

# Kuzma SAFIR 12 tonearm

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**T**he mid-1950s sci-fi classic *Forbidden Planet* used Robbie the Robot's ability to quickly knock up a few sapphires as a sign of a highly advanced species. Three-score and ten later, and we are growing tonearms out of the stuff! We looked at the original SAFIR 9 back in Issue 211, which was the first tonearm in history to feature synthetic sapphire as an armtube. At the time, it was pushing the size limits of lab-grown sapphire. But the technology has improved since then, and it's now possible to make a 12" sapphire armtube. Presumably, that means Robbie the Robot had a firmware update.

The use of sapphire as an armtube material is highly innovative, but Franc Kuzma has been a fairly radical innovator since his early days. Nevertheless, that innovation is always weighed against his core design principles - keep everything rigid, solid and tight; eliminate all unwanted resonances; and, finally, extract as much as possible

from the treasures stored within a record groove. That might not fully echo Colin Chapman's "simplify, then add lightness" maxim, but anyone who has ever owned a Lotus will, at some point, trade a little more mass for a little less 'expensively broken'. Sapphire is not feather-light, and the SAFIR 9 weighed 1,250 grams when fully assembled and installed, resulting in an effective mass of 60 grams. Strangely enough, none of this hindered the tonearm's sonic performance, and it richly deserved the Award for Tonearm of the Year, 2022.

Fast forward to 2026, and the 12-inch SAFIR 12 is the logical and natural evolution from its shorter sibling. The effective mass remains unchanged at 60 grams, while the total weight has increased to 1,630 grams.

## A new angle

In addition to the longer sapphire armtube, the SAFIR 12 features a new VTA (Vertical Tracking Angle) tower. Designed for easy adjustment, it also offers a vertical vernier scale with reference markings in small increments. These enable the user to 'zero' the vertical position of the arm once the cartridge's VTA 'sweet spot' has been identified. Once set to 'zero', turning the crown-like knob adjusts VTA 'on the fly'. Operation is very smooth and refined, allowing for even the tiniest adjustments. As a 'fit and forget' type, VTA changes typically occur only at the extremes; whether with 'oil crisis spec' LPs so thin you can see through them, or heavy slabs of vinyl as thick as a paperback.

The SAFIR 12 uses the same main pivot design as the SAFIR 9.

As most vinyl enthusiasts know, a longer armtube inherently reduces the tangential error, which in turn decreases tracking angle distortion. However, there is another advantage to a longer tonearm: the cartridge



## EQUIPMENT REVIEW

### Kuzma SAFIR 12



» is positioned further away from the opposite end, which contains the bearings and the mounting base on the turntable. In short, this provides more isolation and a 'peace and quiet' environment for the cartridge to perform at its very best.

However, a 12-inch geometry also presents its own engineering challenges. A longer arm increases the moment of inertia, which can complicate behaviour with very high-compliance cartridges (less common today) and can require more from bearings and the structure to maintain rigidity. In the SAFIR 12's case, however, any cartridge with compliance below  $25 \times 10^{-6}$  dyn/cm is suitable. Kuzma's design choices—substantial arm structure, high-quality bearings, and a sturdy base—are clearly aimed at ensuring that the longer effective length does not compromise control.

As with the SAFIR 9, the SAFIR 12 features Kuzma's proprietary pure silver internal wiring in a single, continuous piece from the headshell cartridge pins to the standard Eichmann RCA (or optional Neutrik XLR) connectors for connection to a phono input of a preamplifier. The tonearm includes a variety of armbase templates, geometry setup tools, and accessories. It also comes with a comprehensive, informative, and easy-to-follow instruction manual.

#### **A turntable for the huskier tonearm**

A tonearm weighing a 'husky' 1.62kg (that's just over three and a half pounds in old money) limits the choice of turntables. Kuzma, having the perfect partner in the XL DC Air turntable (tested in Issue 196), helps a lot. Owners of lightweight suspended turntables need not apply.

Kuzma has long had a talent for making complex engineering seem refreshingly simple. Even its most visually striking products tend to avoid giving the impression of 'industrial sculpture' for its own sake; they are engineered objects that look this way because that's the most practical route from idea to function. The SAFIR 12 is no different. Yes, it's an eye-catching piece—part jewel, part machine

tool—but the aesthetic never feels ornamental. Everything about it suggests "this is how we got rid of the resonance."

At a glance, the arm's defining visual feature is its substantial, sculpted armtube assembly, which in SAFIR form is constructed around a sapphire element. It's not intended to impress your friends (though it will); it's designed because sapphire provides exceptional stiffness and desirable resonance characteristics when used correctly. Kuzma's approach focuses on pushing resonant modes out of the cartridge's working band and managing what remains so it doesn't reflect back into the stylus.

The bearing arrangement feels more suited to metrology than domestic audio: minimal play, high precision, and a sense that the arm is most stable when it's completely at rest—no chatter, no wobble, no micro-instability. This aligns with a key aspect of a tonearm: the absence of extraneous noise caused by bearing friction, flexure, or stored energy returning to the stylus too late.

#### **How good, not how much**

There's a temptation, when reviewing a top-quality tonearm, to seek out dramatic changes: more bass, more treble, more 'detail'. The SAFIR 12 does provide more information, but its most notable contribution is how it presents it: not by highlighting, but by reducing confusion.

Reviewers value the phrase "blackier backgrounds." Sometimes it refers to lower noise, and other times it suggests a subtle shift in tonal balance. With the SAFIR 12, it leans more towards the former. Vinyl noise remains vinyl noise. What changes is the faint, constant blur of micro-resonances that makes instruments less stable in space and less certain in pitch.

The SAFIR 12 makes images 'lock' in a way that feels almost digital in its certainty, but without losing the organic continuity that makes vinyl compelling. Instruments stop wandering. Vocalists cease subtly changing size. Reverb tails become easier to follow, not because they're louder, but because the arm isn't adding a faint fog that competes with them.



The audiophile in me is impressed by the scale, precision and solidity of the soundstage. The music lover simply wants to know more about the story!

» How this is perceived in musical terms is both simple and immediately perceptible; there's an effortless clarity to the sound of any piece of music you play. This doesn't obscure a poor recording or a weak voice, but nor does it overpower the sound; Taylor Swift's voice on 'Exile' [*folklore*, Republic] is (deliberately) stripped of processing and sounds a bit thin and weak regardless of how you play it. However, through the SAFIR 12, the emotion of the recording and the intense interaction between her and Bon Iver are brought to the forefront. The audiophile in me is impressed by the scale, precision and stability of the soundstage. The music lover simply wants to know more about the story!

### Quick resolution

That false dichotomy between audiophile intent and music lover quickly becomes a recurring theme. You soon realise they are two sides of the same experience. It's a dual act of 'leaning forward' and 'leaning back'. You lean forward to analyse the excellent bass, perfect tonal coherence, speed, staging, and texture of the sound. Then you lean back and say, "aren't GoGo Penguin great?" or "Prince really was that talented, wasn't he?"

There's a chameleon-like quality to the SAFIR 12's presentation. Play something with complex polyrhythms ['Doudou' from *Ali and Toumani*, World Circuit], and the rhythmic qualities are hypnotic and fluid. Move on to 'Bending Hectic' from The Smile's *Wall of Eyes* [XL], and things become claustrophobic. Transition from something small-scale to a large orchestral piece, and the limitations to performance are either upstream (cartridge) or downstream (phono stage, amp, speakers, etc.). The SAFIR 12 tracks these changes flawlessly.

There was perhaps only one caveat to that perfect score. Playing some relatively aggressive Drum 'n' Bass by Chase & Status ['Massive & Crew' 2 *Ruff*, Vol 1, Virgin], the arm provided excellent bass depth and control. It played all the correct notes with the right intensity. However, in a way, there was so much information in the track that it took longer to process the breakneck speed of the rhythm. I suspect this is more about the processing power of the wetware between the ears than a flaw in the SAFIR 12 (no such concerns were raised when playing Tool, for example). Nonetheless, it's an observation all the same; if your music tastes tend to be on the 'frenetic' side, an arm this honest, revealing, and dynamically informative might be too much of a good thing. So perhaps that perfect score doesn't come with a caveat after all.

That's the point; the SAFIR 12 handles dynamics in a way that feels less like 'impact' and more like 'authority'. Macro-dynamics are reproduced with less sense of strain, while small expressive shifts are more noticeable because they aren't masked by mechanical noise. The overall effect is that music breathes more naturally.

Crescendos build smoothly without the stage collapsing. In rock music, the density of a mix remains intelligible at higher playback levels. In electronic music, low-frequency events feel more shaped, less like pressure and more like energy with contours. It's all good!

### No romance trading

The Kuzma SAFIR 12 is an arm that doesn't rely on romantic appeal, even though it can make vinyl sound profoundly romantic. Its key qualities are stability and the lack of mechanical fuss. It diminishes 'vinyl character' and, in doing so, allows the cartridge to perform its task with fewer distractions.

If your analogue front end is ready, the Kuzma SAFIR 12 is one of those rare components that feels like an enabling technology. It doesn't just improve the sound; it enhances your confidence in the medium. And once you've experienced that kind of certainty, it's hard to go back. +

### Technical specifications

**Type:** 12" tonearm with synthetic sapphire arm tube

**Effective Length:** 304.8mm/12"

**Mounting distance from spindle:** 291mm

**Arm-tube:** Conical Sapphire

**Offset Angle:** 17.8 degrees

**Effective Mass:** 60g\*

**VTA adjustment:** Yes (tower)

**Azimuth Adjustment:** Yes

**Bias Adjustment:** Yes

**Internal Wiring:** Silver Alloy

**Overall Mass:** 1.62kg

\*Suitable for cartridges with compliance below  $25 \times 10^{-6}$  dyn/cm

**Price:** £32,000, €35,000, \$43,000

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**Manufacturer** Kuzma d.o.o.

🌐 [kuzma.si](http://kuzma.si)

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