

An **Impact Soundworks** Sample Library
Designed for Kontakt 5 Player

Performed & Recorded By Simon Dalzell
Produced in Collaboration with Impact Soundworks

Introduction

We are pleased to present the beauty and elegance of **Pearl Concert Grand**, our debut grand piano virtual instrument. This library features a pristine Yamaha C7 captured in exquisite detail with four microphone positions, spanning 14,000+ audio samples. Our goal with **Pearl** was to create a truly timeless piano instrument versatile enough for everything from film scores and classical repertoire to rock and pop music.

Most importantly, **Pearl** is designed to be a *joy* to play. We meticulously crafted this instrument's default presets, 'touch', effects, and mic positions to be eminently playable. A lovely, unencumbered user interface provides very easy control over all aspects of the sound, such as mic mixing, channel EQ, tuning, and velocity response. By simply adjusting the mic mix alone, you can achieve drastically different sounds: emotional and intimate through the close mics, or voluminous and reverberant with stage and hall enabled.

We know that as soon as you load **Pearl** and beginning playing, you'll fall in love - we did!

Installation & Setup

Pearl is a Kontakt instrument, requiring Kontakt (or Kontakt Player) version 5.3 or higher. Please ensure that Kontakt works properly on your machine before downloading, installing, or activating the library.

If Kontakt does not work on your machine, Pearl will not work either!

First, ensure that you have downloaded all RAR archives for the instrument. You can verify that you have all files by checking your download page, which also displays the expected file sizes for each.

Next, extract the library folder by extracting **only the first RAR file** (part1). You do not need to extract any other files. Free tools like **WinRAR** on Windows or **UnRARX** on OSX will allow you to extract these files.

The resulting folder, “Pearl Concert Grand”, can now be moved to the location of your choice. We recommend putting it on an internal hard drive, and preferably a solid state drive for extra loading speed. An external hard drive is acceptable but may result in slower load times and reduced performance. If you must use an external drive, we recommend a USB3 or Thunderbolt drive.

Once you have moved the library folder to the location of your choice, open **Kontakt**. Go to the Libraries tab, and click the **Add Library** button. Navigate to the extracted “Pearl Concert Grand” folder and select it. If you get a “No Library Found!” error message, make sure you are selecting the folder that contains subfolders like “Instruments” and “Samples”.

If you are still getting errors, it is likely that you have an incomplete download - double-check that your RAR files are the correct size!

To activate the library, open the **Service Center** application on your computer once the library has been added to Kontakt. Enter the serial number you were sent via email, and on your order page, and click Activate.

Finally, restart Kontakt and click on Pearl Concert Grand in your library browser. You should now be able to load the master patch (“Pearl Concert Grand.nki”) or any Light patches by double-clicking, or dragging and dropping. Enjoy!

OPTIONAL – 24bit Samples
For maximum fidelity, you can install the optional set of 24bit samples. These are more memory-intensive and will take up more space on your hard drive, so please keep that in mind. Simply download the set of RAR archives from your download page, extract Part1, and move the extracted files to the **Samples folder.** You can now load the 24bit instruments.

OPTIONAL – Close Noise Ambient Loop
This file contains a seamless loop of noise from the hall, as picked up through the close mics. You can layer it underneath any track using Pearl and mix to taste if you want a bit more 'air' and realism!

Library Content

Pearl Concert Grand features detailed recordings of a Yamaha C7 grand piano. The recordings were captured at 24-bit / 88 khz and downsampled using the highest-quality sample rate conversion (SRC) to 44.1khz. All 88 notes were sampled **chromatically**, with 8 dynamic (velocity) layers per note from *pp* to *ff*. Samples were recorded both with sustain (damper) pedal raised and lowered. When a MIDI sustain pedal is used (CC64), you will hear the **actual resonance** of notes being played with the pedal lowered. Additionally, the entire set of samples has two round robin (RR) variations.

Key release noises for every note are provided at multiple dynamics, offering a **realistic release ‘tail’** echoing through the space and the piano body. Pedal release noises are also provided. These are triggered when notes are played with the sustain pedal down, and the sustain pedal is lifted. Release samples also include two round robin variations.

The library includes four microphone positions:

> **Close** (Stereo)
> A pair of DPA 4003 microphones placed on a stereo bar towards the keyboard end of the piano. These provide the cleanest, dryest sound. Because of their placement, they also have a slight stereo image, meaning that higher notes will sound louder in the right channel and lower notes will sound louder in the left channel. This can be exaggerated or mitigated by using the stereo width knob.

Stage (Stereo)
A pair of Earthworks M30 omnidirectional microphones mounted to a wedge-shaped wooden panel and placed a few feet back from the piano. The wedge essentially makes the microphones into boundary mics, adding stereo separation while still capturing more ambience than the close mics.

Pedal (Mono)
A single Rode NT5 placed under the piano pointing at the underside of the sound board. This one is mostly to add diversity to the library, and works best when mixed in with either the close or hall mic, or on its own with heavy effects processing added.

Hall (Stereo)
A pair of DPA 4011 cardioid microphones mounted in an ORTF configuration, placed further back in the hall and elevated to about 12 feet. These will sound best when used to add ambience to the close or stage mics.

Resource Usage & Light Patches

Pearl is a very deeply-sampled library where no sacrifices were made in audio fidelity. The master patch, "Pearl Concert Grand.nki" contains all 14,000+ samples and when all mic positions are loaded, RAM usage can climb to 5-6gb depending on your DFD settings in Kontakt.

It is possible to reduce **Pearl**'s resource consumption by disabling mic positions you don't need. This is the simplest and most straightforward solution.

However, we realize that not every project requires the full depth of sampling **Pearl** has to offer, and so we've created a selection of LIGHT patches with reduced resource usage. These patches, stored in the Instruments\Light folder, are as follows:

Pearl Concert Grand (No RR): Omits the second RR variation for all samples, cutting memory usage in half. You can always use Extra RR for more variation without extra memory usage.

Pearl Concert Grand (No Sustain): Omits the pedal-on samples, again cutting memory usage roughly in half. If you are writing music that does not use the sustain pedal, there is no reason not to use this patch! Of course, the sustain pedal will still work and function as normal; it will just use the normal set of recordings instead.

Pearl Concert Grand (No Sus+RR): Combines the two patches above, reducing memory usage by 75% compared to the default master patch. T

Pearl Concert Grand (Lightest): Omits RR and sustain pedal samples and uses sampling on every *other* note, instead of every note. While not ideal for exposed, solo piano performances, this subtle change (which saves an additional 50% RAM) is virtually unnoticeable in many contexts. If you are really strapped for memory, use this as a last resort.

User Interface

We've created an intuitive and elegant script engine for **Pearl** which allows you control over every aspect of the instrument: microphone mixing, velocity response, tuning, EQ, effects, etc.

Main Page



Master Preset Menu
From this menu, you can load or save a preset for the entire patch, affecting all parameters - this includes mic mix and purge state, volume, tuning, velocity, effects, etc. The presets listed in the dropdown menu are the default **factory presets**, but you can save or load your own presets by going to the "Save Preset" or "Load Preset" options.

These custom presets are saved on your computer as .NKA files and should be stored in the /Data/Master Presets/ folder within the Pearl folder.

Global FX
Clicking this launches the global FX rack - more on this further below.

Master Volume
Affects the output volume for the entire instrument - all mics and effects.

Transpose
Sets transposition for all incoming MIDI events. Unlike Kontakt's "Tune" knob, **this does not affect tuning**! It simply takes any MIDI notes sent to Kontakt and moves them up or down by the selected number of semitones.

Mic Mixer - Width
Controls the stereo width of each mic channel. Each mic can be expanded in the stereo field or collapsed to mono.

Mic Mixer - Offset
Controls the playback position of samples through each mic position. For example, a value of 4ms in the Close mic position means that the Close mic samples will be played starting 4ms into each recording. Higher offsets make the instrument more 'responsive', reducing the delay before the tone of each note is heard, but may truncate the beginning of each note.

We recommend using minimal offset values for the Close mic position, if offset is used there at all. For the other mic positions, offset may be used to effectively reduce the microphone distance and delay between mics.

Mic Mixer - Volume
Controls the volume of each mic channel.

Mic Mixer - Mic / FX Switch
Switches the view for each mic channel from the mixer view to the channel effects strip (EQ & compression).

Mix Mixer - Mic Buttons (Purge)
Clicking the labeled buttons at the bottom of each mic channel strip will enable or disable that mic position entirely. By default, disabled mics are also unloaded (purged) from memory, however this setting may be changed on the advanced page.

Mic Mixer - Output Menu
Each mic position can be sent to a different Kontakt output (st.1, st.2, etc.) If you change your output configuration while Pearl is loaded, please hit the "!" button in the upper right of the Kontakt plugin/standalone interface so the list of outputs within Pearl can be refreshed.

> **IMPORTANT!** When using any output other than "Default", the selected mic will **bypass** the global FX. This is a limitation of Kontakt itself, as the global FX apply to Kontakt's main outputs and not the separate DAW outputs.

Mic FX - Compress
Controls the wet mix for the bus compressor on each mic channel. These compressor settings are 3:1, 10ms attack, 400ms release, 10dB makeup gain, and -13dB threshold.

Mic FX - EQ (HF, LF, HMF, LMF)
Controls the gain for the 4-band bus EQ on each mic channel. The frequencies are as follows: 155hz (LF), 707hz (LMF), 2khz (HMF), 5.7khz (HF).

Settings (Gear Icon)
Toggles between the mic mixer page and the engine settings page.

Settings Page



Velocity Table
This table allows you to edit the velocity response of the instrument. The X-axis represents input velocity, and the Y-axis represents output velocity. The default shape is an upward-sloped line, meaning that input velocity matches output velocity (no changes).

Dynamics Editor (Loudness Icon)
This pops up the Dynamics Table editor. Each one of the 88 bars in the editor corresponds to a MIDI note, from lowest to highest. By changing the value for each note, you can alter the dynamic 'preference' of each note. Lower values mean that for any given velocity, you will hear **quieter dynamic recordings**, without making the output volume softer. Higher values mean you will hear **louder dynamic recordings**, again without making the output volume actually louder.

Expand Velocity Table
Magnifies the velocity table for easier editing.

Revert Velocity
Resets the velocity curve to default.

Velocity Presets
Like the master presets, this menu allows you to load factory presets for the velocity curve or load & save your own. “Light” curves mean that input velocity is scaled **up** (i.e. more sensitive), and “heavy” curves are the opposite. “Floor” means that the lowest possible velocity is significantly higher than 1, and “ceiling” indicates that the maximum velocity is lower than 127.

Vel -> Vol (Velocity to Volume)
Controls how much velocity affects the instrument’s volume. If turned all the way up, volume scales evenly with velocity. If turned all the way down, samples are always played at the same volume regardless of velocity. This behavior is not realistic, but may be useful if you want to hear the softer-recorded dynamics at a louder volume.

Vel -> Bright (Velocity to Brightness)
Controls how much velocity affects the instrument's overall brightness. Naturally, each recorded dynamic is progressively brighter than the last, but this control helps smooth over transitions in layers thus adding even more realism and responsiveness.

Key Noise
Controls the volume of key release noises, which are triggered when keys are lifted.

Pedal Noise
Controls the volume of pedal release noises, which are triggered when the sustain pedal is pressed or lifted.

Tuning Table
This table allows you to set microtuning (in increments of 1 cent, i.e. 1/100th of a semitone) for the piano. This is done by first selecting the **root Key** (the knob directly above the table) and then drawing in the appropriate tuning changes. For example, in the key of C, the first column represents C, the second column C#, the third D, and so forth. Tuning changes affect all octaves on the keyboard.

Revert Tuning
Resets all tuning to default (i.e. no changes to instrument tuning).

Tuning Presets
As with velocity and master presets, here you can save or load factory & custom presets for tuning. We've included a few common piano tunings such as just intonation and pythagorean, as well as A=432, A=442, and A=448hz.

Extra RR
When enabled, the engine will randomly create new RR variations by transposing adjacent zones. For example, playing a C3 may trigger a C#3 note that is then tuned to C3, creating a varied timbre. This may sound somewhat unnatural depending on context, so we have disabled it by default.

High Dampers
Pianos naturally lack dampers in the upper register. This means that high notes will ring out when played, as opposed to stopping when the key is lifted. When this button is enabled, high notes will act as if they had dampers - they will stop ringing out when notes are lifted, and they will be affected normally by the damper pedal. In short, leave this OFF for maximum realism.

Purge Muted
When enabled, microphone positions that are disabled will also be purged from RAM. We recommend keeping this ON.

A/D/S/R - Attack, Decay, Sustain, Release
These controls allow you to change the volume (amplitude) envelope for the instrument. When using any offsets, we recommend a slight attack of ~3ms to ensure there are no pops or clicks in the attack of each sample. Decay, sustain, and release should generally be left at default values, but it's easy to create experimental sounds by varying them.

Pearl Logo (Change UI Color)
Clicking on the 'Pearl ~ Concert Grand' text in the bottom right will change the UI hue from blue to gold and back again!

Global FX Rack



Pearl includes a rack of five high-quality, studio-grade effects. These are as follows:
Compressor: An analog-modeled compressor (Solid Bus Comp) with controls for threshold, attack, makeup gain, ratio, and dry/wet mix.

Tape Saturation: A vintage tape saturation & warming effect with controls for input gain (saturation amount), warmth, and HF (high frequency) rolloff.

Transient Designer: A specialized compressor that enhances or attenuates transients and sustains, with separate control for input gain.

EQ: A four-band parametric EQ (Solid G-EQ) with controls for LF, LMF, HMF, and HF gain and frequency bands, along with LMF/HMF Q (width).

Reverb: A powerful convolution reverb send with 31 custom impulse responses (IRs) created by Impact Soundworks. These range from small rooms to halls, from dreamy and digital to realistic. Controls are offered for reverb HPF and LPF (high pass and low pass filters) as well as size (reverb length multiplier) and wetness.

Credits

Recording and Performance: Simon Dalzell
Recording Engineer: Wiley Ross
Recording Assistant: Dylan Carpenter
Instrument Design: Simon Dalzell & Andrew Aversa
Kontakt Programming & Scripting: Andrew Aversa
Scripting: Andrew Aversa
Editing: Elan Hickler
Additional Editing: Iain Morland
Artwork: Dickie Chapin (Constructive Stumblings)

Troubleshooting & Feedback

Have you used **Pearl** in a project recently? Got an awesome track you'd like to share? Drop us a line (admin@impactsoundworks.com) and we might post it on our website! Or, tell the world at our Facebook page here: http://www.facebook.com/ImpactSoundworks

We encourage all our users to share and promote their work made using our samples. Word-of-mouth is the **#1 way people find our instruments**, so it also helps us to produce more great libraries for you!

For any technical support issues regarding the library, don't hesitate to email support@impactsoundworks.com.

You can also visit our friendly user community and support forum on KVR Audio:

http://www.kvraudio.com/forum/viewforum.php?f=176

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