Audiomat Phono-1.5

It was back in *UHF* No. 56 that we reviewed Audiomat's original phono preamp, the Phono-1. We gave it a glowing report. It was the first time we had heard the tube phono preamp from Copland seriously challenged. Alas, the Phono-1 wasn't around for long. It was quickly discontinued in favor of the Phono-1.5…which however took years to become a working product. Prototypes and early production models worked well in some rooms, but inexplicably hummed furiously in others.

It looked like vaporware, but the final version is finally here, and it was worth the wait, because what it does is sheer…

But hold on, we're getting *way* ahead of ourselves.

Building a phono stage is not trivial, and indeed it is perhaps the most difficult of all audio components. A phono circuit must be able to handle extremely small voltages. The output of a low impedance moving coil cartridge is around 0.4 millivolts *at full level*, and a mere 4 microvolts 40 dB down. The circuit must bring this tiny voltage lost in the noise up to a couple of volts. It must leave the noise behind too.

But that's not all. LPs are made with a pre emphasis that boosts highs by more than 30 dB and de-emphasizes the lows. The phono preamp must re-equalize the signal, to make the response come out all right again. In too many preamps, the equalization network is so slow that the leading edges of transients can get through unequalized, and therefore much too loud. Passive networks are better, but they are often noisy. Such is the challenge of building one of these difficult pieces of retro technology.

The Phono-1.5 is much larger than the earlier one, component-sized and not just a little black box. The power source is a "brick" with a captive power cord, attaching to the main unit via a four-pin XLR plug. Inside is a transformer rather than a full power supply. The rectifiers and filters are on the main chassis, which is surprisingly empty. Why did they make it this size, anyway?

More and more high end low-level circuits are now made with operational amp chips, a cheap means of getting lots of amplification. That's not the case of the Audiomat, whose circuitry depends entirely on discrete transistors. All but two are glued together in pairs, to keep them at the same temperature and therefore stable.

At the rear, there are very good jacks for both MM and MC cartridges, and a switch to choose the appropriate one. Surprisingly enough, the MC function has no adjustments for input impedance or capacitance. This is a minor failing frankly, but surprising in a product of this class.

Check our picture, and you'll see light coming through the front panel on the right edge. That's right…the panel is acrylic, not some sort of metal. Audiomat has done this before.

Okay, let's get serious about getting everything off those vinyl discs.

Plugging it into a high-level input on our Copland preamp, we were surprised by how *quiet* it is. We could hear a very slight hum (60 Hz, without harmonics), but it was noticeable only because there is a complete absence of perceptible hiss. Not many phono sections are this quiet, and the ones that are, ironically enough, sound horrible in other ways.

Not this one. We began the session with our all-in-one test, the remarkable *Façade* LP. What struck us first was how *refined* the Audiomat is. The highly varied instrumental timbres were reproduced cleanly, and so were the shifting moods of this remarkable tone poem. The higher frequencies certainly weren't rolled off, yet the Audiomat made our usual phono section seem a little too bright. The natural sound field was vast. Castanets seemed to emerge from a large space. All of the instruments sounded delightful, with the bassoon especially seductive. Albert, who occasionally plays cello, thought that the cello sounded more like itself than it did with our own phono section "There's no dust hanging around," said Reine, "and no clouds either."

We were certain that the Phono-1.5 would do well on our favorite harp recording (Tournier's *Vers une source dans le bois*, included on *Professor Johnson's Amazing Sound Show*, RR-7). How can one go wrong with a recording like this? Yet we weren't prepared for what we heard.

On this remarkable recording, Susann McDonald alternates between startling power and evanescent subtlety. The Phono-1.5 got them both right, but we realized we could hear details that had escaped us with every other phono section we had ever heard. "Just like the cello on the other recording," said Albert, "the harp is more of a harp. You don't just hear the strings, you can distinguish the different ways the strings are played — plucked, strummed, or sometimes just touched." The rhythm was strong, more so than with our reference. And the low frequencies, chopped right off with some systems, had depth and resonance.

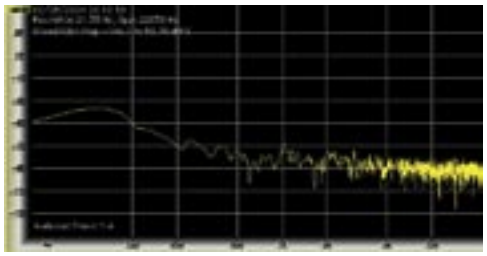
Because some passages of this recording are so low in volume, we appreciated

the Audiomat's very low noise level. "But it's not just the noise," said Gerard, "it's the low-level *detail*. There's black velvet down on the noise floor, and those tiny notes just pop out with amazing clarity."

Like other components, phono stages often have difficulty reproducing human voices, and especially *female* voices if they can't handle high frequencies well. We figured the Audiomat would do well, and of course we were right.

We listened to Mary Black's (alas, long discontinued) *No Frontiers* LP. Black has a clear and powerful voice that cuts through the air effortlessly, and it can sound hard on some passages. Not here. "The hardness has been transformed into expressiveness," said Reine, "and the text really comes out and gets to me." Gerard agreed. "I knew this was a good recording," he said, "but it turns out to be way better than I had suspected."

It wasn't just Black's voice that emerged better than ever. The double bass was rich and resonant, and the bongos were palpable. We also noticed how much clearer the harmony was. When some of the musicians sing along with Black, we could make out their



individual voices. "You know what it's like when water is so clear you can see all the way down to the bottom?" said Albert. "This is what it's like."

We put the Phono-1.5 through the usual tests, though we know there is no common test that can predict the performance of a phono stage (that is, there are tests that can predict bad performance, but they can't discriminate between good and great). We did note the very low noise, but our ears had already told us about that. The curve is shown above. Most of the noise is situated around 90 dB below reference level, an astonishing performance. Even the noise at lower frequencies, including the very slight hum, is way better than one expects.

With the session over, we then discussed just what we needed to do. We don't change reference components unless it means adding enough resolution to our system that we can better evaluate *other* components. What's important is not whether we would have a better standard for evaluating *other* phono stages, but whether we could more easily use vinyl to test loudspeakers or amplifiers, say.

Our conclusion is that we could. There's not much left in our 2004 budget for acquisitions, but this one is a must. The Audiomat Phono-1.5 is a reference quality component, and from now on it will be our reference. We do a lot of speaker and amplifier tests with vinyl, as you may know. We can hardly wait till next time!

SUMMING IT UP...

Brand/model: Audiomat Phono 1.5

Dimensions: 43 x 31 x 8 cm
Most liked: Groundbreaking detail and sophistication
Least liked: Lack of MC adjustments
Verdict: The phono preamp reinvented

CROSSTALK

I don't even know what to say about this device. I've had the chance to hear a lot of phono stages, including ones far more expensive than this one. Been there, seen it, done it.

Not impressed.

Well, I'm impressed this time. The job a phono preamp must do is a huge challenge, and on the evidence most of them don't do it right. The price of the Phono-1.5 may well be beyond any budget you'll ever put together, but if it's not you'll know where to shop.

—Gerard Rejskind

You know, they're going to say that there's a love affair between Audiomat and me. Guilty, Your Honor !

This phono section which has just joined the Audiomat family offers an impeccable spectral balance, with rare richness at the bottom, a perfectly placed midrange, and the screech-free highs every audiophile craves. I was stunned by the impact and energy it radiates. Its exemplary transparency lets through gorgeous timbres and the subtlest modulations, the nearly imperceptible effects that hide none of the artist's sensitivity.

The Phono-1.5 will give you years of listening pleasure, communicating the appropriate emotions, whether the program is light or complex, subtle or vigorous, airy or majestic.

Now I've experienced it, I dream of it…

—Reine Lessard

Welcome to the rarefied air of ultra high fidelity!

As someone said, it's not crowded at the top, and if I may add my own two bits, when you're as high as the North Pole, every direction, no matter where you turn, is south.

What am I implying, that there is nothing better, that you shouldn't consider anything else? No, of course not, since I've obviously not heard everything else that exists. Let's say that I have yet to hear such a profound and unique improvement in our reference system with a substitution at such an early level in the music signal.

Sounds become more focused, more real and smoothly-controlled. Transient attacks don't pierce the air with force, they just happen swiftly, and are gone in a fraction of a blink. Details appear which reveal, for example, not only a beautiful percussive sound, but also how things were actually touched to produce the percussive sound. In other words, I could see what I was hearing.

And when I heard it, I had no doubt that this was exactly how it sounded when it was recorded. Actually, this is quite rare. Most of the time, after listening tests, I end up wondering how close we were to the recording venue. This time, I *knew*.

—Albert Simon