

Imperial Grand3D

World's First 3D Hybrid Modeling Piano



Developed by



Operational Manual

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Huge Sound - Small Footprint: The Imperial Grand3D starts with the famous bright, rich Bosendorfer style sound, and establishes an incredible level of realism by using patented Hybrid Modeling Technology coupled with complete 3D Audio control. Physical modeling is at the heart of the Imperial Grand3D sound, but both sampling and synthesis are incorporated to add to the realism. Multiple DVDs, Out of Memory errors and glitches are ancient history. Only 150MB in size, the authentic harmonic colorations of the Imperial Grand3D bring an unmatched depth of sound to any style of music. Regular sampled piano sounds are always static - there is no interaction between strings while playing. Physical modeling forges these ethereal harmonic changes, generating subtle resonances based on which notes are being played at any given moment. The Imperial Grand3D is always changing, always reproducing this interaction between strings, giving it a living, breathing sound, creating a real instrument with its own soul.

Not content to simply reproduce perfection, the Imperial Grand3D adds over 50 controls to design the sound you're looking for. Create your own piano from detailed physical parameters, such as hammer hardness and velocity, dynamic response, even the interaction between different strings. Not a tweaker? Right out of the box, there are 16 preset modules that let you choose from the 5' 8" Bosendorfer model 175, the 225, the 280, or even the luxurious 9'6" model 290!

The Imperial Grand3D allows you to select and arrange multiple virtual microphones. Set individual levels, choose optimum placements and mix them together to shape that perfect sound. And there are no generic microphones here. You can choose from the best of the best as you select the sound of acclaimed microphones such as the Neumann U87, M149, or the AKG C12VR.

3D Audio brings the Imperial Grand3D into a new audio world. Dial in the separate 3D Effect unit and choose 7.1 channel output (with 24 Bit/192KHz resolution!) Utilizing the complex science of the latest Head Related Transfer Functions, Imperial Grand3D can place your piano into a real 3D space that erases the "virtual" and leaves "reality"!

Here are just some of Imperial Grand 3D's Features:

Imperial Grand 3D gives you absolute control over every aspect of a piano. You can adjust hammer actions, microphone positions, sympathetic resonances, dynamics and more. You can even design your own piano!

Multi-microphone positions enable users to mix between different microphone positions and create new sounds that easily fit into a mix.

Meticulous Dynamic Response controls enable users to adjust the dynamics of

the piano, change the keyboard response, and achieve both realism and playability at the same time!

New! Our 264-string Sympathetic Resonance System adds beautiful harmonies to both pedal up and pedal down notes.

Imperial Grand3D is able to detect repeated notes and activate True Staccato Mode which precisely reproduces staccato notes.

Built-in professional Reverb Engine simulates resonances with environment and soundboard, adding extra realism to the sound.

Actual modeling and soft pedal samples vividly present the sound of three kinds of pedals.

The separate 3D Effect unit can place the piano into a real 3D space, adding realism to the whole sound.

Faster load times. Smaller hard drive footprint, less memory and less CPU usage.

Quick Start

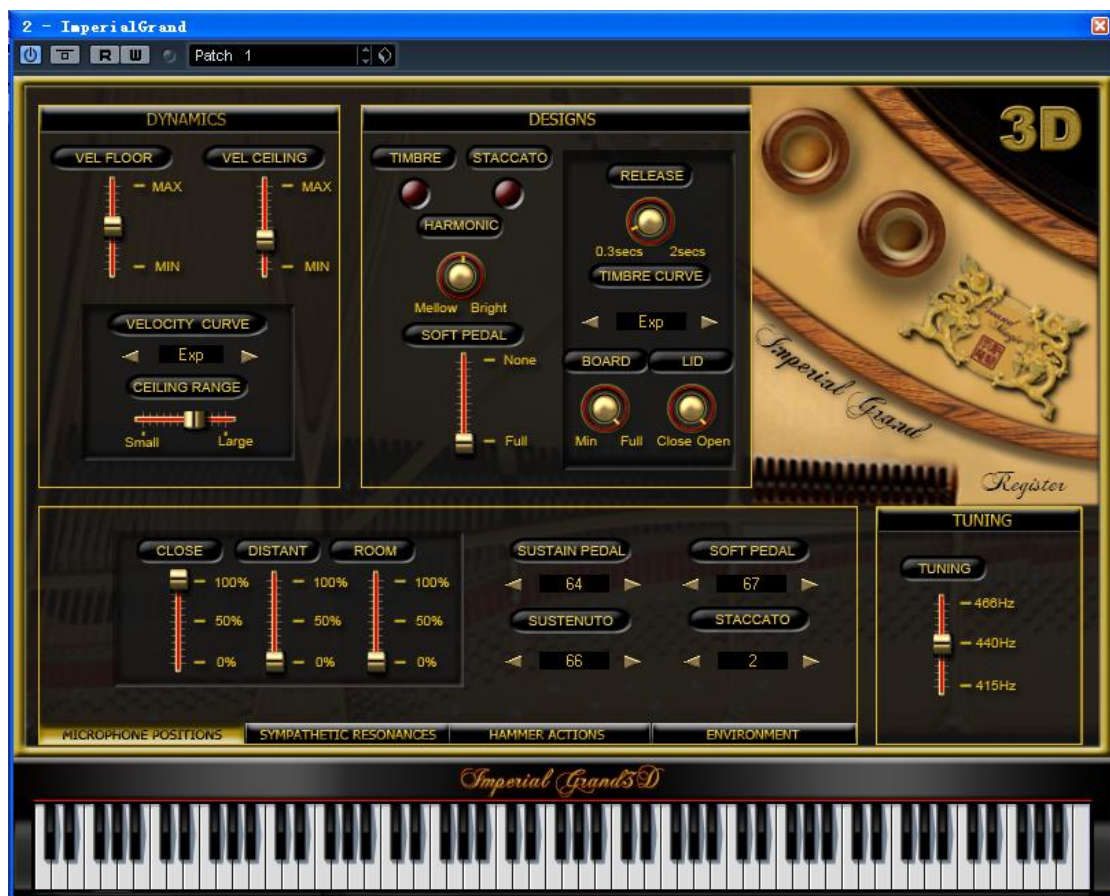
Imperial Grand3D is easy to use. Here are some quick steps to getting Imperial Grand3D running.

If using as a VSTi:

When you run the setup file of Imperial Grand3D

Run your DAW host program (such as Cubase). Most host programs will automatically find any new plug-ins, including Imperial Grand3D.

If your host does not automatically locate Imperial Grand3D, seek the Preferences for an option such as "Find New VST Plug-Ins," or take a look at your owner's manual.



Imperial Grand3D should show up as Imperial Grand in your DAW.

If using in Stand-Alone mode:

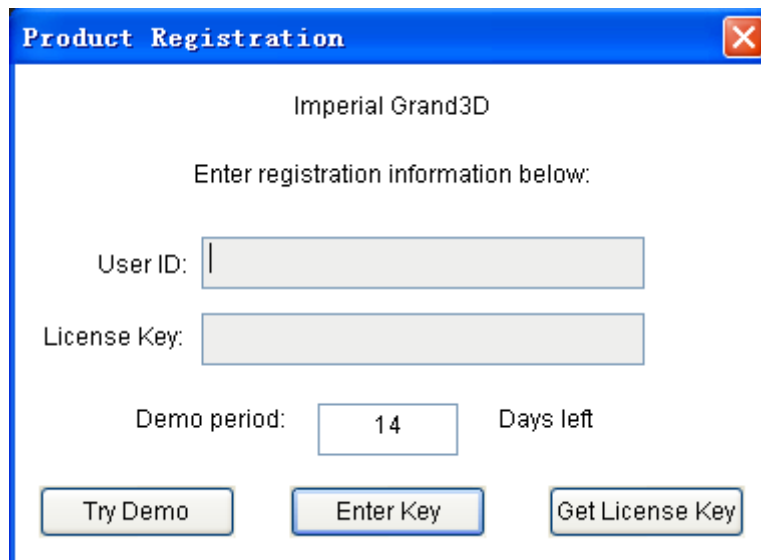
Run Imperial Grand3D, either using the Imperial Grand3D desktop icon, or selecting the Start Menu in Windows and choosing All Programs-> Imperial Grand3D.

By default, Imperial Grand3D in stand-alone mode can be controlled by any MIDI input. It will use your default audio device. To adjust your audio device and latency settings, select Devices->Wave.



Registration

To run demo version, you must click register button on Middle Right of the GUI and then choose Try Demo. Then demo version will begin to sound.



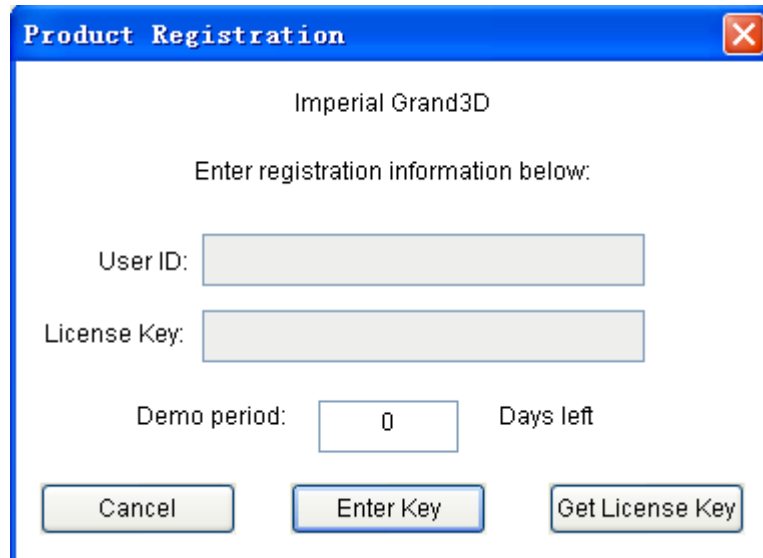
The image shows a 'Product Registration' dialog box with a blue title bar and a close button (X) in the top right corner. The text inside the dialog reads 'Imperial Grand3D' and 'Enter registration information below:'. There are three input fields: 'User ID:' with a text box containing a vertical cursor, 'License Key:' with an empty text box, and 'Demo period:' with a spinner box set to '14' and the text 'Days left' to its right. At the bottom, there are three buttons: 'Try Demo', 'Enter Key', and 'Get License Key'.

Imperial Grand3D Demo Version will work for 14 days before it must be registered with a valid User ID and License Key. A License Key can be purchased from our web site

<http://www.soundemon.com/impintro.htm>



To register Imperial Grand3D, pressing this button on Middle Right of the GUI will bring up the Registration Dialog:



The image shows a 'Product Registration' dialog box for 'Imperial Grand3D'. The dialog has a blue title bar with a close button (X) in the top right corner. The main content area is white and contains the following elements: the text 'Imperial Grand3D' at the top; the instruction 'Enter registration information below:'; a 'User ID:' label followed by a text input field; a 'License Key:' label followed by a text input field; a 'Demo period:' label followed by a numeric input field containing the value '0' and the text 'Days left'; and three buttons at the bottom: 'Cancel', 'Enter Key', and 'Get License Key'.

Enter your User ID and License Key, and press the Enter Key button.
If you've entered your ID and License Key properly, Imperial Grand3D will immediately become registered,
If you have any problems registering Imperial Grand3D, please contact Customer Service.

Controls

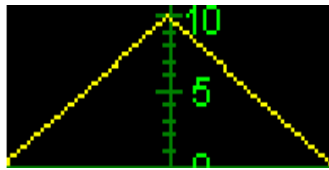


VEL Ceiling: The Ceiling of Volume - the higher the setting, the louder the sound in MAX velocity. Moving the slider to the right will make the sound brighter while left will make the sound darker.

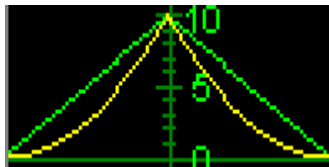
VEL Floor: The Floor of Volume - the higher the setting, the louder the sound in MIN velocity. Moving the slider right will make the sound warmer, but it will lose dynamic if you move it right too much. Moving the slider left will make the sound more dynamic, but it will make the low velocity too low in volume when you move it too much to the left.

Ceiling Range: The Volume difference Between A0 and C8 at MAX velocity. Upwards will increase the difference while downwards decrease the difference.

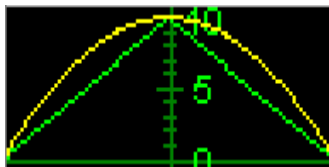
Velocity curve: Different response curve of Velocity. You should click the arrows to switch or click on the middle and a drop-down list will appear. Velocity Curve also means the relationship between Velocity and Volume.



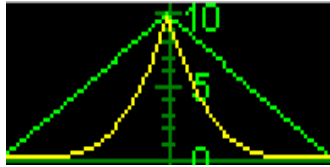
Linear: This type of response means the Volume changes with constant rate as Velocity changes.



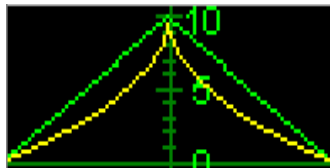
Exp: this type of response means Volume changes slowly first and then gets faster as Velocity increases.



Inv. Exp: This type of response means Volume changes fast first and then gets slower as Velocity increases.



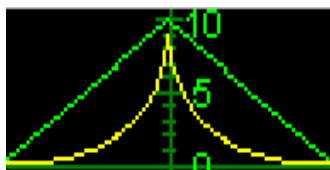
Exp2: This type of response means Volume changes more slowly at first and gets faster as Velocity increases.



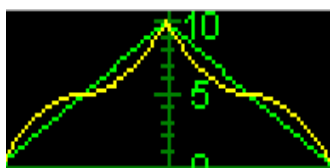
Root: very close to Exp type, but with a smoother changing curve



Inv. Root: very close to Inv. Exp type, but with a smoother changing curve



Exp+Root: very close to Exp2 type, but with a flatter changing curve



S_Crv: This type of response means Volume changes as an "S"

shape as Velocity changes. It changes more slowly in both ends and gets faster while in the middle range.



S_Crv2: This type of response means Volume changes as an “S” shape as Velocity changes. Changes are slowest in both ends and fastest while in the middle range.



Inv.S_Crv: This type of response means Volume changes as an inverted “S” shape as Velocity changes. It changes fast in both ends and gets slow while in the middle range.



Timbre Curve: The change curve of timbre with different

velocities

Soundboard: soundboard can influence how long a piano sound can last and how quick it will decay in Volume. The higher this value, the longer the sustain and decay the piano will have.

Lid: The position of the lid. Highest value means the lid is fully open while lowest value means the lid is closed.

Soft Pedal: This control determines how much the soft pedal will influence the volume. The highest value means no influence on volume while lowest value will have an obvious influence on volume.

Harmonic: controls the harmonic content of the piano. Increasing or decreasing harmonic will result in a different sound. You may even turn Imperial Grand into another piano completely through this control.

Timbre: controls the harmonic slider's mode. When in off (black) mode the Harmony slider is used to adjust main harmony content (mostly the 2nd harmonic). When in (red) mode, harmony slider is used to adjust higher harmonic content (3rd harmonic and above).

Release: The release time of the sound, range from 0 seconds to 2 seconds. Moving upwards will increase the release time.



Tuning: Tuning is the act of making minute adjustments to the tensions of the strings of a piano to properly align the intervals between their tones so that the instrument is in tune. In all systems of tuning, every pitch may be derived from its relationship to a chosen fixed pitch, which is usually A440. Tuning can adjust fixed pitch ranging from 415Hz to 466Hz.

Microphone Positions

In this category, you can adjust three microphone positions. Close, Distant and Room



Close: Adjusts the volume of microphones in this position. The

microphones are placed in the pianist's position. In this position, the piano sounds like exactly the same as when you sit and play it.

Distant: Adjusts the volume of microphones in this position. The microphones are placed behind the pianist's position, closer to an audience position. In this position, the piano sounds like you are sitting in the 1st or 2nd row while the pianist is playing.

Room: Adjusts the volume of microphones in this position. The microphones are placed far away to capture the room reverb. In this position, the piano sounds like it is very far from you. This control also determines the volume of environment effects.

Sustain Pedal: Choose which MIDI controller controls sustain pedal activity. This function is useful to those users who do not have pedals. So they may assign mod wheel to control the pedal.

Sostenuto: Choose which MIDI controller controls sostenuto pedal activity.

Soft Pedal: Choose which MIDI controller controls soft pedal activity.

Staccato: Choose which MIDI controller controls staccato mode.

Sympathetic Resonances



SR Amount: The amount/volume of Sympathetic Resonance. Further right increase the Sympathetic Resonance sound.

Velocity Sensitive: The volume of Sympathetic Resonance follows the notes' velocity. When playing at high velocity, the volume also becomes high; when playing more softly, the volume decreases. Increasing the sensitivity will make the volume less dependent on velocity.

Harmonic Profile: The level of each harmonic. From the left is the 1st harmonic (the basic note)...then 2nd, 3rd and 4th Harmonic.

Hammer Actions



Hammer Noise: The noise of the hammer when it hits the string. Increasing this control will result in the piano losing impact, making the piano sound more like a string instrument.

Forte HH: The hammer hardness in high velocity. Decreasing its value will make the piano sound darker at high velocity.

Mezzo HH: The hammer hardness in middle velocity. Decreasing its value will make the piano sound darker in middle velocity.

Piano HH: The hammer hardness at low velocity. Decreasing its value will make the piano sound darker and mellow at low velocity.

Pedal Noise: The noise sound when you press the sustain pedal. Increasing the value will let you hear the noise sound louder.

Environment



Please note the amount of environment effects is determined by room slider in microphone position. So if you want environment effect, do not forget to bring up the room slider.

R.Size: The size of the whole space

Damp: Dampening is any effect that tends to reduce the amplitude of the sound.

Predamp: This dampening happens before the sound enters the dampening unit.

Decay: Decay time of the reverb tail sound in seconds

Diffusion: The Diffusion of material of the environment

Density: The density of environment. It controls how much air the material can absorb.

Spatial: Adjusts the spatial density of the Room Reflections (1=Unity)

Reverb Type: Different type of environment, such as medium halls, large halls or vocal halls.

Spatial Type: Different type of spatial.

3D Panning

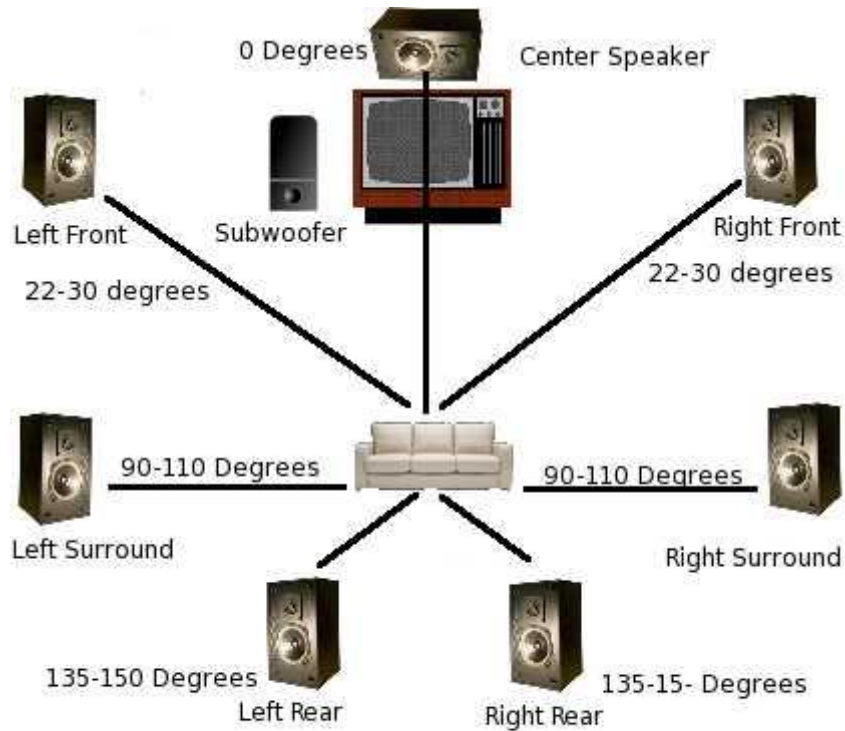
3D panning unit are provided as a separate VST surround effect in host. To use it, first mix down Imperial Grand3D into a stereo wave file then use 3D panning unit to decode from stereo data.

3D panning unit is named as 3D piano spacer in Host programs.



LFE Cutoff: the cutoff frequency of LFE channel. Usually 120Hz.

LFE Q: The Q of the low pass filter.



7.1 Channel Surround System

Out1	Out2	Out3	Out4	Out5	Out6	Out7	Out8
Left Front	Right Front	Center	LFE	Left Rear	Right Rear	Left Surround	Right Surround

R INT: The default or reference width of Rear channel (rear left and right).

R Width: The width of surround channel.

S INT: The default or reference width of surround channel (Left/Right Surround)

S Width: The width of surround channel.

Space: The amount of the environment unit.

Height: The height of the pianos in a 3D space.

The other controls are the same with those in Environment effect.

Microphone Modeler: You can choose sounds from different microphones here. Including Neumann U87, M149, TLM170, AKG C414B, C12VR and Schoeps mk4.

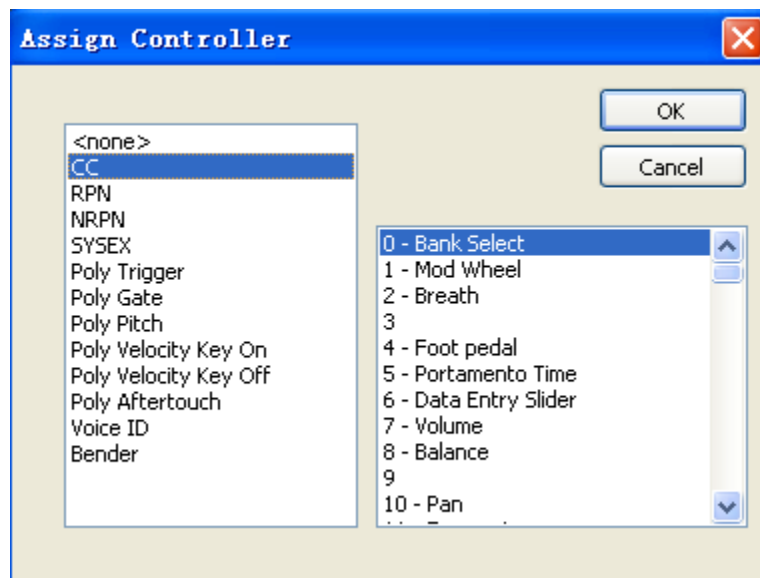
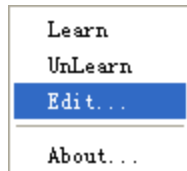
Using Presets



There are a total of 16 factory presets user customization. Imperial Grand3D currently has 4 pianos and 16 modules, It will increase in future.

MIDI Automation and MIDI Learn

All sliders and controls can be assigned to MIDI controllers individually. You just need to right click on it, and at the popup menu choose Edit.



Also, MIDI learn and unlearn can be activated by choosing from the popup menu.

Stand-Alone mode

Record to wave file

In Stand-Alone mode, you can record performances into wave files.

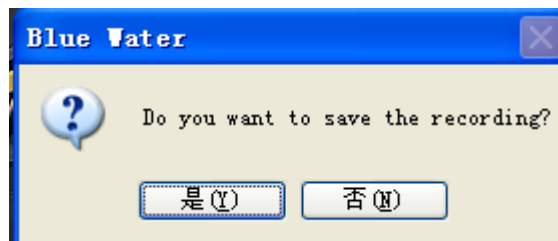
To do this, you need to click the record button as shown below:



Then when you want to save to the wave file, you need to click the stop button:



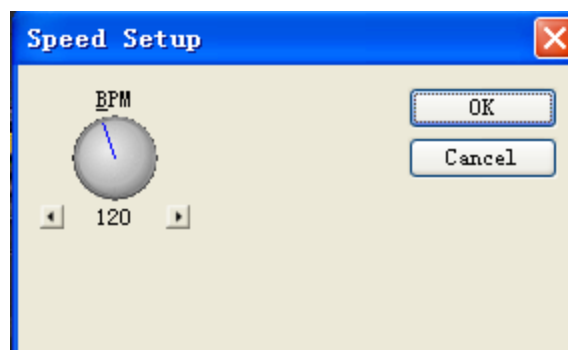
A dialog will appear:



Click the yes button to save your wave file.

Adjust tempo/Speed

Clicking this icon will bring up speed/tempo menu.



You can set your tempo here.

Switch presets



Click on the arrow to switch presets one by one.

If you want to choose a preset quickly, you can also use the menu:

PlugIn->Programs 0-15 and choose the presets you want to load.

