

Question/Issue:

I connected the TDIF-8 AMBus card to a TDIF device (sound card, format converter or any non-MDM TDIF device). I believe that everything is synched properly but the AD-8000 displays the ERROR LED and will not pass audio. Is there a sync problem here?

Answer:

There are two clock sources used when dealing with TDIF-format devices: external **WORD CLOCK** and **LRCK CLOCK** (carried in the TDIF cable). When synching the AD-8000 as master to a DA-88/98/38, for example, a word clock cable is connected from the word clock output of the AD-8000 to the word clock input of the DA-88/98/38. The AD-8000 is set to CRYSTAL and the DA-88/98/38 is set to WC. The DA-88 sends LRCK clock back to the AD-8000 via the TDIF cable. In normal operation (i.e., TDIF8 card DIP SW #4 is set to OFF), the AD-8000 must see this LRCK returning from the TDIF device. If the AD-8000 does not see LRCK, it will turn on the ERROR light and nothing else will happen.

A problem presents itself when using a TDIF device that either does not have an external word clock input; or does not send LRCK clock back through the TDIF connector.

In this case, set DIP SW #4 on the TDIF8 card to the ON (down) position. This will allow the AD-8000 to send LRCK clock via the TDIF connection. The AD-8000 will not need to see an LRCK input to the TDIF-8 card.

If you cannot get your TDIF based setup working correctly using word clock, try switching DIP SW #4 to the ON position.

Just a quick note on LRCK vs. word clock sync (in extremely unlikely cases)...

When synchronizing the AD-8000 to LRCK clock (i.e. SYNC SOURCE set to AMBus A, B, C, or D, where the TDIF-8 card is located), do not also attempt to use the external word clock of the TDIF device to feed other digital devices. LRCK clock and word clock from that device may be 90 degrees out of phase with each other. So for example, in the unlikely case that stereo pairs are split across two machines synchronized this way, there can be stereo imaging problems. Keep in mind that this phase shift (90 degrees at 44.1/48k) is small in the audible range (20Hz to 20kHz) but it's still worth mentioning.