

Review of Rockna WaveLight, by MJ, 08/2020 on



ROCKNA Wavelight DAC

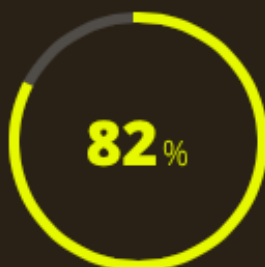


A very good impression of the Wavelight DAC starts with unpacking – it is a very dense device and its weight can put many power amplifiers to shame. The case is an assembly of thick aluminum plates and this, together with slick exterior, makes an impression of solid military device that can be dropped and run over by a jeep.

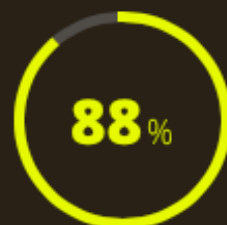
Function and form



EASE OF USE



SOUND



APPEARANCE

You may have noticed that discrete FPGA solutions have become a hit of the last several years in digital to analogue conversion, instead of OEM DAC chips. Pioneered by dCS, MSB Technology or TotalDAC the R2R and FPGA architecture has – among other advantages – almost endless flexibility in how it is configured. The FPGA (which stands for *Field Programmable Gate Array*) is what it says – an array of hundreds or thousands of gates that need a software to become functional. The software determines what the FPGA will become, it can be a DAC as well as a mikroprozessor. Rewriting the software changes the purpose of the device. What does it mean for the Rockna Wavelight DAC? It can hardly become obsolete as the gates can be reprogrammed to reflect the latest developments.

Rockna's own clock/oscillator is the other important feature of the Wavelight DAC. According to Rockna the clock is often responsible for "digital harshness". They see the clock distribution architecture as crucial for good sound and say that "The jitter amount that really counts it's not only the performance of the clock itself – but the clock which actually enters the DAC and is used for conversion – let's call it the conversion clock. The conversion clock that enters the DAC section relies on the clock tree, which is usually not just routing, but in most cases conditioning, altering its quality. A poorly designed clock tree can degrade significantly the clock quality entering the D/A section, even if the source clock has great performance. With these facts in mind, we designed an advanced clock system called Femtovox. With Femtovox in place, one is assured that only extremely small amounts of jitter are present at the DAC conversion clock input. It's unique architecture employs that conversion clock is directly synthesised at the DAC input, without any conditioning, giving constant jitter performance at any sample rate". I only add that the Wavelight DAC can work with digital signals up to 32bit/384kHz and 1-bit DSD512.

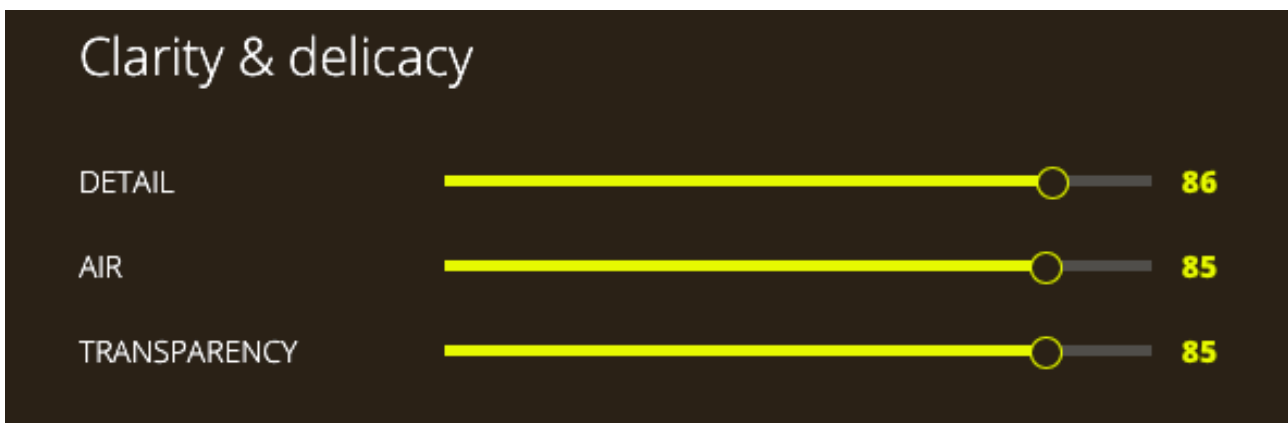
The Wavelight DAC inputs include I2S, USB, AES/EBU, Toslink, S/PDIF, and as a *bonus* there is an analog input on single-ended RCA cinches for the Wavelight DAC can also work as an preamplifier, The preamplifier, although digitally controlled, is conceived in a completely analog domain and its gain is selectable 0/6/9.5dB. This way the Rockna can be used also as a device to which your phono preamp or tape output is connected to.

The control menu of the Wavelight DAC is pretty simple and can be navigated with the help of 3 buttons on the DAC's faceplate. There is no remote controller provided (sic!) but with a download of iOS or Android app you can use your smartphone or tablet to control the Rockna. The digital conversion uses 3 selectable filters or no filter at all - this will be discussed later on. My only complaint goes to the nice and big but overly bright display which flooded me with light even at the minimum brightness setting. In the maximum mode the Wavelight DAC is fine as a main light source in your living room after dusk. Less bright next time, please.



Before I start to discuss the D/A conversion capabilities of the Rockna let me say that the Wavelight DAC is a really accomplished preamplifier. The preamp part of it is not just an extra function thrown in but apparently got the full designer's attention. It is very non-intrusive, almost invisible, actually quite similar to what I heard with rather expensive and ultimate Bespoke Audio passive preamplifier. The Rockna's preamp is not colored and have a transparent and relaxed attitude in spades.

And when I combined it with the DAC's capabilities I got the sound that I heard with some of the best Class D amps that passed through my hands, like the Mola Mola or the Lyngdorf Millennium. The music spreads over the front wall and *invites* me in. There is no thinning, pushing or thickening. The Wavelight DAC offers a very beautiful balance that is neither tubelike nor solid-state or digital, rather musical. Listen to George Michael's classic *Spinning The Wheel* (*Older* and the Wavelight DAC makes it a rocking number with a great soundstage and punchy bass lines. The bass is indeed quite exceptional through the Wavelight DAC, I would say *addictive*, and easily one of the best available at any price. On the other side of the frequency spectrum the Rockna is not as vivid and not as colorful as the best ones, which brings slightly drier and less alive sound, especially to those who like richness of tubes.



Loreena McKennit and her *Santiago (The Mask and The Mirror)* reminded me of a headphone experience – the control of the Rockna over the sound is exquisite, it was as if the converter removed acoustics of the room from the listening equation. This was a sign of a very honest frequency balance if anything else. Still one can sculpt the sound of the Wavelight DAC with the switchable filters.

The FLT LIN aka a linear phase filter moved the tonality to a darker pitch, the music got denser in lower midrange. It was as if there was one extra musical instrument in the mix that added the imaginary thickening in the background. Along came the sense of richer colors and juicier sound. Unlike with many other digital sources the differences between the Rockna's filtering algorithms are quite pronounced, so switching to the FLT MIN aka a minimum phase filter generated a different experience. I liked this filter the most and I kept it engaged for most of the listening sessions. It combined the rhythmic drive with transparency with the juiciness of the minimum phase filter and the sound was pleasant to listen to, pure joy it was.

Tonal accuracy



The FLT HYB aka a hybrid filter actually sounded like a hybrid between the two I mentioned earlier. It was less relaxed and natural than the linear filter and less accomplished as far as the ‘wholeness’ or ‘completeness’ of sound was concerned. Yet this is what I heard and your findings may be different as each person has a unique pair of ears and unique listening preferences. The main message is that the Wavelight DAC gives you those degrees of freedom.

Spatial resolution



The Rockna Wavelight DAC is not a sort of “ruthlessly revealing” devices and that makes less accomplished program material quite digestible. The brutal thrash metal stomper *Death Is Certain (Life Is Not)* from now legendary Dark Angel’s *Darkness Descends* album is not an audiophile gem. An unknown band, low budget, one day that you have to make the whole album in a studio – tat was the case of the album’s conception. Perhaps this is why it is so fierce and the Rockna was able to transfer this massive energy to my ears without sounding too harsh and with more details heard at the same time.

My resume is: The Wavelight DAC is an excellent value for money. If you consider that you can actually save an extra budget for a preamplifier then the Rockna is a fantastic buy. I did not audition their flagship Wavedream DAC yet, however this – much more expensive - unit does not come with the built-in preamp. So I doubt there is something that can beat the Wavelight DAC in its price category.

