

Introducing the TW-Acoustic Raven 10.5 tonearm.

By Graham Tricker, owner of GT Audio and TRON-Electric

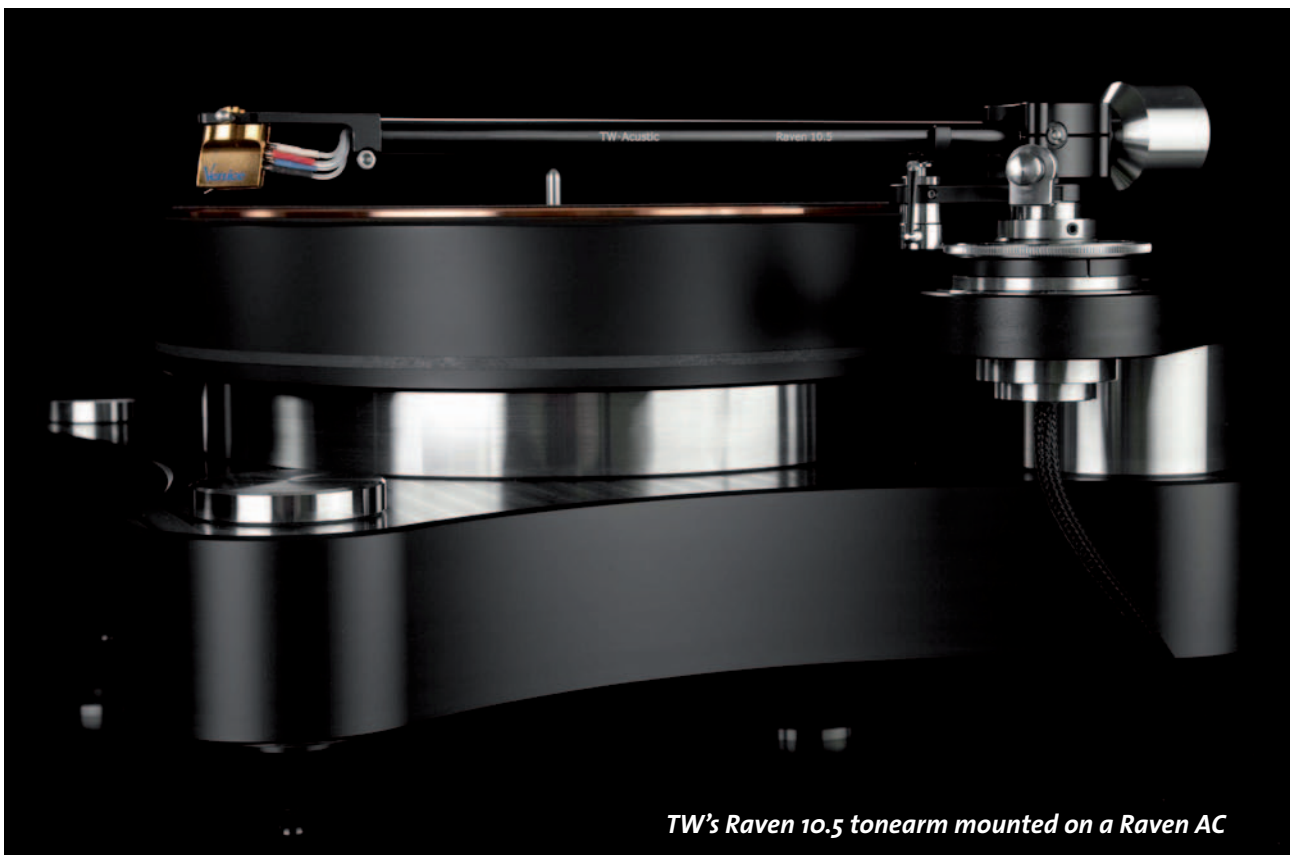
The tonearm comes in a nice presentation box with the inside pre-cut exactly for each tonearm part. Each part fits perfectly in each cut out plus there are a few foam “plugs” which keep all the parts snug and in their place in the box during transportation. The whole package looks very impressive and professional, as you would expect from such a manufacturer. Looking at the parts individually, what strikes you is the extremely high quality finish of the machined parts and the attention to detail that has gone into this tonearm.

Note: – the tonearm comes with all the mounting hardware and mounting template to enable it to be mounted onto any other turntable providing the turntable will take a 10.5 inch tonearm.

Tonearm Design

The design of the TW 10.5 tonearm is very simple, as it is a straight, pivoted-type arm. Precision bearings are used and are rigorously selected and ultra-precisely adjusted to eliminate any interference in the pick-up process. To keep effective mass to a minimum, the tonearm is predominantly constructed from a special black anodised aluminium alloy which intrinsically

ensures the necessary stiffness and torsional strength. The effective mass is approximately 14g, which allows partnering with the majority of currently available MC and MM cartridges. This universal compatibility is further enhanced by the inclusion of three different polished stainless steel counterweights, allowing any cartridge to be used with an operating weight of between 5g and 20g. The mounting to the armboard is via a 4-hole flange mount, and the Raven 10.5 can easily be used with other manufacturers turntables. Tonearm height is adjustable with the zero-float VTA adjuster. The VTA adjuster is derived from that found on the flagship Raven Black Night turntable and allows adjustment of 10 mm on the fly. The headshell is not detachable, but uniquely allows for azimuth adjustment. This allows any cartridge system to be adjusted in every parameter. The arm features integral one-piece sonically-optimised copper tonearm cable from the cartridge tags right through to the phono plugs. Like many high performance designs it is not any one particular aspect that makes it exceptional, but the sum of all the parts (and design of course)—just like a Porsche RS in the car world.



TW's Raven 10.5 tonearm mounted on a Raven AC

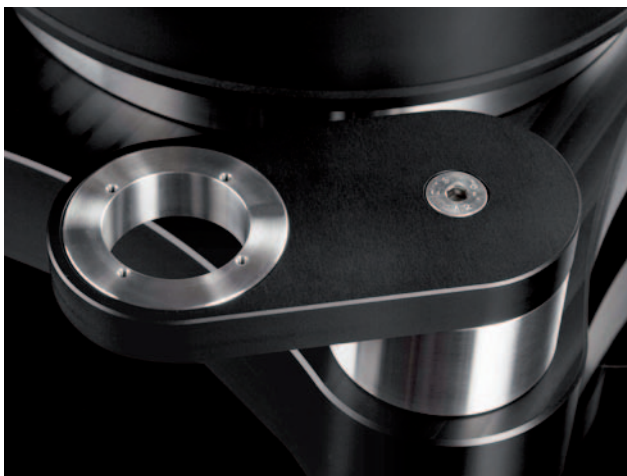
What's in the box...



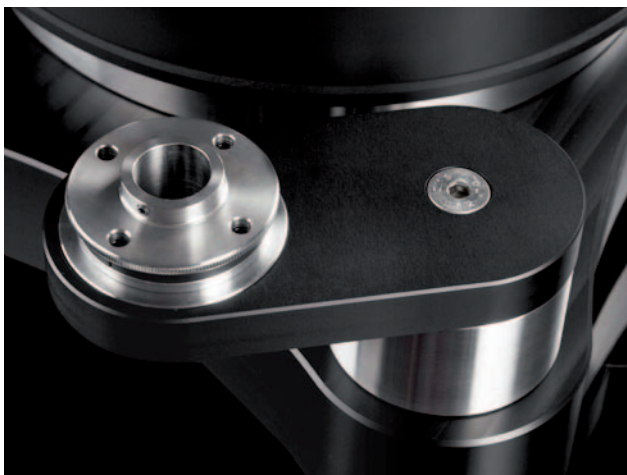
1. 10.5" tonearm with a one piece-wiring loom from the headshell pins right the way through to the RCA phono plugs.
2. VTA "on the fly" adjustable tonearm mount.
3. 3 x counterweights (small, medium and large)—each one for specific cartridge weights: Small = 4–10 grams, Medium = 8–14 grams, Large = 12–20 grams.
4. Tonearm mounting template.
5. Tonearm alignment tool.
6. Set of 3 Allen keys.
7. Set of 4 tonearm mounting collar securing screws.
8. TW-Acoustic cleaning cloth.
9. User Guide/set up manual (not pictured).

Turntable Mounting

The arm is very easily installed on the turntable. On a TW table it is just a simple matter of mounting the supplied tonearm mount (including VTA adjuster) and fitting this into the stainless steel TW arm board mounting with the 4 Allen screws provided. If it is being mounted on to a TW table then a new armboard insert will be needed when ordering the tonearm from your TW dealer. If it is being mounted on to a non-TW turntable then the tonearm-mounting template provides details of the mounting dimensions required for this. Being a 10.5" arm, the spindle to pivot distance is 251.2mm.



Armboard plus stainless steel tonearm insert



Tonearm mount including VTA adjuster fitted to the armboard insert

Setting up

Once the tonearm insert is mounted in the armboard it is a very simple job to fit the tonearm into the mounting. At this point it is best to check and reset the spindle to pivot distance. Next mount the cartridge and the correct counterweight. Both the counterweight and bias adjuster have very finely machined threads so very accurate adjustments can be achieved. Once the cartridge has been installed the cartridge alignment can be made. The TW supplied alignment protractor, which is laser etched, is the best protractor I have ever used in 40 years of turntable setup. It is so easy to get perfect alignment of the cartridge in the headshell using this alignment tool, as well as setting the VTA. Very unusual for a bearing arm is the user adjustable azimuth (HTA—horizontal tracking angle). This is achieved by a single Allen screw in the side of the headshell enabling perfect horizontal mounting of the cartridge. This is an extremely important adjustment and very critical to achieve perfect sound. Once all has been set up via the procedures in the first class manual (with excellent colour photos I might add) it is then just a simple matter to connect the RCA plugs to the phono input and connect the tonearm earth to the phono stage ground connection. One point to mention is the wiring loom is a continuous piece which joins the cartridge tags to the RCA plugs in a single length without any joins or connections. The wiring used is very high quality OFC copper.

Note: the manual is the most comprehensive I have ever seen with accurate colour pictures showing virtually every procedure.

Initial impressions

I have to say I was not prepared for what I heard when I lowered the arm on to the first record (Vivaldi—Six Flute Concertos Op10—L'Oiseau-Lyre). What struck me was the almost inaudible record surface noise—I had to quickly check the stylus was in fact in contact with the grooves such was the lack of surface noise. The next thing I found myself doing was fumbling around trying to find the volume control to turn the music down! It sounded like the cartridge had another 6dB of gain... the dynamic range from this tonearm is truly immense!

I have been listening to this piece of music for many years so I am very familiar with it; however with other tonearms I had no idea there was a harpsichord playing behind the flutes. I had never heard it before but with the TW arm the harpsichord was clean and clear and providing the music foundation for the flute ensemble. Also notable was the full body resonance of the stringed instruments (violin, viola and cello). These were also rich in tone and texture and very well separated, providing the most vivid presentation I have experienced with this record.

The next record on was a Good Time Jazz recording of the Fire House Five—an early stereo recording although you would not know this the recording is so good. The trumpet and the trombone were clearly defined and when the clarinet and tuba came in you could hear each instrument in its own space – yes the TW images like no other tonearm I have heard. Bass is very fast and tight and the start/stop is excellent. During one other passage the tuba let go and I wondered where it came from—such was the depth and power of the note.

After a 30-minute break to get some refreshment we then put on Anne Hills recording of “Woman of a Calm Heart”. Anne’s voice is crystal clear and on the track “Porto Limon” appears centre stage with the guitar just below as you would expect. Her voice is rich and powerful and projects really well into the room but never sounds strained or grainy. The percussion player (Ken Lovelett) has a field day on this track with congas precisely delineated in the right channel but completely separated from the rest of the mix with every note hanging in air and space. Occasionally some of the percussion instruments

move across the soundstage and into the left channel but always behind Anne and her guitar. It was on this track that Paul (my graphics guy) and I noticed a very weird thing. We both commented together that the listening room appeared to be about 6 feet wider... this tonearm does soundstage like no other arm I have ever heard.

I could wax lyrical at great length about the arm’s sound, however I am sure you get the gist that this is a very special tonearm.

Summary

Thomas Woschnick (TW) told me that he wanted to “build a really good tonearm for use on his turntables”. He wasn’t out to build the best or try to compete with other top arm manufacturers, however TW may well have made the finest sounding tonearm on the planet. It is certainly the best I have ever heard and I have had/and heard virtually every arm over the years. The arm is very beautiful; it is quite small and precise compared an SME or a Phantom, even a Rega looks large compared to this exquisite tonearm. The lovely pictures on TW’s website just don’t do this arm justice. You have to see it in the flesh to appreciate what a work of art it is, both in mechanical terms and as an instrument to extract information out of those record grooves. What is so amazing is that in a world of digital, hi-res downloads and music streaming along comes a product that simply redefines what is possible with analogue replay and moves the gap even further apart between analogue and digital replay. I hope you found this introduction useful.

Graham Tricker

TW-Acoustic Raven 10.5 Technical specification

Effective length	267mm (approx 10.5 inches)
Mounting distance	251.2mm
Overhang	15.8mm
Offset angle	20.5 degrees
Geometry	Loefgren B
Effective mass	approx. 14 grams
Tonearm weight	500 grams (1 kg including VTA adjuster)

Equipment used for the review

Tonearm	Raven 10.5
Turntable	TW-Acoustic Raven AC
Cartridges	Dynavector XV-1s and ZYX 4D
Phono stage	Tron Seven Phono stage
Pre-amplifier	Tron Seven Line stage
Power amplifier	Tron Telstar 211 power amp
Loudspeakers	Avantgarde Acoustic Trio