

High Resolution

USB to Analog and
Digital Audio Decoder

GTV-192KUSB-2-ADAUD

User Manual

Release A2



Gefen tv®

Important Safety Instructions

GENERAL SAFETY INFORMATION

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this product near water.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install or place this product near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. To reduce the risk of electric shock and/or damage to this product, never handle or touch this unit or power cord if your hands are wet or damp. Do not expose this product to rain or moisture.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. Batteries that may be included with this product and/or accessories should never be exposed to open flame or excessive heat. Always dispose of used batteries according to the instructions.

Warranty Information

Gefen warrants the equipment it manufactures to be free from defects in material and workmanship.

If equipment fails because of such defects and Gefen is notified within two (2) years from the date of shipment, Gefen will, at its option, repair or replace the equipment, provided that the equipment has not been subjected to mechanical, electrical, or other abuse or modifications. Equipment that fails under conditions other than those covered will be repaired at the current price of parts and labor in effect at the time of repair. Such repairs are warranted for ninety (90) days from the day of reshipment to the Buyer.

This warranty is in lieu of all other warranties expressed or implied, including without limitation, any implied warranty or merchantability or fitness for any particular purpose, all of which are expressly disclaimed.

1. Proof of sale may be required in order to claim warranty.
2. Customers outside the US are responsible for shipping charges to and from Gefen.
3. Copper cables are limited to a 30 day warranty and cables must be in their original condition.

The information in this manual has been carefully checked and is believed to be accurate. However, Gefen assumes no responsibility for any inaccuracies that may be contained in this manual. In no event will Gefen be liable for direct, indirect, special, incidental, or consequential damages resulting from any defect or omission in this manual, even if advised of the possibility of such damages. The technical information contained herein regarding the features and specifications is subject to change without notice.

For the latest warranty coverage information, refer to the Warranty and Return Policy under the Support section of the Gefen Web site at www.gefen.com.

PRODUCT REGISTRATION

Please register your product online by visiting the Register Product page under the Support section of the Gefen Web site.

Contacting Gefen Technical Support

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c/o Customer Service
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Chatsworth, CA 91311

Telephone: (818) 772-9100
(800) 545-6900

Fax: (818) 772-9120

Email: support@gefentv.com

Visit us on the Web: www.gefentv.com

Technical Support Hours: 8:00 AM to 5:00 PM Monday - Friday, Pacific Time

High Resolution USB to Analog and Digital Audio Decoder
is a trademark of Gefen, LLC.

Important Notice

Gefen, LLC reserves the right to make changes in the hardware, packaging, and any accompanying documentation without prior written notice.

Operating Notes

- The source must be configured to output high-resolution 2-channel LPCM audio through USB. This product does not support Dolby® Digital or DTS® encoded audio.
- The *High Resolution USB to Analog and Digital Audio Decoder* only supports 2-channel audio on all its outputs. Multichannel (bitstream) audio is not supported on the TOSLINK™ connector.

Features and Packing List

Features

- Accepts high resolution digital audio from a USB source and outputs both L/R analog audio and TOSLINK™ digital audio
- Accepts up to 24 bits of uncompressed 2-channel LPCM digital audio at 44.1, 48, 88.2, 96, 176.4, or 192 kHz sampling rate
- Outputs 2-channel LPCM digital audio up to 24 bits and 192kHz
- Outputs 2-channel analog audio via L/R RCA outputs and 1/4-inch headphone jack
- Allows listening to locally stored or streaming digital media from a PC or MAC through an AV receiver, analog amplifier, or a pair of headphones
- LED status indicators for streaming and sampling frequency
- 1/8-inch to 1/4-inch (3.5mm to 6.35mm) headphone plug adaptor included
- Small, compact size
- Easy to set up

Packing List

The *High Resolution USB to Analog and Digital Audio Decoder* ships with the items listed below. If any of these items are not present in your box when you first open it, immediately contact your dealer or Gefen.

- 1 x High Resolution USB to Analog and Digital Audio Decoder
- 1 x Mini-USB (Type B) to USB (Type A) cable
- 1 x Headphone plug adapter (1/8"-to-1/4")
- 1 x Quick-Start Guide

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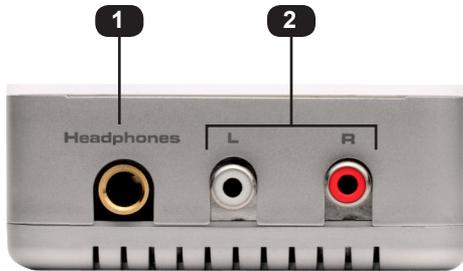
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USB to Analog and Digital Audio Decoder

01 Getting Started

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Side A



ID	Name	Description
1	Headphones	Connect a 1/4" TRS (Tip-Ring-Sleeve) headphone jack to this connector. Use the included 1/8"-to-1/4" adapter if necessary.
2	L/R	Connect a L/R stereo cable from these RCA jacks to the audio output device.

Side B



ID	Name	Description
1	USB 5V	Connect the included USB Type A-to-Mini USB Type B cable from this port to the computer.

Side C



ID	Name	Description
1	Optical Out	Connect an optical cable from this TOSLINK connector to the TOSLINK connector of the audio output device.

Installation

Connecting the Audio Decoder

1. Connect the included USB Type A to Mini-USB Type B cable between the computer and the *High Resolution USB to Analog and Digital Audio Decoder*.



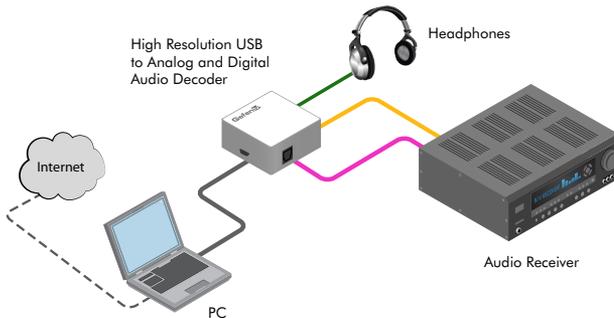
NOTE: As the decoder is powered by the USB source, please make sure that the source can supply 5 Volts at 500mA through its USB port. The Power LED on the decoder will glow bright blue when the source supplies enough power the decoder.

2. Install the USB-to-AUD driver software. The software is required in order to operate the *High Resolution USB to Analog and Digital Audio Decoder* on a PC using the Windows® Operating System. See [Software Installation](#) for details on installing the software.
3. Connect an optical cable from the TOSLINK connector on the *High Resolution USB to Analog and Digital Audio Decoder* to the optical input of an A/V receiver.
4. Connect a pair of L/R RCA-type cables from the L/R connectors to the analog inputs of an external amplifier.
5. Connect headphones to the 1/4" Headphone jack on the *High Resolution USB to Analog and Digital Audio Decoder*. Use the included 1/8"-to-1/4" adapter if necessary.

Sample Wiring Diagram

Gefentv

USB CABLE 
HEADPHONE 
L/R RCA ANALOG AUDIO CABLE 
TOSLINK® DIGITAL AUDIO CABLE 



GTV-192KUSB-2-ADAUD

Software Installation

If using the Windows® operating system, the *High Resolution USB to Analog and Digital Audio Decoder* requires the installation of an audio driver. If installing this software under Windows® 8, refer to [Installing under Windows 8](#). If using a Mac, no software installation is required.

1. Download the latest version of the software driver from the Gefen Web site.
2. Extract the files from the .ZIP file to a folder on your Windows Desktop.
3. Double-click the `Setup.exe` file.



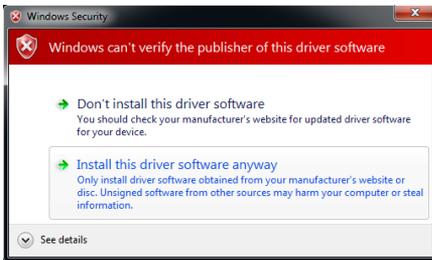
If the User Account Control dialog is displayed, click the Yes button to continue with the installation process.



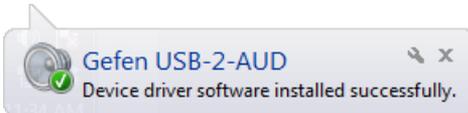
4. The installer Welcome screen will be displayed.



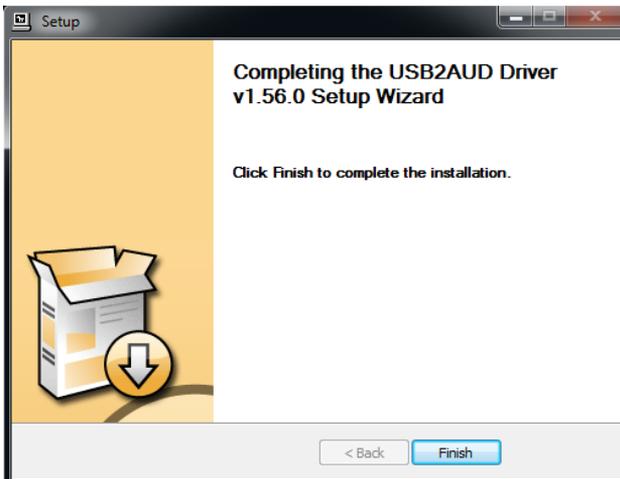
5. Click the **Next** button and follow the instructions on each screen of the installer.
6. If the following screen is displayed, click *Install this driver software anyway*.



7. Once the **USB-2-AUD** driver has been successfully installed, the following message will be displayed in the lower-left portion of the screen.



8. Click the **Finish** button on the Finish dialog to complete the installation and exit the Setup wizard.



High Resolution

USB to Analog and Digital Audio Decoder

02 Operating the Audio Decoder

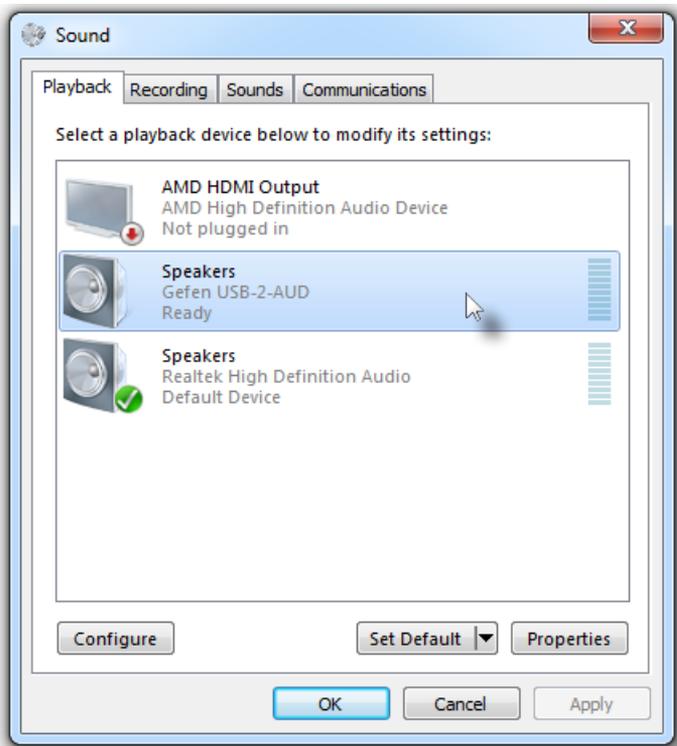
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Configuration

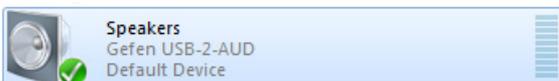
Enabling the Audio Decoder under Windows®

1. Open the Sound panel using one of two methods:
 - Go to Start ► Control Panel ► Sound
 - Right-click on the speaker icon, in the Taskbar, and select **Playback devices** from the context menu.

The Gefen **USB-2-AUD** driver will be displayed under the Playback tab.



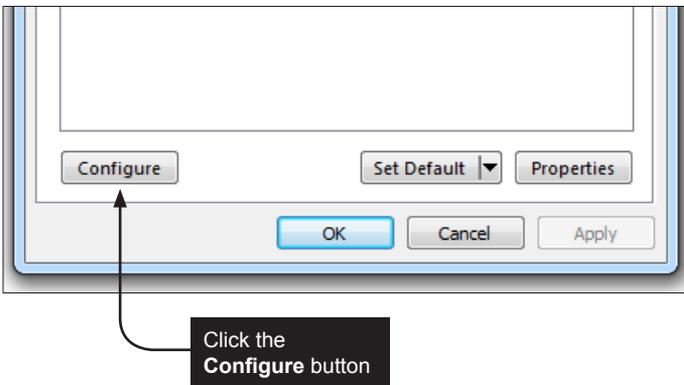
2. Select the Gefen **USB-2-AUD** driver and click the **Set Default** button, as shown above.
3. The Gefen **USB-2-AUD** driver will now have a green check mark next to it, indicating that it is the primary sound driver.



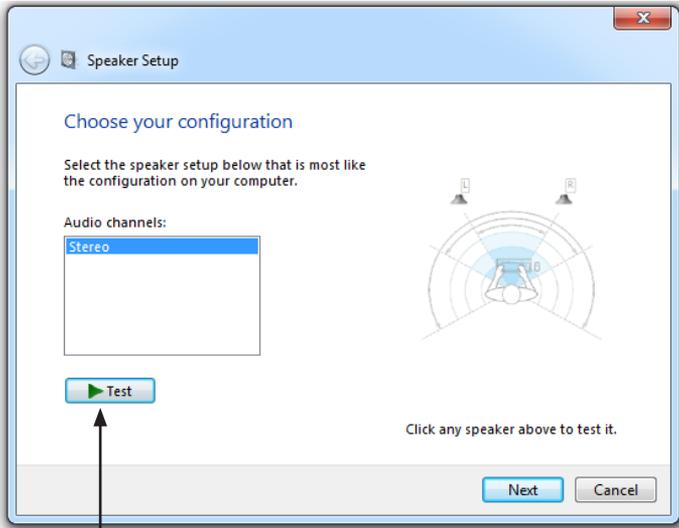
- The **Power / Streaming** LED indicator will begin to flash. The *High Resolution USB to Analog and Digital Audio Decoder* is now the primary audio output device on the computer.



- Connect a pair of headphones to the **Headphones** jack on the *High Resolution USB to Analog and Digital Audio Decoder*. If headphones are not available, connect either an optical cable from the TOSLINK connector (**Optical Out**) or a L/R stereo cable from the **Line Out** connectors to the inputs of an external amplifier.
- Click the **Configure** button on the Sound panel.



- To test the audio, click the **Test** button. Pressing the Test button will produce a series of chimes. If the chimes are heard, then the *High Resolution USB to Analog and Digital Audio Decoder* is set up correctly.



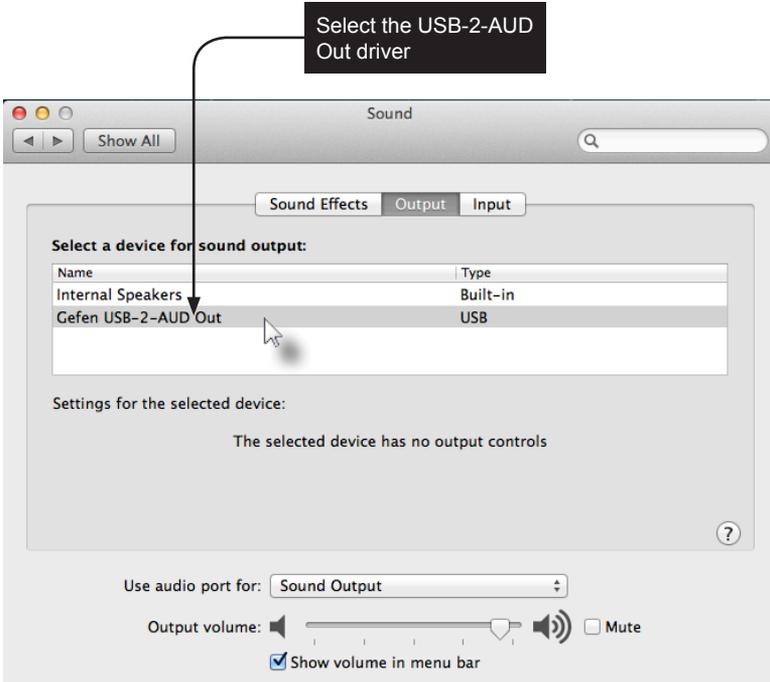
- Click the **Test** button.
- Click the **Cancel** button to close the Speaker Setup panel.
- Launch the desired audio playback software (e.g. iTunes®, Winamp®, etc.) on the computer. All audio will now be heard from the outputs (**Headphones**, **Optical Out**, **Line Out**) of the *High Resolution USB to Analog and Digital Audio Decoder*.



NOTE: The source must be configured to output high-resolution 2-channel LPCM audio through USB. This product does not support Dolby® Digital or DTS® encoded audio.

Enabling the Audio Decoder under Mac OS X

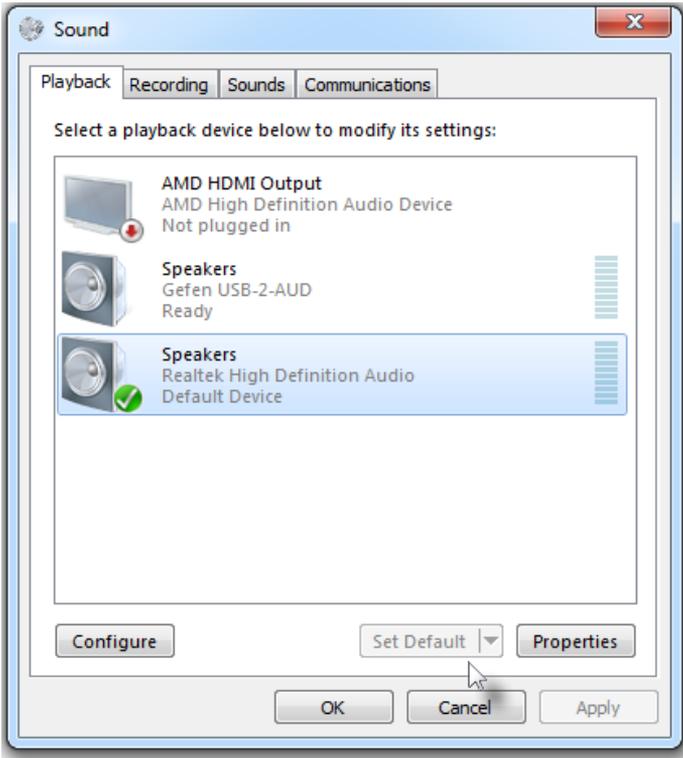
1. Open **System Preferences**.
2. Open the **Sound** panel.
3. Click the **Output** button.
4. Select **Gefen USB-2-AUD Out**.



5. Close the **Sound** panel.
6. Close **System Preferences**.

Disabling the Audio Decoder

1. Open the Sound panel (Start ► Control Panel ► Sounds).
2. Select the default audio device and click the **Set Default** button.



3. The selected (default) playback device will have a green check mark next to it, indicating that this device is the primary sound driver. The **Set Default** button will now be disabled.
4. The **Power / Streaming** LED indicator, on the *High Resolution USB to Analog and Digital Audio Decoder* will glow solid blue. Any audio that is played-back on the computer will now use the default sound driver.



NOTE: To disable the Audio Decoder under Mac OS X, select Internal Speakers under the Sound panel. See [Enabling the Audio Decoder under Mac OS X](#) for more information.

Changing the Sampling Rate

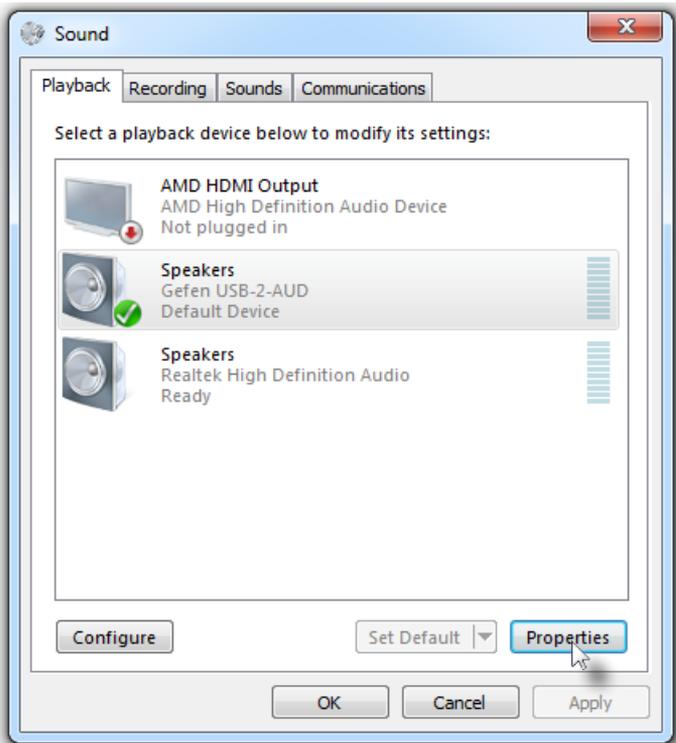
The *High Resolution USB to Analog and Digital Audio Decoder* provides the ability to change the sampling rate of the output signal.

Using the Windows® Operating System

The output sampling rate is selected using the **Speaker Properties** dialog box.

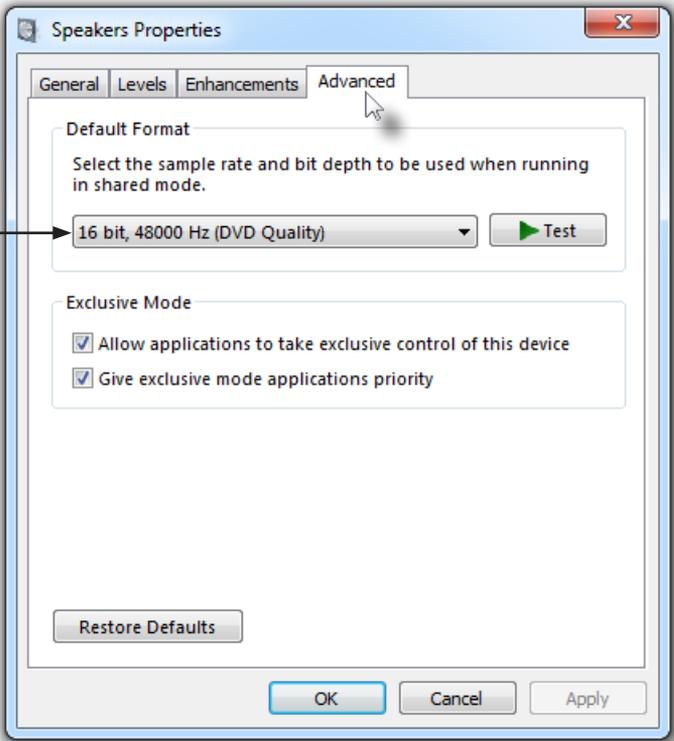
For example, if we were playing a 16-bit audio file at 44.1 kHz, we could up-sample the audio signal to 24-bit at 192 kHz, on the output:

1. Open the Sound panel (Start ► Control Panel ► Sounds). Make sure that the **USB-2-AUD** driver is the Default Device, as shown below.



2. Click the **Properties** button.
3. Under the **Speaker Properties** window, click the **Advanced** tab.

The current sampling rate will be displayed in the drop-down dialog. The current sampling rate will also be indicated on the front panel of the Audio Decoder.

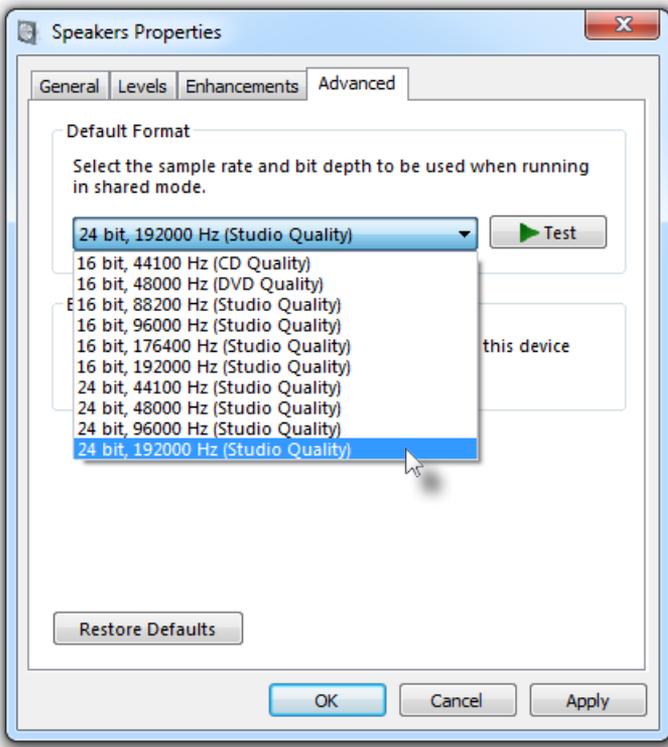


Current sampling rate



4. Click the drop-down list.

A list of supported sampling rates will be listed. For this example, we will select **24-bit, 192000 Hz (Studio Quality)** from the drop-down list.



5. Click the **Apply** button to save the changes or click the **OK** button to apply changes and close the **Speaker Properties** dialog box.
6. The **192k** sampling rate indicator, on the Audio Decoder, will glow bright blue, as shown on the next page.



NOTE: The *High Resolution USB to Analog and Digital Audio Decoder* only supports 2-channel LPCM audio on all outputs. Multichannel (bitstream) audio is not supported on the TOSLINK™ connector.

Changing the Sampling Rate

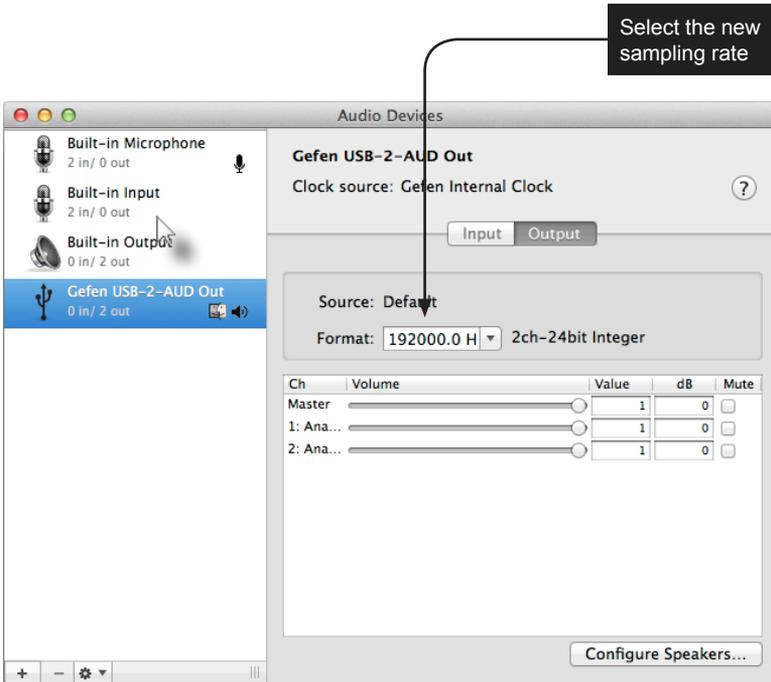


7. All audio files that are played will now be output at 24-bit @ 192 kHz.
8. To change the sampling rate of the output signal, repeat steps 1 through 5.

Using the Mac® Operating System

By default, Mac computer will output the audio at 192k. However, the sampling rate can be changed under the **Audio Devices** panel. Make sure that the Audio Decoder is selected output device. See [Enabling the Audio Decoder under Mac OS X](#) for more information.

1. Open the **Applications** folder.
2. Open the **Utilities** folder.
3. Click **Audio MIDI Setup**.



4. Select the **Gefen USB-2-AUD Out** driver.
5. Select the desired sampling rate from the drop-list, indicated above.
6. Once the sample rate has been changed under the Audio Devices panel, the current sampling rate will be reflected on the front panel of the Audio Decoder.

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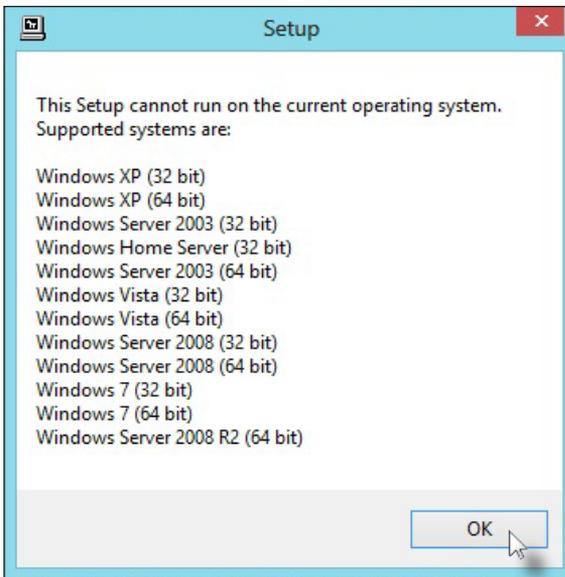
Installing under Windows 8

Follow the instructions, below, when installing the software under Windows® 8.

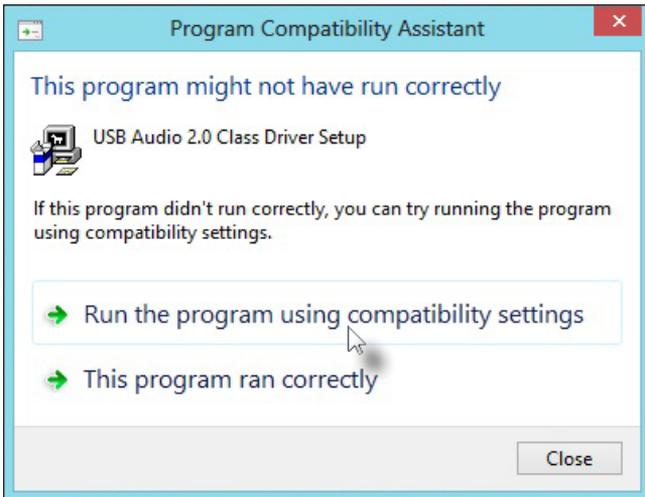
1. Download the latest version of the software driver from the Gefen Web site.
2. Extract the files from the .ZIP file to a folder on your Windows Desktop.
3. Make sure that the *High Resolution USB to Analog and Digital Audio Decoder* is connected to the computer.
4. Double-click the `Setup.exe` file.



The following dialog box will be displayed:



5. Click the **OK** button to dismiss the dialog box.
6. Another dialog box will be displayed (see next page), indicating there is a compatibility issue with the software driver installation program.
7. Click **Run the program using compatibility settings**.



7. The installer Welcome screen will be displayed:



8. Click the **Next >** button.

If the *High Resolution USB to Analog and Digital Audio Decoder* is not connected to the computer, the following message will be displayed in the Welcome dialog box:

"Setup requires that the device is plugged in. Please connect the device you want to install and make sure it is turned on. If your device is currently connected, please unplug and replug it."

- In the **Choose Install Location** dialog box, select the folder in which to install the driver. It is recommended to install the driver software in the default location:

C:\Program Files\Gefen\USB2AUD_Driver

- Click the **Install** button.

The installation Wizard will begin installing the required files.

- During the installation, the following dialog will be displayed:



- Click **Install this driver software anyway**.
- When the dialog box, above, is displayed again, click **Install this driver software anyway**.
- When the **Installation Complete** dialog is displayed, click the **Next >** button.
- Click **Finish** on the final dialog to exit the installation Wizard.
- Refer to the [Configuration](#) page for information on enabling the USB-2-AUD driver.

Specifications

Supported Formats

Audio	<ul style="list-style-type: none"> • 2-channel LPCM
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Electrical

Power / Streaming indicator	<ul style="list-style-type: none"> • LED, blue
Sampling frequency indicators	<ul style="list-style-type: none"> • 6 x LED, blue

Connectors

Outputs	<ul style="list-style-type: none"> • 1 x TOSLINK™ (optical) • 2 x RCA-type, female • 1 x 1/4" stereo headphone jack
USB (audio input)	<ul style="list-style-type: none"> • 1 x USB Mini-B

Operational

Signal-to-Noise Ratio	<ul style="list-style-type: none"> • 110 dBA
Frequency Response	<ul style="list-style-type: none"> • 10 Hz to 20 kHz (± 0.1 dB)
Total Harmonic Distortion (THD) + N	<ul style="list-style-type: none"> • < 0.02% 1 kHz, 2Vrms
Operating Temperature	<ul style="list-style-type: none"> • +32 to +104° F (0 to +40° C)
Operating Humidity	<ul style="list-style-type: none"> • +20 to 90% RH (non-condensing)
Storage Temperature	<ul style="list-style-type: none"> • -4 to +140° F (-20 to +60° C)
Storage Humidity	<ul style="list-style-type: none"> • 0 to 95% RH (non-condensing)
Power Consumption	<ul style="list-style-type: none"> • 2.5W (max.)

Physical

Dimensions (W x H x D)	<ul style="list-style-type: none"> • 3.4" x 1.3" x 3.4" (86mm x 34mm x 86mm)
Unit Weight	<ul style="list-style-type: none"> • 0.23 lbs (0.10 kg)



Stretch it, Switch it, Split it, Control it.
Gefen's got it. ®

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