

Using Adobe Media Encoder CS4

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Customize encoding settings

The Export Settings dialog box (Edit > Export Settings) of Adobe Media Encoder let you create custom video and audio encoding settings.

Before creating custom video encoding settings, be sure that you understand the different video encoding options. For information about video encoding options, see [About video and audio encoding](#).

1. Select the file or files whose encoding settings you want to modify.

To select multiple files in the encoding list, Control-click (Windows) or Command-click (Macintosh), or select Edit > Select All to select all files in the encoding queue.

2. Select Edit > Export Settings.

The Export Settings dialog box appears. This dialog box lets you perform the following actions:

- Specify alternate encoding settings to deliver video for different bandwidths and applications.
- Create cue points to trigger events.
- Crop and resize the video clip to alter its dimensions.
- Trim the length of the video to change its beginning and ending frames.

Filters export settings

Gaussian Blur

The Gaussian Blur effect softens the image and eliminates noise. Adobe Media Encoder applies the Gaussian Blur effect as a pre-encoding task. This step minimizes the noise that the encoder would otherwise have to encode. It results in quicker encoding, smaller output file sizes, better image quality, and often an improvement in the display of motion. You can specify the direction of the blur. Select the Output tab to preview the results of this effect.

Blurriness Controls the amount of blur. Higher numbers cause more blur. Drag the hot text, or type a number, to specify the amount of blur.

Blur Dimension Controls the direction of the blur. Select either Horizontal And Vertical, Horizontal, or Vertical from the menu.

Note: You can remove noise and grain from a project for reasons other than improved encoding and reduction of compressed file size. Consider the Noise & Grain effects, or blur effects, in Adobe Premiere Pro and After Effects.

Video export settings

In the Export Settings dialog box, the options available on the Video tab depend on the format you've specified. Video settings include one or more of the following options. Video settings are listed under headings such as Video Codec, Basic Video Settings, Advanced Settings, Bitrate Settings, Video Hinter Track Settings, and GOP Settings.

Note: Some capture card and plug-in software applications provide their own dialog boxes with specific options. If the options you see are different from the options described here, see the documentation for your capture card or plug-in.

To save final rendering time:

- Use the same codec to capture and export.
- Render previews of your sequences as you make changes.
- Set the export quality setting to match the capture quality setting.

Video Codec or Codec Specifies the codec used to encode the video. The codecs available depend on the format you choose.

Note: If you cannot find options that your hardware-based codec provides, see the documentation provided by the hardware manufacturer. Some codecs included with video-capture hardware require that you set compression options in their own dialog boxes.

Quality Specifies video quality. Generally, higher values increase rendering time and file size. If available, drag the slider or type a value to affect the exported picture quality. Increasing quality above the original capture quality does not increase quality, but may result in longer rendering times.

Width or Frame Width Specifies the width of the frame of the output file in pixels.

Height or Frame Height Specifies the height of the frame of the output file in pixels.

Frame Rate Specifies the frame rate of the output file in frames per second. Some codecs support a specific set of frame rates. Increasing the frame rate may produce smoother motion (depending on the frame rate of the source clip, project, or sequence) but uses more disk space.

Depth Specifies the color **depth** in bits per channel (bpc): the number of bits allocated per color channel. Options are 8 Bit, 16 Bit, 24 Bit, or 32 Bit.

Encode Alpha Channel Enables encoding with alpha transparency, which lets you encode video with the background removed so you can overlay the subject of the video on top of other Flash content. Only the FLV format using the On2 VP6 codec supports the use of alpha channels.

TV Standard Conforms the output to the NTSC standard or PAL standard.

Field Order or Field Type Specifies whether the output file will have progressive frames or interlaced fields, and if the latter, which field will be written first. Progressive is the correct setting for computer display and motion picture film. Choose Upper First or Lower First when exporting video for an interlaced medium, such as NTSC, or PAL.

Aspect or Pixel Aspect Ratio Specifies pixel aspect ratio. Select one appropriate for the output type. When the pixel aspect ratio (displayed in parentheses) is 1.0, the output will have square pixels; all others will have rectangular pixels. Because computers generally display pixels as squares, content using non-square pixel aspect ratios appear stretched when viewed on a computer but appear with the correct proportions when viewed on a video monitor.

Render At Maximum Depth Specifies whether Adobe Media Encoder renders sequences containing high bit-depth assets at their full bit depth.

Bitrate Mode or Bitrate Encoding Specifies whether the codec achieves a constant bitrate (CBR) or variable bitrate (VBR) in the exported file:

Constant Compresses each frame in the source video to the fixed limit you specify, producing a file with a fixed data rate. Therefore, frames containing more complex data are compressed more, while less complex frames are compressed less.

Variable Constrained Allows the exported file's data rate to vary within a range you specify. Because a given amount of compression degrades the quality of a complex image more than it degrades the quality of a simple image, VBR encoding compresses complex frames less and compresses simple frames more.

Variable Unconstrained Allows the exported file's data rate to vary without limit.

CBR Constant bitrate

VBR, 1 Pass Variable bitrate, with the encoder making a single pass through the file from beginning to end. Single-pass encoding takes less time than dual-pass encoding, but doesn't achieve the same quality in the output.

VBR, 2 Pass Variable bitrate, with the encoder making two passes through the file, from beginning to end, and then from end to beginning. The second pass prolongs the process, but it ensures greater encoding efficiency, and often a higher quality output.

Note: When comparing CBR and VBR files of the same content and file size, you can make the following generalizations: A CBR file may play back more reliably over a wider range of systems, because a fixed data rate is less demanding on a media player and computer processor. However, a VBR file tends to have a higher image quality, because VBR tailors the amount of compression to the

image content.

Bitrate Specifies the number of megabits per second of playback for the encoded file. (This setting is available only if you select CBR as the Bitrate Encoding option.)

The following options appear only if you select VBR as the Bitrate Encoding option:

Encoding Passes Specifies the number of times the encoder will analyze the clip before encoding. Multiple passes increase the time it takes to encode the file, but generally result in more efficient compression and higher image quality. (Adobe After Effects doesn't support multiple encoding passes.)

Set Bitrate Available only for the QuickTime format. Select to keep the bitrate of the output file constant.

Bitrate [kbps] Available only for the QuickTime format. Select if you want to determine the bitrate. Then, drag the slider until the hot text displays the desired value.

Maximum Bitrate [Kbps] Specifies the maximum bitrate you want the encoder to allow.

Average Video Bitrate [Kbps] Specifies the average video bitrate you want the encoder to allow.

Target Bitrate [Mbps] Specifies the average video bitrate you want the encoder to allow when encoding video using the H.264 video codec.

Peak Video Bitrate [Kbps] Specifies the top bitrate you want the encoder to allow.

Minimum Bitrate Specifies the minimum number of megabits per second of playback you want the encoder to allow. The minimum bitrate differs according to the format. For MPEG-2-DVD, the minimum bitrate must be at least 1.5 Mbps.

Allow Interlaced Processing Select this option if the video content in the sequence is interlaced and you are exporting to a noninterlaced medium, such as motion picture film or progressive scan video. Deinterlacing can also make it easier to apply high-quality effects in another program, such as After Effects. If the sequence content does not have fields, don't select this option; instead select No Fields from the Fields option.

M Frames Specifies the number of B frames (Bi-directional frames) between consecutive I frames (Intra-frames) and P frames (Predicted frames).

N Frames Specifies the number of frames between I frames (Intra-frames). This value must be a multiple of the M frames value.

Optimize Stills or Expand Stills Select this option to use still images efficiently in exported video files. For example, if a still image has a duration of 2 seconds in a project set to 30 fps, Adobe Premiere Pro creates one 2-second frame instead of 60 frames at 1/30 of a second each. Selecting this option can save disk space for sequences and clips containing still images. Deselect this option only if the exported video file exhibits playback problems when displaying the still images.

Keyframe Interval [Seconds] or Key Frame Distance (Frames) Select and type the number of frames after which the codec will create a keyframe when exporting video.

Simple Profile Available only when exporting in the FLV video format using the On2VP6 codec, selecting Simple Profile optimizes high-resolution video content that will be played back on older computers or other devices with limited memory and processing resources.

Undershoot [% target] Available only when exporting in the FLV video format using the On2VP6 codec, this option lets you specify the percentage of the target data rate to shoot for so that additional data is available in the buffer to improve difficult sections.

Quality Available only when exporting in the FLV format, this option lets you specify a balance between encoding quality and the time it takes Adobe Media Encoder to encode video.

Good Strikes a balance between image quality and the amount of time it takes to encode video. This is the default value.

Best Creates the best possible image quality, but will take substantially longer to encode video.

Speed Specifies that the video be encoded as fast as possible, however, the image will be of lower quality. Recommended for video content used in testing deployments.

Closed GOP Every Specifies the frequency of each Closed Group of Pictures (Closed GOP), which cannot reference frames outside of the closed GOP. A GOP consists of a sequence of I, B, and P frames. (This option is available if you choose MPEG-1 or MPEG-2 as the format.)

Automatic GOP Placement When selected, sets the placement of Group of Pictures (GOP) automatically. (This option is available if you choose MPEG-1 as the format.)

Note: MPEG-1 and MPEG-2 formats include numerous advanced options not listed here. In most cases, selecting a format or preset designed for your target output sets the appropriate options automatically. For detailed information on options not listed, consult the specifications for the MPEG-1 (ISO/IEC 11172) and MPEG-2 (ISO/IEC 13818) formats.

Audio export settings

In the Export Settings dialog box, the options available in the Audio tab depend on the format you've specified. One or more of these options appear on the Audio tab:

Audio Codec or Codec Specifies the codec used to encode the audio data. These options are some of the most commonly used codecs available through Adobe Media Encoder:

AAC (Advanced Audio Coding) A high-quality encoding format supported by many mobile devices. This codec is the default for the H.264 format.

AAC+ Version 1 Uses spectral band replication (SBR) to enhance the compression efficiency in the frequency domain.

SBR is a technology that enhances audio codecs, especially at low bit rates and is based on harmonic redundancy in the frequency domain. The audio codec itself transmits the lower and mid-frequencies of the spectrum, while SBR replicates higher frequency content by transposing up harmonics from the lower and mid-frequencies at the decoder.

AAC+ Version 2 This version of the AAC codec couples SBR with Parametric Stereo (PS) to enhance the compression efficiency of stereo signals.

The AAC+ Version 2 bit stream is created by down-mixing the stereo audio signal to mono along with Parametric Stereo information used to describe the spatial intensity stereo generation and ambience regeneration at the decoder. By having the Parametric Stereo information coupled with the mono audio stream, the decoder can regenerate a faithful spatial approximation of the original stereo panorama using very low bitrates.

MainConcept MPEG Audio A high-quality encoding format developed by MainConcept, and included with Adobe Premiere Pro, After Effects, and Soundbooth.

PCM (pulse-code modulation) Audio An uncompressed encoding format. Files of this format tend to be larger than files of the other formats.

Audio Format The file format used for storing encoded audio data. Some audio formats support only uncompressed audio, which has the highest quality, but uses more disk space. Some formats allow only one codec. Others allow you to choose from a list of supported codecs.

Sample Rate or Frequency Choose a higher rate to increase the frequency at which audio is converted into discrete digital values, or **sampled**. Higher sample rates increase audio quality and file size; lower sample rates decrease quality and file size. However, setting the sample rate in the Export Settings dialog box higher than the sample rate of the audio source doesn't increase quality. Setting a sample rate different from the sample rate of the source file, requires **resampling**, and additional processing time. You can avoid resampling by capturing audio at the same rate at which you want to export it.

Channels or Output Channels Specify how many audio channels are in the exported file. If you choose fewer channels than are in the master track of a sequence or project, Adobe Media Encoder downmixes the audio.

Sample Type Choose a higher bit depth to increase accuracy of audio samples. Higher bit depth can improve dynamic range and reduce distortion, especially if you add additional processing, such as filtering or resampling. Higher bit depths also increase processing time and file size; lower bit rates reduce processing time and file size. However, setting the bit depth in the Export Settings dialog box higher than the bit depth of the source audio doesn't increase quality.

Audio Interleave Specify how often audio information is inserted among the video frames in the exported file. See your capture card documentation for the recommended setting. A value of one frame means that when a frame is played back, the audio for the duration of that frame is loaded into RAM so that it can play until the next frame appears. If the audio breaks up when playing, adjust the interleave value. Increasing the value lets the computer store longer audio segments, and process them less often. However, higher interleave values require more RAM. Lowering the value can make playback smoother. Most hard disks operate best with a 1/2-second to 1-second interleave value. Setting the value to 0 disables Audio Interleave and speeds rendering time. Consider disabling Audio Interleave for projects containing assets with large pixel dimensions.

Bitrate [kbps] Specifies the output bit rate of the audio. Generally, higher bit rates increase both quality and file size. This option is available for AAC, mp3, and FLV.

Note: Options not documented here are specific to the selected format. For detailed information, consult the specifications for the selected format.

Tab menu settings

The menu for the tab section of the Export Settings dialog box holds options for files exported from the Adobe Media Encoder. Click the panel menu icon to the right of the tabs to open the tabs section menu.

[View full size graphic](#)





The tab section menu

Use Preview Files For use with Premiere Pro sequences only, when this option is selected, Adobe Media Encoder uses existing preview files for the parts of the sequence for which they are available.

Using existing preview files can make encoding much faster since Premiere Pro does not need calculate the effects transitions again. The disadvantage, however, is that there is only one compression cycle when the preview file is generated, and this can cause a slight quality video loss.

Use Maximum Render Quality When this option is selected, Adobe Media Encoder renders the sequence with the greatest quality of motion. This option slows rendering substantially, and requires much available RAM. This option is not recommended for systems having the minimum RAM required.

Include Source XMP Metadata When this option is selected, Adobe Media Encoder embeds any XMP metadata found in the source sequence into the rendered file.

High Bandwidth For use with the Windows Media (.WMV) format, this option lets you specify the target Audience defined by the Audience export settings.

Add/Remove Audiences Lets you add or remove audiences to create a multi-audience Windows Media (.WMV) video file.

File Info Lists information on the settings used to encode an exported file.

Audiences export settings

In the Export Settings dialog box, selecting Windows Media (Windows only) as the format exposes the Audiences tab. The options on the Audiences tab allow you to output variations of a movie suited to different network speeds. The player software associated with the format detects and selects the most appropriate version to ensure smooth playback. Windows Media generates a single movie that contains variations for different connection speeds.

***Note:** Some codec-specific settings are not documented here. For more detailed information regarding a particular codec, check the documentation provided by its developer.*

Compressed Specifies that the codec you select in the Video tab is applied. Compressed is the default setting, and is appropriate for most users.

Uncompressed Specifies that no compression is applied. Because this setting results in large files, it is not appropriate for most users.

Others export settings

The Others tab of the Export Settings dialog box allows you to upload the exported file to a File Transfer Protocol (FTP) server that has storage space allocated for file sharing. FTP is a common method for transferring files over a network and is especially useful for sharing relatively large files using an Internet connection. The server's administrator can provide you with the details for connecting to the server.

The Others tab includes the following options:

Server Name Enter the DNS or IP address of the server on which the FTP site is located.

Port Specify the number assigned to the FTP server's command port, which is 21 by default.

Remote Directory Enter the location on the FTP server to access, expressed as a file path.

User Login Enter the user's identity, as designated by the server's administrator.

Password Enter the password to a password-protected server.

Retries Specify the number of attempts to contact the server if a connection isn't established.

Send Local File To Recycle Bin (Windows) or Send Local File To Trash (Mac OS) Deletes the local copy of the exported file once it's been uploaded to the FTP server.

Test Verifies the connection with the FTP server.

Exporting XMP metadata


Export XMP metadata with a clip

If a clip contains metadata, you can export the clip metadata when you encode the clip.

***Note:** The Include Source XMP Metadata option is available when exporting MPEG-1 (Windows only), Windows Media (Windows only), MPEG-2, MPEG-2 Blu-ray, FLV | F4V, H.264, or QuickTime formats.*



1. In the Export Settings dialog box, click the Advanced Mode button , if necessary, to

expose the options panels.



2. Click the panel menu button  to the right of the options panels to open the panel menu.
3. Select Include Source XMP Metadata.

Edit XMP metadata in a file before exporting

You can add metadata to a sequence or composition that can be exported when the sequence or composition is encoded.

1. In the Export Settings dialog box, click the Advanced Mode button , if the options panels are not already exposed.
2. Click the panel menu button  to the right of the options panels to open the panel menu.
3. Select File Info.
4. In the dialog box, type information into any of the metadata fields as needed, and click OK.

Append XMP metadata to a file before exporting

1. In the Export Settings dialog box, click the Advanced Mode button , if the options panels are not already exposed.
2. Click the panel menu button  to the right of the options panels to open the panel menu.
3. Select File Info.
4. In the File Info window, select the tab for the type of metadata you want to import.
5. (Optional) some tabs, such as the Description tab, contain a menu offering a selection of template metadata, such as various types of copyright data. Select the desired type.
6. Select Import from the menu next to the OK button, and, in the Import Options pop-up menu, select the desired option, and click OK.
7. Browse to the desired XMP file, select it, and click Open.
8. Click OK.



[Define and embed cue points for Adobe F4V and FLV files](#)

[Crop, trim, and resize video](#)

[Custom encoding settings](#)

Comments (7)

[Daniel Skaf](#) March 4, 2009

I'm trying to find the best mov to flv compression for sports highlight videos, 4-6 minutes, to be played on the internet. Any suggestions on bit rate, cbr or vbr (1 or 2 encoding), key frame distance?, simple profile (target %?)
thanks

[Chris Bedford](#) (Administrator) March 10, 2009

Hello,

Without knowing more about your video requirements, such as the desired dimensions of the video and the bandwidth requirements you want to adhere to, it's difficult to give you hard numbers. More than likely one of the encoding presets that Adobe Media Encoder ships with will give you the video quality you're looking for. You can find a listing of the F4V and FLV encoding presets at the link below:

http://help.adobe.com/en_US/AdobeMediaEncoder/4.0/WS053EA898-B158-4c20-8147-FE0881119BE2.html#WSA598EB57-2356-4187-8F58-CAE8074E7736

In addition, there is a Flash video bitrate calculator to help you determine the optimal bitrate at which to encode Flash video files - available at the link below:

http://www.adobe.com/devnet/flash/apps/flv_bitrate_calculator/index.html

Regarding the key frame distance (or interval), in general the default key frame distance value provides a reasonable level of control when seeking within a video clip. If you select a custom key frame placement value, be aware that the smaller the key frame distance, the larger the file size.

If your footage has a lot of scene changes or rapidly moving motion or animation, then the overall image quality may benefit from a lower key frame distance. In general, a higher key frame distance produces better image quality because data is not wasted describing the areas of an image that remain unchanged from frame to frame.

I hope that helps.

Regards,
Chris Bedford

[Daniel Skaf](#) March 13, 2009

Thanks Chris,

For the simple profile option, what are the results of choosing different Undershoot (% target) percentages? If I choose the default 90% or if I choose 10%, what's the difference? I couldn't understand the explanation on the help manual.

Thanks

[Chris Bedford](#) (Administrator) March 13, 2009

Those are both more esoteric options that you can most likely leave set to their default values. The Simple Profile optimizes video for playback on older computers that have less memory and slower processors. It's available only when using the On2VP6 codec, which is an older codec that can be played by earlier versions of Flash Player. Unless your audience is using older computers, or computers with very limited processing power, you can leave this option alone.

Undershoot is a percentage of the bitrate of the video stream. If you were to specify a value of 80% for undershoot, then 20% of the bitrate would be set aside for additional data in the video buffer to improve the encoding of difficult video clips (e.g. action video with lots of complex scene changes). The best way to see the results of these options is to experiment with them and view the results.

Here is an encoding tip... The key setting to tweak to improve quality is the "Minimum Bitrate" option. Set this as high as you can for the bandwidth limitations you anticipate for your audience.

Regards,
Chris Bedford

[Daniel Skaf](#) March 13, 2009

Thanks!!!

I'll play with the settings then!

[fuego96](#) March 15, 2009

An entire tab is dedicated to Filters Export Settings but there's only a single [Gaussian Blur] filter and no additional information on how to add other useful filters. It would have been just as important to add a "sharpen" filter as well.

[Rick Williams](#) March 19, 2009

Hi Chris,

In the video tab for .f4v export settings there is a drop down for Profile & another for Level. Could you please explain what these are and how they work?

Many thanks,

Rick

P.S.

You need to [sign in](#) in order to post a comment.

