cinéma thèque qc

Example of MXF-JPEG2000 export settings

Legal deposit of digital films

Cinémathèque québécoise – December 2024

These instructions are intended as a basic guide to exporting different file formats. They are not exhaustive, and your options may vary depending on the software or version used. We recommend that you consult the official documentation for the tools mentioned or hire a professional to help with more complex tasks or custom configurations.

Export Jpeg2000 Lossless

Adobe Premiere

Step 1: **Access the export options**

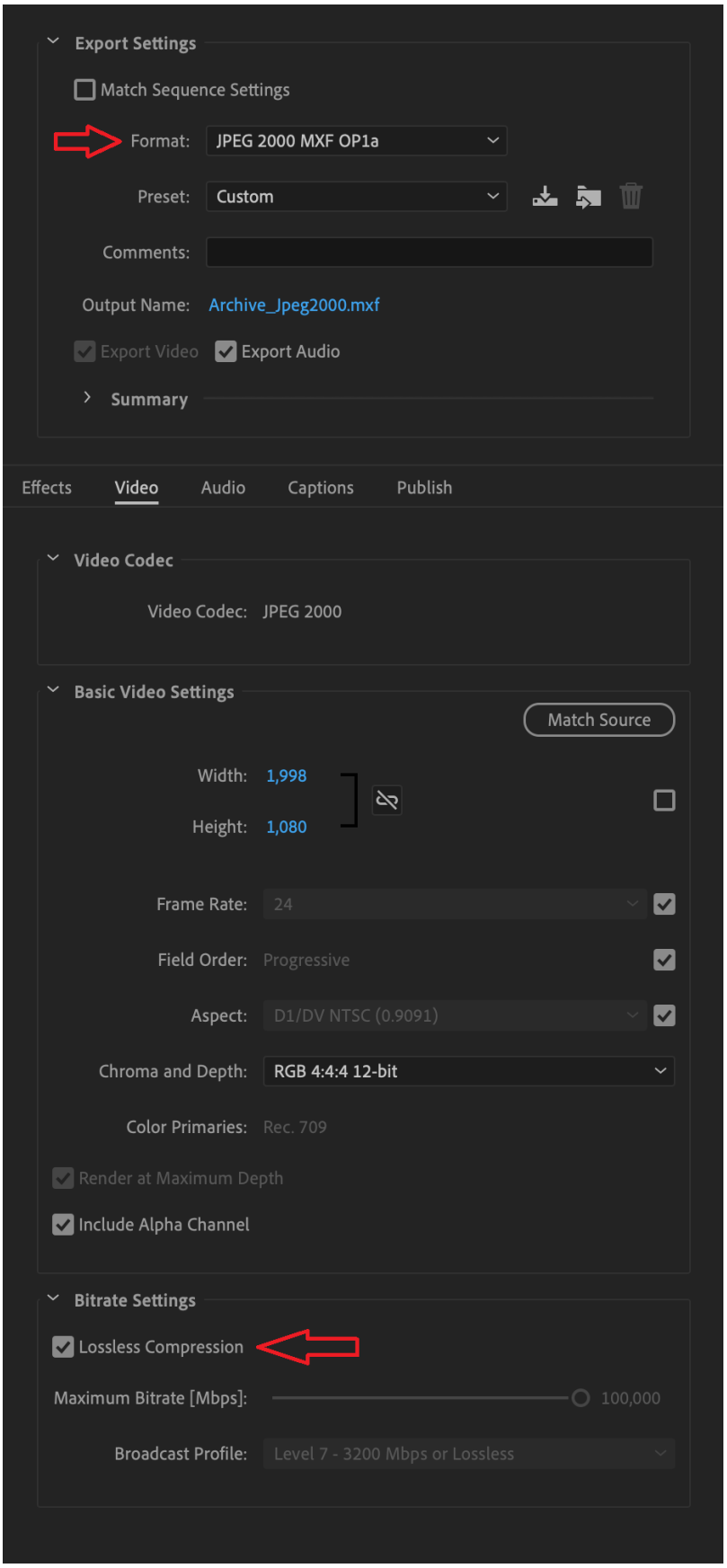
1. **Select the sequence**: Make sure that the timeline sequence is the one you wish to export.
2. **Open the export window**: Go to **File > Export > Media** or press Ctrl + M (Command + M on Mac).

Step 2: **Select the export format**

1. **Format**: In the **Export Settings** window, under **Format**, select **MXF OP1a**.
2. **Preset**: Under **Preset**, select **JPEG 2000 MXF**.
    - If **JPEG 2000 MXF** is not available, you may need to manually adjust the settings in the **Video** section.

Step 3: **Configure the video settings**

1. **Video codec**: In the **Video** section, under **Video Codec**, select **JPEG 2000**.
2. **Bitrate**: Be sure to check **Lossless Compression** under Bitrate Settings
3. **Resolution**: Ensure that your video's resolution is correct (e.g. 1920x1080 for Full HD or 4096x2160 for 4K).
4. **Frame Rate**: Ensure that the framerate matches that of your project (e.g. 24, 25 or 30 fps).
5. **Bit depth**: Select an appropriate bit depth, such as **10 bits** or **12 bits**, to ensure optimal quality.
6. **Aspect ratio**: Ensure that the aspect ratio is correct (usually **Square Pixels 1.0** for digital video).


Export Settings
Match Sequence Settings
Format: JPEG 2000 MXF OP1a
Preset: Custom
Comments:
Output Name: Archive_Jpeg2000.mxf
Export Video
Export Audio
Summary
Effects
Video
Audio
Captions
Publish
Video Codec
Video Codec: JPEG 2000
Basic Video Settings
Match Source
Width: 1,998
Height: 1,080
Frame Rate: 24
Field Order: Progressive
Aspect: D1/DV NTSC (0.9091)
Chroma and Depth: RGB 4:4:4 12-bit
Color Primaries: Rec. 709
Render at Maximum Depth
Include Alpha Channel
Bitrate Settings
Lossless Compression
Maximum Bitrate [Mbps]: 100,000
Broadcast Profile: Level 7 - 3200 Mbps or Lossless

Step 4: **Configure the audio settings**

1. **Audio Codec**: Under **Audio** in the export window, select **PCM**.
2. **Sample Rate**: Select either **48 kHz** or **96 kHz** for better quality.
3. **Channel configuration**: Select **Stereo** or **5.1 Surround** to match your final audio mix.

Step 5: **Set the destination and name the file**

1. **Output Name**: Click on the file name in the **Output Name** section to select the folder where you want to export your file. Give the file a descriptive name such as 20241001_projectname_HD_24fps_JPEG2000_51.mxf.

Step 6: **Launch the export**

1. **Check your settings**: Before launching the export, check all your settings, especially the **JPEG 2000 Lossless** and **PCM** audio settings.
2. **Export**: Click **Export** to start exporting your MXF file with video encoded in JPEG 2000 and PCM audio.

Step 7: **Check the exported file**

1. **Check the video**: Use a video playback program compatible with the MXF format, such as **VLC** or **Adobe Premiere**, to ensure that the video was correctly exported in JPEG 2000 lossless format.
2. **Check the audio**: Listen to the file to ensure that the PCM audio is high-quality and correctly synced.

Additional notes

- **JPEG 2000 Lossless**: This codec provides lossless compression, which is essential for the long-term conservation of high-quality images.
- **MXF**: The **MXF OP1a** wrapper is often used in the audiovisual industry for archiving and transferring professional-quality video files.

If all options are not available natively in Adobe Premiere Pro, you can use **Adobe Media Encoder** for more flexibility in exporting in **JPEG 2000 MXF**.

Davinci Resolve

Step 1: **Access the export interface**

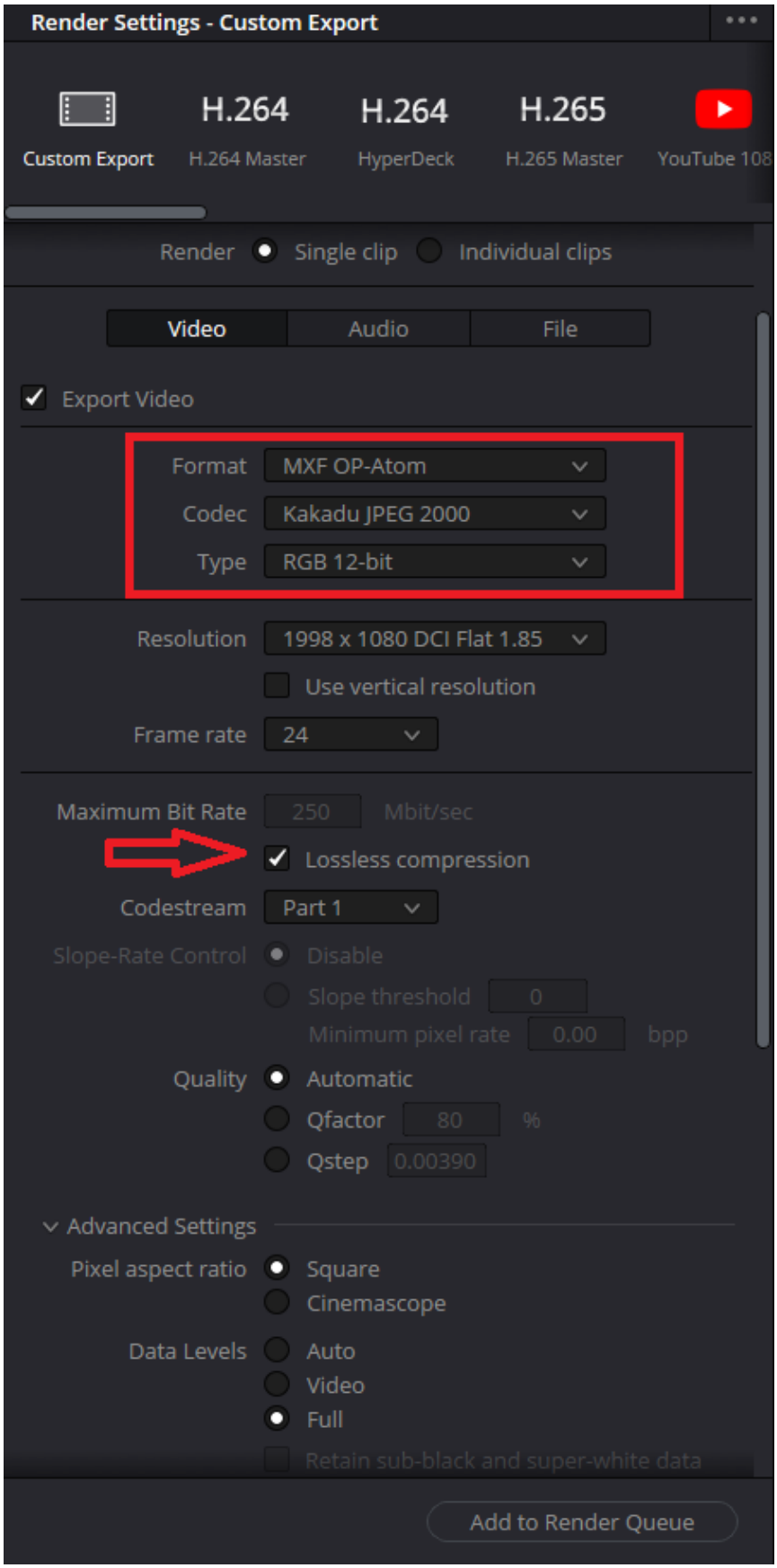
1. **Go to the Deliver** page: Click the **Deliver** tab in DaVinci Resolve, located in the lower right corner of the screen.
2. **Select the export format option**:
    - In the pre-settings to the left, select **Custom** to configure the export settings manually.

Step 2: **Choose MXF JPEG 2000 export settings**

1. **File format**: Under **Video**, in the **Format** section, select **MXF OP1A**.
2. **Video codec**: Under **Codec**, select **JPEG 2000**.
3. **Type of compression**: Select **Lossless**.
    - Make sure **Lossless** is selected in order to ensure optimal quality and preserve all details in the video.

Step 3: **Configure the video settings**

1. **Resolution**: Check that the resolution is defined correctly (for example, 1920x1080 for Full HD, or 4096x2160 for 4K).
2. **Frame Rate**: Ensure that the framerate matches that of your project (for example, 24 fps or 25 fps).
3. **Aspect ratio**: Ensure that the correct aspect ratio is selected (for example **Square Pixels 1.0**).
4. **Bit Depth**: Choose a higher colour depth, such as **10 bits** or **12 bits**, to ensure maximum quality.
5. **Codestream selection**: Choose the Part 1 option for maximum compatibility.


Render Settings - Custom Export
Custom Export
H.264
H.264 Master
H.264
HyperDeck
H.265
H.265 Master
YouTube 108
Render
Single clip
Individual clips
Video
Audio
File
Export Video
Format
MXF OP-Atom
Codec
Kakadu JPEG 2000
Type
RGB 12-bit
Resolution
1998 x 1080 DCI Flat 1.85
Use vertical resolution
Frame rate
24
Maximum Bit Rate
250
Mbit/sec
Lossless compression
Codestream
Part 1
Slope-Rate Control
Disable
Slope threshold
0
Minimum pixel rate
0.00
bpp
Quality
Automatic
Qfactor
80
%
Qstep
0.00390
Advanced Settings
Pixel aspect ratio
Square
Cinemascope
Data Levels
Auto
Video
Full
Retain sub-black and super-white data
Add to Render Queue

Step 4: **Configure the audio settings**

1. **Audio Codec**: Under the **Audio** tab, select **PCM** for audio encoding.
2. **Sample Rate**: For optimal audio quality, select a sampling rate of **48 kHz** or **96 kHz**.
3. **Audio Bit Depth**: Select **24 bits** for audio in order to ensure high quality.
4. **Audio Track**: Select the audio tracks to be exported (5.1, stereo…).

Step 5: **Set the file destination**

1. **File Name**: Under **File Name**, give the export file a name (e.g. projectname_master.mxf).
2. **Save location**: Select the location for saving the exported file by clicking **Browse** and selecting the destination folder.

Step 6: **Export the file**

1. **Add to queue**: Once you have configured all settings, click **Add to Render Queue**.
2. **Render**: In the right panel (Render Queue), click **Start Render** to start the export process.

Step 7: **Check the exported file**

1. **Check the video**: Open the MXF file with a compatible application such as **VLC** or another tool capable of opening MXF files, to ensure that the video was correctly encoded in JPEG 2000 Lossless.
2. **Check the audio**: Ensure that the audio is correctly encoded in **PCM** with full quality maintained.

Additional information

- **MXF OP1A** is a format widely used for archiving and transferring professional video files. It is a flexible wrapper format that can encapsulate high-quality video and audio content.
- **JPEG 2000 Lossless** is a lossless compression codec that is highly adapted to long-term archival use because it preserves image quality with no visible changes.
- **PCM** is an uncompressed audio format that ensures optimal audio quality in archival files.

If some options are not visible, ensure that you have a fully updated copy of DaVinci Resolve, because free versions may have restrictions on certain export codecs and formats.