

# Using Lockstep with S6L



Lockstep is a free software utility for macOS that lets you route LTC (Linear Time Code) from an S6L analog input channel to a Pro Tools AVB system without the need for a hardware synchronization peripheral such as Avid Sync X or Sync HD.

Lockstep also lets you record the incoming LTC to a Pro Tools audio track (also known as “striping”) so it can be available as a time code source later during post-production.

## Required Items

- Lockstep for macOS (download and installation instructions provided later in this document)
- A Pro Tools system qualified and configured for VENUE S6L AVB recording, playback, and Virtual Soundcheck.
  - For compatibility information, see [What are the system requirements for Pro Tools with S6L?](#)
  - For Pro Tools AVB configuration instructions, see the *VENUE S6L Live Recording Guide*, available for download along with all other S6L documentation from the [S6L Documentation](#) article on our Knowledge Base.
- One XLR cable to connect the LTC source device to an available S6L analog input channel

## Important!

Make sure you know the frame rate of the LTC source so that you can configure both Lockstep and Pro Tools to the same rate.

Do not confuse time code synchronization with clock synchronization. If you need to *resolve* Pro Tools to both external clock and incoming time code, you must use an Avid Sync X or Sync HD peripheral.

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## Download and Install Lockstep on the Pro Tools Computer

### To install Lockstep:

1. Make sure Pro Tools is not running.
2. Visit <https://figure53.github.io/studio/> and download Lockstep.  
*Tip: If you are unable to download Lockstep, try a different browser such as Safari.*
3. After downloading is complete, double-click the installer then follow the on-screen instructions to install Lockstep.



### Hardware Connections

Connect an XLR cable from your LTC source device to an available S6L analog input:

- Use a Stage I/O analog input if available as Stage inputs have a default channel pickoff to Pro Tools.

*Or*

- To use a local analog input (Console, or Local 16, if present), go to the Patchbay and soft-patch the local analog input to an available Input Channel, enable that channel's direct out, and patch the direct out to a Pro Tools assignable output in Patchbay > Directs > Pro Tools. Adjust the Direct Out level so that Lockstep receives an adequate signal.

*(Do not use the **LTC In** connector on the back panel of the S6L control surface, you must use an available analog input.)*

# Using Lockstep with S6L



## Configure Audio MIDI Setup

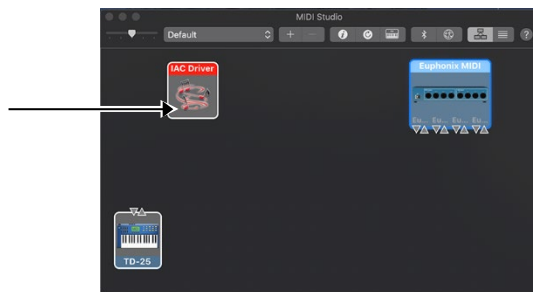
Lockstep uses the IAC Bus available in Audio MIDI Setup (AMS) to receive and route time code.

### To configure AMS for Lockstep:

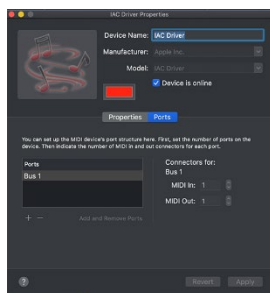
1. Make sure Pro Tools is not running.
2. On the macOS computer go to Applications > Utilities and launch Audio MIDI Setup.



3. In AMS, choose Window > Show MIDI Studio (or press Command+2)
4. Double-click on the IAC Driver.



5. In the IAC Driver Properties dialog, click to select “Device is online”
6. Make sure at least one bus is listed in the Ports section. If no bus is shown, use the “+” button to create one.



7. Click Apply, then close the IAC Driver dialog. You can leave AMS open and running.

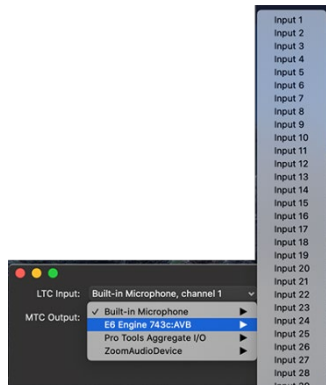
# Using Lockstep with S6L



## Configure Lockstep

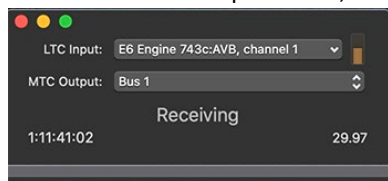
### To configure Lockstep:

1. Launch Lockstep.
2. From the LTC Input selector, choose the E6L audio input option appropriate for where you connected the LTC source.



3. From the MTC Output selector, choose the bus you created in AMS earlier such as "IAC Bus 1."
4. Start playback from the LTC source device.

You should see level on the LTC Input meter, and the Lockstep window should display "Receiving."



If there is no metering activity and/or the window does not say Receiving, check and correct all of the following:

- Did you select the correct E6L option from the Lockstep LTC Input selector?
- Is the time code source running and generating LTC?
- Is the device connected to an S6L analog input? If using a local input, have you configured that input's Direct Out?

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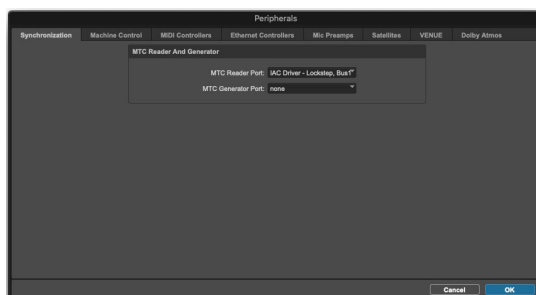


## Configure Pro Tools

After configuring Lockstep, do the following to configure Pro Tools Session Setup and Peripherals settings.

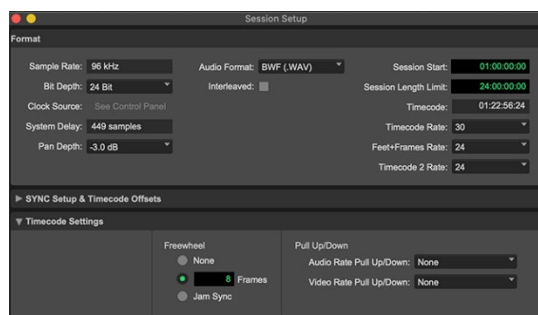
### To configure Pro Tools:

1. Launch Pro Tools.
2. Go to Setup > Peripherals, and click to show the Synchronization tab.
3. Set the MTC Reader Port to Lockstep's IAC bus.



*Pro Tools Setup > Peripherals, Synchronization tab*

4. Click OK to close the Peripherals dialog.
5. Open or create a session for Pro Tools AVB recording (for step-by-step instructions, see the *VENUE S6L Live Recording Guide*).
6. Go to Setup > Session
7. Make sure the Session Start time is 01:00:00:00.
8. Verify the Timecode Rate matches that of the production/source (whether 30fps for audio only, 29.97 for NTSC video, and similar.)



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## Recording

After configuring Lockstep and Pro Tools you are ready to put the Pro Tools Transport “Online”, start playback of the source LTC device, then begin Pro Tools recording. Pro Tools will locate to (chase) the incoming LTC.

In addition, LTC will be recorded onto its corresponding Pro Tools audio track (the track corresponding to the S6L Stage input or Direct Out used for LTC).

To record:

1. Optional: Set the Pro Tools Main Counter to Timecode.



2. Select Options > Transport Online, or click the blue Online button in the Transport window.
3. Record enable all tracks on which you want to record (to record enable all audio tracks, hold Option while record enabling any single track). If you used a Direct Out for LTC be sure to assign this track's Output to a valid output path.
4. Enable the Transport Record button and press play to begin recording.