



# ***PowerScribe® 360 Reporting***

## ***Microphone Troubleshooting Guide***





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# Preliminary Steps

This document will identify and provide solutions to issues that can occur to the microphone input device used with the PowerScribe 360 Reporting Client.

For the Microphone Input Device, follow these preliminary steps before attempting any further troubleshooting.

1. Plug the Microphone Input Device into a different USB port and see if the issue still exists
2. Replace with Microphone Input Device with another device of the same type and see if the issue still exists.

# Microphone Will Not Initiate

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## DLLs Fail to Register in Windows 7

In some instances, the necessary DLLs fail to register properly in Windows 7 causing the microphone not to initialize. The files that fail to register are HIDDEV.dll and/or USBMGR.dll.

The Client log on screen shows the microphone disconnected in bottom right corner.

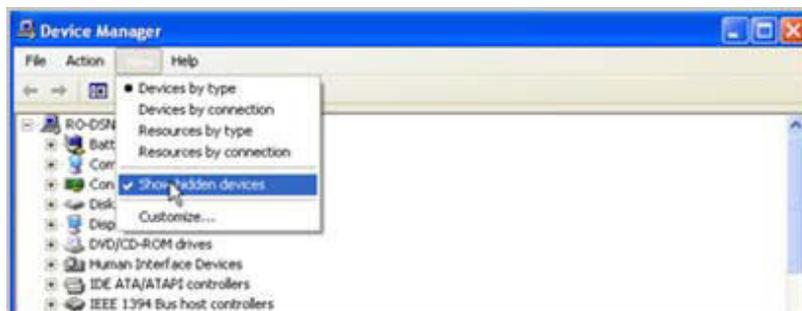
To re-register the DLLs:

1. Download and extract [regfix.zip](#).
  2. Run regfix.bat.
- 

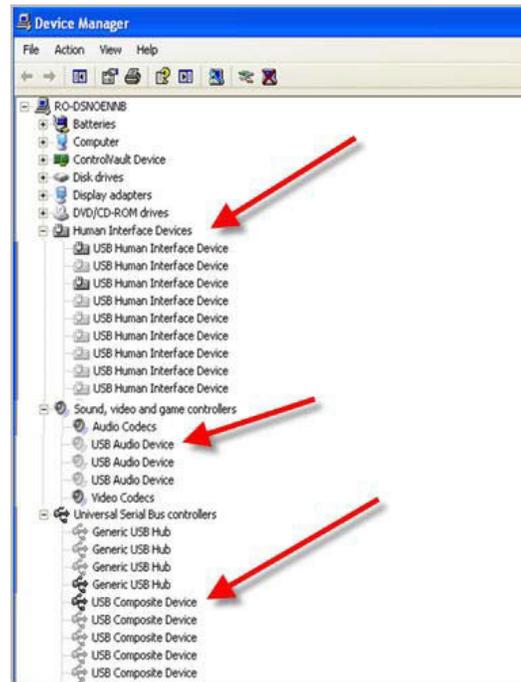
## Remove Remnant USB Devices

Remnant USB devices can accumulate and interfere with the installation of the PowerMic devices.

1. Open the Device Manager and enable Show hidden devices.



Notice how many remnant USB device drivers (grayed-out) clutter the Device Manager as shown below.



2. Right-click each non-present driver for the USB Human Interface Device, USB Audio Device, and USB Composite Device, and then click the Uninstall option.

---

## No Hidden Devices Appear

If you select Show Hidden Devices and no additional devices appear, you will need to change the system variables to allow them to show.

Below is a procedure to add one system environmental variable, which allows drivers for non-present devices to be displayed in Device Manager.

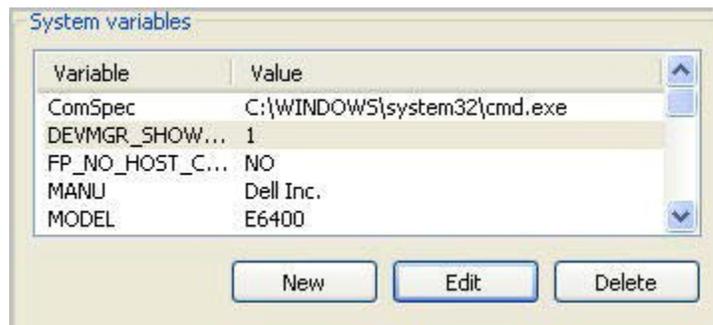
Removal of these non-present devices has proven to be beneficial in resolving issues with the installation of the PowerMic USB device.

1. On the client workstation, go to Start > Settings > Control Panel > System Properties.
2. From the System Properties dialog, select the Advanced tab.
3. Click **Environmental Variables**.
4. In the System Variables area, click **New**.

- On the Edit System Variable dialog, enter the values below:  
Variable name: **DEVMGR\_SHOW\_NONPRESENT\_DEVICES**  
Variable value: **1**



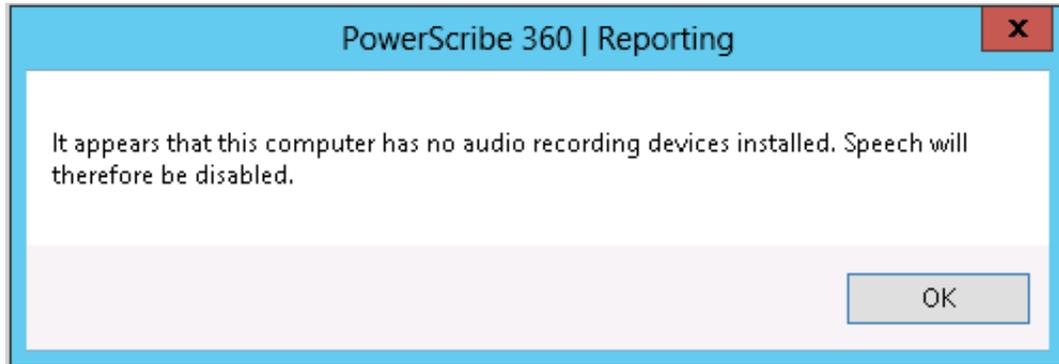
- Click **OK** and the new variable should display as shown below.



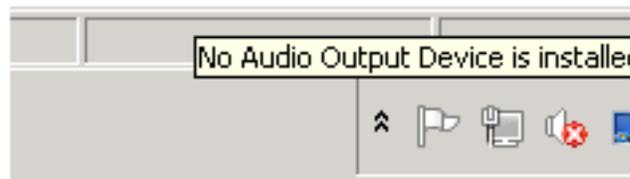
- Click **OK** and **OK** to close.
- After removing the Hidden Devices, unplug the PowerMic and reboot the client workstation.

# No Audio Device Installed

*"It appears that this computer has no audio recording devices installed. Speech will therefore be disabled."*

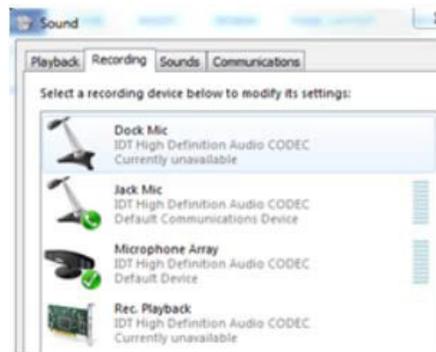


*A red X also displays on the speaker icon.*



If the above message displays during Client log on:

1. Verify that the Audio Mixer device is available and enabled.
  - a. From the Control Panel, select the Sounds and Settings dialog.



- b. Ensure the Audio Mixer Device (it displays as a PCI Card) which is usually labeled as Rec Playback, on the Recording device list as shown above.
    - c. If you do not see the device, right-click and select Show Hidden Devices. If the device does not show, even if hidden devices are shown, it means the audio driver needs to be upgraded.
    - d. Right-click **Rec Playback**, and select **Enable**.

- e. Follow the steps in the '[Remove All USB Devices, Hubs, and Reload Microphone USB Device](#)' section outlined later in this document.
- f. Check Windows Audio service and verify that it is running.
- g. Open a command prompt, and run as an administrator the following commands:  
`Net localgroup Administrators /add networkservice`
- h. Click **Enter**.  
`Net localgroup Administrators /add localservice`
- i. Click **Enter**.

# Drivers Failed to Install for the Audio Device

If an error occurs when plugging in the PowerMic about the driver failing to install for the audio device, it may be necessary to recreate the Driver Store File Repository.



*You must have all administrator privileges when performing these steps.*

1. Open Windows Explorer.
2. Go to C:/Windows/System32/DriverStore.  
There will be a couple of folders and files.  
There should be \*.dat files and another file named: infcache.1.
3. Select all the files (\*.dat and infcache.1).



*Do not touch the folders.*

4. Once the files are selected, delete them.
5. Go to C:/Windows/System32/Driver Store/File Repository/.
6. Search for the **usbstor.inf** folder and open it.



*If more than one usbstor.inf folder exists, choose the most recent.*

7. Select and copy the **usbstor.inf** and **usbstor.PNF** files.
8. Paste the two files in the C:/Windows/inf directory.
9. Reboot.
10. If Windows does not install the drivers automatically, go to Device Manager, and uninstall all unknown devices and any USB devices with a yellow exclamation mark icon, then click **check to see if there is any hardware changes**. Windows should then install the hardware drivers successfully.

# Microphone Disconnects Intermittently or Stops Responding



*It is highly recommended that the Microphone be plugged into a USB port in the back of the client workstation. These ports generally handle power management better than the USB ports on the front of the workstation.*

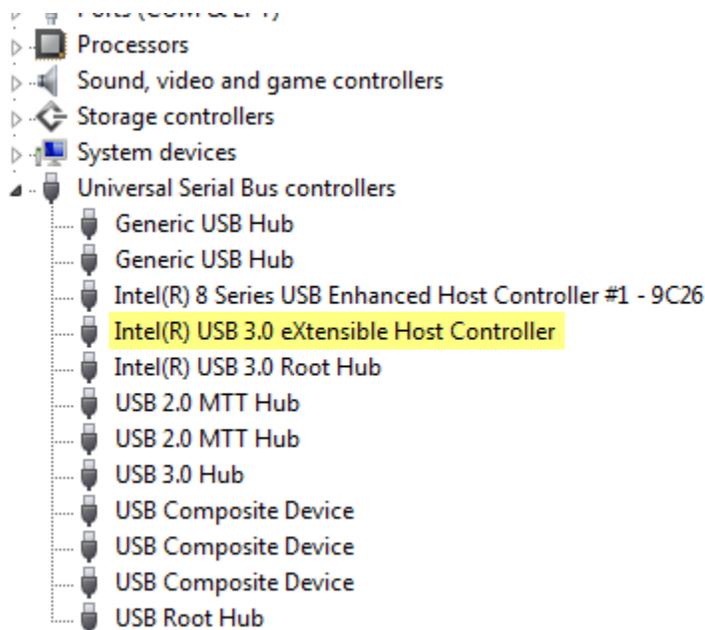


*The following actions should be performed within a single session.*

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## Update the USB 3.0 eXtensible Host Controller Driver

1. Open Device Manager.  
(Windows 10, 8) Control Panel > Hardware and Sound > Device Manager.  
(Windows 7) Control Panel > System and Security > System > Device Manager.
2. Expand Universal Serial Bus Controllers.



If you have the USB 3.0 eXtensible Host Controller, try updating the driver.

Nuance has found that the USB Host Controller is at fault in many of these cases and recommends the following steps to update the driver for the Intel USB 3.0 eXtensible Host Controller Driver to version 4.0.6.60 (required minimum version).

1. Log into Windows with an administrator account.
2. Go to:  
<https://downloadcenter.intel.com/download/22824/USB-3-0-Treiber-Intel-USB-3-0-eXtensible-Host-Controller-Treiber-f-r-Intel-8-9-100-und-C220-C610-Chips-tze?product=65855>
3. Download the driver package and unzip it.
4. In the driver package folder, run setup.exe.



*If the installation fails, do not retry this upgrade of the Intel USB 3.0 eXtensible Host Controller driver on this workstation. Installation failure can be caused by unsupported hardware architecture or because the workstation does not meet the minimum requirements for installing this driver software.*

---

## Audio Buffer Initialization

**Check for and potentially apply Microsoft hotfix to fix an issue with the initialization of the audio buffer.**

Apply the USB Hot fix that is available through Microsoft. This hotfix addresses the issue which occurs because the initialization that is performed for the buffer of the audio data is insufficient for when you try to play audio.  
<http://support.microsoft.com/kb/2721341>

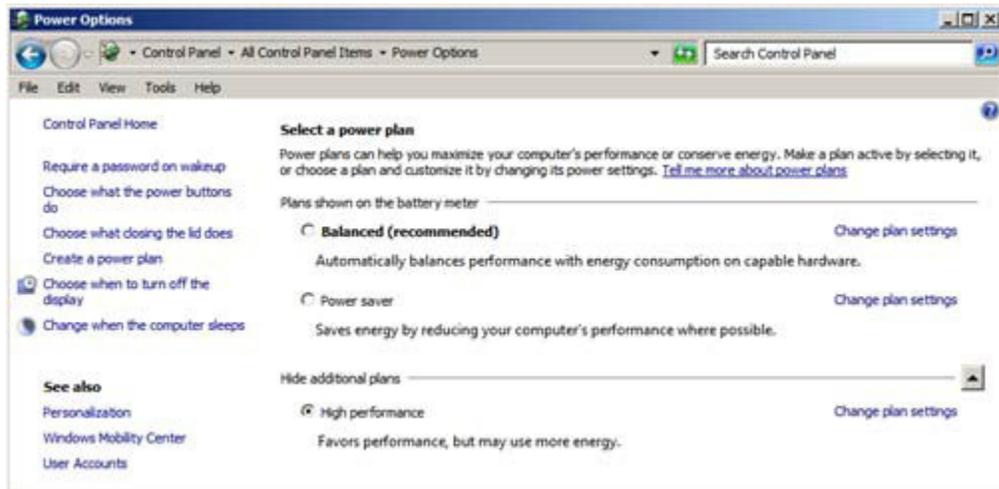
<http://support.microsoft.com/kb/2721341>

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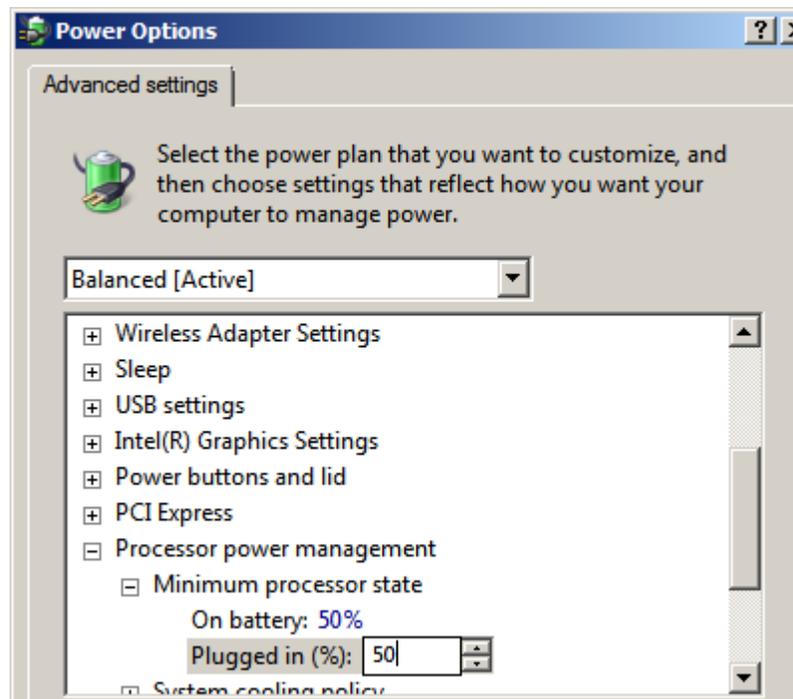
# Disable Power Save Options

Power Save options can cause the USB / Microphone to go to sleep if the system thinks it is not being used. Some areas to adjust are:

1. Disable the power save features in BIOS like Intel Speed Step Technology (aka Runtime Power Management).
2. Switch Windows power plan to high performance (Control Panel / Power Options).



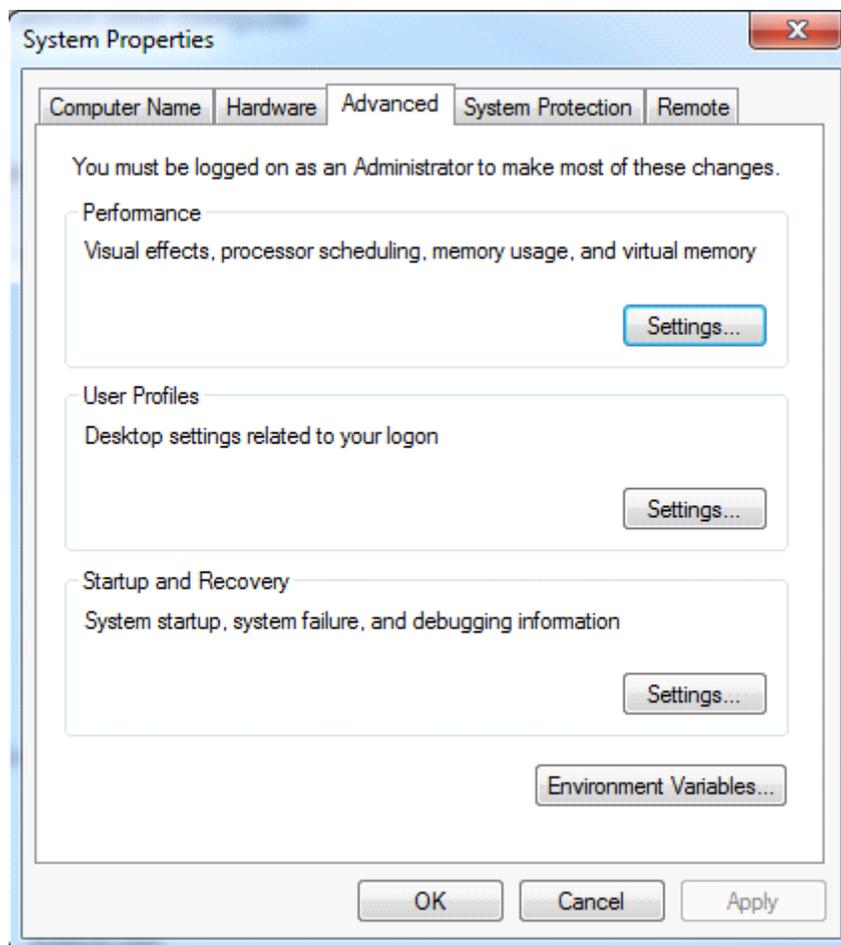
3. Change the minimum processor state of the current power plan to 50% (Control Panel / Power Options / Change plan settings / Change advanced power settings).



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## Remove All USB Devices, Hubs, and Reload Microphone USB Device

1. Unplug all USB devices from the workstation (minus keyboard and mouse if physically at the workstation).
2. Go into System Properties, right-click **Computer**, then select the **Advanced** tab.

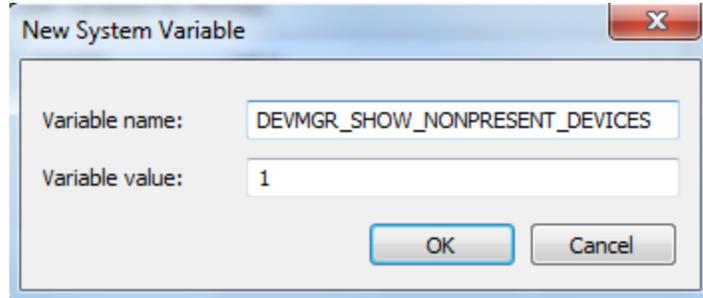


3. Click **Environment Variables**.
4. In the System Variables list, check to see if the Variable **DEVMGR\_SHOW\_NONPRESENT\_DEVICES** is listed.

5. If the **DEVMGR\_SHOW\_NONPRESENT\_DEVICES** is not listed, click the **New** button and enter the Variable Name and Variable Value:

Variable name: **DEVMGR\_SHOW\_NONPRESENT\_DEVICES**

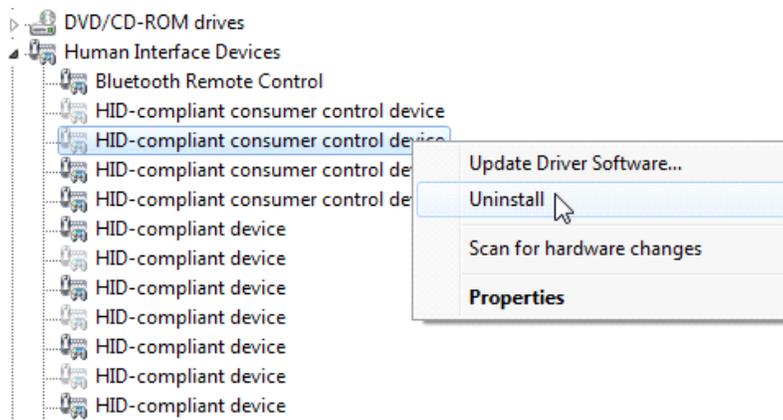
Variable Value: **1**



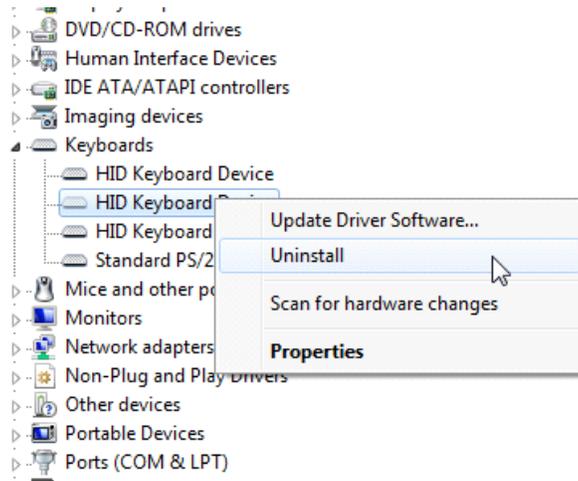
6. Open the Device Manager and select **View**, and then click **Show hidden devices**.



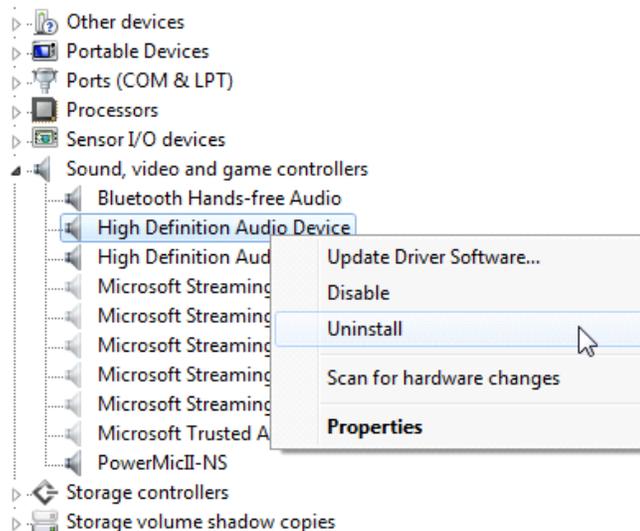
7. Remove all HID (Human Interface Devices) by right-clicking each device, and then click **Uninstall**. This includes all devices, not just the hidden devices.



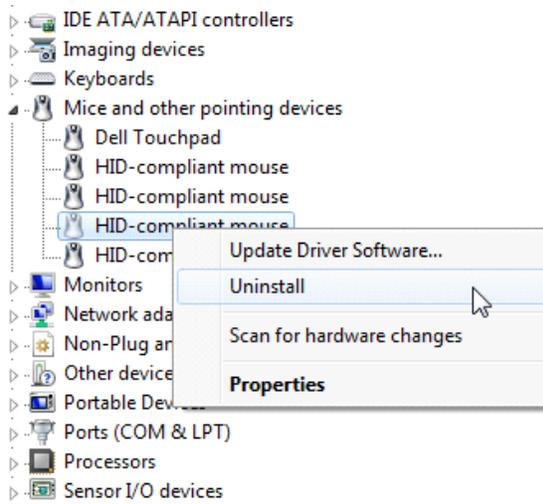
8. Expand **Keyboards** and right-click, and select **Uninstall** for all *Hidden* Keyboard devices.



9. Expand **Sound, video and game controllers**, and right-click and Uninstall all devices *except* Microsoft listed devices.



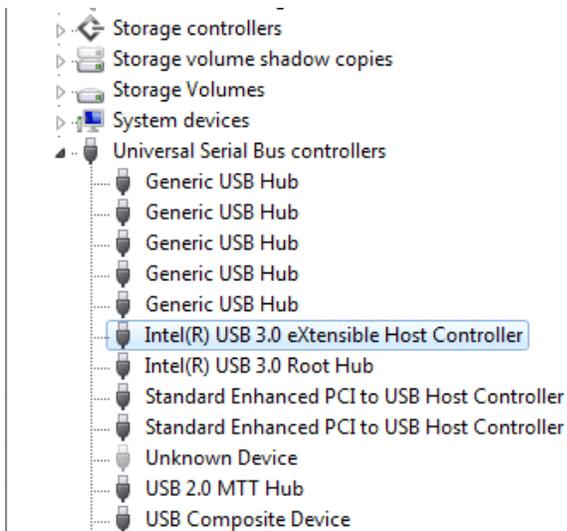
- Expand **Mice and other pointing devices**, and for all *Hidden* devices, select **Uninstall**.



- Expand **Universal Serial Bus (USB) controllers**, and for all devices (including hidden devices, right-click and select **Uninstall** to remove all devices.



*Some devices may have a Confirm Device Uninstall dialog with a check box to warn you about uninstalling the device. You do not need to check the box to delete the driver for this device, just click **OK**.*



12. Reboot the workstation. Devices will be redetected.



*This may take up to 10 minutes.*

13. Once logged back into Windows, you can plug USB devices back in (including the PowerMic II).
14. Right-click on the speaker icon in the system tray, and click **Recording Devices**. Verify that the microphone is labeled as a PowerMicII.



**IMPORTANT**

*If the microphone is not labeled as a PowerMicII, enable the onboard sound in the system BIOS, and make sure the audio drivers for the onboard sound are up to date.*



10. Change the Audio.ini version to increase it by one. For example, change 71 to 72.

Nuance roaming.ver Editor Utility

Roaming User Version File (roaming.ver):  
C:\nuance\DragonUsers\admin\current\roaming.ver Browse

Load roaming.ver File

Roaming.ver file format version: 4

Options.ini file version #: 41  
Options.ini file timestamp: 00/00/0000 00:00:00.000

Soptions.ini file version #: 9  
Soptions.ini file timestamp: 00/00/0000 00:00:00.000

ITNoptions.ini file version #: 4  
ITNoptions.ini file timestamp: 00/00/0000 00:00:00.000

DgnConCfg.ini file version #: 0  
DgnConCfg.ini file timestamp: 00/00/0000 00:00:00.000

MyCmds.dat file version #: 0

Audio.ini file version #: 72

Topics

Number of Topics: 1  
Topic Name: US English | Large | PS360 Radiology  
Topic Version #: 2  
VocDelta.dat file version #: 40  
VocDelta.dat file timestamp: 00/00/0000 00:00:00.000

Dictation Sources

Number of Dictation Sources: 2  
Dictation Source Name: voice  
Dictation Source Version #: 1

Commit Changes and Save File Exit

11. Click **Commit Changes and Save File**. The next time the user logs in, the new audio.ini will download to the workstation.

12. The audio.ini should be checked again on the workstation. After the changes have been committed connect to the workstation again and verify the blank audio.ini has indeed downloaded. You will need to log into the client as the user whose profile was modified to see the updated file in the  
C:\ProgramData\Nuance\Dragon SDK Client  
Edition12\RoamingUsers\Location\_1\
- 

## Add an Internal USB PCI Card

Certain USB chipsets have displayed issues with USB devices like the PowerMicII. This is mostly seen with chipsets that run a combo USB port which can run at both USB2.0 and USB3.0 at the same time, each port on the bus running at different speeds.

This occurs due to the connection to the audio device getting lost due to a Windows driver crash. It appears that Intel chip set drivers; respectively USB controller drivers cause this crash.

This can be resolved by adding a high speed internal PCI USB card. The cards that have been used successfully are:

- Insignia USB 3.0 PCIe Host Card NS-PCCUP53/NS-PCCUP53-C.
- Transcend Model PDU3 USB 3.0 PCI Express.

# Latency When Pressing the Dictate Button on the PowerMic

When pressing the record button on the microphone, if the recording does not start for a few seconds, you should disable Audio Playback Enhancements in the audio devices. One symptom is when you see the audiodg.exe process spikes CPU usage to 80% or more for short periods. (Seen via Task Manager).

1. On the taskbar, right-click the **Speakers icon**, and then select **Playback devices**.
2. From the Playback tab, right-click **Speakers**, and select **Properties**.
3. From the Speakers Properties dialog, select the **Enhancements** tab, and check **Disable all enhancements**.
4. Switch Windows power plan to high performance (Control Panel / Power Options).

# Manual Revision History

**Note:** In this table the most recent changes are first by date.

<b>Date</b>	<b>Sec</b>	<b>Page</b>	<b>Change (Paragraph, Sentence, Figure, Table, etc.)</b>	<b>Initials</b>
8/29/18	6	1	New chapter: Update the USB 3.0 eXtensible Host Controller Driver	BW
8/25/17	5	3	Updated steps for Remove All USB Devices, Hubs, and Reload Microphone USB Device section.	MS/SEP
8/24/17	3	1	Updated steps for No Audio Device Installed.	MS/SEP
6/01/16	All	All	Draft	SEP