LINNENBERG

Owner's Manual

DSD

DXD

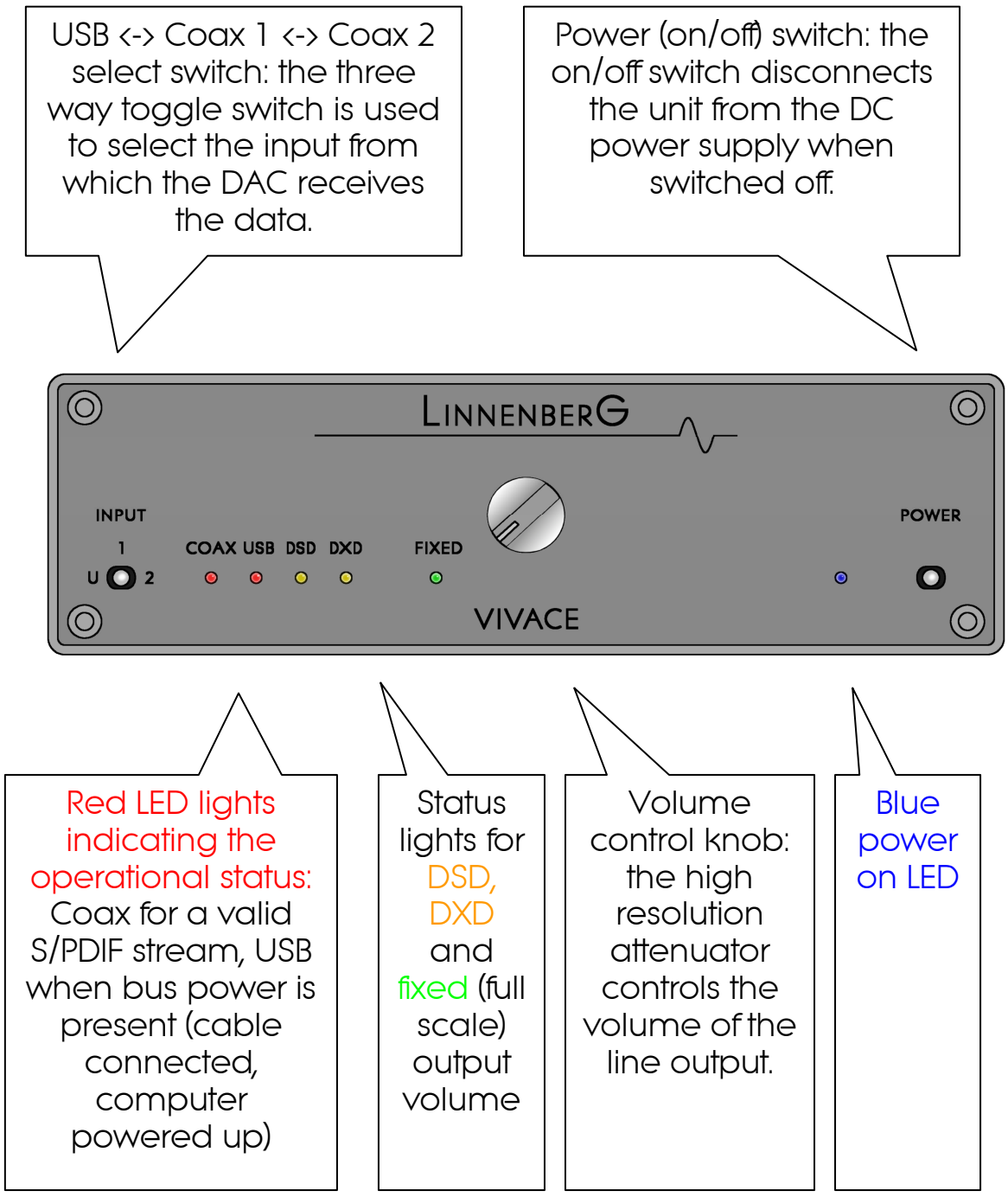
VIVACE

Introduction

In conjunction with a host computer (Windows, Mac OS, Linux) the VIVACE realizes a high performance audio source without drawbacks. The playback of audio files at CD quality (1411 kbps) is absolutely comparable with the reproduction of a pure high class CD-player. The result you get from the VIVACE depends strongly on the resolution of the audio file you play and on the correct settings of your computer running the audio software. In contrast to a red book CD-player, a computer in conjunction with the USB input can play files with extremely high resolution and with different formats like WAV, FLAC or DFF (DSD bitstream). Such music files can be downloaded on specialist internet shops like 2L.no, HDtracks.com or highresaudio.com to name but a few. The choice of music and the number of albums available is clearly limited today, but new releases show up every day. The big advantage here is that you are not bound to a certain format like SACD or DVD-Audio. Computer audio is future proof.

The second essential digital audio format is S/PDIF (Coax 1 + 2). The VIVACE supports sample rates up to 192kHz and bit depths up to 24bit. The S/PDIF inputs are intended for high performance CD drives as well as for © iphone / ipad / ipod docking stations. Here it builds the bridge to the playback of music collections stored on mobile devices.

Controls - front



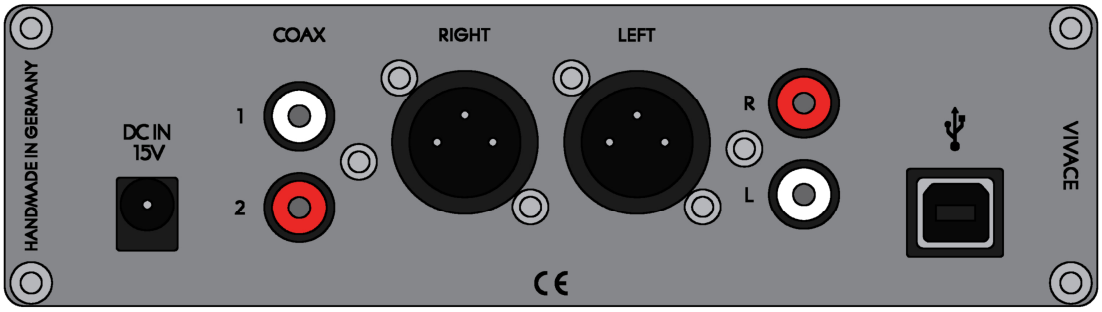
(Figure 1)

Connections - rear

Connect the power supply to the power inlet.

Coax – input: 2x RCA connectors are provided for correct hook-up of shielded 75 Ohm coaxial cables.

USB – input: the USB input employs a standard female B USB connector. Connect to the host computer with a high quality 2.0 USB cable.



Analogue Left / Right – output: A pair of gold plated RCA - connectors and a second pair of XLR - connectors (male) allows the connection of a power amplifier. The high current output drives any amplifier with ease.

(Figure 2)

Operation

The wall adaptor provided with the unit is connected to the VIVACE power inlet. The line operating voltage of this high performance power supply can range from 100V – 240V. The mains plug conforms to the sockets used in the destination country. Should for any reason you decide to use a different power supply, be sure it can deliver 15V DC, regulated @ 2A. The supply jack is a female type 5.5mm/2.1mm, tip is positive. We advice users that using a different power supply than the one included in the package will void the warranty: No warranty claim will be acknowledged for damages due to the use of a power supply different from the one included in the package.

Once the power supply is connected, the blue LED should light up when the power switch is operated. Turn off the unit and do the signal connections according to figure 2. If everything is connected, turn on and have fun!

The volume control works simultaneously for both analogue outputs. The control range spans from -84 … +0dB in increments of 1dB (-84dB - -41dB) and 0.5 dB (-40dB - 0dB). For utmost fidelity, we recommend using a preamp with analogue attenuation and operating the VIVACE in the fixed mode (green LED on). This only makes sense, when the preamp is state of the art, otherwise the internal volume control will outperform any analogue amplifier.

Driver installation

Installing process (Mac)

No drivers are required for the Mac computer with OSX 10.6.4 and later. A native support for audio devices compliant with USB 2.0 Audio class is already included in the operating system. Your VIVACE will be immediately recognized by the OS and ready to use. Be sure to select the VIVACE (Ivo Linnenberg Elektronik) as output device in the "System Preferences / (Hardware) Sound / Output" menu. In the "Applications / Utilities / Audio Midi setup.app" menu you can select the standard sample rate which is (44100 kHz) for CD sourced music. Using high end audio player software instead of iTunes is recommended.

Installation process (PC)

Do not connect the VIVACE to your computer yet, first download and install the driver:

http://linnenberg-audio.de/html/downloads.html

The installation package offers two installation utilities, "setup32.exe" and "setup64.exe" for Vista / Win7 or XP operating systems. Double-click on either "setup64.exe" or "setup32.exe", depending on your operating system: the driver will be installed in your PC. Restart your PC or Notebook and connect the VIVACE to the host for the first time. The VIVACE will now be recognized as usable device.

When the driver installation is done, you are ready to play music via USB. As long as the VIVACE is connected, it is automatically selected as output device. As it is the case with Mac computer, we highly recommend using special software instead of the Windows Media Player.

JPLAY (PC)

There are numerous high performance audio player for Mac and Windows OS available. Describing all of them would definitely go beyond the scope of this manual. If you should encounter problems with specific software, please feel free to send an enquiry regarding the matter. We will be happy in assisting you rectifying the subject.

Representative for a high quality audio player the JPLAY software is presented. The reason why JPLAY was chosen is simple: it sounds awesome and is easy to use – even for computer newbie's. The actual version is ready for DSD playback. Please feel free to order your software licence at *www.jplay.eu* . The only drawback is the very basic to non existent user interface. Those of you not willing to except the limited functionality can use JPLAY as ASIO output device in foobar2000 or just work with foobar2000 alone. Foobar2000 is free of charge, but needs to be adapted for DSD playback capability. Here is what to do:

Foobar2000 (PC for PCM and DSD playback):

Install the latest version of foobar2000 from the official website *www.foobar2000.org* . Download the kernel streaming support from the components section of the website. This allows you to have a bit-perfect transfer via USB. Decompress the file and copy the file "foo_out_ks.dll" in the directory "components" of the foobar2000 directory.

After having successfully installed all foobar2000 components, connect the VIVACE to your PC. Now start the foobar2000 player. Click on "file"; a drop down menu will appear; here go to "preferences". Select "playback / output". Now you have to make several adjustments:

Device :	KS: Ivo Linnenberg Elektronik Streaming
Buffer length :	1000ms
Output format :	32bit

That's the default setting for PCM files like WAV, FLAC or even MP3. In order to use the DSD capability of the VIVACE, you have to do the following: First, you need to download and install the Super Audio CD Decoder plug - in at:

www.sourceforge.net/projects/sacddecoder/files/foo_input_sacd/

Download "foo_input_sacd - 0.6.1.zip" (or later), open and extract all files. Then click and install "ASIOProxyInstall - 0.6.0.exe". After the installation is finished, copy the "foo_input_sacd.dll" file into the foobar2000 components folder. Next download and install the ASIO support 2.1.2 (or later version) plug - in:

www.foobar2000.org/components/view/foo_out_asio/

Run the downloaded file foo_out_asio.fb2k - component to install the ASIO plug - in. Start foobar2000, click menu and select "file", and then enter the "preference" section. Jump to "playback / output" tab. Select "ASIO: foo_dsd_asio" as output device in the "Device" section.

Go to the ASIO4ALL website *www.ASIO4ALL.com* and download "ASIO4ALL 2.10" (or newer):

In foobar2000 "preferences / playback / output / ASIO" you will see ASIO4ALL as an ASIO driver option: Double click on ASIO4ALL to launch the control panel. If you don't see the control panel it is minimized on your task bar. Configure ASIO4ALL by selecting "Ivo Linnenberg Elektronik USB driver 1.0.56". Click on the little icon to highlight it.

Now configure "foo_dsd_asio" by selecting ASIO4ALL as the ASIO driver. Here again, the control panel may be minimized on the task bar.

ASIO driver :	ASIO4ALL
DSD Playback Method :	DoP Marker 0x05/0xFA
PCM to DSD Method :	none
Fs :	DSD64

Close the "foo_dsd_asio" pop-up window; go back to the "Tools / SACD" tab. Here, please select:

ASIO Driver Mode :	DSD
PCM-Volume :	+0dB
PCM Samplerate :	176000
DSD to PCM Mode :	Multistage
Preferable Area :	Stereo

Click "OK" button on Preferences windows and restart the program. You are now ready to play back PCM and DSD files with foobar2000.

Specifications

Sampling frequencies PCM :	44.1, 48, 88.2, 96, 176.4, 192, 352.8, 384 kHz ; S/PDIF – input limited to 192 kHz max.
Resolution PCM :	32bit
Resolution DSD :	DSD64 (2.8224MHz) and DSD128 (5.6448MHz) over DoP protocol
Master clock jitter :	82 fs (femto seconds)
Frequency response :	DC - 24kHz +0.1dB -0.5dB DC – 70kHz -3dB @192kHz or DSD
Distortion and noise :	<0.002% 10Hz - 20kHz @ 0dB; **zero feedback** operation in the critical I/U stage
Dynamic range :	130dB
Output level :	2V rms single ended 4V rms balanced
Output impedance :	100 Ohm per phase
Mains voltage :	100V - 240V
Power consumption :	9W, < 0.5W stand by
Dimensions (H x W x D) :	51 x 165 x 226 mm

CE declaration of conformity

Product Type: Digital – Analogue – Converter (DAC)

Model: VIVACE

Linnenberg-Elektronik declares that this product complies with the Low Voltage Directive 2006/95/EG and the Electromagnetic Compatibility Directive 2004/108/EG.

The unit meets all currently valid regulations only in its original condition. The original, unaltered factory serial number must be present on the outside of the unit and must be clearly legible! The serial number is an essential part of our conformity declaration and therefore of the approval for operation of the VIVACE. The serial numbers on the unit and in manual, must not be removed or modified, and must correspond.

Furthermore, the unit has been found to comply with the limits for a Class B digital device, pursuant to Part 15, subpart B (unintentional radiators) of the FCC rules.

LINNENBERG – ELEKTRONIK
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Warranty Certificate

LINNENBERG ELEKTRONIK warrants this product, under normal use, to be free of defects in materials and workmanship for a period of 2 years from date of purchase, as long as the product is owned by the original purchaser.

In the event that LINNENBERG ELEKTRONIK receives, from an original purchaser and within the warranty coverage period, written notice of defects in materials or workmanship, LINNENBERG ELEKTRONIK will replace the product, repair the product, or refund the purchase price at its option.

In the event repair is required, all shipment costs to and from LINNENBERG ELEKTRONIK shall be covered by the purchaser. In the event that repair is required, a return authorization must be obtained from LINNENBERG ELEKTRONIK. After this authorization is obtained, the unit should be shipped back to LINNENBERG ELEKTRONIK in a protective package with a description of the problem.

In the event that LINNENBERG ELEKTRONIK determines that the product requires repair because of user misuse or regular wear, it will consider a fair repair or replacement fee. The customer will have the option to pay this fee and have the unit repaired and returned, or not pay this fee and have the unit returned not repaired.

Serial No. :