Listen Hardware Compatibility List

The devices in the following list are approved for use with SoundCheck. Other devices may be compatible but have not been verified for use with SoundCheck and are not supported.

SoundCheck is validated using Windows® 10 - 64-bit. No other versions of Windows are supported.

These audio interfaces allow for repeatable delay, therefore they can be used for measurement of absolute phase.

Audio Interface Current	Windows 10-64 Driver Type	Audio Interface Discontinued	Windows 10-64 Driver Type
AmpConnect 621	ASIO / WASAPI	Fireface 800	ASIO
AudioConnect 2	ASIO / WASAPI	Multiface II	ASIO
Lynx E44/E22	ASIO / WASAPI	Lynx Aurora 8/16 LT-USB & LT-TB	ASIO / WASAPI
Lynx Aurora (n) 8/32 LT-USB & LT-TB	ASIO / WASAPI	Fireface UCX USB & FW	ASIO / WASAPI
Fireface UCX II USB	ASIO / WASAPI	Fireface UC	ASIO / WASAPI
Fireface 802 USB & Firewire	ASIO / WASAPI		
NI 4461 PCI & PXI	DAQmx		

The following audio interfaces require the use of *Auto Delay* in SoundCheck Analysis Steps to compensate for large and changing latencies. This is normal when using devices with WDM and in some cases WASAPI drivers. These devices should not be used when measuring absolute phase.

Audio Interface Current	Windows 10-64 Driver Type	Audio Interface Discontinued	Windows 10-64 Driver Type
AudioConnect 4x4	ASIO / WASAPI	LynxTwo	WDM [3,4]
AudioConnect & AmpConnect ISC	WDM [1,6]	MultiFace II	WDM [3]
DCC-1448	WDM [2]	CardDeluxe	ASIO Win 10 [3]
PQC-3048	WDM [2]		
PIO-9216	WDM [2]		
BTC-4148/4149 + BQC-4148/4149	WDM[5]		
Lynx E44/E22 & Aurora series	WDM [3,4]		
Fireface 802 USB	WDM		
NI cDAQ, NI 9260 & NI 9234 modules	DAQmx		

1. Can only be used at 44.1 kHz sampling rate for all operating systems.
2. Can only be used at 48 kHz sampling rate for all operating systems.
3. Sampling rate must be changed in the audio interface mixer/control panel program AND in the SoundCheck Hardware configuration.
4. MME drivers are not supported.
5. Can only be used at 44.1 kHz and 48 kHz sampling rates for all operating systems.
6. Not compatible with the WASAPI driver.

For additional information on drivers see *Approved Drivers - Windows on page 3*.

A1.1 macOS®

These audio interfaces allow for repeatable delay which can be used for measurement of absolute phase.

Audio Interface	macOS - High Sierra 10.13.6 thru Catalina 10.15
AmpConnect 621	Core Audio
AudioConnect 2	Core Audio
Lynx Aurora (n) 8-16 LT-USB	Core Audio
Lynx Aurora (n) 8-32 LT-TB	Lynx Core Audio Thunderbolt
Fireface UCX II	RME Intel Driver
Fireface UCX and UC (discontinued)	RME Intel Driver
Fireface 802 USB	RME Intel Driver
Lynx Aurora 8-16 LT-USB (discontinued)	Core Audio
Lynx Aurora 8-16 LT-TB (discontinued)	Lynx Core Audio Thunderbolt
Fireface 800 (discontinued)	RME Intel Driver

The following audio interfaces require the use of Auto Delay in SoundCheck Analysis Steps to compensate for large and changing latencies. These devices should not be used when measuring absolute phase.

Audio Interface	macOS - High Sierra 10.13.6 thru Catalina 10.15
AudioConnect 4x4	Core Audio
AudioConnect	Core Audio [1]
AmpConnect ISC	Core Audio [1]
DCC-1448	Core Audio [2]
PQC-3048	Core Audio [2]
PIO-9216	Core Audio [2]
BTC-4148/4149 + BQC-4148/4149	Core Audio [3]

1. Can only be used at 44.1 kHz sampling rate for all operating systems.

2. Can only be used at 48 kHz sampling rate for all operating systems.

3. Can only be used at 44.1 kHz and 48 kHz sampling rates for all operating systems.

For additional information on drivers see *Approved Drivers - Mac on page 4*.

A1.2 Approved Drivers - Windows

MFG	Device	Connection	Driver Type	Driver Ver	Firmware	Default ASIO / USB Buffers	44.1 kHz Default Latency	Default Chan Trim – In/Out	Sample Rate Auto Update
Listen	AmpConnect 621	USB	ASIO (6)	SC21 Installed	0.68	Automatic per sample rate	1364	NA	Yes
Listen	AmpConnect ISC (3)	USB	WDM Only	Native Win	3.3.0.1 (3) AUAB: 1.17	NA	250	NA	44.1 kHz only
Listen	AudioConnect 2	USB	ADIO/ WASAPI	SC21 Installed	0.57	Automatic per sample rate	1325	NA	Yes
Listen	AudioConnect	USB	WDM Only	Native Win	1.61	NA	250	NA	44.1 kHz only
Listen	AudioConnect 4x4	USB	ASIO (6)	3.34	28, LTusb 10	2048 / Safe Set In ASIO (1)	5142	NA	Yes
Lynx Studio	Aurora (n) 8-32 LT-TB	Thunderbolt	ASIO (6)	2.24E	1.7, 5.5	256	547	+4 dBu/+4 dBu	Yes
Lynx Studio	Aurora (n) 8-16 LT-USB	USB	ASIO (6)	3.34	28, LTusb 10	1024 / Standard Set In ASIO (1)	2565	+4 dBu/+4 dBu	Yes
Lynx Studio	E44, E22	PCI	ASIO (6)	2.24E	2.6	256	538	+4 dBu/+4 dBu	Yes
NI	NI 4461	PCI/PXI	DAQmx	DAQmx 20.1	NA	NA	108	NA	Yes
NI	cDAQ 9260 & 9234 modules	USB	DAQmx	DAQmx 20.1	NA	NA	71	NA	Yes
Portland Tool & Die (PTD)	DCC 1448	USB	WDM	Native Win	1.28	NA	250	NA	48 kHz only
PTD	PIO-9216	USB	WDM	Native Win	1.07	NA	NA	NA	48 kHz only
PTD	PQC-3048	USB	WDM	Native Win	1.27	NA	NA	NA	48 kHz only
PTD	BTC-4148/49, BQC-4148	USB	WDM	Native Win	1.32 1.8	NA	NA	NA	44.1 kHz & 48 kHz
RME Audio	Fireface 802	Firewire	ASIO (6)	3.125	15/9/7/8	256	610	+4 dBu/+4 dBu	Yes
RME Audio	Fireface 802	USB	ASIO (6)	1.212	15/9/7/10	1024	2116	+4 dBu/+4 dBu	Yes
RME Audio	Fireface UCX II	USB	ASIO (6)	1.212	39/24/19	1024	2107	+4 dBu/+4 dBu	Yes

See *Footnotes on page 4*.

A1.3 Approved Drivers - Mac

MFG	Device	Connection	Driver Type	Driver	Firmware	44.1 kHz Default Latency	Default Chan Trim – In/Out	Sample Rate Auto Update
Listen	AmpConnect 621	USB	Core Audio	Native Mac	0.68	Automatic - 1202	NA	Yes
Listen	AudioConnect 2	USB	Core Audio	Native Mac	0.41	Automatic - 1163	NA	Yes
Listen	AudioConnect (4)	USB	Core Audio	Native Mac	1.61	0	NA	44.1 kHz only
Listen	AudioConnect 4x4 (4)	USB	Core Audio	Native Mac	28, LTusb 10	1230	+4 dBu/+4 dBu	No
Listen	AmpConnect ISC (3, 4)	USB	Core Audio	Native Mac	3.3.0.1 (3) AUAB: 1.17	0	NA	44.1 kHz only
Portland Tool & Die (PTD)	DCC 1448 (4)	USB	Core Audio	Native Mac	1.28	0	NA	48 kHz only
PTD	PIO-9216 (4)	USB	Core Audio	Native Mac	1.07	0	NA	48 kHz only
PTD	PQC-3048 (4)	USB	Core Audio	Native Mac	1.27	0	NA	48 kHz only
PTD	BTC-4148/49, BQC-4148 (4)	USB	Core Audio	Native Mac	1.32, 1.8	0	NA	44.1 kHz & 48 kHz
RME Audio	Fireface 802 (5) (7)	USB	RME USB	3.27	15/9/7/10	1273	+4 dBu/+4 dBu	No
RME Audio	Fireface UCX II (7)	USB	RME USB	3.27	39/24/19	1291	+4 dBu/+4 dBu	No
Lynx Studio	Aurora (n) 8-32 LT-TB	Thunderbolt	Lynx TB	58k	1.7, 5.5	1301	+4 dBu/+4 dBu	No
Lynx Studio	Aurora (n) 8-16 LT-USB	USB	Core Audio	Native Mac	10	1231	+4 dBu/+4 dBu	No

Footnotes

See *Hardware Configurations on page 8* for individual audio interface settings.

[1] Requires change to audio interface defaults for proper operation. Follow setup guide provided with approved driver from www.listeninc.com.

[3] For SoundCheck 10.11 and above, AmpConnect ISC requires firmware version 3.2.4.6 or later. See *AmpConnect ISC PN: 4042 on page 8*.

[4] Auto Delay **MUST** be used in SoundCheck Analysis Steps.

[5] Requires changes to default mixer settings.

[6] Also compatible with WASAPI.

[7] Compatible with macOS 10.12 to 10.15. M1 user please download macOS 11 and up USB Series Driver. USB 2/3 driver for macOS 11 and up. Driver version 3.27 and later supports Intel and M1.USB 2/3 driver for macOS 11 and up. Version 3.27 and later supports Intel and M1.

A1.4 Discontinued Hardware

The following hardware has been discontinued by the manufacturer.

Approved Drivers - Windows

MFG	Device	Connection	Driver Type	Driver Ver	Firmware	Default ASIO / USB Buffers	Default Latency	Default Chan Trim – In/Out	Sample Rate Auto Update
DAL	CardDeluxe W10/64	PCI	ASIO	5.10.3523	NA	30mSec	2697	Set Jumpers: +4dBu In /-10dBV Out	No
DAL	CardDeluxe W7/64	PCI	WDM	5.10.3523	NA	NA	250		No
Lynx Studio	Aurora 8-16 LT-USB	USB	ASIO (6)	3.34	28, LTusb 10	1024 / Standard (1)	1232	+4 dBu/+4 dBu	Yes
Lynx Studio	Aurora 8-16 LT-TB	Thunderbolt	ASIO (6)	2.24B	28, 6.2	256	1207	+4 dBu/+4 dBu	Yes
Lynx Studio	LynxTwo, A, C	PCI	ASIO (6)	2.0.23J	Build 24	256 (1)	618	+4 dBu/+4 dBu	Yes
RME Audio	Fireface 800	Firewire	ASIO	3.114	2.77	256	653	(5)	
RME Audio	Multiface	All	ASIO	4.06	55	256	623	Front panel switch	Yes
RME Audio	Fireface UC	USB	ASIO (6)	1.212	126/138	1024	2167	2114	-10/+4 (5)
RME Audio	Fireface UCX	Firewire	ASIO (6)	3.125	48/260/27/12	256	612		+4 dBu/+4 dBu (5)
RME Audio	Fireface UCX	USB	ASIO (6)	1.212	48/260/27/13	1024	2118		+4 dBu/+4 dBu (5)

Approved Drivers - Mac

MFG	Device	Connection	Driver Type	Driver	Firmware	Default Latency	Default Chan Trim – In/Out	Sample Rate Auto Update
RME Audio	Fireface 800	Firewire	RME FW	3.27	33	1265		No
Lynx	Aurora 8-16 LT-TB	Thunderbolt	Lynx TB	Build 58i	2016.05.18	1207	+4 dBu/+4 dBu	No
Lynx	Aurora 8-16 LT-USB	USB	Core Audio	Native Mac	2015.07.23	1232	+4 dBu/+4 dBu	No
RME Audio	Fireface UC USB (5)	USB	RME USB	3.2	136/124	1265	1234	+4 dBu/+4 dBu
RME Audio	Fireface UCX USB	USB	RME USB	3.2	46	1269		+4 dBu/+4 dBu

Footnotes - See *Hardware Configurations on page 8* for individual audio interface settings.

[1] Requires change to ASIO defaults for proper operation. Follow setup guide provided with approved driver from www.listeninc.com.

[3] For SoundCheck 10.11 and above, AmpConnect ISC requires firmware version 3.2.4.6 or later. See *AmpConnect ISC PN: 4042 on page 8*.

[4] Auto Delay **MUST** be used in SoundCheck Analysis Steps.

[5] Requires changes to default mixer settings.

[6] Also compatible with WASAPI.

[7] Fireface UC SN differences. See *RME (Multiface II, Fireface UC/UCX, UCX II, Fireface 800) on page 11*.

A1.5 Minimum Computer Requirements - Windows

Before buying a series of new computers for use with SoundCheck, we recommend that you purchase a single computer so it can be tested with all the related hardware, including the audio interface. Test the audio interface using the SoundCheck Self Test sequence to ensure that it is compatible with the computer. We recommend that you purchase a high quality computer according to the guidelines below.

Note that some computers may not be compatible with all audio interfaces.

- Supported operating systems:

  - Windows® 10 - 64-bit and Windows 11. SoundCheck may work in Windows® 7 - 64-bit but it is no longer validated. No other versions of Windows are supported.

- Celeron processors are not recommended
- To take advantage of using multiple virtual instruments, a multi-threaded processor is recommended, e.g., Intel multicore processor / AMD multicore processor.
- **AMD Processor**: With some newer AMD processors on Windows, the Math Kernel Library (MKL) uses a default setting that is incompatible with LabVIEW runtime. When opening SoundCheck a LabVIEW error will occur as shown to the right.

  This can be fixed in the Windows Control Panel by adding a System Variable.

  - Navigate to Windows Control Panel > System > Advanced System Settings > Environmental Variables.

  - The Variable name MKL_DEBUG_CPU_TYPE must be added with a Variable value of 4.

- 8 GB of RAM minimum (16 GB or more recommended for large WAV files or high resolution measurements below 50 Hz).
- 2 GB of free hard-disk space required for complete software installation
- Listen only supports Thunderbolt audio interfaces on Windows® 10. Windows® 10 has superior support for Thunderbolt devices, hot-plugging is possible and no 3rd party software is required.
- Dante support is only available for Windows® 10
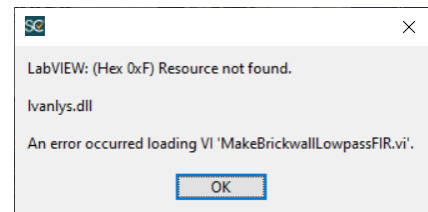
A1.6 macOS

  - macOS®: Versions prior to 10.13.6 are not supported. SoundCheck 21 validated with macOS Monterey 12.x and Ventura 13.x but changes are required. See Readme.txt in the SoundCheck folder for instructions.

  - SoundCheck is not yet compatible with Mx processor equipped Apple Hardware

A1.7 Windows Computer Setup Recommendations

BIOS Settings: Hyper-threading, SpeedStep (Cool n Quiet) and C-States:

Problems may occur with audio and system performance on computers with Intel processors and motherboards using chipsets that employ Hyper-threading, SpeedStep (EIST) and/or C-State functions.

While these functions work to improve power management and energy saving, they can have detrimental effects on the performance of a computer used for SoundCheck.

If your system experiences performance issues, please follow the instructions below.

Speedstep – Allows the system to dynamically increase/decrease its clock speed between its minimum clock and its normal operating frequency, as well as voltage, in order to optimize for power consumption. While this helps save energy, it can unfortunately result in audio dropouts.

C-states – In order to save power, this reduces clock speed by adjusting the multiplier and to some extent, the processor voltage. With multicore processors this can result in a single core partially shutting down to multiple cores completely shutting down. This can cause large jumps in CPU usage as the processor adjusts to these changes while processing audio.

In BIOS, turn off SpeedStep and all C-States (C1E; C3; C6). This may require a BIOS update.

Dell computers do not always allow control of these functions in BIOS. Please contact Dell support for information on disabling Hyper-threading, SpeedStep and C-States.

Hyper-threading – This can cause problems with system performance when SoundCheck is running. It can interfere with real-time audio processes on some motherboards.

If the system is experiencing problems with performance we recommend that you shut off hyper-threading.

AMD Processors - Cool and Quiet is the equivalent to Speed Step and should be shut off along with C1E.

Windows Settings

Set Windows power management scheme to high-performance. When Windows tells the processor to go into low power mode, it can cause glitches in the audio stream. Please refer to: **Installing SoundCheck > Computer Setup**, in the SoundCheck Instruction Manual for more recommendations.

A1.8 Hardware Configurations

Most audio interfaces cannot record and play simultaneously. There is almost always a delay between the two and the delay should not vary from measurement to measurement. The audio interfaces that Listen provides are certified to have high performance in making audio-related measurements. If you are using an audio interface that Listen, Inc has not certified, the measurement performance of SoundCheck may be severely compromised!

Important: **Do not connect audio interfaces through USB hubs. Connect directly to computer USB port.**

Listen Hardware

AmpConnect 621 PN: 4046

● Driver: Included in SoundCheck installer. Firmware: 0.68

AudioConnect 2 PN: 4047

● Driver: ASIO driver installed with SoundCheck 21 and later. Can also use WASAPI. Firmware 0.41

AudioConnect PN: 4050

● Driver: Uses native USB audio driver in Windows. Large and changing latencies are to be expected. You must use Auto Delay in Analysis Steps. Firmware: 1.58 and later required.

● Prior to S/N 40501270108, the headphone output polarity is inverted for both channels. Polarity tests using the headphone out will need to be adjusted accordingly. Updating firmware to 1.61 corrects the polarity to match the audio outputs.

● AudioConnect only uses WDM drivers. It is not compatible with WASAPI.

AmpConnect ISC PN: 4042

1. SoundCheck (or SoundCheck ONE) 10.11 as a minimum is required in order to control AmpConnect ISC™ via USB. AmpConnect ISC requires firmware version 3.2.4.6 or later to work with SoundCheck 10.11 and higher. AmpConnect units with S/N 367 and above have this firmware pre-installed. Units with S/N 366 and prior may require a firmware update. Please contact **support@listeninc.com** for instructions on determining the firmware version.

2. Units with S/N AC432 and after (AUAB audio board firmware: 1.14), operate at 44.1 kHz and 24 bit depth in Windows 7 and above. (Prior to that S/N, 44.1 and 48 kHz are supported) [Windows XP: AmpConnect can only be used at 44.1 kHz sampling rate AND 16-bit]

3. As of SoundCheck 13, a new driver for AmpConnect ISC has been included in the SoundCheck installation process. The new driver will not work in versions prior to SoundCheck 13. To use AmpConnect ISC with SoundCheck 12 (and previously supported versions), you will need to manually rollback the device driver in Windows Device Manager.

4. As of S/N 1536, the "3 dB Down Point" default jumper position is 2 Hz (Jumper removed).

5. As of serial number AC2402, the default jumper position sets the XLR inputs to Single Ended by putting a jumper across pins 2 & 3 of J20 and J28. This also makes the XLR input single ended since the jumper connects pin 3 of the XLR to pin 1 (common).

6. SoundCheck 14 requirements: Default Windows WDM audio driver, minimum of SoundCheck 14 control driver, minimum of firmware 3.2.4.6.

7. After installing SC 14, SC 13 users will not have control over the Headphone Amp. Other controls will work correctly. Additionally, the serial number of the AmpConnect ISC audio interface will not be read properly, which changes the name of the device in the Hardware Editor.

8. Prior to S/N AC4277 (AUAB audio board firmware: 1.17), the headphone output polarity is inverted for both channels. Polarity tests using the headphone out will need to be adjusted accordingly.

9. AmpConnect ISC only uses WDM drivers. It is not compatible with WASAPI.

AudioConnect 4 x 4 PN: 4051

- Driver: See *Approved Drivers - Windows on page 3 and Approved Drivers - Mac on page 4*
- Firmware: Board 29, LT-USB 11
- Default ASIO buffer is 2048 & USB Streaming Mode is Safe (Hardware Step > ASIO control panel)
- Prior to SoundCheck 14, large and changing latencies are to be expected. You must use Auto Delay in Analysis Steps.

Portland Tool and Die

DCC-1448 PN: 5810 - MEMS Digital Microphone Measurement Interface Configuration

PQC-3048 PN: 5811 - Production Line MEMS Digital Microphone Measurement Interface

PIO-9216 PN: 5813 - Programmable Digital Serial Audio Data Interface

- Driver: Uses native USB audio driver in Windows and Core Audio in macOS
- Operates at 48 kHz and 24 bit depth (Select 16 bit depth if using Windows XP)

BTC-4148 PN: 5814 - Bluetooth Audio Measurement Interface

BTC-4149 PN: 5816 - Bluetooth Audio Measurement Interface

BQC-4148 PN: 5815 - Bluetooth Audio QC Interface

BQC-4149 PN: 5817 - Bluetooth Audio QC Interface

- Driver: Uses native USB audio driver in Windows and Core Audio in macOS
- Operates at 44.1 kHz & 48 kHz, and 24 bit depth (Select 16 bit depth if using Windows XP)

SoundCheck requires that input and output sample rates match.

You can either:

- Use 48 kHz for your output Hardware Configuration in SoundCheck

    Or

- If the output configuration cannot be set to 48 kHz, for example because you are using an AmpConnect ISC, you can use **Re-sampling** and **Frequency Shift** Post-Processing steps in your sequence to align the stimulus and response waveforms.
- DCC-1448 can be used as a clock source by connecting its SPDIF Out to the SPDIF In of the SoundCheck audio interface. Then set the audio interface to synchronize its clock to the SPDIF Input. Doing so ensures that input and output are synchronous and will ensure that re-sample and frequency shift steps are not required.

    Do not connect audio interfaces through USB hubs. Connect directly to computer USB port.

NI 4461 PCI and PXI

- Tested with DAQmx 20.1 which can be found on the SoundCheck DVD
- Install full version of DAQmx including Measurement and Automation Explorer

NI cDAQ, NI 9260 & NI 9234 modules

- Tested with DAQmx 20.1 which can be found on the SoundCheck DVD
- Install full version of DAQmx with Measurement and Automation Explorer
- Requires that SoundCheck sequences use Auto Delay on the Delay Tab of all Analysis Steps
- Triggered record acquisition is supported as of SoundCheck 16.1

LynxTwo/E44/E22

- Windows 10 – 64-bit
- Driver and Firmware refer to *Approved Drivers - Windows on page 3*.
- **Important!** - Open the **ASIO Control Panel** from the SoundCheck **Hardware Configuration** Editor and then Turn Off "**Double Buffer Output**"
- If you see periodic drop outs in SoundCheck Acquisition, increase the buffer size to the next highest value. The latency value must be updated in the SoundCheck Hardware Editor.
- **Maximum Channels** - The default is "Unlimited". We recommend changing this to 4 or 8 channels in order to save system resources. This limits the virtual channels of the device and limits the number of channels that can be selected in the SoundCheck Hardware Editor. When using a 192 kHz sample rate in SoundCheck, this may be essential. Otherwise, severe dropouts may occur.
- **203 kHz Maximum Sample Rate** - The sample rate of 200 kHz is available in the Sample Rate field of the Hardware Table but is not valid for the Lynx TWO. Instead, use the Input and Output Tabs of the editor. There you can select "User" in the sample rate field of each channel and change the sample rate to 203 kHz.

Lynx Aurora (n) 8-16 LT-USB or 8-32 LT-TB Interface

- Known issues installing in Windows 11. Driver update pending.
- USB: Windows 10 – 64-bit. Thunderbolt: Windows 10 64-bit only
- Driver and Firmware refer to *Approved Drivers - Windows on page 3*.
- LT-USB - Currently you must set the ASIO control panel to a buffer of 1024 and Safe in order to match the latency values provided in the default hardware (HAR) file. LT-TB does not use USB buffers.

Lynx Aurora 8-16 with LT-USB or LT-TB Interface - discontinued

- USB: Windows 10 – 64-bit. Thunderbolt: Windows 10 64-bit only
- Driver and Firmware refer to *Approved Drivers - Windows on page 3*.
- LT-USB - Currently you must set the ASIO control panel to a buffer of 2048 and Safe in order to match the latency values provided in the default hardware (HAR) file. LT-TB does not use USB buffers.

Lynx issues with Intel motherboards using SpeedStep and C-States:

Problems can occur with PCI audio interfaces on Intel motherboards using chipsets that employ SpeedStep and C-State functions.

- In BIOS, turn off SpeedStep and all C-States (C1E; C3; C6) – may require BIOS update.
- Dell computers do not always allow control of these functions in BIOS. Please contact Dell support for information on disabling SpeedStep and C-States.

Set Windows power management scheme to high-performance. When Windows tells the processor to go into low power mode, it can cause glitches in the audio stream.

RME (Multiface II, Fireface UC/UCX, UCX II, Fireface 800)

Driver versions tested (firmware update may be required).

Driver and Firmware refer to *Approved Drivers - Windows on page 3*.

Configuration Details
- The Fireface UC has two different pc board revisions. Units with a serial number before 23682170 will have a default latency of 2167. Units with serial number 23682170 and after will have a default latency of 2114. The default HAR file provided with SoundCheck is for S/N 23682170 and later. See *Discontinued Hardware on page 5*. If you need to verify the Latency value, run the Self Test sequence as indicated in the Fireface UC setup instructions included with the driver from the Listen Website, *https://support.listeninc.com/hc/en-us*.
- **The Multiface II does not use Firewire. It requires an RME PCI, PCI Express, ExpressCard or CardBus interface card. Do not connect it to a Firewire port! It will damage the Multiface II box beyond repair.**
- Fireface UCX and Fireface 800/802 are not compatible with all firewire chipsets: Texas Instruments and VIA chipsets are generally known to work.
- Fireface UC and UCX are both compatible with USB 3 (USB 2 transfer rate)
- Fireface 802 USB will produce small changes in latency. Auto Delay should be used in SoundCheck Analysis Steps.
- **Do not connect audio interfaces through USB hubs. Connect directly to computer USB port.**
- Windows 7 & 10: ASIO driver supported, WDM driver not recommended

PCI Express Interface Card for Laptop
- BIOS settings, "PCI Express Power Management" should be disabled

ASIO Configuration
- The sample rate of the RME interfaces automatically updates to the rate set in the SoundCheck Hardware Editor.
- In Windows 7, if using Fireface UCX or 800/802, you must Rollback the system's 1394 OHCI Compliant (firewire) device driver to the legacy version in Device Manager as shown below.

CardDeluxe - discontinued

Please install SoundCheck BEFORE installing the CardDeluxe drivers. The SoundCheck installation process sets the customized configuration of the CardDeluxe for use with SoundCheck.

If the CardDeluxe driver is already installed, you will need to configure the driver manually. Refer to the CardDeluxe instructions in the driver folder on the SoundCheck install DVD or on the Listen, Inc. website.

Windows 7-64 & 10-64 bit:
- Driver: Windows 7 Must use WDM Driver - Version 5.10.3523. Windows 10 Must use ASIO Driver - Version 5.10.3523.Note issues from chart on page 1 of this document
- Must also set the sample rate and the bit depth to 24-bit mode via the CardDeluxe control panel

AudioFire 12 - discontinued

- Driver: Version 5.8 (Firmware update may be required. Requires internet connection.)
- In Windows 7, you must Rollback the system's 1394 OHCI Compliant (firewire) device driver to the legacy version in Device Manager as shown under **IEEE 1394 Legacy Driver** (below).
- The sample rate must be set in the AudioFire mixer, settings tab. The sample rate selection in the SoundCheck Hardware Editor must agree with this setting.

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