

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 insure that it is compatible with the computer. We recommend that you purchase a high quality computer according to the guidelines below.

- Supported operating systems:
 - Windows® 10 - 64-bit
- To take advantage of using multiple virtual instruments, a multi-threaded processor is recommended, e.g., Intel multicore processor / AMD multicore processor.
- 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
- Do not connect audio interfaces through USB hubs. Connect directly to the USB port on the computer
- Refer to the Hardware Compatibility List in the SoundCheck manual for details regarding audio interfaces and operating systems. The audio interfaces listed in the Hardware Compatibility List have been tested with SoundCheck on computer systems supplied by Listen. Note that some computers may not be compatible with all audio interfaces.
- Do not connect audio interfaces through USB hubs. Connect directly to the USB port on the computer

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.

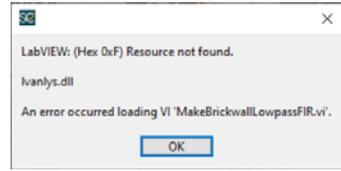
Hyper-threading:

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.

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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.

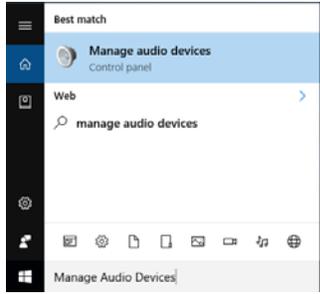
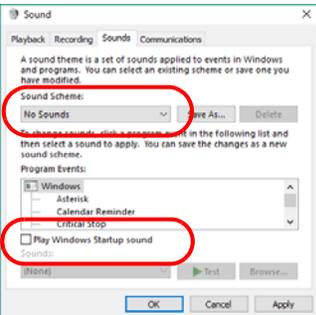
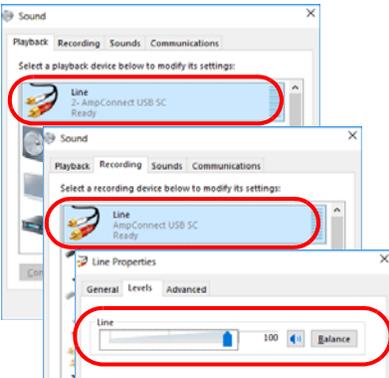
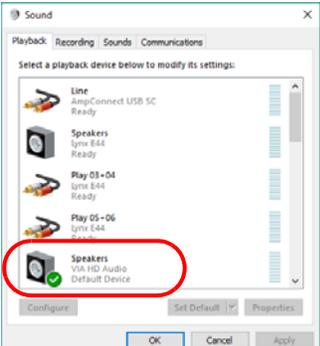
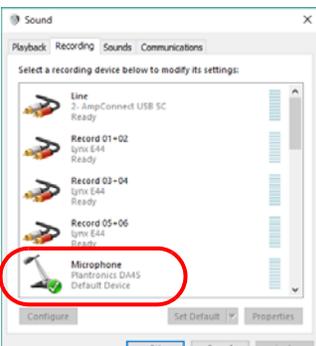
- Navigate to Windows Control Panel > System > Advanced System Settings > Environmental Variables. The Variable name MKL_DEBUG_CPU_TYPE must be added with a Variable value of 4.

Windows Settings

Set the 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: **Appendix - Computer Setup**, in the SoundCheck Instruction Manual for more recommendations.

Audio Device System Settings

The following settings are recommended to prevent Windows systems sounds from inadvertently playing through a device under test or artificial mouth. Some system sounds are capable of damaging some transducers.

<p>1. Click Windows Start, Type "Manage Audio Devices" and hit Enter to open the Sound Control Panel.</p> 	<p>2. Click the Sounds tab and set the default scheme to No Sounds. Uncheck "Play Windows Startup sound"</p> 	<p>3. On the Recording and Playback tabs set levels to 100% for all SoundCheck devices, e.g., AmpConnect, AudioConnect.</p> 
<p>4. Select the Playback tab and set the default device to the motherboard audio interface (no SoundCheck devices)</p> 	<p>5. Select the Recording tab and set the default device to the motherboard audio interface (no SoundCheck devices)</p> 	<p>6. Click OK and close the remaining Control Panel windows</p> <p>For more information please refer to the Appendix - Computer Setup and Hardware Compatibility List chapters in the SoundCheck Manual.</p>

Problems or Questions?
 We're here to help you. Listen technical support is available from 8 AM to 5 PM EST. Outside these hours please contact your local rep for support.
Ph: 617-556-4104 ext 200 Email: support@listeninc.com
 Please visit support.listeninc.com and click on Knowledgebase

Next: Please proceed to the quick start guide for your audio interface.