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Analog Sources

Audio Perfectionist Journals #14 and 15 will provide more information about source components continuing on from the general introduction to this component category offered in Journal #9. This issue will concentrate on vinyl record playback and the next one will cover digital sources. I'd like to start by commenting on some information that was presented previously.

Audio Perfectionist Journal #9 was all about source components. We mentioned most of the possible sources of recorded music and I offered opinions based on my experience with commercial products during my years as a high-end audio retail merchant. The number of sources now available for high fidelity reproduction is shrinking and vinyl records have risen to the top of the list again. My past experiences with certain design choices are still valid but that doesn't mean that products using methods that I've found less than completely satisfactory can't perform reasonably well. Let me elaborate.

Fewer Choices

In the beginning, analog records were the primary source of recorded music suitable for reproduction by a high-end hi-fi system. Tape and radio were available of course but records reigned supreme until the advent of the compact disc in the

early 80s. The convenience of the compact disc, along with a misleading advertising campaign that promised "perfect sound forever," allowed CDs to supplant vinyl records and dominate the recorded music business for the next 20 years.

Today FM radio has been largely supplanted by satellite and Internet radio with compressed digital streams that are not suitable for high fidelity reproduction. DVD-Audio, which was promoted almost exclusively as a multichannel format, seems to be completely dead. Sony failed to deliver "single inventory" SACD/CD hybrid discs as promised and SACD seems to have been relegated to cult status. That leaves vinyl records and compact discs as our primary sources for music listening.

In the late 90s more people began to recognize that the fidelity of CDs was simply inadequate to provide the complete listening satisfaction that music lovers were seek-



ing. By the time they realized this the high-end audio business and the music industry itself had been in decline for more than a decade. During this time home computers and the Internet became established with a mainstream audience and forever changed the landscape of entertainment. Home theater and the iPod siphoned off a number of casual music listeners and our little corner of the world shrunk. Some high-end manufacturers tried to be all things to all people and most failed miserably. The reasons are simple in my opinion.

Mass-market manufacturers, like Yamaha and Denon, can do a better job with home theater than any small specialty company. They can deliver more for less and they can create new products with new “features” much faster. The sound from compressed digital formats like Dolby Digital and DTS has limited fidelity and sophisticated high-end audio components are just not necessary in order to provide a satisfactory experience. Some manufacturers tried to create a high-end home theater market but these efforts have been largely unsuccessful. The rich can spend their money any way they like, of course, but high-end home theater simply is not needed and few seem to want it. Ask Levinson.

Computer companies, like Microsoft and Apple, can do a better job of providing digital downloads on the Internet and portable players for listening to them. Compressed digital music formats typically use bit rates a little higher than home theater sources but this sound is not high fidelity by any stretch of the imagination. An iPod is fine when jogging or traveling by air but MP3s sound inferior to regular CDs even on my Bose car stereo system and horrible on my home audio system.

All these products are clearly here to stay and they provide satisfactory sources for movie viewing or casual music listening. They are convenient and give people access to a wide range of music and film that might not otherwise be heard or seen. The Internet and the iPod give today's kids the taste of music that FM radio provided to those from my generation. Movies are a substitute for books for many of today's time-challenged folk.

But what if you still find that listening to music as a primary activity is among life's most satisfying activities? Why not assemble a high-end audio system and collect recordings to play on it? That's what we're writing about here in the **Audio Perfectionist Journal**. What if you're also an audio component manufacturer who wants to stay in business? I'd advise you to

abandon the product categories where you can't compete and concentrate on the areas where you can deliver superior products.

Music lovers can be most satisfied by a high quality two-channel audio system that incorporates vinyl records for the highest resolution playback and CDs for more casual listening. Specialty manufacturers can best compete by delivering high quality products that require the expertise and care in construction that mass-market manufacturers can't afford—or don't know how—to provide.

Vinyl Rising from the Dead

In the early 80s those in the high-end audio industry tried to jump on the CD bandwagon because they thought they could appeal to a mainstream audience. They were wrong. The mainstream was perfectly happy with the CDs they heard on mass-market audio systems and car stereos. They seem to be even happier with sources of even lower quality, like MP3 and Dolby



Digital compressed formats. The mainstream audience has demonstrated that they want low prices and convenience above all else. Repeated attempts to introduce higher resolution formats, like SACD and DVD-Audio, have failed to make an impact with a public who either can't hear the difference or simply doesn't care. Vinyl records, which

supposedly became obsolete in 1981, outsold SACD and DVD-Audio discs combined last year but that total number was still comparatively small. Apple sold 40 million iPods and a billion songs to play on them. Draw your own conclusions.

Discerning individuals make up a small minority of the public at large. Most people can eat at McDonald's and drink wine out of a box. McDonald's won't try to go “high-end” because they're doing just fine. Fewer people will eat at fine restaurants but there is a market, albeit smaller, for better quality food and

service. And there is still a market for better audio systems and components. That market will never be as big as the market for iPods but I believe that realistic goals can be achieved.

Generalizations Versus Specifics



I was a retail merchant, specializing in turntables, for more than two decades. I sold, set up, installed and repaired all brands of turntables, tonearms and cartridges. I graphed the primary reso-

nances of every tonearm/cartridge combination we recommended and many others. I graphed frequency response variations caused by load impedance changes for every cartridge we recommended. I did turntable A/B comparisons and listened to an enormous number of vinyl playback systems. I came to some general conclusions about the performance characteristics of various design choices and some of these were explained in **Journal #9**.

In my experience, suspended turntables delivered deeper and better-defined bass performance than mass-isolated tables and they were less affected by environmental disturbances. Turntables with plastic platters sounded thick and dull compared to turntables with metal platters, which were generally more lively and dynamic. AC motors outperformed DC motors. Tonearms with gimbaled bearings and rigid construction generally outperformed unipivot tonearms. Pivoting tonearms generally outperformed straight-line tracking tonearms.

In this **Journal** there is a review of a VPI turntable that I could happily listen to for extended periods of time. It is mass-isolated, has a plastic platter and a unipivot tonearm. Based on the generalizations listed above it's not worth listening to. Based on listening to records using this playback system it's very good! There are some caveats. The table is mass-isolated but sounds much better on a Ginko Cloud suspension base. The platter is plastic but has a remarkable metal periphery clamp

for the record. The tonearm has a unipivot bearing and looks flimsy but, for reasons I can't explain, it works very well and sounds very good.

New Motors

In earlier days DC motors had brushes and commutators. They turned faster if the voltage increased and slower if the load increased. Servo systems were always used to keep them turning at the right speed. Servo systems continually sample and change, effectively creating flutter distortion at the sample rate of the servo. Times have changed.

I am not an expert on electric motors but I'm going to attempt an explanation. Today there are motors referred to as "commutatorless" or "electronically commutated," or "stepper motors." Sometimes these are referred to as DC motors but they don't work the same way. Short bursts of current are delivered sequentially to specific poles in order to make the motor rotate. Current may change from none, to a fixed and specific level for a fixed and specific time, and back to none. Even if current flows in only one direction these are essentially alternating current motors with the current alternating from one level to another (stepped or pulsed DC).

Turntables with the older DC motors sounded pretty bad but this problem seems to have been solved. All the turntables Shane and I listened to together sounded virtually pitch perfect with no audible wow or flutter.

RIAA Equalization

Phono preamps must provide RIAA equalization with a curve that is exactly the inverse of the EQ that was applied when the records were recorded. In the old days cheaters loved this and they still do. They could differentiate their product from the others with slight EQ "errors" that would fool unsophisticated listeners for a while.

The defining differences between various phono stages should be significant but shouldn't consist of obvious changes in tonal balance. Beware of products that sound too different. They're probably cheating with RIAA EQ! Very small alterations in playback EQ, even at frequencies well above the range of human hearing, can be very audible. Ultrasonic errors do create audible effects and can potentially damage your other components. [APJ](#)

AUDIO RESEARCH PH5

By Shane Buettner

Several years ago at CES I experienced what was the best stereo and vinyl playback I'd ever heard at a show. Audio Research was "off-site" at the Golden Nugget and using Vandersteen Model 5 speakers with their Reference Series front-end components—the REF 2 preamp and Reference Phono stage. The sound was transparent, dynamic and completely alive.

Flash forward to CES and its offshoot T.H.E. Show in 2005. Audio Research was getting the best sound I'd heard from speakers I don't even like—the Wilson MAXX—using their new Reference 3 line stage, and a phono stage called the PH5.



They could have easily convinced me that what I was hearing was a successor to the \$7K Reference Phono, but the truth is that I wasn't hearing ARC's flagship phono stage. Hard as it was to believe, I was hearing a new ARC phono stage priced at just \$2K. I was dying to hear that phono stage in my own room and now I have. The PH5 is yet another new ARC component that you have to hear for yourself.

A Hybrid For Your Listening Room

Everything you want to know about this phono stage is available on ARC's web site, which is unusually thorough. What follows here is an overview of the important design details.

Audio Research has been making hybrids a lot longer than Toyota or any of the car companies. Of course in this setting the term indicates that this design uses both tubes and solid-state circuits in the same box. The input stage uses JFETs, while the gain and output stages use four 6922 twin-triode tubes.

Interestingly, ARC's literature makes the point that the input stage uses no global feedback—a trend ARC has embraced even more extensively with the new REF3 line stage, which uses no global feedback in the entire circuit. But ARC claims that the RIAA EQ circuits of the PH5 are descended from those used in the Reference Phono, and are passive in the high frequencies but active in the low frequencies. As far as I know active RIAA always employs a feedback loop. The PH5's one and only gain setting is 57.5dB.

Outside the Box

The PH5 looks like an ARC preamp, with the aluminum faceplate and classic ARC handles protruding from either side of the faceplate. The handles cost an additional \$80. I've always loved the ARC look, which is timeless in its way. So for me, the handles are a "when in Rome" kind of must-have.

Facing the unit, there are two inset areas in the front panel. The left inset houses a bank of LED indicators, and on the right inset, a row of four buttons—Power, Mute, Mono/Stereo, and Load. The left bank LEDs light for power, mute, mono and whichever of the five load settings is selected: 47k, 1000, 500, 200, and 100 ohms. All front panel adjustments are repeated on the PH5's diminutive remote control for the ultimate in convenience.

The power cord is removable and there is one single-ended input with a grounding post and a single-ended output. The top and bottom of the chassis are meshed so the tubes get a lot of air-cooling. About as straightforward as can be, especially considering this is such a full-featured phono stage.

Feature-wise, there's only one thing I'd like to see added to the PH5: a standby mode that turns off the tubes but leaves all the solid-state circuits powered up when the unit isn't in use. This would raise the price a few hundred bucks, but would be well worth it, in my opinion. I found that the PH5 sounded quite a bit better when it had been on for a day or two before listening and I'm pretty sure that's not due to the tubes in the circuit, but rather the solid-state components.

Performance

Simply put, the PH5 not only lived up to my expectations—it exceeded them handily. The PH5 is "tubey" in all the right ways, and none of the wrong ways. It has a sparkling, vibrant liveliness through the midrange, and none of the old-fashioned,

warm, syrupy sound that defines tubes in the minds of some audiophiles and manufacturers.

The bass is ample, but also tuneful, nuanced and rhythmically involving. Rhythmic rightness (rhythm-and-pace) has long been regarded as the province of Linn, and some other British manufacturers. But for my money, ARC's front-end components have never been far behind. The reason you read about this critical if



elusive sonic attribute is that it's the stuff that gets your foot tapping—and when that happens your emotions are engaged in the music whether your head knows it or not.

The midrange and treble are open and revealing but also exceptionally organic. The PH5's sound is very fast, engaging and incisive without being analytical in the slightest. The dynamics are concussive, with genuine and expansive contrast between the softer and louder sounds. Musical events and transients happen suddenly in a remarkably free and natural way, evolving from free air and decaying with just the right amount of grip on the room. Some refer to this as "bloom." Whatever you call it, it's a good thing and the ARC has it in spades.

Just as important as what you hear with the PH5 is what you don't hear—noise of any kind. It has the least amount of tube rush I've (n)ever heard from a tube phono stage when the music isn't playing, and has nearly as black a background as I've heard from any phono stage—tube or solid-state—when the music is playing. Anyone with negative preconceptions about tubes will be challenged by the PH5 to reconsider their thinking. And not only did the PH5 start quiet, it stayed that way. During the several months I had it in my system, it never

got noisy, as some tube components do over time.

I compared the ARC PH5 to the Ayre P-5xe, which has been my reference for several months. The Ayre is a 100% solid-state, FET-based design with discrete, balanced circuits that uses zero global feedback and entirely passive RIAA equalization. If you'd expect (as I did) that these two substantially different designs would sound substantially different from one another, you'd be... 100% wrong!

Much to my surprise, Ayre's P-5xe and ARC's PH5 had much more in common sonically than not. Tonally, the two were so similar and so neutral that it took some time to ascertain and quantify the sonic differences between the two. Playing games with the RIAA curves apparently isn't something these two companies engage in. If you hear either of these two phono stages, and then hear another that's noticeably different tonally, you should be suspicious.

The Ayre had slightly tighter bass, with just a touch more extension in the very bottom and the very top, and a pinch more midrange resolving power. The ARC had a slightly more relaxed, easy presentation and yet didn't suffer any significant loss in precision or clarity in order to achieve this. The ARC had a smidge more dynamic snap; the Ayre had better coherence from top to bottom, and slightly more convincing image density and focus. Both had a combination of resolution and musicality overall that was hard if not impossible to fault.

Those who have read my work before know that I'm never hesitant to make the call on what I like, and what I don't like. During the months I had them both, I'd switch from the Ayre to the ARC for weeks on end, waiting to see if a moment or a piece of music arrived that would make me desire the component that wasn't in my system at the time. Never happened. Both pleased me so completely and thoroughly that I know I could live happily ever after with either.

Conclusion

The ARC PH5 is an outstanding phono stage in all regards. Its feature set and functionality leave practically nothing to be desired, it's sonically beyond reproach, and the \$1,995 price probably takes it into the "steal" category of value. And yet I'm not sure accolades such as those do the PH5 full justice. How

about this: like ARC's best components, the PH5 does everything right in an intellectual sense, and yet never fails to make music. Going farther, not only does the PH5 make music, it makes music an event. It also earns a high and boundlessly enthusiastic recommendation from this reviewer. [APJ](#)

Product Information

Audio Research PH5 Phono Stage

Inputs: One single-ended

Outputs: One single-ended

Dimensions (WHD): 19" x 5.22" x 10"

Weight: 11.3 lbs.

Manufacturer Information

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AYRE P-5xe PHONE STAGE

By Shane Buettner

Ayre's flagship K-1xe is the finest solid-state preamp I've heard. Its optional integrated phono stage is astonishingly detailed, neutral and drop-dead quiet. In fact, the K-1xe's integral phono stage impressed me so much that I mentioned to Ayre's president and chief designer Charlie Hansen more than once that I thought an outboard phono stage would be a heck of a good idea.

Well, it wasn't my pestering that finally got Charlie to act but, rather, the fact that it wasn't possible to get a quiet phono stage built into Ayre's midpriced K-5 preamp. I'd also guess that the resurgence of vinyl (which sells more units than SACD and DVD-A discs combined) didn't hurt either. Whatever the reasons, Ayre's P-5xe phono stage is here and it's such an extraordinary performer that its (relatively) diminutive price of \$2,350 also dictates extraordinary value.

Intelligent Design

This product is very Ayre. To those of you who have read my reviews of Ayre gear before, I'm going to sound like a broken

record (pun fully intended!) describing the design of this phono stage. Charlie Hansen likes discrete, fully balanced circuits with no global feedback and he hates op-amps because they inherently contain lotsa feedback. The P-5xe is fully discrete, balanced from input to output, and has zero feedback.

Like all Ayre gear the P-5xe is all solid-state, FETs are used for gain, and there are three gain settings: low (44dB), medium (54dB), and high (64dB). If you're using the balanced outputs add 6dB to each setting. The medium setting is the default, but



it's very simple to open the top cover and swap the jumpers to change. And the user manual includes a handy-dandy diagram and does an excellent job of describing the procedure.

Loading is adjusted with DIP switches on the back panel and the available factory settings are 100, 1000 and 47k ohms. If those don't work or you just want to experiment, custom resistors at whichever value you choose can be inserted into the unused input on the P-5xe, and again the user manual describes the process with superb clarity.

The P-5xe includes not only a set of balanced outputs, but also a set of balanced inputs to complement a set of single ended ins and outs. RIAA is passive, in a proprietary implementation that improves accuracy by eliminating interactions between the multiple curves required to meet the standard and lowering the noise floor. Phono stages by their nature employ very high amounts of gain, making noise suppression of paramount importance.

As you can probably guess, the P-5xe isn't a tweaker's phono stage. There are more expensive phono stages on the market that have multiple inputs, more loading and gain settings, and push-button access to those adjustments. Some will even let you make these adjustments on-the-fly by remote control. The

Ayre doesn't even have a power switch—if it's plugged in and the blue light on the front panel is illuminated, it's on!

Looking at the P-5xe's functionality as a half-full glass, this is a purist design that unequivocally gets the job done and sounds great doing it. In fact, its ergonomics are second to none on a day-to-day basis since you don't even have to turn the thing on! Also consider that any additional features would increase the cost commensurately.

Evolution

Like Ayre's other components the P-5xe is carrying around an extra "e" these days, which denotes the Evolution series power supply updates. Ayre is relatively mum on exactly what's involved, but it's said to be a power supply tweak that's been applied to Ayre's line across the board. I've been mightily impressed with the components I've heard both before and after they evolved, including this one, which I did indeed hear before and after.

In all cases I've heard more natural warmth, body and dimension to the music from Ayre's e-series components, and in no case did I hear a decrease in the resolution, extension or focus that makes Ayre's stuff sound great. To put it in today's vernacular, it's all good.

I get a lot of questions from people who already own Ayre gear, wondering if they should send their components into the Ayre factory for the e-upgrades, and my unequivocal answer is yes! The Evolution updates are reasonably priced and offer performance improvements that are undeniable in my experience, with zero drawbacks.

Another note on power supply is that the P-5xe includes Ayre's proprietary "Ayre Conditioner" power line filtering, which is patent-pending and used in some of Ayre's most highly regarded "1" series components.

Break-In

My review methodology dictates that components under review undergo a sufficiently long and arduous break-in period. I'm more anal about this than some (if not most), and if you don't believe me ask my wife. Our house is always littered with gear plugged into any and every outlet when not up and running in my system. I typically regard this as understood and don't

spend time and words on it in a review except in cases where I feel the component really needs extra time, and if that extra time has a major impact on the component's sonic signature. Never, in my experience, has this been more applicable than in the case of the Ayre P-5xe.

Phono stages are inherently difficult to break-in because you can't simply put an LP on the platter and hit repeat, as you can with optical disc players. Because of this phenomenon the best \$50 I ever spent was on Hagerman Technology's stereo inverse RIAA filter (<http://www.hagtech.com>). As the name suggests this little PC board takes a standard stereo input and performs inverse RIAA equalization and drops the signal level low enough to allow you to run the output of a CD player directly into a phono stage. Now you can hit "repeat" and continuously break-in a phono stage! While the Hagerman device has more obvious benefits to a reviewer of phono stages, it's cheap enough that anyone who buys a phono stage and doesn't want to wait weeks or months to achieve proper break-in might consider it a good value-add.

Now, even though I ran the Hagerman into the P-5xe for almost two weeks straight, the P-5xe took 2-3 months to come into its own dynamically. I didn't continue to run the Hagerman filter into it beyond that couple of weeks because I was already hearing such excellent sound that I was fooled into thinking it didn't need more break-in time. The P-5xe was dead quiet and very extended at both frequency extremes right out of the box, but I kept thinking it was just a bit flat dynamically.

As time went on I was happy but not completely enamored of the P-5xe. I tried the high gain setting to see if I could get some more jump out of it, and tried running the cartridge loading higher than I typically like. The higher gain setting sounded good but a touch strained, and didn't exhibit any real increase in dynamic contrast that I could hear. It was just louder. The higher cartridge loading just made things zippier, and lighter in weight.

So I returned to the medium gain setting and my typical loading preference of 100 ohms and then—bam! One day it was like I had found a DIP switch labeled "slam" and flipped it to the on position! The P-5xe came to life all at once, dramatically. It didn't soften, or get warmer sounding. Tonally it remained just as neutral as it had been, but the jump and snap factor increased by orders of magnitude. Strange but true. I ran this by Hansen and he thought that the thick circuit board he's

using might have something to do with the long and then dramatic break-in. If you buy one of these don't email after a week and tell me you're not hearing what I heard—wait a while!

A last note on setup and placement, the Ayre will hum if it's close enough to something with a big transformer in it. In fact, Ayre's own C-5xe has a big enough transformer that I had to get the P-5xe two shelves down from it to eliminate the hum, even with an all-balanced configuration.

Performance

With the P-5xe in the full swing of its performance envelope I heard even better sound than I'd expected, in spite of the fact that the K-1xe's integrated phono stage prepared me for nothing short of excellence. I heard all of the crystalline clarity and purity of sound I'd heard from the K-1xe phono section, but I also heard better extension at the frequency extremes and more resolution at all points in between. And after the "e" update, I heard more musicality and warmth too.

The P-5xe is not only as scary-quiet as the K-1xe, it might be quieter still. In the midrange it has extraordinary resolution of expression and focus, especially with vocals. It's simply as resolved as can be with as much openness and inner detail as I've heard from vinyl playback. And yet it reveals all its transparency in a way that's non-mechanical, very natural and very relaxed. Only a direct comparison to a tube phono stage in a very high-resolution system reveals the Ayre's sound as being solid-state in any way, and even then I consider that an observation and not a criticism.

I've remarked in print before that the hallmarks of the Ayre "house sound" are incredible amounts of focus and resolution, with bass performance that's lacking weight and foundation in the lowest registers. The P-5xe is one of two new(er) products from Ayre that are a significant and welcome departure in this regard. The other is the C-5xe Universal Stereo disc player.

The bass of the P-5xe is remarkable not only for its weight and authority, but for its extraordinary articulation and resolution of low-level details. Great acoustic bass work has a wealth of small nuances of expression—microchanges in the intensity of the string plucks, the hand sliding up and down the neck and strings, the other hand slapping the cavernous body of the instrument, and the resonance of the big body of the instrument, all at the same time. The Ayre allows all of this expres-

sion during a performance to be revealed without ever getting too fat and quenching the little details, or getting too fast and lean and robbing the instrument of its massive body.



At the other end of the bass spectrum is something like Epic's AC/DC box set on 180G remastered vinyl, which has electric bass and kick drums that are EQ'd to be big, beefy and sock-in-the-

gut powerful like a concert in a 20,000-seat arena. This kind of big, loud bass is short on nuance, but huge on balls and the Ayre can do that with the proper impact but no overhang or bloat—just the requisite amount of raw, punishing power.

Other Ayre hallmark sonic attributes include resolution and otherworldly image focus front to back, and particularly side to side on the soundstage. Laterally, the P-5xe focuses instruments and vocalists in a line, right across the stage in a tighter fashion than anything I've heard. On Johnny Cash's *American Recordings IV: The Man Comes Around*—a record I've listened to hundreds of times—I heard better separation between the dueling guitars and a particularly addictive amount of midrange detail on guitars. The strings and the bodies of the guitars were integrated and full, but also detailed, airy and very present. It's not easy to pull something off that record that I haven't heard before but the Ayre did just that.


While the Ayre's lateral focus is beyond reproach—the best I've heard—it does compress things a hair from front to back in comparison to Aesthetix' Rhea, a remarkably full-featured tube phono stage that sells for \$4K. The Aesthetix has the full, rounded and dense three-dimensional image that places musicians and vocalists front-to-back in layers on the stage to a startling degree. A prime example is "The Nearness of You" on

Norah Jones' *Come Away with Me* LP by Classic Records. Jones' vocal hovers in a more coherent and yet more distinct spatial plane, and there's a deep front-to-back dimension between the piano and the voice that's extremely distinct on the Rhea and a hair less so on either the Ayre P-5xe or ARC's PH5. Is this real? Is it something on the record or a hi-fi parlor trick—a pleasing coloration? I dunno. I'm not sure which is "right," but I confess I do like this aspect of the Rhea's presentation. On the Ayre's plus side, its background is quieter and has a little more resolution through the midrange and better top-end extension too. Cymbal splashes and piano decay light up the stage, but maintain striking coherence. When cymbals are brushed, for example, you can practically count the strands.

The Rhea's single minor fault, in my opinion, is that it can be just a touch on the dark side. As seriously small a touch as it is, the Ayre's midrange and treble are fully resolved and take the lid off the music just enough to make it apparent.

Conclusion

A reference product is as extended at the frequency extremes and as resolved as it can be without being over-emphasized, pushed or tucked anywhere. A reference component establishes the sensation that what comes out of it resembles so closely the source material that went in that you've no doubt that it's all there, warts and all, without embellishment. It's something you can put in your system knowing that when you audition other components any colorations you hear must be coming out of those components, not your reference.

This Ayre P-5xe phono stage is that kind of benchmark. Its sound is defined by what's on the LPs played through it, not by any interpretation of its own imposed on the music. And yet in spite of that neutrality and precision, it in no way sounds analytical, cold or too revealing. The sound it defines is the sound of the system and components getting out of the way and allowing us to hear more deeply into the LPs than before—and believe me there's plenty of music there without the phono stage adding its own color. You can buy more expensive phono stages with more functionality and features, and perhaps even more of some parts of the frequency spectrum. But I'm not sure you can buy a phono stage that's more truthful. The P-5xe is a highly recommended, reference quality component in every way that I could live with and listen to day in and day out. In fact, I've been doing just that for several months now. 

Product Information

Ayre P-5xe Phono Stage

Inputs: One each balanced (XLR) and single-ended

Outputs: One each balanced and single-ended

Dimensions (WHD): 17.25" x 2.38" x 13.75"

Weight: 12 lbs.

Manufacturer Information

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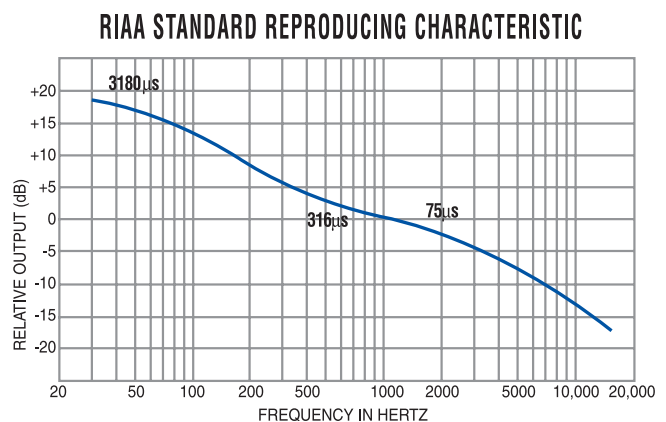
HARDESTY ON PHONO STAGES

By Richard Hardesty

A phono stage must perform RIAA equalization and provide an enormous amount of gain. As the signal level is amplified, any noise, distortion or EQ error will also be amplified. The job performed by the phono stage isn't that complicated but it must be done very well because any negative effects will be magnified—a lot—along with the signal.

RIAA Equalization

During recording, equalization is applied that boosts high frequencies and reduces low frequencies. This equalization allows the reduction of groove spacing to extend playing time when low frequencies are present in the recording, and raises the



level of high frequency information relative to surface noise. A phono stage must provide equalization that restores flat

response during playback. Accurate bass response is achieved by raising the previously reduced bass frequencies, and surface noise is reduced while eliminating the recorded boost in high frequencies. Recording and playback equalization follow the RIAA curve established by the recording industry. See illustration.

Equalization must be very accurate or the signal will be modified (equalized) instead of returned to flat, as it should be. Most RIAA errors aren't really errors but attempts to make a particular phono stage sound unique. The resulting coloration won't be satisfying for long unless you listen to just the half-dozen or so recordings complemented by this inaccuracy. If you listen to a wide range of musical genres you'll be happier in the long run with an accurate component because no coloration complements all recordings.

Gain

Moving coil cartridges typically create about half a millivolt output (.5mV, sometimes expressed as 500 microvolts) at a velocity of about 5cm/second. You'll need perhaps 60dB of gain to raise this to an level appropriate for a line level input on a pre-amp. For lowest noise you'll want the volume control on the line stage to operate in the middle of its range, at comfortable listening levels. If your cartridge output is lower you may need more gain. If its output is higher, less gain will be required.

My Recommendations

I have been using a Linn Linto phono stage for many years. I haven't replaced it because nothing inserted in my system has unequivocally outperformed the Linto and everything I've tried costs more. Loading and gain cannot be easily changed so the

Linto either works with your cartridge or it doesn't. I've been using a Linn cartridge so this combination works perfectly for me. It's quiet, dynamic and neutral and it costs only about \$1,600.

If I were to change cartridges I'd probably change the phono stage. If I were to buy a phono stage today I'd probably buy the Ayre P-5xe. The Aesthetix Rhea sounds very good but is too

noisy for my taste and costs about twice as much. The ARC is quiet and sounds excellent (almost identical to the Ayre tonally) but I find the Ayre slightly more satisfying and it's all solid-state with bulletproof reliability. It has adjustable loading and gain so it will work with virtually any cartridge.

If I had an all-ARC system the PH-5 would be an aesthetic match and could certainly deliver sound beyond reproach. The most cost-effective buy would be a used Linto, which would deliver performance that's right in there, with a Linn cartridge or one with similar needs for loading and gain.

If cost is no object can you buy more performance? Probably not. I've listened to a variety of very expensive phono stages and usually what you get—and this is a generalization—is a romantic addition to the recorded information rather than increased accuracy or resolution. Compare the ARC Reference Phono to the PH5 for an example. Two thousand dollars, give or take a couple of hundred, can buy an excellently engineered and great sounding phono stage. \$10K certainly won't get you much more performance, if any. [ARJ](#)

SME 20/2 TURNTABLE

by Shane Buettner

If you do any poking around to find out who makes today's highly regarded, high-end turntable designs you're not going to have to look hard or far to find someone recommending SME. The Scale Model Equipment Company, known in the audio world simply as SME, is one of those rare companies with a foothold in other markets—aircraft instrumentation and industrial machinery, in this case—that are lucrative enough to allow extraordinary resources to be put into the service of designing and manufacturing audio products that other audio manufacturers simply can't match.

SME was founded in 1946 by Alastair Robertson-Aikman, a passionate audiophile with a now-legendary attention to precision and quality control. By 1959 the company was manufacturing tonearms in steady quantities, and today's SME tables and tonearms are remarkable feats of engineering. While most manufacturers are assembling their products from parts made all over the globe, all the components used in SME's tables and arms are built to the most exacting standards imaginable by SME at SME. Even the screws and grommets used in the

tables are made in-house. And just to be sure, Robertson-Aikman still personally inspects every Series 309, IV and V tonearm, and every turntable that goes out the door with the SME logo on it.

Although the Model 20/2 turntable is available a la carte for \$10,999 it's also sold with SME's Series IV.Vi tonearm as a "performance package" for \$13,999 at retail. I also used the 20/2 with SME's Series V tonearm and, without playing too much the spoiler to myself, I was so impressed after the months I spent with the SME components that I bought a table and arm for my reference system. Read on to find out why.

Design

SME's 20/2 is a medium-mass, suspended design with an out-board power supply. While it's not dainty by any standard at nearly 40 pounds, the 20/2 is nowhere near the size or mass of many of today's enormous "high-end" mass-isolated designs. In contrast to those designs especially, the SME is remarkably compact measuring just under 17" across and less than 13" deep. Density and stiffness matter more than sheer size in SME's book.

The design rationale for the SME 20/2 is that it has sufficient mass and rigidity to resist vibration, but that when it does vibrate the damping shortens the amount of time it takes for



that vibration to dissipate. Low-Q, in other words. The 20/2's base and subchassis are made from a thick, rigid aluminum alloy that's dead—with a capital "D"—and covered with a black powder-coat finish that's quite sturdy with respect to resisting scratches and blemishes. In fact, I was very impressed with the ruggedness and durability of SME's table and arms.

While many high-end tables sport a fine jewelry-like finish with an aura that suggests looking at them the wrong way will cause damage of some kind, the SME makes its fit & finish statement

in a heavy-duty, industrial-grade way that speaks to the company's background. The SME table and arms are more Hummer than Porsche, to put a finer point on it, and obviously built to last and look the same 10 or 20 years down the road. The only exception to the 20/2's brick house approach is the soft cover that's supplied to keep dust off of it. It's actually fine at performing its essential task, but caution must be exercised to always put your stylus guard on, and to avoid catching the cueing device if you're using the cover.

The 20/2's subchassis hangs from 32 O-rings, accounting for 64 strands distributed evenly among the four height-adjustable towers of the suspension. A hanging suspension means the state of the suspension materials is relaxed, as opposed to some spring suspensions, where the springs are in a constant state of compression. SME believes their approach solves the so-called "porch glider" effect that makes some suspended designs susceptible to playback artifacts due to horizontal movement in the suspension, which varies the platter-to-motor distance and causes speed variations. The hanging suspension works in conjunction with a fluid damping system. Energy not filtered by the suspension passes through a fluid damper in the base of the table where it's dissipated.

The platter alone weighs just over ten pounds and is matted with Isodamp, which is softer than vinyl and, according to SME literature, just as sensitive to scratches. According to SME, tiny diamond-shaped cutouts in the Isodamp diffuse vibrations further. The Isodamp mat has a depression surrounding the label area of the record, and then a flat washer fits around the spindle and slightly elevates the area just around the record's cutout. A heavy clamp screws down onto the spindle, pressing the label area down into the depression in the mat and tightly coupling the grooves to the Isodamp mat, and thus to the platter.

There is a cutout area on the left side of the subchassis where the motor and motor pulley rise from the base, so the only physical contact between the motor and the subchassis occurs at the flat belt that wraps around the motor's pulley and the "driven pulley" that spins the platter. Three feet on the bottom of the motor rest in three dimples lined with a rubbery material in the base, and a band similar to the suspension O-rings fastens the motor to the base.

SME feels their approach is most effective at preventing the suspension and other construction materials from imparting their own color on the table's sound. While I don't consider the

Linn LP12's sound to be colored by its spring suspension, I do think the SME is in another league as far as eliminating any coloration that its construction materials might impart.

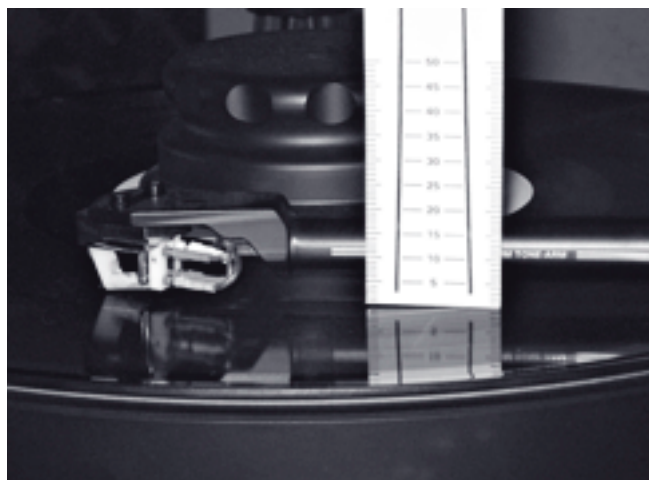
The outboard power supply is only five inches wide and just over ten inches deep. The power supply connects to the table base and this is where you actually turn the table on at 33, 45 or 78 rpm. The conveniently narrow footprint of the table and power supply allowed me to place them side by side on a single (top) shelf on my rack. Speed can be adjusted for each of the three settings. SME literature is vague on the design of the 20/2 power supply, but it appears the power supply sends computer-generated sine waves at the proper frequencies to the motor.

For those curious about SME's step up in the line, the 30/2, here's the short story. The 30/2 is everything the 20/2 is in terms of design, only more. A lot more. Although scarcely larger in overall footprint, the 30/2 tips the scales at nearly 95 pounds—more than twice as heavy as the 20/2. The suspension uses 12 O-rings per tower, for a total of 48 rings comprised of 96 individual strands. Instead of a single fluid damper, the 30/2 has a damper in each of the four suspension towers. Oh, and the 30/2 costs a lot more: \$30K (gulp!) for the table by itself.

Series IV.Vi and Series V Tonearms

These two SME tonearms have much in common, and both are works of industrial art. The IV.Vi retails for \$3,500, but the "performance package" mentioned above hooks you up with that arm and the \$10,999 20/2 table for \$13,999—saving you five hundred bucks. The Series V arm is obviously the top of the SME line, and SME isn't shy about glossing it "the best pick-up arm in the world." The Series V arm now retails for \$4,500, making it and the 20/2 an admittedly expensive \$14,500 not-so-value-priced performance package.

Both arms use precision ball bearings at the horizontal and vertical pivot points, and share the same single-piece, tapered magnesium arm tube and headshell. Magnesium is claimed by SME to have an inherently high damping factor, and the constrained-layer, tapered construction of the tube is said to break up resonances further still. Having the arm tube and headshell comprise a single piece, with no additional screws or moving parts, means uncompromised rigidity.



Both arms employ lateral fluid damping comprised of a screw dipping down into a thick, viscous fluid, but it should be mentioned that this version of the Series IV arm (with the damping trough and Magnan internal wiring) is available only in the US through Sumiko.

The differences between the two arms are slim. Tracking force is set statically in the Series IV arm, but dynamically with springs in the Series V. Perhaps the most significant departure between the two is in the internal wiring. The Series V arm uses Van den Hul silver wire, while Sumiko's exclusive IV.Vi uses copper wiring by Magnan. Experimenting in recent years with speaker wire and interconnects has convinced me of the sonic superiority of silver wire versus copper in all instances. When the construction properties have been right (solid-core pure silver, not silver-coated copper or any other abomination), silver sounds more revealing and open, but also smoother and easier on the ears. There are other construction factors at work here, too, but I preferred the silver-wired Series V arm.

Setup

My hope is that anyone buying a table like this one would buy from an experienced dealer who would set it up properly. But frankly, SME has done such a thorough job of ensuring that their products travel well, and their instructions for setup are so clear, that I think a novice with a reasonable amount of mechanical inclination could get an SME table and arm set up properly in a relatively short time.

Once unpacked from its sturdy box the 20/2 is remarkably close to being ready to spin. The motor is in place, but shimmed with cardboard packing strips and held fast by a tran-

sit screw that's removable by hand. There's an adapter with a measured amount of oil to inject into the bearing housing to supply the bearing with its requisite bath. Two sleeved screws that lock down the suspension must be removed entirely, and then four transit screws must be turned counterclockwise with a ball-ended hex wrench to free the main bearing for play. Pull the flat belt over the motor pulley and driven pulley, carefully lower the platter into place and then level the four adjustable feet on the 20/2's base and you're ready to mount the arm.

The 20/2 is set for an SME arm, and once the arm and cartridge are securely mounted the suspension can be adjusted. Adjusting the SME's suspension is far simpler than tweaking a spring suspension by eye and feel for just the right amount of piston bounce. The ball-ended hex wrench raises or lowers the subchassis at each of the four towers (sounds like a Tolkien quest, doesn't it?). A rectangular key slips in between the bottom of the subchassis and the top of the suspension tower sleeves as a way of measuring the distance. It's recommended that the gap between the two be 3mm, at which point the key fits snugly yet easily between the two.

The instruction manual states that the gap can be exceeded by as much as 2mm to increase isolation. Taking a cue from Silicon Valley turntable guru Brian Hartsell of The Analog Room in San Jose, I got tighter, more focused bass (and more neutrality) by increasing the gap from the 3mm point just a bit. Whatever your taste, there's no mystery whatsoever to adjusting the 20/2's suspension.

Once the suspension is dialed in you can finish fine-tuning the arm setup. Setup of the Series IV.Vi and Series V arms is identically straightforward, and I'll mention only some of the high-



lights. A VTA screw goes down into the base of the arm and allows fast and precise adjustments that are easily gauged using the supplied metered protractor and aligning its measurements with the two stripes that run the length of the arm tube. Drop the stylus onto the middle of a record of the desired thickness and measure the height of the stripes at the stylus end of the arm tube and then again back toward the arm base, and adjust to the desired height. I adjusted VTA flat using a 180g record, letting it go slightly negative for 200g LPs and slightly positive for standard LPs. Life's too short and my music listening time too precious to adjust VTA for each record I play.

A key is provided to scoot the arm back and forth to adjust horizontal tracking angle (overhang) using the other end of the same handy supplied metered protractor. The thick, silicone-based lateral damping goop comes in a syringe pre-measured for a fill and a refill. An adjustable screw paddles in the fluid. If you want more lateral damping, you just turn the screw farther down into the goop. If you want less, raise the screw farther out of the fluid, and if you want none just keep it all the way up. SME recommends replacing the damping fluid annually and admonishes you to use only their fluid.

Like adjusting the suspension, the amount of lateral damping applied to either the Series IV.Vi or V arm offers the ability to subtly tune the sound of the arm and table. More damping tends to warm up the midrange and treble, but also seems to have a positive impact on imaging, adding some dimension and roundness. The less damping that's applied the more lively and (sometimes) edgy the midrange and treble becomes. Even though I didn't want the additional warmth with the Series IV.Vi arm, I liked what it did to the imaging enough to apply just a little. With the Series V arm I applied perhaps a hair more damping, but really just enough to get the spatial dimensionality I crave.

Final Word on Setup

A critical aspect of the design of any component must address the fact that it will be shipped across the globe and not only must it arrive intact, it must be ready to be set up properly and perform within very narrow tolerances. SME addresses this marvelously, especially considering how many precision (and moving) parts are involved in the equation of a turntable and tonearm.

Every objective of setup and tuning for the SME arms and table

is clear, obvious and straightforward, and there's no doubt when you're there. And just as important, the SME gear doesn't drift from its optimal performance setup over time. It's rock solid and, unlike some tables that look more impressive the farther away from them you are, setting up the SME arms and table makes their high quality fit & finish even more apparent. The SME combos often make other table/arm rigs look and feel like toys.

Performance

I started with the SME 20/2 and Series IV.Vi arm, and initially used the Linn Akiva cartridge that I had been listening to on my LP12 for months. Using the same cartridge allowed me to hear very clearly what the arm and table were doing, and the differences were stunning.

Whatever I might have been expecting, I did not expect such an immediate and noticeable improvement in the very basic business of playing records. I know that sounds odd, because what the hell else does a record player do? What I mean is that the SME 20/2, with the same Akiva cartridge I'd had on my Linn, played back records more quietly, and was particularly more adept at quieting down noisier pressings. I'm not huge on owning super-rare and expensive records, but a prized possession in my record collection is a very rare and valuable Nautilus



pressing of Neil Young's *Harvest* that is flawless—except for a good-sized and quite audible scratch right smack in the opening of “The Needle and the Damage Done.” The 20/2 tracked this song without so much as a tick or a pop! The first time I played it I couldn't believe it. I ran over and dropped the needle again only to be given the silent treatment once more.

Making the records I already own play back quieter is big, but this aspect of the SME's performance also lets me take a few more risks when thumbing through the used record bins here in

the bay area. For the most part, so long as a record hasn't been skipped across the street like a Frisbee, odds are the SME will track it and play it with a minimum of noise.



Speaking of dark, quiet backgrounds, on pressings that are inherently quiet the 20/2's backgrounds are as black as night and freer of noise of any kind than any table I've heard. This extended the soundstage depth noticeably from front to back, and the precision of image focus

increased as well. But I'm not talking in run-of-the-mill hi-fi terms. Focus in this case means that the vocalists and musicians take on nearly physical solidity and density. Not just a voice, but the mouth and head from which it emanates. There's image and then beyond that there's the palpable presence of the performers, and the 20/2 crosses the line for the utmost in communication and expression from the artists to you.

Although the 20/2 suppresses the mechanical artifacts associated with vinyl playback to a greater degree than any other table I've heard, it is not among the many, many tables I've heard that also damp the dynamic life and energy out of the music right along with the pops and clicks—the analog equivalent of tossing the baby out with the bathwater. The 20/2 has more control and authority and yet the grip is never so tight that it squeezes the life out of the music.

But these black backgrounds aren't just a matter of suppressing the LP's mechanical artifacts. More than any other LP playback system I've heard, the SME table and arm(s) simply don't have a sonic signature that you can point to. The closest one could come is tapping the subchassis or base and tying that lack of resonance to the black backgrounds. But there weren't any tonal characteristics or colorations of any kind imposed on the music that made me feel at any time like I was hearing the LP playback system's interpretation of the

LPs I played on it. This system—especially with the Series V arm (more on this later)—simply and wonderfully sounds more like the music and less like a record playing machine. Even digital diehards are going to have a hard time throwing FUD (fear, uncertainty and doubt) at this record player. The preceding comments pertain to the SME 20/2 with the Series IV.Vi arm, and with Linn's Akiva cartridge. But with the SME Series V arm and Lyra's Titan cartridge (\$4,500, read review here) the 20/2 showed me even more.

The SME Series IV.Vi arm delivered terrific sound and I wouldn't fault anyone for going that route, especially since the "performance package" (IV.Vi with 20/2) costs about two grand less than a 20/2 and a Series V arm. But I liked the sound more with the Series V arm. In fact I liked it enough to pony up the extra scratch myself. So, there I said it: I bought the 20/2 and a Series V arm. Here's why.

The Series V arm has faster, tighter bass and a more strikingly resolved and open midrange—attributes that are unquestionably interrelated. I also found more sparkle in the treble and more transparency overall, which made the Series IV.Vi sound just a touch softer in comparison. Mark those last two words because, indeed, it takes a direct comparison to a superior arm to reveal these characteristics, which are subtle, but enough to get me to open my wallet a little farther. Lyra's Titan upstaged Linn's Akiva (also reputed to be built by Lyra) in some of the same ways, particularly with midrange clarity and top-end transparency. The Lyra might be a touch less full in the bass, but is unquestionably higher in resolution.

With the Series V arm and Titan on board the 20/2, the silent backgrounds and the elimination of the sound of the mechanical operation of the table took the combo to a dazzling level at revealing and defining the sound of the recording space. And while I could certainly cue in on minute details that previously had not been as apparent, this is something more. There is a complete and obvious sensation every time a record plays that the recording space has changed, that the miking techniques are different, that the players are interacting in different environments. These things are presented in a way that's bigger than the sum of the small details. The air in the listening room feels different as you're somehow taken into each new recording space on a large scale, which makes the small stuff that much more convincing.

As for tonality, I might as well describe what's on my records since that's all I hear from this table. But I will say this: I hear more extension at the frequency extremes than I ever heard from my Linn and, as is so often the case when that happens with a component, I also felt like I heard more of what's in between. Brushed cymbals have the kind of texture and detail that makes you see the strands of the brush, and a piano lights up the room and then decays naturally, in perfect integration with the fundamental notes. Seductive, lid-off, open detail and shimmer with no sizzle or any other additive detractors. The bass is no less impressive, with more outright extension than any other table I've heard, for a rock-solid foundation to the music. Detail, expression and speed were beyond reproach, and overall the bass on this table sets the analog standard among the tables I've heard. Consider that this is with the suspension adjusted such that the subchassis is drawn up a bit higher than SME recommends initially. At the "stock" position recommended by SME, I did find the bass a little on the thick side, and a touch slower, but fortunately it's an easy adjustment to escape that if you choose. Or not. Different systems require different seasonings.

In the last several months the SME 20/2 has been in my room along with some other formidable tables, including the Linn LP12, the VPI Super Scoutmaster, and even Avid's Acutus. The Avid made for an interesting comparison as it resides (roughly) in the same price category at \$13K (without an arm), and is also a new and innovative take on the suspended turntable. In short, the Acutus uses a suspension hung from springs, as opposed to sitting upon and compressing the springs. Unlike the SME, the Acutus' chassis and subchassis materials are not critically damped, and the platter itself is very hard. Flicking your finger anywhere on the SME results in a dull thud, while flicking the Acutus platter in particular reveals a higher-pitched sound with some zing to it. And that's pretty much how I heard the two tables.

It's recommended by Avid's US distributor, Music Direct, that the Acutus be sold with an SME Series V tonearm. So for the sake of comparison, I simply moved the SME V with the Lyra Titan from the SME 20/2 to the Avid. The Avid has a lively, forward midrange, and it projects an enormous but solidly focused soundstage into the room. But in comparison with the SME it became apparent that the 20/2's midrange clearly reveals more real information, especially with vocals. This is a difficult distinction. Many audiophiles are seduced into confusing

midrange emphasis with increase in detail, especially in short demonstrations.

The Avid never approached the SME's bass foundation, making everything sound leaner. Adjusting the VTA of the tonearm added some weight and warmth, but at the expense of the Acutus' forward but lively midrange. It still didn't match the SME, and something was taken away from the Avid's most striking sonic attribute.

Fast, aggressive, dynamic piano recordings also revealed that the Acutus could not keep up with the SME's rock solid footing during complex passages of music. Fine details became blurred, the sound had even more zing and bite, and the image focus became less distinct on the Avid during such passages. One of the SME's many striking attributes is its ability to keep track of every nuance of even the most complex, dynamic passages with no loss of clarity whatsoever. Nothing rattles the SME; everything is there and always in the right place. The Avid isn't a bad table, but it's not my cup of tea, and I wonder what it would sound like with a softer platter material.

Conclusion

The SME 20/2 turntable and Series V tonearm combination is the best I've yet heard, period. If the 30/2, which costs three times more, is even incrementally better it must be a staggering achievement. The 20/2 is too expensive to be called a bargain, but I don't think it's overpriced considering that equal performance (or build-quality) is simply not available for less money. In fact, my experience with turntables to date indicates that to get even a little better performance would require wildly disproportionate spending. And my money is where my mouth is on this one since I threw down my own cash to have a 20/2 and a Series V arm in my reference system. I don't think my high regard for the SME 20/2 turntable and Series V arm can be made any clearer than that. [APJ](#)

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VPI SUPER SCOUTMASTER

By Shane Buettner

Back when I was a college student and a fledgling audiophile, the first audio component I saw that filled me with lust by its looks alone was a VPI TNT turntable. I was using my roommate's solid but old-fashioned AR table at the time, and the TNT was wildly exotic in comparison. This VPI, I thought, could stand alone in my living room as an industrial art masterpiece, regardless of its abilities as a turntable.

Flash forward these many years, and man, have things changed. Even VPI's current top-of-the-line HR-X is almost utilitarian in looks compared to many of today's "high-end" tables. It could even be called relatively cheap compared to many flagship tables. In fact, as I write this, Stereophile's cover is graced by an outlandish looking \$90K turntable system from Australia. The optional stand for this table is \$25K!

While there might be a hedonistic thrill in reviewing a \$100K run at the state of the art that five or ten guys in the world can afford, I'm far more excited to be writing about VPI's Super Scoutmaster. The Super Scoutmaster is a table/arm combo that is far more accessible at \$5500, and offers exceptionally high performance and value for the money. This combo proves unequivocally that high-end analog playback doesn't require robbing a bank or blowing your kid's college money.

What You Get For Your \$5500

In short, a lot. Super Scoutmaster is, as you might guess, a suped-up Scoutmaster. As an overview, the SSM is a three-piece, mass-isolated turntable with a separate motor/flywheel assembly and power supply, and a unipivot tonearm. Some SSM parts are culled from the HR-X, while others represent a one-stop shopping package of add-ons available separately for the Scoutmaster. Let's have a look.

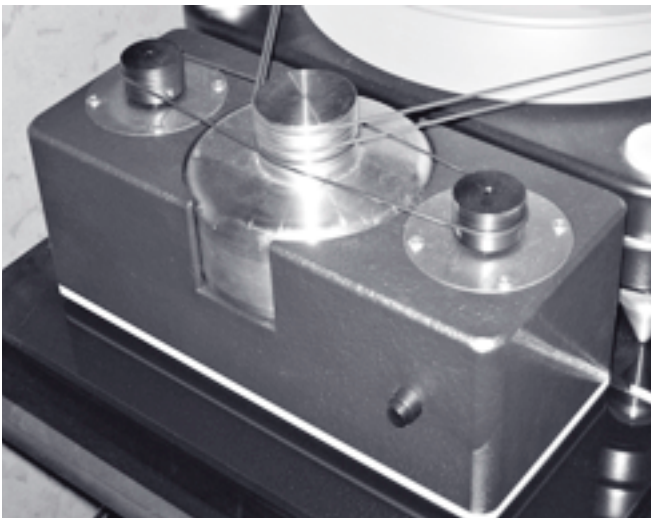
Super Scoutmaster has an inert chassis that sandwiches two dense layers of MDF around a layer of steel. It's compact, but denser and heavier than it looks. The synchronous AC dual motor and massive flywheel are the same as those used in the top-of-the-line HR-X, and the motor/flywheel assembly is positioned 1/2" from the chassis. Together, the motor/flywheel and chassis are a fat package, measuring nearly 22 inches wide. Both components fit on the shelves in my rack, but you should measure to be sure.



Turntable motors rotate the platter via sequential pulses created as the motor poles energize. A turntable designer has two choices: fewer poles and fewer, stronger pulses, or more poles creating weaker pulses more frequently. VPI chose the latter—SSM's two motors operate 7.5 degrees out of phase with one another, offering the effective smoothness of a 48-pole motor. The motor/flywheel assembly is heavy: 14 pounds on the flywheel and 20+ on the dual motor. The flywheel spins at 280 rpm and VPI claims it provides the effective mass/inertia of a 60-pound platter for excellent speed stability without the additional bearing strain of such a heavy platter.

The dual motor is fed by VPI's Synchronous Drive System (SDS), a separate box 16 inches wide, which acts as a combination power supply and power line conditioner. The SDS is included with VPI's higher end models and is an available option for the lower end of the VPI line.

The SDS filters the incoming AC and converts it to DC before digitally generating a pure sine wave at the right frequency to



turn the motors at the correct speed. For both of Super Scoutmaster's playback speeds (33 and 45 rpm) the SDS allows adjustment of voltage and frequency of the signal sent to the motors using simple buttons on the front panel and a supplied strobe record. Very fine adjustments are allowed; frequency is adjusted in tenths.

SSM uses an inverted bearing with a self-lubricating, machined brass bushing and a low-noise thrust plate made of a 50/50 mix of Delrin and Teflon. Some believe inverted bearings induce audible artifacts by placing the bearing close enough to the playing surface that the stylus picks up the bearing noise. Listening to SSM suggests this is a red herring, or that VPI has



it figured out. It isn't a problem either way. The platter is acrylic and has a depressed area around the record label. SSM includes the HR-X center weight and periphery ring clamp to cope with warped records. So, the label is clamped down into the platter depression, and the heavy periphery clamp holds down the record edge coupling the grooves to the platter very, very tightly.

The clamping system looks like it works. I didn't have any problems with warped records. But I also admit I don't keep anything around that's more than mildly warped so I can't pretend I gave the VPI clamp system a real stress test. I would add that the periphery clamp is heavy, and a lot harder than your records. As an admittedly clumsy ass who likes to have people over for wine, food, and music, I was never entirely comfortable moving this thing around my records and my stylus. I didn't kill any of my records, but I also retained a healthy amount of fear and respect for the clamp!

The supplied JMW-9 Signature Memorial tonearm is a 9" alu-

minum/stainless steel unipivot arm with a two-piece arm tube. The cup is on the underside of the arm, and rests on a sharp shaft stabbing up from the arm base. It's fitted with a junction box so no special tonearm cable is required; just connect the "Lemo" connector from tonearm to junction box, and then run standard interconnects from the junction box to your phono stage/inputs (the review unit came with a single-ended junction box, but an XLR version is also available). Its mass was fine for my Lyra Titan cartridge, but I needed to add a headshell weight for the lower mass Lyra Dorian cartridge.

Setup

Setting up the table itself was so simple a reviewer could do it. Well, almost. As I mentioned, the motor/flywheel assembly is heavy. While moving the SSM from the top shelf to get at another component below, I had neglected to move the motor/flywheel first and had the unpleasant experience of watching the shelf list sideways and dump the motor/flywheel onto the floor behind and to the side of my rack with a very heavy thud. This is the first time in my six-plus years of reviewing equipment that I've broken one of my charges—the AC inlet was broken where it fell on the power cord. VPI graciously forgave my idiocy and sent another motor.

User error notwithstanding, setting up the table and motor is too easy. Two small, round bands wrap around each motor and the flywheel, while two larger bands lasso the platter to the flywheel. Leveling the table at the spiked feet is a cinch. Your dealer will adjust the unipivot arm for you. However, if you undertake this yourself it's time-consuming to do properly, but not particularly difficult in scope.

Super Scoutmaster ships with an alignment jig that mounts on the spindle at one end and the base of the tonearm on the other. The jig has a dot with intersecting vertical and horizontal lines. Allow just enough counterweight to drop the arm, then center the stylus on the dot and align the cartridge with the grid lines by sighting along the stylus. Lift the arm and slide the cartridge mounting screws in the headshell slots. Pretty simple—the hardest part is tightening the headshell screws without throwing the alignment off a hair.

Adjusting VTA on the JMW-9 is a snap; adjusting tracking force, not so much. A gauge is required and I use a Winds ALM-01, which is accurate to one hundredth of a gram. My reference Lyra Titan cartridge is equally sensitive—it needs to be

within .02 of its target tracking force to sound its best and I can hear very easily when it's not there. It's time-consuming to dial in tracking force this tight by moving the counterweight on the JMW-9.

Adjusting azimuth is clunkier and somewhat frustrating. The user manual suggests you place "something light and about 6 inches long" (like a fireplace match or coffee stirrer) on the headshell and check it for level. Then loosen the counterweight



and rotate until the match on the headshell is parallel. Adjusting the counterweight for azimuth without affecting tracking force was almost impossible for me, so a lot of back and forth between these two adjustments ensued.

The JMW-9 Signature offers mechanical antiskate compensation, which is rather new to VPI. The arm isn't fitted with it from the factory; it's merely included with the arm in case you want to use it. VPI and some other turntable/tonearm manufacturers believe that antiskate is a crapshoot at best because the force pulling the arm in toward the record's center varies across the record's playing surface. In other words, the right amount of antiskate at the outside of the record is the wrong amount at the inside of the record. At worst, poorly implemented antiskate solutions can be prone to vibration and induce noise into the playback system.

I've used plenty of tonearms with antiskate, including the Linn I used for several years and the SME I use now, and heard no deleterious effects. I used the VPI Super Scoutmaster without any antiskate during the entire review period and I loved its sound. I'm Switzerland on this one!

Overall the fit & finish of the Super Scoutmaster is more substantial than I expected. The table and the motor/flywheel add up to 90+ pounds, and everything in the package looks at least as expensive as it is. I'd prefer that the arm be just a little more straightforward to dial in precise tracking force, and azimuth, and in particular I wish those two adjustments didn't affect one another as much. Essentially, the SSM and its arm offer outstanding performance for the money, especially if your dealer sets up the arm for you. If you do it yourself, the price/performance ratio is still in your favor to the extent that it's worth the sweat equity in setup.

Sound

When I was younger I despised sparkling wine, all of which I thought was "champagne" regardless of where it actually came from. Served at weddings, it was usually Cook's or Korbel, which is to fine sparkling wine what moonshine is to single malt. Later, I discovered sparkling wines done correctly from Champagne (France) and elsewhere, and when it's right it's as glorious as any fine wine.

Similarly, I've heard unipivot tonearms, acrylic platters, and mass-isolated tables that left me biased against such designs. Unipivots can sound fast and detailed, but also lean and light on bass. Acrylics have sounded quiet but also flat, dead, overdamped and boring. Mass-isolated tables have never had the bass foundation or freedom from environmental issues that suspended tables exhibit.

As with the bubbly, listening to and loving the VPI Super Scoutmaster has been an attitude adjustment for me. This table does a bunch of stuff I thought I didn't like, and yet, it rules!

The Super Scoutmaster is lightning fast, vivid, clean and very open. Its sound is quiet, very lively and very dynamic. Another word I keep gravitating to in order to describe the SSM is one I'm not sure I can completely elucidate—and that's free. To me this means that the SSM is free of the mechanical artifacts of playing back vinyl records. It is that, but I think it's more. As



touchy-feely as this sounds, with the Super Scoutmaster the music doesn't seem to play so much as it just happens, defining itself in space with focus and palpability.

Another word I want to use here is musical. But not in the traditional audiophile sense, which typically describes sound that is soft and lacking in resolution but pleasant to listen to. The Super Scoutmaster is not soft or lacking in resolution. VPI's SSM makes music. This table has the rhythmic drive and rightness that gets your foot tapping, its tonal presentation is on target, and most importantly, the emotion of the music is communicated to the listener. We're talking goose bump city. That's another way of saying this is a hell of a table.

In specifics, the tonality is mostly neutral with bass that's just a touch light, which probably contributes to the sensation of speed and clarity. The midrange is spot-lighted a touch, but in an entirely engaging fashion. This is a minor subtractive coloration, not a deal breaker. You won't have to tweak your system's sound around the SSM. Pianos have enough foundation that the low notes sound right, and big male vocals (think Johnny Cash) don't sound emasculated.

With Super Scoutmaster the imaging is focused and present. By comparison, SME's Model 20/2 surpasses this table's abilities in some areas. The SME's images are denser, rounder and more convincing, and it projects deeper and farther to the sides

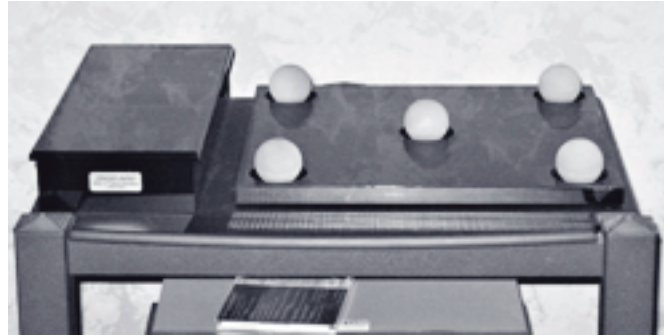
of the soundstage. That SME's Model 20/2 table with Series V arm is ultimately higher in resolution (at a combined cost of \$15,500) is a compliment to that combo, not a valid criticism of the Super Scoutmaster. So, to discuss the few things VPI's table doesn't do as well as its much more expensive competitors is to miss the point. The Super Scoutmaster is an excellent table that I can listen to and compare with anything I've heard (at any price) and still enjoy thoroughly in its own right, even if some of the big guns do some things better.

These comments are based on the listening experiences I had with Lyra's Titan i cartridge, which costs \$4500. Will many people use this table with a \$4500 cartridge? I doubt it. I'd note, however, that SSM is more than good enough to pair with such a cartridge, and also ask you to come up with any other table/arm/cartridge combo at \$10K that's markedly better. But being a thorough kind of dude I also used the SSM with Lyra's \$750 Dorian.

Although my reference Titan i is the Lyra flagship, the baby-in-the-line Dorian bears a strong family resemblance. It's fast, open and detailed, if tonally just a touch cooler than the Titan. The Dorian doesn't deliver the dizzying resolution and natural body of the Titan; nevertheless, the VPI's attributes come through with clarity. Although the Super Scoutmaster is good enough to be paired with a top-of-the-line cartridge, it doesn't have to be in order to deliver engaging, high-resolution sound.

On Cloud 11

I've got to come clean here and give credit where credit is due. Record producer extraordinaire and AudioQuest man Joe Harley is the one who put the big bug in my ear to review Super Scoutmaster in the first place. Joe uses this table with the Lyra Titan. He advised me to nix the antiskate and also enthusiastically recommended using the table with Gingko Audio's Cloud 11 base.



Cloud 11 is two pieces of gloss black acrylic—the top plate floats on the bottom plate courtesy of five squishy balls (they look like racquet balls but feel thicker) sitting between the two pieces. Gingko effectively isolates the turntable from the room like a suspension. And man, does it work.

I was so nuts over what I was hearing with SSM on Cloud 11 that I had to put the Titan i back on to finish the review. Spending some extra time on this table wasn't a bother, which is saying something given my workload. So, what did I hear?

Before Gingko, Super Scoutmaster gave up a noticeable degree of image depth and dimension to the SME 20/2. On the Gingko




Cloud 11, the SSM didn't quite catch the SME in that regard but the gap closed to a surprising degree. The soundstage expanded front to back, and musicians and vocalists fleshed out considerably, taking on a more rounded, convincing character. The Gingko clearly allowed the VPI to resolve more spatial information, which is something I value immensely in hi-fi.

While Super Scoutmaster's bass remained lighter in weight and lacking in texture and detail compared to the SME 20/2, a turntable that already sounded great got even better in this

regard on the Gingko. The bass foundation deepened subtly but noticeably, making the SSM sound a little more full-bodied and warmer without sacrificing any of the engaging liveliness and jump that make the table so enjoyable.

All told, the Gingko is an incredible value for \$600, offering an upgrade in performance that's more commensurate with a component change than an accessory. In addition to the specific improvements noted above, Cloud 11 added a degree of refinement to Super Scoutmaster. This is an essential accessory that performed so well in this application that I may seek out some other Gingko products for use with my own components.

Conclusion

Fun is a word I don't get to use often enough in equipment reviews, but it applies here. In addition to being a real high-end record playing machine, Super Scoutmaster is a fun table to listen to, and I enjoyed every minute I spent with it. The SSM not only earns my highest and heartiest recommendation, it's the kind of product that would grab my vote for Product of the Year in just about any year. Now, stop listening to me and go listen to Super Scoutmaster! 

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LINN LP12 UPGRADES

By Shane Buettner

It's not all that often I get a chance to review a product that's been in production nearly as long as I've been alive. This year I turned 35 and the Linn Sondek LP12, the first high-end turntable, turned 33, having been in production since 1972. I'm not here to do a "straight" review of the LP12 itself, which any audiophile who's been at the hobby for any amount of time has already heard and formed an opinion of. This article intends to find out if LP12 owners can teach their old table some new tricks.

While the essential low mass, spring-suspended design of the LP12 is the same as it ever was, many of the accoutrements of



the LP12—the main bearing, tonearm, tonearm cable, cartridge, etc.—can be upgraded to new parts developed by Linn over the last several years. Being a guy who got back into vinyl by purchasing (and playing the hell out of) a mid-80s vintage LP12 five years ago puts me in an excellent position to evaluate Linn's very latest outfitting for the LP12.

Over a period of months, I had the Cirkus bearing and Lingo power supply installed on my table, followed by swapping out my Ittok tonearm with the current Ekos, and then swapping an Arkiv cartridge for an Akiva and T-Kable tonearm cable. The Akiva cartridge is the most recent of these updates, having been introduced within the last two years, along with the T-Kable silver tonearm cable. In addition to telling you about what I heard from these updates, I'll also tell you about what I heard from an AudioQuest tonearm cable and Extreme Phono's "Speed" mat compared to the good old Linn felt mat grunge trap.

The Mods

The Cirkus bearing is a dealer-installed upgrade consisting of a main bearing and the requisite goop to keep it lubricated. It retails for \$645. I'm sure if I looked into the Cirkus' lineage that I'd find a bunch of information about sub-micron tolerances, and the ludicrous-grade, military precision involved in the bearing's manufacture, but I think it suffices for me to say that the Cirkus made the most profound, immediately noticeable impact of any of Linn's updates for the LP12. Every aspect of the table's performance improved dramatically, but in particular the bass became more powerful and rich without losing any of the LP12's legendary rhythmic drive. The musical background blackened substantially, expanding dynamics naturally along the way, without compromising any of the midrange liveliness

that Linnies love so well about the Linn.

It's fair to wonder if the original bearing on my table was compromised, but I can assure you it wasn't. Analog guru Brian Hartsell (of The Analog Room in San Jose, CA) did the initial setup on my LP12 and installations of the subsequent upgrades delineated in this article, and found nothing amiss in the original bearing before the upgrade or after it had been removed and further inspected. It appeared to be tiptop. The Cirkus is simply that much better and any LP12 owner who doesn't have it should run to his Linn dealer right about now!

Linn's \$1,600 Lingo power supply upgrade makes the Linn go, and does so with subtly superior sonic performance compared to my Linn's original, pre-Valhalla power supply. The Lingo takes the motor's power supply outside the table's chassis and uses a digitally controlled sine wave generator to drive the LP12's AC motor at a precise 33 or 45 rpm speed, the latter selected by holding down the On/Off switch for an extra few seconds.

The LP12's speed was spot on and stable over time before and after the Lingo. The Lingo also improves the LP12's sound noticeably but, in my opinion, subtly. Whether I heard \$1,600 worth of sonic improvement is more debatable. However, if you've got an older Linn power supply, that also means you're using a pulley adapter to do 45 rpm. Some of today's most decadently glorious vinyl is 45 rpm, and the convenience and simplicity of the Lingo bump it up a couple of notches on the roster of upgrades.

The LP12 is now available with two optional bottom covers: the standard bottom cover for \$170 and the Trampolin bottom cover for \$245. The Trampolin adds four springy, suspended feet, presumably to provide additional isolation from the room. While it seems perilous to add a suspension to a suspension, the Linn people obviously did their homework to ensure that the compliances of the two suspensions are tuned such that they don't decrease each other's effectiveness. I use decent quality racks filled with shot and my floor is on a concrete slab, so I didn't hear any improvement in the performance of my table with the Trampolin, but neither did I hear any signs of degradation in any way. As much as I hate to punt on this one, someone with a wood floor above a basement would be in a better position to comment on the Trampolin's impact than I.

The \$2,995 Ekos tonearm was introduced in 1988 (the year I graduated high school for those keeping score at home!). Tracking force is applied dynamically, and precision ball bearings are used at the vertical and horizontal pivot points. Ekos differs from the Ittok it replaced on my table primarily by its use of adhesives to affix the arm tube to the (fixed) headshell and main body instead of screws, providing increased rigidity.

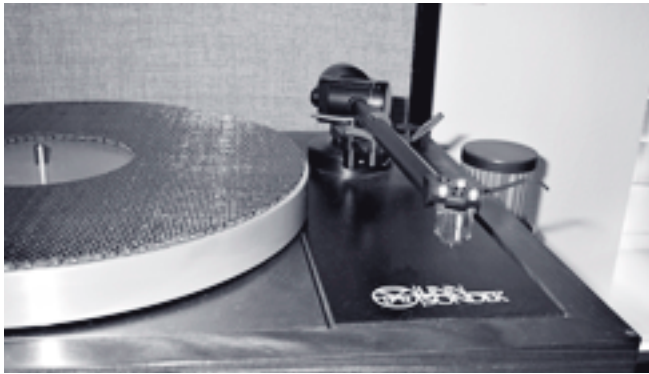
Linn favors reliability over adjustability in general and in the Ekos. The LP12 is not a tweaker's table; it's for someone who just wants to play records without any fuss or muss. Ekos comes with a pre-drilled board so no horizontal tracking adjustment or overhang adjustment is needed. Tracking force and antiskate are set by springs, and VTA by a setscrew and raising or lowering the



arm base. Once the screw is loose enough to allow the arm base to move up or down it's way too easy for the arm to drop all the way down into the arm board, making fine VTA adjustments more time-consuming and painstaking than they need to be. (SME's arms work the same way but supply enough tension that very fine adjustments are applied with ease.)

For a work-around I propped a screwdriver (wrapped in cloth to prevent scratches) underneath the arm tube where it meets the pivot point and base before loosening the screw to prevent the arm from dropping into the board. A royal pain, but once it's set you're good to go. If you're one of those who needs to adjust VTA when you go from a standard profile LP to a 180-gram LP (or, heaven help us, from a 180-gram to a 200-gram LP) this ain't the rig for you. As for me, I dial in the arm so it's as close to perfectly level as I can get it with 180-gram LPs, and live with the sound I hear with the arm slightly low in the back with 200-gram LPs, and then getting slightly high in the back with standard LPs. And I don't obsess about it. Keeping records clean and in good enough shape to play quietly is enough of a ritual for me.

The Ekos' improvements and charms were more elusive to my ears, and were not the head-turners that the Cirkus bearing was and the Akiva cartridge turned out to be. With Ekos the dynamics improved some, and the image focus became sharper but also fuller and more convincing. But the most consistent characteristic of the tonearm was that somehow the LP playback system seemed to get out of the way of the music for a less mechanical, more easily involving presentation—all of which became even more noticeable and significant when the \$2,995 Akiva cartridge was mounted on it. My initial feeling about going to the Akiva from the Arkiv was that Akiva is quieter with respect to surface noise, more full-bodied, and per-



haps not as extended and open on top—almost as though some of the top end is damped along with the surface noise. Switching between the two over a period of days revealed more though.

Extended listening revealed that Arkiv isn't more extended or open on top, it's simply lighter in bass weight, tipping its tonal balance to a little emphasis on the top, which is livelier almost to the point of being edgy in comparison. Indeed, bass seems faster with the Arkiv because the lower foundation registers simply aren't there! Akiva is not only quieter, but it's velvety smooth and more resolved in the midrange with better resolution of low level details, and it maintained superior top-to-bottom coherency through complex passages.

The only minus I found with Akiva on the LP12 is that the bottom end, while truly more extended than Arkiv's, did play a little loose on the LP12 table. But putting Akiva on Musical Fidelity's M1, and later on an SME 20/2, revealed much better articulation, tautness, and definition in the low end—absolving Akiva and pointing a finger at the LP12.

I compared the Akiva to Sumiko's \$1,500 Celebration and Lyra's \$4,500 Titan, and those comparisons only enhanced my

already positive perceptions of it. Akiva sounded even more clearly superior to the lush Sumiko cartridge than it did to the Arkiv, and although the Titan was more open and transparent the mighty Lyra didn't embarrass the Akiva.

In today's high-end cartridge market the Akiva is a solid value at \$3K and is easily and highly recommended without condition. The Ekos is also a winner, if not quite the runaway that Akiva is. Its performance is beyond fault really, but it's close enough in price to killer arms like the SME IV.Vi at \$3,499 to give me pause. If you can spend that extra money there are competing tonearms worth investigating.

The \$400 (1.1m) T-Kable tonearm cable was an improvement by several orders of magnitude over the ancient red and white connector job that had been on my LP12, but it didn't withstand a subsequent challenge from AudioQuest's battery-biased \$500 (1.2m) Leopard. The "veil" that the T-Kable lifted from the table's performance with the stock (circa 1985!) LP12 cable was too thick even to call a veil. More like a thick, woolly blanket! With the T-Kable the LP12 was way more alive, transparent, open—way more everything, top to bottom. No downsides whatsoever. Except in comparison to the Leopard.

When AudioQuest came out with their line of DBS cables, I immediately started hounding them for a tonearm cable. Battery-biasing the cable dielectric is a good idea everywhere, but especially in an LP playback system. LPs aren't background music and it takes time for the dielectric to charge, or to "warm up," which is difficult to achieve playing records one side at a time. With Leopard the cable dielectric is always at a charged state and ready to go. The concern with using a tonearm cable instead of a Kable from Linn is defeating the Linn's suspension. The Leopard seems scarcely heavier than the T-Kable, and I made sure it never hung in such a way that the battery pack pulled down on the clips that attached it to the LP12's suspension and I heard great sound.

Leopard took the T-Kable's midrange clarity and resolution and raised it to another plane still, all the while sounding just as smooth, extended and grain-free. T-Kable is a fine cable but Leopard costs only a hundred more bucks and easily sounds that much better, if not more.

And speaking of non-Linnie tweaks for the table, it's time to talk

about the Extreme Phono turntable mats. Available direct on the web, Extreme Phono (www.extremephono.com) sells two mats that I've used to great sonic effect with the LP12. Starting with the first, what else are you going to call an alternative to Linn's felt mat? The None-Felt is made of a familiar, industrial-grade rubbery mesh that is best used in its "donut" shape, which as the name suggests has a hole in the middle that's slightly larger than a record label. The label area of a record is thicker than the rest of the record and this shape allows tight coupling of the mat to the grooves and doesn't touch the spindle, avoiding any physical interaction with it and the main bearing.

It's been reported that some samples of the original None-Felt had a nasty interaction with some record cleaning fluids and left a sound-degrading imprint on LPs. I never had this problem with the None-Felt, and I do use a vacuum record cleaner with typical alcohol-based fluids. Nevertheless, the donut version of the None-Felt mk-2 now ships with a light, meshed fabric "skin" that prevents the None-Felt from making direct contact with the vinyl for \$42 plus shipping. The None-Felt is thick enough to require a VTA adjustment, so make sure you do that or you're not hearing the mat alone.

With the Arkiv cartridge I had a strong preference for the None-Felt in my system. I place high value on convincing imaging and dimensionality, and the None-Felt was superior to the felt mat in those regards. It also calmed down some of the edginess in the Arkiv's treble at the expense of slightly decreased air and detail on the best recordings. When I switched to the Akiva, which has fuller bass and more natural body of its own, my preference was for the old felt mat. Then I added some Speed to the equation.

The Speed is a very thin layer of carbon fiber that rides on top of the None-Felt. In the preferred donut shape it's a \$99 upgrade if you already have a None-Felt, or \$119 for the None-Felt/carbon fiber combo. This little layer of carbon fiber had a surprisingly massive and obvious impact on the sound—right up there for me with the Cirkus bearing and Akiva. The backgrounds got blacker still, increasing both dynamic contrast and low-level detail retrieval impressively. Bass got deeper and tighter and the soundstage expanded dramatically front to back, and image focus became sharper but also more rounded and full in dimension. I like the word "dramatically" here because drama is so descriptive of what these changes brought to the LP12—more of the incisive impact of the instru-

ments, which in turn gave a more staggering presentation of the emotions that drive music.

Now, let me reiterate that I am very attuned to spatial refinement in an audio system. While not slow, the Speed mat sounded a touch thicker in the bass, which subdued the LP12's midrange liveliness and diminished its classic rhythmic life just




a tad. For me it was a more-than-fair trade; however, it may not be for Linnies who think the LP12 was perfect 25 years ago. The LP12 definitely has a quieter, more "modern" sound with the Speed, but also a little less of the sound that's been its trademark for decades. Some will prefer the Speed's sound, and others will surely scorn it.

So, what does all this get you? A new, completely decked out LP12 costs quite a pretty penny—over \$10K with an Ekos arm and Akiva cartridge. That's enough to give me pause and advise enthusiasts looking at new tables to look around at the options available from SME, Nottingham and VPI, among others. The Linn is great, but hardly the only game in town anymore.

But I also think that a used LP12 is a swell deal. They're always available and often at very reasonable prices. You can then perform these upgrades over time as budget allows, enjoying great LP sound all the while. And while LP12 isn't the analog tweaker's dream girl, once set up it just plays records. No bullshit, just keep pulling out your favorite music. And when all these updates are implemented the LP12's ultimate performance reaches a level that can only be exceeded by the very best and most expensive tables at the SME 20/2 level and above, in my opinion. And even then it's not night and day by any stretch.

Specifically, I think the Cirkus bearing, Akiva cartridge and Extreme Phono Speed mat are rock-solid values that bring big performance returns for anyone who has an LP12. I think the

Lingo and Ekos are also solid performers, and the Lingo offers convenience and reliability benefits as well. My only hedging is that the prices for these updates add up to major dollars. VPI, Nottingham and other notable companies offer entire table/arm combos for less money than it's going to cost you in total to update your LP12. The LP12 is still a must-hear for anyone shopping for a turntable, and it can indeed be brought into the 21st century, and it still makes beautiful music. But all of its wares are now at such a considerable cost that I'd advise enthusiasts who can throw money down in a bigger chunk at one time to look around before jumping in with both feet. 

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LYRA DORIAN & TITAN i PHONO CARTRIDGES

By Shane Buettner

At practically all price points, Lyra phono cartridges are on everyone's short list. Formerly known as Scan-Tech, Lyra is a Japan-based company that has designed and manufactured many groundbreaking phono cartridges for many companies in addition to those sold under the Lyra name. Lyra cartridges are designed by Jonathan Carr, and from the Argo on up, each cartridge in the line is assembled and tuned by Yoshinori Mishima. Each Lyra cartridge is a handcrafted specialty item.

Over the last several months I've listened to the bookends of Lyra's line, the \$750 Dorian, and the flagship \$4500 Titan i, which is my current reference. I listened to and bought the flagship, and then borrowed a Dorian to use during my review of the VPI Super Scoutmaster. And that's the order in which I've written about them, following a brief history of Lyra.

First Scan-Tech, Then Lyra

Before becoming Lyra, Scan-Tech was formed in Japan in 1983 by Stig Bjorge, a Norwegian-born audiophile, audio distributor and audio writer who had moved to Japan years earlier. Stig

first became friends with Jonathan Carr and subsequently made the acquaintance of Yoshinori Mishima while he was working for renowned cartridge manufacturer Supex. Eventually Mishima and Carr moved over to Scan-Tech, which established itself with cartridges sold under its own name, and OEM designs for other brands.

Scan-Tech's inaugural product, the Tsurugi, was released in 1986. This cartridge had a removable body so it could be played "nude," and its sister design, the Spectral MCR, garnered international fame among audiophiles and drew rave reviews from audio critics. Lyra still maintains a parts inventory and can rebuild these cartridges to like-new condition. In addition to Spectral, Scan-Tech was responsible for designing and manufacturing OEM cartridges for AudioQuest, Linn, and others.

As Scan-Tech's reputation as an OEM manufacturer grew, the Lyra brand was established in 1991 as a vehicle for Carr's second-generation designs. The Clavis was the first Lyra-branded cartridge, followed by the Lydian and Parnassus. Lyra's third generation witnessed the Clavis D.C., and the Parnassus D.C.t., with that last letter signifying that Lyra had made its first solid-titanium bodied cartridge.

In the late 90s the well-received Helikon kicked off Lyra's fourth generation of cartridges, followed by the Argo, Titan, and Dorian. In 2002 the Scan-Tech name disappeared, although Lyra still OEMs cartridges for several well-known manufacturers. You'll read here about the "i" series revisions to the current Lyra line implemented in 2005. Lyra's fifth generation Skala cartridge will debut in spring 2006. It will feature a multi-material structure that reduces the amount of conductive metal dramatically to reduce eddy currents, and will also allow Skala to be made of very dense and strong materials while keeping the total cartridge weight manageable.

Titan i

The Lyra flagship has been in the line for years, but was officially updated to the Titan i in August of 2005. The "i" stands for "improved," and the improvements are focused around a new suspension, accompanied by revised damping and voicing of the cartridge. Although Lyra keeps this information a bit guarded, it appears that in seeking ways to get the cartridges to track better on some torture test material greater and smoother movement of the cantilever was achieved, which not

only improved tracking, but also improved the ability to tune (and thus "improve") the cartridge's sound substantially. I say the Titan was "officially updated" in August, because Lyra informed me that every Titan sold in 2005 is in fact an "improved" version, but August was the month the company started silk-screening the "i" on the cartridge body. The price remained \$4500, and each "i" version comes in a new package that includes a free bottle of Lyra SPT (Stylus Performance Treatment) stylus cleaner. Owners of original Titan cartridges can upgrade to the "i" version at the regular rebuild/exchange cost of \$2900.

As far as the basics are concerned, the Titan i is a low output (though not too low at 0.5mV), medium compliance moving coil cartridge with a mass of 10.5 grams without its stylus guard. The body is a "nude" design machined from a single piece of Titanium, which Lyra claims to offer superior rigidity and low resonance as the result of titanium's natural properties and Lyra's shaping during construction. The cantilever is a solid boron core with an outer cladding of diamond, and the stylus itself has a Lyra-designed line-contact profile.

The cantilever mounts directly into the Titan's titanium body, which minimizes the number of mechanical joints and, according to Lyra, reduces distortion by maximizing energy transfer away from the stylus and generator area. The Titan's magnetic field is generated by two symmetrical neodymium discs with no conventional pole pieces—a design attribute Lyra calls proprietary in its literature. Lyra believes this solution allows the coils and cantilever more freedom of movement, and thus superior tracking and lower distortion.

Lyra designs its nude cartridge bodies with rails on either side that allow a large stylus guard to slip on and protect the stylus and cantilever. Although nude body designs are notorious for leaving the stylus and cantilever dangerously exposed, the Lyra design minimizes the risks, and the stylus guard slips on and off easily enough that it's not a nerve-wracking experience each time you use your turntable.

Dorian

The Dorian shares many design elements with the costlier Lyra cartridges. It too is at the high end of low output for a moving coil at 0.6mV. It sports a nude one-piece body design that's machined from single piece of aluminum, and the mass of the

Dorian is significantly lower than the Titan at 6.5 grams. When using the Dorian with the VPI JMW-9 tonearm on the Super



Scoutmaster I had to use a headshell weight to get enough mass on the arm to balance it properly. The cantilever mounts directly to the cartridge body, and the Dorian also uses Lyra's proprietary pole piece-less neodymium magnet structure. While the solid boron cantilever is a Lyra design, it and the stylus are sourced from Namiki.

Initial assembly of the Dorian is by the hand of Akiko Ishiyama, who then turns to Mishima for final adjustment and tuning. As you'd expect at this price point, the Dorian does not go through as rigorous a tuning and voicing period as the costlier cartridges in the line, but also doesn't leave Mishima's care until it qualifies to be called a Lyra.

Lyra sweetens the pot considerably with its generous exchange prices. As a Dorian owner you can get substantial discounts by staying with Lyra and upgrading within the line. For example, if you trade up to a Helikon at \$1995 retail, your price would be \$1350—a credit of \$645 for a \$750 cartridge!

Titan i Performance

I used the Titan i on an SME 20/2 turntable with the Series IV.Vi and Series V arms, and on VPI's Super Scoutmaster with a JMW-9 Signature arm. I also heard the Titan i with the SME V together on an Avid Acutus, and a Sota Cosmos. The

results were consistently awe-inspiring.

This cartridge's balance of performance is so intricate and so righteous that describing the Titan i requires a lot of "but without"—as in, I find it to be as detailed as a cartridge can be, but without any trace of coldness or leanness that would tilt it toward being analytical. It has as much natural warmth and body as I've heard from a cartridge, but without being veiled or gauzy in the midrange. It's as open and extended in the mids and highs as a cartridge can be, but without any edge or grit that would make bad recordings completely unpalatable. I find the bass to be as extended and full as I've heard, but without being thick or slow. It's as quiet a cartridge as I've heard, but without being so much so that the music itself sounds overdamped.

Essentially, the Titan i goes as far as possible in any particular sonic direction, but never too far. It's remarkably high in resolution, but in a very pure, natural and relaxed way. I think this quality comes from the Titan i being freer of the distortions caused by the physical mechanics of what cartridges do, and I think that's what lets you relax so you can hear farther into the music. And it accomplishes this without any of the euphonic qualities I've heard from cartridges that emphasize such traits over neutrality and resolution. The Titan i is superbly balanced.

Let me describe where I came from with cartridges just prior to these from Lyra. I had a Linn LP12 for years, and like a good Linnie I'd been using the Arkiv B and then the Akiva for the last couple of years. The Arkiv was made by Scan-Tech for Linn, and it's rumored (but not confirmed) that the Akiva is also designed and made by Lyra. The Arkiv was an excellent cartridge, very lively, fast and detailed. The Akiva at first seemed warmer to the point of being a little fat and less detailed, but further listening revealed that in spite of its fuller body and warmth the Akiva was actually more resolved in the midrange and treble. The Arkiv did not have Akiva's resolution of low-level detail, but initially it seemed to be even more detailed than Akiva because of its livelier and somewhat forward midrange and treble.

This was my first exposure to the Titan. It's reputed that a similar evolution has occurred within Lyra's family of cartridges: the recent Lyra generations, and particularly the "i" versions, have retained (if not exceeded) all the detail and resolution they were known for in the past, but with added body, warmth and texture.

While I can't speak to the previous iterations, I can unequivocally say the Titan i has all of these attributes in spades.

Moving from the Akiva to the Titan i, I heard an appreciable increase in transparency and detail. Akiva's bass is definitely fuller, but in comparison this comes at the expense of some speed and lower midrange detail that the Titan i fully resolves. The best audio components I've heard leave the listener with the impression that something has been taken away from the system rather than added to it. The sound of the music itself begins to describe the system's sonic signature more than the



components do. There is less a sense of electronic and mechanical components and more music simply happening. In this respect the Titan i gets out of the way more than the Akiva, which has a warm and almost boxy sound in comparison to Lyra's nude design.

As a listener I get off on dimensional imaging that I can practically see as well as hear, and my system is assembled and set up with that aspect of performance paramount. The Titan i's freedom from the mechanical nature of record playback lets the cartridge (and the turntable, if it's up to the task) disappear, leaving just the players on the stage, in deep, coherent focus from front to back and side to side. The Titan i's spectacularly open and transparent sound captures and recreates the recording space (and the players in it) better and more convincingly than any cartridge I've heard.

I also want to mention that the Titan i is superb at what could be called its core function, which is tracking records. I wrote in my review of the SME 20/2 turntable how outstanding that table is with slightly warped and scratched records that had not played back nearly so quietly on my Linn LP12. The SME 20/2 couldn't have done its thing if the Titan i had not held up its end of the deal. I didn't throw any test records at it, but I've been listening to the Titan i for almost a year now. I can unequivocally state that this cartridge is more sure-footed with less tendency to mistrack or produce noise than any I've yet experienced.

The Titan i is very sensitive to setup, and tracking force in particular. In my system it sounds best at 1.70 grams, and you can hear when it's not right in there. At 1.70 grams it sounds tonally even and very light, airy and delicate on top, with imaging that is full and completely three-dimensional. When tracking at 1.68 grams it sounds leaner, vocal sibilants are more prominent, and images are noticeably thinner, less rounded and less fleshed out. It sounds pinched. At 1.72 it sounds a little fat, and the images cloud over and congeal into one another instead of remaining as distinctly there in space. Crazy perhaps, but true!

Dorian Performance

I listened to the Dorian on VPI's Super Scoutmaster after falling in love with the VPI sound with the Titan i. That's a tough act to follow, and yet the Dorian kept bringing a sneaky smile to my face as I marveled at its performance for the price.

The Dorian is not a Titan i, and in a direct comparison it's not hard to hear that at all. But the Dorian is definitely cut from the same sonic cloth, with an obvious family resemblance. And this, I think, is important. When there is a discernible house sound to a product line what that tells me is that the designer has a firm grip on what good sound is and should be, and is capable of consistently hitting the target. The higher you go in the line the more of everything you get. But the basic sonic signature is always there. Thiel and Vandersteen speakers are this way. Electronics by Ayre and Aesthetix are this way, and so are AudioQuest's cables. And so are Lyra's cartridges.

The Dorian emphasizes the speed and detail of the Titan i, but not the bass weight and natural warmth. It's cooler, with less fine textural detail and body. The Dorian isn't genuinely white or grainy, but it's not warm and fuzzy either. When records are on the edge of brightness the Dorian makes it apparent in a more

forceful way than the Titan i. If the Titan i goes about its business in a relaxed and easy way, the Dorian is a bit pushy. It just can't wait to show off! The Dorian has dynamic swing and jump that's always involving. And to humanize it further, it's bounding with energy.

The Dorian's shortcomings are hard to think about when you're listening to it because of the striking number of things it does well. It's not as refined as Lyra's more expensive cartridges, but even the mighty Titan i doesn't totally embarrass it. I can imagine the life and energy of this cartridge making the mid-level systems it's designed for really stand up and sing.

Conclusions

Lyra's Titan i is one of the cherished few products I've heard with no discernible weaknesses, no sins of addition or omission. I've never heard more information coming out of the grooves, and yet there isn't a single thing I'd want more or less of from a cartridge. In two words, the Titan i is reference quality.

The Dorian is no less remarkable given how much performance it packs into \$750. While it's got more of a sound of its own than the Lyra flagship, this isn't all bad because that sound is very lively and detailed and even refined compared to other designs I've heard in its price range. While my purchase of the Titan i makes as strong a recommendation as I can muster, I recommend the Dorian with no less enthusiasm. It's an outstanding cartridge and every bit worthy of the Lyra name. [API](#)

Dorian Specifications (Provided by Manufacturer)

Type: Moving Coil, low-impedance, low-output, medium compliance
Frequency range: 10Hz – 50kHz
Channel separation: 30dB or better at 1kHz
Internal impedance: 9.5 ohms
Output voltage: 0.6mV (5.0cm/sec., zero to peak, 45 degrees)
Cartridge weight (without stylus cover): 6.4 grams
Compliance: Approx. 12×10^{-6} cm/dyne at 100Hz
Recommended tracking force: 1.8 - 2.0 grams
Recommended load direct into non-inverting RIAA equalizer amplifier or head-amplifier: 100 ohms – 47k ohms (determine best impedance value by listening)

Titan i Specifications (Provided by Manufacturer)

Type: Moving Coil, low-impedance, low-output, medium compliance
Frequency range: 10Hz – 50kHz

Channel separation: 35dB or better at 1kHz
Internal impedance: 5.5 ohms
Output voltage: 0.5mV (5.0cm/sec., zero to peak, 45 degrees)
Cartridge weight (without stylus cover): 10.5 grams
Compliance: Approx. 12×10^{-6} cm/dyne at 100H
Recommended tracking force: 1.65 - 1.75 grams
Recommended load direct into non-inverting RIAA equalizer amplifier or head-amplifier: 100 ohms – 47k ohms (determine best impedance value by listening)

US Distributor:

Immedia
1101 8th St.
Suite 210
Berkeley, CA 94710
510 559 2050
www.immediasound.com

HARDESTY ON TURNTABLES, TONEARMS & CARTRIDGES

By Richard Hardesty

*There is a natural order—or hierarchy—to the source components used for vinyl reproduction. (See The Natural Order of Things in **Journal** #3.) The turntable comes first, then the tonearm and then the cartridge. The phono stage follows the turntable system in the signal path and in the hierarchy. While this may not seem intuitive at first, these facts can be demonstrated in direct A/B comparisons.*

In my retail years I performed hundreds of comparisons for individuals and groups. We compared large numbers of turntables, tonearms and cartridges. While this was expensive even then, our business claimed to help listeners choose the most satisfactory audio systems and this was the best way to perform our function. Certain facts emerged from these comparisons: a better turntable will always outperform one of lesser quality regardless of the tonearm and cartridge used; a better tonearm will always outperform one of lesser quality regardless of the cartridge used. We found no way to bypass this order though we tried a wide variety of better arms and cartridges on lower quality turntables for customers who were trying to save money. Direct comparisons always proved they could get more performance for their money by tilting their investments “upstream.”

It will be difficult, but not impossible, to find a dealer who will perform these demonstrations today. Mounting identical tonearms and cartridges on several turntables, for example, will be even more costly today. The sale, however, will be commensurately bigger. I wouldn't buy a \$20K turntable system without direct comparisons that demonstrate that I'm making the right decision and neither should you. You don't need the finest components downstream in order to choose the best source components—any reasonably accurate audio system will clearly delineate these differences.

How We Produced This Journal

Shane wrote most of the reviews after listening to the products for extended periods, which often lasted

months. I flew to

Shane's house for a listening session that allowed us both to hear and compare most of the components reviewed in this **Journal**, on the same system at the same time, over a period of a couple days. The turntable setup that performed

best cost more than my first house in California but so does the car I drove to the airport!

We listened to the finest available components in an audio system with extremely high resolution and very wide bandwidth. The sound was remarkable and virtually beyond reproach even playing familiar records I had used for demonstration twenty or more years ago. In fact I was worried that I'd be disappointed when returning home to my “old fashioned” Linn LP12/Ekos/Arkiv/Linto sourced system. Surprise—I wasn't. Records are better today and record players are, too, but a component that is inherently right will never become somehow wrong. The performance of older components may be exceeded but that doesn't negate intrinsic merit.

My turntable didn't deliver sound with the complete refinement



of Shane's SME/Lyra combo but my system seemed just a tad more dynamic and lively to me. (My system is tweaked to my tastes and my room wasn't "tuned" by ARS.) Is the Linn slightly underdamped or is the SME (or Shane's room) slightly overdamped? I can speculate but will never be completely sure. Whatever the cause, these shadings are subtle and can be modified with tweaks and/or adjustments. My Linn is slightly modified with a ModSquad cable box using Van den Hul silver wire and AudioQuest battery-biased Sky interconnect cables. My turntable has a None-Felt/Speed donut-shaped Carbon Graphite record mat. The SME has a myriad of adjustments that can subtly alter the fine characteristics of the sound delivered by this turntable system.

Yes, I think the SME sounds a little better. If I hit the Lotto I'll probably buy one. In the meantime I'll continue to enjoy listening to my records on my "antique" Linn Sondek.

Our Reviews



Together or separately we listened to the Avid, Sota and SME turntables using the same SME V tonearm and Lyra Titon i cartridge. Shane mounted the same cartridge on the VPI SSM turntable system while I

was there but also tried that table/arm with a less expensive Lyra Dorian cartridge. Shane's audio system previously included a Linn LP12/Ekos/Akiva source and I own a Linn LP12/Ekos/Arkiv turntable system. Both Shane and I have listened to many turntable systems that we didn't write full reviews about for one reason or another. We feel that **Journal #14** provides a pretty thorough investigation of what's available and I'm going to go a step farther and make specific recommendations.

My Recommendations

If I were to buy a turntable system today I'd buy an SME 20, a Linn LP12 or a VPI SSM. I'd choose an SME V tonearm for the SME turntable, a Linn Ekos tonearm for the Linn turntable and use the VPI tonearm on the VPI turntable because it seems to be a synergistic match.

I'd put a Lyra Titan i cartridge on the SME rig and use a Linn Akiva on the Linn. I'd probably stick with a Dorian cartridge on

the VPI. If I were budgeting I'd look for a used Linn or start with a regular VPI Scoutmaster and upgrade as finances allowed.

I've heard many other good components, including the Tri-pla-nar® tonearm and the Dynavector DRT XV-1s cartridge, so the products I've recommended aren't the only ones to consider.

For those just starting out there are complete systems available from Sumiko and Music Hall that cost less than \$1K. These can rejuvenate your interest in music. Trust me.

Don't Buy it for Looks, Buy it for Life

The SME and Linn turntables are lifetime purchases and the VPI seems to be well made, too. If the manufacturer you choose stays in business and continues to make turntables, any part that does wear out can be replaced. I've been using my Linn turntable daily since 1977, which is... a long time! It has undergone a number of upgrades, leaving the solid Brazilian Rosewood plinth (unavailable in this country for many years), the outer platter and the stainless top plate as the only major pieces remaining from the original product. Nothing has ever worn out but all parts have been replaced in various upgrades. I think the motor may be original but I can't remember for sure.

A vinyl playback system may seem expensive at first but you'll probably never have to replace it. You can't say that about many other things these days. [APJ](#)

THE VINYL REVOLUTION

By Shane Buettner

Day in and day out we talk to people who ask what they need to buy or add to their hi-fi to achieve complete musical satisfaction. What about these new speakers? Have you heard that new disc player? What about a DAC that goes straight into the power amps?

We get 'em all, and the simplest and truest answer is one that some people just don't want to hear: If you're an audiophile and a music lover you need to have a turntable and play vinyl records, period. The end. Well, not really the end—just the beginning in fact. Here's my case for it.

My Own Analog Trip

My mom was quite young when I was born in 1970, and so I grew up with the great music of the 1960s and 70s as a soundtrack to my youth. I became interested in audio after high school, and a college roommate and I shared a system for a time. I had been between turntables when I moved in with him and another friend, and when I finished with college in the early 90s the turntable didn't come with me.

I have also had a lifelong passion for film, and I ended up buying a laserdisc player and getting more involved with home theater as the years passed. With the compact disc as my source, music became more and more of a background activity, something I did while driving and doing other things around the house. I think this mirrors a movement by society as a whole that was enabled in large part by the compact disc's shortcomings. As the compact disc took over as society's music medium, music has quite simply receded into background noise, so that really listening to it is not the primary activity that it once was for many people.

Let's look at what has transpired during the CD's rise to prominence in the last 20 years. First, multichannel home theater, based on low fidelity compressed digital sound, has supplanted



high-end stereo audio in stores and homes, and has replaced high fidelity audio reproduction with a sad set of standards and lowered performance expectations designed primarily around imitating the glorified PA systems you hear in movie theaters.

As the new millennium has dawned, even lower quality sound in the form of MP3 has now become society's norm for music reproduction. While any audiophile with a set of ears on his head will tell you that 128kbps MP3 audio isn't high-end sound,



that having the compact disc as a reference standard is what has allowed the masses to accept—and even expect—lower quality digital sound. If more people were listening to vinyl records at home I doubt they'd accept low-res MP3. It's no wonder musical listening isn't a primary activity for most people anymore—if you listened to MP3 on a decent stereo you'd run from the room screaming!

I don't say this to beat on the MP3 crowd. My point is that the frames of reference for most people to compare MP3 are lossy Dolby Digital and DTS codecs in theaters and on DVD, and the compact disc for stereo music. They aren't being informed that there is something better out there. Read any mainstream newspaper or magazine article and you'll see the term "CD quality" applied to anything digital. While I think that's mostly wrong, it's kinda right too. "CD quality" has bastardized society's reference standard.

In my case, I was brought back to the land of the living by two things. The first thing was that I bought a high-end laserdisc player and freaked out when I listened to a couple of my favorite CDs on it. This digital sound was so much better than I'd heard that I started listening to music as a primary activity again, and began weaving my way back from home theater to high-end audio. And the second thing was that after a few years of chasing better digital, I heard vinyl again and everything snapped into place.

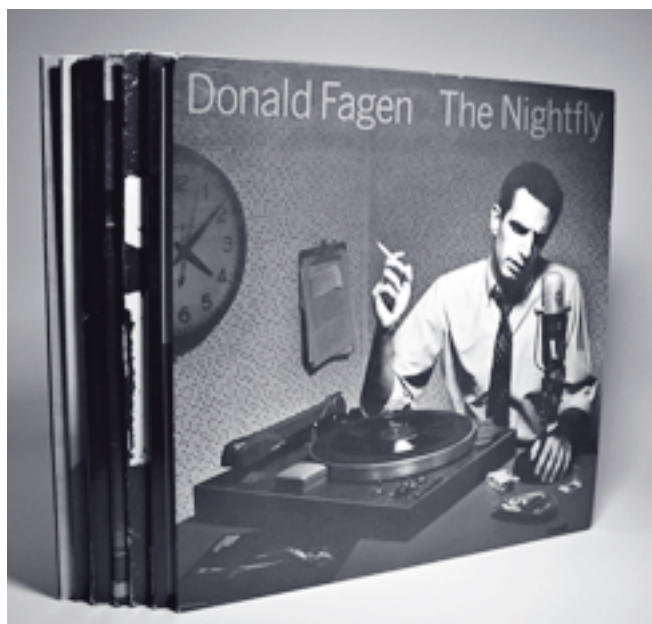
I bought a used Linn LP12 and started playing records again several years ago. I got more musical satisfaction out of that \$800 table than I'd gotten out of all the CD players I'd owned combined. My reliance on analog as a reference standard has

has anyone stopped to consider how low-fi became acceptable to so many people? I personally believe

elevated my expectations of what hi-fi can and should be, and has even helped me to find digital playback gear that's more musically satisfying. Analog has increased my enjoyment of music and the hi-fi hobby immeasurably, and I think it could do the same for you.

Why You Need Vinyl—Exposing the Myths

Too many audiophiles I know don't want to take my advice and buy a record player. Instead, they want to keep trying magic bullets in the form of power line conditioners, exotic wires and



power cords, moon pucks or other forms of mysticism. Or they just keep switching gear. New preamp, new speakers, new disc players. Whole systems come and go and these guys still can't sit in front of their systems for hours and absorb the music without getting antsy and thinking about how it could be better.

Analog? "The gear is too expensive," they say. "I don't want to hear any pops or clicks." Or most often, "I don't want to replace my entire CD collection." Well, all of these reasons are bogus and here's why.

There are brand spanking new turntable and phono stage solutions available right now from Music Hall, Pro-Ject and others that start at about \$420 total. That's right. Probably less than you spent on your last power cord. Each of these companies has turntables starting at \$300 and phono stages starting at \$120. And here's the kicker—these solutions offer better sound at this price than any CD playback rig at any price. Read it

again, I mean it.

Used tables are also a great way to start. When I got back into vinyl several years ago after nearly a decade of digital, I started with a used Linn Sondek LP12. I got the entire table with arm and cartridge for \$800. I upgraded it as my budget allowed over a period of a few years before moving on, but what a great investment that was. I recommend something like the Linn, or some of the other suspended designs, only to people who have a local turntable setup expert or already have that knowledge. If you don't have either, buy something new that's less reliant on expert setup, like the Music Hall, Pro-Ject or Rega tables.

Obviously much more money can be spent on a turntable and the accompanying accessories and electronics. But really excellent CD playback isn't cheap either. In my opinion, it starts at around \$3K these days, and goes up dramatically from there. In strict hi-fi terms these digital rigs unquestionably excel, but even at the lowest levels these turntables have an indescribable "something" that not a single digital rig will give you.

While the powers that be are arguing right now about how to deliver high definition television into your living room, the fact is that we've had high definition audio for over 50 years. Analog playback systems have continued to evolve right up to today. You'd expect that the better the equipment gets the more flaws we'd find in our oldest stereo recordings, but it's not entirely so. Although that is certainly the case with some records (especially rock and pop from the 1960s up to now), many recordings—such as Belafonte At Carnegie Hall, as well as many jazz titles from the 1950s—show just the opposite. I'm still not sure we're pulling out everything that's down in the grooves on these wonderful lifelike recordings!

Digital audio is touted by many to be unequivocally superior technically to analog (i.e., that it measures better), but this is at least a little misleading. Other than signal-to-noise ratio, and in some cases channel separation, analog has some significant points in its favor. Analog recordings have high frequency extension way beyond CD's 20kHz limit, and analog exhibits demonstrably better time domain performance. For all of the LP's mechanical shortcomings, even cheap turntables don't suffer from jitter or require brick wall filters. Think digital is invincible? Run a square wave through a CD player and see

what comes out.

Vinyl sinks a natural sounding, emotional hook into listeners that digital just doesn't. If you don't know what I mean you haven't heard it. Why is vinyl so much more involving than digital? At 16/44 the samples that represent amplitude over time are steps with space representing time between them. Transferred to redbook CD, the musical waveform is not continuous, but resembles stair steps. Analog and its hook live somewhere in the time between those samples. Maybe our brains are working too hard to fill in those gaps and that's what makes digital fatiguing in a way analog never is. Maybe there's more in those high frequencies, way above our hearing range, than we think. Maybe the time domain distortions of digital subtly skew the way instruments and vocals sound in ways we feel more than know. MP3 has shown us how much data can be tossed in the digital garbage can and still reproduce something that sounds like music. But we want more than "sounds like music," and analog has a lot more.

As for pops and clicks detracting from the vinyl experience, I don't think that's the case for someone who loves music and listens with the right side of his brain (literally and figuratively). Today's LP pressings are predominantly flat, quiet, and everything they should have been decades ago. Taking vinyl out of the mainstream has been good from a quality standpoint. If you're truly a music lover, I think you'll be more like me when these pops and clicks occasionally occur. It's thought that we can't hear details down into vinyl's noise floor but I think we can. When I listen to records the pops and clicks that occasionally occur are not tied to the musical experience any more than hearing my dogs barking outside while I'm listening. It's a minor, momentary nuisance that doesn't even make me turn my head unless it becomes excessive.

As far as replacing your entire CD collection, that's not what I did and it's not what I'm advocating. Keep your CD collection. And buy a turntable, and invest in several of your favorite recordings on LP. An accompanying article in this issue features a list of 40 great records that cover a variety of musical genres. Start there. Look at vinyl like a gourmet meal, or a decadent dessert. It's not for every day, or maybe even every week, but when you have a couple of hours to dedicate solely to the enjoyment of listening to music, why not indulge yourself and make it the best it can be?

Follow my advice and buy a modest analog playback rig, then if you decide to continue collecting vinyl the news gets even better. The selection of new music available on vinyl today is eclipsed only by the CD including all tastes and genres—SACD and DVD-A combined don't come close. While there are still some classical and occasional jazz titles trickling out on SACD, DVD-A is dead. If you want high res and you want variety, vinyl is your ticket.

If you don't have a local spot to score new vinyl, don't worry about it. Both Acoustic Sounds (www.acousticsounds.com) and Music Direct (www.amusicdirect.com) have virtually everything under the sun that's released on the LP these days.

If you live in or near a large metropolitan area, used vinyl is not only abundant, it typically costs less than half what used CDs cost. In the San Francisco bay area Amoeba Music, Rasputin, and Streetlight Records each have several stores catering to the vinyl crowd. While used CDs typically range between \$8



and \$12, used vinyl generally runs between \$3 and \$5. Rare and collectibles cost more, and sometimes what gets classified as such is decided pretty liberally. Used vinyl is still cheaper and it still sounds better. A lot better!

It must be mentioned too that it's a fun part of the hobby to shop for used records, a trip to the store that both my wife and I can get with. We're 30-something now and 80s kids all the way. We find tons of stuff in great shape that we used to listen to "back in the day" and usually pay only about \$3 a pop. And we have a hell of a good time taking the records home, cleaning and playing them.

I hope this article has made a dent with those of you who've

been avoiding vinyl. Look for other articles in this issue with reviews of some hot turntables, tonearms, phono cartridges and phono stages, as well as the companion pieces, "Essential Analog Accessories," and "40 Great Records You Can Buy Right Now!" The vinyl revolution will not be televised! [APJ](#)

ESSENTIAL ANALOG ACCESSORIES

By Shane Buettner

Owning a turntable for playing LPs is a ritualistic endeavor that requires at least a few well-chosen accessories to perform, and perhaps more if you're going to jump into the used record market. I'm going to recommend a few accessories for turntable setup, and a bunch for cleaning. This isn't a comprehensive survey, but a starter kit for the uninitiated. What follows is a breakdown of what you need, based on the products I've used over the years. If your dealer doesn't stock these accessories, virtually all of them can be found at Acoustic Sounds (www.acousticsounds.com), Music Direct (www.musicdirect.com), and often times both.

Stylus Pressure Gauge

Even if you have an ace of a setup man at your local dealer, a simple, effective stylus pressure gauge is useful to have around to make sure tracking force is set properly, and that it remains so over time. And if you're using a unipivot tonearm a gauge is the only game in town, period.



Shure SFG-2
Stylus Force
Gauge \$25—

The Shure is the old-school standard, but it's easy to use and very reliable. Its range is spec'd as 0.5-3.0 grams and is spec'd to be accurate within 1/10th of a gram in its wheel-house range of 0.5-1.5 grams. Readings are given in 0.5-gram increments, which is close enough to start experimenting by ear.

Digital Gauges

Don't worry, using a digital stylus pressure gauge won't make your analog records sound bad! Quite the contrary, actually. I have experience with two options out there in digital gauges,

which are faster and more reliable over a broader range than the Shure. But you're going to pay through the teeth for this convenience and accuracy, so the guy who's more confident in his hearing or simply has more time on his hands is going to get out of this cheaper.

Clearaudio Exact \$500—The Exact is just that up to 1/10th of a gram. It's very quick and easy to use. Personally, I prefer Winds ALM-01, which I recommend if you can spring for the additional bucks.



Winds ALM-01 \$799—
As the model number cleverly suggests, the Winds ALM-01 is accurate to 1/100th of a gram. It's just as easy to use as the Clearaudio, has greater

accuracy, and includes a bubble level. This is my current reference.

One note on gauges and how you use them: I'm a reviewer and I have different needs than you probably do. Your needs depend, I suppose, on what kind of hobbyist you are or intend to be. If you are going to set up your rig once and play records, and then upgrade the table, arm, or cartridge once in a blue moon, the Shure is probably fine. All you really need is to get in the ballpark range recommended for your cartridge (by its manufacturer) and then tweak by ear. I flip stuff around and try new cartridges often enough that the Winds is worth it. It allows me to try a new cartridge, and then when I'm done pop my Lyra Titan back on my table and dial right back into its optimal 1.70-gram tracking force. For you, it might not be a worthwhile investment.

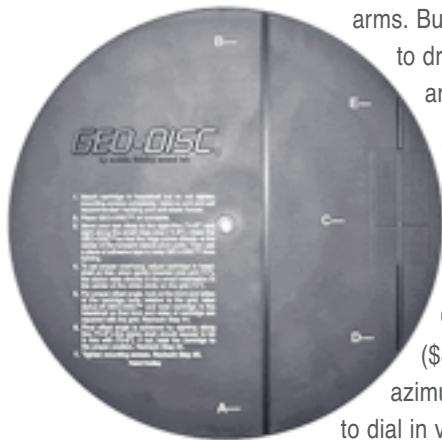
Speed Tester

KAB Speedstrobe \$90—There are lots of these on the market, and many tables come with strobe discs. I use the KAB, and am satisfied with it. The thing that makes the KAB a sweet deal is that unlike some of the others, it comes with its own "quartz-lock illuminator," which is the strobe light you point at the disc when it's spinning on the platter. The KAB disc uses numbers



your table you might just want to find a strobe light. If not, look no further!

Your best bet for turntable/tonerarm setup is always your dealer. Some necessary tools are included with some turntables and



arms. But if you want or need to drill down further in this area, you can do a good job with the Mobile Fidelity Geo-Disc (\$50) for basic cartridge alignment, and a KAB Stereo Channel Canceler (\$80) to fine-tune azimuth. Azimuth is trickier to dial in visually, so you plug the output of your phono stage into a box like this while playing a mono record. The channels are summed out-of-phase, so simply adjust the azimuth until you hear the least distortion.



Last, having your platter level is essential. If you didn't get a small, effective level with your gear you need to buy one. VPI sells one for \$11.99 and Sumiko sells the spiffy looking Pro-Ject Spirit level for \$20.

Cleaning Accessories

These accessories mostly revolve around one simple idea, which is to keep your stylus and your records clean so you can play them with a minimum of noise. This is going to start basic, with the need to brush your records right before you play them,

and go all the way up to record cleaning machines.

Premium Inner Record Sleeves—These are non-negotiable; you've gotta have 'em. Even expensive vinyl can come with lousy paper sleeves that will scratch your records every time they go in and out of these sleeves. There are two distinct styles to buy, and they each start at around \$20 for a 50-count and get cheaper in greater quantities. The first style, from Nitty Gritty and others, has a poly-lined paper sleeve. The second is the one I prefer, which is the VRP style that's not paper on the outside. Mobile Fidelity sells this type. The reason I prefer the latter isn't about performance, but profile. Some records come with inserts and other accompanying material, and/or have jackets that are tight. The inner sleeves with paper outsides are bulkier, make tighter fits in the record jackets and sometimes their seams get caught in the record jacket or inserts too. But either way you choose, you need to have these lying around so you never have to put your pristine vinyl back into a scratchy paper sleeve.

Compressed Air—Having this around to blow dust off your records is handy, just don't do it around your turntable because you could blow dust and other garbage from the stylus up into your cartridge. I don't use anything fancy. Costco carries Dust-Off in six-packs on the cheap.



AudioQuest Record Brush

\$20—This is essentially a copy of the classic Decca brush, and everyone who

owns a turntable needs one of

these, period. You need to brush every side of every record you play, every time you play it. There are variations on this theme, like the Hunt EDA, which adds a big velvet pad in between the two rows of carbon fiber bristles. I've used it and it's not only slower but the velvet collects particles of debris that can actually scratch your records if you don't clean the brush frequently. Why bother? I returned to the AudioQuest brush and never looked back.

Orbitrac 2 Record Cleaner Kit by Allsop \$40—The Orbitrac 2 is cheap, simple and effective. The kit includes some grippy pads to lay your record on, cleaning fluid and pads. Spray the fluid on the pad and then work it around the record. The Orbitrac 2 is the best you can do without a record cleaning machine, and while more time consuming it's arguably as effective as some



low-end cleaning machines. Even if you're thinking that all you're going to do is buy new, clean records, get one of these babies. Even new records can come with some residual chemicals from the pressing process, and/or dust and other light debris. I give every new record I buy at least

a quick clean before it meets my stylus. Replacement fluid and cleaning pads for the Orbitrac are cheap too.

Record Cleaning Machines

If you're serious about getting into the used record market a cleaning machine is a must. Even if you're not, this can still be a worthwhile investment that is faster and even more effective than the Orbitrac.



Nitty Gritty Model 1.0 Record Cleaning Machine \$300—This is the classic manual vacuum cleaning machine. You squirt the fluid on one side of the record, place a brush in

the fluid, and crank the record around manually. Flip the record, and vacuum the fluid off and repeat. Nothing about the build quality or materials is substantial and the process is cumbersome. I owned one of these for a couple of years and often found my used records piling up while I waited for my wrists to feel up to the task of cleaning. If there's any way in hell you

can buy at least a semi-automatic machine you should, especially if you plan to buy used records in any serious quantities.



VPI HW-16.5 Record Cleaning Machine \$525—This semi-automatic machine is the best deal

going in record cleaners. First, it's a substantial piece of hardware that more closely resembles a turntable than an accessory. The Nitty Gritty machines are really cheesy in comparison. Flip one retro toggle switch and the platter spins. The only thing the user has to do is squirt on some cleaning fluid and hold the brush down. Flip the other toggle to start the vacuum. That's it. Squeaky-clean vinyl. Mobile Fidelity makes some record cleaning brushes that are inexpensive and perfect for the task. Get some fluid and you're in business.



VPI HW-17 \$1200—After wrestling a Nitty Gritty for a couple of years, I bought one of these babies a while back and could kick myself for not doing it sooner. While it's true that this fully automatic machine appeals to me as a lazy man at heart, this machine's biggest plus is that it lets me spend more time listen-

ing to my records and less time preparing them for listening. (To a guy with a year-old son, that's priceless!) A bristled brush with a built-in fluid applicator drops the fluid on the record and brushes it. The motor's toggle switch is two-way, so you spin and brush in two directions before vacuuming the fluid and accumulated debris off. Flip and repeat and you're done, or ready for another record. It's fast, ultra-easy and effective. Although some colleagues have claimed to get better results from brushing manually, I have not heard a noticeable improvement over the automatic brush, so that's how I roll. My used record purchases get on my turntable in record time now. The HW-17 is more expensive, but worth every penny. How can you put a price on something that allows you more time to listen to music?

Regarding the various fluids that are out there—Last, Lyra, Nitty Gritty, Record Research, VPI—I've used a few and never heard any discernible differences when playing records. I'm not saying there aren't differences. I'm just saying that I don't hear it when I play a record in spite of claims by fluid manufacturers that better dynamics or bass will result from using their secret sauce. I admit that the used records I buy are usually in good condition, so maybe if I had a literal golden moldy on my hands something heavier duty might be better. But for run-of-the-mill record cleaning, they all seem pretty much the same to me.

Many cleaners are alcohol-based, but some of the newfangled

boast that they are alcohol-free (and some guard their recipe like it's a government secret). Alcohol is an inexpensive and effective way to make a cleaner, and as far as I know it's not harmful to vinyl, so I'm not yet convinced that paying extra for cleaning fluid will pay off any more than the elixir at the medicine show that will save your soul and shine your shoes.

Stylus Cleaners



Zerodust \$70—The Zerodust is a bubble-shaped lump of self-forming polymer that you dip your stylus down into. When you retract it, the dust and gunk from the stylus stays behind. The idea is that the liquid cleaners that get brushed on can get

back into the cantilever and muck up the works inside your entire cartridge. This is a sound principle, and the Zerodust not only works as claimed, it can be washed with tap water! I used this for a while, and would often see the Zerodust tug at the stylus just a little as I pulled it up from the goop. I never saw any damage, but I was never comfortable with it and switched to the Lyra SPT described below. But as I said, it's a solid idea and if you're not a fraidy-cat like me you could be quite pleased with this.



Lyra Stylus Performance Treatment (SPT) \$45—Lyra's SPT is a fluid-and-brush system, but unlike the similar solution from Last, the brush is super tiny

and shaped in such a way that you can easily clean the stylus tip without any fluid getting up into the cantilever. Very swift and very clean. Forty-five dollars might be a lot of scratch for one teensy bottle and a brush, but one bottle has lasted me 8-9 months, and that's with very, very heavy use. [APJ](#)

40 GREAT RECORDS YOU CAN BUY RIGHT NOW!

By Shane Buettner

Since I've smugly urged you to buy a turntable and a smart selection of your favorite recordings on vinyl, I'd better back up my rhetoric with a list of great records that are currently in print. This list proves my point about the variety and quality of music that's available on vinyl right now. All of these records can be purchased from your local retailer or from Acoustic Sounds and Music Direct online.

I have cheated a little here. Some recommendations are actually multiple records in the form of box sets, or catalogs of a label or artist rather than a single release. I don't think anyone will shoot me for making more recommendations than I promised rather than fewer! I've also included the name of the record label, which can be especially handy in tracking down reissues.

Notice that some golden moldy audiophile records aren't here. That's on purpose. I'm assuming you won't have any trouble finding *Kind of Blue*, *Dark Side of the Moon*, or *Jazz at the Pawn Shop*, if you want them. This is no statement on my perception of the quality of those records; I just wanted a list of some fresher music that's here for the sake of being great music, and not necessarily fodder for listening clips to show off a hi-fi. To put a finer point on it, I've recommended a record by U2—not a record by an audiophile label group singing the songs of U2!

AC/DC Box Set (Epic), \$199 for 15-album set or \$15 each for individual records



Maybe not the most artistically important rock band, but what band can claim more instantly recognizable rock anthems than the Australian rockers? These albums sound better than they ever have, and even the studio albums have a big, ballsy sound reminiscent of an arena concert.

The box set has the band's entire catalog of 15 albums, or you can pick and choose individual albums for only \$15 each, which

is a hot price for 180-gram remastered vinyl.



Louis Armstrong *Satchmo Plays King Oliver* (Classic Records), \$33

Armstrong is one of the original greats and this is a musically great record with sound that will surprise the hell out of you! In particular, the image focus and

depth across the stage are "in the room" scary, and Satchmo's vocals are full of the scratchy, throaty textures that define his singular style. Classic also offers two cuts from this record—"St. James Infirmary" and "I Ain't Got Nobody"—on a two-sided, 45-rpm single for \$18.



Blue Note Signature Mono Series (Classic Records), \$33 each

Another legendary jazz catalog, featuring artists such as Miles Davis, John Coltrane, Cannonball Adderley, Art Blakey, Kenny Burrell, Johnny Griffin, Hank

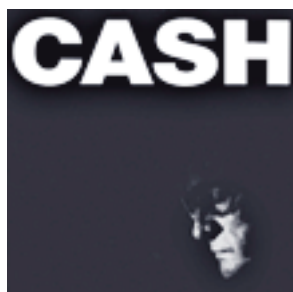
Mobley, Lee Morgan and many, many more. Of course the man behind the board for many of these recordings is nearly as big a name as those he's recorded: Rudy Van Gelder. Classic cuts these records from the original analog master tapes on a genuine all-tube mono cutting system. This is very pure mono on flat, quiet vinyl.



Johnny Cash *Original Sun Singles 55-58* (Sundazed), \$30

For many this is the music that comes to mind when they think of the iconic country singer. Sundazed has done a masterful job with this double LP set.

There's a sea of Cash recordings surfacing and resurfacing these days. Don't miss this one on vinyl.



Johnny Cash *American IV—The Man Comes Around* (American), \$18

The Man In Black redefined his long and great career in his last decade of life, the ten years in which he made "American Recordings" with producer Rick

Rubin. Rubin's ability to understand the essentials of the artist, strip the sound down to that bare minimum, and connect the listener to that essence is so powerful it more than makes up for JC's aging, ragged vocals. The sound is real and intimate, and these simple, under-produced recordings sound their powerful best on vinyl.



Eva Cassidy *Songbird* (S&P Records), \$30

Eva Cassidy is another one who defies genre labels. This album is mostly Cassidy's voice and acoustic guitar; the songs ranging from traditionals and standards to modern songs like Sting's "Fields

of Gold." The productions are spare, and thank heavens for that. Cassidy's instincts for arranging and emotionally communicating these songs are so perfect and honest I wouldn't change a thing. Her music will hit you right in the cardiac muscle. Cassidy died an untimely death in 1996 at just 33 years old, but I'm so thankful her music has survived. Sound quality is somewhat lacking on the original recordings, but it's rough in a good way and it certainly doesn't interfere with Cassidy's strong emotional pull.



Nick Cave and the Bad Seeds *Nocturama* (Anti), \$18

Bob Gendron, my former colleague at The Absolute Sound, loves Cave as much as I do, and recently surmised in print that no artist going is branding a hotter iron of late than Cave and his

Bad Seeds. Cave's eclectic sound defies genres, fusing some punk with roots of rock, blues and gospel. His lyrical language consistently evokes themes of love, fire-and-brimstone religion,

death and violence. But don't worry—there's always enough sly humor to avoid a gothic melancholy. *Nocturama*, currently available on vinyl, has a fiery, live feel to it. Also check out: *The Boatman's Call* (1997) and *No More Shall We Part* (2001). They're no longer in print, but buy them if you find them.



Classical's Holy Trinity of Labels

Decca catalog (Speaker's Corner), \$30-\$85 each, depending on number of LPs; Mercury Living Presence catalog (Speaker's Corner), \$30-\$90 each, depending on number of

LPs; RCA Living Stereo catalog (Classic Records), \$30 each. These three catalogs contain some of the most cherished recordings of great performances of music that has, in many cases, stood the test of centuries—from Solti conducting Beethoven and Fritz Reiner conducting, well, everything, to Janos Starker's virtuoso playing of Bach's Cello Suites. These recordings from decades ago are still astounding to experience. High definition television is just now being realized; these records prove that we had high definition stereo audio in the 1950s!



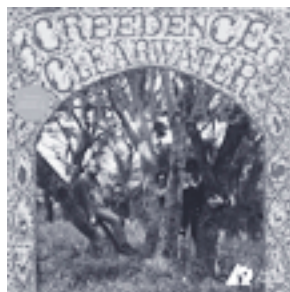
John Coltrane and Johnny Hartman (Speaker's Corner), \$30

Here's a jazz record for everyone, featuring the quintessential male jazz vocal performance, buoyed by some of Coltrane's most beautiful work on tenor sax. There's

enough presence and room sound to make the recording involving and immediate. This is an essential record for any collection.

Creedence Clearwater Revival catalog (Analogue Productions), \$25 each; \$250 Complete Box Set; \$200 45-rpm Box Set

Chad Kassem's Analogue Productions has remastered the entire CCR catalog from the original analog master tapes on 180-gram vinyl, and the results are simply shocking. The sound



tracks from each LP cut on 45-rpm vinyl. Creedence never sounded this good and it's hard to believe this sound was buried there in the tapes the whole time.



Bob Dylan Mono catalog (Sundazed), \$19-\$30 each

Sundazed has remastered a number of the enigmatic folk icon's early works from the analog master tapes of the original mono mixes. The titles include Bob Dylan, *The Freewheelin' Bob*

Dylan, *The Times They Are A-Changin'*, *Bringing It All Back Home*, *Highway 61 Revisited*, *Blonde on Blonde* and *John Wesley Harding*. The work here by Sundazed is warm and brilliant, and the company maintains its impressive reputation for offering high quality remasters of important music at good prices.



Eighty-Eight's catalog, \$30 each

How about some staggeringly pure jazz recordings that aren't 50 years old? The Eighty-Eight's label is nailing it with new records by Ravi Coltrane, Joe

Farnsworth, Roy Haynes, Clark Terry and Max Roach, just to name a solid few. The sound is vibrant and real, with depth and clarity that's to die for. The vinyl pressings are incredibly quiet and pristine. Eighty-Eight's are all around greats!

Fantasy 45-rpm Jazz Series (Analogue Productions), \$50 each

Chad Kassem's Analogue Productions label dubs this series "the best jazz ever," and although that's a bold statement it's not



hyperbole. AP is going through the greatest titles in the Fantasy catalog, 25 at a time, using the original analog master tapes, with the mastering team of Steve Hoffman and Kevin Gray doing their thing. The results are the most stunning editions of the best jazz music ever recorded. The series will eventually comprise 100 titles, and the runs are limited to 1,000 numbered copies of each title. All the greats are here—Miles Davis, Chet Baker, Count Basie, Duke Ellington, John Coltrane, Bill Evans, Thelonious Monk, Oscar Peterson, Sonny Rollins, Ben Webster—and by all accounts these 45-rpm efforts are the best these records have ever sounded. Many titles in the first set of 25 are sold out or running low, but the second set is still in stock, and AP is currently moving through the third set. If you love jazz this series alone makes it worth buying a turntable. If you even like jazz, follow this series and hear your favorites sound their glorious best.



Peter Gabriel catalog (Classic Records), \$30-\$40 each

Peter Gabriel first gained prominence as the front man for Genesis before embarking in 1977 on an astonishingly broad solo career during which he created pioneering, ambitious and intelligent progressive rock; some of the most innovative music videos ever conceived; and moving film scores infused with "world music" before that was even a viable term. Classic has not only done a remarkable job sonically with Gabriel's catalog, but each record's packaging is a keepsake-quality work of art in itself. I own every single one of these reissues, and I can't recommend anything more highly.



Al Green *I Can't Stop* (Blue Note), \$15

This 2003 effort sounds like a lost recording from Green's seminal 70s era when he and producer Willie Mitchell were cranking out soul classics, one after another. Green re-teamed with Mitchell for

I Can't Stop, and really, it sounds like he and Mitchell never stopped! This terrific record doesn't have quite the resonance of Reverend Al's 70s classics *Let's Stay Together* or *Call Me*, but it's not far off those high notes either.



Isaac Hayes *Hot Buttered Soul* (Mobile Fidelity Sound Labs), \$30

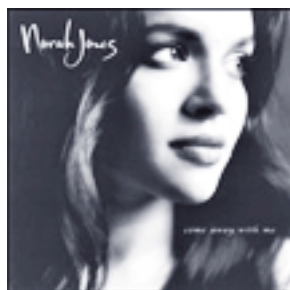
Chef was a hell of a soul singer before headin' on down to South Park! Hayes' second record on the Stax label is as emotionally smoldering as the title suggests.

With the Bar-Kays laying down the rhythms, the highlights here are Hayes' long, incendiary covers of Burt Bacharach & Hal David's "Walk on By" and Jimmy Webb's "By the Time I Get to Phoenix." There are only four songs, but the record still clocks in at nearly an hour! This is real Memphis soul, and Mobile Fidelity does it full, sumptuous justice on 180-gram vinyl.



Jimi Hendrix *Axis: Bold as Love* (Classic Records), \$30

My favorite of Hendrix' studio recordings, *Axis* features a fat, densely layered wall of sound, even in mono! Hendrix' guitar expression is nonpareil, but I think this record also features his strongest lyrics—particularly "Little Wing" and the whimsical "Castles Made of Sand." Classic has reproduced the original mono here in striking fashion. Who needs stereo? OK, we all do, but buy this record and don't fret about it not being stereo. This isn't Classic's only Hendrix reissue, it's just my favorite. Look for the others too, especially *Band of Gypsies*.



Norah Jones *Come Away With Me* (Classic Records), \$30

I admit to being quite the "Snorah" fan, as her detractors label her for being, I guess, a touch boring. Few records are as wildly successful—critically and commercially—as this record. So

say the 18 million units sold and eight Grammy awards won. It's one of the most stunning, airy and natural sounding studio recordings I've ever heard.



Alison Krauss and Union Station *So Long So Wrong* (Mobile Fidelity Sound Labs), \$30 for 2 LPs

Before O Brother Where Art Thou? had people pining for that old-time music, Alison Krauss and Union Station were doing their part to bring bluegrass back into the mainstream. Mo-Fi's vinyl release is fat and rich, with striking detail and texture. A textbook example of how vinyl can be warmer and richer than CD, but also airier and more detailed with far more information reconstructing the performance.



Led Zeppelin catalog (Classic Records), \$30-\$40 each

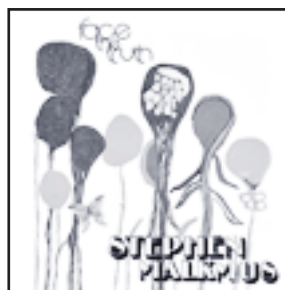
During the 1970s rock giants walked the earth, and Led Zeppelin is one of the greats. Recording quality varies for obvious reasons, but the bottom line is that Zeppelin has never sounded better than this. And again, Classic outdoes itself with the artwork. Essential for Zeppelin fans.



John Lennon *Plastic Ono Band/Imagine/Mind Games* (Mobile Fidelity Sound Labs), \$30 each

The Beatles are rock royalty and everyone knows it. *Plastic Ono* and *Imagine* are arguably the best and most significant releases of John Lennon's solo career (or his Solo/Ono career), with *Mind Games* not far behind. *Plastic Ono* is a tougher listen in its direct, emotional rawness. It's an album I respect, more than one I genuinely love to listen to. *Imagine* is more accessible and no less profound lyrically for the most part. Mo-Fi was a little handcuffed with these titles, only having access to Yoko

Ono's approved stereo remixes, not the original stereo mixes. So comparing these Mo-Fi remasters to the original releases is futile. But when comparing them to recent CD releases, you can clearly hear the Mo-Fi mojo. The Mo-Fi vinyl shines, winning by a landslide.



Stephen Malkmus *Face the Truth* (Matador), \$12

Malkmus was the lead singer and songwriter for Pavement, one of the best and most influential alt-rock bands of the 90s. *Face the Truth* is his third solo record, but the first that sounds (to me) like a continuation of Pavement's tack from *Slanted and Enchanted* through the quirky and underappreciated *Wowee Zowee*. And how great is it that the record is actually cheaper than the CD?!



Modest Mouse *The Moon and Antarctica/Good News For People Who Love Bad News* (Sony), \$17 each

Good News is better known, but both of these albums are full of fresh, vibrant alt-rock with a very dense, layered and intricate sound, especially for what's ostensibly a trio. And hey, here's one of the big labels offering double LP sets for seventeen bucks!



Thelonius Monk with John Coltrane *at Carnegie Hall* (Mosaic), \$30

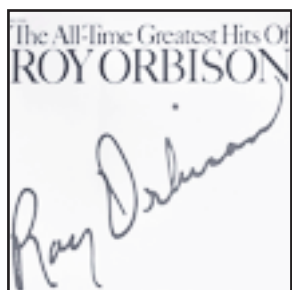
Wow. It's not every day that, while searching the Library of Congress archives, someone unearths recordings by two towering giants of jazz playing together that no one knew existed. That's just what happened here. The result is an imperfect but perfectly natural and vibrant performance by a legendary jazz band. This is a pure classic, and an absolute treasure for jazz fans.



Oliver Nelson *The Blues and the Abstract Truth* (Speaker's Corner), \$30

Here's another gorgeous reissue of an essential jazz record. When you see names like Eric Dolphy, Bill Evans, Paul Chambers, and Roy Haynes you can guess

you're going to hear a good record, and in this case what you hear is in fact a bona fide classic. The mix is pretty hard right/left, with some loose filler in between, but the tonality is righteous.



Roy Orbison *All Time Greatest Hits of Roy Orbison* (S&P Records), \$40

Roy was the voice for those unlucky in love: "Only the Lonely," as he put it. For me, Roy never made an album that was great from start to finish, but as this

collection shows, he spanned a lot of great songs across a number of albums. This collection is lovingly and effectively remastered. Not audiophile quality sound, but "better than ever" sound for one of rock's undeniably unique and influential talents.



Original Jazz Classics, \$10 each

The Fantasy catalog is comprised of records by the greatest jazz artists the world has known, and these are blue-light specials at \$10 apiece, brand spanking new.

In my experience the quality is

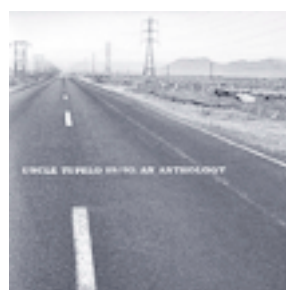
highly variable—some are great and some unacceptably noisy. For that reason, I hesitated putting these in this list, but the lineup is too strong at \$10 to not offer this conditional recommendation. Artists include Chet Baker, John Coltrane, Miles Davis, Duke Ellington, Bill Evans, Charles Mingus, Thelonious Monk, Art Pepper, and Sonny Rollins, just to name a few. I'd pay \$5 more for quieter vinyl but it is what it is.



Otis Redding catalog (Sundazed), \$15 each

Before his tragic early death, Otis Redding established his towering talent as a soul singer fully deserving mention among the likes of James Brown, Sam Cooke, Al Green, and whoever

else you got. Sundazed has created superlative reissues of some of Redding's greatest records, including *Otis Blue*, *The Complete Dictionary of Soul*, *In Person at the Whisky A Go Go* and *The Dock of the Bay* collection.



Uncle Tupelo *89/93: An Anthology* (Sundazed), \$25

Some say Uncle Tupelo is the band that created alternative country as a music genre. And for those who don't know, when this pioneering group disbanded in the mid-90s, Jay Farrar formed Son

Volt, while Jeff Tweedy and the other remaining members founded Wilco. Listen to this double LP set and I think you'll want to track down the individual Tupelo and Wilco records, if you haven't already discovered them.



U2 *All That You Can't Leave Behind* (Island), \$30

This 2000 effort is U2's *Tattoo You*—a bold statement reminiscent of the very best of the band's past works, but new, fresh and vital. Moments of "Beautiful Day," "Elevation" and "Walk On" arc all

the way back to *War* and *Unforgettable Fire*. And then there are quirkier pleasures like "In A Little While" and "Wild Honey." After so many radical reinventions it's actually kind of nice to hear U2 being U2 again! The import vinyl is a little noisy, but still a richer, fuller experience than the CD.

Tom Waits *Mule Variations* (Epitaph), \$18

Someone once described Tom Waits as a "junkyard noise poet" and that's as good a classification as I've heard for this truly



singular artist. Just try to identify the sounds on a Waits record. It could be instruments, could be children's toys, or just a bunch of junk he found in a box being beaten together. What shouldn't be lost in Waits' unique musical stylings are that his lyrics are brilliant, spare poetry. Waits is an analog guy in the recording studio, and the sound on this record is big, open, focused and natural. Rock and pop studio records seldom sound anywhere this good, or this live, so if you're into Tom Waits at all this album is a must.



Ben Webster *Soulville* (Speaker's Corner), \$30

This is another jazz record that anyone will love. Smooth and sultry, this is a great, great record. Ben's sax is as breathy and languid as ever, and the guitar is first-rate too. The sound on this reissue is fat and ripe, and I mean both in good ways. This is another no-brainer: even if you're not a big jazz fan, you need this record.



White Stripes *Elephant* (V2), \$18

This is full-blooded, straight-ahead, high adrenaline rock. The Stripes have a Neil Young garage sound that isn't polished but is very immediate and engaging. Big sound! This record communicates, and it rocks!



The Who catalog (Classic Records), \$30 each

Classic is moving through The Who's catalog, and again, these are great records—but you don't need me to pile on and tell you that. So far *Who's Next*, *My*

Generation, *A Quick One* and *The Who Sell Out* are in the can, and they sound as good as one would expect from Classic. *The Who Sell Out* is worth buying as a pop-art piece for the cover and included poster, even if you don't have a record player!



Wilco *A Ghost is Born* (Rhino), \$25; *Yankee Hotel Foxtrot* (Sundazed), \$25

One of today's most innovative and important bands, Wilco's roots are in alt-country, but the band has moved steadily toward a musically complex and layered rock/pop sound on more recent albums. The sound on *Yankee* is warmer and richer, with a spot-lit vocal that floats impressively in space. *Ghost* was mastered by Kevin Gray at AcousTech and released on 180-gram vinyl. It's more tonally open and live-sounding, but no less expressive.



Lucinda Williams *World Without Tears* (Lost Highway), \$18

This music is emotionally honest, intense and raw with lyrics that mean something. The sound is raunchy and live, with surprising dynamics for a country-rock studio record. This music will appeal to fans of both rock and country, and won't disappoint either camp.



Neil Young *Tonight's the Night* (Warner), \$10

The sound is as raw as the emotions on this record, written and played after the death (by drug overdose) of Young's roadie Bruce Berry, which followed the death by overdose of *Crazy Horse* guitarist Danny Whitten. This is a great Neil Young record and Warner will sell it to you for \$10. This reissue might not sound quite as "there" as the original, but it's only ten bucks and you can find it anywhere.



Neil Young *Greendale/Greatest Hits/Prairie Wind* (Classic Records), \$40-\$45

Classic sandwiched a terrific *Greatest Hits* compilation between Young's last two phenomenally strong studio efforts—one with and one without Crazy Horse.

Greendale is a brave concept record, and a remarkably strong and daring release for an artist whose career already spans five (!) decades. The sound on this record is sensational—big, heavy drum kit and crunching guitars that are the calling cards of Young's collaborations with Crazy Horse. This release is literally one of the best sounding rock records ever produced, and the music kicks just as much ass. Classic's release is a box set with the music sprawled over three 200-gram LPs and loaded with the paraphernalia that was passed around at the live concert performances, which I was fortunate to have attended. Another monster from Classic!

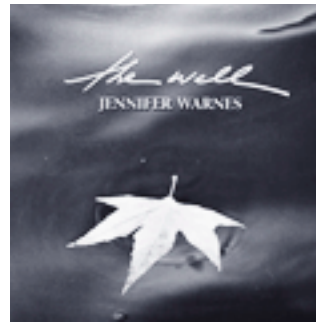
The *Greatest Hits* compilation is as good as such a thing can be, and it's only the duration of Young's career and wealth of quality material that can't be included that mars this experience in any way. The sound is warm and textured, but also big and surly when called for on the Crazy Horse numbers. I did some comparisons between the tracks here and the original LP releases, and in most cases the Classic remasters blew the originals out of the water. Only a few tracks were even comparable. The double LP packaging rocks too, with a gorgeous gatefold and a cool vintage poster thrown in for good measure.

Prairie Wind is Young's latest. It's a very mellow, introspective affair written after the death of Young's father and his own fight with a brain aneurysm. The musical tones are reminiscent of *Comes A Time* and the more recent *Silver and Gold*. These comparisons are important as the two albums I just mentioned are considered acquired tastes for big-time Neil fans only. *Prairie Wind* ranges from somber to a little silly, but I like it. The sound is fat and almost too warm, but rich in resolution and harmonic complexity and shading (it kills the CD too). The packaging is stunning, even by Classic's high standards. **APJ**

HARDESTY ON RECORDS

By Richard Hardesty

Shane has recommended some great music available on vinyl right now. I'd like to add a few suggestions from an older man's perspective. The first three can be purchased new but the rest will be harder to find. Some of the rare ones may be expensive if you do find them. This may seem like a drawback at first but it can be an exciting quest. Finding out-of-print records is somewhat like coin collecting. There is a wealth of music available on the used market and these records have intrinsic merit as well as collector appeal. You can listen to and enjoy the music in your collection of rare or out-of-print records and show the cover art to your children. If you decide you don't like the music, or simply tire of it, you can recoup at least part of your investment and may actually make a profit reselling your excess titles.



Jennifer Warnes *The Well* (Cisco Music CLP7009) \$16

I've been a fan for decades starting with the LA play *Hair* and her TV appearances on the Smothers Brothers Comedy Hour. Her latest album, *The Well*, is a wonderful piece of work and perhaps

the best of her career. Doyle Bramhall II and Arlo Guthrie occasionally join Jennifer here as she performs eleven great songs. I'm particularly fond of the Billy Joel tune "And So It Goes" with its poignant lyrics.



Chicago Symphony Orchestra: Fritz Reiner, Conductor; Arthur Rubinstein, Pianist—

Rachmaninoff Rhapsody on a Theme of Paganini, Op. 43
San Francisco Symphony Orchestra: Enrique Jorda, Conductor; Arthur

Rubinstein, Pianist—*Falla Nights in the Garden of Spain*
Two orchestras, two composers, four records(Classic Records 45 Series) \$30-\$50

Paganini wrote music primarily for the violin and his themes are so beautiful they inspired Schumann, Liszt and Brahms to compose variations for the piano. Rachmaninoff wrote twenty-four variations on the Paganini Caprices for piano and orchestra producing some of the world's most beautiful music and some of my favorite classical selections.

Manuel de Falla is another interesting composer and this four-record, 45-rpm set includes some of his best work, too. The recording is not quite state-of-the-art quality but it's more than good enough to make goose bumps on my arms. A must-have for your classical collection.



Ray Brown & Laurindo Almeida *Moonlight Serenade* (Jeton JET 33 004)

Beethoven wrote "Moonlight Sonata," a classical music standard. Thelonius Monk wrote "Round Midnight," a jazz music standard, many years later. Laurindo and Ray play

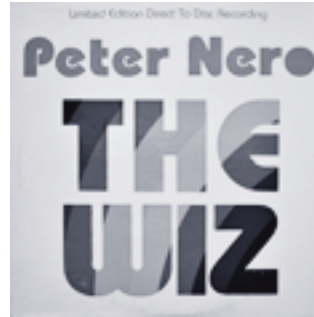
both pieces, together! This album, containing 11 great selections, was originally released as a direct-to-disc recording and that's the one you should get if you can find one. I have a 180-gram analog remaster that's nearly as good sonically and just as good musically. The remaster is available new. Very enjoyable and highly recommended.



Mel Torme and Friends (Finesse Records W2X 37484)

Recorded live at Marty's in New York City in 1981, this is an SOTA recording that I frequently use at seminars. Great music, incredible lifelike sound, two records with ten

songs including two medleys. I'm particularly fond of the duet with Janis Ian. Mel Torme's nickname was "The Velvet Fog." Get this record and learn why.



Peter Nero *The Wiz* (Crystal Clear 45-rpm Direct-to-Disc CCS 6001)

Many people think of Peter Nero as just a Vegas lounge act but I think he's one of the great interpreters of pop music and an outstanding pianist. His rendition of Sondheim's "Send In The Clowns" is worth the price of admission here.



David Lindley *El Rayo-X* (Asylum 5E-524)

David Lindley is a musician's musician and El Rayo-X is one of the tightest bands I've seen live. This record was coproduced by Jackson Browne and mastered by Doug Sax at The Mastering Lab in LA. Tuneful

and rhythmic rock-and-roll featuring the song "Mercury Blues." One of my favorites.



City of Birmingham Symphony Orchestra: Louis Fremaux, Conductor

Massenet Le Cid—Ballet Music, etc. (Klavier KS 522)

Spectacular Le Cid ballet music, "Scenes Pittoresques," and "The Last Sleep of the Virgin" from French composer

Jules Emile Frederic Massenet. If you think most classical music is boring give this a try! Like a shot of espresso this music will stimulate your vital bodily fluids. Recorded in the early '70s and not without sonic flaws but musically thrilling. I love it.

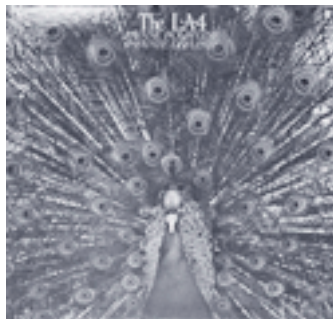
Sue Raney Sings the Songs of Johnny Mandel (Discovery DS-875)

Sue Raney is an exceptional vocalist who never achieved the fame she deserved, in my humble opinion. Here she sings Johnny Mandel songs with words by various lyricists including



be the first customer in line.

Peggy Lee, Marilyn & Alan Bergman, and Johnny Mercer. Sue is accompanied by the *Bob Florence Trio* with the incomparable Bob Magnusson on bass. This album can only be described as a work of musical art! Oh, how I wish Classic would remaster it. I'd



The LA4 *Pavane Pour Une Infante Defunte* (East Wind EW-10003)

Bud Shank, Laurindo Almeida, Ray Brown and Shelly Manne play mellow jazz recorded direct to disc. This is an audiophile favorite because of great sound quality

but don't let that stop you—the music is good, too. I enjoy the title cut even though I can't pronounce it.



Berliner Philharmoniker: Karl Bohm, Dirigent (Conductor)

R. Strauss Also sprach Zarathustra op.30 (Deutsch Grammophon SLPEM 13600)

Also sprach Zarathustra has been called Richard Strauss'

"tone poem after Nietzsche." Regardless of the inspiration, this is thrilling and dramatic music that science fiction fans will remember from the film "2001: a Space Odyssey." This is a typical DGG recording and the sound won't be considered very good. But I suspect you won't be paying much attention to the sound.



New York Philharmonic Orchestra: Leonard Bernstein, Conductor; Rudolf Serkin, Pianist—Beethoven "Emperor" Concerto #5 in E-Flat Major (Columbia M 31807). Serkin is my favorite interpreter of Beethoven and the "Emperor

Concerto" is my favorite Beethoven work. I have several recordings of this piece and none are worth writing home about but the music is simply marvelous. Maybe you can find a better rendition of this work, which contains some memorable music that I recommend highly.



Steven Gordon Plays Chopin (Reference Recordings RR-2)

I believe Steven Gordon has passed away and this record is long out of print but it's a gem! Chopin's work is incomparable and Gordon's playing touches me, even if it isn't

technically perfect. This LP is from 1977 and recording quality can be criticized but the record blows away the CD, which may still be available.



Little Feat *Waiting For Columbus* (Mobile Fidelity MFSL 2013)

This is a classic rock album by a seminal rock group, Lowell George and Little Feat. It's a must-have for students of the genre or anybody who loves rock-and-roll with sometimes

thoughtful and often sardonic lyrics. The two-record set contains 27 songs including "Willin'," a George tune made famous by Linda Ronstadt; "Don't Bogart That Joint," a short memory of a time past; and my favorite, "Apolitical Blues." Recording quality is outstanding with exceptionally powerful bass.



John Klemmer *Straight From The Heart* (Nautilus Direct-To-Disc Recording NR4).

Before there was “new age” (rhymes with sewage) music, there was John Klemmer. If you put Charlie Parker all the way toward one side and

Kenny G all the way toward the other, John Klemmer would fall somewhere in between providing easy listening along with skilled musicianship. The album *Straight From The Heart* contains six mellow jazz songs featuring Klemmer on sax joined by some of the best players of the day including the exceptional bassist Bob Magnusson, bossa nova guitarist Oscar Castro-Neves, keyboardist Milcho Leviev, drummer Roy McCurdy and percussionist Ray Armondo. This direct-to-disc recording is from 1979 and the sound leans very slightly towards thin and bright but is still very good.



Boz Scaggs *Silk Degrees* (Columbia X698)

Any talk about “seminal artists” must include Boz Scaggs, who has been writing and performing great pop songs for decades now. I recently watched a “greatest hits” concert where Boz and

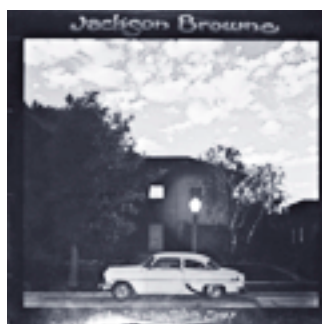
his band did one song after another for two full hours! *Silk Degrees* is from 1976 and precedes the Urban Cowboy days but contains ten memorable classics, performed by Boz and some of the great studio sidemen of the day including arranger and sometimes co-writer David Paich.



Stevie Wonder *The Secret Life of Plants* (Tamla T13-371C2)

I attended a Ray Charles concert around 1960 and watched as Ray introduced another blind musician to the world—a kid called Little Stevie Wonder who sang and

played the harmonica. Little Stevie grew up and became just Stevie, one of the most prolific creators of intriguing pop music in the latter part of the twentieth century. *The Secret Life of Plants* is not Wonder’s best-known work but it may be the most musically creative. The album cover is embossed in brail. I can’t guarantee you’ll like this two-record set. Then again, it just might become one of your favorites.



Jackson Browne *Late For The Sky* (Asylum 7E-1017)

One of pop music’s great poets sings and plays eight of his best songs accompanied by exceptional musicians like David Lindley on electric guitar, slide guitar and fiddle, and Jai Winding on piano and

organ. This 1974 album probably won’t appeal to younger audiences but will surely resonate with those who are a little older and perhaps wiser. This is, like, the story of my life, man. [ARJ](#)

Future Issues

We’ll complete our coverage of analog components for vinyl playback with reviews of some entry-level products that didn’t make it in time for this issue and take a look at the latest and greatest optical disc players as we cover digital source components. We’ll try to provide guidance for those with budget limitations by examining modified mass-market disc players and entry-level machines with high-end aspirations, too.

Future **Audio Perfectionist Journals** will provide some facts about interconnect and speaker cables and discuss power line conditioners and special power cords, too. You may be surprised to learn that some of these products are essential audio components and some are simply a waste of money.

I’ve had long-term relationships with many of the innovators who helped create the high-end audio industry and we can still learn from their experiences. Interviews with industry pioneers like Ivor Tiefenbrun of Linn Products and Bill Low of Audioquest have been completed and we hope to interview Bill Johnson of Audio Research. As in the past, **Journal** interviews will provide real information about real designers and candid views of the audio industry, not just thinly veiled advertising for their products.

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