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Getting Started

Overview
Calibrated MPEG2-X Create is a QuickTime Encode codec, and Compressor and Adobe and Avid set of plugins that enables you to create XDCAM-style MOV and OP1a MXF files from FCP X, Compressor 3.5.3/4.1.2, Avid MC 8.4 & 8.5, and Premiere Pro or AME (CS6, CC-CC2018).

Calibrated MPEG2-X Create supports creating the following formats:

1920x1080i @ 29.97 or 25 fps
BitRates: 6Mb to 280Mb at I-Frame Only or Long-GOP

1920x1080p @ 60, 59.94, 50, 29.97, 25, 24 or 23.976 fps
BitRates: 6Mb to 280Mb at I-Frame Only or Long-GOP

1280x720p @ 60, 59.94, 50, 29.97, 25, 24 or 23.976 fps
BitRates: 6Mb to 280Mb at I-Frame Only or Long-GOP

OP1a MXF files will have 48Khz Uncompressed audio with 0-32 Channels at either 16-bits or 24-bits. OP1a MXF files have the option to export Stereo Interleaved Audio.

MOV files will use the FCP FourCC identifier for XDCAM MOV files

DEMO MODE Limitation
Calibrated MPEG2-X Create will have watermarks of the Calibrated MPEG2-X Create Logo burned into any encoded video when running in DEMO MODE. This is the only DEMO MODE limitation – everything else is fully functional. The burned in DEMO MODE watermarks cannot be removed from the encoded video. After ordering and licensing Calibrated MPEG2-X Create you will have to re-encode any files that you had created while running the software in DEMO MODE. Using the software in DEMO MODE is for testing only and should not be used for commercial purposes.

Please note that if you are rendering using multiple render nodes (i.e. different computers) then each computer would need its own separate license.
Known Issues and Limitations
The following known issues and limitations are associated with Calibrated MPEG2-X Create codec:

- **THIS IS A BETA PRODUCT**

- Please note this product will enable you to encode XDCAM .MOV and .MXF files with BitRates and other file, video and audio properties not supported by Sony Hardware

- Calibrated MPEG2-X Create for Windows will crash if run on a computer system that does not support SSE3 instructions which were introduced in Pentium 4 processors circa 2004 (see the Windows Requirements section).

- **Calibrated MPEG2-X Create supports encoding to 8-bit YUV422 – HOWEVER it is up to the application using Calibrated MPEG2-X Create to send 8-bit YUV422 to the codec.** Please see the “Enable Colorspace Watermark” in the Options Chapter to learn how to see what colorspace an application is sending to Calibrated MPEG2-X Create, and also see the Windows Applications Chapter or Mac OSX Applications Chapter to learn more about how to configure Calibrated MPEG2-X Create for popular applications.

- Calibrated MPEG2-X Create does not convert frames from interlaced to progressive or vise-versa, please make sure that you have selected the appropriate MPEG2-X ‘Compression Type’ to match the type of video frames you will be encoding from.

- Calibrated MPEG2-X Create does not convert the frame rate of video, please make sure that you have selected the appropriate MPEG2-X ‘Compression Type’ to match the frame rate of the video you will be encoding from.

- Please make sure that you have selected the appropriate MPEG2-X ‘Compression Type’ to match the resolution of the video you will be encoding from.

- **You cannot choose the ‘QuickTime Movie’ export option in FCP 7 – please use the ‘Send to Compressor’ option in FCP 7 to export.** If you try to export from FCP 7 using the ‘QuickTime Movie’ Option (i.e. not using Compressor to export) then I-Frame only export works but Long-GOP exporting will give you an error when trying to export.

- If you get a ‘codec error’ or ‘encode failure’ message when trying to encode from an application – usually that means that the application you are encoding from does not support the colorspace you are trying to encode to (i.e most likely 8-bit YUV422 colorspace), please see the Windows Application Chapter or the Mac OSX Application chapter to see how to properly setup the Encode Options for different applications.

- Various applications reading/writing from QuickTime can treat QuickTime Gamma differently (which can make video seem brighter or darker) – please see the Windows Applications Chapter or Mac OSX Applications Chapter to learn more about how to configure Calibrated MPEG2-X Create for popular applications.

- Quicktime Framework cannot write files over 2GB to network volumes (AFP, SMB). Returns -1309 (fileBoundsErr).

- Calibrated MPEG2-X Create is for encoding XDCAM MOV files only. To view or playback XDCAM .MOV files in applications that support QuickTime, you need to have Calibrated(Q) XD Decode installed on your computer and properly licensed. Some applications like Avid Media Composer (6.0 or greater) or Adobe CC applications should be able to natively import the created MOV files

- **IMPORTANT FOR COMPRESSOR – always remember to set the ‘Field Version’ in the Options settings for the version of Compressor that you are using if you are creating your own custom preset.**

- In MXF OP1a files with over 10 tracks of audio then Sony NRT XML metadata will not be embedded in the MXF file
Windows Requirements and Installation

Ensure your PC meets the following requirements prior to installing Calibrated MPEG2-X Create:

- Pentium 4 processor with SSE3 support or greater; recommended at least Intel Core 2 Duo with two cores or two physical processors

- 64-bit Windows 7/8/8.1/10 for Adobe CC or greater, and 64-bit Vista (or greater) for Adobe CS6 and Avid MC

- 32/64-bit Windows 7

- Virtual OS is NOT supported

- BETA Support for 32/64-bit Windows 8 - our software should work fine on Windows 8; however QuickTime Player does not officially support Windows 8 yet.

- QuickTime Player 7.6.6 or higher

- To view or playback XDCAM .MOV files in applications that support QuickTime, you need to have Calibrated{Q} XD Decode installed on your computer and properly licensed. Some applications like Avid Media Composer (6.0 or greater) or Adobe CC applications should be able to natively import the created MOV files.

- **Calibrated MPEG2-X Create supports encoding from 8-bit YUV422 colorspace, HOWEVER it is up to the application using Calibrated MPEG2-X Create to send that colorspace to the codec.** Please see the “Enable Colorspace Watermark” in the Options Chapter to learn how to see what colorspace an application is sending to Calibrated MPEG2-X Create, and also see the Windows Applications Chapter or Mac OSX Applications Chapter to learn more about how to configure Calibrated MPEG2-X Create for popular applications.
**Installing on Windows**

To install Calibrated MPEG2-X Create on a Windows Computer:

1. Quit any applications using QuickTime.

2. Run the Calibrated MPEG2-X Create Installer:
   
   a. Microsoft Redistributables will be installed (if they don’t already exist on the computer)

   b. A folder named **Calibrated** will be created in the `[System Drive]\Program Files (x86)` directory. This **Calibrated** folder will contain the Calibrated MPEG2-X Create Info application *(CalibratedMPEG2XCreateInfo.exe)*, the Calibrated MPEG2X Create User Guide, and a copy of the Calibrated MPEG2-X Create plugins

   c. ExpCalibratedMPEG2XCreateOP1a.prm and ExpCalibratedMPEG2XCreateMOV.prm and NxMPEG2XPProQTHelper.exe will be auto-copied to the `[System Drive]\Program Files\Adobe\Common\Plug-ins\7.0\MediaCore` directory*.

   d. CalibratedMPEG2XCreate.qtx will be auto-copied to the `[System Drive]\Program Files (x86)\QuickTime\QTComponents` directory.

   e. MSP_CalibratedMOV MPEG2X.avx and MSP_CalibratedMXFOP1a MPEG2X.avx and NxMPEG2X AvidQTHelper.exe will be auto-copied to the `[System Drive]\Program Files\Avid\AVX2_Plugins\AMA\Calibrated MPEG2X Create` directory*.

   f. SMDK-VC100-x64-4_13_0.dll and SMDK-VC110-x64-4_13_0.dll will be copied to the Windows System 64 folder.

3. Restart your computer

* For 64-bit Windows 7 or Vista, this will be the `[System Drive]\Program Files (x86)` directory

*Please note that the plugin will install to the latest version of PPro/AME so you must manually copy the plugin to the `Adobe\Common\Plug-ins\6.0\MediaCore` directory for PPro/AME CS6 support if you also have PPro/AME CC-CC2018 installed on the same computer.
Uninstalling on Windows
To uninstall Calibrated MPEG2-X Create on a Windows Computer:

1. **If LICENSED, please use the Calibrated License Manager to DEACTIVATE your Software License before uninstalling**

2. Go to the **Control Panel> Add/Remove Programs**.

3. Select and uninstall **Calibrated MPEG2-X Create** from the list of programs.

4. Restart your computer.
MAC OSX Requirements and Installation

Ensure your Mac meets the following requirements prior to installing Calibrated MPEG2-X Create:

- Mac Intel Computer Only; recommended at least Intel Core 2 Duo with two cores or two physical processors
- Mac Intel with OSX 10.8.5(Snow Leopard) or greater for Compressor 3.5.3
- Mac Intel with OSX with 10.9 (Mavericks) or greater for Compressor 4
- Mac OSX 10.9 or greater for CC-CC2018
- Mac OSX 10.9 for Avid MC 8.4
- QuickTime Player 7.6.6 or higher

- To view or playback XDCAM .MOV files in applications that support QuickTime, you need to have either FCP7, FCP X, or Calibrated(Q) XD Decode installed on your computer and properly licensed. Some applications like Avid Media Composer (6.0 or greater) or Adobe CC applications should be able to natively import the created MOV files

- Calibrated MPEG2-X Create supports encoding from 8-bit YUV422 colorspace, HOWEVER it is up to the application using Calibrated MPEG2-X Create to send that colorspace to the codec. Please see the “Enable Colorspace Watermark” in the Options Chapter to learn how to see what colorspace an application is sending to Calibrated MPEG2-X Create, and also see the Windows Applications Chapter or Mac OSX Applications Chapter to learn more about how to configure Calibrated MPEG2-X Create for popular applications.

- You cannot choose the ‘QuickTime Movie’ export option in FCP 7 – please use the ‘Send to Compressor’ option in FCP 7 to export. If you try to export from FCP 7 using the ‘QuickTime Movie’ Option (i.e. not using Compressor to export) then I-Frame only export works but Long-GOP exporting will give you an error when trying to export.
**Installing on Mac OSX**

To install Calibrated MPEG2-X Create on a Mac Computer:

1. Quit any applications using QuickTime.

2. Run the Calibrated MPEG2-X Create Installer:
   - A folder named Calibrated will be created in the /Applications directory. This Calibrated folder will contain the Calibrated MPEG2-X Create Options application *(CalibratedMPEG2XCreateInfo.app will be located in the /Applications/Calibrated/Applications/Options folder)*, presets, plugins and the Calibrated MPEG2-X Create User Guide.
   - The CalibratedMPEG2XCreate.component will be auto-copied to the “/Library/QuickTime” directory.
   - The ExpCalibratedMPEG2X.prm and ExpCalibratedMPEG2XMOV.prm will be installed to the plugins directory of the highest version of Adobe products.
   - The CalibratedMPEG2XMOVPlugin.plugin and CalibratedMPEG2XMXFPlugin.plugin will be installed to the /Library/Application Support/Apple QMaster directory.
   - The MSP_Calibrated_MPEG2XCreateMXF.avx and MSP_Calibrated_MPEG2XCreateMOV.avx will be installed to the /Library/Application Support/Avid/AVC2_Plug-ins/AMA directory.

3. Please run the Presets installer to install exporting presets for Compressor 3.5 or Compressor 4.1

4. Restart your computer
Uninstalling on Mac OSX

To uninstall Calibrated MPEG2-X Create on a Mac OSX Computer:

1. **If LICENSED, please use the Calibrated License Manager to DEACTIVATE your Software License before uninstalling**

2. If no other Calibrated Software is installed, then delete the directory:

   /Applications/Calibrated

   then skip Step 2 and go to Step 3

3. If other Calibrated Software is installed, then only delete:

   a. /Applications/Calibrated/Applications/Options/CalibratedMPEG2XCreateInfo.app
   b. /Applications/Calibrated/Plugins/QuickTime/CalibratedMPEG2XCreate.component
   c. /Applications/Calibrated/Docs/ Calibrated-MPEG2-X-Create-UserGuide.pdf
   d. /Applications/Calibrated/Plugins/PPro/ ExpCalibratedMPEG2X.prm
   e. /Applications/Calibrated/Plugins/PPro/ ExpCalibratedMPEG2XMOV.prm
   f. /Applications/Calibrated/Plugins/Compressor/ CalibratedMPEG2XMOVPlugin.plugin
   g. /Applications/Calibrated/Plugins/Compressor/ CalibratedMPEG2XMXFPlugin.plugin
   h. /Applications/Calibrated/Plugins/Avid/ MSP_Calibrated_MPEG2XCreateMOV.avx
   i. /Applications/Calibrated/Plugins/Avid/ MSP_Calibrated_MPEG2XCreateMXF.avx

4. Delete the files:

   /Library/QuickTime/ CalibratedMPEG2XCreate.component
   /Library/Application Support/Apple QMaster/ CalibratedMPEG2XMOVPlugin.plugin
   /Library/Application Support/Apple QMaster/ CalibratedMPEG2XMXFPlugin.plugin
   /Library/Application Support/Adobe/Common/Plug-ins/7.0/ ExpCalibratedMPEG2X.prm
   /Library/Application Support/Adobe/Common/Plug-ins/7.0/ ExpCalibratedMPEG2XMOV.prm
   /Library/Application Support/ Avid/AVC2_Plug-ins/AMA/ MSP_Calibrated_MPEG2XCreateMOV.avx
   /Library/Application Support/ Avid/AVC2_Plug-ins/AMA/ MSP_Calibrated_MPEG2XCreateMXF.avx

   **IMPORTANT** - that’s the Library folder on the Main Harddrive (i.e. the root folder) NOT the Library folder in your User Directory – and you must manually go to this folder and delete the component as Spotlight may not index System Folders.

5. Restart your computer.
Overview
This chapter describes the settings available in the Calibrated MPEG2-X Create Options interface.

Important Note: The stand-alone Calibrated MPEG2-X Create Info application is used only to see the version and if it’s licensed or in demo mode.

Info Interface
The Calibrated MPEG2-X Create Info interface has one screen: about.

The about page contains links to download the latest version, view online tutorials or purchase a license, and it also indicates whether the software is running in DEMO MODE** or LICENSED MODE. Please note that you can only license the software thru the stand-alone Calibrated License Manager application.

**DEMO MODE Limitation - Calibrated MPEG2-X Create will have watermarks of the Calibrated MPEG2-X Create Logo burned into any encoded video when running in DEMO MODE. This is the only DEMO MODE limitation – everything else is fully functional. The burned in DEMO MODE watermarks cannot be removed from the encoded video. After ordering and licensing Calibrated MPEG2-X Create you will have to re-encode any files that you had created while running the software in DEMO MODE. Using the software in DEMO MODE is for testing only and should not be used for commercial purposes.
Overview

This chapter describes the settings available in the Calibrated MPEG2-X Create QuickTime Encode codec.

Important Note: The stand-alone Calibrated MPEG2-X Create Info application is used to let you know whether the software is running in DEMO MODE or LICENSED and where to download the latest version – all of the encoding options for Calibrated MPEG2-X Create QuickTime Encode codec can only be set within the application using Calibrated MPEG2-X Create codec – look for a ‘settings’ or ‘options’ button in the application using the codec.

Options Interface

The Calibrated MPEG2-X Create Options interface contains the version number of the currently installed Calibrated MPEG2-X Create and indicates whether the codec is running in DEMO MODE or LICENSED MODE, and where to download the latest version.

Please note that the encode options are not global but local to the specific application and instance of when you are using the codec. Important Note: The options can only be set from within the application that is using Calibrated MPEG2-X Create – look for a ‘settings’ or ‘options’ button in the application. You should always set the options of Calibrated MPEG2-X Create in the application BEFORE every encode.

Here are the FourCC tags used in the MOV file when exporting with the MPEG2-X Create QuickTime Encode codec:

XDCAM Long-GOP

“Calibrated MPG2X LG 1080i29.97” – FourCC ‘xd5b’ - 1920x1080 interlaced footage at 29.97fps
“Calibrated MPG2X LG 1080p25” – FourCC ‘xd5c’ - 1920x1080 interlaced footage at 25fps
“Calibrated MPG2X LG 1080p59.94” – FourCC ‘xdh2’ - 1920x1080 progressive footage at 59.94fps
“Calibrated MPG2X LG 1080p50” – FourCC ‘xdh2’ - 1920x1080 progressive footage at 50fps
“Calibrated MPG2X LG 1080p29.97” – FourCC ‘xd5f’ - 1920x1080 progressive footage at 29.97fps
“Calibrated MPG2X LG 1080p25” – FourCC ‘xd5e’ - 1920x1080 progressive footage at 25fps
“Calibrated MPG2X LG 1080p23.976” – FourCC ‘xd5d’ - 1920x1080 progressive footage at 23.976fps
“Calibrated MPG2X LG 720p59.94” – FourCC ‘xd59’ - 1280x720 progressive footage at 59.94fps
“Calibrated MPG2X LG 720p50” – FourCC ‘xd5a’ - 1280x720 progressive footage at 50fps
“Calibrated MPG2X LG 720p29.97” – FourCC ‘xd51’ - 1280x720 progressive footage at 29.97fps
“Calibrated MPG2X LG 720p25” – FourCC ‘xd55’ - 1280x720 progressive footage at 25fps
“Calibrated MPG2X LG 720p23.976” – FourCC ‘xd54’ - 1280x720 progressive footage at 23.976fps

XDCAM I-Frame Only

“Calibrated MPG2X I 1080i29.97” – FourCC ‘xd6b’ - 1920x1080 interlaced footage at 29.97fps
“Calibrated MPG2X I 1080p25” – FourCC ‘xd5c’ - 1920x1080 interlaced footage at 25fps
“Calibrated MPG2X I 1080p59.94” – FourCC ‘xdh2’ - 1920x1080 progressive footage at 59.94fps
“Calibrated MPG2X I 1080p50” – FourCC ‘xdh2’ - 1920x1080 progressive footage at 50fps
“Calibrated MPG2X I 1080p29.97” – FourCC ‘xd5f’ - 1920x1080 progressive footage at 29.97fps
“Calibrated MPG2X I 1080p25” – FourCC ‘xd5e’ - 1920x1080 progressive footage at 25fps
“Calibrated MPG2X I 1080p23.976” – FourCC ‘xd5d’ - 1920x1080 progressive footage at 23.976fps
“Calibrated MPG2X I 720p59.94” – FourCC ‘xd59’ - 1280x720 progressive footage at 59.94fps
“Calibrated MPG2X I 720p50” – FourCC ‘xd5a’ - 1280x720 progressive footage at 50fps
“Calibrated MPG2X I 720p29.97” – FourCC ‘xd51’ - 1280x720 progressive footage at 29.97fps
“Calibrated MPG2X I 720p25” – FourCC ‘xd55’ - 1280x720 progressive footage at 25fps
“Calibrated MPG2X I 720p23.976” – FourCC ‘xd54’ - 1280x720 progressive footage at 23.976fps
You can control the bitrate by using the quality slider in the QuickTime export window.

- Quality 10 or less is 18Mb
- Quality 11 to 20 is 25Mb
- Quality 21 to 30 is 35Mb
- Quality 31 to 40 is 50Mb
- Quality 41 to 50 is 80Mb
- Quality 51 to 60 is 100Mb
- Quality 61 to 70 is 140Mb
- Quality 71 to 80 is 180Mb
- Quality 81 to 90 is 220Mb
- Quality 91 and greater is 280Mb

**DEMO MODE Limitation - Calibrated MPEG2-X Create will have watermarks of the Calibrated MPEG2-X Create Logo burned into any encoded video when running in DEMO MODE. This is the only DEMO MODE limitation – everything else is fully functional. The burned in DEMO MODE watermarks cannot be removed from the encoded video. After ordering and licensing Calibrated MPEG2-X Create you will have to re-encode any files that you had created while running the software in DEMO MODE. Using the software in DEMO MODE is for testing only and should not be used for commercial purposes.**
**Version**
The version box shows the version of Calibrated MPEG2-X Create you are running and it display a webpage link of where
to download the latest version.

**License**
The license box is where you see your Software License status. It will display a green LICENSED if you are properly
licensed. *Please note that the stand-alone Calibrated License Manager application is used to license the software.*
Please see the ‘Software License’ chapter in this User Guide for more information.

**DEMO MODE Limitation** - Calibrated MPEG2-X Create will have watermarks of the Calibrated MPEG2-X Create Logo
burned into any encoded video when running in DEMO MODE. This is the only DEMO MODE limitation – everything else
is fully functional. The burned in DEMO MODE watermarks cannot be removed from the encoded video. After
ordering and licensing Calibrated MPEG2-X Create you will have to re-encode any files that you had created while
running the software in DEMO MODE. Using the software in DEMO MODE is for testing only and should not be used for
commercial purposes.
The following encode options are available for Calibrated MPEG2-X Create QuickTime Encode codec

**Important Note:** The options can only be set from within the application that is using Calibrated MPEG2-X Create – look for a ‘settings’ or ‘options’ button in the application. **You may have to set the options of Calibrated MPEG2-X Create in the application BEFORE every encode depending on the application using the codec**, please see the ‘Windows Applications’ or ‘Mac OSX Applications’ chapter for more details.

**MPEG2-X Encoding Options**
You can control the bitrate by using the quality slider in the QuickTime export window.

- Quality 10 or less is 18Mb
- Quality 11 to 20 is 25Mb
- Quality 21 to 30 is 35Mb
- Quality 31 to 40 is 50Mb
- Quality 41 to 50 is 80Mb
- Quality 51 to 60 is 100Mb
- Quality 61 to 70 is 140Mb
- Quality 71 to 80 is 180Mb
- Quality 81 to 90 is 220Mb
- Quality 91 and greater is 280Mb

Or in the MPEG2-X Encoding Options window you can manually set the BitRate from 6MB to 280Mb.

And you can set the MPEG ColorSpace to one of the below options:

1. YUV 4:2:2 CBR (mainly used for XDCAM HD 422)
2. YUV 4:2:0 VBR (mainly used for XDCAM EX 420)
3. YUV 4:2:0 VBR – 1440 Anamorphic (mainly used for XDCAM HD)
4. YUV 4:2:0 CBR – 1440 Anamorphic (mainly used for HDV)
Encode Color Options

Quick Colorspace Setup

These are the following quick setup options - please see the ‘Windows Applications’ or ‘Mac OSX Applications’ chapter to see which setup is best for your application. Some applications may not export and give a codec error if a Colorspace is selected that the application does not support – usually this happens with 8-bit YUV422

- **Custom** – this setup enables you to

- **8-bit YUV 422/Gamma** – this setup requests incoming video frames to be 8-bit YUV 422 with a 2.22 Gamma.

- **8-bit YUV 422** – this setup requests incoming video frames to be 8-bit YUV 422 with a Source Gamma (i.e disregards Gamma).

- **8-bit RGB/FULL/GAMMA** – this setup requests incoming video frames to be 8-bit RGB with a 2.22 Gamma – the 8-bit RGB->8-bit YUV conversion is done using the 709 FULL RANGE Matrix.

- **8-bit RGB/FULL** - this setup requests incoming video frames to be 8-bit RGB with a Source Gamma (i.e. disregards Gamma) – the 8-bit RGB->8-bit YUV conversion is done using the 709 FULL RANGE Matrix.

- **8-bit RGB/SMPT** - this setup requests incoming video frames to be 8-bit RGB with a Source Gamma (i.e. disregards Gamma) – the 8-bit RGB->8-bit YUV conversion is done using the 709 SMTPE RANGE Matrix.

Supported Colorspace

There are five Colorspace options:

- **“All Supported”** – 8-bit YUV422, and 8-bit RGB(A) 444(4) are requested colorspace – please note though that when requesting all supported colorspace that this can cause an application to report a ‘codec error’ if that application does not support 8-bit YUV422 exporting.

- **"8bit YUV & 8bit RGB"** – 8-bit YUV422 and 8-bit RGB(A) 444(4) are requested colorspace – please note that when requesting these colorspace that this can cause QuickTime to internally convert 8-bit RGB to 8-bit YUV422 if an application sends 8-bit RGB video frames – the internal RGB->YUV conversion by QuickTime may introduce unintended Gamma changes/corrections (this may vary from application to application and also depends on the RGB to YUV Gamma Correction setting too)

- **"8bit RGB"** - 8-bit RGB(A) 444(4) is the requested colorspace
**RGB to YUV Matrix**

Setting the YUV Matrix enables you to control how RGB is converted to YUV.

There are four **RGB to YUV Matrix** options:

- 601 SMPTE (16,235)
- 601 Full (0,255)
- 709 SMPTE (16,235)
- 709 Full (0,255) (**DEFAULT**)

Generally, 601 equations are used for SD video and 709 equations are used for HD video.

The Full option (the default value) converts RGB, which has black-white levels of 0-255 (0-65536 for 16-bit RGB), to YUV with black-white levels of 16-235 (64-940 for 10-bit YUV). The SMPTE option will convert RGB to YUV with black-white levels of 16-235 (64-940 for 10-bit YUV). The Full option is usually the preferred workflow option since RGB is viewed at having a black/white level of 0-255 for 8-bit RGB material (0-65536 for 16-bit RGB) in most applications. Using the SMPTE option, users can preserve the super black/white values of YUV data when converting from RGB, but this option should only be used for specific workflows where you are working with RGB data in the SMPTE range.

**Important Note:** The **RGB to YUV Matrix** setting will ONLY be used if an application sends RGB data to the code. If an application sends YUV data for a video frame then the **RGB to YUV Matrix** setting will have no effect on the YUV data being handed to the codec for encoding.

**444 to 422 Chroma Sampling**

There are two options:

- Duplicate Values
- Average Next Neighbors (**DEFAULT**)  

This controls how chroma is interpolated when converting from RGB 444 -> YUV 422. ‘Average Neighbors’ will produce smoother colors when converting; 'Duplicate Values' was added to essentially 'turn off' the averaging.

**Important Note:** The **444 to 422 Chroma Sampling** setting will ONLY be used if an application sends RGB data to the code. If an application sends YUV data for a video frame then the **444 to 422 Chroma Sampling** setting will have no effect on the YUV data being handed to the codec for encoding.

**RGB to YUV Gamma Correction**

This settings enables you to control how Gamma is handled when converting RGB to YUV.

There are four options:

- **Off** – all Gamma Correction is turned off and the Source Gamma is used from the incoming frame.
- **CVBuffer Tag '2.22'** – The video buffer is 'tagged' with 2.22 – this means that QuickTime will auto-correct incoming video frames to 2.22 Gamma.
- **CPU Gamma 1.8->2.22** – Source Gamma is requested from the incoming RGB Video Frame; however when converting from RGB->YUV via CPU a 1.8 to 2.22 Gamma Correction is applied. (1.8 is QuickTime Apple Platform Gamma for RGB)
- **CPU Gamma 2.5->2.22** – Source Gamma is requested from the incoming RGB Video Frame; however when converting from RGB->YUV via CPU a 2.5 to 2.22 Gamma Correction is applied. (2.5 is QuickTime Windows Platform Gamma for RGB)
Watermark (For Color Testing)
This option watermarks the video in the almost-top-left corner (the watermark is adjusted about 400 pixels in from the left side so that it is not covered up by watermarks from our Decode codecs) – it is IMPORTANT to disable this option when doing real work as the watermark will be a part of the encoded video – this option is just meant for quick checks for the user to see what colorspace Calibrated MPEG2-X Create is being handed by the calling application. The watermark is a black rectangle. The top text will be 8-bit YUV422 – this indicates what the XDCAM video was encoded as. The bottom text will either say Received 8-bit YUV422, Received 8-bit RGB444, or Received 8-bit RGBA4444 – this indicates the colorspace of the video frame that the calling application is sending to be encoded.
MOV Encoding from 3rd party applications

Overview
This chapter describes using Calibrated MPEG2-X Create in different third-party applications that support. For use of our software in Avid, Adobe or FCP/Compressor – please see those chapters in this User Guide.
MOV Encoding - QuickTime Player Pro 7.6/7.7

To export to any format you need to have QuickTime Player Pro 7.6/7.7 from Apple – HOWEVER – due to differences in how QuickTime Gamma is handled with different QuickTime codecs it is RECOMMENDED that you do NOT use QuickTime Player Pro 7.6/7.7 for exporting using Calibrated MPEG2-X Create for Windows.

MOV Encoding - Other 3rd party applications

When the MPEG2-X Create QuickTime Encode codec from other applications, please be aware of the following:

1. Even though Calibrated MPEG2-X Create supports encoding from 8-bit YUV422 colorspace, it is up to the application using Calibrated MPEG2-X Create to send those colorspace to the codec. From our research, many applications only support 8-bit RGB(A) colorspace when encoding to a MOV file. If you get a ‘codec error’ or ‘encode failure’ message when trying to encode from an application – usually that means that the application you are encoding from does not support the colorspace you are trying to encode to (i.e most likely 8-bit colorspace)

2. Various applications reading/writing from QuickTime can treat QuickTime Gamma differently (which can make video seem brighter or darker).

3. Calibrated MPEG2-X Create does not convert frames from interlaced to progressive or vise-versa, please make sure that you have selected the appropriate MPEG2-X ‘Compression Type’ to match the type of video frames you will be encoding from.

4. Calibrated MPEG2-X Create does not convert the frame rate of video, please make sure that you have selected the appropriate MPEG2-X ‘Compression Type’ to match the frame rate of the video you will be encoding from.

5. Always make sure that you have selected the appropriate MPEG2-X ‘Compression Type’ to match the resolution of the video you will be encoding from.

6. The FourCC tags used in the MOV file wrapper will as follows:

**XDCAM Long-GOP**
- Calibrated MPEG2X L 1080i29.97” – FourCC ‘xd5b’ - 1920x1080 interlaced footage at 29.97fps
- Calibrated MPEG2X L 1080p25” – FourCC ‘xd5c’ - 1920x1080 progressive footage at 25fps
- Calibrated MPEG2X L 1080p50” – FourCC ‘xdh2’ - 1920x1080 progressive footage at 50fps
- Calibrated MPEG2X L 1080p59.94” – FourCC ‘xdh2’ - 1920x1080 progressive footage at 59.94fps
- Calibrated MPEG2X L 1920p23.976” – FourCC ‘xd5d’ - 1920x1080 progressive footage at 29.97fps
- Calibrated MPEG2X L 1920p25” – FourCC ‘xd5e’ - 1920x1080 progressive footage at 25fps
- Calibrated MPEG2X L 1920p29.97” – FourCC ‘xd5f’ - 1920x1080 progressive footage at 29.97fps
- Calibrated MPEG2X L 2304x1296” – FourCC ‘xd57’ - 2304x1296 progressive footage at 29.97fps
- Calibrated MPEG2X L 720p59.94” – FourCC ‘xd59’ - 1280x720 progressive footage at 59.94fps
- Calibrated MPEG2X L 720p50” – FourCC ‘xd5a’ - 1280x720 progressive footage at 50fps
- Calibrated MPEG2X L 720p25” – FourCC ‘xd5c’ - 1280x720 progressive footage at 25fps
- Calibrated MPEG2X L 720p29.97” – FourCC ‘xd5e’ - 1280x720 progressive footage at 29.97fps
- Calibrated MPEG2X L 720p25” – FourCC ‘xd5f’ - 1280x720 progressive footage at 25fps
- Calibrated MPEG2X L 720p23.976” – FourCC ‘xd54’ - 1280x720 progressive footage at 23.976fps

**XDCAM I-Frame**
- Calibrated MPEG2X I 1080i29.97” – FourCC ‘xd5b’ - 1920x1080 interlaced footage at 29.97fps
- Calibrated MPEG2X I 1080p25” – FourCC ‘xd5c’ - 1920x1080 interlaced footage at 25fps
- Calibrated MPEG2X I 1080p50” – FourCC ‘xdh2’ - 1920x1080 progressive footage at 50fps
- Calibrated MPEG2X I 1080p59.94” – FourCC ‘xdh2’ - 1920x1080 progressive footage at 59.94fps
- Calibrated MPEG2X I 1920p23.976” – FourCC ‘xd5d’ - 1920x1080 progressive footage at 29.97fps
- Calibrated MPEG2X I 1920p25” – FourCC ‘xd5f’ - 1920x1080 progressive footage at 25fps
- Calibrated MPEG2X I 1920p29.97” – FourCC ‘xd5e’ - 1920x1080 progressive footage at 29.97fps
- Calibrated MPEG2X I 2304x1296” – FourCC ‘xd57’ - 2300x1296 progressive footage at 29.97fps
- Calibrated MPEG2X I 720p59.94” – FourCC ‘xd59’ - 1280x720 progressive footage at 59.94fps
- Calibrated MPEG2X I 720p50” – FourCC ‘xd5a’ - 1280x720 progressive footage at 50fps
- Calibrated MPEG2X I 720p25” – FourCC ‘xd5c’ - 1280x720 progressive footage at 25fps
- Calibrated MPEG2X I 720p29.97” – FourCC ‘xd5e’ - 1280x720 progressive footage at 29.97fps
- Calibrated MPEG2X I 720p25” – FourCC ‘xd5f’ - 1280x720 progressive footage at 25fps
- Calibrated MPEG2X I 720p23.976” – FourCC ‘xd54’ - 1280x720 progressive footage at 23.976fps
Overview
This chapter describes using Calibrated MPEG2-X Create in Adobe Applications.
MXF & MOV Export - Adobe After Effects CC-CC2018

Getting Started

1. Please make sure you have AME CC-CC2018 is installed. (Exporting from AE CS6 is not supported)

Exporting

1. *When exporting from an AE Composition, please choose the ‘Add to Adobe Media Encoder Queue…’*

2. See the AME section for rest of details on exporting
OP1a MXF Export - Adobe AME/PPro CS6-CC2018

Getting Started

1. **On Windows** - Please make sure you have ExpCalibratedMPEG2XCreateOP1a.prm installed in the Adobe\Common\Plug-ins\7.0\ for CC-CC2018 support, and in the Adobe\Common\Plug-ins\6.0\MediaCore directory for CS6 support.

2. **On Mac OSX** - Please make sure you have ExpCalibratedMPEG2X.prm installed in the /Library/Application Support/Adobe/Common/Plug-ins/7.0/MediaCore for CC-CC2018 support, and in /Library/Application Support/Adobe/Common/Plug-ins/6.0/MediaCore directory for CS6 support.

MPEG2-X MXF Export in PPro/AME

1. In the ‘Export Settings’, please choose the format ‘Calibrated OP1a MPEG2-X MXF’

2. **Click on the ‘Video’ Tab in the ‘Export Settings’ (see picture below)**
   a. The ‘Video Profile Presets’ should automatically be set to ‘Custom’ – which means you can manually set the below 4 options. You can select from a wide variety of predefined common XDCAM types that will set the below options for you.
   b. The ‘Video Codec’ should automatically be set to the Resolution and FrameRate that best matches your Sequence Settings.
   c. The ‘Video BitRate’ will be automatically set to 180Mb as the default
   d. The ‘MPEG2 ColorSpace’ will be set to ‘YUV 4:2:2 CBR’ as the default which is mainly used for XDCAM HD 422 encoding. The other colorspace options are:
      (i) YUV 4:2:0 VBR (mainly used for XDCAM EX 420)
      (ii) YUV 4:2:0 VBR – 1440 Anamorphic (mainly used for XDCAM HD)
      (iii) YUV 4:2:0 CBR – 1440 Anamorphic (mainly used for HDV)
   e. The ‘MPEG2 Format’ is automatically set to ‘Long-GOP’ but you can set it to I-Frame Only encoding.
   f. Make sure to set the “XDCAM Format Settings” - the default is that only a MXF file is exported with embedded XML Metadata. Users can select to also export a sidecar XML file with metadata along with the MXF file or they can select to export in the fully Sony BPAV Folder structure. When choosing the Sony BPAV Folder structure option – you can also choose metadata from the “Disc Setup”.
   g. **By Default - ‘Render at Maximum Depth’ is CHECKED** – this means that our plugin will render at the best possible quality
   h. Make sure that ‘Use Maximum Render Quality’ is CHECKED if you want the best render quality from Adobe; however exports could take a little longer.
   i. Make sure that ‘Use Previews’ is **NOT** CHECKED if you want the best render quality from Adobe; however exports could take a little longer.

3. **Click on the ‘Audio’ Tab in the ‘Export Settings’ (see picture below)**
   a. The ‘Audio Codec’ should automatically be set to Uncompressed
   b. The ‘Sample Rate’ should be set to 48000 Hz
   c. The Audio Layout can either be: Mono, Stereo Interleaved or Discrete Audio Channels. The Discrete Channels is the default in CC-CC2018 - The **Discrete Channels** should be set to the number of channels that closet matches your Sequence Settings (either 0 to 32 ). **IMPORTANT: For CS6, the number of**
channels always defaults to 2. Also – choosing ‘Stereo Interleaved’ as your audio option will produce a valid MXF file but not one that follows the XDCAM spec (as Audio should be stored as discrete tracks in the MXF file per the XDCAM MXF file wrapper spec)

d. The ‘Sample Size’ can be set to 16-bit or 24-bit audio

4. Click on the ‘File MetaData Tab in the ‘Export Settings’ (see picture below)
   a. In the ‘TimeCode’ section you can override the TimeCode that the plugin will use for the exported file. By default, the plugin will use the TimeCode given to it by PPro/AME, but you can CHECK the ‘Override Sequence TimeCode’ to enter in a new TimeCode to use.
   b. The ‘MXF MetaData’ section you can set the MXF file Source Package Name.
   c. The ‘General Non-Real Time Metadata” section , “Descriptive Non-Real Time Metadata”, and “User Defined Descriptive Non-Real Time Metadata” section will enable you to enter in embedded XML Metadata for the MXF OP1a file. Please see the chapter MPEG2-X MXF OP1a XML Metadata in this User Guide for more information.

5. Click on the ‘Disc Setup” Tab in the ‘Export Settings’ (see picture below)
   When you choose the Full XDCAM Disc Structure option in “XDCAM Format Settings” then the ‘Disc Setup’ tab will allow you to enter in disc metadata and name the clip.

6. And you’re ready to export
‘Video Tab’ in the ‘Export Settings’ for PPro/AME CC for MPEG2-X Create

- Video Profile Presets: Custom
- Video Codec: MPEG2-X 1080p 29.97fps
- MPEG2 ColorSpace: YUV 4:2:2 CBR
- Video BitRate: 180
- MPEG2 Format: Long GOP
- XDCAM Format Settings: Non-Real Time XML Metadata Internal
- # Rendering Proc: Maximum

‘Audio Tab’ in the ‘Export Settings’ for PPro/AME CC for MPEG2-X Create

- Audio Codec: Uncompressed
- Basic Audio Settings:
  - Sample Rate: 48000 Hz
  - Channels: Discrete - 2 Channel
  - Sample Size: 24 bit
‘File Metadata Tab’ in the ‘Export Settings’ for PPro/AME CC for MPEG2-X Create

- **TimeCode**
  - Override Sequence TimeCode
    - Enter New TimeCode: 00:00:00:00
    - Override TimeCode Value: 00:00:00:00, 30fps - NDF

- **Source Package Name**: [Empty]

- **General Non-Real Time Metadata**
  - Status: None
  - Title (ASCII): [Empty]
  - Title Alias: [Empty]
  - Creator: [Empty]
  - Description: [Empty]

- **Descriptive Non-Real Time Metadata**
  - Circle: [Empty]
  - Project: [Empty]
  - Director: [Empty]
  - Cinematographer: [Empty]
  - Production: [Empty]
  - Camera Index: [Empty]
‘Disc Setup Tab’ in the ‘Export Settings’ for PPro/AME CC for MPEG2-X Create

- **Disc Clipname**
  - Default Filename: Clip0001

- **Disc XML Metadata**
  - Main Title (ASCII): [Empty]
  - Main Title Alias: [Empty]
  - Alternative Title (ASCII): [Empty]
  - Alternative Title Alias: [Empty]
  - Description: [Empty]
  - Purpose: [Empty]
MOV Export - Adobe AME/PPro CS6-CC2018

Getting Started

1. **On Windows** - Please make sure you have ExpCalibratedMPEG2XCreateMOV.prm installed in the Adobe\Common\Plug-ins\7.0\ for CC-CC2018 support, and in the Adobe\Common\Plug-ins\6.0\MediaCore directory for CS6 support.

2. **On Mac OSX** - Please make sure you have ExpCalibratedMPEG2XMOV.prm installed in the /Library/Application Support/Adobe/Common/Plug-ins/7.0/MediaCore for CC-CC2018 support, and in /Library/Application Support/Adobe/Common/Plug-ins/6.0/MediaCore directory for CS6 support.

MPEG2-X MOV Export in PPro/AME

1. In the ‘Export Settings’, please choose the format ‘Calibrated MPEG2-X MOV’

2. Click on the ‘Video’ Tab in the ‘Export Settings’ (see picture below)
   - a. The ‘Video Profile Presets’ should automatically be set to ‘Custom’ – which means you can manually set the below 4 options. You can select from a wide variety of predefined common XDCAM types that will set the below options for you.
   - b. The ‘Video Codec’ should automatically be set to the Resolution and FrameRate that best matches your Sequence Settings.
   - c. The ‘Video BitRate’ will be automatically set to 180Mb as the default
   - d. The ‘MPEG2 ColorSpace’ will be set to ‘YUV 4:2:2 CBR’ as the default which is mainly used for XDCAM HD 422 encoding. The other colorspace options are:
     - (iv) YUV 4:2:0 VBR (mainly used for XDCAM EX 420)
     - (v) YUV 4:2:0 VBR – 1440 Anamorphic (mainly used for XDCAM HD)
     - (vi) YUV 4:2:0 CBR – 1440 Anamorphic (mainly used for HDV)
     - (vii) YUV 4:2:2 CBR 1/2 resolution proxy
     - (viii) YUV 4:2:2 CBR 1/4 resolution proxy
     - (ix) YUV 4:2:0 VBR 1/2 resolution proxy
     - (x) YUV 4:2:0 VBR 1/4 resolution proxy
   - e. The ‘MPEG2 Format’ is automatically set to ‘Long-GOP’ but you can set it to I-Frame Only encoding.
   - f. Proxy MOV Track Resolution applies to exporting proxy size MOV files as whether the MOV file displays as full resolution or it’s encoded resolution
   - g. Mark file as read only will lock the MOV file when exporting is complete. This is useful as Premiere Pro/AME will try to update the MOV file after the export is completed with different timecode and embedding XMP metadata which can alter the structure of the MOV file.
   - h. By Default - ‘Render at Maximum Depth’ is CHECKED – this means that our plugin will render at the best possible quality
   - i. Make sure that ‘Use Maximum Render Quality’ is CHECKED if you want the best render quality from Adobe; however exports could take a little longer.
   - j. Make sure that ‘Use Previews’ is NOT CHECKED if you want the best render quality from Adobe; however exports could take a little longer.

3. Click on the ‘Audio’ Tab in the ‘Export Settings’ (see picture below)
   - a. The ‘Audio Codec’ should automatically be set to Uncompressed
b. The ‘Sample Rate’ should be set to 48000 Hz

c. The Audio Layout’ can either be: Mono, Stereo (Separate or Interleaved), 5.1 (Separate or Interleaved) or Discrete Audio Channels. The Discrete Channels is the default in CC-CC2018 - The Discrete Channels should be set to the number of channels that closet matches your Sequence Settings (either 0 to 32 ).

IMPORTANT: For CS6, the number of channels always defaults to 2.

d. The ‘Sample Size’ can be set to 16-bit or 24-bit audio

4. Click on the ‘File MetaData Tab in the ‘Export Settings’ (see picture below)

   a. In the ‘TimeCode’ section you can override the TimeCode that the plugin will use for the exported file. By default, the plugin will use the TimeCode given to it by PPro/AME, but you can CHECK the ‘Override Sequence TimeCode’ to enter in a new TimeCode to use.

   b. The ‘MOV ReelName’ section you can set the Reel Name of the Timecode Track in the MOV file.

   c. The ‘Cs – FCP X Embedded Camera/Studio MetaData’ section and ‘Cs – FCP X Embedded Share MetaData’ section will enable you to enter in embedded MetaData in the QuickTime MOV file. Please see the chapter MOV Metadata in this User Guide for more information.

5. And you’re ready to export
‘Video Tab’ in the ‘Export Settings’ for PPro/AME CC for MPEG2-X Create for MOV

- Video Codec
  - Video Profile Presets: Custom
  - Video Codec: MPEG2-X 1080p 29.97fps
  - MPEG2 ColorSpace: YUV 4:2:2 CBR
  - Video BitRate: 180
  - MPEG2 Format: Long GOP, I-Frame Only, Full Resolution, Encoded Resolution
  - Proxy MOV Track Resolution: Full Resolution, Encoded Resolution
  - Mark File as Read-Only when export complete
  - # Rendering Proc: Maximum

- Basic Video Settings
  - Width: 1,920
  - Height: 1,080
  - Pixel Aspect Ratio: Square pixels (1.0)
  - Frame Rate: 29.97
  - Field Order: Upper Field, Progressive
  - Deinterlace Video: Off, On
  - Render at Maximum Depth
‘Audio Tab’ in the ‘Export Settings’ for PPro/AME CC for MPEG2-X Create for MOV

![Audio Tab screenshot]

- **Audio Codec**: Uncompressed
- **Sample Rate**: 48000 Hz
- **Channels**: Discrete - 2 Channel
- **Sample Size**: 24 bit

‘File Metadata Tab’ in the ‘Export Settings’ for PPro/AME CC for MPEG2-X Create

![File Metadata Tab screenshot]

- **MOV Reel Name and TimeCode**
  - **Reel Name**: [Empty]
  - **Override Sequence TimeCode**
    - **Enter New TimeCode**: 00:00:00:00
    - **Override TimeCode Value**: 00:00:00:00, 30fps - NDF

- **Cs - FCP X Embedded Camera/Studio MetaData**
  - **Title**: [Empty]
  - **Creator**: [Empty]
  - **Reel Name**: [Empty]
  - **LogNote**: [empty]
  - **Program Name**: [Empty]
  - **Scene**: [Empty]
  - **Take**: [Empty]
  - **Memo Author**: [Empty]
  - **Memo**: [Empty]
  - **Location**: [Empty]
  - **Shooter**: [Empty]
  - **Camera Name**: [Empty]
  - **Camera ID**: [Empty]
  - **Camera Angle**: [Empty]
  - **Reporter**: [Empty]
Overview
This chapter describes using Calibrated MPEG2-X Create in Avid Applications. Please make sure that you are using Avid Media Composer 8.4 or greater.
**OP1a MXF Export – Avid MC 8.4 & 8.5**

**Getting Started**

1. **On Windows** - Please make sure you have MSP_CalibratedMXFOP1aMPEG2X.avx installed in the Avid\AVX2_Plug-ins\AMA\CalibratedMPEG2XCreate folder.

2. **On Mac OSX** - Please make sure you have MSP_Calibrated_MPEG2XCreateMXF.avx installed in the /Library/Application Support/Avid/AVX2_Plug-ins/ folder.

**MXF Export in Avid MC**

1. In the ‘Export Settings’, please choose the format ‘Calibrated MPEG2-X MXF OP1a’

2. **In the Video Section**

   a. Make sure to set the “XDCAM Format Settings” - the default is that only a MXF file is exported with embedded XML Metadata. Users can select to also export a sidecar XML file with metadata along with the MXF file or they can select to export in the fully Sony BPAV Folder structure. When choosing the Sony BPAV Folder structure option – you can also choose metadata from the “Disc Setup”.

   b. The ‘Video Profile Presets’ should automatically be set to ‘Custom’ – which means you can manually set the below 4 options. You can select from a wide variety of predefined common XDCAM types that will set the below options for you.

   c. The ‘Video BitRate’ will be automatically set to 180Mb as the default

   d. The ‘MPEG2 ColorSpace’ will be set to ‘YUV 4:2:2 CBR’ as the default which is mainly used for XDCAM HD 422 encoding. The other colorspace options are:

      (xi) YUV 4:2:0 VBR (mainly used for XDCAM EX 420)

      (xii) YUV 4:2:0 VBR – 1440 Anamorphic (mainly used for XDCAM HD)

      (xiii) YUV 4:2:0 CBR – 1440 Anamorphic (mainly used for HDV)

   e. The ‘MPEG2 Format’ is automatically set to ‘Long-GOP’ but you can set it to I-Frame Only encoding.

3. **In the Audio Section**

   a. The ‘Audio Codec’ should automatically be set to Uncompressed

   b. The ‘Sample Rate’ should be set to 48000 Hz

   c. The ‘Audio Mix’ should be set to the number of channels that closet matches your Projects Settings. Please note that for any Audio Mix – the least amount of audio channels is 0 and the most is 96. Also – choosing ‘Stereo Interleaved’ as your audio option will produce a valid MXF file but not one that follows the XDCAM spec (as Audio should be stored as discrete tracks in the MXF file per the XDCAM MXF file wrapper spec)

   d. The ‘Sample Size’ can be 16-bit or 24-bit audio

4. **In the ‘TimeCode and MXF SourceName’ MetaData Section**

   a. You can CHECK the ‘Manually Set TimeCode’ to enter in a new TimeCode to use.

   a. The ‘MXF MetaData’ section you can set the MXF file Source Package Name.
5. **In the Non-Real Time Metadata Sections (see picture below)**

   a. The ‘General Non-Real Time Metadata” section, “Descriptive Non-Real Time Metadata”, and “User Defined Descriptive Non-Real Time Metadata” section will enable you to enter in embedded XML Metadata for the MXF OP1a file. Please see the chapter *MXF OP1a XML Metadata* in this User Guide for more information.

6. **In the ‘Disc Setup” section**

   When you choose the Full XDCAM Disc Structure option in “XDCAM Format Settings” then the ‘Disc Setup’ tab will allow you to enter in disc metadata and name the clip.

7. And you’re ready to export
MPEG2-X Create OP1a MXF ‘Export Settings’ for Avid MC

**File Type:** Calibrated MPEG2-X MXF OP1a
- [ ] Use Marks
- [ ] Use Selected Tracks
- [ ] Include Inactive Audio Tracks

**Directory:** /work
**File Name:** Untitled Sequence.01

**Profile**

**Video**
- **Video Compression:** MPEG2-X (OP1a MXF)
- **Video Format:** 1920x1080 29.97fps
- **XDCAM Format Settings:** Non-Real Time XML Metadata Internal
- **Video Profile Presets:** Use Custom Settings Below
- **Custom Video Settings**
  - Custom Video BitRate: 180

**Audio**
- **Audio Format:** Uncompressed PCM 48kHz
- **Audio Bit Depth:** 16
- **Audio Mix:** Stereo – Discrete

**TimeCode and MXF SourceName**
- **Manually Set TimeCode:**
- **Set TimeCode:** 00:00:00:00
- **Set MXF Source Package Name:** [Empty]

**General Non-Real Time Metadata**
- **Status:** Name
  - Title (ASCII): [Empty]
  - Title Alias: [Empty]
  - Creator: [Empty]
  - Description: [Empty]

**Descriptive Non-Real Time Metadata**
- **Circle:** [Empty]
- **Project:** [Empty]
- **Director:** [Empty]
- **Cinematographer:** [Empty]
- **Production:** [Empty]
- **Camera Index:** [Empty]
- **Reel:** [Empty]
- **Scene:** [Empty]
- **Cut:** [Empty]
- **Take:** [Empty]
- **Shot:** [Empty]

**User-Defined Descriptive Non-Real Time Metadata**
- **Name #1:** [Empty]
- **Data #1:** [Empty]
- **Name #2:** [Empty]
- **Data #2:** [Empty]
- **Name #3:** [Empty]
- **Data #3:** [Empty]
- **Name #4:** [Empty]
- **Data #4:** [Empty]
- **Name #5:** [Empty]
- **Data #5:** [Empty]

[Save Profile] [Save] [Cancel]
MOV Export – Avid MC 8.4 & 8.5

Getting Started

1. **On Windows** - Please make sure you have the MSP_CalibratedMOVMPEG2X.avx installed in the Avid\AVX2_Plug-ins\AMA\CalibratedMPEG2XCreate folder

2. **On Mac OSX** - Please make sure you have MSP_Calibrated_MPEG2XCreateMOV.avx installed in the /Library/Application Support/Avid/AVX2_Plug-ins/ folder.

MOV Export in Avid MC

1. In the ‘Export Settings’, please choose the format ‘Calibrated MPEG2-X MOV’

2. **In the Video Section**
   a. Mark exported MOV file as read-only - the default is checked and this will prevent other applications from altering the metadata or structure of the MOV file.
   b. The ‘Video Profile Presets’ should automatically be set to ‘Custom’ – which means you can manually set the below 4 options. You can select from a wide variety of predefined common XDCAM types that will set the below options for you.
   c. The ‘Video BitRate’ will be automatically set to 180Mb as the default
   d. The ‘MPEG2 ColorSpace’ will be set to ‘YUV 4:2:2 CBR’ as the default which is mainly used for XDCAM HD 422 encoding. The other colorspace options are:
      (i) YUV 4:2:0 VBR (mainly used for XDCAM EX 420)
      (ii) YUV 4:2:0 VBR – 1440 Anamorphic (mainly used for XDCAM HD)
      (iii) YUV 4:2:0 CBR – 1440 Anamorphic (mainly used for HDV)
   e. The ‘MPEG2 Format’ is automatically set to ‘Long-GOP’ but you can set it to I-Frame Only encoding.

3. **In the Audio Section**
   a. The ‘Audio Codec’ should automatically be set to Uncompressed
   b. The ‘Sample Rate’ should be set to 48000 Hz
   c. The ‘Audio Mix’ should be set to the number of channels that closet matches your Projects Settings. Please note that for any Audio Mix – the least amount of audio channels is 0 and the most is 96.
   d. The ‘Sample Size’ can be 16-bit or 24-bit audio

4. **In the ‘TimeCode and MOV ReelName” MetaData Section**
   a. You can CHECK the ‘Manually Set TimeCode’ to enter in a new TimeCode to use.
   b. The ‘MOV ReelName’ section you can set the ReelName for the TimeCode Track

5. **In the Metadata Sections (see picture below)**
   a. The ‘Cs – FCP X Embedded Camera/Studio MetaData’ section and ‘Cs – FCP X Embedded Share MetaData’ section will enable you to enter in embedded MetaData in the QuickTime MOV file. Please see the chapter MOV Metadata in this User Guide for more information.

6. And you’re ready to export
Overview
This chapter describes using Calibrated MPEG2-X Create for OSX in a FCP 7, FCP X, and Compressor 3.5.3/4.1.2

IMPORTANT FOR COMPRESSOR – always remember to set the ‘Field Version’ in the Options settings for the version of Compressor that you are using if you are creating your own custom preset.
MOV/MXF Export - Final Cut Pro X

Getting Started

1. Please make sure you have FCP X 10.1.2 or greater installed

2. Please make sure that the Calibrated MPEG2-X Create Compressor 4.1.2 presets are installed

   If the presets are NOT installed, you can use our presets installer to install them

3. Please note that if you are rendering using multiple render nodes (i.e. different computers) then each computer would need it’s own separate license of Calibrated MPEG2-X Create.

4. IMPORTANT: When exporting from FCP, if the number of output audio channels is smaller than the number of FCP audio channels then each output audio channel is a mix of all FCP audio channels.

MOV/MXF Exporting from FCP X

1. In FCP X, you can choose to export from FCP X using the ‘Share’ option, or you can choose to ‘Send to Compressor’ and export using Compressor. If you choose to ‘Send to Compressor’ please go to the ‘Compressor 3.5.3/4.1.2’ chapter on how to export from Compressor. For using the ‘Share’ option from FCP X, please continue to step 2.

2. After choosing the ‘Share’ option, please choose the ‘Add Destination…’ and the ‘Destinations’ window will pop-up. Click on the ‘Compressor Settings’ button and under the ‘Custom’ folder will be the Cs MPEG2-X Create MOV and Cs MPEG2-X Create MXF presets. The presets are organized by resolution, field type and framerate. Choose the preset that best matches your source resolution, frame rate, and field

3. Preset Defaults:

   Please go to the Compressor 3.5.3/4.1.2 section to learn the preset defaults

4. You can also create your own presets in Compressor. Please go to the Compressor 3.5.3/4.1.2 section to learn how to create your own presets.

5. And you’re ready to export
MOV/MXF Export - Final Cut Pro 7

Getting Started

1. Please make sure you have FCP7.0.3 installed (earlier versions of FCP have not been tested)

2. Please make sure that the Calibrated MPEG2-X Create Compressor presets are installed

   If the presets are NOT installed, you can use our presets installer to install them

   Please restart your computer after installing.

3. **For FCP7 Sequences:** For FCP7 Sequences: To preserve the maximum bit depth, please make sure you have the ‘Render 8-bit YUV’ selected OR any of the other YUV processing options selected in your FCP7 ‘Sequence Settings’ if you send a sequence to Compressor 3.5.3.

4. **IMPORTANT:** When exporting from FCP, if the number of output audio channels is smaller than the number of FCP audio channels then each output audio channel is a mix of all FCP audio channels.

5. **IMPORTANT:** Please use the ‘Send to Compressor’ option in FCP 7 to export. If you try to export from FCP 7 using the ‘QuickTime Movie’ Option (i.e. not using Compressor to export) then I-Frame only export works but Long-GOP exporting will give you an error when trying to export. Also (for reasons unknown), pressing the ‘Advanced’ button in FCP 7 to get the Options for the Calibrated MPEG2-X Create codec will crash FCP 7.

Using a Preset Setting for exporting in FCP7

1. In the ‘File->Send To’ menu options, please choose ‘Compressor’ option

2. And you’re ready to export – please go to the Compressor 3.5.3/4.1.2 chapter on how to export from Compressor 3.5.3 by using one of our ready-made presets or by creating your own preset.
Compressor 3.5.3/4.1.2 – MXF & MOV

Getting Started

1. If you are using Compressor 3.5, please make sure you have Compressor 3.5.3 installed, and if you are using Compressor 4, please make sure you have Compressor 4.1.2 installed. Other versions of Compressor have not been tested.

2. Please make sure that the Calibrated MPEG2-X Create Compressor presets are installed in the folder

   For Compressor 3.5 use this folder:
   /Users/[YOUR_ACCOUNT]/Library/Application Support/Compressor/

   For Compressor 4.1.2 use this folder:
   /Users/[YOUR_ACCOUNT]/Library/Application Support/Compressor/Settings

   (Please note that is the Library folder from your User directory and you need to install the presets to every user account that will use the presets)

   If the presets are NOT in the above folder, you can use our presets installer to install them or manually copy them to the above folder(s) from this folder:

   /Applications/Calibrated/Presets/MPEG2-X Create/Compressor [version]/Calibrated MPEG2-X Create MXF

   /Applications/Calibrated/Presets/MPEG2-X Create/Compressor [version]/Calibrated MPEG2-X Create MOV

   To clarify, you would copy the folder ‘Calibrated MPEG2-X Create MXF ‘ & ‘Calibrated MPEG2-X Create MOV’ to the Compressor folder for the version of Compressor that you are using.

   Please restart your computer after installing.

3. For FCP7 Sequences: For FCP7 Sequences: To preserve the maximum bit depth, please make sure you have the ‘Render 8-bit YUV’ selected OR any of the other YUV processing options selected in your FCP7 ‘Sequence Settings’ if you send a sequence to Compressor 3.5.3.

4. Please note that if you are rendering using multiple render nodes (i.e. different computers) then each computer would need its own separate license of Calibrated MPEG2-X Create.

Using a Pre-made Preset for exporting in Compressor 3.5.3/4.1.2

1. If you’ve already installed our MPEG2-X Create Compressor Presets skip to step 2. If you haven’t installed the presets, please go to the above section ‘Getting Started’ to learn how to install our Calibrated MPEG2-X Create Compressor presets.

2. In the Compressor ‘Settings’ window, please open the ‘Settings’ tab and navigate to the ‘Custom’ folder.

3. The presets are organized by resolution, field type and framerate. Choose the preset that best matches your source resolution, frame rate, and field

4. Preset Defaults:
   a. Video: The video bitrate will be defaulted to 180Mb Long-GOP or 220 I-Frame Only
   b. Audio: The default audio will be 16-bit 48Khz uncompressed audio with either 2, or more discrete audio channels.
   c. TimeCode: The default TimeCode will be to use the Start TimeCode from the source (if possible)

5. You can also create your own presets in Compressor. Please go to the section to learn how to create your own presets.
Making a MPEG2-X Create MXF or MOV Preset in Compressor 3.5.3

IMPORTANT – always remember to set the ‘Field Version’ in the Options settings for the version of Compressor that you are using.

First select the ‘+’ button in the Settings window and choose ‘Calibrated MPEG2-X MXF’ or ‘Calibrated MPEG2-X MOV’ in the drop-down menu.

This will add a new preset in the Settings window. Make sure that this new preset is highlighted and then press the ‘Options’ button to open the preset options.

By pressing the ‘Option’ button you will bring up the ‘Options’ panel to configure the preset. See the section below:

*Options Panel in Compressor 3.5.3/4.1.2* for setting the different options in your new preset.
Making a MPEG2-X Create MXF or MOV Preset in Compressor 4.1.2

IMPORTANT – always remember to set the ‘Field Version’ in the Options settings for the version of Compressor that you are using

First select the ‘+’ button in the Settings window and choose ‘New Setting…’ in the drop-down menu

In the window that pops-up, choose either ‘Calibrated MPEG2-X MXF’ or ‘Calibrated MPEG2-X MOV’ from the list of formats

This will add a new preset in the Settings window. Make sure that this new preset is highlighted and then press the ‘Configure’ button to open the preset options panel.

By pressing the ‘Configure’ button you will bring up the ‘Options’ panel to configure the preset. See the section below:

Options Panel in Compressor 3.5.3/4.1.2

for setting the different options in your new preset.
Calibrated MPEG2-X Create supports creating the following XDCAM-style MXF files:

- **1920x1080i @ 29.97 or 25 fps**
  - BitRates: 6Mb-280
  - I-frame Only or Long-GOP

- **1920x1080p @ 60, 59.94, 50, 30, 29.97, 25, 24, or 23.976fps**
  - BitRates: 6Mb-280
  - I-frame Only or Long-GOP

- **1920x1080p @ 60, 59.94, 50, 30, 29.97, 25, 24, or 23.976fps**
  - BitRates: 6Mb-280
  - I-frame Only or Long-GOP

48Khz Uncompressed audio with 0-32 Channels at 24-bits or 16-bits. One interleaved stereo track can be exported as an option

*(continued next page)*
The below Options panel can help you configure your preset in Compressor

1. Video Options

   a. XDCAM Format Settings:
      
(i) the default is that only a MXF file is exported with embedded XML Metadata
(ii) Users can select to also export a sidecar XML file with metadata along with the MXF file
(iii) Users can select to export in the fully Sony BPAV Folder structure. When choosing the Sony BPAV Folder structure option – you can also choose metadata from the “Disc Setup”

   b. Video Profile: This lets you quickly set common video formats

   c. Video Codec: This lets you set the resolution, framerate, and field type that you wish to encode into

   d. The ‘MPEG2 ColorSpace’ will be set to ‘YUV 4:2:2 CBR’ as the default which is mainly used for XDCAM HD 422 encoding. The other colorspace options are:
      
(i) YUV 4:2:0 VBR (mainly used for XDCAM EX 420)
(ii) YUV 4:2:0 VBR – 1440 Anamorphic (mainly used for XDCAM HD)
(iii) YUV 4:2:0 CBR – 1440 Anamorphic (mainly used for HDV)

   e. Video BitRate: This lets you set the bitrate of the encoded video

   f. Sequence Type: This lets you set the bitrate of the encoded video. The ‘MPEG2 Format’ is automatically set to ‘Long-GOP’ but you can set it to I-Frame Only encoding.

   g. Field Version: IMPORTANT – you must set this for the version of Compressor that you are using
2. **Audio Options** - IMPORTANT: When exporting from FCP, if the number of output audio channels is smaller than the number of FCP audio channels then each output audio channel is a mix of all FCP audio channels.

   a. Audio Rate: Always set to 48 kHz

   b. Audio BitRate: 24-bits or 16-bits

   c. Audio Auto: The below options will let the preset tell Compressor the Audio Layout that the plugin wants to receive. Please note that no matter which Audio Layout option is selected – the exported media will only store audio in a 0-32 channel discrete configuration UNLESS you choose “Stereo” then a single interleaved stereo track will be exported.

      (i) The ‘Use # of Audio Channels From Source (if possible)’ option is the default option and this option will tell Compressor to send the exact number of source audio channels in as discrete audio channels.

      (ii) The ‘Use Audio Layout From Source (if possible)’ option will tell Compressor to send the exact number of source audio channels in the source audio layout.

      (iii) The ‘Manually set Audio Layout’ option will let you manually set the audio layout to tell Compressor to send to the plugin

   d. Audio Layout: This is where you would manually set the ‘Audio Layout’ if the ‘Audio Auto’ option is set to ‘Manually set Audio Layout’. Please note that no matter which Audio Layout is manually selected – the exported media will only store audio in a 0-32 channel discrete configuration UNLESS you choose “Stereo” then a single interleaved stereo track will be exported.

3. **TimeCode Options**

   a. Use Start TimeCode From Source (if possible) – by default the preset is set to use the start timecode from the source media for the exported media. By unchecking this option the user can manually add in a new start timecode for the exported media

   b. Enter Start TimeCode – this is where you would manually enter in the new start timecode for the exported media if the ‘Use Start TimeCode From Source’ is UNCHECKED

4. **MetaData Options** – The default MetaData mapping is described below. The user can adjust how the metadata is mapped (or set) by either (i) selecting a different Compressor MetaData mapping for the MetaData field or (ii) the user can manually enter in metadata. Please see the chapter **MXF OP1a XML Metadata**.
Calibrated MPEG2-X Create supports creating the following XDCAM-style MOV files:

1920x1080i @ 29.97 or 25 fps
BitRates: 6Mb-280
I-frame Only or Long-GOP

1920x1080p @ 60, 59.94, 50, 30, 29.97, 25, 24, or 23.976fps
BitRates: 6Mb-280
I-frame Only or Long-GOP

1920x1080p @ 60, 59.94, 50, 30, 29.97, 25, 24, or 23.976fps
BitRates: 6Mb-280
I-frame Only or Long-GOP

48Khz Uncompressed audio with 0-32 Channels at 24-bits or 16-bits. One interleaved stereo track can be exported as an option

Proxy formats at 1-10Mb at ½ or ¼ resolution can also be exported.

(continued next page)
The below Options panel can help you configure your preset in Compressor

1. Video Options

   a. Video Profile: This lets you quickly set common video formats
   
   b. Video Codec: This lets you set the resolution, framerate, and field type that you wish to encode into
   
   c. The 'MPEG2 ColorSpace' will be set to 'YUV 4:2:2 CBR' as the default which is mainly used for XDCAM HD 422 encoding. The other colorspace options are:
      
      (i) YUV 4:2:0 VBR (mainly used for XDCAM EX 420)
      (ii) YUV 4:2:0 VBR – 1440 Anamorphic (mainly used for XDCAM HD)
      (iii) YUV 4:2:0 CBR – 1440 Anamorphic (mainly used for HDV)
      (xiv) YUV 4:2:2 CBR 1/2 resolution proxy
      (xv) YUV 4:2:2 CBR 1/4 resolution proxy
      (xvi) YUV 4:2:0 VBR 1/2 resolution proxy
      (xvii) YUV 4:2:0 VBR 1/4 resolution proxy
   
   d. Video BitRate: This lets you set the bitrate of the encoded video
   
   e. Sequence Type: This lets you set the bitrate of the encoded video. The 'MPEG2 Format' is automatically set to 'Long-GOP' but you can set it to I-Frame Only encoding.
   
   f. Proxy MOV Track Resolution applies to exporting proxy size MOV files as whether the MOV file displays as full resolution or it’s encoded resolution
   
   g. Field Version: IMPORTANT – you must set this for the version of Compressor that you are using
2. **Audio Options** - IMPORTANT: When exporting from FCP, if the number of output audio channels is smaller than the number of FCP audio channels then each output audio channel is a mix of all FCP audio channels.

a. Audio Rate: Always set to 48 kHz

b. Audio BitRate: 24-bits or 16-bits

c. Audio Auto: The below options will let the preset tell Compressor the Audio Layout that the plugin wants to receive. Please note that no matter which Audio Layout option is selected – the exported media will only store audio in a 0-32 channel discrete configuration UNLESS you choose “Stereo” then a single interleaved stereo track will be exported.

   (iv) The ‘Use # of Audio Channels From Source (if possible)’ option is the default option and this option will tell Compressor to send the exact number of source audio channels in as discrete audio channels.

   (v) The ‘Use Audio Layout From Source (if possible)’ option will tell Compressor to send the exact number of source audio channels in the source audio layout.

   (vi) The ‘Manually set Audio Layout’ option will let you manually set the audio layout to tell Compressor to send to the plugin

d. Audio Layout: This is where you would manually set the ‘Audio Layout’ if the ‘Audio Auto’ option is set to ‘Manually set Audio Layout’. Please note that no matter which Audio Layout is manually selected – the exported media will only store audio in a 0-32 channel discrete configuration UNLESS you choose “Stereo” then a single interleaved stereo track will be exported.

3. **TimeCode Options**

c. Use Start TimeCode From Source (if possible) – by default the preset is set to use the start timecode from the source media for the exported media. By unchecking this option the user can manually add in a new start timecode for the exported media

d. Enter Start TimeCode – this is where you would manually enter in the new start timecode for the exported media if the ‘Use Start TimeCode From Source’ is UNCHECKED

4. **MetaData Options** – The default MetaData mapping is described below. The user can adjust how the metadata is mapped (or set) by either (i) selecting a different Compressor MetaData mapping for the MetaData field or (ii) the user can manually enter in metadata. Please see the chapter *Embedded MOV Metadata*. 
Embedded MOV Metadata

**Overview**
This metadata will be stored as embedded QuickTime Metadata in the MOV file – the metadata can be viewed and read as QuickTime Metadata tags and seen by applications like FCP X or CatDV.

*Cs – FCP X Embedded Camera/Studio MetaData*

**Is Good?**
"com.apple.proapps.isGood"

"com.panasonic.professionalplugin.p2.clipmetadata.shotmark"

**Title**
"com.apple.proapps.clipFileName"

"com.panasonic.professionalplugin.p2.clipmetadata.userclipname"

**Creator**
"com.apple.proapps.creator"

"com.panasonic.professionalplugin.p2.clipmetadata.access.creator"

**ReelName**
"com.apple.proapps.reel"

**LogNote**
"com.apple.proapps.logNote"

**Program Name**
"com.panasonic.professionalplugin.p2.clipmetadata.scenario.programname"

**Scene**
"com.apple.proapps.scene"

"com.panasonic.professionalplugin.p2.clipmetadata.scenario.sceneno"

**Take**
"com.apple.proapps.shot"
"com.panasonic.professionalplugin.p2.clipmetadata.scenario.takeno"

**Memo**
"com.panasonic.professionalplugin.p2.clipmetadata.memo.text"

**Memo Author**
"com.panasonic.professionalplugin.p2.clipmetadata.memo.person"

**Location**
"com.panasonic.professionalplugin.p2.clipmetadata.shoot.location.placename"

**Shooter**
"com.panasonic.professionalplugin.p2.clipmetadata.shoot.shooter"

**Camera Angle**
"com.apple.proapps.angle"

**Camera Name**
"com.apple.proapps.cameraName" – Camera Name

**Camera ID**
"com.apple.proapps.cameraID" – Camera ID

**Reporter**
"com.panasonic.professionalplugin.p2.clipmetadata.news.reporter"

**Purpose**
"com.panasonic.professionalplugin.p2.clipmetadata.news.purpose"

**Object**
"com.panasonic.professionalplugin.p2.clipmetadata.news.object"
**Cs – FCP X Embedded Share MetaData**

**Actors**
“com.apple.quicktime.artist”

**Category**
“com.apple.proapps.share.category”

**Copyright**
“com.apple.quicktime.copyright”

**Creator**
“com.apple.quicktime.author”

**Description**
com.apple.quicktime.description”

**Director**
“com.apple.quicktime.director”

**Episode ID**
“com.apple.proapps.share.episodeID”

**Episode Number**
“com.apple.proapps.share.episodeNumber”

**Genre**
“com.apple.quicktime.genre”

**Media Kind**
“com.apple.proapps.share.mediaKind”

**Producer**
“com.apple.quicktime.producer”

**Screen Writer**
“com.apple.proapps.share.screenWriter”

**Season Number**
“com.apple.proapps.share.seasonNumber”

**Show**
“com.apple.quicktime.album”

**Tags**
“com.apple.quicktime.keywords”

**Title**
“com.apple.quicktime.title”

**TV Network**
“com.apple.proapps.share.tvNetwork”

**US Rating**
“com.apple.quicktime.rating.user”
**User Defined MOV MetaData**

The User can define up to 10 of their own MOV Metadata values. Please note that both the Name of the Value and the Data of the Value must be defined.

For example:

Name #1: Location  
Data #1: Japan
Overview
This metadata will be stored as a XML metadata within the XDCAM MXF OP1a file and optionally within the XML Sidecard file and/or the XML metadata in the Full Disc Structure.

In MXF OP1a files with over 10 tracks of audio then Sony NRT XML metadata will not be embedded in the MXF file.

General Non-Real Time MetaData
The User can define the metadata title, status, creator, and description of the file.

Descriptive Non-Real Time MetaData
The User can enter in descriptive metadata about the file using the 11(eleven) defined Sony reserve metadata names.

User Defined Non-Real Time MetaData
The User can define up to 10 of their own Descriptive Metadata values. Please note that both the Name of the Value and the Data of the Value must be defined.

For example:

Name #1: Location
Data #1: Japan

Disc XML MetaData
This is used when exporting in the Full Disc Structure. The User can enter in descriptive metadata about the disc structure and set the default name of the exported clip (the default name is Clip0001).
Software License Agreement
By downloading, installing, ordering, or using the software - you are agreeing to the Software License Agreement. You can download or view the Software License Agreement on our website:

http://www.calibratedsoftware.com/SoftwareLicenseAgreement.php

After Purchase - Software License Instructions
After payment is received for your order, you will be able to use an Activation Key to license the software to a computer using the Calibrated License Manager application. Please see the Calibrated License Manager User Guide for details:


A single Software License for the software can only be used on a single partition on a single physical computer system ONLY. A single Software License for the software will remove the DEMO MODE limitation(s) of the SOFTWARE for that single partition on a single physical computer system that the Software License is licensed to.

Refund Policy
A refund for the purchase price of an order may only be given if you have NOT generated a Software License for your order or used an Activation Key to license the software to a computer, AND the refund request is within 30 days of the order purchase date. For more details, please see our official refund policy here.
General Questions

1. I cannot see any of the 'Calibrated MPEG2-X' Compression Types when trying to export from my application?

   Calibrated MPEG2-X Create may not be properly installed:

   On Mac OSX, please make sure that the CalibratedMPEG2XEncodeCodec.component is in the /Library/QuickTime folder (that’s the Library folder on the Main Harddrive NOT the Library folder in the User directory)

   On Windows, make sure QuickTime Player 7.6.6 or greater is installed, and that the CalibratedMPEG2XEncodeQ.qtx component is in the [System Drive]/Program Files/QuickTime/QTComponents folder (on Windows 64-bit systems it would be the Program Files (x86) folder)

   And make sure you have restarted your computer after installing.

DEMO MODE watermark still visible after licensing

1. Did you restart your computer after licensing?

   If you haven’t, then please restart

2. Did you re-export the files from your application?

   The burned in DEMO MODE watermarks cannot be removed from video encoded while in DEMO MODE. After ordering and licensing Calibrated MPEG2-X Create you will have to re-encode any files that you had created while running the software in DEMO MODE.

3. Did you generate and enter in your Software License?

   If not, please see the ‘Software License’ chapter in this User Guide on how to generate and enter in your Software License after purchase. If you are properly licensed, then the ‘about’ page of the Calibrated MPEG2-X Create Options applications should say LICENSED in green.
Version History

Version 1.0.7
  - Bug Fixes

Version 1.0.6
  - Bug Fixes
  - In MXF OP1a files with over 10 tracks of audio then Sony NRT XML metadata will not be embedded in the MXF file

Version 1.0.5
  - Bug Fixes

Version 1.0.4
  - Update License SDK
  - BETA Support for 10.13 (High Sierra)
  - Minimum macOS support 10.9

Version 1.0.3
  - Update License SDK

Version 1.0.2
  - Performance increase

Version 1.0.1
  - BETA Released
calibrated
software