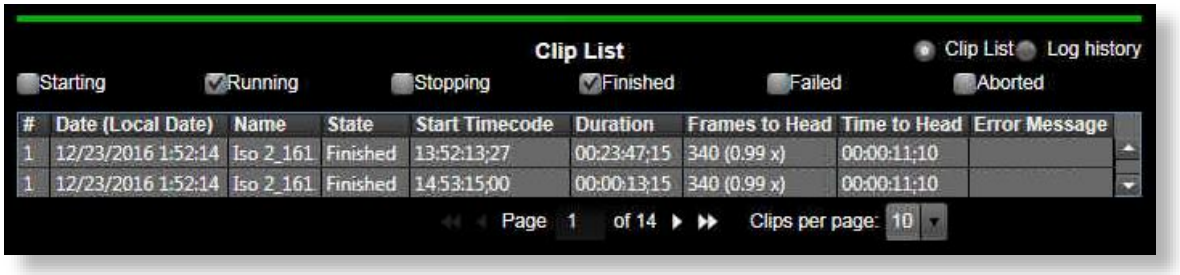
Tip
Always check for valid timecode in the **Channel Status** area.

6) **Clip List and Log History**

The **Clip List** and **Log History** radio buttons are each described below.

Clip List

Click the **Clip List** radio button to display a list of clips that have been created for the current channel, along with various data fields. A sample **Clip List** is shown below:



Clip List (sample)

The check boxes at the top of the **Clip List** allow you to filter the table with different categories of information. Unchecking a box removes that information from the table.

Check box definitions are listed below:

- **Starting** — display clips that are currently starting to be created.
- **Running** — display clips that are in the process of being created.

- **Stopping** — display clips that are stopping.
- **Finished** — display completed clips.
- **Failed** — display clips that have failed to be created (for example, if your storage fell off line).
- **Aborted** — display clips whose creation has been aborted (for example, if communication was lost).

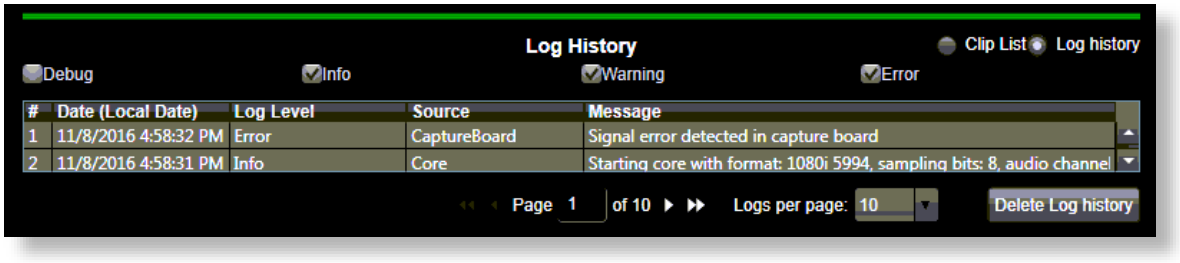
Column headings are defined below:

- **#** — displays the clip's index number. The first clip in the list (e.g., #1), is the *most recent* clip that has been created.
- **Date (Local Date)** — displays the local date on which the clip was finished, failed, aborted, etc.
- **Name** — displays the clip name (as derived from your naming profiles).
- **State** — displays the selected clip state (as indicated by the check boxes).
- **Start Timecode** — displays the clip's starting timecode.
- **Duration** — displays the duration of the clip.
- **Frames to Head** — displays how close the clip's leading edge was to the position of the **Loop Recorder**, at the time the clip was finished. Refer to the **Frames to Head** section for a detailed explanation.

Note
▪ You can set the number of clips per **Clip List** page, using the controls at the bottom of the list. Choices are **5**, **10** and **20**. ▪ You can change the width of the columns, by clicking and dragging the border between column headings.

Log History

Click to **Log History** radio button to display a list of logged events, and to check system errors as needed. A sample **Log History** is shown below:



Log History (sample)

The check boxes at the top of the **Log History** allow you to filter the table with different categories of information. Unchecking a box removes that information from the table. Check box definitions are listed below:

- **Info** — displays selected information.
- **Warning** — displays system warnings.
- **Error** — displays system error messages.

Column headings are defined below:

- # — displays the clip's index number. The first entry in the list (e.g., #1), is the *most recent* entry.
- **Data (Local Date)** — displays the date on which the log entry occurred.
- **Log Level** — displays the level of the log entry, e.g., debug, info, warning or error.
- **Source** — displays the component that generated the log entry, e.g., core, capture board.
- **Message** — displays additional information regarding the log entry.

Note
▪ You can set the number of log entries per **Log History** page, using the controls at the bottom of the list. Choices are **5**, **10** and **20**. ▪ Click **Delete Log History** to delete the list. ▪ You can change the width of the columns, by clicking and dragging the border between column headings.

Note
A more comprehensive logging file is available as an administrative function. Consult with **Pronology Technical Support** for details.

Channel Setup Menu

Click the **Setup** button to display the **Channel Setup Menu**, a sample of which is shown below. For proper **mRes** operation, each setting must be properly configured for *each* ingest channel. Please note:

- Each channel has its own individual setup menu.
- The **Monitor** application is *primarily* an engineering setup function, but it is important for you (the recordist) to understand each control that is available.

Channel Setup Menu (sample)

1) **State**	2) **Source**	3) **Audio Channels Count**
4) **Recorder File (Drive)**	5) **Recorder File Size (Gb)**	6) **Recorder File Count**
7) **Timecode Mode**	8) **Video Format**	9) **LTC Compensation**
10) **Video Sampling Bits**	11) **Save Configuration**	

Descriptions are provided below.

1) **State**

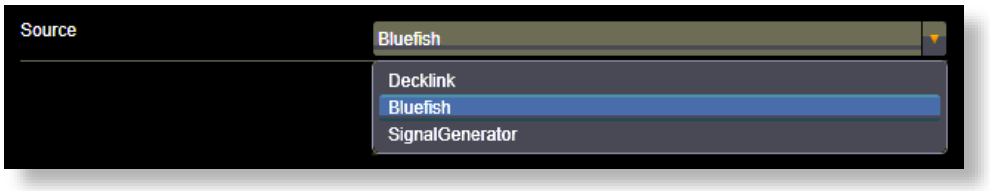
This field displays that state (and color) that is shown in the **Channel Status** area (e.g., **Running**).

2) **Source**

Each **mRes** system includes two capture cards, each of which is capable of ingesting 2 (two) video signals — for a total of 4 (four) ingest channels per system.

This setting selects the type of physical I/O (Input/Output) capture card that is used for that pair of channels (e.g., channels 1 and 2, or channels 3 and 4). The **mRes** program currently supports **Bluefish444** and **Decklink** capture cards.

Click the down arrow to reveal the **Source** options:



Source options

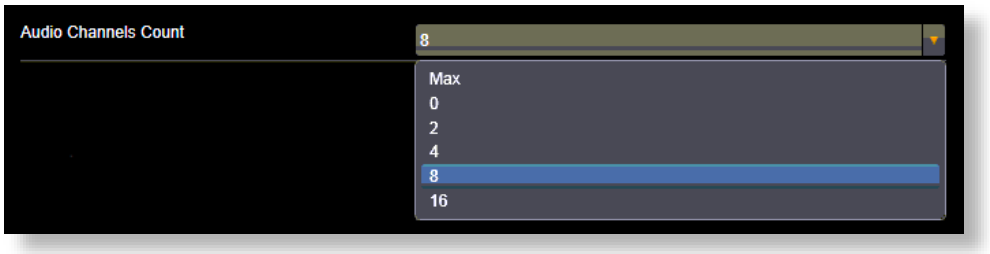
Important
Do not change the selected capture cards. They have been pre-selected by the Pronology engineering team. However, if required, you can select the internal **Signal Generator** if no proper video signals are available. This selection is useful to test storage and to ensure the target editing systems are accepting clips — but **do not** use the signal generator to test system performance.

If you select **Signal Generator**, color bars and audio tracks are generated, as shown below.

Color Bars from internal Signal Generator (sample)

3) **Audio Channels Count**

This field sets the desired number of audio channels to record on the selected ingest channel. Click the down arrow to reveal the options:



Audio Channels Count options

Once selected, VU meters are displayed to the right of the **Preview Monitor** for actual incoming audio, and small dashes (**-**) are displayed for the remaining number of additional audio tracks as selected.

Here, it's a good idea to check your capture card's exact audio specifications.

Select **Max** to instruct **mRes** to query the capture card, and set it for the maximum number of audio channels that the card supports.

Tip
Do not create unnecessary audio tracks. Only select the number of audio channels that you want to be created in the clip. For example, if the incoming video has stereo audio, select **2** — and **2** audio tracks will be created with each clip. If you selected **8**, the **8** audio tracks will be created when only **2** were necessary. In other words, keep your editors happy!

If changes are made, click **Save** to update the channel's configuration. Refer to the **Save Configuration** section for important information.

4) **Recorder File (Drive)**

This field associates ingest channels with drive volumes. Each record channel requires a unique drive volume for its uncompressed **Loop Recorder**. In this manner, performance is kept at maximum. Click the down arrow to reveal the options (a sample of which is shown below):

Recorder File (Drive) options

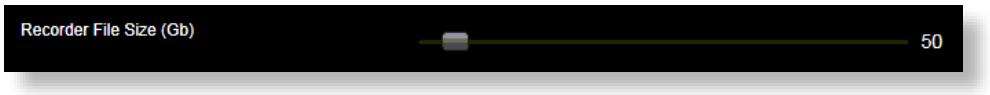
The **mRes Monitor** will display a list of available drives. In a typical system, channel **1** records to **D**, channel **2** records to **E**, channel **3** records to **F**, and channel **4** records to **G**.

Important
Do not use the **C:** drive for a **Loop Recorder**, as that is the Windows system drive.

If changes are made, click **Save** to update the channel's configuration. Refer to the **Save Configuration** section for important information.

5) **Recorder File Size (Gb)**

This slider sets the maximum size of each file on all **Loop Recorders**.



Recorder File Size Slider (sample)

Remember that **Loop Recorders** are comprised of sets of files on the four drive volumes. By setting a maximum file size, this optimizes disk I/O performance and simplifies disk management. Normally, the **Recorder File Size** parameter is set to 50Gb (gigabytes), and should not be changed unless requested by **Pronology Technical Support**.

If changes are made, click **Save** to update the channel's configuration. Refer to the **Save Configuration** section for important information.

6) **Recorder File Count**

This slider sets the maximum number of files that can be created on an individual **Loop Recorder**.

Recorder File Count Slider (sample)

The number is usually determined by the following formula:

- Total Drive capacity in gigabytes / Recorder File Size * 0.8

The reason that the full drive is not used, is because when drives are near capacity, the read and write speeds suffer. So, by using only 80% of the drive, performance is optimized.

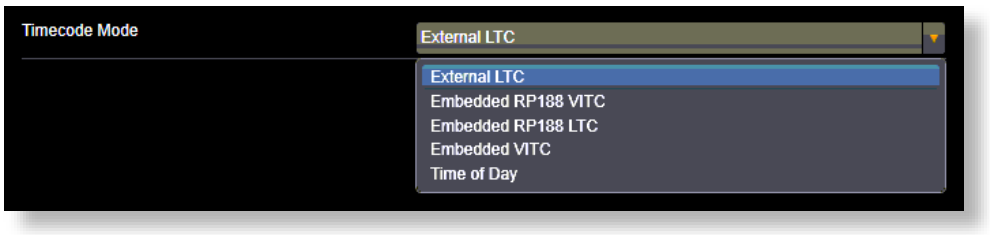
For example:

- Drive capacity: 3.63 TB (3630 Gb). Recorder file size: 50 Gb.
- 3630 / 50 * 0.8 = 58.08. Set **Recorder File Count** to 50 (or less).

If changes are made, click **Save** to update the channel's configuration. Refer to the **Save Configuration** section for important information.

7) **Timecode Mode**

This field sets the timecode source for the selected ingest channel. Click the down arrow to view timecode options:



Timecode options

Please note:

- The **Bluefish444** cards have an LTC timecode input connector. If LTC is connected to this input, select **External LTC**.

Important
The external LTC input on the **Bluefish** capture card #1 is shared between ingest channels 1 and 2, with identical timecode. Similarly, the LTC input on capture card #2 is shared between ingest channels 3 and 4. However, if the need arises, remember that you can select different timecode *types* on any channel, e.g., LTC on channel 1 and VITC on channel 2.

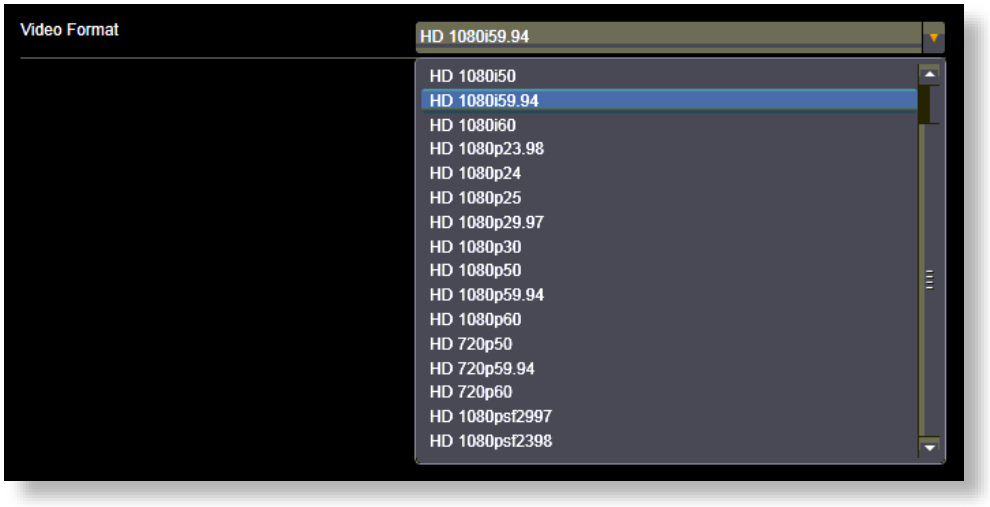
- **Decklink** cards do not have an LTC input. Here, an AEC timecode card must be installed in the mRes server. If timecode is connected this way, it will be considered **External LTC**.
- If the timecode is embedded in the SDI bit-stream, it will either be in the **RP188** or **VITC** format. Check with your on-site engineer for the correct type.
- If there is no timecode present, select **Time of Day**. In this case, set the Windows PC clock as close to local time as possible.

Note
Time of Day is not a valid timecode source for making media clips. Use this selection for testing purposes only.

If changes are made, click **Save** to update the channel's configuration. Refer to the **Save Configuration** section for important information.

8) **Video Format**

This field sets the resolution and frame rate for the selected ingest channel. The **mRes** program supports a wide number resolutions and frame rates. Refer to the **Video Resolutions** and **Frame Rates** sections for details. Click the down arrow to select the desired video resolution and frame rate.



Video Format options

Scroll the list to locate the desired setting, then click to select it. Ensure that the selected setting matches the input video, or you will see an error message on the **Preview Monitor**, and video cannot be recorded.

If changes are made, click **Save** to update the channel's configuration. Refer to the **Save Configuration** section for important information.

9) **LTC Compensation**

This slider sets the compensation between video and timecode.

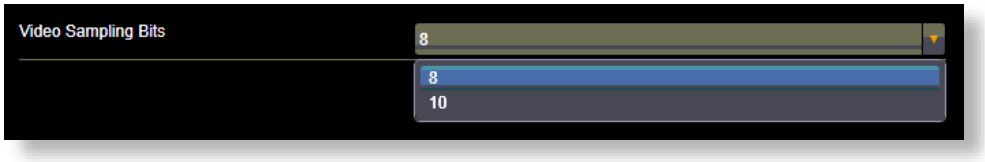
LTC Compensation Slider (sample)

When using the Decklink and AEC combination, there can be a small time difference between the arrival of a video frame and the corresponding LTC packet. The **LTC Compensation** option allows you to adjust for that. It is best to leave the setting at **0** (zero) unless instructed by Pronology Tech support. Additionally, there might be circumstances where the video is routed through a frame synchronizer which will add a frame (or more) of delay. This setting compensates for that delay.

If changes are made, click **Save** to update the channel's configuration. Refer to the **Save Configuration** section for important information.

10) **Video Sampling Bits**

This field selects how video is captured.



Video Sampling Bits Field (sample)

Video can be captured in **8 bits** or **10 bits** per pixel. The first (**8 bits**) is quite common, but **10 bits** provides a better dynamic color range. It also requires more hard drive space and is more demanding on the **Loop Recorder**.

- Typically, set this parameter to **8 bits**. This setting can be used on everything up to 59.94.
- Do not set to **10 bits** unless the target editing system supports it. For example, some Avid DNX, Apple Pro-Res, and AVC Intra video formats require the **10 bit** setting.

Important
If you select **10 bit**, please note: • 10 bit can deteriorate loop performance. • Be aware of dropped frames. • Always create test clips first, to check system performance. • 10 bit cannot be used for 59.94p.

11) **Save Configuration**

Click **Save** after making individual changes, or — you can make *multiple changes* and then click **Save**.

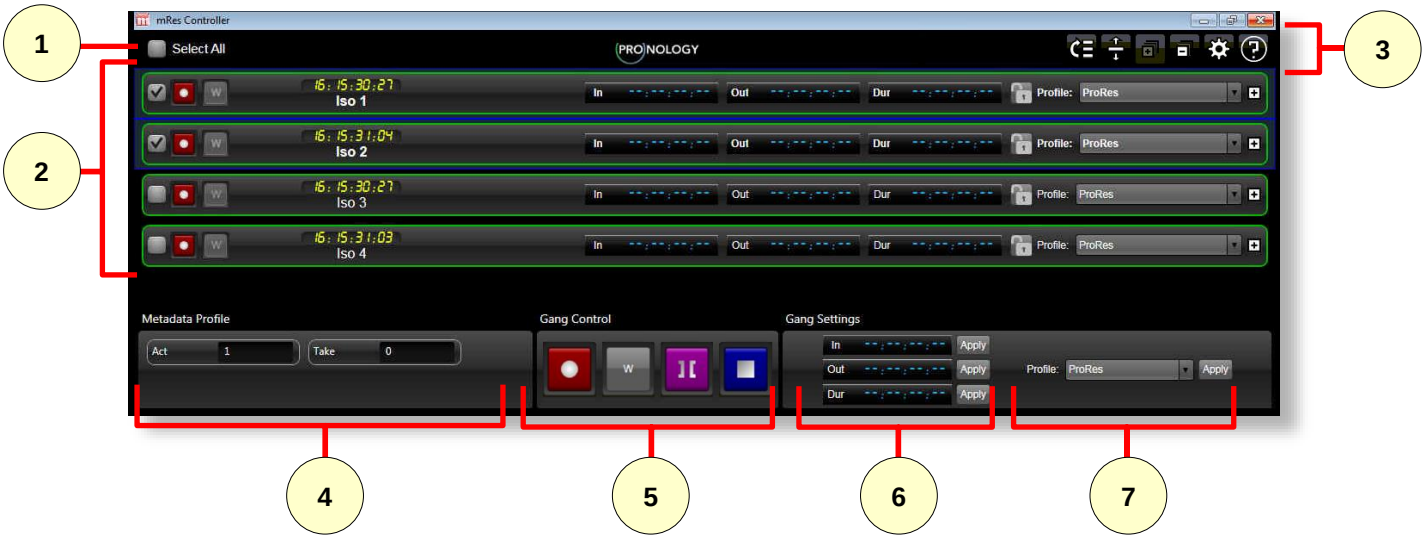
Note
Your changes are not active until you click **Save**. In addition, if you have any unsaved changes when you attempt to exit the **Channel Setup Menu**, you will be prompted to **Save**.

Important
When you save any change in the **Channel Setup Menu**, the system automatically updates — and your previously recorded uncompressed media on the selected channel is **no longer available**. The loop record volumes are re-formatted, and any previously uncompressed media is deleted.

3. The mRes Controller

The **mRes Controller** is a Windows service that controls **mRes** recorders. The **Clip Controller** can run locally on the same computer as **mRes**, or remotely on a different computer. There are two parts to operating the **Clip Controller**: **Setup**, and **Operations** (or Recording).

When you double-click the **mRes Controller Icon**, the program starts, and the main recording panel appears. If any channels had been previously configured, they will be restored. If four channels are configured, the main recording panel appears, a sample of which is shown below:



Main Recording Panel (sample)

1) **Select All**	2) **Channel Section**	3) **Channel Controls**	4) **Metadata Profile**
5) **Gang Controls**	6) **Gang Settings**	7) **Global Profile**	

Each component is described below:

1) **Select All**

Check **Select All** to select all channels for gang control. Uncheck the box to de-select all channels.

Note
▪ Press **Control + A** to select all channels. ▪ Use the keyboard **Up/Down Arrows** to select one channel, either the one below the selected channel (keyboard down key) or the one above the selected channel (keyboard up key). ▪ **Gang Controls** only work on selected channels. ▪ Individual channels can be selected for gang control using the check boxes on the channel lines themselves.

2) **Channel Section**

Each single row in the **Clip Controller** represents a record channel, either on your **mRes** system or on other **mRes** systems that are connected to yours via the network. Refer to the **Channel Description** section for complete details on each channel.

Note
You can click and drag channels to re-arrange their order on the **Controller** screen. To reset the channels back to their original order, click the **Reset Channel Order** button in the top **Channel Controls** section. Refer to the **Channel Controls** section for details.

3) **Channel Controls**

At the top of the menu, a group of channel controls enable you to reset the channel order, change the channel view, expand or contract channel information, and access the **Setup Menu**. You can also click the question mark (**?**) to access this manual. Refer to the **Channel Controls** section for complete details.

4) **Metadata Profile**

If certain metadata fields (e.g., **Act**, **Take**, **Scene**, etc.) are *unlocked* in the **Metadata Profile Setup** menu, those fields will appear in the **Metadata Profile** section at the bottom left corner of the **Controller**. An example is shown below:

These fields allow you to conveniently make changes to a certain metadata fields in a clip name — without going back to the **Metadata Profile Setup** menu. Changes made here are reflected on the Metadata **Profile Setup Menu**. See the **Metadata Profile Setup** section for details on metadata setup.

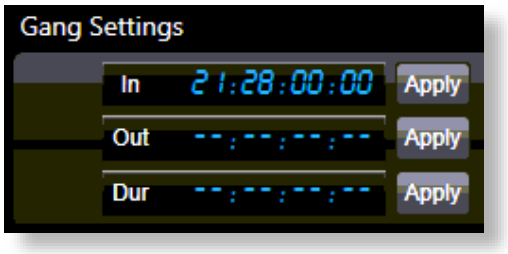
5) **Gang Controls**

The **Gang Controls** are used to simultaneously control multiple channels — that is, those channels that are selected via the left-hand check boxes.

From left to right, the four buttons are **Record**, **Wild Record**, **Seamless** and **Stop**. Refer to the **Record Controls** section for details.

6) **Gang Settings**

The three **Gang Settings** enable you to enter timecode numbers on multiple channels — that is, those channels that are *selected*. The **Inpoint**, **Outpoint** and **Duration** fields behave the same as those in an individual channel's **Clip Timecode** section.

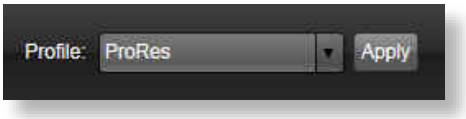


Refer to the **Entering Timecode** section for complete details on how to enter, clear and restore timecode in the three timecode fields.

Note
Illegal drop frame numbers are not corrected in the **Global Timecode Entry** section, because it is possible to have a project with mixed timecodes. Those corrections are made when the timecode is transferred to the channels using the **Apply** button. Illegal drop frame numbers *are* corrected in an individual channel's **Clip Timecode** section.

7) **Global Profile**

The **Global Profile** section enables you to apply a **Record Profile** to multiple channels — that is, only those channels that are *selected*.

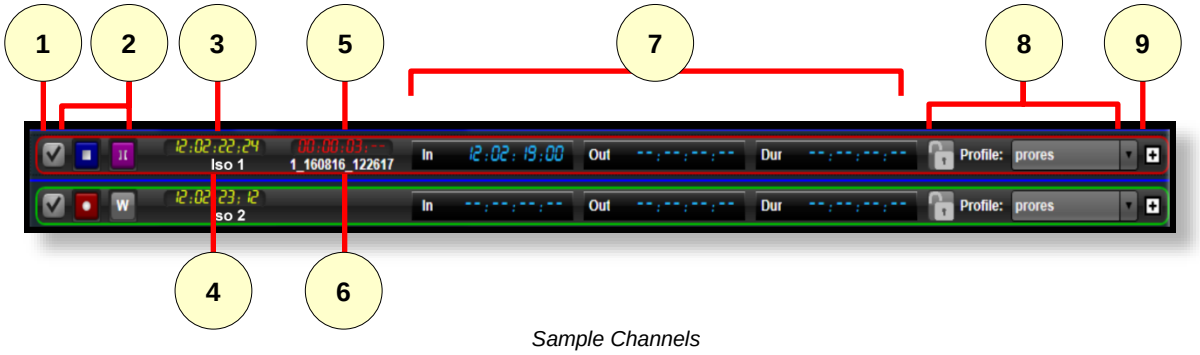


Channel Description

Each bordered row in the **Clip Controller** represents a record channel. Please note the use of color:

- **Red border** — the channel is in record.
- **Green border** — the channel is active, but not in record.
- **Yellow border** — there is an error or bad configuration state. See the **Log History** to learn more about the error.

The image below shows two channels:



Sample Channels

1) **Channel Select**	2) **Record Controls**	3) **Current Timecode**
4) **Channel Name**	5) **Current Record Duration**	6) **Clip Name**
7) **Clip Timecode**	8) **Record Profile**	9) **Expand Channel**

Each channel is described below:

1) **Channel Select**

Check the box to select the channel.

Uncheck the box to deselect the channel.

You can click the box with the mouse, or use the **Up** and **Down** arrows to select a channel. When you select a channel is this manner, all other channels are de-selected. If one or more channels are selected, the **Gang Controls** are activated.

2) **Record Controls**

The **Record Controls** are used to start and stop clips, create **Wild** clips, and start a **Seamless** clip. Each channel has its own **Record** and **Stop** buttons that work as a toggle. For example, when **Record** is clicked, the button automatically toggles to **Stop**.

Click the **Record** button to start making a clip.

If the **Stop** button is visible, the channel is currently making a clip. Click **Stop** to stop the recording process.

When an **mRes** channel is busy, the **Busy** button appears. In this condition, the channel is either inactive, is starting the process of making a clip, or finishing making a clip.

The **Seamless** button appears when a channel is in record. Click the button to complete the current recording and start a new one on the next frame. This feature allows you to make clips that are manageable in size, yet never lose a frame. This is especially useful for reality shows that record all of the action and never really stop tape.

The feature is also useful for shows that send clips to post-production while recording. In this case, you can click the **Seamless** button, wait for the first clip to be finalized (the process only takes a few seconds) and then copy the clip to its post-production destination. The key point is that no frames are lost.

If the channel is active but not in record, and a **Wild Record Naming** profile has been configured, the **Wild Record** button appears. Click the button to initiate a wild recording using the **Wild Record Naming** profile.

If a **Wild Record Naming** profile has not be defined, the **Wild Record Inactive** button appears.

3) **Current Timecode**

To the right of the **Record Controls**, the top display is the current (incoming) timecode that **mRes** is reading for that channel. This display mirrors the TC display beneath the **Preview Monitor** (in the **mRes Monitor**) for the selected channel.

4) **Channel Name**

Underneath the **Current Timecode** is the channel name. When you name channels in the **mRes Monitor** application or using the **Server Setup Menu**, this action populates the **Channel Name** fields in the **Clip Controller** application.

5) **Current Record Duration**

The current clip's **Record Duration** appears to the right of the **Current Timecode** field. This section is only visible when a channel is making a clip.

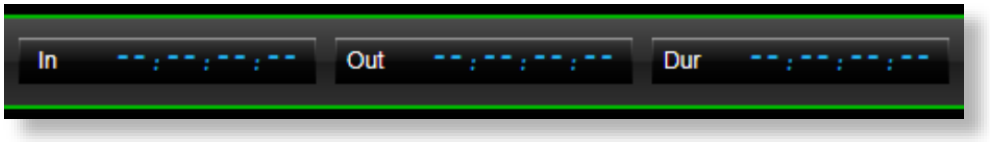
6) **Clip Name**

The **Clip Name** appears below the **Record Duration**. Refer to the Clip Naming Setup section for instructions on creating a clip naming template.

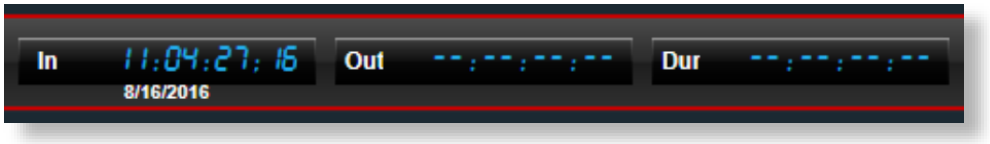
7) **Clip Timecode**

The **Clip Timecode** section appears to the right of the **Record Duration** and **Clip Name** fields. The section consists of three fields: **Inpoint**, **Output** and **Duration**. Three different states are possible:

- **State 1**: The channel is not creating a clip. All fields are blank. The channel border is **Green**.



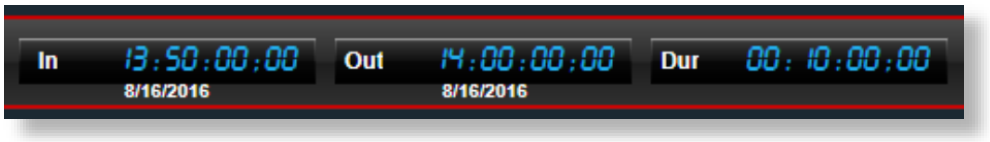
- **State 2**: The channel is creating an open-ended clip. The channel border is **Red**.



Two conditions can cause this state:

- A clip is being created "on the fly." This means that no timecode was entered before the **Record**, **Wild Record**, or the **Seamless** buttons were pressed. Here, the controller grabs the next available timecode and places it in the **Inpoint** field.
- You manually entered an **Inpoint** timecode (e.g., 11:04:27;16), you left the **Outpoint** and **Duration** fields blank, and clicked **Record**.

- **State 3**: The channel is creating a clip from entered timecodes. The channel border is **Red**.



Two conditions can cause this state:

- You manually entered an **Inpoint** and **Outpoint**, and clicked **Record**.
- You manually entered an **Inpoint** and **Duration**, and clicked **Record**.

This is the proper way of creating a clip in the **Loop Recorder**.

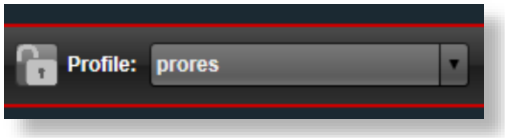
Note
You can also create a clip "in the future" by entering a timecode that is later than the current time and clicking **Record**. In this case, **mRes** waits until that time is current, and then creates the clip. This method is especially useful when recording a live show that is on a fixed time schedule.

Refer to the **Entering Timecode** section for complete details on how to enter, clear and restore timecode in the three timecode fields.

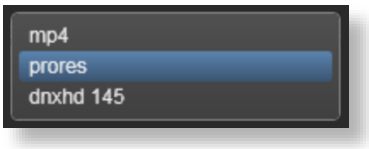
8) **Record Profile**

A **Record Profile** is comprehensive set of instructions (all stored under one name) that tells mRes how to create clips, which codecs and wrapper to use, and where to store each finished clip. On the **Setup** screen, you can create multiple Record Profiles, per the exact requirements of the event or production.

The **Record Profile** section appears to the right of the **Duration** field. To make clips in **mRes** you must create at least one **Record Profile**. In all likelihood, there will be more than one, so it is important that you confirm that all settings are correct for the current production.



Click the down arrow to select the desired **Record Profile**. The choices in the list reflect the profiles that you have created.



Once you have selected a profile, you can lock it by clicking the **Lock Icon**. The icon changes to "locked," and the down arrow is removed.

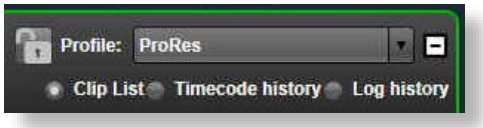
Locking profiles is a good way to prevent accidental changes that may create clips that are not what post production is expecting. To unlock the **Record Profile**, simply click the **Lock Icon**.

Note
Changing a Record Profile while making a clip will not damage or change that clip in any way. However, the next clip will be created using the newly selected Record Profile.

9) **Expand Channel**

Each channel can display historical information about **Clips** that you have made, or about **Timecode** information for that particular channel's record loop. Click the **+** at the far right of a channel to expand it.

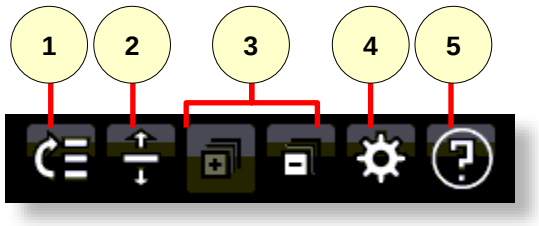
When expanded, three radio buttons appear: **Clip List**, **Timecode History** and **Log History**, each of which has an associated table.



Refer to the **Clip List History**, **Timecode History**, and **Log History** sections for details.

Channel Controls

The **Channel Controls** are located at the top right corner of the **Clip Controller** screen:



Channel Controls

1) **Restore Channel Order**	2) **View**	3) **Expand / Contract**	4) **Setup**	5) **Help**

Each control is described below:

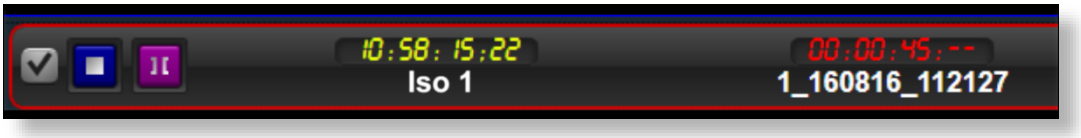
1) **Restore Channel Order**

On the **Controller** screen, you can click and drag channels to re-arrange their order. To reset the channels back to their original order, click the **Reset Channel Order** button.

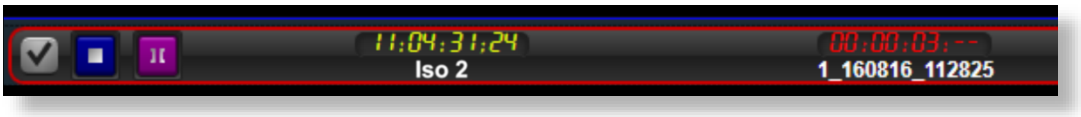
2) **View**

Click the **View** button to toggle between the **Normal** or **Condensed** views.

In the **Normal** view, a channel appears as follows:



In the **Condensed** view, a channel appears as follows:

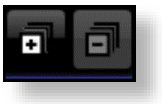


The **Condensed** view displays more channels without scrolling, but text size is smaller. So, if the number of channels fits on screen in the **Normal** view, they are easier to see. If you are controlling a lot of channels, the **Condensed** view might be more convenient.

Tip
Click **SHIFT +** to select **Condensed** view, and **SHIFT –** for **Normal** view.

3) **Expand / Contract**

Each channel can display historical information, such as details about clips, or timecode break information about the record loop for that particular channel. The following button pair expands or contracts all *selected* channels:



Tip
Use the **Left** and **Right** arrow keys to expand or contract selected channels. Refer to the **Channel Description**, **Clip List History** and **Timecode History** sections for details on the data displayed when a channel is expanded.

4) **Setup**

Click the **Setup** button to access the **Setup Menu**, which is used to configure the **mRes Clip Controller**. Clicking the button again toggles the screen back to the **Clip Controller**. The **Setup Menu** enables you to set up channels, storage, record profiles, metadata profiles, clip naming, and wild record naming.

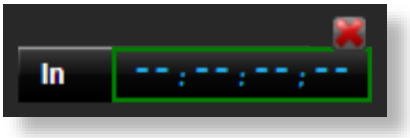
Refer to the **Understanding mRes Setup** and **Configuring mRes Setup** sections for details.

5) **Help**

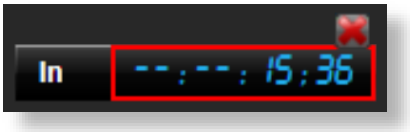
Click the **Help** button to display the mRes help file.

Entering Timecode

To enter timecode in any of the three fields (**Inpoint**, **Outpoint** or **Duration**), simply click on the field. The timecode field appears blank, a green border appears, and the red **X** appears:

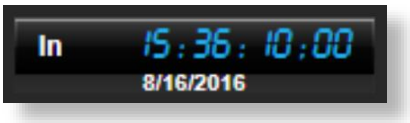


Type the desired timecode. As you type, the timecode numbers shift from right to left, and the border changes to red. For example, to enter **15:36:10;00**, the field appears as follows after the first 4 digits:



Continue typing until all numbers have been entered, at which time, the field appears as follows:

Press **Enter** to complete the entry, at which time the border clears, and the field appears as follows. Note also that the **Date** is added.



- Regarding the **Date**, if your **Loop Recorder** has stopped and started several times, you may have multiple frames with that identical timecode across more than one day. In this case, you will be prompted to select a day. This feature allows you to go back in time, and create a clip from the past.

Clearing Timecode Entries

Click the **X** in the upper right hand corner of a timecode field to clear the current contents of a field.

Restoring Timecode Entries

Press **ESC** while entering timecode to restore the previous value — prior to when you started typing.

Additional Timecode Notes

Note the following important points regarding timecode entries:

- Entering **Outpoints** and **Durations** works the same as entering **Inpoints**.
- If two of the three fields are filled, the third field is automatically calculated with a valid timecode.
- Illegal timecodes are automatically corrected. For example, if you type **01:60:00;00** and press **Enter**, the timecode is corrected to **02:00:00;00**.
- If the channel is recording drop frame timecode, incorrect entries are corrected. For example, if you type **01:01:00;00** and press **Enter**, the timecode is properly converted to **01:00:59;28**.
- Remember that illegal drop frame numbers are *not* corrected in the **Global Timecode Entry** section, because it is possible to have a project with mixed timecodes.

History Tables

There are three different history tables that can be displayed beneath a selected channel:

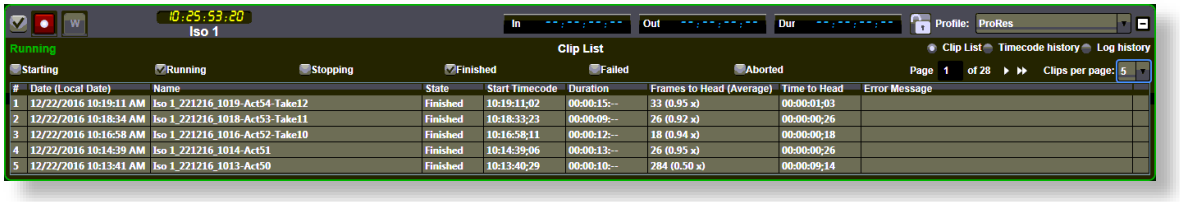
- **Clip List History**
- **Timecode History**
- **Log History**

History table descriptions are provided below.

Clip List History

When a channel is expanded using the **+** button, selecting the **Clip List** radio button displays a list of clips. Each channel has its own clip list, a sample of which is shown below.

Note
This list is identical to the **Clip List** in **mRes Monitor**, but more clips can be displayed here, in conjunction with the complete channel record activity.



Clip List History (sample)

The check boxes at the top of the **Clip List** allow you to filter the table with the selected categories of information. Unchecking a box removes that information from the table. Check box definitions are:

- **Starting** — display clips that are currently starting to be created.
- **Running** — display clips that are currently being created.
- **Stopping** — display clips that are stopping.
- **Finished** — display completed clips.
- **Failed** — display clips that have failed to be created (for example, if your storage fell off line).

- **Aborted** — display clips whose creation has been aborted (for example, if communication was lost).

Column headings are defined below:

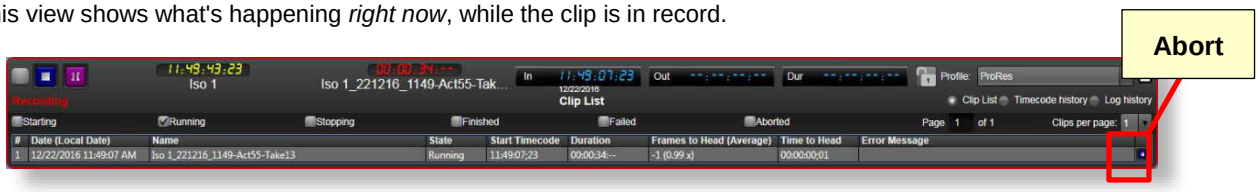
- # — displays the clip's index number. The first clip in the list (e.g., #1), is the *most recent* clip that has been created.
- **Name** — displays clip names (as derived from your naming profiles).
- **State** — displays the selected clip state (as indicated by the check boxes).
- **Start Timecode** — displays the clip's starting timecode.
- **Duration** — displays the duration of the clip.
- **Frames to Head (Average)** — displays how close the clip's leading edge was to the position of the **Loop Recorder**, at the time the clip was finished. Refer to the **Frames to Head** section for details.
- **Time to Head** — displays the same information as **Frames to Head (Average)**, except timecode format (HH:MM:SS:FF) is used. Refer to the **Frames to Head** section for details.
- **Error Message** — displays clip error messages as required.

Note
▪ You can set the number of clips per **Clip List** page, using the controls to the right of the check boxes. Choices are **1**, **5**, **10** and **20**. ▪ You can change the width of the columns, by clicking and dragging the border between column headings.

The mRes Controller keeps multiple reports for each state. Since **Starting** and **Stopping** are transitory, the lists are most useful for **Running**, **Finished** and **Failed**.

Important
Always keep an eye on the **Running** view. This view tells you if clip creation is successful — which will be the case if everything is properly set up. If there's a problem connecting to storage, or if the storage has filled up, clips cannot be created. Therefore it is wise to check this view often.

The **Running** display (by itself) is the recommended view to use most of the time, a sample of which is shown below. This view shows what's happening *right now*, while the clip is in record.



Clip List Running display (sample)

- The **Abort Button** appears at the far right of each running clip entry. Click the button to immediately stop a recording in progress — for example, if a problem occurs with storage. Depending on where the clip creation error occurred, the abort process can take several minutes or more to finalize.

When the **Abort Button** is clicked, the following dialog appears.

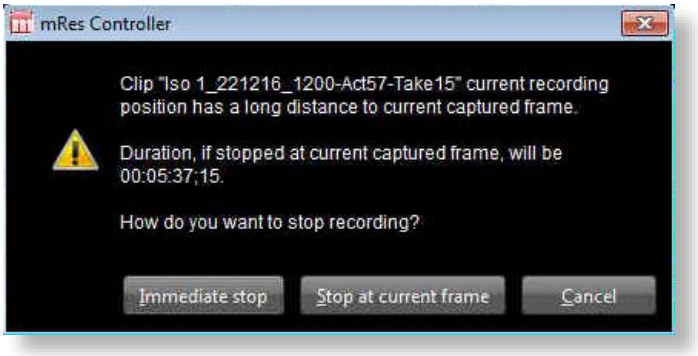
- Click **Yes** to force the recording to stop.
- Click **No** or **Cancel** to continue recording.

Refer to the **Stop Modes** section for more information.

Stop Modes

There are three different "**stop**" modes:

- **Mode 1** — the **Abort Button** stops recording immediately at the current location, and creates the file.
- **Mode 2** — the normal blue **Stop** button also stops the clip, but if the clip was behind (in the past), the following dialog appears:



  - Click **Immediate Stop** to stop at the current timecode.
  - Click **Stop at Current Frame** to instruct the system to continue to record up to the programmed out-point. Essentially, the system continues recording until it catches up to the programmed out-point, and then stops.
  - Click **Cancel** to continue recording.
- **Mode 3** — if you go into record without an in-point (e.g., at the current time), and click the normal blue **Stop** button, the system stops at the current time, with no prompts.

Frames to Head

The **Frames to Head (Average)** column shows how close a clip's leading edge is to the position of the **Loop Recorder** — at the time the clip finished. The number in parentheses to the right of the frames count shows the average speed at which the clip was written to storage. The **Time to Head** column displays the same information in timecode format (HH:MM:SS;FF), but the write speed value is not included.

In the first example below, a clip was created by clicking **Record** at the Loop Recorder's current position — without entering an in-point or an out-point.

#	Date (Local Date)	Name	State	Start Timecode	Duration	Frames to Head (Average)	Time to Head
1	12/22/2016 4:11:39 PM	Iso 1_221216_1611-Scene2-Take2	Finished	16:11:39;04	00:00:19:--	24 (0.95 x)	00:00:00;24

- The **Frames to Head** column lists 24, which means that the clip was only 24 frames behind the leading edge of the Loop Recorder, and the write speed indicates (0.95 x). These numbers are average values.
- **Time to Head** indicates 24 frames.
- All of these indicate very good performance. When the leading edge of the clip is that close to the Loop Recorder, it's physically impossible to write above 1x.

In the second example below, a clip was created by entering an in-point and out-point that are back in time on the Loop Recorder.

#	Date (Local Date)	Name	State	Start Timecode	Duration	Frames to Head (Average)	Time to Head
1	12/22/2016 4:15:35 PM	Iso 1_221216_1615-Scene3-Take3	Finished	16:10:00;00	00:00:10:--	9947 (1.77 x)	00:05:31;27

- The **Frames to Head** column lists 9947, which means that the clip was 9947 frames behind the leading edge of the Loop Recorder, and the write speed indicates (1.77 x). These numbers are average values.
- **Time to Head** indicates 5:31;27.
- In this example, the clip's inpoint was about 5.5 minutes back from the leading edge of the Loop Recorder when the clip finished, and the clip was being written to storage *faster* than realtime. This is normal performance when a clip is being created from earlier in the loop.

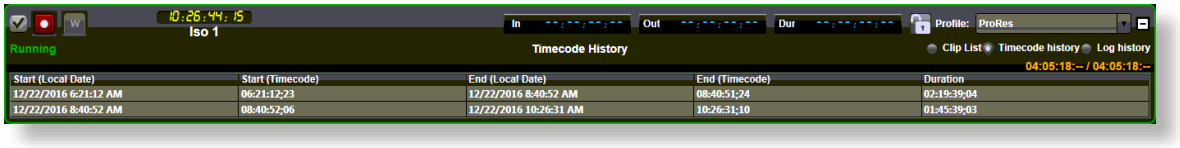
Important

The speed at which clips are written to storage is affected by CPU performance. The **mRes** system is optimized for writing across network storage paths (e.g., NAS).

- If you write to USB3 devices, for example, the system may throttle the write speeds back, so as not to affect CPU performance. In this way, **mRes** prevents the USB3 bus from becoming over-saturated.
- If a channel is paused and you elect to write to USB3 devices, the system does not need to throttle back write speeds.

Timecode History

When a channel is expanded using the **+** button, selecting the **Timecode History** radio button displays a list of valid timecode stamps that indicate when the Loop Recorder was started and stopped. Each channel has its own timecode history, a sample of which is shown below.



Timecode History (sample)

Column headings are defined below:

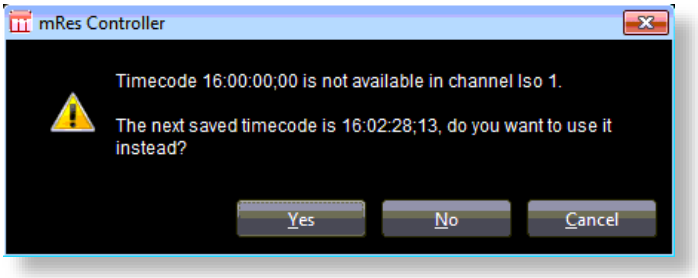
- **Start (Local Date)** — displays the date and time on which the Loop Recorder was started.
- **Start (Timecode)** — displays the timecode at which the Loop Recorder was started.
- **End (Local Date)** — displays the date and time on which the Loop Recorder was stopped.
- **End (Timecode)** — displays the timecode at which the Loop Recorder was stopped.
- **Duration** — displays the duration for which the Loop Recorder ran.

The **Local Date** is important, because **mRes** records across midnight (00:00:00;00), and duplicate timecodes can exist. For example, if you stop recording on Monday and return on Thursday. The calendar lets you see if a timecode still exists, or if it was burned over.

Timecode breaks on a **Loop Recorder** can occur in the following situations:

- When recording happens over midnight (from **23:59:59;29** to **00:00:00;00**).
- When an **mRes** system is turned off.
- When an operator pauses a channel (using the **Server Setup Menu**). Refer to the **Server Setup** section for details.

Because of the likelihood of timecode breaks, the **Timecode History** list displays the active and valid timecode stamped recordings. Clips can only be created using valid timecode sections. If you try to create a clip that contains invalid timecode, the following error message appears:

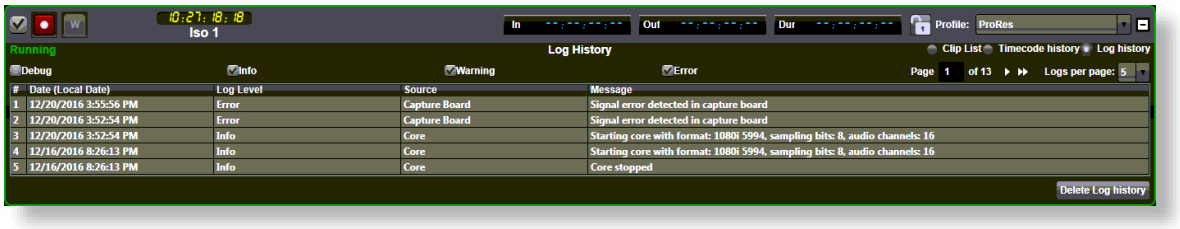


- Click **Yes** to use the next recommended timecode.
- Click **No** or **Cancel** to cancel the procedure.

Log History

When a channel is expanded using the **+** button, selecting the **Log History** radio button displays a list of log entries. Each channel has its own log history, a sample of which is shown below.

Note
This list is identical to the **Log History** in **mRes Monitor**, but more clips can be displayed here, in conjunction with channel record activity.



Log History (sample)

The check boxes at the top of the **Log History** allow you to filter the table with different categories of information. Unchecking a box removes that information from the table. Check box definitions are listed below:

- **Debug** — displays debug information, exclusively for the programmers.
- **Info** — displays selected information.
- **Warning** — displays system warnings.
- **Error** — displays system error messages.

Column headings are defined below:

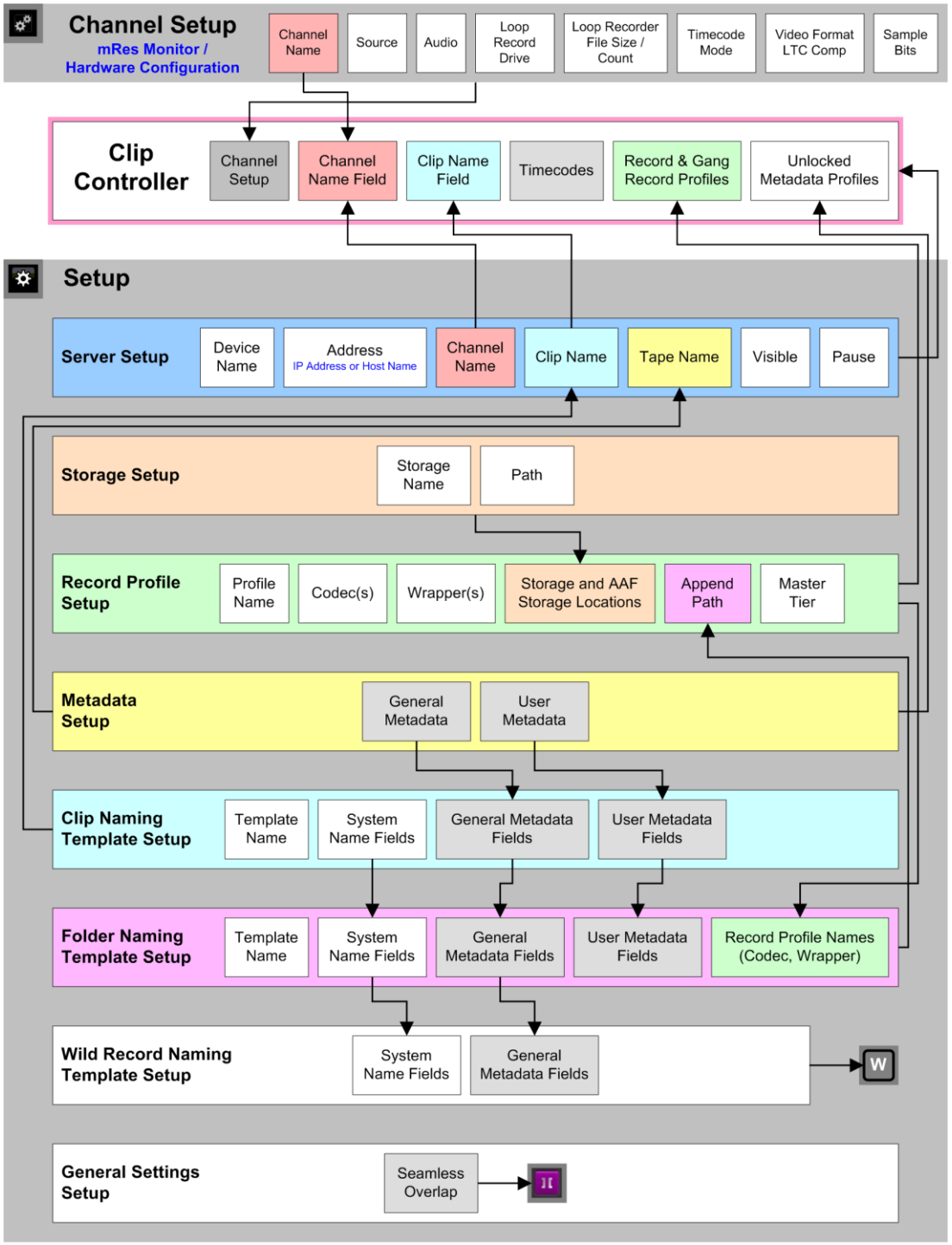
- # — displays the clip's index number. The first entry in the list (e.g., #1), is the *most recent* entry.
- **Data (Local Date)** — displays the date on which the log entry occurred.
- **Log Level** — displays the level of the log entry, e.g., debug, info, warning or error.
- **Source** — displays the component that generated the log entry, e.g., core, capture board.
- **Message** — displays additional information regarding the log entry.

Note
▪ You can set the number of log entries per **Log History** page, using the controls at the bottom of the list. Choices are **1**, **5**, **10** and **20**. ▪ Click **Delete Log History** to delete the log list. ▪ Click and drag the border between column headings to change the width of the columns.

Note
A more comprehensive logging file is available as an administrative function. Consult with **Pronology Technical Support** for details.

4. Understanding mRes Setup

Prior to learning about **mRes** setup, please review this section to better understand setup menu interconnection. Use the following chart for reference.



The **mRes** setup system is complex.

- Under the **mRes Monitor**, one **Channel Setup** menu is provided, on which each section must be set up to properly configure **mRes** hardware.
- Under the **mRes Clip Controller**, seven setup menus are provided. Each must be set up properly, in order for you to record clips, choose the correct codecs and wrappers, name the clips, and store them in the desired destinations.

In terms of setup, the most commonly asked questions are:

- Where does this setup data come from?
- From which setup menu does the data originate?
- How can I navigate to a menu quickly, in order to make changes?

The previous chart is essentially a road map of the entire **mRes** setup scheme. The layout (from top to bottom) mirrors the way that the actual **Setup** menus are displayed under the **mRes Clip Controller**.

The chart is designed to help you identify where data originates, where it is routed, and how the various setup menu interact. As you learn about each setup menu in the following sections, please refer to the map to clearly understand the functions and interrelations of the various setup menus.

About the Chart

To explain the chart in brief:

- **Channel Setup Menu**

  The **Channel Setup Menu** is key to hardware setup. Always set this menu up first, prior to any other **mRes** setup functions.

  Functions:

  - Set up hardware for each *local* **mRes** ingest channel that appears on the **Clip Controller**.
  - Enter (or change) channel names.
  - See the **Channel Setup Menu** section for full details.

- **Clip Controller**

  The **Clip Controller** is the heart of the **mRes** system. Your recordings are initiated here.

  Functions:

  - Hardware setup functions for *local* channels are derived from the **Channel Setup Menu**.
  - The **Server Setup Menu** determines which local or remote channels appear.
  - Channel names are derived from the **Channel Setup Menu** or the **Server Setup Menu**.
  - Clip naming templates are derived from the **Server Setup Menu**, which in turn derives the names from the **Clip Naming Template Setup Menu**.
  - Record profiles and gang record profiles appear in drop down menus. The profiles are derived from the **Record Profile Setup Menu**.
  - Lock / unlock **Record Profiles**.
  - Unlocked metadata profiles are derived from **Metadata Setup Menu**.
  - See the **mRes Controller** section for full details.

- **Server Setup Menu**

  The **Server Setup Menu** enables you to manage the channels that appear on the **Clip Controller**.

  Functions:

  - Add and delete servers.
  - Enter local and remote server device names and network addresses.
  - Enter or change channel names.
  - Hide or reveal channels.
  - Pause or run channels.
  - Clip naming templates appear in drop down menus. The templates are derived from the **Clip Naming Template Setup Menu**. The selected templates are used on the **Clip Controller**.
  - Tape names appear in drop down menus. The templates are derived from the **Metadata Setup Menu**.
  - See the **Server Setup** section for full details.

- **Storage Setup Menu**

  The **Storage Setup Menu** enables you to configure the external storage location(s) onto which you want to store your compressed clips

  Functions:

  - Enter external storage device names.
  - Enter the network paths to the external devices.
  - Storage selections appear in drop down menus on the **Record Profile Setup Menu**.
  - See the **Storage Setup** section for full details.

- **Record Profile Setup Menu**

  The **Record Profile Setup Menu** enables you to create the profiles that instruct **mRes** how to make clips, which codecs and wrappers to use, and where to store the finished clips.

  Functions:

  - Add, name, and delete record profiles.
  - Add and delete codec(s) to/from record profiles.
  - Add and delete wrapper(s) to/from codecs.
  - Designate storage locations (record destinations) for recorded clips. The storage selections appear in drop down menus. The locations are derived from the **Storage Setup Menu**.
  - Designate a sub-folder (or **Append Path**) under the selected storage location into which the clips will be stored. The **Append Paths** are derived from the **Folder Naming Template Setup Menu**. The paths appear in drop down menus.
  - Designate a codec as a master tier.
  - Record profiles (and all data associated with the profile) appear in drop down menus on the **Clip Controller**.
  - See the **Record Profile Setup** section for full details.

- **Metadata Setup Menu**

  The **Metadata Setup Menu** enables you to set up standard and custom metadata fields as part of your clip names and/or folder names.

  Functions:

  - Set up a variety of **General Metadata** fields, including counter values and generic labels.
  - Reset counter values.
  - Add and delete **User Metadata** fields. Set their values as fixed, counter or free label.
  - Lock and unlock both **General Metadata** and **User Metadata** fields. Unlocked fields appear in the **Metadata Profile** section at the bottom of the **Clip Controller**.
  - Metadata fields appear in the **Tape Name** drop down menus on the **Server Setup Menu**.
  - **General Metadata** field selections are routed to the following setup menus:
    - Clip Naming Template Setup Menu
    - Folder Naming Template Setup Menu
    - Wild Record Template Naming Setup Menu
  - **User Metadata** field selections are routed to the following setup menus:
    - Clip Naming Template Setup Menu
    - Folder Naming Template Setup Menu
  - See the **Metadata Profile Setup** section for full details.

- **Clip Naming Template Setup Menu**

  The **Clip Naming Template Setup Menu** enables you to define the naming conventions for your recorded clips, and save them as templates.

  Functions:

  - Add, manage and delete clip naming templates.
  - Add, delete, and rearrange **System** names and separators within templates.
  - Add delete, and rearrange **General Metadata** fields within templates. **General Metadata** values are derived from the **Metadata Setup Menu**.
  - Add delete, and rearrange **User Metadata** fields within templates. **User Metadata** values are derived from the **Metadata Setup Menu**.
  - Templates appear in the **Clip Naming** drop down menus on the **Server Setup Menu**.
  - See the **Clip Naming Setup** section for full details.

- **Folder Naming Template Setup Menu**

  The **Folder Naming Template Setup Menu** enables you to create the naming conventions for the folders in which your clips will be stored.

  Functions:

  - Add, manage and delete folder naming templates.
  - Add, delete, and rearrange **System** names and separators within templates.
  - Add delete, and rearrange **General Metadata** fields within folder templates. **General Metadata** values are derived from the **Metadata Setup Menu**.
  - Add delete, and rearrange **User Metadata** fields within folder templates. **User Metadata** values are derived from the **Metadata Setup Menu**.
  - The **Codec** and **Wrapper** names are derived from the **Record Profile Setup Menu**.

- Folder naming templates appear in the **Append Path** drop down menus on the **Record Profile Setup Menu**. They are used as sub-folders under the selected storage locations.
- See the **Folder Naming Setup** section for full details.

- **Wild Record Naming Template Setup Menu**

  The **Wild Record Naming Template Setup Menu** enables you to create a special naming convention for clips. This template is used in special circumstances, such as when the Director calls for a pickup.

  Functions:

  - Add, manage and delete the wild record naming template. Only one can be configured.
  - Add, delete, and rearrange **System** names and separators within the template.
  - Add, delete, and rearrange **General Metadata** names and separators within the template.
  - The template is applied whenever a Wild Recording is initiated on the **Clip Controller**.
  - See the **Wild Record Naming Setup** section for full details.

- **General Settings Menu**

  The **General Settings Menu** provides a variety of general setup functions. Additional items will be added in subsequent **mRes** versions.

  - Configure the **Seamless Overlap** duration, in seconds.
  - See the **General Settings Setup** section for full details.

5. Configuring mRes Setup

The **mRes Clip Controller** communicates with **mRes** record channels to instruct them how to record, where to place the recorded clips, and how to name the clips and folders. To do that, the following functions must be configured using the **Setup Menu**.

- **Server Setup**
- **Storage Setup**
- **Record Profile Setup**
- **Metadata Profile Setup**
- **Clip Naming Setup**
- **Folder Naming Setup**
- **Wild Record Naming Setup**
- **General Settings Setup**

To access the **Setup Menu**, click the **Setup** button in the top right corner of the **Clip Controller**. Note that the button changes its appearance.

Click the button again to toggle back to the **Clip Controller**.

The **Setup Menu** includes a **Navigation Pane** on the left side of the screen. Clicking a line item in the **Navigation Pane** changes the right-hand pane, enabling you to set up that item.

Important
Set up your **mRes** system in the order listed above, starting with **Server Setup**, and continuing with **Storage Setup**, **Record Profile Setup**, **Metadata Profile Setup**, **Clip Naming Setup**, **Folder Naming Setup**, **Wild Record Naming Setup** and **General Settings Setup**.

Server Setup

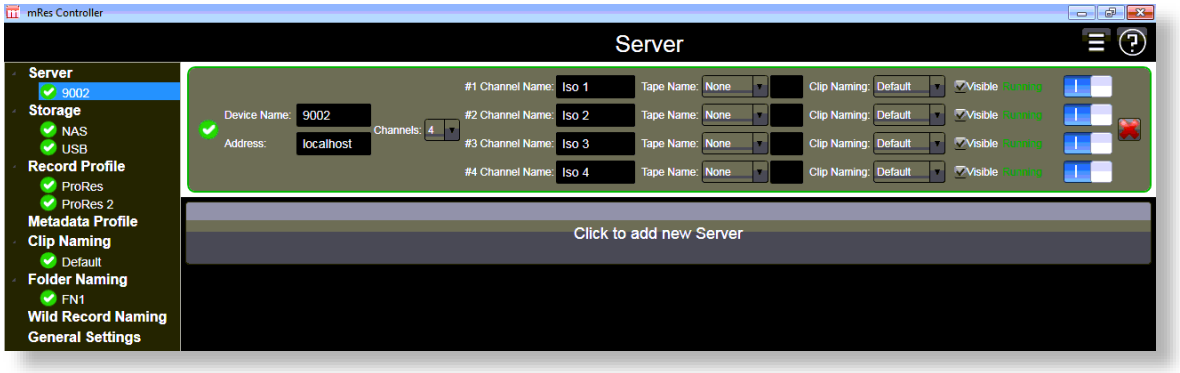
The **Server Setup Menu** enables you to add channels and manage channels. Here, essentially, you are configuring *virtual* channels and assigning them to the **mRes** system's *physical* ingest channels.

- Each server consists of a device name, an address, and individual (virtual) channels.
- Each virtual channel consists of a name, tape name, and clip naming profile.
- You can make channels visible or invisible in the **Clip Controller**, pause channels and delete channels.

Using the **Server Setup Menu**, you can add (and control) channels on other **mRes** servers — that is, servers that are *not* the localhost. For example, you can record clips on your four local virtual channels (e.g., Iso 1, 2, 3, 4), and simultaneously record clips on another server's four channels (e.g., channels 1, 2, 3, 4 on server 9003) — all from the **Clip Controller** interface.

Note
Remember that the **mRes Monitor** application sets up the local host machine only. Channels on other servers must also be set up locally.

In the **Navigation Pane** on the left, click the **Server** heading, or click any of the servers that are already configured to display the data regarding that server. The figure below illustrates a sample server configuration.

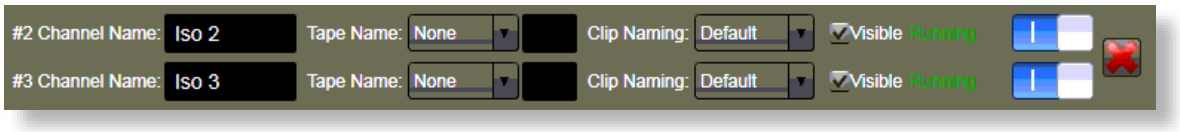


Server Setup Pane (sample)

The following fields are provided for the server itself:

- **Check Mark** — the green check mark indicates that all setup fields of the server and its associated channels are properly configured.
- **Device Name** — use this field to enter the server name.
- **Address** — use this field to enter the network location on which the target server resides. Use an IP Address or a host name (e.g., localhost — if the server is on the same machine as **mRes**).
- **Channels** — use the down arrow to select the number of ingest channels you wish to control on the target server (**1**, **2** or **4**).

For each virtual channel (two of which are shown below), the following fields are provided:



- **Channel Name** — use these fields to name each virtual channel. Ensure that all channel names are unique. Duplicate channel names are not permitted.

Note
The **Channel Names** are global for *this* **mRes** server. The names that are entered here also appear in the **mRes Monitor Channel**. Similarly, if you change a name in the mRes **Monitor Channel**, it appears here. Refer to the **Channel Components** section for details.

- **Tape Name** — use this field to enter an **Avid OPAtom .mxf** metadata field that is typically used to relink Avid media. You can also use the field to enter tape names. In each case, the **Tape Name** field must be part of your selected **Clip Naming** profile. Refer to the **Clip Naming Setup** section for details.

  The selections that appear in the drop-down menu are derived from the standard and custom selections on the **Metadata Profile Setup** menu. Refer to the **Metadata Profile Setup** section for details. The metadata selection serves as a prefix to the **Tape Name** field to the right, in which you can enter any text or number as desired.

  When a clip is created using a metadata selection (e.g., **Act**, **Scene**, etc.) plus a **Tape Name**, the actual clip name that is created will not list the metadata name. It will only increment the metadata value, followed by the **Tape Name**.

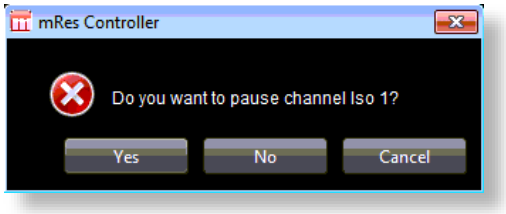
  For example:

  - Your **Clip Name** template is set to **Channel Name** – **Date** – **Tape Name**.
  - In the server channel, the **Tape Name** drop-down is set to **Act**.
  - The **Tape Name** field is set to **A-roll**. This text (or value) does not increment.
  - In the **Metadata Profile**, the **Act** counter is set to **1**, and the reset button is clicked.
  - When a clip is created, the tape name is **Channel Name** – **Date** – **1A-roll**.
  - When the next clip is created, the tape name is **Channel Name** – **Date** – **2A-roll**. Notice that the **Act** value incremented from **1** to **2**.

Note
If you neglect to define a **Tape Name** field and **None** is selected in the drop-down list, the **Tape Name** defaults to the **Channel Name**.

- **Clip Naming** — use this field to select a clip naming profile. The selections that appear in the drop-down menu are derived from **Clip Naming Setup** menu. Refer to the **Clip Naming Setup** section for details.
- The **Visible** checkbox allows you to hide (or reveal) a channel in the **Clip Controller**. This feature is useful when controlling a large number of channels. For example, if you have 24 channels configured for a particular job, but you're only using six on the first day of the event, you can hide the unused channels.

- The **Channel State** label shows the current state of the channel's **Loop Recorder**. The three possible states and colors are:
    - **Running**: **Green**
    - **Paused**: **Yellow**
    - **Error**: **Red**
- To pause a channel, click and drag the **Pause** slider to the right. This action temporarily stops the **Loop Recorder** for that particular channel. The following dialog appears:



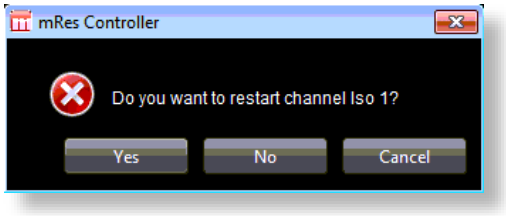
If you click **Yes**, the channel pauses and the **Status** area appears as follows:

When the channel is paused, its timecode is also paused in the **Clip Controller** screen. If a channel is expanded, the **Paused** label appears under the **Record** button.

The **Pause** feature is important for content protection purposes, if required. Because the **Loop Recorder** runs constantly and has a limited amount of file storage capacity, when it reaches the end of its loop, it circles back, and starts recording over material at the start of the loop.

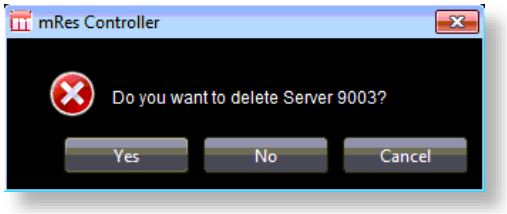
For example, at the end of a production day, to ensure that footage is available the next morning in case post production is missing some content, you can pause the loop. The next morning, as required, enter the missing timecode numbers, recover the missing footage, and re-start the loop.

- To restart the channel, click and drag the slider to the left. The following dialog appears:



Click **Yes** to start the channel. Click **No** or **Cancel** to continue pausing.

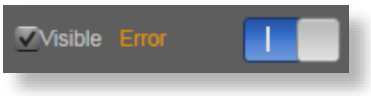
- To remove a server, click the **X**. The following dialog appears:



Click **Yes** to delete the server. Click **No** or **Cancel** to keep the server.

Use this function if a server is no longer needed in your event or production. The *physical* server (local or remote) remains, but the *virtual* representation of the channels are removed from the controller.

- If the **Error** label appears, as shown below …



… one of the following conditions may be present:

  - The **mRes** Controller is turned off.
  - There is a communications error.
  - Remote control is over Ethernet, so the IP addresses may not match.
  - A cable is not connected.

Adding Servers

To add more servers, navigate to the bottom of the server list and click the **Click to add new Server** button. A blank server appears with a yellow border, as shown in the sample below. Caution triangles are placed in each field that requires data.

- Enter the **Device Name** and **Address**.
- Select the number of **Channels** on the server.
- **Name** each virtual channel.
- Select a **Tape Name** prefix and suffix (if required).
- Select a **Clip Naming** profile.

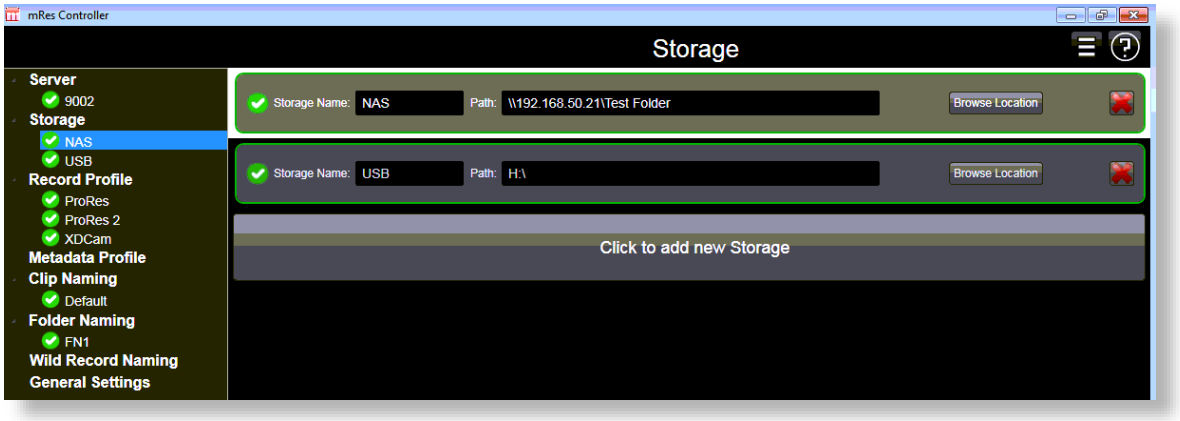
Repeat as required to add additional local or remote servers.

Storage Setup

The **Storage Setup Menu** enables you to configure the external storage location(s) onto which you want to store your compressed clips (e.g., **Avid**, **ProRes**, **AVC**, etc.) for editing. These locations are typically rack-mounted external drives or portable drives — typically connected via USB or the network.

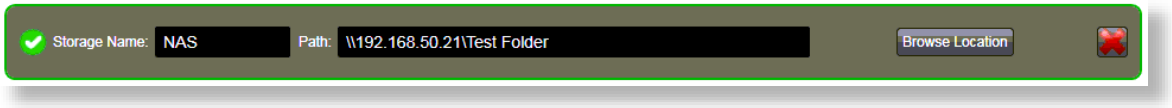
Because every event or production is different, the storage locations will most always be different. For example, in a remote truck, you may only be writing your files to portable storage devices, while in a studio, you may be storing to network drives or SANs (Storage Area Networks).

In the **Navigation Pane**, click the **Storage** heading, or click any of the storage locations that are already configured to display the **Storage Setup Pane**. The figure below illustrates a sample **Storage Setup Pane**. Each bordered group represents a storage location.



Storage Setup Pane (sample)

The figure below illustrates a single **Storage** location.



From left to right, the following fields are provided:

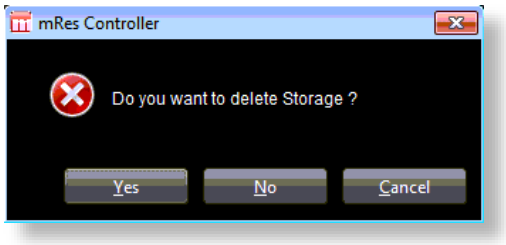
- **Name** — use this field to name the desired storage location.
- **Path** — use this field to locate the network path to the desired storage location (that is, the folder into which you want to store clips).
- **Browse Location** — use this field to find the correct external storage location. If the storage is over Ethernet, you will need the logon credentials to navigate to the correct location.

Important
Do not set up your local **C**, **D**, **E**, **F** or **G** drives as storage devices. These drives are the **mRes** system's OS and the four **Loop Recorders**, and you *do not* want to place compressed media files there. Only use external drives as storage locations.

If the credentials are unknown to this computer, you must complete the following form:

Important
Always check the **Remember my credentials** check box. This action is required to create clips.

- To remove a storage location, click the **X**. The following dialog appears:



Click **Yes** to delete the storage location. Click **No** or **Cancel** to keep the location.

Adding Storage

To add storage locations, navigate to the bottom of the storage list and click the **Click to add new Storage** button. A blank storage location appears with a yellow border, as shown in the sample below. Caution triangles are placed in each field that requires data.

- Enter data in *each* field.
- Continue adding storage locations as required for your event or production.

Tip
An excellent way to set up a network storage path is to click **Start**, and enter **\\ [IP address]** or **[shared storage name]**. When the Windows Security dialog appears, enter the **User Name**, **Password**, and be sure to check the **Remember my credentials** check box. If you have difficulty adding storage locations, always contact your network administrator.

Important
Always make a test recording after adding a new storage location, to verify that your clips appear in the desired location. Often, if a firewall is enabled, this will cause a recording to fail.

A Word about USB3 Storage

The speed at which clips are written to storage is affected by CPU performance. The **mRes** system is optimized for writing across network storage paths (e.g., NAS).

Important
▪ If you write to USB3 devices, for example, the system may throttle the write speeds back, so as not to affect CPU performance. In this way, **mRes** prevents the USB3 bus from becoming over-saturated. ▪ If a channel is paused and you elect to write to USB3 devices, the system does not need to throttle back write speeds.

Record Profile Setup

A **Record Profile** instructs **mRes** how to make clips, which codecs and wrappers to use, and where to store the finished clip. To set up a Record Profile, you will choose Codecs, Wrappers and storage locations.

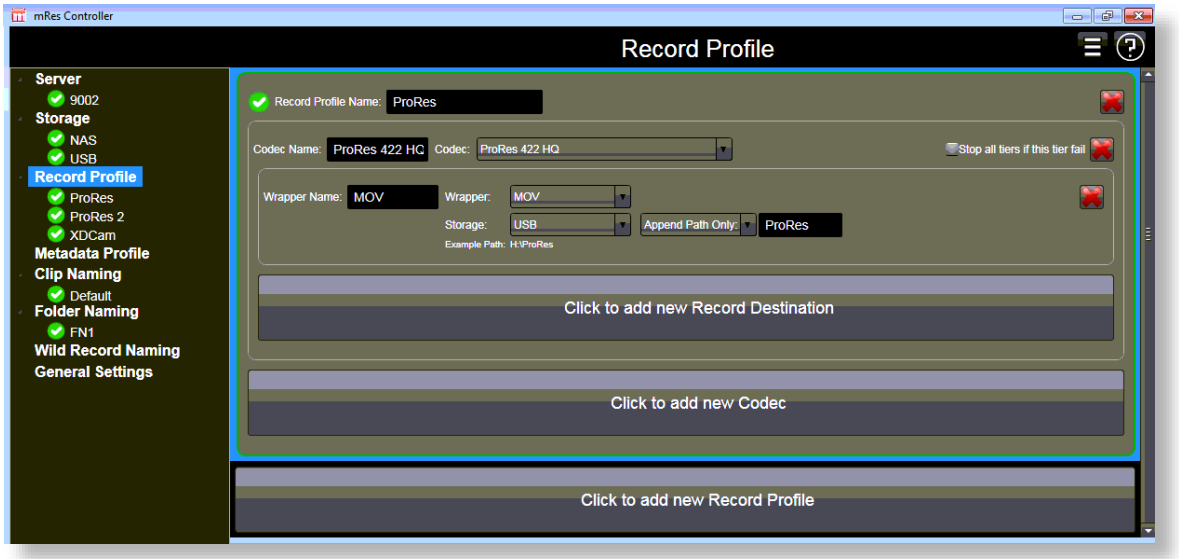
A single **Record Profile** can include multiple codecs, each of which is called a **Tier**. Each codec has its own wrapper and its own target storage location. By assigning a **Record Profile** to a channel, this feature allows the channel to create more than one clip at a time. The video and audio will be the same, but each codec can be different, with a different wrapper and a different storage location. Any number of profiles can be created, as desired.

Important
For purposes of optimizing system performance, It is recommended that you create no more than three (3) codec **Tiers** per **Record Profile**.

For example, on one channel, you can simultaneously record to a local SAN with codec #1, and to a removable drive with codec #2.

- Codec #1 (**Tier 1**) could be configured as high-resolution on-line quality
- Codec #2 (**Tier 2**) could be configured as proxy resolution.
- You can even record two similar instances of a clip (with identical codecs and wrappers) to different storage paths, as an effective *safety* or *backup* file.

In the **Navigation Pane**, click the **Record Profile** heading, or click any of the profiles already configured to display the **Record Profile Pane**. The figure below illustrates a sample **Record Profile Pane**. Each bordered group represents a profile.



Profile Setup Pane (sample)

The following fields and buttons are provided:

- **Record Profile Name** — use this field to name the **Record Profile**.
- **X** — (adjacent to **Record Profile Name**). Click to delete the entire **Record Profile**.

- **Codec** — click the down arrow to choose the codec that will be used to create the clip. Refer to the **Codecs and Wrappers** section for a list of current codecs.

  When certain codecs are selected, additional options appear.

  - **Thumbnail** — click **Show Advanced Options** to display the **Width** and **Height** fields.
  - **Devices** — click **Preset** to display a list of available presets (e.g., **H264**, **Android**, **YouTube**, **Social Media**, etc.). Click **Show Advanced Options** to display buttons and fields specific to the device (e.g., **Video Bitrate**, **Audio Bitrate**, **Width**, **Height**, **Gop Size**, etc.).
- **Stop all tiers if this tier fails** — check the box to halt recording if this particular tier fails (for any reason). For example, let's say that a **Record Profile** has two tiers — **Tier 1** is high-resolution and **Tier 2** is proxy. If **Tier 1** fails, the proxy file won't be of any value to the editor in post-production. Thus, with the box checked, if **Tier 1** fails, both tiers will be stopped. Essentially, the check box makes a tier mandatory.
- **X** — (in the **Codec** section). Click to delete the **Codec**.
- **Wrapper** — click the down arrow to choose the desired wrapper. Refer to the **Codecs and Wrappers** section for a list of current wrappers.

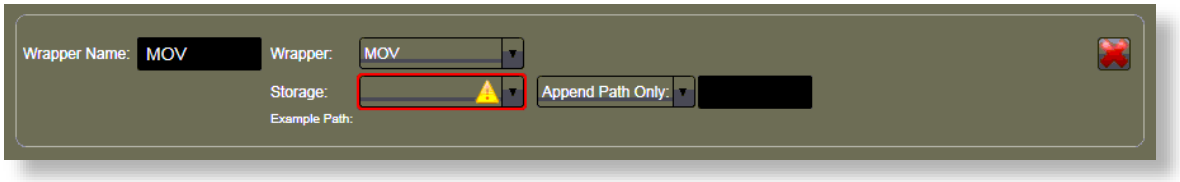
  Note that the codec and wrapper system has special filtering built in. For example, if a **DNX** codec is selected, the system knows that only two wrapper choices are available (**Avid OPAtom** or **OP1A**). If a **ProRes** codec is selected, the system knows only **MOV** or **MOV Reference** wrappers can be selected.
- **Storage** — click the down arrow to select the desired storage location for this **Record Profile** (as derived from the **Storage Setup Menu**).
- **Storage Append Path Only** — use this field to assign a sub-folder under the desired storage location (as derived from the **Folder Naming Setup Menu**). A sample path will be listed below the **Storage** field. Refer to the **Folder Naming Setup** section for details on creating folders.

For Avid-specific codecs:

- **Growing** — check the box to indicate that an Avid-specific file can be loaded (for editing) as it is being recorded to the desired storage location.
- **Use the same destination of Avid OPAtom files to AAF files** — check to place AAF files is the same storage location as the primary file. When the box is checked, the **AAF Storage** and **AAF Append Path** options are grayed out.
- **AAF Storage** — click the down arrow to select the desired AAF (Advanced Authoring Format) storage location.
- **AAF Append Path** — use this field to assign a sub-folder under the desired AAF storage location. A sample path will be listed below the **AAF Storage** field. Refer to the **Folder Naming Setup** section for details on creating folders.
- **X** — (in the **Storage** section). Click to delete the **Record Destination**.

Adding Record Destinations

To add a new record destination to the current codec, click the **Click to add new Record Destination** button. A blank record destination appears with a yellow border. Caution triangles are placed in each field that requires data. Enter data (e.g., wrapper, storage, etc.) in *each* field.



To remove a record destination, click the **X**.

Adding Codecs

To add a new codec to the current **Record Profile**, click the **Click to add new Codec** button. A blank codec appears with a yellow border. Caution triangles are placed in each field that requires data. Enter data (e.g., codec, wrapper, storage, etc.) in *each* field.

To remove a codec, click the **X**.

Adding Record Profiles

To add a new **Record Profile**, click the **Click to add new Record Profile** button. A blank profile appears with a yellow border. Caution triangles are placed in each field that requires data. Enter the Record Profile's name, and continue by adding codec(s) and record destination(s) as required for your event or production.

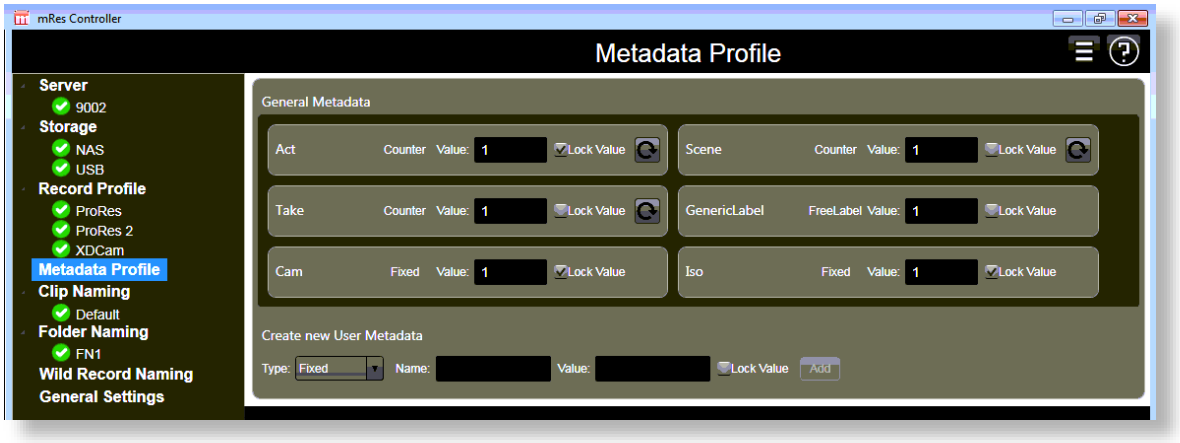
To remove a **Record Profile**, click the **X**.

Metadata Profile Setup

The **Metadata Profile Setup** menu enables you to use standard and custom metadata fields as part of your clip names and/or folder names.

- Metadata fields can be added to clip names using the **Clip Naming Setup** menu. The fields can be used anywhere in the clip name (e.g., as a prefix or appended as a suffix).
- Metadata fields can be added to folder name using the **Folder Naming Setup** menu. The fields can be used anywhere in the folder name (e.g., as a prefix or appended as a suffix).

In the **Navigation Pane**, click the **Metadata Profile** heading to display the **Metadata Profile Pane**. The figure below illustrates a sample **Metadata Profile Pane**.



Metadata Setup Pane (sample)

The following rules apply:

- The **Act**, **Scene**, and **Take** fields have counters that increment automatically when clips are created. When used in an actual clip name, the counter value is appended to the field name (e.g., **Act1**, **Take1**).
- You can set an initial counter value, and reset that value (as required), using the **Reset** button.

- The **Cam** and **Iso** fields have fixed values that do not change from clip to clip.
- The **Generic Label** field is a custom alphanumeric field that you can create (e.g., **Studio 1**). When used in an actual clip name, only the value is used, not the phrase **Generic Label**.
- Check the **Lock Value** box to prevent a metadata field from appearing in the **Metadata Profile** section on the **Controller** (main channel page). Uncheck to box to display the field on the **Controller**.

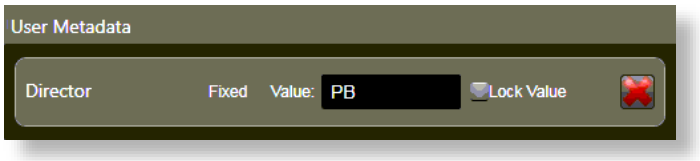
If a field is unlocked, you can conveniently make metadata changes on the **Clip Controller** — without going back to the **Metadata Profile Setup** menu.

- You can also create a **User Metadata** field.

  Click the **Type** down arrow to designate the field as **Fixed**, **Counter**, or **Free Label**.

  - For a **Fixed** field, enter a **Name** and a **Value**. When this **User Metadata** field is applied to a clip naming or folder naming template, both the name and the value are displayed when a clip is created.
  - For a **Counter** field, enter a **Name** and a **Value**. The value increments, and can be reset. When this **User Metadata** field is applied to a clip naming or folder naming template, both the name and the value are displayed when a clip is created.
  - For a **Free Label** field, enter a **Name** and a **Value**. When this **User Metadata** field is applied to a clip naming or folder naming template, only the value is displayed when a clip is created.

- Click **Add** to add the new value to the **User Metadata** section, which will appear below the **General Metadata** section. A sample is shown below.



Clip Naming Setup

A **Clip Naming Template** defines the naming conventions for your recorded clips. It is important to have fields that will be different (unique) for each channel and clip — because there's nothing worse for editors than multiple clips with the same name. Typically, **Channel Name**, **Tape Name**, **UUID** or **Date** and **Time** are recommended selections.

Important
Using a date and time stamp with visible seconds in a clip name template will prevent accidental overwriting of media. **mRes** does not prevent media with the same name from being overwritten and deleted.

Any number of clip naming templates can be created. The template names appear on the **Server Setup Menu**, in the **Clip Naming** drop down. Refer to the **Server Setup** section for details.

Note
It is wise to consult with the editor or post production supervisor when selecting a clip naming scheme.

In the **Navigation Pane**, click the **Clip Naming** heading, or click any of the templates that are already configured to display the **Clip Naming Template Pane**. The figure below illustrates a sample default **Clip Naming Profile Pane**.

Clip Naming Setup Pane (sample)

Each **Clip Naming** template is divided into five sections:

- The **System** section lists the available *standard* naming fields. These fields are variables, which will be replaced by your actual names (e.g., **Channel Name** will be replaced by **Iso 1**).
- The **Separator** section provides three standard separators (**Hyphen**, **Dot**, and **Underscore**) that can be placed between fields, to make a clip name easier to read.

- The **General Metadata** section lists the available metadata fields and separators, as created on the **Metadata Setup Menu**.
- The **User Metadata** section lists the available custom metadata fields and separators, as created on the **Metadata Setup Menu**.
- The **Template** section is essentially a preview area. It provides a representation of the selected naming profile in progress, and enables you edit fields, re-arrange fields and delete fields. You can also click **Reset Template** to start over.

In the **System**, **Separator**, **General Metadata** and **User Metadata** sections, click the **+** in front of a field to add that item to the template. You can also simply drag and drop a field or separator into the template.

In the **System** section, the following fields are provided:

- **Clip Naming Name** — use this field to name the **Clip Naming Profile**, as you want it to appear in the drop down on the **Server Setup Menu**.
- **Channel Name** — use this field to add the **Channel Name** (in which you are recording) to the template.
- **Tape Name** — use this field to add the **Tape Name** (from which you are ingesting) to the template.
- **Date** — use this field to add the current date to the template. Use the drop down to select the date format.
- **UUID** — use this field to add a **Universal Unique Identifier** to the template.
- **Time** — use this field to add the current time to the profile. Use the drop down to select the time format.

In the **General Metadata** and **User Metadata** sections, all values from the **Metadata Setup Menu** are listed. Refer to the **Metadata Profile Setup** section for details.

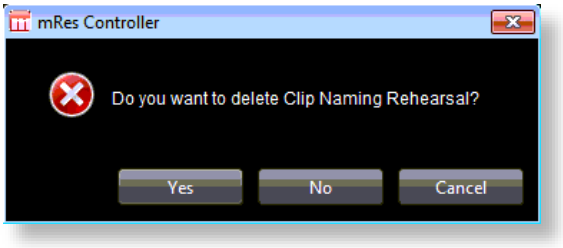
In the **Template** section, you can preview a template as it is being built.

- Drag and drop fields to easily re-arrange them.
- Click the **X** above a field to delete it.

Adding Clip Naming Templates

To add a new **Clip Naming** template, click the **Click to add new Clip Naming** button. A blank template appears with a yellow border. Caution triangles are placed in each field that requires data. Enter the template's name, and continue by adding the desired fields to the template.

To remove a **Clip Naming** template, click the **X**.



- Click **Yes** to delete the template. Click **No** or **Cancel** to keep the template.

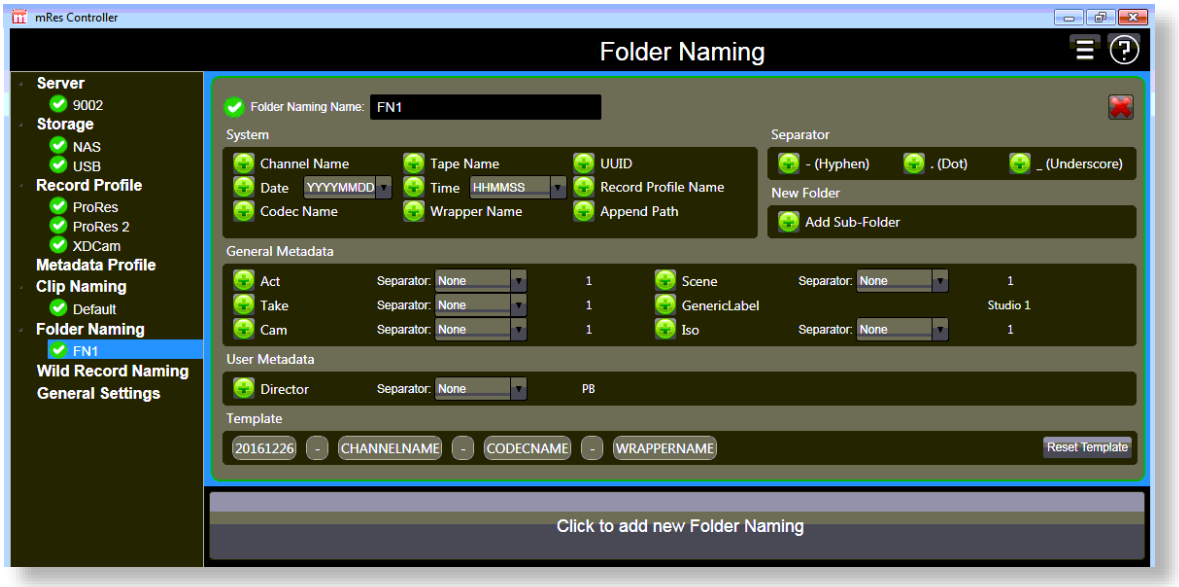
Folder Naming Setup

A **Folder Naming Template** creates the naming conventions for the folders in which your clips will be stored. If you're an organized recordist, and especially if you're creating clips with multiple codecs in a particular **Record Profile**, it may be very convenient to create various folder templates in which to store your clips. Again, there's nothing worse for editors than trying to find exactly where clips are stored.

Any number of folder naming templates can be created. The template names appear on the **Record Profile Setup Menu**, under the **Append Path Only** drop down. Refer to the **Record Profile Setup** section for details.

Note
It is wise to consult with the editor or post production supervisor when selecting a folder naming scheme.

In the **Navigation Pane**, click the **Folder Naming** heading, or click any of the templates that are already configured to display the **Folder Naming Template Pane**. The figure below illustrates a sample folder name template.



Folder Naming Setup Pane (sample)

Each **Folder Naming** template is divided into six sections:

- The **System** section lists the available *standard* naming fields. These fields are variables, which will be replaced by your actual names (e.g., **Codec Name** will be replaced by **ProRes 422**).
- The **Separator** section provides three standard separators (**Hyphen**, **Dot**, and **Underscore**) that can be placed between fields, to make a folder name easier to read.
- The **New Folder** section enables you to create a sub-folder under the current folder name. When **+** is clicked, the backslash field (****) appears in the template.
- The **General Metadata** section lists the available metadata fields and separators, as created on the **Metadata Setup Menu**.
- The **User Metadata** section lists the available custom metadata fields and separators, as created on the **Metadata Setup Menu**.

- The **Template** section is essentially a preview area. It provides a representation of the selected folder naming profile in progress, and enables you edit fields, re-arrange fields and delete fields. You can also click **Reset Template** to start over.

In the **System**, **Separator**, **New Folder**, **General Metadata** and **User Metadata** sections, click the **+** in front of a field to add that item to the template. You can also simply drag and drop a field or separator into the template.

In the **System** section, the following fields are provided:

- **Folder Naming Name** — use this field to name the **Folder Naming Profile**, as you want it to appear on the **Record Profile Setup Menu**, under the **Append Path Only** drop down.
- **Channel Name** — use this field to add the **Channel Name** (in which you are recording) to the template.
- **Tape Name** — use this field to add the **Tape Name** (from which you are ingesting) to the template.
- **Date** — use this field to add the current date to the template. Use the drop down to select the date format.
- **UUID** — use this field to add a **Universal Unique Identifier** to the template.
- **Time** — use this field to add the current time to the profile. Use the drop down to select the time format.
- **Record Profile Name** — use this field to add the **Record Profile** name to the folder name.
- **Codec Name** — use this field to add the **Codec Name** to the folder name.
- **Wrapper Name** — use this field to add the **Wrapper** name to the folder name.
- **Append Path** — use this field to add the **Append Path** name to the folder name.

In the **General Metadata** and **User Metadata** sections, all values from the **Metadata Setup Menu** are listed. Refer to the **Metadata Profile Setup** section for details.

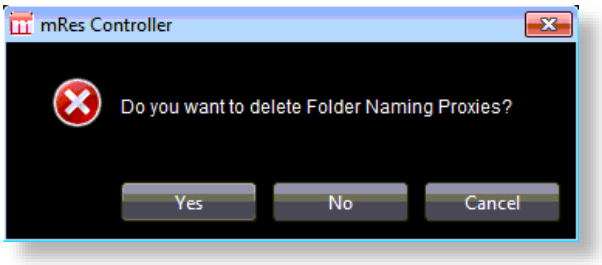
In the **Template** section:

- You can preview a folder name template as it is being built.
- Drag and drop fields to easily re-arrange them.
- Click the **X** above a field to delete it.

Adding Folder Naming Templates

To add a new **Folder Naming Template**, click the **Click to add new Folder Naming** button. A blank template appears with a yellow border. Caution triangles are placed in each field that requires data. Enter the template's name, and continue by adding the desired fields to the template.

To remove a **Clip Naming** template, click the **X**.



- Click **Yes** to delete the template. Click **No** or **Cancel** to keep the template.

Wild Record Naming Setup

There are times where it's desirable to record a clip and not use the normal clip naming scheme. For example, if the **Clip Naming** scheme is configured to use **Act**, **Scene** or **Take**, and the director calls for a pickup (or other action) that does not fit into the chosen scheme, you might want to make a **Wild** recording on the **Clip Controller**.

In the **Navigation Pane**, click the **Wild Record Naming** heading to display the **Wild Record Naming Template Pane**. Only one template can be configured.

The figure below illustrates a sample template.

Wild Record Naming Setup Pane (sample)

The **Wild Record Naming** template is divided into four sections:

- The **System** section lists the available *standard* naming fields and separators. These fields are variables, which will be replaced by your actual names (e.g., **Channel Name** will be replaced by **Iso 1**).
- The **Separator** section provides three standard separators (**Hyphen**, **Dot**, and **Underscore**) that can be placed between fields, to make a wild record name easier to read.
- The **General Metadata** section lists several metadata fields and separators, as created on the **Metadata Setup Menu**.
- The **Template** section is essentially a preview area. It provides a representation of the selected wild record naming profile in progress, and enables you edit fields, re-arrange fields and delete fields. You can also click **Reset Template** to start over.

In the **System**, **Separator**, and **General Metadata** sections, click the **+** in front of a field to add that item to the template. You can also simply drag and drop a field or separator into the template.

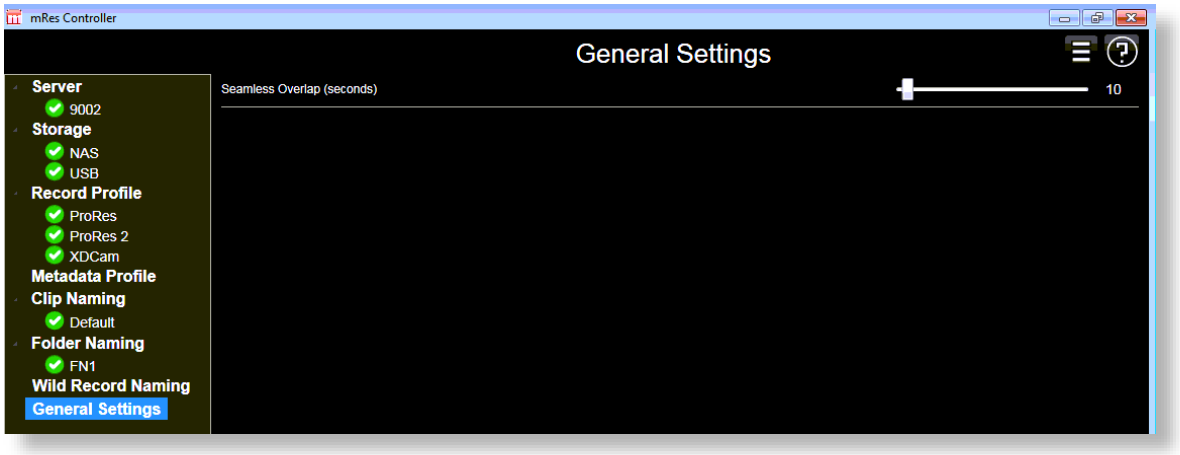
To remove the **Wild Record Naming Template**, click the **X**.

Adding a Wild Record Naming Template

You can only add a new **Wild Record Naming Template** if one is not currently present, or if the current one has been deleted. Click the **Click to add new Wild Record Naming** button. A blank template appears with a yellow border. Enter the desired fields to complete the template.

General Settings Setup

The **General Settings Setup Menu** enables you to configure a variety of general setup functions. In the **Navigation Pane**, click the **General Settings** heading to display the **General Settings Setup Pane**.



General Settings Setup Pane (sample)

The following function is provided:

- **Seamless Overlap (seconds)**

This function applies whenever the **Seamless** button is clicked. The function enables you to preset the seamless overlap duration in seconds. You can either use the slider to increment the duration, or enter a number from **0** to **180**.

Additional items will be added to the **General Settings Menu** in subsequent **mRes** versions.

6. Operations

To begin recording clips, use this section as a basic pre-production checklist — to ensure that all facets of the **mRes Monitor** and **mRes Clip Controller** are properly set up.

- ☐ 1. Ensure that you are completely familiar with the **mRes Monitor** application, and all facets of the user interface. Refer to the **mRes Monitor** section for details.
- ☐ 2. Use the **Channel Setup Menu** to name and completely set up each ingest channel on your local **mRes** server. Refer to the **Channel Setup Menu** section for details.
- ☐ 3. If remote servers and their associated channels are to be used by you, repeat step **2** for each remote server. As an alternate method, verify that each remote server has been properly configured by other facility professionals.
- ☐ 4. Ensure that you are completely familiar with the **mRes Clip Controller**, and all facets of the user interface. Refer to the **mRes Controller** section for details.
- ☐ 5. Ensure that you are completely familiar with all **Setup Menus**. Refer to the **Understanding mRes Setup** and **Configuring mRes Setup** sections for details.
- ☐ 6. Using the **Server Setup Menu**, add local and remote servers, and name channels. Refer to the **Server Setup** section for details.
- ☐ 7. Using the **Storage Setup Menu**, set up each remote storage location (record destination), typically NAS or USB. Ensure that you enter the desired name(s) and exact network paths. Refer to the **Storage Setup** section for details.
- ☐ 8. Using the **Record Profile Setup Menu**, configure a **Record Profile** as required, and add the required codecs and wrappers. Refer to the **Record Profile Setup** section for details.
- ☐ 9. Using the **Storage** drop down (on the **Record Profile Setup Menu**), select a record destination, as configured on the **Storage Setup Menu**.
- ☐ 10. Using the **Metadata Setup Menu**, set up any standard or custom metadata fields that you may want to include in your clip names and/or folder names. Refer to the **Metadata Profile Setup** section for details.
- ☐ 11. Using the **Clip Naming Template Setup Menu**, create a simple clip naming scheme (e.g. **Channel Name**, **Date** and **Time**), and include metadata fields as required. Once you've verified the clip names in a test recording (which you'll make in a subsequent step), you can modify the clip names. Refer to the **Clip Naming Setup** section for details.
- ☐ 12. In the **Server Setup Menu**, select the **Clip Naming** template that you just configured.
- ☐ 13. Using the **Folder Naming Template Setup Menu**, create a simple folder naming scheme. Once you've verified the folder names in a test recording (which you'll make in a subsequent step), you can modify the folder names. Refer to the **Folder Naming Setup** section for details.
- ☐ 14. Using the **Record Profile Setup Menu**, select the folder naming scheme that you just configure, using the **Append Path Only** drop down menu.
- ☐ 15. (Optional) Using the **Wild Record Naming Template Setup Menu**, create a simple wild record naming template. Refer to the **Wild Record Naming Setup** section for details.
- ☐ 16. Using the **General Settings Setup Menu**, configure general setup settings are required.
- ☐ 17. In the **Clip Controller**, select a **Record Profile** for a selected channel.
- ☐ 18. For a selected channel, click the red **Record** button to create a test recording.

- [ ] 19. Expand the channel if required, select the **Clip List** radio button, select the **Running** check box, and verify that the selected clip name is displayed.
- [ ] 20. Stop the recording, and open up the storage volume on the selected record destination.
- [ ] 21. Validate that the storage location is correct, the folder name is correct, and that a clip with the correct name, codec and wrapper is included in the selected folder.
- [ ] 22. Repeat steps **16** through **20** for each channel.
- [ ] 23. If required, modify clip names and folder names.
- [ ] 24. If required, create additional **Record Profiles** that you may want to use for the current production (e.g., Hi-Res, Proxy, etc.), and select them in the **Clip Controller**.
- [ ] 25. Begin your production recording.

This completes your pre-production checklist for the **mRes** system.