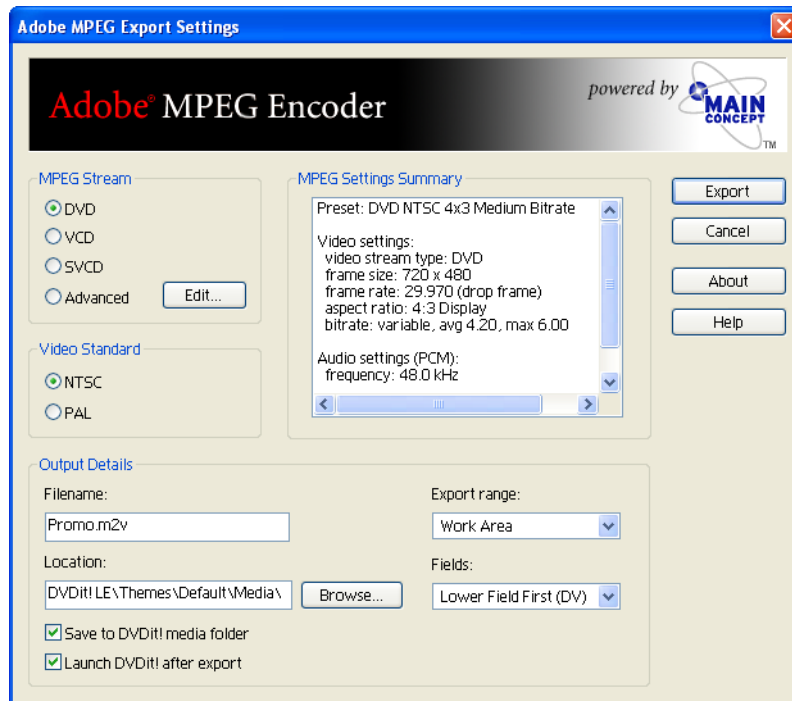


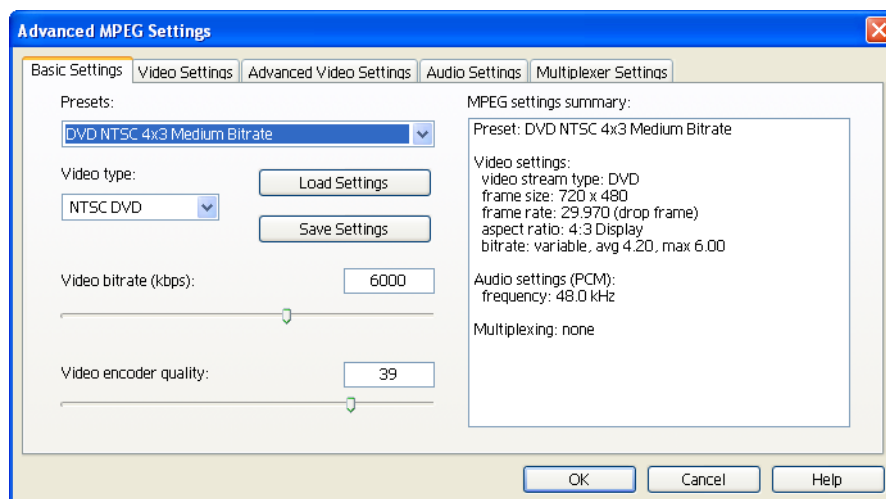
Adobe MPEG Encoder 1.0

Introduction

The Adobe MPEG Encoder is a plug-in for Adobe Premiere that enables you to create high-quality MPEG-1 and MPEG-2 output for DVD, Super Video CD, Video CD and cDVD™.



Although powerful and versatile, the encoder is very easy to use. A layered approach makes the most commonly used settings available first, with advanced settings quickly accessible.



The plug-in includes a variety of presets, making it easy to choose the right parameters. You can import presets created by others, and you can create your own.

The Adobe MPEG Encoder is powered by MainConcept, a leader in multimedia technologies. The MainConcept technology has been tightly integrated with Premiere so you can generate MPEG files right from the Timeline.

The encoder is also integrated with Sonic's DVDit!® LE, which is included with Premiere 6.5. You can automatically export files to the appropriate directory so they will appear in DVDit! without having to be imported. You can also launch DVDit! automatically after exporting MPEG files from Premiere. The Adobe MPEG Encoder works equally well with the SE and PE versions of DVDit!

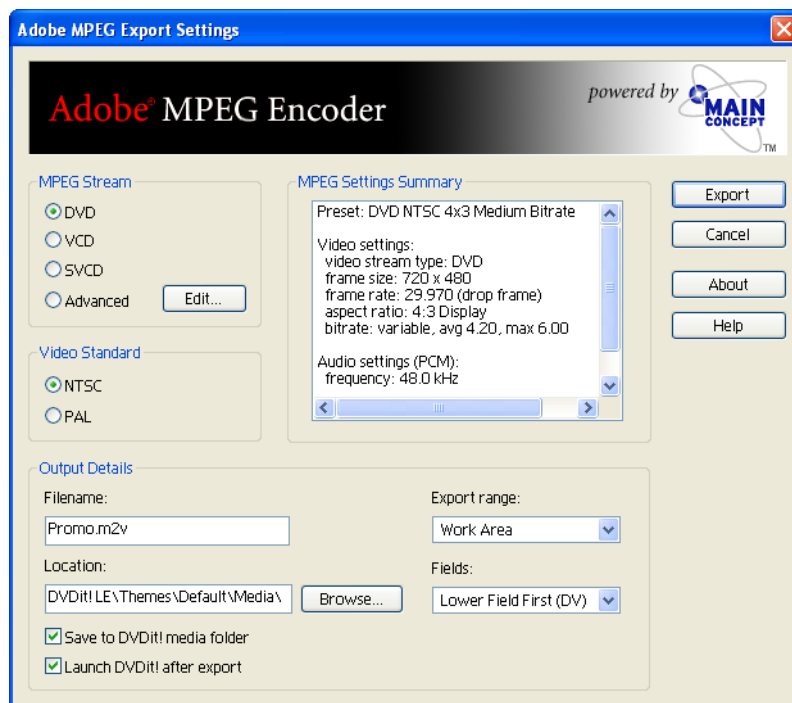
Adobe MPEG Encoder 1.0

Quickstart Tutorial

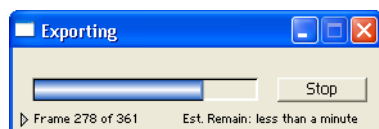
With the Adobe MPEG Encoder's main interface, you can create a DVD in just a few simple steps. The following tutorial assumes that Premiere is running and you have already created a project.

To export an MPEG file for DVD:

- 1 Choose File > Export Timeline > Adobe MPEG Encoder. The main interface will appear.
- 2 In the MPEG Stream section, click DVD if it is not already selected.



- 3 In the Video Standard section, click the setting that matches your product, NTSC or PAL. The NTSC standard is used in North America and Japan. PAL is used in much of Europe.
- 4 In the Output Details section, specify the Filename. Do not choose the Location, as it will be set automatically in the next step. It is also not necessary to specify a file extension (such as ".mpg"), as this will be done automatically.
- 5 Make sure the checkboxes for both DVDIt! options are checked. These will save your exported files in the default DVDIt! Media directory and launch the program after the export is finished.
- 6 Click Export. The time needed to export will depend on a number of factors including the size and complexity of your project, as well as your system's configuration.



When the export procedure is finished, DVDit! will open and you can use the following steps to create a DVD from the material you just exported.

***Note:** When you use the standard DVD setting as shown above, the Adobe MPEG Encoder creates separate files for the video and audio portions of your program. This is because DVDit! works most efficiently with separate files. The video file has an “.m2v” extension by default, and the audio file has a “.wav” extension (NTSC) or “.mpa” extension (PAL). This approach is referred to as elementary streams because it splits a project into separate elements, also referred to as assets. Later in this document you will learn when and how to create a program stream, which is an MPEG file containing video and audio. By default, the Adobe MPEG Encoder applies the “.mpg” extension to any program stream.*

To create a DVD:

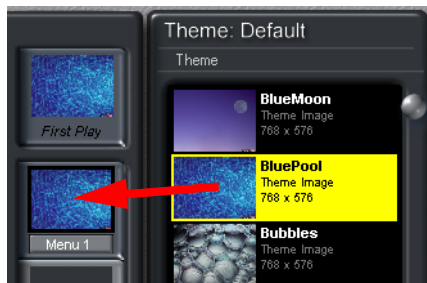
- 1 When the DVDit! Starting Point dialog appears, click Start A New Project.



- 2 Choose the TV standard that matches your project, choose the MPEG2 (DVD-compliant) video format, and click Finish.



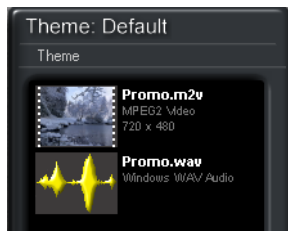
- 3 In the Theme area of DVDIt!, choose a background. Drag it into the Menu 1 rectangle and release it.



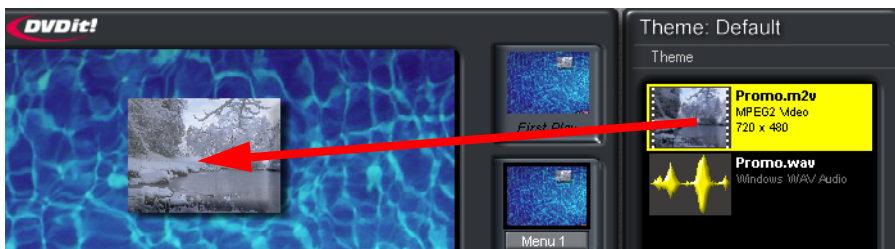
- 4 Click the Media button at the bottom of the Theme area.



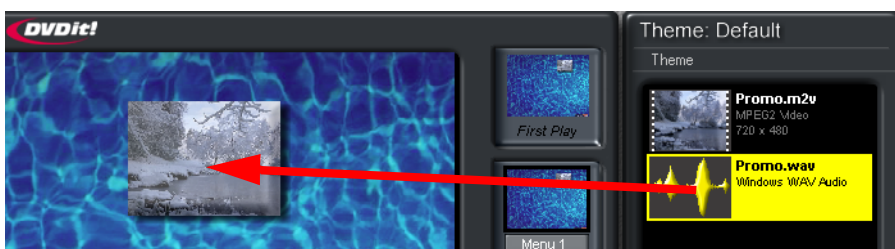
Note that the Media area already contains the files that you just exported, because you chose the “Save to DVDIt! video files folder” option when exporting. The audio file will have a “.wav” or “.mpa” extension, depending on whether you chose the NTSC or PAL standard when exporting.



- 5 Click and drag the video file (with the “.m2v” extension) into the program area. Release it at the desired location. You have now added the video portion to your DVD project, but not the audio.

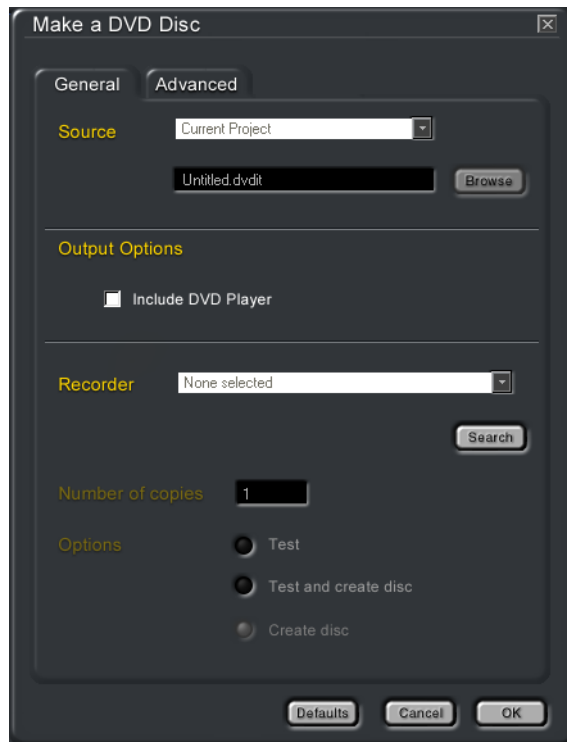


- 6 Click and drag the audio file (with the “.wav” or “.mpa” extension) onto the video file and release it. A brief sound will indicate that the audio has been linked to the video.



7 Choose Build > Make DVD Disc.

8 If you are recording to CD media, check the Include DVD Player option. This will create a cDVD — a CD containing DVD content, which can be viewed on virtually any PC with a CD or DVD drive, but not on most standalone DVD players. If you are recording to DVD media, do not check this option.



9 Select your recorder from the popup list and click OK.

DVDIt! will create your disc.

Adobe MPEG Encoder 1.0

An MPEG Primer

MPEG basics

MPEG (pronounced “em-peg”) is a popular method of compressing video and audio data. MPEG stands for the Motion Picture Experts Group, the consortium which developed the standards for the format. It is popular because of its versatility and efficiency. It offers variations which are ideal for many needs, and it allows very efficient compression of data. Even high quality material can be encoded into MPEG files which are relatively small compared to other file formats.

The efficiency of MPEG comes from the methods used to analyze and compress data. Instead of creating each frame of data from scratch, MPEG builds frames by analyzing changes between frames. If a particular frame is very similar to adjacent frames, the frame can be created by describing the changes instead of describing every attribute.

Popular variations are MPEG-1 and MPEG-2. MPEG-1 offers basic quality, and is ideal for the web, CD-ROM and Video CD. MPEG-2 offers very high quality, suitable for digital broadcasting, DVD and Super Video CD.

Bitrates

One of the most important attributes of the MPEG format is bitrate, which refers to the amount of data per second. Bitrate is generally measured in megabits per second (mbps) or kilobits per second (kbps) — for example, 4.2 mbps equals 4200 kbps. Higher bitrates generally mean higher quality, because they allow more detail to be given to each piece of data.

Most variations of MPEG can use either constant bitrate (CBR) or variable bitrate (VBR). Of course, constant means that the same rate is used throughout a file, while variable means that the rate can be changed to accommodate the material. For example, a certain scene might need to be encoded with more detail, while a lower bitrate might be fine for another portion. VBR allows creation of smaller files, because it only uses higher bitrates when needed. However, CBR can provide better quality if the bitrate is high enough.

Program streams and multiplexing

As mentioned before, elementary streams are separate audio and video streams, also known as assets. An MPEG file containing video and audio is a program stream. Combining video and audio is known as multiplexing, or muxing.

Popular video disc formats

The Adobe MPEG Encoder can create virtually any variation of MPEG-1 and MPEG-2, but it is highly optimized for easy creation of the most popular video disc formats:

DVD (Digital Versatile Disc)

This type of disc generally contains MPEG-2 at relatively high variable bitrates. MPEG-1 can also be used, but MPEG-2 is generally used to maintain high quality. With a DVD writer, you can create discs with quality comparable to that of commercial DVDs, depending on the quality of the source material. DVDs can be played in standalone DVD players, and on computers with DVD drives and appropriate playback software.

You can create DVDs using Sonic's DVDIt! software and a DVD writer.

SVCD (Super Video CD)

This kind of disc is a recordable CD containing fairly high-quality MPEG-2 material. The advantage is that recordable CDs are significantly less expensive than recordable DVDs, and CD recorders are less expensive than DVD recorders. SVCDs can be played in standalone Video CD players, many standalone DVD players, and in computers equipped with CD or DVD drives and appropriate playback software. An SVCD can contain approximately 35-45 minutes of material, depending on the quality and other factors.

You can create SVCDs using any CD writing software which supports the format. DVDIt! does not support SVCD.

VCD (Video CD)

A VCD is a recordable CD containing low- to moderate-quality MPEG-1 material. Although the quality is generally lower than SVCD, the advantage is that up to approximately an hour of video can be stored on one disc, depending on quality and other factors. VCDs can be played in standalone VCD players, many standalone DVD players, and in computers equipped with CD or DVD drives and appropriate playback software.

You can create VCDs using any CD writing software which supports the format. DVDIt! does not support VCD.

cDVD

A cDVD is a recordable CD which can contain MPEG-1 or MPEG-2 material at virtually any quality level, designed for playback on a PC in a CD or DVD drive. The cDVD format was developed by Sonic, and is supported in the DVDIt! LE software bundled with Premiere. With cDVD, you can create discs with higher quality than VCDs and SVCDs, although they generally cannot be played in standalone players. Note that some CD drives might not be fast enough to play back high bitrate cDVDs.

Quick reference

Disc Type	Format(s)	Bitrate(s)	Playback Device(s)
DVD	MPEG-1 or MPEG-2 (although MPEG-1 is seldom used)	Variable or constant, up to 9.8 mbps	Standalone DVD players, computers with DVD drives
SVCD	MPEG-2	Variable or constant, up to 2.6 mbps	Standalone VCD players, some standalone DVD players, computers with CD or DVD drives
VCD	MPEG-1	Constant, 1.5 mbps	Standalone VCD players, some standalone DVD players, computers with CD or DVD drives
cDVD	MPEG-1 or MPEG-2	Any	PCs with CD or DVD drives

Adobe MPEG Encoder 1.0

The Main Interface

The Adobe MPEG Encoder is designed to be quite powerful, allowing you to fine-tune a wide variety of settings. It is also designed to be easy to use when you don't need to do much adjusting. And most importantly, it is designed to steer you in the right direction in cases where certain settings could make your output non-compliant with the requirements of certain formats, such as DVD.

To achieve both simplicity and power, the encoder uses two interfaces — main and advanced. The main interface contains commonly used, suggested presets for DVD, VCD and SVCD. These settings are designed to achieve an optimal blend of encoding quality and speed, and to conform to the appropriate standards. In many cases, there is no need to go beyond these settings.

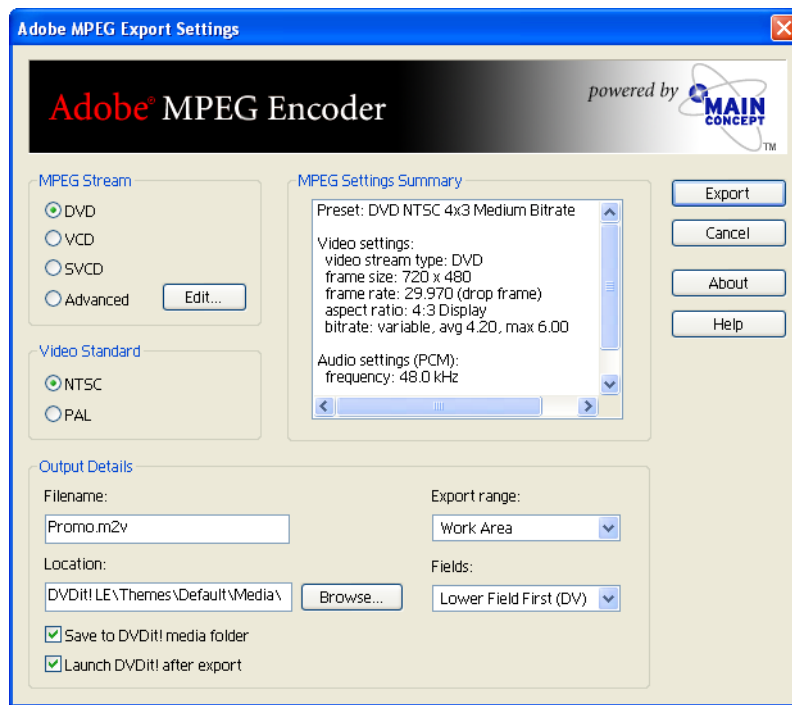
The main interface is the first dialog box that appears when you launch the encoder. To use it, simply select your choices and click Export.

To launch the encoder:

1 Do one of the following:

- Choose File > Export Timeline > Adobe MPEG Encoder. Use this option to export the entire Timeline or the Work Area.
- Select a clip, then choose File > Export Clip > Adobe MPEG Encoder. Use this option to export a clip or a portion of a clip.

The main interface offers these options:



MPEG Stream Select the type of stream: DVD, VCD or SVCD. Selecting a type activates the suggested default settings for that kind of stream.

Video Standard Select NTSC or PAL.

MPEG Settings Summary View the details of the current settings.

Filename Enter a name. It is not necessary to enter the extension (such as “.mpg”) as the encoder will automatically enter the correct extension(s). Note that if you are exporting with the default DVD option, the encoder will create separate audio and video files as mentioned in the Quickstart Tutorial section.

Location Choose the directory where the exported material will be saved.

Export Range If you are exporting the Timeline, choose whether to output the entire project or just the work area. If you are exporting a clip, choose whether to output the entire clip or just the range from the in point to out point.

Fields Select the correct field order (also known as interlace). This order is generally determined by the capture hardware that was used to acquire the video. The DV format generally uses the Lower Field First setting. Analog capture hardware can use either setting. Check the documentation that came with your video capture device for details. If you cannot determine the correct order, the No Fields option may produce acceptable (but not necessarily optimal) results. Otherwise, it might be necessary to experiment by creating a DVD or SVCD using one setting. If the video is jittery, try the opposite setting.

Save to DVDIt! media folder Select to automatically add exported MPEG files to the Media area of the Default theme in DVDIt!

Note: Enabling this option will set the path to the appropriate DVDIt! folder, and will override any path setting you entered.

Launch DVDIt! after export Select to automatically run DVDIt! after exporting to MPEG. Only choose this option if your computer has adequate resources to run Premiere and DVDIt! and burn a disc simultaneously. If you experience any problems using this option, exit Premiere after the MPEG export process, then launch DVDIt!

Export Select to begin exporting to MPEG after all settings are finalized.

Cancel Select to exit the Adobe MPEG Encoder.

About Select for copyright and version information about the Adobe MPEG Encoder, plus a hotlink to web pages containing tips, tricks, downloads, and more information about the encoder.

Help Select to open this User Guide.

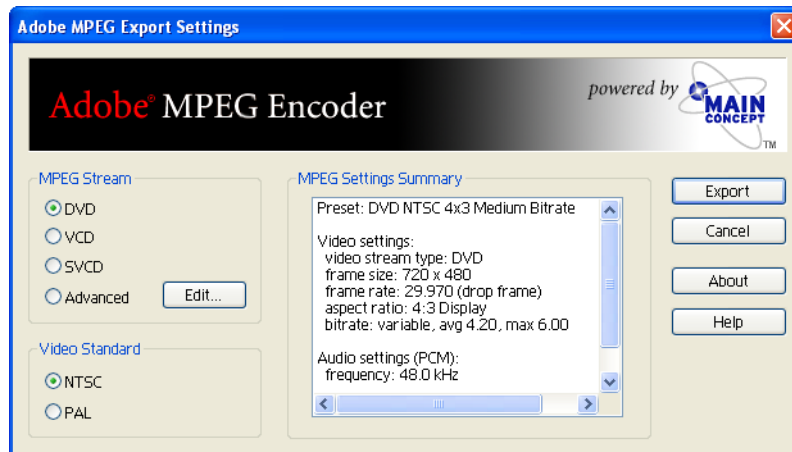
Adobe MPEG Encoder 1.0

The Advanced Interface

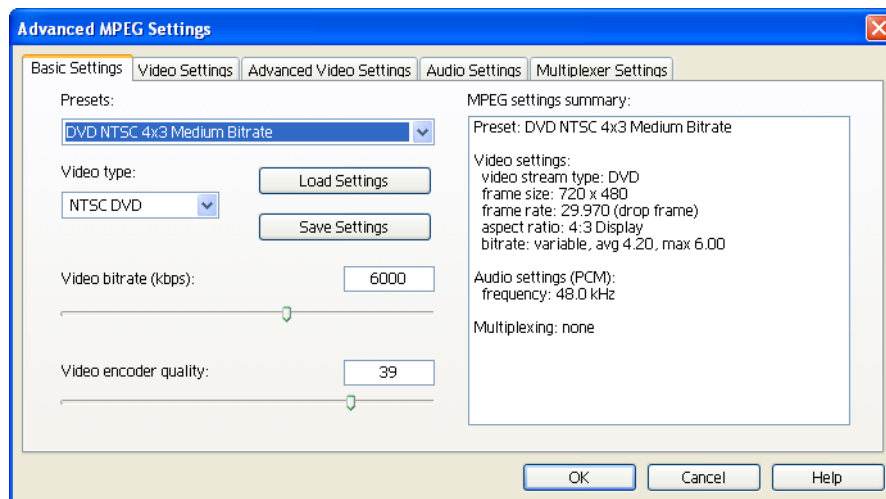
Although the main interface might be all that is needed for many (or most) situations, the advanced interface allows the kind of fine-tuning that can be very important, especially in professional production environments. The advanced interface is broken down into several panes, making it easy to choose which elements to adjust. It also enables you to use, load and save presets.

To launch the advanced interface:

- 1 Launch the Adobe MPEG Encoder.



- 2 In the MPEG Stream area of the main interface, click the Edit button beside the Advanced option. The advanced interface will appear, with the Basic Settings pane active.

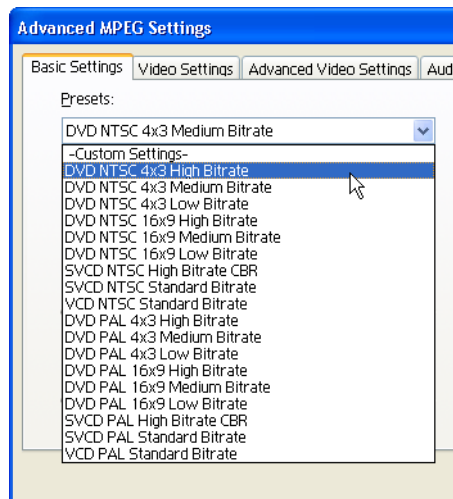


Working with presets

The Basic Settings pane includes one of the encoder's most powerful features — the ability to work with presets. These are settings files which contain all of the necessary parameters for exporting. They can be very important, because they make it easy to use advanced settings without having to adjust all the details. The encoder comes with a variety of popular presets, and you can also import presets that you receive from other people. You can also save presets to use again, or to share with others.

To choose an existing preset:

- 1 Click the Presets popup menu.



- 2 Click the desired preset.

Note: Existing presets are those located in the encoder's Presets folder. These include the ones which were shipped with the encoder, as well as any you have saved to the Presets folder in previous encoder sessions.

The presets that are shipped with the Adobe MPEG Encoder include NTSC and PAL versions of the following:

DVD 16x9 High Bitrate Select to create extremely high quality widescreen output for DVD.



The Medium Bitrate DVD settings provide excellent quality with most material, and they offer an optimal ratio of quality to encoding speed. Only use the High Bitrate settings on material that requires an extra level of quality.

Note: DVDit! LE does not support widescreen material. However, 16x9 presets are included for the benefit of users who have DVDit! PE (Professional Edition) or other authoring software which does support widescreen material.

DVD 16x9 Medium Bitrate Select to create very high quality widescreen output for DVD.

DVD 16x9 Low Bitrate Select to create high quality widescreen output for DVD.

DVD 4x3 High Bitrate Select to create extremely high quality standard screen output for DVD.

DVD 4x3 Medium Bitrate Select to create very high quality standard screen output for DVD. This preset is equivalent to the default DVD setting in the main interface.

DVD 4x3 Low Bitrate Select to create high quality standard screen output for DVD.

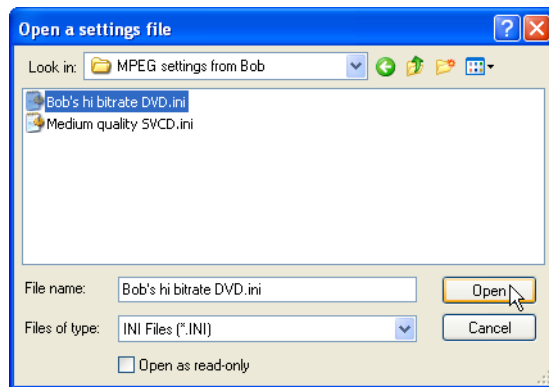
SVCD High Bitrate CBR Select to create very high quality output for SVCD, at the expense of file size.

SVCD Standard Bitrate Select to create high quality output for SVCD with efficient file size. This preset is equivalent to the default SVCD setting in the main interface.

VCD Standard Bitrate Select to create standard quality output for VCD with efficient file size. This preset is the equivalent of the default VCD setting in the main interface.

To load a preset that is not in the menu:

- 1 Click Load Settings.
- 2 Locate and select the file you want to load.



- 3 Click Open.

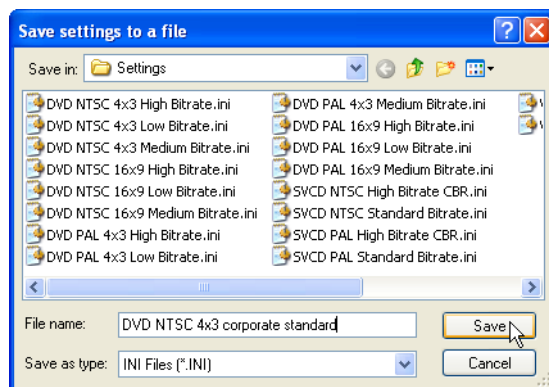
Note: When you load a preset, it is not automatically added to the popup menu. If you load a preset and want to add it to the menu, use the procedure shown below for saving presets.



MPEG preset files are very small, and can easily be shared with others on disc and by attaching them to e-mail messages.

To save a preset:

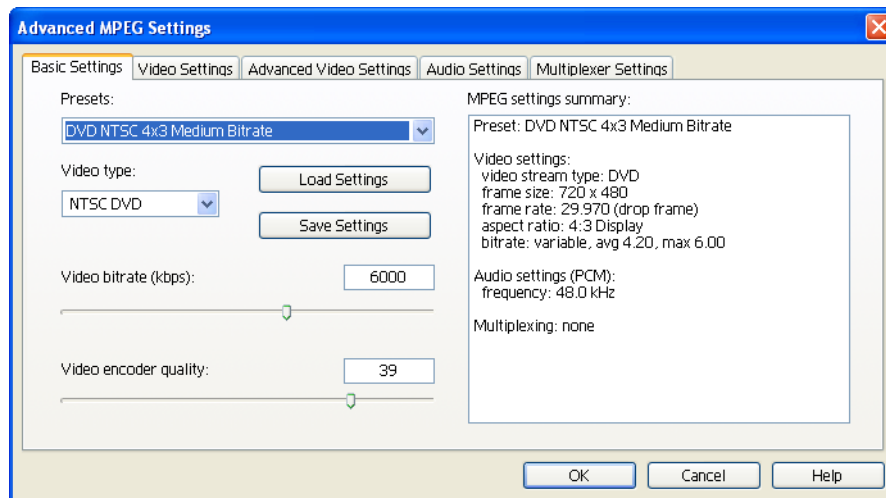
- 1 Click Save Settings.
- 2 If you want to save the preset in the Settings folder so that it will appear in the popup menu, accept the default path that is presented. If you want to save a preset in another location, choose a different path.



- 3 Enter a name for the preset. It is not necessary to enter the file extension (".ini"), as this will be added automatically when the preset is saved.
- 4 Click Save.

Other Basic Settings

The Basic Settings pane also lets you revert to default video types, control the ratio of speed vs. quality, and view a summary of the current settings.



Video type Select this popup menu to revert to the default settings for a certain type of format such as DVD. These settings are ideal starting points for your own custom presets.

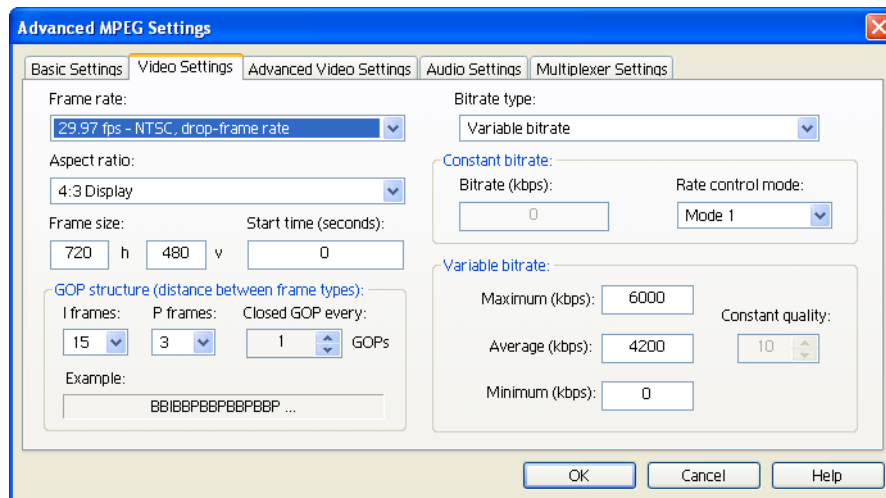
Video bitrate Use to adjust the maximum bitrate if necessary. The presets generally set the appropriate bitrate.

Video encoder quality Use to adjust the ratio of speed vs. quality. At lower settings, the emphasis is on speed. At higher settings, the emphasis is on quality. The presets generally set the appropriate quality for the chosen format. However, some video material might require different settings, so experimentation might be necessary to find the right quality ratio for your needs.

MPEG Settings Summary Shows the current settings, as well as any errors. For example, if you are attempting to use DVD settings and you specify a bitrate which exceeds DVD standards, an error message will appear in red in the MPEG Settings Summary.

Video Settings

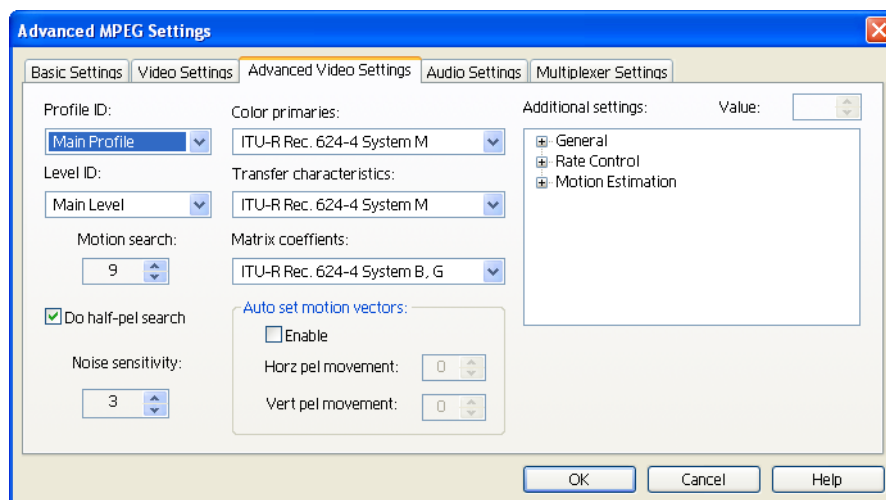
This pane includes controls for the frame rate, aspect ratio, frame size, starting time, GOP (Group of Pictures) structure and specific bitrate settings (Maximum, Average and Minimum).



These settings are controlled automatically by settings in the main interface, by presets, or by the specified video type. In general, these items should only be adjusted if there is a specific reason to do so. One exception is the Bitrate type control, which is generally safe to use when exporting for DVD or SVCD.

Advanced Video Settings

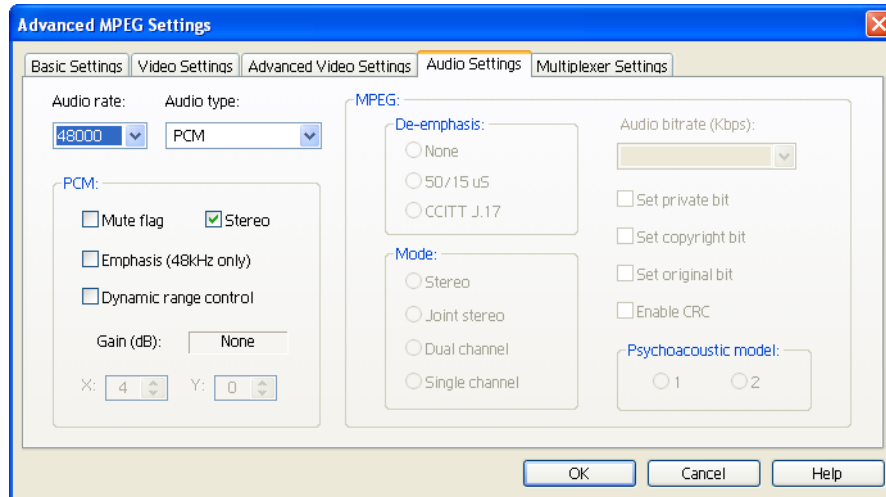
This pane includes highly advanced settings which generally should not be modified.



These parameters are designed for use only in highly technical environments which require specific adjustments.

Audio Settings

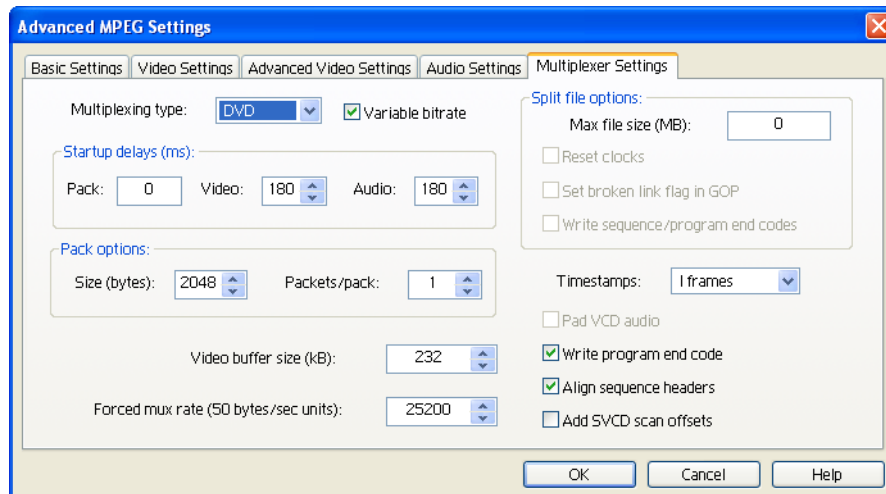
This pane includes basic and advanced settings for audio output.



The default settings and presets generally set the correct audio parameters. Only adjust these settings if there is a specific need to do so.

Multiplexer Settings

In this pane, you can choose whether your exported MPEG material will be multiplexed (also referred to as muxed), meaning that video and audio will be exported in the same file, and you can set advanced mux settings.



These parameters are generally adjusted by the default settings and presets. For example, when you choose a default DVD setting in the main interface, the Multiplexing type is set to None, meaning that elementary streams, or assets (a separate video and audio file) will be exported. However, there might be times when you want to export a DVD-compliant program stream (a single file containing video and audio). For example, you might want to play the file

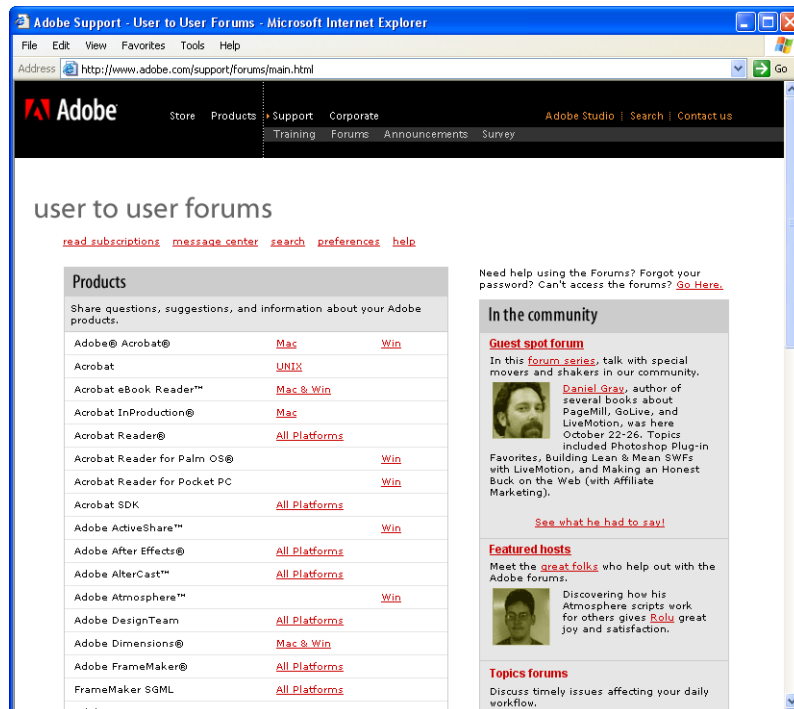
on a computer and use it to create a DVD. So you might choose to create a muxed version of the file that would serve both purposes. In this case, you would need to set the Multiplexing type to DVD.

Sonic's DVDit! software can handle muxed files, although it works with elementary streams more efficiently. You might have to wait a few moments while DVDit! processes the file, but that is a better alternative than exporting the same material twice with different multiplexer settings.

Adobe MPEG Encoder 1.0

Additional Resources

Adobe and MainConcept offer web-based resources to enhance your experiences with the Adobe MPEG Encoder. In Adobe's user to user forums, you can exchange questions, answers, tips and tricks with others.



You can access them at <http://www.adobe.com/support/forums/main.html>. MainConcept will host a forum devoted to the Adobe MPEG Encoder.

MainConcept's website has special pages with tips and tricks, additional preset files, a link to the Adobe MPEG Encoder forum, and more. You can access those resources at <http://www.mainconcept.com/adobempeg.html>.



The Adobe MPEG Encoder contains a hotlink to the special MainConcept web pages. To access it, click the About button on the main interface.

