

## TURNTABLE + TONEARM + CARTRIDGE

### Kuzma REFERENCE + STOGI REF 313 VTA + KC 2



WOJCIECH PACUŁA

Translation: Krzysztof Kalinkowski



This is really refreshing to be able to test products not coming from one of the big hi-fi manufacturers from UK, Germany, US or France. The company Kuzma Ltd founded in 1982 is a Slovenian company. Its owner and good spirit, designer and main engineer, showman and a man of many other talents and abilities (a very interesting interview with him can be found in one of last issues of "Hi-Fi News": Steve Harris, *Turning the Tables*, „Hi-Fi News”, January 2009, s. 96-100), Frank Kuzma, who graduated the university in a mechanical and acoustic transducers specialization, had a clear view how his turntables should look like from the very beginning. This vision is made clear by the name of the turntable brought to market the same year, the model STABI – this name should signal, that the main attention was placed on stability and resonance control. The company made its first steps in Yugoslavia, where Slovenia (Republika Slovenija) was a part of until June 25th 2005, when it left the alliance with Croatia. Anyway, STABI was aimed at the internal market. But shortly a new improved version was made, STABI 2, which made it to the western countries (let me just remind, that for the former Yugoslavia it was still easier than for the former Soviet Union countries) and there it was just named STABI. The turntable, the deck, is only one of the four elements that make a full system for analog discs reproduction. The system is composed of: a deck, a tonearm complete with cabling, a cartridge and a phono preamplifier. The deck itself is not the most important thing, as the tonearm plays an equal role. This is the reason that Kuzma prepared one, and named it STOGI, what means 'stiff' in Slovenian. The company history speeded-up when in 1985 Martin

**Colloms, one of the most renowned British audio journalists (also acclaimed by me), wrote in "Hi-Fi News & Record Reviews" (the predecessor of today's "Hi-Fi News") a very enthusiastic review of this tonearm.**

Now in 1989 came to life, and is marketed since 1990, a further gramophone called Stabi Reference, identical to the one tested today. It is built on a stable plinth and a sub-chassis decoupled with springs, and was a complete novelty at time, as all the elements it is composed of – the plinth, sub-chassis, platter, tonearm support and record clamp are made in the form of a sandwich of two layers of aluminum with a layer of acryl in between. The whole is tightened with non-magnetic steel screws. Kuzma decided then to decouple the sub-chassis with springs and he placed them in silicon oil. Instead of one motor two were used, rotating the heavy sub-platter, mounted on an inverted bearing with a ruby ball.

Interestingly the next model was not a top construction.

It was said at that time, that the Kuzma Reference with the new tonearm Stabi Reference were such a perfect set, that they were regarded as a true reference – and it was the *summa* of Kuzma's knowledge. That is why the new, introduced in 1997 (this date is given by the company materials, and "Hi-Fi News" quotes 1998), model was completely different to the previous ones. The Stabi S had a rudimentary, not decoupled chassis, giving it a unique looks. Similar assumptions were the basis for the new tonearm Stogi S (of the unipivot type). Two years later a new product was added to the line, based on the Stabi S assumptions, but stretched to extremes – non decoupled turntable Stabi XL (here "Hi-Fi News" gives the year 2000). The newest products are three tonearms: introduced in 2003 AirLine (linear tracking type), in 2008 Stogi4Point and the newest, tested this time, Stogi Reference 313 VTA.



Like I mentioned we received a complete set for testing, a "branded" set: the turntable Stabi Reference, tonearm Stogi Reference 313 VTA and the K2 cartridge. We mentioned the first two elements. The tonearm is a completely new construction and we test it as one of the first magazines in the world. It is very long, it measures 12.5 inch and was equipped with a mechanism to adjust VTA "on the fly". Interesting is the fact, that it was made to fit in 9" tonearms mounting hole – the tonearm is placed on a kind of extension placing it away from the column with the VTA mechanism. The cartridge is also a new thing – since some time Kuzma puts his brand name on cartridges made for him by the Japanese company ZYX. This quite a light device (5g), MC with low output voltage – 0.25mV. At the distributor and in my home it played best with a load of 200Ω, 0.4mV preset and balanced output – I am talking about the settings on my preamplifier, the [RCM Sensor Prelude IC](#). Due to its low

weight, as to such a heavy tonearm, the distributor equipped it with a special ballast plate, mounted between the cartridge and the headshell. The K2 is similar to the R-100-02H model from ZYX, only in low level version. Because the distributor, the company [RCM](#), whose employees brought everything and put together, has also products of [Dr. Feickert](#), the turntable came with the azimuth adjusted digitally (using the Adjust+ program) for this particular cartridge.

## SOUND

### Discs used in the test:

Benny Carter, *Jazz Giant*, Stereo Records/Analogue Productions, S7028, 45 rpm, #0404, 2 x 180 g.

Miles Davis, *Miles Davis And The Modern Jazz Giants*, Prestige/Analogue Productions, 7150, 45 rpm, #0706, 2 x 180 g.

Mari Nakamoto With Shoji Yokouchi Trio/Sextet, *Mari*, Three Blind Mice/Cisco Records, TBM-3005-45, 2 x 45 rpm, #0080/1000, 2 x 180 g LP; review [HERE](#).

Yama&Jiro's Wave, *Girl Talk*, , Three Blind Mice/Cisco Records, TBM-2559-45, 2 x 45 rpm, #0080/1000, 2 x 180 g LP; review [HERE](#).

Greetje Kauffeld&The Paul Kuhn Quintet, *Live in Weinheim*, In+Out Records, Image HiFi 006, 180 g LP.

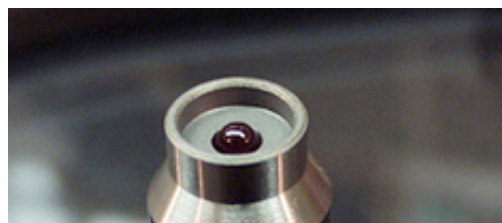
Carol Kidd, *Carol Kidd*, Linn Records, AKH 297, 180 g LP (reedycja z 2007 roku).

Depeche Mode, *Exciter*, Mute Records, STUMM190, 2 x 180 g LP.

New Order, *Brotherhood*, Factory Record/Tonpress, SX-T 109, LP.

Kraftwerk, *Tour The France Soundtracks*, EMI Records, 591 708 1, 2 x 180 g, LP.

Kuzma Reference differs from other decoupled turntables, like the SME20, or the tested for "[Audio" Avid](#) Volvere. It is also completely different from the one tested in parallel, equipped with a long, 12" tonearm (12cc EVO) [Pro-Ject](#) X-tension. Interestingly, the tested not so long ago [Model 10 SME](#) also sounded completely different. Frankly speaking the tested gramophone is closest, in terms of timbre and some vision of sound, aesthetics, to the uncoupled mass-loader Transrotor Super Seven La Roccia [TMD](#). It is also, in absolute terms, one of the best turntables I heard, except for a few special cases.



Kuzma plays with an incredibly precise, thorough sound. The instruments can be heard like that, for the lack of coloring, only from an analog, or even a digital 24/96 master tape. I heard and I know. That is the reason, that if I would have to compare this sound, make parallels on the same quality level, I would need a... open reel digital tape recorder [Nagra D](#) (film [HERE](#)).

But let us return to wider known, and more accessible for a comparison, things. I mentioned the Transrotor. Its asset was the lack of coloring and a splendid, deep, differentiated bass. We will not get that from the Kuzma, about that later, but all the rest – we will. Even more – the Slovenian turntable reaches another level, and it is not, that it does not do anything bad, but it introduces into the sound many things commonly attributed to the analog, like depth, three-dimensionality and lack of aggression (I know, it is not logical to introduce a 'lack' of something, but this depicts well the effect I mean). All discs, regardless of their origin and state, will be played back in a perfectly passionless way. I mean the emotions introduced from outside, the euphoria added to the recordings. The best turntables, like the mentioned SME, or the Avid, can add even more colors, while still staying on 'this' side of neutrality. Kuzma does not go that far, but it does also not devote the sound from anything, turning it into a caricature of a CD. Because it is not an analog Compact Disc. This is not about pulling out the juice from the sound, but just about a complete lack of engagement. Again – I am talking about something, that subconsciously is perceived as a shortcoming, while it is an asset – we strive to neutrality, don't we?



This is why I understand, yes, I understand very well, why the Kuzma Reference is used in the biggest radio broadcasting stations in the West for archiving and critical listening purposes since many years. This device should find its place in all government and local institutions, which have any LPs stored. Why? Because it is the best? No, like I said – I know a few better turntables. Rather more expensive, but still better. But I think that this is an ideal turntable for those usages, as it is completely unconflicting. There is nothing to argue about with it. When I listened to the Avid during the High End 2008 in Munich (report [HERE](#)), took part in the presentation of the new turntable [Continuum Audio Labs](#), and finally – this is probably the best example – when we listened to the new Sondek LP12 [Linn](#) turntable, there was always a hot discussion afterwards, the pros and cons were weighted, we exchanged arguments, etc. Because each of those devices represents a 'school' of sound, a quite

heavily visible personality behind them. The elements brought by a given technology or technical solution were also quite discernible. This problem is non-existent with the Kuzma. There is nothing to brag about. I will do that in just a moment, this is my role here, but in general, this is sound on a very high level. Listening to the Reference for some time over and over, I sat surprised, how low the noise can be, how good the turntable can be paired with the preamplifier, that does not hum at all, and the noise is really small – and that with a preamplifier with such high gain like the Sensor Prelude IC!

Now one remark: this is not ,y sound. To make it clear: personally I prefer the risk that is brought by a degree of non-linearity. This sounds a bit senseless, because this is not about the frequency response, but about timbre, color, and something that could be called "own character". I know, that this is a departure from what the high fidelity should seemingly bring with itself. If I would have to choose, then after consideration I would choose the SME 20. Not because that would be a better turntable, but because of the way of presentation, the turntable while not so transparent, fits me better. Like every device, also the Kuzma is a sum of compromises, and it is important, that it is conform with what we value.

But this is my personal choice, and it should in no way influence you. Everyone has to decide for himself. And we need to think about that, and that very thoroughly, because the tested system offers a set of characteristics, for which one chases in hi-fi from the very beginning, and which were achieved only by a few. We already mentioned transparency. It is related to a brilliant resolution. The disc of Carol Kidd, recorded a bit quiet, a bit "gully" sounded for the first time as it probably should, I mean with a darker timbre, a certain distance, but at the same time with a musical transmission, with music. Neither the mentioned Avid turntable nor the Linn or finally the Transrotor could not do that, getting lost somewhere between timbre and resolution. Only the Transrotor was close to getting out of it, but without that grace the Kuzma had. It was similar with the fantastic disc Greetje Kauffeld & The Paul Kuhn Quintet. This is a live recording, just phenomenally issued by Dirk Sommer, the editor in chief of "[Image Hi-Fi](#)". Greetjes voice is also a bit dark, without a part of the spectrum, and the Slovenian turntable reproduced it splendidly, without brightening of the whole and without mudding any part. Both the micro-dynamics of that disc, as the breath of the whole were brilliant. It seems



that this ability to extract the information of the midrange and treble is mostly related to the long tonearm used. A similar signature, structure of the sound, I heard with other turntables equipped with long tonearms from SME, Ortofon, EMT and even Pro-Ject (I am talking about the new carbon arm 12cc EVO). A long tonearm gives a kind of peace without diminishing dynamics – a peace coming from the fact, that a long tonearm has so much 'reserve' of everything, that it can play anything leisurely. It is similar with cars – probably every car is capable of reaching a speed of 130km/h. But this speed will be differently handled by a Daewoo Aveo and by Audi A4. Like I said – it is within the reach of both of them, but someone sitting inside the Audi will not even notice it, the limit will be far away. So this is how it is with long tonearms, what the Kuzma Reference showed extremely well.



Also the VTA adjustment of the new Reference 313 VTA tonearm came handy. Only having a very precise, easily accessible regulation, that can be made before listening to any disc, with just one hand movement, allows to get the maximum out of each disc. And the resolution and precision of Kuzma will not be an obstacle. You just have to remember not to exaggerate. In fact, the VTA must be set differently for every disc, even within the same pressing plant. But this can make you mad quickly, and forget about the fact, that during listening 'music' is most important, and not 'listening' itself. So I propose two settings – one for the 180g (and 200g) vinyl and a second one for the rest. This will of course be a compromise, but – in my opinion – an acceptable one. And the time saved can be used for listening. And a good setting of VTA allows for brilliant, outstanding, vivid and dynamic reproduction of the piano of Tsuyoshi Yamamoto also from discs other than *Misty* and *Midnight Sugar*

(review [HERE](#)) of his trio - also *Girls Talk* sounded great! The piano had lots of air around, but it did not get lost in it, it was direct and just in front of us – exactly the way the artist prefers it to be. Even old discs issued by Tonpress, like my beloved record *Brotherhood* of the group New Order, sounded – within their limits – really good. Treble was underlined with them, but within the limits of common sense, not turning into something that could deprive me from the joy of listening. Also the treble on the new re-editions of Depeche Mode, like *Exciter*, was a bit stronger than on the originals, but here the digital nature of the master tapes came to word (the re-masters were digital).

So let us say what was a bit worse than the rest. I think that you have to look at two things. One is bass – I already mentioned that. It is not as coherent on the bottom end, not that authoritarian, like the bass of the mentioned Transrotor, or the one I remember from listening to the SME 20. Also the Avid Volvere offered a bit more differentiated, more "colorful", lower end. Maybe it was not better controlled, but it had a nicer timbre. The sound of Kuzma is actually not light, but you can reach far more down – even the Model 10 SME gave more energy in the low end. This can be heard on every disc, but especially on those, where the bass is synthetically generated and goes very low – like on the *Tour The France* Kaftwerk. The second thing is about the stage, the tested system (turntable + tonearm + cartridge) sounds with a very deep and quite broad stage, but a bit more vividness in the sound of the instruments could come handy, on *Jazz Giant* Benny Carter, or *Miles Davis and the Modern Jazz Giants*. Both discs, phenomenally issued by Analogue Productions, were splendidly defined in time and space, and I missed only some kind of "softness" in showing the contours, something, that makes the elements flow a bit together, but resemble more a live event than a recording.



I have not found anything else. It can of course be done better. But you need to pay twice or three times the price for it. It can be done differently – here for the same money. I told that this is not my sound. And I support this statement. I know, that with this statement I am going a bit away from reaching absolute fidelity. In fact just a turntable like the Kuzma Reference, with this tonearm, would be an ideal tool for listening sessions, as it guarantees a splendid basis, consistency between the sessions and insight in the recording, which is really hard to get. You probably know that, but I will call upon this example: with the CD coming into use, almost all manufacturers of audio – both electronics and loudspeaker manufacturers, adopted the CD players as sources in their laboratories and listening studios. This happened because the 'digit' allows for something not available with the vinyl (I am not talking about the analog in general, but about vinyl, as the open reel recorders have that), namely consistency and stability between sessions. Now this is changing, but I am not sure if it is not too late, as the high resolution files will take over this role. Anyway, if the manufacturers would have machines like the Kuzma Reference at their disposal, then it would be a reference sound source until today, probably. And probably even much longer, until the CD, and the physical carriers after it, would fade out of our lives...

## DESCRIPTION



Kuzma Reference is a turntable that combines the assets of a decoupled sub-chassis and mass-loaders. It is composed of two main elements: the base and the sub-



chassis. Both are made in the same way: between two layers of aluminum (10mm thick) a layer of transparent acryl is placed. The whole is tightened by non-magnetic bolts. The plinth is supported by three regulated feet, with steel cones. In this case, although we set the level of the sub-chassis, for normal operation initial leveling of the plinth is critical, about that in a moment. The sub-chassis is placed on silicon damped springs, that have a low resonance of 2.2 Hz. From the top we have four elements, which allow for leveling the sub-chassis by tightening or un-screwing them. The two motors, synchronous Philips Airpax, were tightened to the lower layer of aluminum, cutting openings for the pulleys, and in the top aluminum layer for the whole motor. The Kuzma Reference is a construction, where the sub-platter

is moved by means of two AC motors, placed on the opposite sides. The torque is transferred via one, flat belt. The sub-platter is placed on a reversed bearing with a ruby ball. On top of it a very heavy platter is mounted, made just like the rest of the turntable as a sandwich. Its top is covered by a plastic and rubber mat – quite hard, but with low resistance to scratches. Let us also mention, that the structure of the surfaces of the turntable, including the platter, makes it very difficult to dust-off. So we should think about a cover. The axis is in a small recess, on which we place a small copper ring – thicker for normal discs and thinner for 180g vinyl. I used only the last one, as I could not discern any difference between the two. On top a record clamp can be screwed on, made similar to the SME one, and in the form of a sandwich.

The motors are powered by an external, new power supply PSREF2, which allows to start and stop the platter, and also to select – and read on a green LED display – the rotation speed. The power supply has a small front plate, but is very deep – it has the same depth as the turntable. The connection with the turntable is established via a shielded cable terminated with a metal DIN plug. The power supply generates much interference, so it should be placed as far away as possible from the turntable, especially the cartridge, and the preamplifier.

The 313 VTA is a 12.5" version of the Stogi Reference gimbaled arm, mounted in a VTA mechanism taken from the 4Pi tonearm. The whole made from aluminum elements allows for almost all possible regulations, including azimuth. The last one is possible, because the tonearm is made from two elements, that can be twisted. The inside of the tonearm is damped. The headshell is very stiff, because the flat part the cartridge is attached to, is reinforced with perpendicular ribs. The geometry of the tonearm, bearings, etc., are the same as in the model Stogi. The counterweight, of significant diameter, made from brass, is decoupled and is easy to adjust. Next to it, we have a chrome plated classic anti skate mechanism, with a weight on a string. The tonearm, with the suspension, is mounted on a sort of lever, that connects to the VTA mechanism. It has a scale on the side, but also on the top knob we have an additional, relative scale. The mounting is compatible with Linn tonearms. The tonearm is cabled with copper [Cardas](#), wires, with Eichmann Copper Bullet Plug (or actually now ETI) plugs. On request [Nordost](#) can be supplied. The whole is very heavy (about 45kg) and incredibly solid. The craftsmanship and finish are brilliant.



Technical data of the deck (according to manufacturer):	
Weight:	40 kg
Dimensions:	500 x 400 x 200 mm
Platter weight:	8 kg
Sub-chassis resonance:	2.2Hz (damped)
Speeds:	33 & 45 RPM
Mat:	plastic and rubber
Motors:	x2

## Kuzma REFERENCE + STOGI REF 313 VTA + KC 2

**Price:** 31 900 zł + 12 750 zł + 5000 zł

**Polish distribution:** [RCM](#)

**Contact:**

ul. Matejki 4  
40-077 Katowice

tel.: (032) 206-40-16; 032/201-40-96  
fax: (032) 253-71-88

**e-mail:** [rcm@rcm.com.pl](mailto:rcm@rcm.com.pl)

**WWW:** [KUZMA](http://KUZMA)

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