



in the music consumption habits of hard-core digital users, which have changed significantly in the last 12 to 24 months as web-based streaming services have moved in to overtake local media networks. Since providers such as Spotify or Tidal assert their demands on optical processing and details such as playlist management before the approval of licenses, their selections cannot be integrated into all hardware, which is primarily due to the limited RAM and ROM storage of many network chip sets.

Bluesound was not interested in compromises, which is why it required a future-proof core solution: the interior of the Node2 clocks one Cortex A9, a fast quad-core SoC (system on a chip) processor which puts out up to 4 x 2 GHz computing power and is also used in current smartphones.

In terms of sound, however, the system remained true to itself. As before, 24 bits and 192 kHz mark the upper limit of the reproduced sound formats, although the internal processing has become more precise at 32 bits, to the point where the digital volume control of the Node 2 has such a fine resolution that one can operate it directly into a power amp or active speakers without any problems. NAD seems to have intended the latter. In addition to an analog audio input and a new coaxial digital output delivering the full 192 kHz, there is now also a subwoofer

# FLAT, YET FULLY-LOADED

Normally we don't address this subject so bluntly, but Bluesound's Node network player Node has put on quite a bit of weight since our last meeting. However, it carries its additional software rather well.

When we welcomed the Bluesound devices in the listening booth for the first time two years ago we were surprised: the brand shares a stable with no less than NAD, one of the best-known manufacturers in the audio industry. The multiroom streaming concept is based on the software and technical experience gained with the design NAD's big "Masters" line, and the two even shared a control app and was controlled over the same remote app. The Canadians also passed on their sound DNA to the new network devices: on several occasions the Node convinced us of its qualities (see HD 1/15) and even today it is close to being a reference device in its price class up to 750 Euro.

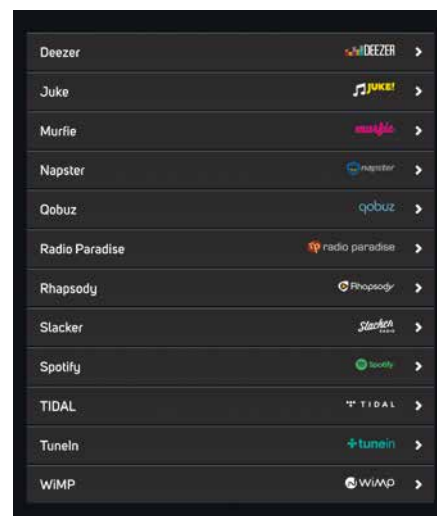
With this in mind we were surprised – to say the least – when we got a look at the prototypes of the next generation late last summer. They'd been redesigned

from top to bottom – or at least the drastic redesign of the exterior led us to this assumption – and even in the fast-moving world of digital HiFi systems a product cycle of less than two years is very short.

## A new flat world

The rapid change may be explained in part by the extravagant hexagon design of the first generation, which we liked but whose idiosyncrasy may not have been to everyone's taste. The hardware of the new Node 2 is now located in a classically flat housing in space-saving Midi size, and Bluesound uses the gained surface area for a pair of new operating elements: you can now control Stop/Play, Skip, and Volume without the app.

However, it would be wrong to merely shrug off 'Bluesound: the Next Generation' as a mere cosmetic facelift. One of the central reasons for the big update lies



▲ The clearly expanded list of supported web streaming services indicates the massively revised software of the Bluesound network system.

## UPNP SERVER

Universal Plug'n'Play is the name for programs that search through the content of media libraries and create indexes. All UPnP-compatible players on the same network can access these indexes and play the indexed titles, movies, or images. Typical representatives of this software type are Twonky, Asset, or Minim. The concept is mature and reliable, however, indexing directly in the playback device – as in Sonos, Raumfeld, and now Bluesound – is usually faster and more stable since it does without a lot of unnecessary network communication.

connection, which can be selected via the device software.

As already indicated, the new flat version mainly serves as a stage for the greatly revised and expanded software: Instead of simply “Bluesound”, the accompanying remote control app is now called “Blu OS”, and is available for Android, iOS, Windows, and OS X, with the fact there is also a variant for Amazon’s Kindle setting it apart from others.

### An eye for detail

That said, if you’ve ever used the preceding version, you’ll get used to Blu OS very quickly. The somewhat brittle mouse grey of the old version has now been replaced by a dark surface and, apart from the cooler look, the new color scheme has the benefit that cover images look more vibrant and have more contrast. However, only images up to 600kb are supported: Bluesound could provide a little

#### KEYWORD

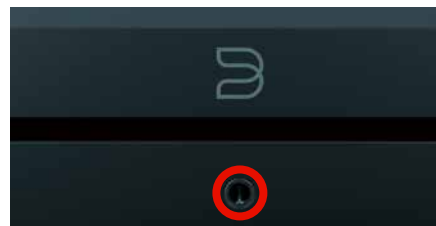
**RAM and ROM storage:** „Random Access Memory” in computer systems serves as fast working storage, while slower but cheaper „Read Only Memory” is used as mass storage.

bit more storage here and the app could generally be a bit more visually exciting, although music geeks will be happy that they can now search for information about artists on the web via Last.fm.

Bluesound generally appears to have paid a lot of attention to the feel of its network devices, which becomes clear in the new logic of its playlist creation, among other things: when you click on a song in the media view, it is played immediately and does not first need to be added to a playlist via a context menu. Should it be part of an album, which is usually the case, all subsequent tracks are also added to the playlist.

So with three casual touches you can create evening-filling playlists, which can be edited and saved to your heart’s desire – this may sound completely secondary but it gives the control a directness every long-suffering streamer owner will appreciate.

We really fell in love with the also new infrared learning ability of the streamer: albums, playlists, or favorite web radio stations can be associated with five programmable macros, displayed in the remote app right next to the available sources. You can then use an infrared sensor in the front of the device to assign these macros to keys on an arbitrary remote control. We decided to try the four colorful videotext keys on the TV remote. When you come home in the evening, one click of the button suffices to start up the associated playlist. In addition to the macros, you can store additional functions such as Play, Stop, or Skip.



▲ There’s now a rudimentary control panel on the housing top (left). However, more exciting for device control is an invisible feature: the IR sensor on the front (right, circle). With the app one can assign the control functions of the Node 2 to the keys of any remote control. Start/stop commands or entire playlists can be moved to the videotext keys of the TV remote. The programmable options include five favorite macros.

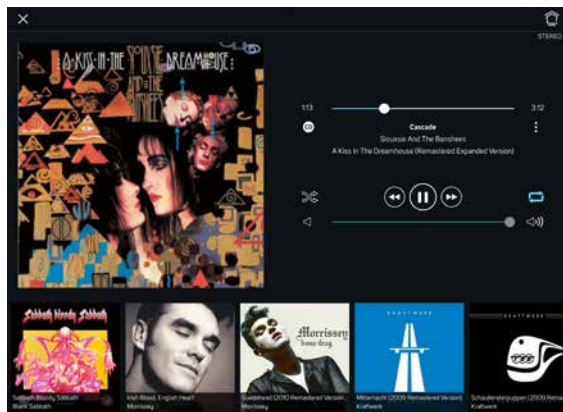
Details which make the everyday handling of the streamer easier are urgently needed, since the list of features has blown up compared to the predecessor: signals at the audio input can be directed into any other room if several Bluesound devices are combined into a multiroom group. The formerly somewhat meager list of web-streaming services now hosts twelve entries, featuring some of the most important with Spotify, Qobuz, Tidal, and Deezer.

### Greater complexity

If you own a NAS or music computer, the Node 2 can of course also reproduce the data on them. However, when indexing,

The back view of the Node 2: there’s now an analog input, which can be shared with a multiroom group. Also new, the coaxial digital-out which now passes on full 192 kHz. ▼





◀ One of the numerous views during media playback. You can also display the current playlist or search the internet via Last.fm for the artist – this makes you curious and playful, however, you will inevitably get lost in the complex „Blu OS app“ from time to time.

the streamer no longer relies on the UPnP server pre-installed in the NAS (see box) but creates its own table of contents. This accelerates operation significantly but has a catch: as is already known from Sonos, Raumfeld, and a few other manufacturers, you have to enter the network list once in the BluOS app which stores the library, and depending how the NAS was configured you may need passwords for this and a rudimentary idea of what file paths are and how to enter them correctly.

Fortunately, we were able to skip all that: the Node 2 keeps an eye out on the network for existing UPnP indexes and offers their media references when they are installed in a list. However, we know from past experience that it does not always work smoothly. However, in the actual indexing process one could feel the Node 2's extra computing power in action: the search through roughly 22,000 titles, including the creation of miniature covers, only took about 20 minutes, and after this, the device was ready to go.

Bluesound has also integrated Bluetooth access into the device, of course with higher resolution via aptX: this is always helpful for the quick integration of a mobile phone or tablet.

All these great features come at some cost: the formerly fairly simple Node has now become a really complex device, and as much as the new remote app tries to hide this fact, you'll sometimes get lost in the endless choice of views. This situation is aggravated by the fact that all menus

**KEYWORD**  
**SoC processor:**  
 „System On A Chip“ – a complete computer system on a single processor. Such circuitry usually includes several processor cores as well as a graphics card and numerous working storage options.

look very similar, no matter whether you're playing local music or stream via Tidal.

That said, the Node 2 is a computer, and thus requires some set-up time to get working. Once you have overcome this hurdle, the app's clear organization, intuitive spatial zone representation and media organization offer all

the comforts you could desire. Or you can go to direct macro access and forget all the additional gadgetry.

**Open and musical**

In the sound booth, the streamer shone especially with its outstanding representation and relaxed playing. Whether used with Symphonic Line's RG-9 MkIV amplifier or NAD's C 390 DD, it filled both two test spaces and gave us the feeling of being in the middle of the music. Like its predecessor, it is so fluid and vivid that it has a large "seduction factor", yet despite the pleasantly silky tone

there's not the slightest trace of distortion or color, and compared to the Node 2, the Sonos Connect displayed a noticeable hint of loudness enhancement.

HiFi buffs will likely hear the NAD DNA here almost immediately, although the differences from the first generation Node are limited: at best, we were able to hear a slight improvement in terms of transparency and detail. However, while there's not enough of a sonic gain to justify existing customers buying the new model, the many new features may have them licking their lips.

*Carsten Barnbeck*

**BLUESOUND NODE 2**



Price: about € 550  
 Warranty: 2 years  
 Dimensions: 22 x 4.6 x 14.6 cm (WxHxD)  
 Contact: Dynaudio  
 Tel.: +49 4108/41800  
 www.bluesound.com

Bluesound has pumped up its streamer significantly and expended it with countless new possibilities. The sound is still unrivaled in its segment.

**EQUIPMENT**

**Concept:** UPnP-capable network player with integrated indexing system and integrated, learning-capable IR-remote interface, supports web-streaming and subscription services (Spotify, Tidal, Qobuz, Napster, Deezer, and many more ...), functions and playlists can be assigned to up to 5 macros, also plays USB media, multiroom-capable

**Sound formats:** FLAC, ALAC, WAV, and AIFF (all up to 32/192), MP 3, AAC, WMA, OGG, WMA up to the respective highest bit rate

**Connections:** LAN, WLAN, Bluetooth (with aptX), USB-A for mass storage, USB-B (service only), analog input (signals can be transferred to other streamers), optical and electric digital output, subwoofer out, headphone jack

**Accessories:** power cable, German quick start manual, free app for Android, Kindle, iOS, Windows, and OS X

**STEREO-TEST**

**SOUND QUALITY 82%**

**PRICE/PERFORMANCE**

★★★★★

**OUTSTANDING**



◀ In addition to the Node, Bluesound has also revised the Pownode (illustr., about 900 Euros) – identical to the streamer but with integrated 60 Watt amp – and of course also offers the Vault (rip server, about 1300 Euros) and the Pulse (wireless active speaker, about 800 Euros) in the new look with improved hardware and software.