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Using Matrox MediaExport

This chapter explains how to use Matrox MediaExport to export material from your Adobe Premiere Timeline to Windows Media, RealMedia, and MPEG formats.

About Matrox MediaExport

Matrox MediaExport is a plug-in for Adobe Premiere that brings together Windows Media and RealMedia streaming media, and Ligos MPEG encoding in one customizable export application. By taking advantage of your Matrox realtime editing hardware, MediaExport significantly reduces the rendering time of exporting clips from your Premiere Timeline. The MediaExport plug-in features:

- Accelerated video export from your Adobe Premiere Timeline to Windows Media, RealMedia, and Ligos encoders.
- Encoding of Windows Media, RealMedia, and MPEG video files in a single encoding session.
- Pre-configured streaming media encoding profiles.
- Pre-configured Ligos MPEG encoding profiles optimized for VideoCD and DVD-compliant video.
- Ability to customize any of the encoding profiles.
- Ability to save all settings of an encoding session to a file that can be loaded for a later session.

Starting the Matrox MediaExport plug-in

Matrox MediaExport is available when you use the **Export Timeline** command from within Adobe Premiere.

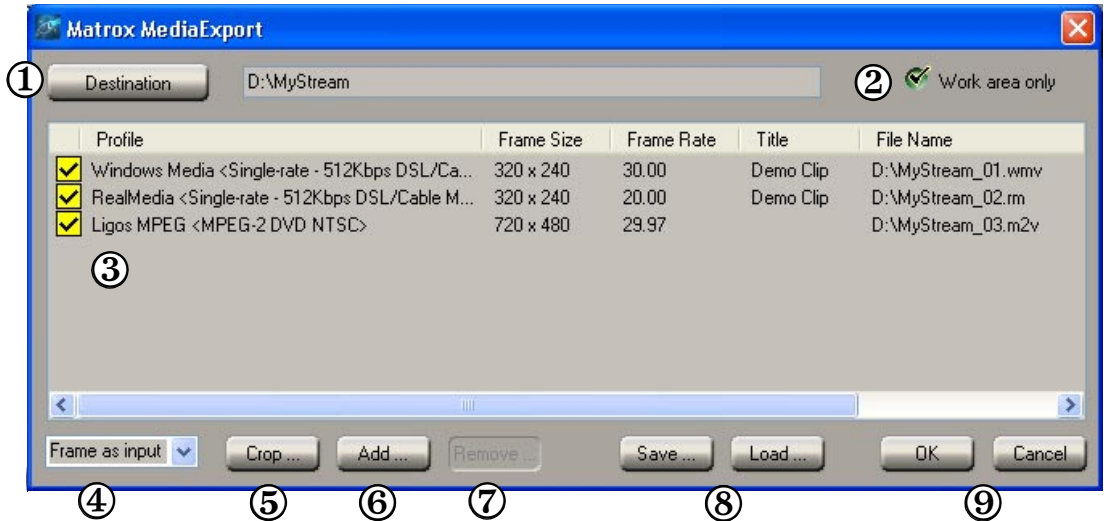


To start Matrox MediaExport:

- 1 Start Adobe Premiere.
- 2 Open the project from which you want to export material.
- 3 If you don't want to export all the clips in the project, drag the work area bar so that it covers the portion of your project you want to export.
- 4 Choose **File > Export Timeline > Matrox MediaExport**.

Overview of the Matrox MediaExport dialog box

When you start MediaExport, a dialog box similar to the following appears:



Here's a brief description of the **Matrox MediaExport** dialog box:

- ① **Destination** Lets you specify the destination folder for your encoded files and assign the base file name. For more information, see [“Exporting clips from the Timeline”](#) on page 35.
- ② **Work area only** Select this option if you want to export only the clips under the work area bar of your Adobe Premiere Timeline. For more information, see [“Exporting clips from the Timeline”](#) on page 35.
- ③ **Session window** Lists the encoding profiles that have been selected for use in the current encoding session. The columns show encoding settings for each profile. For more information, see [“Selecting encoding profiles for use in the session window”](#) on page 36.
- ④ **Input source** Lets you use either full frames or the first field of each frame as the input source for your encoded video. To achieve the best video quality, select **Frame as input**. However, if you crop your source video or output your video to non-standard frame sizes (frame sizes with heights that are not multiples of 480 for NTSC or 576 for PAL), the best video quality is achieved by selecting **Field as input**.
- ⑤ **Crop button** Opens the **Crop Source Video** dialog box where you can trim the edges of your source video. For more information, see [“Exporting clips from the Timeline”](#) on page 35.


- ⑥ **Add button** Lets you add an encoding profile to the session window. For more information, see [“Selecting encoding profiles for use in the session window”](#) on page 36.
- ⑦ **Remove button** Click this button to remove the currently selected profile from the session window.
- ⑧ **Save button** and **Load button** Click **Save** to save the current session as a *.mex* file that can be loaded in a later encoding session. Click **Load** to load a saved encoding session into the session window. For more information, see [“Saving and loading your encoding session”](#) on page 49.
- ⑨ **OK** and **Cancel buttons** Click **OK** to start encoding. Click **Cancel** to quit MediaExport and return to Adobe Premiere.

Using the MediaExport pop-up menu

When you right-click the session window, a pop-up menu appears containing commands for working with MediaExport. All commands present in the MediaExport pop-up menu are described in this chapter.

Exporting clips from the Timeline

This section explains how to export clips from your Adobe Premiere Timeline using MediaExport.

- 1 Start MediaExport as explained in [“Starting the Matrox MediaExport plug-in”](#) on page 33.
 - 2 Click the **Destination** button, then specify the drive and folder where you want to store your encoded video files.
 - 3 In the file **Destination** box, enter the base name that you want to assign to the encoded files in this session. This base name will be assigned to the output files of all encoding profiles selected in the session window. To create a unique file name for each of your encoded files, MediaExport sequentially adds an underscore and a two-digit number to the specified base name. Regardless of what file types you encode in your session, each encoded file will be named using this convention (for example, *MyStream_01.wmv*, *MyStream_02.rm*, *MyStream_03.m2v*, etc.).
 - 4 To apply crop settings to your source video, click **Crop** and enter the crop values in pixels in the **Crop Source Video** dialog box. Your video will be cropped and then resized to the frame size specified for the encoding profiles you’ll be using.
-  **Important** When you apply crop settings to your source video, the best quality video is achieved by selecting **Field as input** from the MediaExport dialog box. Your crop settings and input source selection apply to all the encoded files in the session.

- 5 To export only the clips under the work area bar of your Adobe Premiere Timeline, select **Work area only**.
- 6 Click the **Add** button, then select the encoding format you want, such as **Windows Media**.
- 7 From the profile library, select the encoding profiles you want to use. You can select many encoding profiles for a single encoding session. For details on selecting a standard profile, see [“Selecting encoding profiles and adding clip information”](#) on page 36. For details on creating a custom profile, see [“Modifying standard profile settings to create a customized profile”](#) on page 38.



Tip You can clear the check boxes for profiles you don't want to use for the current encoding session.

- 8 To start the encoding process, click **OK**. Once the encoding is complete, MediaExport closes automatically.

Selecting encoding profiles and adding clip information

The Matrox MediaExport plug-in for Adobe Premiere includes a number of standard encoding profiles with settings pre-configured for optimum delivery and playback of your video. For streaming media clips, such as Windows Media clips, you can add information about your video, such as its title and important copyright information.

The standard encoding profiles are listed in MediaExport's profile libraries. Standard encoding profiles cannot be removed from the profile libraries and their pre-configured settings cannot be permanently modified. Using standard profiles is the easiest and fastest way to encode your clips.

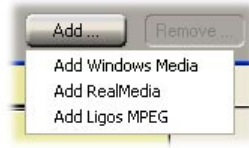
If your video clip or target audience requires encoding settings that differ from those of the standard profiles, the encoding settings can be modified for the current encoding session. If you want to permanently save modifications to an encoding profile's settings, you must create a customized encoding profile. For details on how to do this, see [“Modifying standard profile settings to create a customized profile”](#) on page 38.

Selecting encoding profiles for use in the session window

To encode video files, you must select at least one encoding profile from the profile library and add it to the session window. MediaExport allows you to add many encoding profiles to the session window at one time.

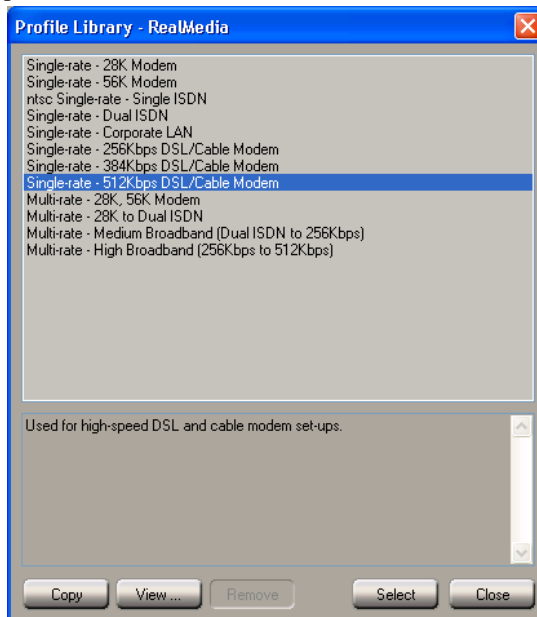
➡ **To select an encoding profile:**

- 1 Click **Add** and choose an encoding format from the list. You can also right-click in the session window, then choose the format you want from the pop-up menu, such as **Add Windows Media**.



Note If an encoding format is not available from the list, it cannot be added to the current encoding session. This means that you've either added the total maximum number of profiles to the session window, or you've reached the limit for a specific encoding format.

- 2 Depending on the encoding format you chose, a **Profile Library** dialog box appears. From the list, select the encoding profile that you want to use. A brief description of the selected standard profile appears in the status box below the profile list.



Note Before adding the selected profile to the session window, you can view the profile's default settings. Click the **View** button and browse through the tabs of the **Export Settings** dialog box. To modify any of the profile settings,

see [“Modifying standard profile settings to create a customized profile”](#) on page 38.

- 3 To add the selected encoding profile to the session window, click **Select**.




Tip If you want to remove an encoding profile that you’ve added to the session window, select it, then either click the **Remove** button, or right-click in the session window and choose **Remove** from the pop-up menu.

Adding clip information to your streaming video

You can add information to your RealMedia or Windows Media file, such as its title, important copyright information, and the author’s name. This information will be displayed when your video clip is played in RealPlayer or in Windows Media Player.



To add clip information:

- 1 In the session window, do one of the following:
 - Double-click the profile to which you want to add clip information.
 - To apply the same clip information to more than one profile, **CTRL+click** or **SHIFT+click** to select multiple encoding profiles. Right-click any of the selected profiles, then choose **Settings** from the pop-up menu.
 - 2 Click the **Clip Information** tab, then enter the clip information you want.
-  **Tip** You can also add or modify the title of your video clip by typing it directly in the session window.
- 3 To return to the session window, click **OK**. To save your encoding session, see [“Saving and loading your encoding session”](#) on page 49.

Modifying standard profile settings to create a customized profile

By modifying the settings of standard encoding profiles, you can create customized encoding profiles that meet the specific needs of your media content, and optimize the delivery of your video to your intended audiences. Your customized profiles can be renamed and permanently added to the profile libraries. They are easily identified in the **Profile Library** dialog boxes by an * prefix.



To modify an encoding profile:

- 1 From one of MediaExport’s profile libraries, select the standard profile that you want to modify.
- 2 Do one of the following:
 - Click **Select** to add the selected profile to the session window. Double-click the profile, or right-click the profile and choose **Settings** from the pop-up menu. The changes you make will be retained only for the current encoding

Modifying standard profile settings to create a customized profile

session, unless you choose to save your customized profile as explained in the section [“Adding your customized profile to the profile library”](#) on page 48.

- Click **Copy** to add a copy of the selected profile to the profile library, then click the **Edit** button. The changes you make will be saved to the copy in the profile library.



Note You can use the **Remove** button to permanently delete profile copies or customized profiles from the profile libraries. You can’t remove standard profiles.

- 3 Under **Profile Name**, enter a new profile name.
- 4 Under **Profile Comment**, enter any comments that you want to appear in the status box of the **Profile Library** dialog box.
- 5 Select the media type(s) that you want to include in your encoded file by selecting **Export video** and/or **Export audio**.
- 6 To specify the destination folder and base name for files encoded using the current encoding profile, either click **Output File** and browse to the folder you want, or enter a folder and base name under **Output File**. Changing the destination folder and base name associated with this profile will not affect the destination folder or base name for other profiles in the session window.



Tip You can also change the destination folder and base name associated with the profile by typing it directly in the session window under the **File Name** heading.

- 7 To add information about your RealMedia or Windows Media streaming video clip, click the **Clip Information** tab (see [“Adding clip information to your streaming video”](#) on page 38).
- 8 If you want to make advanced modifications to your customized encoding profile, such as to change the bit rate settings used and the desired frame size, see the next section, [“Fine-tuning your customized encoding profiles.”](#) If you want to add your customized profile to the profile library, see [“Adding your customized profile to the profile library”](#) on page 48.

Fine-tuning your customized encoding profiles

You can make advanced modifications to your customized encoding profiles, such as to change the video and audio options and bit rate settings. For your streaming videos, you can choose from a list of RealMedia or Windows Media video and audio codecs, frame sizes, and other options. For your Ligos MPEG videos, you can choose the MPEG format you want to use, modify the arrangement of the video’s GOP (group of pictures) structure, and set the speed of the motion estimation algorithm.



Note For more information on RealMedia and Windows Media encoder settings, see the Advanced RealMedia and Advanced Windows Media plug-in online Help or PDF documentation in Adobe Premiere.

Selecting your RealMedia codec options

- 1 Click the **RealMedia** tab. By default, the **Codec Options** are displayed.



- 2 From the **Video Codec** list, select the video codec that you want to use. If you're encoding a high-action video clip for high-bandwidth Internet connections, you may want to select the latest version of the video codec.



Note When selecting a video codec for a RealMedia multiple bit rate profile, don't select the RealVideo codec because it does not support multiple bit rate encoding. Later versions of the RealVideo codec, such as RealVideo 8.0 and RealVideo G2, do support multiple bit rate encoding.

- 3 From the **Frame Size** list, select a size for your video frames. As frame size increases, greater bandwidth is required to stream the video. If you are encoding for slow connection speeds, such as 28.8 or 56 Kbps, it's best to select a frame size no greater than 176×144.



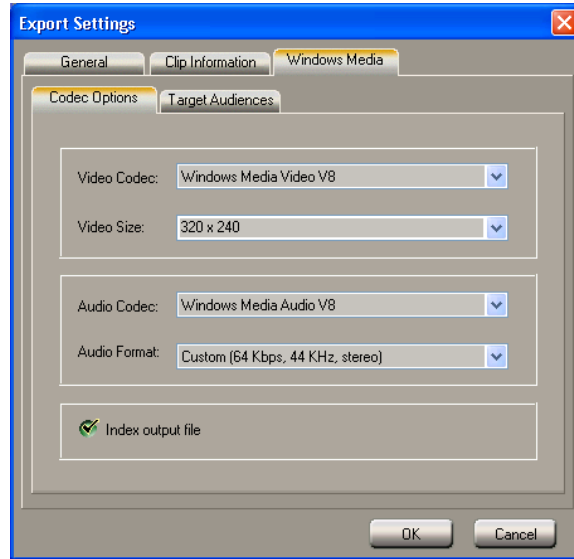
Tip You can also modify frame size by typing it in the session window under the **Frame Size** heading. When you modify the frame size of an encoding profile from the session window, the new frame size will apply to all the video streams of the encoded file.

- 4 From the **Video Quality** list, select the video quality that you want for your video. As you increase the sharpness of the image, the playback of the video may become less smooth.

- 5 From the **Audio Content** list, select the option that best describes the audio content of your video.
- 6 If you want to prioritize the delivery of your clip's audio during periods of Internet congestion, select **Emphasize audio**. This option, however, may cause the video portion of your clip to degrade during periods of Internet congestion.
- 7 To allow viewers to download your encoded video onto their hard drives, select **Allow download**.
- 8 To allow viewers using RealPlayer Plus to record your encoded video clip, select **Allow recording**.
- 9 Under **Filtering Options**, select the options you want:
 - **De-interlace** Select this to de-interlace the fields of your video, such as to remove flicker from a still-frame image.
 - **High-quality resize** Select this to use the high quality resize filter, which can remove aliasing or blurring when your video is resized.
 - **Inverse telecine** Select this to remove the video frames added by the telecine process.
 - **Noise filtering** Select a noise filter from this list if you want to remove video noise distortion from the source video before it is encoded.

Selecting your Windows Media codec options

- 1 Click the **Windows Media** tab. By default, the **Codec Options** are displayed.



- 2 From the **Video Codec** list, select the video codec that you want to use. If you're encoding a high-action video clip for high-bandwidth Internet connections, you may want to select the latest version of the video codec.
- 3 From the **Video Size** list, select a size for your video frames. As video size increases, greater bandwidth is required to stream the video. If you are encoding for slow connection speeds, such as 28.8 or 56 Kbps, it's best to select a size no greater than 176×144.



Tip You can also modify video size by typing it in the session window under the **Frame Size** heading. When you modify the video size of an encoding profile from the session window, the new size will apply to all the video streams of the encoded file.

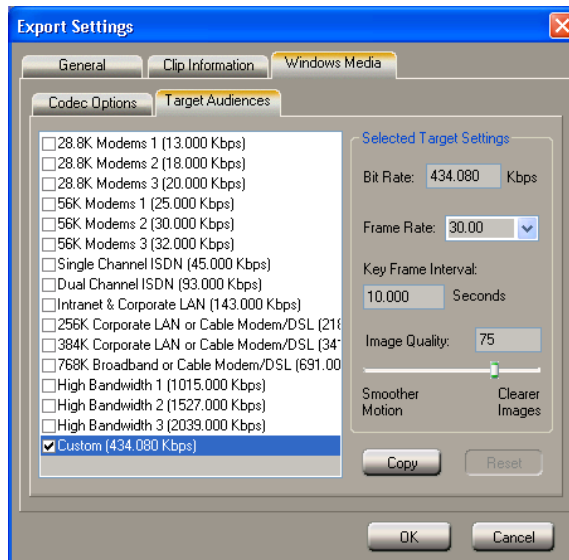
- 4 From the **Audio Codec** and **Audio Format** lists, select the audio codec and audio format you want to use.
- 5 Select the **Index output file** option if you want your viewers to be able to use the Windows Media Player fast forward and rewind features when they play your video.

Customizing your target audience settings

Customizing your target audience settings for RealMedia and Windows Media files, such as bit rate, frame rate, and key frame interval, lets you create video streams that are optimized for delivery over specific types of Internet connections. You can create multiple bit rate video files by adding one or more target audiences to a single bit rate encoding profile.

⇒ **To modify your target audience settings:**

- 1 Click the **Target Audiences** tab.



Note If you're modifying a multiple bit rate profile, check boxes for several target audiences will be selected. An individual video stream will be encoded for each selected target audience to create a multiple bit rate video file. You can change the settings for each of these target audiences.

- 2 From the list of target audiences, select (highlight) the target audience whose settings you want to change.
- 3 Change the **Bit Rate**, **Frame Rate**, and **Key Frame Interval** as needed.



Tip You can also change the frame rate by typing the value in the session window under the **Frame Rate** heading. When you modify the frame rate of an encoding profile from the session window, the new frame rate will apply to all of the profile's target audiences.

- 4 If you're modifying a RealMedia encoding profile, you can select the following options:
 - **Variable bit rate encoding** Select this to allow your video to be streamed at varying bit rates that correspond to the complexity of its content.

For example, high action segments will be allocated more bits than lower action segments, increasing the overall quality of the video without increasing the file size.

- **Lossless protection** Select this to help prevent the loss of data from your video file when it is being streamed during periods of heavy internet or network traffic.

- 5 If you're modifying a Windows Media encoding profile, drag the **Image Quality** slider to select the image quality you want. As you increase the image quality, the playback of the video may become less smooth.



Note To restore the default target audience settings, click the **Reset** button.

- 6 Click **OK** to return to the session window.

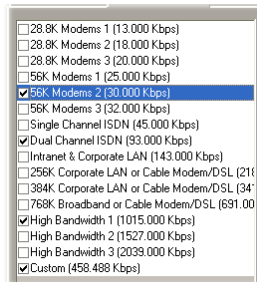
Adding target audiences to create a multiple bit rate profile

You can add multiple target audiences to a single bit rate encoding profile to create a multiple bit rate video file. For each target audience that is added to the profile, an additional video stream is encoded in the file.



To add target audiences:

- 1 From the target audience list, choose the target audiences you want to add by selecting their check boxes.



- 2 For Windows Media, you can also add target audiences by selecting (highlighting) a target audience, then clicking **Copy**. A “Custom” target audience with the source’s selected target settings is added to the end of the target audience list. You must change the bit rate value of new “Custom” target audiences before MediaExport adds them to the encoding profile.



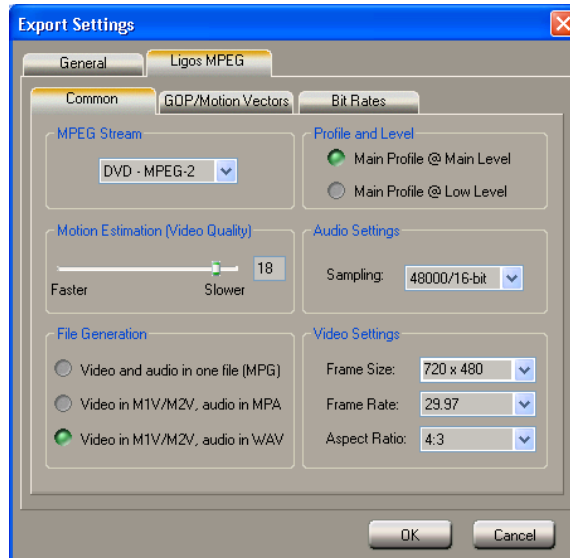
Note The check box of a target audience doesn’t need to be selected in order for it to be copied.

- 3 You can now modify the settings for each target audience, if needed.

Selecting your Ligos MPEG common settings

You can customize various common settings for the Ligos MPEG encoder, such as the video and audio file formats you want to encode.

- 1 Click the **Ligos MPEG** tab. By default, the **Common** settings are displayed.



- 2 Under **MPEG Stream**, select the type of MPEG stream you want to encode.




Note To ensure that your encoded stream is compliant with the type of MPEG stream you've selected, you may not be able to change some export settings.

- 3 If you are encoding an MPEG-2 video file, under **Profile and Level**, select either **Main Profile @ Main Level**, or **Main Profile @ Low Level**.
- 4 Use the **Motion Estimation** slider to select the image quality you want for your video file. In general, setting the **Motion Estimation** slider to higher numbers produces the highest quality video, but the video will take more time and processor power to encode.
- 5 From the **Audio Settings** list, select the sampling format for the audio portion of your clip.
- 6 Under **File Generation**, select the type of video and audio file you want the encoder to generate:
 - **Video and audio in one file (MPG)** Generates an *.mpg* (MPEG-1 or MPEG-2 Program) file that incorporates the video and audio portions of your clip into one file.

- **Video in M1V/M2V, audio in MPA** Generates an *.m1v* (MPEG-1 Elementary) or *.m2v* (MPEG-2 Elementary) video file and a compressed *.mpa* audio file.
- **Video in M1V/M2V, audio in WAV** Generates an *.m1v* (MPEG-1 Elementary) or *.m2v* (MPEG-2 Elementary) video file and an uncompressed *.wav* audio file.

7 Under **Video Settings**, select the **Frame Size**, **Frame Rate**, and **Aspect Ratio** you want to use from the lists provided.

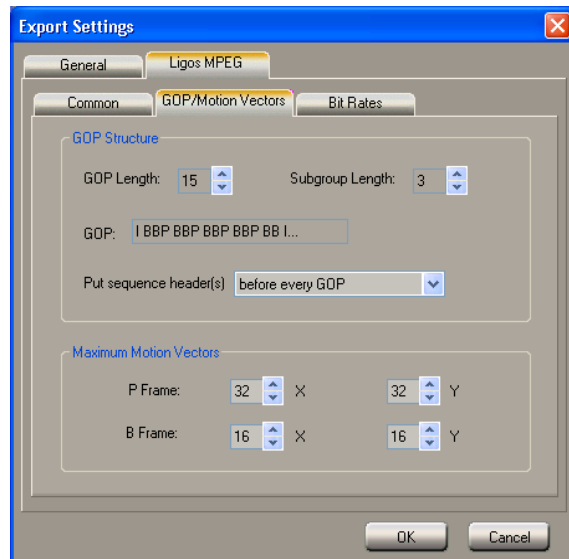
 **Tip** You can also modify frame size by typing it in the session window under the **Frame Size** heading.

Customizing your Ligos MPEG GOP structure and motion vector settings

You can define the properties of your video's GOP structure, including its subgroup length and placement of the sequence headers. You can also modify the size of the motion vectors for your P and B frames.

⇒ **To modify your GOP and motion vectors settings:**

1 Click the **GOP/Motion Vectors** tab.



2 Under **GOP Structure**, you can set the following:

- **GOP Length** Determines the number of frames in the GOP (Group of Pictures).
- **Subgroup Length** Determines the subgroup length of B-frames and/or P-frames in the GOP, after the initial I-frame. A subgroup of 3 appears as

“BBP,” a subgroup of 2 appears as “BP,” and a subgroup of 1 gives you only P-frames after the initial I-frame.

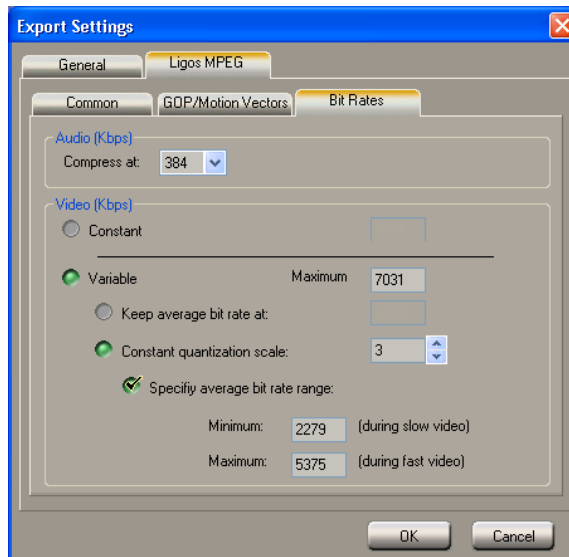
- 3 From the **Put sequence header(s)** list, select the placement frequency of the sequence header. The sequence header of an MPEG file provides information about the video stream for the decoder, such as bit rate, frame rate, and aspect ratio. Some MPEG applications require a particular frequency for the placement of the sequence headers in the file. For example, DVD-compliant video requires a sequence header before every GOP in the video file.
- 4 Under **Maximum Motion Vectors**, either select a preset value from the lists, or enter a value for the size of your P frame and B frame motion vectors. The quality of your images can be affected if the motion vector values you choose are either too long, or too short. The best image quality is most often achieved using vector lengths between 16 and 32.



Note Motion vector values must be multiples of 8 between 16 and 64. If needed, the value you enter will be set to the nearest supported value.

Customizing your Ligos MPEG bit rate settings

- 1 Click the **Bit Rates** tab.



- 2 Under **Audio (Kbps)**, select a bit rate for your compressed audio (for *.mpg* and *.mpa* files only).
- 3 To select a bit rate type for your MPEG video, do one of the following:
 - Select **Constant** if you want your video to be compressed at a constant bit rate. Enter the bit rate you want to use for your video in the box provided.

Your video is compressed at exactly the bit rate you enter. However, if your video is very complex (such as scenes with many colors or sharp edges), you'll need to specify a high bit rate to avoid having frames of very blocky video.

- Select **Variable** if you want your video compressed at varying bit rates based on the complexity of the video. Enter the absolute highest bit rate for your video in the **Maximum** box, and the average target bit rate in the **Keep average bit rate at** box.



Important The maximum recommended DVD-compliant bit rate is 8000 Kbps, which should give you good results with most DVD authoring programs. If you specify a higher bit rate, be aware that it may not be supported by your authoring program. For charts of recommended bit rates, see [“Recommended MPEG data rates for distribution on DVD-R or CD-R”](#) on page 86.

- 4 If you are encoding a variable bit rate video, you can choose to control the bit rate with a quantization scale value instead of an average bit rate. To specify a quantization scale value, select **Constant quantization scale**, then either select a preset value from the list, or enter a value between 0 and 31. For best results, select a constant quantization value between 2 and 6.
- 5 If you've selected **Constant quantization scale**, you can also select **Specify average bit rate range**, then enter an average minimum bit rate to use while encoding slow video, and an average maximum bit rate to use while encoding fast video.



Note The average maximum value you enter must be less than or equal to 14648 Kbps, and less than or equal to the **Maximum** bit rate value.

- 6 Click **OK** to return to the session window.

Adding your customized profile to the profile library

You can permanently save your modified profiles by adding them to the profile library. They are easily identified as customized profiles in the **Profile Library** dialog boxes by an * prefix.



Note If you edited a copy of a standard encoding profile, your customized profile has already been added to the profile library.

- 1 In the session window, select the encoding profile you want to add to the profile library.
- 2 Right-click the selected profile, then choose **Add To Profile Library** from the pop-up menu.

- 3 When the message box appears asking if you want to add the selected profile settings to the profile library, click **Yes**.
- 4 The **Profile Library** dialog box appears with your customized profile added to the bottom of the profile library list.
- 5 To return to the session window, click **Close**.

Saving and loading your encoding session

Once you have added all the encoding profiles that you want to use to the session window, you can save the encoding session and the settings of the selected profiles to a *.mex* file. The session and all the profile settings can then be loaded for a later session.



To save your encoding session:

- 1 Click **Save**.
- 2 In the **Save As** dialog box, name your file and click **Save**.



To load a previously saved encoding session:

- 1 Click **Load**.
- 2 In the provided dialog box, select the session (*.mex* file) you want to load, then click **Open**.



Tip You can also save and load encoding sessions by right-clicking inside the session window and choosing **Save Session** or **Load Session** from the pop-up menu.