Allrounder

The new musicbooks by Lindemann combine a powerful digital platform with sophisticated analog electronics. But there is more: they create HiRes. On request. In DSD or PCM. From any given input signal.

The perfect musical enjoyment already begins on the frontend of each audio chain. What is lost at the source can hardly be retrieved later. But this does not only apply to sound quality. Unlike with analog devices such as turntables or, back in the days, cassette recorders one must listen very closely to digital sources to be able to detect or even classify the minimal sound differences. After all, they still remain often subjective to a certain extent and are also a matter of taste.

However, if a player reveals howlers in basic virtues, the joy of music listening will be seriously marred. In this regard the demands on digital sources have meanwhile clearly gone up. Network players are supposed to play back music data in the most diverse formats and in highest resolutions. Hereby the data shall enter the unit on as many different ways as possible.

An integration into your home network, both tethered and wireless, is therefore just as obligatory as Bluetooth or USB interfaces plus the direct access to internet-based services like streaming portals or web radio stations. But still the devices should be intuitive to operate and easy to configure.

Universal music source

Not every manufacturer can meet these expectations in equal measure. Lindemann is among those who do things a little better and still deal openly with the technological limitations. Of course, the musicbooks support PCM and DSD – via USB up to the highest resolutions (32/384 or DSD 256), but via streaming only up to 24/192 and DSD 64. This is due to the streaming platform furnished by Audivo which is also employed by numerous competitors. So this is a point where the competition rarely fares much better.

On the other hand the reworked musicbook series has something to offer which is more or less seldom to be found otherwise: all digital input signals can be upconverted either to DSD or high-resolution PCM. The elaborate signal processing is handled by a sample rate converter from the Asahi Kasei Microdrives Corporation (AKM). Depending on the original quality, it can convert PCM signals to DSD 128 or DSD 256 and upscale all DSD signals to DSD 256. Optionally it scales PCM to a maximum of 352.8 or 384 kHz by multiple sample rate doubling. Sampling artefacts generated by the recalculation of sampling points are thus avoided for the most part. Any source material can therefore be polished up the audiophile way.

The rear panel leaves nothing to be desired: digital supply is possible via USB, network and S/PDIF, moreover there are two analog RCA inputs. Antenna connectors provide wireless connectivity (Bluetooth, WLAN). On the balanced XLR outputs active speakers may be connected.

In this point the reissued musicbook models also differ from their predecessors and now bear the name affix "DSD". To all owners of the previous generation Lindemann makes a fair upgrade offer: older devices can be retrofitted at a fraction of the original price by having the entire electronics replaced. Only the streaming module, the CD drive and, of course, the enclosure will be maintained, because nothing has changed on these components.

Family show

The musicbook: series, always written by the manufacturer in lower case and with a colon at the end, comprises four digital sources and two matching class-D power amps of different wattage. For the review we got the fully equipped musicbook:25 DSD with built-in CD drive and streaming module for 4780 euros. Those who like to go without the CD drive can just take the musicbook:20 and save 500 euros. The even more budget-friendly models musicbook:10 and 15 also come without the streaming module. Unfortunately one will hereby lose the option of remote controlling via the app and other practical functions which largely contribute to the fascination of the test device. ▶

Perfectly tidy and clearly structured: in the right-hand third we have the sophisticated analog section that works in class-A mode and without negative feedback. The detached board in the middle section is a streaming module, supplied by the Audivo company from Upper Palatinate. Right in between we see the AK 4137 sample rate converter (1) and two AK 4490 DAC units (2) which are run in dual differential mono mode. The power supply sits on the left side. A six-layer pc board ensures optimized signal paths between the components.

A common feature of all models is the ingenious electronics. For the D/A conversion the manufacturer also draws on AKM components of the AK 4490 type. These are run in the so-called "dual differential mono mode", which means that each stereo channel is processed by a separate chip. According to the data sheet, this configuration ramps up the converters' already very good signal-to-noise ratio by another 3 dBs.

In the next step the signal passes a preamp stage with analog volume control which is run in class-A mode without negative feeback. True, the feedback loop could optimize the distortion behavior. But Lindemann waives it in favor of a faster current delivery. Such tricks are grounded on year-long experience, which in total make for the outstanding performance of the device. Excellent measured values give additional proof of its technical strong points.
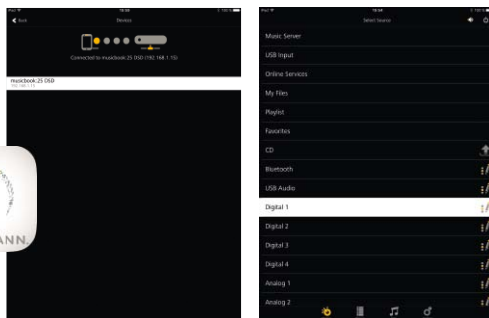
Almost perfect

In the test the music book met our high expectations. The integration into the stereoplay network clicked at the first try, via app we could easily navigate the device, the streaming functions were all running smoothly. The DSD conversion will only come into its own on high-class chains. It gives many musical pieces a little more shine and that certain something – and this, by the way, also over the powerful and energetic sounding headphone output.

As a result, the Lindemann musicbook:25 DSD comes already very close to the ideal of a universal music source. Perfect timing and flawless sound make it the champion of its class. *Klaus Laumann* ∎

The musicbooks' operating concept

As one would expect, Lindemann also has a dedicated app for iOS and Android in petto which enables a convenient control of the network-compatible models within the musicbook series. Just like the actual units, the app has been designed with attention down to the last detail to offer a very clear layout and therefore great ease of operation. During the test it was running in an absolutely reliable and smooth way. The app lists all audio sources which the musicbook can play back. This includes the direct analog and digital inputs as well as the USB audio connector on the rear side and also the Bluetooth interface, all of which can even be renamed individually. Furthermore, there are several streaming options available. Among those are mass storage devices directly connected via USB, music servers in the home network and online services. Of the popular streaming providers only TIDAL is currently supported, but according to Lindemann Qobuz will follow soon through update. In addition web radio stations and podcasts can be researched. On the musicbook:25 the app can also control the integrated CD player and even display CD text. A remote control and the multifunction wheel of the device complement the app or replace it with the smaller models of the series. Some basic settings can therefore be done only via the remote.
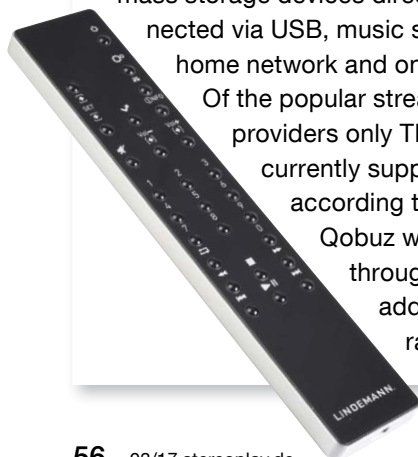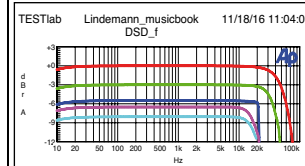
Lindemann musicbook:25 DSD
4780 Euros *(manufacturer information)*

Manufacturer: Lindemann Audiotechnik
Phone: ++49 (0) 8153 / 9533-390
www.lindemann-audio.com
Agencies abroad see internet
Dim.: W: 28 × H: 6,5 × D: 22 cm
[11.0 x 2.6 x 8.7 in.]
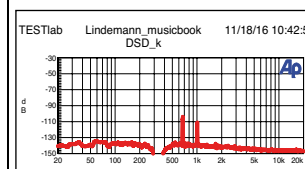**Weight:** 3,5 kg [7.7 lbs.]

Measured data
Frequency response graphs

Clean with all resolutions, switchable filter characteristic

THD spectrum (96 kHz/24 Bit)

Very favorable THD spectrum with minimal distortions (only k2, k3)

Overview
• Streamer with upsampling to DSD
• integrated CD player
• WLAN, Bluetooth
• USB-DAC (up to 24/384 and DSD 256)
Formats (Streaming)
• DSD64
• WAV, AIFF up to 24/192
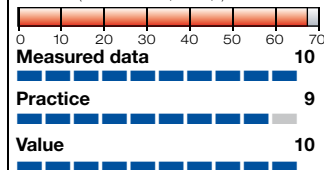• FLAC up to 24/192
• ALAC up to 24/96
• MP3, AAC, OGG-Vorbis, WMA
Others
• TIDAL, Qobuz
• Tune-In (internet radio)

S/N ratio (A-weighted)	116 dB
Output resistance	40/70 Ω

Power cons. standby/operation 0,4/12 W

Evaluation
Sound (24/192 / 24/96, 16/44,1) **68/68/68**

0 10 20 30 40 50 60 70

Measured data **10**

Practice **9**

Value **10**

A wonderfully built streamer with excellent performance specs and intuitive operation which can convert any input signal into DSD. Every detail is just perfect here!

stereoplay score
Sound
absolute top class **68 points**
Overall verdict
superb **97/100 points**
Price/performance **outstanding**