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MUCH MORE THAN A TUNER

MAGNUM DYNALAB'S MD-109 IS AN ASSAULT ON TUNER TECHNOLOGY; WITH ITS DAC AND CONNECTIVITY OPTIONS IT'S FUTURE PROOF

BY ERNIE FISHER

WHEN IT COMES to FM tuners, one can build a sturdy case that Magnum Dynalab ranks at or near the top—I should know because I have owned their top-of-the-line model for years. Magnum Dynalab has been building tuners for about 20 years. Although the company does not release a new model each year, when it does, you can be assured that the latest iteration has been designed with the express purpose of surpassing the standards set by earlier models. MD states that their latest tuner, the MD109, “represents the culmination of two years of internal development.” MD further notes that its commitment to state-of-the-art design includes the development of multi-format audio sources, such as new digitally-based playback media.

With the MD-109, I believe that Magnum Dynalab has reached another benchmark. Not only is it another good tuner, it also offers technology-driven innovations. It's a tuner made for the future, but one that adheres to a good old analogue foundation. Before I get into a more in-depth explanation, let's first have a look at the MD-109 externals.

Appearance

AS ONE CAN readily observe, the MD109 is a very impressive-looking component featuring a large centre-mounted display window. The window is a touch-sensitive screen—a favorite station's frequency can be selected by gliding a finger over the screen. I loved this convenience and couldn't help but “play” with it. Dial in 91.1 and the tuner will “jump” to it instantly; change station to 102.5, done. The large knob located on the unit's right side allows you to fine-tune the frequency even further. On the left, another large knob allows access to FM,

Toslink (that's correct!), and balanced and single-ended inputs (I'll explain in the technology section). On either side of the touchscreen you'll find two illuminated windows which indicate signal strength on the left and fine-tuning on the right.

When in standby mode the tuner's large windows dim, providing just enough illumination to allow you to find it in the dark. To activate (switch on), one need only touch the centre screen, which lights up and the word “Power” appears. Touch it again and the tuner responds, telling you that it is “Warming Up”; then, a few seconds later, it displays the station it had been receiving when it was last switched off. The touch-screen, rather ingenious and simple to operate, allows you to program the system in an “accommodating and intuitive” manner.

I like the idea of hands-on fine-tuning, especially with the help of that large dial. The hands-on approach can also be accomplished from a distance, thanks the 109's IR remote control (yet another one for my collection!). It's well designed, allowing you to control all of the tuner's functions, and I enjoyed its solid feel in my hand.

The standard black faceplate (also available in silver or gold for an additional US\$200) is silk-screened, lending the unit a very elegant look. In an effort to ensure that the tuner's performance is not compromised by external vibrations, Magnum Dynalab saw fit to include Vibrapod isolator feet.

The Sound

NO OTHER TUNER today can boast the musical finesse and wealth of options provided by the MD109. It can receive stations broadcasting

FACTS

MODEL

MD-109 Tuner

MANUFACTURER

Magnum
Dynalab Ltd.

DIMENSIONS

6 (h) 19(w) 16 (d)

WEIGHT

46 lbs

FASCIA OPTIONS

Black (standard)
Silver, Gold
(\$200 extra)

RATING

♪♪♪♪

PRICE (US)

\$9,000
(basic model)

\$10,000

(w/DAC section)

CONTACT

Magnum Dynalab
905.791.5888
800.551.4130
magnumdynalab.com



Touch the center screen, and presto,
Magnum's new MD-109 tuner comes to life.

The MD-109 is a triode-based vacuum tube design that sports a buffer stage

within a 100-mile radius, clearly revealing those stations that broadcast compressed signals. However, when you find a relatively uncompressed signal, watch out; through the MD109, it may sound better than a CD.

My first impression was that this tuner provides better imaging than any other I have auditioned and better than its lower priced sibling, the MD108, which I have owned for a few years. While I judge the midrange to be the same as that of the MD108—smooth, articulate and open—I'd say that the 109 manages better, more realistic bass and high frequencies. Its selectivity is also on par with the 108, although it seems to have a better capture ratio. I believe that the 109's extremely low noise floor enhances imaging with a mastery of musical subtleties and detail. Other outstanding

sonic elements include the tuner's "control" of sound, its ability to appropriately replicate tonal nuances and its graceful, very organic sound reproduction. The 109's performance was so good, in fact, that I found myself criticizing FM stations and their broadcast quality, rather than picking nits with the MD-109 itself.

Much has been said about the FM signal limiting frequency response to about 17kHz, and while this is true, the 109 can and will handle from 2Hz to 200kHz. Of course, this huge range is not needed for FM, but frequency response is an important determinant for attaining harmonics—and on this score, the 109 delivers plenty.

I had a few friends over to listen to some classical music via the tuner. Rather than being dyed-in-the-wool audiophiles, these guests were

TECHNOLOGY

IN ADDITION TO its performance as a great FM analogue tuner, the 109 also contains an excellent DAC, which can be connected to any digital signal source one may wish to "tune" in. This, of course allows transport, internet, server and satellite connectivity, making it compatible with all kinds of sources in the present and likely in the future. This also explains why MD calls this tuner a "World Source Platform."

The MD109 is a triode-based vacuum tube design that sports a gain stage elaborate enough to meet the requirements of a good preamplifier.

To assure an unimpeded signal path and minimize vibrations, MD employed double

sided 0.093-inch thick printed circuit boards. To preserve signal integrity, all circuit board contacts are gold plated. In fact, the 109's component list reads like a who's who of high-end: Mundorf, WBT, Wima, Dale-Vishay and Burr Brown. The most noteworthy components on the list are the Mundorf Supreme/silver/oil polypropylene dielectric capacitors, which employ high purity silver for the capacitor coating and windings impregnated with special oil. MD has found that these capacitors contribute to the tuner's all-around sound, making it smoother and better textured.

The MD109's four-tube audio section is unique as the direct output from

the tubes does not employ any capacitors after the buffer stage. This design incorporates what MD calls its TRACC technology (Triode Reference Audio Control Center), which establishes conditions with superlative specifications (see below). To attain long tube life MD employed a special switch-on circuit, incorporating a slow rise time slope to bring the tubes up slowly to optimum operating current. As for the tubes themselves, in positions 3 and 4, you get Jan-Phillips or equivalent 6922 triodes. In positions 1 and 2 you get Russian-sourced 6922, specifically made for Magnum Dynalab. The company refers to these as their Reference CryoValve

tubes. They undergo a special process, including lengthy burn in (approximately 100 hours) and an equally long cryogenic treatment process at minus 320 degrees F. The cryo treatment is said to reduce microphonic effects, lower the dynamic noise floor and increase the "apparent gain"; the process is also said to improve dynamics and low level resolution. Additionally each triode undergoes extensive testing and grading as well as having its gold-plated pins cleaned and then polished to ensure the best pin-socket contact. All tubes rest in gold-plated ceramic sockets.

Next, there is the all-important power supply. Concentrating much of

TUNER AND DAC

music lovers and each one found that instruments and voices sounded, to quote one of the guests "real and not concocted." My own take is a bit more analytical, because of my bias, for which the Magnum MD108 is responsible. I reviewed the 108 a few years ago, purchasing it promptly, because, at the time, there wasn't a better tuner on the market. The 109, however, is quite a few steps ahead of the MD108, both sonically and functionally; it's like a device engineered for the next decade, it sounds better and it offers options for the future—an audio utopia not yet available.

As part of the review, I tested the built-in DAC—which provides four switchable inputs controlled on the front panel—with the help of a Philips-based player marshaled into service as a transport. An A/B listening test

quickly revealed that the Magnum Dynalab 109's DAC offers excellent musicality, outperforming the DAC of an upscale player with which I am familiar (and the brand of which I'll not mention to avoid abuse, although I am willing to state that the player is of recognized value). The Magnum Dynalab DAC took a while to burn in (no surprise here), but when it had finally settled in, I quickly determined that it is good, rendering excellent resolution across the audible frequency band and sounding very musical indeed. I'd suggest that the DAC is worth more than the price difference between the MD109 in its basic (FM) version and in the complete, digital-ready version. Its digital technology and musicality seem on par with the unit's excellent tuner section.

The 109, is quite a few steps ahead of the MD-108, both sonically and functionally

his effort on the ground plane, head designer Zdenko Zivkovic decided to lift the audio ground from the chassis ground, resulting in the removal of all ground-plane spurious and the consequent preservation of the purity of the original signal. Further, to ensure that signal-carrying sections remain uncorrupted, all inputs and outputs are isolated from the chassis with a special insulator. The result is that the MD109's power supply is free of ripple effects at 60Hz, 120Hz and 180Hz, which allows the 109, according to the manufacturer, to be free of "any transients and mysterious high frequency noises."

Two custom-designed toroidal transformers

provide pure power to each of the (divided) audio, RF (radio frequency) and control sections.

What all this means is that the extent of the 109's purity (i.e. its clarity in terms of audio) is as close to a direct battery supply as is conceivable.

The tuner's varactor-tuned front end (basically, a varactor allows capacitance to vary depending on the voltage that is applied) boasts a new eight-stage design, that is arguably the best design for receiving and reproducing FM signals. Three settings can be activated on the tuner's touch screen: (Wide, Narrow and Super Narrow), thus allowing the best possible reception,

regardless of RF conditions.

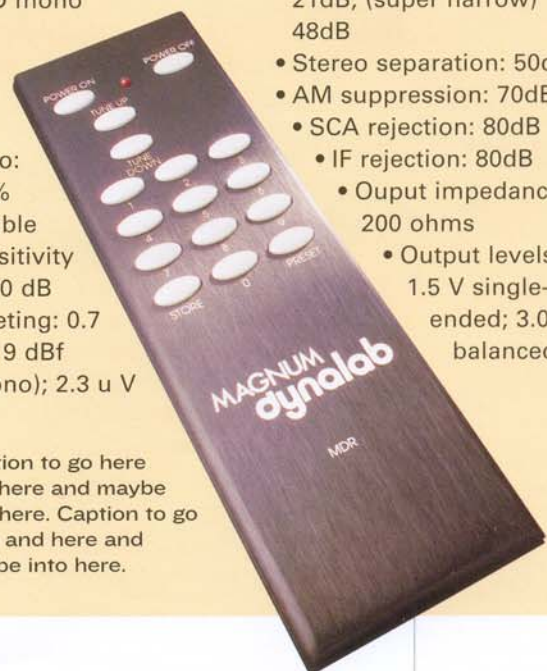
For those who need specs, here's what the Magnum Dynalab MD-109 tuner boasts:

- Frequency response: 2Hz to 200kHz
- Signal to noise ratio: > -110dB
- THD mono and

- stereo: 0.10%
- Usable sensitivity at 50 dB quieting: 0.7 uV 9 dBf (mono); 2.3 uV

Caption to go here and here and maybe into here. Caption to go here and here and maybe into here.

- 9.9 dBf (stereo)
- Capture ratio: 1.5dB
- Image rejection: 125dB
- Alternate channel sections: in wide (mode) >46dB; in narrow >70dB; in super narrow 80dB
- Adjacent channel; (wide) 3dB; (narrow) 21dB; (super narrow) 48dB
- Stereo separation: 50dB
- AM suppression: 70dB
- SCA rejection: 80dB
- IF rejection: 80dB
- Output impedance: 200 ohms
- Output levels: 1.5 V single-ended; 3.0 V balanced.



**The
Magnum
Dynalab 109
is a window
to the world
of music,
literally
speaking**

Commentary

AFTER REVIEWING ELECTRONICS for two decades, I'm scarcely inspired enough to listen for longer than an hour or so at a time. Most of the equipment I listen to today is high-end, and I routinely leave and come back to it and listen again, and again. However, I could not tear myself away from the superb sound of the MD109, used as a source component connected to the Simaudio Evolution Series system (reviewed in this issue) driving the WLM Gran Violas/and Duo sub speaker array (reviewed in Vol. 16, No. 4).

Folks, this is state of the art audio in every respect. Friends and acquaintances who dropped in for a visit would often ask what CD I was playing back, when what they were actually hearing was the FM section of the MD109. Sometimes even I would have moments of confusion. While I respect the MD-109's function as a tuner with which to receive

Servers, Music and Such

AMONG OPTIONAL COMPONENTS one can connect to the MD109 is the server, at its most basic a hard drive that can hold thousands of songs, allow the user create his own playlists and output analog or digital signals, among numerous others options. Having been an audiophile for more years than I care to remember, I have had many misgivings about the use of computerized media in high-end audio applications. However, it seems that my anxiety may have been unfounded. Magnum Dynalab provided me with an inexpensive server, a slot-loading component. The unit, costing approximately \$1,000 can store numerous CDs or analogue recordings on its 160 megabyte hard drive.

To test the server/MD109 interface, I ripped a JVC disc with Zoot Sims playing "Emily" into the server. Playing it back through that combination, I had mixed feelings. The server clearly "shrank" the size of the sound stage and compressed the music.

Fortunately, long-time contributor David McCallum came to the rescue, informing me that I had used the MPEG mode for loading the CD into the server's hard drive, and of course, the results were predictable. The MPEG codec (short for coder-decoder) highly compresses audio files.

David quickly found the control options on the server, and I ripped the CD again, this time using the AIFF codec, which is considered a better format to use for ripping audio files. Results? The compression was not audible, tonal elements such as timbre and hue were identical to the CD and the only apparent shortcoming related to depth, layering, diminished dimensions of the sound stage, along with less space (around the performers). I was surprised, because I had expected the server's performance to be much inferior to that of a good CD playback system. Instead, I'm forced to admit being wrong in my assumptions that a server, any server, could not deliver respectable audio performance. It's my guess that a more expensive, high-end server will do a better job—a number of companies are in fact exploring this latest development in the high-end and Magnum Dynalab will bring one to the market early 2007. *The Inner Ear* shall report.

FM stations, I can not emphasize enough just how well it performs as an outstanding, musically engaging source component. I've said it before and I'll say it again: the Magnum Dynalab 109 is a window to the world of music, literally speaking. Connect it to a satellite and chances are you can listen to tunes from Romania, Cuba, or Greece. Connect it to a server holding your favorite tunes, and you may be tempted to avoid or even discard other source material. Use it as an FM tuner and you'll never be disappointed, for the MD-109 reliably offers high-end audio at its best.

I believe that the MD109 is a benchmark design by which all tuners are judged.

While the touch screen offers assorted readouts, the inside glows with triode vacuum tubes.

