



REVIEW

BY PAUL VNUK JR.

Millennia HV-37 Microphone and Instrument Preamplifier A modern classic preamp design takes on a new form and new functions



The story of Millennium Media and its HV series of microphone preamps dates back twenty years, to a time when stand-alone mic pres were not the norm. At the time, recordings were typically tracked through preamps built into consoles, each with its own colored sonic imprint due to transformers and complex signal paths. By contrast, Millennium founder John LaGrou designed the HV series of microphone preamps, initially intended for his own use, to capture classical instruments and symphonies as transparently and accurately as possible.

It did not take long before word about the HV preamp had spread, and John was persuaded by a friend to send one out to a magazine, to be part of a mic preamp shootout alongside eight other standalone units of the day. That publication, as you can probably guess, was *Recording* (at the time we were still known as *Home & Studio Recording*), and back in March of 1993 we were the first magazine to get our hands on one of these early HV models as part that issue's Mic Preamp Extravaganza. To put this in further perspective, our own Editor Lorenz Rychner had only just been hired as Associate Editor the month before!

Fast-forward 20 years, and over 35,000 HV channels later (according to Millennium's estimate), the HV-3 preamp is known industry-wide for its accurate, uncolored and crystalline sonic capture.

Over the last few years the pendulum has started to swing away from vibey, colored preamps and back to the "straight wire with gain" variety. We have looked at many in this category, from Grace Designs, AEA, Earthworks, Moon and others. Interestingly, Millennium's HV-3 and John Hardy's M-1 (also featured in our 1993 shootout) were among the first preamps of this kind on the market!

It's also interesting that the HV series falls into the "if it ain't broke..." category and has remained largely unaltered since its inception, until last year when the HV-35 marked

the HV mic pre's entry into the world of 500 Series modules, as reported in our October 2011 issue. It was with that design that Mr. LaGrou chose to add a handful of new features to his previously minimal design. We will look at those features and additions below as I introduce to you the HV series' newest member, the HV-37.

A return to form

The HV-37 is a 2-channel version of the HV-35, housed in a standard single-space 19" rack. If you are thinking, "Wait, isn't that the HV-3C?", the answer is "Yes and not really". Yes, internally the HV-37 makes use of two channels of HV-Series mic preamps and all that implies with regard to sound and specs.

As for technical differences, the HV-3C has a 65 dB max output level (up to 75 dB with a no-charge modification), a 3 dB difference in its noise floor (-133 dB EIN vs the -130 dB on the HV-37), and it has maximum input and output levels of +23 dBu and +32 dBu, while the HV-37 offers +20 and +28.

Despite these differences I find no discernible difference in the sound when comparing my HV-3D side-by-side with the HV-37; that was also the case in my HV-35 review, making all three units sonically interchangeable when used on the same application. The trick here is that the HV-37 can do some tricks that the HV-3C can't.

Dressed down but decked out

The HV-37 is visually more casual than its older sibling and does away with the extra thick ebony black faceplate in exchange for a thinner and less imposing brushed matte black version, similar to that of the HV-35. The real difference is in the feature set. The older HV-3 models were minimal affairs with phantom power, a large stepped gain switch (36 steps of 1.5 dB per step), boost buttons, and an optional +130 V setting for use with DPA (B&K) high-voltage mic designs. In contrast, the new HV-37, like the HV-35, is quite

tricked out with modern enhancements.

Each matching channel starts with a gold 1/4" instrument input followed by a small variable-gain knob (15–60 dB). The remaining controls on the unit are backlit push buttons which, in order, are:

- ~ a blue Instrument Input switch
- ~ an amber Highpass Filter button (-3 dB/octave, 80 Hz corner frequency)
- ~ a red Ribbon Mic boost button (+10 dB)
- ~ an amber Phantom Power button (+48V)
- ~ a red Polarity Flip button
- ~ a green 15 dB Pad button

Each channel is rounded out by a green signal LED and a red Peak LED which glows at +22 dB. The rear has matching XLR ins and outs and a standard 3-prong AC socket.

A closer look

While many of the above items are self-explanatory, a couple deserve a closer look.

The Ribbon Mic button was introduced on the HV-35. It boost the unit's gain up to an impressive +75 dB for use with ribbon and low-powered dynamic microphones—Shure SM7, anyone? When engaged, it disables phantom power, keeping some older fragile ribbon mics safe from harm.

The Hi-Impedance input for use with guitar and bass sounds really good! It's solid, tight and quick, great for clean pure DI'd bass tracks, pickup-equipped acoustic guitars, electric violin, and especially for capturing pure direct electric guitar that will be reamped later.

A sound investment

You can see some pretty impressive specs (both quoted by Millennium Media and verified by our friends at CRAS) in the sidebar to this article. But how does the HV-37 sound? In short: like a Millennium preamp!

Over the past twenty years, the Millennium HV series preamps have been called clean, crisp, pure, natural, real, invisible, transparent, and many other descriptives that all

highlight the line's honest sound. I have been a Millennium HV-3D (the 8-channel model) owner and user for well over a decade. It is a sound I know and flat out cannot be without.

Beyond the series' initial targeted applications for classical, jazz and acoustic instrument recording, I have used them for sound design on numerous sample libraries, on loud screaming guitars and drums in metal, goth and indie rock recordings, on world music albums of odd and nuanced ethnic instruments, on gritty Americana recordings, and more. All this to say that you don't need heavily colored preamps to make gritty, vibefilled and/or heavy music; the preamp is only one link in the chain and your instruments, playing style, mics, and placement all figure into the final result.

Bottom line, the HV-37 always sounds good and captures every source clearly, but somehow not boringly. You may have heard of the Millennium sheen... it's there for sure. I can't describe it, but, man, do I love it!

Like the HV-35, the HV-37 takes that famous Millennium sound and adds a host of modern features that I jealously wish my HV-3D had, all for users who crave the sweet clear sound and fantastic flexibility of the Millennium Media HV Series but who don't yet have a 500 Series enclosure. All I can say in conclusion is, the last 20 years' evolution has brought us one amazing preamp, and I can't wait to see what Millennium Media gives us in the next 20 years! ➡

Price: \$1600 (\$1429.99 street)

More from: Millennium Media, www.mil-media.com

Specsmanship

Millennia Media quotes the following specs for the HV-37:

Minimum Gain:	8.5 dB
Maximum Gain:	60 dB (up to 70 dB in Ribbon Mode)
Frequency Response:	under 3 Hz to beyond 300 kHz (+0/-3 dB)
Equivalent Input Noise (EIN):	-130 dB (60 dB Gain, 10 Hz-30 kHz, Inputs common)
Total Harmonic Distortion+Noise:	< 0.001%, Typ. < 0.0005% (< 5 ppm) (35 dB Gain, 10 Hz-20 kHz, +27 dBu Out)
Intermodulation Distortion:	< 0.0009% (50 Hz & 7 kHz, 35 dB Gain, +27 dBu Out)
Phase Response:	< 2 degrees deviation (35 dB Gain, 50 Hz-20 kHz bandwidth, +27 dBu Out)
Common Mode Rejection Ratio:	> 65 dB, Typ. > 85 dB (35 dB Gain, 10 Hz-20 kHz bandwidth, 100 mV C.M.)
Slew Rate:	> 25 Volts per microsecond (35 dB Gain, +27 dBu Out)
Maximum Input Level:	+20 dBu (20 Hz-40 kHz, no attenuator pads required)
Maximum Output Level:	+28 dBu (20 Hz-40 kHz)
Phantom Input Impedance:	6750 ohms (1 kHz)
Output Impedance:	24.3 ohms (x2)

Given Millennium's reputation for sonic excellence, we thought it would be fun to have the HV-37 bench tested and see how some of its impressive specs match up with the real world. To do this, we were aided by Jeff Harris of the Conservatory Of Recording Arts & Sciences (cras.org), who ran tests on our HV-37 using an Audio Precision 525 test set.

As one might expect, the results were stunning: just as an example, the AP 525 measured the HV-37's frequency response as flat to within 0.09 dB from 20 Hz to 50 kHz. Many other specs were similarly tight, like phase deviation under 0.02 degrees, and others were within the test setup's margin of error, e.g. an EIN value of -128 dB.

If you're curious about such things, our website at www.recordingmag.com/resources/resourceDetail/399.html has a downloadable PDF of the test results.—MM