

BDMO

This roughly 4.1GB instrument comes in a Native Instruments Kontakt 2 player (it can also be opened in Kontakt 2), and it takes up a little under 258MB of RAM at the default disk-streaming settings. It makes extensive use of the NI engine's built-in convolution processing, so depending on the convolution programs loaded it reached as much as 70% of one CPU in the test dual 2.5GHz G5 Mac.

Saying that BDMO is one of the best digital grands doesn't quite tell the story, because the included timbral impulse responses effectively transform it into a variety of different pianos just by selecting one from a list—which is one of Cholakis' specialties. (You can read more about his work at <http://www.numericalsound.com/>; he's an interesting guy.)

There's also a selection of impulses for when you engage the sustain pedal, and if you have a "variable sustain pedal" (we didn't) you can control the impulse level in real time. To me these pedal-down impulses are the most impressive thing about the instrument. There are other sampled pianos on the market that also sound good, but Cholakis just *nailed* the resonance. BDMO offers two different types (that I can't tell apart, frankly) each with a choice of crisp, clear, even, full, or dark.

Finally, there are 20 progressively large reverb impulses labeled A - T, each available in crisp, clear, warm, and dark varieties. These reverbs integrate extremely well with the Blüthner, with none of the ugliness that pianos are so good at exciting in less tailored reverb programs. You have control over the wet level, dry level, and pre-delay.

Ears and fingers

Dean and Cholakis like to put their emphasis on sound quality above all else, and that's really the first thing that strikes you about BDMO: it sounds just amazingly realistic—round, rich, smooth, fabulously detailed, with great clarity and sense of space. Well...that's the first thing to strike you once you un-bypass the reverb, which it absolutely needs; the initial defaults want changing every time you load a program (until you save your own custom ones). Then the second thing you notice is the subtle realism when you play the sustain pedal, as mentioned above.

PAV bent over backwards and all the way around again to make this a quiet instrument. One of the reported benefits of sampling the Blüthner at Skywalker Ranch was that the studio is very quiet—far from any

traffic. (Another benefit is that it's a great studio, of course.)

Then they used some proprietary secret sauce to reduce the noise further. While I have to admit that noise in sample libraries—even in pianos—doesn't usually bother me the way it does some musicians, this library has no noticeable noise reduction side-effects whatsoever.

BDMO is touted as having the dynamic range of a real piano, and the dynamics correspond to the real thing (they call this Linear db Scaling™). But you don't necessarily want the full range in a sampled piano, depending on taste and a number of factors including the physical response and transmitted velocity curve of your controller, so the piano is available in six different dynamic ranges (labeled 100, 85, 75...45).

By instinct I first loaded a full-range 100 program and didn't at all care for the way it played—at least not with the default velocity-transmitting curve in the Kurzweil 2500X (88-key weighted action) and minimally skilled fingers employed for this review. The 100 and even the 85 programs are harder to control than a real piano is.

However, the 75 and under programs play just beautifully. The transitions between the 12 pedal-up and 12 pedal-down layers are absolutely transparent, without any notes that bite or fail to speak properly. This is a totally playable instrument, and there isn't a single note that gives away that this is a sampled piano.

A couple of miscellaneous features to mention are the chorus, for those inclined, and the release sample length control. BDMO provides independent control over the pedal up, pedal down, and sustain pedal release times. This can change the character of a piano performance a lot more than one might think.

Timbral impulses

It's always interesting how different developers can approach sampling projects with totally different ideas, yet all of them work well despite their apparent incompatibility. There are pianos miked from some distance that work very well.

But PAV's concept is to mic the piano close-up so you get all the detail, then presumably use reverse convolution to "remove" the room so you get as bone dry recording as possible. After that you have a piano that can be shaped any way you want using the timbral convolution impulses. Note that the reason this works in BDMO is because of the quality of the impulses; it's not something any old fool

could just up and do.

The timbral impulses that come with the BDMO cover an overwhelming variety of pianos throughout the ages in all kinds of different contexts. There are 50 different Classical ones, identified by year (as far back as 1932), coyishly-named piano make if available (e.g. Italian Piano A), and source (almost always a recording). Then come some custom impulses just to change the sound, another 50-odd jazz ones, lots of impulses of other pianos (including some digital ones), pop/rock, R&B, and—believe it or not—vocal syllables. The latter are a novelty.

All seven groups of timbral impulses are identified similarly to the classical ones, i.e. you don't know exactly what they are. But that really doesn't matter, because sounds can usually fit several different contexts. Plus there's a rough 8-band display of the equalization curve for each impulse.

Since you're not going to go through 250 timbral impulses every time you want to find the right sound for a piece, the thing to do is save a few presets you like with names that you can understand. A few of the impulses can sound a little murky, and some can be quite radical, but the majority of them succeed in giving you a very different but equally good sound.

Having said that, it's worth adding—no offense—that I happen to like the unimpulsed sound as much as any of the presets I saved during the course of this review. So it's not like Dean and Cholakis will show up at your door and beat you up if you just leave the timbral impulses completely bypassed. They will if you don't use any reverb, however.

Open wallet?

This is one of those sample libraries in which everything comes together and simply works—concept, source instrument, performance, studio, recording, sample programming, and in this case convolution processing. That magic didn't "just happen," though—developers Dan Dean and Ernest Cholakis have a lot of experience with sampling and convolution processing between them, and they obviously gave this project a lot of thought before they even started.

The Blüthner Digital Model One is an outstanding piano library by any standard. It's very satisfying to play, flexible, it sounds fantastic, and it's uncannily realistic. The bar has risen. **vi**