



Reviews

Review: Lime Ears Aether – The Special One

Lieven, Headfonia.com

Lime Ears Poland

Earlier this year, in February if my memory serves me well, Emil from Lime Ears got in touch with me to check if I was interested in reviewing a new upcoming Custom IEM. Lime Ears is a smaller company located in Poland and up to now they are mostly known for their 3 driver, the LE3SW. Don't mistake Lime Ears for CustomArt, that's a completely different CIEM company.

Lime Ears maybe isn't as known as their colleagues and the reason for that is that Lime Ears focused especially on musicians and sound engineers in Poland during the first 2 to 3 years. They in fact started making CIEMs around the same time. By word of mouth they quickly gained a good reputation and once Lime Ears felt their "pro" mission was complete, they started focusing on us, the so called audiophiles.

The Lime Ears Aether review is part of the 5-driver review series. So far we have looked at the Rhines Stage 5, the Cosmic Ears CE5, the Vision Ears VE5 and the last 5-driver will be the Jomo5.

The Aether

Aether is a five driver monitor with a four-way crossover and a three variable-diameter bore design. Its name comes from the fifth element (quintessence) that fills the entire universe and enables transfer of energy and information across them.

"Aether as model completes our offer as being the first multi-driver flagship and at this moment presents quintessence of Lime Ears sound without technical limitations that previous models encountered".

The logo of Aether (the triangle – see pics) was derived from early Slavic alphabet and it simply pictures the letters "AE". It took Lime Ears nearly two years to develop their new Top Of The Line monitor, even if it is based on their LE3SW. Emil explains (Italic = quote from Emil):



Aether R 

"Thought behind LE3SW was to make the most natural sounding in-ear monitor possible, in its vibe similar to contemporary hi-fi or studio equipment made even back in '70s and '80s. Balanced, full, pleasant, musical and very faithful in a monitor kind of way. But with three drivers I encountered technical limits that made it impossible for them to sound similar to two-way near-field monitors. What I finally wanted to experience were big, three-way far-field monitors placed in a big, well treated room with a pinch of audiophile-sounding fun that would please listeners avoiding too technical sound but still looking for real fidelity in their recordings"

"So I needed to set a separate subwoofer driver and since I'm fan of acoustical rather than electrical tuning I wanted it to be acoustically low-passed. Prototyping the low-pass filter took several months and after many attempts I managed to make use of XHD (Extreme High Definition) 3D printing technology to get it right. Another thing the new model needed was a wider soundstage and better source separation, like you were sitting really in front of pretty big audio system. I needed some more sparkle in the mids and increased coherence among the drivers, so a faster dual low-mid driver was implemented as well and the crossover that couples it with high-mid driver was redesigned"

"The highs were made a little bit more airy to maintain balance with powerful lows. But they still incorporate something that seems to be the part of Lime Ears sound philosophy: in my opinion BA drivers are likely to superimpose their own characteri-

stics on highs, making them bright but sometimes pretty harsh and unpleasant. Aether incorporates relatively high-output tweeter that has been damped relatively strongly. The outcome is high-frequency region with reduced resonances that would cause "ringing" responsible for harsh sound. The highs were aimed to be crispy clear but soft and elegant (like these produced by silk-dome tweeters in opposition to harsher titanium or ribbon tweeters)".

Something else we have seen before is the switch on the faceplate (see VE6 Xcontrol). In the Aether this switch activates the sub bass in its lowest regions below 80-90 Hz. There are several reasons for implementing a bass switch like this:

- Depending on listening level to make use of the Fletcher-Munson law (for lower listening levels the bass can be boosted to make it better audible),
- Depending on the level and quality of bass in the recording (if the bass is great it can be made very powerful, on the other hand if the material is not so well mixed and lows are becoming boomy and out of control, they might be trimmed down)
- Depending on external noise levels (If you're listening in a noisy environment like an airplane, subway or similar where low-end noise masks the lows, you might want to switch them up).

Breakdown

Just like I do with all my other custom monitor reviews, I will be going over the next topics:

- Build quality & Comfort
- Personalization
- Cables
- Price & Accessories
- Customer Service
- Sound
- Driveability & Sources
- Comparisons
- Conclusion

1. Build Quality & Comfort

From what I understand, building CIEMs with a switch incorporated in the faceplate isn't the easiest from a technical point of view and I know of several companies that would rather not go there. Lime Ears however has no problems doing that. The recessed sockets and the faceplate closing are really well done but there do are a couple of "bubbles" in the acryl and you can see some traces of glue on the inside. As a result the Aether isn't the best made monitor in my collection but it's fairly good.

When comparing left to right you will find the Aether to have non-symmetrical insides. To me that's less important because

it only shows with see-through shells but some people find that really important. What is more important to me is that there is a good fit. Goof it means good comfort and Lime Ears delivers, I have no issue whatsoever with wearing them for hours. With some monitors I manage to break the seal when putting on weird faces but this simply is impossible with the Aether. I just hope no one saw me trying at the office.

2. Personalization

I usually don't have any requests when it comes to personalization but when I saw these fancy looking brushed aluminum face plates on Lime's Facebook page, and I was sold right away. I also suggested putting both our logos on the faceplate and I very much like how the monitors turned out. (see pics) .

Like with most companies you can personalize your monitors but it will as usual cost you extra. Simple artwork, laser engraving, wooden/carbon/steam faceplates: it's all possible. Just email Lime Ears and work something out together.

I have several really good looking monitors in my collection like the full steam by Cosmic Ears and the wooden design by Rhines just to name two, but I also really like these brushed aluminum plates. The typical grey in combination with the green Lime Ears' logo just gives me this summer-ish feeling. Call me crazy.

3. Cables

All of Lime Ears' monitors come with a grey/white-ish detachable 3.5mm gold-plated jack cable. The cable is a pretty basic quad cable with a bendable piece of metal to put around your ears. While there's nothing special about the cable at all it actually sounds pretty good.

I always like trying different cables to find the one with the best synergy for a specific IEM. I only used the stock cable for a very short time as I soon found Linum's balanced cable to be perfect for the Aether. I have a feeling the balanced SuperBaX might be even better but unfortunately my prototype can only be used with flush sockets.

When using the Linum balanced cable the balance, stereo image and texture improves to an unbelievably high level, but more on that in the "Sound" and "Source" parts. The Linum cables aren't that expensive compared to other aftermarket cables and if you plan on getting the Aether, I would certainly recommend giving the balanced Linum a try. That being said, the stock cable – as reported – sounds really good already and you will enjoy the Aether for sure.

4. Price & Accessories

Most of the 5-driver CIEMs don't come cheap and the Aether isn't any different. It is priced at €1150 (more or less \$1250)

and that puts it almost at the same level as the Stage5 and the VE5 CIEMs (Rhines Stage 5 – 1379€, Vision Ears VE5 – 1399€). And that's for the basic version, customization costs extra. The Cosmic Ears CE5 monitor still is cheapest, starting at €580. That's still impressive.

My Aether came in a black personalized 1015 Pelican case holding a drying cap, the stock cable and a cleaning tool which I have lost in the train in the meantime. For the price they could maybe add a cleaning cloth and spray just like Rhines and VE do, but maybe paying customers get exactly that, I couldn't tell.

If you look at other CIEM companies you will see most of the 5-driver monitors cost over €1000, so there's nothing wrong with Lime Ears' price setting. At the same time the other companies have a bigger (note I didn't say better) reputation and I'm afraid a certain number of potential clients might be scared away by that. Sound wise however these are really worth their price and you won't hear me complaining about the price/quality ratio at all. (see below)

5. Customer Service

Dealing with Lime Ears always goes by email. They do have a contact form on the site but there at the moment is no automated way to process your order. Earlier this month Emil told me they are working on a new website with a simple shop. That would make ordering a whole lot more convenient than by

exchanging e-mails. It should be up around the publication of this review. If you go to Lime Ears' website right now, you won't find any reference to the Aether model, I guess they're keeping that for the new version as well. The only reference to the Aether in fact is on their Facebook page .

Dealing/emailing with Emil/Lime Ears has always been a pleasure and his excitement about his products really showed and pleased me. I always love hearing motivated people talk about their products and based on his excitement I have a feeling the new website and order form will be quite the improvement. I'm pretty sure Lime Ears' customer service won't disappoint you.

6. Sound

I'm not going to beat around the bush, I really love Aether's sound. Luckily I do not, but if I had to live with just one set of monitors the Aether could certainly make it to the short list. The Aether is a monitor I personally can live very happily with for listening to music at the office, at home or on the go. That doesn't mean it is the best 5-driver on the market or that it is the right monitor for you because I really like it. So I will describe the Aether's sound in an objective way just as I have done with all the other CIEMs I have reviewed.

According the Emil Aether sounds like this: "Massive, yet extremely textured lows, clear, yet balanced midrange smoothly transitioning into airy highs. Vastly upgraded detailing and spatial separation due to unique acoustical tuning". And he is right.

The first time I put these in to my ears it didn't take long to realize the Aether really was something special. The left-right balance is really good and the three-dimensional positioning is impressive. What struck me as well was the layering from bass to treble, the high detail level and the depth of the sound. Is this really only a 5 driver? It shows again the driver count isn't everything; it's how you tune the monitor, that's what counts.

Aether's sound stage is fairly wide and there is a good amount of space between the instruments, you don't get the feeling of an "inside your head" sound, as often is the case. Aether is detailed, musical and well it basically ticks all my boxes. Music is dynamic and flows on a black background. It is always clear sounding and it kind of reminds me of the Luxury & Precision L5P DAP I'm in the process of reviewing, and that's a good thing. It's on the warmer side of neutral but it isn't a warm sounding monitor either. It just has that bit of warmth and smoothness so you can't call it a (flat and) neutral sounding monitor.

Aether is a do-it-all monitor. If you don't like too much (low) bass, you can just flick the switch on both of your faceplates down and you will get fast, well defined bass with a good punch and just enough body. It's the more neutral kind of bass and you won't have to worry about it having too much body or too much impact. Bass will still be in line with the full bodied mids and the treble but you'll get the more reference type sound with good detail, depth and all that in a musical way. Flick on the switch (up position) and the sub gets activated: extra body and depth without losing detail.

I love it, bass goes really deep and it never loses control and the layering is impressive. You really get that feeling of how a dynamic driver does bass moving air. It's addictive, I love it. I don't get the feeling bass bleeds in to the mids at all.

I am really happy the switch is there, sometimes you just want and need more bass for whatever the reason is. At the same time if you're using a bass heavy source, bass can get a bit much even for me. A good example is the FiiO gear that often has a Bass Boost (BB) switch. When Aether's sub and FiiO's BB is activated, bass (depending on your preference of course) can become a bit too much. I personally turn off the BB when I am using the Q1 and E10K but on most of my other amps and DAPs I tend to keep it on at all time. That's exactly the beauty of this switch implementation, you can do whatever you like and you basically get two monitors for the price of one.

The switch has no effect on the mids and treble region but you might get the impression the treble is crispier when the sub is turned on. Aether's mids are very seducing. They have a lot of detail and the depth and layering is simply awesome. Each time I put the Aether in my ears I am still impressed with the texture it delivers, these are one of the very best mids I have heard. A musical, correct and airy presentation, Aether has it all. If you like full bodied mids with a lot of detail, depth and excellent layering, the Aether is a CIEM you really have to consider.

The treble is just as airy, detailed and layered as the mids are. Treble at all time sounds lively but never harsh.

With the sub turned on you get a very nice contrast between the lows and highs and the overall sound signature is very dynamic and engaging. Maybe it's not the most extended or most detailed treble I have heard before but it has a lively and energetic presentation. You won't hear me complain.

7. Driveability & Sources

Aether is fairly easy to drive and on the go I almost never used a portable amplifier, it works just fine plugged in directly to the AK120II and the L&P L5Pro. At home I have mostly been using it with the AK240 connected to the ALO Audio CDM or to the CypherLabs Duet.

If you know these devices you will know they both can be used in a Single Ended or a full balanced configuration and that's exactly why the AK240 is a great source to use it with. Connect Aether in single ended mode and you will get everything I have described in the previous chapter, connect Aether fully balanced and you can add 20% of improvement to everything. Aether in SE mode is already very good but in balanced mode it reaches a whole new level, especially with the Duet amplifier. (AK240 -> ALO SXC24 -> PlusSound Micro 2.5mm to Kobiconn -> CL Duet -> Linum Balanced -> Aether)

In balanced mode the layering gets even better with more texture and depth. I have to say I always kept the sub activated as the bass body in balanced mode decreases a little. For some recordings I prefer the single ended setup but in general the

balanced output really elevates the Aether to an even higher level. This is most audible with the Duet output and I prefer it slightly over the CDM's.

Like I mentioned earlier, the only thing you might have to look out for is a double bass boost, even though I am sure will want exactly that. In my opinion it's not needed and I prefer quality over quantity but do keep it in mind if your DAP or amplifier has a bass boost switch.

8. Comparisons

The Rhines Stage 5 has a focus on bass and the mids are more recessed and can sound kind of muffled with a bad source or less qualitative files. Aether's soundstage is wider and has better layering and especially the mids are more clearly and in the front.

Vision Ears' VE5 is incredibly good for vocal music, it takes a bit of time to get used to the sound but once you do you will find its clarity addictive. Focus in the VE5 is on the (high) mids and the treble where the Aether is more focused on bass and mids. These are very complementary monitors.

Cosmic Ears' CE5P is a good all-rounder just like the Aether, but bass and mids have bigger body in Lime Ears' monitor. The CE5 is the more neutral tuned CIEM and sounds tighter and faster. Aethers' sound stage, depth and texturing are better on the other hand. It's the most musical as well as it has more

engaging body and then there's the bass switch. The first time I put these in to my ears it didn't take long to realize the Aether really was something special. The left-right balance is really good and the three-dimensional positioning is impressive. What struck me as well was the layering from bass to treble, the high detail level and the depth of the sound. Is this really only a 5 driver? It shows again the driver count isn't everything; it's how you tune the monitor, that's what counts.

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The difference with the 4-drivers in my collection, the CE CE4P and the Eaertechmusic Quad, is quite big. Aether's sound stage, depth, detail, layering, etc. are all at a higher level. Aether sounds much more airy and detailed. If I hadn't known how many drivers were inside Aether I would have guessed 6. My 64 Ears V6S of course is more v-shaped and it sounds thinner. Sound stage in the V6S is quite good but Aether has the bigger body and better layering from bass to treble and especially the mids. The Cosmic Ears CE6E is one of my favorite all-round CIEMs as I love its bass and how well it performs in total with every source. The CE6E is kind of in between the Aether with the bass switch turned off and on but Aether's layering is better.

Let me know if there's a specific monitor in my collection you'd like me to compare the Aether to and I'll do my best to make that happen.

9. Conclusion

Aether is nice, Aether seduces, Aether rocks, Aether does it all. It's pretty obvious I really like it and it has quickly become one of my favorite all-rounder monitors together with the CE6E,

the Harmony 8Pro and the Earwerkz Legend R just to name a few.

Aether is the kind of monitor that makes all types of music sound good, it's engaging, has great imaging and sounds musical. The bass switch basically gives you two different sounding sets and that's a great added feature. The overall sound signature is on the warmer side of neutral with a slight focus on bass and key characteristics are detail, depth and layering. For a 5 driver, it is sublime.

Like with all customs, I do advise listening to the universal demo versions first as your preferences might be completely different. Aether's prices start around €1150, that isn't cheap but the quality is there, I certainly am hooked.



Lime Ears Aether - Grease Lightning

Deezel177, Head-Fi.com

Lime Ears - an establishment based in Poland and captained by the ever-amusing Emil Stolecki - have been manufacturing custom in-ear monitors for the past half-decade. Their flagship, the Aether, is a gem I hold very near and dear to my heart. Back in 2015, it was my very first major audio purchase, and my very first top-of-the-line CIEM. Fast-forward to two years (and half-a-dozen CIEMs) later, I am immensely glad to say the Aether is still getting a great amount of ear time, because very little in my collection can quite capture its exquisite balance of tone, clarity, smoothness and air.

Lime Ears Aether

- Driver count: Five balanced-armature drivers
- Impedance: N/A
- Sensitivity: N/A
- Key feature(s) (if any): Switch for sub-bass boost/cut
- Available form factor(s): Universal and custom acrylic IEM
- Price: €1150
- Website: www.limeears.com



Build and Accessories

The Aether comes in a black, Pelican-esque monitor vault with the Aether logo, owner's name, and serial number printed on top. Inside, you'll find a cleaning tool, desiccant, and a name card with Lime Ears's contact information. What you get with the Aether are the bare essentials for a flagship custom monitor. It's certainly not lacking, but compared to offerings from companies like Jomo Audio, Empire Ears and Vision Ears, you can certainly get more for your money; at this price range, they'd also provide optional carrying cases, micro-fibre cloths, etc.

Throughout the two years I've spent with the Aether, my personal pair have been sent back to Lime Ears twice; once after I damaged them in negligence, and once more to replace sockets loosened from months of cable-rolling. And, each time they've returned, Lime Ears' build, cleanliness and finish have consistently improved. Gone are the slight botches of glue at the joins of the faceplate and rough-around-the-edges feel; in its place: A uniform and seamless shell, perfectly flush sockets, superbly engraved multi-colour artwork, and a glamorously shiny coat of lacquer. It's a sign of impressive workmanship and dedication to their craft; no Lime Ears customer should ever fear for the quality of their CIEMs. This is top-quality stuff.

The Switch

The Aether is equipped with a switch on its faceplate that serves as an optional bass boost. This switch boosts the lower registers of the bass, accentuating frequencies usually associated with bass lines, and kick drum impact (not tone). It's a nifty feature I use quite regularly as I burn through my extremely varied library, because the changes it makes are very much isolated; affecting very little above and below. In culinary terms, it acts like pepper rather than salt. It doesn't lift the entire flavour of the dish; it just adds heat. Although it does not favour in terms of bass speed and resolution, it does inject a healthy dose of fun into the overall listening experience.

Presentation

From bottom to top, the Aether has a warm, natural and tightly-woven atmosphere, but one also endowed with great sparkle, energy and immense air. The Aether isn't the type to bore you with neutrality, nor will it put you to sleep with a slow, dull or heavy-handed presentation; it's loud, bombastic, a wee-bit loose and a crap-ton of fun. This is an IEM that prioritises musicality before technicality. It busies itself ensuring everything on stage sounds correct, fun and vibrant, before attending to matters of resolution and separation, even if it's certainly no slouch when it comes to the latter. The Aether prides itself in its tone, where it meticulously fuses smoothness and shine; body and bite; easygoingness and edge. It's a tone that strikes a sweet spot between life-like and clear, and it is an achievement worth

much praise.

The Aether's soundstage is decently wide for a flagship, but its defining quality is certainly its depth. It creates an even, cube-like image around the head, and performs admirably in terms of layering along the z-axis. However, this depth comes at a price: The Aether's midrange - by virtue of its distance from the listener's head - sounds very laid-back; sometimes borderline-recessed. Depending on the recording, vocalists may sound like they're singing from behind the band, and a rhapsodic guitar solo can end up sounding shy and held back (especially at lower listening levels). It's definitely a tuning choice, and altering this would compromise the far-field-monitor-system approach Emil is trying to achieve, but it won't be universally appreciated.

Speaking of the approach to the Aether's tuning - as written on the package - it is essentially a far-field monitor system in IEM form. Now, it certainly won't sound like a set of speakers in a room, but it presents music as such a set-up would. Aside from its midrange presentation, the Aether's tightly-woven atmosphere comes from what sounds like a built-in cross-feed. Although individual elements in a recording can be traced back to their point-of-origin with ease due to the Aether's clean stage, the recording as a whole always sounds woven together with an always-engaging sense of cohesion and collaboration. Instruments on the left have echoes and harmonics that extend to the right of the stage, and vice versa. It's a presentation that won't necessarily benefit those seeking to analyse and compartmentalise, but it's the proverbial candy store if

you're looking to get lost in the music and let the band dance around your head.



Bass

The Aether's low-end is arguably its stand-out quality; not necessarily for its technical performance, but rather for its presence, musicality and dynamic ability. In terms of quantity, the Aether's bass is north-of-neutral, but still within "natural" territory. Tonally, it's also rather dark - and slightly loose - which allows great contrast against its middle-to-higher registers, and ensures the low-end is always present and heard without excessive boost; no matter the artist, mix, or genre. Although insufficient air down low causes this darkness to intrude on bass resolution and speed - which I find "average" against other flagships - it's certainly sufficient for the sound it's going for.

Mainly characterised by bumps on both the middle-and-upper regions of the bass, this is a tuning that emphasises bass line melodies and kick drums, and adds great heft to the lower registers of any instrument (whether it be the lower harmonics of a cello, decaying tom-toms, the left-most keys of a piano, etc.). It's also the source of the Aether's lightly rich atmosphere; midrange notes are ever-so-slightly warmed up and liquified, treble notes are sweetened, and the overall ambience becomes all the more pleasing. This, however, is at the cost of sub-bass texture and separation. Due to okay bottom-end extension, and the emphasis on mid-bass bloom and upper-bass melody, the Aether's sub-bass lacks rumble and clarity; listening to the Aether's lower registers is always fun and giddy, but rarely ever coordinated, resolute or visceral.

The Aether's bass is also unique in that it separates through dynamic presentation, rather than contrasts in tone or texture. While, in well-mixed material, most would differentiate the kick drum and the bass guitar by their respective frequencies (one is usually brighter in tone than the other), the Aether forgoes this and instead presents one as punchier than the other. In order to preserve the Aether's bass tone, quantity and body, Emil has crafted a low-end that allows the listener to separate instruments in the lower registers based on how far forward they come into the foreground of the stage. It's an odd presentation that I've only recently noticed and it won't be the apple to an engineer's eye (or ear). But, it was a compromise made to highlight the low-end's addictive musicality, and it's a choice I probably would've made too.

Midrange

The Aether's midrange is a very difficult game of compromise: A balancing act between body and clarity; smoothness and shimmer; naturalness and cleanliness; engagement and authenticity. And, while the Aether does not walk the walk perfectly, it does stick the landing, delivering a midrange that focuses on articulation and attack, whilst maintaining a natural, smooth and sufficiently-bodied tone throughout; a very, very admirable effort.

The Aether's inherent emphasis on vocal articulation and clarity comes from its leaner lower-midrange. Compared to similarly neutral-warm IEMs like the Warbler Prelude or the Custom Art Harmony 8.2, the Aether's lower-middle registers carry a lighter and less substantial presentation. As a result, the Aether's stage is impressively clean - with merely minute traces of warm air between individual instruments - relying on its "cross-feed" to unify elements of the recording into a single consolidated image. However, that's not to say the Aether sounds dry or thin; in fact, the Aether's note structure is one of its strongest assets. Drawing forth warmth from its loose and atmospheric bass, the Aether constructs notes that are natural and bodied - such that it gives instruments tangibility and weight - but never thick or dense enough to introduce congestion, slowness or clout. The Aether is quite snappy in its midrange presentation as a result; a stark contrast - in a good way - to its rather fat bottom.

Coming back to the Aether's "shy" midrange placement, its tilt towards the upper mids tends to rob vocals of power and strength. Because of this lack in dynamic energy, when listening to artists like Adele, there aren't chills when she belts the climactic chorus, nor are there shivers when Diana Krall begins a verse with a raspy whisper. There's often a lack of immersion, drama and theatricality in ballads, and smoky, intimate, jazz-club settings can end up becoming nonchalant and un-engaging soundscapes. To combat this, however, the Aether endows midrange notes with decent size. Lead instruments take up about half of the central image, equipped with great height and harmonics/reverb that spread outwards along the stage. This smearing effect is what fuels its "cross-feed." Although it impedes the Aether's midrange resolution from reaching top-class status, it admirably compensates for the Aether's timidity and gives it a strong sense of liquidity, cohesion and gobs of musicality.

The upper midrange is where the Aether finally whips out its signature weapon: a metric wallop of pure, crystalline air. The Aether employs a healthy upper-mid peak to bring clarity and light to the entire presentation; essentially cutting through all the fat with a brilliant sense of cleanliness, liveliness, and energy. Cymbals crash with confidence and shimmer with grace, snare hits bang without the slightest hint of distortion or grain, pianos and strings gleam with texture, and electric guitars sound as crisp as freshly-fried potato chips. It's an unbridled and unabashed rush of enthusiasm and immediacy, but it

would only mean pain if it weren't paired with superbly impressive headroom. The Aether's upper midrange - though vibrant and packed with crunch - never breaks nor cracks; it neither distorts nor harshens. Notes are released with an openness and finesse that mates natural tone with punch, texture and clarity, yet constantly remaining smooth, rounded, and meaty along the way. This is the bite to the Aether's bark; the definitive, supplementary component to the entire ensemble and undoubtedly the Aether's MVP.

Treble

The Aether's treble is ultimately what defines its entire presentation and tone. While its upper midrange beams with liveliness and vibrancy, the Aether's top-end dares not be anything but laid-back and smooth. It's a treble that's warm, natural and easy-going, shying away from the mainstream where "sizzle-y and sharp" are the norm. Crafted with sweetness, body and tone in mind, the Aether's upper registers hardly ever steal the spotlight. Instead, they conclude, complement and complete.

Beyond the Aether's energy and pizzazz, the treble region enriches its strong fundamental notes with elegant harmonic detail, adding crucial decay to transients that its low-end and upper-midrange generously provide. Once instruments appear, they don't vanish without a trace. Instead, they linger; effectively using the air around them to float, far before fading away. As a result, the Aether's soundscape is never truly black; dead space is constantly occupied by overtones, notes become

intertwined and intermingled between one and the next, and the overall listening experience bathes in euphony, musicality and warmth. Admirable linear extension is also a key player here, providing an airy and coherent stage to balance against the Aether's innate liquidity. It layers and resolves capably too, discouraging any sense of messiness or gloom to produce - once again - a clear, natural and tightly-woven atmosphere.

But, of course, no good deed comes without compromise. The Aether's treble is very forgiving, sometimes to an unfortunate fault. Although it's capable of making any piece of music (and any source) sound superbly enjoyable and rich, it's not discerning enough to truly take advantage of masterful recordings and make them sound breathtaking. The Aether's top-end lacks transparency and incisiveness due to its decidedly musical-first presentation. But, whether or not that's a negative ultimately depends on your preferences and perspective. If you have a desperate obsession for perfect technical performance and you prefer your top-ends strict, then you won't necessarily love what the Aether has to offer. On the other hand, if your playlist is home to a variety of genres and production quality ranging from Chesky Records to your neighbour's bedroom mixes, then the Aether is where your money should be. It's the epitome of the phrase, "Jack of all trades, master of none," and it'll often be a give and take. However, regardless of whatever artist, genre or mix you listen to, you can always count on the Aether to sound beautiful, and versatility is something no one should ever take for granted.

Select Comparisons

Custom Art Harmony 8.2 (€1100)

The Aether and its fellow countryman, the Harmony 8.2, fall within a common demographic. Similarly equipped with neutral-warm tonalities and bodied presentations, both strive to impress via musicality first. Where they ultimately differ is in approach; the Aether dazzles with energy and vibrancy, whereas the H8.2 seduces with intimacy and warmth.

Of the two, the H8.2 has the technically stronger bass. Although it can't quite match the Aether's bass richness, power and atmosphere, it's the clear winner in rumble, resolution and cleanliness. They're tonally similar down low, but in terms of texture, the H8.2's bass is drier and more compact against the Aether's wetter and looser approach.

The midrange is where the two contrast most. Unlike the Aether's snappier, sparklier and airier delivery, the H8.2 places its emphasis on lower-midrange body. As a result, the H8.2's midrange is warmer and less clear-cut, losing out to the Aether on openness, clarity and finesse. Vocal presentation, though, is served with a greater sense of forwardness, gusto, resolution and strength, whereas the Aether puts its focus on depth and articulation.

The treble, on the other hand, is probably where the two compatriots are most alike. Both the H8.2 and the Aether are attenuated in the top-end to produce natural, non-fatiguing and easy-going tonalities. The H8.2's treble is attenuated to a larger degree (leading to a darker and less-resolving overall tone), but it has a grainier and more tangible texture - almost like film grain - compared to the Aether's smoother and more elegant presentation. The Aether, though, trumps it in extension; providing a more stable, coherent, and consistent stage throughout its entire presentation.

Empire Ears Athena-VIII ADEL (\$1429.99)

The Athena-ADEL - similar to both the H8.2 and the Aether - is driven by a fun, fatigue-free and laid-back approach to sound. However, its implementation of ADEL technology is where it really diverges from the beaten path. The result: An IEM that soothes with smoothness, warmth and body, but with a healthy dose of air thrown into the mix.

The Aether and the Athena-ADEL present bass in two wildly different ways. While the Aether excels in radiation and oomph, the Athena-ADEL endows its lower registers with softness and air. Both have rich low-ends that bloom without much rumble or physicality, but the Athena-ADEL compensates with light and clarity. The Aether, on the other hand, doubles down on fun, happily throwing ultimate resolution out the window in exchange.

Now, because the Athena-ADEL displays its low-end in such a delicate manner, it relies on midrange warmth to equip its vocal and instrumental presentation with thickness and weight. Unlike both the Aether and H8.2, the Athena-ADEL has a linear bump across the entirety of its middle registers. This means it focuses on neither articulation nor intimacy, instead relying on its sheer size to engage the listener. This is where the effects of the ADEL module are most prevalent; vocals are stretched sideways and upwards to form a huge wall of sound. The Aether's midrange presentation, by comparison, is more compact and energetic, engaging the listener with short bursts of excitement rather than long stretches of smoothness and warmth.

In order to compensate for its modest midrange sparkle, the Athena-ADEL is equipped with a brighter treble. It adorns the midrange with clarity and air - sparing it from congestion - and alleviates its inherent richness; essentially serving the same role as the Aether's upper midrange. Although it also shares the meatiness, roundedness and smoothness of the Aether's top-end, it is less natural in tone, and less transparent as a result. The Athena-ADEL's treble layers and resolves about as capably as the Aether's does, but is less adaptive and forgiving when it comes to coherence and prominence.

Lime Ears Aether - A class of its own

Binsterrrr, Head-Fi.com

Introduction:

Hello all, I am Binsterrrr and I have been in this hobby for close to 2 years now. I just started writing recently and I am still trying to develop my own style of writing so please help me out along the way and feel free to point out anything. I paid the full retail price for the Aether and I am writing this so as to share my own opinion on this wonderful IEM. Please take my words with a pinch of salt and YMMV.

The Aether is my first flagship CIEM I owned and I bought this from Music Sanctuary Singapore early 2016. I had a budget to look for a CIEM that I really liked. My preference for music has changed since then to a more mid-centric sound signature recently from a slight V-shaped sound and something that is musical and slightly on the warm side. When I first heard the Aether, I was immediately wowed by the sound. Sound was smooth, musical and simply very enjoyable (More on that later). I went around to the different audio shops in Singapore to continue trying out different monitors but eventually I personally felt that the Aether was still the most suitable for me and I eventually decided to go with it.

Specifications:

- 5 Precision Balanced Armature drivers (Single Sub, Dual Low, Single Mid, Single High)
- 3-Way passive crossover design
- Sensitivity: 109 dB/mW
- Impedance: 46 Ohms @1000Hz

Ordering Process/Build Quality:

I did my impressions on the same day that I ordered the Aether and settled all the necessary procedures at and the ordering process was very smooth. In exactly 2 months and 2 days from the day my order was placed, my Aethers arrived in Singapore. I picked Victoria Red Shells and Piano Black Faceplates with Gold Glitter laser engraving of the Lime Ears and the Aether Logo.

Build quality of the monitors are superb with the exceptions of a few small air bubbles in the shell near the nozzle area. Monitors come with a stock cable, Emil's name card, a desiccant and a cleaning tool inside a pelican case with my name printed on it.

Customer service by Emil of Lime Ears was also very good and I was able to message him personally on Facebook and check on the progress of the construction process and he also confirmed some details regarding the design online. Emil is very approachable and very friendly and helpful and he is willing to answer any questions you have regarding the Aether. Thumbs up for Lime Ears customer service.



Summary

The Aether can be considered a warm sounding monitor which sounds very smooth but what hit me the most was the very good instrument separation with very deep, punchy yet controlled bass. I would not consider the Aether having a very wide soundstage but I would call it very intimate sounding with very good depth. It has one of the punchiest bass I have heard from IEMs (Switch up) and some might find that the bass is a little too strong for their liking, but it certainly does not overpower the rest of the frequency range.

Bass

One of the weaknesses of the BA driver is that it does not pack as much punch as a dynamic driver would. However, this is clearly not the case. If you were to look into the shell of the Aether, you can see a large driver inside there for the bass frequencies and they sure punch hard. The bass produced by the Aether does not sound like any ordinary BA driver IEM and it rumbles deep but yet sounds controlled and very dynamic. The best thing about the Aether's bass is that is very punchy but does not bleed into the midrange at all.

Should the bass be a little too much for you, just flip the switch down and you will get a slightly less impactful bass punch. However, that does not mean that the Aether becomes bass-light with the switch down. The Aether still packs enough low end punch with the switch down to satisfy most genres of music

and gives it a more balanced sound overall. In my personal opinion, I feel that the switch gives more of a mid-bass than an increase in the sub-bass. The switch makes the bass a little more punchy and makes you want to snap your fingers along with the music and not so much of an increase in sub-bass boom and rumble for me.

Mids

The main thing I can say about the Aether's mids is that it is very smooth and seductive. It is slightly recessed but it keeps your attention there to the mid details and makes you want more. It has good resolution and speed and sounds very musical and enjoyable.

Highs

The highs of the Aether are very detailed and very resolving. Aether manages to give a lot of details but not sound too analytical at the same time. It matches the overall sound signature of the monitor very well and maintains the very musical sound without sounding too technical at the same time. Treble extension is very good and on tracks like Celine Dion's All By Myself the treble remains sparkly and well extended all the way to keep up with the vocals while not becoming sibilant and non-fatiguing.



Verdict

The Lime Ears Aether is a fervent and unapologetic rockstar. It may be a bit loose around the edges, and it isn't the most romantic of souls, but it is the pure, unadulterated essence of fun; alluring, exhilarating, and devilishly delicious. Built upon a foundation of masterful tonal balance and striking presentations of clarity and air, the Aether is bolstered by sheer musical charisma, with proper technical performance just lurking underneath. And, while it may have sacrificed a tiny bit of resolution for atmosphere, an ounce of vocal density for articulation, and the last word on transparency for warmth all along the way, among the plethora of IEMs I've heard thus far, it is one of the prestigious few that can pull off a near-perfect balance of them all at the same friggin' time. The Lime Ears Aether is an absolute powerhouse, and it is a tantalizingly promising precedent to what else the Polish company has to offer.



Soundstage

Staging on the Aether is not as wide as compared with my Jomo 6r CIEM but it has very good spatial arrangement of instruments and everything feels nicely spaced out and u don't feel the instruments all cluttered together and making the sound feel mushy and messy.

Cable Pairing

The main cable that I pair this with is the Effect Audio Leonidas. Even before my Aether arrived, I was chatting with Emil on Facebook and I asked him for any cable recommendations with the Aether. That time was just after CanJam Singapore 2016 and he mentioned that he heard a few cables but the Leonidas "really stands out" and that there is "a really big difference in amount and quality of highs". He also warned me to "beware as you might get addicted". Oh damn he was so right. Leonidas sounded so smooth with the Aether and makes the sound even smoother and more seductive with increased treble extension and tightening up the bass even more. This improvement in the lower frequencies is one of the most welcomed and significant improvement in my own opinion. The Leonidas is one cable that I would strongly recommend to any Aether owner looking for a smoother and more musical sound.

Sources

I would consider the Aether as a forgiving monitor that sounds pleasant out of almost any source like my iPhone 6s, Onkyo DP-X1, Astell&Kern AK240SS and AK380CU but the sound changes pretty significantly when paired with different players, especially affecting the bass frequencies and the vocals. My favourite pairing now would be the Aether with my AK380CU as it sounds very musical and non-fatiguing and I can listen to it for extended periods of time. However, the Aether already sounds very pleasant straight out of my iPhone 6s or my MacBook Air but I would strongly recommend you invest in a DAP to bring out the maximum potential of the Aether.

Conclusion

The Aether is one of my favourite monitors. Period. Every time I leave an audio shop or meet and get poisoned by all the gear, when I pop my Aethers into my ears, I still feel that sense of satisfaction and helps me to resist any temptation to get new audio gear. Aether is warm, smooth, musical and an all-rounder that manages to handle almost all genres of music. It functions well as an IEM for use on the go when travelling for work or for a critical listening session to relax at the end of the day. I would highly recommend anyone who is looking for a new pair of CIEMs to go and audition this pair of monitors and the Aether is certainly a masterpiece that demonstrates that "More drivers does not equate to better sound".

Lime Ears Aether - A masterpiece of tuning

gearofwar, Head-Fi.com

I would like to thank Emil and Bara for arranging the tour allowing me to experience some of the great IEM products on the market and one of them being one of the best I have ever heard in this price range and well beyond - Aether.

Pros - Perfectly balanced signature, well-done and beautiful treble, smooth and rich from top to bottom, most natural timbre ever heard of an iem.

Cons - None

INTRO:

Lime Ears Aether is a 5-BA drivers IEM (1 super low, 2 low, 1 mid, 1 high) with Crossover 4-way crossover design. I have learned from my journey in the audio world that Driver-count just doesn't matter, what matters is how well you tune those drivers and this example could be vividly seen with Hum Pristine. In a few words, I would describe Aether as having the very natural timbre if not most, rich, smoothly done from top to bottom, resolving yet still being so musical without sounding thick nor thin.

In fact, it's an all-rounder IEM and the tuning has got to be the most balance out of any IEMs I have ever heard. As said, this special signature of Aether reminds me of Mr. Speaker Ether Flow but Aether doesn't sound as diffused as the Ether hp , they are both well balanced and seemingly no compromises.

The following review will be done on pairing with Sony NW-WM1A on Single-ended with universal-fit of Aether. The review will be based upon my opinion of the demo, it might be subjective to some people because we all have different hearing and taste.

Low: Aether has a very neutral type of bass which is tight, fast, well-textured and provides sufficient amount when needed without ever being bassy or too articulated. The sub-bass while not having the same quality as DD type but actually leaning toward it. It rumbles well, has good texture and hits really deep which is the best part of it. Despite having a BA-type driver, the bass is really impressive and satisfying to most people and I actually ended up never using the bass-boost switch. Bass on Aether also doesn't bleed into other frequencies even when the bass-boost switch is up. For the switch, when up, it makes the sub-bass become a lot more powerful, the signature becomes a bit of V-shape with treble becoming more sparkling.

Mid: The vocal on Aether is neutral and has a very natural tone with a bit of warmth to it. It's neither laid back nor forward, neither thick nor thin, it pronounces exactly what and where the singer sings in space without coloring the sound. Because of the natural tone, the string instruments and every note ring full and true to life on Aether. The upper mid is well-extended and very forgiving, it never sounds harsh nor bright or tends to sibilance with many bright and poor recordings.

High: The treble on Aether is my favorite part of the entire spectrum, just euphonic. It's a perfect kind of treble which is well extended, possesses the airiness that goes between layers (Aether possesses this tremendous depth, more on next part) that none other in this price range has and yet it's accurate. It has no peaks or glares from top to bottom but being smooth and non-fatiguing without ever being bright or dull; also It has a good amount of micro details presented in a very natural manner instead of shoving into the face. The resolution and technical performance are overall high and top-notch in this specific price range and in fact, beats those with higher price tags such as Encore and Katana.



Soundstage and Imaging: To paint the picture, try to imagine yourself in a room listening to a pair of high-end loudspeakers because that is the philosophy to which Aether was being tuned (Can't remember to which model it was being tuned). The room would have an average size of width, not big and that would be the width of Aether. In this specific space, you will hear every note and position of each instrument with distinct separation between them. This room in fact also has a good height where the sound would travel up top above your head and also well below. From this picture, it could be seen that Aether possesses an average size of width hence the soundstage will not be your last cup of tea but the sense of depth is among the top.

Comparison

AAW W500 Ahmorph (middle tuning): AAW used-to-be flagship appears to have best bass quality out of any current IEMs I have ever heard (though it might be surpassed by the new W900). The bass on W500 just hits very deep, highly textured, tight and impactful like a hammer. It clearly beats the bass on Aether hands down. Staging on W500 is wider and has similar depth to Aether. From this point, everything else from Mid to Treble, Aether is just miles better with more natural presentation and higher resolution than W500. One thing I didn't like about W500 was the sense of muddiness in treble and its upper mid tend to sibilance and peaky on certain tracks.

Zeus XR: Having tried the demo unit at Canjam. Zeus XR beats Aether in resolution not by much with better staging, separation and more accurate (reference tuning in mind here) but Aether's staging has more depth to it and the treble on Aether sounds just more natural and euphonic without any hints of sibilance. As you know Zeus XR is 2.5x the price of Aether and you will get absolutely higher performance but I would take Aether over Zeus due to the signature, the way Aether represents the sound to make you enjoy more than analyze. Also with a top-end upgrade cable, Aether can still match the technical performance of Zeus on the stock.

Hum Pristine Reference (PR): Being my daily driver since September, Hum Pristine is a direct upgrade to my previous JH13 Freqphase. It has the resolution and technical performance that rivals Zeus XR despite having only 2 drivers. Hum Pristine has an absolute build quality from top to bottom with internal wirings and components including premium-quality stock cable and premium MMCX connector (brand exclusive).

Both have a neutral presentation but they represent the sound in very different ways. Being a reference monitor, PR is extremely accurate, brighter, thinner and brutally revealing. PR shoves out details in an aggressive manner (similar to that of JH13) unlike Aether presents the detail in very smooth and natural way. Through certain periods of time, I have found PR to be very dependent on source and track, it will tell you exactly what's on the track without mercy whereas Aether is an all-rounder very forgiving, trying to make everything sound as much natural as possible. In fact, PR has higher resolution and reveals more micro details but at the cost of sounding harsh, thin, dry and lifeless compared to Aether. Bass on Aether has subwoofer-like quality (even with bass boost off) where Pristine has a tighter, more articulate bass with a touch of warmth and good impact. Both has a satisfying amount of bass leaning toward the Dynamic-driver type of bass though I prefer the bass on Aether. Mid on PR is slightly more forward, the upper mid is bright, revealing and become fatiguing sometimes with bad recording not as natural and forgiving as Aether. Both have a great treble extension but Aether extends further and more natural. Soundstage wise, PR has wider stage while Aether has better depth, I found PR staging is similar to that of HD800 due to its being tuned as a Reference monitor, and the separation is better and more spatially accurate. Deciding factor would be for which purpose you would use it, I would pick Aether over Pristine for daily use since I have a large variety of music from different quality and genres.

Campfire Andromeda: (updated) Having tried this iem many times even borrowing it home from friend. Both iems are well balanced but Aether seems to come out on top eventually due to extremely natural timbre. Andromeda has brighter upper mid which tends to be sibilant on tracks, the mid is a bit more forward on Andromeda, it's a bit warmer and thicker. Staging wise, Andromeda is wider but Aether is deeper throwing a depth into face. Overall, Aether beats Andromeda in resolution, separation and has a more natural timbre.

Noble Encore: This unit was demo-ed after a long waiting line in Canjam. Encore has fixed that congested staging and treble of K10 while retaining the similar signature. I have found Encore is still a notch below Aether in airiness, resolution and not as natural. The mid on Encore also somehow lost that magical touch on K10.

Noble K10: The impression was made on demo units and was demoed many times during the past 2 years but please still take this as a bag of salt. As you know, Noble K10 was sparking quite a fame in US audiophile community for a few years back. I already had many chances to compare it to JH13 Freqphase which was my daily driver but couldn't find it to resolve better than JH13 to justify the cost of switching over. Though I have to admit K10 to be thick, musical, pleasant sounding monitor with very emotive vocal (the best part of this IEM). Compared to K10, I found Aether to have better technical performance while still retaining musicality, has an overall higher resolution, more resolving, better separation of the instrument and much more spatially accurate. Aether also has a more natural presentation without being thick or congested. The staging on Aether is wider, airy and has a better sense of depth. The treble of Aether is more extended, more natural and has better definition. The mid on K10 is more emotive and forward where Aether is laid-back and neutral. The upper mid of K10 could borderline brightness sometimes while Aether is not, both never sibilance. The bass on K10 has more slam but lack of control compared to Aether, it also doesn't extend as deep as Aether's sub-woofer quality. I have found Aether to be an upgrade over K10 as they are both being all-rounder monitor.

CONCLUSION:

Aether is a vivid example of how a natural sounding IEM should be – smooth, rich, neutral without the need to be analytical or thick. While its technical performance could be rivaled and bettered by higher-end models with the cost of twice and more, its signature will always be something make it distinct from competitors as a unique one. At the moment, Aether is among those with the best price-to-performance ratio to date. I can only see myself switching between gears but Aether will always remain here for many years to come and it is going to become a classic masterpiece that won't fade away with times. Give it a listen to believe. (Custom version is even better).

Introduction:

The audiophile market is booming, and every week there appear to be new releases in all price tiers. A few years back, there were only a handful of TOTL ciems that passed the \$1000 range. Now even in this price class, and well above, the competition has grown fierce. The first three years are always the hardest for a new company, and Lime Ears has spent their time in the margins waiting for a break. Their LE3 model was keeping them up float, but that real break finally came with the Aether – a new flagship that established their name, and announced they were here to stay. For even in a crowded market, the Aether has something special to offer.

Lime Ears Aether

- Drivers: 5 BA drivers; 1 super low, 2 low, 1 mid, 1 high
- Crossover: Hybrid electro-acoustical 4-way crossover
- Frequency range: 'wide'
- Impedance: 'moderate'
- Sensitivity: 'moderate'
- MRSP: €1150

Emil was somewhat reluctant to give up the specs, as he feels there is so much variance between measurements that it is almost impossible to give an exact specification, that can be directly compared to other ciems. But I can attest to his 'specifications': the Aether is relatively easy to drive, while being quite forgiving with poor recordings or quality. Its frequency



range is also wide, though more so at the top end compared to the bottom.

Build & Design

The Aether slides in easy and fits comfortably. Insertion depth is about average, and overall there's nothing out of the ordinary worth mentioning. Emil and I discussed some options, and after that I gave him carte blanche for the design. The Lime Ears monitors were the first iems I saw with the 'time machine' design, a steam punk style collection of sprockets. I like if the design is in line with the house style, something fairly unique to the company, so the visual design resembles the signature in some way. So I'm glad with the golden elements set against a black wood background. The transparent gray shells are finished with a lining of gold dust in the left ear, and silver dust in the right.

The Aether comes with a switch to adjust the bass response. I've had iems with an adjustable bass dial before, the EarSonics Velvet and AAW W500, but in both cases a screwdriver was required. While still relatively easy, it turned out to be a step too much for frequent use, so I never ended up adjusted them more than the once or twice when I first got them. So, based on prior experience I wasn't expecting to use the one on the Aether. But the simple switch is so practical to use, I find myself playing around with it on a regular basis. Since you can flick it up or down while listening, it's easy to adjust between songs, or just for fun or testing.

Accessories

I'm glad to keep this short – the Aether comes with the standard custom starter pack. A Pelican case with your name, a cleaning tool, and the cable of course if you want to count that separately. The cable is a generic OFC 3 wire common to many 2-pin iems. It's the same you'll see with iems from EarSonics, Perfect Seal, and Custom Art for instance.



LimeEars Aether Custom IEM Review: I don't always listen to treble, but when I do, I listen to the Aether

Jelt2359, theheadphonest.com

LimeEars' Emil is a wizard of treble.

In the magic mountains of Xanadu did Kubla Khan a stately pleasure-dome decree, where Alph, the sacred river, ran through caverns measureless to man down to a sunless sea.

When I first contacted Emil about the Aether, he told me he had just emerged from a meditation retreat. Indeed, he must have conjured up the Aether during that time, for this IEM brings with it a touch of the divine. It is a magical take on treble that I have heard in no other earphone. Emil knew it was special, too, having chosen to launch it on his 30th birthday. (Note to self: What a nice birthday present for oneself!) I've had it and kept my views to myself for a while now, but it's finally time to let the dove out of the hat.

In FFAB 2 I have eschewed rating bass, mids and treble separately, because it's the overall presentation that generally matters. It still does, but every once in a while I get an IEM that comes along and says, 'well, I don't care about that'. The VE5 and its mids was one, and with the LimeEars Aether we have yet another. The Aether presents, triumphantly, the best treble I have ever heard, as if taunting me to try and talk about the overall presentation, the coherence, the separation, *the blah blah blah blah blah* without mentioning that freaking treble. Fine, LimeEars. You win. Your treble also wins.

Before we get there, let's take a moment to talk about the beautiful artisan designs that Emil conjures in his IEMs. Mine was concocted in green and brown, with thoughts of spring around the corner- a happy coincidence that I'm publishing it now, then, with spring, well, around the corner again. It's simply gorgeous, with exquisite gears built into the faceplate. Making an IEM is both art and science, and Emil walks both paths (luckily he has two legs) to their natural pinnacle. A particularly welcome touch- one I'll get to in more detail later- is the built-in switch that he has crafted. It is well-designed and subtle, with both sonic options seeming like adjoining sides of the same musical coin.

With that out of the way, let's start this review. No more mincing our words. No more ignoring the elephanttreble in the room. Let me just say this: it's never been easier to summarise an IEM. No matter its other merits, you're going to be buying this IEM for one reason and one reason only. Because you want to sing to the raw, flavoured, textured treble of the LimeEars Aether.



- IEM: LimeEars Aether
- Form Factor: Custom In-Ear Monitor
- Damage: 1150 € (Euros)
- Type of CIEM: 5 BA Drivers, 4 Crossovers
- Build Quality: Beautiful work of art!

The Sound

So twice five miles of fertile ground with walls and towers were girdled round; and there were gardens bright with sinuous rills, where blossomed many an incense-bearing tree; and here were forests ancient as the hills, enfolding sunny spots of greenery.

When I see things like a switch built into an IEM, I can't help getting worried. Is it a gimmick? Is the bass boost simply for the 'Dr Dre' Beats crowd, with all the mindless subtlety of a 50-cent shot of vodka?

Thankfully, nothing about the LimeEars Aether feels or sounds cheap. The switch is blink-and-you'll-miss it sublime, with an approach that clearly retains the Chef's interpretation in everything you eat. "More salt or less salt, either way you must have salt". If I were Emil, founder and chief honcho at LimeEars, I'd be perfectly proud of both settings on this IEM, and in fact I find myself using it way more than expected. Switching between settings from song to song to fit the genre. Pop, or bass heavy? On comes the bass switch. Instrumental, ambient? Off comes the setting. Bottom-line, this is a beautifully, tastefully implemented change of flavour, that sets the gold standard for how

all such switches should be done.

But while the first thing you'll notice about the LimeEars Aether is the switch, that's probably not the key decision factor. In the end, turning on the switch generally turns the bass on to a level I'm more used to. The bass gets heavier, punchier, more umami-flavoured. Quantity-aside, though, the bass on this IEM is reasonably good. Not only is it detailed, it actually has good subbass extension and slam. I also found it authoritative and tight enough- not 'oh wow', but at least 'that's okay'.

The mids are also competent, although it fails to strike a major impression amidst other IEM powerhouses like the VE5. It resonates well and has good detail, and generally holds its own. These are a clear and resonant type of mids that toe the line well between analytical and emotional. I particularly liked how they would spread out across the entire stage and linger wistfully with every note. On the other hand, these mids suffer a little bit from a lack of forwardness, so if you like your mids so close you can feel the singer's saliva on your face... this is not it. These mids are also lighter on their feet, more consommé than cream soup- so make sure that that type of sound floats your boat before picking these up for a listen. Personally, I think this tuning also explains the need for a switch. If you want maximum-Emil, so to speak, put it to bass-lite mode and hear it in all its glory. On the other hand if you prefer something more mainstream, then turn on the bass-tap and start to flesh out the sound a wee bit more.

That Treble with a capital T

But oh! That deep romantic chasm which slanted down the green hill athwart a cedarn cover! A savage place! As holy and enchanted as ever, beneath a waning moon, haunted by a woman wailing for her demon-lover!

Nobody should mistake the Aether for a club-thumping drums and bass monster, nor is it a vocal powerhouse. After all, it's all about that Treble, 'bout that Treble- no bass.

The Treble is clear, even, smooth, and detailed. It sounds raw, unfiltered, like tasting sashimi for the very first time. It's blazing fast, and also helps contribute to a precise and airy sense of space and stage. I'm not sure what Emil did here, but it sounds unlike any other Treble I've heard before, and I love it. It's not absolutely perfect in every way, but it's darned close. For example, it's not the absolute last word in sparkle, nor does it extend like the neck of a giraffe. But these are minor annoyances. Give me quality over quantity any day. With the Aether, passages that I'd normally either wince at, or completely not hear (yes, some IEMs deal with the pesky 'problem' of treble simply by glossing over it altogether), I can now enjoy in their gorgeous entirety. My EDM soul rejoices- bring on that synthetic mashup of high notes!



Now let's learn what Emil did here (spoiler alert!) Let's cut to the chase. How did you do it?!?

In Aether I used fairly high-output treble driver which was fairly heavy-damped (acoustically). Acoustical damping reduces peaks and valleys in FR making highs smoother and more silky so to speak (jelt2359's note: yes pleasee). This combined with VariBore tech is responsible for the effect.

*While implementing VariBore we use different bore diameters for different groups of the transducers. Subwoofer and low frequencies are delivered through 1mm bores and mid-high frequencies are delivered through 2mm bore. Increased bore diameter has the biggest impact on highest frequencies: reducing the air friction and diminishing resonant effects. The result is better high-end extension (compared to smaller bores) and what is most important fewer resonances (peaks and valleys in FR) causing the highs to be less harsh, more silky and natural. (jelt2359's note: so apparently all he did was damp more and increase the bore size? Cheeky fella, I'm guessing that's not all there is to it. But I suppose you can't give away *all* your trade secrets at once!)*

...back to regular programming (aka my thoughts)

This Treble has the ability to be crystal clear and detailed, yet avoid any harshness at all. It's like when you eat top notch sushi for the first time, and you're like, man, why would I bother marinating and seasoning and sautéing and all that stuff I normally do to cook something, when food actually tastes so darn good raw?

Cos' it aint normally that good, silly. Welcome to the Grade A sushi buffet that is the Aether Treble. Stuff yourself silly, and go light on that soy sauce and wasabi. Savour every treble

Vision Ears VE5 vs Aether. The two IEMs- while very different- both come across as supremely refined and clear. They both don't put a step wrong, and would both look very out of place at a Miley Cyrus concert. The two have some differences- the VE5 has bigger, more fun mid-bass, but less subbass. On the other hand the Aether feels more alive, more exciting (again, this is relative) between the two. Spatially the two have very different strengths, too, with the VE5 being much wider while the Aether is much deeper. Overall, I think the Aether has better articulation and note density, and is generally clearer. For its part the VE5 has a much more emotional midrange, and an overall smoother presentation.

Ultimately I still can't get past how delicious that treble is, especially for super-fast music like happy hardcore. It also has the effect of making heavily processed pop music sound almost audiophile-like in how gentle yet detailed the sound becomes. Yum. I personally prefer the Aether, although for the purposes of this comparison I rate the VE5 in front simply because I think more are likely to be impressed by what it brings to the table.

PS, if this matters to you, the Aether also takes in a lot more juice.



Summary

With music loud and long, I would build that dome in air, that sunny dome! Those caves of ice! And all who heard should see them there, and all should cry, Beware! Beware! His flashing eyes, his floating hair! Weave a circle round him thrice, and close your eyes with holy dread. For he on honey-dew hath fed, and drunk the milk of Paradise.

Having heard so many IEMs over the course of the past few years, I find myself gravitating towards IEMs that fulfil a few key criteria. First, no major, glaring weaknesses. I don't want to find myself ever thinking "Argh"! Second, they do one thing better than any other, so much so that I tell myself, ah, there is nothing quite like this. And yes, there is nothing quite like the Aether's Treble. It is the signature on the declaration of independence, the cherry on top that ties its entire musical thesis together, the raison d'être of its existence. If you are a Treble head- although importantly you'll need to be the type who enjoys quality rather than quantity of Treble- buy the Aether, and never have to spend a single cent again.

Until, of course, Emil genius brews up something new....

Count the Aether among one of these- a rare spot on my 'personal favourites' list.

Overall Score: 85-90 (Almost Perfect)



"And yes, there is nothing quite like the Aether's Treble."

"Count the Aether among one of these- a rare spot on my 'personal favourites' list."

Lime Ears Model X – The Onion

Linus, Headfonia.com

Disclaimer: Lime Ears has provided the custom Model X free of charge for the purpose of this honest review. I only had to cover the costs for getting my impressions done and to ship them to Poland. It will stay in my collection and serve the purpose as reference model for future reviews. I will also use it for my personal listening of course. Lime Ears is not a site advertiser. Many thanks!

About Lime Ears

Lime Ears is a Polish CIEM company that has been around for some years now. They started out working with professional sound engineers and musicians but have shifted their focus on the audiophile consumers a while ago with their triple driver and their flagship Aether. Since the five-driver Aether it has been quiet about Lime Ears though.

Emil luckily gave me a little history lesson about Lime Ears:

The company history is dated back to 2010 when, after graduating from the university (I'm a sound engineer by education) I was working as acoustic designer specializing in room acoustics of concert halls, cinemas and theaters as well as noise control in such places. I was an active bass player, performing with several rock bands. With one of them we started rehearsing in recording studios. With all instruments mic'ed up we used big over-ear headphones as our monitors. I was blown away with by clarity and quality of them. I started to be interested in in-ear monitors then. I looked around Google and found out about CIEMs.

Back at the university I met Karolina who was an audiologist by education and had some prior experience in making the earmolds. I thought: why not to make the CIEMs then? After two long years of sourcing the materials, prototyping, attempts and fails to manufacture something useful I've got to the point when I thought that all this went so far that it should transform into a boutique company. We started Lime Ears as a duo in 2012. Slowly gaining recognition among Polish musicians, eventually we started gaining interest from the audiophile community around the world. Now, after five years of official existence, we're working as a four-people team providing monitors for the majority of the Polish music scene, as well as getting more and more attention internationally from both professional musicians and the audiophile community.

Having the Aether as our extremely well-received flagship, the Model X fills the gap between LE3S and Aether.

Like I said, I have many years of experience in room acoustics and noise control. And regarding to CIEMs my biggest interest is the methods of tuning them by changing the size and shape of the path that sound is travelling to your ear from the transducer. Implementation of acoustic filters, lengths, shapes and diameters of the canals enables to squeeze out some new qualities even from widely-used transducers. Thus the technologies we used in Model X are connected with this realm.

About Model X

When I was asked by Lieven if I'd want to review Lime's newest creation I had no idea what to expect. I only knew he was very much into the Aether and that the new one would be a custom with a bass-switch. Even after I have received my set, I have not known anything else apart from that and the name, though I thought 'Model X' would be a codename and it would change once it's released. On October 5th Lime Ears has announced their new model officially and they have revealed a little more info about it.

Model X is a four BA-driver model, with vented dual low-end BA's, single mid-driver and single high frequency driver. It features as already mentioned a switch to boost low end (<800Hz) by around 8dB. Model X will set you back 890€ with standard choices, and price will go up depending on your personalization.

According to their website boosting bass response has three purposes:

Depending on listening level to make use of the Fletcher-Munson law (for lower listening levels the bass can be boosted to make it better audible)

Depending on level and quality of bass in the recording (if the bass is great it can be made very powerful, on the other hand if material is not so well mixed and lows are becoming boomy

and out of control they might be trimmed down)

Depending on external noise levels (If you're listening in noisy environment like airplane, subway or similar where low-end noise masks the lows, you might want to switch them up).

Apart from that Lime Ears has also introduced their PAR technology, which features a Passive Acoustic Radiator.

Emil again provides us with more information:

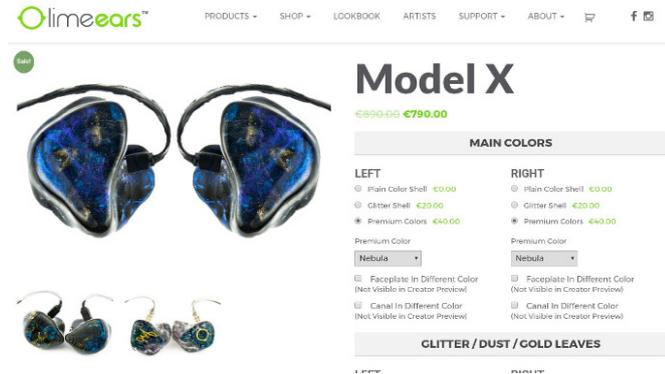
In Model X one of the sound bores is used solely as a resonant cavity (radiator). Tuned carefully in terms of length, diameter and volume, it provides numerous resonant effects that help to straighten the frequency and impulse response of the transducers used in this design.

Since every sound source is affected by its environment – every speaker transducer is influenced by its enclosure and the room that it's performing in. The idea of PAR is to modify performance of BAs by modifying the geometry of the "room" created by insides of our ear canal.

My thinking is that PAR is the reason (amongst others) why Model X, even only being 4-driver design, while auditioned by several individuals (including some earphone designers) received mixed opinions about its driver count and driver types. It seems to sound surprisingly different than it "should" sound based on its driver count and type of drivers used.

Like in previous models Lime is also using VariBore again, this makes use of different diameters for their soundbores, specific to the frequency they carry. For instance, the sound bore for high frequencies is about 2mm thin and together with a damper is responsible for a smooth and clean sound.

We use different bore diameters for different groups of the transducers. Subwoofer and low frequencies are delivered through 1mm bores and mid-high frequencies are delivered through 2mm bore. Increased bore diameter has the biggest impact on highest frequencies: reducing the air friction and diminishing resonant effects. The result is better high-end extension (compared to smaller bores) and what is most important fewer resonances (peaks and valleys in FR) causing the highs to be less harsh, more silky and natural.



Custom build choices (Personalization)

When you are about to place an order for a custom built Model X you have a wide array of different choices, you can pick from 17 different colours, get glitter shells in three different kinds or you can get a set with premium colours (either Nebula or Cosmic Swirl). And that's just for the body, you can then add different colours or materials for your face plate, and on top you can also add different materials to the entire set, such as 24k gold flakes, dust, watch parts and so on. All in all, you have a very big set of choices to go through. While you are doing this, a preview model will adapt to your choices in real time, so you always have an idea what your model will look like.

Apart from colours and materials you can also have either the Lime Ears logo or anything you want laser engraved on the face plate. You can also pick between two different cable-colours and decide to get your Peli 1015 case personalized with your name.

For an upcharge of 180€ you can boost your order to get it build in eight work-days, though it is recommended to ask for availability of this service prior to placing the rush order.

I personally went with a Nebula design, simply because I like my monitors to become little pieces of art. My set features a black background with gold and blue clouds.

It continues with Package, Build quality and Sound on page two

Package

The list of accessories for Lime's Model X is rather short, but absolutely to the point. When ordering a custom in ear monitor from Emil you will get a shock and waterproof Peli 1015 case, which is personalized to you. It features the serial number and the model's logo on top alongside your name. In the case, you will find the monitors, attached to which is the industry standard Plastics One 3-wire OFC cable with a 3.5mm stereo plug. Other than that, you will get a drying cap and a cleaning tool.

Supplied accessories are as you can see kept to basics, but in my opinion you won't need anything else, though a cleaning cloth for example would have been nice.

I personally am not the biggest fan of the Plastics One cable. I don't like the memory wire and the cheap feel of it. I know complaining about such things might be a bit of douchery, but for me it is also about aesthetics. This cable does not do the Model X justice.

Build quality

Model X is one of the smaller CIEMs in my inventory, only Kataka comes close in size. The units itself are in almost perfect build quality and there are only minor issues with it, those are only very small blemishes though. Face plate and body close perfectly together, with no signs of glue or sharp corners. The face plate is, in contrary to every other monitor I have, comple

tely flat, whereas all the other CIEMs in my possession show a rounded type.

On the lower end of the face plate you will find the bass switch, according to my knowledge implementing a switch is fairly hard, though in the recent past we have seen many manufacturers utilizing them. There is little residue of glue left where the switch was put in, but I imagine cleaning it is a very tough job, especially when trying not to harm the switch itself.

The 2-pin sockets are to my satisfaction flushed. Personally, I prefer flushed sockets, because it enables cable-rolling with any available after-market cable. Another slight issue I have with my set is, that the 2-pin socket of my right ear-piece is implemented uneven and also has some signs of glue on it.

Other than those two very minor belmishes my set is in excellent condition.

Fit is tighter than most of my CIEMs, but I like it when it is. Whatever I try, I can not lose the seal, and that's a great thing. Even the funniest of faces won't break it. Just like with any custom comfort is top notch and once you get used to the tight fit, you will not notice the monitors in your ears anymore. That's why I prefer custom build over universal at any times. I can wear them for hours without my canals getting hot.

Sound

As said, I knew close to nothing when I got my Model X. All I knew was that it will not be a new flagship (that one's reserved for Lieven) and that it has a bass switch. So I really didn't know what to expect. When I first had my new Lime Ears in the hands I was surprised by its size, but I was even more surprised when I had my first listen only a few moments later.

What struck me the most was the incredible resolution and layering the X has to offer. It is almost en par with some of the flagships I have here. The sound stage goes deep and wide, while at the same time it is not the biggest of stages around. Imaging is very good with great left-right balance. The amount of details is impressive, especially with the near pin-point positioning X sports. X's speed is very good and I never found it to become out of control of things. The overall sound is open, engaging and transparent, with many out-of-your-head experiences.

Depending on the position of the switch X becomes more forgiving, with the bass boost turned on, the warmer signature's nature will cover up mistakes and bad recordings easier. With the switch down it still is forgiving, but by a good margin less.

"X has become one of my easy-recommendations for everyone looking for a custom monitor in the sub 1000\$ region or that does it all and that can adapt to your preferences."

Bass with the switch set down (off) is fast, tight, energetic and well textured while maintaining in the background. It does not bleed into the midrange or overshadow it with its body. With the bass switch turned on low ends gain more body and presence, giving the entire presentation more boom and a warmer tone overall. X also throws a meaner punch when the bass switch is turned upwards. Personally I would have preferred a mix of both, while I like the gained body and fun factor, I would have been satisfied with a little less boost in dB. That being said, I kept the switch up almost all the time.



Mids are very natural and organic, with slightly laid back presentation. There is great resolution and layering to them. Mids are presented with lots of air between the instruments to separate them easier. Strings and vocals show beautiful harmony and emotion, where keys have perfect weight and body. These lush musical mids are some of the best I have yet heard. Mids have great body, that's shown very well in tracks with notes that float around in the room, moving from right to left, from back to front. Vocals, both male and female, sport great emotions. You can really emphasize on the pain, euphory and power some singers want to bring across with their songs. This midrange quickly becomes seductive.

With the bass boost turned on, lower midrange gains more body, going a step away from the neutral tuning to a more elevated bass to lower mids.

Treble is neither cold nor warm, it is neutral and crisp. Like mids, treble is also airy and very detailed with awesome layering and tons of energy without any signs of sibilance. Especially the amount of details and resolution again is outstanding. X's treble extension is good, but not the biggest out there. Though the switch does not affect the upper end of the frequency, you will get the impression that treble becomes crispier and more pronounced. Resulting in a clearer V-shaped signature.

I find the switch to really add value to the monitor, because depending on the mood, genre or situation I'm in, I can add a good portion of body and slam to the sound, all with a simple flick of

a switch. This makes it also an easy do-it-all monitor, it doesn't fear any genre or artist. Everything I've listened to with Lime's X was pure pleasure and an absolute delight.

Just an example: A song every monitor of mine has to go through is Apparat's Good Bye, a very powerful song. If the monitor can get it right, it's moving and gives me goosebumps. Did X succeed? Hell yeah it did. Excellent layering, punchy and powerful bass. Keys and vocals with lots of emotion and crispy clean highs. Some of my TOTL customs don't get this track right because they're too focused on detail-retrieval so they lose track of the emotions within this piece. X doesn't. X captures the track with all its feelings and fears and gives it back with greatest care and puts a huge grin on my face, simply amazing.



Cables

I noted it early on, I am not a fan of the Plastics One cable. Mostly due to aesthetics, call me crazy, but I do find some cables to simply look sexy. Of course after-market cables perform on a different level and add something valuable to the spectrum. Though I'd rather put it this way: they do less harm. I like that phrase, an Audioquest guy told me that's their slogan, and I think it gets cable-sound to the point. 'Do no harm'. Excellent. For the purpose of this review I have tried many cables in order to find the best match for Model X.

All below cables are terminated to a 2.5mm balanced plug.

PlusSound – Exo (T-Metal, 449\$)

The Exo cable with their silver, silver/gold and copper/gold hybrid construction is something very special in my opinion, ever since I got it I hook it up to any monitor I have. The Model X + Exo pairing is resulting in a bigger sound stage, enhanced transparency and resolution. Layering and imaging also stepped up a bit, while treble got clearer and features more sparkle. The top end extension is also reaching a tad farther with a little more air.

PlusSound – X (Gold Plated Copper- 349\$)

The second PlusSound in my possession I bought because I was looking for an ultra-portable cable that had to be light-we

ight and extremely comfortable. The X-series was on my radar for a while, and after I read a few reviews I decided to give this one a shot. I sure as hell am glad I did.

The X-X combination gives the monitors a slightly more elevated low end with enhanced upper bass body, while retaining great resolution and layering. Mids keep their wonderful lushness and treble loses a bit of its focus getting tamed a bit.

Labkable – Silver Galaxy Mix II (silver plated copper, copper – 380\$)

In the recent past I came across more and more eight-wire cables below 400\$, the Silver Galaxy Mix II is one of them. It sports a mix of four silver plated copper and four copper conductors. The Silver Galaxy Mix II brings a good portion of lower end body and transparency to the sound, while it does lose a little of the treble goodness and resolution.

Labkable – Samurai III (silver, gold, platinum – 870\$)

The Samurai III cable is a mixture of 98.5% silver, 1% gold and 0.5% platinum. It is the only cable I have and know of that uses platinum as material. Together with my Model X stage gets considerably wider, with more air between the instruments. Treble extension also increased, while the pronunciation of high notes got a little softer, it's almost like a layer of silk was put on top of each note. What I value most about this cable is the added realism in the mids. It adds a little more body and fluidity to the mid-section, giving especially keys and strings more weight and naturalism.

Effect Audio – Leonidas (silver, gold plated silver – 799\$)

Leo has been my trusted partner for a long time now, and what makes me love it so much is the fact that it goes very well with just about any IEM. It has a wonderfully natural tonality, with incredible details and an enhanced soundstage with immense sense of air. All that added to X makes it a hell of a CIEM, ready to compete with some other, higher priced, models right here. It's got speed, clarity, resolution and precision. Just like you wouldn't expect it from a quad driver.

My personal guilty-pleasure combination was with the Exo and Samurai III cable, because of the inseparable lush mids and top end clarity. I mostly looked for the PlusSound though.

I have to admit, I am a little spoiled with choices when it comes to cable-pairing, and it won't be the end, as we have already agreed with PW Audio to send in their 1960s flagship cables, it will be interesting to see how those fare up against the likes of Effect Audio, Labkable and PlusSound.



Sources

Though no specifications regarding impedance and sensitivity are disclosed on Lime Ears' website, I can tell you that it is not very prone to hissing, so much, that it only picked up very mild hissing from my Continental Dual Mono, which hisses a lot more with most of my other monitors. Except W900 and Vega. All the other sources stayed dead quiet in their backgrounds.

Astell&Kern – *A&ultima SP1000*

Almost all my listening time with the Model X was done with my SP1000 (solid steel), because it holds my favourite albums, is incredibly fast and has an impressive sound, especially from its balanced output, which I exclusively used.

The SP has a very wide and deep soundstage, with great dynamics and out of this world resolution and layering. As you probably read in my sound discription, this also goes for the Model X, so both really partner well together. The stereo imaging is very good with superior instrumental separation and a pitch-black background. The sound is alive, engaging and keeps fascinating me every time I listen to it.

Luxury & Precision – *L5Pro*

The L5Pro is Luxury & Precision current top offering. It delivers outstanding sound quality at a moderate price, at least for today's market. Due to the lack of balanced output I used a 2.5mm to 3.5mm adapter when utilizing the L5Pro.

The Luxury & Precision is a damn fine sounding player with great sound stage and musicality as well as resolution and emotions. It is warmer compared to the SP1000 but probably has the most audiophile tuning of all these DAPs.

Luxury & Precision – L3Pro

Just like its big brother, the L3Pro is a very musical and warmer source. In contrary to the L5Pro it does have a balanced output though, and what an output that is. Great resolution and imaging with lush mids and good low end body. Of course it does not deliver the in-depth clarity like the SP1000 or L5Pro, but at the same time it also comes at a fraction of their prices.

The L3Pro has become my go-to DAP on business trips and will most likely stay at that position for a long time. The only downside to the L&P DAPs is their incredibly outdated software. Nowadays manufacturer use a customized Android version, whereas L&P sticks to their custom build Linux firmware. While I can clearly hear that it is worth it, my inner-audiophile misses the basic functions of some other offerings... Too bad, really.

Chord Electronics – Mojo

Ever since the Hugo2 came into my life Mojo has not been getting as much playtime as before. Simply because it has been replaced as my office DAC by its bigger brother. Word on the street is that Chord will very soon launch their Poly addon module, who knows, maybe then my Mojo will run through more

battery-circles again, since I have been looking forward to that little companion for a while now.

The Mojo pairs really well with most of my C/IEMs and X is no exception either. It has a very detailed and smooth sound, with great extension on both ends as well as very good imaging. Especially the bass-boost enhanced body and emotions of X pair very well with Mojo.

Chord Electronics – Hugo2

A few lines above you read that Hugo2 is my main office source for music, my work requires me to be completely focused on what I'm doing, and sharing an office with a hand full of people doesn't make that exactly easy. The solution of course for me is to completely shut out my surroundings and plug in some C/IEMs, while not everyone likes to see that at my office, I know no other way around it. Plus I get to listen to awesome gear and music...

Hugo2 is my top pick as source/amp of the year, and it is very unlikely that something else comes along and beats it in terms of sheer resolution, space, imaging or simply reproduction of audio overall. Hugo2's resolution is by far the best I have yet heard, what's especially mind-numbing is how extremely precise it renders in depth. The stage is amazingly deep and at the same time absolutely clear in all dimensions.

Model X as sparring partner for H2 is a guarantor for a highly resolving and precise combination with a wonderful musical touch and warmth while keeping the typical silk top end of

Hugo2. Smooth, detailed and a wide-spread soundstage with superior imaging and layering. Flick the bass-switch up and you'll gain even more bass and lower-mid body.

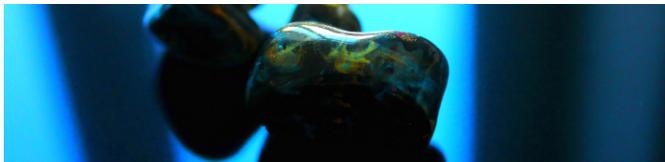
ALO Audio – Continental Dual Mono

I don't think that it is necessary to use a separate amplifier to run Model X properly, but from time to time I like to use my faithful ALO CDM to add a touch of tubey-goodness to the sound. I'm running the CDM fully balanced with my SP1000 as source. Line level output is set to 1V, to have a little room for the volume potentiometer to find the right place for channel matching.

The tube-hybrid from the Portland based cable twisters, breathes even fuller and lushier mids into the X, bass is tight yet well rounded, highs are tamed and lose their sparkle. Resolution also took a hit, while layering still is great. Switching the bass to its upwards position results in just too much low-end prominence.

Comparisons

Up until now I think it is a fair statement to say I have been



mightily impressed by this quad-driver, and it was very interesting to see how it scales up against its competition. You will notice that all monitors I have compared it to are of higher price, that though does not necessarily mean it won't be a fair fight. The contrary is the truth. Two models I always like comparing new monitors to are Campfire Audio's Vega and Andromeda. Though they are not really partnering top models, the community likes to see them both as co-flagships, probably because they complement each other very well. The other monitor X will have to step in the ring against is Jerry Harvey's latest hybrid lady Lola. We will move the ladder up in price, starting with Andromeda.

Campfire Audio – Andromeda (5BA, 1099\$)

Campfire's Andromeda sports one balanced armature driver more per side and also costs a little more than Model X. Both models share some similarities in sound, especially when the bass boost is not enabled on X. Andromeda's lower end goes down a little softer, while X's has more punch and sits a notch tighter. Both have wonderful treble response and sparkle up top. I find X's treble a touch airier and Andromeda's a hint brighter. Where they might differ the most is probably the mid-section, where Andromeda can come across as emotion-less and cold-blooded X will appear more natural and fuller with a more organic presentation and more life-like instruments and vocals.

Andromeda's sound stage might be in front when it comes to width and maybe height as well, but X's Z-axis stretches far deeper with a blacker background. Layering and instrumental separation are also better accomplished on the Lime Ears.

When giving X a low-end boost, bass becomes more powerful and energetic, while also giving lower mids more body and meat.

JH Audio – Lola (2DD/6BA, universal: 1599\$ custom: 1749\$)

It is kinda weird to say it, but Lola is the next cheapest custom IEM I have currently, it features the most interesting driver configuration of all in this list. With proprietary dual low BA's, dual dynamic mid-drivers and quad high frequency BA drivers Lola counts down to an eight-driver earphone. The first thing both models have in common is the possibility to tune bass. Where Lola does sport a more elastic tuning of the low frequencies with its bass attenuator implemented in the cable, you can enhance its response (<200Hz) by up to +/-15dB. Let's look at the contrary of these two first.

Model X's sound stage is wider and especially deeper, layering and resolution are also better, with clearer highs that shimmer more. Lola's treble extension goes further and high tones are a tad warmer and softer, they are also richer in tone than on Model X. Lime wins on separation and air.

Both units have a very distinctive mid-section, with great harmonics and realism. I have to give the nod to Lola for weightier presentation and even more emotions though. Those concentric placed dynamic drivers really do their work very well!

When it comes to bass, Lola has more sub bass rumble, but X's is faster, making it more suitable for electronic genres. Both low ends are very well controlled and have splendid texture.

Funnily enough I would call Lola the more tube-inspired IEM where X is the valve-transistor hybrid to me. Lola has a more analogue feeling with its smooth and relaxing tone, where X is more dynamic and strikes with higher amount of details.

Conclusion

In my opinion Lime Ears is one of the most overlooked brands in this field. They don't launch many products every year like others, but when they get one out in the wild, it is a killer product. Aether was one like that two years back and Model X is one right now. It definitely is the monitor to beat in the sub 1000\$ category and does also rival some higher tiers. For me it

Campfire Audio – Vega (1DD, 1299\$)

CA's flagship model has been raved about on many sites, mainly for its powerful, hard hitting bass and thick life-like mids, but what most reviews did not say is that Vega also has a unpleasant downside, namely its highs. Vega tends to become sibilant at certain tones and has a sharper edged treble, that very often makes it uncomfortable to listen to. At least for me. It is a fun monitor, I do give them that, but it misses out on resolution (I do not mean detail retrieval, but rendering) and comes across as foggy at times. Bass is very powerful and does reach nicely deep, but overshadows lower mids too much and stays out of focus and control. I know many people won't like to read this, because it still is an IEM to fall in love with, but it is like it is.

Overall I think Model X is pretty much superior in any way. With the bass boost turned on, X also reveals a mighty low end with great body and texture. It's ahead on layering, resolution and imaging as well as sound stage size. Mids again share the biggest similarities between both models. Both are very natural and life-like, but Vega's bass can make them unenjoyable with its extreme presence.

has become my reference below 1500\$ and one model I certainly don't want to part with – ever!

It is refreshing to see so much quality audio at a still affordable price, even though 900€ still is a tough pill to swallow for many, this price bracket has weirdly become mid-fi now. Lime Ears proves the contrary can be the truth and provides a CIEM with exceptional price performance ratio!

X has become one of my easy-recommendations for everyone looking for a custom monitor in the sub 1000\$ region or that does it all and that can adapt to your preferences.

Lime Ears Model X Review

Marcus, Headfonics.com

Lime Ears is a new name to Headfonics though a lot of us here are well aware of their products and the recent success of their excellent Aether.

Owned and managed by Emil Stolecki, they hail out of Poland and have been in business for 5 years. They have 4 product lines currently and all are very competitively priced for custom monitors.

I actually totally missed Emil at his stand in CanJam Singapore earlier in the year. He has this tendency to be very active on the floor with attendees, so I never got to bump into him for a chat, even when I was testing what was then called the Project X.

That being said we kept in good contact since then and just last month he approached me again with the final version of the Project X, now called officially, Model X.

Priced at 890 EUR SRP and packing some brand new tech it is something I had to take a listen to and find out what the buzz is all about with Lime Ears customs.



What Is The Pitch?

Product Position

The Lime Ears Model X is a quad balanced armature custom monitor design. Its pricing point is best described as mid-range for a CIEM. The 5 BA Aether is still considered the flagship of the range at just over one thousand euros, however, the Model X comes with new technology that the Aether does not have.



Passive Acoustic Resonator

The big pitch with the Model X is to offer something powerful sounding and at the same time retain an excellent focus on clarity and control. Part of that vision includes the introduction of PAR (Passive Acoustic Resonator) technology.

One of the things I noted with Emil was his acoustics designer background. I know a few guys who spend a lot of time working with speaker clients on treating rooms to sound the way they want it. PAR is just such an approach miniaturized to the internals of the Model X shell.

Basically, PAR is the process by which Lime Ears shape and tune their sound bores to ensure that the resulting audio response from the drivers is as “correct” as possible. Reflections and resonance control is at the heart of design in much the same way acoustical treatment of a room controls how sound bounces and reflects.

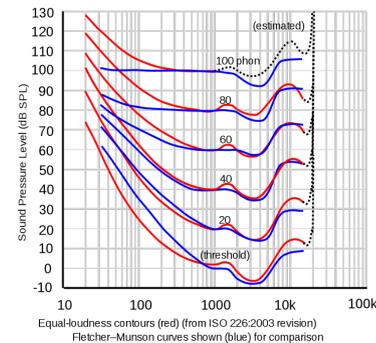
VariBore

Although not a new technology, VariBore technology Lime Ears first used on their flagship Aether is also used on the Model X. Again, this stems from Emil’s acoustical designer background. The pitch with VariBore is variable bore sizing for groups of BA or frequencies delivery. Each bore has a different width, so you have 1mm for the low end, 2mm for the mid and high end.

Think of it like tips with different stem lengths and openings. The wider the opening the better the upper-frequency response due to lower levels of friction and bad resonance. The tighter the opening the better the low-end presence.

Switchable Sound

The concept of a switchable sound is nothing new to me. I have encountered switching sounds of various complexity from M-Fidelity, Lear, and Vision Ears. However, I am always interested to hear a company’s switch tuning. Some are more impressive than others. I hate the Roxanne bass tuning but I loved the VE6 XControl version which was more subtle.



Lime Ears pitch their switches as observing the Fletcher-Munson Law (FML). In layman terms, this basically means a refinement of how loud one frequency is compared to another in mathematical terms so that the listener perceives the sound to be balanced rather than skewed to one frequency being louder than another.

Lime Ears switch focuses on shaping the low-end response in accordance to the FML. In their Model X notes, they state specifically the sub-bass to lower midrange of just under 800Hz by up to 8dB.

In doing so the Model X is pitched as having a flexible but balanced sound to either ramp up the low-end response or further refine the mid-to-high focus depending on your preferences.

Buying your Lime Ears Model X

New Store

Everyone seems to be launching far better online customization stores these days and Lime Ears are no different with their new online tool launched in March 2017. Though stylistically different the Lime Ears stores offer much the same in terms of options and ability to customize your Model X as Custom Art and Vision Ears.

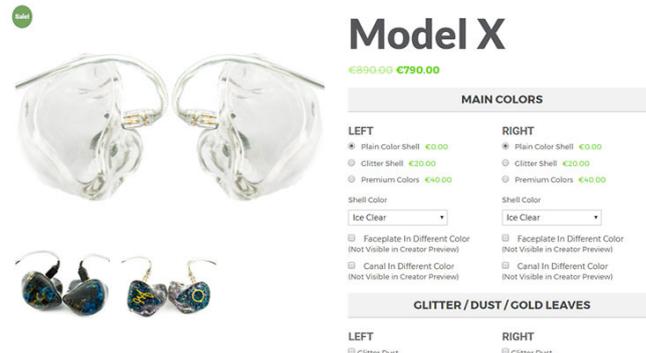
Personally, I let Emil fire away with the final design, I had one picked out which he themed then. I know he loves green, so it

was no surprise green was a factor in the final product.

Process

For most everyone though the process begins with accessing the store which will take you right through all the options including accessories and cables as well as rush order options. You will also have a handy price accumulator, so you can see how much everything will cost as you go along.

As with Custom Art, I prefer Lime Ears rendering in their shop process to 64 Audio as the pictures are more lifelike. Using the store is really nice and easy with plenty of design features. You can customize each individual earpiece (left or right) in terms of shell and faceplate. You can also put your own custom artwork and text onto your creation.



Model X
€890.00 €790.00

MAIN COLORS

LEFT	RIGHT
<input checked="" type="radio"/> Plain Color Shell €0.00	<input checked="" type="radio"/> Plain Color Shell €0.00
<input type="radio"/> Clitter Shell €20.00	<input type="radio"/> Clitter Shell €20.00
<input type="radio"/> Premium Colors €40.00	<input type="radio"/> Premium Colors €40.00

Shell Color: Ice Clear

Faceplate In Different Color (Not Visible in Creator Preview)

Canal In Different Color (Not Visible in Creator Preview)

GLITTER / DUST / GOLD LEAVES

LEFT	RIGHT
<input type="checkbox"/> Glitter Dust	<input type="checkbox"/> Glitter Dust

Options

The options are endless and very interesting in terms of the potential combinations you can get with the Model X using the online store.

Shells

For the main shell you have 3 headline options and for each headline category, you have up to 18 choices. For the plain color option 18 choices, for the glitter you have 3 choices, and for the premium, you have 2 choices. You can even add leaves effect in the shell with either a gold or silver accent.

Face Plates

For faceplates, the myriad of options is just as impressive. Again, you have a headline and sub-category option system with 5 headers including plain, wood, glitter, carbon, and silver. You have 10 wood plate and 5 glitter options to play with. All of them are eye-watering in terms of grain or pop.

Pricing

Pricing starts at 890 Eur for the Model X base unit however prices will rise with premium options. Lime Ears additional options or premium designs are fairly reasonable starting from 10 EUR up to around 30-40 EUR for the wood face plates or clock face finish.

I generally found a combination of colors and finishes to set you back between 900-1000 EUR for the final product which is more than reasonable for some excellent designs.

Add-Ons

Other options further down the screen include your cable color and left right markings. There are no additional costs involved with picking the color or left-right markings option in this section. Be careful if you want to rush your order though as this is a rather pricey 180 EUR. I would advise patience unless you want it within 8 days as an absolute must.



Accessories & Packaging

Your Model X will ship in a fairly spacious Peli case 1015 type case in a dark black gloss finish with branding, your name and serial number on top. You will have plenty of room for the custom units plus a few cables of choice.

Unfortunately, it does not ship with anything smaller so you are out of luck if you want something pocketable. Personally, I prefer the hard larger cases as they are better for weather sealing and shock resistance.

Includes accessories are as follows:

- Wax pick tool
- Drying pellet
- Warranty card/Greetings card

Ear Impressions Short Guide

Lime Ears includes online ear impressions guide in PDF format and we have included the link here for quick reference.

You will find all the necessary information including the type of clay to use, how deep the impression should be as well as shipping instructions.

Note that Lime Ears do require open jaw impressions so bring a bite block to your usual audiologist to keep your jaw steady

whilst open to prevent the clay impressions from poorly curing. Then it is a simple case of packing them securely and sending them to Lime Ears through your favored courier.

Meet the Model X

Design

I actually did not give any specific direction to Lime Ears on the design for the Model X. I actually just sent them a pic of something I liked and left Emil to his own creative devices. It was perhaps no surprise that he slipped in something “lime” into the design when it came back. Coming hot after Custom Arts identified green as our lacking color in our previous reviews I think I am not well stocked on striking green color schemes.

Shell

The shell is a hollow body lacquer finished acrylic material with their own cola brown transparent hue. Its deep enough to mask the internals from the prying eye with just enough transparency to create a compliment to the face plate which is more solid in color. It is basically quite organic in the tone which is something I quite like.

Faceplate

The faceplate is what they term in the business as a leaf design and you can custom order this in a few variations. This is not

an available design in the store, you may have to email Lime Ears and specifically ask for this and price it up along the way. Of course, the signature lime/green color is akin to an actual leaf but fits smartly into their own branding.

It also keeps things fairly organic in themed sitting alongside the cola brown translucent shell. Note the small black lever at the top right-hand corner of the plate which is the switch and you can move this up or down. Down reduces the low-end output and up increases the bass response.



VariBore Nozzle

You may not be able to see clearly enough from the picture but the nozzle on the Model X is a tri-bore design rather than a horn construction and using the VariBore technology.

As mentioned in our pitching and technology discussion on page 1 the bores are all different in diameter to maximize the individual frequency response groups. This means each bore opening at the tip of the nozzle has a different diameter. In the case of the Model X you have one bore opening roughly twice the size of the two smaller ones which look to me about the same size as each other.

Cables & Connectors

Stock Cable

The Model X comes with a single Plastic One type 4 core copper cable in a black PVC jacket measuring 1.2m in length and terminated with 0.78mm 2-pin connectors. The cable is designed to be worn over the ear and fit into the 2-pin flat sockets on the shells of the Model X.

Lime Ears currently do not offer any recessed socket or MMCX options as standard. For MMCX and recessed you need to email them for a special order and they will customize if possible with MMCX and/or recessed. The cable is fixed in color with a black or silver/transparent color option. The input jack is a 3.5mm gold-plated right-angled stereo jack with decent strain relief. The cable is finished with a light PVC “hook” above each termination for molding around your ear and keeping everything secure.

Recommended Upgrades

The stock cable is largely inoffensive and smooth sounding but lacks a little in dynamics and separation for me. Nothing beats a nice upgrade cable with something like Whiplash's Silver Twag V4 or the Effect Audio Thor II (retails around \$300) as viable options for the Model X.

Both will give you a nice boost in dynamics with a more holographic quality to the staging as well as a touch more top-end sparkle. The Twag V4 will give you a slightly more forward treble response and the Thor II will give you better low-end dynamics. Something worth considering if you find the stock cable a bit too bland.

Comfort & Seal

The Model X fitting is comfortable with a pro length nozzle and a fairly secure position in the ear. Background noise is nil, isolation is excellent. Being a balanced armature driver design there are no ports for bass drivers to breathe out so it is a step up on hybrid custom designs.

The accuracy of the acrylic shell from the mold is very good indeed. Lime Ears did a great job with zero gaps either open or closed jaw and no uneven pressure points.

The 'pro-fit' for those who may not understand will have a fairly even pressure against the entire ear canal and a deep insertion.

You can sometimes shorten the nozzle for a more relaxed fit but I find them prone to gaps forming and a looser fit. Pro-Fits are designed to be rock solid for musicians and this one fits the bill in that respect.



Short Fitting Comparisons 64 Audio

The 64 Audio 3-D printing design is technically the most accurate fit I have experience today so in terms of comfort it is class leading with some very precise contours. The pressure is around 50% less on the ear canal and has a slightly shorter horn nozzle.

However, the APEX module system means it does not isolate quite as much as the Model X due to how it handles pneumatic pressure away from the eardrums.

Custom Art

In some ways, the pressure and fit are the same as the Model X, especially for the FIBAE 1. The silicone fits from Custom Art are very different though with a smoother more rubbery texture that seals brilliantly and are very comfortable.

Compared to the acrylic design though the Model X is slightly bigger with a minor increase in girth so it sticks out of the ear a little more than the FIBAE 1. Both have even pressure throughout the canal and both have excellent sealing qualities.

Lear

The BD4.2 fit is a little more comfortable than the Model X but has less isolation and a much deeper shell. This will stick out a bit more of your ear due to the dynamic driver hybrid design. The dynamic driver also means it needs to vent hence the lower levels of isolation.

M-Fidelity

The quad-BA SA-43 fit is still up there as one of the best pro-fits I have received in the last 3-4 years. It generates less pressure on the canal than the Model X so it has an edge in comfort but

maybe about 25% less isolation in comparison.

It does stick out a little bit more from the ear than the Model X with its deeper body. The pro-fit SA-43 also has a longer nozzle than the Model X. I call it the 'drum tickler'.



Sound Impressions

The core presentation of the Model X is primarily musical in nature with a slightly u-shaped frequency curve though the extent of the response bias depends on the switch position.

Switch Down Response Bias

With the switch down you get a -6dB decrease on the low-end up to 600Hz which tends to give the Model X a more neutral tonal quality and slightly less warmth into the mids. Tonally this is a bit flatter but more accurate sounding with more balance across the range.

Bass

Bass response still has a touch of warmth but the elevation is much milder than 'switch up' so it does not sound as full-bodied. The bias here is more typical of a very natural BA sound staying well defined but snappier sounding and quicker paced.

Mids

Switch down mids are more neutral in their positioning with excellent instrumental clarity and separation as well as a very smooth sibilant free vocal presence. There is slightly less richness in its instrumental timbre, yet it

still sounds fairly natural and accurate to my ears. With a less dominant low-end, switch down's superior clarity will provide a little more room to pick up on spatial cues and generally has a bit more precision in terms of accurate imaging.

Treble

Treble in switch up is neutral to slightly laid back with a bit more emphasis on its lower treble with a rising response curve from around 2-5k and smooth drop to a small bump around 10-12k. What I like about the Model X's top-end though is that it doesn't sound shelved down with more than decent headroom and enough air to prevent it pushing down on vocals.

There is a definite even harmonic bias but it is not overly rounded sounding with a nice little edge in its attack to lift percussion and higher pitched vocals and give them some welcome contrast.

Switch Up Response Bias

With the switch up you get a fuller and warmer low-end with a richer sounding instrumental timbre. With the boosted low-end the mids will sound a bit further delivering more of a V-shaped response with a corresponding upswing in treble contrast.

Bass

The low-end dB boost pushes the bass further forward than the switch down mode. Sub to mid-bass boosting from around 30-150Hz produces a much more powerful and dominating bass response on the Model X.

Mids

The dip into the lower mids will still carry a bit of warmth from this elevation and will add a bit more body to instrumental timbre. Lower pitched instrumental work, particularly guitar work with sound richer and more authoritative on this switch setting.

Vocals for me do not actually change their position or presence with either switches but due to the more elevated nature of the low end they will struggle for a bit more air and fall a bit further back in the mix. Female or higher pitched vocals will perform better than lower pitched male vocals which tended to sound a little smoothed over in comparison. In fact, I preferred high pitched female vocals on switch up, they had a fuller more enticing forward presence than switch down.

Treble

Treble positioning on the Switch up is a clever sleight of hand for me. Technically it is the same for me as switch down with a neutral position and a natural sound. It has a nice balance, never sounding peaky or too brittle with a slight lower treble bias

and rising response from around 2-5k and a gentle nudge in its brilliance region for some additional air and sparkle.

However, with the accentuated low-end drawing some focus away from the mids that rising energy from the upper mids into the lower treble brings a bit more perceptible focus and contrast between the Model X's top and low-end.

Switch Staging Changes

The soundstage of the Model X is fantastic but not fixed in stone. It is hard to believe this is a quad BA design to be honest, especially when you opt for the switch up and throw in that additional low-end presence which adds a perceptible step-up in depth.

Switch Up

With switch up, you get a more forward sounding low-end and a bit more staging depth. Lower mids also come forward a bit more and though vocals for me have a fuller sound they will have sound a little further back as a result of the bass boost making everything slightly more v-shaped and musical sounding. This is the fun switch in a sense with a very forward sounding low-end.

Switch Down

With switch down, staging becomes a little more balanced with less depth and linear low end. This frees up a bit more space for a more open sounding mid-range and a more agreeable level of instrumental clarity. This is the more reference sounding switch and perhaps the more accurate of the two.

Matchability

Efficiency

Lime Ears are a bit like Noble in that sensitivity and impedance are not specified on any technical documentation so we had to do a bit of trial and error to get a guesstimate on how sensitive the Model X actually is.

We selected the FiiO X7 with the AM3a using the single-ended output which will give us a nominal output impedance of around 1 ohm and 150-200mW of power depending on the impedance of the IEM in question. Testing was done on low gain with replay gain using FLAC 16BIT/44.1k files on FiiO Pure Player.

Based on our testing it does seem the Model X is efficient enough to be driven handily from the FiiO X7ii in low gain mode but it is not as efficient as the CA 115dB 5-BA Andromeda and slightly less efficient than the FIBAE 1 at 109dB. It is marginally

	Impedence	Sensitivity	Min Volume	Max Volume	Noise
CA Andromeda	12.8	115dB	15	45	
M-Fidelity SA-4	50	104dB	25	80	
Nightingale YK1	24	102dB	25	75	
FIBAE 1	5.6	109dB	15	60	
Model X	Unknown	Unknown	25	70	
IT04	16	110dB	22	67	
Fidue A91	20	113dB	30	75	

more efficient than the single BA 24 ohms 102dB YK1 from Aya Audio and requires less juice than the 50-ohms 104dB M-Fidelity SA-43.

I do not think this is a 50-ohms creation though. In today's market that would be fairly unusual. My gut instinct from my listening tests is around an 18-25 ohms impedance value with an approximate 104-109dB sensitivity rating.

Of course, this is a fairly crude test and some IEMs like the 8 ohms, 105dB IT03 have far less sensitivity than you might think. The Model X is all BA and sometimes the dynamic driver aspect of hybrids pulls down the efficiency by some margin in comparison.

What you need to know is that the Model X will drive off a smartphone such as the LG G6 and Axon 7 and pretty most DAPs without any volume or driving issues.

Noise

The Model X is also an excellent performer in terms of noise control. Perhaps another indication of its medium efficiency levels but it is not prone to the same level of background hiss and noise as some sensitive IEMs can pick up.

Amps such as the ALO Audio V5 and the Class A output of the Lear FSM-02 V2 where much quieter than the 109dB rated Custom Art FIBAE 1 which tended to show up more noise when paired.

You can also get a bit more gain control with the Model X compared to the likes of the Andromeda with stronger amps such as the FiiO A5 and Chord's Mojo. Not by much on the Mojo mind you with both the FIBAE 1 and the Model X almost identical with translucent red volume level.



Scaling

The Model X has some modest scaling capabilities in the sense pairing it with a portable amp will not hugely change the performance over a quality DAP. Power is not a necessary requirement though tonal tweaks will occur.

Chord Mojo/V5/X7ii

The V5 and the Chord Mojo will sound a little smoother than the X7ii which has a bit more bite and sparkle in its upper mids and treble over those two. The V5 opens up the mids a little more with a sweeter vocal delivery particularly with auto-tuned high-pitched voicing.

Lear FSM-02 V2/X7ii

It is pretty much the same case with the Lear's Class A output on the FSM-02 V2 which adds a little richness to the vocals over the X7ii. The X7ii AM3a is a bit more dynamic and tighter sounding than the V5 and the Lear's Class A, particularly with the switch up bass boost. The two portable amps are richer in sound and work much better with the switch down reference sound.

Oppo HA-2SE/X7ii

I actually have a very slight preference for the Oppo HS-2SE paired with the X7ii over the X7ii with the AM3a when paired with the Model X. The HA-2SE treble didn't sound quite as 'pinched' as the X7ii and generally sounded a little a little more balanced when using the Model X switch up.

Select Comparisons

M-Fidelity SA-43 | Starting at \$775

Technical

The SA-43 is a quad BA custom IEM from Norwegians specialists M-Fidelity. It is rated at 50-ohms and 104dB and like the Model X has a switch function that can alter the frequency bias. Unlike the Model X, the SA-43 has 2 switches as opposed to one. You can have up to 3 different responses including mid presence boosting, bass boosting, and both boosted at the same time.

The Model X has a slightly different approach with 2 options. A bass boost option that lifts a few areas in line with FML but focuses primarily on everything below 800Hz and a flatter more reference like sound with the bass boost off.

Both have roughly similar noise control and gain requirements on DAPs and amps despite what I believe to be the Model X's lower impedance. The X will sound more optimal on Smartphones and weaker sources.

Sound

Bass On, Mids Presence off

Tonally this is a mixed bag given there are multiple signatures at play here, however, we can start with the bass on switch with the SA-43 and the mid presence off switch. Compared to the Model X no competition here. The SA-43 shelves down the mids and treble too much for my liking making everything sound too veiled and recessed in favor of a low end that becomes very warm but still very polite.

The Model X retains mids and top end clarity much better with its switch up bass enhanced position. Instead of veiled it is euphoric and fun sounding and with way more headroom and sparkle.

Mids Presence on, Bass on

With both mids presence and bass boost on you get a much cleaner fuller sound from

the SA-43 but it is not as spacious sounding as the Model X switch up though richer sounding than switch down.

Mids on the SA-43 are a little more prominent than the Model X with a more forward vocal presence though it doesn't have the depth and power of Model X's vented bass driver low-end.

Treble on the Sa-43 is a little more muted also compared to the better headroom and energy of the Model X. The lower treble on the Model X is just a little more forward sounding than the SA-43's top-end.

Reference Switch Positions (all off or down)

With all switches off on the SA-43 and switch down on the Model X both are in what I would call their flat reference mode. Side by side the SA-43 has a little more warmth and body than the Model X switch down though its top-end is roll-off a bit more so the focus is more on a warm and smooth mid-range and a slightly forward vocal presence.

The Model X delivers a cleaner sound but more top end snap and sparkle and a more spacious mid-range performance. However, it is has a leaner cooler timbre than the SA-43 with a brighter more energetic upper mids and lower treble. Vocals have a bit more focus and clarity and instrumental separation and imaging are much better for me than the SA-43's more intimate staging.

Noble Audio Savanna | \$499

Technical

The Savanna is a quad BA universal IEM with an approximate 30-ohms impedance and around 110dB upwards of sensitivity rating. It plays roughly at the same volume levels as the Model X on most amping signals with similar levels of noise control. Being a universal it will be somewhat tip dependent and its seal will not be as rock solid as the Model X custom design.





Sound

Tonally the Savanna sits somewhere between the reference switch down and bass boosted switch up of the Model X.

The Savanna is a reasonably balanced reference type sound with small mid-bass elevation for additional warmth and relatively neutral to natural sound. The top-end on the Savanna was tweaked from the original Classic 4 so it sounds a little more rounded and less edgy.

Compared to the Model X in reference switch down the Savanna is a touch more weighted sounding with more note body and a slightly smoother upper mids and treble delivery. Staging wise they are quite similar with average depth though the X has slightly superior headroom.

With switch down the Model X's V-shaped tilt delivers superior depth with a harder hitting bass and more top end extension. Suddenly this becomes a much engaging and immediate experience than the Savanna more neutral positioning.

64 Audio A6 | Starting at \$1199

Technical

The A6 is a 6-BA custom monitor rated at 22 ohms and 115dB. It is slightly more efficient than the Model X requiring a little less volume juice but also prone to higher noise floors and background hiss. It also comes with a unique APEX module system which can change its sound signature as well as avoid long-term hearing damage. Something I am greatly in favor of.

Sound

The M15 module is more open sounding and would sit closer to the reference sound of the Model X. The M20 isolates a bit more and would be a better comparison with the model X switch up. One thing to note with the A6 is the cable. It sounds poor with the stock cable with an overly veiled presentation lacking in dynamics and air. Switching to something like a Whiplash silver Litz or silver Thor II cable will do open the sound right up.



The A6, much like the Savanna, sits somewhere in-between the switches on the Model X. It is a little more neutral sounding than the Model X 'switch up' but it does have more note body, a little more bass presence and a more forward and engaging mid-range than 'switch down'.

With 'switch up' the Model X gains a substantial low-end presence over the A6 with a fuller sounding impactful bass response and more forward and fuller sounding vocal presence. The A6 mids, particularly instrumental separation, and clarity has the edge over 'switch up' which tends to gloss over that a bit more in favor of that planted low-end. Instrumental timbre on the Model X on 'switch up' is a little richer and warmer sounding.

Treble on the Model X 'switch down' is more energetic and forward sounding than the A6 but it lacks a little bit of body and slightly harder sounding for percussive passages. The A6 you could accuse of just being a little laid back and certainly with the stock cable its completely lacking in air. Better cables will give you a bit more sparkle and air and a more natural sound. With 'switch down' its pretty much a similar scenario only you are more aware of it due to the more linear bass response.



Our Verdict

I have noticed this year more and more IEM companies are moving away from the driver count wars and delving into more unique technologies to deliver their desired presentation. Be it, Tia, TAEC or PAR and VariBore there is something that makes a monkey out of our typical expectations of what an IEM might sound like with a certain amount of drivers.

The Lime Ears Model X is no exception to this rule. Whilst I have heard plenty of switch implementations before this is probably one of the best bass tunings on a switch I have heard thus far. Chiefly because it doesn't drown out the rest of the range or leave it a bit woolly sounding. Other companies have tended to be a bit subtle with bass boosting to avoid this. Not so with the Model X, its big, bombastic, and spacious sounding.

The reference switch down tuning is not half bad either. Its flatter, more neutral sounding with excellent clarity though it can lack a little treble body which is not so obvious in the switch up mode. You can pick either depending on your mood with my preference for switch down on most lighter numbers then switch up for rock and EDM.

Throw in a super fit, custom design and excellent isolation, throw out the stock cable and upgrade to something silver and you have a very competitive mid-range CIEM indeed.

Lime Ears Model X Technical Specifications

- 4 precision balanced armature drivers
- 3-way passive crossover design
- 2 balanced armature driver for low-frequency production
- 1 balanced armature drivers for midrange frequency production
- 1 balanced armature drivers for high-frequency production
- Sensitivity: unspecified
- Impedance: unspecified

"The core presentation of the Model X is primarily musical in nature with a slightly u-shaped frequency curve though the extent of the response bias depends on the switch position."

"Whilst I have heard plenty of switch implementations before this is probably one of the best bass tunings on a switch I have heard thus far."

Lime Ears Model X Review: Two-faced

crinnacle, Head-Fi.com

Introduction

The Model X is Lime Ear's quad driver model that was first released back in late 2017. As with most other boutique-style companies, the Model X was offered only in custom and universals only existed as demo units for distributors and sellers. I myself have tried the Model X demos before and have ranked them at A- a few months ago. Now, Lime Ears is offering the Model X in universal shells commercially and have provided me with a unit for a full review.

The Signature

The most defining feature of the Model X has to be its switch system. Now yes, what was once a feature exclusive to kilobuck IEMs has now been gaining relevancy on the IEM stage in recent years, with many cheap chifi models now sporting switches. However, most switches seem to be rather specific with their changes with most opting for rather focused frequency boosts, most popular being boosting the bass. Lime Ears takes a rather unique (for now at least) direction with their Model X switch, changing the overall signature of the IEM quite drastically.

On what I dub „neutral mode“ (switches down), the Model X is... well, neutral. A little like the UERM in a way with some extra upper midrange, so it's what I'd personally define has slightly coloured due to the small tilt in tonality towards the higher frequencies. More or less completely flat from the bass to the lower mids so it fulfills the classic textbook definition of sterility and being „reference“ in that regard.

Turning up the switches to what I dub as „warm mode“, the Model X could be an entirely different IEM and I'd be none the wiser. There is a wide band boost in the lower frequencies as well as a slightly reduction in the upper mids and treble, which balances out the tonality nicely. Even in this mode though, it's not that warm and still less warm than something like the Mass-drop Plus. Lime Ears intends for the „bass boost“ switch to be used for low volume listeners per the equal loudness contour, though objectively speaking it's not quite accurate since they'll require a much higher sub-bass increase than what is tuned in. But let's just throw the textbook out the window for now.

The Bad

To be absolutely clear, the Model X is a very capable all-rounder (moreso with its dual signatures) and so these aren't hard flaws, more like shortcomings that any potential buyer should be aware of.

For one thing, the treble tilt can get a little hot. It's not quite screaming in your face demanding damping, but it gets fatiguing for sensitive people like me who can appreciate a rolloff. That said, it's just emphasised but not splashy, so it retains definition and control despite its brightness. I can see the Model X being a „makes you wince“ kind of sound for many people but at least it has the resolution and definition to justify the use of foam.

Bass is another issue but it's pretty much a guaranteed talking point on the „The Bad“ section of my reviews if it's a pure BA IEM. I do have my biases and I'm not afraid to talk about them;

the Model X's low end doesn't hold a candle to any of my hybrid or DD IEMs and so sounds limp and inarticulate in comparison. That said, even in the realm of BA IEMs the Model X also doesn't have particularly good „BA bass“. It still fails to convey the authority and darkness of a bass drum in an orchestral piece or the proper rumble of a deep synth note. Of course you can still hear the notes, but my usual criticisms of BA bass apply here, no escaping that. The characteristics of the bass itself don't change much between modes, with only the overall volume getting louder or softer depending on the switch position. Additionally, there's a hint of that crunchy, plasticky aftertone that's a sign of the good ol' BA timbre. Thankfully it's not too obvious and I've definitely heard worse, but that is something to look out for if you're sensitive to that kind of phenomenon. Rather common in these kinds of reference-style BA IEMs so given the amount of it I'm hearing, I'm willing to close one eye.

The Good

Let's shift the fluff out of the way; the Model X is very good bordering on exceptional. What I feel is its strongest point is the way that both modes are tuned. I've let no less than ten people have a go at the Model X and there was almost a 50/50 split between those who prefer it in „neutral mode“ versus those who prefer it in „warm mode“. Small sample size but it's hard to argue that the Model X can offer something to almost everybody. As I've said before: „neutral to warm in a pinch“, though it is to be noted that the Model X is capable of both proper neutral as well as proper warmth, nothing half-baked with either.

That being said, tuning is nothing if not backed up by technical proficiency, especially in the kilobuck realm. But obviously I've avoided talking about technicalities in „The Bad“ section for a reason here. The Model X scores high marks across the board, nailing resolution, definition, tonal balance and attack speed and achieving passing grades for timbre and decay naturalness. There is virtually no smearing of notes even on the warm mode, remaining clean and defined even on my busiest metal tracks. Furthermore, there is almost no sacrifice in technicalities when going neutral to warm mode, a nice surprise given the amount of monitors I've listened to that fall apart with just a small emphasis in the lower midrange.

Neutral mode tends to bias percussions and plucked strings more, though the bias shrinks on warm mode. Depending on your tracks and genres, there isn't an emphasis of one instrument type over the other and the tone is well presented, perhaps one of the best in my recent pool of review units.

Conclusion

Proper tuning, proper technicalities, proper use of a switch. Not much to say, the all-rounders are always the hardest to praise.

Perhaps I'll get some flak for doing this only after getting a review unit, but my reputation will survive. Lime Ears deserves this.

To się zaczęło w 2010. Świeżo upieczony inżynier akustyk i jednocześnie basista rockowy Emil Stołecki postanowił zrobić słuchawki dokanałowe nie gorsze od wokółuszných. Albowiem te wokółuszne były świetne, ale dla koncertujących muzyków nieporęczne. „Niepogłowne” de facto, ale mniejsza o części ciała. Stworzył więc (łatwo powiedzieć) zespół badawczo-rozwojowy, w którego skład weszła między innymi pani Karolina, specjalistka od audiologii, czyli laboratoryjnej oceny słuchu, mająca doświadczenie w konstruowaniu słuchawkowych przetworników w aparatach słuchowych. Nastąpiły teraz dwa lata badań – prób, zawirowań i błędów. Testowano materiały, budowano przetworniki, słuchano, poprawiano, zarzucano, ruszano dalej. Aż po dwóch latach sprawa wydała się ostatecznie dopięta i miejsce badawczej analizy zajęła produkcja. Zrazu niszowa, butikowa, dopiero usiłująca pozyskać kogokolwiek; z czasem coraz szersza, do coraz szerszego grona zwykłych zjadaczy muzyki i profesjonalnych muzyków docierająca. Obecnie, po siedmiu prawie latach, zespół liczy sześć osób, a dystrybucja pruje głównie ku Dalekiemu Wschodowi – poprzez Rosję ku Tajlandii, Chinom, Singapurowi, Malezji, Korei Południowej i Japonii. A sprzedać słuchawki dokanałowe w Japonii, ich mateczniku i miejscu najliczniejszego powstawania, to już nie lada sztuka. I to jeszcze dla firmy niewielkiej, pa-roosobowej, nie młócącej klientów ciężkokalibrową reklamą...

A jednak się udało i Lime Ears to teraz producent w świecie znany, uczestnik światowych zlotów i show. Mało tego – firma mająca już zagorzałych fanów, takich co to się obruszą i popatrzą na ciebie spode łba, gdy się okaże, że o tym Lime Ears nie słyszałeś.

A że słuchawki dokanałowe to teraz obok bezprzewodowych sama szpica audiofilskiego rynku i jak najbardziej to, czego młode, żadne muzyki misie łakną jak te prawdziwe miodku, to i wróżby dla tego Lime Ears pomyślne i jasna przed nim przyszłość. Co tym milej mi pisać, że o polskich słuchawkach do tej pory takiej okazji nie było. I nie było w ogóle żadnej, bo choć słuchawkowych wzmacniaczy nad Wisłą spory wybór, to słuchawek już nie, a przynajmniej na razie.



Odnośnie obecnej oferty, to oferuje warszawski Lime Ears cztery modele – obok recenzowanych X także szczytowe, pięcioprzetwornikowe Aether i niższe Psi oraz Lambda. (W trakcie pisania recenzji pojawiły się jako nowość sześcioprzetwornikowe Aether R, czyli revision.) Przymierza się też do konstrukcji wokółusznej, ale to na razie pieśń przyszłości i nie wiadomo, czy w ogóle coś z tego będzie. Nie boi się przy tym poddawać ocenom i dzięki temu ta recenzja to żaden debiut opisowy, a tylko jedna z wielu. Przy czym wszystkie wcześniejsze odnośnie wszystkich modeli nieodmiennie chwalą i chwalą, a zatem dobra nasza, jako że chwalić zawsze najłatwiej i najprzyjemniej.

Lecz zanim zaczniemy się sposobić do sporządzania kolejnych pochwał, słowo najpierw o cenach. Najdroższe Aether kosztują 1200 euro, drugie od góry X (poczytywane przez samego producenta za również flagowe, tyle że mniej pieścizotliwie i wyrafinowanie brzmiące) kosztują tych euro 890, a kolejne Psi i Lambda odpowiednio 625 i 480. (Lime podaje ceny w euro, ponieważ handluje światowo i nowomodnie – wyłącznie przez Internet. Ma jednak otwartą dla nabywców siedzibę w Warszawie, i to nie byle gdzie, bo przy ulicy samego Alfreda Nobla; tyle że trzeba się wcześniej umówić za pośrednictwem podanego na internetowej stronie telefonu.)

Wracając do przerwanej wątku. Słuchawki nie są więc tanie, ale i nie jakoś specjalnie drogie; akurat takie, by zadawały szyku i zadowalały jakością tym cenom odpowiadającą zarówno zawodowców jak audiofilii. Bo tysiąc dwieście euro to według

dzisiejszego kursu pięć tysięcy dwieście złotych, a w internetowych sprzedażowniach MP3Store i Audiomagic najdroższe dokanałówki to piętnaście i pół tysiąca za 64AUDIO tia Fourté™ oraz jedenaście za Astell & Kern Layla II. Niemało tam też innych na internetowych półkach się wyleguje od tych Lime Ears droższych, w tym wyroby tak sławnych producentów jak Westone i Final.

Tak więc polskie douszne „Limonki” nie są jakieś szalone, a jeszcze bliżej do przystępności testowanemu modelowi X – według dzisiejszego kursu europejskiej waluty mogącego stać się naszą własnością za 3800 PLN. A że w tych okolicach cenowych od konkurencji równej, nieco tańszej i trochę droższej aż huczy, więc limonkowe cacko naprawdę musi mieć argumenty, by pośród tego nie zniknąć. Wobec czego się przyglądnijmy, a potem posłuchamy.

Budowa

Za ile, już powiedziałem, a teraz powiem – co.

W kontraście i swego rodzaju przekorze, ale też i zapobiegliwości, do malutkich, leciutkich samych słuchawek, dostajemy je w pancernym pojemniku z grubego aluminium. Ale nie srebrnym, tylko matowo-czarno anodyzowanym, z symbolem X przemienionym dwiema kreskami w klepsydrę na wieczku. Wieczko odkręca się statecznie z charakterystycznym poszumem metalu trącego o metal, a w środku spoczywa woreczek. Woreczek też jest czarny i zaciągnięty czarnym sznureczkiem,

a na nim duży napis „limeears” z logiem limonki w jaskrawej zieleni. W woreczku oczywiście słuchawki, mogące być bardzo różnie wykończone na indywidualną prośbę, która zostanie wysłuchana i ewentualnie skwitowana dodatkową opłatą. (Dotyczy wersji custom.) Na stronie producenta jest wielozakładowy wybornik, gdzie sobie wybieramy kolory i ozdóbki graficzne, a do mnie trafił egzemplarz pozbawiony cech indywidualnych, bo testowy. W standardowe jasne centeczki na czarnym tle pod grubą warstwą przezroczystego akrylu i z logiem firmy na jednej, a klepsydrą-znakiem modelu na drugiej wkładce. Bardzo w sumie ładny i miły dotykowo, że od samego patrzenia i dotykania robi się człowiekowi milej. Poza tym pod tym akrylem z prawdziwego karbonu, a nie jakiejś jego imitacji.



Lime Ears oferuje oczywiście dla wszystkich modeli wersje custom – bez czego na rynku droższych słuchawek dokanałowych nie istniejesz – czyli te powstające na bazie indywidualnych odlewów (ściśle biorąc „wycisków” ze specjalnej masy plastycznej); ale równolegle i takie jak ten testowy egzemplarz uniwersalne, we wszelkie ucho pasujące. Gdyż nie każdemu chce się ruszać z domu, by zrobić taki odlew, mimo iż wędrować daleko nie trzeba, bo robi się go u audiologa, a w samym Krakowie znalazłem dwudziestu.

Aby tak stać się mogło, żeby pasowały też bez odlewu (a z nim jeszcze bardziej), muszą być nasze LimeEars ultra gładkie i perfekcyjnie obłe – więc takie faktycznie są, niczego im pod tym względem zarzucić się nie da. W komplecie obok nich kłębi się duża garść dousznych końcówek z podziałem na trzy kategorie w zależności od użytych surowców, a każde nakłada się na wylotowe ryjki z trzema różnymi otworami. Dwoma mniejszymi (po \varnothing 1 mm) i jednym większym (\varnothing 2 mm). Ten większy jest wspólnym wylotem dla wysokich i średnich częstotliwości, z których każda ma po jednym dla siebie przetworniku, a jeden z dwóch mniejszych jest wspólny dla dwóch przetworników niskotonowych, jako że niskie tony mają dwa, czyli sumarycznie są cztery. I jest jeszcze ten trzeci otwór – jak się okazuje wyłącznie rezonansowy, w którym wszystkie częstotliwości się zbiegają, aby osobną drogą dołączyć do podawanych rozłącznie, tak żeby suma była lepsza.

Odnotujmy w tym miejscu, że otwory o różnych średnicach to efekt zastosowania technologii VariBore™ (tą różnicą właśnie oznaczającej), jako następstwo lepszego dzięki takiemu podejściu dźwięku, co kiedyś – dość już dawno – zauważono. Prócz tego zastosowano też technologię PAR, czyli pasywnego rezonatora akustyki, jako specjalne wszystkich tych wylotowych kanałów dostrojenie pod kątem długości, średnicy oraz kształtu, tak aby fala akustyczna jak najładniejsza przez nie wychodziła. I jeszcze są tam na obudowach malutkie przetworniki, przyjemnie lekko chodzące (umieszczone u dołu na powierzchniach zewnętrznych), którymi możemy zmieniać dozę niskich częstotliwości i całościową bepośredniość brzmienia poprzez zmianę ustawień zwrotnicy.

Słuchawki są leciutkie (nie to, co metalowe Final) i ma się też rozumieć dobrze przylegające do wnętrza ucha, co wraz z wpadającą do tego ucha dobrą muzyką powinno przynieść użytkownikowi radość, nie stając się wcale podwójną wpadką. Być nią, ale pozytywną, a nie ponurym dołem.

Dobrze – dość tych wpadek i dołowania; co innego jest tu ważniejsze niż językowe wygłupy. Ważne na przykład to, że posiadają te Lime Ears odpinany kabel, tak więc można sięgać po lepsze, co sam dostawca zapewnił. Kabel oryginalny to czarny, lśniący splocik dwóch cieniutkich żyłek z kątowym wtykiem niesymetrycznym mini jack, a oprócz niego przyjechała znacznie grubsza miedziana plecionka trzyżyłowa z końcówką symetryczną, będąca produktem Effect Audio (model Ares) o cenie przeszło dwustu dolarów. I jeszcze jedna plecionka

przybyła – popielata, jeszcze grubsza i też trzyżyłowa; z przewodami z czystego srebra, będąca produktem nieistniejącego już jako oddzielna firma Whiplash (fuzja z Brimar), a konkretnie model V2. I tu już żartów nie było, bo taki Whiplash V2 był wyceniany (obecny model to V3) na ponad \$500, czyli słono. Co nie oznacza, że droższych tego rodzaju kabli nie ma, bo dokałówki to teraz szczyt mody i ceny kabli do nich poszalały. Po dziesięć razy tyle i więcej chcą, ale o tym, to może kiedy indziej.

Oдноśnie jeszcze danych technicznych, to forma ich nie ujawnia. W pudełku z całością prócz pancernego puzdra ze słuchawkami jest instrukcja obsługi i oczywiście karta gwarancyjna, ale ani w tej instrukcji, o z czarnej tekturki stroniczkach, ani na internetowej stronie producenta, danych technicznych nie ma.



Jest tylko dołączona do kompletu ściereczka do czyszczenia i szczegółowe w instrukcji wyjaśnienia, jak się obchodzić ze słuchawkami. Sam mogłem je tylko zważyć i okazało się, że z założonymi wkładkami ważą dwa malce łącznie dziesięć gramów, a razem z kablem dziewiętnaście.

Po odkręceniu pancernego wieczka zapachniało limonką, a po założeniu słuchawek i puszczeniu muzyki...

Odsłuch

Trzy wtyczki od trzech kabli wnikały kolejno w niesymetryczne i symetryczny gniazdko Astell & Kern AK380, poczynając od niesymetrycznego i kabla rodzimego, wyposażonego w tradycyjne śliskie osłonki na część wokół ucha i w regulacyjną zwężkę do ustawiania długości rozwidlenia.

I już z tym kablem zagrało wybitnie, co znów z satysfakcją piszę. Od razu mi się spodobały i poczułem, że dobrze będzie, bo pomijając wszystkie aspekty techniczne z licznymi ich zawłościami, słuchawki na pierwszy, drugi i ostatni strzał lubimy albo nie. Czasami podobają się na pierwszy, a na drugi już nie tak bardzo, by koniec końców po dłuższym czasie w ogóle się przestać podobać; a czasem jest odwrotnie – i to, co zrazu nie bardzo do siebie zachęcało, po pewnym zaczyna ciągnąć i ciągnie coraz bardziej. Ale czasami tak się zdarza – i wówczas, to już święto! – że od razu masz pewność, iż coś zawsze się będzie podobać. I tak było tym razem, od razu to wiedziałem. Ale wiedzieć – to jedno, a dlaczego – to drugie.



Tego podobania było parę głównych czynników wpadających do jednej rzeki, a rzeka je niosąca nazywa się muzyka. Co nie jest wcale takie oczywiste, ani wcale banalne. Bo dobrych składników brzmienia w danych słuchawkach może być sporo, a muzyka w jej naturalnej postaci się z tego nie wyłoni. Grać będzie, śpiewać, tupać – ale to wszystko nie takie, nie poskładane w muzykę. Zresztą – to nie jest nawet dobrze powiedziane, bo kiedy gra naprawdę świetnie, wówczas nie czuć żadnego złożenia. Jest muzyka – to wszystko; żadnego elementu analizy. Można oczywiście analizować, ale to jest w tej sytuacji wtórne, tego tak naprawdę nie chcemy. Bo nie chce się zaburzać jakąś sekcją anatomiczną ładu muzycznej całości, która do nas napływa. I Lime Ears X Universal taką właśnie muzyką mnie częstowały – to było dokładnie to. Przy czym nie pierwszy raz się zdarzyło, że słuchawki dokanałowe okazały się mieć lepszą

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od wokółuszných predyspozycję do jednoczenia się ze słuchaczem. Muzyka za ich sprawą rodziła się jakby sama, bez żadnych czynników sprawczych. Czego nie należy mylić ze słyszeniem tworzących ją dźwięków w głowie, bo to osobna sprawa. A tylko brać od tej strony, że muzyka w normalnych słuchawkach czy głośnikach powstaje poza słuchaczem, i to się właśnie czuje. Słuchacz to jedno, muzyka drugie – i mają się do siebie w pewien określony przestrzennie i sprawczo sposób, podczas gdy w słuchawkach dokanałowych muzyka i słuchacz to jedno.

I to jest bardzo dobre, tego się mocno chce. Żałuję zatem, że sam takich słuchawek nie mogę używać, ale po dłuższym lub krótszym czasie – tak góra do godziny – moje kanały słuchowe od obecności dokanałowych wkładek zaczynają dostawać szału. Nim jednak tak się robiło, słuchałem z zaangażowaniem i dużą satysfakcją. Bo przede wszystkim ta topiąca w sobie wszystko i jakby samoistna muzyka, co wcale jej nie przeszkadzało wychodzić hen za głowę, by tworzyć wielkie przestrzenie. W tej mierze działa się dość analogicznie do sytuacji niedawnej z topowymi Staksami, to znaczy gdy się wsłuchiwać gdzie ta muzyka jest, to wówczas odnajdywała się w głowie, choć w tym wypadku nie na linii pomiędzy uszami, tylko bliżej części twarzowej, tak na samym wewnętrznym obrysie. Natomiast kiedy słuchać zwyczajnie, kiedy lokalizacji nie szukać, wówczas momentalnie następuje wyjście za głowę – z pierwszym planem tak na trzy kroki, a horyzontem dalekim. I jednocześnie bardzo dobra separacja oraz dobre widzenie głębszych planów; całkiem niezgorza też holografia, chociaż nie jakaś

radykalna. Żadnego nacisku na nią, ale też i poczucia braku. – I wszystko to było dobre, ale to pierwsze najważniejsze: najważniejsze całościowe poczucie zanurzenia w muzyce i bezstratnego z nią obcowania. Przez co rozumieć dojmujące wrażenie jej autentyczności i pełnej personalizacji.

Lime Ears X już z kablem stockowym dają zupełną bezpośredniość; nie aż tak wprawdzie cyzelowaną w wymiarze spektrum detali, jak też dający ją nowy Stax, ale w pierwszym muzycznym rzucie, a nawet przy analizie, to jest muzyka par excellence, czyli „przez doskonałość”. Całkowicie dosłowna, bez śladu umowności; nie ma, dosłownie nie ma na tym muzycznym obrazie najmniejszych niedociągnięć. Zarówno trafność tonalna, jak i szerokość spektrum, a także trójwymiarowość dźwięków i ich model przestrzenny – to wszystko towarzyszy, a tak naprawdę tworzy, bezpośredniość i dotykowość kontaktu. Więc muzyka bezumowna – nie można jej zaprzeczyć, podać w wątpliwość, zdezawuować.



Nie posiada żadnych wypaczeń, sztuczności, śladu krzywego lustra. W efekcie pojawia się mimowolnie odczucie spotkania z autentykiem i dopiero retrospektywnie – przypominając sobie, jak nowy Stax (czy jakies inne takie) każdy detal wyciągał z tła i dopieszczał, możemy zdać sobie sprawę, że tu aż tak realistycznie nie jest. Ale to dociera dopiero wtórnie, natomiast podczas słuchania, gdy jednoczymy się z muzyką, tego zupełnie nie ma, tak samo jak grania w głowie. Jest miło, wręcz upojnie, i jest bardzo prawdziwie. Muzyka i słuchacz zespoleni i równie autentyczni. Bowiem nie tylko spójność i dokładność tonalna, ale także potęga... Tak, ta muzyka może być potężna i zaistnieć w scenerii ogromnej. Malutkie słuchawki mogą przywoływać orkiestry tak samo jak wielodrożne podłogowe głośniki, że dźwięk spada kaskadą i słuchacz przy nim mały. Huczy pod wysokim sufitem (żadnego spłaszczenia sceny) i na rozległych planach (żadnego też ścieśniania), z których pierwszy stać się może odległy, realizując prawdziwy koncert.

W tym miejscu słowo o przełącznikach. W ustawieniu „do góry”, a więc bardziej typowym (przynajmniej moim zdaniem), dźwięk staje się bliższy i bardziej bezpośredni, podczas kiedy w alternatywnym „na dół” dalszy i nie tak realistyczny. Cokolwiek wycofany, cokolwiek oddalony, cokolwiek spokojniejszy. Przy kablu stockowym po prostu gorszy, jako że ten „do góry” nie okazał się pod żadnym względem „za bardzo”. Ani za ostry, ani przerysowany, ani trochę za ekspansywny ani nerwowy. Być może tak czasem się zdarza z gorszymi odtwarzaczami, ale z AK380 był perfekcyjny pod każdym względem i nie zasługujący na to, by cokolwiek przy nim majstrować. Nie tej aż miary jak z flagowego Staksa przy dobrym dla niego torze, ale



dający to samo wrażenie spotkania z autentykiem – takim naprawdę wytężonym. Moc, koherencja, dynamika i idealnie dopasowane szczegóły, a przy tym niezwykła celność tonacyjna, w którą pośród słuchawek „normalnych” tak dobrze potrafiło utrafić AKG. Ale nie w odniesieniu do dokanałówek, te były od nich wypaczone. Dawnego AKG już nie ma; z austriackiego stało się chińskie, chociaż słuchawki ciągle od nich są i wciąż są trafne tonalnie.

Odsłuch cd.

Wracając do naszych Lime Ears. Oprócz tamtych czynników oferowały także dobrze zorganizowane pogłosy i dużą szybkość, jak również długie podtrzymanie. (Te dwa ostatnie przymioty mogą się wydać natrętne, ponieważ od recenzji do recenzji do znudzenia się powtarzają. Ale niech tylko trafi się aparatura ich nie przejawiająca – a bywa niestety taka – wówczas formalna katastrofa.) Dawały też Lime Ears całościową aurę muzyczną utrzymaną w klimacie naturalnego dziennego światła i pastelowych ale dobrze nasyconych kolorów. Z dużą, od razu się narzucającą głębią całego brzmienia i dużą wagą oraz objętością muzycznego przedmiotu. Więc w sumie z całej genezy bycia dokanałowymi zostawało im jedynie to lepsze ze słuchaczem scalenie, czyli coś jak najbardziej pozytywnego. Cała reszta była natomiast niczym z high-endowych słuchawek wokółusznych lub kolumn. W tym i bas oczywiście, bo bez basu ambaras.

Phi, ale to gra! – pomyślałem, przestając się dziwić ich powodzeniu i sławie. Także nerwowym fanom, co w irytację wpadają zaraz, kiedy się wyda, że o tych Lime Ears nic nie wiesz.

A że z majstrowaniem przy ich dźwięku trzeba ostrożnie i że nie ma co pchać się na oślep, to pokazało przejście na dużo droższy i symetryczny kabel Effect Audio Ares. Zrobiło się z nim inaczej i pod pewnymi względami lepiej, lecz całościowo gorzej. Rysunek się wyostrzył, jak zawsze gdy większą aktywność zyskują wysokie tony (przy miedzi to nieczęste, ale ten

miedziak tak zadźwięczał), a wraz z tym rozchwiała się spójność.

Mocniejsze stały szczegóły i przyrosła szumowość tła, lepiej też wyodrębniły dalsze plany oraz zjawiała większa połyskliwość, a wraz z nią głębszy, bardziej kontrastowy światłocień – ale to wszystko miało jeden mankament – te mocne soprany były płaskie. A to jest wada zasadnicza – zwróćcie na to uwagę. Płaskie soprany to uciążliwość, to muzyka z miejsca nieładna. Wraz z nimi bowiem przerysowania, utrata formy obłej i odpowiednio pojemnej, a na dodatek sybilacja, od której zaraz złość. I nie przystoń tego ani czarniejsze tło, ani na nim połyski, ani też cienkość kreski opisującej kontur. Staje się nieprawdziwie, męcząco, niemuzycznie. Z kablem od Effect Audio nie zagrały na szczęście Lime Ears X tak źle, jak owa doszczętnie wypaczona droższa nosząca miano Ultrasono Edition 10 (chyba najgorsze z drogich słuchawek), niemniej wolałem stan poprzedni. Za nic bym nie wziął tej wyraźności w zamian za spójność i całościowy realizm. I nie odmienia tego fakt, że z symetrycznym kablem przyrosła też dramatyczność. Głosy nasączone emocjami i brzmienia stały bardziej dojmujące, ale co z tego, gdy za taką cenę i z towarzyszeniem cech ułomnych. Ten kabel może pasować jakimś brzmieniowym misiom z nie-dobrem wysokich tonów, ale do Lime Ears X napędzanych flagowym Astell & Kern moim zdaniem się nie nadaje.

Dobra nasza: zaoszczędziliśmy dwieście dolarów i mamy super dźwięk za w miarę znośne trzy osiemset. Ale czy może być jeszcze lepszy? Może, ale za pięćset „zielonych”.

Na koniec użyłem tego trzeciego z setu kabli – tego Whiplash V2, który jest cały srebrny. Więc to z nim teoretycznie powinno stawać się dziko, ale właśnie że nie. „On jest srebrny, ale nie gra jak srebro i my go bardzo kochamy” – powiedzieli mi twórcy słuchawek. Faktycznie – jak srebro nie gra. To znaczy gra, jak najbardziej, ale bez srebrnych wad. Te, nieznanym sposobem, prezentował miedziany Effect Audio, a srebrny Whiplash ani-ani. Z nim stało się niemal to samo, jak było na początku, tyle że zjawił się ten poszukiwany, będący audiofilskim złotym runem, trójwymiarowy sopran. Trójwymiarowy teraz dobitnie, dzięki czemu silna ekstensja wysokich tonów z kłopotu stała się atutem. Muzyczne fakty wraz z tym rozbudowanym trzeczim wymiarem stały się wyraźniejsze i bardziej kontrastowe, nie tracąc waloru bryły i naturalnej melodyjności. Realizm oczywiście na tym zyskał. W przypadku tego kabla zyskiwał też dzięki temu, że nastąpił nawrót do bardziej pastelowych kolorów i całościowego spokoju – bez zbytnej sopranowej nerwowości, choć kosztem redukcji dramatyzmu. Całość na bazie wyważenia i spójności, ale z towarzyszeniem tego, co jest największym walorem takich trójwymiarowych sopranów: pojawiła się lepsza współpraca na linii dźwięki-przestrzeń, to znaczy lepsze plasowanie bardziej trójwymiarowych i dużo lepiej się rozchodzących dźwięków w bardziej obecnej mikrodetale i szumem tła przestrzeni. To nie była aż piana, ale stało się szumnie i dźwięki w oczach się rozchodziły lub rozwiewały; nie spadając od razu z trwania w nicłość, tylko przechodząc w brzmieniowe mgły. A to jest dużo lepsze, bo bardziej realistyczne. I jednocześnie wzbogacające, dające więcej dźwięku. Oczywiście niektóre dźwięki giną: pac – i ich nie ma. Muzyka

zna wiele takich przypadków, niektóre umyślnie się wygasza. Ale inne powinny trwać, by tworzyć brzmieniową lunę. Jednak kiedy sopran nie są wystarczająco trójwymiarowe, tego efektu nie będzie. A to jest zubożenie i brak naturalności. W tym aspekcie kabel od Whiplash okazał się pomocny, a silnym tego przejawem była zmiana sytuacyjna z użyciem przełącznika. Poprzednio jego zastosowanie odebrałem jako zbędną redukcję i zwykły pejoratyw, natomiast przy kablu Whiplash była to pełnoprawna alternatywa: muzyka podawana z dalsza i nie tak się narzucająca, niemniej tak samo piękna.



Nastąpiło zatem jeszcze większe zbliżenie do flagowego Staksa, który nam tutaj posłużył za wzór i autorytet. Nie jest łatwy do napędzenia, ale jak mu dać, czego chce, to realizmem przytłacza. Lime Ears X nawet z tym najlepszym z użytych kabli jeszcze nie przytłaczały, niemniej dusza się przed ich muzyką otwierała i radość brała słuchać. Realizm wybuchał w głowie, biorąc się całkiem z niczego; samoistnie tak jakby bez twórczego aktu, jako bezprzyczynowa kreacja.



Nie grało to aż na miarę Meze Empyrean, podziwianych niedawno z tym rozdającym tu karty AK380 (że wezmę inny przykład referencji), ale blisko już było do tamtego święta i grało w tym samym stylu. Nie takiej aż miary obrazowaniem dystansów i tak bezapelacyjnym bycie „tam”, niemniej byciem bez żadnej umowności ani wysiłku ze strony słuchacza. Niezafałszowane żadną dającą się odczuć wadą wejście do muzycznego świata – więc sławny koncert „Friday Night in San Francisco” znowu naprawdę się odbył.

Podsumowanie

Gdy mamy w uszach te Lime Ears X, przestajemy się dziwić, że takie słuchawki święcą teraz tryumfy. Sam wprawdzie nigdy bym nie wpadł na pomysł, by sobie sprawić z muzyki nieustające tło zdarzeń, jako że mi przeszkadza w myśleniu i aż tak jej bardzo nie łaknę; ale – jak w wielu miejscach pisałem – muzyka to narkotyk i wielu ludziom jest najwyraźniej potrzebna tak często, jak tylko to możliwe. A słuchawki douszne są do tego najlepsze, ponieważ najbardziej dyskretne i jednocześnie bez porównania od innych mniej zawadzające. Na dodatek zyskuje się z nimi zupełne odcięcie od głosów otoczenia, więc nawet cicho puszczone muzyka jest ze słuchaczem sam na sam.

Cudem współczesnej techniki – mówię to bez sarkazmu – jest umiejętność konstruowania takich słuchawek jednocześnie wygodnych i na swój sposób ładnych, a przy tym nie narażających na redukcję jakości brzmienia. Mało tego – dobre dokałówki potrafią dać wielokrotnie w tej recenzji akcentowane wrażenie zrośnięcia muzyki ze słuchaczem – umiejętności budowania scen jak prawdziwe i na nich realistycznego dźwięku przy wyeliminowaniu zauważalnej obecności sprawczego czynnika zewnętrznego. To oczywiście złudzenie, lecz w ramach niego jakby to sama nasza głowa umiała muzykę sprawić; jakby technika niepotrzebna; coś jak wyjątkowo realistyczny sen albo marzenie. To niewątpliwie samoistna wartość i taki typ prezentacji można woleć. Odnośnie samych Lime Ears X, to nie dziwię się ani producentowi, uważającemu je za jedne z dwóch flagowych, ani też fanom firmy, którzy wyroby jej preferują.

Dzięki wspomnianej jedności słuchacza i muzyki słuchawkom dokanałowym łatwiej przywołać referencyjną jakośći pozbawioną wszelakich „ale”: sekunda – i już wiadomo; minuta – i wiesz na pewno, że to właśnie jest to. Tak bardzo często się dzieje w przypadku słuchawek dokanałowych z najwyższego poziomu, a te tutaj recenzowane do takich niewątpliwie należą, będąc przy tym cenowym prymusem. Naturalizm, realizm, tonacyjna trafność, wyeksportowana na zewnątrz głowy scena i całościowy rozmach muszą budzić szacunek i pożądlivość zarazem. Do tego jeszcze całkowite skupienie na muzyce, a nie na przekazywaniu zbioru detali, pogłosów, czy nadrealnych wizji – jak to zazwyczaj ma miejsce w przypadku mniej udanych.

Można by to sumarycznie określić mianem „referencji $\frac{3}{4}$ ”, bo jeszcze nie takiej miary, jak ta od prymusów w cyzelowaniu form, ale od ich referencyjnych form nawiązującej; wprost pochodnej od brzmień wzorcowych. To jest po prostu realizm, tyle że nie mający (jak Sennheiser Orpheus, czy Stax SR-009S) rozdzielczości 16K (taką ma ludzkie oko), tylko cokolwiek mniejszą. Taką właśnie trzy czwarte. To w zupełności wystarcza do przebywania „tam” i obcowania „z nią”. Tak, przede wszystkim do kontaktu z NIĄ – z jaśnie panią Muzyką.

W punktach:

Zalety

- Naturalizm.
- I w ślad za nim realizm.

Zalety

- Stuprocentowa trafność tonacyjna. (Przy odpowiednim kablu, ale własny jest odpowiedni.)
- Zaskakująca potęża brzmienia.
- W normalny (niebadawczym) słuchaniu granie na ze wnątr głowy.
- To „na zewnątr” może być wielką sceną.
- Nie tylko dużą, ale także wysoką.
- Szeroko rozwarte pasmo – przy lepszym kablu jeszcze szerzej.
- Już w stanie zakupowym dające wrażenie pełnej otwartości trójwymiarowe soprany.
- Średni zakres wyjątkowo muzyczny, zasobny w żywe postaci i całościową magię brzmienia.
- Bas mocny, wypełniony, trójwymiarowy, dokładnie obrazujący instrumenty i gotowy zaspokoić nawet najbardziej go łaknących.
- Bardzo dobre całościowo wypełnienie w obrysie naturalnych, pozbawionych sztucznej ostrości konturów.
- Styl w ramach tej naturalności dbający o neutralność: żadnego sztucznego ocieplania, przyciemniania, słodzenia, koloryzowania.
- Dobrze oświetlające dzienne światło bez śladu jaskrawości. (Chyba, że głupi kabel.)
- Ale towarzysząca mu cieniistość dla budowania klimatu.
- Żywość, szybkość i rytm.
- Bardzo ważne – ta muzyka może być naprawdę potężna, i to bez żadnej umowności.

Zalety

- Może zahuczeć tak, że aż ci w piętę pójdzie.
- I nie mniej ważne – w każdym wypadku jest spójna, organiczna, pozbawiona luk i podziałów.
- Co nie przeszkadza jej być detaliczną, holograficzną i z odpowiedniej miary pogłosami.
- Od razu je polubisz.
- Cztery osobne przetworniki (dwa basowe) spięte regulowaną (dwa tryby pracy) zwrotnicą.
- VariBore™ – technika różnej wielkości kanałów wylotowych dźwięku.
- PAR (Passive Acoustic Resonator) – technologia strojenia akustycznego tych wylotowych kanałów.
- Wygodne.
- Eleganckie.
- Duży wybór wykończeń.
- Odpinany kabel.
- Ten sprzedażowy jest dobry.
- Spory zestaw dousznych koreczków.
- Oferowana wersja custom.
- Efektowne, pancerne opakowanie.
- A w nim woreczek ochronny i limonkowy aromat.
- Znany producent.
- Światowa już renoma.
- Made in Poland.
- Można posłuchać przed nabyciem.
- Bardzo dobry stosunek jakości do ceny.

Wady i zastrzeżenia

- Trzeba uważać przy ewentualnym wyborze lepszego kabla, bo można się naciąć.
- Dlatego lepiej skonsultować sprawę z producentem słuchawek.
- Wiadomo – konkurencja nie śpi, a jest jej bardzo dużo.

Cena: 3850 PLN (890 euro)

System:

- Słuchawki: Lime Ears X.
- Kable słuchawkowe: własny Lime, Effect Audio Ares, Whipla sh V2.
- DAP: Astell & Kern AK380.



Recenzja słuchawek Lime Ears Model X Universal

Jakub Łopatko, audiofanatyk.pl

Lime Ears jest manufakturą spersonalizowanych słuchawek dokanałowych, o której słyszeli myślę wszyscy fani takich rozwiązań i powinni ją kojarzyć. A jeśli nie kojarzą, to wstyd. Tym bardziej, że ten producent nie jest z kraju kwitnącej wiśni, ani kwitnącej demokracji, ale z kraju płynącej Wisły, a dokładniej z Warszawy. Tak, my także mamy swój wkład w rozwój przepięknej przestrzeni, jaką jest rynek audio i to nie na poziomie amatorskim, a profesjonalnym. Produkty LE miały bowiem swoje miejsce w uszach naszych rodzimych wykonawców, jak chociażby Happysad. Już sam ten fakt sugeruje, że Lime Ears jest marką „na poważnie” i nie są to słuchawki dopiero szukające sobie miejsca na rynku. Dziś marek polskich produkujących słuchawki tego typu mamy już kilka, ale zdaje się Lime być spośród nich pierwszy i tym bardziej cieszę się, że sam mogę nadrobić straty natury poznawczej, recenzując prawie najwyższy model z ich oferty: Lime Ears Model X Universal.

Dane techniczne

Producent z tego co widziałem nie udostępnia bezpośrednich danych technicznych.

Opakowanie i wyposażenie

Powiedzieć że opakowanie jest kapitalne, to jak nic nie powiedzieć. Przede wszystkim dostajemy tu masywną i pancerną puszkę z aluminium, którą odkręcamy, po czym oczom naszym ukazuje się cała zawartość, w tym chorągiew tipsów, wliczając w to hybrydowe tipsy Symbio oraz Comply T500.



Oznaczone są kolorami dla lepszej identyfikacji, a co jest mądrym posunięciem. Mamy też woreczek z logiem Lime Ears, ale co jest najbardziej w nim szczególne, to... zapach limonki. I to nie tylko woreczek tak pachnie, ale wszystko. To jest tak genialne i tak świetnie definiujące dosłowne znaczenie nazwy Lime Ears, że szczerze gratuluję pomysłu. Ludzie zapamiętają ją m.in. właśnie po zapachu, gdy wyjmą z pudełka, a raczej z główicy od bomby, słuchawki pachnące limonką. Ograniczam cukier, a mimo to miałem wielokrotnie chęć sięgnąć po jakiś sok owocowy właśnie przez walory zapachowe. Przy spręczeniu za takie pieniądze jestem przeważnie mocną marudą, ale tutaj... Lime, Panowie, udało się, macie duży plus. Kompletnie się tego nie spodziewałem. Pakowanie pierwsza klasa. Bardzo mi się podoba takie podejście do użytkownika. A nie że słuchawki śmierdzą plastikiem i chińską imitacją skóry (vide np. K550).

Jakość wykonania i konstrukcja

No dobrze, to może przejdźmy od moich zachwytych nad pakowaniem do – tym razem również zasłużenie – zachwytych nad jakością wykonania.

Lime Ears Model X Universal to – jeśli jeszcze nikt się nie zorientował – słuchawki z gatunku UCIEM (dla osób nie wiedzących co ten skrót oznacza: Universal Custom In Ear Monitors). Małe, odlane uniwersalnie dokanałówki, na które zakładamy klasyczne tipsy silikonowe oraz pianki. Częstą spotykaną w takich modelach cechą jest tulejka z głowicą wielootworową z osobno poprowadzonymi kanałkami o zmiennej średnicy (tu: jako technologia VariBore), którymi do naszych uszu dobiega się kwartet zbalansowanych przetworników armaturowych.



Słuchawki posiadają oczywiście wszystkie cechy „pełnego” wariantu CIEM, który, w przeciwieństwie do wariantu uniwersalnego, tworzony jest na bazie indywidualnie pobieranych od użytkownika wycisków i odlewany dokładnie tak, jak wskazuje kształt jego – i tylko jego – uszu. Tymczasem w LEX Universal (w skrócie nazywamy te słuchawki umownie LEX) mamy tu akrylowe odlewy z zaokrąglonymi w każdy możliwy sposób krawędziami, aby jak najbardziej pasowały do jak największej ilości uszu. Są delikatnie prześwitujące mimo ciemnego koloru, także możemy po głębszym przyjrzeniu się zauważyć zarysy kapsułek z przetwornikami, ale nie jest to jednocześnie okrutnie rzucający się w oczy element.



Podoba mi się takie podejście i choć wiem, że jest to kwestia bardzo losowa (zwłaszcza w pełnych customach, gdzie użytkownik sam może sobie dobrać kolor wedle swojego gustu, a nawet wręcz kaprysu), cieszę się, że wariant uniwersalny został zaprojektowany w ciemnych barwach. Mocne przydymienie nadaje im powab i elegancji, jednocześnie zachowana mimo wszystko przezroczystość nie przyprawia o banalność. Tak samo wygląda sprawa faceplate'ów, które wykonane są z karbonu. Na modelu pokazowym umieszczono również logo firmy oraz symbol „X” w kształcie klepsydry – jego znak rozpoznawczy.



Konfiguracja przetworników, z tego co się doczytałem, prezentuje się dosyć klasycznie, czyli 2+1+1 (dwa przetworniki niskotonowe na wspólnym kanale dolotowym plus po jednym przetworniku/kanale na odpowiednio średnie i wysokie tony). Słuchawki wykorzystują również technologię PAR – Passive Acoustic Resonator. Jego nazwa mówi w zasadzie wszystko. Posiadają także boczne przełączniki, które wzmacniają niskie tony w razie potrzeby (8 dB < 800 Hz). Całość podłączana jest za pomocą „Westonowskiego” kabla 1,3 m o bardzo podobnej konstrukcji plecionej i w wielu miejscach mi go przypominającej, jako że dawniej to właśnie z Westone miałem sporo doświadczeń. Lime Ears Model X wykorzystuje standardowe dwupinowe złączki, które są najpopularniejszym standardem w ramach słuchawek typu Custom.



Sam kabel jest tutaj jak najbardziej w porządku i na plus punktuję przede wszystkim jego wagę. Używam konfekcjonowanego okablowania ze swoimi iSine i zdarzało mi się zwracać uwagę na jego masę, ciągnącą te lekkie i specyficznie zakładane słuchawki ku dołowi. W LEX przyjęto zatem zasadę, że im lżej, tym lepiej, a tak jak jest, lżej się nie da.

Wygoda i izolacja

W obu tych kategoriach LEX są modelem w bezwzględnie ściślejszej czołówce i gdyby każdy z tych parametrów miał swoją samodzielną ocenę, byłyby tu w zasadzie same 10-tki.

Izolacja jest na poziomie wręcz „Etymoticowym”, jeśli mogę tak go opisać. Oznacza to bardzo mocne odcięcie słuchacza od otoczenia, ale bez konieczności np. przycinania tipsów lub dyskomfortu wynikającego z głębokiej penetracji, jaki towarzyszy często produktom Etymotica. To model świetnie sprawdzający się w podróży, np. w pociągu, ale nie okupujący tego komfortem. Naprawdę genialnie wyważone między czasem jaki mogą spędzić w naszych kanałach, a izolacją, jaką w trakcie jego trwania są w stanie nam zaszerwować. Chyba dawno już nie chwaliłem słuchawek dokałanowych za takie zdolności tak mocno, jak właśnie Model X.



Pod względem wygody także jest rewelacyjnie. Słuchawki – mimo uniwersalnego wymoldowania – idealnie wpasowują się w moje ucho, także jedyna rzecz, na jaką trzeba uważać, to odcinki pamięciowe, aby nie były zbyt ciasno zaciśnięte na naszych małżowinach. Słuchawki bez ich pomocy spokojnie mieszczą się w moich uszach, nie wypadają mimo rozmiarów, nie musiały mieć też mocnego chwytu na odcinkach pamięciowych ze względu na niską wagę (ok. 6 g na słuchawkę, niemal 12 g łącznie). Co najważniejsze jednak, nie przekręcały się w uchu tak jak swego czasu czyniły moje Westone 1 i 4R. Są to jak do tej pory jedne z najwygodniejszych słuchawek OTE jakie miałem okazję nosić.

Naturalnie może się to wydać oczywistą oczywistością, zwłaszcza gdy nabędziemy model w pełni odłany pod nasze i tylko nasze uszy, ale prawda jest taka, że odłanie modelu uniwersalnego wcale nie jest takie proste i sprawienie, by pasował na większość uszu, wciąż stanowi pewne wyzwanie.

Całościowo o wykonaniu

Ogólnie więc muszę przyznać, że bardzo trudno jest mi się do czegokolwiek tu przyczepić. Słuchawki są bardzo fajnie wykonane, nic nie jest luźne, nie zwraca na siebie negatywnej uwagi, nie sprawia wrażenia jakby miało za chwilę się rozlecieć, tipsów mamy tyle że idzie spuchnąć z obfitości, pianki są (i to normalne Comply, a nie jakieś chińskie podróbki jak w Aune E1), woreczek jest, twarde (mało powiedziane) etui też jest, estetyka także zachowana na plus, nawet zapach jest elementem

marki... w głębi duszy jestem rozczarowany. A tak na poważnie to naprawdę cieszę się, że są producenci, którzy starają się dopieścić swoje produkty do takiego stopnia. I to w Polsce, a nie gdzieś na Zachodzie.

Przygotowanie do odsłuchów

Słuchawki trafiły do mnie jako próbka testowa o nieznanym przebiegu, ale nie zanotowałem żadnego zjawiska związanego z wyrzewaniem. Model X grał od początku do końca w ten sam przewidywalny i stały sposób.

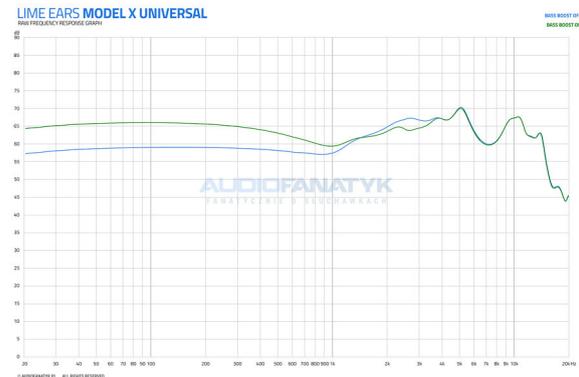
Sprzęt testowy, na jakim LEX były przeze mnie odsłuchiwane, listuję na bieżąco na tej specjalnie wydzielonej stronie. Tak aby nikomu nic nie umknęło. Czynię to jednak ze szczególnym uwzględnieniem różnego rodzaju słuchawek towarzyszących, które w tym konkretnym przypadku sprowadzają się do modeli:

- Audeze iSine 20
- Aune E1
- Etymotic MK5
- Etymotic HF2

oraz paru innych słuchanych na przestrzeni czasu + kilku par pełnowymiarowych, które mniej lub bardziej traktowałem jako punkt odniesienia i coś, przy czym można wyresetować się w trakcie odsłuchów, takich jak dostrajane barwowo Audeze LCD-XC czy precyzyjnie equalizowane AKG K240 DF.

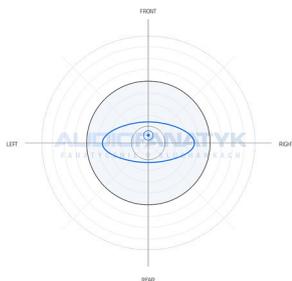
Pomiary

Ponieważ słuchawki mają przełączniki basowe, zaprezentowana została poniżej tonalność surowa w obu stanach przełącznika: włączonym i wyłączonym. Przy czym okazało się, że bardzo dokładnymi pomiarami dysponuje już sam producent, toteż tym razem nie było konieczności wykonywania ich przeze mnie. Mój pomiar dokanałowy w stanie surowym aktualnie nie ma jeszcze np. możliwości odwzorowania basu w sytuacji pełnej szczelności. Doliczając do tego kompensację o indywidualną krzywą odsłuchu okazałoby się, że poziom basu powinien być trochę większy niż to, co pokazałbym na wykresie. Nie widzę więc problemu z tym, aby tym razem oprzeć się za zgodą producenta na jego własnych materiałach pomiarowych.



Jak widać różnica w tonalności nie jest wcale taka mała między obydwoimi trybami. Scenicznie natomiast jest bardzo przyzwyczajone jak na dokaławkę:

LIME EARS MODEL X UNIVERSAL
PERKINED SOUNDSTAGE - BASS LAYER



Zadziwiająco, LEX są bardzo odporne na rodzaj tipsów co do sposobu ich grania i jeśli notujemy jakieś poważne zmiany, to wynikające bardziej z tytułu szczelności uzyskiwanej za ich mocą.

Jakość dźwięku

W słuchawkach wieloprzetwornikowych istnieje naturalna tendencja do opisywania dźwięku rozbitego na części pierwsze, tj. osobne segmenty brzmienia prezentowanego przez słuchawki. Niemniej do tematu zawsze podchodzę także z perspektywy całości, bo to tak naprawdę nie tyle same przetworniki

z osobna nam przygrywają, ale łączą się w jednorodny obraz dźwiękowy. To trochę tak, jakby podziwiać obraz malowany przez kilku artystów i cała sztuka polegać miałaby na tym, aby nie móc wyczuć w żadnym jego fragmencie konkretnej ręki. Dlatego też osobom niespecjalnie zorientowanym w systematyce tworzonych przeze mnie od lat recenzji zaznaczę, że rozpiętkę na konkretne elementy brzmieniowe realizuję zawsze, bez względu na ilość przetworników i konstrukcję danego modelu słuchawek. Nie należy więc postrzegać tu przyczyny.

Opis ubarwiać będzie też fakt konfigurowalności dźwięku modelu X, toteż od tegoż najlepiej będzie nam zacząć. Basem możemy sterować za pomocą mikroprzełączników znajdujących się na korpusach. Ustawienia oczywiście mają swoje parametry, ale umownie możemy nazwać jedno z nich „płaskim”, a drugie „umiarkowanym”.

Trudno powiedzieć, czy w przypadku słuchawek tworzonych od początku jako CIEM ustawienia te będą wyraźnie wzmocnione każde względem siebie samego, ale w formie odlewów uniwersalnych – bez względu na użyte tipsy – najbliższymi słuchawkami jakie przychodzą mi do głowy porównawczo są:

- dla trybu „płaskiego”: Etymotic MK5, AKG K240 DF,
- dla trybu „umiarkowanego”: np. AKG K270 Playback, Snaab AF100 czy FiiO FH1.

Oczywiście słuchawek można tu przyporządkować znacznie więcej, ale są to pierwsze modele, jakie przyszyły mi do głowy, gdy sięgam sobie w niej za czymś o podobnej ilości basu co

LEX. I już myślę, że sporej części czytających świta kondycja basu w każdym z trybów.

W trybie płaskim LEX są bardzo monitorowe, z krótkim i szybkim basem o dużej punktowości i dokładności, ale nie wydźwięku i mocy. Dlatego też nazwałem go „płaskim”, ponieważ sprawia wrażenie deski do krojenia. Nic nie ma tam prawa się ruszyć na pół łba z szeregu, wszystko musi być dopięte na ostatni guzik. Przyznam, że korzystałem z niego najrzadziej. Bas o takim kształcie nadaje się do sytuacji raczej kontrolnych, zaś w muzyce przerobiłem go wzdłuż i wszerz na wspomnianych Etymoticach i to właśnie to było moim motorem napędowym ku ich modyfikacjom.

Tryb umiarkowany natomiast uczyniłbym tu spokojnie tym podstawowym, który miałby pełnić rolę jakoby „bez wzmocnienia”. Jest bardzo wyważony, optymalnie serwujący wszystko co potrzebne i co wymieniłem wcześniej. Mamy tu zarówno nasycenie, natężenie, moc, wydźwięk, jak i nadal sporą szybkość i dokładność. Tryb ten mocniej skupia się na basie środkowym, porzuca płaskość i wzmacnia cały segment basowy. Osobiście nawet mógłby być dla mnie mocniejszy, ale powiedzmy że rozpieściły mnie trochę E1 i Audeze. Korzystałem z tego trybu praktycznie cały czas, bo przez 95% czasu trwania testu. Dodatkowym smaczkiem jest też delikatne ocieplenie przekazu – moim zdaniem bardzo korzystne.

Jeśli ktokolwiek jest zdumiony, że LEX nie są basowymi potworami – witam w klubie. Ja również sądziłem, że dostanę

solidny bas ilościowo, a przełączniki będą dla mnie „jedynym ratunkiem”, ale okazało się, że jest kompletnie na odwrót. Tu dochodzimy jednak do faktu wspomnianej uniwersalności modelu X i jego pierwotnego rodowodu. To słuchawki typu Custom, toteż natywnie pracują one w bardzo dokładnym i dopasowanym środowisku (naszym kanale słuchowym). Można więc założyć, że poziom basu w obu przypadkach nieco się zwiększy, ale ponieważ notowałem bardzo dobrą izolację – nie postawiłbym na to swoich pieniędzy. Ale jeśli weźmiemy taką optykę i przyłożymy do np. EarSonics S-EM6, to okaże się, że ich mocny bas w sytuacji bycia pełnym Customem skutkowałby prawdopodobnie wręcz niemożnością użytkowania. Dlatego jedyne co możemy zrobić, to pozostawić tą kwestię spowitą mgłą spekulacji.

Wokal i ogólnie środek słuchawek jest skonstruowany także optymalnie – nie jest ani wycofany, ani też przybliżony do oporu. Zachowuje sensowne proporcje i dystans, choć na pewno można powiedzieć o nim to, że bliżej mu do nas niż dalej. To jedna z tych sytuacji, gdzie najpierw chcemy określić go jako zakres lekko wycofany, aby na utworach obfitych w wokal odkryć, że clou jednak serwowane jest konkretne i na solidnym talerzu. Na tym etapie powinno zaczynać już też powoli dochodzić do słuchacza, że nad tym projektem trochę czasu jednak spędzono i starano się przemyśleć, który zakres ma być jak prezentowany i przede wszystkim: dlaczego.

Sopran w LEX wnosi trochę nosowości co do barwy, którą okrasza wysoką detalicznością i rozciągnięciem. Jest to zakres podkreślony, przypominający proporcjami to, co dało się usłyszeć w FiiO FH1 (oczywiście uwzględniając przepaść jakościową), także Model X jest na pewno parą należącą do słuchawek jasnych, ale nie przesadzonych, zwłaszcza jeśli nie podpinanych pod jednoznacznie jasny sprzęt. I jest to też jedyny chyba punkt, w którym miałbym (prócz wzmocnienia basu lub chociaż dodania trzeciego trybu przełączników) jakieś uwagi w stosunku do Limonek, wynikające z moich własnych preferencji.

Nie przeszkadzało mi to jednak w odsłuchach. Tak prezentowany sopran pozostawia po sobie wrażenie dużej detaliczności, korelując w tym względzie z basem, ale też jasności, klarowności i czułości na źródło oraz w szczególności na jakość utworów. LEX nie szczypią się w tańcu i choć nie jest to ani aż do bólu rozdzielczy zakres proszący się o mega-audiofilskie utwory z kosmicznym próbkowaniem, ani też jakoś masakrycznie analityczny, to jednak w ramach obu tych cech pożądamy jakiegoś bardziej sensownego kompana do pracy. Na pewno takim kompanem nie są tanie odtwarzacze przenośne i raczej już sama cena słuchawek powinna dobitnie o tym mówić.

Scenę można opisać dzieląc ją na trzy aspekty: holografię, szerokość i głębokość wraz z portretowaniem wokalu. Holografia stoi tu na dobrym poziomie. Nie jest to co prawda to, co zachwycało mnie w S-EM6, ale też nie jest okupione żadnymi konsekwencjami, w przeciwieństwie do produktu EarSonicsa.

Solidny standard z naddatkiem, czyli wszystko czego generalnie bym tu oczekiwał. Szerokość jest natomiast bardzo dobrze rozbudowana i słuchawki nie mają żadnego problemu z wyjściem daleko poza głowę. W zakresie głębi, LEX w bardzo umiejętny sposób starają się wyważyć wrażenie głębokości i odległości pogłosów względem nadrzędnej pozycji wokalisty w stosunku do nas.

Słuchawki jako całość sprawiają naprawdę świetne wrażenie: spójności, koherencji, ale jednocześnie bez zbitcia, plastyczności. Są dokładne i rozdzielcze, ale nie rachityczne, mimo barwy lubiącej zaznaczać się od bardziej nosowej strony. Ma się wrażenie, że dźwięk serwowany przez LEX jest kompletny, będący jedną całością, a nie zlepkiem przetworników lub różnych charakterów, toteż wspomniana barwa byłaby praktycznie jedynym moim zarzutem co do brzmienia LEXów. Jednym z powodów ku temu jest porównanie z sopranem E1. To świetnie do dziś grające dokanałówki, które mają od LEXów bardziej wycofaną średnicę i mocniejszy bas, ale jednocześnie lepiej ujmują naturalność sopranu w sensie strojenia. Pełnym przeciwieństwem będą tu natomiast iSine 20, które z kolei mają najbardziej gardłowy sopran z całej trójki, a co też nie jest do końca idealną sytuacją z punktu widzenia wierności.



Niemniej to właśnie LEX pozostawiają po sobie wrażenie najbardziej liniowych, wyrównanych i neutralnych, jednocześnie – obok E1 – piekielnie z tego powodu uniwersalnych. Choć wiele z tych przymiotników można byłoby przypisać również i Etymoticom i co się okazuje, także i tu LEX muszą przyjąć pozycję poniekąd obronną co do ogólnego strojenia. Na tle moich HF2 mają wyraźnie więcej energii na dole i górze. Z perspektywy poprawności nie czyni to więc Etymoticom zbyt wielkiej ujemy, bo i zastosowania są tu zupełnie inne. Etymotic nie był nigdy marką celującą w zabawianie słuchacza, a raczej w pracę jako dokonałowy substytut sprzętu monitorującego. Stąd ich renoma i legenda. Moje HF2, w przeciwieństwie do MK5, które również posiadam, nie mają na sobie żadnych modyfikacji poza tipsami konwertowanymi z tri-flange na bi-flange, jako że nie znoszę zbyt głębokiej penetracji kanału słuchowego.

Ale wracając do przedmiotu recenzji, Lime Ears posiadają na ich tle jeszcze jedną cechę, która wpływa wyraźnie na wierzch podczas żonglerki słuchawkami na co bardziej rozbudowanych w sopran utworach – rozciągnięcie. Choć HF2 wydają się znacznie bardziej poprawne (i za takie w istocie je uważam), to jednak słyhać jak dużo dodatkowych informacji Model X jest w stanie nam przekazać na wysokich oktawach.

Ogólnie rzecz ujmując... tak, jestem w stanie zrozumieć zachwyty, jakich zagraniczna prasa udzielała na ich temat. Słuchawki są strojone ostrożnie, ale sensownie, a co można byłoby określić na kilka różnych sposobów. To jest też w nich chyba najśmieszniejsze, że nie dają się ot tak wpisać w jakieś sztywne, jednoznaczne ramy. Wydaje się, że mają w sobie to „coś”,

co znalazłem np. w K270 Playback, ale konkretnie skupiając się na LEX, nie możemy nazwać je ani słuchawkami neutralnymi, ani V-ką, ani jasnymi. A przynajmniej nie w sposób jednoznaczny. Zawsze będzie bowiem jakieś „ale”: mają zbyt słabo podkreślone skraje i za słabo odsuniętą średnicę, aby być V-ką, jednocześnie odstają trochę od równego jak deska grania Etymotica, którego naprawdę nie bez powodu w tym względzie tu przytaczam i użytkownicy tych słuchawek powinni mi szczerze przytaknąć. Wreszcie – mimo nosowej barwy nie są jednoznacznie podkreślone na sopranie i w jakikolwiek sposób karykaturalne.

Czym więc LEX są? Wszystkim co wymieniłem. Słuchałem ich naprawdę bardzo długo i żonglowałem innymi słuchawkami do tego stopnia, że zdążyłem podrażnić sobie kanały słuchowe, ale wszystko to miało na celu umożliwienie stwierdzenia tego, co powyżej. Model X to słuchawki po prostu mieszające w sobie wszystkie trzy sposoby prezentacji: neutralny fundament, lekko podkreślone skraje, sopranowe zabarwienie. Wszystko to występuje tu jednocześnie i mogę się tylko domyślać, że użytkownik będzie miał problem z jednoznacznym stwierdzeniem czym LEXy są dla niego. W zależności bowiem od swoich doświadczeń, jedna z tych części składowych może dominować bardziej od innych, zaburzając proporcje.

Domyślnie jednak na moje uszy są one sobie mniej więcej równe i Lime mają tyle samo neutralności, co skrajności i jasności. Sprawiają wrażenie równych, wyważonych, nie zaskakujących słuchacza niczym negatywnym lub dziwnym. Są bardzo fajnie

przygotowane do zwracania detaliczności bez wyostrzeń, a także pracy z szybkim materiałem muzycznym (dobra responsywność). Pod względem szybkości reakcji powinny zadowolić sporo osób o całkiem niezłej wybredności. Aczkolwiek musi temu towarzyszyć też dobrej klasy sprzęt źródłowy. Z nim – nie można się z Lime Ears nudzić. Jakiż on będzie? W zasadzie byle dobrej jakości, choć słuchawki na pewno trochę bardziej faworyzują ten cieplejszy, bardziej basowy i nasycony sprzęt.

Gdybym miał znaleźć model najbardziej podobny strojeniem do LEX spośród sprzętu tańszego, wobec którego mogą funkcjonować jako ulepszenie w prostej linii, do głowy przychodzi mi EarSonics SM64, ale przede wszystkim FiiO FH1. One też grały w podobny sposób i w połączeniu z bardzo dobrym wyposażeniem oraz świetną ceną utorowały sobie drogę do rekomendacji. SM64 się to nie udało, ale niemniej nadal tkwi mi w pamięci sposób ich grania.

Generalnie patrząc na te słuchawki z własnej, subiektywnej perspektywy, tak jak w przypadku FH1 nie pogardziłbym większą ilością basu (np. poprzez zmianę skali pracy przełączników), gorzej nadałbym nieco bardziej gardłową barwę i może też troszkę się jeszcze pochylił nad sceną w formie najwyższej sopranowej oktawy, ale tylko gdyby nie miało to żadnych konsekwencji w postaci zwiększonej jasności. Obecnie brzmienie jest ładnie wyważona między bliskością, a objętością, ale być może nie zaszkodziłoby im pójście w stronę S-EM6, byle tylko nie aż tak mocno jak one faktycznie grały (przypomnę: potężny bas + wyraźnie cofnięta średnica z robiącym wrażenie efektem

głębi). Niemniej naprawdę nie jest źle tak jak jest i słuchawki wciąż mieszczą się spokojnie w moich preferencjach: nie za jasne, nie za lekkie basowo, mogące być traktowane jako konkretne rozwinięcie FiiO FH1, ale też alternatywa dla Etymoticów. Są bardzo uniwersalne i powinny odnaleźć się w naprawdę szerokim wachlarzu zastosowań, a o tym fakcie niech świadczy to, że słuchawki całkiem zgrabnie zagrały na tych samych ustawieniach, które miałem jeszcze chwilę wcześniej włączone dla LCD-XC, na wtyczce Reveal i APO Equalizerze. Znaczy to więc, że na charakter źródła oraz drobne zabiegi będą w stanie odpowiedzieć faktycznie żywo i słyszalnie.

Podsumowanie

Aż chce się powiedzieć: „cudze chwalicie, swego nie znacie”. Nie da się ukryć, że LEX to bardzo mądrze zaprojektowane słuchawki, robiące wrażenie na wszystkim – od opakowania po sam produkt, od zapachu po dotyk, od wysokiej wygody po bardzo fajne brzmienie. Słuchawkom do ideału brakuje w istocie niewiele i jeśli miałbym wystosować wobec nich uwagi, byłyby nimi jedynie preferencyjnie chęci odwrócenia stosunku basu do sopranu lub po prostu uczynienie sopranu bardziej poprawnym barwowo w stronę niższej intonacji, bardziej gardłowej, jako że takie właśnie granie interpretuję jako bardziej naturalne. Sytuacja zastana czyni z modelu X co prawda słuchawki dosyć uniwersalne i może nawet bardziej, niż gdyby moje postulaty Lime Ears zapragnęło spełnić. A może już to zrobiło w swoim jeszcze wyższym modelu? Kto wie.

W każdym razie, w kwocie do 4000 zł, jakie niemalże przychodzi zapłacić za Model X, oczekiwałbym kapitalnej wygody, bardzo wysokiej izolacji, dodatkowych możliwości i konfigurowalności, a ponad wszystkim brzmienia godnego słuchawek takiego właśnie formatu i konstrukcji (oraz kwoty). Lime Ears spełniło wszystkie moje postulaty, pozostawiając uczucie niesamowitego fartu, że jestem posiadaczem przenośnych planarów, jakkolwiek blokujących moje zapędy zakupowe. Inaczej już bym przeliczał wolne środki na koncie.

Nie ma co tu zaklinać rzeczywistości i tłumaczyć sobie że czarne jest białe: nie miałem jeszcze w uszach tak wygodnych słuchawek o jednocześnie – podkreślam: jednocześnie – tak dużej poręczności, ogromnej izolacji od otoczenia oraz ogólnie tak wielkim wrażeniu przemyślenia i kompleksowej tego wszystkiego realizacji. Choć EarSonics S-EM6 miały od nich większą głębię sceny, to jednak strojenie było znacznie bardziej karykaturalne, a sam sprzęt kosztując 500 zł wydany był jednak znacznie skromniej. Tu płacimy naprawdę za elementarną jakość i produkt, który cieszy od początku do końca. I choć wydanie wspomnianej kwoty niemal 4000 zł (dokładnie 3820,26 zł, jeśli liczyć wprost po kursie) to wciąż poważna decyzja, zwłaszcza że w tej cenie można mieć naprawdę świetne modele pełnowymiarowe oraz sporą ilość nieco tańszych dokanałówek, to jednak suma zalet praktycznych i brzmieniowych dla osoby, która preferuje (lub jest zmuszona preferować) zamknięte modele dokanałowe z poważnego wydania i wysokiej półki, powinna skutecznie móc ją usprawiedliwić.

Zalety

- solidna, akrylowa konstrukcja i bardzo dobre wykonanie ogólne
- świetne wyposażenie, prezencja i całościowe wydanie znacznie wygodniejsze od konwencjonalnych modeli z normalnymi korpusami
- de facto jedne z najwygodniejszych dokanałówek z jakimi pracowałem
- wymienny kabel z odcinkami pamięciowymi profesjonalne brzmienie nastawione na bliskość, czytelność, detaliczność
- wysoka spójność tonalna oraz responsywność detaliczność i klarowność bez wpadania w przesady i nadmierną ostrość
- bardzo dobra scena na szerokość
- mnogość tipsów dla jak największego komfortu
- mała podatność na negatywne zmiany wynikające z doboru tipsów niesilikonowych

Zalety cd.

- dodatkowe możliwości płynące z przełączników basowych
- duża podatność na efekty płynące z equalizacji (np. APO)
- całościowo świetnie przemyślany projekt od początku do końca

Wady

- subiektywnie nie pogardziłbym jeszcze mocniejszym basem i bardziej gardłową barwą
- przydałyby się dodatkowe kable w zestawie do pełni szczęścia
- brak opcji kolorystycznych jak w wariantcie spersonalizowanym
- cena identyczna jak najtańszy model w pełni spersonalizowany

WYKONANIE I WYPOSAŻENIE	10
JAKOŚĆ DŹWIĘKU	9
MOŻLIWOŚCI I ERGONOMIA	10
OPŁACALNOŚĆ	8

Oceny odzwierciedlają subiektywne odczucia w danej klasie recenzowanego urządzenia.



Jakub Łopatko, audiofanatyk.pl

Lime Ears Model X - a 2 in 1 Premium IEM

Grimbles, head-fi.org

Pros

- Fabulous SQ
- 2 fab sound settings
- Comfortable (for me)
- Holographic sound stage
- Oodles of Details
- Sublime imaging and separation

Cons

- May be too big for smaller ears
- Crappy cable
- Slightly rough finish around switch

Quick Read Conclusion

I joined the review trail for the Lime Ears Model X (universal ("Model X")) reasonably excited about the proposition of switchable tuning. I have seen a number of IEMs including this sort of functionality over the last few years, and the Model X was the first I got my hands on. The Model X is a remarkable bit of kit – two IEMs in one really; at first, you have a very neutrally tuned detail master, then flick the switch and the corresponding lift to bass and lower mid frequencies gives a much more

relaxing and (to my ear) enjoyable experience. Rounded off with (other than the cable) a solid set of accessories and the Model X offers a convincing proposition for relieving yourself of €890.

Introductions and General Bumf

This review follows a familiar format, but I have spent a little more time deliberating on the comparisons between the two switch settings of the Model X – as it is clearly a key feature, I thought worth some focus.

For the avoidance of doubt, I am in no way affiliated with Lime Ears and have received no inducement from them to write this review (apart from a bit of fudge they included with the review sample, but as it was Lent and I had given up sweets etc, my wife ate it. Apparently lovely!).

Test Kit: I have tested the Model Xs with a Samsung Note 8 and Galaxy S8 (using both UAPP and Tidal), an 11" Macbook Air (2012 vintage, running Tidal), an Astell and Kern AK70 mk 1 (both balanced and unbalanced), an iFi iDSD Nano Black Label, RHA DacAmp L1 and also a Schiit Modi 2 Uber into a Vali 2 („Schiit Stack“).

Preparation: I received the Model Xs as review samples and gave them both about 50 hours of burn in before any analytical listening.

Me as a listener: I am not a pro by any stretch of the imagination. I have always enjoyed my music, and my tastes are pretty broad. I go to live music ranging from rock and pop concerts to orchestra and opera. I would not describe myself as having a trained ear, but I am attentive and my ears are in pretty good nick for a 35 year old.

My tastes: neutral to warm, but I do like good punchy bass and I love to hear decent instrument separation.

Test tracks: Test tracks noted in the review below were the T1-DAL 16/44.1 available through their Hi-Fi subscription.

So, on to the main event. [/General Bumf]

Tech Specs

Now this is an interesting one. I struggled to find detail of the normal specs (impedance, sensitivity, THD etc) I would expect to publish as part of a review on the Lime Ears website, so I dropped the (ever helpful) Peter a line and the response was "... we kinda don't believe in these. That's funny considering we are a pro-audio rather than audiophile company... [and published stats] are often bogus".

I'm a little conflicted by this response. I have always been clear in my reviews that I am an amateur reviewer, and focus on trying to describe what I hear when listening to the equipment. From this perspective I get Peter's point. However, I think that

stats and frequency response curves can be extremely helpful in helping make sense of what I'm hearing – recognising impedance mismatch as a source of distortion for example, or identifying a frequency response spike as a perceived focus on a particular part of the sound spectrum. Peter did share some internal measurements Lime Ears had, but asked me to keep them to myself. I have respected this, but I would say that:

- 1) they were excellent and I don't think he should have any problems sharing them in this community; and
- 2) they correlated with my subject perceptions... helped to make sense of what I thought that I was hearing.

So what can I say unequivocally? The Model X contains 4 balanced armatures and utilises Lime Ears' Passive Acoustic Resonator and Varibore technologies (more detail at www.limeears.com, but basically physically adapting the sound bores in the IEM nozzle with the intention of producing a better sound). In my experience, including plugging the Model X into my Vali 2, I didn't encounter any impedance distortion.



Unboxing

Lime Ears are another IEM manufacturer which have nailed quality, premium packaging perfectly. When I received it, I was really surprised by the weight of the box – the heaviest IEMs I have ever been shipped. On opening the box, it was clear why... the Model X come with their own solid metal tin. Nice touch and no question this will protect the IEMs adequately.

In the box then, that tin containing the Model X IEMs, and their 3.5mm unbalanced cable (more on that below), and a bunch of tips, all inside a thick card box with a magnetic flap and ubiquitous Lime Ears branding. And the obligatory warranty card etc.



Accessories

Cable

Lime Ears obviously have the same cable supplier as fellow Polish IEM manufacturer Customart... and they should both sack them off. An average, inflexible cable with poor (i.e. too much) microphonics (especially due to rub against glasses) and an overall cheap feel. I abandoned it immediately and used my Effect Audio Origin cable, including for all testing below. In my opinion, at €890, Lime Ears should be including a superior cable – the EA Origin is only US\$60 but immeasurably superior to the included cable.

Tips

Conversely, Lime Ears included a fulsome set of tips including (my personal fave and the tip I settled on for testing) Comply foam tips, a number of silicon spinfit style (not sure if they are actually SpinFit), and a really interesting silicon outer, foam inner tip which I loved the idea of but found a little uncomfortable.

Practicalities, Build, Fit and Tips

You can tell the Model X is built by a custom IEM manufacturer – they are big, and consistent with a lot of the premium custom manufacturers' universal offerings (with the possible exception of 64 audio), chunky. The nozzles are also pretty

long and wide, so they go deep into your ear canal. This meant that I actually couldn't use the usual Comply tips I like to use (the ball shaped ones) as I couldn't get the Model X deep enough inside my ear canal. I also let my wife (who has small ear canals) have a listen, and even with the smallest comply tips, she was struggling to get them into her ears. Once you get the right tips though, fit, seal and isolation are all good. My recommendation on fit then – try them first if you can! You'll see from the pictures below though, that once properly inserted they are pretty neat and snug.



Build quality is (with one small exception) great. Seamless faceplate attachment onto a comfortable acrylic body – the carbon fibre finish of the faceplate set off against the (lime!) green motifs is deeply aesthetically pleasing to my eye, and the Model Xs are a joy to hold with a sensible weight to them. My one tiny niggle (which I feel justified at this price point) is that, around the switch, the finish is a tiny bit rough. No suggestion anything will break/fall out, just that the slightly unfinished feel around the switches is noticeable on an otherwise beautifully fabricated IEM.

The Sound

The Switch

The main event here is the switchable tuning. In the switch down (reference) setting, the tuning is very neutral and (to my ear which prefers a little more warmth and bass) a little thin sounding. Unquestionably treble forward and (after a while) a little fatiguing. Flick that switch to the up (warm) setting though, and you are hearing a different IEM – the lift in the bass and lower mid provided by changing the tuning taking off some of the sharper edges and creating a much more relaxed sound, possibly at the expense of a little detail.

I had a good few weeks with the Model X (for which I thank Lime Ears), including taking them on holiday with me. Initially I only listed to them on the switch up (warm) setting, finding the switch down (reference) tuning thin, dry and a bit fatiguing. One evening however (after the best part of a bottle of a very good South African pinot noir) I decided to listen to some live guitar focused music (Barenaked Ladies live album on Tidal) and was blown away by the soundstage and detail I was hearing in the recording, really experiencing “holographic” sound stage. I then became much more experimental with the tuning switch, finding that different tracks were better suited to different tunings – the positive and negative traits of each tuning being:

Switch down (reference) – sparkly treble, massive soundstage

and enhanced detail but I found I needed to listen to the Model Xs louder on this setting, and this made them a little more fatiguing. On certain tracks this setting can also sound a bit thin/lifeless.

Switch up (warm) – much more laid back, relaxed and fuller sound, but can introduce a little mud/veil to the track.

Highs, Mids and Lows

Switch down (reference)

Best suited to guitar (especially steel strung), live and orchestral pieces, the Model Xs in this setting really focus on that upper range, sparkling in “metallic” frequencies – cymbals, triangles etc but lacking a little for any sort of music which has a requirement for impactful bass (think most pop, EDM, rap etc). One of my favourite tracks for testing bass – Wiz Khalifa’s *On My Level*, is a very different proposition switch up. You can hear the bassline but there is no impact, and the treble snare is far more forward. Vocals, especially male vocals, can also sound a little lifeless in this setting to my ear. Pearl Jam’s *Yellow Ledbetter* for example losing some emotion as the vocals have less impact and power than Eddie Vedder deserves!

Switch up (warm)

For me, my default setting with the Model X, the bass enhancement creates a non-fatiguing, more impactful sound. This is

still balanced armature bass, you are not being blown out of your seat, but the difference is clear. Switch to something like Fouki’s *Je Positif*, and there is depth and focus in (male rap) vocals with the (low mid) trombone fully occupying centre stage, not demoted below the consonant of the vocals.



Soundstage, Separation and Detail Retrieval

Switch down (reference)

The level of detail retrieval and the soundstage created by the Model X is a real strength of this IEM. The soundstage is broad with clear instrument placement, but on the right track (almost any live recording) there is a spectacular holographic soundstage, creating not just width and depth but an intriguing sense of height. These Model Xs create a truly capacious overall stage (particularly for an IEM) but manage to place instruments well on it. For example, the Santana/Rob Thomas classic *Smooth* sees an obvious placement of bongos left and high, Rob’s vocals up front and the washboard over right and high, with the brass section front and centre but low. This placement is palpable, almost causing you to cock your head to hear a specific direction a little better.

Switch up (warm)

The same as above, but with a little detail, space and holography missing. The cost of relaxing warmth, a little less detail, a shrunken soundstage and a less discernible physical placement with a shrunken soundstage.

Gear Matching

I found the Model X to scale beautifully with any kit I threw at them. My mixture of dacs and amps noted above all scaled well, with the Model X's able to extract the finest detail. Where they surprised me was plugged into my Schiit Stach (Modi 2 Uber into Vali 2). Given the tube this is normally noisy with IEMs, and SQ suffers. Not so with the Model X - there was the ever-present tube buzz but they maintained their signature soundstage and detail retrieval where other IEMs often fail. Usable in a desktop environment then.

Comparisons

v. Customart FIBAE Massdrop Edition (custom)

Nothing like the bass impact that the FIBAEs can deliver, but superior detail (even on switch up - warm). Far more subtle, leaving the FIBAE ME's sounding a little veiled in comparison.

v. Campfire Audio Polaris

With switch up, some similarities to the very V shaped tuning of the Polaris. Bags more detail, quicker decay and more overall coherence creating a more physically accurate sound. Hard to describe, but (for example) an oboe sounds much more like a real life oboe as opposed to an approximation of one. More... lifelike.

Niggles

Cable is poor as noted above. Easy fix Lime Ears.

Switch bore could be a little smoother/better finished. Maybe a gromit?

Conclusion

Our friends at Lime Ears have done something a bit special here. Two premium IEMs here in one pleasing package: a reference tuned detail monster with a soundstage to die for; neatly transitioning to a warm, enjoyable leisure listener. As I sit, on the train home, flicking between switch settings to suit the tracks I am listening to, I struggle to think of a more satisfying (or greater value) method of relieving myself of (a bit less than) a thousand euros.



Lime Ears LE3, LE3B, and LE3SW custom in-ear monitors review: 2 for the price of 1

average_joe, theheadphonest.com

Make: **Lime Ears**
Model: **LE3/LE3B**
Base Price: **555€; + 70€ for the SW option**
Country of Manufacture: **Poland**

Poland has become somewhat of a powerhouse in custom in-ear monitor with two companies with high-performing silicone shelled models: Spiral Ear and Custom Art. Lime Ears was officially started in October 2012, a little after Custom Art, after 2 years of tuning monitors. Started by Emil Stolecki, a sound engineer by education and acoustic designer by trade with the assistance of an audiologist friend involved in hearing-aid manufacture, the name was created by simply spelling Emil backwards.

As a Bassist, Emil used musicians monitors, but the sound quality was not to his liking, so he decided to make his own. He designed them for a purpose, but still wanted them to appeal to musicians, studio engineers, and audiophiles. I asked Emil about his design goals for the LE3 and LE2 and here is his response:

"I'd start with LE3, which was main axis of my designs, being 3-way it was supposed to be starting point to others. Again, simple answer would be that goal was most pleasant musical sound but getting a little bit deeper into the aesthetics I'd say that I wanted overall sound to be not too aggressive, a little bit laid back, with crispy, but not harsh highs (even highs from ribbon tweeters as found on Adam Audio monitors are a bit harsh for me), lows that are punchy and could get pretty big if sound engineer meant it that way (otherwise they shouldn't dominate). I wanted mids to be a little bit recessed, just enough to avoid nasal sound and sharp enough in higher part of the band to maintain punch in snares or grain in distorted guitars.

LE2, since it's 2-way and lacks some continuity between lows and highs was meant to be made a little bit more contour and thus maybe less transparent but more interesting. Lows were made bigger and slower, highs were kept a little bit more harsh and slightly more emphasized which widened sound stage in my opinion."

Since the creation of the LE3, Emil tuned a new LE3 to be more balanced with less bass and subsequently more treble emphasis and clarity. This version is called the LE3 while the original has become the LE3B. There is also a version with a switch for a few dollars more that will allow switching between the two sound signatures, which is one of two CIEMs that uses a switch to change the sound signature, and one of about 20 offerings with capability to change the sound signature.

ORDERING INFORMATION

Lime Ears uses a simple order process defined here, which starts with an email. Emil is friendly and responsive, making the process fun. The base price is 555€ base price, but of course options can result in a higher price, and adding the switch option, which gives an additional sound signature for a little amount, it an additional 70€.

Price as tested: LE3: 655€ (555€ base price + 60€ for wooden faceplates + 40€ for the colored canal tips); LE3B: 575€ (555€ base price + 20€ for simple artwork).

Options and pricing can be found on the product page.

Impression instructions:

- Beyond second bend of ear canal
- Full concha
- Open jaw impression (1-2' bite block, as long as it's comfortable and doesn't generate jaw muscles tension during impression curing)
- High viscosity silicone is preferred (as for making impressions for CIC hearing aids)
- Cotton or foam dam – it doesn't matter, as long as second bend will be clearly visible.



DESIGN

The LE3 and LE3B are both 3-driver, 3-way configurations in acrylic shells with dual sound tubes and a detachable cable. The LE3SW combines the LE3 and LE3B in one shell with a switch that allows the user to quickly change between the sound signatures. The detachable cable sockets are recessed and fit a standard 2-pin connector.

PACKAGING & ACCESSORIES

The presentation of the LE3/LE3B is top-notch, with Lime Ears tape, matching cases, and the touch of a special product. The accessory pack includes a padded Pelican case, desiccant pack, ear lubricant, and a cleaning tool. The case is crushproof, waterproof and dustproof case. 9/10



CABLE

The two different tunings came with two similar, but different cables. One is clear coated while the second cable is a black rubber jacketed cable, not the typical twisted cable. Both cables have a strong memory effect, bending back to the way they have been stored and resisting straightening, making for an annoying experience. The clear cable is stiffer than the black cable, but the black cable is more tangle-prone above the Y-split due to the sticker coating and thin cable. The cables are free from microphonics and both are acceptable during use, but far from the best I have experienced. The cable has recently been replaced with a twisted cable for better ergonomics. TBD/10

FIT & FINISH

Receiving two different units has allowed me to see two different iterations of Lime Ears fit & finish, which is good. Having two different CIEMs for the two different tunings has given me double the opportunity to see Emil's work. He is innovative and likes to try new things, and does make them well. While the overall quality of the second set of shells is better than the first, the minute imperfections in the first are completely gone in the second. The artwork, while innovative, is done well, but nothing to write home about. Emil did seem up for any artwork challenge, but to be honest, I couldn't think of anything too exciting or challenging for him to make. Artwork examples below (including the glow in the dark artwork). 7/10



ISOLATION

Isolation is on par with most other hollow acrylic shelled CIEMs, which typically blocks out between 24 to 28 dB of sound, depending on the frequency, fit/canal length, and individual anatomy. 5/10

SOUND

Disclaimer: My review is done in a comparative way using similarly priced IEMs and/or CIEMs for perspective and to determine performance. In this review I try to accurately portray the product under review, presenting strengths and weaknesses, the sound signature, characteristics, and technical performance as opposed to providing flowery dialog of performance without perspective. My ultimate goal is to enable you to make an informed decision about what product is right for you. Take the review as a critical look at the product and not a sales pitch or marketing fluff. I believe gear should be selected based on the sound signature you want and/or the specific use, not solely on technical performance or unsubstantiated hype. Here are some quick references for more information: My review technique, Thoughts on reading a review, Custom IEM information

The Lime Ears LE3/LE3B both received 100+ hours of burn in as is customary before I do my serious listening. The following custom IEMs were used for comparison: Dream Earz AUD-5X, Dream Earz AUD-8X, Alclair Reference, ProGuard P2+1, In Earz IE-P250, Perfect Seal PS6, Minerva Artist Pro. Comparisons can be found on page 2 of this review.

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LE3 vs. LE3B: The LE3B was the original tuning and it has plenty of clean and clear low end, but the clarity isn't quite to the level of many CIEMs within the price range. After mentioning the clarity issue with Emil, he created the LE3, which has better clarity, but it comes with a different sensation and tonality.

The LE3B is effortless, fun, musical, spacious, and it is easy to get lost in the personally powerful sound. On the other hand, the LE3 offers a better window into the details of the music, offering a lighter tonality that accentuates individual instruments better, but it doesn't offer the fun, powerful, engaging experience of the LE3B. The midrange presentation of the LE3B is a bit more forward and the presentation is deeper while the LE3 has a wider presentation that isn't as deep. Detail levels are similar, but the LE3 articulates detail more than the LE3B while the overall presentation of the LE3B, with the added depth, resolves more of the entire presentation. Headroom is greater on the LE3B but transparency and coherence are better from the LE3, as is clarity of course.

The differences come down to the type of music being listened to, as pop music, EDM, and other music where warmth and a

heavy bass presence are expected sound better and more natural from the LE3B while acoustic music, vocals, and lighter music that sounds too heavy from the LE3B is right on with the LE3.

Bass: The quantity of bass from the LE3B is substantial, and the driver doesn't lose steam in the lowest registers as many CIEMs that use a single driver do. Quality is good, as the bass is tight and well textured for a top-notch bass experience for the price range. The bass can interfere with the rest of the spectrum and bring a veil to the sound while, and the integration with the rest midrange isn't great. In tracks that aren't meant to sound bass heavy, and even some that are, the bass is turned up, giving separation of the various parts of the frequency spectrum. Overall, the bass of the LE3B gives a feel that is akin to having quality subwoofers adding an emotional aspect through feeling the bass.

In contrast, the neutral sound of the LE3 sounds lean and lacking even though there is still great capability and similar overall quality to the bass region. It is integrated within the rest of the sound signature better, with increased coherence, but the texturing isn't quite as good as the LE3B. Depth of the presentation is still excellent, and the driver can sustain notes quite well, but the bass is quite neutral and not exaggerated.

If enhanced bass is what you are after, the LE3B is an excellent choice when all things are considered, including the combination of capability and quality. If you want neutral, the LE3 is still capable and punches deep.

Midrange: The LE3 and LE3B diverge in the midrange to an extent not unlike the bass, but do share the depth of presentation and imaging. The LE3 midrange is more in-line with the bass quantity while the LE3B midrange is a slight bit pushed back in comparison, and notes are a bit thicker than the LE3. Combining these characteristics gives the LE3B a warmer, more tube-like sound that conveys much more power while the LE3 reveals more within the presentation with better clarity. The upper-midrange of both has a slight dip by design to avoid a nasally sound, which is more prominent in the LE3 due to the midrange presentation, but results in a natural sound.

When compared with other CIEMs, this recessed area is a big differentiator that sounds good or bad depending on each track's characteristics. Clarity levels of the LE3 is about on par with the price range, and the LE3B competes given the sound signature. Comparing the LE3B with purpose-build stage monitors such as the ProGuard P2+1, the differences between the upper midrange area is quite prominent, as it is between the M-Fidelity SA-43 with the "presence" switch on. Combining the great imaging and presentation depth, the LE3 and especially LE3B perform well and have a lot to offer for the listener.

Treble: The treble is a bit pronounced in comparison with the upper midrange, giving a sense of brightness even though the LE3B treble is relaxed and the LE3 treble is a slight bit above what I consider neutral. While detail is plentiful, it is more on the revealing and analytical side given the smoothness of the rest of the spectrum. In perspective, this is not unusual for

the price range, better than most lower-cost CIEMs, but not to the level of higher-end CIEMs: they perform where they should. Extension is average for the price range, extending up to 16 KHz in test tone listening.

Overall quality of the LE3 is higher than the LE3B, but the LE3B treble is integrated better with the rest of the spectrum for a more transparent, natural overall sound. Overall treble performance is very representative of the price point and isn't offensive, but will reveal issues with poor masters and/or low bit rate tracks.

Presentation: The models present in different ways as follows:

LE3: Relatively neutral presentation with a bit of emphasis on both ends of the spectrum with a slight tendency to be analytical. Soundstage recreation focuses on depth over width and when combined with the good imaging results in a very 3D presentation. The presentation perspective is quite neutral; not too forward or too laid-back. Coherence and clarity are good resulting in an overall transparent sound, and outperforming the LE3 overall in these characteristics. The LE3 isn't quite as natural and laid-back due to the more analytical presentation in comparison with the LE3B's more relaxed and natural presentation.

LE3B: Bass-heavy with a more up-front presentation, the LE3B also emphasizes depth over width, but has a more organic overall feel. Notes are thicker and that thickness can greatly affect

clarity with entry level sources, resulting in hidden details and a unremarkable sound, but with high quality sources this isn't an issue. Combining the frequency response with the coherence, imaging, and 3D presentation, the LE3B recreates a sense of space and power that is rare at this price range. The overall presentation is reminiscent of a stage monitor, but with a bit sharper note for a more audiophile feel.

Volume performance: Both the LE3 and LE3b perform well at all volume levels, but at very low volumes the midrange starts to sound a bit recessed. At higher volumes, the treble can be a bit harsh and the LE3b bass quality starts to decrease due to the enhancement. For a triple driver, the LE3 and LE3b perform quite well at louder volumes.

Sound Summary: The LE3 and LE3B offer different tunings, with the LE3B offering a more organic, relaxed; yet up-front presentation that is bass emphasized while the LE3 is more on the neutral side. Presentation size of both isn't large in width, but both have excellent depth and imaging for a very 3D experience. Bass quality for both is excellent given the single driver and the midrange contains plenty of detail although the thicker notes and additional bass of the LE3B can result in a bit of a veil.

The LE3 has a presentation that is similar to a reference monitor, but not quite as analytical or spacious, achieving a nice balance between reference and audiophile. The LE3B is reminiscent of a stage monitor, with enhanced bass to cut through loud venues and relaxed treble for a fatigue-free experience.

But the real gem is the sense of power and naturalness combined with the ease of listening that the LE3B can provide, albeit at the expense of clarity, which is rare for the price range.

The LE3SW combines the two, allowing a quick change between the two sound signatures with a simple flip of a switch on each shell. From an audiophile standpoint, the switch goes from a revealing reference sound to a powerful fatigue-free sound, and from a pro standpoint the change goes from a stage monitor to a reference monitor.

Comparisons:

Dream Earz aud-5X: The LE3B is closer to the 5X presentation than the colder, clearer, brighter LE3. While the presentation of the two is similar in many ways, both react differently to my various test tracks. In general, the LE3B sounds larger and less in-the-head due to the better presentation depth with a more up-close presentation and better imaging even though the 5X has an overall wider presentation. Clarity of the LE3B is superior due to better focus within the soundstage and superior instrument separation. Dynamics, punch, and transparency are better from the 5X, but not by a large margin, while the LE3B is more resolving and coherent. The LE3B is more forgiving of poor quality tracks due to the higher quality, smoother yet more detailed notes.

Bass quantity is similar, but the 5X has more low end sustainment capability. Both have good texturing and punch, but the LE3B pulls ahead of the 5X in quality with tighter notes and a bit more detail. Both have similar warmth. The slightly more forward midrange of the LE3B has much cleaner, more articulated, and engaging presentation of the entire presentation as well as individual instruments due to the superior focus, presentation depth, and focus., while presented similarly, is quite different due to the presentation depth, focus of presentation, and imaging, all of which are superior from the LE3b. The upper midrange and treble of the 5X is more accentuated and pulled further forward, with a brighter sound and harsher overall note.





The more expensive LE3B has a similar sound signature to the 5X, but it outperforms the 5X in most ways, and where the 5X has an advantage, it isn't very large. The price differential will dictate which is best for you, but the LE3B offers a more enveloping sound that is more refined and natural along with the benefit of being able to add the LE3 sound signature with the flip of a switch if you opt for the LE3SW model.

Dream Earz aud-8X: The 8X presents music in a more neutral way similar to the LE3, but has a frequency response closer to the LE3B. Both the LE3 and LE3B have a better focus within the soundstage resulting in a more concise presentation even though the 8X is more detailed and has similar clarity to the LE3. While the 8X typically has a larger presentation space, which is more dependent upon the track, the LE3 and especially LE3B can sound much more accurate from a proportion standpoint, with a more 3D presentation overall. Transparency is similar while the LE3/LE3B are more coherent. The note thickness and ADSR differ with the more natural Lime Ears offerings outperforming the sloppier yet sharper 8X. The LE3/LE3B are more forgiving of poor masters.

Bass quantity of the 8X is close to that of the warmer LE3B in normal listening, but the 8X is much punchier yet not quite as clear and concise due to a thicker bass note. The 8X's superior capability allows it to deliver a much more impactful experience than even the LE3B with bass-heavy tracks. The midrange of the 8X is more forward than both LE products in relation to the rest of the spectrum, but overall presentation space is closer to the LE3. Even with the good imaging and added detail recreated by the 8X, the lack of sharpness gives the LE products an advantage in clarity into the midrange and sense of musicality with acoustic music. The midrange to treble integration is better from the LE products in comparison with the more prominent upper midrange and treble region of the 8X, which has better overall treble note decay for a smoother, more accurate sound.

Close in price, the triple driver Lime Ears products are better with acoustic music while the Dream Earz aud-8X offers punch and capability that works with electronic music and lower bitrate music. Source is more important for the LE products; especially the LE3B but the LE products recreate a more realistic environment with high performing source equipment. The LE3SW offers switching between the LE3 and LE3B sound signatures by flipping switches, but the 8X can be custom tailored to fit your hearing profile. It comes down to music and listening style: 8X is best for fast electronic with a more aggressive sound while the LE products recreate acoustic music environments better.

Alclair Reference: Tonal presentation Reference is closer to the LE3B than the LE3, as the LE3 is colder and more neutral, especially in the bass region. Spatially, the more mid-forward LE3B has more depth to the presentation and an overall wider space that gives a more 3D presentation. The LE3B outperforms the Reference in most categories including transparency, dynamics, detail levels, resolution, and clarity (only with high-end source components), and imaging and focus is a good deal better.

Bass of the warmer LE3B is more enhanced with better sustainment of deep bass, which is more noticeable the deeper the bass note. In contrast, the LE3 bass quantity is significantly less and sounds cold comparatively, but the LE3 also has better capability than the Reference. The midrange of the LE3B and LE3 are presented more up-front and forward with additional presentation depth while the Reference has gives a sense of spaciousness comparatively. Treble quality of the LE3 is superior to the Reference, but the LE3B quality is similar.

While the LE3B and Reference have some similarities, the LE3/LE3B outperforms the Reference in just about every category, especially the bass region. The lower cost Reference does offer a more laid-back midrange presentation and more neutral bass performance vs. the LE3B while the LE3 is more neutral overall. The Reference will work well for multiple purposes while the LE3B or LE3 alone are a bit more focused on their audience preferences.

ProGuard P2+1: Both the P2+1 and LE3B share many characteristics and a similar tuning, but have very noticeable differences. The presentation of the LE3B is a bit more up-close, but the overall presentation space, and especially the depth of presentation is greater. Notes of the P2+1 are slightly thicker on average than the quicker attacking LE3B, which gives the LE3B a more dynamic performance. Coherence is similar from top to bottom, but the LE3B has more detail and better clarity.

The LE3B has superior bass quantity and quality compared with the relatively neutral but warmer P2+1. The P2+1 midrange is pushed a bit forward in relation to the bass and treble for a more mid-centric presentation compared with the more linear LE3B. Both image well trade-off victories for which is more spacious depending on the track, as the changes from track to track can be significant. The upper midrange of the P2+1 is more pronounced leading to a bit more throaty sound while the LE3B sounds a bit recessed in comparison. Treble quantity and quality is similar between the two.





The ProGuard P2+1 and Lime Ears LE3B have relatively similar sound signatures, but the P2+1 is more tuned for musicians while the LE3B has an audiophile's spin on the stage sound. Vocalists should appreciate the more forward midrange and boosted upper midrange while the LE3B would fit those that want excellent bass performance with overall better clarity.

In Earz IE-P250: The P250 sounds closer to the LE3 than the LE3B, which is warmer and thicker overall. The LE3/LE3B cost double the P250, and the increase in price translates to a much more coherent, natural, and realistic sound overall. Differences across most sonic characteristics lead to this dominance, from the better coherence and transparency to the superior imaging, detail, and resolution, to the more 3D presentation that is larger with better focus. The upper midrange of the P250 boost sticks out in comparison, making for a more throaty sound that accentuates parts of the music, bringing an unnatural sound in comparison.

The LE3 is an upgrade to the P250 if you don't mind the lower quantity in the upper midrange to go with a more punchy and natural sound.

Perfect Seal PS6: The mid-forward PS6 presentation is closer to the LE3B, but the frequency response is much closer to the LE3, which was used for comparison. The PS6 has a more up-front presentation, but the overall size is wider with similar depth and imaging to the LE3. Detail levels, resolution, and articulation of details are greater on the PS6, but the overall focus within the soundstage is slightly better from the LE3. Transparency and coherence are similar, while dynamics are better from the LE3B. The PS6 exposes poorly mastered tracks a bit more. Bass quantity is quite different, as the PS6 has more bass emphasis and capability, but the LE3 bass is cleaner and clearer. Warmth is close, but the PS6 is slightly warmer and thicker. The closer presentation of the PS6 helps with achieve better detail articulation while the thinner note and better focus of the LE3 helps to keep the articulation level similar. Upper midrange differences give the PS6 a bit brighter feel while the more laid-back LE3 provides a naturalness that is relaxing for long-term listening. Treble is more pronounced with the PS6 and has a slightly more natural note, but due to the difference between the upper midrange and treble, the LE3 treble sounds more accentuated.

Offering different sound signatures and strengths, the PS6 is best for those that want to be more immersed in their music and experience the bass while the LE3 will provide a more relaxed sound. The LE3B compares more closely with the PS6 in the bass region, but isn't as bright and not quite as forward.

Minerva Mi-Artist Pro: The Mi-Artist Pro sounds closer to the LE3B in overall presentation and frequency response, although the LE3B has more bass emphasis. The presentation of the LE3B is more spacious in all directions with better imaging resulting in a more 3D experience than the more forward Mi-AP. While the Mi-AP has decent dynamics, the note attack and decay is a step slow while sustainment is lacking in comparison with the LE3B even though the Mi-AP is thicker in general. This results in the LE3B giving a more concise presentation that is clearer, more coherent, and has higher detail levels for a more convincing and effortless experience. The LE3B is more forgiving due to the better note capability.

Bass quantity is similar between the two, except when there is substantial deep bass, as the Mi-AP can't keep up with the LE3B note sustainment. Quality isn't too far apart, but the LE3B is overall cleaner, clearer, punchier, and more concise than the warmer Mi-AP. The midrange presentation is quite similar between the two, but with a superior depth of presentation the LE3B has a more 3D and enveloping experience. The upper midrange of the Mi-AP is more prominent (similar to the P250, so is it an AcuPass characteristic?), adding what sounds like an unnatural bump to the area in comparison. This adds an extra layer that reduces the overall internal clarity of the presentation. The LE3B treble is a bit brighter and more extended, but quality is similar.

With similar price points and sound signatures that are close, the Mi-Artist Pro doesn't offer the same level of performance as the LE3B, which has more capability. The LE3B extends better on both ends, offers more depth of presentation, and a larger overall space that is more clear and concise. The one caveat is the source dependence, as the LE3B requires a better source to really shine while the Mi-AP is less source dependent. The Mi-Artist Pro isn't bad, but for similar money, the LE3B is easy to recommend between the two.

Source matching

Portable Sources, DAPs

Sandisk Sansa Clip+: Pairing the Clip+ with the LE3B results in clarity that doesn't come close to matching the CIEM's potential, as there is a veil over the sound recreating less but tighter bass than the iPhone 5. The overall sound isn't very clean and

the pairing limits depth of presentation and imaging, which is required for the LE3B to really shine. 2/10

Providing much better clarity with the LE3 and a tight, concise bass response, the LE3 sounds quite neutral and performs relatively well. This pairing starts to show the 3D capabilities of the LE3. 5/10

Apple iPhone 5: Paired with the LE3B, the iPhone 5 has a slightly clearer sound and more bass presence than the Clip+, with an overall improvement to the presentation. The iPhone still lacks the spatial capability to bring out the best of the LE3B. 3/10

With the LE3, clarity isn't what it is with the Clip+ as the overall sound is warmer and a good deal less precise. The spatial qualities are not up to the Clip+ level and are overall sub-standard for known performance or the LE3. 3/10

Fiiio X3: Paired with the LE3B, the X3 recreates a tight, precise, and clear presentation that is superior to the Clip+ or iPhone 5 by a good margin, but still doesn't truly show the CIEM's capability. 4/10

The X3 pairing with the LE3 gives a bit more up-front presentation while relaying quite a bit of added detail, excellent imaging, and plenty of presentation depth, bringing out the best of the LE3. This is a night and day difference from the iPhone 5 and a significant improvement over the Clip+. 6/10

iBasso DX50: The LE3B starts to shine with a source like the DX50, increasing presentation depth which creates an enveloping space that improves other characteristics such as instrument separation, imaging, resolution, and especially clarity. In contrast, the other similarly and lower priced sources don't give the 3D presentation space and sound flat in comparison. 6.5/10

Pairing the DX50 with the LE3 results in an open, warm sound with great imaging and control revealing more resolution within the soundstage. Improvements over the Fiiio X3 aren't huge, but are there. 6.5/10

iBasso DX100: Paired with the LE3B, the DX100's high quality DAC and powerful amp kick the LE3B to another level of clarity resulting from an engulfing, 3D sound, taking the LE3B performance to a level that is very good for the price point. 8/10

Improvements to the spatial presentation has a trickle-down effect with this pairing, improving instrument separation, tightness, detail level, articulation, and clarity for an overall experience that is excellent. 9/10

Portable Sources, DAPs with Amps

iPhone 5 -> Tube Amp TA-1: This combination offers little benefit with the LE3 or the LE3B other than slightly tighter bass and ever so slight clarity improvement. 3/10

ADL X1: The LE3 benefits minimally, but more than the TA-1 amp pairing, with a bit more spacious sound and a smoother upper end. The LE3B also benefits slightly with a bit better clarity and somewhat smoother upper end. However, there is a faint hiss. 3.5/10

DX100 -> Sunrise Dolphin AM-P1: The P1 limits the spatial presentation, clarity, or focus of the DX100, underperforming in comparison with the DX100 headphone output. 5.5/10

The differences aren't quite as significant when powering the LE3, but there is less bass, the treble isn't as smooth, and the level of detail is lower. 6.5/10

Shonyun SH-306A: With the LE3B, the 306A reduces the presentation depth and pushes the presentation forward while increasing clarity by a bit. The overall sound lacks the space of the DX100 headphone out and has some hiss. 7/10

Paired with the LE3, the 306A has a more prominent treble region with sharper notes, less detail, and pushes the presentation closer. 6.5/10

JDS Labs O2: Although the presentation space of the LE3B is larger with the O2 than from the DX100 headphone output, the DX100 offers better clarity and a cleaner presentation. 8/10

With the LE3, the O2 sounds quite close to the DX100 headphone out, but with a bit smoother treble in exchange for slightly less detail. 7.5/10

Tube Amp TA-1: Cleaning up the sound of the LE3B in comparison to the DX100 headphone output, the pairing with the LE3B provides better overall definition, tighter bass, and improved instrument separation. 9/10

Adding a slight bit of presentation width to the DX100 headphone output and a slight clearer presentation, the LE3 doesn't benefit too much from the TA-1. 9/10

Lear FSM O2 V2 (class A): Paired with the LE3B, the O2 recreates a larger space than the DX100 headphone out, and is an overall improvement in clarity. The O2 is closest to the ADL X1 in performance and slightly behind the Portaphile 627. 9.5/10

Paired with the LE3, the O2 increases the presentation size compared with the DX100 headphone out and improves instrument separation for a bit better overall presentation. 9.5/10

Furutech ADL X1: Giving the LE3B a more open and cleaner sound than the DX100 headphone out, the X1 has better clarity and instrument separation almost on par with the Portaphile 627 but with less bass prominence. Compared with the Tube Amp TA-1, the bass is tighter and the overall sound is a bit larger. 9.5/10

Quite similar to the DX100 headphone output with the LE3, the X1 offers a slightly clearer, more precise presentation with a bit deeper bass and more presentation depth. 9.5/10

Portaphile 627: With a bit more forward presentation and noticeable spatial improvements vs. the DX100 HPO, the 627 pairing with the LE3B adds life and realism to music. Clarity is improved due to better control, instrument separation, and imaging. In comparison with the Tube Amp TA-1, the 627 has a larger sound and more organic, clearer sound. 10/10

Improving instrument separation, clarity, and transparency with a slightly larger presentation space, the 627 improves the fine nuances of the LE3. 10/10

Source Summary: The LE3 and LE3B are both quite sensitive to quality of the DAC because without good presentation depth, the strengths of the CIEMs is greatly reduced. The LE3B is more sensitive to DAC performance. Pairing with amps also plays into the performance to a lesser extent, but without a minimum level of DAC performance, amp performance is meaningless. The LE3 is easier to drive while the LE3B is more sensitive to hiss and benefits more from a brighter, clearer amp. It is recommended to use a high-end DAC to take advantage of the LE3/LE3B strengths.

SUMMARY

The Lime Ears LE3 and LE3B, which are combined in the LE3SW model, provide two different flavors of sound signatures

with similar characteristics. Both offer an immersive, 3D sound, excellent bass response, clear midrange, and relatively natural overall sound when paired with high quality source equipment. The LE3 offers a more analytical presentation with better clarity, a more neutral frequency response, for a near reference sound signature while the LE3B's more up-front presentation, enhanced bass, and relaxed treble is reminiscent of a stage monitor.

Source components are very important for getting the most out of the LE3 and especially LE3B, which can be very involving with a great source, but mediocre with a phone. The audiophile overtones to professional sound signature types results in an interesting sound that is a great value when you consider the LE3SW can switch between the complimentary stage and reference sounds.

Pros

- Conveyance of power from the LE3B with a naturalness not found in this price range
- Ability to switch between a stage-like and reference-like sound signature with the flip of a switch on the LE3SW model, which is great for both professionals, audiophiles, and headphone enthusiasts

Cons

- The LE3B sounds veiled and ordinary with entry-level source components
- Overall soundstage size isn't as large as much of the competition at the price point

Lime Ears LE3 and LE3B Review

ljoker|, theheadphonest.com

Details: sister flagship CIEMs from Poland-based Lime Ears
Base Price: 555€ (approx. \$590) from limeears.com; 625€ (approx \$670) for LE3SW version, which combines both LE3 and LE3B

Specs: Driver: 3 BA / 3-way crossover | Imp: 46Ω | Sens: 109 dB | Freq: N/A | Cable: 4.3' L-plug
Wear Style: Over-the-ear

Accessories (4/5) – Hard-shell crushproof carrying case and tube of ear lubricant

Build Quality (5/5) – Construction is on-par with the likes of 1964EARS and Alclair, falling just short of pricier UM and Hidition sets. The acrylic shells have a very smooth finish and while my LE3B unit has some mild internal imperfections, the shells of the newer LE3 are very clear. The earphones boast recessed 2-pin connectors in the common configuration. There are five standard colors and myriad other customization options available. The cables have a smooth feel but suffer from a bit of memory character, maintaining their shape after being coiled up for storage. On the upside, unlike most clear cables found on custom monitors, these don't seem to oxidize and turn green over time

Isolation (4/5) – Similar to my other shallow-fit acrylic customs and slightly below that of the Hidition NT6 and Etymotic Research universals

Microphonics (5/5) – Nearly nonexistent in the smooth clear-coated cable

Comfort (5/5) – The LE3 and LE3B have medium length nozzles and are very comfortable when fitted correctly. As usual, if the CIEMs seem uncomfortable after an initial break-in period, a refit is probably a good idea. There is added cost with shipping and, if necessary, getting new impressions but on the whole a perfect fit is well worth the trouble

Sound (9.5/10) – Lime Ears currently offers two different configurations of their triple-driver flagship. The standard LE3 pro



vides a balanced and neutral sound while the LE3B, built by request only at this time, is an alternate tuning meant to supply a warmer tone with more bass kick. This review will cover both units.

The standard LE3 offers up a balanced sound with a very mild warm tilt, akin to the JHAudio JH13 or, from the realm of universals, a newer HiFiMan set. To my ears, it is more uncolored than the vast majority of my other custom-fit earphones. The Hidition NT6, for example, is brighter than the LE3 and tends to emphasize treble more while the Spiral Ear SE-3 is warmer with its deep, visceral bass. The bottom end of the LE3 lacks a little in the way of extension – while not exactly poor in this regard, it definitely gives up depth to its enhanced-bass sibling.

That's pretty much the extent of the LE3's concessions, however – moving up from the subbass region, it boasts punchy and



controlled bass and clean, accurate mids with no hint of recession. It remains smooth through the upper midrange and treble, coming across as quite forgiving for an IEM with such a neutral tone. There is a bit of crispness missing compared to higher-end sets but nothing drastic and despite the soft treble character, the LE3 does not sound dark, again reminding me of current-gen HiFiMan earphones. The LE3 also provides a sonic image that's neither forward nor too far back, thanks to its prominent, veil-free midrange. Compared to higher-end custom-fit sets, the only thing its presentation is a bit of depth – in this regard it is similar to top-tier universals such as the AKG K3003.

Switching over to the LE3B, the enhanced bass immediately makes itself known. The two earphones have many similarities – as they should, using identical drivers and all, but the LE3B delivers on its promise of extra bass, putting out perhaps the best combination of quantity and quality I've heard out of a single bass driver. In this regard the LE3B competes with the pricier Westone ES5. Compared to the LE3, the warmer and bassier LE3B boasts not only more punch but also less roll-off while the extra bass impact and depth lend it a richer, fuller, more dynamic sound.

The bass of the LE3 on the other hand, lacks the depth and rumble of the LE3B's bass and its presentation actually seems more intimate next to the more dynamic LE3B. The less prominent bass of the LE3 results in a cooler overall tone and slightly cleaner mids. The difference in clarity is small between the two, however, and the treble is very similar – smooth but not lacking in presence.

Select Comparisons – Lime Ears LE3

Clear Tune Monitors CTM-200 (\$350)

The most reasonably-priced of my customs, the CTM-200 is a dual driver that strives towards a flat/neutral sound, which made it the perfect starting point for LE3 comparisons. Compared to the CTM-200, the LE3 has better bass presence and sounds a little warmer overall. The bass is both deeper and more impactful, which results in the Lime Ears having a more natural and dynamic sound. The midrange of the CTM-200 seems more forward overall while the LE3 is more relaxed. The treble of the LE3 is smoother, though the CTM-200 is not a harsh-sounding earphone. The differences in the midrange and treble are minor and can easily be chalked up to preference. Presentation, however, is a win for the Lime Ears – they are simply more spacious and well-separated, with better imaging and depth that cause the CTM-200, with its more forward mids, to sound a bit flat and dull in comparison.

Alclair Reference (\$399)

While still pricier than the CTM-200, the Alclair Reference recently underwent a \$100 price drop to a more comfortable price point, which has worked in favor of its value proposition. The Reference keeps up with the LE3 very well, with the only major differences stemming from its midrange and treble presentation. Signature-wise, the Reference is a very mildly v-shaped earphone that reminds me more of the UM Miracle and VSonic GR07. Its lower midrange sounds a little withdrawn compared to the more balanced Lime Ears but otherwise the two earphones have a lot in common right up to the upper midrange, which is noticeably grainier on the Reference. This theme continues through the treble, which is more harsh and sibilant with the Alclairs. The extra treble energy of the Reference does make it seem clearer at times, but it's a dubious tradeoff that causes me to choose the LE3 almost every time.

Unique Melody Miracle (\$949)

A top-tier flagship that has been popular for several years running, the Miracle is a mildly v-shaped earphone, though one with fewer caveats than the cheaper Alclair Reference. Compared to the LE3, the Miracle has better deep bass, with extension that easily matches the bass-heavy



LE3B tuning of the Lime Ears, but without the bloat. The UM is a little warmer overall and suffers from a slightly recessed midrange in comparison to the LE3, which actually appears more balanced as a result. The Miracle does catch up in treble presence, with a top end that is more prominent but still a little more refined and just as smooth as that of the Lime Ears. Overall, I was impressed with how well the LE3 kept up with the Miracle – its downsides were not as obvious as those of the LE3B and its midrange was actually preferable much of the time.

JH Audio JH13 Pro Freqphase (\$1099)

Currently my CIEM of choice, the JH13 Freqphase is yet another neutrality-oriented custom that made for a natural comparison with the LE3 – indeed, I found the signature of the JH13 to be more similar to the Lime Ears than those of the Alclair and Unique Melody sets. In terms of performance, the LE3 is less extended at either end and not as clean, crisp, and resolving as the JH13. The JH13 also offers up a bit more bass punch, exercises tighter control over its low end, and provides slightly more convincing imaging but the two earphones definitely share a similar sound signature, with the LE3 approximating the sound and performance of the JH13 as well as can be expected for the price.

Select Comparisons – Lime Ears LE3

1964EARS 1964-V3 (\$425)

1964EARS' triple-BA model is tuned for a decidedly consumer-friendly sound with big bass and sparkly, energetic, treble. The enhanced-bass Lime Ears boast a bit less bass than the V3 and offer a slightly clearer and more neutral overall sound. The midrange of the LE3B is flatter, in contrast to the bumped-up, more forward mids of the V3. The treble is smoother, with less sparkle but also less danger of harshness and sibilance. The V3, on the other hand, tends to be fairly revealing of sibilance and more colored-sounding overall. In terms of presentation, the V3 is more aggressive while the Lime Ears are more laid-back.

EarSonics SM64 (\$399)

Like the LE3B, EarSonics' universal-fit flagship utilizes a 3-way, triple-armature setup and pursues a sound on the warm side of neutral. Compared to the SM64, the bass of the LE3B is a little more enhanced – not in depth, but certainly in impact and overall power. Despite this, the clarity of the LE3B is slightly better and overall detailing appears better as well, likely because the upper midrange dip of the SM64 is not present. There also is more treble energy with the LE3B which, combined with the flatter midrange-treble transition, makes it less forgiving and more prone to exposing sibilance. That's not to say the LE3B is sibilant on its own – it isn't – but the SM64 is a more tolerant of such artifacts in recordings. Lastly, the presentation of the LE3B is slightly wider whereas the SM64 appears more intimate, though still far from congested.

Unique Melody Miracle (\$949)

Unique Melody's flagship IEM offers a level sound signature more in line with the regular LE3, but for the sake of posterity I decided to compare it to the LE3B as well. Unsurprisingly, the results are much the same as when the LE3B is pitted against the LE3. Next to the Miracle, the LE3B sounds mid-bassy and bloated, with a warmer overall tone and a slight loss in overall clarity and refinement. The Miracle boasts more treble presence/energy, is more neutral in tone, and enjoys a slightly more spacious presentation. Still, though I found myself leaning towards the Miracle more here than in the LE3/Miracle comparison, the difference between the two can easily be negated by signature preferences.

FitEar To Go! 334 (\$1345)

The TG334 is quite similar in performance to the LE3B but whereas the FitEar is unabashedly warm and dark, the Lime Ears at least make an attempt at a reference sound. Overall, the LE3B is more balanced and neutral while still offering good bass punch. The more prominent treble of the LE3B makes it sound a touch clearer and its soundstage is a little more out-of-the-head. Other than that, the two earphones are about even in performance, with both lacking a bit of treble extension and some of the refinement of more neutral sets. I preferred one or the other on most of the tracks used in the comparison, but never strongly.

Value (8/10) – Operational for only a few months so far, Lime Ears is off to a very good start with their first flagships, the LE3 and LE3B. Functionally and aesthetically, the earphones are identical, with the same customization options, construction, and accessories. In terms of sound, the LE3 is a reference monitor that sacrifices a bit of bass depth to maintain a clearer, more prominent midrange while the LE3B is warmer and bassier without throwing accuracy under the bus. Both units offer advantages over the entry-level customs I've previously come across and compete with pricier earphones. As for choosing between the two, there's no right or wrong answer, but I have found the bass depth and dynamics of the LE3B very persuasive in day to day listening.

Pros

Both tunings offer competitive performance for their sound signatures; cables resist oxidation

Cons

Cables prone to memory effect

"Lime Ears is off to a very good start with their first flagships."

CanJam Singapore 2019 – The Hybrid Resurgence Lime Ears

Accompanying Custom Art on their flight were compatriots: Lime Ears. Lime Ears have always held a special place in my heart for popping my flagship cherry, so to speak. So, seeing them year after year and goofing around with their head honcho, Emil Stolecki, always makes for a wonderful time. This year, they brought a refresh of their flagship Aether called the Aether R. Featuring an additional driver for headroom and a slight tuning tweak, here are my thoughts.

Lime Ears Aether R: The Aether R thankfully maintains the Lime Ears house sound through and through. Heaps of clarity and air resonate within its soundscape, paired with a natural, well-balanced and sufficiently-bodied timbre. Among all of Lime Ears' previous models, I feel they've made major strides in spatial performance. The depth that the original Aether had is now paired with stronger resolution, so that distance does not translate to detachment. And, image stability, left-right separation and background blackness all mark career-highs for Lime Ears, due to high extension and coherency.

The balance between the upper-mids and treble is excellent. Vocals sound like they flow from the chest to the mouth in an even-handed, smooth and linear manner. There is more energy towards the upper-registers, so the fuller harmonics sound more laid-back. Hi-hats, cymbals and snare drums continue to be highlight instruments, as they crackle and pop with immense clarity, and zero fatigue. The extra low-end driver intended to add headroom has delivered too. The bass comes across more nimble. Personally, I would've loved more warmth to bind

the image a hair. Adding a couple dB's to both the switch down and switch up modes wouldn't have hurt, especially considering how flat switch down is down low.

All in all, the Aether R succeeds in what it ultimately set out to do: Maintain that gorgeous Lime Ears house sound and package it in a technically-capable, well-defined and transparent soundscape. Being frank, I do have a bias towards their signature tone, so take it with a grain of salt when I say the Aether R is perhaps my favourite all-rounder among the many I've heard recently. And without a shadow of a doubt, I absolutely can't wait to hear the Aether R in custom form.





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www.limeears.com