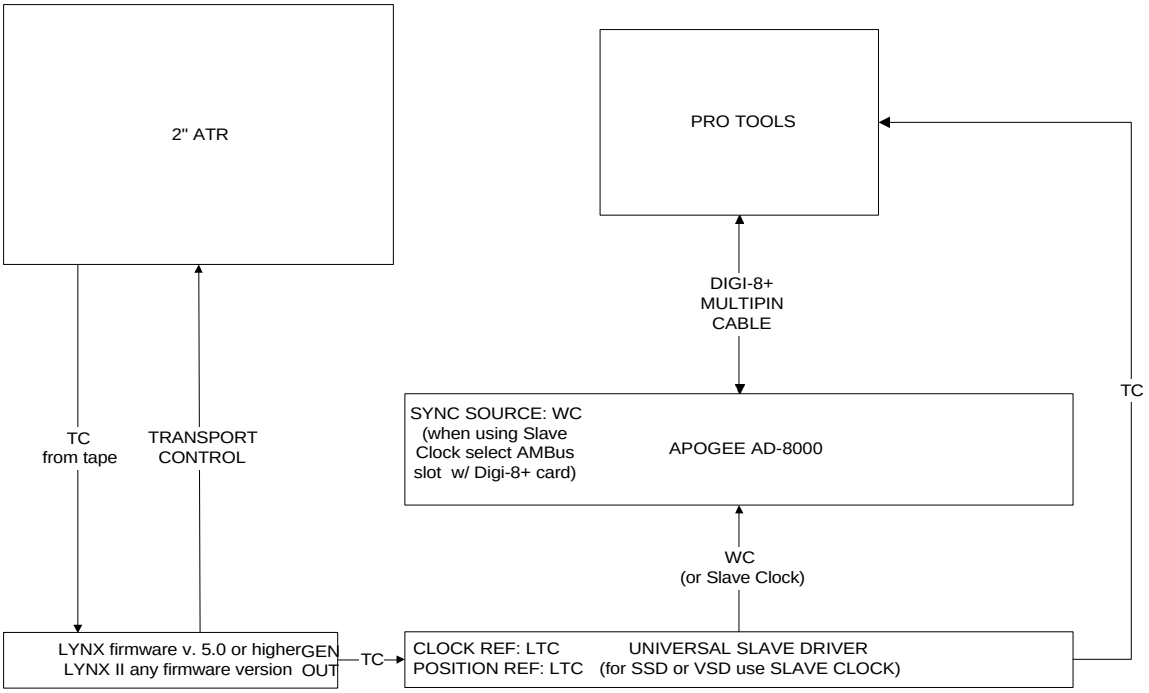
Application Notes

Product: AD-8000
Topic: Analog Tape Recorder/Time Line Synchronizers/PT
Document #: 14

The best way to synchronize your 2” machine to an AD-8000 is to use a synchronizer to act as master over the 2” transport. In this application note we will discuss the most popular synchronizers, the Timeline Lynx systems (Lynx I, Lynx II, and Micro Lynx).

Lynx and Lynx II



The idea is to have the Lynx control the 2” transport. The time code from tape is fed into the Lynx. The TC is then regenerated (referenced to the Lynx’s internal crystal) and output to the USD. The USD is consequently always receiving fresh TC referenced to a stable crystal source (the same source that is controlling the ATR transport). Your digital audio won’t suffer from the inconsistency in speed (wow and flutter) of a “wild” analog tape recorder.

Lynx Setup (the Lynx must have firmware version 5.0 or higher)

DSPL SEL	GEN
CODE TYPE	for 29.97 non-drop (which is what you should be using) choose NTSC
REF SRC	INT XTL (or VIDEO if using Black Burst as master sync)
GEN MODE	TACH>TC
GEN ON	switch to ON

DSPL SEL READER

TRAN MODE ONLINE
MASTER switch to ON
REF SRC INT XTAL (or VIDEO if using Black Burst as master sync)

Lynx II Setup (any Lynx II software)
DSPL SEL GEN
GEN CODE select which type (29.97)
GEN REF INT
*Press and hold SHIFT and press GEN ON to select TACH > TC
GEN ON switch to ON
DSPL SEL RDR
TRAN MODE ONLINE
MSTR ON
Make sure that the master reference is RDR and *not* VSO.

The most-recently developed synchronizer from Time Line, the Micro Lynx (with the addition of the ACG card), can provide a Word Clock output to the AD-8000 and an MTC output directly to the Pro Tools software via a serial cable to the Mac, effectively acting as the only necessary synchronizer. The WC output and the regenerated TC output are synchronous providing the best possible lock to the ATR. While a detailed description of the Micro Lynx setup is beyond the scope of this note, the Micro Lynx manual has very good application notes describing its use as an interface to a DAW. Setting up a Micro Lynx without the ACG card is similar to the setups above with the following notes:
Make sure that the transport setup is *not* in VSO mode (should be in INT or VIDEO)
Generator output is connected to the USD as above, the analog transport (A, B, C, or D) should be master.
The time code generator should be slave.

The Micro Lynx *with* the ACG card can be setup up as follows (sans the USD):