

Lynx E22 & E44 Setup for Windows

Always use the approved driver from the SoundCheck DVD or from our website:

<https://support.listeninc.com/hc/en-us/sections/200370694-Drivers>

The current driver is signed with a SHA-2 digital certificate. 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>

Firmware is included with the approved driver package. The new firmware is required when upgrading the driver to the latest version. After installing the driver and **Lynx E44/E22**, run the firmware update: **FWUpdate.Win.#####.exe**.

Mixer

The mixer application for the **Lynx E44/E22** 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 2.

The mixer is set to:

- Hardware Outputs: All channels used in SoundCheck set to 0 dB (Unity Gain)
- The E44 is a 4 In – 4 Out interface
- The E22 is a 2 In – 2 Out interface
- Analog Trim should be set to “+20 dBu FS” (same as Lynx Model A +4 dBu). “Variable” is the same as Lynx Model A -10 dBv

By default, the E44 is set to 8 Channel Mode; 4 Analog and 4 Digital. Click **'Settings'** then click **'Adapter Settings'** to view the panel. We recommend that you use the default setting of 8 channels.

The E22 default is 4 channels; 2 Analog and 2 Digital. Again, the default setting is recommended.



Figure 1-1: Mixer Screen

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 a **Lynx** Channel Name in the SoundCheck Hardware Editor - Audio Tab.

- More channels of measurement may require a buffer value change
- The sample rate of the **Lynx E44/E22** automatically updates to the rate set in the SoundCheck Hardware Editor ([Figure 1-3](#)) and the **Lynx E44/E22** mixer updates when the sequence runs

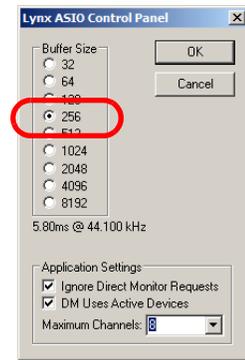


Figure 1-2: ASIO Buffer

The default buffer size of the **Lynx E22 & E44** driver at 44.1 kHz and corresponding Hardware Editor Latency is shown in [Figure 1-4](#). Use this chart as a guide when changing to other sample rates. You can verify that the latency is correct by following the steps in [Latency Changes on page 3](#).

- 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 Hardware Editor in [Figure 1-3](#) shows the general settings for the Input and Output Vp values. The E22 will be the same but only 2 channels.

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

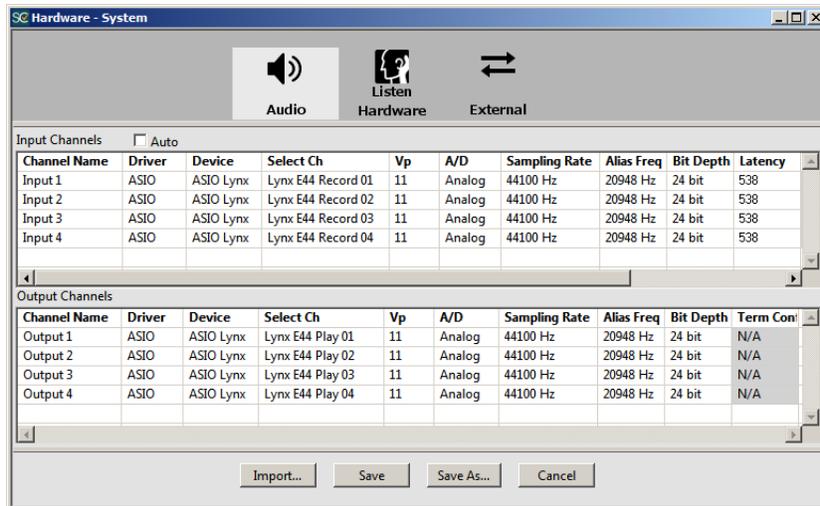


Figure 1-3: Hardware Editor

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 | | | | |
|--|----------|--------|--------|---------|
| USB Connection | 44.1 kHz | 48 kHz | 96 kHz | 192 kHz |
| ASIO | 256 | 256 | 256 | 256 |
| Samples | 538 | 538 | 531 | 529 |

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.
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)

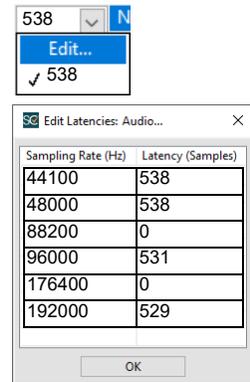


Figure 1-5: Edit Latency Table