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TEST

Lindemann Move

POINT SOUND SOURCE FOR HIGH-RESOLUTION MUSIC

Holographic illustration

Super tweeter for airiness



Lindemann Move

With its sleek shape, smooth rounded edges and light grey paintwork, the Lindemann Move is a home-friendly monitor.

Point sound source for high-resolution music

Double surprise: Lindemann, known for excellent audio electronics, now presents a speaker with the Move - leaving conventional concepts and components behind with this monitor. The goal: a point sound source for high-resolution music reproduction that converts the audio signal as loss-free as possible and radiates all energy as sound. Our test shows whether and how Lindemann succeeded.

Lindemann? Bayern have been offering high-quality and innovative audio electronics for three decades now, from the first CD player with re-sampling in 1999 and the first German SACD player in 2001 to the current portfolio, which scores points with the smart little components of the Limetree series or offers excellent amplifier and network streaming solutions with the high-end Musicbook models Source II, Power II and Combo. Speakers, on the other hand, have always been scarce in the repertoire. But with the introduction of the Musicbook series, Lindemann was able to complete the sound chain with its own monitor - so the HiRes capability of the electronics with high-resolution sound conversion can also be heard. And so company founder Norbert Lindemann and his team have created the Move, a speaker that boasts amazing features and finesse and has thus become much more than an addition to the product portfolio. Let's look at the Move!

Engaging design with energy concept

Their exceptionality cannot be immediately noticed by the Move: At first glance, we see on our editorial desk a compact speaker that is well-proportioned with the dimensions 35 by 19 by 32 centimetres and also presents itself with the gentle curves of the edges, the neatly realised matt finish in light grey and the harmonizing trims





Without cover, the distinctive gold-coloured diaphragm of the broadband is the eye-catcher of the Move. Those who want it more discreetly cover the front with the magnetically adhesive fabric trim.



An aluminium front panel is placed in front of the compacted wood material body. Housings such as sound barriers promote low energy storage. This loss minimisation has been a guiding principle in the development of the Move.

in pleasant mid grey engaging and living-room-friendly. With the removal of the aperture, however, we are already beginning to doubt conventionality: The front is not part of the body, as usual, but consists of a three-millimetre-thin aluminium plate held in black, which is placed in front of the body made of highly compacted wood material and fixed with six screws. The theme of "minimum energy storage" - which was a guiding principle when designing the speaker - begins with this aluminium sound wall. This motto is also due to the centimetre-thick HDF housing, which also avoids housing resonances with its high degree of vibration resistance.

Point sound source principle

The chassis configuration also quickly suggests that the Move is not a conventional speaker. At first glance, you might think of it as a two-way speaker, but the lower chassis is a full-range speaker - and Lindemann also uses it as



Model:	Lindemann Move
Product category:	Compact speakers, shelf speakers, monitor
Price:	3,200.00 € / pair
Guarantee:	5 years
Versions:	- Front: Black
	- Housing: Light grey
	- High stand: Anthracite
Distribution:	Lindemann Audiotechnik, Wörthsee 08153 9533390
	www.lindemann-audio.com
Dimensions (HWD):	350 x 190 x 315 mm
Weight:	6.8 kg / piece
Design:	Wideband system (1-way + super
	tweeter), passive,
	bass reflex housing
Broadband:	1 x 127 mm (cone, gold-coloured
Constanting at a st	magnesium alloy) 1 x AMT
Super tweeter:	440 Hz -36 kHz
Frequency range: Transition frequency	
Impedance:	8 Q
Efficiency:	87 dB @ 2.83 V (1 W at 8 Ohms)
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Scope of delivery

- Lindemann Move (pair) - 2 covers
- 2 high stands

Summary

Overall rating: Class: Price/performance: very good Sound Practicality Features

94/95 Top class 94 of 95 93 of 95 93 of 95



The full-range speaker handles sound conversion from 40 to 10 kilohertz. This is how the Move acts as a point sound source.

a full-range speaker: The Move thus acts as a point sound source. This one-way principle has advantages: As in nature, the sound event is emitted from a singular location instead of being divided into different chassis as in the case of reusable speakers. As a result of this splitting, several sound components sound from different locations, overlapping or cancellation of individual frequency ranges occurs in the transition region. The timing of the individual sound components is also a delicate issue. In addition, the crossover that divides the music signal between the various chassis, with its sometimes numerous components, causes phase rotations and sound degradation. All this is eliminated with broadband. The reproduction is therefore extremely homogeneous and harmonious, it also offers outstanding spatiality, in the illustration all sound events can be located extremely precisely.

Broadbands with special diaphragm

However, the broadband solution also has its tricks. The full-range speaker must meet conflicting requirements: It's supposed to be nimble so it can reproduce the heights with pulse accuracy. At the same time, it should deliver rich bass, which requires a certain diaphragm area - leading leads to a higher mass and thus a greater inertia. Due to the principle, broadband chassis sometimes tend to overemphasise in the high frequency range or have one or the other "favourite" in the frequency spectrum. A sophisticated and elaborate chassis is therefore required for balanced reproduction - and that is exactly what the Move possesses. The diaphragm of this 5-inch wideband is ultra-rigid thanks to a magnesium alloy and has a special design: The extremely flat shape and at the same time the wide opening of the bulge allow a wide radiation. The central cap also helps to optimise stereo imaging. Here Lindemann has applied a small cork disc which dampens the unwanted tweeter components. Even behind the diaphragm, this broadband comes with some amazing features: The chassis does not require the conventional centring spider.



The diaphragm is ultra-rigid thanks to the magnesium alloy. The special shape of the oscillating surface - in particular the curvature - enables a broad emission. The cork plate on the central dome dampens undesired height components.

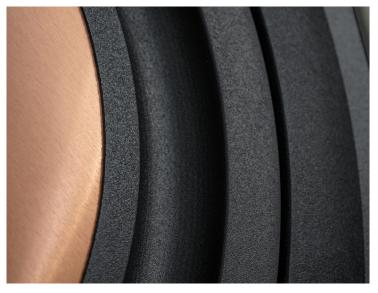
Faster chassis by saying goodbye to the spider

This corrugated fabric disc normally assists in guiding and restoring the diaphragm and voice coil. But it also limits the agility of the diaphragm and destroys some of the signal energy. The wide band of the Move - also thanks to the special diaphragm curvature - manages without this spider. It acts alone with a sophisticated bead. This mono suspension consists of four synthetic materials. Freedom from the spider promotes the momentum fidelity of the chassis, increases the energy transmission from the drive to the diaphragm and thus the efficiency. This should also offer greater linearity in the bass range. Control of the diaphragm thus takes place largely via the connected amplifier and is determined by its damping factor. This agility plus also makes the broadband fitter for the high-frequency range. According to the data sheet, it can operate up to thirty kilohertz. Lindemann restricts it with the cork plate from around ten kilohertz. Thus, the fullrange chassis delivers pretty much everything voices and instruments give in frequencies.

Super tweeter for airiness

Nevertheless, a second chassis operates in the Move: an AMT. This so-called Air Motion Transformer acoustically converts with a wafer-thin film that is folded like an accordion. Anyone looking through the grid behind which the AMT sits can clearly see this yellow fold structure. The foil is traversed by conductor tracks and is located in a magnetic field. As soon as the current of the music signal flows through the conductor tracks, the accordion diaphragm contracts and diverges again, the air between the folds being pressed out and sucked in. Thus, a large sound pressure is generated with little diaphragm movement. Combined with the feather lightness of the diaphragm, this leads to immense impulse fidelity. That's why the AMT is often used for high frequency. It shines



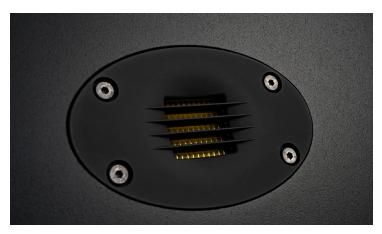


The sophisticated enclosure is also the only guide of the diaphragm: The full-range chassis operates without a centring spider. That is why this mono suspension is realised in a special inverse shape and with four synthetic materials.

with outstanding openness and airiness. Lindemann uses it exclusively for this purpose in the Move: The small AMT, supported by a horn attachment, provides the airiness of the reproduction, it virtually opens the sound.

Crossover freedom and bass reflex tuning

So that the Air Motion Transformer operating up to 36 kilohertz does not contribute more than this airiness to the sound conversion, it is equipped with an excellent coupling capacitor, which is also trimmed with its thin dielectric insulator to avoid memory effects. In terms of circuitry, the entire chassis-capacitor coupling results in a serial filter which ultimately also prevents elevations in the central region. But that was it with sound-influencing and energy-consuming components: The Move does not require a crossover. The body construction and the targeted attenuation realised with different materials in the housing now contribute to the balance of the sound, as does the bass reflex tuning, which supports the alrea-



As a super tweeter, an Air Motion Transformer provides airiness and openness in sound. The AMT operates behind the horn-like, latticed sound guidance. Those who look closely can see the fold structure of the delicate film.

dy woofer-compatible broadband in the lower frequency range. So the Move delivers a bass up to 40 Hertz. Finally, the concept of minimised energy storage also includes the tripod: For the Move, Lindemann supplies a high stand that is made of the same HDF material as the monitor body, has only punctiform contact surfaces with the Move and therefore neither reflects nor stores energy.



The Move has a bass reflex tuning in favour of strengthening the low frequencies. The port rounded at the mouth, completely burr-free in the tube and thus overall flowoptimised is positioned on the back of the monitor.

The Lindemann Move in practice

During the test, we operated the Move with the matching playing partner, the Lindemann Musicbook:Combo, which we had already tested. First, because the monitor is brand new, it has to be installed for about fifty hours. For this we put it in the auditorium without any orientation. But already in this way we get an idea of its imaging power and the great spatiality of the representation when listening in between. After the recording, it's time to set up. We start with a distance of a good two meters both between the speakers and the listening place. This is already pretty good, but the bass is underrepresented. So everything comes together a bit - and so we get a bass that makes us look for a subwoofer. Wow! Alternatively, we also achieve this bass power with a greater distance between monitors and sofa. You should therefore invest time and care in the line-up so that the Move can also play to its sonic class.

Holographic illustration

We optimised the lineup with "Big Picture" from London Grammar. The music of the indie rock/trip hop trio has everything we need. This is Hannah Reid's voice first: The lead singer of the British band stands right between the speakers in the room in front of us, while the Move has made itself acoustically completely invisible from the first note. Hannah Reid's presence is all the more impressive: The charismatic singer asks "Love, what did you do to me?" and we immediately feel that this melancholic question is addressed to us. This is due to the almost holographic representation of the voice, but also to the excellent resolution: We can perceive every detail of the vocals as if Hannah Reid were very close to us - we hear not only the breathers before each line, but also the almost inaudible endings of each vocal phrase. Such supposed trivia contribute immensely to the How Real impression - and the Move delivers these details effortlessly.



Around the Sound Cathedral

London Grammar likes to work with opulent reverberation and echo effects. This puts the musicians virtually in a huge cathedral - and the listener, too, if the playback is successful. The Move as a point sound source provides a superb spatiality here: Not only the sound of the voice, but also the sounds of the added instruments - i.e. piano, guitar and percussion - are reflected by fictional walls of an imaginary giant dome and thrown back and forth until they fade away in the distance. This is a great acoustic radio play that is best enjoyed with your eyes closed: So you can immerse yourself in the music and give yourself the spatial illusion of sitting in the middle of the art cathedral. The real walls of our auditorium, on the other hand, make the Move disappear with ease. Despite these intense spatial effects and the dense sound structure, the instruments are clearly and precisely audible. This applies first to the keyboard, which delivers a piano sound where we perceive every subtle keystroke.



Lindemann provides high tripods for the Move. They consist of two tapered, interlocked HDF plates - in other words, the same material in which the monitor housing is held. Like the punctual contact of the body and tripod, this should allow perfect energy dissipation. Soundwise, these high tripods are quite advantageous, in terms of stability there is still room for improvement.

Excellent pulse fidelity

This is especially true for the electric guitar with its undistorted, ultra-crisp tone, where Dan Rothman damps every stroke with his palm. This almost percussive sound effect is accompanied by a striking delay - and, together with Reed's vocals, is considered an acoustic trademark of London Grammar. Here we can hear every touch of the plastic spectrum with the metal strings while picking, the muted yet immensely crisp tones bubble into the room. The recurring tone motif is rounded off by a final flageolet tone that acts like a small bell. Each of these notes prevails with ease, because the Move delivers the stops with a great attack due to its excellent momentum. Of course, percussion also benefits from this precision: Highly accurate, fine, metallic clocks sound like the ticking of a clock, offset to the left and right, thus also contributing to the impressive stereo panorama. Even the dull-dark bass drum quarter beats remain contoured and clearly audible.

Amazing foundation

The ever-increasing and acoustically denser song is then backed with a synthesiser bass, which gives the song an epic thickness even in the frequency cellar - and if the lineup is right, the Move can deliver amazingly voluminous. The bass becomes almost physically noticeable at richer volumes. This also works confidently with our Hegel H360, which we have connected in the meantime as an amplifier alternative: The Move moves and massages our body. This is especially true for the individual drum effect beats, which make an impression like dripping detonations in the distant background. The Move also delivers all these merits for music with purely acoustic instruments. This is what we experience with "Skylark" by Cassandra Wilson: The singer is accompanied by pedal steel guitar, bass and drums - again the Move delivers this downright holographic image with 3D spatiality. The song starts with the line of double bass, this purely acoustic four-string also provides an amazing foundation in the reproduction with the Move.

High resolution and airiness

With this bass power, Lonnie Plaxico also inspired Dougie Bowne's drum set in the studio. In the background, we hear the quiet rattle of the snare even before the drummer brushes over this drum to create an acoustic atmosphere. The Move also depicts these micro-details. Excellent! And this goes even better: We have reconnected the Musicbook:Combo from Lindemann as a game partner - and here you can change the music conversion of the 192 kilohertz/24 bit file streamed via Qobus via the app: Having previously run the HiRes file in PCM mode, we now utilise the re-sampling process to convert it to DSD. Now the playback offers even more openness and freshness - and the Move is able to deliver this high resolution with its AMT. Especially the gentle blows on the hi-hat and ride cymbals have a great freedom when the cymbals swing out, but it gains the entire playback in airiness.





The Lindemann Move results in a complete and compact sound chain with the Musicbook:Combo.



For connection to the amplifier, the Move offers two laboratory built-in sockets. Only cables with banana plugs are connected here.

Like a big headphone

This in turn intensifies the consistency: While the reproduction seemed wonderfully harmonious before, it now delivers more openness and freshness as well as more details and spatial impressions. As a result, Cassandra Wilson and her fellow musicians appear once again more real and tangible, the interplay even more natural, the reproduction even more immediate and direct. The longer we listen to music with the Move, the more we understand that chief developer Norbert Lindemann likes to call his monitor a "big headphone". Finally, the tripod question concerns us: So far we have operated the Move on the supplied high stands - now let's put them on external tripods, which are coupled on the floor side with conventional metal spikes. Here, too, the fine-resolution Move shows differences: The openness gets a little damper, especially Cassandra Wilson's voice loses some of its sonority - the fundamental tone range experiences a loss throughout the soundscape. So the simple original tripods supplied are recommended for the sound development of this monitor.

Conclusion

The Lindemann Move has it all: It operates with a special broadband chassis as a point sound source, with an Air Motion Transformer providing the super high frequency. Thanks to this concept, a careful chassis choice and a clever construction, the monitor can then do without the conventional but sound-degrading crossover. In addition, there is an optimised choice of material and design for vibration resistance and minimal energy storage. All this enables immensely direct, pulse-scattering dynamic reproduction that impresses with holographic imaging and immersive 3D spatiality. The sound conversion is extremely homogeneous, harmonious and natural: The interaction of the musicians seems self-evident. The monitor scores with excellent detail and high resolution, the airiness and openness is impressive - especially for high-resolution files. Finally, the voluminous and sovereign bass reproduction is truly astonishing. Lindemann achieved his own goals of using the Move to create a point sound source for high-resolution music reproduction that radiates the audio signal as sound energy as loss-free as possible.

> Test & Text: Volker Frech Photos: Branislav Ćakić

