

# SurCode STEREO Dolby<sup>®</sup> Digital VERSION 2

## Stereo Dolby Digital AC-3 Encoder

# OWNER'S MANUAL

## 1 Overview

SurCode Stereo Dolby Digital (Version 2) converts stereo or mono soundfiles to Dolby Digital (AC-3) file format.

SurCode can accept the master soundfiles in either .WAV or .AIFF format. SurCode outputs an .ac3 file that can be used for DVD authoring, or a .wav file that can transfer Dolby Digital over a S/PDIF connection.

SurCode accepts soundfiles with sampling rates of 32 kHz, 44.1 kHz, and 48 kHz. It accepts .wav files of 16, 24, and 32-bits, and .aiff files of 16 and 24 bits.

New features in Version 2 are: built-in Dolby Decoder for playback (allowing decoded AC-3 file playback from a computer soundcard), and refined Dolby encoding parameters.

## 2 The SurCode Main Screen

Figure 2-1 shows the SurCode main screen.

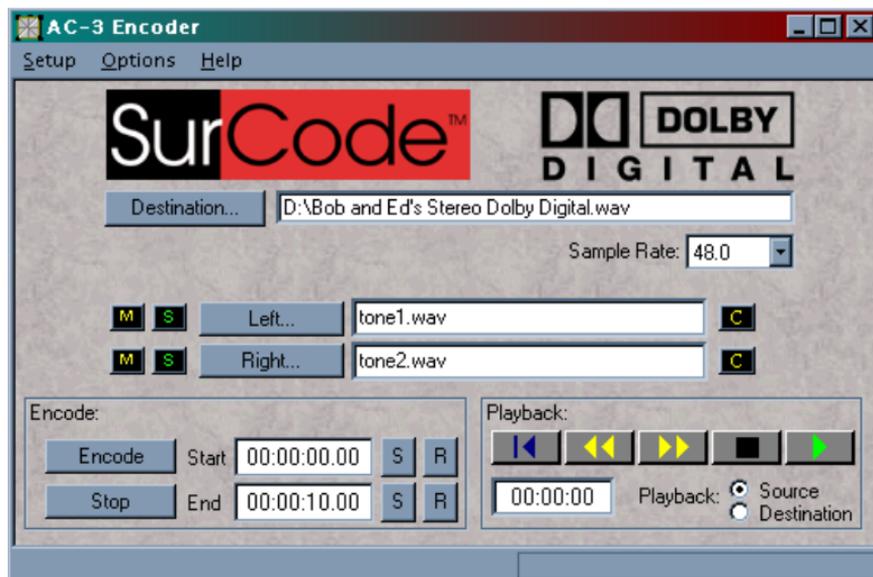


Figure 2-1 The SurCode main screen

### 2.1 Encoding procedure

- 1) Browse to find the stereo soundfile (or pair of mono soundfiles) that you want to encode.
- 2) Set the Destination - where you want to place the encoded soundfile.
- 3) Press the "Encode" button.

This is the entire procedure for most recordings that you will encode. Options include monitoring the pre-encoded and post-encoded soundfiles (see section 4, *Monitoring*), and setting different start and end times (see section 4.2, *Time Display*).

## 2.2 Selecting the soundfiles to be encoded

The “Browse Buttons” are for specifying the stereo or mono soundfiles to encode (see Figure 2-2).

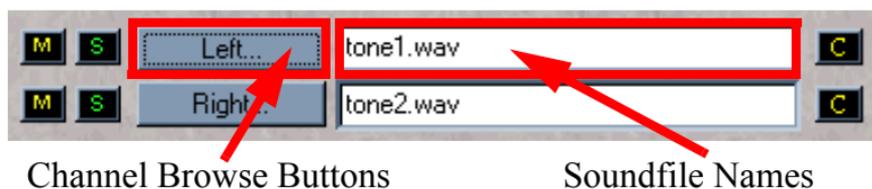


Figure 2-2

To select a soundfile, click on the browse button that corresponds to one of the two channels you want to load. This will bring up a browse window (see Figure 2-3).

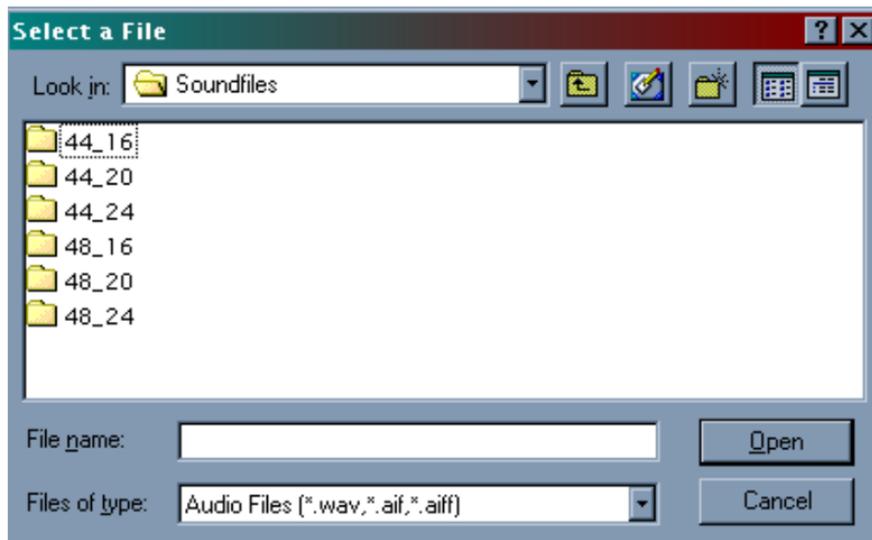


Figure 2-3

Navigate to the directory that contains the soundfile or soundfiles that you wish to encode, and double-click on the soundfile that you’ve chosen for that channel. The filename that you’ve chosen will now appear in the window to the right of the browse button. If it is a stereo soundfile, it will appear to the right of both Left and Right channel buttons.

## 2.3 Selecting an output file for encoded sound

You must designate a Destination, i.e. where to place the encoded file when encoding is complete (see Figure 2-4).

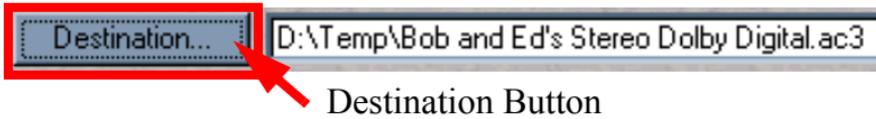


Figure 2-4

First, click on the button labeled "Destination". This brings up the browse window (see Figure 2-5).

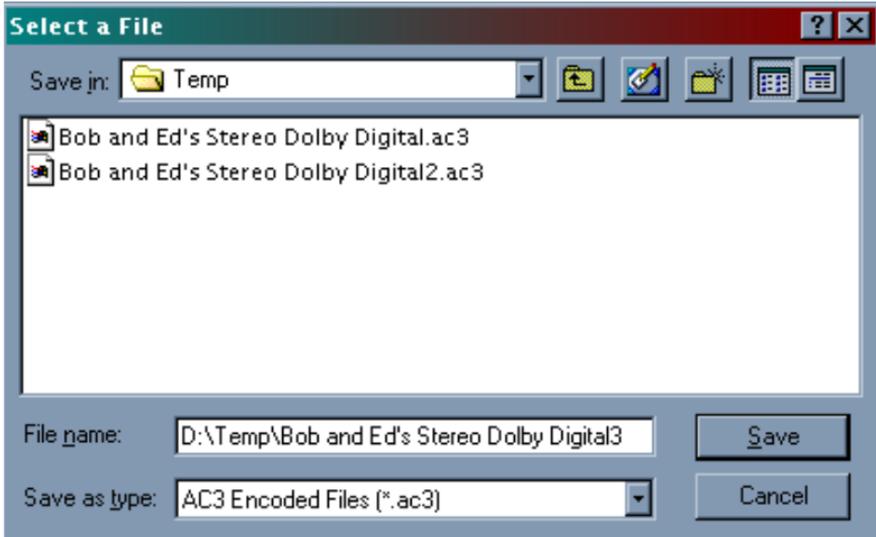


Figure 2-5

Browse to the directory you want to save the encoded file in (shown in the window at the top labeled "Save in:"), and type a filename into the window labeled "File name:". Then hit the "Save" button. The directory pathname and filename will now appear in the SurCode window next to the "Destination" button.

You can also type the full path name, or edit the file name, in the edit window next to the "Destination" button at any time.

### 3 Encoding

When the input (Left, Right) files and the output (Destination) file have been selected, you are now ready to encode.

Simply click on the "Encode" button (see Figure 3-1).

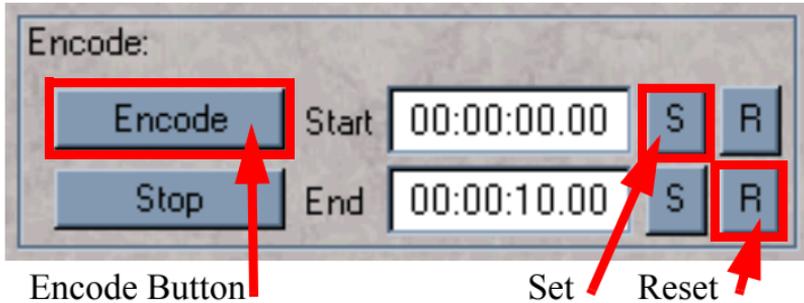


Figure 3-1

A progress meter will tell you when the encode process is completed.

You can cancel the encoding process at any time by clicking on the "Stop" button (see Figure 4-1).

It is not necessary to encode the entire input soundfile. For example, you may want to trim a few seconds of silence off the beginning or ending. You can use the "Start" and "End" windows to trim the soundfile before encoding.

#### 3.1 Trimming Encode Start and End Times

The Encoding section also allows you to trim the start and end time of the file you are encoding. The start and stop times for the encoder default to the beginning and end of the soundfile. To trim a file, you will want to change one or both of these times.

There are two buttons next to the start time display, and also next to the end time display. These buttons are labeled "S" ("Set") and "R" (Reset - see Figure 3-1).

When you click on the "S" button, the time that is showing in the Playback Time Display (see Figure 4-1) is copied into the encode time display next to the button. When you hit the "R" button, the time is reset to



### 4.3 Playback Selection

You can play the input (“Source”) soundfile (or soundfiles), or you can play the encoded file after the encoding process has been completed (“Destination”). To monitor the input soundfiles, click on the “Source” radio button in the Playback section (see Figure 4-1). This routes the input files to the soundcard chosen under “When SOURCE is played” in the Device Options window (see section 5.1, *Device Options*). When you play the source (un-encoded) files, the output is routed to a Windows Wave stereo output device, typically the analog outputs of a computer soundcard (see Figure 4-2).

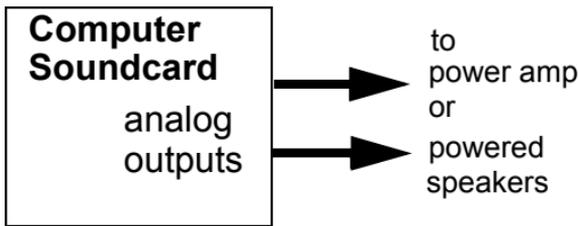


Figure 4-2

When you are playing from the input soundfile, you can solo or mute either of the 2 channels. The solo/mute buttons are to the left of the input channel (Left/Right) browse buttons (see Figure 4-3).



Figure 4-3

To monitor encoded files, chose one of the three options available under “When DESTINATION is played” in the “Device Options” window (see section 5.1, *Device Options*) by clicking on the radio button for the Destination option you wish to use:

- “Decode and play through the above device” will route the decoded audio (using the built-in Dolby Digital decoder) from the selected encoded file to the computer soundcard selected in the Device Options window.
- “Decode and save to .WAV files” will decode the selected encoded file and save the resulting audio as two .WAV files (left and right).

- “Send digital output directly to:” will route the encoded file to the digital output (usually a S/PDIF output) of the soundcard chosen in the window below the buttons (see Figure 5-1). Note: the encoded file chosen must be of the “Dolby Digital WAV” type.

Figure 4-4 shows the recommended setup for monitoring the encoded files with an external hardware Dolby Digital (AC-3) decoder.

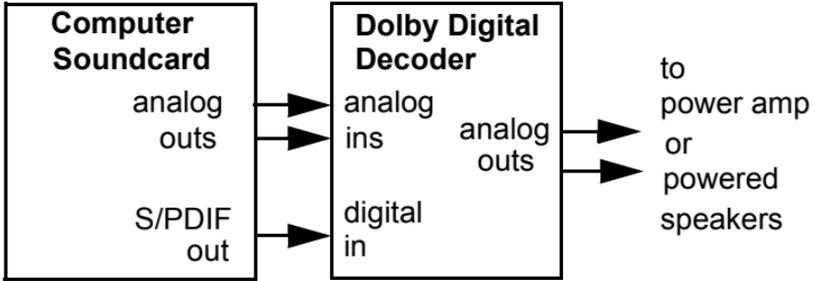


Figure 4-4

The analog outputs from the computer soundcard allow you to monitor the input (un-encoded) soundfiles, and the S/PDIF output allows you to monitor the Dolby-encoded soundfile through the external Dolby Digital decoder.

# 5 Options

## 5.1 Device Options

The "Device Options" window can be accessed through the Options menu. This is where you tell SurCode which soundcard outputs to use for monitoring (see Figure 5-1).

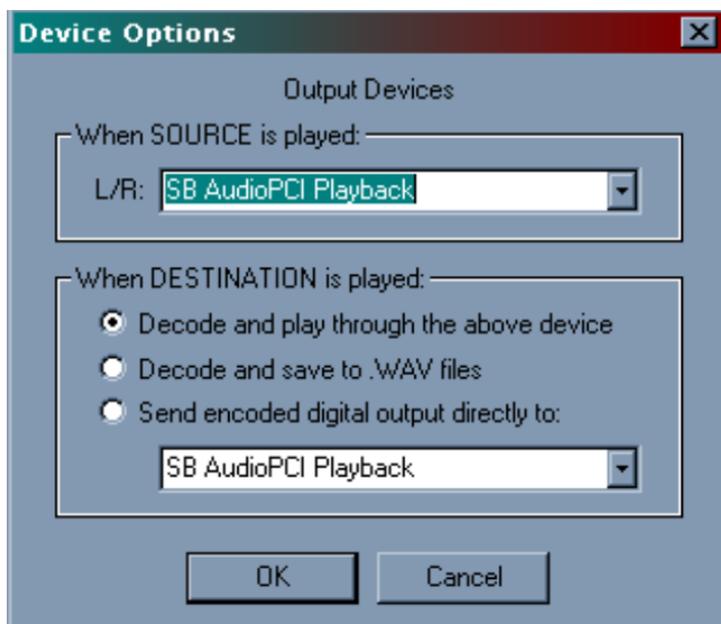


Figure 5-1

### 5.1.1 “When SOURCE is played”

Because Windows wave devices work in stereo pairs, you must assign a stereo device driver in the upper Device Options section to monitor your source stereo files. These usually connect to L/R analog outputs, but you may also connect them to ADAT, TDIF, or other digital outs.

### 5.1.2 “When DESTINATION is played”

This section assigns an output for playing a previously-encoded soundfile. Click on the appropriate radio button for the Destination option:

- “Decode and play through the above device” will route the decoded audio (using the built-in Dolby decoder) from the selected encoded

file to the computer soundcard selected in the “When SOURCE is played” Device Options section.

- “Decode and save to .WAV files” will decode the selected encoded file and save the resulting audio as two mono .WAV files (left and right).
- “Send digital output directly to:” will route the encoded file to the digital output (usually a S/PDIF output) of the soundcard chosen in the lower Device Options window (see Figure 5-1).

To assign an output, click on the down-arrow at the right side of the window. A drop-down menu will list the outputs available in your system. Click on the output that you want, and it will be assigned.

## 5.2 Encode Options

The "Encode Options" window can be accessed through the Options menu (see Figure 5-1).

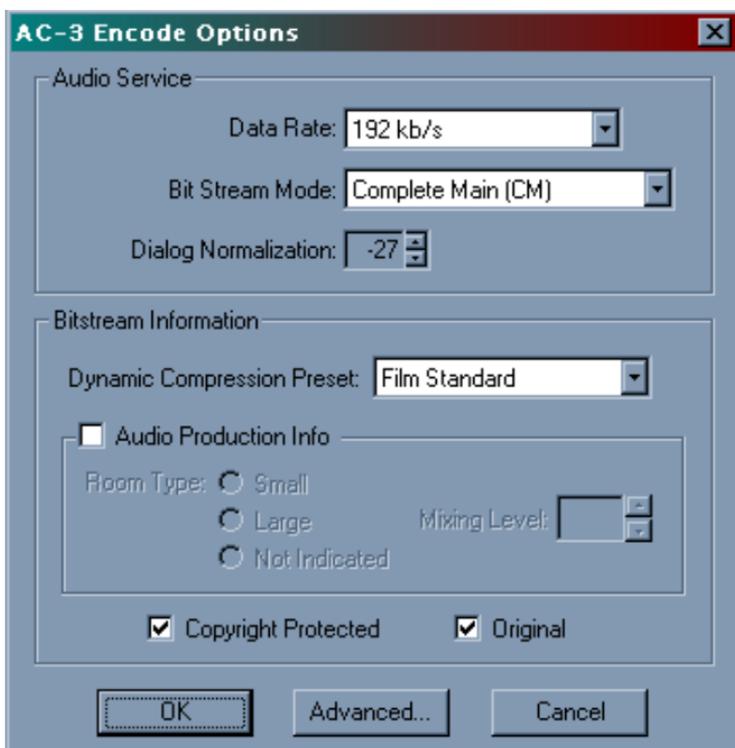


Figure 5-1

## 5.2.1 Advanced Options

The Advanced Encoder Options window comes up when you click on the "Advanced" button (see Figure 5-1).

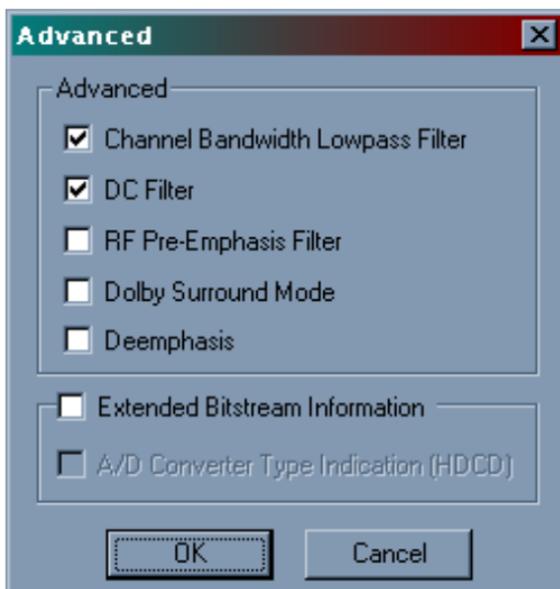


Figure 5-1

The use of these options is fully explained in the document called the "Dolby Digital Professional Encoding Manual". It is available as a .pdf file on Dolby's website at [www.dolby.com](http://www.dolby.com). It is also accessible by following this path: go to the Start button (lowerleft of screen, with the Windows Flag logo), then > Programs > Minnetonka Audio > SurCode for Dolby Digital > Dolby Digital Encoding Guidelines - Screen (in PDF form) This PDF Document may also be printed, however it is quite long.

**NOTE:** We highly recommend reading and understanding these options fully before changing the default settings, as the encoded results may vary significantly.

**TECHNICAL SUPPORT:**  
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