

# ANALOG by MICHAEL FREMER CORNER

**THIS ISSUE:** Mikey ponders the difference between analog and digital noise, reviews the Thrax Orpheus phono preamplifier, and takes a preliminary listen to the Trinity phono preamplifier.

## A Question of Balance

**T**he quest for vinyl quiet seems, at best, quixotic. By “vinyl quiet” I don’t mean “quiet vinyl,” which we now reliably get from pressing plants like QRP, RTI, Pallas, and a few others. I’m referring to makes of phono preamplifiers who set as a primary design goal electronic “quiet,” *ie*, an absence or minimum of electronic noise. A stylus coursing through the groove of even the quietest LP still produces a considerable amount of noise. If you’ve ever made a digital file from an LP using an analog-to-digital converter equipped with a level meter, you know what I’m talking about.

Yet despite what such meters display, practically speaking, to the ears, a clean LP in good condition is *quiet* when first amplified, even by a multi-tubed phono preamp that itself doesn’t measure as being low in self-generated noise.

In fact, many of us would argue that digital “quiet” is, in many ways, unnatural sounding, and that another type of noise, which I’ll call “digital noise,” seems to take a non-aural pathway to the brain, and is more fatiguing than intrinsic vinyl noise. This “non-aural digital noise” is felt more than heard, and after a long period of being subjected to it, its absence produces both an unusual sense of “quiet” and especially of “drop the shoulders” relief and relaxation—

**Whether or not going balanced produces worthwhile sonic results is a subject much in dispute.**

especially if there’s been an instant switch to vinyl playback.

But of course, since no one’s bothered to measure this or figure out *how* to measure it, or even to understand what it is, it can’t possibly exist, though surely you’ve experienced it.

Which brings me to balanced phono preamplifiers featuring balanced phono cartridge inputs using XLR jacks.

Because a phono cartridge’s generator is symmetrical and doesn’t need to be referenced to ground, the “hot” half of each channel’s signal can be fed, not to a single-ended input circuit with the other wire connected to ground, but with the two wires fed to a differential circuit that will cancel common-mode noise. Given the non-common-mode noise inherent in vinyl playback, whether or not going balanced produces worthwhile sonic results is a subject much in dispute. Some very capable designers (Boulder Amplifiers’ Jeff Nelson, B.M.C.’s Carlos Candeias, et al) believe it does, so maybe there’s something to it.

However, a larger number of capable designers go single-



Photo caption photo caption photo caption photo caption photo caption photo caption

ended, believing there’s no practical sonic benefit to a balanced phono preamplifier, while noting the theoretical advantages—and the higher manufacturing costs [see *Martin Colloms’ “Balance: Benefit or Bluff?”*: [www.stereophile.com/features/335/index.html](http://www.stereophile.com/features/335/index.html)—Ed].

### **A Preview: the Trinity Electronic Design Phono preamplifier**

While attending the High End Show in Munich last spring, Audioarts’ Gideon Schwartz, and I met with Trinity Electronic Design’s designer, Dietmar Bräuer, who held in his hand the Phono preamplifier’s impeccably laid out, “unstuffed” circuit board. Standing on the crowded, noisy main floor, Bräuer began explaining, with great enthusiasm at Autobahn speed, the finer points of his fully balanced design.

I tried to feign interest and to share his excitement, but it was late in the afternoon of a full day of walking the High End floors, when technical details of circuit designs tend to drift by like so much flotsam. Even when primed for “dielectric absorption,” this non-engineer finds the written word far easier to grasp. After about 10 minutes, and feeling wobbly on my feet, I looked at my watch and made my getaway, no disrespect meant.

Some months later, the Trinity Phono (\$34,750) arrived in a very snazzy plastic flight case (yes, plastic can be snazzy).

This heavy, grayish-black, low-profile component has an understated, Stealth bomber-like appearance. On the Phono’s front panel are eight chromed pushbuttons illuminated with green LEDs: Power, one each for four equalization curves (RIAA, FFRR, Columbia, EMI), Polarity (which is more easily and simply achieved in a balanced design), and Input 1 and 2. The rear panel’s 10 XLR jacks let you know this unit is fully balanced, inputs and outputs. The loading for the two inputs is set with four supplied XLR plugs, to which are attached square aluminum blocks containing resistors. The desired load is chosen by setting a clock-like dial on the back of each plug. The choices are 5, 10, 25, 50, 75, 100, 200, 250, 300, and 500 ohms. Those who like to run moving-coil cartridges wide open at 47k ohms will freak out, but Bräuer is simply trying to protect you from your own worst instincts. However, if you insist, other values can be ordered.

Unfortunately, although Bräuer supplied me with one

of his DIN-to-XLR cables, whose documentation includes more specs than come with some electronic components, I couldn't try it. My Graham Phantom tonearm, which allows for balanced operation, had been shipped back to Graham Engineering for a minor update, and Graham's new Elite arm, which also allows for balanced operation and has been promised for review, has yet to materialize.

I did have the excellent Balanced Audio Technology RCA-to-XLR adapters for both inputs and outputs. Since the Kuzma 4Point arm's ground wire "floats," I had no problems with hum running the Trinity Phono this way, but doing so meant that half of the Phono's 12 gain stages weren't being used and that I couldn't experience whatever the benefits might be of the fully balanced operation of this fully double-balanced, DC-coupled design.

However, even running in single-ended mode, this is easily one of the most dynamic-sounding phono preamplifiers I've yet heard and by

a surprisingly wide margin. But for my full review of the Trinity phono preamplifier, you will have to wait until one or other of the Graham tonearms arrives and I can run the preamplifier as its manufacturer intends, fully balanced.

### **Thrax Audio Orpheus phono preamplifier**

Based in Bulgaria, Thrax Audio builds a full line of electronics that includes a remote-controlled line-level preamp, a direct-heated-triode tubed monoblock amplifier, a class-A hybrid tube/FET amplifier, a discrete ladder-type DAC (designed for Thrax by MSB), and the Orpheus phono preamplifier. While Thrax's profile in the US is relatively low, its worldwide reputation for designing and building innovative products is well established. Engineer-in-chief and company owner Rumén Artarski is a member of the Audio Engineering Society, and has presented papers at the organization's biannual conferences.

The Orpheus (\$21,000) is a vacuum-tube phono stage. It uses a low-noise

German D3a pentode tube wired as a triode for both moving-magnet gain, and to produce sufficiently high output impedance to feed the passive LCR, constant-impedance, RIAA equalization section. The RIAA circuit features custom-made coils, wound by Sowter in the UK, Cardas-supplied wire, and paper/foil capacitors. The equalized signal then feeds a second tube—a Russian triode similar to a WE417—to provide the necessary output gain, loaded by a Hashimoto isolation transformer. The additional gain required by moving-coil cartridges is provided by an amorphous-core Lundahl 1931 transformer with 1:8 and 1:16 selectable primaries. The full-wave, tube-rectified power supply uses a C-core gapped transformer with symmetrical field cancelling windings and chokes for smoothing.

Elegant appearance and packaging, superb build quality, and pleasing ergonomics are as you'd expect in a \$21,000 phono preamp. The Orpheus has three switchable inputs, two RCA and one XLR. The latter is for use with balanced cartridges; switches on

the rear-panel allow the single-ended RCA jacks to have their grounds lifted in case of hum. All three can be set for MM or MC “high” or “low. The “high” setting is for low-internal-impedance cartridges, and offers about 60dB gain and an input impedance of 40–50 ohms; the “low” setting is for high-internal-impedance cartridges, with 54dB gain and an input impedance of 200 ohms). Output is via single-ended RCA or balanced XLR, the former again capable of having their grounds lifted. On the front panel are pushbuttons for On/Off, Mute, Phase (“polarity”), and Input Select Previous and Next. Particular attention has been paid to grounding problems.

With the variety of turntables, cartridges, and external step-up transformers I used to test the Thrax’s transparency, backgrounds were 100% hum free. And despite the five tubes (two each per channel plus the tube rectifier), any noise was also inaudible.

The all-in-one-box “high/low” MC approach will appeal to many, but might be problematic for the superfinicky who demand greater



Photo caption photo caption photo caption photo caption photo caption photo caption photo caption photo caption

control of loading. Practically speaking, Atarski’s choices should work well with most cartridges. They did for the superlow-output (0.2mV) Ortofon Anna and the higher-output (0.5mV) Lyra Atlas, both low-impedance designs. A premium version of the Orpheus boasting silver wiring and a step-up transformer with a mu-metal core is also available.

The Orpheus performed flawlessly during the months it was in my system,

the only glitch being unpleasant pops when I switched among inputs. Not a problem if you mute your preamp or the Orpheus.

The Thrax Orpheus produced a rich, full overall sound with a powerful, well-controlled bottom end, a fully fleshed-out midrange. The top end was less than sparkly but sounding muted, closed-in, or lacking in air. Still, when I switched to a more open-sounding phono preamp, I could



Photo caption photo caption photo caption photo caption photo caption photo caption photo caption

hear that the Thrax was less than fully generous on top. But there are always trade-offs, and the Orpheus's high-frequency transient presentation was clean and precise, never sounding soft or incomplete.

Although the Orpheus has been masterfully and coherently voiced, it won't appeal to everyone. But once it was in my system, I had no desire to remove it, even when playing edgy stuff like Volto! or Metallica, which I know can sound more exciting and impactful through other phono preamps. Even as it conceded performance parameters at the sonic margins, the Thrax retained an ability to produce a vivid sensation of "live" as opposed to "well recorded."

Was that due to euphonic colorations? Who cares, when it can preternaturally bring to life the velvet-voiced Nick Drake in the recent, meticulously produced boxed set *Bryter Layter*, producing a thrillingly three-dimensional image of the singer in the room, if with the loss of some studio detail and sense of space. That's a trade-off I'll take every time.

The Orpheus pulled the front of the stage back somewhat compared to

the Trinity Phono, or even to the Ypsilon VPS-100 phono preamp, and it didn't illuminate as well the rear and corners of the stage—but what did appear on that stage had great body and fleshy physicality, if somewhat at the expense of maximum possible rhythm'n'pacing.

The Orpheus's richness never descended into tubey bloat, or

a pronounced tonal coloration that attached itself to every recording. Its top-end "tuck" was subtle enough that cymbals and other percussion produced satisfying shimmer and precise transient attacks. With RCA Living Stereo reissues, this midrange richness helped produce rich, burnished brass, and luxurious string tone without homogenizing massed strings.

Once I'd gotten a firm hold on the Orpheus's sound, I bypassed its Lundahl transformers and ran the Lyra Atlas into the Ypsilon MC-10 transformer and the Ortofon Anna into the Ypsilon MC-16 transformer via its MM input, to maintain consistent loading. Transparency, top-end extension, *and* transient attacks improved on what already was heavily addictive sound, leaving me thinking the Lundahls were imposing a bit of darkness on the edge of Analog Town that will appeal more to some than to others. Overall, I came away very impressed with the design, build quality, and sound of the Thrax Orpheus. ■

*Michael Fremer is the editor of Analog Planet.com, a website devoted to all things analogical.*

## CONTACTS

### Thrax Audio Ltd.

251 Okolovrasten pat, Delta Center  
1766 Sofia, Bulgaria  
TEL: (359) 2-988-95-55  
FAX: (359) 2-988-95-56  
WEB: www.thrax.bg

US distributor: HiFi Imports  
TEL: (719) 640-6999  
WEB: www.hifiimports.com

### Trinity Electronic Design GmbH

Johann Wieser Ring 11  
DE-85609 Aschheim, Germany  
TEL: (49) (0)89/201-865-77  
WEB: www.trinity-ed.de

US distributor: Audioarts Inc.  
210 Fifth Avenue, Third Floor  
New York, NY 10010  
TEL: (212) 260-2939  
WEB: www.audioarts.co