

Acoustic Signature TA-1000

Germany's Acoustic Signature expands its range of vinyl replay equipment with the introduction of the TA-1000 tonearm – a first for the turntable company
 Review: **Adam Smith Lab: Paul Miller**

Despite vinyl's star being firmly in the ascendant and the choice of replay equipment growing continually, there are now rather fewer new tonearms being launched than turntables. So it's heartening to see a new, designed-from-scratch arm appear from a well-known name, in this case Acoustic Signature with its TA-1000. This is effectively a three-model range, as the design is available in 9in, 10in and 12in lengths, retailing at £999, £1099 and £1199 respectively. This puts the arm up against some stiff competition from the likes of SME, Rega and Audio Note.

TUBE WITHIN A TUBE

Rather than being a simple single-walled carbon fibre tube, it actually has a second tube inside the first. The two are joined by three internal 'ribs'. Acoustic Signature claims that this achieves both high rigidity and low vibration, as the two tubes are thin and light and their construction is effectively self damping. (Certainly the tube responds with a pleasingly dull sound when lightly flicked!)

The armtube is terminated in a beautifully machined and polished end stub with an elongated slot that supports a cartridge mounting platform – these can often pay dividends in terms of vibrational behaviour compared to a conventional headshell, and make for a cleaner and more precise treble.

At the rear is a sizeable housing containing precision bearings, sourced from the Swedish manufacturer SKF, for both lateral and vertical movement. These are set and pre-loaded during production. And a neat feature of the TA-1000 is that it offers adjustable azimuth for optimum cartridge alignment. In the case of most one-piece straight arms where no adjustment is available, this would

require shims between the cartridge and headshell. But on the TA-1000, loosening of the three screws surrounding the arm tube in the bearing housing allows for a $\pm 5^\circ$ adjustment. The mount is as solid as could be hoped for when these are re-tightened.

Internally, the arm is wired with a continuous length of Teflon-insulated 6N copper cable from cartridge tags to phono plugs. It is, however, also available with a 5-pin socket on the underside, for users who prefer to experiment with their own arm cables. Alternatively, pure silver wiring may be specified for an extra £250, but only with the 5-pin socket option. The arm's fitment pattern matches the original Rega type, and there's an SME mount

available as a £145 option.

The TA-1000 comes with an excellent two-piece location and alignment gauge which makes for easy installation and cartridge set-up.

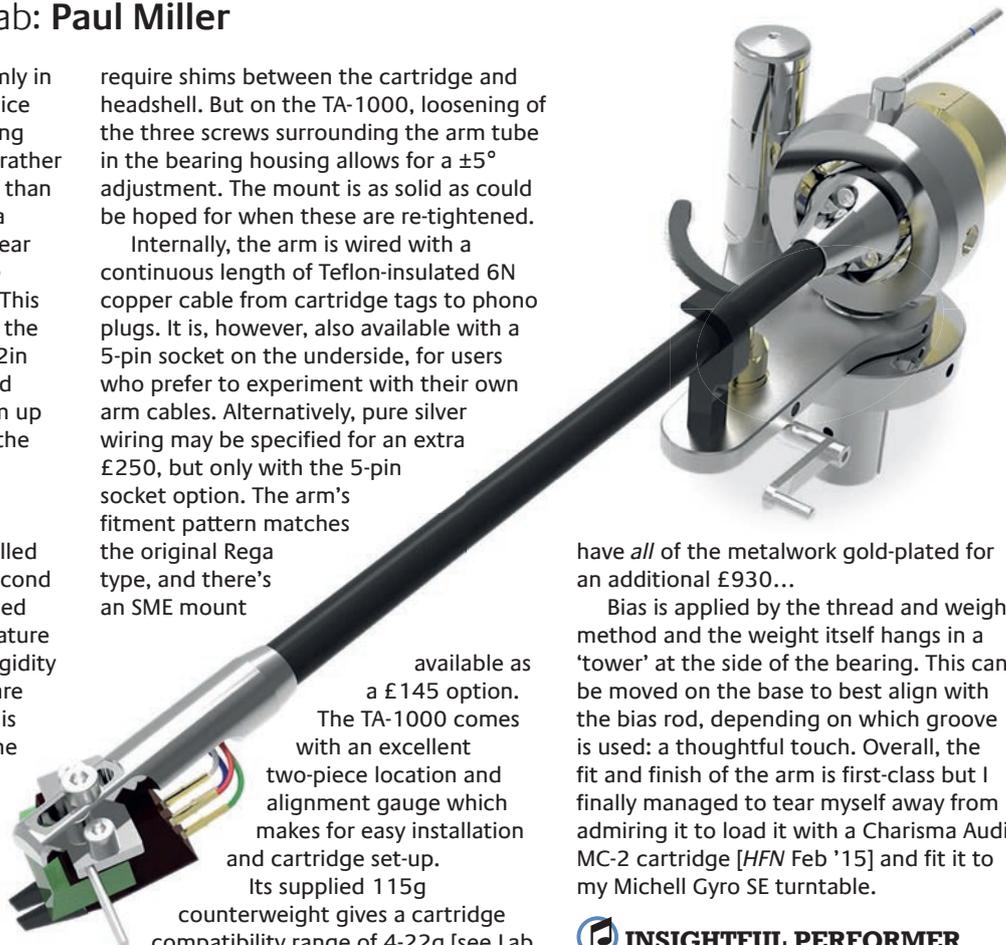
Its supplied 115g counterweight gives a cartridge compatibility range of 4-22g [see Lab Report]. The weight has a brass finish, which is elegant, if perhaps slightly at odds with the bright silver finish of the rest of the arm's metal parts. However, you can

have *all* of the metalwork gold-plated for an additional £930...

Bias is applied by the thread and weight method and the weight itself hangs in a 'tower' at the side of the bearing. This can be moved on the base to best align with the bias rod, depending on which groove is used: a thoughtful touch. Overall, the fit and finish of the arm is first-class but I finally managed to tear myself away from admiring it to load it with a Charisma Audio MC-2 cartridge [*HFN* Feb '15] and fit it to my Michell Gyro SE turntable.

INSIGHTFUL PERFORMER

I quickly realised that the TA-1000 is a product that needs to be taken very seriously indeed. It offers a sound that is pure and insightful, and its performance is



TAKING UP ARMS

Since the company's inception in 1996, Acoustic Signature has always recommended high quality arm designs by other manufacturers, including SME and Rega. However, the launch of its own arm was prompted by the increasing scarcity of more affordable options that would match its turntables. The TA-1000 fills this role admirably but, at the Munich High End Show in 2014, Acoustic Signature also unveiled the prototype of an arm called the TA-9000. This will be manufactured using 'Stereolithographic Laser Sintering', providing two tubes separated by a complex internal structure, with movement courtesy of top quality ceramic bearings. The aim is to offer one of the most technologically advanced arms on the market, albeit at a price! It is rumoured the 9in version of the TA-9000 will cost around £14,000 when finally available.

ABOVE: The 'tower' beside the bearing housing encloses the bias weight, insulating it from air currents or accidental contact. This is movable for optimum bias thread positioning



blessed with a scale and grandeur relatively uncommon at this price level. Indeed, if I'd been told it retailed for double the amount that it does, I would have had no problem in accepting that.

Most notable about the arm's sound is the scale it gives musicians and vocalists, and the uncanny way in which they almost seem to hang between the loudspeakers. Shutting my eyes while playing 'New York Morning' from Elbow's *The Take Off And Landing Of Everything* [Fiction 3754769] I was left with a vivid image of singer Guy Garvey's face just hovering in the air. As the backing track came in, the Acoustic Signature proved well up to the task of perfectly ordering the instruments behind him. The result

'The TA-1000 is so well suited to large orchestral works'

was a completely encompassed performance on an impressive scale.

With the TA-1000 I unexpectedly found myself playing more classical music than I have with a review item for a long time. This was simply because the grand soundstaging offered up by the arm was so suited to large-scale orchestral material. Playing 'Dance Of The Reed Pipes' from Tchaikovsky's *Nutcracker* Suite, with the VPO under Karajan [Decca 417 274-1], showed this aspect in all its glory.

It genuinely seemed as if I could reach out and touch the violinists, whereas the percussion appeared to be about halfway down my garden! The whole performance was a joy which even improved when 'Waltz of the Flowers' followed.

A large part of the arm's sheer competence seemed to be as a result of its neutrality across treble and midband. A perfect example was Nanci Griffiths' 'You Made This Love A Tear Drop' [*Storms*, MCA MCG 6066]. I have long been a fan

ABOVE: The carbon fibre arm tube may be adjusted for azimuth by loosening three screws at the bearing end. There's a stylish 'starting handle' cueing lever

of Miss Griffiths but her voice has an undeniable stridency across the middle registers. It is not uncommon for a hi-fi system to pick up on this and make things edgy, but the TA-1000 never faltered. The song rang out cleanly and with passion.

LOW-END DETAIL

At the bottom end, the Acoustic Signature proved to be equally accomplished. Although it lacked the last ounce of punch that my regular SME 309 delivers, it never sounded soft or lightweight and it picked out low-end detail within a recording expertly.

The drum strikes on 'You're Not The Rule...' from Helen Watson's 1987 *Blue Slipper* debut LP [EMI SCX 6710] came barrelling from my loudspeakers in an impressively snappy manner, and the synthesiser notes that held the track together were well-rounded and vivid. ☺

HI-FI NEWS VERDICT

The new Acoustic Signature TA-1000 deserves to be a huge success for the company. Well designed and beautifully built, its sound is a stark reminder of just how good vinyl can be – cartridge and turntable notwithstanding, of course! The performance to price ratio is more than competitive with its peers in the £1000 price bracket, but if this is its entry-level model, I can't wait to hear the flagship!

Sound Quality: 83%

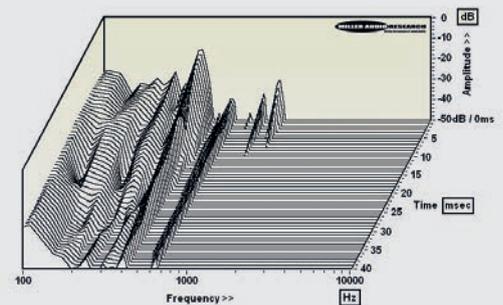


LAB REPORT

ACOUSTIC SIGNATURE TA-1000

The machining and finish of the TA-1000 is perfectly in keeping with the very high quality of Acoustic Signature's partnering decks. We tested the shortest (9in) version of the arm which is also available in 10in and 12in guises, extending the effective length from 237mm to 318mm and reducing the offset angle from 22° to 17.3°, 9in to 12in respectively. Both the thread-and-weight bias system and gold-finished counterweight are uncalibrated but the quality of the pre-loaded gimbal bearings is unquestionable – no play was detected on test in the lab while friction proved less than 10mg in both planes.

The carbon main tube is actually composed of two concentric tubes, bonded internally, terminated into an alloy bush at the bearings and into the alloy sleeve of the headshell at the business end. The latter pushes the arm's effective mass up from an estimated 9g (pure carbon) to 12g but this still accommodates MCs up to 20g in weight and down to 8cu in compliance. The arm's resonant modes are also very well resolved with 'soft' bending/flexing modes at 180Hz and 280Hz and a higher-Q torsional mode occurring at a very high 400Hz, the latter quickly damped but not uncommon with carbon tubes. Readers can view a QC Suite report for the Acoustic Signature TA-1000 tonearm by navigating to www.hifinews.co.uk and clicking on the red 'download' button. PM



ABOVE: Cumulative resonant decay spectrum, illustrating various bearing housing, pillar and arm vibration modes spanning 100Hz-10kHz over 40msec

HI-FI NEWS SPECIFICATIONS

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| Bearing / bias type | Gimbal / thread and weight |
| Effective mass (vertical/lateral) / length | 12g/12g / 237mm |
| Offset angle / overhang | 22 degrees / 15mm |
| Friction (vertical/lateral) | <10mg / <10mg |
| Downforce accuracy (at 2g) | uncalibrated |
| Cartridge weight/compliance range | 4-22g / 8-20cu |
| Mounting Type / total weight | Rega / 895g |