



## Oehlbach® USB Bridge

**"Stylish USB DAC with excellent acoustic qualities  
and a lot of application options"**

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Ultra-compact USB DACs for use with high-performance headphones are very much the trend nowadays. Why? Demanding users rely more and more on high-resolution audio files, e.g. in FLAC, DSD or WAV format, stored on a PC, notebook or NAS systems/home servers. This music with extended dynamic range and a particularly detailed treble range often demands far too much of the output options and playback qualities offered by a PC or notebook.

If a headset is connected directly to a PC or notebook, the playback is often poor, even if a well-recognised software player is used that supports high-resolution audio playback. The fact that the sound quality can still only be regarded as inadequate is due to the cheap headphone amplifier and the simple D/A converter in the PC or notebook.

A separate USB DAC like the Oehlbach DAC, known as the "USB Bridge" and available for just under €150, promises to be a rapid and effective remedy. The USB Bridge can be connected to any vacant USB port on a PC or Mac and present a range of high-quality features. First of all, headphones are supported with an impedance of 12 - 10k ohms.

The USB headphone amplifier/DAC is extremely compact in size – with the high-performance device only about as big as a standard USB stick. 24-carat gold-plated contacts, Plug&Play function without any special software for PC or Mac, all very welcome features. We have checked out all of this, of course – and Plug & Play really does work on a PC or Mac. On the PC, we use WinAmp as the software player, and Adirvana on the Mac.

The flawlessly made, small DAD natively supports up to 96 kHz/24 bits - according to Oehlbach on its website. The D/A converters in the small enclosure come from the well-known supplier Asahi Kasei (AKM AK4396 model) and can actually process up to 192 kHz/24 bits according to the information given in the relevant AKM data sheet.

However, as the Audirvana software player on our Apple MacBook pro clearly indicates, 96 kHz and 24 bits is the native limit – Oehlbach specifies everything in precise terms accordingly; the USB Bridge processes up to 96/24 natively. The AKM DAC is furthermore able to process 1 bit DSD signals, e.g. from SACDs as well as DSD HiRes files. The converter also displays extremely high tolerance to digital jitter.

The stylish aluminium enclosure ensures the best possible quality. Use of the analogue stereo output (3.5 mm) is not just limited to direct connection of a headset. It may also be possible, if there is no 3.5 mm connector, to connect the USB Bridge to a stereo system using a 3.5 mm stereo RCA adapter.

To extend the application possibilities, Oehlbach provides a high-quality 15 cm USB extension cable. The package also includes a protective cap to keep the device safe when on the move.

## SOUND

With "Past Is Dead" by Bad Religion, the Oehlbach DAC immediately shows how highly motivated it is. Dynamic, rousing, neutral – the

Flac 88 kHz/24 bit number comes across as very authentic. The headset we used was the tried-and-tested Sony MDR-Z1000 (recommended retail price €499), outstanding high-end headphones with balanced and richly detailed sound. The very compact Oehlbach DAC is immediately recognised by the PC and the Mac, so we can get started.

We then listen to "Summer Lovin" by Torsten Goods in the form of a Flac 88 kHz file. The Oehlbach USB DAC reproduces the relaxed rhythm of the number in an outstanding way. The voice is rich in detail, highlighting the main features through clear reproduction of the overall contours. The bass is convincing with natural interpretation and impeccable depth.

Diana Krall's "I Miss You So" was available to us in Flac 96/24 format. The charismatic voice comes across as incredibly realistic, with the Oehlbach USB DAC displaying very good resolution. It has an extremely uniform and pleasant design with, happily, no unpleasant undertones whatsoever. The keyboard expression of the piano is presented without any difficulty. In addition, the separation of Diana's voice from the instruments can be described as very precise. The Oehlbach DAC harmonises very well with the acoustically neutral Sony headphones.

The playback characteristics on "Diamante" from Sandra & Tony Alessi also come across as very natural and vivid. The bass is tight and honest, and there is no unnatural "buffering". With this HiRes number in Flac 96/24 format, the Oehlbach USB DAC once again displays its excellent resolution, especially in the treble range. It brings out the structures in a subtle way, placing them in the virtual space in a precisely locatable manner. Both the female and the male voice sound very clear, with no trace of unpleasantly aggressive undertones, although the number here can be rated as quite critical, as we know from other listening test series.

Wolfgang Amadeus Mozart's Violin Concerto opus 218, 1st allegro: We always like to take this part to sound out new products. Played in Flac 96/24 format, it also challenges the USB Bridge with the high degree of acoustic facets as well as huge vitality and enthusiasm. However, the USB DAC from Pulheim faces up to all the challenges and overcomes them effortlessly. It presents the violin solos with great attention to detail and excellent impulse fidelity. Another feature worthy of mention is the transparent, fine sound of the violin, which is never unpleasantly piercing. The overall orchestral performance is incorporated in a precise way, with the dynamics transported into virtual space in an admirable manner.

Even though the resolution is higher at 192 kHz/24 bits, "River Towns" by Mark Knopfler comes across very well. Clear, fine and with Mark's voice beautifully reproduced – the discerning music fan will be very happy with the USB Bridge. The USB DAC also presents the instrumental structures with finely defined contours.

Can the Oehlbach DAC also perform well on Spotify tracks of modest quality, or is a high-quality USB DAC needed to play back streams like this? In "Back Again" from General Base, it quickly becomes evident that the bass becomes

tighter, control greater and the treble range freer when we use the Oehlbach DAC. With the 2011 remix of the General Base classic "Poison", the USB Bridge quickly shows that it offers distinct acoustic advantages: Greater tonal depth combined with sharper acoustic contours. The voice is separated more cleanly from effects and the bass line. The bass is not as solid as some users might wish, but does have an extremely precise and clear structure. The Svenson & Gielen mix of the Brooklyn Bounce track "Bring It Back" portrays a comparable acoustic image. The bass hits just the right spot and also has the right degree of hardness for this number. The build-up is vivid and transparent at all times. The Oehlbach DAC comes up trumps again with its three-dimensionality, which is excellent because it is so genuine.

## CONCLUSION

Oehlbach offers, at a fair price, an outstanding, very compact and extremely high-quality USB DAC that is entirely convincing acoustically with fine resolution, dynamic and spatially genuine reproduction. Flexible application options and excellent components also speak in favour of the practical device.