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GRAMOPHONE DREAMS

BY HERB REICHERT

THIS ISSUE: Herb tries a new drug from Technics.

Record Player Revelations

Like romance or car racing, the act of playing records is tactile by design. Like drifting through curves or making out, spinning vinyl is a learned skill that requires users to touch everything with practiced assurance.

To play a disc with Technics' new SL-1300G record player means pushing its round On button, then touching one or more of its rectangular speed selector buttons, then pushing the big square [Start:Stop] button, then unclamping the tonearm and using its cue lever to raise it up.

Next comes the part where my heart beats a little faster: using the headshell's fingerlift to position the arm over the disc and lower it into a groove.

When the needle contacts the groove, the whole system kicks in and sound comes out. Every time I repeat this pulse-raising arm-cueing ritual, which I've been practicing since 1956, I can feel in my hands the material and engineering quality of the whole record-playing machine. I'm 75, so 68 years playing as many as 500 records per year results in my having experienced at least 34,000 intimate turntable encounters. *That's* what I call a friend with benefits. And a long-term relationship.

Speaking of long-term relationships, I've owned multiple Technics SL-1200s, using one for more than a decade. I still had it when I reviewed the Technics SL-1200GAE in 2016,[1] and I am currently living with Technics' SL-1300G ($3299) and it's begging to move in. The direct drive SL-1300G is the latest addition to what Technics calls its fourth-generation record players.

Technics' first generation of direct drives began in 1970 and included the SP-10 and the SL-1100. Technics' second generation, which added quartz-locked speed control, was labeled Mk.II. It included the SP-10 Mk.II and the biggest-selling turntable of all time: the SL-1200 Mk.II. The third generation began in 2016 with the SL-1200GAE/G and employed all new closer-tolerance tooling for every part. It also introduced a new coreless motor with digital speed control, which Technics says eliminated the cogging issue. Technics' fourth generation began last year with the introduction of the $2199 SL-1200GR2, and now the SL-1300G, which I will be discussing in this month's Dreams.

"Hi-fi styling"

Incorporating features from the other fourth-generation turntables, the Technics SL-1300G represents a crossbreeding of the 'GR2 and the 'G (with a little SL-1000R thrown in for good measure). The result is a domesticated 1200G and a sonically upgraded 1200GR2. The 1300G uses the same triple-layered platter as the 1200G, and an "improved" version of the 1200G's twin-rotor, nine-stator motor. This means the 1300G's motor delivers the same amount of torque as the classic SP-10 Mk.II in a very un–DJ-looking package.

Technics' gentle-speaking, good-explaining business development manager Bill Voss describes the 1300G as their "Styling model." He said the 1200GR2 and 1200G are "DJ Styled" while the 1300G is "Hi-Fi Styled," which means it lost the pitch control, the strobe, the cueing light, and the 45rpm adapter. They are also distinguished by being divided into two categories: one that Technics calls "DJ Design," which includes the flagship SL-1200G, the SL-1200GR2, and the SL-1200MK7, and the "Hi-Fi Design" group topped by the SL-1000R, just below which is the SL-1300G, and below that the SL-1500C.

On the 1300G, the motor is bolted directly to its thick die-cast aluminum plinth, which in turn is attached to a rubber base, making it a two-layer chassis like the 'GR2, as opposed to the 1200G, which employs a four-layer plinth. These plinth and platter differences are evidenced by the fact that the 1200GR2 weighs 25.35lb, the 1300G weighs 30lb, and the 1200G weighs 42lb. The 1200G's extra weight is due to its heavier bottom cover and two layers of internal damping. Similarly, while the 'GR2's platter weighs 5.5lb, the 1300G's brass-topped die-cast aluminum platter weighed 7.93lb on my bathroom scale.

In a text, Bill Voss asked me to not take the review sample apart. To which I gladly consented. I knew in advance: I could not reassemble the 1300G with the same level balance and fine tuning as Panasonic's skilled workers using specialized high-precision equipment.

Fortunately, Fernando Zorrilla of Technics super dealer SkyFi Audio had already taken it apart for me. Cool man Fernando's riveting 43-minute YouTube video[2] documents his "deep dive" into the SL-1300G. He completely disassembles a SL-1200G, a SL-1200GR2, and the new SL-1300G, comparing these decks side by side, part by part on his workbench. This video, plus

1 See stereophile.com/content/gramophone-dreams-11.
2 See youtube.com/watch?v=suL4deekMpE.

the 1300G's owner's manual,[3] answered every question I had (except ones about the tonearm; see later).

Technics' new motor

At a promo demo at Panasonic's Newark, New Jersey, headquarters, Bill Voss explained how these fourth-generation products are distinguished by their use of Technics' "delta-sigma drive system" and an upgraded multistage power supply. According to Mr. Voss, the 1300G employs a revised version of Technics' coreless direct drive motor. Between this motor's twin rotors is a circuit board supporting nine triangular stator coils. The 1300's circuit board has been upgraded (over the 1200G's) to a new double-sided board with a "reinforced pattern to improve the coil-mounting rigidity." This is important trickle-down technology (from the SL-1000R) that should reduce vibrations and lower noise.

ΔΣ-Drive

For me the biggest news was the 1300G's delta-sigma drive system: a digital rotational control technology that, according to Technics, suppresses microvibrations.

According to the Technics website: "The ΔΣ-Drive uses delta-sigma conversion technology to reduce errors in the drive signals, obtaining low distortion drive signals through highly precise PWM generation technology. It also helps to reduce the minor rotational inaccuracies and minute vibrations that cannot be picked up with wow and flutter or S/N ratios."

This noise-reducing technology is assisted in its tasks by Technics' Multi-Stage Silent Power Supply, which features active noise canceling.

The result of these new technologies, as I describe in my auditioning below, is a modestly priced record player that performs (noise-, speed-stability-, and momentum-wise) like those big-ticket luxury decks.

Tonearm questions

Even if you've never owned a turntable, even if you can't assemble an IKEA bed frame, if you diligently follow the directions in the 1300G's owner's manual, you will end up with a precisely aligned cartridge on a properly set-up turntable.

But there is one detail that needs some elucidation.

My Nagaoka MP-200 cartridge measures 18.5mm high. Dynavector's XX-2A cartridge measures 18.7mm, my Ortofon 2M Black measures 18mm, and my Goldring E3 measures 17.29mm. The 1300G's manual instructs users to "Adjust the arm height until the *tonearm* becomes parallel to the record." Under that instruction is an

illustration showing an arrow pointing at the middle of the tonearm tube. But wait! Is that instruction correct?

With Nagaoka's MP-200 and the arm at its lowest setting ("0"), the 1300G's tonearm tube was conspicuously higher in the back and could not be lowered further. The Nagaoka is a pretty standard 18mm-high cartridge and if it won't level, which cartridges will?

Then, while I was VTA-vexing, it struck me: The engineers at Technics have been designing turntables longer than almost anybody, and they've sold millions, so it's likely they know more about turntable setup than I do. This thought urged me to a closer study of the 1300G's owner's manual, wherein I discovered a chart telling me that with an 18mm cartridge I should set the tonearm's height dial at 4mm. This seemed counterintuitive, but I tried it, and as I expected, the back of the tonearm looked even higher. However! While I was fretting to Spin Doctor Michael Trei about what I perceived as Technics' VTA issues, he instructed me to use a clear acrylic phono alignment block and train my eye on the top of the cartridge body, not the armtube, or the top of the headshell.

When I placed the sloped-top Technics headshell against Acoustic Signature's 15mm-thick alignment block, the top of the MP-200's body was parallel to the record surface. For decades I'd been eyeballing *armtubes* against the top of the record because that's where I thought I should start when setting vertical tracking angles. Now I use the alignment block, and a little bubble level designed to sit atop headshells.

I asked Bill Voss and he asked Technics' CTO, Mr. Tadayoshi Okuda, "Does the 1300G's platter sit 3mm higher than previous Technics platters?" Mr. Okuda replied, "It is the same platter as the SL-1200G's except for the presence or absence of the strobe dot."

The 1300G tonearm has an aluminum tube, so I asked, "Other than the magnesium pipe on the 1200G, is everything else on the 1300G's arm the same as the 1200G's?"

Tadayoshi Okuda replied: "The tonearm is almost the same as the SL-1200GR2's, however, the VTA is lowered by 3mm compared to the GR2. The reason for this is to accommodate the lower height type of cartridges."

As I expected, Mr. Okuda, Michael Trei, and the Technics owner's manual were right. But that wasn't the end of the lessons. Clever Trei pointed out two setup details that I had never considered. First was that tightening any H4 headshell with only a top pin can, and often will, raise the front of the headshell—sometimes by one or two degrees—making the headshell not exactly parallel to the armtube. When I checked for this on the Technics, I observed that when I tightened the 1300G's headshell collet as much as I could, the headshell did not appear to move.

Doing that reminded me of the first rule of all mechanical work: Never assume.

In that spirit, and knowing I did not own a runout gauge, Trei told me to eyeball the chrome bead on the lower rim of the 1300G's platter against the line of the plinth's top surface, watching to see if the platter rises and falls during rotation. Which it did! I estimated it rose about 1.5mm during one point in each rotation. This seemed trivial, but Michael said I could fix that by first making sure I have the washers on the screws that fasten the platter to the motor in the right order (with the small Belleville spring washers on top next to the screw-

3 See av.jpn.support.panasonic.com/support/technics/downloads.

head), and, as the manual clearly instructs, "Tighten the three screws evenly." When I loosened the three screws and snugged them down as evenly as I could without a torque wrench, I was delighted to see the up-and-down motion was gone.

As I've done with all my Technics turntables, I set all cartridges to the Stevenson geometry.

Listening

My first impression of the Technics SL-1300G was "Holy cow! Are you kidding me? That's the smoothest, quietest analog I've ever heard from any record player." Then I remembered Ken Micallef's dead-silent J.Sikora deck. And Alex Halberstadt's "quiet with push" Well Tempered Lab Amadeus record player. And my Trei-optimized Linn LP12, which wins medals for silence and PRaT. The 1300G was not as quiet as those decks, but it was conspicuously quiet.

In my 2016 1200GAE review, I thought the 1200G sounded more sharply focused and transparent than my stoop-sale SL1200Mk.II, but also perhaps, very subtly, *digital*, in a way my old gray 1200 did not. All of the several Mk.IIs I've owned presented music with what I call a "stretchy" correction interval that I identify as some amount of leading-edge and trailing-edge blur that appears to connect separate sounds together. To my ears, this subliminal blurring is unobtrusive and does not compromise my listening pleasures.

While using the 1200GAE, I detected a sharper, more distinct "correction interval" that I pictured as a tiny squarewave superimposed on the analog signal streaming from the cartridge output. If what I heard was real, that tiny wave must be buried somewhere in or near or separate from the noisefloor. When records were playing, it was imperceptible, unless I specifically went looking for it.

The 1300G induced a tiny mental squarewave too, but it was so low in level, I'd need an EKG machine to verify its presence.

I mention all this because my auditions suggest that Technics' delta-sigma speed control has brought direct-drive platter spinning to a quieter, more natural, less mechanical place. And I'm really digging it.

Nevertheless, I've always thought and still think the 1200 Mk.II sounds alluringly smooth, high in boogie-factor, and uncolored. For me, the Mk.II's strongest suits are its motor and chassis, and its weakest link is its tonearm. But I don't feel that way about the SL-1300G's tonearm, which looks the same as my old Mk.II's, but moves with noticeably lower stiction and friction.

As Bill Voss explained: The 1300G uses the same basic tonearm, with the same bearings and bits as the 1200G, but substitutes an aluminum armtube for the magnesium pipe on the 1200G. And! According to Bill, the only difference between the 9" magnesium arm on the 1200G and the 10" magnesium arm on the SL-1000R is the length. What this means is: Technics makes one tonearm and fits it with three different armtubes to suit the needs of three different turntable models.

Listening with the Nagaoka MP-200

The first arrangement I tried felt like roots audio: the SL-1300G sporting a $509 Nagaoka MP-200 moving magnet cartridge feeding my beloved Sun Valley SV-EQ1616D phono equalizer ($850 in kit form). This created a jumping, live-wire–sounding analog source that played an original pressing of Dinah Washington's *This Is My Story Vol.1* (Mercury Stereo SR60788) in a manner that felt crisp, direct, and authentic to its era (1963). What stood out was how Dinah's voice was so clear and present it became impossible to not pay complete attention to how the artist was forming each word and shaping each phrase of each song. My copy of *This Is My Story* is an old, worn, hazed-with-scratches disc, with a dense hairball of spindle marks on both sides, but that wear was not noticeable. Dinah Washington's voice was clear, corporeal, and true of tone. To my delight, the 1300G exposed the unique flavors of each track's reverb.

If I could only save one record from my collection, it might be the 1968 Skip James LP titled *The Devil Got My Woman* (Vanguard VSD79273). Skip James's chill-inducing voice, in concert with his transcendent piano and guitar accompaniments, takes scary ethereal beauty to a place I need to visit often. When the 1300G+MP-200 played this record, I felt instantly transported, and while lucid dreaming with Skip, I found myself pausing repeatedly to admire the quality of sound coming out of my Falcon Gold Badge speakers, thinking how could it, and why should it, ever sound better than this?

Like its SL-1200Mk.II forebear, the SL-1300G's tonearm seemed especially made for moving magnet cartridges. The Nagaoka MP-200 and Shure V15 Type III moving magnets tracked splendidly and sounded more solid, transparent, and finely detailed than I thought they ever could.

Listening with Hana's SL Mk.II

Speaking of Mk.IIs, Hana's new "Mk. II" version of its popular SL moving coil cartridge is a stunner and shaker, and costs only $850. And it seemed like a cartridge SL-1300G owners might want to consider.

The Hana Mk.II's greater mass, alnico magnet, tapered shank aluminum cantilever, and nude Shibata diamond make it a cartridge that, mounted on the 1300G's tonearm, strode through complex program with a high level of unruffled precision.

Playing "Careless Love" off that 1968 Skip James LP put me in a super mood. Tone and rhythm were five-star just right, as were transients and presence. Think smooth flow, touchable textures, and sterling tone. Best of all, the SL Mk.II (mounted in a $450 DS Audio HS-001 headshell) played this recording with creamy flowing rhythms, a rich well-focused midrange, and razor-like transients. IM distortion was below audibility, proof the 1300G's tonearm steers cartridges with aplomb.

Torque settings

Lately I resort to recordings with massed strings punctuated by sledgehammer bass transients as a measure of cartridge tracking stability. One of my favorite discs to test for this is a Columbia six-eyes pressing of Leonard Bernstein conducting the New York Philharmonic in a landmark performance of Stravinsky's *Firebird Suite* (Columbia MS 6014). The high-rez bass

transients on this recording are legendary, but the 1300G just smiled as they passed through effortlessly.

The 1300G allows for three choices for "turntable startup speed," which it defines as "time to reach constant speed after [Start:Stop] is pressed" and "torque gain at constant speed." The factory's default setting is "3" (the highest), and I had done all of the above listening at that setting. But out of curiosity and a desire for thoroughness, I tried lowering the torque one step at a time while repeat playing that Columbia *Firebird*. The differences were subtle but clear, and the test proved very Goldilocks. With the Hana SL Mk.II, the "3" setting was a touch hard and sometimes a tad bright, but always highly expressive. The "1" setting was more supple, laid-back, and transparent, but I felt that the leading edge of transients was compromised a little too much. The "2" setting felt like a neutral balance between hard and soft. The sound difference between settings was subtle—I doubt I could tell which setting was which in a blind listening.

After settling on "2," I played Charles Mackerras conducting the Royal Philharmonic Orchestra performing the ballet version (arranged by Charles Mackerras) of Gilbert and Sullivan's opera *Pineapple Poll* (EMI LP ESD 7028). I have enjoyed this stunning demonstration-quality recording since I discovered it on Harry Pearson's Super Disc list in the 1980s. This is British music on British vinyl featuring EMI's best recorded sound. I wondered if a Japanese record player could ever really play it properly?

To my amusement, with the Hana SL Mk.II on Technics' SL-1300G, this disc sounded surprisingly much like it does on my Linn LP12 with an old Koetsu cartridge. I noticed this similarity immediately. As the Union Jack fluttered, I observed a relaxed openness, with a ginlike transparency, and pure saturated tones—the definition of British sound.

What I'm describing here is a $3300 turntable with an $850 moving coil cartridge feeding an $850 kit phono stage that plays with the assured vigor and understated sophistication of record players costing several times as much.

This is the kind of mid-level audio that could be aspirational to persons with modest resources and luxury taste, and possibly an end-game solution for persons seeking a durable, precisely engineered tool for enjoying their record collection.

I found a new drug

Initially, the Technics SL-1300G played smooth and quiet to a point where for a while I thought it was too smooth and too seductive. Then just as I'd get lulled out, it would startle me with a sledgehammer bass transient, followed by a head-rushing bevy of train-wrecking momentum. I forgot how quiet turntables with great tonearms are the ones most likely to startle listeners. Turns out, this deck's best talent was how it could go from dreamy and dead silent to explosive—with elan, and understated ease.

Like all Technics turntables, the SL-1300G was engineered to be set up easily and correctly by average users, and to last decades under heavy use. In my system, the 1300G performed like a Class A turntable at a Class B price. That's why it's my new budget reference. ■

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