



SurCode™ Encoder for DTS-HD™ for Compressor

USER MANUAL



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1 Introduction

This SurCode Encoder for DTS-HD plug-in for Compressor encodes multichannel audio for several DTS formats. The resulting DTS-encoded files can be used to create disc-based media (Blu-ray, DVD, and DTS Music Disc), but can also be used to create content for online delivery for playback via QuickTime.

SurCode for DTS-HD supports these DTS formats-

.dtshd file types:

- DTS-HD Master Audio
- DTS-HD High Resolution Audio
- DTS-HD Digital Surround
- DTS ES
- DTS 96/24
- DTS Express for Blu-ray Secondary Audio

.cpt file type (DVD authoring):

- DTS Digital Surround
- DTS ES
- DTS 96/24

.wav (DTS Music Disc):

- DTS Digital Surround

Supported channel configurations are:

- From mono up to 6.1 channels for Blu-ray disc
- From stereo up to 6.1 channels for DVD
- Stereo, 5.1, and 6.1 channels for DTS Music Disc

For QuickTime playback, you will need to install SurCode Decoder for DTS-HD for QuickTime. This will make QuickTime compatible with all DTS formats.

2 Included in This Installation

This installation includes both the SurCode Encoder for DTS-HD for Compressor, and the SurCode Decoder for DTS-HD for QuickTime.

This user manual includes information for SurCode Encoder for DTS-HD for Compressor only. For information on the SurCode Decoder for DTS-HD for QuickTime, which is included in the installation. For info - refer to the SurCode Decoder for DTS-HD user manual.

3 Using SurCode in Compressor

After installation, SurCode Encoder for DTS-HD for Compressor will become available in the Settings window of Compressor. To access SurCode, click on the “+” button (see Figure 3-1).

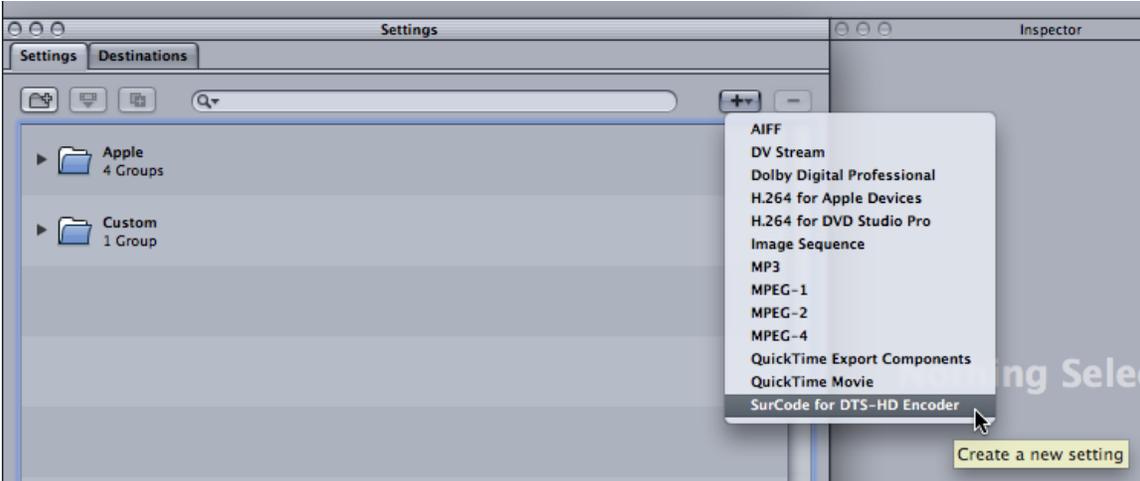


Figure 3-1

When you click on SurCode encoder, the encoder will appear in the Settings list (see Figure 3-2).

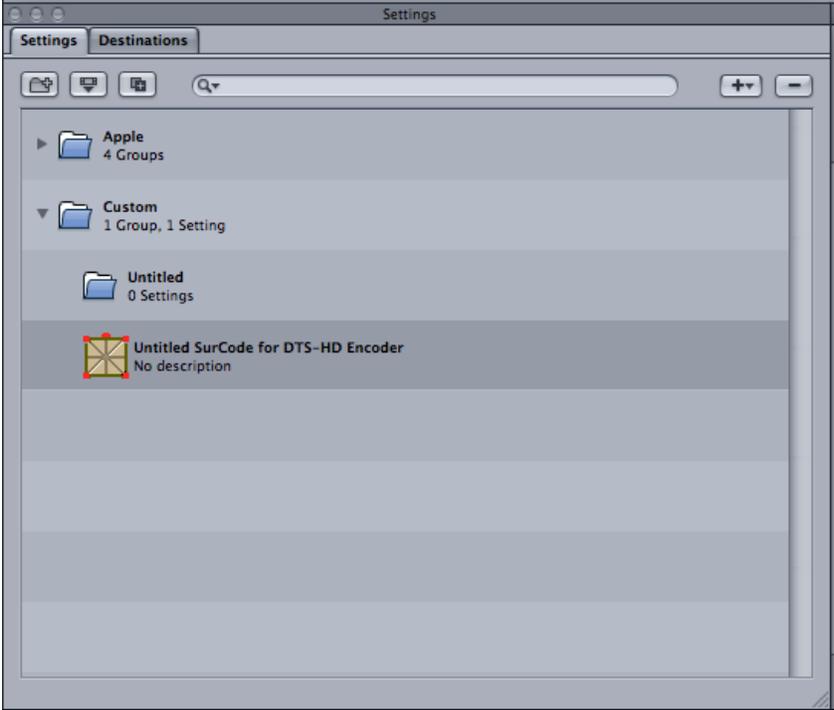


Figure 3-2

You can now drag the encoder from the settings window to a Job (see Figure 3-3).

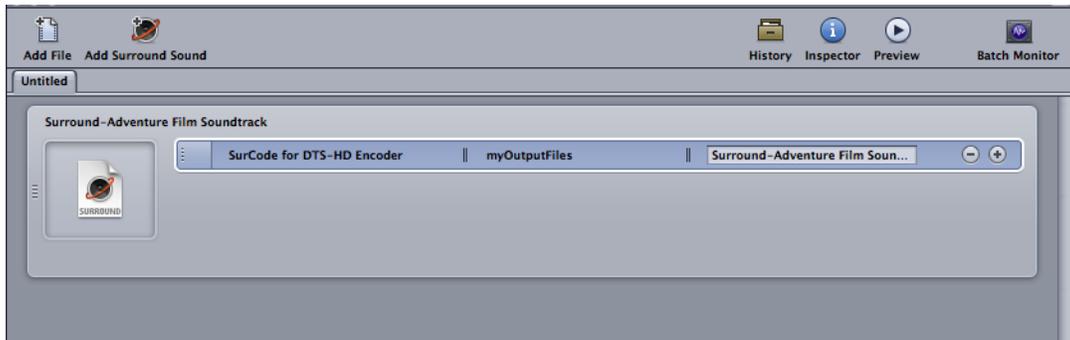


Figure 3-3

When you click on the encoder in the Job window, the encoder parameters will appear in the Inspector window. It is here, in the Inspector, that you can bring up the SurCode for DTS-HD Encoder user interface. First, click on the second button in the row of buttons at the top (see Figure 3-4).

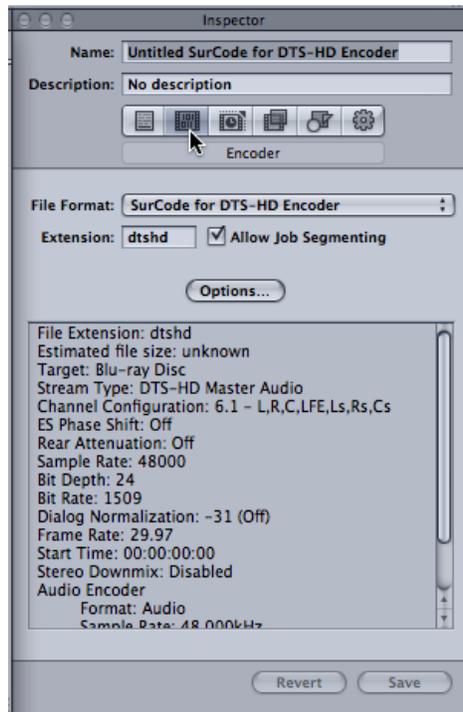


Figure 3-4

Then click on the Options button in the middle of the Inspector window. This will bring up the encoder's user interface, where you can adjust all of the encoding parameters.

4 Main Tab

Figure 4-5 shows the SurCode for DTS-HD main tab.

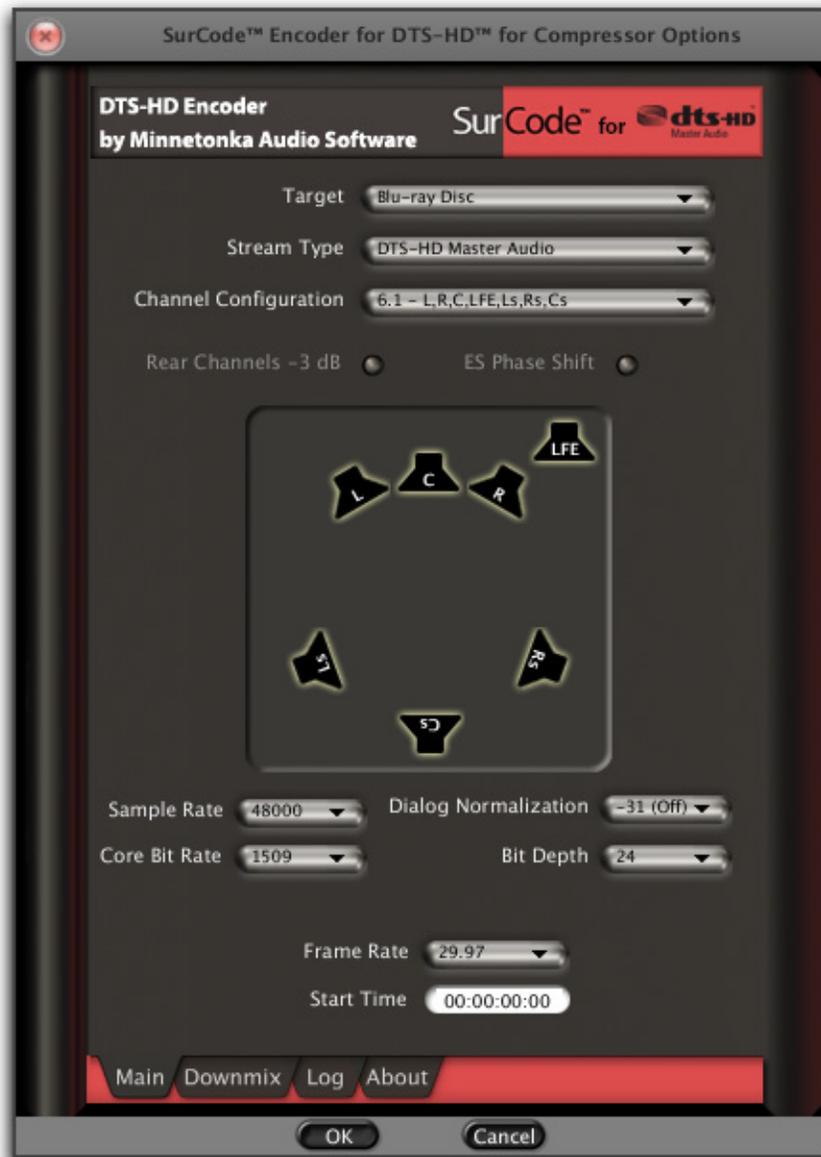


Figure 4-5

4.1 Target

You must tell the Encoder what media type you are encoding for. The Target pull-down lets you select from 4 different media types (see Figure 4-6).

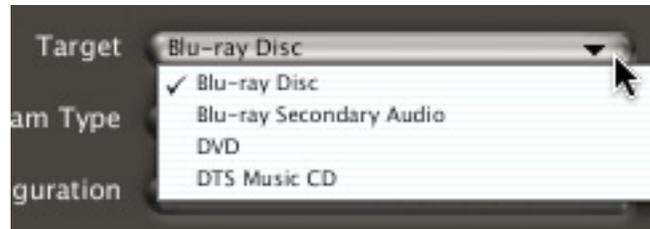


Figure 4-6

4.2 Stream Type

For each selected Target, there will be certain DTS stream types that are compatible. You must tell the encoder which stream type to use by selecting one from the Stream Type pull-down menu (see Figure 4-7).

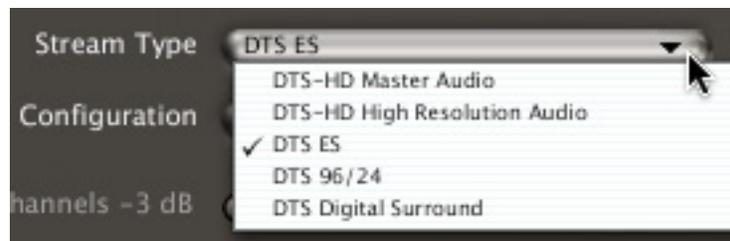


Figure 4-7

4.3 Channel Configuration

For each Target and Stream Type, there will be a number of different allowable Channel Configurations. You must tell the Encoder which Channel Configuration to use, by selecting one from the Channel Configuration pull-down (see Figure 4-8).

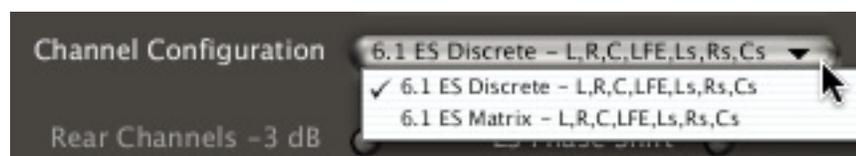


Figure 4-8

The Channel Configuration that you choose will be graphically represented below (see Figure 4-9).

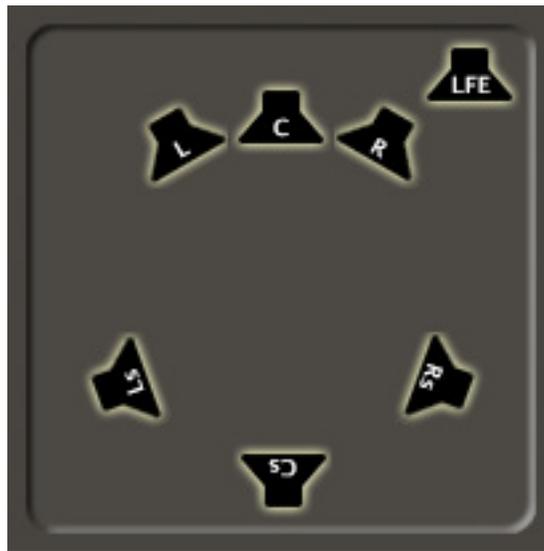


Figure 4-9

4.3.1 Rear Channel Attenuation

For some configurations, you have the option of attenuating the rear channels by 3 dB. To turn on the attenuation, click on the Attenuate Rear Channels -3 dB button (see Figure 4-10). The button will turn green when selected.



Figure 4-10

4.3.2 ES Phase Shift

When encoding to a DTS-ES format, you can choose to phase shift the rear channel by clicking on the ES phase Shift button (see Figure 4-11). The button turns green when selected.

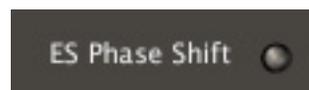


Figure 4-11

4.4 Sample Rate

This indicates the sample rate at which the decoded audio will play back (see Figure 4-12). Most formats will have only one sample rate. For the formats that allow more than one sample rate, you will be able to select it from a pull-down menu



Figure 4-12

4.5 Bit Rate or Core Bit Rate

This can be used to select either the Bit Rate of the selected format or the Core Bit Rate of DTS-HD Master Audio files (see Figure 4-13).



Figure 4-13

4.6 Dialog Normalization

This pulldown allows you to select the Dialog Normalization level, where appropriate (see Figure 4-14). DTS recommends to leave dial norm at -31 or off..

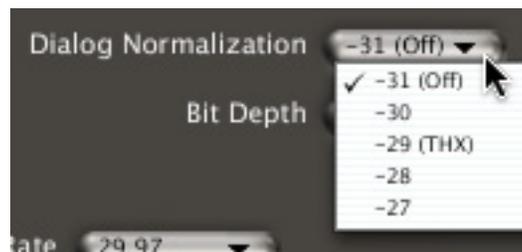


Figure 4-14

4.7 Bit Depth

This pulldown lets you select the bit depth for your DTS encoded file (see Figure 4-15). The bit depth of your input files should match your selection.

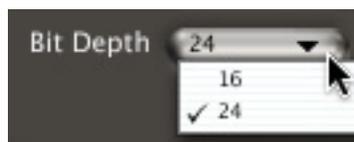


Figure 4-15

4.8 Frame Rate

When encoding audio for Blu-ray Disc, it is necessary to specify the video frame rate (see Figure 4-16).

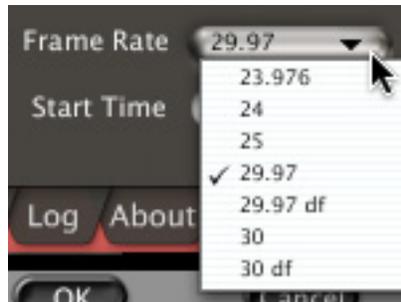


Figure 4-16

4.9 Start Time

When encoding in formats that contain embedded timecode, it is necessary to specify a starting timecode (see Figure 4-17).

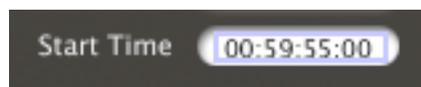


Figure 4-17

5 Downmix Tab

For encoded surround-sound recordings, you can specify how the surround sound will be downmixed to stereo for those listeners who only have two speakers (see Figure 5-18).



Figure 5-18

Set how much of each channel of the surround sound format will be mixed into the final L and R channels. The mix values are in dB.

5.0.1 Stereo Downmix Enabled button

This button makes the Stereo Downmix user interface available, and tells the encoder to use the table in the encoded file (see Figure 5-19).

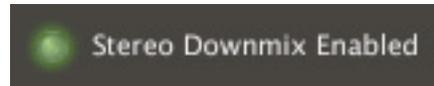


Figure 5-19

5.0.2 Stereo Downmix table

The stereo downmix table determines how much of each surround sound channel is mixed into the Left and Right stereo channels during a downmix. Each mix value is adjusted by 1 dB when you click on the up- or down- arrow next to the value (see Figure 5-20).

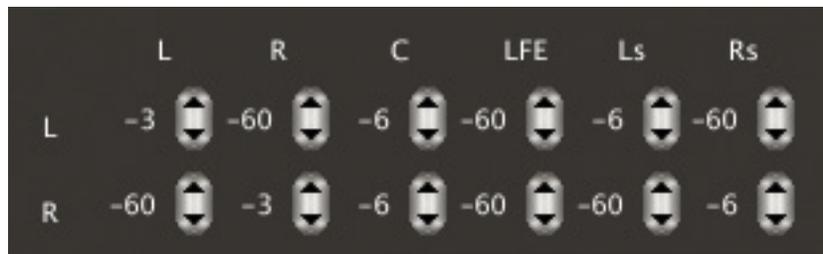


Figure 5-20

5.0.3 Stereo Downmix Defaults

Clicking on this button will show the predetermined downmix tables that can be loaded (see Figure 5-21).

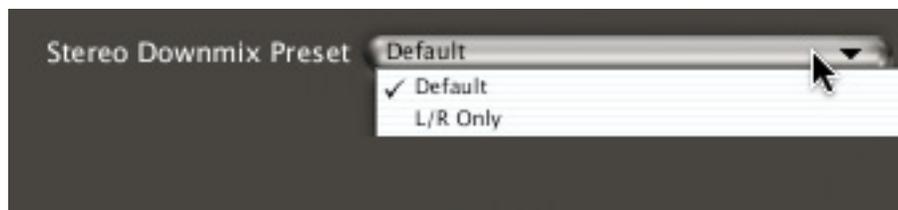


Figure 5-21

6 Log Tab

SurCode for DTS-HD encoder can a log of all encoding activity. It can be viewed on the Log tab (see Figure 6-22).



Figure 6-22

7 About Tab

The About tab provides information about your SurCode for DTS-HD encoder plug-in (see Figure 7-23).

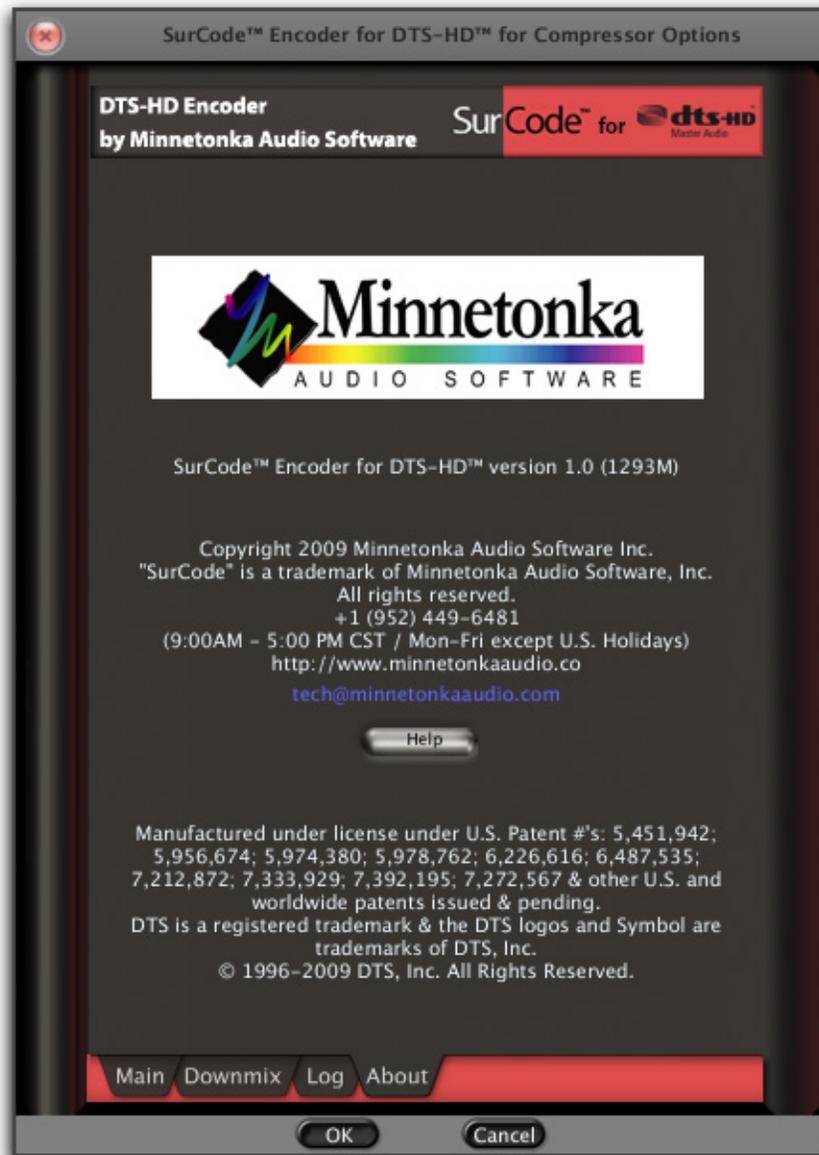


Figure 7-23

8 Installation

Open the installer, and locate the .pkg file inside of the Mac folder. Double-click on the .pkg file to start installation. It will bring up the first installer screen (see Figure 8-24).

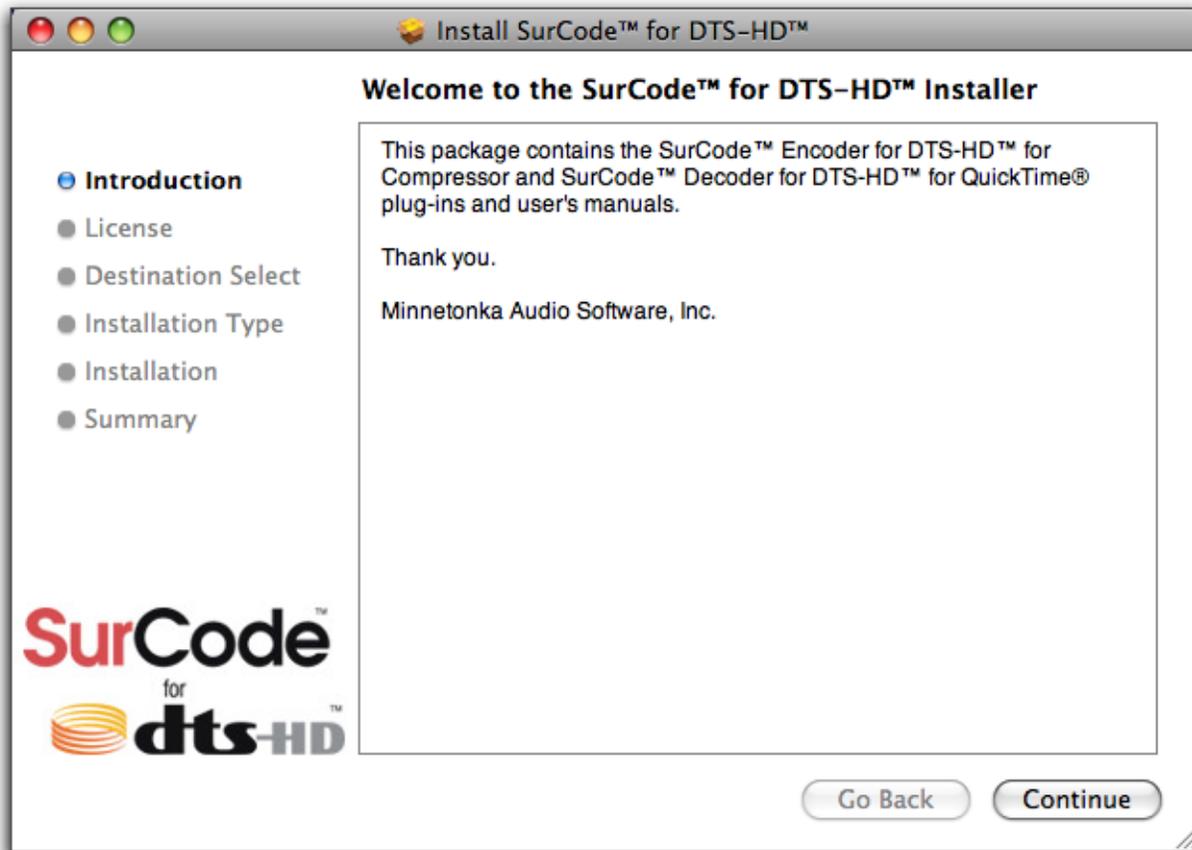


Figure 8-24

Click on the Continue button. This will bring up the Software License screen (see Figure 8-25).

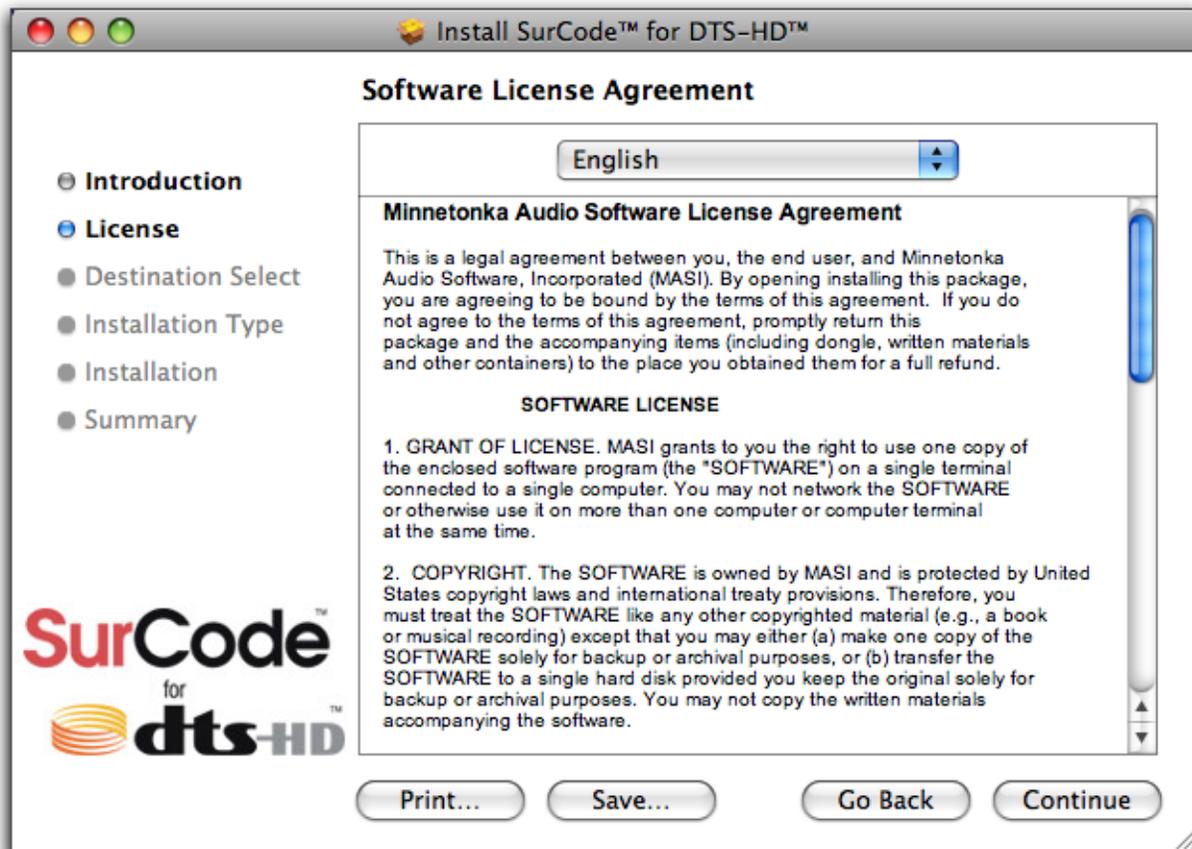


Figure 8-25

Click on the Continue button. This will bring up the screen asking if you agree with the software license agreement. If you agree, click on the Agree button (see Figure 8-26).

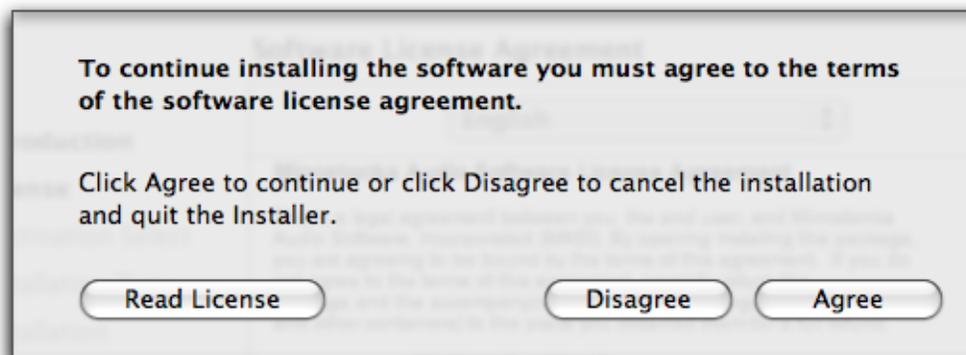


Figure 8-26

Next is the installation location screen. To install SurCode at the default location, click on the Install button (see Figure 8-27).

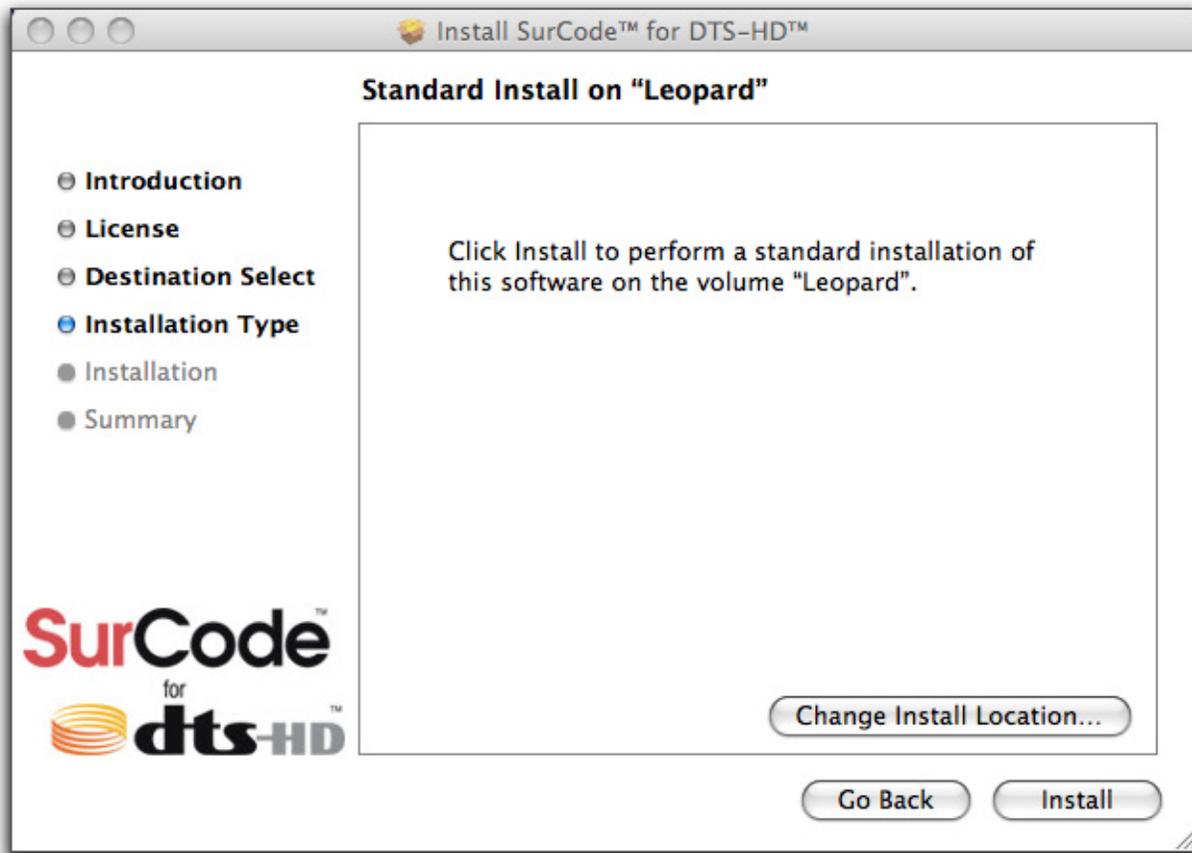


Figure 8-27

The operating system will ask you to enter your administrative password (see Figure 8-28). Type it in and click OK (see Figure 8-28).



Figure 8-28

The installer will install all necessary files, and notify you when it has finished (see Figure 8-29).

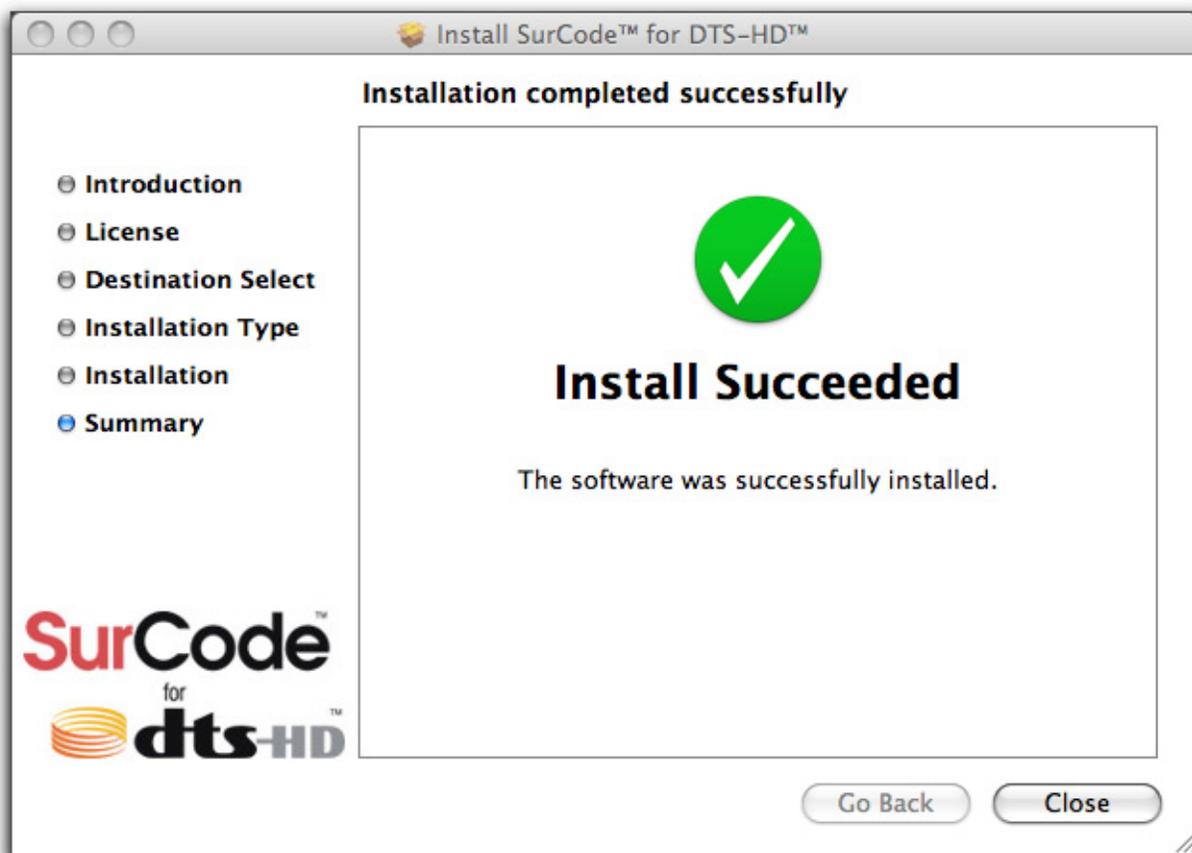


Figure 8-29

The installer will also bring up the Activator window (see Figure 8-30). SurCode comes with a 14-day trial period, after which it must be activated by purchasing a license and entering the license code.



Figure 8-30

To purchase a license, click on the link. This will take you to the purchase page at the Minnetonka web site (see Figure 8-31). Allow one full business day for the license code to be sent to you.

When you receive the license code , enter it in the box at the bottom of the activation tab, and click the Activate button.

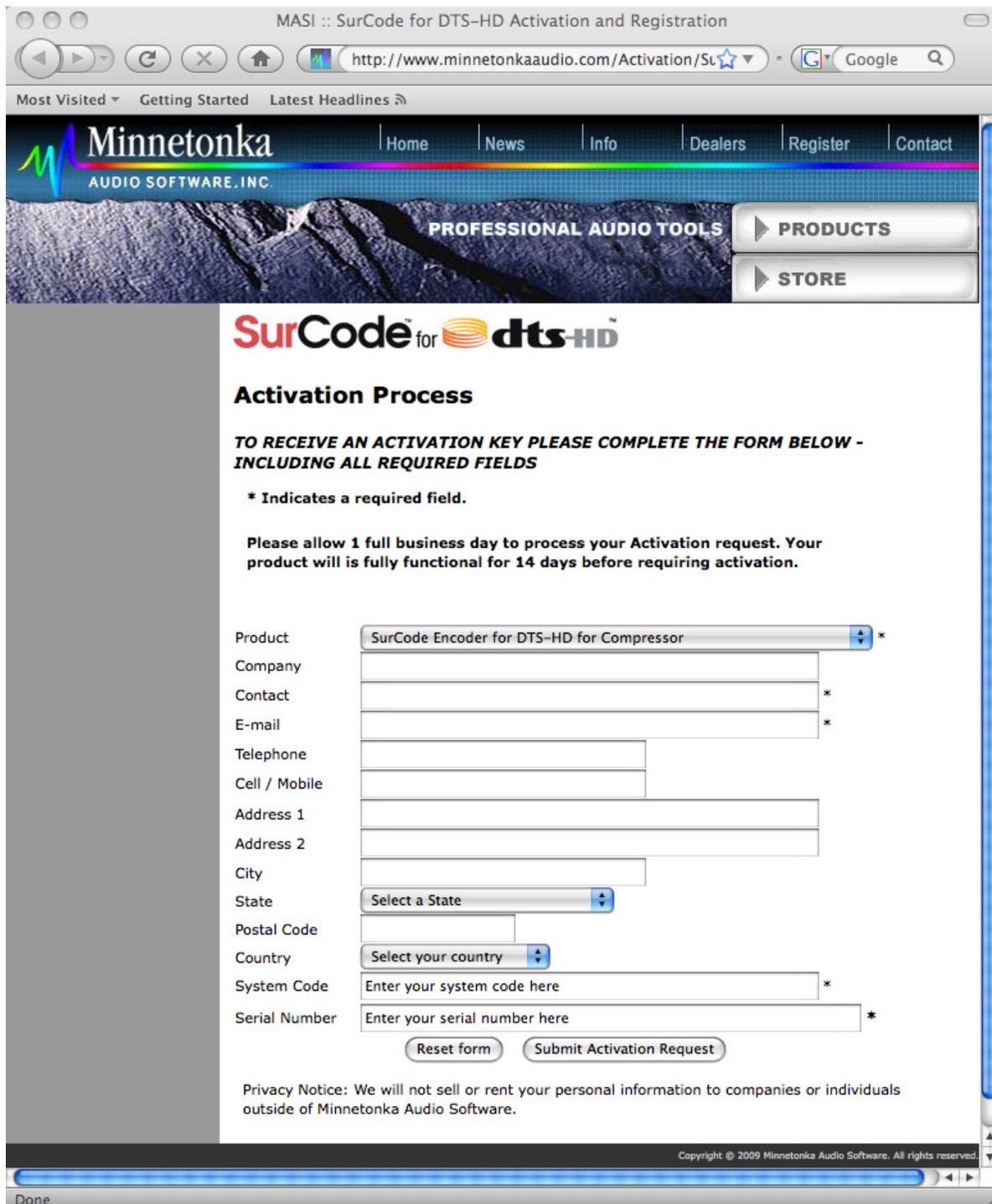


Figure 8-31

9 Release Notes for Version 1.0

- 1) For some input file lengths, Compressor creates output files that are not exactly the same length as the input. This is independent of whether the SurCode Encoder for DTS-HD is loaded. When the output file is not the same length, it is generally within +/- 50 audio samples.
- 2) If too many or too few PCM files are loaded for the selected encode, Compressor will apply channel mappings that are beyond the control of the SurCode for DTS-HD plug-in. For example, if 6.1 PCM files are loaded in Compressor, but the "2.0 - L, R" channel layout is selected in the SurCode plug-in, Compressor will downmix the 6.1 to 2.0, and the SurCode plug-in will encode only the 2.0 downmix. Similarly, if only a 1.0 (mono) PCM file is loaded, but the "2.0 - L, R" SurCode channel layout is selected, Compressor will split the 1.0 to 2.0, and SurCode will encode a 2.0 channel layout. Due to this functionality of Compressor, ensure that Compressor input files match the selected SurCode channel layout to avoid potentially undesired channel mapping.
- 3) The SurCode plug-in is unable to read bit-depth or sample rate information from Compressor. So, it is important to always be sure you have set these parameters on the SurCode user interface before encoding.
- 4) Downmix values of "-60" dB are actually "-INF", which is to say, channels set to "-60" make no contribution to the L or R channels.
- 5) "DVD" Target encodings do not support embedded downmix coefficients. When appropriate, these encodings will be downmixed according to consumer hardware defaults.

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