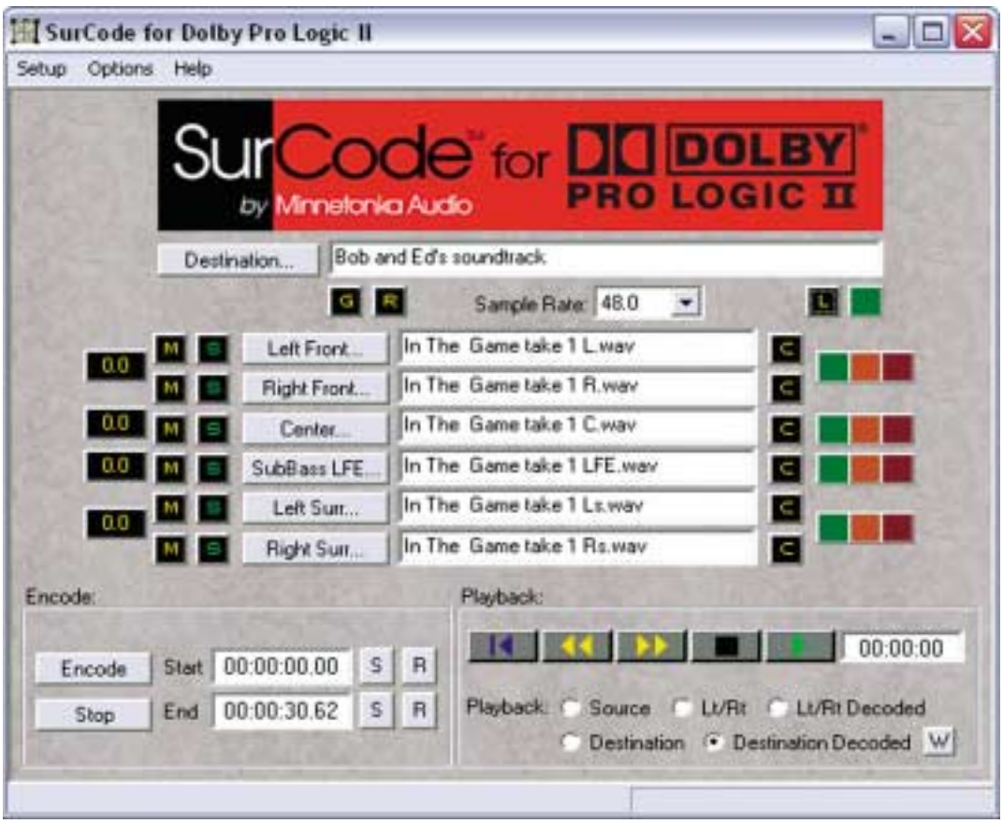
Minnetonka SurCode Dolby ProLogic II software encoder

Having already reviewed the Dolby Digital 5.1 decoder from Minnetonka, it is logical to check out some of the other software encoders it offers. Rather than choosing MLP or DVD-Audio products, ANDY DAY tries the ProLogic II encoder as an excuse to compare 5.1 discreet and PLII encoded 5.1 for himself.



PROLOGIC II HAS BEEN around for a few years, so there are quite a few consumer households equipped with decoders, about 15 million worldwide at the last count. The majority are mid priced home theatre systems or TVs, but some appear in cars, such as the Aston Martin DB9 *(You say that with the authority of one who knows. Ed)*. Originally developed as a decode only process, to generate 5.1 from stereo music material, PLII has found other niche markets in game and in-car audio. For DVD and the few 5.1 digital broadcasters out there, discreet is the way to go, but there is still huge potential for a matrix system that can carry a 5.1 mix over an existing stereo carrier, particularly for TV drama and sports programmes.

We have all experienced the 'side effects' of ProLogic, the band limited surround channel and funky steering across LCR for example. ProLogic II encoding improves this drastically, and much to my surprise, maintains great stereo separation in the surround channels. For the surround channel maniacs, there are even 7.1 versions available to give four separate surround channels, although the Minnetonka encoder is just designed for 5.1.

The user interface is straightforward, in that files are selected for each channel, and popup sliders set the gain trim for each channel. This is an important part of PLII encoding as matrixing together signals into a stereo format can easily cause overloads if not done properly. Another important part of the software is an integrated PLII decoder, which allows you to monitor the encoded signal in real time, through a multichannel sound card. I routed the LtRt to the AES output of my Lynx card and decoded using the Dolby DP564 reference decoder, in order to make it easier to A/B 5.1 discreet against PLII.

Both options are easily selected in the software. Once you have tweaked the gain trims you have the option to gang groups of channels together for an overall trim, to adjust the final LtRt level and prevent overloads (the OL meter also helps here). A nice addition is the limiter function, which acts as a safety net by effectively re-encoding sections that are too high — a kind of file-based peak limiter. Finally, to enable monitoring of individual channels, there are individual solo/mute buttons.

The decoder acts as a fully featured reference decoder, with options for Movie, Music and ProLogic emulation. For those of you unfamiliar with these modes, they are the basic PLII decoding modes available in most consumer decoders. Movie is the standard PLII decoding, which offers LCR decoding for the front channels plus full bandwidth stereo surrounds. There are no user adjustable decoder settings for this mode. Music mode is the interesting one as it has a Dimension setting that sets the balance between front and rear channels, plus a centre width control to pull the centre channel out into left and right. There is also a panorama setting, which is mainly of use in small listening environments, such as cars. This adds a small amount of each channel into the dominant channel, to help reduce proximity effects. Music mode was the original concept of PLII, allowing consumers to play stereo music through the PLII decoder and have control over the spread of the decoded 5.1 audio.

PLII versus 5.1 discreet, then. The first examples I used were some movie clips from a recent full-on 5.1 production, with plenty of stereo surround effects and music, decoded using Movie mode. These worked amazingly well, to the point that I had to check my monitoring set-up a couple of times! Once you set the gain trims for the files — to keep the overloads under control — the results can be very good. The separation is effective in the stereo surrounds and best of all the image stability across the front channels is much better than the original ProLogic system.

I also tried some dialogue heavy scenes (with low level stereo music cues), which again worked very well. Of course, if you solo individual channels, there is crosstalk between channels, but considering what you're actually doing — taking 5 channels of audio and squashing them into 2, it works amazingly well. 5.1 music mixes also sounded very good, but there may be a tendency for consumers to adjust the dimension and centre width parameters on their decoders. For producers who want to nail down their 5.1 mixes, this is a disadvantage, but quite good fun for consumers.

As a PLII encoder the Minnetonka ticks all the boxes, you have some useful trim tools, a limiter and a PLII decoder thrown in. Setting up can be done in real time, with the correct soundcard, and encoding is faster than real time, making it ideal for generating a quick PLII version from a 5.1 master (MRSP US$495 standalone and VST).

As with normal ProLogic, the process of creating an LtRt, should ideally be done as a separate mix pass, pushing and pulling the centre channel as necessary. But in these days of cost/time cutting, this file based approach, although creatively not the best option, can be more productive. As for PLII as a process, for once the sequel is actually better than the original. ■

PROS Useful trim tools; built-in limiter; faster than real-time encoding; built-in PLII decoder.

CONS No way to vary channel levels progressively through the mix.

Contact

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