



Tenor Phono 1 preamplifier

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Over the past seven years I have had the chance to review all of Tenor's components and to closely follow their evolution. This review focusses on the latest link in the series of high-fidelity components developed by Tenor, the Phono 1 preamp, which represents the culmination of more than fifteen years of effort and several million dollars in research and development costs.

High fidelity is a merciless art. For passionate music lovers and audiophiles, the quest for perfect sound reproduction can be an ordeal, an obsession bordering on madness. It remains a truism, unfortunately, that perfect reproduction of sound is impossible without the complete and flawless control of every component in an audio system.

The path of any serious audiophile is inevitably paved with frustration, unless he has an inexhaustible fortune to acquire the complete set of Tenor components or to accept certain limits.

When you realize that a single mismatch on a system of any price - even those bordering on a million dollars - can destroy the listening experience, it becomes clear that everything depends on the precision and the fine tuning of each element and of each component.

I remember hearing a manufacturer tell me that an audiophile engineer who worked on the design and implementation of aircraft for Boeing said it was easier to build

a 747 than a perfect audio amplifier! Optimizing a stereo system relies on careful matching and optimum tuning of each component. How many times have I heard a \$5,000 system «sound better» than systems at ten times the price?

I diverge, but the message here is that, for me, **Tenor** has always been in a class of its own, just shy of nirvana, until now. The cause was the missing link: the phono preamplifier.

DRIVEN TO THE EXTREME

Although I have reported on numerous details of Tenor's design and manufacturing processes in my previous reviews, I take the opportunity here to describe how far the engineers go in their quest to perfect their products. This accuracy is found nowhere else in the world, probably not even in the aviation industry!

The obsessive attention to detail extends even to the screws used. Each one costs three times more than a normal screw. Why? The underside of the screw head is perfectly flat to ensure ideal coupling, the thread is finer and more precise and the screws are selected to perfectly match the beveled rubber washers.

Speaking of rubber washers, when a component is attached to each unit, Tenor uses a specialized tool to fine-tune the coupling pressure. For example, when a component is

fixed on an aluminum surface, the MOSFET transistors and heat sinks can expand differently, generating stress over a period of time. Tenor's use of coupling washers and calibrated coupling pressure ensure that contact and pressure remain constant indefinitely.

While the majority of high-end tube equipment manufacturers test their tubes for perfect matching, Tenor goes even further by designing and building its own dedicated tube testing facility. As tube microphonics can worsen over time, all tubes are tested only after several hundred hours of heating. Rejection rates can be as high as 60% in some cases.

Tenor's chassis are designed to control vibration through several layers of decoupling technology, starting at the internal circuit supports and suspensions, and extending to damping materials applied to internal surfaces. In addition, to isolate the component from floor vibration and microphonic effects, each audio circuit is calibrated to a resonance frequency of 20 hertz.

When one invests over \$50,000 in a device, it is reasonable to expect that contacts not oxidize after a few years. To prevent this, most of the internal wiring (copper-plated silver) is Teflon-wrapped for superior insulation. A special oil is used in the extrusion process to ensure the absence of oxidation for a minimum of twenty years.

These are just a few of the details that reflect the degree of obsessive care taken in the design and manufacturing of Tenor devices. Their website provides more information.

SPECIFICATIONS

- 90 pounds, 19.5 inches wide x 9.5 in length and 9.5 inches in height
- Gain: 55, 60, 65, 70 dB, adjustable
- Load impedance: 200 - 300 - 400 - 500 ohms and high (600)
- RIAA accuracy: 20 Hz to 20 kHz (+/- 0.1 dB deviation)
- Frequency response: 2 Hz to 100 kHz
- Output impedance: 10 ohms
- Maximum output voltage: 25V rms (rca out)
- Signal / noise: < -87 dBA for 70 dB gain
- Crosstalk: < -90 dB
- Two moving coil single-ended inputs (RCA)
- One moving coil balanced input (XLR)
- Two single-ended outputs (RCA)
- One balanced output (XLR)

The unit is also equipped with a meter that measures the time of use, highly useful for tube electronics.

It is not surprising that the Phono 1 is the most technically advanced component among Tenor's products. Not only does it benefit from the experience acquired during the development of its predecessors, but it was probably the most difficult to develop, given the inherent challenges of designing a phono preamplifier. As an indicator, the Phono 1 took five years to develop.

LISTENING CONDITIONS

As my own listening room does not have enough space or height to do justice to the Tenor devices, listening tests were conducted in a dedicated studio of one of the compa-

ny's members, the same studio used for my previous tests of the Tenor preamplifier and amplifier in 2013.

The system consisted of the full Tenor range: mono-block amplifiers, the preamplifier equipped with its separate power supply, and the phono preamplifier. The turntable and tonearm were exclusive models designed and produced by André Thériault, the designer of the «Black Beauty» reference tonearm used by Kronos Audio. Speakers were the Kharma Grand Ceramique. All cabling had also been updated since my last test.

For this review, I will not go into the details of each disk used for testing, but rather present my observations on the musical performance as a whole.

Not including the dedicated listening room, it's worth bearing in mind that the cost of this system is around \$300,000.

At this price, it is perfectly reasonable to ask what to expect. The answer is simple and paradoxical at the same time: music and nothing but music, devoid of any electronic artifice.

BACK TO THE FUTURE IMPROVED

This is both a return to the past and a leap into the future.

Many audiophiles and music lovers will tell you that the public was deceived by the major music companies when digital music was introduced. These corporations saw it as a way to increase their profits despite the huge backwards step in the quality of music reproduction. I refer in particular to the invention of the CD and the 16-bit / 44.1 kHz standard, chosen for cost considerations, small size and marketing. It is a fact that the music companies knew very well that sound quality would be compromised for the following reasons: 1) technology for filtering and timing is imperfect, even today; 2) there is no perfect «brick wall» filter; 3) filters resonate perceptibly and introduce timing errors to which the brain is particularly sensitive. In this context, it is not surprising that audio manufacturers have been constantly refining digital-to-analog converters (DAC) to overcome the shortcomings of the CD format. This also explains the exponential rise of the newer high-resolution formats (HR).

For all these reasons, only an analog source can reveal the full potential of a Tenor system. The proof is that during the listening tests, we used a CD player connected to a high-end DAC, and the difference in musicality between the digital and analogue formats was clear cut. I also had on hand vinyl pressings of digital recordings such as the *Concerto en Fa* and *Rhapsody in Blue* by George Gershwin, with Gabriel Tacchino and Monte-Carlo Philharmonic Orchestra, recorded in 1981 on the Erato label. The vinyl disc even proudly bore the statement: DIGITAL RECORDING. Compared with an analog recording, it was significantly less musical, bordering on the irritating.

This then is where all of the years of research and development on Tenor's part have led us. It is a great return to the heyday of analog recordings using tube devices, but pushed to the limits of what modern technology allow.

The Tenor ensemble reveals unequivocally the superiority of the analog medium. The differences are not subtle.



SOUND QUALITY

With the Phono 1 in the system, we finally have access to the complete set of Tenor components, which now allows us to assess and estimate the system to its full value.

What does all this mean for the listener?

Simply: Music and a listening ease that is impossible to understand until you experience it.

The Tenor system improves nothing and destroys nothing. It presents music impartially, without distortion, without artifice and without effort. That is all we can ever ask for and it is the greatest surprise to finally hear it.

The \$300,000 price tag of the system becomes secondary once you hear the music. It is as if you were there, to the extent that recording conditions allow it.

DYNAMICS

This is one of the most fragile aspects of sound reproduction. From the delicacy of a string quartet to the explosive dynamics of orchestral music or the latest blockbuster, Tenor maintains its authority without compromising refi-

nement. There is no congestion and instruments retain their respective space without confusion.

SOUND STAGING

Tenor is fully 3D. With the proper recording, it puts you right in the acoustic space without artifice, a totally natural sense of realism. With eyes closed, one is almost afraid of stepping on the musicians' toes! The harmonic richness and texture of instruments is fully preserved.

DETAILS AND REFINEMENT

I think one of the greatest successes of the Phono 1 is its silence. Apparently Michel Vanden Broeck worked many long hours to achieve the result he was seeking. It is this feature that allows it to largely outrun its competitors. The degree of silence places the Phono 1 in a category of its own. It enables the system to deliver the entirety of a musical performance without masking any of the finest details, allowing the full emotional impact of the music to come through. Listening becomes completely natural and completely engaging.

IN SUMMARY

Zéro & 100%

Zéro

artifice.
information loss.
effort.
"electronic sound"
listening fatigue.
system.

100%

music.
presence.
realism.

It took time and effort to achieve this result. But what a result! Years of work to erase everything that separates the listener from the music.

Tenor has fully met the challenge. The only drawback of the system is of course the price. But when you consider all that constitutes a Tenor device and the time invested in research, development and production, the price is justified.

But I want to reassure music lovers. There are less expensive systems that will still come close to this ideal, even if there are trade-offs. With Tenor though, there are no trade-offs.

All I can ask is that those who acquire such a work of art, the whole Tenor system, are real music lovers rather than status seekers.

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