

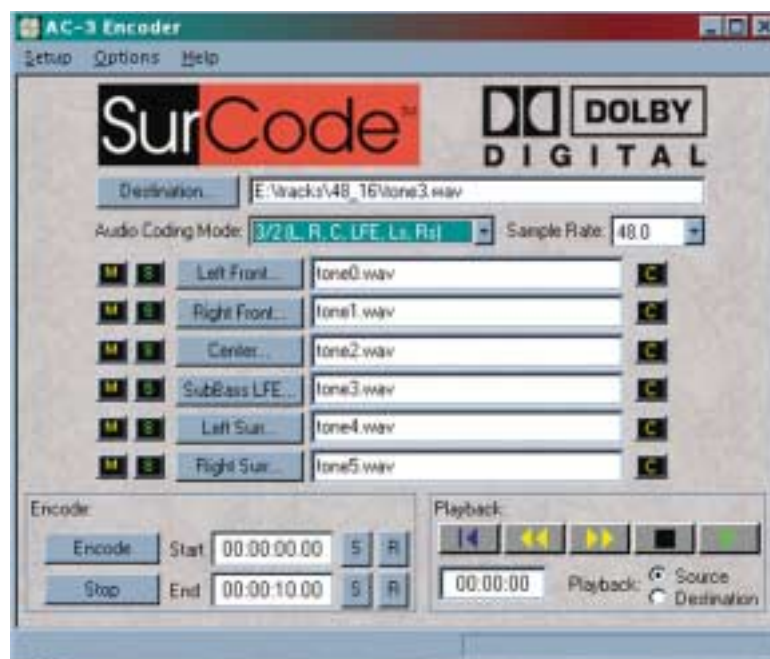
Minnetonka SurCode for Dolby Digital V2 encoder

Taking the bull by the horns and going for software encoding in a variety of flavours, Minnetonka has set out its stall as a developer to watch. **ANDY DAY** plays with its Dolby Digital incarnation.

SOFTWARE DOLBY AC-3 encoders have been around for sometime, starting originally with unlicensed shareware and cracked versions, progressing to licensed products for integration into DAWs, such as Pro Tools, Nuendo and Sonic Foundry. The main problem with software encoders over their hardware equivalent from Dolby (DP569), is that you have to make an AC-3 file first, then play it back through a decoder to hear the effects of the metadata settings. This is not a problem with hardware encoders, as you can hear the effects of changing dialogue normalisation and dynamic range compression parameters 'live'.

However, this does not mean that software encoders have no use for professional AC-3 file creation. Their major strength lies in the ability to batch encode, a great advantage for busy facilities, freeing up valuable studio time and allowing the encoding process to take place off-line. The ideal combination would be to use real-time encoding to set parameters, enter the metadata settings into a software encoder and batch process files overnight, but as usual this is not as simple as it seems. For some strange reason, licensed AC-3 encoders have ignored a vital feature of the AC-3 data stream — timecode embedding.

Minnetonka has several standalone PC-based software encoders for professional applications, including MLP DVD-Audio encoding and authoring solutions. Its latest version of the Dolby AC-3 5.1 encoder, SurCode for Dolby Digital V2, has batch processing and timecode embedding



implemented, could this be what we have been waiting for? I checked out the new software and did some direct comparisons between files created with the Dolby DP569 and SurCode V2.

The user interface is very straight forward and self explanatory, if you're familiar with AC-3 encoding parameters. For those new to encoding, the supplied manual is fairly good, with references to URLs on the Dolby website for more detailed information.

There are some nice additions to the basic encoder, including integrated source file playback with solo/mute functions and a file trim facility for the source files. The trim function allows you to trim the start time of the file, which is handy if you have to adjust the timecode start and end time, to match an MPEG-2 video encode. Unfortunately the trims only work in hours:minutes:seconds:hundredths, and not in timecode frames, which would be more postproduction friendly. When trimming you should also be aware that starting a file on a fast transient without a fade, may cause the audio to click, when playing on a finished DVD. This is particularly important on menu audio as part of a looping menu design. In these situations it's always better to trim in a DAW before encoding. Audio for encoding must be in wave or AIFF format at 48kHz.

The basic channel mode (2.0, 5.1, 5.0, etc.) is visible on the main page, with the other metadata parameters set from the options menu. All the standard parameters are set here, plus some file naming options for the generated AC-3 files. Start

time for the embedded timecode is also set here, with options for 25, 29.97DF and NDF. This is a very welcome feature, and appears to work fine, I was able to encode some particularly tricky timecode dependant sections and import them into Sonic Solutions DVD creator without any problems. I chose Sonic as a test system as it refers to the timecode stamping in the AC-3 file to place the audio on the timeline. The only problem I did find with SurCode's timecode was when using the Dolby recorder application to play back the file. Audio played fine but I got timecode errors, this is something specific to this monitoring configuration and Minnetonka is currently looking at the cause of this. Practically this means that QCing SurCode AC-3 files, using the timecode stamp (to lock a VTR, for picture reference) is not possible. This is a slight setback as SurCode will only playback AC-3 files that are contained as .wav files, via AES or SPDIF — making QC with a reference decoder (DP564) only possible without timecode (and thus picture).

Another interesting feature of this encoder is the advanced page of the metadata settings, which takes you to extended bit stream parameters. This is the only software encoder I am aware of that supports extended bit stream metadata (except for the essential EX flag!). If you don't already know, extended bit stream parameters were added to AC-3 metadata a few years ago, essentially to support 5.1EX in the home. This allowed an extra centre surround channel in the decoder, which is matrix encoded in the Lsurr and Rsurr channels, to be switched on by the EX flag. I suspect that Dolby is not yet licensing extended bit stream software encoders, but Minnetonka already has things in place to upgrade as and when Dolby 5.1EX becomes more popular.

You can monitor your finished file through a digital output on a sound card or through 6 analogue outputs, if you have them. The built-in decoder works fine, but for professional use you really need to use a reference decoder, which allows downmixing and bass redirection. As mentioned above, to monitor in this way you need to create a different file type, not usable by authoring systems.

This is the best software encoder I've seen to date, if the timecode issues are sorted out, then this will effectively be a software version of the DP569, and when both are used together audio and DVD authoring facilities will have the luxury of overnight batch processing without any sacrifices. At only US\$995 it will pay for itself in no time. ■

PROS

Easy to use; timecode embedding; batch processing; good support literature and PDFs; extended bit stream capability possible in future; reasonable pricing.

CONS

Timecode playback in Dolby Recorder application not reliable yet...; can only play .wav AC-3 files through a digital output.

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