

# vienna instruments

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## Bösendorfer



### VIENNA IMPERIAL

The new *Vienna Imperial* virtual piano is a class of its own. The sampled grand, a Bösendorfer Imperial 290-755, is the famed piano manufacturer's flagship piano and is certainly the Rolls Royce among all grands. It is demanded and performed by top pianists such as Paul Badura Skoda, Paul Gulda, Oscar Peterson, Tori Amos, and many more.

Like the Vienna Symphonic Library, Bösendorfer is a supremely innovative company. The venerable grand piano that the Vienna team hosted at the Silent Stage for two months was equipped with Bösendorfer's patented CEUS technology, which allowed them the most precise and by far most extensive piano sample recordings ever conducted in the history of music technology. 1,200 recorded samples per key represent a magnitude of sampling detail that has been unthinkable up to now.

The CEUS computer grand is capable of recording even the most subtle key movements and positions using microprocessors and highly sensitive optical sensors. It plays those recorded notes absolutely identically using solenoids installed under every key. Far exceeding the limits of any other system, the CEUS measures the velocity of the hammer on its way to the string just before striking it (a distance of just 0.15") with an accuracy of 0.0001 milliseconds, and even records and exactly reproduces the key movements after every strike.

### vienna ORCHESTRAL PIANO

The *Vienna Orchestral Piano* is the first hardware built by the Vienna Symphonic Library. It's a prototype, meant to visualize the esthetics of the sound of the *Vienna Imperial*. Its debut was at the NAMM Winter Show 2009, reflecting Vienna's innovative piano technology through design and functionality.



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### Velocities

The CEUS technology made it possible to exploit the velocity range of the MIDI protocol to an unprecedented degree. Up to 100 velocities were recorded per key and playing technique, i.e., with and without pressing the sustain pedal, and alternatively with the soft pedal down. There are simply no audible steps between the singular velocity layers, and every single key has its own authentic velocity curve. These precise recording techniques would have been impossible without Bösendorfer's CEUS technology. No human pianist, no matter how skilled, would be able to play 100 evenly spaced velocities from pianissimo to fortissimo, not to mention playing them consistently across all playing techniques such as sustain pedal or soft pedal down.

### Release Samples

Bösendorfer's computerized grand also allowed for another innovation, the recording of perfectly timed release samples, depending on the length of the note played by the user. In particular, the releases of very short notes, with lengths between 100 and 1,000 ms, were recorded in subtly gradated steps, because in this range the length of each held note most affects the volume and sound of the release. Therefore the *Vienna Imperial* can reproduce release sounds very authentically, most audibly when playing short staccatos in the lowest range.

### Sympathetic Resonances

The newly developed software player supports sympathetic string resonances. Not a DSP emulation, the actual sound of the piano in its resonating state has been captured in great detail. There are two variants, sympathetic resonances of individual strings (pedal-up) and of all non-damped strings (pedal-down). In the first case, the overtone resonances of each individual string reacting to other keys being played were recorded. In the pedal-down case, the sound of the whole piano with all its resonating strings reacting to a given key was captured. Again, no compromises were made to achieve absolute authenticity.

### The Software Player

A new customized software player with a dedicated piano user interface has been designed specifically for recreating the Bösendorfer CEUS Imperial grand. Many innovative solutions have been implemented to control the massive database. Thanks to a novel compression method, the new core engine allows for virtually unlimited polyphonic playback. Technology from our *Vienna Suite* plug-ins such as **filters**, **compressors**, and even a **convolution reverb** have been integrated directly into the engine, and so you can achieve premium results even when using the stand-alone version of the *Vienna Imperial*. The graphic user interface provides easy access to all parameters and presets, and offers innovative features, such as the ability to change the volume of the pedal noises according to the speed at which the pedal is depressed.

### Miking

The elaborate positioning of microphones allowed for the sound to naturally evolve and spread, but minimized capturing the sound of the room. Therefore the *Vienna Imperial* remains flexible and can be placed easily in any virtual environment you may choose. You may select between three microphone positions, resulting in three different sonic basis points and lending the *Vienna Imperial* well to orchestral music, romantic ballads, contemporary pop and rock tracks as well as jazz performances.

### Far – Audience Position

The audience position exhibits the most room ambience, as is needed when recreating the sound of a concert recording. The sound of the Bösendorfer Imperial develops authentically and is well balanced throughout.

### Middle – Player Position

This position recreates the sound a pianist would be hearing when playing the instrument. The perspective offers a present and broad sound that can be mixed superbly into contemporary productions and modern tracks.

### Close – Microphones placed in the body

This miking position, with its clear, distinctive, and voluminous tone, is suited for all modern applications that need a direct and in-your-face sound.

### Recorded Styles

- Sustain pedal up
- Sustain pedal down
- Soft pedal (una corda) down
- Repetition tones for sustain pedal down (hitting the sounding string)
- Repetition tones for soft pedal down (hitting the sounding string)
- Release samples in different lengths
- Release samples in different lengths with the soft pedal down
- Sympathetic resonance tones of individual keys (sustain pedal up)
- Sympathetic resonance tones of the whole piano (sustain pedal down)

Shipping in Spring 2009



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All specifications subject to change.

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