

Air Force 1 Turntable and Graham Phantom Elite Tonearm

Magnificent!

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The mention of dust reminds me to give copious points to TechDas for actually manufacturing a dust cover—it's an accessory and costs extra, but at least there *is* one, as is not case with any turntable I'm aware of costing north of \$40–\$50k. Graham tells me the reason the dust cover is optional is that it's so large many users don't want to be bothered with it. So Nishikawa supplies as standard with every AF1 an acrylic platter cover; he even went to the trouble of inscribing a pickup alignment protractor on the top surface for cartridge setup. Whether you use a dust cover or not, you should *always* keep your platter covered when not playing records (I use an old record): Nishikawa's solution, complete with knob, is novel, attractive, and salutary.

Graham Phantom Elite

Although the basic design principles, thinking, and features of Bob Graham's classic Phantom unipivot tonearm remain unchanged, the Elite represents a substantial upgrade from previous iterations, which were already stellar in engineering and execution. As I reviewed the Supreme II only a couple of years ago, I refer readers to that article [Issue 226] for a full description of the 'arm's features. The new model boasts improvements in materials and implementation. The pivot assembly has been redesigned to incorporate constrained-layer damping of two different metals, both having high weight-to-size ratio. A new, high-density, non-magnetic tungsten insert ensures zero-tolerance bearing-contact and high spurious-energy absorption. The pivot top has been reconfigured for superior energy rejection and chatter-free, extremely low-friction pivoting (Graham's 'arms are unique in feeling as unwobbly as fixed designs yet without sacrificing

the advantages of a unipivot). The patented Magneglide stabilizing system eliminates azimuth deviation as the 'arm negotiates warps; and since the 'arm is also in true neutral balance, tracking force will remain consistent regardless of warps. The removable 'arm wands—9-, 10-, and 12-inch lengths are available—have been made larger in diameter with more rigid and damped titanium. A new alignment gauge incorporates an adjustable height feature. The new counterweight is decoupled to ensure the 'arm has practically no sonic signature of its own. The 'arm wiring is now an updated Litz-based construction and approaches the ideal air dielectric absorption factor of 1, which is claimed to improve transient response without introducing energy into the wire at unpredictable intervals. The same goes for the new interconnects.

I have not had occasion directly to compare the Elite to the Phantom II—the last Graham I reviewed has now been discontinued to make way for the Phantom III, which I've not heard—so I can't comment on the sonic improvements. But Graham's past improvements have always been real and audible, even if occasionally not what one would call dramatic—after all, the design began and remains at a very high level of excellence. What remains unchanged, and for me of supreme (sorry about that) importance, is the ease with which you can adjust every parameter of phono-cartridge setup more precisely, more quickly, and more repeatedly than with any other tonearm known to me. If you subscribe to Jon Valin and Andre Jennings' fanaticism when it comes to getting the 'arm /pickup combination nailed to the nines in every aspect and particular, I don't know of another 'arm that will let you do it as accurately as this one. Not the least of its virtues is that you can adjust vertical tracking angle during play. Some believe correct VTA is as important as getting the stylus rake-angle right. The latter optimally aligns elliptical line contact and other special stylus shapes to the groove wall. But optimal SRA does not necessarily equate to the vertical angle of the groove-cutting stylus. Sometimes the correct VTA will sound better than the correct SRA. Thanks to the bubble-level Graham builds into his pivot-housings, if you note the position of the bubble once you've established the correct SRA setting, you can always easily return to it if you decide to experiment with different

VTAs.

Like the AF1, the Elite is a true statement product in which you feel that every aspect of design, execution, and performance has been thoroughly thought through and addressed. The Elite retails at \$12,000 with a 9-inch wand; the 10-inch may be substituted for an additional \$500, the 12-inch for an additional \$1000, each with a different counterweight appropriate to the added weight.



Air Force 1 Turntable

Bob Graham had long thought of designing a turntable of his own to go with his Phantom tonearms, but gave it up when he discovered the Air Force 1. He made the decision to import the AF1 because he felt it was the first turntable that would allow audiophiles fully to appreciate his own state-of-the-art tonearms. The two products are thus here reviewed as a unit, so the remarks in the next section on sound and performance refer always to the AF1/10-inch Elite *combination*, most of the time with my reference Ortofon Windfeld pickup. The retail for the package is \$125,000, excluding pickup.

The Sound

One reason the AF1 turntable caught my attention right away is that Nishikawa announced he wanted to achieve levels of background quietness and silence comparable to digital. This is the first time I recall hearing an analog designer grant *any* superiority to digital reproduction. And it was evident from the first serious listening session that the AF1/Elite combination was onto something pretty special. Assuming cooperating media, i.e., high-quality vinyl, quiet surfaces, etc., the background blackness from this setup is extraordinarily deep and pervasive. I'm not sure I'd quite liken it to digital, but it's pretty close and superior, if at times only very narrowly so, to any other vinyl reproduction in my experience. Put on ORG's 45rpm reissue of *Ella Swings Lightly* and you'll hear the voice and the performers emerge from a background of complete silence. Of course, not all records are pressed as carefully as that one, but even with standard issues of old recordings from major labels there is a perceivable reduction in all the background muck and detritus of typical vinyl playback. Such quietness translates into superior resolution and recovery of detail, though in no sense did I ever feel detail was exaggerated or thrust excessively forward.

This superiority also translates into an extended dynamic range, hardly surprising given that a quieter background indicates a lower noise floor that in turn widens the envelope. You hear this effect even on music of limited dynamic range, such as small ensembles, instrumental soloists, and vocalists. On large-scale material, like my trusty Bernstein *Carmen* or Abbado's Verdi *Macbeth*, the effect of spectacle can be quite breathtaking, inviting playback at higher levels than you might typically use, so very *clean* and clear is the reproduction. This clarity derives from several aspects of the design: outstanding isolation from the environment, absolute speed accuracy allied to absolute speed constancy, and vacuum hold-down to eliminate the effects of warps and resonance anomalies in the LP/platter interface. There's a certain school of reviewers who place great emphasis upon what they call pace and timing, the so-called ability of 'arms and 'tables to "play the tune." I personally find many of the products they cite to be excessively articulated such that the-mu-sic-of-ten-sounds-

like-this. You won't hear any of that from the AF1/Elite, but you will hear literally sensational attack with absolutely no impression of smear or spread over time—and at all times control is absolute and stability rock-solid.

Bass response is of quite amazing extension, definition, and power (i.e., slam). The *Sheffield Drum Test Record* displays these qualities handily enough, but a recording like the Mehta *Also Sprach Zarathustra* on London is even more persuasive, the opening organ pedal point remaining absolutely pitch-firm, solid, and present, as the rest of the orchestra rises and falls above it. Or listen to the Bernstein recording of Beethoven's Op. 131 quartet as essayed by the full string complement of the Vienna Philharmonic, the energetic last movement in particular—a marvel of clarity and articulation despite the conductor's challenging tempo—passages where the doublebasses judiciously augment the cellos appear immediately obvious and beautifully registered.

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I have in the past remarked upon the sense of size, ease, and relaxation that physically large and/or heavy and massive turntables all seem to possess. But sometimes this comes at the expense of a certain difficult-to-define sense of agility. Not so here: the AF1/Elite projects size, scale, and mass with an unrivaled granitic strength and power, yet what it can do with intimacy and nimbleness is no less impressive. Paul Badura-Skoda playing Beethoven sonatas on a period pianoforte is as persuasively essayed as Klemperer conducting the same composer's massive *Missa solemnis*. The AF1/Elite constitutes a superlatively even-handed and comprehensive platform for music in all of what Bernstein once called its "infinite variety." At no point during the listening evaluation did I feel that any kind of music was favored over or short-changed with respect to other styles. This extends to imaging and soundstaging, as well: Over a wide variety of recordings I found it impossible to ascribe any characteristics to the turntable/'arm combination.

We reviewers often talk about neutrality and accuracy, qualities all reproducing components should ideally possess. Yet these are not necessarily the same things. Neutrality, by which we mean *tonal* neutrality, refers principally to deviations in frequency response from flat, and it is easy enough to hear, especially when it comes to broadband deviations, such as shallow troughs, rising top ends (which seem to be endemic to almost every super-expensive speaker system now made), valleys in the upper bass and lower midrange (the bane of almost all floorstanding speaker systems with their drivers a foot or more above floor level), and swollen or anemic bass response. But accuracy is a considerably thornier

issue when it comes both to subjective reviewing and source components. (An old saying among audio designers has it that a component which is flat is not necessarily accurate, but one which is seriously not flat is for *sure* not accurate.) The AF1/Elite, particularly when used with a pickup as neutral as the Ortofon Windfeld, constitutes an extremely neutral reproducing setup. It also presents to my ears a rare impression of apparent accuracy to the source. Obviously, my choice of words —“impression,” “apparent”—are important qualifiers. The truth is that without a known reference setup by which we can compare the source to the reproduction, it’s impossible to determine how accurate any reproduction is. To do that would require comparing the reproduction to the mike feed or the mastertape.

So when I say that I hear an impression of *apparent* greater accuracy, what do I mean in the absence of a verifiable source reference? Well, one thing is that I perceive more difference from recording to recording. To put this another way, I get no impression of definable characteristics reappearing on each and every recording, regardless of where the recording was made, how it was miked, or on what label it was released. Now most of the time when you hear such things, what you’re really hearing is frequency response anomalies from transducers (phono pickups or speakers). But when those components are reasonably flat, what you’re left with are colorations and other artifacts in the rest of the setup (or the room). Some record-playing setups offer an excessively detailed presentation (those that pride themselves on their “resolution”); some are always warm, heavy, and relaxed; some are always bright or forward; others distant and laid-back; some are light and a little drummy (often found in small, physically light turntables that lack suspensions); and still others have a “liveliness” or “airiness” that, however pleasant, is plainly not accurate (more often the result of euphonic resonances, as sometimes happens when moving coils are inadequately loaded or ’arms and platters insufficiently damped). The list goes on and on. Most of the time when these characteristics occur in quality vinyl setups, their effects are relatively subtle or at least benign enough to allow us to enjoy the music with little or no distraction as such.

But when you hear components that generate few or none of these anomalies, you realize that what you've been listening to has been a lot of "information" that does not actually derive from the source. For me, it's this quality of absence that many of the better record-playing systems approach—and that is perhaps the only thing that even remotely justifies their high prices. (Two of the true luminaries of audiophile recordings, Doug Sax [Sheffield] and Kavi Alexander [Water Lily], both use moving-magnets—Sax, a Stanton 881 Mk II; Alexander, an Audio-Technica ATLM-170—for their greater accuracy. Both men find these cartridges yield results that prove very faithful to the mike feed or the mastertape, far better than any moving coils either has found previously.) [*Sax once said to me in jest "I like moving-coil cartridges—when they're in somebody else's system."*—RH]

The AF1/Elite obviously possesses this accuracy in abundance. It's the audio equivalent of what Keats called "negative capability," and it refers to the way some components have of being able to disappear from the reproducing chain. Among vinyl-playing components with which I have long familiarity, the AF1/Elite combo possesses this to a degree unsurpassed and only rarely equaled. For that alone it merits my highest recommendation (but, of course, it is *not* alone).

Summation

As sound reproduction continues to improve, it's getting harder and harder to describe it without using terms that result in repeating yourself. This is because the improvements are mostly along the same lines as previous advances, only in ever-smaller increments that, ironically, also result in exponentially higher prices. It was Gandhi who defined an expert as someone who knows more and more about less and less until eventually he will know everything about nothing. I've sometimes wondered if a parallel observation cannot be made about audio reviewers and audiophiles: People who inflate tinier and tinier differences of ever more minute significance until they quite literally disappear into thin air well after they've ceased to be meaningful. (Particularly in areas of reproduction such as "resolution" and "detail," two related characteristics that beyond a

certain point have rather less to do with natural and realistic reproduction of music than you might think.) Every time I review very expensive products, these concerns loom large, not least because there is so much hyperbole in journalistic reviewing of everything from consumer goods to books and films, so that a temperate and reasonable response, indeed anything less than a hat-in-the-air rave, can sound unenthusiastic, if not like a pan.

Is the AF1/Elite the best recording-playing system money can buy? Yes. Are the Basis Inspiration, the Clearaudio Statement, the Continuum Caliburn, the Kuzma Stabi M/4 Point, the Rockport Sirius III, the SME Models 30/2 and 20/2, and the Walker—to name only a few that to varying degrees I've heard under reliable circumstances (please note the order here is merely alphabetical)—also the best record-playing systems money can buy? Yes. If this sounds confusing, good: because I don't regard the question as a serious one. The "best" doesn't exist, and it absolutely doesn't exist when it comes to sound reproducing systems, with their constituent parts as interdependent upon each other and upon the conditions under which they are used.

That said, let me state that while the Air Force 1/Phantom Elite pairing is not the most expensive recording playback setup out there, it did perform in certain key respects, which I hope I've articulated adequately in this review, better than any other to which I've had a reasonably long exposure. Further, as is far too typically the case in high-end audio (setting aside monster speaker systems and certain kinds of electronics with designed-in tonal flavors), the margin of superiority of outlandishly expensive gear—notably source components and electronics—is in most areas rather modest, the rhetoric of its champions notwithstanding. This is certainly true of AF1/Elite with respect to other fine record-playing systems I've used, such as several SME models, the Basis 2200 and Vector 4 'arm, and the SOTA Cosmos with an earlier Graham or SME 'arm. The reasons are obvious: the really high excellence these last twenty years in components of moderate and even budget cost and, specifically with respect to vinyl reproduction, the ceiling on the technology itself. I personally believe that

ceiling was in every practical sense nearly reached a couple of decades ago. Analog is a mature technology, which means that while as a genre the latest turntables, 'arms, and pickups are usually better than those of the past, the key questions remain how *much* better, how much better can they get, and how much that better costs.

Here's what I will say with some confidence: If you elect to purchase this combination, you can rest assured that you will have one of the very finest record-playing setups in the history of the planet—one that, given the limitations of vinyl technology and the available media now and in the foreseeable future, is unlikely to be significantly surpassed, if at all, during your lifetime. Add to this the fact that despite its considerable weight, the AF1/Elite is rather compact compared to several of its Rube-Goldberg oil-derrick-in-your-living-room brethren, gloriously easy to use and both flawless and foolproof in operation, unfussy to maintain, beautiful to behold without being garish or ostentatious, and absolutely magnificent sounding.

SPECS & PRICING

Air Force 1 Turntable

Type: Belt-driven turntable with vacuum hold-down

Speed: 33-1/3, 45

Dimensions: 24" x 20"

Weight: 221.5—238 lbs.

Price: \$105,000

Graham Phantom Elite Tonearm

Type: Unipivot tonearm with user-replaceable 9-, 10-, 12-inch removable 'arm wands

Price: \$12,000—\$13,000, depending on 'arm wand

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