

LINNENBERG

Owner's Manual



VIVACE 2

Introduction



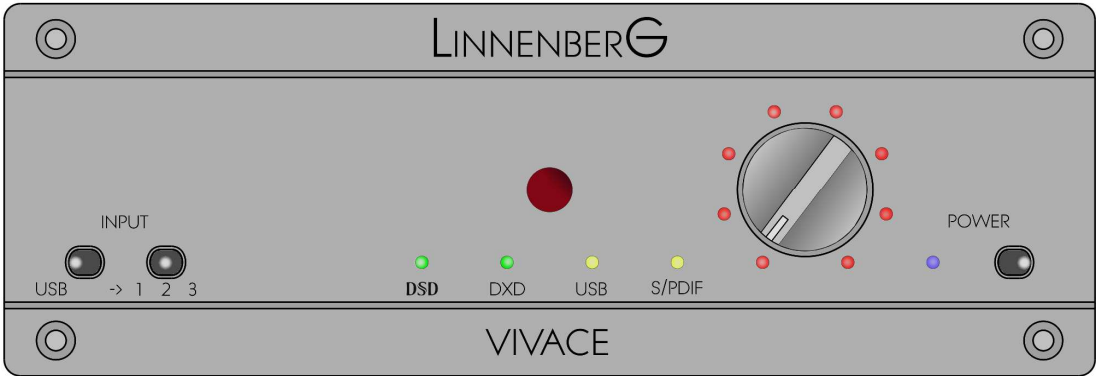
In conjunction with a host computer (Windows, Mac OS, Linux) the VIVACE 2 realizes a high performance audio source without drawbacks. The playback of audio files at CD quality (1411 kbps) is absolutely comparable with the reproduction of a pure high class CD-player. The result you get from the VIVACE 2 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 + AES/EBU). The VIVACE 2 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

USB <-> S/PDIF and 1 <-> 2 <-> 3 select switch: the toggle switches are used to select the input from which the DAC receives the data.

Power (on/off) switch: the on/off switch disconnects the unit from the DC power supply when switched off.



Status lights for DSD, DXD

Red LED lights indicating the operational status: S/PDIF for a valid S/PDIF stream, USB when bus power is present (cable connected, computer powered up)

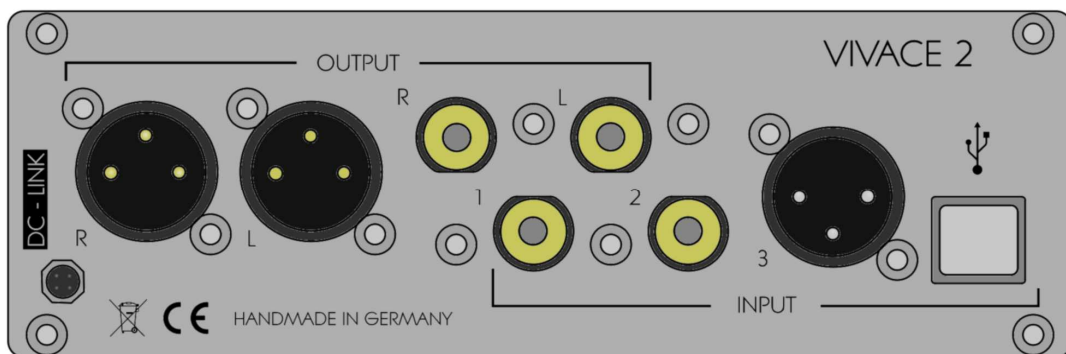
Volume control knob: the high resolution attenuator controls the volume of the line output.

Blue power on LED

(Figure 1)

Connections - rear

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.



Connect the power supply to the power inlet.

S/PDIF – inputs:
2x RCA connectors
plus 1 x symmetric AES/EBU connector

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.

(Figure 2)

Basic operation

Place the unit on a solid, flat level surface such as a shelf where it is convenient to operate.

Some naturally venting air is recommended and ambient temperatures over 27 degrees Celsius and / or extreme humidity (> 85%) should be avoided. !

Please note, operation of the VIVACE 2 is exclusively possible in conjunction with the UNISONO or LEGATO supply. To prevent potentially erroneous connections, the socket on the rear site of VIVACE 2 only accepts the mating plug of the UNISONO / LEGATO DC power cable.

Before ultimately firing up your VIVACE 2, you must first establish the connection to UNISONO / LEGATO. The multi pin medical grade connector with lock nut must be secured first in place. Please avoid making this connection when the UNISONO / LEGATO is already powered up and the POWER switch of the VIVACE 2 is in the <ON> position. In this case high surge currents may harm the precision contacts.

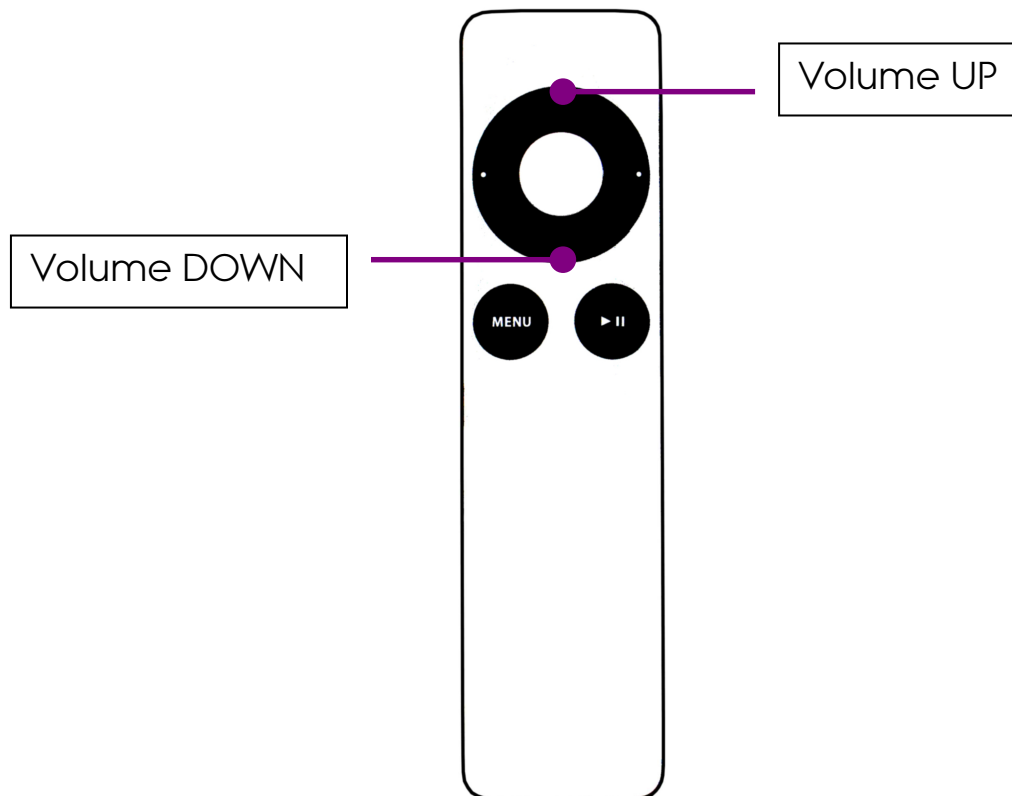
Once the power supply is connected, the blue LED should light up when the power switch is operated. Turn off the unit and do the signal connections according to figure 2. If everything is connected, turn on and have fun!

Volume control

The volume control works simultaneously for both analogue outputs. The control range spans from -79 ... +6dB in increments of 1dB (-79dB - -29dB) and 0.5 dB (-28dB - +6dB). If you wish to drive a preamplifier or an integrated amplifier, you may turn the volume knob to full scale.

Remote control operation

To enhance the versatility of the VIVACE 2 as a digital preamp, the volume is remote controllable. The unit responds to the © Apple remote.



(Figure 3)

Please note, the ©Apple remote is not included in the delivery !

When powering up the VIVACE 2, the setting of the volume knob will be used as actual playback volume (...usual potentiometer operation). Once you have pressed the remote in either direction, the actual volume alters depending on how long you have ramped up or down the volume. In contrast to the knob marking, the LED bar graph display always correspondence to the actual volume. Rotating the knob restores the potentiometer operation.

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 2 will be immediately recognized by the OS and ready to use. Be sure to select the VIVACE 2 (Combo384 Amanero) 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 Hz) for CD sourced music. Using high end audio player software instead of iTunes is recommended.

Installation process (PC)

Do not connect the VIVACE 2 to your computer yet, first ! download and install the driver.

The newest version of the installation package for VIVACE 2 *performance pack edition* offers a single executable for all Windows operating systems and native ASIO driver for 32 and 64bit systems. Double click on the file in order to install the complete package. Restart your PC or Notebook and connect the VIVACE 2 to the host for the first time. The VIVACE 2 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 2 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 players 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 2 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: Amanero Technologies 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 2, 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 - 0.7.4.zip" (or later), open and extract all files. Then click and install "ASIOProxyInstall - 0.7.1.2.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.

Now it is time to install the appropriate ASIO (32 or 64bit) driver from the VIVACE 2 driver zip-file. Sometimes the installation is already carried out during the installation of the main driver executable. You won't have to do it again then.

In foobar2000 "preferences / playback / output / ASIO" you will see "foo_dsd_asio" as an ASIO driver option. Now configure "foo_dsd_asio" by double clicking on that entry. The following options will show up:

ASIO driver :	ASIO Combo 384 driver	
DSD Playback Method :	DoP Marker 0x05/0xFA or ASIO Native	
DSD to DSD Method :	none	FS: DSD64
PCM to DSD Method :	none	FS: DSD64
DSD/PCM Transition :	50 ms	

Playing DSD256 or DSD512 files requires the selection of the native ASIO driver. !

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.

JRIVER (PC)

A combination of fine sound quality and ease of use is JRIVER. In contrast to foobar2000 there are just a few adjustments to do.

Output mode :	Kernel streaming
Bitstreaming / custom ...	Yes (DSD over PCM (DoP)) Format : DoP 1.0 (0xFA / 0x05)

The features of JRIVER are countless and thus can't be described here. However the above settings are essential for the sound quality we strive for. Our own experience showed that JRIVER delivers a flawless approach to a high class software player without the hassle of foobar2000 and without the limitations of JPLAY. As is the case with foobar2000, no audible switching noise between different formats occurs what so ever.

AUDIRVANA PLUS (MAC)

A very user friendly and exceptional sounding software is Audirvana Plus. Just download the AudirvanaPlus_1.5.12.dmg file and run it on your computer. Most of the settings are by default – there is very little to configure. Please select in Audirvana preferences menu:

Preferred Audio Device :	Combo384 Amanero
Native DSD capability :	DSD over PCM standard 1.0

You can even arrange Audirvana to upsample your PCM files in a case selective manner. Even if the iZotope plug in is one of the best software upsampler, we recommend playing your files in the native form as this guarantees the best over all performance. Upsampling is not making your source files any better; it just makes the transmission to the DAC more susceptible to jitter.

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, DSD256 and DSD512 over ASIO native
Master clock jitter :	82 fs (femto seconds)
Frequency response :	DC - 24kHz +0.1 dB -0.5dB DC – 70kHz -3dB @192kHz
Distortion and noise :	<0.0003% 10Hz - 20kHz @ 0dB
Dynamic range :	136dB
Crosstalk :	120dB @ 20kHz
Output level :	4V rms single ended 8V rms balanced
Output impedance :	100 Ohm per phase
Power consumption :	8W, < 0.5W turned off
Dimensions (H x W x D) :	60 x 170 x 230 mm

CE declaration of conformity

Product Type: Digital – Analogue – Converter (DAC)

Model: VIVACE 2

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 22. 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.

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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. :

