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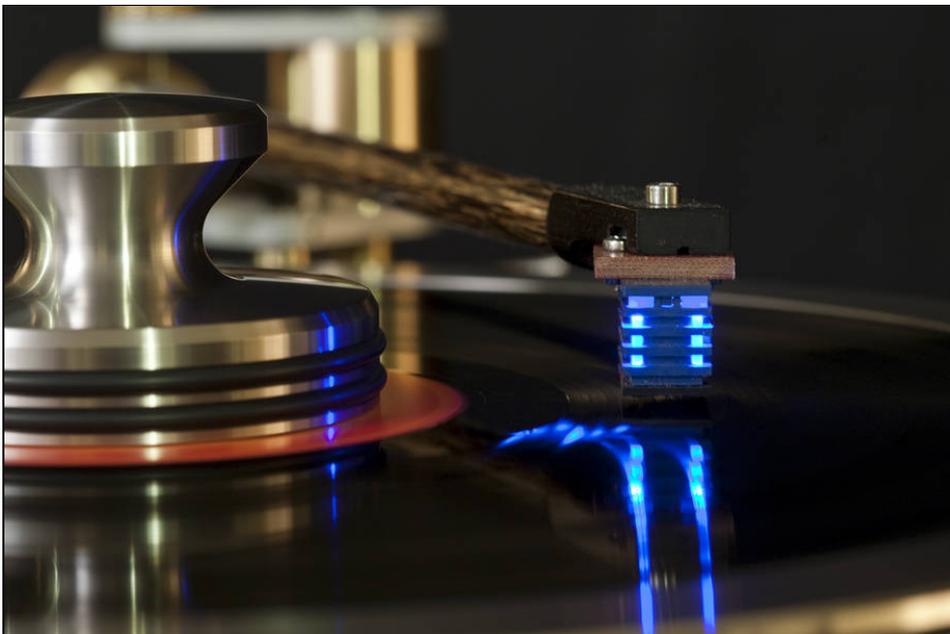
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Analog Sources

Soundsmith SG-220 Strain-Gauge Cartridge System Review

By: Jack Roberts | February 2013



Sound Smith Strain-Gauge Cartridge – photograph by Ross Bennett of ~ ImagePro Productions ~ imagepro@earthlink.net

Even if you have heard of a strain-gauge phono cartridge, you probably have never heard one or understood how it works. If you are one of the few who have heard one, it was probably at an audio show in a system you were not familiar with. Still, as rare as they are Soundsmith's Peter Ledermann is committed to making them available to us. In the midst of repairing vintage equipment, providing the much needed service of retipping and rebuilding phono cartridges, building his extensive lines of wonderful sounding moving-iron cartridges, preamplifiers, amplifiers, and speakers, he also makes a full line of strain-gauge cartridge systems available with a choice of six user-replaceable stylus. Peter says it takes him at least a full day to build just the cartridge itself.

At the 2012 RMAF, Peter Ledermann introduced two new models to compliment the original SG-200 (\$6,499): the new SG210 (\$7,499), and SG-220. All three models feature MK IV upgrades, the fourth generation of Soundsmith's strain gauge cartridge



Specification:

Cartridge frequency response, DC to 70 Khz
No "RIAA" filter circuitry is required or used in our preamp - just one ULTRA clean gain stage (this is because the Strain Gauge is a "displacement" device, not a "velocity" sensitive device like magnetic cartridges).
User Replaceable Nude "Contact-Line" stylus w/Ruby Cantilever (varied stylus types avail)
System Price includes Strain Gauge Cartridge and Soundsmith SG-220 Preamp
Ultra low effective moving mass, medium Compliance design and freedom from low frequency saturation assures excellent tracking ability and performance with any tone arm
Compatible with any 1/2" mount headshell - uses STANDARD 4 wire tone arm wiring
IR Hand Held Remote

MSRP: \$8,600

Soundsmith

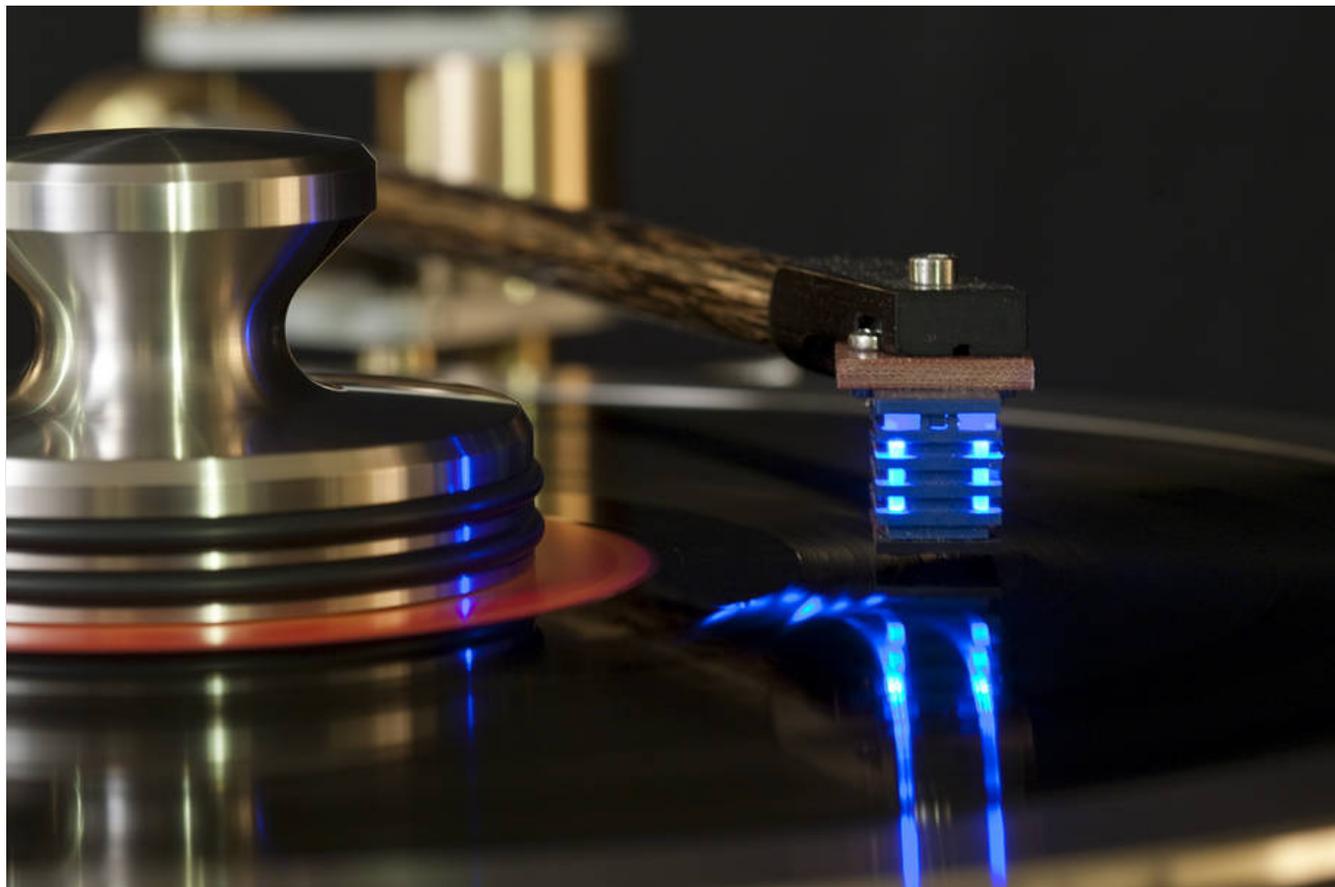
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At the 2012 RMAF, Peter Ledermann introduced two new models to compliment the original SG-200 (\$6,499): the new SG210 (\$7,499), and SG-220. All three models feature MK IV upgrades, the fourth generation of Soundsmith's strain gauge cartridge systems. As compared to prior iterations, they have improved frequency response characteristics. The top featured model, the \$8,600, SG 220 strain-gauge cartridge system in for review includes a dedicated preamplifier for input switching, remote control, fixed and variable outputs. In other words, it's capable of functioning as a full-fledged preamplifier with one input dedicated to the strain gauge cartridge and one line stage input. It can also be ordered with an adapter to give you four line stage inputs.

Strain-gauge phono cartridges are the stuff of legend. What is the difference between a strain-gauge and a magnetic cartridge? Perhaps the best known strain gauge is the Win Strain-Gauge cartridge. Sao Win has made them off and on for decades. Panasonic also made some years ago, and some are still in service today. Jeff Rowland was so taken with the Panasonic that he made a power device for it. Personally, I've never heard either a Win or Panasonic strain-gauge cartridge, though my audio bud Steve says he used to own a Win Labs and loved it. The only ones I have heard are the ones from Soundsmith and up to now, only at shows with equipment I was not familiar with, but the sound intrigued me enough for me to go after Peter to let me review one. He promised me one after the 2012 RMAF, but then the super storm hurricane Sandy came and Peter's place was hit very hard; however, by late December he had one ready for listening to and reviewing.

To the best of my understanding a strain-gauge cartridge, unlike traditional moving magnet or moving coil cartridges, does not produce voltage or current. In contrast, it responds to mechanical movement or displacement of the grooves by changing resistance. Thus, it requires the use of a separate, dedicated electronic device to generate a direct current in which changes in resistance can then be converted into an analog signal. *(Because of the resistance produced by the cartridge, it must be used with a special preamp that in essence, provides a power supply. Whereas typical cartridges respond to velocity, the strain gauge responds to displacement. As such, the strain gauge does not require an RIAA correction. Most importantly, the strain gauge must be used with the Soundsmith preamp; it cannot be mixed and matched with other preamps. -Exec Ed.)*

In theory, there are several advantages over traditional cartridges. First, it should provide a relatively flat frequency response over a range that exceeds the audible range. Second, the SG cartridge is a medium-low compliance cartridge that has a much lower effective moving mass than most moving coil cartridges; this should result in a lower level of stored energy reflecting back down the cantilever and stylus to cause distortion or mis-tracking. Third, it is said to be the most phase coherent cartridge system made.

With a strain gauge cartridge the cantilever puts pressure on two sensitive silicon crystals that change resistance as the cantilever moves, in response to the stylus following the grooves of the LP. Unlike other cartridge designs, the cantilever does not have to drive coils or magnets. I'm not by any stretch of the imagination an expert on phono cartridge design, so if you want to understand more of the technical side go to www.sound-smith.com.

Review System

I used the Soundsmith SGG-220 in my reference system. I removed my [Miyabi Standard](#) cartridge (\$3,500), my [Auditorium 23 Homage T1 SUT](#) (\$5,000), a meter of [High Fidelity Cables CT1E](#) (\$2,800), and disconnected my beloved [Shindo Giscours](#) (\$28,000). In the place of all this equipment, the cost of which is \$39,300, I mounted the Soundsmith strain-gauge phono cartridge with the SG-220 as my preamp(\$8,600). I used my [AMG V12](#) turntable and its 12-inch tonearm, placed on the [HRS M3X-1921-AMG](#) isolation platform made for the V12. The power amp for the review was my [Wavac EC 300B](#), and the speakers were my [Teresonic Ingenium XR Silvers](#). All interconnects and speaker cables were Rick Schultz's [High Fidelity Cables](#). Power condition was from [HB Cable Design PowerStar Horizon](#) and Audience AU24 power cables. I also listened to the Soundsmith cartridge through the SG-220's fixed outputs into the Shindo Giscours' line stage.



Setup

Everything I had read and things Peter said about the SG-220 made me think setting up this cartridge would be a bear. Nothing could be further from the truth. I want to compliment Peter for one of the best owners' manuals and setup instruction I have seen in audio. I would like to encourage anyone purchasing this cartridge to read it thoroughly before setting up the cartridge. I found mounting it in my AMG V12 tonearm a snap, and its rectangular shape made getting the geometry right straightforward. I followed the method outlined in the instruction manual for setting the azimuth.

This involves the use of flashlight and your eyes. I double checked it with a [Fozgometer](#) and a test record, but it was right on just using the flashlight as Peter instructs.

One word of warning though, the stylus in this cartridge sits much farther back in the cartridge than most. Thus it is easy to get the geometry a little off if you aren't careful about where you place the stylus versus where it usually is. The first time I set it up I caught myself doing this, and even after break-in, it sounded a little lean; when I went back and checked everything, I discovered I had not gotten the stylus itself right on the spot on the protractor. When I did, the sound snapped into place and the slightly lean sound went away.

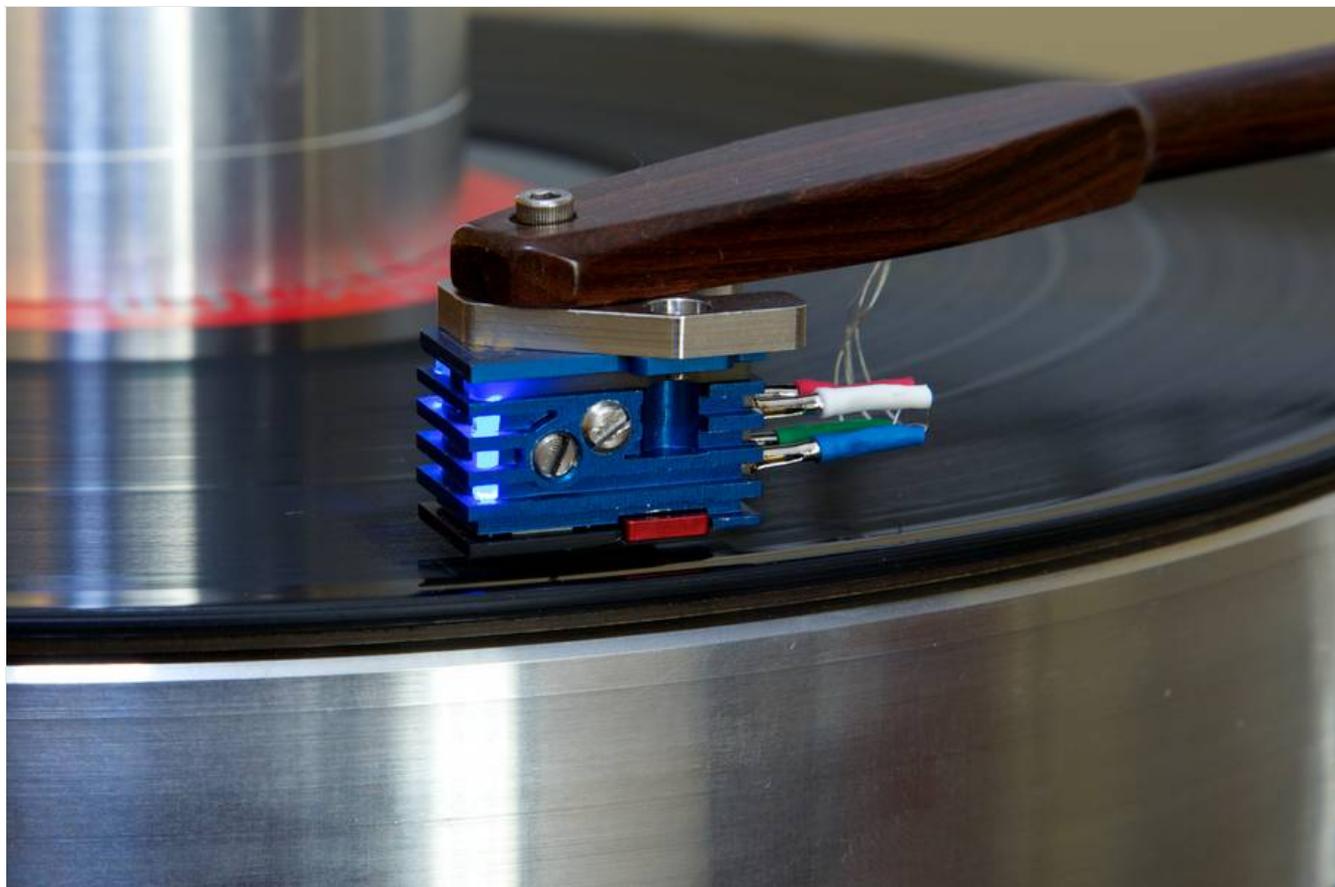
Tracking force is checked before Peter ships it out, and he writes the recommended tracking force on the box. Mine had 2.4 grams on the box and I tried it a little bit up and down, and I need to say that small differences in VTF made significant differences in my system. I settled on about 2.415g.

This leaves VTA to set, and that is a very simple and easy thing to do with the AMG V12 tonearm. I don't buy into setting VTA with a microscope; I trust my ears. By the way I have discovered that this is the biggest mistake most audiophiles make, not trusting their own ears. Again, like VTF the small changes in VTA made significant difference in my system. Since VTF also effects VTA, I tried to get the VTA so that I could keep the VTF as close to 2.4g as possible and get the best sound. In my system it sounded best with it back down just a hair, and I mean a hair. If the VTA is too high or the VTF too low, the cartridge sounded a little thin and didn't quite pop like it did when I got them right.

In the end, the cartridge did take more time to set up than most. There is this special balancing act between VTA and VTF and of course every time you change the VTA you have to get the protractor out and reset things. I ended up getting the best sound using the late Allen Wright's protractor which you can still print out from [VSEI's web site](#). The way I finally got it tuned in was using a LP I was very familiar with — Carol King's *Tapestry*, a LP I have listened to since my college days. To get the protractor setting perfect I had to increase the VTF to 2.48, so I lowered the VTA and then tried to get the VTF back to 2.4. I settled on this VTA and a VTF of 2.415. Of course, lowering the arm meant I had to redo the geometry.

This may sound like a lot of work, but it wasn't very hard with my arm, and it was worth it. Without this fine tuning the cartridge can sound thin on some LPs, but after getting this all set up the cartridge is not thin at all, but has beautiful harmonics and deep layering. This is why I don't think you can set up a cartridge with a microscope. You need something to get you to a starting point like a level or with the AMG tonearm's built-in level, but after that you have to listen. It's worth the effort, I promise.

One last thing, it seems to me that a preamp never sounds its best for the first two or three minutes it is played. Maybe I should just leave it on all the time but I just got used to this.



Tracking

The only tonearm I used the SG-220 cartridge in was my AMG V12 twelve-inch tonearm. The 12 gram mass and the ingenious bearing of this arm

seemed to be perfect for the SG cartridge, as it out tracked anything I have used. It is the best tracking cartridge I have ever used, surpassing the superb tracking [ZYX 4D G SB2](#) cartridge . Most modern cartridges track well, but the SG-220 was at the very top of the pack. In fact, it tracks so well at such a broad spectrum of tracking forces that it allows you to have such a range of setup.

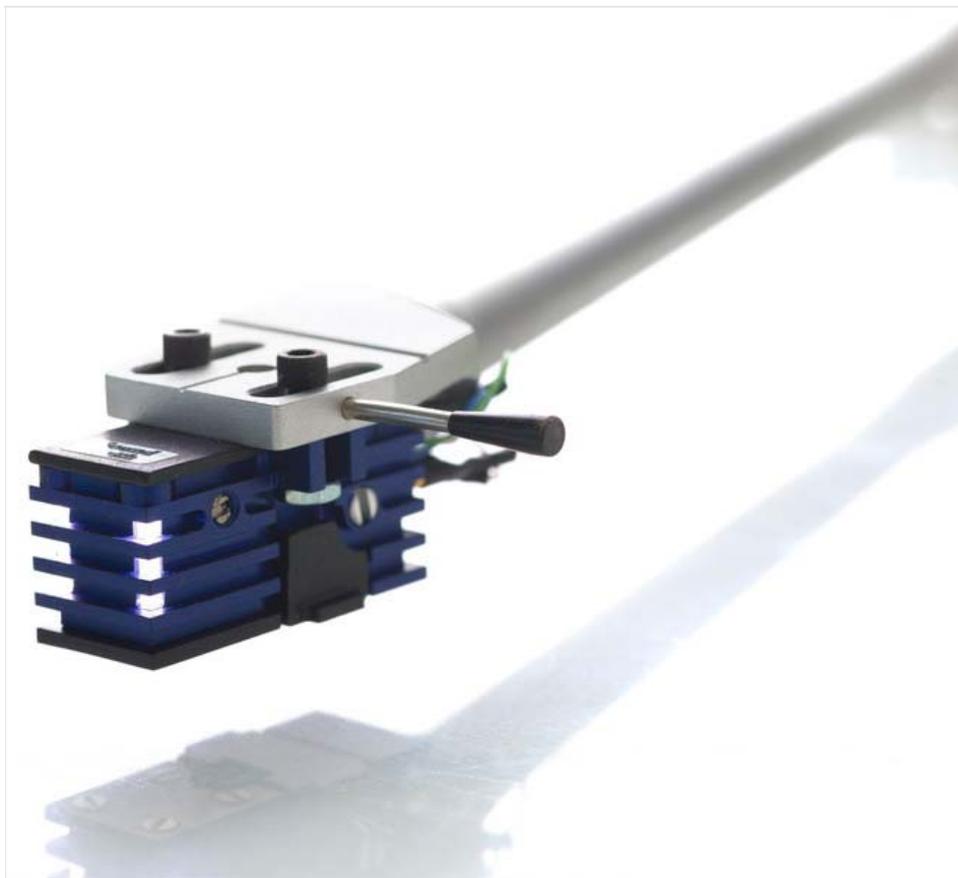
Initial Reaction

As my regular readers know, I spent many years listening to Quad 57 electrostatic speakers. I will never forget the first time I heard them. It was at Baylor University and the album was Cat Steven's *Teaser and the Firecat*. The reason I remember it now 39 years later is because the sound such a revelation. I was blown away by the transparency of the midrange and the speed of the bass; of course, I didn't know those terms at the time.

I'm not the first to say it, but that is exactly the same feeling I had when I installed the SG-220 cartridge and preamp in my system. My first impression after a few hours of break-in was that a properly set up Soundsmith strain-gauge cartridge reproduces the cleanest, clearest, most transparent midrange and top end I had heard. It also had the fastest, most dynamic bass I have heard. It also let me hear more air around and within instruments and more of the hall than I had heard by a large margin. Lastly, it produces by far the most three-dimensional soundstage I have encountered. Let me stop right here and say that most products that wow me like this at first, often in the end do not end up being as musically and emotionally involving as I want a product I own to be. So having said that, let's see what a few weeks of listening did for the way I feel about this cartridge.

The first session I had with this cartridge with only about 6 hours on it my listening room had records everywhere. My oldest son dropped by unannounced and we started pulling out LP after LP. We were so impressed by its immediacy and straight forward sound. One of my first thoughts was of the 'positive scanning' Decca pick-ups I used to love so much. I called [Warren Gregoire of WGA](#) and told him I had found a [London Decca](#) that could track. Its speed and agility is spell binding and the way the Soundsmith delivers bass information is very reminiscent of the Decca cartridges that don't have a cantilever. While it has the slam and speed of the Decca's bass, it lacks the Decca's tracking difficulties. A few weeks later Warren came to hear it and we both agreed it not only tracked better than the London Reference cartridge, but bettered it in every way.

After a few days, I thought again the cartridge was sounding too lean and I wondered if maybe it just wasn't the perfect match for my system. So I put back in the Miyabi Standard and thought it had a warmer tonal balance, but after a few days I missed the strain gauge's incredible clarity, immediacy and solid three-dimensionality. So, I took it back out of dismissal and begin to set it up again. That's when I noticed I wasn't paying close enough attention to how far back the stylus sits in the cartridge body. A little time resetting everything while paying attention to this and I put it back on to play. Wow! What a difference this made. The lean sound was gone and the bass was even better. The top end sounded just as extended, and even more beautifully.



So what does it sound like?

Maybe I should start by saying it doesn't sound like anything I have heard before. It doesn't exactly sound like what I have come to expect vinyl to sound, nor does it sound anything like digital. There is a naturalness, ease, and total lack of coloration that I wasn't prepared for; you probably won't be either the first time you hear it.

Like the AMG V12 turntable and the High Fidelity Cables, it's equally important what you don't hear with this cartridge. The SG-220 is the quietest preamp/phono cartridge I have heard by a big margin. There is no hum, no electrical noises, and an incredible quietness to the background of music. This quietness doesn't miss things like tape hiss at all; in fact, this quietness lets you hear everything. I have never heard anything like the beautiful way this cartridge plays soft passage on LPs. If you're looking for a forgiving, warm, more beautiful-than-reality cartridge, this isn't for you. If you're looking to hear what's hidden in those grooves, and hear it in a way that is remarkably alive sounding, then read on.

If you like to listen to music at low levels, this is the LP playing system for you. If you really like to crank it up, this still is the cartridge for you. I have heard very few speakers or sources that I could say sounded just as good at really low volumes or really high ones before. The combination of the SoundSmith SG-220 and my Teresonic Ingenium XR Silvers do exactly that, though. Like with my old Quad 57, the volume control seems to move you closer or farther from the music as much as it makes it louder or softer. Unlike the Quads, this system can be played at lifelike volumes or even louder.

One last general comment about the sound. With this cartridge in my system I hear so much more of the hall, club, or recording studio than with other systems. Live albums like *Peter, Paul, and Mary In Concert* or *The Weavers Live at Carnegie Hall* were almost disturbing at how you could hear individual voices singing in the audience, and the clapping was so alive. It is so much more like hearing the recording in person among the audience than listening to a live recording. This is equally true of studio recordings; it is so obvious when microphones are turned up or down. Sometimes it is even possible to hear a mic become live that had been off. Sadly, it is also easy to hear when certain microphones on certain instruments are hotter than others. Still, I warn you when you get used to hearing this kind of space, hall sound, and real air it's very hard to go back to even the best moving coils.

Bass

I have to admit I was shocked by the precision with which the SG-220 played bass in my system. The bass is one of its strongest points. Whether it was drums, acoustical or electric bass, the impact and speed were spot on. There is a fundamental rightness that seems to complete the transformation my system has gone through with the addition of the AMG V12 turntable and the High Fidelity Cables. The amazing thing was that once I got the geometry right, it let me hear the air and warmth without even the slightest hint of boom, looseness, or hangover in the bass or mid-bass. I was really surprised that a system with this kind of speed, detail, and quietness could have such beautiful harmonic structure; I found it quite beguiling.

The characteristic sound of the bass was carried all the way up into the upper mid-bass. The cartridge provides fast attacks followed by beautiful full decay that lets me hear different layers of the timber of the instruments. One of the most amazing things is to listen to a standup bass and hear the fingering, the air around the fingering, the air within the standup bass, and the space it was played in. I have never heard all of this all at once before. My system with the SG-220 has the most lifelike bass I have experienced. I know my speakers only go into the low 30s, but the bass I have is just so lifelike. The most amazing thing is that it produces this bass effortlessly and sound so fundamentally right.

Rereading this section, I see I haven't talked enough about drums. No system I have heard plays drums as realistically as mine does with the SG-220 as the source. The way you can hear the skin, the decay, the different sound different sticks sound, and most of all the impact of the sound and the air of a bass drum. It simply sounds more like drums.

Midrange

The Midrange is the glory of an Analogue/SET/Single Driver system. With the SG-220 my system plays voices and instruments in a way that is scary real. It is the midrange that is the glory of this cartridge system and at the same time I find the midrange the most difficult to describe.

First, there seems to be a whole lot more information getting to the speakers and out into the room with this cartridge setup. At the same time, this information seems to be coming into the room in a more natural and relaxed way, that is at the same time incredible dynamics.

Second, yes it has that magic like a great SET system can have, but it goes beyond that; and yes it also has that special way of breathing life into the system, but again it goes beyond that; and yes it is incredible in letting you hear small differences in voices and instruments, but once again it goes beyond that. Lastly, if set up correctly it does have rich harmonic structure, but there is more to its midrange than any of those great things. It simply sounds more alive!

Third, there is an effortlessness to the sound from the lowest bass, through the midrange, all the way to the top end that is just so relaxing to listen to. I'm sure this is a combination of a great 12-inch tonearm and the cartridge, but it is a world beyond anything I have heard before.

So what is it that takes my system to another level with the SG-220 in it? I think you have to go back to what it doesn't do. It doesn't ring, vibrate, or

in any way smear the sound. The problem with describing this is if you haven't heard your system with the SG-220, you probably have no idea your current setup is doing this. As good as the Miyabi Standard, the latest Benz Ebony TR, or the Shindo SPU are, and they are really good, they each add a degree of reverb and smearing that I don't hear with the SG-220. The Benz Ebony TR with its single winding per channel comes closest, but does not have the power or bass that the SG-220 does.

The thing about this quality of what you don't get is that it brings to life the subtle details you can now hear. For example, listening to Sara K singing and playing an acoustic guitar I hear so much more of her breathing and phrasing. This result in much more like live music. The phrasing is especially hard to get the PRaT right, but it does. Then it also gets the rhythm of guitar playing right along with both the fingering and the decay of the acoustic guitar. It's quite wonderful.

Treble

My normal test for the top end of an audio system is whether I notice it. If I do then either it is too bright, too etched, or too dull. The SG-220 is none of those, but it is really beautiful. It can be quite delicate, or quite biting depending on what's on the recording, but it's the most neutral and most beautiful top end I have heard in my listening room. There is just no way to tell you how good cymbals, recorders, and strings sound.

Soundstage and Scale

Can you say three-dimensionality? Everyone who heard this cartridge said they had never heard such three-dimensionality from recorded music. Yes, my system had a wider and deeper soundstage with this cartridge than ever before, but saying that really misses the point. The soundstage is totally dependent on the recording. It can have a soundstage with great scale, but just as in real life instruments can sound large or sometimes quite small. I bet, like me, you want to hear both. I don't know why musicians love to walk over and stick their horns right into the mic, but they do and that larger-than-life sound is part of a live Jazz performance. With this cartridge, you get both the scale and the dynamics that occur when they do. That's what I mean by scale. I want to hear a vocal or a trumpet start soft and small then swell in volume and size as they reach back and let it go.

Another thing I want to hear in a natural soundstage is space and air around, and even within an instrument. I've said this before: I don't want strings floating around in some black velvet space like a modern painting that show strings and notes but no instrument or musician. I want to hear the body of the guitar, I want to hear the floor under the bass, I want to hear the sound of the strings inside a piano. The SG-220 allows my system to do this even better than before. I feel like I'm not conveying how holographic the soundstage is. It is!

Harmonics, Musical Flow, and Texture

After getting the geometry right, the SG-220 was unsurpassed in these areas, but it did require getting the geometry just right. Then I could hear deep into the emotion of the music. This is something that is so important in live music, but rarely heard in recorded music. It allowed my system to draw me deep into the emotions of the music. It did this through all the small nuances that I could hear, but nothing is ever razor sharp, instead it is a beautiful blend of delicacy and dynamics.

For example, can you hear the difference in textures, and harmonics when Willie Nelson or Sinatra sings a song verses some lesser singer singing it.? You can hear and feel the difference in the emotions of a great ensemble playing a number. With the strain gauge in the system, I was simply brought deeper into the emotions of the performance.

How it sounds with and without a separate line stage

Early on, I tried coming out of the fixed outputs of the SG-220 into my Shindo Giscours and then later, I tried this combo again. Don't get me wrong, it sounds good through the Giscours, better than the Miyabi Standard used with the Homage T1. Playing the strain gauge into the Shindo Giscours, music sounds slightly warmer than going straight into its own preamp, but slower, less transparent, slightly muddy, and the soundstage isn't nearly as wide, deep, and nowhere near as three-dimensional. You also lose the unbelievable purity you get from it straight into the amp. I can't imagine why you would not just use the SG-220 straight into your power amp.

There are those of you who will prefer this sound, probably because it's more like what you are used to. In my system, there was no contest though; I liked it much better straight to my Wavac EC300B. I would go as far as to say if you have only heard it through a line stage, you probably still don't know how good it is.



Specific Examples

I've chosen several of my favorite songs on vinyl and I'm going to talk about how they sound with the SG-220 compared to any low output moving coil I have used with the Shindo Giscours and the Homage T1 SUT.

“Swing Low Sweet Chariot” and “Amazing Grace” from Joan Baez’s album *From Every Stage* are two songs I always listen to with new equipment. The SoundSmith allowed my system to sound unbelievably alive and open with a holographic three-dimensional soundstage. It had incredible spatial information and an ease about it that made it sound as if Joan Baez was in my listening room.

Listening to Ry Cooder’s great album *Jazz*, I found it to be a very involving experience. This is the kind of album that highlights transients and harmonics. This was the most delicate, sweetest sound I had ever heard on this LP. It plain sounds prettier on the top-end on many of the cuts on this album. The guitars have such detail and air with rich harmonics, great decay, and such air.

Rob Wasserman’s *Duets* is one of my favorite albums. I love to hear the standup bass played well and Wasserman’s bass playing is superb. My favorite cut is Wasserman and Jennifer Warnes’ version of “Ballad of the Runaway Horse”.

Pop, Pop, Rickie Lee Jones’ iconic album is another that I always use to evaluate equipment. On this album, Rickie Lee’s vocals can get a little shrilled, but not with all cartridges. The detail, information, and soundstage on this LP are also superb.

Tracy Chapman’s iconic debut album *Tracy Chapman* is a struggle for some playback systems. Her voice has such power and edge, it’s not easy to get this right without sounding edgy or even mistracking in some places. The SG-220 sailed through this LP with such powerful effortless and emotion that it was hard to tear myself away from it. I ended up listening to the entire album on four different evenings. The power of the bass and her voice combined with the guitars was mesmerizing.

Neil Young and Crazy Horse’s album *Americana* shows another strength of this cartridge, it’s ability to play loud, grungy rock music. Up until now, the two best cartridges I had heard for rock music were the EMT JSD5 Jubilee and the London Reference. Both of these cartridges have tons of balls and slam. Where the SoundSmith SG-220 surpasses these two cartridges is in its ability to play those guitar riffs and all the other grungy rock sounds without sounding grungy itself. It unravels those sounds in a way that is lifelike and it has more power and slam than I had heard on my system.

I could go on and on but let me end by talking about the Mercury Living Presence LP *HI-FI LA ESPANOLA*. I have listened to this album since my college days. The dynamics, which range from an almost silent ‘pianissimo’ to thundering Crescendos, are incredible and I have never experienced them like I did with this setup. I could hear and feel the full power of the orchestra like never before and the bowed basses is an emotional experience. As the performance reaches its climax, each instrument maintains perfect clarity and definition as I have never heard on any system.

Downsides or Who Shouldn’t Buy this Cartridge?

There aren’t many, but there are people who should not buy this cartridge. First, as I have said over and over again, geometry is critical. Not hard to get right, but a necessity and a little time consuming. If you’re not willing to do this, then this cartridge isn’t for you. Second, it likes clean records. It’s not that it exaggerates surface noise, in fact, it does just the opposite. A clean record sounds more like the view out a window than other cartridges when its clean versus when it has a slight film on it.

Last, if what you like about analogue is that it gives you a warm, fuzzy feeling, then the strain gauge is not for you. Some would say it’s not a forgiving cartridge, but I disagree. In fact, many LPs I thought were poor recordings were better with this cartridge because it made the LPs sound

clear from what was just poor recording technique. I don't guess it makes it sound any better, but like a noise in the car it doesn't bother me so much once I know where it's coming from. Still, it doesn't add color that's not on the recording and a lot of people expect this from LPs. Maybe this is why many prefer the sound of a vinyl rig even to great tapes. If you're looking for a cartridge that will add its own beauty to recordings or if you are looking for a warmer, richer sound on every LP, then you need to look elsewhere.

Upsides!

First, some mentioned the strain gauge's cost as a downside but I'm going to suggest it's a bargain. The cost of my Miyabi Standard MC cartridge, Auditorium 23 Homage T1, 1 extra meter of High Fidelity Cables CT-1E interconnects, and a Shindo Giscours preamp is \$38,800. This makes the \$8,600 cost of the Soundsmith strain gauge for a superior sound seem like a bargain to me.

Second, it also has a user replaceable stylus for \$599. I don't know about you but I think that beats the heck out of sending it back and waiting for months to get it back. Besides, we normally pay a lot more for it. By the way, \$599 is for the Nude "Optimized Contour" Contact Line/Ruby Cantilever. You could go as low as \$249 for the Bonded Shibata/Aluminum Cantilever.

Third, the accompanied preamp has a very usable remote control. Best thing about the remote is it allows you to raise or lower the volume by very small amounts. Thus, it is not hard to find that perfect volume. Lots of very expensive preamps I've used have stepped volume controls and the steps are too big to get just the right volume, sometimes.

Last, the biggest upside is that I feel more like I'm listening to live music with the SG-220 in the system. It is much more emotionally involving. The longer I listen to the system with the SG-220 in it, the less I begin to think about the system and the more I was amazed by the music and the performances.

Conclusion

I made direct comparisons between the SG-220 to the following cartridges; the Miyabi Standard, the Benz Ebony TR S class with micro-ridge stylus, the [Allnic Puritas](#), the [EMT JSD 5](#), and the [Miyajima Shilabe](#). All the cartridges were used with the AMG V12 tonearm, on the V12 turntable. The preamp for all the cartridges other than the SG-220 was my \$28,000 Shindo Giscours, with either the \$5,000 Homage T1 SUT or the \$1,600 Allnic AUT 2000 SUT.

The pure fidelity effortlessness achievable by the Soundsmith is truly amazing by comparison. In terms of temporal realism, none of the MC cartridges could touch it; nor do any of them have the same tight bass combined with huge slam, great texture, and bloom. Only the Benz TR comes even close to the strain gauge's ability to start and stop notes on a dime; none have nearly as little smearing.

Add to this world class dynamics, beautiful shading, and three-dimensionality that is almost spooky and you have a totally different way of listening to vinyl. The harmonics and timbre were as good as any of the other cartridges, but not overly reverberate. In the end, a few of you may want a more forgiving, richer cartridge; no one who heard in my system wanted this, though. I think really we are just used to vinyl sounding that way. It takes time to get used to the different way this cartridge sounds. With every cartridge I tried, I kept missing the SG-220 when it wasn't in the system. I guess you can be sure that this is now my reference for vinyl playback.

One Last Closing: Lessons from the Strain Gauge

The Soundsmith Strain Gauge cartridges can teach you a lot about how good recorded music can sound. It will also teach you about sounds you have come to accept and sometimes feel comfortable in vinyl playback that I no longer believe are really there.

If you have the patience to get all there is from your system, this cartridge can help you. By the time I had lived with this cartridge for a while, I discovered that my speakers weren't set up quite right, especially the toe-in on the right speaker. Now, I only moved them a couple of inches in total, and the sound popped into space.

So, if you get one of these little wonders, be patient; let the cartridge teach you things about how vinyl can really sound; keep working on the geometry although I think it changes some at first as the stylus assembly settles in; let it help you dial in your whole system. I promise you, in my system it was more than worth the effort; it took me to places I didn't know I could get to with recorded music playback in my home.

Addendum: Best Mono Cartridge Ever?

As my regular readers know, I love mono. So it was a big concern to me that if I gave up my phono preamp I would have no way to play mono LPs and hear them at their best. I have been a big proponent of "real" mono cartridges as well as a mono input on the preamp. You get neither with the SG-220.

The good news is that the SG-220 is the best mono playback system I have used by a long shot. I would go so far as to say for me it would be worth

owning if only for listening to mono LPs. It surpassed the wonderful EMT, the Allnic, and even the [Miyajima Premium BE](#) mono cartridges. It is quieter in the groove, more dynamic, and much more alive sounding. As well the spacing (that's right spacing on mono recordings), air, and three-dimensionality are just amazing.

I asked Peter about this and he said this was a very normal reaction, and the reason is that it is the most phase coherent cartridge system made. I listened to Folksy Nina, a very old mono recording without great sound, but great music. I had never heard it anywhere near as quiet or alive sounding. Maybe even more important was how great my English mono pressing of the Beatles' *White Album* sounded. What another blessing; you don't need a separate tonearm, mono cartridge, and another SUT to get the best mono sound I have heard.

Comment from Soundsmith:

Dear Constantine and Jack,

Firstly, thank you very much for this draft – it is greatly appreciated.

I am also glad that Jack “got it” – his review is the essence of what this device is. While no cartridge is perfect, as any mechanical transducer must inherently be imperfect, what it does do correctly is exactly what Jack “got” – The SG shows that the other technologies to play vinyl are farther from perfect than one might have thought.

In doing so, it presents a more honest playback than other technologies – and MOST folks can actually hear that – BUT – some are unable to. Not to their discredit in any way, but it does indicate that we do have an acoustic memory of what a device is supposed to sound like.

I am thrilled with this review. Usually there are negative points on any product. I think Jack's comments on who should NOT buy this product are PERFECT.

Reviewing is a VERY tough job – it is by far the last job I would want in this industry !

NO THANK YOU.

I would rather build gear than comment on it.

Best – Peter