Lynx Aurora 8 and 16 LT-TB Setup in Windows

Always use the approved driver from the SoundCheck DVD or from our website:
https://support.listeninc.com/hc/en-us/sections/200370694-Drivers

Driver signing error in Windows 10

Starting with Build 23f (LT-TB) and the February 20, 2018 release (USB), Lynx drivers are both signed by Lynx (with a SHA2 certificate) and counter-signed by Microsoft (for Windows 10 installation). This should allow easy installation on any version of Windows operating system from Windows Vista through Windows 10. On some installations of Windows 10, Secure Boot must be disabled to allow third-party drivers to be installed. This is done in the UEFI BIOS on your computer.

- To disable Secure Boot: From within Windows 10, hold the Shift key while selecting Restart. Go to Troubleshoot > Advanced Options: UEFI Firmware Settings.
- Find the Secure Boot setting, and if possible, set it to Disabled. This option is usually in either the Security tab, the Boot tab, or the Authentication tab.
- Save changes and exit.
- When the computer restarts you should be able to install the driver.

Windows 7

Early versions of Windows 7 do not support SHA-2 digital certificates, so Windows 7 requires a specific patch to support SHA-2 digital certificates. Please see ***Microsoft Security Advisory 3033929*** for more information. https://technet.microsoft.com/en-us/library/security/3033929

Lynx Mixer

The mixer application for the Lynx **Aurora** should be configured as shown ***Figure 1-1***.
Click '**Mixer**' then click '**Restore Defaults**' to reload the mixer settings for SoundCheck.
You will then need to change the Buffer as show in ***Figure 1-2***.

The mixer is set to:

- Hardware Outputs: All channels used in SoundCheck set to 0 dB – Unity Gain
- Analog Trim should be set to "+4 dBu FS"
- The **Aurora** mixer is the same with only 8 channels

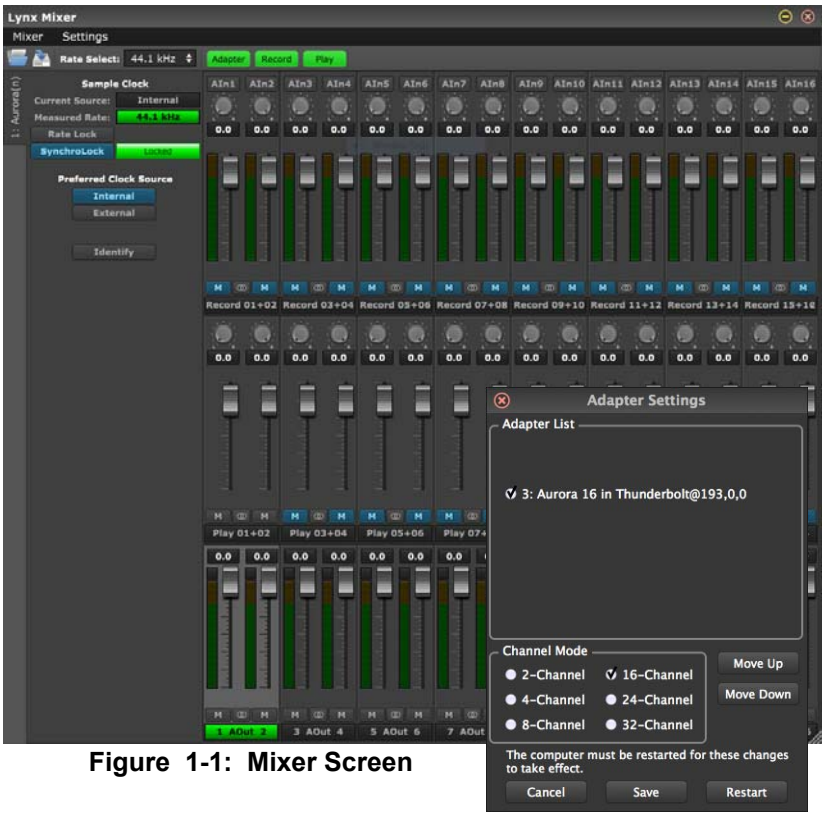

Figure 1-1: Mixer Screen

Multiple Devices

Important! ***When using multiple* Aurora *interfaces, the first unit in the chain will show up as, Analog channels 1-x, in the SoundCheck Hardware Editor - "Select Channel Field". The second unit will show up as, Analog channels 2-x. You will need to associate the appropriate channels in the "Select Channel Field" with the "Channel Names". See Figure 1-3.***

ASIO Buffer

The ASIO buffer is set in the ASIO Control Panel which is launched separately from the Mixer Utility.
The ASIO control panel can be opened by right clicking on an **Aurora** Channel Name in the SoundCheck Hardware Editor - Audio Tab.

The **default Buffer** is set to 256 samples.
More channels of measurement may require a larger buffer.
See ***Figure 1-4***.

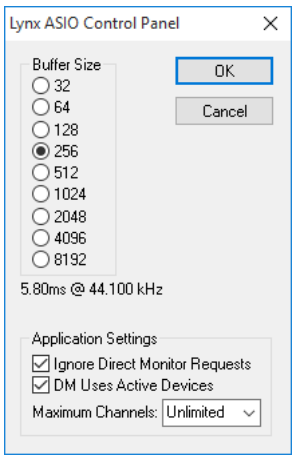

Figure 1-2: ASIO Control Panel

The sample rate of the **Aurora** will automatically update to the rate set in the SoundCheck Hardware Editor (see ***Figure 1-3***). The sample rate set the in the SoundCheck Hardware Editor will update in the Lynx mixer when the sequence runs.

SoundCheck Hardware Editor

The Hardware Editor in ***Figure 1-3*** shows the general settings for the Input and Output Vp values as well as the Latency. Interfaces sold by Listen include a data sheet with more precise Vp values that you can enter in the Hardware Editor.

- Note that the default Calibration Configuration (.CAL) file in SoundCheck has only 2 signal paths of direct input and output. New signal paths will need to be created in Calibration if you plan to use the additional hardware channels.

The **Aurora** will be the same but only 8 channels.

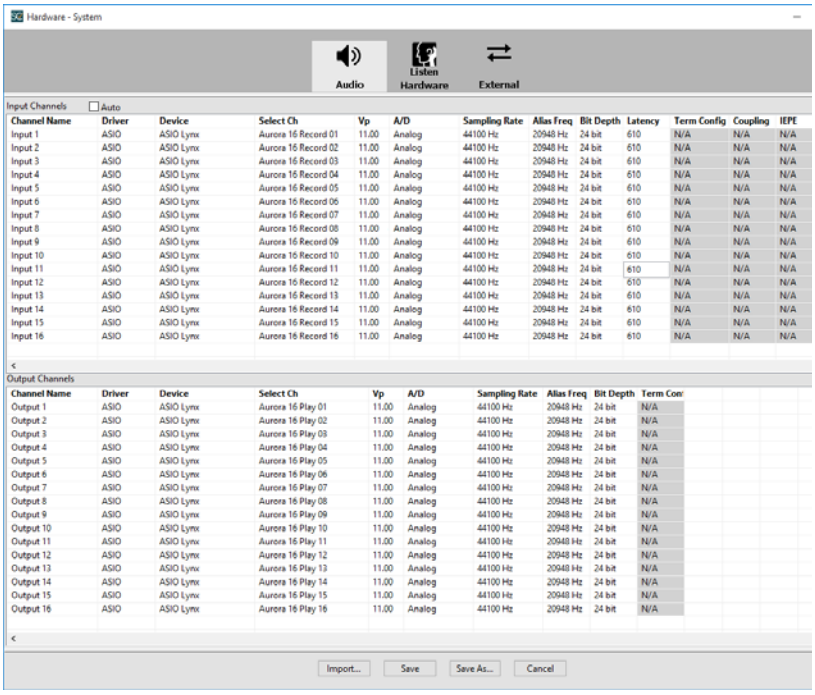

Figure 1-3: Hardware Editor

- **Sampling Rate:** Only one rate can be selected for all Input and Output channels of an interface

Important! ***Do not use different input and output driver types for an audio interface, e.g.: ASIO for Inputs and WASAPI for outputs. Doing so will result in an Acquisition Step error.***

Latency Table

Latency in Samples for Typical Sample Rate and Buffer Values				
LT-TB Connection	**44.1 kHz**	**48 kHz**	**96 kHz**	**192 kHz**
ASIO	256	256	256	256
Samples	610	610	603	601
Enter the **Samples** value in the Hardware Editor Latency field for the selected Sample Rate.				

Figure 1-4: Latency in Samples

Latency Changes

1. Open the Hardware Editor. Change the Sample Rate to the value you need to measure Latency for. Click on the drop down arrow next to the value in the **Latency** field of the Hardware Editor. Select **Edit** and the Latency Table will open.
2. Set the **Latency** for the desired sample rate to 0 (zero) and click OK
3. Make sure the sample rate of the audio interface has updated. Change the ASIO Buffer/USB Streaming mode for the audio interface in the **ASIO Control Panel** (if applicable). Typically there is no buffer control for WDM / WASAPI.
4. Run the **Self Test** sequence from the Calibration folder in SoundCheck. The Result window shows the **Audio Interface Latency** for the new Buffer size or Sample Rate.
5. Enter this value in the Latency field of the Hardware Editor Sample Rate/ Latency Table. Repeat this for other required Sample Rates.

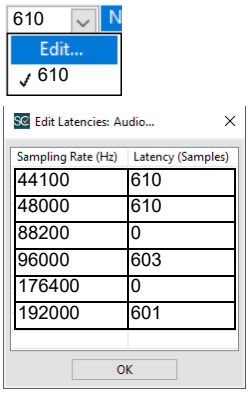

Figure 1-5: Edit Latency Table

6. All channels, analog or digital, must have the same latency value per sample rate for that audio interface. This insures the system will work correctly if they are used simultaneously in a sequence.
7. Run the Self Test sequence again to verify that the Audio Interface Latency is 0 (zero)