



# THE KID'S GOT TALENT

Auratic discovered a seductive HiFi recipe with the brilliant Aries Mini, and now its winning ingredients satisfy real sound aficionados as part of the new „Altair“:

One thing of which you cannot accuse the gentlemen at Auratic is a lack of innovation and creativity. The company's very first product proved its developers had been observing and considering the market: since we are currently being swamped by a veritable flood of D/A converters, the "Aries" was designed as a streaming bridge, a pure network player without its own DAC whose sound can be adopted to the specific taste by the choice of a suitable converter. Just about a year later the "Aries Mini" followed (see figure next two-page spread) as a compact network player – this time with its own D/A converter – which can be expended into a full-fledged music server with minimal tinkering. Since the small box costs barely € 500 it hit like the proverbial bomb, leaving the Auratic designers so surprised by their success that they immediately started process which usually works in the other direction: instead of migrating the technology of a flagship product down to cheaper products, the reverse took place. The Aries Mini has become the basis of the company's high-end streamer/server/DAC mix.

## HiFi control center

The result is the Altair: although still a very compact device, at "midi" width, it

transfers the basic recipe of the Mini to the upper middle class. For a beginner in digital music playback, its spectrum of functions may appear difficult to master, but put it this way: buy the Altair and you need no more than a power amp and speakers to create a complete system.

The robust and outstanding workmanship of the metal box houses a superb D/A converter whose ESS chip processes signals up to 384 kHz/32bit and DSD up to 11.2MHz (DSD 256). In order to prevent jitter and rounding errors, the DAC has two independent clock generators – one each for 44.1 kHz and its multiples and variations on 48 kHz and multiples – and the four digital inputs include a USB port for computers.

If you have ever wondered why current D/A converters require 32-bit signal processing – after all, there are no sound formats in this resolution – we can now show you an application: the Altair has a digital volume control, which qualifies it as a full-fledged preamp. Its internal 32 bits (which allow for more than four

billion volume levels) make its amplitude resolution so fine that any analog potentiometer looks vague by comparison, and even when listening at extremely low volumes there's no noticeable loss of resolution. The volume control doesn't have a bypass, but not to worry: if you want to operate the Altair in line mode simply set the volume to 100 %. Since volume adjustment is a mathematical operation, the audio signals are no longer touched with the control set to maximum, and effectively the volume regulator no longer interferes with the signal path.

The second main feature of the device is the network-ready media player. Auratic acquires music files via LAN or WLAN from every hard drive on the home network. It doesn't use the DLNA or UPnP protocol, so it doesn't find data stores automatically: as is the case with, for example, Sonos products or Elac's "Discovery", you have to "point it at" the network music location as part of the set-up process, by entering a network address. This may represent a bit of a hurdle for



▲ A wealth of connection in limited space: the Altair can feed external USB converters with an untreated datastream via the DAC connection in the middle.

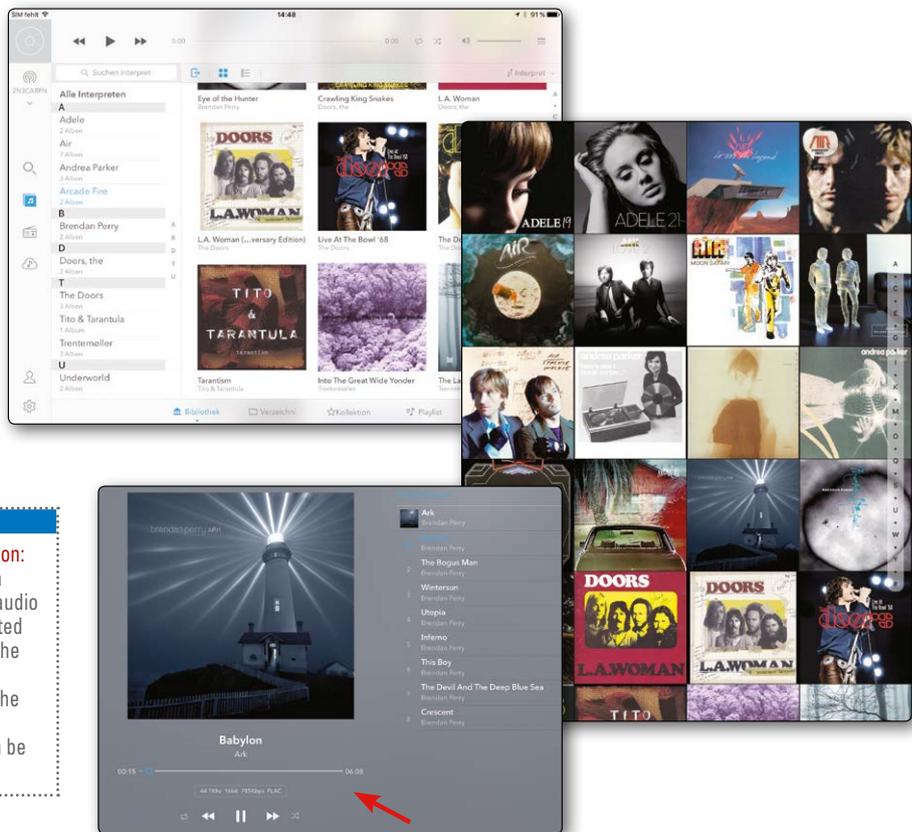
beginners since it is not exactly easy to enter file paths via iPad or Android tablet – not to mention to even find the IP address of an NAS or network hard drive in the first place – so some may require some assistance from a net-savvy friend or the supplying dealer.

Once this hurdle is out of the way, however, the proprietary indexing and administration of the music library only has advantages: the Altair searches through all found media indexes and passes their content tables directly to company's excellently designed, free remote app. This trick makes it a lot faster to get

a feel for the operation since the app never has to check on the network whether the stated drive even exists. As you can see on the screen capture below, the remote control is designed well and offers library and playback views as well as a colorful cover tile view, which invites you to discover your own music collection again. One point of criticism is that our test sample became confused with playlists containing more than 1000 titles – so you should hold yourself back a bit! – but apart from that, our only observation is that the enlarged cover view could use higher resolution.

**KEYWORD**

**Amplitude resolution:** The amplitude of a digitally sampled audio signal is represented via the bit value. The more bits a digital audio signal has, the more faithful the original signal can be reproduced.



▲ Here you can see three of the many facets of Auralic's remote app. In addition to the excellent design, which may require some study, we especially like that the playback screen displays the sound format in clear text (arrow).

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In terms of formats, the media player reads everything! Since it is built on a full-fledged Cortex-A9 computer, the Altair is also capable of accessing the network streaming services of Tidal and Qobuz, and as well supported audio files from the network can also play from USB hard drives, which can be plugged into the back. That offers a tidy alternative for all those who don't want to deal with IPs and networks.

However, it can become even more elegant since the streamer has also inherited the upgradability of the Mini: you can get your dealer to expand the Altair with the internal mounting of a 2.5" storage drive (SSD or HDD) of any capacity using optional cables. As soon as the streamer has been set into the "Internal Storage" mode in the setup, it will appear as a mass storage network drive to other computers on the network, making it easy to copy over files from any computer.

Another feature carried over from the Aries and Aries Mini into the architecture of the Altair is digital signal output via

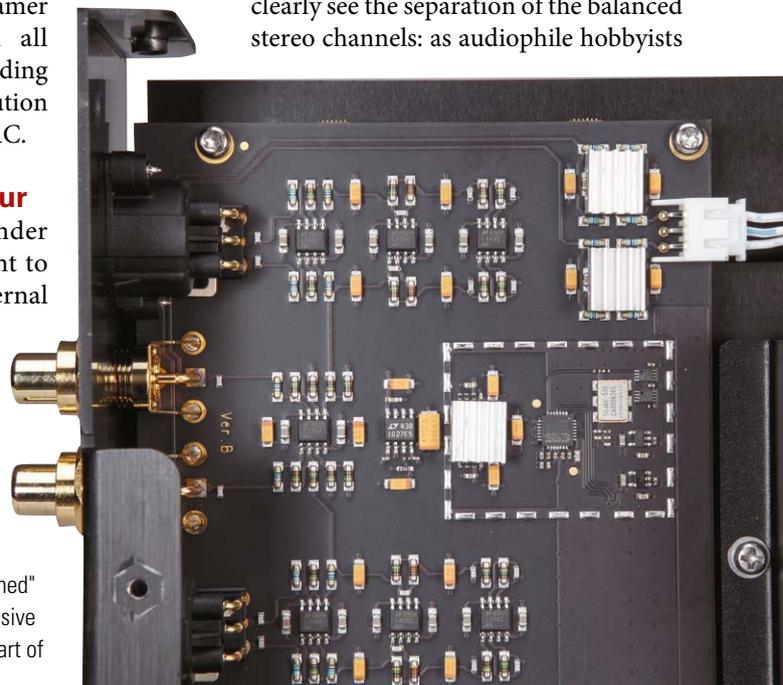
USB: the internal D/A converter (including all downstream analog output stages) is disabled, and all signals flow through an USB output to the converter of your choice. Compared to optical and coaxial connection, this has the benefit that the streamer can pass through all sound formats including DSD in native resolution to the connected DAC.

**Filter connoisseur**

However, we wonder why you would want to circumvent the internal DAC and analog

The Altair has an unusually cleanly designed analog section. The ESS converter lies in the "hashed" frame. The two silver passive heat sinks top right are part of the headphone amp. ▲

output stages of the Altair, as they're among the cleanest and most impressive we have come across in this price and model class. The illustration on the top of this page shows you the complete converter and output section, where you can clearly see the separation of the balanced stereo channels: as audiophile hobbyists





▲ From the Mini to the max: The clever € 500 streamer Aries Mini served as blueprint for Auralic's development of the versatile multitasking Altair.

AAC and MP3 files from digital artifacts. You can also use the 'dynamic' filter to pep up the usually somewhat stolid reproduction of Tidal or Qobuz streams – sound fetishists will have fun playing with this selection of effective filters.

will know, such a reduced signal path with few high-quality components is definitely good for the sound. Analogue output is available on robust gold-plated balanced XLRs and conventional RCA sockets, as well as via the headphone output on the front, which has its own amplifier path and sounded impressively open and dynamic on our test headphones (Sennheiser HD 800 and Audioquest Nighthawk).

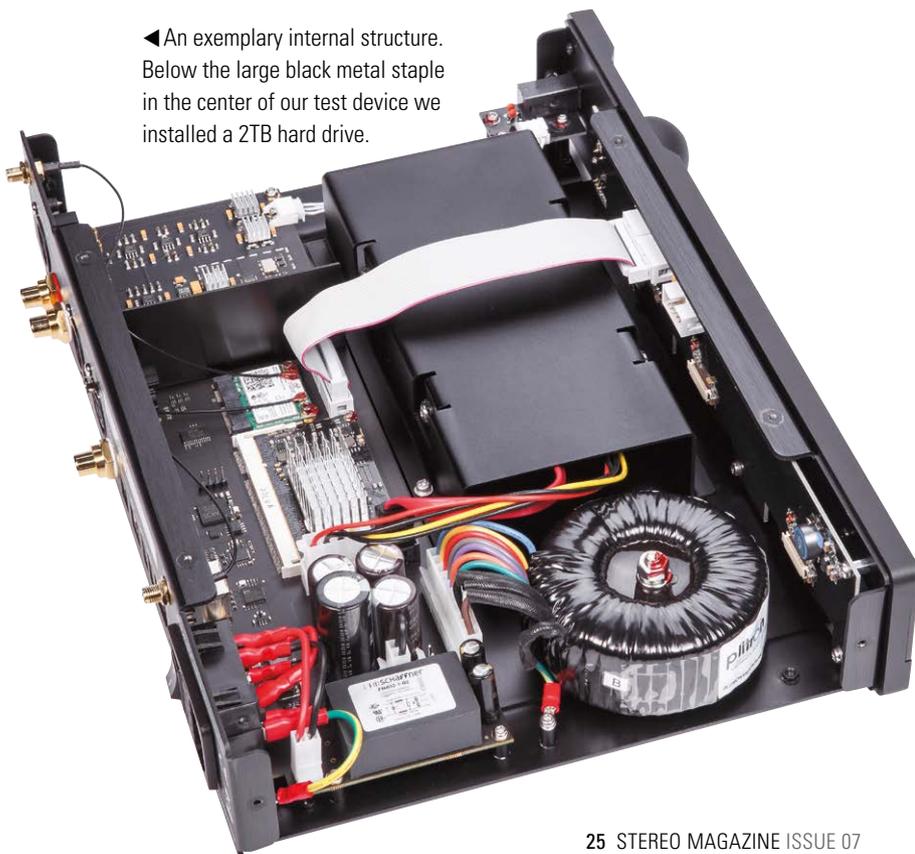
In addition to the superb analog signal processing, however, there are also four switchable digital filters, which can be used to tailor the sound. They can also be switched using the remote app and are labeled clearly with terms such as "precise", "soft", "dynamic", and "balance", and do exactly as they promise with remarkable efficiency: we liked the 'precise' filter best for its musicality, while the clearly gentler 'soft' filter defused harsh and biting pop and rock productions and also audibly freed highly compressed

Overall, whether connected to our Exposure 3010 power amp or ADAM's Compact Mk 3 active speakers, the Altair sounded outstandingly resolved and spacious, able to project stages and concert halls into the room in a lifelike manner. The sound is really sophisticated, open, and balanced, its brilliance and clarity in the upper ranges providing a good contrast to the color and presence of the midband.

It separates voices and solo instruments very finely and delivers even the smallest nuances of the music, and thus will satisfy connoisseurs as well as more analytical listeners who like to penetrate through the music and experience every detail. Combined with the right power amp or a good active speaker, Auralic's latest success is a real seducer, with many talents.

*Carsten Barnbeck*

◀ An exemplary internal structure. Below the large black metal staple in the center of our test device we installed a 2TB hard drive.

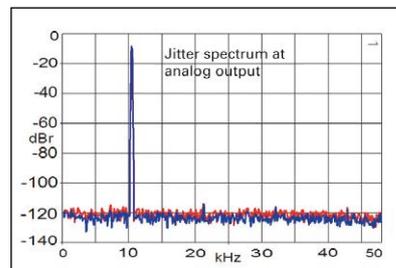


## AURALIC ALTAIR

Price: ca € 2000  
 Warranty: 2 years  
 Dimensions: 33 x 7 x 30 cm (WxHxD)  
 Contact: Audionext  
 Phone: +49 201/5073950  
 www.audionext.de

Conclusion: Auralic created a great mixture of streamer and DAC with the Altair. The server option is still unique.

### LAB MEASUREMENTS



Signal-to-noise ratio digital null	116 dB
Quantization signal-to-noise ratio 16 bits   24 bits	97   114 dB
Distortion -60 dBFS   -9 dBFS	0.3   0.001 %
Converter linearity up to -90 dB	<0.1 dB
Output impedance Cinch/XLR	50   8 Ohm
Output voltage Cinch   XLR	2.2   4.5 V
Timing error volume control up to -60 dB	0.01 dB
Power consumption Standby   Idle	-   9 Watts

**LAB COMMENTS:** Did we mention that the analog part of the Altair has a great construction? Our measurements agree – only the lack of a real standby bothers us a little.



### FEATURES

Functions: network player, high bit rate D/A converter, Tidal and Qobuz integrated, Bluetooth and Airplay, digital volume control, headphone amp, 4 digital filters selectable  
 Connections: Inputs: S/PDIF coax. and optical, AES/EBU, USB for PC and USB for data storage; Outputs: XLR, RCA, USB to run external DACs  
 Sound formats: PCM up to 32 Bit/384 kHz and DXD, DSD up to 11.2 MHz  
 Included: remote control, power cord, manual, free remote app  
 Rating

### STEREO-TEST

SOUND QUALITY DAC **86%**  
 SOUND QUALITY STREAMER **83%**

PRICE/PERFORMANCE



**OUTSTANDING**