Audiomat Solfège

Is it expensive considering how much you get? So is a season ticket to the symphony.

You may recall that we've reviewed a product from this French company before: the Phono-1 phono stage (*UHF* No. 46). We thought it was terrific, but perhaps you shrugged that off, because after all a phono stage is just an accessory, right? And isn't designing one a lightweight assignment?

Not really, no. A phono stage must deal with an impossibly small signal, a mere fraction of a millivolt, and it has to amplify it to perhaps 600 times that, far more than a power amplifier does. Its noise level must be near the theoretical limits, and to make things even tougher it must apply a frighteningly steep equalization curve that is nearly impossible to execute without disastrous side effects. A designer who can do magic with a phono stage can do anything.

Of course, this amplifier is also something of a challenge. It is a class A tube design, with remote control. Because it is expensive, it needs to justify its price by turning in performances that seem to be worth the price. Not easy.

First, a note about class A amplifiers. Like most amps, this one uses a push-pull design, with one tube amplifying the positive half of the wave and the other the negative half. Push-pull amplifiers have a potential problem, however: distortion near the crossover point, when one tube "hands off" to the other. This is negligible at full power, but it gets much worse as signal level drops. For that reason most amplifiers are designed so that the two output devices overlap, to avoid the worst of the distortion. A class A amplifier throws efficiency away and overlaps the two completely. Unneeded power is discarded in the form of heat. And even though this amplifier's rating is a mere 40 watts per channel, it dissipates as much heat as an amp with ten times the power.

Actually, if you dig further into the specs, you discover that it operates in class A only up to 33 watts, after which it slips into conventional class AB. To translate that, it means that from zero to 33 watts it draws constant current from its power supply. From 33 watts up it increases its demand on the power supply. Is *Audiomat* cheating? No, because *any* class A amplifier will do this at some point. In this case, the company has chosen to rate the maximum power above that of maximum *class A* power. Think of it as a 33 watt per channel amplifier (just 0.83 dB less), and it's class A all the way.

This is a remote-controlled amplifier, with not many buttons on its remote. You can turn it on (providing it's in standby position, not completely off), and its volume control will rotate all the way down while it goes through the warm-up cycle. Volume can then be controlled by two sets of buttons, one for moving quickly to the desired volume, the other for fine-tuning. There is also a mute button. Inputs (marked line 1 through line 6) are selected from the front panel.

The rear (see the photo at right) includes the input jacks plus "line out" jacks, which are actually "tape out" jacks. There is no matching tape input, nor of course a tape-source switch. There are two sets of output jacks, allowing easy biwiring, and of course with separate posts for 4 ohm and 8 ohm speakers. The posts are rather slim, and because they are not hexagonal we couldn't use our Postman wrench to tighten them.

Inside is an all-tube circuit, with half an ECC83 (12AX7) input buffer and an ECC82 (12AU7) phase inverter feeding a pair of Russian *Svetlana* 6550 output tubes. And unusual detail: the circuit operates without the usual feedback loop. The power supply has muscle, as it must. Its 10,000 µF filter capacitors are bridged by 1000 µF capacitors to give better performance at low frequencies. The machined aluminum case uses a special paint with a high damping factor developed by *Siemens*.

Because the *Reference 3a* Suprema speakers in our Omega system have a 4 ohm impedance, and because we anticipated that the Solfège would need every watt it could get its hands on to drive them, we connected to the 4 ohm posts. However we should add that this is controversial, and some audiophiles prefer to use the

8 ohm taps. That's because the 8 ohm winding on the output transformer has only half as much wire as the 4 ohm tap, and it might potentially sound better for that reason. There will be a loss of power, however.

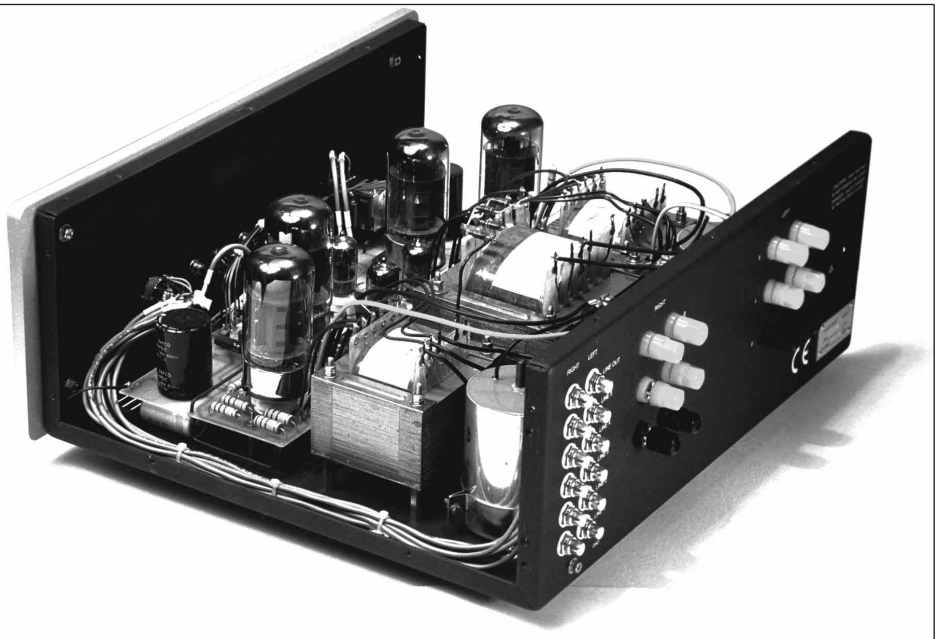
We began our test with the HDCD gold version of the famous *Antiphone Blues* disc of saxophone and pipe organ recorded in a vast church (*FIM* CD003). Reproducing it is difficult for an amplifier, which must draw lots of detail from the saxophone without making it sound edgy, and must be able to handle the low organ notes and the considerable reverberation.

The Solfège did well. If the saxophone was less velvety than with our reference, it was nonetheless detailed and expressive. The sound was spacious, and the organ pedals were solid, though Reine found the tonal balance cool. Was there some confusion on the final organ passage? Reine thought so on first hearing, but changed her mind after a second audition. All in all, on this first recording the *Audiomat* sounded much like our reference.

Our next recording, often used in our tests, was Rossini's *Cavatina* from *The Barber of Seville* (*The Magnificent Steinway, Golden String* GSCD031). Though the only instrument is a piano, this too is a challenge. Not only must the Steinway's distinctive tone be properly captured, but we need to feel the power and the precision rhythm of Hyperion Knight's playing. We've heard expensive components flunk this test big time.

The Solfège did well, rendering the notes with lightness and good separation, as well as fine rhythm. Gerard noted the particularly clear way that the final note of each phrase died out, seeming to go on longer than usual because there was no "haze" to hide it.

Of course we could hear the fact that we were listening to 40 watts instead of 185. There was no hint of overload or distortion, but there was a little less force to the chords. And Reine — our resident pianist and Steinway enthusiast — found the clarity of Knight's playing affected, and also found the higher notes somewhat "dry."



But of course the breeding of an amplifier like this one shows up more in the soft passages than in the loudest ones, and in the recordings that followed we could hear how much *Audiomat* designer Denis Clarisse had sweated each detail in his amplifier.

The Solfège's rendition of *Papa John* (*Audioquest* AQHD1041) was particularly revealing. If Doug MacLeod's voice had a touch less force behind it, its clarity was virtually perfect, and the ends of syllables (which MacLeod sometimes lets drop) were so clear they let us "see" the hall where the recording was made. The guitar sound was clear and downright delightful.

But it was in the percussion that this amplifier's talent made itself heard. It was solid, but we especially enjoyed the subtle, barely audible way drummer Jimi Bott colors the sound with a barely audible shimmer of the cymbal. That cymbal can either vanish, hidden behind the other, much louder, instruments, or it can be altered to the point where it is unrecognizable. It isn't often that we hear it sound so clear and lifelike.

The Solfège also behaved in exemplary fashion on the choral recording *Now the Green Blade Riseth* (*Proprius* PRCD9093), which began with an oddity. In the two seconds preceding the start of the first selection, we were aware of the slight hiss of the original analog tape (recorded without Dolby noise reduction). Tape hiss can be emphasized by resonances in players, amplifiers, speakers or even cables, but in this case it wasn't really emphasized at all. We noticed it because there is so much clarity at the bottom of the dynamic scale. That augured well for what was about to follow.

And what followed was delightful. The women on this choral recording often sound shrill, and the men weak and thin. Neither happened this time. The women's voices were smooth, with gorgeous elocution, and the men added a solid foundation. The string bass was just as solid, and the amplifier's superb rendition of subtle cues gave an unusually strong sense of ambience. This is a recording made with natural stereophonic perspective, and few amplifiers have *ever* let us hear it this clearly. The final crescendo was somewhat less forceful than with our reference, but we should stress that this was evident only by direct comparison. We never got the feeling that the Solfège was running out of breath.

Nor did we with Copland's *Fanfare for the Common Man* (RR-93CD), despite that remarkable recording's great demands on an amplifier's resources. The huge brass and percussion passages were majestic not only for their power but for their tonal quality. If the piece seemed less "scary," it was even more delightful. The brass was wonderfully dissonant, and the instruments didn't all run together. That allowed us to hear and enjoy the fine counterpoint between the trumpets and the French horns, for instance. As with other recordings, we could follow the "decay" of each note better than with most other amplifiers, including our reference.

We ended with *Say It With Music* (*Sheffield* CD-36), which flirted with perfection. Margie Gibson's voice was exceptionally fine and expressive, and Gerard wondered where her sometimes troublesome esses had gone. Each vocal inflection was clear, and the great detail of the sound even let us hear a slight vibrato in the playing of the cello, a detail that is usually hidden.

In the lab, we checked out the power of the well-warmed Solfège into our 8 ohm dummy load, and discovered that clipping came just below the amplifier's rated power, at 38.5 watts, with both channels driven. Tubes vary in performance, to be sure, and the 1.5 watt deficit is a minor one.

At the other end of the dynamic scale, the waveform was excellent even at very low level (0.0032 watt), but we could see a surprising amount of high frequency noise, situated around 200 kHz. This is unexpected in an amplifier without a switching power supply, and which also has a ferrite filter on the AC input. The noise is not of course audible. *Audiomat* says bandwidth is limited to just 30 kHz, and suggests the stray noise was RFI riding in on the chassis. That's quite possible.

Crosstalk among the five inputs was the lowest we have measured, an incredible -85 dB at most frequencies barely rising to -82 dB at 20 kHz. How's *that* for sweating the details?

We should no doubt add that, although our reference speakers are quite efficient, with a 91 dB rating, they are a difficult load to drive. An earlier tube amplifier had been unable to cope until we disconnected the subwoofers. The Solfège Reference handled the load well, and we can suppose it would have little trouble with any other speaker. It will take exceptional speakers, however, to shine the spotlight on this amplifier's mastery of tiny details. It is this mastery which can justify its price.

Model: *Audiomat* Solfège Référence
Price: C$6890, US$4790
Warranty: Two years, transferable, except six months on tubes
Dimensions: 44.5 x 19 x 40 cm
Most liked: Uncommon mastery of fine detail, superb tonal balance
Least liked: Thin binding posts
Verdict: Where lesser amps give you silence, this one gives you magic

CROSSTALK

There is music in those tubes! I could hear the *Audiomat* refinement with each piece we listened to, from the sweet clarity of lyrics to the delicate sense of space and sound decay.

Instrumental timbre was a particular treat. Perfectly separated piano notes cascaded joyously, and chords filled the air with rich harmonies. Cymbals — so often glaring and bright — shone softly.

I wished it had more power, though, in order to better render the weight of some instruments but I quickly set that thought aside as I sat, enjoying the majesty of brass or the superb choir voices, rising and swelling as a collective giant breath.

A real heart warmer!

—Albert Simon

Great concert ambience. A perfect spectral balance. A very extended dynamic palette. Powerful attacks for flawless rhythm. A reverberation that is pleasant because it is never overdone. The list of qualities of this integrated tube amp is a long one.

From the first seconds I knew I was listening to a thoroughbred amp. Instrumental timbres are gorgeous. Reproduction of virtuosity and emotion is extraordinary. I was struck by the multitude of tiny details from all sorts of sources. I had the troubling sensation that I was coming very close to a sonic ideal! I really got into savoring the music.

I had just one reservation: I preferred the sound of keyboards with our reference amplifier. But I wonder whether that can even be blamed on the Solfège. As a pianist, I'm rather demanding on this point, and it's a subjective question. With that cleared up, I don't hesitate to add that this is a transcendental amplifier.

—Reine Lessard

All right, first things first. Tube amplifiers are a pain right where you're thinking. They're big, they have low power, they run hot, they need retubing, and sometimes the factory that made your tubes has gotten into a war with *your* country and gotten itself wiped out.

But oh — when it's done right…

And this one *is* done right. Never mind the limited power rating, the Solfège puts out a *huge* sound, and the quality of the sound outperforms the quantity. The tone of every instrument is at once sweet and dynamic. You listen, and you listen again, and what runs through your mind is that you should barricade the door so that you don't have to give it back.

Have integrated amplifiers come to this? Can they really be made this good? Well, at *Audiomat* they can. And they are.

—Gerard Rejskind