

ART DUDLEY

Metronome CD8 S

CD PLAYER & D/A PROCESSOR

I don't listen to music when I write, even when I write about listening to music: When there's music playing, it almost always gets my full attention—and I'm no good at multitasking. (And if I'm around music that's awful and I'm powerless to stop it, I have to leave the premises.) A rare exception is when I listen to CDs while proofreading, because proofreading is fairly brainless stuff—and as playback formats go, the Compact Disc isn't the most musically compelling.

In recent years, that last observation has been challenged a very few times, most notably by CD-playing source components from Naim Audio, Ayre Acoustics, 47 Laboratory, and Audio Note—products that upset my composure by leading me to the music and making me drink it.

Now another new product is disturbing my peace: the CD8 S (\$10,000), which French manufacturer Metronome Technologie describes as an *integrated player*, in the same sense that many hundreds of electronics manufacturers describe their preamplifier-amplifier combinations as *integrated amplifiers*. Lest that seem like just so much nominal silliness, consider: The Metronome CD8 S—which recently *evolved*, Hillary-like, from the well-established Metronome CD8—is equipped with USB and S/PDIF digital-input jacks, so its internal DAC can be used with external digital sources. Consider also that the Metronome's D/A converter *technically* outpaces the disc transport with which it shares space in the case . . . but I'm getting ahead of myself.

Description

The Metronome CD8 S first caught my eye as part of a silent display at last year's New York Audio Show,¹ which was noted for having taken place not in New York City but in Rye Brook, in Westchester County. ("It's easier for me to travel to Munich than to Rye Brook," declared the newly carless Herb Reichert from his Bed-Stuy sanctum.) The initial attraction was, I admit, skin deep: I considered the CD8 S one of the most perfect-looking appliances I've seen.

Viewed from above, the 17.6" wide by 17" deep Metronome is nearly square—only later would I realize that those dimensions are *precisely* the same as those of my Sony SCD-777 SACD/CD player—with a top-loading disc transport whose mechanical and aesthetic designs appeared to be in perfect sync with one another: The CD8 S seemed both artsy and purposeful. Notably, both the player's top surface and its 4"-high aluminum-alloy front panel mixed two different shades of metallic gray, one a few degrees warmer than the other, to create an elegant, sculpted look. (I know nothing of the psychology of color perception, but a few weeks after the New York show, when my review sample of the CD8 S arrived, I was surprised to see that the manufacturer describes the color as "silver": Its textured finish and combination of hues led me to think of it as light taupe.)

I was also impressed by the CD8 S's disc-loading mechanism—a simple sliding lid, devoid of needless motors and endowed with a *just-right* feeling that bordered on the sensual—and its top-mounted control panel. The latter comprises five small pushbuttons for the usual functions: previous track, stop, play, pause, and next track. Like the aesthetics of the player as a whole, the orthography of the control panel is unique: Each switch is labeled with a symbol that looks abstract yet strangely intelligible. It took me a moment to realize that each graphic was created by taking the universal media-control symbol for that function—the sideways Christmas trees for skipping tracks, two parallel vertical bars for pause, etc.—rendering them in outline, rounding off the corners, and bisecting them horizontally. Neat.

Although its controls are on top, the CD8 S's standard-issue digital readout is centered on its front panel, along with two miniature toggle switches: one for On/Off, the other for selecting among three different inputs: USB (Type B socket), S/PDIF (RCA jack), or the built-in disc transport. For the first two selections, the display also shows sampling

1 See www.stereophile.com/content/new-york-audio-show-day-one.

SPECIFICATIONS

Description Single-box CD player. Analog outputs: 1 pair single-ended (RCA), 1 pair balanced (XLR). Digital inputs: 1 USB (Type B), 1 S/PDIF (RCA). Input resolution, USB: up to 32-bit/384kHz. Input resolution, S/PDIF: up to 24-bit/192kHz. Digital input impedance, S/PDIF:

75 ohms. Output voltage, single-ended and balanced: 2.5V RMS. Output impedance, single-ended: 75 ohms. Output impedance, balanced: 600 ohms. Frequency response: 10Hz–50kHz, ±0.1dB. Signal/noise: >95dB. **Dimensions** 17.6" (450mm) W by 4.5" (115mm) H by 17"

(435mm) D. Weight: 33 lbs (15kg).

Finishes Silver, Black.

Serial number of unit reviewed 305.

Price \$10,000. Approximate number of dealers: 5.

Manufacturer Metronome Technologie, ZAC de Roumagnac, 38 avenue

de l'Europe, 81600 Gaillac, France.

Tel: (33) (0)5-34-26-11-33.

Fax: (33) (0)5-34-26-17-11.

Web: www.metronome-technologie.com.

US distributor: Rep-Presents, 4449 Easton Way,

Columbus, OH 43219.

Tel: (614) 322-1234.



rates, preceded by an uppercase *P* for PCM files or, for DSD files, a lowercase *d*. (Let's not read too much into that, shall we?) Thus, files ripped from "Red Book" CDs came up as "P 44.1" (the period was actually rendered as a teensy-tiny colon), DSD128 files came up as "d 128," and so forth.

And there you have the Metronome CD8 S's Big Surprise: It does DSD. Or, at least, its D/A converter does DSD—its disc transport does not. On the one hand, that seems a bit odd, like a four-wheel-drive vehicle with very little ground clearance. But then it dawns: Just as most owners of 4WD vehicles aren't interested in off-roading, it can be argued that most digital-audio enthusiasts aren't interested in SACDs (which I regard as a niche format—although, as an LP collector, I have no right to condescend).

At the heart of the CD8 S's DAC is the AK4490EQ, a two-channel, 32-bit Velvet Sound chip from Asahi Kasei Microdevices (AKM), of Japan. This chip supports up to 768kHz PCM digital and 11.2MHz DSD, and incorporates its own digital filtering—although Metronome says they supplement the AKM's filter with circuits of their own design. The CD8 S's DSD-friendly USB receiver is the Combo384 module from the Italian firm Amanero, the model number of which signifies its support for up to 384kHz. Analog output

put gain is created with two OPA604 FET-input op-amps per channel.

The CD8 S incorporates a specially modified Philips CDM12 Pro2 (v.6.8) transport, for which Metronome makes their own removable, puck-style magnetic clamp. The transport mechanicals are fastened to a large and vaguely T-shaped platform made of 0.3"-thick black acrylic. That platform is isolated from its surroundings by means of

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a three-point suspension using outside (2.4" high by 2.3" in diameter) foam-rubber dampers instead of springs. Additional dampers atop the three suspension points appear to both enhance isolation and confer enough of a cushioning effect for the CD8 S to be safely shipped without the need for transit bolts.

Speaking of niches: When one slides open its lid, the Metronome's disc compartment is suffused with a ghostly blue light that looks especially nice against the glossy black

MEASUREMENTS

I measured the Metronome CD8 S with my Audio Precision SYS2722 system (see www.ap.com and the January 2008 "As We See It," <http://tinyurl.com/4ffpve4>). As well as using test signals on CDs, I tested the Metronome by feeding its coaxial input S/PDIF data from the SYS2722, and its USB input data sourced from a battery-powered MacBook Pro running Pure Music 2.0. The S/PDIF input would accept data sampled at all rates from 44.1 to 192kHz. Apple's US Prober utility identified the Metronome as "Combo384 Amanero" from "Amanero Technologies," and confirmed that it operated in the asynchronous mode. Mac's AudioMIDI utility stated that the Metronome's USB input would accept 32-bit integer data at all sample rates from 32 to 384kHz. However, when I fed the CD8 S's USB data sampled at

384kHz, although the player's display correctly indicated "P 384," there was no audio output.

Tested with the Pierre Verany *Digital Test CDs*, the CD8 S demonstrated superb error correction, playing tracks with gaps in the data spiral of up to 3mm without skipping. The maximum output level at 1kHz was 6.06V from the balanced outputs and 3.06V from the unbalanced outputs, the latter 3.7dB greater than the CD standard's 2V. Both outputs preserved absolute polarity (*ie*, were non-inverting), the XLR jacks being wired with pin 2 hot. The unbalanced input impedance was very low, at 57 ohms at all audio frequencies. The balanced output impedance was appreciably higher, at 1196 ohms across the audio band. Channel

separation (not shown) was excellent, at >105dB in both directions across the audioband.

Fig.1 shows the Metronome's impulse response with CD data: a conventional, time-symmetrical Finite Impulse Response (FIR). The red and magenta traces in fig.2, taken with white noise burned to a CD-R Audio disc, reveals that this filter rolls off sharply above half the sample rate (indicated by the green vertical line), the result being that the aliased tone at 25kHz that results from a full-scale signal at 19.1kHz (blue and cyan traces) is suppressed by 85dB. The CD8 S's measured performance so far appeared to be as expected, but when I looked at its frequency response I ran into problems. The green and gray traces in fig.3, taken with tones from a test CD, show the same sharp rolloff seen in fig.2. The cyan and magenta traces in fig.3, taken with 96kHz-sampled data fed to the Metronome's S/PDIF input, feature a sharp rolloff above 43kHz. However, with 192kHz-sampled data fed to the S/PDIF input, I got the blue and red traces in fig.3: the response overlaps the 96kHz traces up to 48kHz, including the very sharp rolloff, but then returns to full level above 50kHz. Puzzled, I repeated the test with USB data and got the same result. There is something awry with how the CD8 S handles data sampled

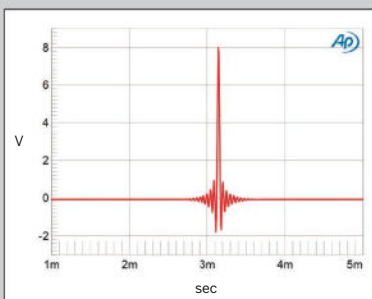


Fig.1 Metronome CD8 S, impulse response at 44.1kHz (4ms time window).

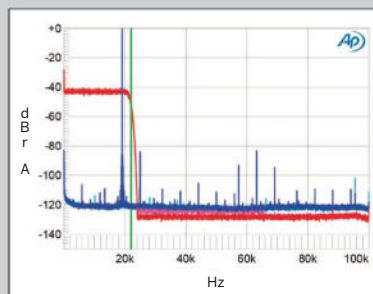
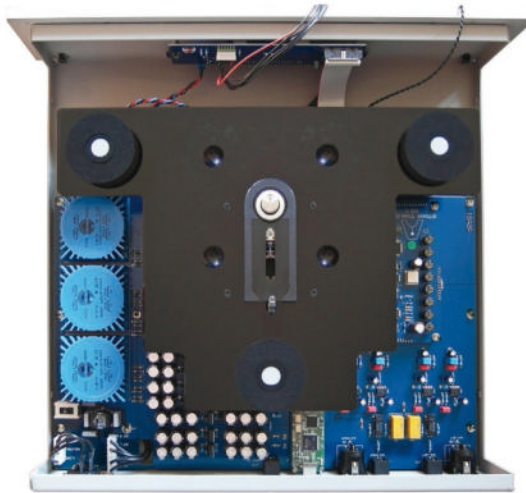


Fig.2 Metronome CD8 S, wideband spectrum of white noise at -4dBFS (left channel red, right magenta) and 19.1kHz tone at 0dBFS (left blue, right cyan), with data sampled at 44.1kHz (20dB/vertical div.).

of the acrylic platform—and assists in the changing of discs and the placing of pucks when the lights are low. According to Jean-Marie Clauzel, Metronome's general manager, the light neither hinders nor enhances performance—and is in fact extinguished, refrigerator-style, when the lid is shut.

Also supplied with the CD8 S is a remote handset that duplicates all of the controls on the player itself, and adds controls for fast forward and reverse within a given track. Happily, the remote's Volume ring, obviously intended for some other product, can be used to toggle among the player's three input modes. Also happily, the 10"-long handset almost reaches from my listening seat to the CD8 S's location on my equipment rack: Another inch or two and I could use it as a stick with which to work the player's switches, thus saving on batteries. Really.



T is for transport: a look inside the Metronome CD8 S.

Installation and setup

There isn't much one can say about installing the CD8 S, thus confounding the reviewer who's paid by the word or the column inch. All I did was take it out of the box, put it on the topmost surface of my Box Furniture rack, and plug in its AC power cord. The Metronome has both single-ended (RCA) and balanced (XLR) output jacks; I used the former.

Preparing the CD8 S for use with my Apple iMac required slightly more brainpower but was still easy enough—at least for use with PCM-based file

And there you have the Metronome CD8 S's Big Surprise: It does DSD.

measurements, continued

at rates greater than 96kHz.

Looking at this result for data sampled at 192kHz in greater detail, note that the horizontal scale in the graph is the frequency of the input signal encoded by the digital data. When I actually looked at the frequency of the analog signal being output by the Metronome for input frequencies above 48kHz, it was actually an aliased product. For example, when the input signal had a frequency of 60kHz, the output signal was actually 36kHz (96,000–60,000). So what you see above 48kHz with the blue and red traces in fig.3 are frequencies mirrored above the 96kHz Nyquist frequency (half the 192kHz sample rate), not actual audio. Real music does not have high-level content above 48kHz, so

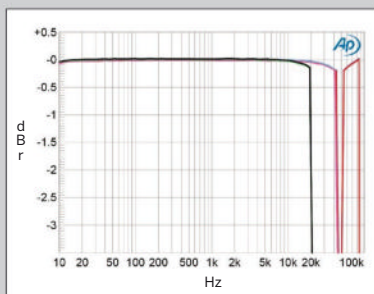


Fig.3 Metronome CD8 S, S/PDIF input, frequency response at -12dBFS into 100k ohms with data sampled at: 44.1kHz (left channel gray, right green), 96kHz (left cyan, right magenta), 192kHz (left blue, right red) (0.5dB/vertical div.).

this behavior might look worse than it sounds. But again it suggests that the CD8 S does not correctly handle high-sample-rate data.

I asked Art Dudley if he had heard any difference in sonic character when playing 96kHz data vs CD-derived data; he hadn't, responding that "they were similarly pacey, and not the least bit harsh."

With 44.1kHz-sampled data fed to the S/PDIF input, an increase in the bit depth from 16 to 24 dropped the noise floor by more than 20dB (fig.4), suggesting that the CD8 S's DAC section offers resolution approaching 20 bits, which is excellent. But note the appearance in fig.4 of odd-order harmonics with 24-bit data (blue and red traces), which suggests that the LSB is being

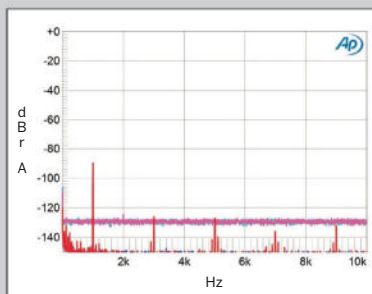


Fig.4 Metronome CD8 S, S/PDIF input, 44.1kHz data, spectrum with noise and spurs of dithered 1kHz tone at -90dBFS with: 16-bit data (left channel green, right gray), 24-bit data (left blue, right red) (20dB/vertical div.).

truncated somewhere in the signal-processing circuitry. I got an identical result with 44.1kHz data fed to the Metronome's USB input, though there was now a low-level spurious tone at 5.7kHz present.

Then I found more anomalous behavior. Repeating the test used to produce fig.4 with 24-bit data sampled at 48kHz fed to the S/PDIF input, I got the result shown in fig.5. The odd-order harmonics are still present, but the spectrum of the 1kHz tone at -90dBFS is now overlaid with a large number of low-level spikes. I repeated the test with data sampled at 96kHz and 176.4kHz and got similar results to that shown in fig.5, though with data sampled at 88.2kHz, the spectrum was as clean as it had been in fig.4.

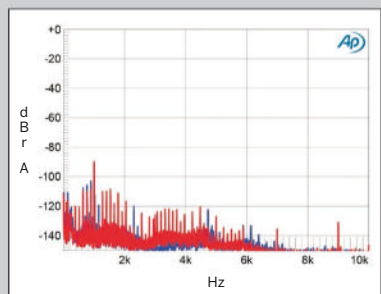


Fig.5 Metronome CD8 S, S/PDIF input, 48kHz data, spectrum with noise and spurs of dithered 1kHz tone at -90dBFS with 24-bit data (left channel blue, right red) (20dB/vertical div.).

formats. After I'd run a cable from a USB Type A socket on the iMac to the Metronome's USB Type B socket, a selection labeled "combo384 Amanero" appeared in the Sound/Output pulldown menu of my iMac's System Preferences window. I clicked on that and all was well—until I decided to play some DSD files, for which I use DSD-friendly Audirvana Plus v.1.5.12. I was able to select the Metronome—again, as "combo384 Amanero"—from within Audirvana's Preferences window, but Audirvana's Automatic Detection function didn't recognize the CD8 S's native DSD capability, forcing me to select DSD over PCM standard 1.0. After doing that, then going back and selecting the Metronome from within my iMac's Audio MIDI Setup utility, all was *really* well.

A final setup note: The CD8 S's steel case is supported by three feet of fairly large diameter (2.3"), each made mostly of polymer but with a metal disc recessed into its center. Also supplied with the CD8 S are three polymer cones with



Uncluttered: the rear panel of the CD8 S.

Given better-quality symphonic recordings, the CD8 S rose to the challenge.

magnets at their tops—again with the magnets!—that are sized to snug into those recesses. I tried it both ways and preferred the sound sans cones: It seemed to me the pointed feet diminished the *substance* of the sound, and added a fussiness that distracted from the player's musicality. But, hey, that's just me.

measurements, continued

It appears that while the Metronome performs well on this test with data sampled at 44.1kHz and 88.2kHz, it has problems with 48kHz-family data (48, 96, 192kHz) as well as with 176.4kHz data. A puzzle—unless the CD8 S uses a sample-rate converter for data sampled at frequencies other than 44.1kHz.

Nevertheless, with 16/44.1 data representing an undithered 1kHz tone at exactly -90.31dBFS , the output waveform was essentially perfect (fig.6), with the three DC voltage levels clearly defined. With undithered 24-bit data, the result was an excellent sinewave (not shown).

The Metronome player offered low levels of harmonic distortion. Even into 600 ohms (fig.7), the second harmonic, the highest in level, lay at

-77dB (0.014%). However, a regular series of low-level paired spuriae can be seen in this graph, which was taken with 24/44.1 data. Repeating the test with 24/96 data (fig.8) increased the level of the second harmonic to -70dB (0.03%), which is probably not significant. However, many more spuriae can be seen, again suggesting that the CD8 S does not handle 48kHz-family data as well as it does 44.1kHz-family data.

The CD8 S performed well on the demanding high-frequency intermodulation test, with all the distortion products at extremely low levels (fig.9). But note the spectral spreading at the bases of the two primary tones. This is due to sidebands at the power-supply-related frequencies of ± 120 , ± 240 , and $\pm 360\text{Hz}$, etc. And when I tested the CD8 S's rejection

of word-clock jitter with 16-bit J-Test data burned to a CD-R Audio disc, the spectrum was spoiled by similar sidebands, at much higher levels than I have found with other players (fig.10). The odd-order harmonics of the LSB-level low-frequency squarewave are all slightly higher than they should be, the desired levels indicated in this graph by a green line. Repeating this test with S/PDIF data gave a very similar result, while USB J-Test data resulted in the production of much worse jitter-related sidebands in the left channel (fig.11, blue trace).

To check that there was not some kind of incompatibility with the Audio Precision test system, I recorded the Metronome's output on a battery-powered digital recorder while it played the J-Test CD-R. Performing

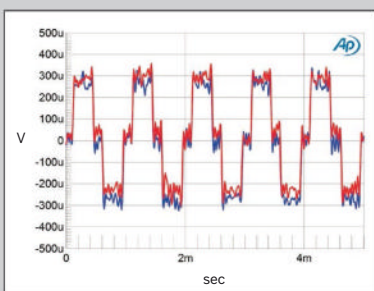


Fig.6 Metronome CD8 S, waveform of undithered 1kHz sinewave at -90.31dBFS , 16-bit data (left channel blue, right red).

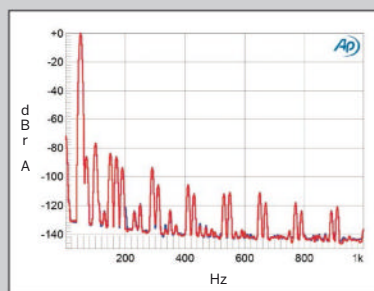


Fig.7 Metronome CD8 S, 44.1kHz data, spectrum of 50Hz sinewave, DC-1kHz, at 0dBFS into 600 ohms (left channel blue, right red; linear frequency scale).

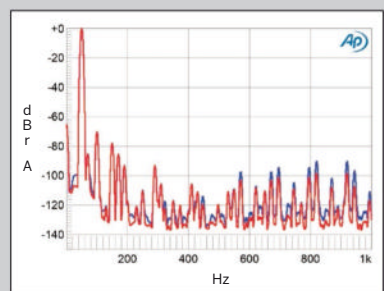


Fig.8 Metronome CD8 S, 96kHz data, spectrum of 50Hz sinewave, DC-1kHz, at 0dBFS into 100k ohms (left channel blue, right red; linear frequency scale).

Listening to CDs

My first impression was that the CD8 S let CDs sound notably smooth and silky, with really good musical momentum and flow—cold, right out of the box. (I mean *literally* cold: The UPS man probably hadn't made it to the bottom of the driveway by the time I'd plugged in the Metronome.) Those qualities were evident with Mstislav Rostropovich's 1995 recordings of J.S. Bach's Cello Suites (2 CDs, EMI 5 55364 2): The Metronome cozied up to Slava's very brisk and polished yet nonetheless emotional (especially Suite 5) performances. During the first 45 minutes or so, the sound was a little plasticky and lacking in texture, and the Metronome seemed to have little going for it in the scale department: dB for dB, things sounded smaller than I'm used to hearing from the best digital sources.

But boy oh boy, did that ever change. *After* those first 45 minutes, I heard distinct increases in both texture and scale. Color saturation, too, went up a notch. Then, maybe 90 minutes after installing the CD8 S, I heard a change so drastic, and virtually in front of my ears, that I laughed out loud:



An honest puck: the Metronome's disc clamp, in situ.

The Metronome's disc compartment is suffused with a ghostly blue light.

The sound got huge—*huge*, I say!—and both texture and color went up a few more notches. With regard to the latter characteristics, I wasn't yet in Audio Note territory—and I

measurements, continued

FFT analysis on the resulting WAV file gave a result similar to that shown in fig.10. When I then looked closely at the 44.1kHz-sampled 19.1kHz data used to generate the blue and cyan traces in fig.2, it appeared that the lowest amount of supply-related sidebands could be seen with USB data. CD data were slightly worse, and S/PDIF data worse still.

One thing I did note was that the Metronome's data receiver could work with sample rates very different from the "legal" frequencies. For example, when I fed the S/PDIF input with 1kHz data sampled at 200kHz, the player's display still indicated "192" and the output was a 1kHz sinewave. When I fed the Metronome 1kHz data sampled

at rates ranging from 42kHz to 47kHz, this display indicated "44:1" and the output was a consistent 1kHz sinewave. This tolerance for the input-data sample frequency is generally not felt to be a good thing, because it means that the receiver circuitry will have compromised word-clock jitter rejection.

The most likely cause of the supply-related sidebands in figs. 10 and 11 is inadequate rejection of voltage-rail ripple on the DAC chip's reference-voltage pin. I'd had the Metronome plugged into the wall with a conventional power cord fitted with a three-pin, grounded plug for all the testing. But when I repeated the testing of the player's jitter rejection, lifting the ground with a cheater plug, there was

no significant change in the measured performance.

The Metronome CD8 S is a beautiful-looking audio component. But I was concerned about its idiosyncratic measured performance, especially with data sampled at rates other than 44.1kHz and 88.2kHz. It could be argued that as the result of the questionable behavior occurs at low levels, it might not have a major effect on sound quality. And it is fair to note that Art Dudley did most of his auditioning of the CD8 S with data sampled at 44.1kHz, where the player performs at its best. Nevertheless, its measured performance suggests that the Metronome player is sub-optimally engineered.—John Atkinson

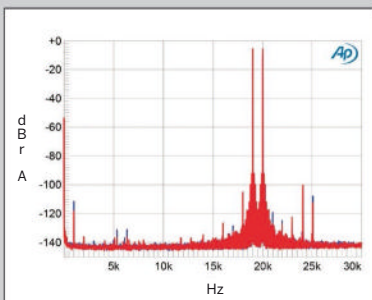


Fig.9 Metronome CD8 S, 44.1kHz data, HF intermodulation spectrum, DC-30kHz, 19+20kHz at OdBFS into 100k ohms (left channel blue, right red; linear frequency scale).

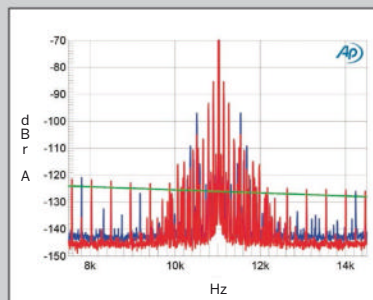


Fig.10 Metronome CD8 S, high-resolution jitter spectrum of analog output signal, 11.025kHz at -6dBFS, sampled at 44.1kHz with LSB toggled at 229Hz: 16-bit CD data (left channel blue, right red). Center frequency of trace, 11.025kHz; frequency range, ± 3.5 kHz.

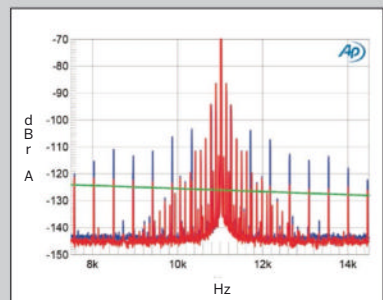


Fig.11 Metronome CD8 S, high-resolution jitter spectrum of analog output signal, 11.025kHz at -6dBFS, sampled at 44.1kHz with LSB toggled at 229Hz: 16-bit data via USB from MacBook Pro (left channel blue, right red). Center frequency of trace, 11.025kHz; frequency range, ± 3.5 kHz.

was still far from good vinyl territory—but I was reasonably well satisfied.

Encouraged by such good performance with small-scale classical music, I moved on to tenor Peter Schreier's 1989 recording, with pianist András Schiff, of Schubert's song cycle *Die Schöne Müllerin* (CD, London 430 414-2). Schiff's touch was appropriately light in "Halt," his instrument well colored and textured—and the extra force he brought to the staccato lines of "Der Jäger" were communicated well. Throughout, Schreier's somewhat lean voice was present and believable, the Metronome doing nothing to round the edges of either his tone or his expressive timing.

Large-scale works? The live recording of Wilhelm Furtwängler and the Berlin Philharmonic performing Strauss's *Metamorphosen* in October 1947—when the ink on the score was scarcely dry—has appeared in countless CD (and LP) incarnations; all sound terrible, but in strangely different ways. The flaw common to all is gross distortion, beginning at about 4:29, apparently from signal overload on the original tape. The best digital version I've heard is the one in *Wilhelm Furtwängler: An Anniversary Tribute* (6 CDs, Deutsche Grammophon 477 006-2). Compared to the LP version (Deutsche Grammophon LPM 18 857) played on my Garrard 301-based rig, that CD through the Metronome lacked the appropriately sharp attacks on double basses' pizzicato notes (at 1:46, 2:00, and so forth), but was otherwise emotionally gripping and sonically tolerable—high praise, really—especially in the quieter moments. (Sadly, those are also the moments in this recording when Berlin's Titania-Palast theater sounds most like a tuberculosis sanatorium.)

Given better-quality symphonic recordings, the CD8 S rose to the challenge, as with Sergiú Celibidache's live recording, with the Munich Philharmonic, of Bruckner's Symphony 9 (2 CDs, EMI 5 56699 2). The Metronome's good sense of drive and momentum kept the *Scherzo* pointed in the right direction, even if the plucked strings didn't have quite the physicality I remember hearing from the Audio Note combination of CDT One/II disc transport and DAC 2.1x Signature digital-to-analog converter that I reviewed in January. In all three movements, the spatial relationships among various instrument groups were convincing, and instrumental timbres—especially the brass—were believably well saturated. With a very different sort of large-scale recording—Randall Thompson's "Alleluia," from the Cantus collection . . . *Against the Dying of the Light* (CD, Cantus CTS-1202)—the Metronome's good way with scale and, again, spatial placement of individual groups of musicians, added to my emotional involvement.

"Born in Chains," from Leonard Cohen's *Popular Problems* (CD, Columbia 88875014292)—probably the most convincing song of a very uneven collection—was also compelling through the Metronome, which gave the subtle dramatic ebbs and swells their due and allowed the electric bass to sound particularly right: deep and limber, with good note attacks. The electrically reedy tone of the cheap-funeral-parlor organ that opens this number was perfect, and Cohen's rusty *Sprechgesang* was front and center, with good presence and body. The Metronome's very good way with electric bass was also evident when I listened to a gold SACD of Aretha Franklin's *Aretha's Gold* (gold SACD/CD, Mobile Fidelity Sound Lab UDSACD 2142)—the 16-bit/44.1kHz layer, of course. Through the CD8 S, Tom Cogbill's perfect, in-the-pocket bass playing in "Chain of Fools" lost nothing to the

ASSOCIATED EQUIPMENT

Analog Sources Garrard 301, Thorens TD 124 turntables; Abis SA-1.2, EMT 997 tonearms; EMT OFD 25 & OFD 15 & TSD 15 pickup heads; Denon DL-103, Miyajima Premium BE Mono II cartridges.

Digital Sources Halide Designs DAC HD USB D/A converter; Apple iMac G5 computer running Audirvana Plus 1.5.12; Sony SCD-777 SACD/CD player.

Preamplification Auditorium 23 Hommage T2 step-up transformer, Shindo Laboratory Auriegues Equalizer Amplifier phono preamplifier & Masseto preamplifier.

Power Amplifiers Shindo Laboratory Corton-Charlemagne monoblocks.

Loudspeakers Altec Valencia, DeVore Fidelity Orangutan O/96.

Cables USB: Wireworld Revelation 2.0. Interconnect: Audio Note AN-Vx, Nordost Blue Heaven, Shindo Laboratory Silver. Speaker: Auditorium 23. AC: manufacturers' stock cords.

Accessories Box Furniture Company D3S rack (source & amplification components), Audiodesksysteme Gläss Vinyl Cleaner. —Art Dudley

The synth solo popped out of the mix with analog-caliber color and presence.

LP version. Otherwise, the Metronome did the best it could with engineer Tom Dowd's typically excessive crispness.

Special mention should go to the Metronome's way with King Crimson's debut album, *In the Court of the Crimson King* (CD, Discipline Global Mobile DGM0501). Even the highest sustained notes of Robert Fripp's guitar and Ian McDonald's alto saxophone, though intentionally keening, were reproduced with clarity and lack of unintentional harshness, and Michael Giles's drumming was as impactful as, I believe, the compression of the original recording allows—and nimble and propulsive, too, while retaining a sense of musical purpose that so often escapes CD playback.

Listening to files

Auditioned with files streamed from my iMac, Metronome's DAC neither rounded off edges nor filled in pores. An edgy, spitty download of George Harrison's *All Things Must Pass* (24/96, Apple) still sounded edgy and spitty. That said, when I was of a mind to listen past those qualities, the Metronome allowed the performances to sound musically absorbing. I was impressed at how the CD8 S didn't distort the musical timing of any of those recordings: even the gritty maracas in the middle eight of "Beware of Darkness" was enjoyable in its own way, propelling the song just as effectively as when I listen to it on vinyl.

And in an altogether fine-sounding file of "Marrakesh Express," from *Crosby, Stills & Nash* (24/192, Atlantic), Dallas Taylor's drumming was uncannily propulsive—as was Stephen Stills's electric bass playing: the song *moved!*

I played some selections from the most recent Gillian Welch album, *The Harrow & the Harvest* (AIFF files ripped from CD, Acony ACNY-1109), and was all but spellbound by the combination of clarity, articulation, appropriate roundness of tone, and complete absence of timing distor-

tion brought to the music by the Metronome. My reference DAC, the Halide DAC HD—which, of course, sells for $\frac{1}{20}$ the Metronome's price—was no match: It sounded murky compared to the DAC section of the CD8 S. Nor did the Halide, or any other DAC I've heard recently, apart from the Audio Note DAC 2.1x Signature, do as well as the Metronome at conveying the extra little *push* that singers Welch and David Rawlings put behind their repetition of the chorus near the end of the song, or catching the full timbral beauty of the brief guitar duet at the very end.

I then tried the DSD64 file of "Sledgehammer," from Peter Gabriel's *So* (Geffen), and was mostly pleased. Through the CD8 S, the song was rhythmically convincing, and its synth solo—which, in the famous video, accompanies a Claymation chicken—popped out of the mix with analog-caliber color and presence. My only disappointment was that Tony Levin's bass wasn't quite as deep, big, or powerful as it should have been.

I began by saying that I don't listen to music while I'm writing—and I don't. Even so, in this silent room I now perfectly recall the sound, through the Metronome DAC, of a DSD128 file of "When Your Lover Has Gone," from *Ben Webster Meets Oscar Peterson* (Verve). The magnificence of Webster's tone, the outlandishly huge scale of his tenor saxophone, the surefooted momentum and tunefulness of Peterson's piano, and the texture and *rightness* of pitch of Ray Brown's bass were all astonishingly good. Not just good for digital, but *good* good.

Conclusions

How best to sum up the Metronome CD8 S? After I lis-

tened to Dmitri Mitropoulos and the Minneapolis Symphony Orchestra performing Mahler's Symphony 1 (CD, Sony Classical MHK 62342), the first question to cross my mind was *Why don't I play this disc more often?* The Metronome reminded me of Mitropoulos's insights and importance as a pioneering Mahler interpreter. It reminded me of how much I love the very American sound of that orchestra, *ca* 1950. And it reminded me that, in the late 1940s and early '50s, some of the orchestral recordings on Columbia Masterworks ranked among the very best in terms of sound quality. I can't say for sure, but I suspect that, the last time I heard that CD, I wasn't quite so *engaged*.

On more than one occasion, my colleague Michael Lavorigna has reminded us all that the best gear compels us to take chances and discover new music. True, of course—but just as important is rediscovering old music that wasn't so well served the last time around.

About halfway through my listening notes for the CD8 S, I wrote, "This is a really nice CD player!" Apart from being the sort of thing that might look good on colored construction paper, perhaps decorated with Elmer's Glue and sparkles, that simple observation doesn't embarrass me *too* much: Some combination of qualities—the Metronome's good sound, superb musicality, and fine ergonomics and styling—conspired to make me smile every time I used it. Considering also that the CD8 S is the rare recommendable CD player through which one can stream computer-audio files (why doesn't *every* high-end CD player offer this?), and that this *really nice* CD player sounds even nicer when used as a USB DAC, a very strong recommendation is in order. Which I here make. ■

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