

GForce Minimonsta: Melohman

By John Rossi III



The Minimonsta:Melohman, from GForce (a partnership of England's GMEDIA Music and France's Ohm Force), comes on the heels of M-Tron, a software emulation of the Mellotron (reviewed November 2004); Oddity, an emulation of the ARP Odyssey; and ImpOSCar (reviewed January 2005), an emulation of the unique British OSCar synth. The Minimonsta aims to emulate the Moog Music Minimoog Model D, with a few enhancements that really make it a dual-personality software synthesizer. Most folks refer to it as simply "Minimonsta"; so shall I, and I'll cover what "Melohman" is in just a second.

The original Minimoog Model D was the portable synthesizer that changed the world of keyboardists worldwide. Its compact package included 3 voltage-controlled oscillators (VCOs), a very unique 24 dB/oct ladder-type voltage-controlled filter (VCF) with variable resonance, a single voltage-controlled amplifier (VCA), and two simple 3-stage envelope generators to control the VCF and VCA.

The Minimoog was the ultimate performance-oriented synthesizer. Its signal routing path was hardwired, and its user interface was extremely easy to understand. With most of the modular behemoths that preceded it, the user had to worry about patch cords or control voltage or audio signal connections; by contrast, the player of a Minimoog was able to obtain sounds by simply flipping a few rocker switches and twisting a few knobs.

Between 1970 and 1981, more than 12,000 units of the Minimoog Model D were sold, making it the most popular synthesizer of the pre-MIDI era. The list of musicians who have recorded or gigged with a Model D would be longer than the permitted length of this entire review, although an obligatory nod to Rick Wakeman, Keith Emerson, Brian Eno, Gary Numan, and Kit Watkins would be in order.

Format/Compatibility/Installation

Minimonsta operates as a standalone virtual synthesizer under both Windows (minimum requirements: Windows 98, Pentium III) and Mac (Minimum OS X, 1.25 GHz G4 or Intel CPU), an RTAS or VST plug-in (Win/Mac), and as an AU plug-in (Mac).

Minimonsta installs from a single CD-ROM. The only method of copy protection is the entry of a valid key code furnished with the Quick Start Guide. I applaud both GForce and M-Audio for their release of this fine product without cumbersome copy protection schemes. There is no excuse for using a pirated or unlocked version of this program, since it is so accessible and is priced at a point that is well within the budgets of most musicians who would be expected to use a software synthesizer.

Documentation and legal language

Minimonsta comes with a printed multi-language Quick Start Guide and a comprehensive User Manual provided in an Adobe Acrobat format (PDF) file on the installation CD. The Quick Start Guide addresses installation of the program on both PC and Mac platforms, and gives a cursory introduction to Minimonsta patch structure and loading and playing the included preset patches and meta-patches (see below).

The very user-friendly User Manual sets off with an historical introduction of the Minimoog Model D synthesizer and the goals and concepts that were set for the Minimonsta software emulation. The manual then thoroughly discusses every feature of the synthesizer, every control knob and switch, both what it does and how its manipulation interacts with the synthesizer as a whole. It provides sufficient documentation to be of real use to a novice in subtractive synthesis, and contains information that is very useful for seasoned veterans of Minimoog programming, especially on enhancements to the Minimoog interface. Indeed, the sections that cover operation of the Melohman and LFO/XASDR matrix controls are very well written and provide sufficient guidance to make their use almost effortless.

The manual concludes with 10 very useful tutorials that cover a gamut of performance scenarios, from using the Minimonsta as a plug-in effect to the more obscure duplication of the Minimoog Feedback Trick (where the low level output of the Minimoog was routed back into the synth through its external input).

There are no legal restrictions on use of the Minimonsta in any music production context.

Platform tests

I tested Minimonsta on both an Intel Pentium 4 3.2 GHz PC with 1 GB RAM as well as an AMD 4800+ dual-core PC with 2 GB RAM. The program functioned flawlessly on both systems in both standalone and plug-in versions.

On the less capable Intel system I was able to run eight simultaneous instances of Minimonsta plug-ins, four of them set for 4-voice polyphony, using Chainer (www.xluto.com) as a VST host, and the CPU usage indicator never exceeded 85%. As would be predicted, the AMD system proved to be much more capable and I gave up after loading 2 instances of Chainer each hosting ten instances of Minimonsta (20 Minimonstas!) and still failing to exceed 50% of the available CPU resources. I didn't have the opportunity to test Minimonsta on a Mac.

Emulation tests—and beyond

Unlike some other emulations of classical analog synthesizers that introduce new features along with the emulation, Minimonsta is perfectly capable of functioning as a Minimoog clone. When using Minimonsta as a software Minimoog, I have yet to hear any patch emulation that is not authentic. All of the controls in the GUI function identically to those of a hardware Minimoog, and even little nuances like the function of the keyboard-following switches for filter frequency have been duplicated faithfully. Anyone who is familiar with the operation

and programming of a Minimoog will be perfectly at home with Minimonsta.

As for sound, the introduction in the User Manual discusses the phenomenon that no two hardware Minimoogs sound exactly alike. The emulation that comprises the Minimonsta was derived from replication of the sound characteristics of Minimoog serial number 1794, an early unit with unstable oscillators. Among the patch presets included with Minimonsta are over 80 that were recreated from original Minimoog patch sheets. Some of these are patches for sounds that appear on well-known recordings from the classical Minimoog period by Emerson, Lake and Palmer and Rick Wakeman.

The degree to which the emulation by Minimonsta reflects the aural characteristics of the original recordings is amazing. To assess this phenomenon further, I borrowed a late 1970s model Minimoog from a local musician and ran it through my studio console in parallel with Minimonsta. I was astonished by the perfection in the A/B comparisons of the two synths. The Minimonsta oscillators were clearly more stable than the hardware synth, but the voicings through the filter were uncanny in their similarity. Changes in controllers on the Minimonsta GUI produced identical sound modifications as changes in the corresponding knob or switch on the hardware synth. Clearly, as an emulator of a Minimoog, Minimonsta is dead on.

As mentioned in the manual, GForce wanted to not only faithfully replicate the sound and voicings of the Minimoog, but to extend them with additional (i.e., optional) control functions. First, where the original Minimoog was a monophonic instrument both in sound-stage and number of voices, Minimonsta is a stereo/polyphonic instrument. In the place on the control panel where the original Mini had a "Volume" control, Minimonsta features an Output section with both level and pan controls. Additionally, where the hardware Mini had no onboard effects, Minimonsta features a delay section that allows control over delay feedback and timing position between the left and right audio channels.

One of the major complaints of Minimoog programmers over the years was the loss of one VCO if LFO modulation was used in a patch. Minimonsta addresses this deficiency with the inclusion of an LFO/XADSR modulation section. The modulation routings are virtually limitless and can be routed to any parameter of the synthesizer amenable to modulation, and the LFO section can be sync'd to an incoming MIDI clock. In addition, Minimonsta allows any of the modulation functions to proceed under MIDI control and provides a clever user interface for their application in the modulation section.

So what's a Melohman?

Of all of the enhancements to the Minimoog that are provided in Minimonsta, the most ingenious are those that correspond to the Melohman modulation capabilities. Melohman modulation (first introduced in Ohm Force's Symptom digital softsynth, reviewed February 2005) allows morphing among the patches within a *meta-patch*, a grouping of 12 patches—this group could contain, for example, 12 identical patches with only the

filter modulation levels changed, or it could be a group of 12 completely different patches (e.g. bell tone, hard bass, guitar pluck, etc.). Each patch, or *element*, of a meta-patch is allocated to one of the "notes" of the Melohman Octave, an octave on the keyboard that can be assigned to any full octave (from C up to B) in the range of MIDI notes. These notes usually don't play sounds; instead they act as switches for the elements. Morphing from one sound to another is as simple as playing a new note in the Melohman octave.

At its most simple level, Melohman modulation allows morphing between any two patches in the meta-patch "octave", and control is provided for the time it takes to complete the morph. So, for example, morphing between a synth bass patch and a pristine bell patch with a long morph period results in a slow modulation in synth parameters that effect the change in tone from synth bass to bell. While the morph is being executed, all of the controls for the effected parameters change in real time with the morph. In effect, all the knobs are being turned at once—from their original settings for the starting patch to their final settings for the ending patch. This feature is quite valuable in learning the associations between various changeable synth parameters and their effects on the sound that is produced.

Additionally, there are several Melohman modes of operation: in addition to simple patch-to-patch morphing, you can select back-and-forth morphing, which allows morphing to another patch and then back to the initial patch on release of the note; morph sequencing, in which the note of the Melohman octave determines which patches in the octave will be morphed

among; variations on a morph-mutate function that allow morphing to occur with, more or less, random changes in parameters of the original patch; and more.

In my opinion, the morphing capabilities provided by the Melohman functions set this synthesizer well apart from anything else that purports to be an emulation of any venerable analog synth. Clearly, describing the power of Melohman modulation in a single paragraph is nearly impossible. The net result of its inclusion into Minimonsta creates a totally unique synthesizer that brings the Minimoog to a whole new level of sonic possibilities.

Conclusions

I've owned Minimoogs from the early '70s through the late '90s. Of all the emulations of that instrument I have experienced, Minimonsta is clearly the most authentic. GForce has done its homework very well and produced a software synthesizer that is almost indistinguishable from the hardware synth it emulates. The modulation flexibility added by the LFO/XADSR matrix and the Melohman functions brings it to a new level in software synthesizer performance. 🎹

Price: \$199.95

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