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SAM'S SPACE

Sam Tellig

Sam and Marina consider lifestyle liquidation

Last May, the *Wall Street Journal* ran an article about “fabulously rich” folks who have been “liquidating their lifestyles”—divesting themselves of their mansions, yachts, sports cars, antiques, art work, and wine cellars (<http://online.wsj.com/article/SB124268209889631903.html>). My wife and I are looking to go minimal, too—smaller digs, one car, far less stuff. The new frugality has something to do with it, but it's more than that: As we get older, we feel that possessions own us, not the other way around.

David A. Kessler, MD, former head of the FDA, wrote a best seller, *The End of Overeating: Taking Control of the Insatiable American Appetite* (Rodale Books, 2009, \$25.95). After consuming that book, I now consume less of everything, and not just food. I will never eat at a chain restaurant again: fat, sugar, more fat, more sugar. I should write *The End of Overspending*.

It's been seven years since my friend Lars died, surrounded by way too much hi-fi stuff that he took far too seriously. Funny that Lars, a Swede, was caught up in galloping hi-fi overconsumption. Lars was abstemious in some ways. He was the first to take me to an IKEA store.

Do Europeans generally strike a saner balance in their lives? It seems so to me. Quality trumps quantity. It's better to have fewer but finer things: cars, clothes, food, wine, lovers.

Hi-fi, too. Despite some recent moves by some manufacturers to ape American overbuilding and overpricing, European hi-fi makers usually produce things on a scale more modest, more humane, less grotesque. The problem, of course, is the weak dollar and the import markup. An item that sells for €1500 there, including a stiff value-added tax (VAT), generally costs around \$2500 here, plus tax.

One brand that suits today's minimalist lifestyle is a French marque from 20 years ago, now raised, like Lazarus, from the dead: Micromega. I can imagine their gear in a small Paris apartment or pied-à-terre. I can imagine the stuff in our own smaller quarters—once

we've cleared away the clutter that clogs our lives.

Flashback

Many will remember the mid-1980s, when “perfect sound forever”—Sony's slogan for the Compact Disc—burst upon the scene. Many audiophiles were in a dither. So were manufacturers. Ivor Tiefenbrun, of Linn Products, once told me that CDs were “for little old ladies with shaky fingers.” That was before he started making CD players.

Though some audiophiles fretted about the end of high-end audio, the CD actually gave high-end audio a boost, and stoked the flames of the tube renaissance. I was delighted with the

could be like Valvoline for a well-oiled sound. Among the early kludgemeisters was Mike Moffat, who went on to start a proper company, Theta Digital; he called his first creation the Frankenstein. Lars became his first victim—er, customer.

Le retour de Micromega

At about this time, in 1987, in France, Daniel Schar founded Micromega. Mike Moffat was big on the brand. Mike showed me Micromega's CDF-1 Digital—introduced in 1988 as the world's first separate CD transport and digital-to-analog converter (they weren't sold separately). The transport had a sexy acrylic cover. The sound

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CD, despite the shitty sound. I didn't have to get up and turn over records. Imagine playing an LP during dinner: Just as you twirl strands of spaghetti around your fork, the stylus settles into the run-out groove.

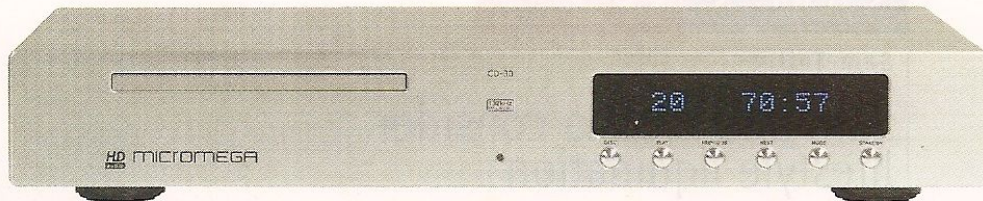
There was an early consensus among audio buffs that Magnavox players using the Philips 1541 chip had better sound, if only marginally so—enough to make them the least bad choice. In basements, garages—an office above the dentist—one-man workshops popped up to modify the Magnavox CDB-650. They silk-screened their badges onto the faceplate or covered Magnavox's with their own. One modifier commissioned a metal bottom plate to cover the CDB-650's cheesy plastic chassis and add some heft. The sets of plastic and metal ventilation holes didn't quite align; he used the metal plates anyway.

Sometimes the modifiers put tubes inside, as did Conrad-Johnson, one of the first companies to realize that tubes

quality, for its time, was superb. Micromega introduced a number of single-box CD players, too, including the noteworthy Stage 6; I bought one and still have it.

But Micromega, so much in the forefront of CD, lost its way in the 1990s, and by the time Didier Hamdi added it to his portfolio of electronics companies in 2007, the marque was moribund.

Twenty-five years ago, Didier Hamdi was the world champion of motorcycle speed racing, and is said to still be as passionate about bikes as he is about hi-fi. According to a Micromega press release, he has acquired companies in the field of “industrial electricity for buildings,” one of which is involved in putting on the nightly flashing light show that illuminates the Eiffel Tower. Founder Daniel Schar continues as Micromega's chief designer. You can tell a new Micromega component from the old by the badge on the faceplate;



Micromega is back with a range of three CD players. The CD-30 is the flagship.

the new ones read "HD Audio Micromega."

But if you think "HD Audio" indicates SACD playback, you're mistaken. Micromega's HD Audio CD-30 player offers neither SACD nor HDCD playback—not that it needs SACD to be high definition. But might there be some confusion? And even more confusion over Micromega's FM-10 tuner, which does *not* decode HD Radio—a system foisted on the US by the FCC and not used in Europe? The "HD" in HD Radio stands for "Hybrid Digital," not "high definition." Someone who buys an FM-10 expecting to receive a station's HD2 or HD3 signal might be in for a rude awakening. The way Micromega tosses around the initials HD, it's as meaningless as the words "hi-fi" applied to a \$99 boombox.

But I drift, like an out-of-whack analog FM tuner.

HD Audio Micromega CD-30 CD player

The CD-30 (\$2495) represents the top of Micromega's new HD Audio line. Partnering it is the matching IA-180, a class-D integrated amplifier (\$2495). The dimensions of both are 16.929" (430mm) wide by 2.775" (70.5mm) high by 10.433" (265mm) deep, including connectors. Micromega also offers a separate preamplifier and power amplifiers.

I used the CD-30 player and IA-180 integrated amplifier together. I also tried NAD's C 275BEE integrated amplifier (\$1299 without phono stage), a

sample of which resided *chez nous* last month, as well as NAD's somewhat underwhelming C 575 CD player (\$699). Speakers were my reference Harbeth Compact 7 ES-3. Speaker cables were Triangle's excellent Silver Ghost.

The Micromega remote control I received has 46 buttons, at least eight of which appear to be for the FM tuner. I consistently failed to find on it the buttons I needed. Perhaps Micromega can offer a simpler remote, especially for those who buy only the CD-30 CD player.

The Micromega CD-30 is something special, as it should be for more money than three NADs. I noticed more life, more openness, more low-level resolution, a more analog-like sense of ease. A great CD player can spoil you.

The combination of Micromega CD-30 and NAD C 275BEE was stunning, offering me the best of all worlds: resolution, definition, tonality, and sheer bottom-end grunt. Much of the delicacy, resolution, and balls-to-the-wall bass came from the Micromega CD-30.

The CD-30 uses a Sony KHM313 DVD transport and servo-controller. I found it a little noisy when loading and unloading discs, and not as sturdy as I might expect a \$2495 player to be. Micromega says the transport was chosen "for its quality, reliability, and value for the money." And clunkiness? I would have welcomed something more solid. What I truly yearn for is a top-loader, like Micromega players of yore.

I asked Daniel about the CD-30's 3x oversampling, to 132.3kHz, which is unusual, and perhaps unique to Micromega. (Micromega makes no mention of "upsampling," the magic bullet.) "We wanted a single master clock to deliver the signal to the DAC, the oversampling chip, and the servo decoder. This required us to oversample the native frequency—that is, 44.1kHz. We could have chosen 2x, 3x, or 4x oversampling. By listening tests, we determined that 3x oversampling sounds better, so the CD-30 oversamples to 132.3kHz." Note that because 96 and 192kHz are *not* whole multiples of the CD's na-

tive sampling frequency of 44.1kHz, they require a second clock, which means more parts and more complexity.

Daniel continued: "The oversampling is performed by a CS 8421 [chip] from Cirrus

Logic. It is capable of handling different voltages between the input and the output, reducing the need for additional parts. Performance is outstanding, with dynamic range over 150dB, so distortion is negligible. The chip also has the advantage of converting the 16-bit native signal to 24 bits. We address the DAC with a full 24 bits."

That's upsampling, *n'est-ce pas?* Hello, DAC. I'm an ordinary CD—perfect sound forever with only 16 bits. I greet you with 24 bits and I feel I'm almost an SACD.

Whatever the Cirrus Logic (formerly Crystal) chip does, it lengthens the CD's 16 bits by 8 bogus bits. Or *are* they bogus? The 64x question. The effect is to make the datastream from a CD mimic that coming from an SACD, even though the 8 last bits aren't there. Confused yet? I can hear John Atkinson snort as he reads this. I forget it the moment I write it; you can forget the moment you read it.

The DAC is an Analog Devices 1853 chip. Declared Daniel, "This is their highest-current output DAC that works with a single clock, and that allows us to reduce jitter and time-domain distortion." Which he couldn't do at 96 or 192kHz.

Daniel points to the CD-30's power supply. In a white paper, he notes that noise from computers, digital TVs, the Internet, DVD players, satellite devices, and who knows what can put high-frequency hash on the mains that is "likely to disturb the CD's musical reproduction." His solution is an R-core transformer for the player's digital section: the drive mechanism, servo, and decoding circuits. "These [transformers] have very interesting characteristics from the point of view of mains-interference filtering. Contrary to toroidal transformers, which have a very broad bandwidth, R-core transformers, due to the way they are made, have a very narrow bandwidth."

Other factors, such as linear regulators with high power-supply rejection, "guarantee a perfectly noise-free power supply for all the digital elements," says Daniel Schar.

For the analog section, Micromega's

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proprietary ACTS power supply comes into play. As with the digital section's power supply, noise rejection is the key to good sound: silent backgrounds, extended dynamic range. As Schar explains, "The maximum output voltage at full scale for most CD players, including the CD-30, is 2V RMS. At the nominal resolution of 16 bits, the player should be able to reproduce signals of amplitude as small as 30 [microvolts]. This is *very* small, and places in perspective what we are trying to achieve."

Alors, l'écoute, as the French hi-fi scribes say. Let's listen.

Micromega is alive and well and sounding better than ever: The CD-30 is one of the finest, if not the finest, one-box CD player I've had in my system.

Good thing, since there are a lot of us (aren't there?) who want to stick with CD... and stick Sony with it, too.

Over and over, I noticed how quiet the CD-30 was—no hash, no noise going on in the background. This likely accounts for its exceptional truth of timbre: the purity of voices and instruments. It also may explain its exceptional dynamic range, from testicular bass (with the NAD integrated but not the Micromega) to exquisite highs.

What I found exceptional was... *je ne sais quoi exactement*, but you might call it finesse. Air, ambience, resolution, dynamics, truth of timbre—the CD-30 had it all. It may be the best CD player I have ever heard.

HD Audio Micromega IA-180 integrated amplifier

Class-D is *not* digital. Got that, JA? "[A] device delivering power to a loudspeaker is by definition analogue." So states Daniel Schar in a Micromega white paper.

He has a point. The signal going into the HD Audio Micromega IA-180 integrated amplifier (\$2495) is analog, as is what comes out. Analog in, analog out? Analog. *N'est-ce pas*, M. Atkinson? (JA had a French *grandmère* but doesn't let on.) Daniel Schar continued: "The analog signal is modulated but it is not a digital signal. There is no analog-to-digital and then digital-to-analog conversion. We enter an analog voltage and we get out an analog voltage."

The IA-180 works like all other class-D amplifiers. The manufacturer sources a pre-packaged digi—oops, make that a *class-D* module, in this case from Hypex Electronics, of

the Netherlands.¹ Hypex designer Bruno Putzeys (you can't invent those Belgian names) is a crony of Daniel's. (The other hot class-D module is the ICEpower, from Denmark's Bang & Olufsen.)

Class-D amps are sometimes called switching amplifiers, because they're either completely on or completely off—like Mikey Fremer, who's either asleep or completely awake: on/off, no in-between. A class-D amp delivers either none of the current available from its power supply, or all of it—the whole hog. The voltage output doesn't vary, except for a few microseconds or so as it switches from full off to full on. The longer a pulse is on, the louder the music. In quiet passages, pulses are on for very tiny periods of time; they barely whisper. If this sounds like pulse-width

modulation to you, that's because it is. It also sounds, to me, like digital. Perhaps The Chief will spar with M. Schar. Actually, class-D amplifiers are like AM radio. There's a carrier frequency, way above the audioband, that can easily be filtered out, and from which the pulses are modulated. There's nothing contentious about Daniel's claim that a class-D amplifier is very efficient—green, if you will. Maybe *too* green. I wonder how long it will be before the energy police outlaw amplifiers that waste watts. Or tax them, like gas-guzzling automobiles. I would enjoy the discomfiture of liberal audiophiles. By way of example, Daniel observes that the efficiency of a class-A amplifier is about 25%. To maintain 40W into 2 ohms, say, you need a bias current equivalent to 160W. The amplifier is always on, and never consumes more power than it does when it's idle. (Actually, a class-A amp runs a little less warm when it's driving a loudspeaker load, because the speaker absorbs much of what otherwise would be wasted heat.) Daniel explained that most amplifiers are class-A/B. The ratio of wasted power is about 50%. "To produce 40W into 2 ohms, you would need about 80W," he said. "With a class-D amplifier, we are above 90%. To deliver 40W into 2 ohms, we draw something like 45W from the power line. Because we draw less current from the mains, we can reduce the size of the power transformer and generate very little heat."

Even so, Micromega's IA-180 pro-

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duces enough heat that Daniel warns against stacking other components on top of it. He's right: the IA-180 needs ventilation. I also found, *chez nous*, that it hummed. In French, this is known as *le ronflement du transformateur*. Snore, buzz, hum, purr—take your choice of how to translate *le ronflement*. My IA-180 *ronfled*.

"Electronic parts don't like heat, especially electrolytic capacitors," said Daniel. "Many amplifiers fail after a number of years for exactly this reason: heat destroys the electrolytic caps. The electrolytic inside the can evaporates and the cap gets shorted. Reduce heat and you extend reliability."

So why does the IA-180 run as warm as it does? The chassis of my LFD Integrated Zero is much cooler to the touch, and doesn't even have vent holes on top. The IA-180 has two completely separate sections: the low-level and power-output sections. The low-level section has an R-core transformer for the same

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¹ The Channel Islands amplifiers also use the Hypex module: see www.stereophile.com/solidpoweramps/805cia. —Ed.



The IA-180 integrated amplifier is class-D, but Micromega says don't call it digital.

reasons the CD-30 CD player does. The power section uses a toroidal.

"The R-core has a very narrow bandwidth," says Daniel, and acts as "a natural filter against any crap on the power line. Today, the power line is heavily populated with parasites of every kind, ranging from computers and satellite TVs to who knows what. If you use a toroidal for low-level signals, you create a problem for yourself because the transformer will let in everything from the power line."

The IA-180 has a single pair of MOSFET output switching transistors per channel. The amp is rated to deliver 100Wpc into 8 ohms, 180Wpc into 4 ohms, or 300Wpc into 2 ohms. There are four RCA unbalanced line-level inputs, plus a moving-magnet phono input and an RS-232 interface for remote configuration. A miniplug input on the front serves as an iPod input; an optional iPod dock should be available soon. There is a single pair of speaker outputs, as well as a headphone output.

I thought the IA-180's MM phono stage was excellent, using my Rega P25 turntable with Goldring 1042 cartridge. Whether you're getting back into LPs or just dusting off your collection, get yourself a Rega table and an Ortofon or Goldring MM cartridge and you'll be set to rock. The IA-180's phono stage may lack moving-coil facilities, but it's no afterthought. Its sound was clear, clean, and lively—immediate and involving.

Nor is the headphone section a mere afterthought, as it is on some integrats, though some might be annoyed that the input is an 1/8" mini rather than a 1.25" maxi. (You can always buy a 1/4" adapter at RadioShack.) The headphone output power is claimed to be 2W, the minimum headphone impedance 32 ohms.

If you own expensive 'phones and listen often through them, you might want a separate headphone amp. I didn't hear balls-to-the-wall bass with my AKG 701s, which can deliver it in spades, though that may have been because of the IA-180 as a whole, not just its headphone stage. I was captivated by the Audio-Technica ATH-AD700 'phones, which provided smooth, detailed, non-fatiguing listening. An outboard headphone amp might get you a richer, fuller bottom end, but the Micromega IA-180 is about living minimally—if not quite about lifestyle liquidation.

I thought the IA-180 was the finest digi—oops, *class-D* amplifier to come my way so far. It avoided some of the

dry, dessicated quality of some of the other class-D amps I've heard. It also sounded clean, with nothing "electronic" going on in the background. The treble was smooth, resolving, exquisitely extended.

What's *not* to like? Well, my sample hummed—loudly enough to be annoying at times. Also, I thought the IA-180 ran rather warm for a class-D amp (this was August, without air-conditioning). Do as Micromega suggests: give it enough ventilation and stack nothing on top, including cats.

Compared to the far less expensive (a little more than half the price) NAD C 375BEE integrated, I noted slight lacks of resolution and, for lack of a better word, finesse. The NAD had it all over the IA-180 in terms of balls-to-the-wall bass, however; and this *was* thrilling with classical music through my Harbeth Compact 7 ES-3 speakers.

The Micromega wasn't alone in eliciting less-than-bone-crushing bass from my Harbeths; I think the LFD Integrated Zero, too, is a little weak in this regard. I make allowances because it's not a very powerful amp. Keep in mind that the \$3299 LFD lacks a phono stage and a 46-button remote. The other in-

tegrated amplifiers in Micromega's new series, the IA-60 and IA-100, are more conventional class-A/B designs.

Perhaps I'd be more satisfied by Micromega's PW-250 or PW-400 class-D power amplifiers. I might get the richer, fuller bass I've been looking for, and which I found with NAD's C 375BEE integrated.

I have a theory about class-D amplifiers. Compared to class-A/B and, especially, class-A amps, I think they sound less powerful than their power ratings suggest. I think it's the nature of these beasts to lack bass, and this may be one reason for the apparent resolution: there's nothing to muddy the sound. Of course, I can't prove this. I also feel that flea-watt single-ended-triode (SET) tube amps sound *more* powerful than their power ratings imply, perhaps they *are* more powerful—for immeasurably short periods of time.

The HD Audio Micromega IA-180 is one class-D integrated amplifier that doesn't belong in Class D of this rag's "Recommended Components." I can't suggest Class A, but can vote for listing it in Class B. Confused? I thought so. And remember: *There are no digital amps.* Micromega said so. ■

HD Audio Micromega

Editor:

Sam, you're right: For every season there is a right action, and for many of us overconsuming hi-fi-holics, the time to experience balance and downsize is overdue. We've owned tubes, air compressors to raise heavy spinning platters, maybe even had to modify the entryways to our homes to get a particularly special loudspeaker under our roofs—for what? Elusive bliss with the lights off.

That was then, this is now. Where does our search for balance to find musical realism, durable build quality, and a price that still allows a morning espresso, buttery fresh croissant, and enough money left over to buy the *Paris Daily* take us?

Micromega has a proud international history of taking a quietly independent road toward achieving balance. Daniel Schar, the fruits of whose work you so positively reported on this month, is a brilliant designer. If you ever give that CD-30 sample back, it will become the reference CD player chez Bevier (far more French-sounding than *chez Tellig*, which sounds German!). It is light and airy, gutsy and powerful, extended and smooth; out of the box, I knew this was something you would want to hear. It's a world-beater for the price.

Also pleased you liked the IA-180 integrated amplifier, the best class-D amp you've heard to date: "smooth, resolving, exquisitely extended." Add that you were impressed with our commitment to energy savings offered by the amplification design and a green manufacturing approach, as well as our transparent phono stage, iPod access, and headphone output quality, and you're coming dangerously close to saying you've found your perfect downsized electronics package. As a humble aside—normally, our amps know the words and don't need to hum along—yours needs to visit our service department, as our transformers don't normally make a peep. We offer a five-year warranty to be sure our customers are kept happy long after the sale. Glad you left the door open for wanting to hear the separate amplifiers! The chase is the thrill, isn't it?

You're going to like the big amps—lots of slam—they'll make you wiggle your toes and sing the French national anthem. Marina will look only mildly shocked at your behavior—she's grown accustomed to it over the years.

Thank you again, Sam, for allowing us to present our products to *Stereophile* magazine for evaluation. All the very best from the entire Micromega/Audio Plus Services gang.

John Bevier
Audio Plus Services