



# Technical Note #96

## *Using AES-EBU and SPDIF on the DSP4000 at 32kHz*

In general AES-EBU is used at a sample rate of 48kHz, and occasionally (more often with SPDIF) at 44.1kHz to communicate with CD and DAT players. It is very rare for either to be used at 32kHz sample rate.

It has come to our notice that the DSP4000 (and variants) will not transmit AES or SPDIF reliably at 32kHz, although it should receive satisfactorily. This is due to the hardware design, and cannot be easily changed. A note to this effect will be placed in the next version of the 4000 series User Manual.

For those few users who require this facility, a workaround exists. The DSP4000 allows a user supplied Crystal Oscillator to be installed in socket Y4 on the motherboard (near the other metal-can oscillators to the left of the CPU). If a suitable 8.192MHz oscillator is installed here, and the sample rate (on SETUP/AUDIO screen - see User Manual) is set to "crystal", 32kHz AES and SDIF generation will be possible, although it has not currently been extensively tested. To receive at 32k, set the input to "AES/EBU" or "S/P DIF" as appropriate on the same menu.

A suitable crystal is the FOX 1100E 8.192MHZ, available through distributors or from Eventide as part 420022.

See Technote 85 for more information on the use of User-Supplied Oscillators.