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Lindemann Limetree Phono + Limetree Headphone

## High Class workmanship in a small frame



Lindemann, a well-respected HighEnd company, has been active on the German market for about 25 years. At this moment their series called „Limetree“ offers five different devices. Of which I chose the duo of analog equipment for testing – one being the phono pre-amplifier „Phono“, the other a line preamp named „Headphone“. Both of these are developed and manufactured in Germany – which makes the retail price of

600 Euros almost unbelievable. The „Limetree“ lineup is completed by the digital trio of „USB-DAC“, „Network“ and „Bridge“. But as we're staying on the analog side, let's start with the multifaceted „Headphone“ unit. A trio of line inputs, combined with one pre-out plus a headphone connector offer more than enough possibilities alignment-wise. A so called „Diamond Buffer“ is built in to allow correct adjustments to what diver-

se headphones may present in different loads (impedance- and capacity-wise, that is). This type of circuitry is basically an impedance convertor from high impedance to low impedance. As it makes use of two complementary transistors creating a look close to that of a diamond in the circuit diagram that is where this naming comes from. Alternatively it is also called X-symmetrical. This buffer offers no amplification anyhow, as it just delivers an adaption to the electrical environment of the consumer load. Of course every additional circuit adds a certain level of noise and distortion. But this level, even in addition, is, especially with headphone amps, way lower than the one created if a headphone is driven directly by the amplifying circuitry. This is due to the fact that a headphone always presents a capacitive load. So this buffer eliminates negative retroactive effects, such as phase problems or overloading, the headphone may induce into the amplifying circuitry. Au contraire, the „Diamond Buffer“ causes enhanced thermic stability. In addition to that this topology also offers high linearity plus a great frequency bandwidth.

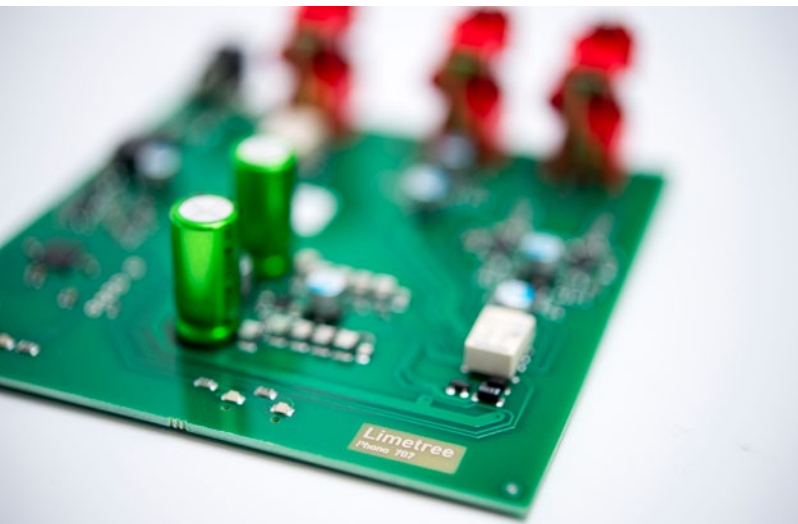
Before the signal reaches the buffer stage it is being amplified by a circuitry based on the best JFET-OPs Burr-Brown has to offer right now. Each and every

component in use is kept within tight tolerance levels. For volume control a potentiometer deriving from studio technology is used. The wooden attenuator knob in itself is of simply superb haptic quality.

### Flexibe and adjustable

For starters I connected an analog line device to input 1 of the Limetree Headphone. Switching the inputs on the Limetree is as easy as refined. Just keep the power switch in its up position for three seconds and the input is being changed, that's it. Nice and simple. To check which input is selected you can take a quick look at the LED display on the front panel of the Limetree „Headphone“. Due to the small frame of the enclosure used, Limetree decided to employ a high quality Meanwell 5 V DC power supply. What else? I almost forgot to mention the small slide switches at the units bottom, allowing to adjust the load impedance for diverse headphones. In my case the Shure SRH1540 was attached to the Limetree. The Shure presents a friendly 46 Ohm load to the Limetree. Manufacturer Lindemann recommends headphones with load impedances from 32 to 200 Ohms. Cheap headphones with lower load impedances are not a good match with Lindemanns „Limetree Headphone“ anyway.





Now Bill Frisell plays „Roscoe“ from his album „Good Dog Happy Man“ via Questyle QP2r. That typical „Frisell guitar“ gets some support by bass and drums in this track. Listening with concentration I can hear lots of details in production. Like the echo effect frequently used on Snare-Drums. Or some fragments of the pedal steel guitar melody played backwards. All of these details and elements are wonderfully integrated into the sound structure by the Limetree. So I find myself listening to the music instead of watching out for specific minutiae. Musical integration may be the best term to describe this unit. Everything sounds good, non-stressed and with a little dash of warmth that I also found to be there with other musical styles. All of this makes the Limetree Headphone a long term listening unit I have become to enjoy a lot. Yes, for more money you can get devices offering a little more in detail – but it will be hard to find a unit providing a more coherent and musical sound.

## For all kinds of systems

It is time to team up the „Headphone“ with its sibling, the Limetree „Phono“. Using an almost identical housing the Phono can process MM signals (gain is 40 dB then) as well as MC signals (60 dB gain). Once again only strictly selected parts are used. When used with MC cartridges a symmetrical microphone preamp by THAT does the job. Equalization is done following the RIAA curve. Same as with the Headphone all of the RCA connectors on the back are screwed tightly to the frame. My first listening is done with ELAC Miracord record player carrying the Audio Technica AT33PTG/II MC pickup. This duo is connected to the corresponding input of the Phono at a load impedance of 400 Ohm. First record spinning is the new LP of Simone Kopmajer. „Spotlight on Jazz“ has been recorded very well and pressing quality is also first class. „You don't call me“ showcases not only Ms. Kopmajers voice but also saxophone, piano, guitar, bass and drums. Each of which is given a short solo part within the track. Two observations came to mind immediately. Firstly, that the Limetree Phono deals favourably with the Austrian singers voice, thus leading to a warm, pleasant timbre. Secondly, the accompanying reverb chamber is illuminated wonderfully so it does not give you an impression of being too big and overwhelming. Instead everything fits right in its place, sounds musically satisfying and simply feels right. Hum or noise are never an issue with this little phono preamplifier. S/N ratio is listed by the manufacturer with >82 dBV at MM (600 Ohms) and >78 dBV at MC (40 Ohms) which seem to be realistic numbers in my book. There was no noise to be heard from the blank lead-in groove. All of this speaks in favor of the meticulous circuitry design and well-executed selection process of the parts Lindemann uses.

I have used another preamplifier for gathering my sonic impressions until now. But finally the Limetree „Headphone“ gets to work as a preamp, sitting right there between record player and power amps. So I choose another record to be played. Peter Gabriels' „Us“ – in





its actual incarnation as Halfspeed-Mastering, weighing 180 grams - is my next record of choice. Using my own preamp the Limetree Phono had delivered a powerful presentation. Gabriels voice was portrayed excellently, Tony Levin's bass sounding resonant and pounding whilst being a small touch too well-rounded. So now the time has come for the „Headphone“ to act as a line preamp.

### Studio quality

Tonally this combination stays on the clean side, adding a small dose of warm timbre and a great ‚feel‘ for voices. David Rhodes' floating guitar play and the diverse filters used on drums are being shown with accuracy and precision. Musical power and pressure arise from the stereo center while at the same time on both sides all the fine details Peter Gabriel incorporated into this production are presented. HiHat and sibilants always come clean without being widened/prolonged to unnatural proportions. Bass frequencies remain pure and unsmearred. Sure, in comparison with another preamp costing more than double the money the costlier amp did produce an ever more spacious sound with a little more room all around. And yes, bass transients were drawn with a minimal bit more of finesse than the

„Headphone“ is capable to do. But these differences are indeed so small they are absolutely neglectable. Only in direct comparison anybody will notice. The Limetree is a perfect example of what you can do with a small budget: „Made in Germany“ at its best.

### MM please

My Rega P3, equipped with a Goldring MM pickup, now initiates the final listening session with the Limetree duo. The album used therefore: Kenny Burrell's „Midnight Blue“. „Chitlins con carne“ starts it up. I have to say: Right off the bat what I heard impressed me very much. Through the Limetree Phono the Goldring pickup sounds crisp, clean and swinging. Cymbals and saxophone shine, Burrell's guitar shows a vibrant, jazzy, sonorous tone and the bass, played by Major Holley Jr., sounds subtly nuanced with correct placement in the background. The Limetree generates an even slightly bigger and wider stage than it does via its MC input. To be honest: You don't really need more than this Limetree-combo of Phono and Headphone, partnered with a standard record player like my Rega plus a good, inexpensive MM pickup to become a vinyl aficionado. The same liveliness and elation combined with its detailed, finely nuanced reproduction can be

experienced via the headphone output (the line output is automatically muted if a headphone is connected). Now I'm going back to the Miracord and the Audio Technica MC system to take another listen. Conceded, this sounds „bigger“, „spacier“ and more detailed than the Rega can manage in combination with the Goldring. But the ELAC/Audio Technica combo's cost is way higher. Admittedly the sound quality the Limetree combination delivers paired with a MM pickup has left a lasting impression on me. Don't get me wrong: The Limetree phonopreamp is no slouch when it comes to MC reproduction. Compared to others in its price range it is definitely good. But the MM stage is something really special, it excels absolutely.

## To the mark

Norbert Lindemann and his team did everything right with these analog devices. As a part of the small framed „Limetree“ series these two are manufactured premium grade, using fine parts and delivering really great sound. „Headphone“ is as much an adaptable headphone amp offering flexible adaption to diverse headphone impedances as it is a line preamplifier carrying three inputs plus a high grade attenuator. Limetree „Phono“ offers flexible adjustments to whichever MC pickup you may choose, always delivering a well-balanced, never tiring sound. But the highlight of this chain is definitely the extraordinarily great MM input of Limetrees „Phono“, as it lifts every ambitious turntable to levels of sound unknown before.

Frank Lechtenberg



### INFORMATION

MM/MC-Phonopreamp Limetree Phono

Price: 595 Euro

Headphone Amplifier/Line-Preamp Limetree

Headphone

Price: 595 Euro

Manufacturer:

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