

stereo-link Quick Start Guide
for Models 1200 and 1300
USB Digital to Analog Converter (DAC)

stereo-link

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1 Radio Frequency Interference

1.1 FCC Part 15 compliance

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio TV technician for help

Shielded cables must be used with this unit to ensure compliance with the Class B FCC limits. If the cables supplied with your unit also contain additional components, such as ferrites, then these components were required to achieve compliance and should not be removed.

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

1.1 EMC Directive (89/336/EEC) compliance

This equipment has been tested and found to comply with EMC Directive (89/336/EEC). Shielded cables must be used with this unit to ensure compliance. If the cables supplied with your unit also contain additional components, such as ferrites, then these components were required to achieve compliance and should not be removed.

2 What You Will Find In the Box

Model 1200

- **stereo-link** Model 1200 DAC (blue or graphite)
- 3 meter USB 1.1 cable
- 3 meter stereo audio cable
- IEC type detachable power cord
- Quick Start Guide
- Optional accessories (if purchased)

Model 1300 series

- **stereo-link** Model 1300 DAC (black)
- 3 meter USB 2.0 certified premium cable
- **StudioSeries** premium audio interconnects, available in 2 to 12 meter lengths
- IEC type detachable power cord
- Quick Start Guide
- Optional accessories (if purchased)

3 Integrating the **stereo-link** DAC Into Your Audio System

3.1 Limitations of this Guide

This guide is intended to provide you with the information you need to successfully get your **stereo-link** operating properly. It does not contain extensive troubleshooting information. For more information, visit our website support page at:

<http://www.stereo-link.com/Static/Support.html>

There you will find answers to various technical issues, and you can also download a more complete version of the Users Manual.

3.2 Important Warning

The outputs of the **stereo-link** are DC coupled, and a momentary “thump” is likely to occur when the unit is powered on or off. To prevent damaging your speakers, always turn down the volume on your audio system before connecting cables or turning the **stereo-link** unit on or off.

When the unit is connected between your computer and audio system, but not powered on, it is possible that you may hear a hum coming through your audio system. This is the ground loop introduced when your computer is connected to your audio system. The hum is audible because the isolation circuitry in the **stereo-link** is not active when it is powered off. When the **stereo-link** is turned on, any hum should be reduced significantly.

3.3 What it does

Technically, the **stereo-link** is a USB DAC (Digital to Analog Converter). The audio output of your software player is transferred digitally using the USB link. The **stereo-link** converts this data to clean

audio, outside the computer, and bypassing the computer's sound card. USB audio support is built into all modern computers, so no special software drivers have to be installed.

3.4 Placement & Connections

Begin by determining where you want to locate your stereo-link. You want to choose a place that will allow for easy routing of all the cables. You should avoid placing the unit near sources of electrical interference, such as a computer monitor. Also avoid running cables near AC line cords and power converters, as this could introduce unwanted interference. Generally, it is better to run longer audio cables than longer USB cables. A USB extender will be needed if you want to go beyond 16 ft.

Once you are satisfied with the location, you're ready to hook up the cables. On the back of the 1200/1300 there are three sets of connections; the Audio Line out marked L & R, the USB jack marked with the USB symbol and the AC power cord. Using the cables supplied with the product:

- Attach the square portion of the USB cable to the **stereo-link**, while the thin flat connector plugs into the computer. The small ferrite block attached to cable should be at the **stereo-link** end, and should not be removed. It prevents radio interference and is required to meet FCC/CE standards.
- Next connect the audio cables between the **stereo-link** and your audio amplifier. The audio cables we provide have one end wrapped through a ferrite block. This end must be connected to the **stereo-link**. Attach the other end to any line level input on your receiver or amplifier, eg CD, Tape, VCR, DVD, etc. Do Not use the PHONO inputs, as the sound will be greatly distorted. (Be sure your amplifier is turned off or the volume setting is set very low while hooking up cables in order to prevent damage to your speakers).
- The stereo-link is equipped with an audiophile quality headphone amplifier. You plug in your favorite headphones to the jack on the front panel. Adjust the volume using the thumb-wheel control located on the right side of the unit, around the corner from the headphone jack. (NOTE: You can safely use the headphone jack as an output to computer speakers or other powered speakers).
- Now you are ready to turn the **stereo-link** on. Attach the power cord to the **stereo-link** and plug it into a suitable power strip or wall outlet. Avoid plugging into a power conditioner, such as a Uninterruptible Power Supply (UPS), unless the audio system will also be plugged into this device. Press in the power switch on the front, and the LED next to it will light to indicate that it is operating.

4 Using the **stereo-link** For the First Time

4.1 Windows 98SE/ME/2000/XP¹

Windows will automatically recognize the **stereo-link** when it is first connected (Detecting New Hardware), and automatically install 3 USB drivers which are usually already loaded on the computers hard drive. There is never any need for special stereo-link drivers.)

In earlier versions of Windows, you may be required to have your installation (or Recovery) CD available if the USB audio drivers are not on the hard drive. In Windows XP, this installation should occur automatically and take very little time. For versions other than XP, it is a good idea to restart your computer after new drivers are installed.

In Windows XP, you can quickly see if the stereo-link is active by double clicking on the loudspeaker icon in the system tray. The name of the stereo-link should appear in the bar at the bottom of the mixer panel.

¹USB Audio is not supported under Windows 95 or NT4

In most versions of Windows, you can verify that the **stereo-link** is both active and the preferred sound playback device. Go to the control panel (In XP, Start/Settings) and click on "Sounds and Audio Devices". Select the Audio tab. Make certain the **stereo-link** is selected as the Sound Playback Default Device. If you want the **stereo-link** to always play when it is active, check the "Use only default devices" box at the bottom.

When the **stereo-link** is receiving audio from the USB, the LED next to the headphone jack will light. It is normal for it to go off when the music stops.

4.2 Mac OS²

Normally the stereo-link will be automatically recognized under OS X (and earlier versions) when it is first connected. You can verify that the stereo-link has been detected by looking as follows:

Under System Preferences->Sound

select the Output tab. You should see 2 devices;
Internal Speakers / Built-in Audio
stereo-link 1200 USB DAC / USB

Make certain the **stereo-link** is highlighted, otherwise sound will continue to come out of the built-in speakers. When the **stereo-link** is receiving audio from the USB, the LED next to the headphone jack will light. It is normal for it to go off when the music stops.

4.3 Linux

USB Audio has been supported since Kernel version 2.4.0 5 .³ After verifying USB Audio support is enabled (either by default or as a result of a kernel compile) you must check to see that the USB Files system is mounted.⁴ Verify the **stereo-link** is installed as follows:

```
you@yourmachine$ cat /bin/sh > /dev/dsp5
```

or alternatively, go to the "soundcard detection" system setting, and make certain the **stereo-link** or USB audio is selected.

4.4 Settings for achieving the highest quality playback

To ensure the best performance from your **stereo-link** DAC, it is necessary that the DAC receives the full resolution of the music file you are playing. In general, you do this by properly setting the computer's Volume settings and controlling the playback volume with the amplifier's volume control.

In Windows, you should have the Master (Speaker) volume control slider and WAVE slider all the way up. If you play CDs, then that slider should also be set to max. The volume controls in Windows can be misleading. The Master or Speaker volume has the most range. When set half way, that corresponds to -25 dB. The same setting on the WAVE slider corresponds to only -5 dB. When both are set at half, the

²USB Audio is supported under the Mac OS 9.04 and above. The **stereo-link** will automatically become the default output device in OS 9.x, but this is not necessarily the case for OSX.

³USB Audio support must be compiled in statically or as a module. Many current distributions enable USB Audio support by default.

⁴Check /etc/fstab to see if it is mounted at boot time. If not, check, man fstab for details.

⁵NOTE: set the volume on your stereo very low while performing this test or speaker damage may occur. /dev/dsp generally points to the default device but this can vary based on installed hardware

level is about -30 dB. Check these settings periodically, and whenever the levels seem to have changed, as other Windows application may adjust these settings without you being aware of it.

On Macs running OS X, the proper volume can be set by going to System Preferences->Sound and select the Output tab. Set the volume control to maximum (all the way to the right).

The **stereo-link** is compatible with certain ASIO drivers, such as ASIO4all. These drivers can be used to bypass some of Windows' sound processing functions. See the FAQ on our website for more details.

5 Getting Help

If you're having problems with your **stereo-link** be sure you have:

1. Checked all the connections
2. Rebooted the computer
3. Read the FAQ on our Support Page <http://www.stereo-link.com/Static/Support.html>

Still Having Problems? Send us an email at support@stereo-link.com. We'll get back to you in a timely manner.

6 Warranty & Returns

6.1 **stereo-link** Limited Warranty

Sonus Research and Design, Inc. warrants the **stereo-link** products against defects in material or workmanship for a period of one year from the date of original purchase, and agrees to repair or, at our option, replace any defective unit with-out charge for either parts or labor. This warranty does not cover damage resulting from accident, misuse or abuse, lack of reasonable care, the affixing of any attachment not provided with the product, loss of parts, or connecting the product to any but the specified receptacles. This warranty is void unless service or repairs are performed by stereo-link or an authorized service center.

No responsibility is assumed for any special, incidental or consequential damages. However, the limitations of any right or remedy shall not be effective where such is prohibited by law. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Some states do not allow the exclusion or limitations of incidental or consequential damages or limitations on how long an implied warranty lasts, so the above exclusions and limitations may not apply to you. Products are sold on the basis of specifications applicable at the time of manufacture. stereo-link reserves the right to make changes or improvements in the design of the equipment without obligation to make such changes or improvements in purchaser's equipment.

Any out-of-warranty repairs are warranted against defects in materials and workmanship for a period of 90 days from date of service.

6.2 **stereo-link** Return Policy

stereo-link offers a two week (from delivery) money back guarantee (shipping charges are non-refundable). If, for any reason, you are unsatisfied with the performance of the product, do not find it useful for your application, or are dissatisfied for any other reason please send an email message to:

support@stereo-link.com.

In the message please tell us your name, order number, and date of purchase. We will respond in a timely manner. Do not return the product without a Return Merchandise Authorization number. You will be assessed a 15% restocking fee for a return without this authorization.