

GRAMOPHONE DREAMS

BY HERB REICHERT

THIS ISSUE: Herb listens to another Chinese-made DAC, this one with some special sonic virtues.

The sound of sound

Whenever I install a new, in-for-review DAC, after some amount of spaced-out not-listening listening I find myself just sitting there, being happy I got the damn thing working. Once I recover from the stress of installation, my brain begins, without prompting, to examine the character of sound coming out of my speakers. Half-consciously I wonder: How does this sound *sound*? Has changing DACs altered the contrast, viscosity, or timbre? Does the energy of recordings feel more or less intense with the new DAC? I make these observations lazily but empirically, with a fair amount of detachment.

In an effort to prolong my detached listening, I've been starting my new-DAC listening sessions playing recordings with no voices, melodies, or attention-grabbing compositional development. I have an "ambient-electronic" playlist in Roon that I have played so often that I can now observe its diverse creations as a single, long, highly textured reference track. This playlist makes getting a preliminary feel for a new DAC easy. It was especially effective with Audio-GD's R7HE MK2 DAC (\$4990), where it exposed the bold, heightened quality of this DAC's delivery.

One example, from the end of that playlist: "Floatdown," the first track on Tod Dockstader's *Recorded Music for Film, Radio & Television: Electronic, Vol. 2 (Original Mix)* (16/44.1 FLAC Boosey & Hawkes/Qobuz). Dockstader's recorded sound sounded dramatically *different* through Audio-GD's R7HE MK2 than it did through the dCS Bartók or Mola Mola Tambaqui DACs. What was different was the quality of the R7HE's clarity: listening to recordings reminded me of looking at rocks and fish and sand just below the surface of a clear, freshwater pond. This shimmering, light-filled clarity endowed sounds with a transcendental beauty that I found extremely appealing. The Denafrips Terminator Plus and HoloAudio May DACs deliver a similar, natural-feeling clarity but present recordings less boldly—less dramatically—than the Audio-GD.

I am fascinated by DACs. I enjoy watching their sonics and technology evolve. But my religion forbids shilling for one DAC-design strategy over another. I tell everybody, "I regard all digital suspiciously" and consider most digital implementations to be either fashionable math or sonic trickery. There does not appear to be a single right or wrong way to convert bumpy data packets into powerful, live-sounding sound. Consequently, I judge digital's proclivities for musical pleasure and audio insight one DAC at a time, regardless of which conversion strategy is employed.

Describing the indescribable

To describe in words *the sound* of anything, I must resort to metaphor, simile, or onomatopoeia. To elucidate the sound character of the diverse DACs I review, I am obliged to describe—if I am able—the

singular quality of each one's clarity. The nature of a DAC's clarity, along with its dynamic personality, is what distinguishes one DAC design from another. Describing a specific *quality of clarity* is a near-impossible task, one I've been wrestling with since I bought my first CD player in 1992. But for today, the best metaphor I can conjure is mirror and art glass in various thicknesses with more or less iron-oxide green reflecting at its edges.

My favorite NOS DACs, like the HoloAudio May and Denafrips's Terminator Plus, reproduce audio recordings with this vivid, looking-through-still-water clarity that I can now better describe as how my face looks in diffuse natural light reflected in a 1/4"-thick glass mirror with a mercury or silver oxide backing.

Thick ruler-flat mirror glass, with top-quality silvering, reflects my image with the least grain and blur. Its high level of chromatic integrity makes the light illuminating my skin seem super-natural in its eerie evenness. In a thick glass mirror, dimensionality assumes a prominence more fantastic than natural, complimented by an acute emphasis on bas-relief textures. When I look at a room in a thick vintage mirror, it looks more vivid and 3D than it does when I observe it directly.

In the audio equivalent of these visual images, I use "vivid" to describe a sound I perceive as vibrant, luminous, and tubelike, with much reverb, glow, and brilliance.

In contrast, oversampling (OS) DACs make recordings seem like they are being



reproduced through a contemporary mirror with thinner glass and a silver-paint backing. I can still see every pore, image focus is sharp, and tone balance is spot-on, but lighting, texture, and dimensionality are presented less dramatically than with NOS.¹

Every generalization has exceptions, and the Mola Mola Tambaqui DAC is an interesting one. It manufactures its own brand of rarified clarity, one that's less reflective and diffuse than any I'd previously encountered. The Tambaqui's transparency reminded me of expensive art-framing glass, called museum glass, which, like high-grade optical glass, is radically lower in iron and potassium contaminants, which results in a very low refractive index; its edges are clear, not green. Imagine glass so clear and diffusion-free that it disappears. In a museum, when it's properly lighted, a viewer might never realize there was glass in front of a painting if they weren't deliberately looking for it. Tambaqui-clear is like that.



I am introducing this glass-clarity metaphor because the Audio-GD R7HE MK2 digital-to-analog converter I am about to describe delivers a different, unusual form of transparency, which reminds me of how silvered thick-glass mirrors reflect their surroundings.

This Dream's examination of the \$4990 R7HE MK2 digital-to-analog converter

was motivated by (in addition to my partiality for NOS DACs) my suspicion that Audio-GD's signature current drive technology and regenerative power supply technology (included in the HE version reviewed here) might bring new forms of sound pleasure to the \$5000 DAC scene. If they do, I want to tell you about them.

Audio-GD R7HE MK2 DAC

The Audio-GD website says, "All Audio-GD's products are made in China and designed and developed under the leadership of Mr. He Qinghua, the 'First Prize Winner' of the National Semiconductor (USA) Audio Design Contest." The website goes on to explain Audio-GD's signature engineering strategies: "With strong research and development capability in audio technology, Audio-GD offers a complete series of Hi-Fi equipment—DAC, preamplifier and power amplifier—with our signature 'Audio-GD Current Signal System' (ACSS) technology. Our ACSS technology transmits all audio signals via "Current" domain.

elusive
DISC

Call Today! **866-615-0399**

or visit us online at elusivedisc.com



Music Hall

STEALTH TURNTABLE WITH ORTOFON 2M
BLUE CARTRIDGE

As Music Hall's first direct drive turntable, the Stealth features a brushless low-torque motor that automatically stops running at the end of a record. The Stealth comes complete with an s-shaped tonearm, a detachable head-shell, and a factory-mounted, precision aligned Ortofon 2M Blue cartridge.

\$1,648.99



Pro-Ject

DEBUT CARBON EVO WITH SUMIKO RAINIER
MM CARTRIDGE

(High Gloss Red, Other Colors Available Upon Request)
Ortofon has taken their most popular turntable design and improved every aspect of it. Technically correct design - expert craftsmanship - handmade in the EU. This turntable is built to last you a lifetime!

\$598.99

... In addition, we also master advanced audio technologies like power regeneration and fully balanced audio circuitry.”²

“ACSS is Audio-GD’s system for transmitting audio signals in the current domain. This concept, first seen in 1966, we have used for many years, and since 2006, have evolved this technology to include all audio signals in our systems from the digital source to the power amplifier.” I am intrigued by this.

I and many of my friends use transimpedance phono stages, so I am beginning to get a feel for the sound character of current-domain amplification. Naturally, I wondered if Audio-GD’s ACSS might be playing a starring role in making the R7HE MK2 sound as liquid push-forward and beautiful as it does.

My daily-driver experience with Ron Sutherland’s Little Loco transimpedance phono stage suggests that current drive enhances silence while preserving more small-signal information than traditional voltage amplification.

Audio GD says: “the R7HE employs eight sets of fully discrete R-2R DA modules to form a two-channel balanced push-pull decoder. There are also four sets of fully discrete and independent DSD hardware decoders. Two top-notch Ac-

cusilicon TCXOs with frequencies of 90 and 98MHz provide synchronization for the whole unit, and, they are applied to the playback of all data rates without PLL up-conversion. The R7’s 32bit / 384K asynchronous Amanero USB interface is synchronized with a FPGA.” (The Amanero interface isn’t especially common; the majority of DACs use XMOS or their own “proprietary” method.)

“The digital circuits of the whole DAC are comprised of 1 FPGA and 7 CPLDs (both programmable devices), which allow separating the different functional circuits and preventing interference. The FPGA operates in the parallel data processing mode even at the fastest data rate, and supports firmware upgrades to improve sound quality when new and better design ideas are eventually found and implemented.”

The R7’s front panel is simple and moderately elegant, consisting of a small LCD display that shows the input selected, digital mode, and sampling rate of the current track and four buttons: one for power, the other three to operate the menu to select inputs, choose digital modes (OS/NOS), enable PLL, program HDMI, and dim the display. (Warning: For me, the downloadable owner’s manual description of how to navigate the menu, though in English, was

not intuitive.)

The R7HE MK2’s back panel sports three output options: single-ended RCA (at 2.5V), fully balanced XLR (at 5V), and Krell CAST (ACSS)³ via MiniXLR (2+2mA), which I did not try. There is no Ethernet input, but there are six digital inputs: USB, I²S (over RCA and BNC), TosLink, AES3, and HDMI. There is also a BNC connector for an external clock and a 10-pin firmware-upgrade port.

The R7’s USB and HDMI modules are galvanically isolated and fed by two groups of independent, isolated power supplies “to avoid the mutual electrical contamination between USB and HDMI.”

In addition to its current drive and NOS technologies, Audio-GD’s premier DAC undoubtedly benefits from its robust linear power supplies, which take up half the cabinet, and, in the HE version, employ four R-core transformers, the largest of which is for the R7HE MK2’s AC power

1 What artist Herb has written here makes me think, also, of differences between modern digital and vintage film photography.—**Jim Austin.**

2 See bit.ly/3CaUEvw.

3 Another current-mode technology. See Wes Phillips’s conversation about CAST with Krell’s Dan D’Agostino at stereophile.com/solidpoweramps/1206krell/index.html. I don’t know, however, which other, current products support CAST.



Musical Surroundings

FOZGOMETER V2 AZIMUTH RANGE METER

Introducing Musical Surroundings’ Fozgometer V2 azimuth range meter, the unique tool to optimize your phono cartridge azimuth for the best sound from your HiFi system. The new V2 model features higher sensitivity, greater accuracy, a new analog meter, and the option to use an outboard power supply, as well as a 9v battery.

\$399.99



Musical Surroundings

NOVA III PHONO STAGE (BLACK)

The Musical Surroundings Nova III is a complete phono-graph preamplifier with RIAA equalization that amplifies the output signal of a phono cartridge, either moving coil or moving magnet, up to a nominal “line level”. This third generation Michael Yee design combines discrete dual-mono topology, a new internal power supply, and optional external Linear Power Supply.

\$1,499.99

regenerator.

That's right: To ensure the highest-quality power possible, the HE version of the R7 includes its own AC power regenerator. Power enters the DAC—of course—as 60Hz AC and is converted to DC “through a regenerative power input transformer,” the company says; DC is then fed to the regenerative waveform generators “through a class-A parallel stabilized power supply.” The generators produce an “ultra-low distortion 50Hz sine wave,” which is amplified in a gain stage and directed to three power transformers, which output “pure, voltage, ... stable in terms of amplitude and frequency.” These three regenerated AC outputs supply the power supplies for the digital board and the left and right analog output stages.

My limited experience with high-tech power cords and conditioners leads me to speculate that Audio-GD's power-regeneration technology and “class-A power supplies” might be responsible for some of that extra “force” I hear behind vocals and instruments.

I believe that the fundamental sound character of all audio amplification can be traced to the power supply. You want more forceful, detailed, and realistic sound? Put more power (and less impedance) in the power supply.

The R7HE MK2's chassis is big and heavy, measuring 17" × 5" on its front elevation and 19" deep; this depth could present a problem in some equipment racks. It comes triple-boxed and weighs 37.8lb—1lb more than the dCS Bartók and about 1lb less than the HoloAudio May (both chassis together).

Audio-GD's R7HE MK2 is made in China and sold and supported with a two-year parts and labor warranty by 50-year industry veteran Walter Liederman at Underwood HiFi.

Setup and use

The Audio-GD R7HE is a standalone DAC with no volume control, so I connected its output to HoloAudio's Serene line-level preamp with a pair of Cardas Audio Clear Beyond balanced intercon-



nects and its input to my Roon Nucleus+ server with an AudioQuest Cinnamon USB cable. Over the course of my auditions, I alternated between connecting the Serene pre to the Parasound A21+ amplifier driving my long-term reference Falcon Gold Badges and connecting it directly to the mesmerizingly pure Genelec G Three active standmount loudspeakers.

During the first days of my auditions, I experimented by alternating between OS (in 2×, 4×, and 8× modes) and NOS mode. NOS mode presented singer Arooj Aftab's production of *Vulture Prince (Deluxe Edition)* (24/96 FLAC Verve/Qobuz) in such a tone-rich, dynamic way that I would have had to force myself to listen with OS mode. The R7's 8× oversampling mode seemed pristine, pure, tight, and clear in a manner I am sure many audiophiles will find more compelling than the R7's NOS, but to my sensibility, OS felt awkward and emotionally detached. It did not express recordings with as much beauty or feeling as NOS. Consequently, all my observations were made in NOS mode.

Listening

Playing the 1989 recording *Live at Safari Club* by Washington DC's Junk Yard Band (16/44.1 FLAC, Street Records & Tapes/Tidal), the first thing I noticed was how exceptionally big, tight, and bouncy the bass was. The next thing I noticed was how all the tiny molecules of club atmosphere and audience call-and-response came through with utter clarity: zero haze or blur, pure, detailed, and micro-organized. In my studio, this was the most vital

and microscopically detailed this recording had ever sounded. If you're not familiar with this subclass of funk called “Go Go Beat” (or gogo), this album is an ideal starter disc.⁴

Another album that showed clearly what was special and different about the R7HE's presentation was *Jùjú Jubilee* by Nigerian jùjú king Chief Commander Ebenezer Obey and his Inter Reformers Band (16/44.1 FLAC, Shanachie/Qobuz). The charm of Obey's dreamy harmonies coupled to the realism of Sikiru Adepoju's talking drum and the momentum of jùjú's syncopated polyrhythms tranced me out. This is Nigerian dancehall music you can bathe in—if your system lets you—and the R7HE supercharged the show-stealing forces of guitar and vocal reverb. With the Audio-GD driving the Serene pre driving the Genelec G Threes, I could feel the jùjú on my skin. Even with the G3's small woofers, I could feel it in my chest. I observed sound filling a big room, putting electricity in the air. It was a Wow! moment watching how powerfully the R7HE brought this record to life.

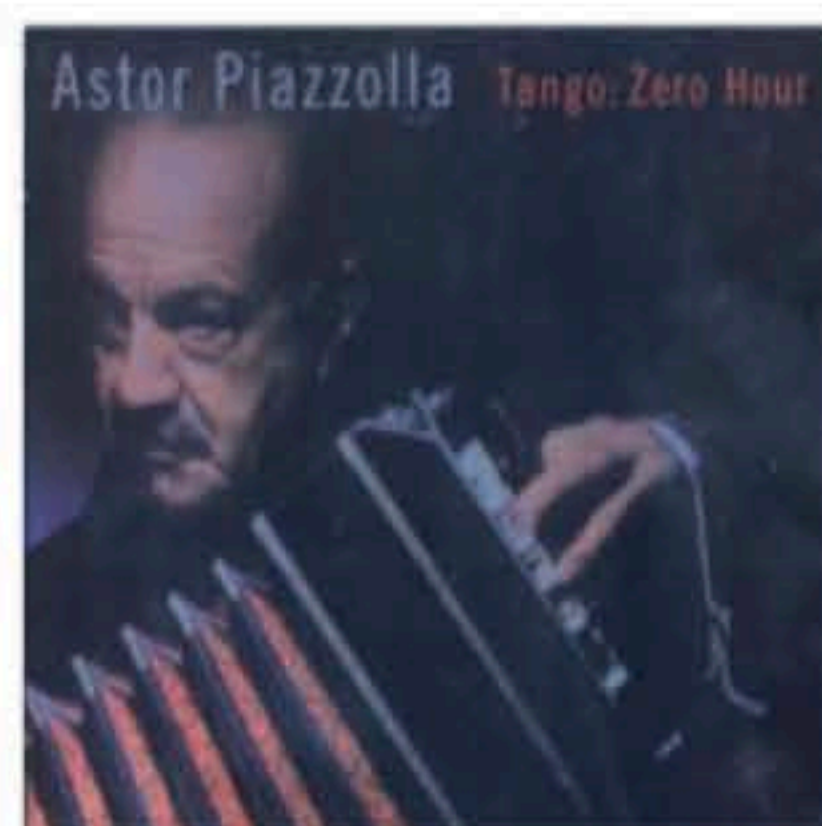
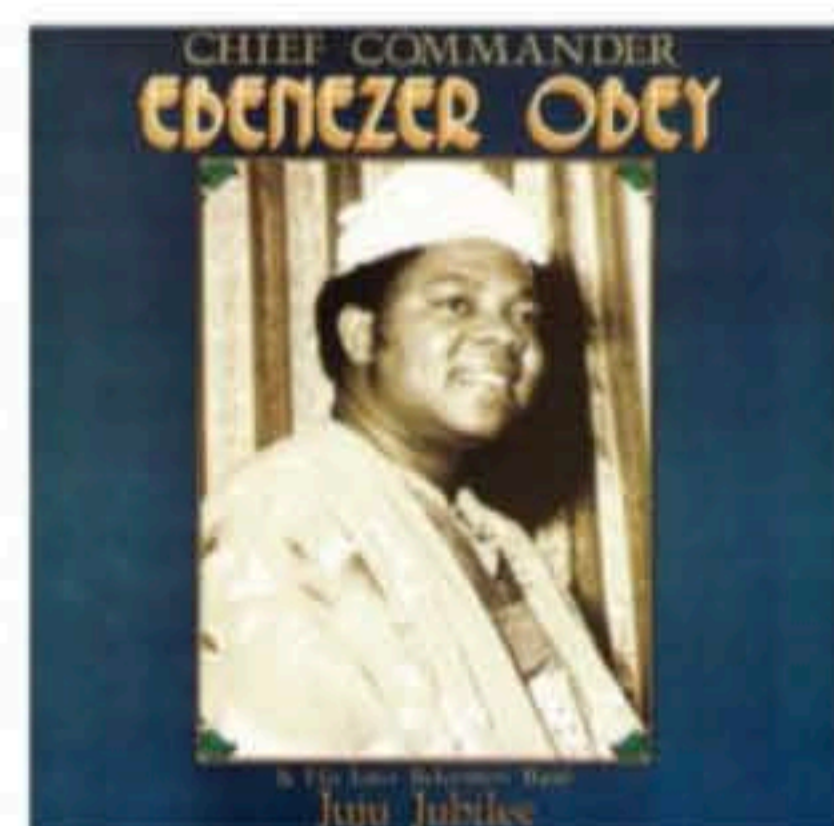
Unfortunately, jùjú never comes across via streaming like it does from a turntable or a live performance—or almost never. Audio-GD's R7HE MK2 is the first DAC I've used that played this music like an LP. I could feel human force *behind* every beat. I dreamed dancehall and bopped in my head.

Amazingly, in my little room, the R7HE MK2 conveyed the full blues-funk mojo of gogo and jùjú without LPs. I was deeply impressed.

Audio-GD vs HoloAudio May

After spending months with Mola Mola's Tambaqui, I found myself returning to HoloAudio's Level 3 May DAC and saying *wow!* This is natural. The May gave me more of music's nuance and microdata than the Mola Mola. The May's sonic demeanor features a relaxed, understated, detail-rich intensity that displays the nuts-n-bolts of a

⁴ You can hear and see the Junk Yard Band performing at the 1987 Smithsonian Folklife Festival at youtu.be/EkWXjeKBRYM.



recording under an extremely even, natural light, like the thick mirrors described earlier. This is very different than the Tambaqui, which is brighter, more direct, and more dynamic than the May.

I'm telling about the Mola Mola and May DACs because Audio-GD's R7HE MK2 presents music in a manner that I think combines the solid, understated intensity of the May with the uberclear dynamism of the Tambaqui. The result is digital playback that *materializes* what's buried in the bits in a manner I find intoxicating.

Both the May and the R7 present music with pyramid-like solidity that reminds me of the *Mona Lisa*, wherein Leonardo da Vinci employed a technique known as *sfumato*, which Google translates as "nuanced." Others say it translates to "vanished or evaporated." My teacher called it "up in smoke."⁵ The Audio-GD DAC demonstrated a beguiling *sfumato*.

What connects the *Mona Lisa*, the NOS May, and the Audio-GD DAC (in NOS) is the moody evenness of the lighting.

Leonardo-esque is a good descriptor for how Audio-GD's R7HE presented Archie Shepp and Joachim Kuhn's rendition of Duke Ellington's "Sophisticated Lady" on their 2011 album *WO!MAN* (16/44.1 FLAC, Archieball/Qobuz). On this recording, piano and saxophone are presented in elegant, subtly layered tones with a slight *Mona Lisa*-like glow that imparts an ethereal quality.

On every *WO!MAN* track, the Audio-GD R7HE and the HoloAudio May did this layered tone thing equally well. Not surprisingly, these two R-2R NOS DACs sound more alike than different, but what the R7HE did that the May did not do was project sound emphatically into the room and play large bass notes really *large*. It did it with both the Parasound A21+ powered Falcons and the active Genelec G Three standmounts.

Audio-GD vs dCS Bartók

My reference converter, the one I compare all other converters to, is the \$16k dCS Bartók. Its "Ring-DAC" technology ranks it as a benchmark product representing one category of leading-edge digital engineering. Sonics-wise, it's a gateway drug to the stratospheric regions of digitally induced pleasures. But most importantly for my purposes, its sound character is well-known and respected. So naturally I compared it to Audio-GD's R7HE MK2.

The secret of being an artist is to have birds flocking outside your window. Birds transmit creative energy via songlike communiqué, a form of communication that is well-employed in British DJ Orlando Hig-



ginbottom's creation, *I Can Hear the Birds* by Totally Enormous Extinct Dinosaurs (16/44.1 FLAC, Liberator Music/Qobuz). To create this album, Higginbottom asked his friends to create homemade bird-song tapes, which he assembled into this compelling, four-track EP with birdsong nestled between larger synth sounds in elegant, otherworldly sound collages. The dCS Bartók plays this file masterfully, revealing what seems like every micro-bit of its complex textures and layered tones. But the sound is delivered in a slightly detached deadpan (which might be how Higginbottom intended it to be delivered).

Played through the Audio-GD, *I Can Hear the Birds* became larger (space-wise), more expansive (energy-wise), and more powerful-sounding. Punch, glow, and luminosity replaced deadpan—a bit like triode tubes with no global negative feedback vs transistors with NFB.

Audio-GD DSD

If you want to see how unclear and distorted a mirror is, hold the edge of a white card up against it and observe its reflection. If you do this with a variety of antique and new mirrors under a variety of lighting conditions, you'll probably discover (as I did) that different glass types and back-coating processes present "reality" in a slightly different, less-than-accurate manner—just as DACs do. This is especially true when DACs are converting DSD.

I missed the SACD era entirely, but the few DSD files I have sound so clean and correct and unmitigated through the HoloAudio May and Spring3 DACs that I presently regard pure DSD as the most truthy of all digital formats. But it is crazy to compare DACs using DSD files, because every DAC processes DSD differently.

Obviously, with DACs there is no white card—nothing objectively real we can observe directly—but for me, when the \$5598 HoloAudio May KTE reproduces

DSD, I feel like I am listening somewhere close to the truth of a recording. When I played my DSD64 rip of Astor Piazzolla's *Tango: Zero Hour* (American Clavé SACD ewsac 1013) through the May, the sound was markedly less vigorous (but considerably more dreamy) than it was through the Audio-GD R7HE MK2. When the KTE May played *Zero Hour*, it felt like an advertisement for unaffected naturalness. It showed less slam and *va va voom* than the R7HE but compensated with an extremely tactile presentation that encouraged close listening. The May showcased the sensuous, intimate side of Astor Piazzolla. The R7HE MK2 expressed his presence and the energy of his performances.

In my current systems, featuring either my Falcon or Genelec speakers, both DACs operated at the LSD-conjurer level: Tones glowed through a liquid NOS transparency; detail and texture thrived. But the May played a tiny bit gentler in the bass, and less boldly (dynamics and presence-wise) than the R7HE. The Audio-GD DAC pumped out Astor Piazzolla's bandoneon and Hector Console's bass with an invigorating sense of raw, air-moving force, something digital rarely does.

If Tambaqui and Terminator had a baby

What is unique and special about Audio-GD's R7HE MK2 is how it renders recordings in a heightened state of naturally lit beauty and how clearly it conveys the force and drive behind recorded sounds.

The R7HE delivered the dynamism and clarity of the Mola Mola Tambaqui coupled with the triodelike splendor of the HoloAudio May and Denafrips's Terminator Plus. In my book, that establishes Mr. He Qinghua as a genuine digital wizard and earns my highest recommendation. ■

⁵ See to.pbs.org/3STH8CD.

CONTACTS

Audio-GD

XiangJing Rd., No.15,
National Zoology Industrial Park,
Danzao, Nanhai District, Foshan City,
Guangdong Province, China
Email: audio-gd@vip.163.com
Web: audio-gd.com/En%20audio-gd.htm

US importer and sole retailer (online-only):

Underwood HiFi Inc.

89 Kahana Makai Rd.
Lahaina, HI 96761
Tel: (770) 667-5633
Email: underwoodwally@aol.com
Web: underwoodhifi.com