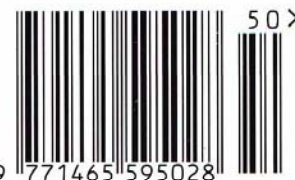


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The SME 20/12 Record Player

by Roy Gregory

SME Ltd. has been one of the few ever-presents in the UK hi-fi firmament. Since its inception in 1958, the company has built an unparalleled reputation for the consistent quality and longevity of its products. Indeed, in nearly fifty years of unbroken manufacturing, their products can (for the most part) be grouped into a mere four discrete ranges: the 3000 series (medium-mass, knife-edge bearing tonearms); the III series (ultra low-mass knife-edge bearing tonearms); the Series V tonearm and its derivatives; the Model 30 turntable and its derivatives. Indeed, the record players are relatively recent arrivals, appearing in the lengthening shadow cast by the commercial success of CD. Yet, despite the oft-forecast demise of analogue replay, it could be argued that SME hasn't enjoyed such a solid market presence or identity since the heyday of the '70's, a situation due in no small part to the strong family identity that binds the various products in its ranges. Even the uninitiated couldn't mistake the 309 tonearm for anything other than a close relative of the Series V. But beneath the skin the subtleties that differentiate one model from another are both carefully considered and very real.

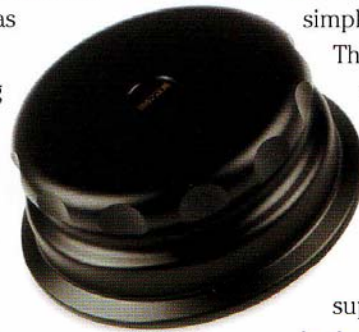
Anyone familiar with the Model 20/2 turntable could be forgiven for assuming that the 20/12 is simply the stretch limo equivalent of the standard version, elongated to accept the company's 12" arms. Likewise, it seems natural to assume that the 312S tonearm is simply a derivative of the established 312. But both assumptions would be well wide of the mark. Time then, as we've never reviewed either the Model 20 or 30 turntables, to start at the beginning.

Turntable performance can be characterized as the eternal conflict

between the need to isolate the stylus/groove interface from outside interference and the necessity to couple it closely to an extremely noisy motor in order to achieve decent speed stability. SME's solution is both elegant and unsurprisingly, based on sound engineering and first saw the light of day in the shape of the Model 30. The 'table was based around a heavily damped, four-point suspension which carried the tonearm and massive platter. The motor was mounted on the base plate and driven from an external supply. Nothing terribly revolutionary in that, but the execution was extraordinary.

A conventional standing bearing was employed, but massively oversized. This was rigidly coupled to an aluminium plate chassis supported in its corners by suspension towers. These dispensed with metal springs in favour of rubber O-rings as the suspension medium, their non-metallic nature banishing the risk of damaging high-frequency resonance, their sheer number ensuring consistent support and relatively low individual tension (as well as making replacement simplicity itself). The base of each tower constituted a dash-pot, the damping of the suspension adjustable through varying the ride-height, easily achieved via adjusters in the top of each tower. But the really clever thing was the way in which dropping the suspension for transit lowered the chassis over the fluid reservoirs, sealing them against leakage. And the practical touches didn't stop there. Bolts through the sub-platter locked it and the chassis elements together, while four captive bolts lifted the sub-platter and spindle clear of the thrust

pad, protecting this critical interface from possible transit damage while leaving the bearing itself sealed and free from the risk of contamination. The motor was positioned to one side on a compliant mounting, an O-ring on its outer edge linking it to the main chassis balancing the tension in the drive-belt, allowing much closer coupling of the drive-pulley to the sub-platter. A further O-ring stretching between the sub-chassis and the base plate, opposite the motor balanced the horizontal force that might otherwise have canted the suspension; simple and effective.



The heavily damped suspension provided an incredibly stable platform, while the much higher tension in the drive belt delivered superior speed stability – both critical factors when

it comes to sound quality.

Not surprisingly, the Model 20 followed the same basic pattern, except that the massive chassis plates and platter of the 30 were slimmed down, the overall mass reduced (allowing fewer O-rings on each suspension tower) and the four damping pots in the towers replaced by a single one around the main bearing. It's this basic arrangement that we find in the 20/12, except that the elements have been beefed-up throughout. The sub-chassis and base plate are both thicker, the 6.5kg platter is over-sized and half again as heavy and the diameter of the suspension units has been increased, allowing the use of 10 O-rings per tower in place of the 20's eight. The end result is almost twice as heavy as the 20, making this in many respects, a halfway house between it and the 30. ▶

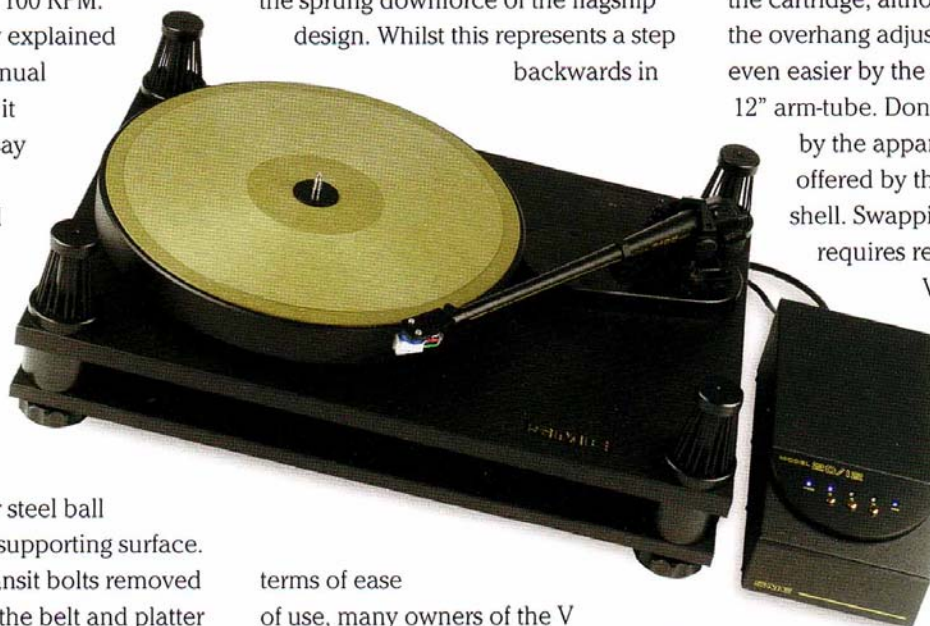
► The extra width necessary to mount the 12" arm obviously adds extra mass, but the wider stance and increase in the physical proportions of the various elements makes this, to my eye at least, the most attractive of SME's 'tables.

One thing that hasn't changed is the hall-effect motor with its sophisticated quartz-referenced external power supply. This allows electronic selection and fine adjustment of 33, 45 and 78 speeds, the latter with a usefully wide range of 60 to 100 RPM. Operation is clearly explained in the excellent manual so I won't dwell on it here other than to say that it's extremely straightforward and precise.

Set up is simplicity itself. The base plate is supported on four adjustable feet. These offer a choice of rubber or steel ball interfaces with the supporting surface. With the various transit bolts removed or disengaged and the belt and platter in place, simply level the platter using the adjustable feet. Then raise the suspension to the recommended level (a feeler gauge is provided) and recheck the level of the platter. Indeed, the most fiddly part of the exercise is inserting the motor power supply plug, a tiny S-video type that inserts sideways between the rear of the base plate and sub-chassis. Those with fat fingers need to proceed with caution given the fragility of the connector's pins.

With the deck leveled and ready to run, it's time to install the cartridge. Assuming you've bought a deck that includes a tonearm, that will be already installed. The 312S supplied with our 20/12 differs from the 312 in several important respects. Most important is the material used for its arm-tube. Whereas the original 312 used an aluminium casting, the S version

employs a magnesium tube derived from the one used in the Series V, delivering a stiffer structure and one that's a third lighter. Unfortunately, it was impossible to manufacture a one-piece assembly of this length, necessitating the use of the detachable headshell. The S also borrows its ABEC 7 bearings from the Series V, along with the damping trough. However, the counterweight assembly is drawn from the 300 series arms, eliminating the sprung downforce of the flagship design. Whilst this represents a step backwards in



terms of ease of use, many owners of the V actually prefer to use gravity to set VTF wholly or in part, feeling that the arm sounds better that way. Auxiliary slabs which can be added to the underside of the counterweight allow cartridges as heavy as 30g to be accommodated.

At first sight, the decision to use a detachable headshell might seem like a poor compromise, but SME's collet connection is about as secure as a detachable design can be, whilst also allowing proper azimuth adjustment, a critical alignment denied by one-piece designs and particularly important given the greater effective mass of a 12" arm. Add the reduction in tracing error to the simplified tracking force arrangements and you have an arm that in many respects represents possibly the best overall sonic compromise in the range. If you want to check that conclusion, the elongated oval

armboard of the 20/12 can simply be reversed allowing you to install a Series V or any of the other 9" arms. A brief comparison with the resident 309 resulted in a swift "no-contest" verdict – only to be expected given the difference in price between it and the 312S. Although originally only available as a package with the 20/12, the 312S is now also available as a separate item, at a price of £1408.37.

SME's familiar tools aid in aligning the cartridge, although in this instance the overhang adjustment is rendered even easier by the slim neck of the 12" arm-tube. Don't however be fooled by the apparent versatility offered by the detachable shell. Swapping cartridges requires readjustment of

VTF, VTA, azimuth and overhang and is really only a practical proposition for those wanting to run mono and stereo versions of the same pick-up. Both internal and external wiring

is from vdH, but more on that later. One particularly welcome inclusion is a "lid" – or at least a soft cover similar to the ones that used to come with typewriters. In a world where turntable manufacturers have solved an increasingly awkward issue by simply ignoring it, SME provide a practical and effective (if not terribly attractive) solution.

Even a cursory listen revealed the superiority of the metal foot interface over the rubber alternative. Whilst separation, transparency and soundstaging all improved, the real bonus was the improvement in the shaping and weight of musical phrases, adding significant expressive depth to performance. In order to prevent long term dimpling to the top surface of the finite-element rack I used for ►

▶ the review, I employed a set of finite's excellent spike shoes, which worked perfectly and without detectable sonic compromise. The other aspect of set-up that really repaid almost obsessive care was the precise setting of VTA. Using the threaded tool supplied by SME makes tiny incremental changes possible, but only in the upward direction, so start low and work up through the range, repeating the process once you've established your target zone. Once you hit the mark you'll be rewarded by greater inner clarity within the soundstage, but more importantly, an expressive coherence and emotional sweep that can escape the arm if VTA is incorrect. It adds up to a significant extra sense of musical involvement, the glue that binds the clarity, detail and poise into a meaningful whole. Yes, it's worth persevering...

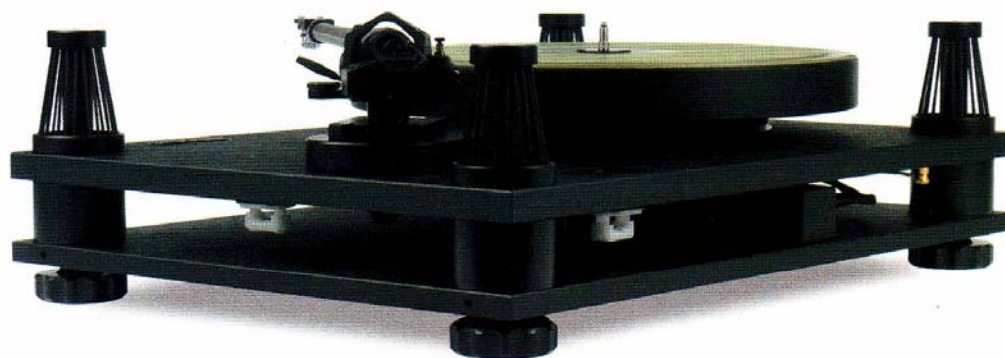
And one other thing; when making speed adjustments during set-up, do it after the turntable has been running for an hour, with a battery powered strobe and preferably with the stylus in the groove* and the clamp in place. In other words, in as close as possible a condition to the actual operating state of the 'table. So precise is the speed adjustment of the motor controller that all these factors affect the setting. Omit the record or clamp in particular and you'll set the speed slightly slow, adding a ponderous, almost lethargic quality to the sound.

Most readers will have some experience of SME's arms and turntables. Some will like them, some won't. Well, whichever camp you inhabit, prepare to be surprised by the 20/12. I may not have had every SME turntable in my home system, but this record

* If you don't own a suitable device, strobe discs and lamps available from KAB (Moth Marketing - 01234 741152) and Clearaudio fulfill all the necessary requirements. The KAB also gives a range of discrete speeds for 78 replay. I'd consider it an essential accessory for this record player.

player sounds like no SME I've used before. The precision, clarity and focus are all to be expected, watermarks of the SME sound. However, added to that solid, grounded quality the 20/12 brings something quite new and special. The inclusion of the 312S, as brutally revealed by comparison with the 309, brings a freedom to the music, allowing performers and the performance to breathe, so that despite the control and definition, the precision of the presentation, it never strays into the constricted or clinical. Instead, what you get is sure-footed and wonderfully positive articulation.

Play the Starker Bach *Cello Suites* and you'll see what I mean.



The structure and inner symmetry of the pieces will clearly play to the SME's traditional strengths, but the life and vivacious energy in the playing will surprise you. Starker's mastery of his instrument is immediately apparent, his awesome technique, but so to his love of and respect for the music he's playing. The latter are the kind of performance characteristics more akin to those claimed for the LP12 back when it was king and colouration was a necessary by-product of "genuinely musical performance". But listen to the woody, vibrant complexity of Starker's cello, appreciate how his breathing and the mechanical intrusions of his playing add to, rather than subtract from the reality and enthralling nature of the experience and you realise that here is a record player that let's you have your cake and eat it.

Nor is this performance limited to the intellectual rigour of solo classical pieces. The 20/12 took the jumbled layers of a recent Yes re-issue and sorted them with not just aplomb but genuine enthusiasm. The easy, relaxed lope of Neil Young's *Silver And Gold* never lags, the intricacy and fragile delicacy of its largely acoustic arrangements laid open but never dismantled. The almost bi-polar, sardonic optimism and reticence of Lloyd Cole's *Easy Pieces* is beautifully rendered, the busy mixes, effortlessly sorted. The rollicking tumble of 'Grace' segues naturally into the brooding, building power of 'Cut Me Down', the cleverness of the lyrics never

blunted or obscured by the heavy beat, the dense guitars and piano. The wonderful inevitability of the pulsing rhythm, the slow, almost imperceptible increases in tempo, the hanging pauses and weight and security of the trip-hammer beat that underpins the side-ender underline both the security of the 20/12's temporal grip and its tracing. No shortage of toe-tapping, singalong quality here.

There's an impressively holistic appeal to music replayed on the SME, but don't think that it's cuddly or forgiving, as it's neither. What it is, is supremely natural and impurtable – as long as you've set it up just so. The problem (such as it is) is that it's so natural that even quite subtle deviations become glaringly obvious; hence the insistence on absolute accuracy when it comes to cartridge ▶

► set-up, VTA and pitch adjustment. Thankfully, the engineering excellence of all things SME, the clear instructions supplied and the sheer clarity of the light the 'table shines on its own performance make optimizing this player a case of due diligence rather than the application of a black art. Plonk it down with minimum care and it will likely sound dark, heavy and staid, worthy but uninviting. That's not the turntable you are hearing, it's the laziness and inadequacy of the installation.



Take the time and requisite care and the 20/12 will repay you in spades, with a musical dexterity and enthusiasm that is both infectious and addictive. Why is it so compelling? It's down to that rare combination of absolute security and musical coherence, the ability to hold with the lightest of touches, to protect without stifling. This isn't a sound that's designed to blow your socks off with sonic fireworks. In absolute terms you can point a finger at its absolute transparency and a slightly shut-in top-end that even the most painstaking adjustment never opens out. But that's to miss the point. The 20/12's evenness and coherence within the range allow it to stand aside, to disappear, to let the music speak with its own voice. Even when you are trying it's remarkable how quickly you stop listening to the turntable and find yourself simply enjoying the performance.

And that's straight out of the box. Such a high-resolution device lends itself to further optimization, both in terms of partnering equipment and ancillaries. I ran through three cartridges, each with impressive results, before I settled on the lucid delicacy and articulation of the Mysonic Eminent as the perfect partner. It's deft bass and top to bottom coherence suit the

20/12's self-effacing honesty perfectly. Likewise, of the phono-stages many and various that I had in house alongside the SME, it was the Groove Plus that cemented an almost uncanny partnership with the 'table. Swapping the vdH arm-lead for a Cardas Golden Cross wrought additional benefits, adding texture and shape at low-frequencies, richer colours and more body through the mid-band, banishing the incipient grain and grey tinge that characterizes the stock cable.

That's the real beauty of the 20/12. It's got the fundamentals so right that it offers the perfect foundation for further refinements, delivering maximum potential from carefully selected ancillaries. With a character that's best expressed in terms of the opportunities that it opens for the music, its security, neutrality and the stability of its presentation provides an unforced sense of musical authority that allows a musical performance to really speak,

irrespective of genre or scale. It doesn't impose, it never dictates. Instead it does exactly what a turntable should – and just as importantly, no more. This is, in the best sense of the word, a tool; one that unlocks the life and magic in vinyl grooves. Like all tools it demands care and responds to respect, but through good tools, carefully used, we realise great art. In that sense SME's 20/12 builds on more than one tradition. ►+

TECHNICAL SPECIFICATIONS

Model 20/12

Type:	Belt-driven, four point suspended turntable
Motor:	Hall effect
Speeds:	33, 45, 78 – all user adjustable
Bearing:	19mm standing
Platter Mass:	6.5kg
Suspension Medium:	Fluid damped nitrile rubber
Dimensions (WxHxD):	520x174x375mm
Weight:	35.5kg

Series 312S

Type:	Gimbal bearing tonearm
Arm-Tube Material:	Magnesium
Headshell:	Detachable, magnesium
Effective Length:	308mm
Effective Mass:	12g
Fluid Damping:	Yes (user adjustable)
Tonearm Cable:	vdH 502

Prices

Model 20/12 turntable:	£9724.26
Model 312S tonearm:	£1408.37

Manufacturer:

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